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Introduction

What is PCBoard?

PCBoard Bulletin Board Software allows your computer to operate as a communications host, known as a Bulletin Board System or BBS. With your BBS you can transfer information between two computers which may be connected via modem or Local Area Network (LAN) connection.

In the beginning, bulletin board systems primarily exchanged messages. As bulletin board systems became more and more popular, the demand for more features increased. Today, users logged into a BBS may read and write messages, transfer files, chat with other users online and more. PCBoard meets these and other user demands with several key features.

PCBoard's Key Features

PCBoard has many powerful features. The features listed below are but just a few of the features PCBoard has. You will discover the other features as you read through the remainder of the manual and configure your BBS.

- *Quick Installation:* The installation program provides several templates to begin your system.
- ***Powerful security features*** to restrict the information you allow users to see/transfer.
- ***Customizable display files*** to make it easy for users to find information and for you to give your BBS a unique look and feel.
- ***Up to 65,535 conference areas***: You can use conferences to focus on a particular subject or to isolate information for a group of users from the rest of the BBS.
- ***Extensive support for third party add-in software***: You can draw upon the huge third party support PCBoard has to add door games, or run any DOS text mode application such as an informational database.
- Bulletins may be used to ***display ASCII documents or text files*** online.
- ***Internet/UUCP connectivity***: Internet newsgroups and e-mail are imported directly into the messages bases which provides seamless access to your users.
- ***Built-in Fido***: No more messing around with a front-end mailer to send and receive Fido messages.
- ***Multi-Channel Chat***: Users online can communicate using any of the 255 channels. Each channel can be private or public depending on the topic discussed.
- Users can ***logon from a LAN workstation*** without requiring additional software.
- ***Powerful Boolean text searching capabilities***: You can search messages, file descriptions, bulletins and more for simple or complex search strings using Boolean operands such as *AND*, *OR*, and *NOT*.
- ***Multilingual support*** allows callers to choose which "language" the BBS prompts and display files will be displayed in.
- ***Grows to fit your needs***: PCBoard can expand up to 65,535 nodes (concurrent users online) if you need additional nodes, simply purchase the appropriate software upgrade.
- ***Optional command stacking***: PCBoard allows you to stack commands on a single command line so expert users can quickly get to where they wish to go. Novice users are not ignored either. They may enter one command at a time and get the extra guidance to help them do what they want to do.
- ***Powerful serial port routines*** written in 'C' and assembly language for speed. Supports up to *8+ serial ports* via *standard COM ports* and all 15 IRQ settings. There is also an option that allows you to use popular *multiport cards (intelligent* and *non-intelligent), FOSSIL drivers*, or communicate directly with *OS/2's communications drivers*.

System Requirements

Below is a list of hardware and software that is necessary for a base configuration of PCBoard with one node.

Hardware

- IBM® or compatible computer (8088, 8086, 80286, 80386, 80486, etc.)
- Properly connected “AT command-set” modem for each dial-in node
- 512K of RAM

Software

- MS-DOS or PC-DOS v3.3 or later
- PCBoard Software

NOTE: If you plan on running multiple nodes please see the *Multiple Nodes* chapter of this manual. This section has a list of required hardware and software for various system configurations.

Using This Manual

By now, you realize that this manual is quite extensive. The goal of this section is to provide you with information on how to effectively use this manual. In order to accomplish this goal, we'll outline a strategy for accessing information in the manual and discuss the significance of special symbols.

Accessing Information

Bulletin Board Systems vary greatly on their setups and even on their applications. Therefore, there is no procedural approach to setting up a BBS where we can tell you that step 1 is to do this, step 2 is to do this, etc. However, we can suggest some general guidelines and a plan of action for finding the information you need, when you need it.

Anytime you begin setting up a bulletin board it is generally advisable that you work at it one step at a time. For example, when setting up a 10 node system, focus at getting one node up and running first before expanding out to the full 10 nodes. Trying to do too many things at the same time is counterproductive.

The automatic installations provide a good basis from which to build you BBS on. You may simply need to add a few more conferences and modify the file directories to get where you want to be.

The *best way to find information* in this manual *is to use the index* located at the back of this book. This index points to nearly any topic relating with PCBoard and the appropriate page number of where to find it.

Special Symbols

Throughout the manual, you will see icons to the left of the text. These icons or symbols have various meanings:

This symbol represents information or ideas that may present better ways to look at a subject or even how to better accomplish a specific task.

When you see this symbol, the text to it provides either additional information or where you can find additional information.

Use of this symbol represents information of concern. This information usually comes in the form of a warning.

There are versions of PCBoard for various operating system platforms. When you see this symbol, the paragraph or immediate thought relates only to the DOS version of PCBoard.

With several different versions of PCBoard, it is useful to know when a though or topic relates to the version of PCBoard you are using. This symbol serves as a signal to you that the immediate thought or text relates only to the OS/2 version of PCBoard.

Technical Support

With a program as powerful as PCBoard you may run into a situation where you cannot find an answer to one of your questions. In such a case, you should first check the manual or if in PCBSetup or System Manager, access online help by pressing `1`. If neither of these approaches brings you closer to a solution, contact Clark Development for your support needs.

Clark Development offers a trained technical support staff to answer your questions no matter how seemingly unimportant or complex. Our technical support staff will be more than happy to help you with any problem related to the PCBoard program itself. Unfortunately, our technical support staff cannot help you with third-party add-ins or other programs not written by Clark Development. If you have a question about another program, your best solution is to contact the author of the program or to leave a message on our support BBS (Salt Air) where other, more experienced, users may assist you.

When Calling For Technical Support Via Phone:

- Hcve your serial number ready
- If possible, be at the computer you are experiencing the problem with.
- Be prepared to describe, in detail, the problem or question you have, including the exact text of any error messages you may be getting.
- If you have made attempts to correct the problem, be prepared to describe the actions taken to the technician.

You receive one year of voice technical support with any new PCBoard purchase. After the first year, you may renew your support at any time by calling our toll free order line at 800-356-1686.

When Requesting Technical Support Via BBS Message:

- Describe the problem or question you have in detail.
- When necessary, try to use screen captures to enhance the readability of your message.

Technical support via the BBS is always available to registered customers even if your voice support or ability to download upgrades off the BBS has expired. The same is true of technical support over the various mail networks our support staff regularly monitors.

How To Obtain Technical Support

Technical support for PCBoard can be obtained through a variety of channels. This section discusses each in detail.

Phone

Voice technical support is available to all customers by calling 801-261-1686 but is not a free service. New customers are given 1 year of voice support free. Yearly voice support contracts can be purchased at any time. For those customers who prefer to pay for support on a per-incident basis, a pay-by-the-minute option is also available. Call our office or toll-free order line to learn more about your voice support options.

Support BBS (Salt Air)

Our support BBS is available 24 hours a day, 7 days a week. Just leave a message and you will receive a reply as soon as possible. Our support BBS has three main phone numbers; all modems are capable of V.32 and V.32bis connections.

801-261-8976	USRobotics HST Dual Standards
801-261-8979	Hayes Optimas
801-261-8977	USRobotics HST Dual Standards - *Extended access purchasers only*

Internet

Clark Development hosts a USENET newsgroup on the Internet and also has an e-mail address for support. Support questions can be entered in the **alt.bbs.pcboard** newgroup, or as e-mail addressed to either **support@clarkdev.com** or **support@saltair.com**.

Echo-Mail networks

Several mail networks carry our support conference (e.g. RIME, ILink, etc.). You may leave a message in our support conference and get a reply from any of our trained technicians. If you do decide to use the mail networks for support questions, it is important to use an account with the same logon name that you use for your established Salt Air BBS account.

Chapter Overview

Your first experience with PCBoard will be to install or upgrade your current version. For this information, refer to the Installation chapter of this manual. Once PCBoard is installed, refer to the rest of the chapters in this book for additional information. The following sections summarize the rest of the chapters in this manual.

Chapter 2: Installation

Whether you are installing PCBoard for the first time or upgrading a previous version, this chapter provides both quick and detailed instructions for installing this version of PCBoard.

Chapter 3: PCBoard

This chapter discusses how to load PCBoard including any command line or environment switches that you may want to use. In addition, any error messages that can occur while PCBoard loads are described in detail.

Chapter 4: PCBoard Commands

When logged into PCBoard, all tasks are accomplished by entering commands at a command prompt. This chapter details the user and SysOp commands available and how to use them.

Chapter 5: PCBSetup

The PCBSetup utility is used to alter the configuration files that make-up your bulletin board system. With the exception of conference configurations, all options and switches are discussed in great detail. Refer to this chapter when you are making changes to your system and you need additional information about the screens and options presented to you.

Chapter 6: Conference Setup

There are several options, switches, and files that make up each conference's configuration. This chapter details the components that make up a conference such as doors, scripts, bulletins and file directories in explicit detail. For information on creating or registering users in a conference, refer to the *SysOp's Guide* chapter instead.

Chapter 7: Multiple Nodes

It is quite common for a bulletin board system to have several nodes. Each node can accommodate one caller at a time. If you have three nodes, three users can be accessing your system at the same time. This chapter discusses how to setup multiple nodes using a network or multitasker.

Chapter 8: SysOp's Guide

This chapter of the manual ties together key concepts of your configuration to help you understand how to do certain things on your BBS. In this chapter the following topics are discussed:

- file transfers
- messages
- conferences
- events
- system security
- maintenance tasks
- new users
- user subscriptions
- semi-technical information about modems

Chapter 9: Customizing Your BBS

If all bulletin board systems looked the same, it would make for a pretty dull environment. This chapter details some changes that you can make to your system to help give it a unique look and feel. This chapter will also assist you in creating menus, utilizing display files, and more.

Chapter 10: System Manager

System Manager is a utility that is used in conjunction with PCBoard to modify user records. You can adjust the security levels of users, individual records, and many other tasks. This chapter describes all of the options and screens in System Manager.

Chapter 11: PCBFiler

Use PCBFiler to help you maintain your file directories. Using PCBFiler you can move files from the directory where they were uploaded to a new location. This chapter discusses how to use PCBFiler.

Chapter 12: Utilities

Several utilities are included with your PCBoard package. For example, you would use PCBPack to help keep the size of your message bases down. This chapter describes each of the utilities included with your package.

Chapter 13: Batch Files

There are several features of PCBoard that require the use of a batch file. For example, when testing uploads, PCBoard is executing a batch file, allowing you to use any program you desire to do the actual testing. This chapter discusses the various batch files you will create when setting up PCBoard.

Chapter 14: Accounting System

Many of today's bulletin boards are commercial systems requiring payment of some type for access. PCBoard has a powerful accounting system which can be used to help form pay-as-you-go, pre-pay, and ratio type systems. This chapter overviews the accounting system and the types of applications it can be used for.

Chapter 15: PCBFido

In this chapter of the book, the options relating to PCBSetup and PCBFido are covered in detail. Additional information about setting up Fido can be found in the file FIDO.DOC.

Chapter 16: PCBoard's UUCP

Connecting with the Internet is a big deal. PCBoard's UUCP provides an interface to put Internet e-mail and news on your system. This chapter highlights the PCBSetup options related to UUCP. Additional information can be found in UUCP.DOC.

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Installation

For PCBoard to operate properly, you must install it on your system. The installation program provided on disk #1 will insure that PCBoard is properly installed. If you are installing PCBoard for the first time or upgrading a previous version, the installation program will get you running in a minimal amount of time.

If you are installing PCBoard for the first time, familiarize yourself with the first two sections of this chapter—*Brief Introduction to PCBoard Terminology*, and *Planning a New Installation*. Once you are familiar with these sections you'll be prepared to install PCBoard.

Brief Introduction to PCBoard Terminology

Before you begin it is essential for you to have a brief introduction to some of the terms you may run into when installing PCBoard. The purpose of this section is to give you a very brief understanding of these terms. As your familiarity with PCBoard increases, so will your understanding of these and many other terms associated with running a bulletin board.

BBS: An acronym for **B**ulletin **B**oard **S**ystem. PCBoard is the software you will be using to create your BBS.

conference: A conference is an area in a BBS which allows you to separate groups of users or categories of information. For example, if you want to have an area for recreational camping where users leave messages, transfer files, and find the news on recreational camping, setup a conference.

door: Bulletin Board Systems enjoy a wide range of third-party support. To access many third party programs, callers to your system must open a door. When a door is opened, PCBoard transfers control of the session to another program.

file directory: A very popular activity on bulletin boards is to transfer files from the bulletin board to the caller's system. In order for the caller to know what files are available for transferring, he will review the file directory.

login: To access the BBS, a user must login to the BBS. This process involves typing in a user name and entering the proper password for the account.

modem: The majority of connections to bulletin boards are done through modems which are devices for sending data from your computer to another computer over standard telephone lines.

multitasking: To multitask on a computer you have to have a multitasker such as DESQview, Windows or OS/2. A multitasker allows you to open more than one DOS program and run them at the same time.

node: A node is a way to reference a session on a bulletin board. Each concurrent session running is given a unique node number and no two sessions use the same node number. For example TOM SMITH could be online on node 1 and JOHN ANDERSON on node 2. These two users are using different sessions or nodes on the system.

password: When a user logs into a bulletin board system two key components are required to logon -- user name and password. The password is a security measure to prevent users from logging into other accounts in an unauthorized manner. By changing the password often, or making it difficult to guess, user accounts will be harder to break into.

remote: Most connections on a bulletin board come from a remote caller. That is, a caller uses a modem to call into the system from across the street or across the world. Users who connect in this manner are termed as logging in from remote.

SysOp: This term is short for **Sys**tem **Op**erator and is pronounced (sis-op). In short, this is you because you are the operator of the system who is responsible for configuration and maintenance.

user record: Information about a caller to the system is stored in what is called a user record. The user record stores information such as password, number of files and bytes transferred, address information, and a myriad of statistics.

user file: The collection of user records are stored in one file known simply as the user file.

Planning a New Installation

The INSTALL program for PCBoard will provide you with a good beginning for your bulletin board system. Not only will all of the necessary files be copied to your hard-drive but many sample files are also included in the initial installation.

While many of the initial steps are completed, it is important for you to think ahead and plan for the future of your system. It is a fact that many bulletin board systems experience explosive growth because modem usage among the general population is also growing at a phenomenal rate. If your system is not prepared to grow, you are going to find yourself doing a whole lot more work than is necessary.

A bulletin board comprises many files and many definitions of where to find files. In fact, as you become familiar with PCBoard you will soon realize that several hundred file specifications (where to find message bases, user files, conference definitions, etc.) make up your system.

Keeping this in mind, you want to minimize the amount of work you have to do in preparing your system to grow. Before you begin setting up your system, take the time to do one installation and get familiar with PCBoard and how it operates. Do not spend any time adding new file directories or conferences. Instead, become familiar with where all of the files are stored, and the general layout involved. Becoming more familiar with PCBoard and it's structure will give you a better understanding which will help you in the growth and development of your system.

DOS

When PCBoard is installed, all of the files and subdirectories relating to PCBoard are centered around a single subdirectory titled `PCB`. The default is to install PCBoard to the C:\PCB subdirectory but this is not necessarily a good idea when you keep future growth in mind. What would be a better idea instead is to install PCBoard to a directory like P:\PCB instead.

You do not have a drive P? That's okay because remember our goal is to plan for the future when your bulletin board system may encompass several computers all tied together with a LAN or network. This still did not answer the question, "Where is drive P going to come from?" What many people overlook is the fact that DOS comes with a utility called SUBST to create a drive by giving an existing drive an alias name. In other words, you can make drive P be the exact same thing as drive C. The command line to accomplish this is:

```
SUBST P: C:\
```

Add this statement to your AUTOEXEC.BAT to insure the drive letter will be assigned every time the machine is booted.

CAUTION: Other operating systems such as OS/2 may not have a command similar to SUBST. If this is the case, you will not be able to fool the operating system into thinking you have a drive you do not have. Therefore, install a physical drive instead.

If you are having difficulty in understanding why you should hassle with drive P and drive C if they are the same drive, perhaps the following scenario will help illustrate the importance.

- You began running PCBoard with one node. All files were centralized around C:\PCB\

- Soon your received enough calls to warrant up to 4 nodes. It was decided that running these under a multitasker on one machine would be both cost and performance effective. All files remained centralized around C:\PCB\
- Growth continued at a phenomenal pace. You already had 4 nodes, 20 doors installed, countless batch files and many display files. You were now at a crossroads. To run more than 4 nodes you decided a LAN was needed to maintain the delicate balance between economy and performance. As you know, a LAN has at least one server and many workstations. The workstations read files from the server drive. We have a problem now. All of the batch files and file specifications refer to C:\PCB (the local workstation drive) but the files are now on the server drive. This results in you having to change an awful lot of file specifications just to make the jump for a few nodes.

Now can you see how important it is to have good planning when dealing with a powerful bulletin board encompassing many files and subdirectories. Remember to always think ahead of the game and your maintenance and growth modifications will be much easier.

Installing PCBoard

An installation will fall into one of two categories -- new installation or upgrade from a previous version. This section discusses the steps necessary for each type of installation.

New Installations

The installation program gets one node up and running for you including many sample files and configuration options. To run the installation program, insert disk #1 into your A or B drive as required and type:

`a:install R` (if using drive A)

or

`b:install R` (if using drive B)

The installation program will provide you with all of the information you will need on the screen. If you have any questions about the install program or what to do, please call technical support for assistance.

Note: If you are installing OS/2 version of PCBoard make sure you answer YES when it asks "Running under a multitasker." The system would get stuck trying to access the usernet file
Once the installation program has completed, your next step should be to spend a few hours logging into the newly installed BBS and get familiar with the commands and options PCBoard presents to you and your callers. Once you have become familiar with PCBoard, refer to the other chapters in this manual like the *SysOp's Guide* or *Conference Setup* to help you add conferences, file directories, bulletins, and other BBS components.

Upgrading From a Previous Version

Realizing just how much time and effort goes into setting up a bulletin board, one of our goals is to always make upgrades as painless as possible. Upgrading from a previous version involves three steps:

1. **Backup** your \PCB and all associated subdirectories. This is your insurance policy.
2. Running INSTALL.EXE found on disk #1 of your PCBoard disks.
3. When asked if you are installing a new copy or upgrading an existing copy, make sure you select the ***upgrade*** option. Otherwise, your entire configuration may be wiped out which is the reason for step #1.

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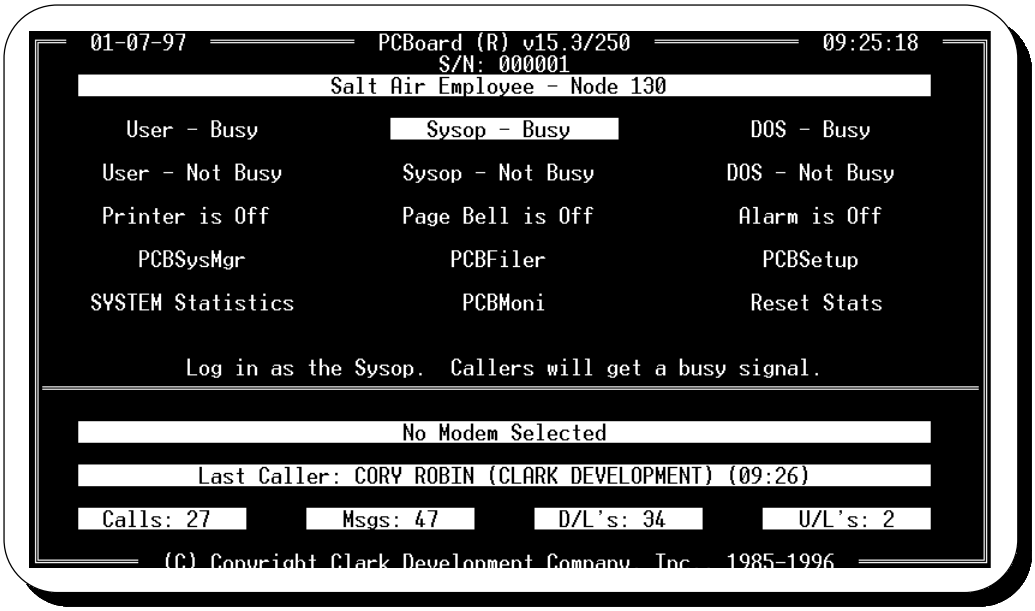
PCBoard

To load PCBoard, execute the NODEx batch file (where x is the node number to load). This brings up the node number you specify by utilizing batch files in the \PCB subdirectory. When PCBoard is loaded, it presents the *call waiting* screen to you.

The first part of this chapter discusses the call-waiting screen. The rest of the sections in this chapter discuss the command line parameters and switches you can use to load PCBoard, the status line, and potential problems you can run into while attempting to load PCBoard.

Call Waiting Screen



The call waiting screen is shown only to you, the SysOp. From this screen, you can access all of the important PCBoard configuration utilities and modify some of the ways PCBoard operates. There are 15 buttons on the call-waiting screen which define the action that will be taken.

Navigating

When the call waiting screen is displayed, you will notice the *Sysop - Busy* button is highlighted. You can move the highlight bar around the call-waiting screen by using the following keys:

l	**Left**. Move the highlight bar one button to the left. If the highlight bar is at the left-most button on the row, the highlight bar will not move.
r	**Right**. Move the highlight bar one button to the right. If the highlight bar is highlighting the right-most button on the row, the bar will not move.
b	**Down**. Move the highlight bar one button down. If the highlight bar is on the bottom button, the bar will not move.
t	**Up**. Move the highlight bar one row up. If you are at the top of a column of buttons, the highlight bar will not move.
R	**Execute option**. The button currently highlighted will be executed. For example, if the *Sysop - Busy* button is highlighted when you press R, you will log in as the SysOp and the phone will be made busy.

Options Explained

The following describes each of the buttons available on the call-waiting screen:

User - Busy

Selecting this button or pressing 2 enables you to login locally as a user. The display changes to approximate the view as seen when calling with a modem with the addition of the status line. When selected, the phone line for this node becomes busy (if a COM port has been selected).

User - Not Busy

This button is identical to the *User - Busy* button, except the phone line is not made busy. If someone calls while you are logged in, PCBoard makes a ringing sound to notify you of the call.

Sysop - Busy

This button allows you to login locally to PCBoard as the SysOp. The graphics, name, and password prompts are all skipped allowing for quicker logins. PCBoard makes its best attempt to approximate the display a remote caller would see on his screen. When selected, the phone line is made busy (if a COM port has been selected).

Sysop - Not Busy

This button is identical to the *Sysop - Busy* button, except the phone line is not made busy. If someone calls while you are logged in, PCBoard makes a ringing sound to notify you of the call.

DOS - Busy

Selecting this button or pressing 1 exits PCBoard and returns to DOS. The phone line is made busy thereby preventing users from connecting to the node.

DOS - Not Busy

This button exist PCBoard and returns to DOS. The phone line will not be busy so incoming callers hear the phone continually ring. If you prefer to use keyboard short-cuts, press 0 or E instead of selecting this button.

Printer

Selecting this button or pressing 3 will toggle the printer status.

Off: Caller log information is not sent to the printer.

On: Anything written to the caller log is also written to the printer port defined in *PCBSetup | Node Configuration*.

No Printer: PCBoard is not configured to use a printer (*PCBSetup | Node Configuration*).

Page Bell

Selecting this button or pressing 4 will toggle your chat status to be either on or off.

Off: Users are told the SysOp is not available for chat. They are then given the opportunity to leave a comment instead.

On: When the page bell is turned on, users can page you for chatting between the hours defined in *PCBSetup | Configuration Options | Limits*. If paged, you will be beeped for 30 seconds. You can choose to answer the page by pressing M or to ignore the page. If the page is not answered, the user may leave a comment to the SysOp.

Alarm

Selecting this button or pressing 7 toggles the alarm status to be either on or off. While a caller is online (either local or via modem), PCBoard beeps when an invalid command is entered, at the beginning of the call, and when the automatic logoff for inactivity is about to occur. The setting of the alarm determines if the beeps are heard on the local computer only -- remote callers are always sent the beeps.

`Off`: The beeps are heard on the remote computer only.

`On`: The beeps are heard both on the local computer and the remote computer.

PCBSysMgr

Pressing this button or A-S loads System Manager and makes the phone busy. See the *System Manager* chapter for further details. As long as you use NODEx.BAT to load PCBoard, you will return to the call waiting screen when you exit System Manager.

PCBFiler

Pressing this button or A-D loads PCBFiler and takes the phone off-hook. See the *PCBFiler* chapter for further details. As long as you use NODEx.BAT to load PCBoard, you will return to the call waiting screen when you exit PCBFiler.

PCBSetup

This button loads PCBSetup and makes the phone busy. As long as you use NODEx.BAT to load PCBoard, you will return to the call waiting screen when you exit PCBSetup.

Statistics

The call waiting screen keeps track of the last caller, and number of calls, messages, and file transfers since being reset by the *Reset Stats* switch. This button toggles the statistics that are displayed on the call waiting screen between local and system status.

`Local`: All statistic totals refer to the current node only.

`System`: All statistic totals refer to all of the nodes in your system.

NOTE: The statistics will not be updated on local logins if the `Exclude Local Logins from Stats` option is enabled in *PCBSetup | Configuration Options | Switches*.

PCBMoni

When this button is selected or you press A-M, PCBMoni is loaded and the phone is made busy. See the *Utilities* chapter in this manual for further details on the PCBMoni program.

Reset Stats

Selecting this button resets the last caller, and the number of calls, messages, and file transfers. When LOCAL statistics are shown only the current node's values are reset. Likewise, when SYSTEM statistics are shown, all values are reset. You may want to do this on a regular basis to help keep tabs of how active your system is.

Additional Keyboard Commands

In addition to the buttons on the call waiting screen, there are two keyboard commands:

8 **Recycle node.** Using this keyboard command will cause PCBoard to recycle the node and re-initialize the modem.

9 **Toggle screen display**. This keyboard command will toggle the status of the screen. When the screen is off, no information is printed on the screen (leaving the entire screen black). Otherwise, the normal information is displayed on the screen.

Command Line Parameters

Command line parameters give you the ability to modify certain ways PCBoard will behave. The following is a brief listing of what some of the command line parameters do:

- Automatically assume a local login and skip the call-waiting screen.
- Assume the call has already been answered by a front-end program.
- Override the serial port information in PCBOARD.DAT

Usually, you will modify the BOARD.BAT file to include the command line parameters you want to use. Use a text editor to modify the *PCBOARD* line in the batch file. To add one or more command line parameters, specify them after PCBOARD as shown in the following:

```
if exist endpcb del endpcb
PCBOARD /LOCALON /KEY:y;q^M
if exist remote.bat remote
```

Notice two command line parameters were specified on this line. To separate the parameters, a space is used after *PCBOARD* and also after the first parameter.

/C:[carrier speed]

If you run a front-end program which answers the call, you need to inform PCBoard the call has already been answered by using this parameter. When this parameter is used, the carrier speed of the connection must be supplied. If you do not specify a valid carrier speed, PCBoard prints

```
Invalid use of /C: switch
Exiting to DOS!
```

and returns to DOS. When a valid carrier speed is specified, PCBoard checks the port to make sure carrier is detected on the serial port PCBoard is defined to use before allowing the user to login. If carrier cannot be found, PCBoard prints an error message and returns to the OS.

Example

```
PCBOARD /C:14400
```

/CSTR:[connect string]

When this parameter is used with a front-end answering the phone and the `/C:` switch, the connect string can be passed to the modem. There are at least two benefits to passing the connect string to PCBoard from those front-end programs capable of doing so. 1) PPE programs access the connection information if designed to do so, and 2) PCBoard can analyze the connection string to automatically determine whether or not the caller has established an error correcting session.

Connect strings will almost always have spaces in the string to separate items such as connect speed from the connection codes. This presents a problem because DOS uses spaces to separate command line parameters. To get around this, PCBoard will translate any _ (underscore characters) into a space. Therefore, if you have a front end which can pass the connect string, make sure it replaces all spaces with underscore characters.

Example

```
PCBOARD /C:%BAUD% /CSTR:%CSTRING%
```

/CID:[CallerID information]

Caller ID information is automatically gathered by PCBoard if it is sent between the first and second RINGs sent by the modem. When you have a front-end answer the phone, PCBoard can no longer gather this information. Using the `/CID:` parameter, the Caller ID information can be passed to PCBoard. This information will then be written to the caller log if you have enabled the option to write the connect string to disk and it will also make the information available to any PPE applications requiring it.

Caller ID strings will almost always have spaces in the string to separate items such as date, time, and phone number. This presents a problem because DOS uses spaces to separate command line parameters. To get around this, PCBoard will translate any _ (underscore characters) into a space. Therefore, if you have a front end which can pass the Caller ID string, make sure it replaces all spaces with underscore characters.

Example

```
PCBOARD /C:%BAUD% /CSTR:%CSTRING% /CID:%CALLERID%
```

/DTE:[local port speed]

Use this command line parameter to pass the DTE or local port speed PCBoard should use for the call answered by a front-end program. Normally PCBoard is going to get the speed from the `Opening Baud Rate` field in *PCBSetup | Modem Information | Modem Setup*. With a front-end though, it is going to be controlling the speed of the port. Rather than forcing you to update two configurations to make a change in the port speed, the front-end program can use this switch to pass the speed it used for opening the port speed.

Example

```
PCBOARD /C:%BAUD% /CSTR:%CSTRING% /DTE:%PORTSPD%
```

/ERR

This parameter tells PCBoard that the connection established by a front-end program is an error-correcting session. Users who have error-correcting sessions are able to select file transfer protocols which require error-correcting sessions. You must use this parameter in conjunction with the /C parameter to have any effect.

Example

```
PCBOARD /C:14400 /ERR
```

/EVENT:[minutes to event]

If you have a front-end program answer all of the calls, PCBoard will not be in control of running events. Instead, it is up to your front-end program to run all of your events for you. To help ensure all callers have logged off by the time your front-end program is ready to run the event, PCBoard uses this parameter.

You must specify the number of minutes after the user has connected that the event is scheduled to run. Most front-end programs will set an environment variable with this value.

Example

Assuming your front-end program sets an environment variable called EVENTIME with the number of minutes until the next event occurs, you would use the following line in BOARD.BAT:

```
PCBOARD /EVENT:%EVENTIME%
```

NOTE: If you are unfamiliar with using environment variables in batch files, refer to your DOS manual for a detailed description.

/EXPORT

Manually export all outgoing Fido mail. A synonym for this parameter is /SCAN. Example:

```
PCBOARD /EXPORT
```

or

```
PCBOARD /SCAN
```

/FILE:[location of PCBOARD.DAT]

By default, PCBoard assumes its configuration file (PCBOARD.DAT) is located in the current directory. If you attempt to load PCBoard from a directory that does not have a PCBOARD.DAT, you see the following message:

```
Unable to open PCBOARD.DAT
Exiting to DOS!
```

In some setups, it is desirable to share the same PCBOARD.DAT file for several nodes. A good example of this is when you have several local users logging on over the network. The /FILE parameter enables you to specify where the PCBOARD.DAT file is found for the nodes.

After the *`/FILE:`*, specify where the appropriate PCBOARD.DAT file is located. If you specify an incorrect location or forget to specify the filename, you will see the following error message:

```
Unable to open PCBOARD.DAT
Exiting to DOS!
```

Example

```
PCBOARD /FILE:C:\TEMP\PCBOARD.DAT
```

/IMPORT

Manually import all new Fido mail. A synonym for this parameter is /TOSS. Example:

```
PCBOARD /IMPORT
```

or

```
PCBOARD /TOSS
```

/KEY:[text to stuff]

When used in conjunction with the *`/LOCALON`* parameter, you can automatically send the keys specified with the /KEY parameter. This would allow you to setup a batch file that may automatically answer the graphics, name, and password questions for you -- saving you from entering this information each time you want to log in locally.

When specifying the keys to stuff, you need to be aware of some special conditions:

- To send a carriage return, enter *`^M`* on the command line. See the examples for this section for additional details.
- If you need to send a space, surround the entire /KEY parameter in quotes to make sure DOS treats it as a single parameter. See the examples for this section.
- If you need to send a %, enter two % characters in a row. This character has a special meaning when used in batch files and is stripped unless you specify two together.

To send the contents of a file rather than specifying the keys to send on the command line, enter an `@` followed by the filename to use after the *`/KEY:`* parameter. By sending the contents of the file, you do not have to worry about the special conditions outlined earlier in this section. For a sample of using the contents of a file, see *the examples for this section*.

Examples

To automatically answer the graphics and name questions, you could modify your BOARD.BAT to read:

```
PCBOARD /LOCALON /KEY:y;q^mFirst^mLast^m
```

Using the previous example and stacking your name (instead of answering each prompt individually) would require that you use a space. As mentioned previously, you will need to surround the entire /KEY parameter with quotes if you want to send a space.

```
PCBOARD /LOCALON "/KEY:y;q^mFirst Last^m"
```

Finally, if you want to specify that the contents of LOGIN.TXT be sent to the local login session, you would modify your BOARD.BAT to read:

```
PCBOARD /LOCALON /KEY:@LOGIN.TXT
```

or

```
PCBOARD /LOCALON /KEY:@C:\LOGIN\BOB.TXT
```

/LOCALON

Not all users have to connect with a modem to login to PCBoard. In fact, the ability to let users login from remote with a modem or locally is one of PCBoard strong points. You could have all of your users login locally from the call waiting screen using the *User - Busy* or *User- Not Busy* buttons, but this could introduce some serious and unnecessary risks to your system.
Instead, you should use this command line parameter. When used, PCBoard bypasses the call-waiting screen and automatically performs a local login similar to selecting the User - Not Busy button. The following conditions are in effect when the /LOCALON parameter is used:

- The status line is changed to a one line status line, displaying a minimal amount of information. This status line more closely resembles the status line one might see in a regular modem terminal or communications program.

- With the exception of `A-F`, `A-I`, `A-P`, `A-T`, and `5`, all SysOp functions keys are disabled to prevent potential security risks. Descriptions of these function keys can be found in the NODE.BAT section of this chapter.
- The function keys defined in *PCBSetup | Configuration Options | Function Keys* still remain active.
- Users may upload and download files using any protocol **internal** to PCBoard.

For additional information about setting up local logins for multiple users, please refer to the *Multiple Nodes* chapter in this manual.

Example

```
PCBOARD /LOCALON
```

/NOENV

Normally PCBoard will create environment variables to aid the setup of doors in a multiple node environment. If you do not want the PCBDAT, PCBDRIVE, PCBDIR, and PCBNODE environment variables to be created, use this parameter.

Example

```
PCBOARD /NOENV
```

/PPE:[filename]

With this command line switch, PCBoard will execute the PPE specified after the colon. Upon completion, control is returned to the DOS prompt for further processing. You can use this command line switch to run PPE files in events or to execute INSTALL.PPEs if you develop PPEs. If no PPE filename is specified, PCBoard exits with an errorlevel of 99. You can test this errorlevel in a batch file to see if the request to run the PPE aborted abnormally.

When executing PPEs with this command line parameter, be aware that no user information is available from within the PPE because a user has not logged in yet. PPEs needing user information should be run with the `/RUNPPE` parameter instead.

When passing command line parameters to a PPE, you must use semicolons between all parameters (including the first one). Refer to the examples for this section.

Examples

```
PCBOARD /PPE:C:\PCB\PPE\INSTALL.PPE
PCBOARD /PPE:C:\PCB\PPE\EVENTWRK.PPE
PCBOARD /PPE:C:\PCB\PPE\SAVETIME.PPE   ;PARAM1;PARAM2
```

/READSYS

This parameter searches the current directory for a USERS.SYS file. If found, the user file is updated with the information in the file. Once the update is completed, PCBoard immediately exits to DOS. This parameter is useful for third party applications that update the user file.

Example

```
PCBOARD /READSYS
```

/RUNPPE;[first];[last];PWRD:[password];PPE:[filename]

Use this command line parameter to run a PPE and immediately return to DOS. A user name and password is required to use this command line parameter because that information is used to log into the system. Once logged into the system, the PPE will run and you have full access to all user data.

If insufficient information is passed via the command line, one of the following error messages is printed and PCBoard exits with an errorlevel of 99 which you can check inside of a batch file.

```
PPE Name is missing
User Name not found
Error in Password
```

first	first name of user to log into the system as
last	last name of user to log into the system as
password	password required to login for user specified by *first* and *last* parameters
filename	filename of the PPE to execute including full path if necessary.

When passing command line parameters to a PPE, you must use semicolons between all parameters (including the first one). Refer to the examples for this section.

Examples

```
PCBOARD /RUNPPE;Silo;Cook;PWRD:anyoldthing;PPE:C:\PPE\RUNME.PPE
PCBOARD /RUNPPE;Silo;Cook;Jr.;PWRD:anyoldthing;PPE:C:\PCB\PROCUSER.PPE
PCBOARD /RUNPPE;Jim;Ogg;PWRD:secret;PPE:C:\PCB\TEST.PPE;param1;param2
```

/USERSYS;[first];[last];PWRD:[password];TPA:[application]

This command line switch is designed to be used by developers of third party applications. It generates a USERS.SYS file for the user specified and then returns back to DOS. The USERS.SYS file will be found in the directory where PCBoard was executed. The text surrounded in brackets must be replaced with the following information:

first	The user's first name for whom the USERS.SYS file will be generated.
last	The user's last name for whom the USERS.SYS file will be generated.
password	The user's password. If the password is incorrect, the USERS.SYS file will not be generated.
application	The name of the application TPA information should be included for. This is optional and should only be used if TPA is specified.

NOTE: The **;TPA:[application]** is purely optional and should only be specified if the USERS.SYS file should contain the information of a particular TPA.

Examples

```
PCBOARD /USERSYS;John;Doe;PWRD:anyoldthing
PCBOARD /USERSYS;John;Doe;Jr.;PWRD:anyoldthing;TPA:mail
```

Environment Switches

Environment switches are similar to command line parameters because they modify the way PCBoard behaves. Instead of specifying the switches on the command line, PCBoard will look for these switches to be specified in the PCB environment variable.

If you look at your NODEx.BAT file, you will notice towards the top is this line:

```
SET PCB=
```

It is on this line you will specify any of the environment switches discussed in this section. Note the `=` character immediately follows `PCB`. If it does not, PCBoard will not recognize the environment variable. Specifying more than one switch can be done by entering them one after another on the same line as shown in this example:

```
SET PCB=/NODE:99 /COM2:
```

This example shows each switch separated by a space. In reality, it is not necessary to separate each switch with a space but it does make it clearer to read.

NOTE: If you get an `out of environment` error when loading PCBoard, refer to your DOS manual on how to use the *Shell* command in your CONFIG.SYS file to increase the default environment size.

/16650

DOS

Because the 16650 and 16550 chips both have similar detection schemes, you must manually tell PCBoard if you have a 16650 UART by using this switch. Without this switch, PCBoard sees the UART as a regular 16550 and will only use 16 bytes of the 32 available. Use of this switch insures the other 16 bytes are used.

Example

```
SET PCB=/16650
```

/BASE:[hex address]

DOS

This switch overrides the serial port base address specified in *PCBSetup | Modem Information | Modem Setup* with the value you enter. This value must be in hexadecimal and may comprise no more and no less than 3 digits.

NOTE: This switch is only recognized when PCBoard is configured to use Async. serial ports COM3-COM8.

Example

```
SET PCB=/BASE:3f8
```

/BAUD:[opening port speed]

This switch overrides the opening port speed defined in *PCBSetup | Modem Information | Modem Setup*. In order for your modem and PCBoard to communicate properly, you must specify a value at which your modem is capable of communicating.

Example

```
SET PCB=/BAUD:57600
```

/BIGNDX

PCBoard uses index files to quickly lookup user records by name. Prior to v15.2, these index files could hold no more than 65,535 names. Using this switch will modify the index files to allow several billion names.

Use of this switch can cause some compatibility problems with third party applications. Any application which accesses the user file might also access the index files. Programs not designed to read the larger index formats, will not work properly using this switch.

Example

```
SET PCB=/BIGNDX
```

/COLOR

PCBoard attempts to automatically determine if your system is capable of color display or not. Using this switch will force PCBoard to assume your system is capable of color display.

Example

```
SET PCB=/COLOR
```

/CDROM:[drive];[range of drives]; . . .

To speed-up file scans, PCBoard stores index files in the same location where the DIR (description file) filename is located. Some CD-ROMs come with DIR files on the disc ready for adding to your BBS. Due to the fact that CD-ROMs cannot be written to this presents a problem when PCBoard attempts to create the index files on the CD-ROM and an error message will be generated. Using this switch, no index files will be created. Your file scans will not be as fast, but the errors will not be generated either.

The best of both worlds can be achieved if you copy the DIR files to a directory on a hard-drive and change your configuration in DIR.LST to reflect this change. Utilizing this change, you will not have to use the /CDROM switch and the index files can be created thereby increasing the speed of file scans.

Examples

```
SET PCB=/CDROM:G
SET PCB=/CDROM:G;I;Z
SET PCB=/CDROM:G-L
SET PCB=/CDROM:N;Q-V
```

/COM[number]:

DOS

This switch will enable you to override the Comm Port defined in *PCBSetup | Modem Information | Modem Setup*. If an invalid port number is defined, PCBoard will revert to the port defined in PCBSetup.

NOTE: This switch assumes you are referring to a UART based port. The /PORT switch should be used if communicating with an external driver like OS/2 or FOSSIL.

Example

```
SET PCB=/COM2:
```

/CONNECT:[carrier speed]

If you want to override the carrier speed PCBoard uses for estimating how long it will take to download a file, use this switch. This switch is ideal if you are operating in a packet switching network which is capable of high speeds—whereas the users accessing the system through the network may not be capable of the same speeds.

NOTE: For this switch to have any effect, you must answer Y to the `Packet-Switch Network` question in *PCBSetup | Modem Information | Configuration Switches*.

Example

```
SET PCB=/CONNECT:2400
```

/INIT:[string]

This parameter gives you the ability to override the initialization strings in *PCBSetup | Modem Information | Modem Setup*. This ability is useful in circumstances where more than one node share the same PCBOARD.DAT file.

Because modem initialization strings typically contain characters that can be misinterpreted at the command prompt level, surround this entire parameter with quotes as the examples show.

Example

```
SET PCB="/INIT:ATZ"
SET PCB="/INIT:ATZ^MATM0H0"
```

/IRQ:[number]

DOS

If you are using a serial port which uses a non-standard IRQ setting, you can use this switch to override the value defined in *PCBSetup | Modem Information | Modem Setup*. The only time you should worry about non-standard IRQs is when you are using COM ports above COM2.

Example

```
SET PCB=/IRQ:5
```

NOTE: This switch is only recognized when PCBoard is configured to use Async. serial ports COM3-COM8.

/ISDN

This switch forces all connections PCBoard answers to be treated as error-corrected calls. In an ISDN environment where calls are error-corrected but not reported as such in the connect strings, use of this switch will inform PCBoard of the error-corrected status. Without the error-correction, protocols such as Ymodem/G and Xmodem-1K/G would not be available.

This switch is different than the /ERR command line parameter because /ERR is used only in calls answered by a front-end program instead of PCBoard.

Example

```
SET PCB=/ISDN
```

/MIXED

Normally, PCBoard will convert the city/state information entered by a new user into uppercase characters. To prevent this conversion and leave the information in the same form as it was entered by the user, use this switch.

NOTE: You can always enter lower or mixed case city/state fields using the user editor in System Manager even if this switch is not used.

Example

```
SET PCB=/MIXED
```

/MONO

PCBoard attempts to automatically determine if your system is capable of color display or not. Using this switch will force PCBoard to assume your system is **not** capable of color display.

Example

```
SET PCB=/MONO
```

/NMT

PCBoard is capable of automatically detecting when Novell's NetWare is running. If you are running NetWare and you experience lockups loading PCBoard, you may want to use this switch. If PCBoard fails to automatically detect NetWare it may think that it erroneously determined that a multitasker is present. This condition would eventually cause a lockup.

Example

```
SET PCB=/NMT
```

/NOATA

When PCBoard detects a ring it instructs the modem to answer the phone by sending the standard ATA modem command. Some modems have the ability to detect a fax or modem call and require the modem to answer the phone. If you own this type of modem, PCBoard's sending of ATA to answer the phone will interfere with modem trying to answer the phone.

This environment switch will cause PCBoard to not send the ATA to answer the phone. Instead, PCBoard will wait for the number of seconds defined in *PCBSetup | Modem Information | Modem Setup* for a `CONNECT` message from the modem.

NOTE: When the modem is configured to answer the phone instead of PCBoard, a potential security breach can occur when running door applications. If a caller hangs up while in a door and another caller is able to login before control is returned to PCBoard, the new caller will login as the user who dropped carrier. See the `Disable Password Check (DOS)` option in *PCBSetup | Configuration Options | System Control* for additional information on protecting users from logging in under another account.

Example

```
SET PCB=/NOATA
```

/NOCONF

With this switch, PCBoard does **not** write the conference registration information to the DOOR.SYS file. This switch is normally not needed. But on a system with a large number of conferences, it can be used to reduce the space and time required to create the DOOR.SYS file.

Example

```
SET PCB=/NOCONF
```

/NODE:[node number]

This switch will override the node number PCBoard finds in the PCBOARD.DAT file it uses. If you specify a node number which exceeds what you have purchased a license for, PCBoard will revert to 1 as the node number.

Example

```
SET PCB=/NODE:3
```

/NOFIDO

Disables Fido processing. This is equivalent to answering *N* to the *Enable Fido Processing* in PCBSetup | Fido Configuration | Fido Configuration. Example:

```
SET PCB=/NOFIDO
```

/NOPROTECT

This switch disables some of the alias-protection schemes PCBoard uses to prevent other users from determining the real name behind an alias. In particular, the following are eliminated:

- The automatic increase in the required security for the USERS command inside of a conference where aliases are allowed
- The ignoring of real names by the Soundex search when performed in a conference where aliases are allowed

Example

```
SET PCB=/NOPROTECT
```

/NORIP

By default, PCBoard checks incoming calls to see if the caller is capable of RIPscrip graphics. This information can then be used by PCBoard or PPL as needed. This detection does add a brief amount of time to the logon. Use of this switch disables the RIPscrip auto-detection.

Example

```
SET PCB=/NORIP
```

/NOVIEWSEC

When this switch is used, a caller may view a file even though they are not able to download it. Normal operation for PCBoard is to disallow a caller to view a file if they are not able to download it. Be careful when utilizing this option if your BBS contains sensitive data.

Example

```
SET PCB=/NOVIEWSEC
```

/OLDINDEX

This version of PCBoard is capable of maintaining V14.x style message index (.NDX) files. You may need to maintain these index files if you are using third party programs which access the message base index files but are not able to read the newer IDX index files. If so, use this switch to force all conferences to maintain the older style index files as well as the newer style.

Example

```
SET PCB=/OLDINDEX
```

/OS

Looking at *PCBSetup | Modem Information | Modem Setup*, you'll see PCBoard has the ability to communicate directly with the OS/2 communications driver. This switch is the equivalent of answering `O` to the `Comm Driver to use` question and is only valid when used with the /PORT environment switch. If you do not use the /OS switch in conjunction with /PORT, the /OS switch is ignored.

Example

```
SET PCB=/OS /PORT2:
```

/PAD

This switch force PCBoard to act as if the connection is coming in via a packet-switched network. For more information, please refer to the PCBSetup chapter of this manual where it discusses packet-switched networks.

Example

```
SET PCB=/PAD
```

/PORT[port#][F]:

Using this switch you can override the Comm Port defined in *PCBSetup | Modem Information | Modem Setup*. This switch differs from the /COM switch because it allows you to specify a port controlled by an external driver like COMM-DRV, FOSSIL, or OS/2.

DOS

Using a port controlled by COMM-DRV requires you to simply pass a port number between 1 and 32. To utilize a FOSSIL port, append an `F` to the right of the FOSSIL port number as shown in the examples for this parameter.

To use an OS/2 port, please refer to the /OS environment variable. If an invalid port number is specified, PCBoard reverts to the port defined in PCBSetup.

Examples

```
SET PCB=/PORT2:
SET PCB=/PORT8F:
SET PCB=/PORT5: /OS\
```

While A User Is Online

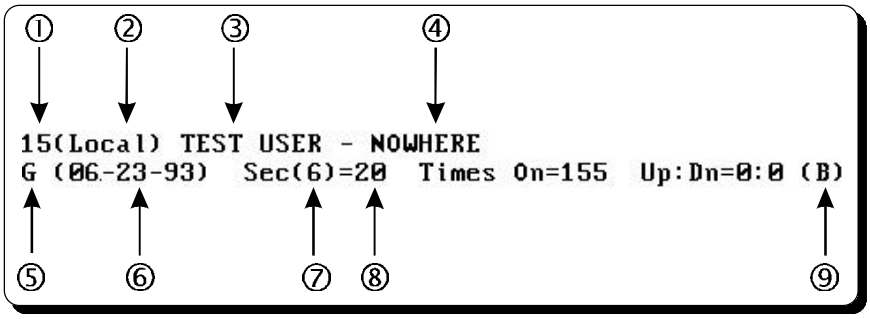
Status Line

When a user is logged into the system, a 2-line status bar is displayed at the bottom of the screen. You can refer to this status bar to determine information about the online caller. There is far too much information about the user to display it all in two lines. To accommodate all of the information displayed, there are several views of the status line you can rotate between by pressing A - H. The original view is referred to as the *default view*.

Default View

```
130(Local) SEAN POPHAM - CLARK DEVELOPMENT                ALT-H=Help   0 09:27
G (01-07-97)  Sec(0)=250  Times On=228  Up:Dn=0:2            15 198K1303 09:27
```

There is a lot of information displayed on this screen. To help explain the various components of the status line, it will be broken into two segments which will be explained in detail.



① **Node number**. This area displays the node number.

② **Carrier speed**. This area displays the carrier speed of the caller. If there is an *E* after the carrier speed, the caller has an error-correcting session.

③ **Name of user**. This region displays the full name of the user.

④ **City / location**. In this area, the contents of the City field in the user's record is displayed.

⑤ **Graphics mode indicator**. 1 of 4 indicators are shown: N, A, G, or R:

N- CTTY mode. Color graphics is disabled.
A - ANSI sequences are sent to speed up cursor positioning.
G - ANSI sequences are sent to color the screen and to move the cursor.
R - The user has selected RIPscrip mode.

⑥ **Last date online**. The last date the current user called the system is displayed in this region of the status line.

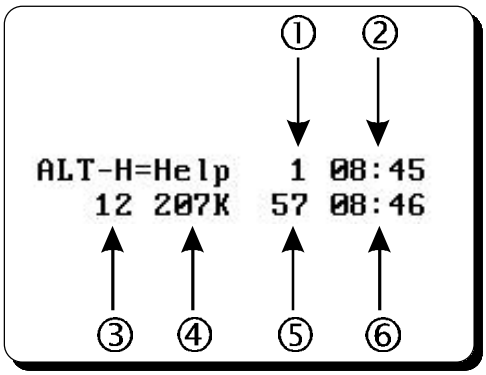
⑦ **Current conference**. The number between the parentheses displays the current conference the user is in.

⑧ **Current security level**. In this area, the security level of the caller is displayed. This level takes into account any additional security assigned by joining a conference or other temporary security level adjustments.

⑨ **Call waiting screen indicators**. From the call-waiting screen you can see the status of the page bell, printer, and alarm. Between the parentheses a *P*, *A*, or *B* will be displayed if the printer, alarm, or page bell is turned on.

`Times On` This region of the status line displays the total number of times the user has called the system. This information can be found in each user's record.

`Up:Dn` Refer to this area of the status line to see how many files the user has transferred. The number to the left of the colon is the number of files uploaded while the number to the right is the number downloaded.



① **Minutes used**. In this region of the status line, the total number of minutes the user has been online is displayed. This value is obtained by looking at the current time and comparing it with the time the user logged in.

② **Logon time**. The time the caller logged into the system is displayed in 24 hour format in this region.

③ **Last file handle number**. The value displayed in this area is the last file handle number DOS returned to PCBoard You should use this number to *estimate* the number of files which are open by this copy of PCBoard. Using this number, you will know if you need to increase the number of files allocated in your CONFIG.SYS file.

DOS

④ **Total free memory**. The value displayed here tells you how much memory is left. The number is displayed in kilobytes (1024 bytes per kilobyte).

⑤ **Minutes left**. In this region, the number of minutes left for this session or day is displayed. Remember, it is possible for the user to achieve time credits by uploading.

⑥ **Current time**. In this region, the current system time is displayed in 24 hour format.

In addition to the information shown on the status line, there are blinking characters that may appear at the bottom of the screen near the Logon and Current time fields. The following describes the significance of the blinking characters:

N This node has been marked to make the SysOp the next user to login.

X This node is set to exit to DOS after the caller disconnects.

R This node is set to recycle after the caller disconnects.

S Software flow control is turned on. The remote caller must press `C -Q` to begin sending data again. Unlike the other indicators, this one does not flash or blink.

g After the file transfer is completed, the user has requested to be logged off.

p The caller attempted to page you, but you did not answer the page.

◆ PCBoard is scanning the USERNET.XXX file.

View #2

```
13Alt-> F=Out I=In N=Next X=DOS P=Printer T=FmFeed F1/F2=Time F9/F10=Security
 1=SyPrv 2=LkOut 3=Print 4=Bell 5=SHELL 6=Reg 7=Alarm 8=HngUp 9=Screen 10=Chat
```

The second page of the status line briefly lists the SysOp function keys available while a caller is online. Refer to *Keyboard Commands* in this section for a detailed description of each.

View #3

```
13801-261-1686  / 801-261-8976   E/D: 00-00-00  P/W:
 C1:                                C2:
```

In the upper left hand corner of this view, the user's business/data and home/voice phone numbers are displayed. The two numbers are separated by a / character. The following describes the rest of the fields in this view:

E/D **Expiration date**. This field shows the expiration date of the user. If *00-00-00* is displayed, either subscription mode is not enabled or the user has been setup to not have an expiration date.

P/W **Password**. This field displays the login password of the caller.

C1 **Comment 1**. The contents of the *Comment1* field in the user's record is displayed.

C2 **Comment 2**. The contents of the *Comment2* field in the user's record is displayed.

View #4

```
13Msgs Left:     40  Files U/L:      0  Bytes U/L:          0
 Msgs Read: 20,687  Files D/L:      2  Bytes D/L:   1,378,934  Today:       0
```

To quickly display the user statistics for file transfers and messages, you should switch to this view. The following information is available:

Msgs Left Displays the total number of messages the user has entered.

Msgs Read Displays the total number of messages read by the user.

Files U/L Displays the number of files uploaded to the system.

Files D/L Displays the number of files downloaded from the system.

Bytes U/L Shows the number of bytes the user has uploaded to the system.

Bytes D/L Shows the number of bytes the user has downloaded.

Today Displays the total number of bytes downloaded by the user today. A negative value means he has uploaded files and received byte credits.

View #5

```
0 PC-Modem: 57600 Overrun:  0 Parity  :  0  InBuf:    0  OutBuf:    0  CTS:up
 Carrier : 21600 Framing:  0 ErrCorr :YES  16550A FIFO
```

This view presents information about the serial port PCBoard is using. If PCBoard is using port 0 or an external communications driver, this view is **not** available. The fields for this view are:

PC-Modem	The speed used between the computer and the modem. This is used between the computer and the modem. This is known as the DTE speed.
Carrier	The speed the caller connected to the system. This speed is known as the DCE speed.
Overrun	Displays the number of overruns experienced. This value should always be 0. If not, you are receiving data faster than your system is setup to handle.
Framing	Displays the number of framing errors that have occurred. If this value is not 0, your system is having problems receiving data.
Parity	Displays the number of parity errors that have occurred. If this value is not 0, your system is having problems receiving data.
ErrCorr	Based on the information the modem provides to PCBoard at login, this field shows whether or not an error-correcting session was detected.
InBuf	The total number of bytes currently in the input buffer. This value should normally be 0.
OutBuf	Displays the total number of bytes in the output buffer. This value should normally be 0.
CTS	Shows the status of the CTS signal on the serial port. The signal will either be *up* or *dn*.

In addition to the rest of the fields in this view, PCBoard displays the type of UART it detects in the lower right hand corner of the status line. The possible values are:

8250 OLD	An older 8250 UART has been detected.
8250A/16450	An 8250A or 16450 UART has been detected.
16550	An older 16550 UART chip has been detected. This chip has a bug which prevents the 16 byte buffer from working correctly.
16550 FIFO	An older 16550 UART chip has been detected. PCBoard determined this chip is capable of using the 16 byte buffer.
16550A FIFO	A 16550A UART chip has been detected. PCBoard will take advantage of the 16 byte buffer of this UART chip.
16650 FIFO-32	PCBoard detected a 16650 UART chip with a 32 byte buffer.
COMM-DRV	PCBoard is communicating with the modem using COMM-TSR.
FOSSIL	PCBoard is communicating with the modem using a FOSSIL driver.
OS/2	PCBoard is communicating with the modem via the OS/2 API.

Keyboard Commands

This section details the keyboard commands available to you while a user is online. You may only use these from the local keyboard -- not while you are logged in from remote.

1 **SysOp privileges**. Use this keyboard command to **temporarily** upgrade a user from a non-SysOp security level to the SysOp security level defined in *PCBSetup | Security Levels | Sysop Commands*. To return the caller to his original security level during the same call, press 1 again. Once the caller logs off, his security level will be returned to the original value.

2 **Lock out**. This keyboard command allows you to automatically lock out the user from the system. If you choose this route, their security level is dropped to 0 and they are immediately disconnected from the system.

3 **Toggle printing caller log**. Use of this keyboard command toggles the printer status. Anything written to the caller log is also sent to the printer port defined in *PCBSetup | Node Configuration*. The printer status is on when a P is printed in the parentheses found on the lower-right corner of the status line.

4 **Toggle page bell status**. Use of this keyboard command toggles the page bell status. When the page bell is turned on, users are able to page you for chatting if they attempt to page between the hours defined in *PCBSetup | Configuration Options | Limits*. If paged, you are beeped for 30 seconds. You can then choose to answer the page by pressing M or to ignore it. If you do not answer, the user is asked if they want to leave a comment to the SysOp. The page bell status is on when a B is printed in the parentheses found on the lower-right corner of the status line.

5 **Shell to DOS**. As long as you have not disabled local shells to DOS in *PCBSetup | Configuration Options | System Control*, this keyboard command will cause PCBoard to shell to DOS.

6 **Modify current user's record**. This keyboard command enables you to edit the same fields you can edit by using the C subcommand of the 7 SysOp command. The difference being that the current user's record is edited instead of you making an attempt to find the proper record. If the user does not yet have a record on disk, this keyboard command is disabled.

7 **Toggle alarm status**. Use of this keyboard command toggles the alarm status. While a caller is online (either local or via modem), PCBoard beeps when an invalid command is entered, at the beginning of the call, and when the automatic logoff for inactivity is about to occur. The setting of the alarm determines if the beeps are heard on the local computer. You know the page bell status is on when an A is printed in the parentheses found on the lower- right corner of the status line.

8 **Disconnect current caller**. To force a user to immediately disconnect from the system, use this keyboard command. Before the caller is disconnected, you are asked for confirmation.

9 **Toggle screen display**. This keyboard command toggles the status of the screen. When the screen is off, no information is printed on the screen (leaving the entire screen black). Otherwise, the normal information you would see is displayed on the screen.

0 **Chat with caller**. To break into chat with the caller, use this keyboard command. When in chat mode, both you and the user can type interactively with one another. When finished, press E to return to PCBoard.

A - B **Send a bell to the caller**. When this keyboard command is used, a beep is sent to the remote caller. This beep is useful to get the user's attention. For you to hear this beep locally, the alarm status must be on.

A - D **Run PCBFiler**. PCBoard shells to DOS and runs PCBFiler. If a caller is online, they are informed you have exited and are asked to remain online.

A - F **Capture text to a file**. Use this keyboard command to capture the text PCBoard displays on the screen to a file on disk. When you turn on capture mode, you will be prompted to enter the filename you wish to capture the information to. If the filename already exist, the new data is appended to the end of the existing file. To turn off capturing, press A - F again.

A - I **Import text from a file**. This keyboard command is used to import a text file into PCBoard's buffer. If PCBoard finds the filename specified, the contents of the file are used as if you typed at the keyboard.

A -M **Run PCBMoni**. PCBoard runs PCBMoni by shelling.

A - N **Reserve node for the SysOp**. After the caller disconnects, PCBoard automatically selects the *Sysop - Busy* button from the call waiting screen rather than wait for the next call to come in.

A - P **Capture text to the printer**. Use this command to capture the text PCBoard displays to the printer defined in *PCBSetup | Node Configuration*. When capture mode is on, a P appears next to the last file number opened on the status line. To turn off capturing, press A - P again.

A - R **Recycle the node**. This command marks the current node to be recycled after the caller disconnects. For additional information on recycling a node, refer to the 1 5 SysOp command in the *PCBoard Commands* chapter.

A - S **Run System Manager**. System Manager is executed by shelling to DOS.

A - T **Send a top of form to printer**. This keyboard command sends a form feed to the printer defined in *PCBSetup | Node Configuration*.

A - X **Drop to DOS after current call**. This keyboard command automatically selects the *DOS - Busy* button after the current caller is disconnected. The phone is made busy, and PCBoard exits.

A - 1 **Decrease available time**. When this keyboard command is used, the caller's available time online will be reduced. If the user's available time is under 10 minutes, it will be decreased by one minute. Otherwise, his time will be decreased by 5 minutes.

A - 2 **Increase available time**. When this keyboard command is used, the caller's available time online will be increased. If the user's available time is under 10 minutes, it will be increased by one minute. Otherwise, his time will be increased by 5 minutes.

A - 9 **Decrease security level**. Using this keyboard command reduces the caller's current security level. The new security level is the next lowest entry in the PWRD file (*PCBSetup | File Locations | Configuration Files*). Once the security level has been adjusted, the user adopts the characteristics of the new security level (including the time and bytes available).

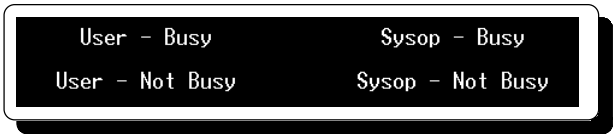
A - 0 **Increase security level**. Using this keyboard command increases the caller's current security level. The new security level is the next entry in the PWRD file (*PCBSetup | File Locations | Configuration Files*). Once the security level has been adjusted, the user adopts the characteristics of the new security level (including the time and bytes available).

Local Logins

Anytime you access the system locally rather than through a serial device, you are performing a local login. All information is displayed to you on your local machine and you are actually running PCBoard on your machine. There are several methods you can use to log into the system in local mode.

Methods To Login Locally

Perhaps the most frequently used method of logging into the system locally is via the call-waiting screen. On the call-waiting screen, you will notice the following four buttons:



The two buttons on the left will log you into the system asking you for your name, etc. In essence, this is identical to accessing the system via modem or serial port except everything is on your local screen. If you use the two buttons on the right, you will be logged into the system as the SysOp (as defined in record #1 of the users file).

You may also use the `/LOCALON` command line parameter of PCBOARD.EXE. If you use this parameter on the command line, the call-waiting screen will be bypassed and you will be immediately logged into the system. This method would be identical to selecting *User - Not Busy* from the call-waiting screen. For example, if you want a node to bypass the local login screen and immediately login, modify your PCBOARD line in your BOARD.BAT file to read:

```
PCBOARD /LOCALON
```

Differences in Operation

Normally everything behaves/displays the same whether you are logged in locally or over a serial connection. However, when you are logged in locally, there are a few items you may want to be aware of:

- Perhaps the most noticeable difference between remote logins and local logins is when you transfer files. PCBoard behaves differently when logged in locally. Refer to the *File Transfers* section in the *SysOp's Guide* chapter of this manual for additional details.
- When a user is logged in locally, the COM port is defined as 0 in the setup. This means if you have any door or utility applications that reference PCBoard to see what COM port is being used, be sure it is able to discern COM 0 means the user is on locally.
- The speed of a caller when he is online is set to what you have defined as the *Opening Baud Rate* in *PCBSetup | Modem Information | Modem Setup*.

Additional Features

While a user is logged in locally some additional keyboard commands are available:

o	**Scroll-back Buffer**. Access text that has scrolled off of the screen. The maximum number of lines stored in the buffer is defined in *PCBSetup* | *Configuration Options* | *Limits*.
5	**Shell to DOS**. Enables you to shell to a DOS prompt while in PCBoard. You can disable or enable this option in *PCBSetup* | *Configuration Options* | *System Control* with the `Allow Local SHELL to DOS`.
A - I	**Import a text file**. You may need to import or stuff a text file while in PCBoard. Perhaps you need to include a file in a message. While entering the message you can press A - I . You are asked for the filename to import. If the file is not found, nothing is done. If the file is found, the text is imported into PCBoard as if you typed the information.
A - F	**Capture screen output to file**. To capture the text PCBoard displays on your screen, press A - F . If you do not already have a capture file open, you are asked for the filename to put the data in. If you have a capture file open, pressing A - F closes it. You will know if a capture file is open because you will see an **F** on the status line.
A - P	**Capture screen output to printer**. Capturing text to the printer is almost identical to capturing text to a file except you are never asked for a filename. Instead, PCBoard looks at the printer port you defined in *PCBSetup* | *Node Information*. All information PCBoard displays (with the exception of `More` prompts and such) are sent to the printer. A **P** appears on the status line to signify you are capturing output to the printer.
A - T	**Send a form feed to the printer**. If you need to send a form feed to the printer, you may do so by pressing A - T .

BOARD.BAT / BOARD.CMD

For PCBoard to function normally, BOARD.BAT or BOARD.CMD must load each node. The difference between these two files is that the former is for the DOS version of PCBoard and the latter is for the OS/2 version. This file provides the logic that allows PCBoard to exit out of memory, load a door application or event, and return where the caller left off from.

Because BOARD.BAT and BOARD.CMD are so similar in structure, we will cover both in the same section and refer to them as the term *BOARD file*. Whenever a specific portion of the BOARD file is specific platform, an appropriate icon in the margin will alert you to this fact.

Sample

The BOARD file that came with your copy of PCBoard resembles this example:

```
@echo off
:top
%pcbdrive%
cd %pcbdir%
if exist remote.cmd rename remote.cmd remote.sys
if exist remote.bat rename remote.bat remote.sys
if exist door.bat   delete door.bat
if exist event.bat  delete event.bat
if exist endpcb     delete endpcb
pcboardm /file:%pcbdat%
if exist remote.cmd call remote.cmd
```

```
if exist remote.bat call remote.bat
if exist door.bat   call door.bat
if exist event.cmd  call event.cmd
if exist event.bat  call event.bat
if not exist endpcb goto top
:end
```

Detailed Explanation

To help better understand the flow and structure of the BOARD file, this section breaks it down into three sections. Each section shows a portion of the batch file and proceeds to explain each line in detail.

Preparing To Execute PCBoard

```
@echo off
:top
%pcbdrive%
cd %pcbdir%
if exist remote.cmd rename remote.cmd remote.sys
if exist remote.bat rename remote.bat remote.sys
if exist door.bat   delete door.bat
if exist event.bat  delete event.bat
if exist endpcb     delete endpcb
```

1. This DOS batch file command prevents each line from displaying as it is executed.
2. This line sets up a label named *top*. This is used as a quick way to reload the board.
3. Changes to the home drive for the node.
4. Changes to the node subdirectory.
5. For the OS/2 version of PCBoard, this line checks to see if REMOTE.CMD exists. If so, it renames it to REMOTE.SYS.
6. Checks the current directory to see if REMOTE.BAT exists. If it does, delete it to prevent it from accidentally being executed by another caller. This file is created by PCBoard from your REMOTE.SYS file. Because the REMOTE.SYS file remains on disk, this file can be deleted.
7. If the EVENT.BAT file exists, delete it since the event has already run.
8. Checks the current directory to see if DOOR.BAT exists. If it does, delete it to prevent another caller from executing it. PCBoard creates the DOOR.BAT file from your batch file for your doors. This file is used as a temporary file so DOS can execute your door application.
9. When PCBoard exits, it creates an ENDPCB file in the current directory. This file does not contain any useful information. Instead, it is used later in your BOARD.BAT to determine if PCBoard should reload, or jump to the *end* label.

Executing PCBoard

```
pcboardm /file:%pcbdat%
```

This line serves one purpose—to load PCBoard. To use any PCBoard's command line parameters, you must specify them on this line. The PCBOARD.EXE file listed in this example, is just one of the PCBoard executables. The following lists each of the executables you can use on this list:

PCBOARD This is a DOS executable that runs on any standard CPU.

PCBOARDM This also is a DOS executable but may only be used on 80386 or higher machines. Additionally, this executable must be used if you plan on talking to an external driver (FOSSIL, OS/2, etc.) Sometimes, this is referred to as the *Multiport* version of PCBoard.

PCBOARD2 This executable comes with PCBoard for OS/2. It is a native 32-bit OS/2 application with multi-threading support.

After PCBoard Exits

```
if exist remote.cmd call remote.cmd
if exist remote.bat call remote.bat
if exist door.bat   call door.bat
if exist event.cmd  call event.cmd
if exist event.bat  call event.bat
if not exist endpcb  goto top
:end
```

The first 5 lines of this section are simply checking for a .BAT or a .CMD file and running them if they exist. The checks for .CMD files have no relevance to the DOS version of PCBoard, but no harm is made by leaving these lines in the batch file because DOS does not know how to run these types of files. On the other hand, OS/2 can run both CMD and BAT files, so the OS/2 version of PCBoard can exploit this feature.

The final two lines of the BOARD file check for the existence of a file called ENDPCB. If it does not exist, PCBoard is not ready to end execution, so we reload it again by going to the top of the batch file. The last is a label used to signify the end of the file.

From this point on, discussions of the BOARD file represent BOARD.BAT (DOS). Because the structures of BOARD.BAT and BOARD.CMD are so similar, you'll easily adapt any modifications that must be made.

Errorlevels

When PCBoard exits to DOS, it sets an errorlevel based on why it exited to DOS. Using DOS batch commands, you may check the errorlevel returned from the last program run and take appropriate actions. The table on the following page lists each errorlevel returned by PCBoard and a brief description:

Errorlevel	Description
0	Normal exit (DOS-Busy / DOS-Not Busy)
1	Exiting to run an event
2	Exiting to run a door
3	Exiting to DOS (9 SysOp command)
4	No longer used
5	Exiting to DOS between phone calls
6	Exiting to recycle the node
7	Exiting because a fax call was detected
8	Exiting due to failed connection attempt
9	Reserved for future use
10	Exiting because a PPE was running at disconnect
99	PCBoard could not execute due to a critical error

Checking An Errorlevel

To test an errorlevel you need to use the *IF* batch file command. If you insert the following line somewhere after the *PCBOARD* line in your BOARD.BAT

```
IF ERRORLEVEL 0 ECHO No Errors
```

the message *No Errors* is printed to the screen if PCBoard exits with an errorlevel of 0. For additional information on checking errorlevels, refer to your DOS manual.

NOTE: Due to the way DOS handles ERRORLEVELS, you should check for higher numbered errorlevels first before checking lower errorlevels. PCBoard may exit with an errorlevel HIGHER than 7, yet DOS will treat an IF ERRORLEVEL 7 as being true. Therefore, if you are using FAX software you could write your batch file like this:

```
pcboardm
if errorlevel 8 board    <-- test for all higher levels
if errorlevel 7 fax      <-- if 7 is still found, run fax
... etc
```

Errorlevel 0

This errorlevel is returned anytime PCBoard exits to DOS and expects no other action to take place. The only time this errorlevel occurs is by selecting *DOS - Busy* or *DOS - Not Busy* from the call waiting screen. You should be aware if you run PCBSetup, System Manager, or PCBFiler from the call waiting screen, the errorlevel returned is from the utility program and not PCBoard.

Errorlevel 1

This errorlevel is returned if PCBoard is exiting to run an event. At this point, the event batch file has been copied to either EVENT.BAT or EVENT.CMD in the current directory. The BOARD file included with your package uses an `if exist event` line to determine when the event should be run instead of testing the errorlevel.

Errorlevel 2

This errorlevel is returned if PCBoard is exiting to run a door. At this point, the door file has been copied to DOOR.BAT in the current directory. The BOARD file included with your package uses an `if exist door` line to determine when a door should be run instead of testing the errorlevel.

Errorlevel 3

This errorlevel is returned if PCBoard is exiting to DOS (9 SysOp command). At this point, the REMOTE.SYS file has been copied to REMOTE.BAT or REMOTE.CMD in the current directory. The BOARD file included with your package uses an `if exist remote` line to determine when REMOTE.BAT should be run instead of testing the errorlevel.

Errorlevel 4

This errorlevel is no longer used by PCBoard.

Errorlevel 5

If you have answered Y to the `Exit to DOS After Each Call` option in *PCBSetup* | *Configuration Options* | *Switches*, PCBoard exits with this errorlevel after each disconnect. By adding a line to your BOARD.BAT that tests for this errorlevel, you can determine the difference between a caller disconnecting and exiting via *DOS - Busy* or *DOS - Not busy* on the call waiting screen.

The following BOARD.BAT shows an example of what your BOARD.BAT might look like after you have added the ability to test for errorlevel 5:

```
@echo off
:top
%pcbdrive%
cd %pcbdir%
if exist remote.cmd rename remote.cmd remote.sys
if exist remote.bat rename remote.bat remote.sys
if exist door.bat   delete door.bat
if exist event.bat  delete event.bat
if exist endpcb     delete endpcb
pcboardm /file:%pcbdat%
if errorlevel 99 board
if errorlevel 5 loggedof.bat
if exist remote.cmd call remote.cmd
if exist remote.bat call remote.bat
if exist door.bat   call door.bat
if exist event.cmd  call event.cmd
if exist event.bat  call event.bat
if not exist endpcb goto top
:end
```

Two lines have been added in this example. The first line checks for critical errors while the second checks to see if the caller disconnected. If the caller has disconnected, a batch file called LOGGEDOF.BAT is executed.

NOTE: If you run a batch file after checking for the errorlevel as shown in this example, it is important to reload BOARD.BAT within the batch file—LOGGEDOF.BAT in this example.

Errorlevel 6

If PCBoard is exiting because the node was marked to be recycled, this errorlevel is returned. In your BOARD file, you can add a statement which checks to see if the node is recycling. If so, run a batch file which does some special processing. The following illustrates the change that would need to be made to BOARD.BAT:

```
@echo off
:top
%pcbdrive%
cd %pcbdir%
if exist remote.cmd rename remote.cmd remote.sys
if exist remote.bat rename remote.bat remote.sys
if exist door.bat   delete door.bat
if exist event.bat  delete event.bat
if exist endpcb   delete endpcb
pcboardm /file:%pcbdat%
if errorlevel 99 board
if errorlevel 6 call c:\update.bat
if exist remote.cmd call remote.cmd
if exist remote.bat call remote.bat
if exist door.bat   call door.bat
if exist event.cmd  call event.cmd
if exist event.bat  call event.bat
if not exist endpcb goto top
:end
```

The two lines added to the batch file are highlighted in bold. The first line checks to see if the errorlevel returned by PCBoard is 99. If a critical error has occurred, this line causes the BOARD file to run again. If a critical error did not occur, the second line runs UPDATE.BAT found in the root directory of drive C. Notice the *call* batch command is used. This makes sure control is returned back to PCBoard after the UPDATE.BAT runs. For more information on the *call* command, refer to your DOS manual.

NOTE: This errorlevel is also set if a modem fails to reset after two attempts. In other words, two modem reset errors force a node to recycle.

Errorlevel 7

If PCBoard answers the call and the modem returns *FAX* or *+FCON* in the connect string, PCBoard immediately exits with an errorlevel of 7. A simple check for this errorlevel in your BOARD.BAT tells you if you need to load your fax software or not. A modified BOARD.BAT may resemble the following:

```
@echo off
:top
%pcbdrive%
cd %pcbdir%
if exist remote.cmd rename remote.cmd remote.sys
if exist remote.bat rename remote.bat remote.sys
if exist door.bat   delete door.bat
if exist event.bat  delete event.bat
if exist endpcb     delete endpcb
pcboardm /file:%pcbdat%
if errorlevel 99 board
if errorlevel 7 c:\fax\recvfax [params]
if exist remote.cmd call remote.cmd
if exist remote.bat call remote.bat
if exist door.bat   call door.bat
if exist event.cmd  call event.cmd
if exist event.bat  call event.bat
if not exist endpcb goto top
:end
```

Notice two lines were added to the batch file. The first checks to see if PCBoard exited due to an errorlevel of 99, while the second checks to see if a FAX call has been detected. You should be aware the fax connection has already been established. You should use a program to receive the fax that assumes the connection has already been made. Refer to your modem manual to see if such a utility was shipped with your modem.

NOTE: Modems which require TSR software to be loaded ahead of PCBoard, and which do not let PCBoard control the answering of the call, are a risk to PCBoard's security and are not supported. In addition, modems that do not issue a *FAX* or `+FCON` message are not supported.

Errorlevel 8

In *PCBSetup | Modem Information | Configuration Switches* is a field titled `Drop to DOS on Missed Connect`. Enabling this feature causes PCBoard to do what is known as an external recycle if it answered the phone but was unable to make a connection. The intention is to hopefully wake the modem up or perhaps run a program to get the modem's attention. For all intents and purposes, this feature is a crutch or cover-up for a modem which may be failing to operate at 100%.

When PCBoard exits to recycle for the missed connection, the errorlevel is set to 8. Knowing the errorlevel, you can test in BOARD.BAT to perform some special actions or even to skip over actions you may not want to perform.

Errorlevel 10

When a PPE is running and a recycle is forced due to a keyboard time-out or loss of carrier, it is necessary for PCBoard to exit and reload. This event triggers an errorlevel of 10 which you can test for in BOARD.BAT.

Errorlevel 99

If PCBoard is unable to load because a critical error has been detected, it exits with this errorlevel. For a list of messages printed by PCBoard if it is unable to load, refer to the *Trouble Shooting* section of this chapter. Each message is thoroughly explained.

Troubleshooting

PCBoard Will Not Load - Gives Error Message

If PCBoard is unable to safely load, an error message is printed in the upper left portion of the screen. This error message gives you information about why PCBoard could not load. The following lists each possible error and an explanation of how to fix the problem.

ALL NODES ARE BUSY AT THIS TIME PLEASE TRY LATER

In order for you to see this message, you must have set the *`Float Node Number`* option in *PCBSetup | Node Configuration* to *`Y`*. A user has attempted to log into the system but there is not a free node on the system for them to log into. Remember, PCBoard only scans for free nodes from the node number specified in *PCBSetup | Node Configuration* up to your software license limit. PCBoard knows a node is free if PCBMoni shows the node to be an *`(inactive node)`*.

The only cure for this problem is to free up a node for new users to login or to upgrade your software license limit.

If you check your system and you see PCBoard thinks people are logged in locally when in reality you know they are not (because they rebooted their system from the local connection or otherwise improperly exited PCBoard), you need to manually clear out their entries using PCBMONI.EXE.

Load PCBMONI and cursor down to the node number. Next, press the M bar to access the *Edit User Net Status* screen. In the status field, enter Z for *Node is offline*. This will clear the entry for that node. The node will then be free for other users to log in to the system.

Can't create caller log:

PCBoard attempted to open the caller log. The log file could not be opened, so an attempt was made to create the file. However, the file could not be created. Since there is no way for PCBoard to keep track of the calls to the system, the system is not brought online.

The following are all valid reasons as to why the caller log could not be opened/created:

- The path specified in *PCBSetup | File Locations | System Files* does not exist. Since the path does not exist, PCBoard cannot create the caller log file.
- If your system is on a network, you may have lost your connection to the server which contains the caller log files. This would mean the path where your files are normally stored does not exist and consequently the log could not be created.
- You do not have enough file handles to open up the caller log. Make sure you have at least 25 files defined in your CONFIG.SYS (`FILES=25) for` each node the machine runs. In addition, also make sure your server (if you are running on a network) has at least 25 file handles for each node you are running.

Cannot open system PCBTEXT file

PCBoard attempted to open the default PCBTEXT file defined in *PCBSetup | File Locations | System Files* but could not open the file. This may mean you have an invalid path specified in the PCBTEXT field or the path is correct, but there is no PCBTEXT file in the directory. It could also mean you do not have enough file handles available. Make sure each node on the computer has at least 25 file handles available via CONFIG.SYS and your server also has at least 25 file handles for each node you are running.

Could not get OS/2 driver info

The node in question has been configured to use the OS/2 communications driver (*PCBSetup | Modem Information | Modem Setup*.) When the attempt was made to access the serial port in question, PCBoard could not get the driver information for the OS/2 operating system. Most likely this means OS/2 is not the current operating system -- insure that it is before continuing.

Error initializing comm port

You should only see this message if you are using the /M version of PCBoard. It means the communications port specified in *PCBSetup | Modem Information | Modem Setup* could not be opened via COMM-DRV. A number will be displayed after the error message. To get more information why the port could not be opened, call technical support and give the technician the error message and error number.

Error obtaining FOSSIL information

Only the multiport version of PCBoard reports this error and only when configured to communicate through the FOSSIL driver (*PCBSetup | Modem Information | Modem Setup*). PCBoard has attempted to communicate via a FOSSIL driver but the information returned from the FOSSIL driver was invalid. Make sure the FOSSIL driver is installed properly.

ERROR! Need to update User Info File Conference Allocations

When you increase the `Number of Highest Conference Desired` in *PCBSetup | Configuration Options | Messages*, you must update conference allocations. To do this, load System Manager, select *User Info File Maintenance*, and select *Change Conference Allocation*.

You are shown some information about your USERS.INF file. If you need to upgrade the file to accommodate the increased number of conferences, you are told the file needs to be updated and are asked if you want to update the file. By updating the USERS.INF file,. the size of the file on disk is increased so information about the new conferences can be stored.

ERROR! PCBML.DAT does not contain a default (blank extension) entry.

PCBoard uses the language defined, without a filename extension (usually the default language), to determine the text that is written to the caller log files. If all language definitions list extensions, PCBoard cannot determine the text to write to the log files.

If you receive this error, you need to modify your PCBML.DAT file (*PCBSetup | File Locations | Configuration Files*) to include a language with a blank extension. You may have to change the definition of one of the currently defined languages or you may have to install a brand new language to meet this requirement. Until the requirement is met, PCBoard will not load.

ERROR! System is setup for SHARE access...

If you have answered `Y` to the `Running a Network / Multitasker System` in *PCBSetup | Node* Configuration, PCBoard checks to make sure SHARE is loaded and functioning properly before accepting calls.

If you receive this error message, SHARE.EXE is either not loaded or is not functioning properly. Without SHARE, file access cannot be relegated properly leading to potential corruption of files. Rather than risk data corruption, PCBoard displays this error message and return to the DOS prompt. Check your configuration to make sure SHARE.EXE is being loaded in AUTOEXEC.BAT.

Error! USERNET.XXX filename is blank.

In order for PCBoard to be able to operate properly in a multinode configuration it must be able to read and write to the USERNET.XXX file. If you get this error, the location of this file is blank in *PCBSetup | File Locations | System Files*. Specify a valid path and filename and the error should not reoccur.

HEADER ERROR IN USERS.INF - OR UNABLE TO READ USERS.INF FILE

The USERS.INF file has been damaged or corrupted in some manner. This may signify a possible file corruption problem on your system (e.g., faulty disk cache, etc.) or a utility program which accesses the USERS.INF file may have damaged the file in some fashion.

About the only thing you can do (as an immediate fix) is to recreate the USERS.INF file by selecting *Create User Info File* from *System Manager | User Info File Maintenance*.

insufficient memory for comm buffers

PCBoard determined you did not have enough memory to create the communication buffers it needs. Increase the amount of conventional memory available before loading PCBoard.

insufficient memory for conference strings

You do not have enough conventional memory available for PCBoard to store the conference strings. Increase the amount of conventional memory available before loading PCBoard.

insufficient memory for conference flags

There is not enough conventional memory for PCBoard to store the conference flags. Before PCBoard can be loaded, you must increase the amount of conventional memory available.

insufficient memory for message pointers

PCBoard determined you did not have enough conventional memory available to store the message pointers (4 bytes for each conference). Before you can load PCBoard, you must increase the amount of conventional memory available.

Invalid comm port - COMMDRV access not found

PCBoard attempted to open the communications port specified in *PCBSetup | Modem Information | Modem* Setup, but determined you do not have COMMTSR loaded. In order for the /M version of PCBoard to run properly, you must have COMMTSR loaded as per the installation instructions in the *Multiple Nodes* chapter of this manual..

Along with the error message, you are given an error number. When you call for technical support, have the error number handy so the technician can help you solve the problem faster.

Invalid comm port - FOSSIL driver not found

You have specified PCBoard should communicate via a FOSSIL driver but the FOSSIL driver could not be identified. Make sure the driver is installed properly.

Invalid comm port or UART not functioning

The COM port you have specified in *PCBSetup | Modem Information | Modem Setup* does not exist, or the UART for the COM port is malfunctioning. Check the hardware for your COM port to make sure it is functioning properly and replace it if necessary.

Invalid use of /C: switch

You have used the /C: command line switch with PCBOARD.EXE but have not specified a valid port/connect speed for the option. Make sure you use a valid port speed such as `/C:19200`, `/C:14400`, etc.

PCBoard is already loaded! Type 'EXIT' to return

You have attempted to load PCBoard, but it is already loaded. This is usually caused when you press 5 to shell out to DOS and then execute BOARD.BAT while you are in the shell. To return to PCBoard, type `EXIT` at the DOS prompt.

PCBTEXT is unavailable

PCBoard attempted to open the PCBTEXT file but determined it could not be opened. This could be due to any of the following reasons:

- The path you specified in *PCBSetup | File Locations | System Files* is invalid or does not exist. Therefore, the PCBTEXT file(s) could not exist in that directory, let alone be opened for access.
- If you are running in a network configuration, you may have lost your connection to the server thereby making the files on the server unavailable for access. Reconnect to the server (if your PCBTEXT file(s) are stored on the server) and the problem is corrected.
- You may not have enough file handles available to open another file. Make sure you have allocated enough file handles in your CONFIG.SYS statement. For one node on the machine you should have FILES=25. If you are running 3 nodes on one machine you need to have at least FILES=75. If you are in a network configuration, make sure you have allocated at least 25 file handles for each node.

PCBTEXT is the wrong version! Run MKPCBTXT to convert it.

The default PCBTEXT file PCBoard loads at startup was determined to be the wrong version. To fix the file, load MKPCBTXT.EXE. When prompted for the filename to edit, specify the full path and filename of your PCBTEXT file. You will then be guided on the steps necessary to fix the file.

PCBTEXT needs to be upgraded! Run MKPCBTXT.

Your default PCBTEXT file is an older version which was not designed to run with the current version of PCBOARD.EXE you are running. If you run MKPCBTXT.EXE and specify the filename of your default PCBTEXT file, it will be upgraded.

Unable to open Operating System COMM Port Driver

When the attempt was made to open the OS/2 communications device, access was denied because another application already has it open. For example, you may have a communications program open in the background accessing COM2: under OS/2 and are also trying to get PCBoard to communicate with COM2. Only one application can open the communications device at a time.

Unable to open PCBPROT.DAT file

PCBoard attempted to open the PCBPROT.DAT file but could not locate it, or it could not be opened. The following are some reasons why the file could not be opened:

- The file you specified in *PCBSetup | File Locations | Configuration Files* is invalid or does not exist.
- If you are running in a network configuration, you may have lost your connection to the server thereby making the files on the server unavailable. Reconnect to the server (if your PCBPROT.DAT file is stored on the server) and the problem will be corrected.
- You may not have enough file handles available to open another file. Make sure you have allocated enough file handles in your CONFIG.SYS statement. For one node on the machine you should have FILES=25. If you are running 3 nodes on one machine you need to have at least FILES=75. If you are in a network configuration, make sure you have allocated at least 25 file handles for each node.

UNABLE TO OPEN USERS FILE - RUN PCBSM TO CREATE IT

PCBoard attempted to load the USER file but could not do so. The file may not exist or the location specified in *PCBSetup | File Locations | System Files* is incorrect. Other possibilities include not having enough file handles specified in CONFIG.SYS to open the file or having lost your connection to the server (if running a network) where the USERS file exists.

If you do not have a USERS file and need to create it, you should use System Manager to create a new USERS file. If you have a USERS.INF file but no USERS file, delete the USERS.INF file that remains behind.

Next, load System Manager and select *Users File Maintenance* and select *Edit Users File*. You will be informed of an error and you need to create the User Info File. Next, return to the Main Menu and select *Users Info File Maintenance* and select *Create User Info File*. You will be asked if you wish to create the file. Answer `Y` to the question and a new USERS.INF file will be created. You should now have one record in the USERS file which is the SysOp record.

UNABLE TO OPEN USERS.INF - RUN PCBSM TO CREATE IT

The USERS.INF file could not be opened. If you know you have a USERS.INF file, this error could be caused by any of the following reasons:

- The location of the USERS.INF file specified in *PCBSetup | File Locations | System Files* is incorrect or invalid. Specify the correct location of the USERS.INF file or make sure the entry is valid.
- If you are using a network, make sure you have not lost your connection to the server. If you have lost your connection, you cannot access the USERS.INF file stored there.
- Make sure you have enough file handles available. You should allocate at least 25 file handles for each node on the computer, and on your server you should allocate 25 handles for each node on your system. This can be done using the FILES= statement in your CONFIG.SYS.

If you need to create a new USERS.INF file, you may do so by loading System Manager, selecting *User Info File Maintenance*, followed by *Create User Info File*.

USERNET.XXX: create error

PCBoard attempted to create the USERNET.XXX file used to maintain what each user is doing on the system but was unable to. The file location in *PCBSetup | File Locations | System Files* may point to an invalid subdirectory. If you are running under a network, you may have lost your connection to the server.

Another possibility is you may not have enough file handles available to open the file. Make sure each session on your computer has 25 file handles available and your server has 25 file handles allocated for each node in the system.

USERNET.XXX: format error

PCBoard has determined the format of the USERNET.XXX file is invalid. It could be you are using an older version of the USERNET.XXX or it has been corrupted excessively. If you delete the file, PCBoard recreates the file using the proper format.

USERNET.XXX: memory error

When PCBoard attempted to load the USERNET.XXX file into memory there was not enough conventional memory to do so. You need to increase the amount of conventional memory available before you load PCBoard.

USERNET.XXX: open error

The USERNET.XXX file could not be opened. It could be the path to your USERNET.XXX file is incorrect (*PCBSetup | File Locations | System Files*). Another possibility is you have lost connection to the server or you may have insufficient file handles available to open the file.

USERNET.XXX: read error

When PCBoard attempted to read the USERNET.XXX file it could not do so or encountered an error of some sort. If you have had disk access problems in the past it may cause this type of error. You could delete the USERNET.XXX file since PCBoard will recreate it and see if that clears anything up. However, it may be this is a symptom of hardware failure on your system.

Wrong OS version of PCBoard in use

The OS/2 version of PCBoard could not find the appropriate PCBOARD.SER file. Make sure that only one PCBOARD.SER file is available to this machine. If you need to obtain another copy of this file, contact technical support.

PCBoard Does Not Answer

Nothing can be more frustrating than setting up your system and realizing it is not accepting any incoming calls. This sections details some reasons why your system may not be properly answering phone calls.

Phone Rings But PCBoard Does Not Recognize The Call

Normally, when a call comes in, PCBoard will display `Ring Detected` followed by a number which counts down. When you see this message you know a call was detected and the two modems are attempting to establish a connection. What if you do not see this message but you know a phone call is coming in? There are two common reasons why this may occur:

- Your modem is not properly configured to send `RING` whenever a call is detected by the modem. Without the modem returning that response code, PCBoard does not know if the phone is ringing or not. Make sure you used PCBModem to configure your modem — it will setup both your hardware and your software to work as PCBoard expects it to.

- You have the multiport or /M version of PCBoard but are running the regular version of PCBoard. The /M version stores the configuration in PCBOARD.DAT as PORTx, whereas the normal software stores it as COMx. Because the normal version of PCBoard does not know how to handle the PORTx, it will report `No Modem Selected` as the communications port. Of course, since no communications port is selected, PCBoard will not answer the phone.

PCBoard Recognizes Call, Counts Down to 0 And Recycles

When a call is detected, PCBoard counts down from the value entered in `Seconds to wait for carrier` located in *PCBSetup | Modem Information | Modem Setup*. As soon as you see the `Ring Detected` message, PCBoard sends an ATA to the modem signaling it should answer the call. At this point, it is up to your modem to answer the call properly.

If your countdown goes to 0 for every phone call without getting a connection established, it could be caused by the following reasons:

- You have not given the modem enough time to answer the phone. Increase the `Seconds to wait for carrier` so your modem has enough time to answer.
- If your RS-232 cable is not wired correctly, PCBoard may never realize the connection has been established. In order for a connection to be realized as valid, PCBoard waits for the CONNECT message from the modem and also checks the CD (carrier detect) line to make sure the connection really exists. If your CD line is not wired properly (or not wired at all) in your RS-232 cable, the connection may never be considered valid. The easiest solution is to make sure your cable has all 25 pins wired straight through.

Modem Reset Errors

Anytime PCBoard cannot send the initialization string at the call-waiting screen you will receive a `Modem Reset Error` which is signified by a low-tone beep and a message. Before ever sending the initialization string, an `AT` is sent to the modem. PCBoard expects an `OK` to be returned from the modem. If `an OK` is not received within approximately 25 seconds, PCBoard will report there was a modem reset error.

Error Occurs When You Load PCBoard

If the error occurs when you load PCBoard for the first time, this usually signifies your hardware and software are not configured properly. First, make sure the right communications port is being opened. If that all checks out, it may mean that you have an IRQ conflict in your system which will prohibit communications with the devices that are using the same IRQ.

Another possibility is your initialization string contains a command which is not recognized by your modem. Check your initialization string in PCBSetup to make sure all commands in your initialization string are valid.

Error Occurs When Recycling After A Call

If you get modem reset errors after users have logged into your system, it could be caused by any of the following reasons:

- You have loaded another application which accesses the same COM port as the node that is giving you the errors. You may have also accessed a port which uses the same IRQ. That would mean the other application stole away the IRQ -- meaning PCBoard would not be able to communicate with the modem.
- Your modem may be malfunctioning. It is not uncommon for modems to malfunction. One solution may be to turn your modem off and back on again to see if that has any effect on the situation. Aside from that, there is not much you can do but to have your modem checked.

4

PCBoard Commands

When logged into PCBoard, you use *commands* to accomplish your tasks online. When you are reading messages or downloading files, you are simply executing the appropriate commands to accomplish these tasks. Most commands also have *subcommands* which is what you use to enter the message number to read, the file to download, etc. In other words, these subcommands allow you to be more specific about what you want to accomplish with the command you are executing.

You will enter commands at what is known as the *conference command prompt* which usually resembles the following examples:

```
(39 min. left) Main Board Command?
(112 min. left) Chatter (1) Conference Command?
```

The first example shows you what the Main Board conference command prompt looks like. The second example shows what the prompt looks like if conference 1 is named **Chatter**.

When you enter a command at the conference prompt, PCBoard will execute it if possible. If additional information is required, an additional prompt will be displayed to you. It is at this prompt that you will normally enter the subcommands you want to use. If you decide to read messages and entered R at the conference command prompt, you will see something similar to the following prompt:

```
(H)elp, (3262-8623), Message Read Command?
```

PCBoard knows you want to read messages, but it has no clue as to what messages you want to read. By using the appropriate subcommands for the R user command, you will be able to select the messages to read.

One of the major advantages to PCBoard is you can save time by *stacking* commands and subcommands together. To stack commands and subcommands together, separate each by a space or a semicolon. For example, to read the new messages in the current conference you could enter `R;S` at the command prompt to bypass the `Message Read Command` prompt. As you become more accustomed to PCBoard and the various commands available, you will find stacking gives you the ability to navigate the system as quickly as possible.

Throughout this chapter, all examples will make use of command stacking. This will help you become more familiar with the concept of stacking and how much time it can save you.

SysOp Commands

There are several commands available from the main menu which are designed to help you, the SysOp, to do many common maintenance functions. Using these commands you can do these following tasks and more:

- View, print, search, and delete the callers logs
- Pack the current message base
- Change a user record
- Drop to DOS from remote

The security level for these functions should be set high enough so only authorized people will have access to the commands. To assign the security levels for these commands, use PCBSetup and select *Security Levels | Sysop Functions*.

1 Manage Caller Log

This (Sysop) command enables you to manage the caller log PCBoard creates for the current node. You can view, print, search, and delete the caller log.

Subcommands: Alphabetical Listing

D **Delete caller log**. This subcommand will delete the caller log for the current node. You may want to use this subcommand to periodically delete the caller log to prevent it from taking up too much disk space.
WARNING: Once deleted, PCBoard cannot recover that caller log.

P **Print caller log**. If you use this subcommand, the caller log for the current node will be displayed on the screen and also sent to the printer port defined in PCBSetup.

S **Search caller log for text**. The more callers your system has the more difficult it will be to find the information you are looking for in the caller log. PCBoard provides search capabilities to allow you to search the log file for any text. You can do both a simple one word or one phrase search or you can do complex Boolean searches using the AND, OR, and NOT operators. For more information on Boolean searching please see *Searching For Text* in the *Sysop's Guide* chapter of this manual.

If PCBoard finds a match when searching the caller log, the log entry for the entire call will be displayed. The search text found will be highlighted for clarity.

When PCBoard searches through the callers logs it does not try to match case. If you tell PCBoard to search for Jim Smith any caller log entry which contains the text JIM SMITH will be a match.

V **View caller log**. Using this subcommand you can view the caller log. The display starts with the most current caller.

Description

The callers log provides you with information about who has called your system, what node they called in on, highlights of what they did online, what date and time they called, etc. When you view the caller log, PCBoard will display the file to you in reverse order beginning with the last caller to the system.

You will also want to periodically search the caller log because that is where any system error messages may be displayed. In addition, when users attempt to access a command not available to them, the attempt is almost always written to the caller log.

The caller log is simply a condensed history of what has taken place on the BBS. The 1 command enables you to not only view the information stored in the caller log but also to print and/or delete the caller log.

Examples

To view the current node's caller log on your display, type the following:

```
1 V
```

You may want to regularly search your caller log for possible system errors. When executed from the command prompt, the following command will search for any caller log entry that contains the word *FAIL* or the word *ERROR*.

```
1 S FAIL | ERROR
```

2 View/Print User List

Enables you to either view or print a list of users. Each user is listed on a separate line.

Subcommands: Alphabetical Listing

P **Print user listing**. When you use this subcommand, a list of users will be printed to the printer you have defined in PCBSetup.

V **View list of users**. This subcommand will enable you to display a list of your users on the screen.

Description

The list this command produces lists each user, their city, last call date, last call time, and total minutes used so far. All of this data is listed on one line. The users are listed in the order they appear in the user file.

The only time the SysOp information (user record #1) is displayed is if the user defined in that record is issuing the command. This means if you use co-SysOps to help you maintain the system they will not be able to view any information about the main SysOp user record.

3 Pack/Renumber Messages

This command enables you to pack the message base for the current conference. When you pack the message base you can eliminate messages in the current conference that are old, that are private and have been read, or those that have been marked for deletion. After executing this command, several questions will be asked to help determine the messages that should be packed. The following details each of the questions asked.

Pack the Message Base?

This question is asked to confirm that you want to pack the message base. Valid responses are:

N Do not pack the message base. Return to the conference command prompt.

Y Continue packing the message base. Additional questions are asked which determine what criteria to use for deleting messages (if any).

Generate ONLY a New Index File?

This question is asking if you only want to regenerate a new index file for the message base. Valid responses for this question are:

N If you enter this response, additional questions will be asked to determine the criteria for deleting messages.

Y If you enter this response, no other questions will be asked. Instead, PCBPack will be run immediately and create a new index for the conference. Creating a new index file is useful if you suspect the current index may be corrupt for some reason.

> **TIP**: To accomplish this same task by executing PCBPACK yourself, use the /INDEX command line parameter.

Purge older than

This question asks you to enter the cutoff date for keeping messages. Any messages older than the date you enter will be deleted from the message base. In the field provided, enter the cutoff date for keeping messages. The default date in this field is `010180` which will not delete messages by date.

> **TIP**: To accomplish this same task by executing PCBPACK yourself, use the /DATE command line parameter.

Purge RECEIVED+PRIVATE Msgs?

Messages that have been assigned *RECEIVER ONLY* message security are only useful to the receiver. Once the message has been read by the recipient, you may want to delete it from your message base. The question you are asked will determine if these messages will be deleted or left in your message base to be packed out by other criteria. Valid responses are:

N Leave any *RECEIVER ONLY* messages in the message base. To be deleted, they will have to meet other packing criteria.

Y All *RECEIVER ONLY* messages that have been read are deleted.

> **TIP**: To accomplish this same task by executing PCBPACK yourself, use the /PURGE command line parameter.

Renumber during repack?

This option is designed to allow you to renumber the message base if you exceed the 16,000,000 maximum message number limit. When renumbering your message base, PCBPack does **not** update the *last message read* values for your users. Therefore, if you renumber the message base without adjusting these values, users may not see new messages because their last message read value remains unchanged. Using System Manager, you can reset last message read pointers to 0 to avoid this problem. Valid responses to this question are:

N Do not renumber the message base -- message numbers will remain unchanged.

Y The message base will be renumbered beginning with the number you specify when prompted. When the message base is renumbered, the last message read values are not updated.

> **TIP**: To accomplish this same task by executing PCBPACK yourself, use the /RENUMBER command line parameter.

The Packing Process

Once you have answered all of the questions, PCBoard will load and run PCBPack. When PCBPack is finished, control is returned to BOARD.BAT. If you do not load PCBoard using BOARD.BAT (or equivalent), you are left at the DOS prompt.

4 Recover a Killed Message

This command enables you to recover a message that has been deleted or killed. A message that has been deleted cannot be recovered if the message base has been packed.

Subcommands: Alphabetical Listing

[msg #] **Message number to recover**. The only subcommand that is supported is the message number. You need to type the message number to recover. If the message number does not exist, you will be notified appropriately.

Description

When a message is deleted from the message base via the K ill command it is only marked for deletion. You can recover any message that is marked for deletion and make it active again by using the 4 command. Of

course, if the message has been physically deleted by packing the message base, the message cannot be recovered.

5 List Message Headers

This command will list message header information. The information pertaining to a message is listed on one line for easy viewing.

Subcommands: Alphabetical Listing

[msg. #]	**Beginning message number**. This is the message number with which to begin the scan. The default scan direction is forward. If you want to go in the reverse direction, please see the - subcommand.
+	**Scan in forward direction**. When appended to the beginning message number you can set the direction in which PCBoard scans the message base. For example if you enter 7 6 2 + PCBoard will begin scanning at message number 762 in the *forward* direction.
-	**Scan in reverse direction**. When appended to the beginning message number you can set the direction in which PCBoard scans the message base. For example if you enter 3 5 6 9 - PCBoard will begin scanning at message number 3569 in the *reverse* direction. **NOTE**: PCBoard defaults to searching in the forward direction.
A	**Scan selected conferences**. Scans not only the current conference but also those conference which you have set for scanning via the S E L E C T command or the S conference flag in the users record.
A L L	**Scan all conferences**. Scans all conferences you are registered in even if you have not marked the conference for scanning.
F	**Message from you**. Only messages from you, the user currently online, will be displayed.
L	**Begin with last message in message base**. Sets the beginning message number to the last message in the message base. When you use this subcommand you may omit the beginning message number.
N S	**Display in non-stop mode**. The listing of messages will be displayed in non-stop mode. This means there will be no *more?* prompts each time the screen becomes full.
S	**Messages that you have not read yet**. Searches only those messages you have not read yet.
T S	**Messages that contain particular text**. This subcommand enables you to search for text in the message body, the TO: field, and the FROM: field. You can search for a word/phrase or you can use any Boolean search. For more information on searching for text please see *Searching For Text* in the *SysOp's Guide* chapter of this manual.
U S E R	**Messages from a particular user**. You may search the message header for a particular user. When PCBoard searches for a particular user it will search both the TO: and the FROM: fields in the message header. You must enter a full user name. Partial matches cannot be made with this command.
Y	**Messages addressed to you**. Only messages addressed to the user currently online will be listed.

Description

The 5 command can be used to quickly search message headers for information. This command will produce a list on the screen showing who a message is to and from as well as the subject of the message.

The only difference between the `5` command and the `Q` command is that the former will display active messages and also those messages which havg been marked for deletion.

Format of the list

The list produced by the format contains the following information:

- **Sts**. Displays the status of the message. An *A* indicates the message is active while an *I* indicates the message is inactive (marked for deletion).
- **Msg #**. The actual message number in the message base. Just before the message number is a status code that shows if the message has been read, etc. For a list of status codes please see the section titled *Status Codes*.
- **Ref #**. If the message is a reply, this field will contain the message number which was replied to.
- **To**. Displays who the message is addressed to. Only the first 15 characters of the user name are displayed.
- **From**. Displays who the message is from. Only the first 15 characters of the user name are displayed.
- **Subject**. Displays the subject of the message. Only the first 25 characters of the subject are displayed.

Status Codes

Next to each message number is a status code. You can use these codes to determine if the message has been read, if it has replies, etc. The following is a list of all valid message status codes:

`m`	A message which can be read by anyone.
`*`	A private message to a specific person which has not been read by the person it was addressed to.
`+`	A private message which has been read by the person it was addressed to.
`-`	A message to a specific person, which was readable by anyone, which has been read by the person it was addressed to.
`~`	A *comment* to the SysOp which has not been read by SysOp record #1.
`` ` ``	A *comment* to the SysOp which has been read by the person in SysOp record #1.
`%`	A message protected by *sender password* which has not been read.
`^`	A message protected by *sender password* which has been read.
`!`	A message protected by *group password* which has not been read.
`#`	A message protected by *group password* which has been read.
`$`	A message protected by *group password* which is addressed to ALL.

Examples

To display the header information for all messages in the current message base in reverse order, issue the following at the command prompt:

```
5 L
```

To search for all messages (beginning with the first message in the message base) either to or from a user named *Wally Peterson*, issue the following at the command prompt:

```
5 USER WALLY PETERSON 1+
```

6 View a File

Enables any file to be displayed. Even if you are calling in from remote you can view any file.

Subcommand

[filename] The filename to view online. This file may be any valid DOS filename.

Description

Sometimes you may want to view a file while you are online. This command will display any file in its raw form -- making it primarily useful for viewing ASCII files. With this command, you could view batch files, display screens, or any other text file.

This command is most useful when used from remote because you can quickly view a file on screen without having to do a remote drop to DOS.

Example

If you want to display C:\PCB\BOARD.BAT, type following at the command prompt.

```
6   C:\PCB\BOARD.BAT
```

7 User Maintenance

Enables you to modify any user record. You can adjust security levels, conference registrations, and more.

Subcommands: Alphabetical Listing

[rec #] **User record number**. Displays the user record number you type. To view record number 10 type `10`.

A **Add a user**. Using this subcommand you may add a user to your users file. You will be asked to provide the basic information to create the record such as a password, security level, etc. If you attempt to create a record for a user that already exists, you will be informed an account with the name you are trying to add already exists on the system. If this happens you may want to use the F subcommand to help you locate the duplicate record so you can make the appropriate changes.

C **Change current user record**. When you use this subcommand you can make changes to the key fields of the user record (e.g., security level, expiration date, city). The user record that is currently selected is the one that will be edited.

D **Delete current user record**. Marks the current user record for deletion. You will first be asked to confirm the deletion. If you proceed to delete the record the security level will be changed to *0* and the deleted flag will be set to *Y*. You can tell if a user record is marked for deletion by looking for a *DL:* on the display. If there is a *Y* next to it, the user has been marked for deletion. Otherwise there should be a *N* and the user has not been marked for deletion.
NOTE: The user will not be physically removed from the user file until the users file is packed.

F **Find a user**. When you select this subcommand you are asked for the name to search for. The user file will be searched for the name you supply - partial names will not match. If the name is found, the corresponding user record will be displayed and you can use any other subcommand like C or D to modify the record.

L **List all user records**. Displays the user records beginning with the first user record to the end of the file. The format for the output is the same as when you select one individual record.
NOTE: Any user records that have a security level higher than the current user will not be displayed in the list.

P **Print all user records**. Displays the same information as the L subcommand but sends it to the defined printer instead.

Q **Quit**. Quits the user record editor and returns you to the command prompt.

S **Search user records for text**. This subcommand enables you to search the user records for specific text. PCBoard will search all ASCII text inside of the user file. This means fields such as user id, address, phone numbers, password, city, and the two comment fields will be searched.

U **Undelete a user record**. If there is a user record that has been marked for deletion, you can use this subcommand to undelete the user. If a user record is undeleted, you will need to manually change the user security level and expired security level because they were originally changed when the user record was deleted. You can use System Manager to make the appropriate changes.

NOTE: Any changes made to a user record (e.g., changes in security level, city) while the user is online will not take affect until the next time the user calls in. For immediate changes to a user record, please refer to the SysOp function keys in the *PCBoard* chapter of this manual.

Description

PCBoard gives you easy access to the user records while you are online either locally or remote. You can do such things as add users, delete users, edit user records, etc. For security purposes, PCBoard will not allow you to see information about those users who have a security level higher than your own. This enables you to have co-SysOps without allowing them to see the passwords and other sensitive information about users with higher security levels.

Format of Record Display

When a user record is displayed on the screen, it is shown in the following format:

```
1: BOB SYSOP                ANYCITY, ANYPLACE        P/W: *ANYPASSWORD
D: 999-999-9999  V: 999-999-9999   LD: 06-24-93  LT: 10:15  EX: Y  PR: G
Sec: 250  E/Sec: 250  TO: 13  PL: 23  UP: 32  DN: 57  ET: 0  DL: N
E/Date: 00-00-00  D/D: 90543  T/D: 3463463  T/U: 346246
C1:                                C2:
ALIAS: FX MEISTER
ST#1: 100 Elm Street
ST#2: Apartment #32
CSZC: Jackson, TN  38325  UNITED STATES
NOTE: ******************** Comment Field #1 ********************
NOTE: ******************** Comment Field #2 ********************
NOTE: ******************** Comment Field #3 ********************
NOTE: ******************** Comment Field #4 ********************
NOTE: ******************** Comment Field #5 ********************
VERIFY: 1001 WAYS TO USE CLIPS
```

The first line of each record displays the user's record number, name, city, and password. The following discusses the rest of the items you will find in each record:

D:	Data phone number
V:	Voice phone number
LD:	Last date the user called the system
LT:	Last time the user called the system
EX:	Expert user status
PR:	Default protocol letter
Sec:	Security level
E/Sec:	Expired security level
TO:	Number of times the user has called the system
PL:	Page length setting
UP:	Number of files uploaded
DN:	Number of files downloaded

ET:	Number of minutes spent on the last day the user called the system
DL:	Whether or not the user is marked for deletion.
E/Date:	Expiration date of the user.
D/D:	Total number of bytes downloaded today.
T/D:	Total number of bytes downloaded from the system.
T/U:	Total number of bytes uploaded to the system.
C1:	Comment1 field.
C2:	Comment2 field.

The rest of the fields shown on this display will only be available if you have installed the appropriate PSA. For example, the ALIAS line will only be displayed if you have installed the Alias PSA (*System Manager | Users Info File Maintenance | Install PCBoard Supported Allocation*).

ALIAS:	The name the user selected as his alias
ST#1:	First address line
ST#2:	Second address line
CSZC:	City, state, zip, and country fields.
NOTE:	The five lines provided by the notes PSA
VERIFY:	The information the user has entered for verification purposes.

Locating a User to Edit

You can use the S and F subcommands to help you locate the user you want to edit. If you use the F subcommand, you must know the full user name to search for. Unless a perfect match is found, no record will be displayed. Alternatively, you can use the S subcommand to search for text or when you do not know the full name of the user. Any dates you search for must be expressed in YYMMDD format because of the way they are stored in the user file.

Examples

If you want to search for AMY SEXTON's user record, type the following at the command prompt:

```
7 F AMY SEXTON
```

If you want to locate all users who potentially call from Cassidy, WY, type the following at the command prompt:

```
7 S CASSIDY, WY
```

8 Pack User File

The user defined as record #1 in the user file can use this command to pack the user file while other users are online. When you pack the file, you can eliminate users who have not called for a specific period of time or that have been marked to be deleted. After executing this command, several questions will be asked to help determine the users that should be packed. The following details each of the questions asked.

Pack the user file?

This question is asked to confirm you want to pack the user file. Valid responses are:

N Do not pack the user file. Instead, return to the conference command prompt.

Y Continue packing the user file. Additional questions will be asked to determine what criteria you want to use for deleting users (if any).

Keep 'Locked Out' users?

Locked out users are those that have a security level of 0 but have not been marked for deletion. Your response to this question will determine whether these users will be deleted. Valid responses are:

N Locked out users will be deleted from the user file. Since the locked out records will be removed, the users will no longer be prevented from logging in under the name that was previously locked out.

Y Locked out users records will remain in the user file. This will prevent these users from logging into the system again.

Purge older than

Your response to this question will determine the cutoff date for deleting inactive users from the user file. The default date is *010180* -- implying that no users will be removed for inactivity. For example, if you want to delete all users who have not called since April 1st, 1994, enter *040194* in this field.

Keep whose security =>

Quite often it is desirable to exempt users of a certain security level or higher from being packed out of the user file. The default security level is 100 which prevents anyone of this security level or higher from being deleted when the user file is packed.

9 Remote Drop to DOS

Enables you to drop to DOS from remote. Once in DOS you can run standard DOS commands or other DOS applications.

Subcommand

Y **Yes**. Normally, when you select the 9 command and press R , you are asked to confirm the drop to DOS. To bypass this confirmation, use the Y subcommand.

Description

Inevitably there will be a time when you are calling into your system from remote and realize you need to drop to DOS and do a little maintenance. When you encounter a situation like this, you realize just how handy the 9 command is. With this command you can drop to DOS and run other programs. PCBoard allows maximum flexibility by running a batch file called REMOTE.SYS to drop you to DOS.

Setting Up REMOTE.SYS

For the most reliable remote DOS access, you need to use a third-party program. This program should be able to redirect your screen displays. At the very least, it should be able to handle all text mode applications. DOORWAY is a program written by Tri-Mark Engineering which will handle just about any 80x25 text mode program. It will redirect the text mode screen to the remote user using the popular ANSI escape codes. A sample REMOTE.SYS using DOORWAY might look like this:

```
set box=no
doorway com1 /s:.\ /v:d^O /o: /k:v0 /c:dos
set box=
c:
cd \pcb
```

Two things should be noted about the above example. If you are using a serial port other than COM1, you will have to make the appropriate change to reference the correct port you are using. In addition, the last two lines of this example return you back to your PCBoard subdirectory before reloading PCBoard.

Using Function And Alt Keys

When you drop to DOS using the 9 SysOp command, you may load one of your maintenance programs such as PCBFiler or PCBSetup. Most likely your communications program will intercept all of the cursor movement and function keys. Check your communications program to see if it supports what most call *DOORWAY* mode. This mode in communications programs will allow them to pass the cursor key movements and function keys to the remote system.

1 0 Execute DOS Command

This command enables you to execute DOS commands directly from the conference command prompt.

Description

When this command is executed you are asked for the command to execute. Once you type in the command, PCBoard will shell to DOS and execute it.

How much memory is available when shelled out?

DOS

The amount of memory available depends on your answer to `Swap Out During Shell` in *PCBSetup | Configuration Options | Switches*. A `Y` means you will have slightly less memory available to you than you had when you loaded the node. An answer of `N` means you will have slightly less than the free memory shown on the status line.

Please keep in mind your memory restrictions. If you run an application and there is not enough memory available, you will return back to PCBoard without the command executing.

What programs can be run?

When you are on locally, you can run any application assuming you do not run into any memory restrictions. When you are executing this command from remote however, there are some items you must take into consideration.

If the command you execute from remote requires any interaction or input from the keyboard, you will not be able to execute these programs using the 1 0 command. The reason you cannot use these programs is because you are logged in remotely and have no control over the local BBS's keyboard. If you attempt to run one of these programs, that node on your system will appear to hang.

What really happened is PCBoard executed the program and then ran into a situation which required keyboard input. PCBoard waits until the program is finished before returning, which means the node will be stuck. If you need to run an application that requires user interaction or input from the local keyboard, use the 9 command instead.

1 1 View Users Currently Online

Enables you to view a list of all of the active nodes, who is online, and what they are doing.

Description

On multinode systems this command displays the name and location of users currently online on all of the nodes in the system. This display also shows what users are doing on the system.

Status Messages

The display of all active nodes has a *Status* column. This column displays a brief description of what the user is currently doing online. A list of status messages follows:

Auto Logoff Pending	*Logging into System*
Available for CHAT	*No Caller this Node*
CHAT Request Sent	*Out of Code in DOOR*
CHATTING with Group	*Paging the Sysop*
Chatting with Sysop	*Run/Answer Script*
DOS Recycle Pending	*Running DOS from remote*
Dropt to DOS Pending	*Running Event*
Drop to DOS - Urgent	*Transferring a File*
Entering a Message	*Unavailable for CHAT*

As you can see, you can obtain a significant amount of detail about what each user is doing online from executing the `1 1` command.

Additional Information

Since the `1 1` command is a SysOp command, you will also have additional information available to you. The following shows the additional information status messages when you use this command:

Transferring a File

When a user is transferring a file, PCBoard will display as much information as it can. Internal protocols, by their very nature, update after each file. If PCBoard knows enough about the file transfer, it will display if a transfer is an (U)pload or a (D)ownload, the filename that is being transferred, the protocol letter used, the size of the file being transferred, and finally the estimated time of transfer. The line underneath the user's name may resemble the following:

```
(D) PCBMULT.ZIP (G) 44,573  -  0.6
```

This tells you the user is downloading a file called PCBMULT.ZIP using protocol letter G and that the file is 44,573 bytes which will take approximately .6 minutes (36 seconds) to transfer.

```
(U) TESTSLC.ZIP (G) 141,042  -  1.6
```

This entry shows the user is uploading a file called TESTSLC.ZIP using protocol letter G. The size of the file is 141,042 bytes and will take about 1.6 minutes (1 minute 36 seconds) to upload.

```
(U) ... (Z) ...
```

This shows the user is uploading using the protocol defined by the letter Z, but the filename and transfer information could not be determined because the protocol is external. PCBoard updates this information at various times. The following details when internal and external protocols update the information for this display:

Internal Protocols

Internal protocols, by their very nature, know how to update PCBoard. As each file is transferred, the display will be updated to show the current status. The only exception is if a user is using an internal non-batch protocol to upload a file. In this case, you will only see the user is uploading a file and what protocol they are using.

External protocols

External protocols do not update nearly as often because they do not know what to update -- since most are not PCBoard specific. PCBoard does its best on downloads by showing the last file that will be transferred. On uploads, you will see that someone is uploading a file and what protocol they are using. You will *not* know what file they are uploading.

NOTE: If a user is viewing the contents of a file, PCBoard will show the name of the file being viewed beneath the user name. The format is as follows:

```
F V FILENAME.EXT
```

Entering a Message

When a user is entering a message, you will be shown what conference they are in, followed by who the message is being addressed to. For example, if the user is in conference 9 and entering a message to JOHN SMITH, you will see the following under the user's name:

```
(9) => JOHN SMITH
```

Run/Answer Script

If a user is completing a script, you will see the conference and the script number under the user name. For example, if a user is in conference #1 and filling out script #2, you will see:

```
(1) => #2
```

If you have a script questionnaire which is a PPE file, the filename of the PPE is displayed as shown in the following:

```
C:\PCB\GEN\SCRIPT2.PPE
```

Running Event

When an event is running on a node, PCBoard will update the display of the nodes to show the event number and event name currently running. The format for the display is:

```
#1 -> DAILY
```

This example shows the display if event #1 is executing the event BATCH file called DAILY.

Example

If you execute the 1 1 command you might see a display which looked like this:

```
(#)   Status                  User
---   ---------------------   ----------------------------
  1   Transferring a File     STEWART OGDEN (HIGHLAND, KS)
                              (D) PCBMULT.ZIP (G) 44,573  -  0.6
  2   Run/Answer Script       FRED KORKLEWSKI (ALBURY HEIGHTS, NV)
                              (1) => #2
  3   Entering a Message      BILLY CRUMP (GREENMEADOW, NV)
                              (9) => JOHN SMITH
  4   No Caller this Node
  5   Transferring a File     WINIFRED NEIDERHAUSER (SAN SIMEON, NE)
                              (U) ... (Z) ...
```

1 2 Logoff Alternate Node

Enables you to immediately logoff a user currently online.

Subcommand

[node] **Node number**. The node number to logoff. The user is displayed a message which informs them an automatic logoff has been initiated.

Description

Sometimes you may need or want to logoff a user that is currently on another node. PCBoard provides a SysOp command enabling you to do this. When you issue this command, you must supply the node number to log off. Once you type in a valid node number the user will be logged off of the system

NOTE: If the user is currently in a third party application or door, the automatic logoff cannot occur until the program currently running returns control to PCBoard. Likewise, the user will be allowed to finished any file transfers in progress before an automatic logoff.

1 3 View Node Caller Log

Enables you to view other node's caller logs from any other node. You may search or view any or all node's caller logs.

Subcommands: Alphabetical Listing

[node] **Node number**. The node number to view or *A* to view all nodes. If you enter a node number that does not have a caller log an error message will be written to the caller log notifying you the caller log for the node specified does not exist. In addition, entering a number which exceeds the number of nodes in your software license will re-display a list of who is currently online so you can pick a valid node.

A **All caller logs**. Specifies that all node log files should be used—not just an individual node. This subcommand is most useful when used in a search using the S subcommand.

S **Search for text**. The more callers your system has the more difficult it will be to find the information you are looking for in the various caller logs. PCBoard provides capabilities for you to search the log file for any text. You can do a simple one word, one phrase, or a complex Boolean search using the AND, OR and NOT operators. For more information on Boolean searching please see *Searching For Text* in the *Sysop's Guide* chapter of this manual.

If PCBoard finds a match when searching the caller log, the log entry for the entire call will be displayed. The search text that was found will be highlighted for clarity.

When PCBoard searches the caller logs it does not try to match case. If you tell PCBoard to search for Jim Smith, any caller log entry which contains the text JIM SMITH will be a match.

Description

The caller logs provide you with information about who has called your system, what node they called in on, highlights of what they did online, what date and time they called, etc. When you view the caller log PCBoard will display the file to you in reverse order beginning with the last caller to the system.

You will want to periodically search the caller log because this is where any system error messages are recorded. In addition, when a user attempts to access a command that is not available, the attempt is written to the caller log.

Examples

To view node 5's caller log type the following at the command prompt:

```
13 5
```

You may want to regularly search all of your caller logs for possible system errors. When executed from the command prompt, the following command will search for any caller log entry on any node which contains the word *FAIL* or *ERROR*.

```
13 A S FAIL | ERROR
```

1 4 Drop Node to DOS

Enables you to drop another node to the DOS prompt from any other node.

Subcommand

[Node #] **Node number**. The node number you want to drop to DOS.

Description

This command will drop any active node to a DOS prompt. You are asked if you want to have the node drop to DOS after the caller logs off, or immediately drop the node to DOS.
In order to drop to DOS immediately, PCBoard must be in control. If the user is shelled out to an external protocol or running a door, the node will not be dropped to DOS until PCBoard regains control.

1 5 Recycle Node

This command marks the node number you specify to be recycled. When recycling the node, you can execute a batch file to perform any necessary processes (e.g., updating files).

Subcommand

[node] **Node number to recycle**. This value represents the node number to recycle.

Description

When a node is recycled, PCBoard exits with an errorlevel of 6 and then continues executing BOARD.BAT. You can use this recycle to run a batch file that updates necessary system files or whatever is needed. Simply add a line to BOARD.BAT that checks for an errorlevel of 6. If an errorlevel of 6 is detected, run the appropriate batch file. See the Errorlevel section in the PCBoard chapter for more details.

NOTE: A node can also be marked for recycling by pressing A -R while a user is online.

1 6 View Directories on System

This function is keyed off of the same security level which is used to view files (Sysop Function 6) and will alow directories on his system. The command is used either in a prompted or stacked fashion. For example, you can type "16 *.*" to view the files in the current directory, or you can type "16" and press enter, then type "*.*" at the "Enter DIR Command?" prompt. While this is implemented as a Sysop Function, the Sysop might want to create a CMD.LST entry called "DIR" which would map over to Sysop Function 16. In this manner, the sysop could then issue commands such as "DIR *.*".

B R Broadcast Message to Any Node

Enables you to send a brief message to any node number. You can use this command to notify users that you are about to shut down the system or just to say hello.

Subcommands: Alphabetical Listing

[node] **Node number**. This can be any active node number. You may also type A L L in place of the node number to broadcast the message to all active nodes.

[msg] **Message to send to another node**. Any text up to 48 characters in length. Text is displayed in all capital letters and punctuation is omitted.

Description

This command allows users with SysOp security to display a message to any or all active nodes. This is useful to notify users the system may be going down or to warn users to logoff. When the message is displayed to the user, a beep is sent to help get the user's attention.

NOTE: All subcommands must be placed on the command line. If you type BR and press enter, you will be returned to the command prompt and no action will take place.

If a user is not in PCBoard (e.g., the user is currently in a DOOR), the user will not see the message because they were not in PCBoard at the time the broadcast message was sent.

Examples

To broadcast a message to node 1 which says *PLEASE LOG OFF AS SOON AS POSSIBLE,* type:

```
BR 1 PLEASE LOG OFF AS SOON AS POSSIBLE
```

To broadcast a message to all active nodes which notifies the users you want them to log off of the system, type the following at the command prompt:

```
BR ALL PLEASE LOG OFF AS SOON AS POSSIBLE
```

P P E Execute a PPE File

Allows you to execute any PPE directly from the conference command prompt. This command will prove very useful in testing new PPEs you want to add to your system.

Subcommand

[file] **PPE filename**. This parameter can be any valid filename which specifies a PPE file to execute. An extension of .PPE is assumed if you do not specify one.

Description

There are at least three circumstances where having the ability to run a PPE directly from the conference command prompt becomes extremely useful:

1. As a PPE developer, you will be making numerous changes to source code, recompiling, etc. Being able to run the PPE directly from the prompt instead of adding entries to CMD.LST or similar hook is going to save time.
2. Additionally, this command is going to provide the developer of PPEs with a standard command which can be used to launch INSTALL.PPEs for installing PPE applications.
3. For all SysOps, having the ability to test a PPE before actually adding it in CMD.LST, PCBTEXT, etc. is going to save you time and preserve your current configuration.

The security level required to execute the PPE command is controlled by the `(10) Shelled DOS functions` field in *PCBSetup* | *Security Levels* | *Sysop Functions*.

Examples

```
PPE C:\PCB\PPL\KAL.PPE
PPE C:\PCB\PPL\LANGUAGE
```

User Commands

While you are logged into the bulletin board system, you can issue several commands. These commands allow you to read mail, transfer files, read bulletins, and much more. Each command can be assigned a minimum security level which is required to execute a particular command. For more information on assigning security levels to user commands please see the *Security Levels* section in the *PCBSetup* chapter of this manual.

! Re-Display Last Command

This command re-displays the last command entered which was at least five characters.

Description

Sometimes you may want to re-display the last command you entered so you can execute it again. From the *Conference Command* prompt, you can use this command to re-display the last command executed (at least 5 characters). In the long run, this command can save you a lot of typing because it is quite similar to pressing `3` while at a DOS prompt.

A Abandon Conference

Abandons the current conference and returns back to the Main Board conference (a.k.a. Conference #0).

Description

On some bulletin board systems, the majority of activity takes place in the Main Board (otherwise known as conference #0). A conference enables you to go to another area of the bulletin board which may focus on a particular topic or subject.

The A bandon conference command enables you to quickly exit a conference you have joined and to return back to the Main Board. Alternatively, you may return to the Main Board by issuing either of the following commands:

```
J 0
J MAIN
```

A L I A S Alias Name Usage

This command allows you to turn your alias on or off when in a conference that allows aliases.

Subcommands: Alphabetical Listing

O F F **Use your real name**. Even though you are in a conference where aliases are allowed, your real name will be used.

O N **Use your alias**. Your alias will be active.

Description

When you are in a conference that allows aliases, this command enables you to decide when your alias will be active. When you enter this command with no subcommands, the status of using your alias will toggle. If your alias is active and you execute this command with no subcommands, you will switch to using your real name. When you switch, PCBoard will attempt to hide the change by making it appear a login is occurring.

This command will have no effect if you attempt to use it in a conference where aliases are not allowed, or if the Alias PSA is not installed.

Examples

This example will show you what to enter if you want to toggle the status of your alias from either on to off or from off to on:

```
ALIAS
```

To turn usage of your alias on, enter:

```
ALIAS ON
```

B Bulletins

Bulletins can display information like rules for the bulletin board system, how to gain additional access, or additional information.

Subcommands: Alphabetical Listing

[bltn #] **Bulletin number**. This is the bulletin number you want to view. You may list several bulletin numbers separated by a M or a ; .

A **All bulletins**. If you want to view all bulletins instead of manually entering the numbers, use this subcommand. Using this subcommand causes PCBoard to view all bulletins. If you are using the S subcommand in conjunction with this one, all bulletins are searched.

D **Download bulletins**. Allows you to download a bulletin rather than viewing it online.

N **New bulletins**. Display only new/updated bulletins since the last time you called. At login, you are automatically notified which bulletin numbers are new.

N S **Display in non-stop mode**. When a bulletin is displayed, this subcommand makes it so that there are no *more?* prompts displayed. This might be useful when manually capturing to a file. If you do not use the N S subcommand, you may also type N S at any *more?* prompt.

R **Re-display menu**. Will cause the main bulletin menu to display again. This subcommand is most useful when issued immediately after you have viewed a bulletin. That way you can see the menu again and select another bulletin to view.

S **Search bulletins for text**. This subcommand allows you to search a bulletin for text. Any time the search text is found it will be highlighted on the display. You may do a simple one word or one phrase search, or a complex Boolean search using the AND, OR, and NOT operators. For more information on text searching please see *Searching For Text* in the *SysOp's Guide* chapter of this manual.

Description

A bulletin is basically a text file that may be viewed online. A bulletin usually contains important information for the callers. It may also be used to list sales reports, or just about any other text file you want to display online.

PCBoard enhances bulletins by allowing you to download and search the bulletins. Using the subcommands described above, you can control not only which bulletins you view but also what parts of the bulletins you actually view.

Examples

To download bulletins 1, 8, and 15 on the system, enter the following at the conference command prompt:

```
B 1 8 15 D
```

Searching bulletins can be a real time saver. To search all of the bulletins in the current conference for the word *subscription*, enter the following at the conference command prompt:

```
B A S subscription
```

When logging into the system, you are notified if any bulletins have been updated. These bulletins can be viewed by using the N subcommand. Enter the following command:

```
B A N
```

C H A T Group Chat

This command allows you to chat interactively with one or more users that are currently on the bulletin board system.

Subcommands: Alphabetical Listing

A **Available for chat**. By default, you are available for chat when you log into the bulletin board system. If you have made yourself unavailable for chat, you can make yourself available for chat again by using this subcommand. When you logoff, your chat status will be used on your next call as well.

G **Enter group chat**. Use this subcommand to begin chatting with other users.

U **Unavailable for chat**. When you use this subcommand, you make yourself unavailable for chat. This means other callers will not be able to call you into group chat. When you logoff, your chat status will be used on your next call as well.

Description

Node chat allows 2 or more people to communicate with each other across separate nodes of the BBS. When you are in chat, you may select any of the available 255 channels to chat with other users. If another user is available for chat, you may request a chat with that caller.

Entering Chat Mode

When you execute the C H A T command and select G for group chat, you are put into group chat mode. PCBoard begins by asking you the channel to use for chatting. If you compare this to a CB, you can pick any of 255 channels to chat on. Each channel could be talking about different subjects. To get a list of the currently active channels, press L at this prompt.

Next, depending on the system configuration, you are asked for the handle you want to use while you are in chat. This will default to your first name, but you may change it. When text is displayed by you, it will have a banner showing your node number and handle.

NOTE: If you are notified that someone wants to chat with you, the default channel number is the channel the other user called you from.

After you select a channel to chat on, you will be in chat mode. If you need help with the commands available in chat, press H at the `Chat Command` prompt. If you press R , you will enter into Chat Mode with the other callers on the system. Pressing E brings back the `Chat Command` prompt.

Chatting With Other Users

Once you are in a channel you may begin typing. Anyone else in that channel will see what you type as you type it. However, only one person has the *focus*. The focus is used so only one person can be typing while others, if they do type, do not interrupt. However, you may type up to one line ahead when you do not have the focus. Once you have the focus, any text you have typed will be sent out and you can continue to type because you have the focus.

The only way you can lose the focus once you have it is by being inactive. If you are on the first character of a line, after two seconds of not typing, you will give up the focus to someone else in the channel so they may type. Anywhere else on the screen (such as the middle of the screen) you can be inactive for 10 seconds before the focus will be given to someone else.

While you are chatting, you can press E to access the chat mode commands. These additional chat mode commands allow you to call other users into chat, make discussions private, etc. The following section details these commands.

Commands Available While In Chat

C A L L	**Call a user to chat**. This command lets you invite other users into your chat session. These users may already be in group chat, or they may be out in the main part of the BBS. As long as the user has not made himself unavailable and is not busy performing other tasks, you may issue a CALL command to request the caller to chat. It should be understood that the caller may ignore your offer to chat if they so desire.
C H A N	**Change channels**. A channel is a separate group of people or topic of conversation. There are 255 channels available. Use the SHOW command to see what conversations, by topic, are currently taking place and who is involved in each. The MONITOR command lets you listen in on all non-private channels to help decide which conversations to join.
E C H O	**Enable echo mode**. By default, echo mode is turned on. If you used the NOECHO command, you may turn on echo mode again with this command.
G	**Goodbye**. See the G user command.

HANDLE **Change your handle**. A handle simply allows you to identify yourself without requiring your entire name to be used. A handle does not hide your identity (as seen by a WHO command in PCBoard) but merely provides you the ability to be known by another name while in chat.

IGNORE **Ignore input from one or more nodes**. The IGNORE command allows you to ignore the input coming from one or more nodes. If a caller in your channel is becoming a nuisance, that caller can be ignored. However, the better solution is to switch to another channel and make it private.

MENU **Display menu for chat commands**. You may display the menu of chat commands at any time by using this command. It works even if you are in expert mode.

MONITOR **Toggle the monitoring of public channels**. This command allows you to toggle monitoring of public channels. If you turn monitor mode on you see all chat occurring in all public channels. If you do not want to monitor all public channels, enter the channels you *do* want to monitor when prompted.

NOECHO **Disable echo mode**. The NOECHO command allows you to disable the input echoing that normally occurs. With echoing enabled, your system must be capable of handling ANSI cursor position commands and even then you are limited to ONE line of text that can be typed ahead while another caller is typing. With echoing disabled, ANSI is no longer required and since a local split screen is used, none of the text is transmitted until you press enter so you may type more than a single line of text while others are typing. Use the ECHO command to re-enable echoing.

PRIV **Make discussion private**. A Private Discussion prevents others not already in the channel from monitoring or joining. Use this command to make the channel that you are in private. If you want to make the current channel public, use the PUBLIC command. Channel #1 can never be made private which leaves it open for newcomers to the chat.

NOTE: The CALL command is the ONLY way someone outside of a Private Discussion can join. Once you CALL the user, they may join the private discussion.

PUBLic **Make discussion public**. An Open Discussion is one in which others may freely join. During the course of an open discussion you may notice other callers joining in. An announcement of each arrival or departure is made to let you know who is in chat. The SILENT command can be used to turn these announcements off.

Q **Exit chat mode**. Exits you out of chat mode back to the main part of the bulletin board system.

SEND **Send a private message**. This command can be used to privately send a one line message to another caller already in group chat. You are asked for the node number of the recipient. The recipient needs to be in chat mode but does not have to be in the same channel as yourself.

SHOW **Show users currently chatting**. This command shows you all active channels, what users are in each channel, and what the topic of discussion is.

SILENT **Toggle silent mode**. If you want to ignore the system messages which tell you which users have joined or left the channel, toggle silent mode on using this command. By default, silent mode is off.

TOPIC **Change current topic**. Each channel can have a topic or title. You can change the topic of the current channel by using this command.

WHO **Show who is currently on-line**. See the W user command.

X **Toggle expert mode**. See the X user command.

Sysop Commands Available While In Chat

A few of the SysOp commands available while in the main part of the bulletin board system are also available to SysOps while in chat mode. You can enter the following SysOp commands while in chat mode:

7	**View/edit user records**.
1 1	**View status of nodes**.
1 2	**Logoff alternate node**.
1 3	**View alternate node's caller log**.
1 4	**Drop alternate node to DOS**.

For more detailed information on these commands, see the detailed descriptions in the **Sysop Commands** portion of this manual.

C Comment To The Sysop

Enables you to leave a message to the SysOp. The message is addressed to the SysOp and is always a private message.

Description

When you have a question about the system, leave a message to the SysOp. PCBoard provides a command to enter a message to the SysOp without worrying who the message should be addressed to. Before the messages is entered, you are asked to confirm you want to leave a comment to the SysOp. If you answer with a `Y`, you are taken directly into the message editor.

When you save the comment it is placed into the current conference unless you have answered `Y` to the `Force COMMENTS-to-the-Sysop into Main` field in *PCBSetup* | *Configuration Options* | *Messages*.

D Download A File

Allows you to download or transfer a file from the BBS to your computer system.

Subcommands: Alphabetical Listing

[file] The filename that will be transferred. For batch transfers, multiple filenames may be entered on the same line if separated by a M or a ; . In addition, when selecting files to transfer, the DOS wildcard characters (`*` and `?`) can be used to select groups of files. If you do not type in the filename extension, PCBoard will search the files online to see if there is a match. See the **examples** that follow for more details.

[prot] In order to transfer a file, you must use a file transfer protocol. You may set any protocol as the default protocol. To temporarily use another protocol for a particular transfer, pass the temporary protocol letter with the D command. To obtain a list of protocol letters, use the T user command.

NOTE: The protocol letter may also be entered when PCBoard asks for the filename to download. The only protocol that cannot be selected in this manner is the `H` protocol, as it will display online help instead. The preferred method is to pass the protocol letter with the D command.

B Y E This subcommand will cause you to be logged off of the bulletin board once the file transfer is complete. You are given 10 seconds to abort the automatic logoff.

G B This subcommand will cause you to be logged off of the bulletin board once the file transfer is complete. You are given 10 seconds to abort the automatic logoff.

Description

One of the most popular activities on a bulletin board is the transferring of files. Downloading refers to you receiving a file from the bulletin board system. In order to transfer a file, you must select a protocol to transfer via the T ransfer protocol command. If you select N (for no default) protocol, PCBoard will prompt for the protocol to use on each file transfer.

Once the files have been selected for download, PCBoard will be ready to begin the transfer. When PCBoard notifies you the file transfer is ready to begin, use your communications software to begin the download. Normally this is done by pressing d on the remote keyboard and selecting the same protocol as the bulletin board is using.

Examples

To download a file called TEXTEDIT.ZIP, the user can issue the following:

```
D TEXTEDIT.ZIP
```

To download NEWUTIL.ZIP and ISD320.ZIP using the *G* protocol letter, enter:

```
D NEWUTIL.ZIP ISD320.ZIP G
```

To download NEWUTIL.ZIP and immediately disconnect when the transfer is complete, enter:

```
NEWUTIL.ZIP BYE
```

D B Download Batch

Like the D ownload command, this command allows you to transfer files from the bulletin board system to your machine. This command however, assumes that the file transfer consists of multiple files (otherwise known as a batch transfer).

Subcommands: Alphabetical Listing

[files] You may enter multiple filenames on the same line or you may enter a single filename to download on each line. The list of files to download will be considered complete when R is pressed at a *Enter the filename to Download (Enter)=none?* prompt.

[prot] In order to transfer a file, you must use a file transfer protocol. You may set any protocol as the default protocol. To temporarily use another protocol for a particular transfer, pass the protocol letter with the D command. To obtain a list of protocol letters, use the T user command.

NOTE: The protocol letter may also be entered when PCBoard asks for the filename to download. The only protocol that cannot be selected in this manner is the *H* protocol, as it will display online help instead. The preferred method is to pass the protocol letter with the D command.

B Y E This subcommand will cause you to be logged off of the bulletin board once the file transfer is complete. You are given 10 seconds to abort the automatic logoff.

G B This subcommand will cause you to be logged off of the bulletin board once the file transfer is complete. You are given 10 seconds to abort the automatic logoff.

Once all of the filenames have been entered, you have the option to edit the batch of files to send. If you decide to edit the batch, you will be able to add, remove, and list the batch list.

Editing The List of Files to Download

Once you have entered the filenames to be downloaded, a screen is displayed which shows how many files are in the batch, how many total bytes in the batch, and which protocol has been selected. At this point, you may edit the batch transfer, abort the transfer, or to begin the transfer by pressing R .

If the batch transfer is aborted, the files will remain flagged. This enables you to do something else on the system and then return and download the files again without having to type in the filenames again. When

executing the D or D B commands while files are flagged for download, you are asked if you want to download the flagged files. If you answer *N* to that question, the files will be un-flagged.

If you decide to edit the batch, you are able to add, remove, or list files in the batch. The following options are available to edit the batch list:

A **Add a file to the batch**. Enables you to add one or more files to the batch. To stop adding files, press R at an *Enter filename to Download* prompt.

R **Remove a file from the batch**. Enables you to remove a filename from the batch. To remove a file, you must enter the number to remove from the batch. To get the number in the batch, list the batch.

L **List files in the batch**. Lists all filenames that are currently in the batch and their corresponding number in the batch. If you have flagged TCRN10.ZIP and LSTR312.ZIP, listing the batch list will look like the following:

```
File Selected:  (1)   TCRN10.ZIP     32,612 bytes,  0.5 minutes (approximate)
File Selected:  (2)   LSTR312.ZIP   532,981 bytes, 40.1 minutes (approximate)
```

P **Protocol letter**. To use a protocol that is different than your default protocol for this transfer, enter this letter at the prompt. You will be shown a list of protocols that are available. Choose the protocol that you want to use from this list.

Once you have finished editing the batch (if you chose to) you are ready to begin the transfer. At this point, use your communications program to begin a download. In most programs this can be accomplished by pressing d followed by selecting a protocol and typing in the filename or directory to download files to. Of course this varies from communications program to communications program so if you have difficulties in this area, consult your documentation.

E Enter a Message

Electronic communications is becoming more and more popular. The most popular method to communicate with other users on a bulletin board system is to enter messages or electronic mail.

Subcommand

[user name] The user name or user id that the message will be addressed to. When PCBoard prompts for a user, this value will be the default addressee.

Addressing a Message

To enter a message you must address the message to a person or a group of people. PCBoard asks whom the message should be addressed to. At the *TO:* prompt, enter a valid user name. In conferences that are not set to echo mail, PCBoard checks to make sure the user exists. As the SysOp, you may also address the message to the following:

@[sec]@ If you want a message to be seen only by a particular security level, address the message to @ followed by the security level and another @ sign. As a user with the security level specified reads this message, it appears to be a personal message.

@[sec]-[sec]@ Sometimes you may want to address a message to a range of security levels. If you want to do this, address the message to @ followed by the low security level, a dash, the high security level, and finally another @ sign. For example, if you want to address a message to security levels 10-40, address the message to *@10-40@*. When a user between the security of 10 and 40 sees the message, it will appear to be a personal message. SysOps will see it addressed to *(Generic Message)*.

@USER@ To make a message that is personally addressed to everyone on the system, address the message to *@USER@*. This allows you to enter just one message but make it appear that it

is addressed to each person individually. When SysOps view the message it is addressed to *(Generic Message)*.

@LIST@ Sometimes you want to address a message to a select group of individuals but they may not have something like a security level in common. If you address a message to *@LIST@*, you are prompted for names to address the message to. The actual limit for the numbers that can be entered is in *PCBSetup | Conferences (2nd configuration screen)*. After entering your message, notice that the list of names that you addressed the message to is stored at the bottom of the message. This list keeps track of whether each user has read the message or not and if so, when the message was read.

The Subject of the Message

You are allowed to enter up to 53 characters to describe the content of the message. If you do not enter a subject for the message, the message is aborted (non long-To name conferences) It's a good idea to sum up the contents of your message in the subject.

Assigning Message Security

Unless you have defined the current conference to make all message private, you are asked what type of message security to use. You may choose to make the message public so that other users on the system may read it, or you may choose to make the message private so that the message is viewable by a limited number of people.

To make things easier, you will be asked to enter a letter that corresponds with the type of security to use for the message. If you press R , the message is made public for others to read. The message security options and their corresponding letters are:

date specified is reached.

The message entered is a public message making it useful for letting users know about special announcements and such. To change the message security, you may do so by editing the message header or by using either the U or P subcommand at the *End of Message Command* prompt.

Only those who have security clearance to set the pack-out date (*PCBSetup | Security Levels | Sysop Commands*) may enter messages of this type. Furthermore, those having sufficient security are shown the pack-out date at the bottom of the message.

G **Group password**. When this message security is selected, you are asked for a password to protect the message with. In order for anyone to read the contents of the message they must know the password.

N **None**. Choosing this message security enables anyone that can read messages in the conference that the message was left in to read the message. This message security may be used to make general announcements or to get input or replies from a wide group of users. All of these messages are seen as *public* messages

R **Receiver only**. Only the person to whom the message is addressed and the sender of the message may read a message that has been marked as receiver only. This is the most common way to send *private* messages.

S **Sender password**. This message security also asks for a password. Anyone may read this message, but only the person who entered the message may kill it. Normally the receiver and the sender can kill it.

NOTE: The SysOp with user record #1 can always kill a message. The user with this record may also read any message regardless of the protection if their security level is higher than the *Security Required to Read All Messages* in *PCBSetup | Security Levels | Sysop Commands*.

Requesting A Return Receipt

If you are entering a *RECEIVER ONLY* message and have sufficient security, you are asked if you want a return receipt. When the recipient reads the message, a return receipt is generated which notifies you that they have read the message.

The return receipt that you receive will display the message number that it was generated from and who it was addressed to. Also included in the return receipt message is the date and time that the message was read.

Echoing a Message

Some bulletin board systems participate in an activity called echo-mail. This allows messages to be *shared* between several different bulletin board systems. By sharing messages across a network, users can get a wider variety of responses and usually will have more mail to read.

If you are entering a message in a conference that is designated as an echo-mail conference, you are asked if the message should be echoed. If so, the message is sent to the rest of the bulletin board systems echoing the conference. Otherwise, the message remains on the current system.

Routing A Message

When a message is directed to a specific location it is considered to be *routed*. You may be prompted for routing information when entering a message if the following conditions are met:

- *Prompt for ROUTE Info* is enabled in the options screen for the current conference (see PCBSetup)
- The message is *RECEIVER ONLY* **or** the message is entered in Usenet newsgroup (a type 3 or 4 conference).

Each mail network may have a different method of routing mail or may not support the routing of messages. If the user responds to a message which has origin information he will not be asked to enter routing information as that will come from the origin information.

Choosing a Message Editor

If you choose, PCBoard will ask if you want to use the full-screen message editor each time you enter a message. If you find that you always use the full-screen editor or you always use the line-editor, use the W user command to change your answer to the *Use Full Screen Editor* question. If you select A, you are given the following options:

Y **Yes**. If you select this option you will use the full-screen editor to enter your message. For more information on the full-screen editor, see *The Full-Screen Editor*.

N **No**. If you choose this option you will use the line-editor instead of the full-screen editor to enter the message. For more information on the line editor, please see *The Line-Editor*.

U **Upload mode**. This is identical to selecting any message editor and then selecting the U command available from within *Commands Available While in a Message Editor*.

Commands Available While in a Message Editor

There are certain commands that are available in both message editors. We will call these commands *message entry commands*. These commands enable you to save a message, quote a message, and more. To access these commands in the full-screen editor, press E or C-U. To access these commands in the line-editor, press R on a blank line.

A **Abort message**. Aborts the current message entry and returns to the main prompt.

C **Continue message using line-editor**. Continue the message using the line-editor.

D **Delete a line**. Enables you to delete any line by line number. If you are using the full-screen editor, you can use C-Y to delete the current line.

E **Edit a line**. Enables you to edit any line in the oessage. Once the line number to edit has been entered, you are asked for the text to replace followed by a semicolon, and finally the replacement text. For example, if you want to replace the word *halp* with the word *help*, type *halp;help*. Editing text in the full-screen editor is even easier because you can move the cursor around and toggle insert/overwrite mode.

F **Edit message using full-screen editor**. Continue editing the message using the full-screen editor.

H **Help**. Enables you to access on-line help for entering a message.

I **Insert a line**. Enables you to insert lines after the line number specified. Each line is inserted one at a time. The insertion stops when you press R on a blank line. In the full-screen editor, you may use C-N to insert a new line in the message.

L **List current message**. If you are using the line editor, you can list the current message showing all line numbers and the contents of the message by using this command. This command allows you to preview the message and to obtain line numbers that you may want to modify.

Q **Quote message**. When replying to a message you can quote from the original message to make the reply clearer. You may quote as many lines as desired. When prompted, enter the beginning and ending line number to quote. These lines are then brought into the message with each line being preceded by a –> to show it is a quote. This command only works when the current message is a reply.

NOTE: Local users may also quote a message by using PCBoard's scroll back feature or by pressing C-O while in the full-screen editor. For more information about using PCBoard's scroll-back to quote message see the REPLY user command later in this chapter.

S **Save message**. Once the message is complete it can be saved using this command. Once the message has been saved, you are returned back to the command prompt.

SA **Save and attach a file**. You can attach a file to a message. When a file is attached to a message users that can read the message can also flag the file for download. Using this method, two or more individuals can share a file that is relevant to the message. When you attach a file, you are asked for a protocol to use and also for the filename. If the transfer is successful, the file is attached and the message is saved. If the upload is not successful, you are returned to the message command prompt.

SC **Carbon copy message**. If a message needs to be sent to several people, you can use this command to copy the message to others. When this command is executed, you are asked for the other users that the message should be addressed to. For each new addressee, a new message is saved with the same subject, message security, and body.

SN **Save message and go to next message**. Normally when you save a reply, you are returned back to the message that you replied to. To save the message and continue reading with the next message, use this command.

SK **Save message and kill original**. When replying to a message, you may want to kill the original message by using this command. If you are not able to kill the message, you do not have sufficient security to kill messages.

U **Upload a message**. To upload a prepared message into the message editor, use this command. PCBoard will prompt you for the protocol to use for the upload. Once a protocol has been selected, you are informed that PCBoard is ready to begin the upload. Upload the message as you would upload any other file. When the transfer is complete, the message will be checked for line lengths. If any line in the imported message is in excess of 79 characters, PCBoard will not allow you to edit the message. Instead, you may only save the message as it was uploaded.

Using the Message Editors

After you have addressed the message and assigned the message security, the message editor will be displayed. There are two different message editors -- the full screen editor and the line editor. The full-screen editor is more like a word processor where you can move the cursor around the screen while the line-editor allows you to edit or enter the message one line at a time.

The Full-Screen Editor

To effectively use the full-screen message editor, you should familiarize yourself with the control keys and special keys that can be used within the editor. Besides the list that is provided in this manual you may obtain the same help by pressing C - Z while in the full-screen editor.

When logged in locally, use the keys shown in the *PC-Keyboard* column. If you are logged in remotely, the same keystrokes may or may not work depending on the communications program being used. Some communications program have a command which will enable **DOORWAY mode**. This mode allows you to use all of the cursor keys, and other keys from remote. If the communications program you are using does not support this mode, you may have to use the *Control-Key* equivalents instead.

Cursor Movements	PC-Keyboard	Control-Key
Move cursor to the left	l	C - S
Move cursor to the right	r	C - D
Move cursor one word to the left	C - l	C - A
Move cursor one word to the right	C - r	C - F
Move cursor to next tab stop	T	C - I
Move cursor to start of current line	h	C -W
Move cursor to end of current line	e	C - P
Move cursor to line above	t	C - E
Move cursor to line below	b	C - X
Move cursor to next page	d	C - R
Move cursor to previous page	u	C - C

Edit Functions	PC-Keyboard	Control-Key
Toggle insert mode	I	C - V
Reformat paragraph		C - B
Join a line		C - J
Insert a line		C - N
Delete a line		C - Y
Delete to the end of the current line		C - K
Delete character to the right	D	C - G
Delete character to the left	B	C - H
Delete word to the right		C - T

Special Functions	PC-Keyboard	Control-Key
Exit the full-screen editor	E	C - U
Re-display the screen		C - L
Quote the original message		C - O
Toggle 79 column mode		C - _

The Line-Editor

The line editor commands are described in the *Commands Available While in a Message Editor* section. Because the full-screen editor requires you to have ANSI terminal capabilities, you may choose to use the line-editor instead. The only editing that can be done while typing in a line in the line-editor is to backspace and correct typing mistakes. All editing must be done with the commands described in the *Commands Available While in a Message Editor* section.

To enter a blank line in the line-editor, press M on a blank line and then press R . Otherwise, pressing R on a blank line will display the message entry command prompt.

Entering Your Message

When entering a message, continue typing without worrying about formatting or pressing R at the end of lines. PCBoard will wrap the text that is written so that whole words remain on one line. If you lose carrier or are logged off for inactivity, PCBoard saves the message. This message can later be edited by using the E D I T subcommand at the `End of Message Command` while reading the message.

F File Directories

This command enables you to list files in the current conference, and to find a particular file either by filename or by text in the file description.

Subcommands to Locate a File

Usually you will want to filter the list of files that are seen. You may pick any of the subcommands listed in the following table to control which files are displayed. The L and N subcommands can be combined as well as the Z and N subcommands. The L and Z commands may not be combined. See *Examples* for more details.

All of the subcommands in this section are also accessible from the main menu. Expert users find that accessing them from the main menu is the fastest way.

L	**Locate filename(s)**.
N	**Display files after a particular date**.
Z	**Search entire file listing for text**.

File Directory Subcommands

You should pick one or more of these subcommands to determine which file directories to view. If you pick more than one subcommand, each must separated by a M or a ; . See *Examples* for more details.

[dir. #]	**File directory number**.
P	**View private upload directory**.
U	**View public upload directory**.

Miscellaneous Subcommands

D	**Flag the files found for download**.
F L A G	**Flag a file for download by filename**.
G	**Log off of the BBS**.
N S	**Display listing in non stop mode**.
R	**Re-display available file directories**.
V	**View a file**.

Subcommands: Alphabetical Listing

[dir. #] **File directory number**. Specifies the file directory number(s) you want to view. If you want to view multiple file directories, enter each directory number separated by either a M or a ; character.

D **Flag the files found for download**. Any files that are listed to the screen will also be flagged for download. No warning is given if you exceed the batch file limit. In other words, if you can batch transfer no more than 20 files, only the first 20 files displayed will be flagged for download. The rest will still be displayed but not flagged.

F L A G **Flag a file for download by filename**. Enables you to flag any file by typing in the filename. A single filename may be typed or wildcard characters may be used to flag multiple files with similar filenames.

G **Log off the BBS**. Immediately disconnects you from the system.

L **Locate filename(s)**. Enables you to display only those files which match a particular filename. Any valid DOS filename may be entered including those with wildcard (*?* and ***) characters.

N **Display files after a particular date**. Quite frequently you will want to scan the file directories to see what new files have been recently put online. PCBoard uses the N subcommand to display files that were posted after the date you enter. The default date will always be the latest date seen in the file directories. You can specify another date by stacking the date after the N subcommand or PCBoard will prompt you for the date. To specify the default date on the command line use S to represent the date.

N S **Display listing in non-stop mode**. When this subcommand is used the file listings will be displayed in non-stop mode. This subcommand may also be entered at any *more?* prompt while displaying file listings.

P **View private upload directory**. This subcommand enables you to view the private upload directory of the current conference. In order to use this subcommand you must have a security level that is equal to or greater than the one that is entered in *PCBSetup | Security Levels | Sysop Commands*.

R **Re-display available file directories**. This subcommand will re-display the list of file directories that are available in the current conference.

U **View public upload directory**. When files are uploaded they go either to the private upload directory if you force all uploads to be private--otherwise, they are stored in the public upload directory. This subcommand enables you to view a list of files and descriptions that are in the public upload directory of the current conference.

V **View a file**. Sometimes you may want more detailed information about a particular file. When this subcommand is used you will be asked for the filename to view. If the filename is a valid filename *PCBVIEW.BAT* will be executed. This is a batch file that you can use to customize what information you see about that particular file. For more information about *PCBVIEW.BAT* please see the *Batch Files* chapter of this manual.

Z **Search entire file listing for text**. A user may select only those files which contain particular text. Like other search functions in PCBoard, Boolean operands can be used for more complex searching. For more information on Boolean operands please see *Searching For Text* in the *Sysop's Guide* chapter of this manual.

Description

File transfers are one of the most popular attractions to bulletin boards. You may want to view a list of files that are on the system to see if there are files you want to download. When the F command is used, a list of file directories that may be viewed will be listed on the screen. After the list is displayed, you are given a file

command prompt where you can use any of the previously listed subcommands to control what files are listed/downloaded.

Examples

To view all of the files that are available in file directory number 3, enter:

```
F 3
```

To view the contents of ANYFILE.TXT, enter:

```
F V ANYFILE.TXT
```

F L A G for Download

This command enables you to mark a file or group of files for download later during your call.

Subcommand

[file] The filename or filenames to flag or mark for download later. You can enter multiple filenames by using standard DOS wildcards or by typing multiple filenames separated with a M or a ; .

Description

Sometimes you may want to flag or mark a file for download but do not want to begin the transfer right away. By flagging a file, PCBoard remembers the filename(s) until you are ready to begin the download. There are several ways to flag a file for download:

- At the conference command prompt by using the F L A G command
- While listing files with the F, Z, or N commands. PCBoard adds an additional prompt on each *more?* prompt which enables you to flag a file.
- Using the F L A G subcommand of the F user command.

Once the transfer has begun, all files that are being downloaded are remembered in case the transfer is aborted. Files that are not transferred completely remain flagged so you can make another attempt. The only way to remove the flagged files is to either successfully download the files or to answer N to the *Download Flagged Files?* prompt.

G Goodbye / Logoff of the BBS

To disconnect properly from the BBS, use this command.

Subcommand

Y **Yes**. If you have files flagged for download or if you have enabled the *Warning on Logoff Command*, you will be warned before logoff. If you use this subcommand, PCBoard will not warn you.

Description

When you disconnect from a system, you "terminate the connection". Once disconnected, you can call other systems or perform other tasks. Although you can issue G ; Y to skip the *Proceed with logoff?* question, you may also use the B Y E command. This command is usually easier to remember than G ; Y and is generally recommended.

H Online Help

This command lets you explicitly access the on-line help system. Using this command, you can get help for any of the commands available on the main menu.

Subcommand

[cmd] The command or filename that you want additional assistance with.

Description

Each of PCBoard's main commands have additional assistance available in the form of on-line help. The on-line help will be displayed on the screen.

Adding Help For Custom Commands

To add help files for commands that you add to the system or for doors on your system, you can create a filename in your help subdirectory that comprise of the first 8 characters of the command. PCBoard will display the help file if it exists.

Example

If you add a command called ORDER to your system, create a file called ORDER and place it in your help subdirectory. Execute the following to get help with your ORDER command:

```
HELP ORDER
```

I Initial Welcome

If you want to review the welcome screen that was displayed to you when you first logged into the system, use this command. Any user may issue this command regardless of security level.

J Join a Conference

Conferences serve as a way to separate information and topics on a bulletin board system. By dividing up the information, you can find what you are after quicker than ever before.

Subcommands: Alphabetical Listing

[name] **Conference name to join**. Specifies the conference name to join. Joining a conference by name is useful when you do not remember conference numbers, or in case the conference is moved to a new number.

[num.] **Conference number to join**. Specifies the conference number to join.

Q **Quick-join the conference**. Sometimes the conference that is being joined will have a news or introduction file. This subcommand will make sure that these files are **not** displayed when the conference is joined.

S **Search conference names for text**. As pointed out earlier, you may want to join a conference by name instead of number. What if you do not know or remember the conference names? This subcommand enables you to search the conference names on a system for text. PCBoard prompts you for the text to use for the search. If a match is found in the conference name, both the conference name and number are displayed.

R **Redisplay the list of conferences**. Using this subcommand at the *Conference # or Name to join* prompt redisplays the list of conferences.

Description

Conferences provide a method by which information on the bulletin board system can be broken down into areas. Each conference can have unique file directories, message bases, scripts, bulletins, and doors, or it may share these with other conferences on the system. In order to go to one of these conferences, use this command. Once you join the conference all of the features of the conference are made available to you.

Examples

If you want to join conference number 13, enter the following at the conference prompt:

```
J;13
```

If you know the name of the conference instead of the number, type in the name of the conference. For example, to join the *Computer_Art* conference, type:

```
J;COMPUTER_ART
```

If you do not know either the conference name or the conference number, use the search subcommand to help you find the right conference. For example, you may only remember that the conference deals with art. In that case, type the following at the conference prompt:

```
J;S;ART
```

PCBoard searches the conference names to see if it could find a match. For this particular example, you may see a report like the following:

```
1) Classic_Art
13) Computer_Art
37) Digitized_Art
```

The number to the left is the conference number. Next to that is the conference name. Using this information, you can pick the conference number or name to join.

K Kill a Message

This command marks a message for deletion making it inactive and unreadable. The actual message is not physically removed until that message base is packed.

Subcommand

[msg. #] The message number to kill or make inactive. This subcommand is only available if you are issuing the K command from a conference command prompt.

Description

Eventually messages on your system will become outdated or no longer useful. You can delete any message on your system by using this command. When you kill a message you make it inactive but do not actually remove it from your system. In order to physically remove an inactive message from your system you need to pack the message base.

There are only two prompts where you may delete a message. At any *conference command* prompt and at the *read message* prompt.

If a message has a security option of *RECEIVER ONLY*, the recipient and the sender of the message are the only ones that may kill it. If a message is marked as *SENDER PASSWORD*, only the author of the message may kill it. Finally, on messages that are addressed as *GROUP PASSWORD*, only the users with the proper password may kill the message. The SysOp may kill any message even if the message is protected via password.

Examples

If you are at an *End of Message Command* prompt, type *K* to make the current message inactive.

Sometimes you may already know the number of the message you want to delete. For example, if you want to delete message number 3292 in the current conference, type the following at the conference command prompt.

```
K 3292
```

L A N G Change Current Language

PCBoard has the ability to support multiple languages. Use this command to switch to the language you desire to use for your prompts after you have logged into the system.

Subcommand

[lang. #] The language number to use. If you omit the language number a list of available languages is displayed.

Description

The LANGuage command allows switching to other languages which are available on the system. These languages may vary from foreign languages to "humorous" type languages and even some that are dedicated to new callers. Choices that are available are displayed in menu format with a number corresponding to each operational language choice.

Example

To change to language number 3 on the system. enter the following:

```
LANG 3
```

L Locate a Filename

This command enables searching the file directories of the current conference for a particular filename. Wildcard characters are permitted.

Subcommands: Alphabetical Listing

[#] **Directory #**. When using this command, you must specify a directory or range of directories that PCBoard should search for the desired file(s). You may list a single directory, a range of directories in the format [#-#] or a list of directories in a [#;#;#] format. There are three letters you may use to represent special file directories. If you use A for the directory number, PCBoard will search all file directories in the current conference. Likewise, if you use U for the directory number, the upload directory of the current conference will be searched. Finally, if you have sufficient security, you may use P to specify the private upload directory for the current conference.

[file] **Filename to search for**. In order to search the file directories for a filename you must supply the filename you want PCBoard to search for. The filename you specify can be a simple filename like *READTHIS.TXT*, or more frequently something that contains wildcard characters like *READ*.*. The advantage in using wildcard characters is that you are not required to know the exact filename.

D **Flag the files for download that are found in the search**. If a file that matches the parameters is located, it is flagged and prepared for download later during the call. If more than one file is found, all files are flagged.

N **Combine the locate search with a new file scan**. This subcommand helps limit your search by only searching for files equal to or after a specific date. If you use the N command, include the

minimum file date from which the scan should search for. To use the date you last scanned for files, add an S to the N subcommand.

N S **Display the files found in non-stop mode**. Files are displayed in non-stop mode (no *More?* prompts will be displayed).

Description

Quite often you will want to search the file directories on a BBS to determine if a particular file exists on the system. If you are looking for a particular filename, use this command to help you find that filename. Most of the time your search will include some sort of wildcard like *TCRN*.* or similar. If you attempt to search for *HSXM*, PCBoard automatically appends an *.* making the search criteria *HSXM*.* to help you find the file(s) you are looking for.

Examples

If you want to locate any files that begin with ABC in all file directories for the current conference, type the following at the conference command prompt:

```
L;ABC;A
```

To search for files that begin with ABC in directories 1, 3, 9, and 15, type in the following command:

```
L;ABC;1;3;9;15
```

If you find that two many files are showing up on your searches, you may want to restrict the files you search for by date. To do this, use the N subcommand that was described previously. For example, to search for any filename that begins with ABC in all directories but only show those that have a file date equal to or later than 10/21/93, enter the following command:

```
L;ABC;N;102193;A
```

M Graphics Mode

This command allows you to change the graphics mode between RIPscrip, ANSI, non-ANSI, and no-color, graphics modes.

Subcommands: Alphabetical Listing

C T T Y **Non-ANSI mode**. Everything displayed by PCBoard will be in non-graphics, non-ANSI mode. This is the usually the safest mode for non-IBM computers like UNIX or Macintosh.

A N S I **ANSI cursor positioning**. Everything displayed by PCBoard will be in non-graphics, ANSI mode. This allows for faster screen drawing without having to slow down the displays with the colors.

G R A P H **ANSI color and cursor positioning**. Everything displayed by PCBoard will be in graphics, ANSI mode. This means that all prompts and text will be colorized. This mode is commonly referred to as *color graphics mode*.

R I P **RIPscrip graphics mode**. If you have made RIPscrip versions of your display files, they are displayed to users in this mode. By entering R at the *Do you want graphics* prompt, this mode is enabled.

Description

Issued without subcommands, this command acts as a toggle between graphics and non-graphics display modes. If you execute this command with a subcommand, you may choose which mode to use. If you do not have ANSI capabilities or are unsure if you do, choose CTTY mode. If you accidentally choose the wrong mode and get what seems to be garbage on your screen, enter the command again with the CTTY subcommand to see if that clears up the display.

About RIPscrip

While most communications programs are capable of displaying ANSI graphics, not all are capable of showing RIPscrip graphics. If you choose RIPscrip and your communications program is not able to interpreted the codes, it will appear that *garbage characters* are displaying on the screen. PCBoard itself, does not support the display of RIPscrip graphics on the local screen. As the SysOp, you always see the RIPscrip codes rather than the graphics.

Examples

If you are in graphics, ANSI mode and want to switch to non-color mode, simply execute the M command. It will change your mode.

If you want to switch to CTTY mode so that no ANSI sequences will be sent you can do so by typing the following at the conference command prompt:

```
M;CTTY
```

NOTE: The only way to enable CTTY mode after you log in is via the M command and the C T T Y subcommand.

M E N U Re-display Main Menu

This command redisplays the main menu.

Description

You can redisplay the main menu at the command prompt. When executed, the main menu screen is displayed regardless of the expert status.

N New File Scan

This command locates files that are new since the specified date in the directories specified.

Subcommands

[date] This represents the date from which PCBoard begins a search for all *new* files. All files found are displayed.

NOTE: If you pass the date on the command line (e.g., *N;030394;A*) and you want to specify only the files since your last scan, enter an S instead of an actual date.

[dir. #] When using this command, you must specify a directory or range of directories that PCBoard should search for the desired file(s). You may list a single directory, a range of directories in the format [#-#] or a list of directories in a [#;#;#] format. There are two letters you may use as a directory number. If you use A for the directory number, PCBoard searches all file directories in the current conference. Likewise, if you use U, the upload directory of the current conference is searched.

D All files found are queued for later download during your call. To download the files that have been queued, execute a download using either the D or D B commands.

S PCBoard scans for files added since the date of the most recent files the caller has been shown. PCBoard keeps track of the most recent valid file date that you have seen in the file directories. For example, if you do a new scan searching all file directories on 12-24-94, but the latest file date displayed is 12-21-94, PCBoard will remember that the latest date you have seen is 12-21-94.

N S Files are displayed in non-stop Mode (no *More?* prompts are displayed).

Description

A system commonly has hundreds or thousands of files online. Rather than viewing each of these directories and attempting to pick out the new files, use this command to limit the files that are displayed by date. Using the subcommands you will have control over the date to begin the search and the directory or directories to search for new files in.

Examples

One of the most common searches is to find new files in all directories of the current conference. To perform this search, type the following at a conference command prompt:

```
N;S;A
```

If you want to only scan the upload directory for files that have a date which is equal to or greater than 07-19-93, type the following at a conference command prompt:

```
N;071993;U
```

A more complex search may specify only a few of the available file directories in the conference. As an example, if you want to scan for new files since 05-22-94 in directories 1-4, 15, and 20-25, type the following at the conference command prompt:

```
N;052294;1-4;15;20;25
```

N E W S Display System News

Allows you to view the system news file which may list important events or notices about the bulletin board system.

Description

The news file usually contains important notes or events regarding the bulletin board system. You may use this command to read the news file for the current conference. Normally, this file is displayed when you log on to the system or join a conference, but you may read it at any time by using this command.

N O D E Chat With Other Users

This command is identical to the C H A T command. See the detailed explanation of the C H A T command for further details.

O Operator Page

If the SysOp is available for chat, this command allows you to page the SysOp for chat. If the SysOp is not available, you will be given the opportunity to leave a comment.

Description

This command enables you to request an immediate chat with the SysOp. If the system operator is available, both your machine and the SysOp's will beep for 30 seconds or until the page is answered, in which case you enter SysOp chat. If, however, the SysOp does not answer the page or is unavailable at the time of your request, PCBoard will inform you that the SysOp is unavailable and asks if you want to leave a comment

instead. The time when the SysOp is available can be configured in *PCBSetup | Configuration Options | Limits*.

O P E N a D O O R

This command allows you to open a DOOR to another application. You may open a door via door number or by name.

Subcommands: Alphabetical Listing

[num] This represents the number of the DOOR to open. It may either be stacked with the command at the conference command prompt (e.g., `OPEN;1`) or chosen after the DOOR menu is displayed.

[name] Instead of the DOOR number, you may type the actual DOOR name. For example, to open a door called 'EXCITING' you could type `OPEN;EXCITING` from the conference command prompt.

NOTE: If you use the name to open a door then you can type just the name of the door at the conference command prompt. For example if you have a door called MAIL, type `MAIL` at the conference command prompt to open the door.

[param] You may pass a parameter to the DOOR that is called. This parameter is similar to one passed at a DOS prompt to another application. Not all DOOR programs accept parameters so unless a particular DOOR states that it will accept parameters, assume that it does not. As an example, if you open a door by typing `OPEN;SALES;ANYTHING`, you are opening a DOOR called SALES and ANYTHING will be passed as a parameter. To access the parameters in a DOOR batch file, read the PCBDOOR environment variable. See the *Doors* section of the *Conference Setup* chapter in this manual for further details.

Description

A DOOR can extend a BBS because a DOOR is more or less an application that is independent of the bulletin board system. For example, a door could be an on-line game or an on-line database. If you do not specify a door number or name to open, the door menu is displayed so that you may pick a door to open.

P Page Length Setting

Allows you to change the number of lines that PCBoard should think is on your display screen.

Subcommand

[# of lines] This number indicates the number of lines displayed per screen. This value may range between 0 and 99.

Description

You may specify the number of lines PCBoard displays before it prompts you with a *(H)elp, More?* line. The most common setting is 23, but you may choose any value between 0 and 99. If you select a page length setting of 0, it is like being in permanent non-stop mode (i.e., when the screen fills up, a *More?* prompt will not be displayed).

Q Quick Message Scan

This command lists message header information. The information pertaining to a message is listed on one line for easy viewing.

Display Subcommands

+	**Scan in forward direction**.
-	**Scan in reverse direction**.
L	**Begin with last message in message base**.
N S	**Display in non-stop mode**.

Message Selection Subcommands

[beg. msg. #]	**Beginning message number**.
A	**Scan selected conferences**.
A L L	**Scan all conferences**.
F	**Message from you**.
F R O M	**Read messages from a user**.
N	**New Messages by date**.
S	**Messages that you have not read yet**.
T O	**Read messages to a user**.
W A I T	**Scan messages in conferences where you have mail waiting**.
T S	**Messages that contain particular text**.
U	**All unread messages**.
U S E R	**Messages to or from a particular user**.
Y	**Messages addressed to you**.

Subcommands: Alphabetical Listing

[beg. msg. #] **Beginning message number**. This is the message number to begin the scan with. The default scan direction is in the forward direction. To go in the reverse direction, use the - subcommand.

+ **Scan in forward direction**. When appended to the beginning message number you can set the direction in which PCBoard scans the message base. For example if you enter 7 6 2 +, PCBoard will begin scanning at message number 762 in the *forward* direction.

- **Scan in reverse direction**. When appended to the beginning message number you can set the direction in which PCBoard scans the message base. For example if you enter 3 5 6 9 -, PCBoard will begin scanning at message number 3569 in the *reverse* direction.
NOTE: PCBoard defaults to searching in the forward direction.

A **Scan selected conferences**. Scans not only the current conference but also those conferences which you have set for scanning via the S E L E C T command or the S conference flag in the users record.

A L L **Scan all conferences**. Scans all conferences you are registered in even if you have not marked the conference for scanning.

F **Messages from you**. Only messages that are from you are displayed.

F R O M	**Read messages from a user**. If you want to read mail that is from a particular user, use this subcommand. When you use this subcommand, PCBoard will prompt you for the user to read mail from.
L	**Begin with last message in message base**. Sets the beginning message number to the last message in the message base. When you use this subcommand you may omit the beginning message number.
N	**New messages by date**. The first message that is read is the one that matches the date that you specify. This enables you to read only messages entered after a certain date.
N S	**Display in non-stop mode**. The listing of messages will be displayed in non-stop mode. This means that there will be no *more?* prompts to pause each time the screen becomes full.
S	**Messages that you have not read yet**. Searches only those messages that you have not read yet.
T O	**Read messages to a user**. To read mail that is addressed to a particular user, use this subcommand. When you use this subcommand, you will be prompted for the user name to read mail from.
T S	**Messages that contain particular text**. This subcommand enables you to search for text in the message body, the TO: field, and the FROM: field. You can search for a word/phrase or you can use any Boolean search. For more information on searching for text please see *Searching For Text* in the *Sysop's Guide* chapter of this manual.
U	All unread messages. If a message has not yet been read, it is displayed. **NOTE**: A message that is addressed to ALL will always show up in such a search because the read status is not maintained on a message addressed to all users on the system.
U S E R	**Messages from a particular user**. You may search the message header for a particular user. When PCBoard searches for a particular user, it searches both the TO: and FROM: fields in the message header. You must enter a full user name. Partial matches cannot be made with this command.
W A I T	**Scan messages in conferences where you have mail waiting**. Messages are read from only conferences that you currently have personal mail waiting to be read. For example, if you login and see that you have mail waiting in conferences 2,3, and 25 you could read all new messages in only those conferences by entering *R;WAIT* at the conference command prompt.
Y	**Messages addressed to you**. Only messages addressed to you are listed.

Description

You may analyze a brief list of messages that may be read if you use the Q user command. When executed, PCBoard displays the following information about each message:

- Message number
- Reference number
- Sender
- Addressee
- Subject
- Read Status

The reference number indicates the previous message to which a reply was entered to. This command can be used to quickly search message headers for information.

Format of the list

The list that is produced by the format contains the following information:

- **Msg #**. The actual message number in the message base. Just before the message number is a status code that shows if the message has been read, etc. For a list of status codes please see the section titled *Status Codes*.
- **Ref #**. If the message is a reply, this field contains the message number replied to.
- **To**. Displays who the message is addressed to. Only the first 16 characters of who a message is address to is displayed.
- **From**. Displays who the message is from. The first 16 characters are displayed.
- **Subject**. Displays the subject of the message. Even though a subject may be quite long, only the first 25 characters of the subject is displayed with this command.

Status Codes

Next to each message number is a status code. These status codes determine if the message has been read, if it has replies, etc. The following is a list of all valid message status codes:

M	A message which can be read by anyone.
*****	A private message which has not been read by the person it was addressed to.
+	A private message which has been read by the person it was addressed to.
–	A message to a specific person, which was readable by anyone, which has been read by the person it was addressed to.
~	A *comment* to the SysOp which has not been read by the person in SysOp record #1.
`	A *comment* to the SysOp which has been read by the user in SysOp record #1.
%	A message protected by *sender password* which has not been read.
^	A message protected by *sender password* which has been read.
!	A message protected by *group password* which has not been read.
#	A message protected by *group password* which has been read.
$	A message protected by *group password* which is addressed to ALL.

Examples

To display the header information for all messages in the current message base in reverse order, type the following at the command prompt:

```
Q L
```

To search for all messages (beginning with the first message in the message base) either to or from a user named *Wally Peterson,* issue the following at the command prompt:

```
Q USER WALLY PETERSON 1+
```

QWK Transfer Mail In QWK Format

This command will allow you to transfer mail packets in QWK format to and from the BBS. Using the appropriate programs, mail can be read and replied to off-line.

Subcommands : Alphabetical Listing

[prot] If a protocol is not specified for transferring the QWK (mail) or REP (reply) packet, the default protocol will be used.

B Y E When you use this subcommand, PCBoard will logoff after your transfer is complete. Use of this subcommand is ideal for performing automated mail-runs.

D This subcommand is used to download a QWK packet. PCBoard scans the conferences that have been selected for scanning with the SELECT user command.

N E T Used in conjunction with either the D subcommand, PCBoard scans all conferences the user has access to and checks for the net status flag. Any conferences found to contain the net status flag are scanned for new *echo* mail and included in the packet. With the U subcommand, PCBoard allows the user to import a QWK packet to conferences where they have net status even if the messages are not from them.

U This subcommand is used to upload a reply (REP) packet. You may also specify *U LMR* to set the last message read pointers past the replies just uploaded. This prevents you from downloading your own replies.

Description

To save time and money, a common practice is to transfer mail packets to and from a bulletin board system. The messages can then be read and replied to off-line. PCBoard will create a QWK mail packet when using this command. In addition, the REP file can be uploaded with this command when using the U subcommand.

Although PCBoard does all of the processing to and from a packet, the compression and decompression of the mail packet is done by shelling out to PCBQWK.BAT where you can run your favorite compression program. The version of this batch file shipped with PCBoard will work with the popular PKZIP program.

Examples

To download a QWK packet using the Z protocol, enter the following:

```
QWK D Z
```

If there are replies to the QWK packet they will be stored in a REP file. This file needs to be uploaded for the replies to be posted on the bulletin board system. The following command will prepare PCBoard to upload the REP packet:

```
QWK U
```

Downloading a QWK packet for export to another bulletin board system (net mail) can be done with the following command:

```
QWK D NET
```

R Read Messages

The Read messages command permits you to read messages on a bulletin board system. Messages may be addressed to you, or to other people. From this command you may also reply to messages you are reading, search for text in messages, and get a synopsis of messages.

Read: Selection Subcommands

The following is a list of what are called the selection subcommands. These commands determine the criteria for the messages that you read. With the exception of the message #, you may use any subcommand in conjunction with any other subcommand. For example, to read new mail in all conferences that you have

set for scanning, enter *R;S;A*. Likewise, to read the same messages, but only display those from a user named FRANK CROSS, enter *R;S;A;USER;FRANK CROSS* at the conference command prompt.

[Message #]	**Message number to read**.
A	**Scan all selected conferences**.
A L L	**Scan all conferences that you have access to**.
F	**Read messages from current user**.
F R O M	**Read messages from a user**.
N	**New Messages by date**.
S	**Read new messages**.
T O	**Read messages to a user**.
T S	**Search messages for specific text**.
U	**Read unread messages**.
U S E R	**Search messages to or from a particular user**.
W A I T	**Scan messages in conferences where you have mail waiting**.
Y	**Read messages addressed to you**.
Y A	**Read messages to you or to ALL**.

Read: Scan Subcommands

These particular subcommands can be used to set the direction that you will read mail. For example, if you want to begin reading at the end of the current message base, enter *R;L*.

+ / -	**Set read direction**
1 +	**Begin with first message in the message base**.
L	**Begin with the last message**.
N	**New messages by date**.
R M	**Read memorized message**.
R M +	**Read memorized message and continue reading forward**.
R M -	**Read memorized message and continue reading reverse**.

Read: Capture Subcommands

One time-saving feature that PCBoard offers is the ability to capture messages into one single file which you may download and browse off-line. The resulting file is an ASCII file that looks just like what you see on the screen when viewing messages.

Sometimes you may want to download a group of messages or just a single message. These subcommands allow you to capture messages and download them to your system.

C	**Capture messages**
D	**Capture messages**
Q W K	**Capture messages in QWK format**
Z	**Capture and compress messages**

Read: General Subcommands

The following commands could be categorized as miscellaneous subcommands. Here, you will find commands to perform various functions that may not necessarily be directly related to reading messages, but are still available for your convenience.

D E	**De-select current conference**
G	**Goodbye**.
J	**Join a conference**.
K	**Kill a message**.
L O N G	**Use the extended message header for displaying**.
N S	**Non-stop mode**.
O	**Read-only mode**.
Q	**Quick scan messages.**
S E	**Select current conference for scanning**.
S E T	**Set the last message read number**.
S H O R T	**Use the brief message header for displaying**.

End of Message: Scan Subcommands

After you read each message, PCBoard will display an *End of Message Command* prompt. From this prompt you can enter numerous subcommands. Most often, you will be entering subcommands which allow you to continue reading, memorizing the current message number, etc. Following is a list of the subcommands you may access most frequently.

[Message #]	**Message number to read**
R	**Read next message in current direction**
+ / -	**Set read direction**
J U M P	**Jump to the next conference**.
L	**Begin with the last message**.
M	**Memorize current message number**.
N E X T	**Read next message**.
P R E V	**Read previous message**.
Q	**Quick scan remaining messages**.
R M	**Read memorized message**.
R M +	**Read memorized message and continue reading forward**.
R M -	**Read memorized message and continue reading reverse**.
R R	**Read reference message**.
S K I P	**Skip current conference**.
T +	**Thread read (forward direction).**
T -	**Thread read (reverse direction)**.

End of Message: Reply Subcommands

Communications is a two way street. Therefore, you will most likely read messages you want to respond to. The following is a list of reply subcommands you can use to enter responses.

R E **Reply to current message**.

R O **Reply to a message but send reply to a different user.**

End of Message: Capture Subcommands

If you are in the middle of reading messages and decide to capture the current message, use one of the following subcommands:

C **Capture current message**

D **Capture current message**

Z **Capture and compress current message**

End of Message: Selection Subcommands

While you are reading messages there are a few subcommands you can use to change the future messages you will be reading. You can use these to make specific searches. For example, if you begin reading all new messages (*R;A;S*) and decide there are too many messages, you should restrict your search. If you decide it is faster to read mail addressed to you or *ALL*, enter Y A at the *End of Message Command* prompt.

F	**Read messages from current user**.
S	**Read new messages**.
T S	**Search messages for specific text**.
U S E R	**Search messages to or from a particular user**
Y	**Read messages addressed to you**.
Y A	**Read messages to you or to ALL**.

End of Message: General Subcommands

The following subcommands are the remaining commands that are available at the *End of Message Command* prompt.

/	**Re-display current message**
A L I A S	**Toggle use of alias.**
C H A T	**Enter group/node chat.**
D E	**De-select current conference**
E	**Edit message header information**.
E D I T	**Edit the content of a message**.
F L A G	**Flag a file for download**.
F O R W	**Forward a message to another user.**
G	**Goodbye**.
J	**Join a conference**.
K	**Kill the current message**.
L O N G	**Use the extended message header for displaying**.
N	**Quit reading messages**.
N S	**Non-stop mode**.
S H O R T	**Use the brief message header for displaying**.
S E	**Select current conference for scanning**.

S E T	**Set the last message read number**.
V	**View a downloadable file**.
W H O	**Display who is currently logged into the system.**

End of Message: SysOp Subcommands

There are several subcommands that are available only to SysOps at the *End of Message Command* prompt. You can copy or move messages, access user records, edit message header information and more.

C O P Y	Copy a message to another conference.
F	Access the sender's user record.
F F	Access the sender's user record.
F T	Access the recipients user record.
M O V E	Move message to another conference.
P	Make current message private.
U	Make current message public.

Subcommands: Alphabetical Listing

For your convenience, the following is a detailed alphabetical list of subcommands that are available with the R command. Even the subcommands that are available at the *End of Message Command* prompt are listed.

[Message #]	**Message number to read.** This number indicates the message number to read. You may also append either a + or a – to the message number to read in the forward or reverse direction, starting with the number specified. For example, to read message #3236 and every message afterwards, enter *3236+* instead of just *3236*. You may also specify a range of message numbers by adding a dash between the low message number and high message number. For example, to specify messages between 3000 and 4000, enter *3000-4000*.
R	**Read next message in current direction**. When pressed at the *End of Message Command?* prompt, the next message is displayed in the direction that you are reading.
+ / -	**Set read direction.** When appended to a message number or used by itself, PCBoard displays all messages in forward-numerical or reverse-numerical order respectively from that point. You can always tell what mode you are in by looking at the *Read Type* at the top of the message. In that field you will see either a + or a – to denote the direction.
/	**Re-display current message**. When this subcommand is entered at an *End of Message Command* prompt the current message is redisplayed.
1 +	**Begin with first message in the message base**. If you want to specify the first message in the message base, use this subcommand.
A	**Scan all selected conferences**. Messages are read from all conferences that have been selected for scanning. You may choose which conferences to scan for messages by using the S E command at the *conference command* prompt or by using D E or S E with the R user command. These conference scanning flags may also be modified while editing a user record.
A L I A S	**Toggle usage of alias**. When you are in a conference that allows usage of an alias, you may or may not want to enter messages using your alias. This command allows you to toggle whether or not your alias will be used.
A L L	**Scan all conferences you have access to**. Messages are read from all conferences you have access even if they are not normally set for scanning.

C — **Capture messages**. The messages displayed by the current command are captured, placed in a file, and prepared for download. You are given the choice to continue with the download, abort the transfer, or hang-up after.

C H A T — **Enter group/node chat**. While reading messages, you could be paged into node chat by a user already there. To save time, you can enter this command at the *End of Message Command* prompt instead of stop reading messages and returning to the main menu. This command is only available at the *End of Message Command* prompt.

C O P Y — **Copy a message to another conference**. This subcommand for SysOps enables copying of a message to another conference. When you copy a message you leave the original message but also make another copy of the message in the conference that you specify.

D — **Capture messages**. The messages displayed by the current command are captured, placed in a file, and immediately prepared for download.

D E — **De-select current conference**. If a particular conference is chosen for scanning, the conference is de-selected. This has the same effect as using the Select command from the main menu and de-selecting the conference by pressing the corresponding number for the conference. This will cause the "X" flag in the flags column from the SELECT command (executed from a conference command prompt) to be removed.

E — **Edit message header information**. At times, you may want to change who you addressed a message to or the subject of a message. This subcommand allows you to edit these fields. If you have SysOp security level, you may also change the reference number, whether the message has been read yet, and the protection of the message. This subcommand is only available at the *End of Message Command?* prompt.

E — **Enter a message**. See the E user command for more details. Note, this command is not available at the *End of Message Command*? prompt. See the previously described subcommand.

E D I T — **Edit the content of a message**. The current message is placed in the editor for modification. You may want to re-edit a message if you accidentally lost carrier while entering a message or changed your mind, etc.

F — **Access the sender's user record**. As a SysOp, you may be reading a message and want to access the user record of the user who left the message. At the *End of Message* prompt, this command will display the user record of the user who left the message. The format of the user record and the commands that are available when the user record is displayed are all discussed in the description of the 7 SysOp command.

F — **Read messages from current user**. The message base is scanned for all messages from you.

F L A G — **Flag a file for download**. Enables you to flag a file for download later during the session. This subcommand is identical to the FLAG command.

F F — **Access the sender's user record**. See the F subcommand for more details.

F O R W — **Forward a message to another user.** Allows you to copy and readdress the message to another user. For a more detailed description on message forwarding, refer to the *SysOp's Guide* chapter.

F R O M — **Read messages from a user**. To read mail that is only from a particular user, use this subcommand. When you use this subcommand, PCBoard will prompt you for the user you want to read mail from.

F T — **Access the recipients user record**. Like the F subcommand, this subcommand allows you to access user records while you are reading messages. The difference, however, is that the user record of the whom the message is addressed to will be displayed.

G — **GoodBye**. (See the G user command for more details.)

J	**Join a conference**. You may join another conference. (See the J user command for more details.)
J U M P	**Jump to the next conference**. If you read all conferences (*R;A* or *R;ALL*), you may jump to the next available conference for message base scanning by using this command. The last message read pointer is not advanced to the last message when you j u m p a conference. Next time you scan for new mail in that conference, all of the messages you jumped over will be shown in the scan. This subcommand is only available at the *End of Message Command* prompt.
K	**Kill the current message**. If the message is to/from you then you may kill it. When you kill a message, you make it inactive in the message base. The SysOp may recover any message which has been killed but not yet packed out of the message base by using the 4 SysOp command. If you do not issue this command at an *End of Message Command* prompt, you will be asked to enter the message number to kill.
L	**Begin with the last message**. The current message base is read backward from the last message to the first.
L O N G	**Use the extended message header for displaying**. Displays the extended message header. All message header fields are displayed, but the extended header uses 7 lines as opposed to the 5 lines used by the short display.
M	**Memorize current message number**. When executed, PCBoard memorizes the current message number. PCBoard will only remember one message number. If you try to memorize another message number, the previous one will be lost. When you want to return to the memorized message number, you may type *RM*, *RM+*, or *RM-*.
M O V E	**Move message to another conference**. This subcommand for SysOps will move a message to another conference. Moving implies that the message will be copied to the conference that you specify and then the original message will be deleted. When you use this subcommand, you are prompted to enter the destination conference for the message. If you enter the number of the conference you are currently in, the message will be moved to the end of the message base.
N	**New messages by date**. The first message that is read is the one that matches the date that you specify. This enables you to read only messages entered after a certain date.
N	**Quit reading messages**. At the *End of Message* command prompt, reading ends and you are returned to the *conference command* prompt.
N E X T	**Read next message**. The next message in the message base is displayed.
N S	**Non-stop mode**. Messages are displayed in non-stop mode, thus eliminating *More?* prompts from the display.
O	**Read messages in read-only mode**. When you want to read messages and do not want your last message read updated as you read the mail, read the mail in what is called *read-only* mode. Additionally, if you have sufficient security as defined in *PCBSetup | Security Levels | Sysop Commands*, the message read status will not be updated. This means that even though you have read the message, it will not be shown as having been read and your last message read pointers will not be updated.
P	**Make current message private**. A quick way to make any message security *RECEIVER ONLY* is to use this subcommand. This subcommand is available to *SysOps only* and is quite useful when you need to make a message private but do not want to use the E subcommand to edit all of the message header information.
P R E V	**Read previous message**. The previous message is displayed.
aQ	**Quick scan messages**. See the Q user command for more information.
Q	**Quick scan remaining messages**. At the *End of Message Command* prompt, using this subcommand gives quick scan listing of the remaining messages to read. For example, if

doing a thread read and you want to see the remaining messages to get a feeling of how involved the thread is, you can use the Q subcommand at the *End of Message Command* prompt.

QWK **Capture message in QWK format**. One of the most popular off-line message format is the QWK format. With what is called a QWK packet you can load it into an off-line mail reader and read and reply to messages off-line saving time and money. If you use this subcommand, any message normally displayed to your screen will be sent to a QWK packet that you may download and read off-line.

RM **Read memorized message**. Redisplays the memorized message.

RE **Reply to current message**. When you want to respond to an individual's message you enter a message called a reply. To enter a reply to the current message you use the RE command which will create a new message addressed to the sender of the original message. This is the command you will be using most often when replying to a message because the message that you want to respond to is the message you are currently reading. Therefore, you will not have to enter a message number to respond to because you are currently reading the message. See the REPLY to Message command for additional information.

RM+ **Read memorized message and continue reading forward**. The message previously memorized is re-displayed and the message base is placed in forward mode for further reading.

RM- **Read memorized message and continue reading reverse**. The message previously memorized is re-displayed and the message base is placed in reverse mode for further reading.

RR **Read reference message**. If the message you are reading displays a message number in the *REFER#* field of the message header, you may read the reference message by typing RR and pressing the R key. This is also where the memorize a message command (M) comes in handy. Using that command you can memorize the current message, read the reference message and then quickly return to the original message by returning to the memorized message number.

S **Read new messages**. All messages in the current conference that have not already been read are displayed. You may specify the A or ALL subcommand to scan for new mail in other conferences.

SE **Select current conference for scanning**. While reading a message you may select the current conference to scan for messages. This has the same effect as if you executed the SELECT command from the main menu and placed an "X" in the flags column for this conference.

SET **Set the last message read number**. PCBoard stores last message read pointers for each conference. These pointers contain the last message number you read in each conference. By looking at this value, PCBoard is able to determine which messages you have not read yet. As you read messages, this number is automatically updated. If you need to manually update this value, use this command. When executed, you are asked to enter the new highest message read. If the number you enter is higher than the highest message in the conference, your last message read is set to the highest number in the conference.

SHORT **Use the brief message header for displaying**. Displays the five line version of the message header. This means that not all of the fields in the header are displayed so that more of the message is displayed on the screen.

SKIP **Skip current conference**. While executing an R;ALL or an R;A command, you may use SKIP to bypass the remaining messages in the current conference and to set the last message read pointer to the last message. In the R;A case, however, invoking SKIP will

act just as it does with the R;A command only it moves you to the next available conference and permits you to continue reading messages in the next conference.

T — **Thread read**. PCBoard allows you to read only messages that have the same subject in the message header. This is called *reading messages by thread*. You may choose to read forward or reverse in the thread by appending a + or a - next to the T (e.g. T+, T-). Normally, you memorize your current position (by using the M command) and use the RM command to return to the original message after the thread read is complete.

T O — **Read messages to a user**. If you want to read mail that is addressed to a particular user, use this subcommand. When you do, you are prompted for the user name that PCBoard uses to search the TO: field of each message.

T S — **Search messages for specific text**. Each message is scanned for the text that you indicate. You may perform complex text searches by using Boolean text searches. For more information on Boolean text searches, refer to *Searching For Text* in the *Sysop's Guide* chapter of this manual.

U — **Read unread messages**. Anytime that you want to read messages that have not been read, use this subcommand. If a message has been read by the recipient, PCBoard displays the date and time that the message was read in the message header. Messages to `ALL` are always considered to be unread.

U — **Make current message public**. Like the P subcommand, this subcommand allows you to quickly change the message security of the current message. However, this subcommand makes a message `PUBLIC`. This subcommand is only available to SysOps since it can change the security of a message.

U S E R — **Search messages to or from a particular user**. When executed, you are prompted to enter the name of the user to search for. After a valid user name is entered, the message base is scanned for messages both for the specified user and those left by the specified user.

V — **View a downloadable file**. Enables a downloadable file to be viewed online via PCBVIEW.BAT. This subcommand is identical to the V subcommand for the F user command. In other words, it is identical to typing `F;V` at a conference command prompt.

W A I T — **Scan messages in conferences where you have mail waiting**. Messages are read only from conferences that you currently have personal mail waiting to be read. For example, if you login and see that you have mail waiting in conferences 2,3, and 25 you could read all new messages in only those conferences by entering `R;WAIT` at the conference command prompt.

W H O — **Display who is currently logged into the system**. When paged for chat by another user, it can be useful to see who is currently online. Using the WHO command at the *End of Message Command* prompt you can see who is currently logged in. Remember, this command can only be used at the *End of Message Command* prompt.

Y — **Read messages addressed to you**. The message base is scanned for all messages addressed to you.

Y A — **Read messages to you or to ALL**. The message base is scanned for all messages addressed to you or to ALL.

Z — **Capture and compress messages**. As with the D command, the messages displayed by the current command are captured and placed in a file. The file, however, is compressed before it is downloaded and therefore may not be sent to your local printer.

Description

Exchanging electronic mail or messages between users is probably the most popular form of communications on bulletin board systems. Users enter and read messages almost every call. PCBoard has several subcommands that allow you to read only messages that interest you.

While the number of subcommands may overwhelm you at first, you will find that you will become familiar with them after a little bit of practice. You may also find that using mnemonics will help you remember the commands easier. By looking at the subcommands described earlier you can enter *R;S;A* at a conference command prompt to read all new messages in the conferences you have selected for scanning. You may find it easier to remember that *R;S;A* means **R**ead mail **S**ince last time in **A**ll selected conferences.

Use the selection subcommands to determine the messages that you will read. After you read each message you will be presented with an *End of Message Command* prompt where you can enter other commands that enable you to reply to messages and other functions as well.

Combining Read Subcommands

Once you understand how you can combine the various read subcommands, you will be able to better make use of PCBoard's power. The following section is designed to help you find the right subcommand for the right situation.

If you enter *R* at a conference command prompt you will see a line which shows you the range of the message numbers in the current conference message base and will ask you what *Message Read Command* to use. At this point, choose at least one subcommand from the *Read: Selection Subcommands* section. For example, if you enter a **Y**, you are telling PCBoard to read messages that are addressed to you. Now that PCBoard has enough information to go on, it will begin scanning with message #1 for any mail that is addressed to you.

You may be wondering what to do if you do not want to begin scanning at message number one (maybe you only want to scan any **new** mail that is addressed to you). In this case, use both the **Y** and the **S** subcommands. Simply enter both subcommands at the Message Read Command prompt putting either a space (**M**) or a semicolon (**;**) between each command. The following is a sample scenario:

```
(50 min. left) Main Board Command? R

(H)elp, (3523-5032), Message Read Command? Y;S
```

At this point, PCBoard will begin scanning all new mail in the current conference for any messages addressed to you.

The Difference Between LONG and SHORT Message Headers

The message header is the information displayed regarding who the message is from or to, the subject of the message, etc. PCBoard supports two different message headers—long and short.

The long message header closely resembles the message header of previous versions of PCBoard with the exception that the, TO, FROM, and SUBJECT fields all take one line a piece. The long message header displays the following information:

- Date
- Message number
- Reference number (if message is a reply)
- Who the message is addressed to
- Who the message is from
- The subject of the message
- If the message has been read or not
- The status of a message (has replies, message security, etc.)
- The current conference number

- Type of message read you are using

All in all, this format takes a hefty 7 display lines on the screen including the blank line between the header and the message text. This amounts to nearly one third of the entire display area on the screen. The short header, on the other hand, uses only 5 display lines including the blank line. This amounts to less than one quarter of the display screen enabling you to fit more message text on the screen. The short message header displays the following information:

- Date and time the message was entered
- Message number
- If the message has replies (displayed as an **R** on the top line of the header)
- If the message has been read (displayed as an ***** on the top line of the header)
- Who the message is addressed to
- Who the message is from
- The subject of the message

The following shows the long message header style:

```
Date: 12-03-96 (10:59)              Number: 59162 of 61861 (Refer# NONE)
  To: SEAN POPHAM
From: CORY ROBIN
Subj: Your email address
Read: 12-03-96 (11:37)                      Status: RECEIVER ONLY (Echo)
Conf: Internet Email (31)                 Read Type: YOUR MAIL (+)
```

The following illustrates the short message header style

```
Date: 12-03-96 (10:59)              Number: 59162 of 61861 (Refer# NONE)
  To: SEAN POPHAM
From: CORY ROBIN
Subj: Your email address
```

As you can see two lines of information really does make a difference. The default header that is used is determined by how you answered the following question using the W user command:

```
Use long headers when reading messages? (Y)
```

You can also switch between long and short headers by typing either *LONG* or *SHORT* at the *End of Message Command* prompt. In addition, you may also use these words when using the R user command. For example:

```
R;A;LONG
R;Y;S;SHORT
```

Examples

If you do not like to read a lot of mail when you login to a system, you may want to only read new messages that are addressed to you in all conferences that you are able to join. To do this, enter the following at the conference command prompt:

```
R;Y;S;ALL
```

If you want to read the same messages but instead you want to capture them to a file you can download, enter the following instead:

```
R;Y;S;ALL;C
```

Sometimes you may want to search for messages that only have certain text in either the message header or the actual message body. For, example, if you want to search all of the messages in the current message base for *HARD DRIVE*, enter the following:

```
R;TS;HARD DRIVE
```

At this point, PCBoard will ask you what message you to begin the scan with. If you enter L , it will begin with the end of the message base and search backwards. If you want to scan with the beginning message and search forward, enter 1 + instead.

R E P L Y Reply To A Message

This command allows you to respond to a message that you have read. When you enter a response to a message you enter what is called a reply.

Subcommand

#	The message number (between 1 and 16,777,216) you want to respond to. If you want to reply to multiple messages, enter a message number followed by a comma, a space and another message number (e.g., *3252, 3523*)

Description

A reply is nothing more than a new message. There are a couple of things that make a reply different than entering a regwlar message. These differences are listed below:

- The message is automatically addressed so that your response is sent to the proper user.
- The subject automatically defaults to the one of the previous message--you may change the subject if you want.
- You may quote from the original message to enhance the clarity of your response.
- If security of the message that you are replying to is *PUBLIC* then you may change the security level of your reply. Otherwise, the message security of the original message will be carried through to the reply. In other words you can respond to a *PUBLIC* message and make the reply a *RECEIVER ONLY* message. However, you cannot respond to a *RECEIVER ONLY* message and make the reply *PUBLIC*.
- The message number of the original message displays in the header of your reply message as *REFER #*.

Aside from the differences listed, a reply is exactly like entering any other message. Therefore, you will want to refer to the E command to find what options are available to you while entering your reply.

Quoting The Previous Message

Quoting the original message in your reply enhances the clarity of your reply. It makes it easier to understand the message and what you are responding to. Very little effort is required for quoting a message from either remote or local calls.

Remote: From remote, there are two ways you can quote the original message. If you are in the full-screen editor, press C -O to pull up the previous message, or you may press E and then select Q from the

message entry command prompt. When the message is displayed on your screen, you will see line numbers to the left of each line. You are then asked the beginning and ending lines to quote.

Once you have entered the line numbers to quote, you are returned to the message you are writing. Where you left off you will now see the lines that you quoted. To set the quote apart from your message, you will see a `->` to the left of each line that is a quote. When reading the message, these marks show up in color to make them stand out even more.

Local: When you are not calling in from remote and want to quote a message you may use PCBoard's scroll back buffer in addition to the methods that are described for remote users. Since your arrow keys are active in the full screen editor, you can access the scroll back buffer by pressing the O key on your keyboard. When you are in the scroll back buffer, simply press the M where you want to begin your quote and then cursor to the last part you want to quote and press the M bar again. The text that you have marked is now shown in reverse text. To use that text, press E to quote the marked text. You may also remark the text you want to quote using the M bar as previously mentioned.

Example

If you want to reply to the following message,

```
Date: 01-02-97 (14:25)              Number: 145425 of 145425 (Refer# NONE)
  To: SEAN POPHAM
From: CORY ROBIN
Subj: PCBoard and Windows NT
Read: NO                                   Status: RECEIVER ONLY
Conf: Main Board (0)                    Read Type: YOUR MAIL (A) (R/O) (+)



PCBoard works GREAT under Windows NT



Cory Robin
Clark Dev. Co, Inc. Support Staff

(1011 min left), (H)elp, End of Message Command?
```

type *RE* at the *End of Message* prompt. RE is the subcommand to reply to the message you are currently reading.

Depending on the conference configuration, the following information may be asked before you can enter a reply to a message:

- **Subject**: When entering a reply, you are given the ability to change the subject of the message. If you press R when prompted for the subject, the subject of the message you are replying to will be used.
- **Message Security**: If the message you are responding to is a public message, the security of the message can be changed in case you want to make a reply private.
- **Echo Message**: If the *Echo Mail in Conference* option is turned on for the conference where the reply is entered, you are asked if you want to echo your response.
- **Route message to**: If your response is to be echoed and if the response is a private response, and if the *Prompt for ROUTE info* option is turned on, this question will be asked. You can enter any routing information (such as a site address or personal address) in this field as appropriate for the NetMail system that the conference carries.
- **Request Return Receipt**: If the message is private, you are given the option to request a return receipt. If you request a return receipt, you will receive a message notifying you when a user has read your message.

- **Use Full Screen Editor**: If you have setup your defaults to ask which editor each time you enter a message (W user command), you will be asked this question.

Once these questions have been asked, you are ready to enter the response. Usually, however, you will want to quote some of the text from the original message. From within the full-screen editor, you can press C -O to quote from the previous message. You are shown the message you are responding to (with line numbers at the beginning of every line). Once the original message has been displayed, you are asked which line you want to begin your quote from followed by the last line to quote.

```
To: SEAN POPHAM                Subj: PCBoard and Windows NT
--------------------------------------------------------------------------------
  1:
  2:
  3: PCBoard works GREAT under Windows NT
  4:
  5:
  6:
  7: Cory Robin
  8: Clark Dev. Co, Inc. Support Staff

QUOTE: Starting line number, (Q) to Quit? (2      )
QUOTE: Ending line number, (Q) to Quit? (3      )
```

In this example, you could quote line one by specifying both the starting and ending line number as line 1. You are then returned back to the editor and you will see that quoted text is now in your message with each line prefixed with -> so you can differentiate between your reply text and the quoted text.

```
To: CORY ROBIN                 Subj: PCBoard and Windows NT                  2
--------------------------------------------------------------------------------
-> PCBoard works GREAT under Windows NT
```

If you are using the line editor instead of the full-screen editor, the method you use to quote will be a little different because that particular editor does not recognize C -O. Instead, you get to the message command prompt by pressing R on a blank line in the editor. At the command prompt, press Q followed by R . You may then quote the message in the same manner that was used to quote from the full-screen editor.

If you are logged in locally, you can use the methods described previously to quote a message, or you can take advantage of PCBoard's scroll-back buffer (if you have it enabled). You can mark any text in the scroll-back buffer and have it included in the message as quoted text. To do so, press the o key and you will be in scroll-back mode. You will notice that you have a cursor that you can move around the screen. Simply move the cursor to the beginning of the text you want to quote and press M . Next, move the cursor to the last portion of the text to quote and press M . All of the text between the beginning and ending mark is highlighted.

```
Date: 01-02-97 (14:25)              Number: 145425 of 145425 (Refer# NONE)
  To: SEAN POPHAM
From: CORY ROBIN
Subj: PCBoard and Windows NT
Read: NO                                     Status: RECEIVER ONLY
Conf: Main Board (0)                      Read Type: YOUR MAIL (A) (R/O) (+)



PCBoard works GREAT under Windows NT



Cory Robin
Clark Dev. Co, Inc. Support Staff

(1011 min left), (H)elp, End of Message Command? re

Subject (Enter)=no change? (PCBoard and Windows NT                          )
Request Return Receipt? (N)
```

Simply press E , and this text is entered in your reply as quoted text. You may then continue to enter your reply and quote more text if you need to.

```
To: CORY ROBIN                Subj: PCBoard and Windows NT                    2
-------------------------------------------------------------------------------
-> PCBoard works GREAT under Windows NT
```

Once you have finished entering your response and quoting text, you can save your message just as you do when entering a new message.

R M Re-Read Memorized Message

This command allows you to read a message that you have previously memorized. If you try to execute this command and you have not memorized a message number, you will be notified that no message number has been memorized. For more information on this command see the R M, R M +, and R M - subcommands for the R user command.

S Script Questionnaires

Script questionnaires allow you to answer various questions that the SysOp has designed for you to answer. These questions may cover a wide variety of topics and can vary in length. When you execute this command you will be presented with a list of script questionnaires available in the current conference. Select the number of the questionnaire to answer and the questionnaire will be presented to you. Answer each question in the space presented.

S E L E C T Select Conferences for Scanning Or Reading

In order to determine what conferences you want to scan or read mail in, you must *select* the conference. This command will enable you to select the conferences that you want to select.

Subcommands: Alphabetical Listing

[Conf] **Conference number(s) to select**. You may specify a single conference or multiple conferences. If you want to specify multiple conferences, you must do so by specify a range (e.g., *32-53*) or by separating each conference by a space or semicolon. You can even combine ranges and individual conferences. See the example section of this command for more details.

S **Select all conferences**. This subcommand selects all conferences for read scanning.

D **De-select all conferences**. This subcommand deselects all conferences for scanning.

Using the SELECT Command Interactively

If you do not specify any subcommands when you run the SELECT command then you will be running it in interactive mode. The only thing you need to remember about interactive mode is that it is slightly different than specifying everything when you use the command with subcommands. The following lists the differences between the various subcommands when you are using the command in interactive mode.

[#] **Conference number(s) to select**. In interactive mode when you select a conference you toggle its status. If you select conference 1 and it was already selected (had an X in the FLAGS column), you will de-select that particular conference. If you select a conference that was not already selected, you will be asked what you want to set your last message read pointer to. You may set the last message read pointer to any value that is within the range of messages in the conference. To find the range of messages in the conference look to the left of the conference name on the prompt

where it is asking you to enter your last message read. You will see a range of numbers that will look something like 3005-8292. The first number is the lowest message in the conference and the second number is the highest.

In addition, you can add a *D* to the right of the conference number(s) to de-select the conference(s) that you specify.

S **Select all conferences**. This subcommand selects all conferences for scanning and all conferences will have an "X" placed in its flags field.

D **De-select all conferences**. This subcommand de-selects all conferences for scanning and removes the "X" if there was one in this conference's flags field.

Q **Quit**. This subcommand quits and returns control to the main menu.

Description

Quite often, there are conferences on a bulletin board that you do not want to participate in. This command enables you to choose which conferences to automatically scan for messages both at login and when you use the A subcommand with a message read or scan command (e.g., the R, T S, and Q commands). A two-column listing of conferences that you are able to join is displayed. In the list, PCBoard includes the conference number, description, last message read, highest message in the conference, and an "X" if you have marked this conference for scanning. Only the conferences you have access to are listed. If you find that a conference is not listed, it is because you do not have access to it. The following is an example of the screen:

```
Conference                                            Last   High
  #   Name                                            Read   Num. Flags
-------------------------------------------------------------------------
    0 Main Board . . . . . . . . . . . . . . . . . .  78661  79347 X
    1 SysOps Talk. . . . . . . . . . . . . . . . . . 150169 150657 X
    2 For Sale . . . . . . . . . . . . . . . . . . .  14666  14723
    4 Programming. . . . . . . . . . . . . . . . . .  10891  10974
    5 Operating Systems. . . . . . . . . . . . . . .   7729   7747 X
Enter Conference Numbers, (S)elect All, (D)eselect All, or (Q)uit?
```

NOTE: If an asterisk is printed between the conference number and name, it is a signal that the user has Net access to the conference for transferring QWK mail packets. The net access is given with N conference flag in the record of the user.

Examples

If you want to make sure that conferences 1 through 9 and conference number 12 are selected, you can do this from the command line by typing the following:

```
SELECT 1-9;12
```

Now, if you want to de-select just those conferences, you should do that by running the SELECT command interactively by typing SELECT on the command line. At the next prompt, type *1-9;12* and you will see that the conferences have been de-selected.

T Transfer Protocol

In order to transfer a file while connected to a bulletin board system you must use a file transfer protocol. This command allows you to select your default file transfer protocol.

Subcommand

[prot] Protocol letter. You can change your transfer protocol to any valid transfer protocol letter. If you do not specify a protocol letter when you execute the command, you will be given a list of available protocols from which you may choose. Valid protocol letters are A-Z and 0-9.

Description

When executed, a list is displayed that allows you to choose from among several different file transfer protocols for uploading or downloading files. Each is denoted by a single character, a letter or a number from 0 to 9.

When determining which protocol to select, it is important to remember that the same protocol must be used on the bulletin board system and by the communications program that you are using. If you are unsure of which protocol to select or will be changing your selected protocol, select N for no default protocol. If you select None, you will be asked to select a protocol each time you begin a file transfer.

T E S T Test A Downloadable File

This command allows you to test a file for download before you actually download the file. The testing procedure is determined by the SysOp so it may vary from system to system.

Subcommand

[file] **Filename to test**. This is the file that will be tested according to the testing procedures designated by the SysOp. You may only specify one filename at a time.

Description

How many times have you downloaded a file only to find that it will not uncompress due to errors? The TEST command permits you to check files for viruses and other corruption that might exist in a particular file. When you enter the filename to test, you will be informed after a short delay whether the file passed or failed the predetermined criteria. If the filename you enter to test does not exist on the system, you will be notified that the filename you entered does not exist and you will be allowed to enter a new filename to test.

T S Text Search Messages

Subcommands

[Text] **Text to search for**. This subcommand is required for use with the TS command. This is the text to scan for in the message base. This may be a single word or it may be a complex Boolean search string.

NOTE: You may also specify any subcommands of the Read a Message command (R):

- Read: Selection Subcommands
- Read: Capture Subcommands

Description

Every once in a while you may have a need to search through all or a portion of messages on a particular system. You might be experiencing a problem that you need help with or you may have a particular question in mind. The T S command is very similar to the R command. The major difference is that only the messages that contain the search text that you specify are displayed. Giving you the ability to scan messages and message headers to locate a specified text in a message makes it easier for you to display only those messages that interest you. By using conditional text searches you can further limit the messages that are displayed to you.

U Upload a File

Like the D user command, this allows you to transfer files between systems. In this case, however, you are sending a file to the bulletin board system instead of receiving one.

Subcommands: Alphabetical Listing

[file] **Filename(s) to upload**. The parameter is given to identify the uploaded file in the PCBoard system. PCBoard asks for the filename or it may be included on the command line. If more than one file is to be uploaded, each must be listed on the command line.

[prot] **Protocol to use for the upload**. To specify a protocol that is different from your default protocol, enter the protocol letter to use on the command line.

B Y E **Logoff after transfer is complete**. After the file transfer is complete, you may choose to disconnect automatically. This option may be included on the command line with the other options of this command. Before you are disconnected from the bulletin board system, you have 10 seconds to abort and continue with your session.

Description

When you upload a file to a BBS you are adding a particular file to the file system so other users can download the file. When you upload the file it could immediately be made available for download, or the SysOp may make all uploads private to review files before posting them.

When you begin an upload, you must specify the filename to upload and provide a description for the file before PCBoard will proceed with the transfer. After the filename and description has been provided, you will see the following:

```
Upload Drive :  341,188,608 Bytes Free Disk Space
Upload Status:  Posted Immediately
Protocol Type:  Ymodem/G BATCH
(Ctrl-X) Aborts Transfer
```

The first line shows you that there is over 331 megabytes of free space for your upload. Obviously this is plenty of space to handle just about any upload. The second line tells you if the file will be *Posted Immediately* for download or *Screened Before Posting*. The third line will display the protocol that you have selected for the transfer. Only the protocol description is listed (not the protocol letter). The final line just informs you that you may press C - X to abort the transfer.

From the time you see these four lines you will have about 60 seconds to begin your transfer before PCBoard will automatically abort your transfer.

Local Uploads

If you have logged into PCBoard locally and you use an internal PCBoard protocol for an upload, PCBoard does what is called a *local upload*. When you do a local upload instead of trying to transfer the file via the normal methods, PCBoard displays a box which asks where it can find the file(s) to upload. Inside of the box you will see *Local Upload Path or Filename?* In the box, enter the file(s) to upload. To specify more than one, enter a wildcard filename such as *C:\TEMP*.ZIP*.

Example

If you want to upload a file called TMAL352.ARJ using Ymodem/G (which is protocol G), type in the following:

```
U TMAIL352.ARJ G
```

You are asked to enter a description of TMAL352.ARJ. You will be told how many lines of description you may enter and that you may begin the description with a / to make the file a private upload to the SysOp. You must enter at least 5 characters for your description; PCBoard rejects any other description.

U B Upload Batch

This command functions similarly to Upload A File with one minor exception. The UB command immediately assumes that more than one file will be uploaded.

Subcommands: Alphabetical Listing

[file] **Filename(s) to upload**. You can specify the filename(s) to transfer on the command line. If you specify more than one filename, separate each filename with a space.

[prot] **Protocol to use for the upload**. If you want to specify a protocol that is different from your default protocol, specify the letter on the command line.

B Y E **Logoff after transfer is completed**. After the file transfer is complete, you can indicate you want to disconnect after the transfer is complete. This option may be included on the command line with the other options of this command. Before you are disconnected from the bulletin board system you are given 10 seconds to continue on with your current call.

Description

You will be prompted for each filename to upload. When you have finished entering all the files you want to upload, press R at the *Filename to Upload* prompt. If you specify more than one filename to transfer, you will only be allowed to select batch file transfer protocols such as Ymodem Batch, Zmodem, or Ymodem/G.

Unannounced Uploads

When you finish an upload, PCBoard will check all of the files to make sure that there is a description for each file that has been uploaded. Any file that does not have a description when the transfer is completed is called an **unannounced upload**.

If an unannounced upload is received, PCBoard will scan the uploaded file to see if it contains a FILE_ID.DIZ file. If it does, it will send the file directly to the upload tester without asking you for a description of the file. This capability is made available for ZIP, ARJ, LZH, PAK and ARC files as well as self-extracting versions of each. It is built right into PCBoard. It is fast. And it does not require outside (third party software) to do it.

At this point, you will be prompted to enter descriptions for any filename without a file description. Once all files have descriptions, PCBoard will begin testing the files (if enabled).

Before testing begins, you are given the option to hang up and let the testing proceed while you are off-line. If you are calling long-distance this can save you a lot of time and money.

NOTE: You are only given the choice to hang-up after the transfer when you are not uploading during a local connection..

U S E R List Active Users

This command allows you to search the user file for a text string. PCBoard will display the user's name, location, and the last date the user logged into the system for each matching record.

Subcommand

[text] **Text to search for**. You may specify any text to search for. PCBoard analyzes this input, scans the USERS file, and displays the name, city/location, and last date on for all matching records. The search string you enter could be part of a first or last name, or even part of a city name. This search string may also be Boolean if you need to restrict your search further.

Description

This command allows you to search the user file for a text string. You are responsible for inputting the text string. PCBoard provides a list of users with the text string found somewhere in their records. In the list are the user's name, location, and the last date the user logged on.

NOTE: PCBoard does not display any sensitive or confidential information with this command. Only the name and location (City and State) of each user found will be displayed. In addition, only fields which do not contain confidential information are searched in the users record (e.g., the password field is **not** searched). Also note, this command adopts the security level required to use the 7 SysOp command if you have installed the Alias PSA.

Example

To find everyone from Evergreen, Nevada, enter the following at the conference prompt.

```
USER EVERGREEN
```

At this point, you may see something similar to the following on your screen:

```
       User Name                  Location              Last On
------------------------  ------------------------  ---------------
MARK HAMPTON              EVERGREEN, NEVADA         10-09-93  03:47
CYRUS NEILSON             EVERGREEN, NV             04-23-94  21:12
MAX SANCHEZ               EVERGREEN,NV              12-13-93  14:21
GERALD CARPENTER          EVERGREEN,NEVADA          05-13-91  14:04
ALLEN ROBERTS             EVERGREEN, AZ             06-11-93  03:31
```

V View Settings

This command displays the current settings of your user record.

Description

This command allows you to view various information and statistics regarding your current call. The display may look like the following:

```
Caller Num.: 1,005,213
Lst Date On: 02-08-93
Expire Date: None
# Times On : 6,008
Page Length: 23
Expert Mode: On
Security Lv: 120
# Downloads: 684
# Uploads  : 256
```

```
Bytes Avail: Unlimited
Byte Ratio : 19.3:1
File Ratio : 15.9:1
L/Msg. Read: 117,261
High Msg. #: 117,261
Active Msgs: 1,936
Tr/Protocol: No default protocol -- ask each time.
```

The following describes each field that you may see on the status screen:

Caller Num: This is the number of calls that the bulletin board system you are calling has answered since operation of the system began.

Lst Date On: The last date you called the system is stored in this field.

Expire Date: This field contains the date at which your account will expire. If you have no expiration date then this field will contain the word *None*. Some bulletin board systems set their users to expire at a certain date. When you are "expired" your security level is usually dropped until you follow the instructions that are displayed to you.

 # Times On: This value shows how many times you have called this system.

Page Length: The page length setting allows you to configure how many lines will be displayed on your screen beforg you want PCBoard to issue a *More?* prompt and ask you if you are ready for the next screen. This value may be changed by using the P user command.

Expert Mode: If expert mode is turned on, an *On* is displayed. Otherwise, you are in novice mode and an *Off* is displayed. You may toggle expert mode by using the X user command.

Security Lv: This value is the security level that you have been assigned on this system. The bulletin board system uses this value to control what you can and cannot do on the system.

 # Downloads: This is the total number of files you have downloaded from the system.

 # Uploads: This is the total number of files you have uploaded to the system.

Bytes Avail: This field shows you how many bytes you can download for the remainder of the day. If this value is set to *Unlimited* then you may download as much as your time allows.

Byte Ratio: Displays the current byte ratio. For example, if *13.1:1* is displayed, you have downloaded 13.1 bytes for every byte uploaded. If this line is not shown, no byte ratio active.

File Ratio: Displays the current file ratio. For example, if *8.7:1* is displayed, you have downloaded 8.7 files for every file uploaded. If this line is not shown, no ratio is in effect.

L/Msg. Read: This field contains the last message number you have read in the current conference. As you change conferences this value will be updated.

High Msg. #: This value is the highest message number in the conference you are currently in.

Active Msgs: This value is the number of messages that are active in the conference. While you see that each conference has a range of messages (e.g. 332-982) some of the messages in that range may have been deleted. Therefore, you cannot subtract the low message number from the high message number to get the actual number of active messages.

Tr/Protocol: This is the name of the protocol you have selected as your default transfer protocol. If *None* is displayed, you are prompted for a transfer protocol to use each time you start a file transfer.

If you happen to be logging in as the SysOp (as record #1 in the USERS file) then two additional lines will be displayed to you:

Defined #'s: The value shown here will determine the maximum number of messages that can be maintained with the old index style.

Free Msg #s: Displays the number of messages that you may add to the current conference before exceeding the number of message blocks that you have defined. For example, if your low message number is 4362, your high message number is 8257, and you have defined the conference for 6 message blocks (6144 messages) then you will have 2248 free messages before you exceed your defined range of active messages.

W H O Other Users Online

This command enables you to see who is currently online. Each user name is displayed including the city/location and a brief synopsis of what the user is currently doing online.

Description

Most users on multi-node systems like to know who else is currently on the system. To satisfy this curiosity you can use the WHO command. When executed, PCBoard displays the status of each node on a multi-node system. You can use this command to see if anyone is online that you want to chat with, who is doing what on the system, etc. This command is only available on multi-node systems. If you try to execute it on a single node system you will get a *Sorry, no Network is Active* message.

Example

```
(#)   Status                  User
---   ---------------------   ----------------------------
  1   Out of Code in DOOR     JIM HALBROM - MAIL
  2   Available for CHAT      NEIL GRANGER (SANDY CREEK, MN)
  3   Transferring a File     BILL MOWERY (CHERBOURG, TX)
  4   Available for CHAT      TAMARA ANTHONY (ASHWOOD, NJ)
  5   No Caller this Node
```

From the above example display we can see that the user on node 1 is currently running a door called *MAIL*. The users on node 2 and 4 are logged in and probably reading messages or scanning for files. The user on node 3 is transferring a file. Nobody is currently on node 5 because it is waiting for a call.

W Write User Information

This command allows you to change information about your account such as your password.

Description

This command allows you to change your own user information. Based on how the *Disable Full Record Updating* option was answered in PCBSetup, certain questions may not be updated via this command. The following lists each question which will be asked depending on how you answered the *Disable Full Record Updating* option in *PCBSetup | Configuration Options | System Control*.

Disable Full Record Updating : N

```
Password (one word please)?
City and State calling from?
Business or data phone # is?
   Home or voice phone # is?
 Brand of CPU you are using?
Clear the screen between each message?
Scroll multi-screen messages?
Use long headers when reading messages?
Full Screen Editor Default: (Y)es, (N)o, (A)sk?
Set editor workspace default to 79 columns?
Alias Name (enter=no change)?
Select Conference(s)?
     Street (1 of 2)?
     Street (2 of 2)?
                City?
```

```
                State?
             Zip Code?
              Country?
Set Message Capture Limit (System Max=###)?
Set Per-Conference Message Capture Limit (System Max=###)?
Maximum Size to Auto-Include Personal Attachments in QWK Packet?
Maximum Size to Auto-Include Attachments in QWK Packet?
```

Disable Full Record Updating : Y

```
Password (one word please)?
Clear the screen between each message?
Scroll multi-screen messages?
Use long headers when reading messages?
Full Screen Editor Default: (Y)es, (N)o, (A)sk?
Set editor workspace default to 79 columns?
Select Conference(s)?
Set Message Capture Limit (System Max=###)?
Set Per-Conference Message Capture Limit (System Max=###)?
Maximum Size to Auto-Include Personal Attachments in QWK Packet?
Maximum Size to Auto-Include Attachments in QWK Packet?
```

NOTE: The *Clear the screen between each message* question also determines if the screen is cleared between each file directory

X Toggle Expert Mode

This command enables you to toggle expert mode on the system. Using subcommands you may also explicitly specify if you want expert mode or not.

Subcommands: Alphabetical Listing

O F F **Explicitly select non-expert or novice mode**.

O N **Explicitly select expert mode**.

Description

When this command is used with no subcommands it acts as a toggle between expert and novice modes. If expert mode is turned on, menus are not shown. In novice mode, if there is a menu, it is displayed after each command is executed.

Examples

If you simply want to toggle expert mode, press *X* at any conference command prompt. To explicitly select either expert or novice mode, use one of the subcommands. For example, to make sure you are in expert mode, enter *X ON* at any conference command prompt.

Y Your Personal Mail

This command permits you to scan for mail addressed to you to determine if you have sent or received messages.

Subcommands: Alphabetical Listing

+ **Scan forward**. When added to a message number (e.g., 300+), PCBoard scans from that message forward.

- **Scan reverse**. When added to a message number (e.g., 300-), PCBoard scans from that message backward.

A **Scan all selected conferences**. PCBoard scans all selected conferences for messages from or to you.

A L L **Scan all conferences**. PCBoard scans all conferences for messages from or to you.

C **Scan current conference**. Only the current message base is scanned for messages.

L **Scan in long report mode**. This option shows messages in long list mode. The messages are scanned and the corresponding number of each message is displayed.

N S **Display in non-stop mode**. Screen displays are placed in non-stop mode (without *more?* prompts).

Q **Scan in quick report mode**. Messages are shown in quick list mode. The message bases are scanned, but only the number of messages and the number of messages to you are displayed and not what those message numbers are.

S **Scan unread mail**. The message base is scanned from the last message read. Only messages after this point are displayed.

W **Scan only conferences where you have mail waiting**. If you want to only display conferences where you have mail waiting, use this subcommand.

Z **Display conferences with messages**. It is quite likely for you to have several conferences selected for scanning. When using this command to scan for messages, you do not want to list any conferences which do not have any mail to scan. Use of this subcommand will prevent these conferences from being listed in the scan.

Description

This command allows you to display the number of messages that are addressed to or from you. You can use the subcommands to help select the conferences that will be scanned and if you want to start from the beginning of the message base or only messages you have not read. The report format you choose determines if PCBoard only counts the number of messages or if it will actually show the message numbers.

The Difference Between Short And Long Reports

The Y command can report in short or long form. When you select short form, your display will resemble the following:

```
Conference                                                   To   Total
  #   Name                                                   You  Found
----- ------------------------------------------------------ ----- -----
   0  Main Board                                                0     6
   6  Software                                                  0     5
   9  Chit_Chat                                                 2     6
```

This display tells you that there are a total of 11 messages that you have not read yet in the Main Board and Software conferences. In the Chit_Chat conference, there are 6 new messages, 2 of which are addressed to you.

In long form, the same scan looks like the following:

```
Scanning Main Board
  Msgs For You: None
 Msgs From You: None
  # Msgs Found: 6

Scanning Hardware (1) Conference
  Msgs For You: None
 Msgs From You: None
  # Msgs Found: 14
```

As you can see, the long mode displays not only messages to you, but also from you. In addition, it lists the message numbers and to the right of each message number it displays the message status code if appropriate. For a list of message status codes, see the Q user command.

The default scan mode is determined by the *Default to (Q)uick on Personal Mail Scan* setting in *PCBSetup | Configuration Options | Messages*. If you answer *Y* to this question, PCBoard defaults to quick display mode. Otherwise, long display mode is used.

Examples

If you want to count the new mail in the conferences that you have selected for scanning, enter the following command:

```
Y;Q;S;A
```

Z Zippy Directory Scan

This command enables you to search through the file descriptions in various file directories for the text that you specify.

Subcommands: Alphabetical Listing

[dir #] **Directory number to search**. PCBoard scans for the indicated text in this directory. When using the Zippy Directory Scan command, you must specify a directory or range of directories that PCBoard should search for the file specification. You may list a single directory, a range of directories in the format #-# or a list of directories in a #;#;# format. There are two letters that you may use as a directory number. If you use A for the directory number, it tells PCBoard to search all file directories in the current conference. Likewise, if you use U for the directory number, the upload directory of the current conference will be searched.

[text] **Text to search for**. This is the text to search for in the directory listings. If you want to search for an imbedded space (e.g., *"TEST "*), you must imbed that part of the string in quotes. Since you cannot enter quote characters on the command line, you will not be able to enter the above example on the command line. This search string may also make use of Boolean operands if you want to further qualify your search.
NOTE: The search is not case-sensitive. This means that if you search for the word *TEXT*, it is the same as if you searched for the word *Text*. In other words, capitalization of your search text does not matter.

D Each file found with the specified text is flagged for download. The system does not immediately download the files, but waits until the D or D B user commands.

N This subcommand enables you to include the minimum file date from which the scan should search for. This is identical to the N user command but you can use it in conjunction with a zippy scan to help restrict the file descriptions that you search.

N S Screen output is displayed in non-stop or continuous mode.

Description

This command scans the file directories to find a specified text string. If you do not specify the text to search for on the command line, you are prompted to enter it. Possibly one of PCBoard's most powerful time-saving features, the Zippy directory scan command locates text in both the file name field and the descriptions. Like other PCBoard searching features, the zippy directory scan command utilizes Boolean operands (AND, OR, and NOT).

How To Make Your Search More Specific

Quite often you may notice that your search found too many matches. Rather than wading through all of the matches to find what you were really after, let PCBoard help you make your search more specific so you can save some additional time.

Perhaps the easiest way to restrict your search is to use Boolean operands. As an example, let's say that you scanned all file directories in the current conference for the word *DISK*. After a couple of screens of data,

you realized the search was not specific enough. A better search would have described what you are really after—a utility to format a floppy disk. You could enter "*Format a disk*" in the text to search for. However, few descriptions contain the exact text "*Format a disk*".

What you need to use in this example is the Boolean AND operator. In the text to search for, tell PCBoard that you want to search for *DISK & FORMAT*. The *&* character means to search for both words in the description but you do not care if they are right next to each other. Instead, you just want them to be anywhere in the file description.

If you searched for *DISK & FORMAT* and it still turned up too many matches, you may need to restrict your search even further. You notice that some of the matches were dated back in 1989 and may not be compatible with your current system. Therefore, you want to display only utilities that are dated 01-01-90 or later. What you could do, is use the N subcommand as described above. To perform your final search, type the following:

```
Z N 010190 DISK & FORMAT A
```

This tells PCBoard to zippy scan all file directories for files newer than 01-01-90 and that also have the words *DISK* and *FORMAT* in the description.

How To Make Your Searches Less Specific

Sometimes you may want to make your searches less specific. Why would you want to make your searches less specific? Perhaps the best way to illustrate this is with an example.

If you are searching for all hard drive utilities you may enter *HARD DRIVE* as your search text. However, some people may call them hard disks instead of hard drives. You are now faced with a small dilemma. You either have to run two searches, or find a way to search for either *HARD DRIVE* or *HARD DISK*. To get around this problem search for either phrase by using the Boolean OR operator. If you recall, we were going to search for *HARD DRIVE* or *HARD DISK*. If you simply replace the word *or* with the **|** character, the goal is accomplished.

Now, when you search, you will be searching for *HARD DRIVE* or *HARD DISK* anywhere in the description. You can get fancy with Boolean operators and consolidate this more by searching for *HARD & (DRIVE | DISK)*. Since you are going to be looking for *HARD DRIVE* or *HARD DISK*, search for the word *HARD* and either the word *DISK* or *DRIVE*.

Examples

Perhaps the simplest example is to search for a single word in all file directories of the conference. To search for the word VGA, enter the following at the conference prompt.

```
Z VGA A
```

Obviously, this will probably turn up quite a few matches so you may want to define your search better. If you are only interested in games that support VGA, search for the words VGA and GAME by entering the following at the conference command prompt.

```
Z VGA & GAME A
```

Since you are searching for the words VGA and GAME, it does not matter what order you put the words in. For example, you will perform the exact same search if you type the following:

```
Z GAME & VGA A
```

5

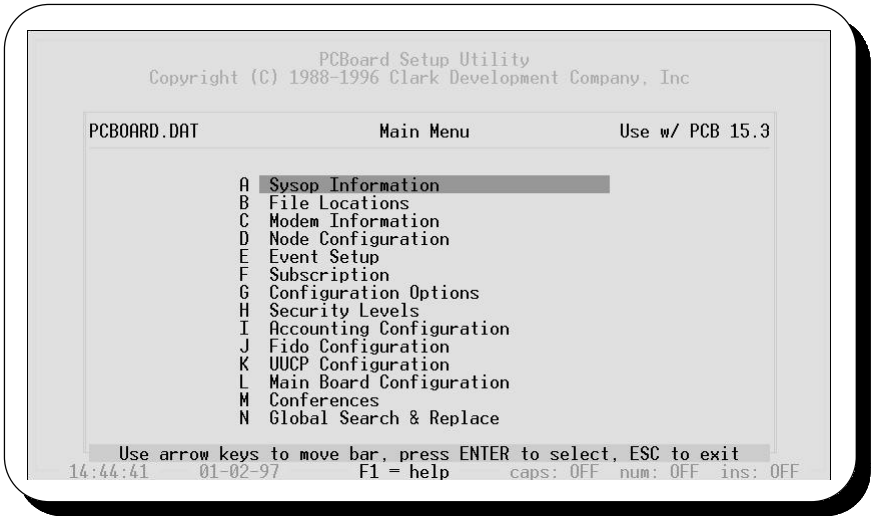
PCBSetup

PCBSetup is a utility designed to configure the operation of PCBoard. With PCBSetup you can define new conferences, add more file directories, and even change configuration options which determine how your system operates. There are three ways to access PCBSetup:

- From the call waiting screen, select **PCBSetup**.
- While logged in locally (not with the */LOCALON* switch for PCBoard), you can press A - S and select *PCBoard Configuration (PCBSETUP)*.
- From the DOS prompt you can load PCBSETUP.EXE. If a PCBOARD.DAT file cannot be found in the current directory and you have not used the /FILE command line parameter, an error message stating that PCBOARD.DAT could not be found is shown.

  If you need to specify a different location for your PCBOARD.DAT file, use *PCBSETUP /FILE:[location of PCBOARD.DAT]*. For example, to load PCBSetup and tell it to use the data file located in C:\TEMP\, type:

  PCBSETUP /FILE:C:\TEMP\PCBOARD.DAT



Once PCBSetup is running, you see the Main Menu. The various functions of PCBSetup are available from these menu options. To select a particular option, press the letter at the beginning of the line, or move the currently highlighted option using the cursor keys and press R . If you make a mistake, press E to return to the previous menu. To get help with a particular screen or option, press 1 to access the online help.

Command Line Parameters

PCBSetup has two command line parameters that you can use when executing PCBFiler to determine how it should behave. To use a command line switch you must execute PCBSetup from the DOS command prompt and you need to specify the command line parameter after you enter PCBSETUP at the command prompt as shown in the following example:

```
PCBSETUP /CNAMES
```

To enter more than one command line parameter, separate each parameter with a space.

```
PCBSETUP /FILE:H:\TEMP\PCBOARD.DAT /CNAMES
```

/CNAMES

Previous versions of PCBoard wrote conference information to a text file called CNAMES while the current version of PCBoard writes this information to CNAMES.@@@ and CNAMES.ADD. These two files are binary data and consequently are not as easy to edit manually as the older CNAMES file. When this command line switch is used, PCBSetup rereads the CNAMES file instead of using the information stored in CNAMES.@@@ and CNAMES.ADD.

There are advantages and disadvantages to using this switch. First, the advantages are:

- Files that are in text file format are easier to edit with a wide range of editors.
- If you are adding a lot of conferences, you can easily pattern the new conferences after an existing conference by cutting and pasting text.

The following are the disadvantages to using this switch:

- The CNAMES is not updated by PCBSetup unless you do a full save when exiting. If a quick save is used, the CNAMES file is **not** updated. If you are not careful, you could use a CNAMES file that is not up-to-date and consequently alter your system configuration in an undesirable manner.
- The CNAMES file does not contain all of the information that the combination of CNAMES.@@@ and CNAMES.ADD does. In fact, nearly all of the fields listed in the second conference setup screen are not stored in the CNAMES file. This means that if you have PCBSetup re-read the CNAMES file, the default values are used for all fields that are not written to the CNAMES file.

This command line switch is not designed for use by novice SysOps. If you do not have a good knowledge of text file editing, you can really foul up your system configuration by using this switch.

If you use this command line switch, begin by making backups of your CNAMES.@@@ and CNAMES.ADD files. Next, load PCBSetup without the /CNAMES switch and immediately exit answering *Y* when asked if you want to save configuration files. This insures that the CNAMES file is up-to-date. Once you have done these steps, you may proceed to make the necessary changes to the CNAMES file.

/FILE:[filename]

Normally, PCBSetup requires that a PCBOARD.DAT file exists in the subdirectory where you load it. To use a PCBOARD.DAT in a location other than the current subdirectory, use this command line switch.

To use the /FILE parameter, you need to specify the location of the PCBOARD.DAT after you enter /FILE:. For example, if you want to use a PCBOARD.DAT that is stored in C:\PCB\NODE1\, enter the following:

```
PCBSETUP /FILE:C:\PCB\NODE1\PCBOARD.DAT
```

Exiting And Checking Your Configuration

To exit PCBSetup you need to press E at the Main Menu. When you do, you will be asked if you wish to save your configuration. The following describes each option available to you:

N Do not save any changes you have made to your PCBOARD.DAT file and exit. Any changes made to the fields in your conference configuration are automatically saved whenever you exit the conference screen.

Q Save all changes to your configuration without checking the validity of the paths and drives in your configuration. This is probably the selection you will use most because it is quicker than checking the entire configuration each time you exit.

Y Saves all changes to your configuration and checks all paths and drives to make sure they exist. In addition, your CNAMES file is updated in case you use it. If you have conferences that do not have message bases, the message bases are created.

The following section describes in more detail what will occur when you select either Y (full save) or Q (quick save) when asked if you want to save your changes.

Full Save

PCBSetup divides the checking of your system into four sections. During each section, checks are made to see if all filenames point to valid locations. PCBSetup is smart enough to not check the same data files twice if multiple conferences point to the same file. At any time you can press E to skip over the section being checked.

Checking Directories While Saving Files

At this junction, PCBoard is going to check the drives and paths in your configuration to make sure they are all valid. All filenames and paths listed in all setup screens will be checked to make sure they exist (including conference information)

If a path does not exist, you are shown the path that does not exist, and asked if you want to create it. If a drive does not exist, you are shown which drive is invalid.

If the invalid path is in one of your conferences, you are told what conference and what question has the invalid path. With this in mind, you can quickly and easily fix your configuration to point to a proper path.

Checking BLT.LST file(s)

When you see this on your screen, PCBSetup is checking the bulletins defined in each conference's BLT.LST file. Only the paths to each bulletin are checked for validity. If the actual bulletin does not exist, nothing is printed to the screen by PCBSetup.

Checking DIR.LST file(s)

When you see this on your screen, PCBSetup is checking the file directories defined in each conference's DIR.LST file. Only the paths to each DIR (description) file and attached subdirectory are checked for validity. If the DIR file does not exist, nothing is printed to the screen by PCBSetup.

Checking SCRIPT.LST file(s)

When you see this on your screen, PCBSetup is checking the scripts defined in each conference's SCRIPT.LST file. Only the paths to each script are checked for validity. If the actual script file does not exist, nothing is printed to the screen by PCBSetup.

Checking DLPATH.LST file(s)

When you see this on your screen, PCBSetup is checking each path listed to insure that they are valid paths on your system. If you have specified an index file in your DLPATH.LST file, it will only check to insure that the path that points to your index file is valid.

Quick Save

A quick save is by far the quickest way to save your configuration. When you choose to save your configuration in quick mode, your configuration is not checked to make sure that all paths are valid. Instead, it simply copies the values that were in memory at the time you exited the program and writes them to the configuration files.

The PCBOARD.DAT File

The PCBOARD.DAT file is the main configuration file for PCBoard. In fact, all fields in menu options A-I, and K from the Main Menu are stored inside of this file. If you are running multiple nodes, you probably have a PCBOARD.DAT file for each node.

If each node has a separate configuration file, you may change the way the node operates dramatically. For example, you could change one node to point to a different PWRD file. This allows you to limit access to this node without effecting the other nodes on your system.

The disadvantage of having separate PCBOARD.DAT files for each node is quite evident when you have a lot of nodes. If you have 20 nodes operating and each has a separate configuration file, you could spend a lot of time updating all 20 nodes to change the location of a file.

You are not forced to use a PCBOARD.DAT for each node. With the ability for PCBOARD.EXE and all of the supporting utilities (PCBFiler, PCBSetup, etc.) to utilize the /FILE command line parameter, you can share data files between nodes. If you choose to share data files between nodes, remember that node specific information such as node number, serial port to use, and other items are stored in the PCBOARD.DAT file. Therefore, must use command line and environment parameters of PCBOARD.EXE to override this information.

Specifying File & Paths

Throughout PCBSetup, you specify where PCBoard finds filenames and what paths are used to store files. Because of this, you should have a good knowledge of subdirectories and how they are used by DOS. If you do not, you will most likely have a hard time configuring your PCBoard system to operate the way that you want it to.

There are two ways that you can specify a path or filename—*absolute* and *relative*. The following sections describe the difference between the two..

Absolute Naming Conventions

You are probably most familiar with this method of specifying a filename. For example, if you tell someone to view `C:\AUTOEXEC.BAT`, you have given them an absolute filename. In other words, you told them the

drive, the subdirectory (in this case the root directory), and the filename. If they view that file they are guaranteed to view one and only one file because you told them exactly where the file is.

To relate this to your PCBoard configuration, you would want to specify absolute filenames when configuring the locations of files shared by all nodes (e.g., user file). That way, you can be assured the proper filename is accessed by all nodes.

Relative Naming Conventions

Specifying a filename in a relative fashion is, for some, a more difficult concept to understand. Relative addressing takes into account the current drive and directory rather than having that information provided via absolute addressing. For example, if you know the file is in the current directory, you can simply reference the filename. You do not need to specify the drive, path, and filename as it would be a waste of time.

Another example would be if you wanted to see a directory of all files in your C:\PCB\GEN\ subdirectory while you are sitting at the *C:\PCB>* DOS prompt. You could type

```
DIR C:\PCB\GEN
```

but it would be even faster to type

```
DIR GEN
```

The reason that you can do this is because you are already in the C:\PCB\ subdirectory. Why type it again? Remember that relative addressing takes the current directory into account and adds the relative information to the end of the filename. When you typed *DIR GEN* you forced DOS to look for a GEN subdirectory underneath the current subdirectory. If you were to change to your DOS subdirectory and type DIR GEN you would see an error message that no files were found because there is no C:\DOS\GEN subdirectory, but you do have a C:\PCB\GEN subdirectory.

At this point, you have to be asking yourself what good does this relative filename information do for my PCBoard configuration? The answer to that question is "quite a bit" if you are running multiple nodes.

Most likely all of your nodes point to the same CNAMES file. Inside of the CNAMES file, more filenames are specified that relate to each conference on your system. For example, the location of the NEWS file for each conference is located in the CNAMES file. If you want every node to have an individual NEWS file, change the location of the file to point to *NEWS* instead of something like *C:\PCB\GEN\NEWS* Because no path or drive information is specified, PCBoard looks in the default directory for a file called NEWS. If that file is found, it is displayed. What really makes all of this work is the fact that no two nodes use the same default subdirectory. Therefore, you can have node specific NEWS files using this method.

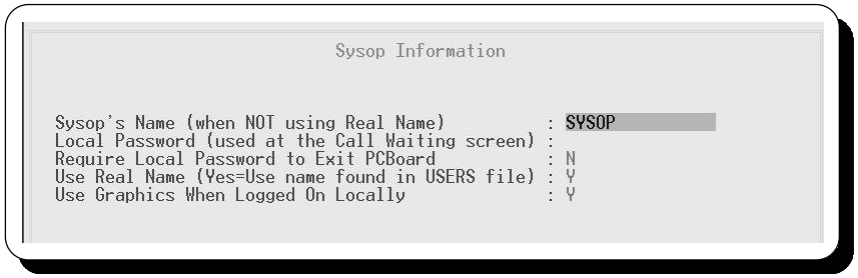
Internal Editor Keyboard Commands

PCBSetup has several built-in editors to edit many of the data files used by PCBoard. For example, when you edit the *PWRD/Security File* (*PCBSetup | File Locations | Configuration Files*) the file is loaded into one of PCBSetup's internal editors. In fact, nearly any file you edit in *PCBSetup | File Locations | Configuration Files* loads the file into an internal editor. Within the internal editors, the following keyboard commands are available:

E — **Exit the editor**. If changes have been made to the file, you are asked if you want to save the changes. Answer Y to save the changes, N to return to the editor, or A to abort the editor without saving the changes.

1	**Access on-line help**. On-line help is displayed that relates to the file and the fields you can edit.
2	**Rotate screen views** or **Edit file**. This keyboard command is used in two different ways in the internal editors of PCBSetup. For data files that have more fields than can fit on one screen, 2 acts as a way to switch to the next screen of fields. Some editors allow you to edit external files (e.g., event and door editors). For these editors, 2 edits the selected batch file.
d	**View the next page of entries**. On each screen of the editor, 15 entries can be displayed. To view the next page of entries in the file, use this command.
u	**View the previous page of entries**. To view the previous page of entries, use this keyboard command.
A - 5	**Toggle 25/50 line mode**. With machines equipped with a VGA or compatible video adapter, the video mode can be toggled between 25 and 50 line mode. In 50 line mode, more entries are displayed on each page.
A - D	**Delete current entry**. This keyboard command deletes the currently highlighted entry. There is no undo function so if you mistakenly delete an entry, exit without saving and attempt to make the changes again.
A - I	**Insert a new entry**. To add a new entry between two existing entries, use this keyboard command. A new blank entry is inserted below the current line that you can edit to suit your needs.
A - R	**Repeat currently highlighted line**. If you are creating entries that are similar in definition, use this keyboard command to duplicate the current entry. The new entry is inserted below the current line.

SysOp Information



This menu option allows you to define information about the SysOp. You can specify whether you want to let users see your real name among other settings. If you are looking to control the security level of SysOp related functions, select the *Security Levels* option from the Main Menu instead. The following describes each field on the *Sysop Information* screen:

Sysop's Name (when NOT using Real Name)

In this field, enter the **first** name of the SysOp. Enter a name in this field only if you do **not** want to use your real name as defined in record #1 of the users file. This field is used in some of the following areas:

- When entering SysOp chat mode, the user receives a message that says "Hello, this is..."
- When using 5 to shell to DOS, the user is informed who has dropped to DOS.

- When you are logged in, this is used for your first name or any time the @FIRST@ macro is used.

NOTE: This field is not recognized if you have answered `Y` to the *Use Real Name (Yes=Use name found in USERS file)* option.

Local Password (used at the Call Waiting screen)

The local password gives you the ability to password protect the following buttons on the call-waiting screen:

- *Sysop - Busy*, *Sysop - Not Busy*, *PCBSysMgr*, *PCBFiler*, and *PCBSetup*

The following buttons are also password protected if you answered `Y` to *Require Local Password to Exit PCBoard*:

- *DOS - Busy*, and *DOS - Not Busy*

If you leave the local password field blank, no password is asked. If you enter a password, enter the proper password to access the restricted buttons on the call waiting screen. Entering an invalid password recycles the modem and returns you to the call waiting screen.

Require Local Password to Exit PCBoard

To protect people from dropping to DOS from the call-waiting screen, enable this option. One thing to keep in mind is that if someone has access to the keyboard, they also have access to reboot the computer and abort the AUTOEXEC.BAT to access DOS.

Enabling this option is not a fool-proof way to protect others from accessing DOS on the machine, but it makes it more difficult and may discourage an unauthorized person from accessing DOS.

N Do not ask for the local password when attempting to exit to DOS.

Y Ask for the local password when exiting PCBoard.

Use Real Name (Yes=Use name found in USERS file)

This option gives you the ability to determine how PCBoard refers to the SysOp defined in record number 1 of the user file. The user defined in this count can use their real name or the name SYSOP depending on how this question is asked. Valid options for this field are:

N Any messages you leave are shown as being from `SYSOP` regardless of the name in user record #1. In addition, the *Sysop Name* field is now active.

Disabling this function has an additional benefit. A user cannot login to the system using the name SYSOP. Hence, the user name in record #1 must be known to access that particular account. Not only would a user that is attempting to hack your account have to get your password right, they would also have to guess your name as well.

Y The user name that is found in record #1 of the user file is used for the operation of the bulletin board. When you leave a message, the user name in record #1 is stored in the `FROM:` field, etc.

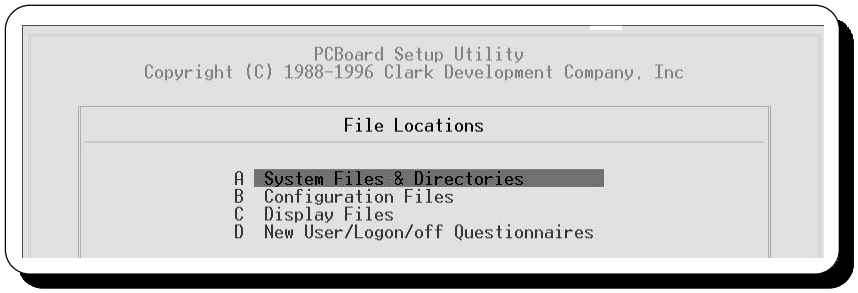
Use Graphics When Logged On Locally

When you access the bulletin board by using the *Sysop - Busy* or *Sysop - Not Busy* buttons on the call-waiting screen then PCBoard will skip the question that asks which type of graphics you want to use, your name, password, etc. This option lets you choose if you want to default to color graphics mode when logging in using the previously mentioned buttons on the call-waiting screen. Valid options are:

N Do not use graphics mode when logging in as the SysOp. You may want to choose this setting if you are using a monochrome monitor on your system.

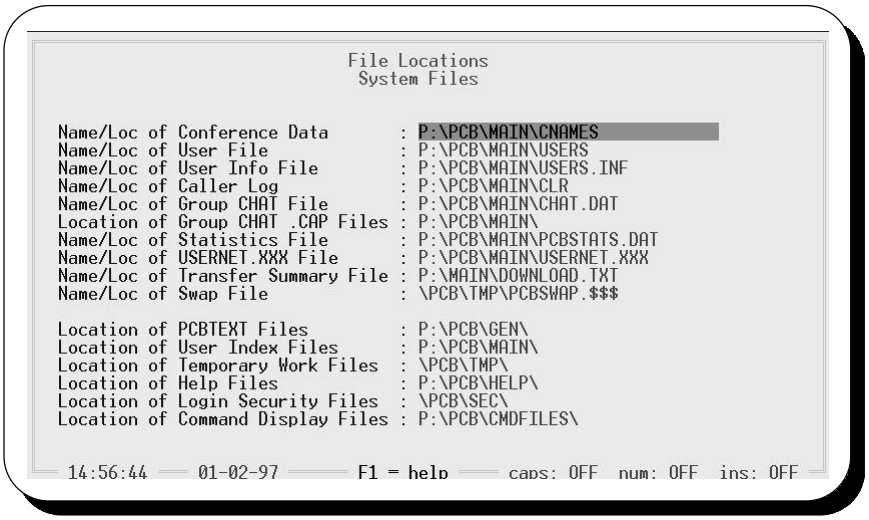
Y Assume graphics mode when logging in as the SysOp.

File Locations



When this menu option is selected, you are presented with an additional menu separating the file locations into categories. Select the category of file locations to modify.

System Files & Directories



From this screen, you can edit the file locations of the most commonly accessed files (often referred to as system files). In each of these fields on this screen, enter the file and/or location where a particular configuration file is found. Each field and how it relates to your system configuration is explained in the following sections:

Name/Loc of Conference Data

PCBoard stores the conference information (including the Main Board) in what is referred to as the **conference data file**. Any field in the conference configuration screens (*Main Board Configuration* and *Conference Configuration* is considered to be conference data.

The default filename is CNAMES, but there are actually two files used to store the data. PCBoard uses the default filename of CNAMES and adds .@@@ and .ADD to the first and second files respectively. That makes the filenames CNAMES.@@@ and CNAMES.ADD.

The CNAMES file is a simple text file that contains most, but not all, of the conference configuration information. This file is used by a few older third-party programs. **The CNAMES file is only updated when you exit PCBSetup and answer `Y` to the *Save configuration files* question**.

CNAMES.@@@ and CNAMES.ADD are the primary files that are used to store conference information. These files are random access to increase the speed that information can be looked up for conference information. These two files are updated automatically by PCBSetup.

Location for multiple nodes

If you are running all of your nodes from a single machine using a multitasker, store this file in a location that all nodes can access directly. On a network, you should store the CNAMES file on a server so that all nodes may access it. It is perfectly valid for each node to point to its own CNAMES file, but if you use this type of configuration you will have to

Naoe/Loc of User File

The user file stores the majority of information about each caller on your system. For example, the actual user name, password, and city data is just a small sample of the data that is stored in the user file.

Location for multiple nodes

If you are running all of your nodes from a single machine using a multitasker, store this file in any location, but make sure all nodes point to the same file. On a network, you will want to store the user file on a server

Name/Loc of User Info File

The user info file contains additional information about each user. This is the file where TPA or PSA (additional user record information) is stored. This file is an extension of the user file.

Location for multiple nodes

Since this file is an extension of the user file, treat it in the same manner. This means it should be stored in a single shared location where all nodes can access it.

Name/Loc of Caller Log

The caller logs record information about each session on your system. From viewing the caller logs you can determine when a particular user successfully logged in, the major functions that they performed while online (entering messages, transferring files, joining a conference, etc.)

If you are running more than one node, the node number is added to the end of the filename specified. Therefore, if you are running three nodes and specify *C:\PCB\MAIN\CALLER* for all nodes, a CALLER1, CALLER2, and CALLER3 file will exist in that subdirectory:

If you are running the /100 node version or higher, change the name of your caller logs to something like CLR instead of the default (CALLER). The reason this should be done is that CALLER100 is not a valid DOS filename. If running a /100 node or higher package, PCBoard automatically translates the name from CALLER to CLR to prevent the aforementioned conflict.

The following is a sample log entry (when viewing online):

```
************************************************************
09-06-93 (12:47) (3) RAY COOK Off Normally
      Minutes Used: 15
      Back from DOS at 12:47
      Opened Door (MAIL) at 12:46
      Batch Dnld: 1  Bytes: 76526  Avg. CPS: 1877
      (D) SHOWFR11.ZIP  Completed using Z (B)  T/E=1  CPS=1877
      Chatter (6) Conference Joined
      Support (1) Conference Joined
      Caller Security: 30
      Caller Number: 1,061,432
      => CONNECT 14400/ARQ/V32/LAPM/V42BIS
09-06-93 (12:32) (3) RAY COOK (14400E) (G) JACKSON, TN
************************************************************
```

Location for multiple nodes

When running multiple nodes, store your caller log files in a common location for all nodes to access. If you are multitasking multiple nodes on a single machine, specify the same location for all nodes. For a multiple node installation on a network, all caller logs should be stored in one common location on the server with each node pointing to the same location.

Name/Loc of Group CHAT File

When callers use the CHAT command to communicate with one another, PCBoard uses the Group CHAT file to handle the communications between the various nodes and chat channels. This file is a fixed size with the actual size being determined by the total number of nodes your package supports. For example, the group CHAT file for a 250 node version of PCBoard is larger than the group CHAT file for a 10 node version.

Location for multiple nodes

Like the user file, your group CHAT file **must** be stored in the same

Location of Group CHAT .CAP files

If you have enabled the option in *PCBSetup | Configuration Options | Configuration Switches* which deals with capturing the group chat session to disk, this field will specify where the capture files will be. The contents of the capture files include date and time stamps, the node number of the caller, the caller's name, and the text of the complete line of information typed.

Each channel has its own filename. The filename is created in the subdirectory that you specified to store the group chat .CAP files. The actual filename is [channel#].CAP. For example, you may have a 1.CAP,

2.CAP, etc. Also, information such as when a caller joins the channel, leaves the channel, makes it private, etc., is also captured.

> **Location for multiple nodes**
>
> It is not required that you specify the same location for the .CAP files on all of your nodes. However, it would be desireable to do so in case you want to use a text search utility or something similar. You could then easily find all of the .CAP files in one single location.

Name/Loc of Statistics File

This file is used to record the statistics that are shown on the call waiting screen such as the number of calls to the system, the number of uploads and downloads, the number of messages left, and the most recent caller information.

> **Location for multiple nodes**
>
> Because the call-waiting screen allows you to switch between local and system statistics, you will want to specify the same location for your

Name/Loc of USERNET.XXX File

You can think of the USERNET.XXX file as the messenger between nodes. If you are running a single node system, do not worry about this file as it is not accessed. This file is used for some of the following features in PCBoard:

- Request node chats with other users
- Send node broadcasts with the `B R` command from within PCBoard.
- Protect users from logging in multiple times
- Display information about who is online and what they are doing.
- Drop nodes to DOS or logoff users from another node.

> **Location for multiple nodes**
>
> It is essential that all nodes point to the same physical USERNET.XXX file. If they do not, you will see a situation where a node is isolated from

Name/Loc of Transfer Summary File

This file is created by PCBoard detailing the files that have been transferred on your system. If the callers to your system transfer a lot of information, you may find that you have to periodically delete this file to reduce the amount of disk space it uses.

The information about each file transfer is stored on a single line in the transfer summary file. Each item on the line is separated by a comma and contains the following information:

- Whether the transfer was an upload `(U)` or a download `(D)`
- The name of the user who transferred the file
- The date that the file was transferred
- The time that the file was transferred
- The filename that was transferred

- File transfer protocol letter that was used
- The number of transfer errors that occurred
- Finally, the last item is the transfer rate in characters per seconds (cps)

NOTE: You may choose to not keep a record of file transfers by not specifying a filename (leaving the field blank).

Location for multiple nodes

This is another one of those files that it is not essential to have all nodes point to the same file, but it is desirable. If you need to keep the file transfers for a particular node separate from the entire system then go

Name/Loc of Swap File

When PCBoard is configured to swap itself out of memory during a shell (*PCBSetup | Configuration Options | System Control*), it will normally be swapped out to memory (EMS or XMS). If there is insufficient free memory to hold the PCBoard memory image, it will instead be written out to disk.

In case the memory image has to be swapped to disk, enter the filename where the file is to be stored. The default is to store it in a filename called PCBSWAP.$$$ in the current directory.

Location for multiple nodes

Because the PCBSWAP.$$$ contains a memory image, it is critical that no two nodes share the same PCBSWAP.$$$ file.

Location of PCBTEXT Files

Virtually all of the text and prompts PCBoard displays are contained in a PCBTEXT file. Each language on your system will have a different PCBTEXT file that you can customize to suit your needs with MKPCBTXT.EXE.

In this field, enter the drive and subdirectory where your PCBTEXT files are stored. If you are not using more than one language on your system, only one PCBTEXT file exists.

Location for multiple nodes

For the sake of speed you could have each node point to local copies of your PCBTEXT files. You may find, however, that pointing all nodes to one location and pre-loading your PCBTEXT files (*PCBSetup | Configuration Options | Configuration Switches*) will increase performance. This gives you the speed advantage and also the advantage

Locations of User Index Files

The user index files are used to quickly access the name of users on the system and to point to their actual user record number. These files are essential to the operation of your system.

In this field, enter the drive and subdirectory where you want to store your user index files. PCBoard maintains an index for each letter of the alphabet (PCBNDX.A through PCBNDX.Z).

Location for multiple nodes

As with the user file, all nodes should point to the same physical location for storing the user index files. If you are running a network, make sure that all nodes point to the same location on the server (since drive letters

Location of Temporary Work Files

While users are logged into the system, it is quite likely that PCBoard will need to create some temporary files along the way. Each node has a temporary work directory where these files will be placed. This short list shows just a few things that are stored in the temporary directory:

- QWK mail packets (compressing and uncompressing)
- Message capture files
- Temporary storage (upload description until posted, etc.)

In this field, enter the drive and subdirectory where you want the temporary files to be stored for this particular node. An ideal location for temporary files is on a RAM drive.

Location for multiple nodes

Each node in your multinode setup must specify a unique location for their temporary work directory and it may not be the current or default directory. Usually the best solution is to add a TEMP directory below the current directory. If you are running PCBOARD.EXE from C:\PCB\NODE1, you

Location of Help Files

There are numerous help files for PCBoard. These help files detail information about commands or areas of the system needing a more thorough explanation. The format for PCBoard to look for a help file is `HLP[option]` where `option` is the command or topic.

You can also create help files for your doors or other new commands that you add via CMD.LST (*PCBSetup | File Locations | Configuration Files*). To accomplish this, create a text file in the directory that you specify for help files that has the same name as the command or door. For example, if you have a door called MAIL and you want to make a help file, create a text file called MAIL in the location you specify for your help files. When your users ask for help with H command they can type MAIL and have the text file you created displayed to them.

Location for multiple nodes

If you do not plan to update your help files frequently it may be a good idea to have local copies for each node if running on a network. That way you can reduce un-necessary traffic. If you are running all of your nodes on a single computer, it does not matter where you store your help files as long as all nodes point to a valid copy.

If you can see that you will be updating your help files frequently, store the help files in a single shared location to reduce the amount of maintenance

Location of Login Security Files

When a user logs into the system, PCBoard has the capability of displaying security specific files. These files are displayed to the user after they complete their login but before the conference news file is displayed. The filenames for the login security files are simply the security level of the caller. For example, to create a file that only security level 20 users see, create a file named 20 in the location specified for the login security files. Because these files are normal display files, you can also make them graphics or language specific.

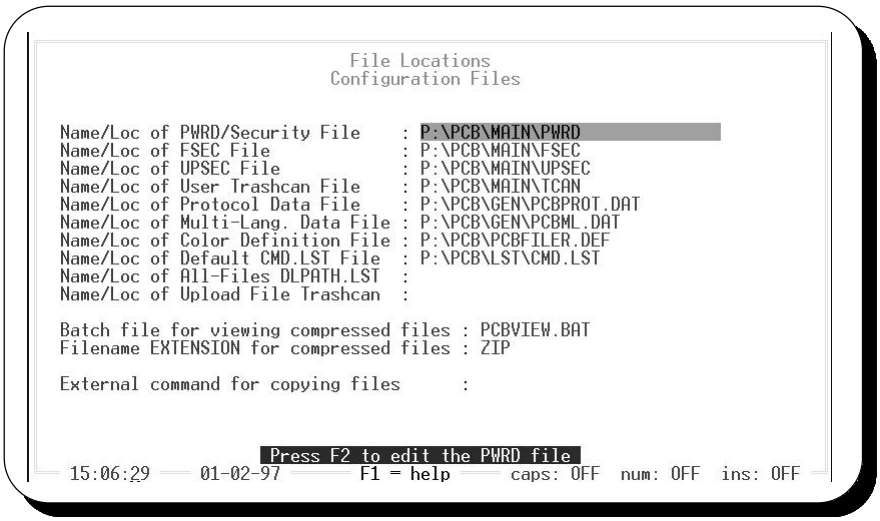
> **Location for multiple nodes**
>
> Because these files are only accessed once per login, it might be best to store these in a single location where all can access the files. This will help reduce the amount of maintenance you will have to do on your system.

Location of Command Display Files

Command display files are used to display text files before a command is entered on the system or just before a special occurrence. The number of applications for command display files are numerous. Due to the complexity involved, please refer to the *Command Display Files* section in the *Customizing Your BBS* chapter for further information.

> **Location for multiple nodes**
>
> Because this field deals only with display files, the location specified by this path is a performance versus ease of maintenance issue. For ease of maintenance, make all nodes share the same command display files. For

Configuration Files



Name/Loc of PWRD/Security File

The PWRD file defines the security levels that you will use on your system. For each security level you can specify the following information:

- Daily/session time limit
- Daily kilobyte limit

- Batch file limit
- File and byte ratios
- Maximum total file and byte limit
- Initial file and byte credits
- Time limit for session or entire day
- Allow alias usage
- Allow multiple logins
- Enable User Activity Accounting (Pre-Pay or Pay-to-Play)

To edit your PWRD file, press 2 while you have the *Name/Loc of PWRD/Security File* field highlighted. When you do, you see the following screen:

Security Levels Definitions

Password	Sec	Time	Daily K Bytes	Base Baud	Batch Limit	File Ratio	Byte Ratio	File Limit	KByte Limit
	0	0	0	0	0	0	0	0	0
	5	60	32767	0	0	0	0	0	0
	8	45	32767	0	0	0	0	0	0
	9	45	32767	0	300	0	0	0	0

There are several fields inside this file. These fields allow you to control time limits, byte limits, and more. The following describes each column in the PWRD file in detail:

Password: In order for a user to be assigned the values for a line, not only does their security level have to match, but also their login password must match the one entered in the *Password* field. If this field is blank, the password of the user is not checked. Do not get confused and assume that if a user enters a password that is in this field that they will be assigned the security level and options that you have defined. This field does not work that way.

Sec: This field determines the security level being defined. When a user logs into the system, PCBoard reads the security level info from the PWRD file. You need to have one entry for each security level assigned to a user. In other words, if you have security levels 5, 10, 20, 30, 110, and 120 assigned to actual user records, you must have a corresponding entry in the PWRD file. If you do not, PCBoard prints *No security level match in PWRD file* and defaults their time to 10 minutes and 0 bytes.

Time: The amount of time, in minutes, you wish to give a user per day or per session. If you have answered *Y* to the *Enforce Time Limit* field, the time limit you enter is for each day. If you answered *N* to that question, the time limit is renewed each time the user calls. If you enter a time limit of *0*, PCBoard treats the user as if they accessed a **Closed** node or system. A lot of systems have public and private nodes. To make a node private, create a second PWRD file that has a time limit of *0* for each of the security levels you want to lock out.

Daily Bytes: The number of kilobytes (K) that you want each security level to have available per day. If you enter 0 for the number of bytes available, it effectively disables downloads unless they are defined as *FREE* or *NOTIME* downloads by the FSEC file. To give a security level unlimited download bytes, enter 32767. A user who has unlimited download bytes can download files until they run out of time.

Base Baud: This field allows you to adjust the maximum daily download "K-Byte" limit based on the speed of the caller. For example, you may want to allow 9600 bps callers to download 1600k per day. You could set the kilobytes per day to 1600k per day. However, to your high speed callers, who may have the same security level, 1600k may not seem to be enough. By setting the base baud rate to 9600 and the kilobytes per day to 1600, you end up giving your 28800 bps callers 4800k. They get three times the amount of bytes because they are calling in at a speed which is three times greater than 9600.

As a general rule, you will want to enter the base baud rate as the lowest bps rate that callers will be calling in. In the previous example the base baud rate was set for 1600k if a 9600 bps caller and at 4800k if the user was a 28800 bps. This is more desirable than defining it at 4800k for 28800 bps and letting PCBoard size it down.

Batch Limit: This field defines the number of files a user can transfer in a batch transfer. For example, to allow a user to download a maximum of 5 files in each batch, enter 5 in this field. If you enter 0, the maximum batch is set to a default of 30 files. Batch transfers can be disabled for all callers by setting the security level for the Level Required for BATCH File Transfers option in *PCBSetup | Security Levels | User Levels* to a high value like 255.

File Ratio: If you want to control the number of files a user can download based on how many files they have uploaded to the system, you want to enforce a *file ratio*. In this field, enter the number of downloads that you want the user to be able to download for each file that they upload. For example, if you enter 4.0 in this field, a user must upload 1 file for every 4 files they download. Entering a value of 0.0 disables the ratio.

Byte Ratio: If you want to control the number of bytes that a user can download based on how many files they have uploaded to the system, you want to enforce a *byte ratio*. In this field, enter the number of bytes a user may download before they must upload another byte. In other words, if you want your users to be able to download 20 bytes for every byte they upload, enter a value of 20.0 in this field. Entering a value of 0.0 disables the ratio.

File Limit: If you want to control the total number of files that a user of the security level you are defining can download, you want to impose a file limit. In this field, enter the maximum number of files a user can download from your system. Once this limit has been reached, the caller cannot download any more files. This type of limit is ideal if you are using a "pay-as-you-go" type system where you allow a user to download a certain amount of files for some sort of compensation.

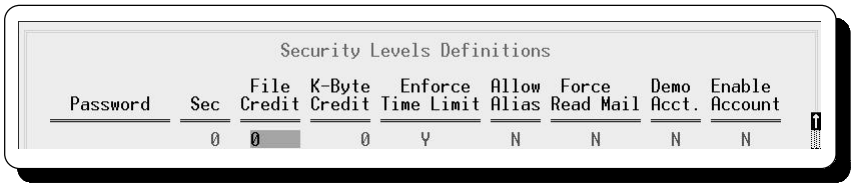
When the file limit has been reached, you can reset the total files downloaded field in System Manager (while editing a user record) once more compensation has been received. As with the other limits that you can define in the PWRD file, entering a File Limit of 0 disables the limit checking.

NOTE: Any file that is specified as a FREEFILE or FREETIMEFILE download in the FSEC file will not be counted as a file downloaded by a user.

KByte Limit: If you want to control the total number of bytes that a user of the security level you are defining can download, you will be enforcing a byte limit. In this field, enter the maximum number of bytes a user can download from your system. Once this limit has been reached, the caller cannot download any more bytes. This type of limit would be ideal if you are using a "pay-as-you-go" type system where you allow a user to download a certain amount of bytes in exchange for some sort of compensation.

When the byte limit is reached, you can reset the total bytes downloaded field in System Manager (while editing a user record) once more compensation is received. As with the other limits you can define in the PWRD file, entering a kilobyte limit of 0 disables limit checking.

NOTE: Any file that is specified as a FREEFILE or FREETIMEFILE download in the FSEC file is not counted as bytes downloaded by a user.



The rest of the fields that you can define in the PWRD file must be accessed by pressing 2 to rotate the screen view. Once you have pressed 2 , you see the following additional fields:

File Credit: This field gives you the ability to implement a grace period if you are enforcing a file ratio. The value entered in this field is seen as an upload credit as if the user really uploaded this many files. Sometimes it takes users a while to become familiar with a ratio system. In a situation such as this, you may want to give your users an initial upload file credit.

For example, if the File Credit is set at 10, the caller may download 10 files before reaching a 1:1 ratio. A total of 20 files can be downloaded before a 2:1 ratio would prevent the downloading of a 21st file.

K-Byte Cred.: This field gives you the ability to implement a grace period if you are enforcing a byte ratio. The value entered in this field is seen as an upload credit as if the user really uploaded this many bytes. Sometimes it takes users a while to become familiar with a ratio system. In a situation such as this, you may want to give them an initial upload byte credit.

For example, with a byte ratio of 10.0 a brand new caller would be able to download, at most, a single 10-byte file. To make it more fair, you could give the user an initial credit of 20 kilobytes. Then the caller would be able to download as much as 200 kilobytes before they would exceed their ratio.

Enforce Time: With this setting you choose whether the time limit defined is a daily time limit or a session time limit. A setting of *Y* enforces the time limit to be a per-day limit. A setting of *N* enforces a session limit letting the user log back in immediately and get the time limit defined for their security level each time they call.

Allow Alias: If you have installed the Alias PSA, you can control which security levels are able to use Alias names in conferences that allow aliases. If you want a security level to be able to use an alias, this option must be enabled.

Force Read: You can force users with a given security level to read mail when this option is enabled. Assuming the system is configured to prompt users to read new mail (*PCBSetup | Configuration Options | Messages*), users are forced to read mail after PCBoard notifies them that it exists. All messages read are done in read-only mode to prevent the user from missing messages they may want to read.

NOTE: Unlike PCBoard, not all third-party software updates the message waiting flags.

Demo Acct.: Setting this answer to *Y* allows a user at this security level to log into the system multiple times. In other words, you can have an account on your system that you can use for demonstration purposes. With this setting, you can have several users logging into your system using that same account whereas PCBoard normally disallows users of the same name from logging in concurrently. If you use accounts with this security level for demonstrating, you may want to clear out the password field in your demonstration accounts. With a blank password, PCBoard does not prompt the caller to enter a password.

NOTE: When set to allow multiple logins, PCBoard protects the W user command and also resets the last message read pointers because they are seen as demonstration accounts.

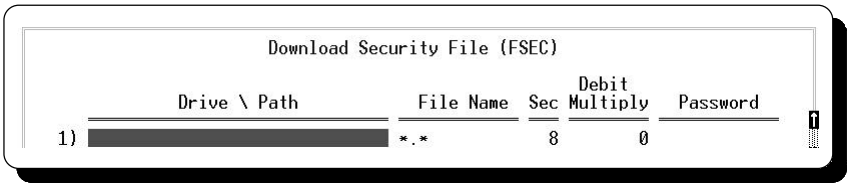
Enable Acnt.: There are three valid responses for this field. N disables accounting for all users of that security level. *Y* adjusts the balance dynamically as the user does various activities (pre-pay system). *T* logs all activities requiring or giving account credits for the purpose of billing at a later date (pay-to-play). See the *Accounting System* chapter for more details.

Name/Loc of FSEC File

The FSEC file gives you the ability to control the following:

- Protecting files for download by security level or by password
- Determining what files are free downloads
- Altering the amount of accounting units charged for a file or group of files.

Whenever a user attempts to download a file, PCBoard first checks your DLPATH.LST for the current conference to see if the file can be found. If the file is found, PCBoard checks your FSEC file to make sure the user has sufficient security or knows the correct password to download the file. To edit your FSEC file, press 2 while the *Name/Loc of FSEC File* field highlighted. When you do, you see the following screen:



Notice that there are four fields in this file. These fields allow you to specify the subdirectory and/or filename(s) to control and the security and/or password required to access the file.

Drive \ Path: In this field, specify the subdirectory to control the access of. You can enter any valid DOS path in this field. Make sure that whatever you enter in this field matches one of your entries in your DLPATH.LST file or it is ignored. For example, if you enter *C:\RESTRICT* in this field but in your DLPATH.LST is the entry *\RESTRICT*, a match does **not** occur. To control access to an entire drive, enter the drive letter followed by a colon. For example, to control access to all of drive F, enter *F:* in the field.

If you leave this field blank, whatever you enter for the filename is controlled no matter what download path it is found in. For example, if you have a bunch of files in different subdirectories that begin with FAQ, save yourself several entries in the FSEC file by leaving the *Drive \ Path* field blank and enter *FAQ*.** in the filename field.

File Name*:* In this field, enter the filename to protect. You may enter any valid DOS filename or wildcard in this field. For example, to protect *SALE0393.ARJ*, enter that filename in this field. However, to protect every file that begins with SALE, you enter *SALE*.** instead.

If you leave this field blank, every filename that is found in the subdirectory entered in the *Drive \Path* field is protected. In other words, this field defaults to *.* (all files).

Sec: In this field, enter the security level that is required to download the file(s) defined by the first two fields. If you enter a security level of 0, it is assumed that the file is a FREE file that does not get recorded as a downloaded file in the user's record.

Debit Mult.: The value entered represents the multiplier value regarding how many accounting units are charged for files matching the entry being entered. With a multiplier of 0, no accounting units are charged. However, with any other multiplier, PCBoard takes the amount of credits charged for bytes or time while downloading (*PCBSetup | Accounting System*) and multiplies the value with the *Debit Multiplier*.

Password: The password field allows you to enter a password that is required in order to download the files defined by the first two fields. There are three exceptions and those are the words FREEFILE, FREETIME, and NOTIME. These passwords have special meaning in PCBoard in regards to making files free in respect to time or bytes charged. For a more thorough discussion on these special passwords and their actions, refer to the Making files FREE for download section in the SysOps Guide chapter.

Once the password is entered, it will not be asked for again during the session. This means that if the user's login password is the same as the file password, the password is not asked for when attempting to download a file protected with the same password.

The password security on a file works in conjunction with the security level protection. This means the user must meet both the security level criteria **and** enter the proper password to download the file.

The order that you list the entries in your FSEC file are very important because PCBoard acts on the first match it finds. Therefore, you should list your most specific entries at the top and your more generic entries towards the bottom of the file. Example:

```
                                                Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
                                *.*           20        1
Q:\FREE\                        MEMBER*.*      0        1 FREE
```

This example **does not work** because every file matches on the first entry and PCBoard acts on it. Instead, reverse these entries so that PCBoard checks to see if the file is in Q:\FREE\ first. As a general rule, you should order your FSEC in the following manner:

1. Entry has a subdirectory and a filename specified
2. Entry has a subdirectory but no filename specified
3. Entry has only a filename specified
4. Entry has `*.*` for a filename and no subdirectory specified.

Perhaps the simplest example is to allow any user to get files from your Y:\FREE\ subdirectory, but only users who have a security level of 20 or higher can download other files. In this case, make the following entries in your FSEC file:

```
                                                Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
Y:\FREE\                        *.*            0        0 FREE
                                *.*           20        1
```

As another example, let's assume you want to protect the files in two subdirectories with a particular password. In this case, you would make the following entries:

```
                                                Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
Q:\CHARTS\                      *.*           20        1 MAKE_MY_DAY!
R:\SALES\                       *.*           20        1 CHERRY-PIE
```

Finally, let's assume that you have a CD-ROM on-line as drive X. You only want to allow those users which have contributed to your system (level 50 or above) to download files from your CD-ROM. You want to protect all of the files in drive X but you certainly do not want to have to enter all of the subdirectories into the FSEC file. In the *`Drive \ Path`* field. Instead, enter the drive letter to protect as in the following example:

```
                                                Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
X:                              *.*           50        1
```

Name/Loc of UPSEC File

The UPSEC file is very similar to the FSEC file except it allows you to control the files that get uploaded to your system rather than the files that are downloaded. For instance, you may decide to only accept files that have a .ZIP extension. If this is what you desire, the UPSEC file is where you configure the system to do this.

Whenever a user attempts to download a file, PCBoard first checks your DLPATH.LST for the current conference to see if the file can be found. If the file is found, PCBoard checks the UPSEC file to make sure the user has sufficient security or knows the correct password to upload the file. To edit the UPSEC file, press `2` while the *`Name/Loc of UPSEC File`* field is highlighted. When you do, you see a screen which resembles the following:

Notice that there are four fields in this file. These fields allow you to specify the subdirectory and/or filename(s) to control and the security and/or password required to access the file.

Drive \ Path: In this field, specify the subdirectory you want to control access to. Enter any valid DOS path in this field. To control access to an entire drive, enter the drive letter followed by a colon. For example, to control access to all of drive F, enter *F:* in the field. If this field is blank, it is the same as saying any drive and any subdirectory on the entire system.

File Name: In this field you should enter the filename you wish to protect. You may enter any valid DOS filename or wildcard in this field. For example, if you wish to prevent users from uploading any filename that ends with a .COM extension, enter **.COM* in this field.

If you leave this field blank, every filename that is found in the subdirectory that you entered in the *Drive \Path* field will be protected. In other words, this field defaults to **.** (all files) when left blank.

Sec: In this field, enter the security level that is required to upload the file(s) that are defined by the first two fields. If you enter a security level of 0, anyone may upload the files specified.

Credit Mult.: The value entered represents the multiplier value regarding how many accounting units will be earned for files matching the entry being entered. With a multiplier of 0, no accounting units will be earned. However, with any other multiplier, PCBoard will take the amount of credits earned for bytes or time while uploading (*PCBSetup | Accounting System*) and multiply the value with the *Credit Multiplier*.

Password: The password field allows you to enter a password that is required in order to upload the files that are defined by the first two fields. Once the user has entered the password, they are not asked for it again during that session. This means that if the user's login password is the same as what is entered in this field, the password for the file is not be asked for.

The order the entries are listed in the UPSEC file are very important because PCBoard will act on the first match it finds. Therefore, list the most specific entries at the top and the more generic entries toward the bottom of the file. For example:

```
                                                Credit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
                               *.*           20        1
Q:\CONF1\PRIVUPLD\             *.GIF          0        1
```

This example will not work because every file matches on the first entry and PCBoard will act on it. Instead, reverse these entries so PCBoard checks to see if the upload goes to Q:\CONF1\PRIVUPLD\ first. As a general rule, order your UPSEC in the following manner:

1. Entry has a subdirectory and a filename specified
2. Entry has a subdirectory but no filename specified
3. Entry has only a filename specified
4. Entry has **.** for a filename and no subdirectory specified.

Perhaps the most practical example is to illustrate how you make it so that users can only upload compressed files and only those compressed files that you allow. You can create the following FSEC file for allowing only *.ZIP files to be uploaded to your system:

```
                                                Credit
          Drive \ Path            File Name  Sec Multiply   Password
----------------------------- ------------ --- -------- ------------
                                *.ZIP          0        1
                                *.*          100        1
```

When a user uploads a file, PCBoard will check the UPSEC file to see if the filename ends with .ZIP. If it does not, it proceeds onto the next entry in the file. Obviously the last entry will match any file that is uploaded. The catch, however, is that if no matches were found on the previous entries in your UPSEC file, he will not be able to upload the file unless his security level is 100 or higher.

Another example would be if you wanted to allow .ZIP files to be uploaded anywhere on your system but you only wanted .GIF files to be uploaded in conference #3. In a case such as this, you would make the following UPSEC file:

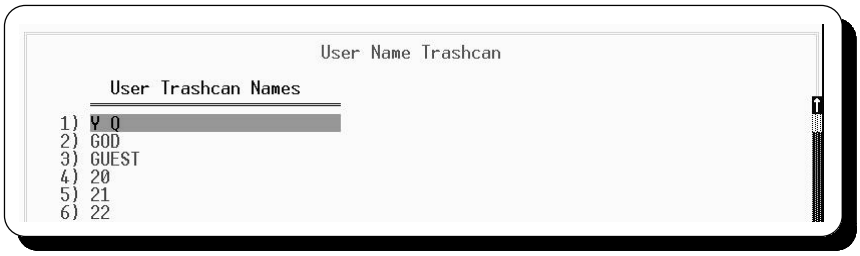
```
                                                Credit
          Drive \ Path            File Name  Sec Multiply   Password
----------------------------- ------------ --- -------- ------------
D:\CONF3\PRIVUPLD\              *.GIF          0        1
                                *.ZIP          0        1
                                *.*          100        1
```

PCBoard sends all uploads initially to the private upload directory so make sure if you are trying to protect uploads to a particular conference, enter the location of the private uploads regardless of whether all uploads are public or private. This example assumes the private upload directory for conference #3 is *D:\CONF3\PRIVUPLD*. As you can see, a user could only upload a filename that ends with .GIF if the private upload directory for the conference is *D:\CONF3\PRIVUPLD*.

Name/Loc of User Trashcan File

The trashcan file gives you the ability to protect users from creating accounts with user names that are listed in your trashcan file. This means that you can protect users from logging into your system with words that you may find offensive.

To edit the trashcan file, you highlight the field on the screen which says *Name/Loc of User Trashcan File* and press 2 . When you do, you will see a screen similar to the following:



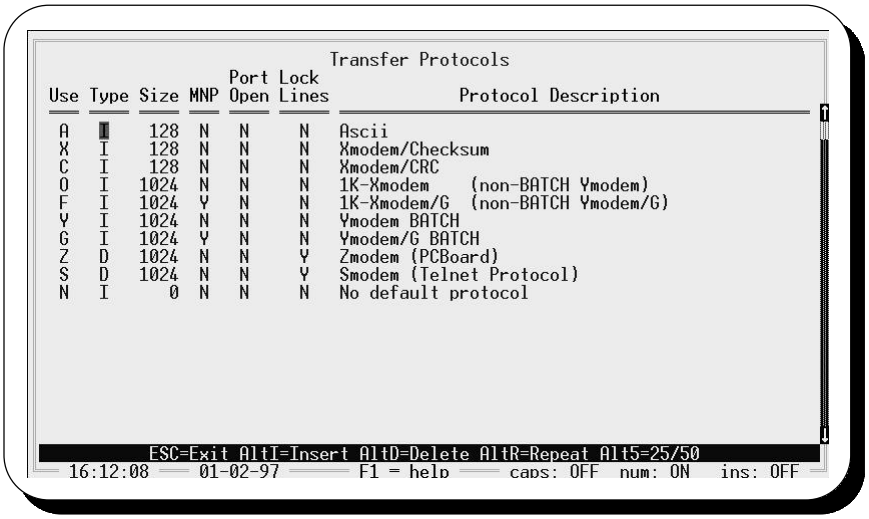
The trashcan file is accessed whenever a new user logs into a system. If any of the entries in the trashcan file are part of the new user's name, PCBoard will not allow them to continue. For example, if you have the word *ENTER* in your trashcan file a user could login as *THE ENTERPRISE*, but not as *ENTER THE NIGHT*. The key difference is that *ENTER* is not a separate word in the name.

As another example, if you have the word THE in the trashcan file, a user name such as *THE WIND*, or *THE WILD ONE* would fail. A name such as *JOHN THEOS* would not fail because the word *THE* does not exist as an entire single word.

Name/Loc of Protocol Data File

The protocol data file is the configuration file that stores information about the file transfer protocols that are available on your system. In order to transfer files from your system to the remote user's system or vice versa, a file transfer protocol must be used. There is no one standard file transfer protocol, therefore, PCBoard gives you the ability to define up to 36 different protocols for your system.

To edit your protocol data file, highlight the line which says *Name/Loc of Protocol Data File* and press 2 . When you do, you will see the following screen:



The protocol data file consists of seven fields for each protocol entry. The following describes each field in detail:

Use: Each protocol in PCBoard is referenced by a protocol letter rather than the name of the protocol. The letter entered in this field is the letter used while on-line to reference the protocol. Enter any letter or number (A-Z and 0-9) for a total of 36 possible protocol definitions.

Type: This field describes the type of protocol that you are defining. The following are the valid options:

I **Internal**. An internal protocol is one that is implemented inside of PCBoard itself. You could call these built-in protocols if you wish. There are seven protocols that are internal to PCBoard:

(A) ASCII
(X) XModem/Checksum
(C) Xmodem/CRC
(O) 1K-Xmodem
(F) 1K-Xmodem/G
(Y) Ymodem BATCH
(G) Ymodem/G BATCH

If you are defining an internal protocol, you must use the appropriate protocol letter (shown in parentheses in the internal protocol list) for the internal protocol to be used.

S **Shelled**. This type of protocol refers to an external protocol (one that is not built into PCBoard). You should define an external protocol as this type if it is a single file transfer protocol (not capable

of batch transfers) or if it does not use the DSZLOG style log for recording transfer activity. If you define a protocol as this type, PCBoard will not let a user transfer more than one file at a time.

D **DSZLog**. This type of protocol refers to an external protocol. Any protocol that is capable of recording transfer information in the DSZLOG style format should use this protocol type. If you are unsure if the protocol you are trying to add supports DSZ style logging, please refer to the protocol documentation or the author of the protocol. PCBoard will allow callers to use any protocol of this type for batch file transfers.

B **Bi-directional**. You should only define a protocol as this type if it is capable of sending and receiving files at the same time. Only a handful of protocols exist that support bi-directional transfers. If you do use a protocol that supports bi-directional transfers, make sure that it also supports DSZLOG style logging. If it does not, PCBoard will not be able to properly determine the files that were transferred.

Size: Just before PCBoard begins a download it will print the size of the file(s) that will be transferred and approximately how many protocol blocks are required to transfer the file. Each protocol uses a packet or block size. Most of the advanced protocols will send 1024 bytes at a time whereas protocol like Xmodem will send 128 bytes at a time. PCBoard uses the value that you enter in this field to determine how many protocol blocks will be transferred. This information really is purely statistical in nature and the protocol will continue to function properly even if you do not enter the right value.

MNP: Some file transfer protocols off-load the error correction on the modems in order to get better throughput. If you are installing a protocol which relies on error correcting modems, enter *Y* in this field. When this field is set to *Y*, a user may only select this protocol if they established an error correcting connection (e.g., MNP, v.42, etc.) **For this to work properly, both your modem and the remote modem must establish an error-correcting connection**.

Port Open: Normally, PCBoard will shut down the RTS signal and unhook itself from the serial port interrupt prior to executing an external protocol. It is then up to the external protocol to initialize the serial port for proper communications. This is the method that nearly every external protocol expects to function properly. However, some protocols may require PCBoard to leave the port 'as-is' before turning control over to the external protocol. If you run into a protocol that absolutely requires this, enter a Y in this field. If you are not sure, leave this option set to *N* or you could see some unpredictable results when you return back to PCBoard from the external protocol.

Lock Lines: The status lines, which PCBoard moves to the top of the screen during a shelled protocol, may be frozen in place to avoid having them scrolled off the top of the screen. This way you can see who is on-line transferring files when users are using external protocols. This only works for those external protocols which use BIOS to write to the screen or if the protocol does not write to the top two lines of the screen. To lock the lines in position, set this option to *Y*.

Description: In this field, enter a short description of the protocol that is being defined. This description is displayed to the caller whenever they are choosing from the list of protocols that have been defined on your system. You may enter up to 37 characters to describe each file transfer protocol.

As mentioned previously, internal protocols are built into PCBoard. External protocols are separate programs and are not really related to PCBoard. Batch files are used to execute external protocols. PCBoard expects these batch files to be named in the following manner:

PCBR?.BAT where *?* is the protocol letter of the external protocol you are defining. This batch file will be executed whenever you receive a file (a user uploads to your system).

PCBS?.BAT where *?* is the protocol letter of the external protocol you are defining. This batch file will be executed whenever a file is sent (a user downloads from your system).

An external version of Zmodem is included with your package. If you look in the directory where you installed PCBoard, you will see a PCBRZ.BAT and a PCBSZ.BAT file. These are the two batch files that will get executed when a user requests Zmodem for their transfer protocol. For further information on setting up external protocols please see the *Batch Files* chapter of this Manual.

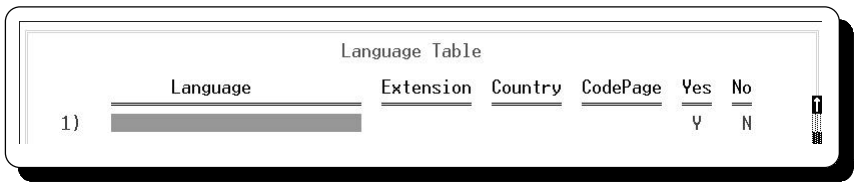
NOTE: If you have defined a protocol and it is not showing up when a user attempts to set their default protocol, it may be due to one of the following:

1. The protocol that is not being listed is marked as a protocol that requires an error-correcting connection (MNP or v.42). The user that is on-line has not established an error-correcting connection (the connect speed on the status line does not have an E on the end).
2. The protocol is an external protocol and one or both of the external protocol batch files are missing.

Name/Loc of Multi-Lang. Data File

The multi-language data file is the file that controls what languages (if any) are defined for use on your system. The ability to configure multiple languages on your system gives you the ability to cater to more users who may not speak the same language.

To edit the multi-language data file highlight the line on the screen that says *Name/Loc of Multi-Lang. Data File* and press 2 . You will see a screen which resembles the following:



The following describes each of the fields in this file:

Language: The name of the language. This is the text that is displayed to the caller when they are asked to choose a language at login. You should include the number of the language on this line. The first language in the file will be assigned language #1, the second language will get language #2, etc.

Extension: The filename extension for language specific files. For example, if you are adding the French language, you may want to make the extension .FRE. This means if you had a file called WELCOME.FRE it would be displayed to anyone who selected the French language at login.

Country: If you also want PCBoard to add date, numerical separator, and capitalization support for the language that you are defining, you need to enter the country number to use as defined by COUNTRY.SYS. For the French language this would be 033.

CodePage: The code page is also a function of COUNTRY.SYS and defines what characters are available in the language you are defining. This information should be provided in your operating system manual. As an example, the French language would use 850 in this field.

Yes: Since Yes and No are not the same in all languages, you can define what character will be used to represent a response of Yes. In French, you most likely would like to use the letter O.

No: As with the Yes field, the language you are defining may use a character other than *N* to represent a response of No. Simply enter the character that you wish to use to represent a response of No.

For more information about the country code and code page information please see the discussion about COUNTRY.SYS in the *Internationalization* section of the *Customizing Your BBS* chapter of this manual.

Name/Loc of Color Definition File

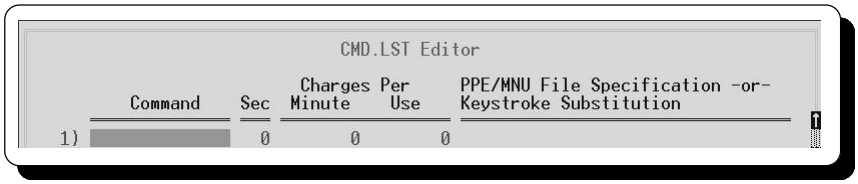
PCBFiler has a menu option you can use to customize the colors used in your directory files. PCBoard will read this information from PCBFiler configuration file (PCBFILER.DEF) to colorize your directory files on-the-fly. The configuration file will be created in the same directory as PCBFILER.EXE.

In this field, enter the location and name of your PCBFILER.DEF file. If the PCBFILER.DEF file cannot be found in the location that you specify, your file directories will appear in monochrome rather than the colors that you desire.

Name/Loc of Default CMD.LST File

The CMD.LST file defines commands that are used to add, change, or even replace commands available to your callers. These new commands can stuff the keyboard with text, run PPE files, or execute a menu file. In this field, enter the name and location of the default CMD.LST file. This file is used in conferences that do not have a conference specific file defined.

To edit this file, highlight the line which says *Name/Loc of Default CMD.LST File* and then press 2 . You will see a screen which resembles the following:



There are several fields that are used to define each command in the CMD.LST file. The following describes each field in detail:

Command: You can enter up to 15 characters to define a command. The text entered in this field will be used whenever the command is executed. For example, if you enter MAIL in this field, a user must type MAIL to access the command you are defining.

Security: In this field, enter the security level that is required to execute the entry you are defining. If the user does not have a security level equal to or greater than the number that you enter, a *Menu Selection is not available* message will be displayed to the user.

Per Minute: Enter the amount to charge (in accounting units) for every minute spent using the new command defined. For any charges to be levied, the action must be either an interactive PPE or an MNU. Keyboard stuffing does not spend any time therefore no time is charged. All charges in this field are additive. In other words, if charging .05 accounting units per minute for being online and enter .02 in this field, the user will be charged .07 units for every minute while using the command.

Per Use: In this field, enter the amount of accounting units to charge each time the entry is executed. Remember you can use negative values to increase the user's account balance thereby encouraging them to run the command.

Replacement: When a caller executes a command you define, you can have the command run a .PPE file, an MNU file, or have it simulate the user keystrokes. To run a .PPE file, specify the full path and filename to run including the .PPE extension. If the filename cannot be found, no action occurs when the command is executed. To run a .MNU file, specify the full path and filename to run including the .MNU extension. If the filename specified cannot be found, occurs when the command is executed. If you do not specify a .MNU or a .PPE file, the text entered in this field is *stuffed* into the keyboard so that it appears the user typed the text. This could be useful to combine frequently used commands into one easy to remember command.

Any commands that you define in the CMD.LST file are found before any other internal command or door name is executed. This is the reason that any commands defined in this file override internal commands of the same name.

If you define a command that is more than one character in length, you do not have to type in the entire command for PCBoard to act on it. PCBoard simply needs to be able to guarantee that what is typed will make it a unique command. For example, if you have a command named ORDER as the only entry in CMD.LST, you could enter OR to open the command because there are no others beginning with OR either as an internal command or in your CMD.LST file.

As another example, you could create a command called NEWFILES that would stuff *N;S;A* into the keyboard. This provides an easy way for users to display the new files in a particular conference without having to remember to type in a more cryptic command such as *N;S;A*. To define this new command, make the following entry in CMD.LST:

```
                     Charges Per     PPE/MNU File Specification -or-
    Command    Sec  Minute    Use    Keystroke Substitution   -------------- ---
----------------- ---------------------------------
NEWFILES         0        0        0 N;S;A^M
```

Assuming that you have a .PPE file that you want to run in place of the E user command, make the following entry in your CMD.LST file:

```
                     Charges Per     PPE/MNU File Specification -or-
    Command    Sec  Minute    Use    Keystroke Substitution
-------------- --- ----------------- ---------------------------------
E                0        0        0 C:\PCB\PPE\EMSG.PPE
```

As you can see by this sample entry, any time a user executes the E user command, PCBoard runs EMSG.PPE located in the C:\PCB\PPE\ subdirectory instead.

Having a command execute an MNU file is just as simple as running a .PPE file. All you have to do is to specify the name of the .MNU file to run as shown in the following entry:

```
                     Charges Per     PPE/MNU File Specification -or-
    Command    Sec  Minute    Use    Keystroke Substitution
-------------- --- ----------------- ---------------------------------
ORDER            0        0        0 C:\PCB\MNU\ORDER.MNU
```

This entry executes C:\PCB\MNU\ORDER.MNU when a user types in the ORDER command.

NOTE: It is possible to include the contents of one CMD.LST within another by using %filename in the *Keystroke Replacement* field. This feature is mainly useful for conference specific CMD.LST files where you want to include the contents of the main CMD.LST file.

```
                     Charges Per     PPE/MNU File Specification -or-
    Command    Sec  Minute    Use    Keystroke Substitution
-------------- --- ----------------- ---------------------------------
SPECIAL          0        0        0 C:\PCB\PPE\SPECIAL.PPE
                 0        0        0 %C:\PCB\MAIN\CMD.LST
```

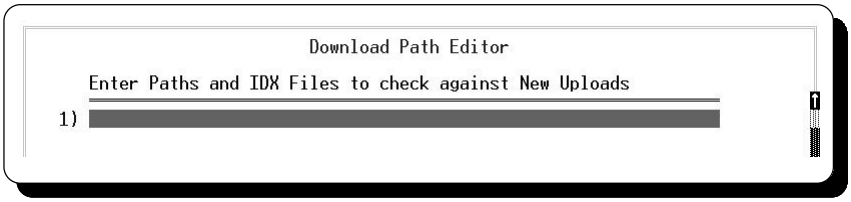
This example is a sample of a CMD.LST which defines a SPECIAL command and then adds in all the other commands defined in the CMD.LST stored in `C:\PCB\MAIN\CMD.LST` .

Name/Loc of All-Files DLPATH.LST

If you have files available for download in several conferences, you may want to use this file to protect users from uploading files which do not exist in the current conference but may exist in another conference on the system.

Normally, PCBoard checks the DLPATH.LST file of the current conference to see if the files a user wants to upload duplicates any files already on the system. Since a different DLPATH.LST file can be specified for each conference, you may not be able to check for duplicates across conferences.

If there are entries in the The All-Files DLPATH.LST (ALLFILES.LST) file, PCBoard uses this file to check for duplicates when a user is uploading a file. The ALLFILES.LST file is **not** used at any time for downloading purposes so every path on the system can be included if desired. To edit your ALLFILES.LST file, highlight the line on the screen that says *Name/Loc of All-Files DLPATH.LST* and press 2 . You see a screen resembling the following:



Perhaps the easiest way for you to create your ALLFILES.LST is to use the DOS COPY command to combine the DLPATH.LST files that you use in your various conferences into one single file called ALLFILES.LST. This method may be faster than manually entering each path or index file into the file.

NOTE: You should also add the private upload directory path for each conference in your ALLFILES.LST if you want PCBoard to check these directories since they are not normally included in your conference DLPATH.LST files.

As a quick example, let's assume that you have defined two conferences on your system. In both conferences you have different files available for download. You decide that the ALLFILES.LST is the best way to protect from getting unwanted duplicate files. First, you use the COPY command in DOS to combine the DLPATH.LST files for your conferences by typing the following:

```
COPY C:\PCB\CONF1\DLPATH.LST+C:\PCB\CONF2\DLPATH.LST C:\PCB\ALLFILES.LST
```

Next, add the public and private upload directory paths for the two conferences into your ALLFILES.LST so that it resembles the screen on the following page:

```
                              File Locations

Enter a list of Paths to check against New Uploads

 1)   C:\PCB\CONF1\DL1\
 2)   C:\PCB\CONF1\DL2\
 3)   C:\PCB\CONF1\DL3\
 4)   C:\PCB\CONF1\DL4\
 5)   C:\PCB\CONF2\DL1\
 6)   C:\PCB\CONF2\DL2\
 7)   C:\PCB\CONF2\DL3\
 8)   C:\PCB\CONF2\DL4\
 9)   C:\PCB\CONF2\DL5\
10)   C:\PCB\CONF1\UPLOAD\
11)   C:\PCB\CONF1\PRIVUPLD\
12)   C:\PCB\CONF2\UPLOAD\
13)   C:\PCB\CONF2\PRIVUPLD\

 ESC=Exit   Alt-R=Repeat a Line   Alt-I=Insert a Line   Alt-D=Delete a Line
 11:46:50 ═══ 05-12-93 ═══ F1 = help ═══ caps: OFF  num: ON   ins: OFF
```

Name/Loc of Upload File Trashcan

This configuration file has one purpose—to stop users from uploading certain filenames. If a user attempts to upload a file which is in this list, PCBoard prints an error that says *Files matching ([filename]) are not allowed on this system*. To edit your upload file trashcan, highlight the line on the screen which says *Name/Loc of Upload File Trashcan* and press 2 . Inside the upload file trashcan editor, you can specify any valid DOS filename or wildcard. Use the t and b cursor keys to move between fields.

Batch file for viewing compressed files

In this field, enter the name of the batch file to execute when a user uses the F;V user command to view a file available for download. PCBoard executes the batch file specified in this field. In addition, PCBoard passes the full path and filename being viewed as the first parameter to the batch file.

The default PCBVIEW.BAT included with your package makes use of VIEWZIP.EXE and VIEWARCH.COM that are also supplied with your package. These two utilities allow you to list the files contained in .ZIP and .ARC compressed files.

Filename EXTENSION for compressed files

Usually a bulletin board system picks a particular compression program to compress all of the files on-line. For example, you may decide that you want all of your files to be in .ZIP format. This field allows you to specify the default extension for compressed files. This extension is used in the following places:

- When flagging or requesting a file for download, PCBoard attempts to find a filename with the compressed filename extension if no extension is supplied by the user. This can save keystrokes because the extension does not have to be entered.
- When using the F;V command PCBoard attempts to find a filename with the compressed filename extension if no extension is supplied by the user. This can save keystrokes because the extension does not have to be entered.
- If a bulletin is requested for download, PCBoard checks to see if a file exists in the same location as the bulletin file that has the same filename and also an extension that matches the compressed filename extension. If such a file exists, the compressed version of the file is downloaded instead of the ASCII text version. This allows you to have large bulletins on-line but for users to easily download a compressed version of the bulletin.

External command for copying files

The main reason why you would want to utilize this feature is if you run PCBoard on a network which has a network file copying command which copies files directly on the server without transferring data around the network. This can greatly improve the speed of the file copy procedure and also

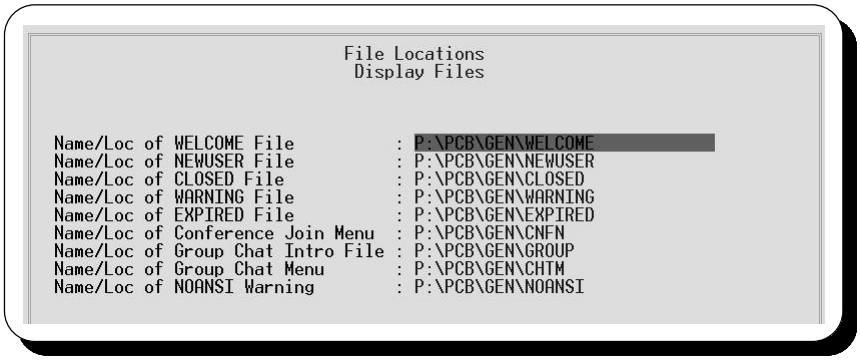
reduce network traffic.

When used with the "Slow Drive" support, this feature can further enhance the performance that is seen by your end users.

NOTE: Some network copy commands may restrict the command such that it only works if you are copying a file from and to directories that exist on *that* server and so the copy command will fail if copying files to or from a local drive or another server. In such cases, you should only enable this feature if you are sure that all file copies will be on the server's drive.

Display Files

When you select this menu option, you are presented with the following screen which lists some of the display files you can change the location of or even edit:



PCBoard makes use of several display files. These display files are text files that are displayed to the caller. Text files allow you to easily customize the information presented to the user. You can make your file large or small, colorized or monochrome. You have the choice.

All of the display files listed on this screen can have graphics, security, and language specific versions. See *Display Files* in the *Customizing Your BBS* chapter of this manual for additional information.. In each of the fields on this screen, enter the drive, path, and filename to use for each display file.

From within PCBSetup, you can edit the normal display file and the graphics specific version by using 2 and 3 respectively. If you edit a file, PCBSetup uses the text and graphics editors defined in *System Manager | Define Text & Graphics Editors* because these are display files.

Name/Loc of WELCOME File

This file is displayed after the `Do you want graphics` prompt is answered (assuming Q is not used to abort the welcome file). Typically, SysOps design this screen to display the system name, phone numbers, and any other relative facts.

Name/Loc of NEWUSER File

When a new user is logging into your system, this display file is shown to them right after they confirm that they are a new user. In this file you will most likely want to display rules of your system and any steps that the user must complete to become registered on your system.

Name/Loc of CLOSED File

This file is displayed whenever PCBoard determines that a user cannot login to a system because it is a closed system. There are two ways of creating a closed system:

- In *PCBSetup | Configuration Options | System Control* you have enabled the `Run System as a Closed Board` option. New users are not allowed to login.
- The security level of the caller has been defined to have 0 minutes available in the PWRD file. This will display the CLOSED file regardless of the closed board option.

You should display a brief explanation of why the user cannot login to your system and provide further instructions as to what the user should do.

Name/Loc of WARNING File

The WARNING file is displayed only to those callers whose subscription is about to expire. This file is displayed when the user is within the warning period defined in *PCBSetup | Subscriptions*. You should let the user know that their subscription is about to expire and using purpose eye-catching colors is a wise idea.

Name/Loc of EXPIRED File

When a user's subscription has expired, PCBoard displays the EXPIRED file every time they login. Therefore, you may want to have this file contain the instructions necessary for a user to renew their subscription.

Name/Loc of Conference Join Menu

When a user executes the `J` user command without specifying a conference name or number to join, PCBoard displays the menu of conferences that are available. The display file defined by this file is the one that is used to list the conferences that are available on your system. Because it is a text file, you can customize it to look any way that you desire. You should include the conference number and/or name for each conference so the user may use the name or number of the conference they wish to join.

Name/Loc of Group Chat Intro File

When a user joins group chat, this file is displayed to them. In this file, you may want to outline general rules of courtesy in regards to node chat. Remember that this file is displayed every time group chat is joined so you may not want to make this file too long.

Name/Loc of Group Chat Menu

While in group chat, the user can execute several different commands. These commands allow the user to change channels, send private messages to other users, and more. This display file is a menu that is displayed when a user is not in expert mode and presses `E`. Expert users would need to ask for the menu by typing `MENU` at the `Chat Command` prompt.

Name/Loc of NOANSI Warning

Group chat makes heavy use of the ANSI terminal emulation standard. If PCBoard determines that the user is not capable of ANSI at login and the user attempts to join group chat, this file is displayed. In this file, you should warn the user that they should instruct their terminal program to use split-screen chat mode (if available) or avoid typing while others are typing.

New User/Logon/off Questionnaires

You can also use script questionnaires at logon, logoff, and when a new user is logging into the system. As with normal script questionnaires, you can use the text format questionnaires or you can make the questionnaire files actual PPE files if you need more control when asking questions.

Name/Loc of New Reg Questionnaire

When a new user logs into your system, this questionnaires gives you the ability to ask for additional information that PCBoard does not. For example, you may want to ask questions about where the new user found out about your system or the company they are associated with. If you have defined a new registration questionnaire, it is used right after PCBoard finishes asking it's normal questions (default protocol, password, etc.) This questionnaire behaves as any other questionnaire in PCBoard with one exception—no 5 line

header is necessary at the beginning of the script questionnaire. A detailed discussion on creating script questionnaires is discussed in the Conference Setup chapter of this manual.

NOTE: For the additional new user questions to be asked, the `Use NEWASK + Standard Questions` must be enabled in *PCBSetup | Configuration Options | System Control*.

Name/Loc of Answers to New Reg.

The filename specified in this field is where the answers to the new registration questionnaire are stored. If you use a standard script questionnaire, the answer file prints the question that was asked followed by the answer that the user gave. If you are using a PPE for the new registration questionnaire, the format of the answers can be in any format since the PPE controls the output.

Name/Loc of Logon Script Quest.

The login script questionnaire is executed by everyone right after they enter their password and even before the $$LOGON.BAT file is executed. If you want to ask a questionnaire for every login or more likely to execute a PPE at every login, define the file to use as your questionnaire.

NOTE: You can also have this field display an additional logon screen by specifying the filename to display in this field and leaving the answer field blank. When the answer field is blank, no questions are asked. Also note that the login script questionnaire is not shown to the user in record #1 (the SysOp).

Name/Loc of Logon Script Answers

The filename you specify in this field is where the answers to the logon questionnaire are stored. If you used a standard script questionnaire, the answer file prints the question that was asked followed by the answer the user gave. If you are using a PPE for the logon questionnaire, the format of the answers could be in any format since the PPE controls the output.

Name/Loc of Logoff Script Quest.

The logoff script questionnaire is executed by everyone right after they enter the command to logoff and before the $$LOGOFF.BAT file is executed. If you want to ask a questionnaire or run a PPE at every logoff, define the file to use as your questionnaire.

NOTE: You can also have this field display a logoff screen by specifying the filename to display in this field and leaving the answer field blank. When the answer field is blank, no questions are asked. Also note that the logoff script questionnaire is not shown to the user in record #1 (the SysOp).

Name/Loc of Logoff Script Answers

The filename you specify in this field is where the answers to the logoff questionnaire are stored. If you used a standard script questionnaire, the answer file prints the question asked followed by the answer the user gave. If you are using a PPE for the logoff questionnaire, the format of the answers could be in any format since the PPE controls the output.

Modem Information

```
PCBoard Setup Utility
Copyright (C) 1988-1996 Clark Development Company, Inc

Modem Information

A  Modem Setup
B  Configuration Switches
C  Allowed Access Speeds
```

Selecting this menu option allows you to modify the setup of PCBoard in regards to the serial port you are using. Not only can you define the serial port you will be using, but there are options which control the behavior of PCBoard with your serial port.

There are three menu options that you can select. If you want to configure the serial port to use, the initialization string, or other items related to the setup of your modem, select the first menu option. Selecting the second menu option allows you to set numerous options that control how PCBoard interacts with your modem. Finally, the last menu option contains items that allow you to control access to the node you are configuring based on the connect speed of the caller.

Modem Setup

```
Modem Information
   Modem Setup

Seconds to wait for carrier    : 45
Comm Driver to use (A/C/F/O)   : A   A=ASYNC, C=COMM-DRV, F=FOSSIL, O=OS/2
Comm Port (0=NONE/Local Only)  :  2
Opening Baud Rate (300-115200) :  57600
Lock in Opening Baud Rate      : N
Modem Initialization String #1 : ATH0M0
Modem Initialization String #2 :
Modem Off-Hook String          : ATH1M0
Modem Answer String            : ATA
Modem Dialout String           : ATDT
Max # of Redials on Busy       :    1
Max # of Attempts to Connect   :  100
```

When you installed PCBoard, the install program configured your modem with a program named **PCBMODEM.EXE**. This utility configures numerous modems to operate properly with PCBoard. You should run PCBModem at least once to configure your modem

Seconds to wait for carrier

As soon as PCBoard detects a ring coming in from the modem, it counts down from the number entered in this field until 0 is reached. If PCBoard reaches 0 without being able to determine that a connection has been established, it recycles and wait for the next call. Normally a good value to set for this field is between 30 and 45 seconds.

Comm Driver to use (A/C/F/O)

Standard DOS PCBoard software supplies one type of comm driver and that is *Asynchronous*. The OS/2 version of PCBoard only communicates with OS/2 devices. The multiport version of PCBoard (DOS), allows you to select from any of the following drivers:

DOS A **Asynchronous (Async).** Select this option to use standard serial ports (sometimes referred to as COM ports). These serial ports utilize standard UART chips (e.g., 8250, 16450, 16550, etc.). This driver requires each serial port in the machine to access a unique base address and IRQ setting.

DOS C **COMM-DRV**. The multiport version of PCBoard includes a TSR called COMM-DRV. This TSR provides a standard interface between numerous serial devices. Not only are intelligent serial boards like those produced by Arnet and DigiBoard supported but also most non-intelligent serial boards are supported. To confirm whether or not your card will work with COMM-TSR, refer to the Using An External Comm Driver section in the Multiple Nodes chapter of this manual, or contact technical support.

DOS F **FOSSIL**. PCBoard can also communicate with serial devices that provide a FOSSIL interface. Usually this requires you to load a device driver or TSR.

O **OS/2**. PCBoard is able to communicate with any device which includes a driver for OS/2 v2.x or later by talking directly through the API. After installing the driver for your serial port hardware, use programs or utilities included in OS/2 to insure the operating system is properly communicating with your hardware.

Comm Port (0=NONE/Local Only)

Enter the number of the comm port to be used by PCBoard. If you enter a comm port of 0, only local logons are allowed.

If you have configured PCBoard to use the async comm driver, the numbers 1 and 2 correspond to COM1 and COM2 in your machine. Any number higher than 2 requires you to enter the base address and IRQ value to define the port. If you enter a port higher than 2, your hardware must be configured for whatever values you enter for the base address and IRQ. If they do not, PCBoard will either refuse to load, or will not be able to properly communicate with your comm port. Refer to the *Troubleshooting* section of the *PCBoard* chapter for additional details.

If you have configured PCBoard to use COMM-DRV, enter the corresponding port number defined in DRVSETUP. For example, to use port 2 defined in this sample DRVSETUP

Port Number	Card Type	Sub-Port	Base Address	IRQ	Card Segment	FOSSIL
1	ARNET	1	300	3	D000	Y
2	ARNET	2	300	3	D000	Y

enter *2* in the comm port field because that is what is defined as the port number in DRVSETUP. If you selected the FOSSIL comm driver instead, enter the port number as it is defined in your external communications driver that provides the FOSSIL interface.

Opening Baud Rate (300-115200)

In this field, enter the speed that PCBoard should initialize your serial port. Normally you should set this to the maximum port rate speed your modem supports. The valid options are 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.

Sometimes, your modem may be able to support a faster port rate speed than your serial and computer hardware can keep up with. If this is the case, data loss is experienced To resolve this, lower the opening port rate speed or upgrade your computer hardware.

NOTE: If you enter an opening port rate speed of 19200 or higher, PCBoard forces the port speed to be locked regardless of how you have set the *Lock in Opening Baud Rate*.

Lock in Opening Baud Rate

A locked port speed tells the modem to communicate at the rate you entered for the opening port speed. When the communications port is not locked, PCBoard communicates at the same speed as the caller is connected at.

A locked port rate has no effect unless you are using a modem that is capable of error-correction (e.g., V.42, MNP) and an error-correction connection is established. With an error-correcting connection, the actual throughput of all data transferred can be increased by up to 20% because the start and stop bits are stripped out. In addition, most error-correcting modems also support data compression of ASCII text (such as display screens) very well.

If you enable this option, be sure that your modem is also configured to expect a locked port rate (sometimes referred as a *fixed DTE speed* or a *fixed DTE link*). If both the software and hardware are not configured to communicate at a locked port rate, you will see *garbage characters* on the remote screen when calling in.

Modem Initialization Strings

These two fields contain the initializing string PCBoard sends to the modem when it first loads and whenever it recycles to the call-waiting screen. The string entered in this field varies between modems because most modems have different command sets and default values. The best thing to do is to use PCBModem to properly configure your modem for use with PCBoard. Instructions for PCBModem are found in the *Utilities* chapter of this manual. If your modem is not listed in PCBModem, contact the technical support staff for configuration assistance.

There are two special characters that you can use in your initialization string to simulate a carriage return (pressing R) and to incorporate a brief pause in your initialization string.

^M If you enter these two characters in your initialization string, PCBoard sends a carriage return and continue sending the rest of the initialization string. Some modems have a problem with long initialization strings. Use the carriage returns to break up a long initialization string. For example

ATM0^MATH0^MATS0=0

sends the following to your modem:

ATM0 R
ATH0 R
ATS0=0

~ If you enter this character in your initialization string, PCBoard pauses 1/2 of one second every time it encounters this character. This is useful to manually slow down the speed at which the modem initialization string is sent.

If you run communications programs on the same modem that you use for your system, be careful to restore the modem to all of the proper settings because your communications program has an initialization string as well. One initialization string that you could use would be *ATZ^MATM0H0*. This string resets the modem, turns off the speaker, and puts the phone line back on hook (if it was off hook). Be forewarned, however, that some modems have a problem with sending ATZ in the initialization string and may report a **modem reset error**.

An incorrect initialization string that does not generate an OK from the modem results in PCBoard issuing a **modem reset error**. If you experience this error, refer to the *Troubleshooting* section in the *PCBoard* chapter of this manual for additional instructions.

Modem Off-Hook String

Sometimes PCBoard takes the phone off-hook to make the phone line busy. PCBoard sends the off-hook string that you enter in this field at the following times:

- Selecting *User - Busy*, *Sysop - Busy*, or *DOS-Busy* from the call waiting screen.
- Enabling the `Modem Off-Hook During Recycle` will force the phone to be off-hook from the time carrier is dropped until the initialization string is sent.
- Recycling the node using the `1 5` SysOp command.
- Going into the Fido menu from the call-waiting screen.

NOTE: Some modems have built in limits as to how long they stay off-hook. When this time expires, they go back on hook (allowing your phone to ring). In this type of situation there is nothing PCBoard can do to keep the phone line busy as this is a built in function of the modem.

Modem Answer String

Once PCBoard has determined there is an incoming call, the modem answer string is sent to the modem. In almost all circumstances this string is going to be the standard ATA command to answer the phone. With many modems encompassing features like fax support and Caller ID, the ability to modify the answer string for your modem is an important feature.

Modem Dialout String

This field determines what modem commands are necessary for dialing outside of PCBoard (Fido calls). Most often the default, ATDT worked fine. However, your circumstances may require different such as ATDP (pulse dialing) or ATM1DT (turn the speaker on when dialing). PCBoard adds the phone number to the string entered in this field.

Max # of Redials on Busy

The number entered in this field determines how many times PCBoard redials when it gets a BUSY response from another Fido node. In other words, if the other Fido site is busy, PCBoard limits its dialing attempts to the value entered in this field before it continues with the next process or queue entry.

Max # of Attempts to Connect

If your Fido configuration requires or allows long distance calls, this is an important value to consider since it determines how many failed dial attempts before aborting. As an example, assume you make a long-distance call to another Fido site. For whatever reason, the two modems fail to negotiate. Rather than continue to redial and therefore increase your phone-bill with each attempt, you can tell PCBoard to stop after a set number of attempts. Once a queue entry reaches this limit, no more dial attempts are made.

Once the connection problems are worked out, be sure to clear the failed connection count for each packet. This is done from the `View/Modify Queue` option in the Fido menu (`A - F` from the call-waiting screen)

Configuration Switches

```
                          Modem Information
                       Configuration Switches

Disable CTS/RTS Checking      : N
Disable RTS-Drop During Write : N
Using a FastComm 9600         : N
Reset Modem While Idle        : N
Reset Modem During Recycle    : N
Modem Off-Hook During Recycle : N
Modem Delay During Recycle    : 0
Packet-Switch Network         : N
Verify CD-Loss                : Y
Leave DTR Up at Drop to DOS   : N
Drop to DOS on Missed Connect : N
Answer on True Ring Detect    : N
Number of Rings Required      : 1
Monitor Missed Connections    : Y
Force NON-16550 Usage         : N
Force 16550A Usage            : N
Share IRQs on MCA Buses       : N

09:56:46 ═══ 01-03-97 ═══ F1 = help ═══ caps: OFF  num: ON   ins: OFF
```

Disable CTS/RTS Checking

CTS/RTS refers to a type of flow control called hardware flow control which restricts or enables the flow of data. When data cannot be received or sent by one side of the connection it will attempt to restrict the flow of data via the hardware flow control signals provided by the RS-232 serial interface. In other words, flow control is necessary to guarantee that modem and computer buffers are not caused to overflow by incoming or outgoing data. Normally you want to answer *N* to this question unless your modem or serial card does not support CTS/RTS flow control. Valid options for this field are:

N — CTS/RTS flow control is enabled by PCBoard. Similar to locking the port rate, it is required that both the modem and PCBoard be configured to use CTS/RTS flow control. It is also important that your modem not be configured for XON/XOFF or software flow control.

Y — Hardware (CTS/RTS) flow control is disabled by PCBoard. Select this setting only if your modem does not support hardware flow control (check your modem manual).

NOTE: For high speed communications it is essential that you answer *N* to this question or risk data loss over the modem.

Disable RTS-Drop During Write

While PCBoard is receiving an upload file (via an internal transfer protocol) it normally shuts down the RTS signal while it writes to disk to avoid data loss.

N — When writing data being uploaded, PCBoard shuts down RTS to prevent data from being lost.

Y — Disables this automatic RTS shut down. While faster uploads may be possible, it could result in data loss. You would be most likely to experience data loss if the upload is being written to a slow drive or across the network.

Using a FastComm 9600

If you are using a FastComm 9600 modem, answer Y in this field. PCBoard has to assume certain aspects about the connection due to the way the FastComm modem operates. If you are not using a FastComm 9600 modem, leave this field set to *N*.

Reset Modem While Idle

PCBoard gives you the opportunity to reinitialize the serial port and modems every five minutes while idling at the call waiting screen. This may be beneficial if you experience unexplained *modem reset errors*. Valid options are:

N When at the call waiting screen, PCBoard makes no attempt to reinitialize the port.

Y While at the call waiting screen, the port and modem will be reinitialized after five minutes of inactivity.

NOTE: In some modems this can help keep the modem from getting modem reset errors while other modems will instead be more prone to such errors. Experiment with this setting.

Reset Modem During Recycle

After a caller hangs up you can automatically have PCBoard send the standard ATZ to your modem to initialize the power-on defaults of your modem. This *might* be useful if your modem experiences unexplained *modem reset errors*. Valid options for this field are:

N PCBoard does **not** send the ATZ command to the modem during each recycle.

Y After a caller disconnects from your system, PCBoard sends an ATZ command to restore the power-on defaults of your modem.

NOTE: In some modems this can help keep the modem from getting modem reset errors while other modems will instead be more prone to such errors. Experiment with this setting if you are getting modem reset errors during recycles.

Modem Off-Hook During Recycle

Normally after PCBoard disconnects a caller, it leaves the phone on-hook. Those callers calling in get a ring. This is usually desirable because PCBoard recycles very quickly under normal circumstances. At most, callers may get two to three rings before the modem answers the phone. Using this option, you can configure PCBoard to make the phone busy until it is ready for the next caller. Valid options are:

N PCBoard leaves the phone on-hook (incoming callers will hear rings).

Y The phone is taken off-hook causing incoming callers to get busy signals until after PCBoard has completely recycled and is waiting for the next call.

NOTE: In some modems this can help keep the modem from getting modem reset errors while other modems become more prone to such errors. Experiment with this setting if you are getting errors during recycles.

Modem Delay During Recycle

Some modems can get confused if you attempt to recycle the system too quickly resulting in modem reset errors. Setting a value of 1 or higher helps slow down the recycle process and give your modem more time to be reset without experiencing a modem reset error.

In addition, this value can be used to 'tune' the speed with which PCBoard recycles. On buffered modems, a higher setting insures that all data gets transmitted. If your remote callers are not receiving all of the information before carrier is dropped, try increasing the value entered in this field.

Packet-Switch Network

If you are running in an environment where PCBoard is directly connected to a cable and not directly to a modem (e.g., a PAD, packet-switch network, X.25), you need to inform PCBoard via this field. Valid options are:

N PCBoard operates in a normal manner expecting a modem to be directly connected to the serial port you specify.

Y PCBoard assumes the modem is not directly connected to the serial port specified. PCBoard doesl not send an initialization string when recycling after a call (or at startup). PCBoard knows a call needs to be attended to when an R is sent over the connection. You should also use this setting if you are using a null-modem cable to connect with another machine.

NOTE: It is important that the CTS/RTS, RD/SD and CD/DTR signals be wired properly if you select *Y* for this field.

Verify CD-Loss

When the Carrier Detect (CD) signal goes out, it generally indicates that the connection has been broken and that the caller has disconnected. However, some modems drop the CD signal while auto-bauding (changing baud rates) in search of a more efficient speed. This is generally caused by changing line noise conditions. Valid options for this field are:

N When the CD signal goes out, PCBoard assumes the caller has hung-up and recycles the system. In a PAD or packet-switching environment, loss of the carrier detect signal never indicates auto-bauding. In fact, a PAD often brings the CD signal right back up. To avoid accidentally putting the next caller into the last caller's session, select this option.

Y To avoid detecting CD loss when, in fact, the caller is still on-line, you must answer Y. When the CD signal goes out, PCBoard verifies the modem is not simply compensating for line noise. This avoids PCBoard automatically thinking that a caller has hung up when the CD signal goes out.

Leave DTR Up at Drop to DOS

When selecting the **DOS - Not Busy** button on the call waiting screen, this option controls whether the DTR signal is left on or not. Valid options are:

N The DTR signal is turned off.

Y The DTR signal is left on.

Drop to DOS on Missed Connect

If PCBoard answers the phone but is unable to establish a connection (a potential problem of the modem), it can be configured to drop to DOS. Dropping to DOS on a missed connection does two things. 1) Reinitialize the modem as if you were starting PCBoard for the first call. 2) Give you the ability to run a program which may reinitialize the modem between failed calls. Available options are:

N Do not drop to DOS on a failed connection attempt. Instead, return directly to the call-waiting screen.

Y On every call PCBoard answers and fails to establish a connection, drop to DOS.

When configured to drop to DOS on missed connects and a failed connection attempt is made, PCBoard exits to DOS with an errorlevel of 8. This errorlevel can be tested in BOARD.BAT for additional processing.

Answer on True Ring Detect

Normally, PCBoard waits for *RING* to be sent from the modem and then sends *ATA* to the modem to answer the phone. This proves to be the most reliable method for answering the phone. If you desire, you can choose to have PCBoard watch the ring detect line as signaled by the serial card. Valid options are:

N — PCBoard uses the more reliable method of waiting for the RING to come from the modem before attempting to answer the phone.

Y — PCBoard answers on a true ring detect as signaled by the serial card. You should only enable this option for those modems which do not return the verbose *RING* response when the phone is ringing.

Number of Rings Required

This setting allows you to customize the number of times you want the phone to ring before PCBoard tells the modem to pick it up. For example, you may be in an environment where the phone is normally used for voice calls but at night you want to be able to dial into the system. By setting this value a high number most voice callers will hang up before PCBoard answers the phone.

NOTE: For Caller ID detection to work, you must set this number to at least 2 since Caller ID is typically passed in between the 1st and 2nd ring.

Monitor Missed Connections

After an incoming phone call is detected, there are four possible outcomes. They are:

1. The countdown runs to completion without establishing a connection (no handshaking, or handshaking failed to complete)
2. A NO CARRIER message is issued by the modem before the connection is ever completed (aborted handshaking sequence)
3. A connection is established but carrier is lost before the caller completes a login.
4. A connection is established and the caller successfully logs into the system

Valid options for this field are:

N — Only fully established connections are written to the caller log.

Y — Normally PCBoard only writes successful login information to the caller log. Selecting this option instructs PCBoard to write one of three lines corresponding to the first three possible outcomes listed previously.

1. *NO CONNECT / FULL COUNTDOWN*
2. *NO CONNECT / NO CARRIER*
3. *Carrier Lost*

Force NON-16550 Usage

Some of the early 16550 UART chips are buggy. The bug is most often seen when data output gets behind where it should be and only proceeds when typing more characters. If the command prompt is incomplete, but gradually, one character at a time, becomes more complete as you type a command, you have one of the buggy 16550 UARTs. Valid options for this field are:

Setting *Force NON-16550A Usage* to *N* will generally make the problem go away, but you lose access to the FIFO buffers. A better solution is to replace the defective UART chip.

N — PCBoard will not modify the way that it treats the UART it detects.

Y Even if PCBoard detects a 16550 UART, it will treat it as if it was a 16450 UART. If you suspect that some of the advanced features of your 16550 UART are defective, you may want to select this option.

Force 16550A Usage

Some multi-tasking environments, such as OS/2 or Windows, use device drivers to virtualize the comm port. In the process of doing so, they may hide the 16550A UART, making it appear to be a 16450 UART when accessed by a DOS application. Valid options for this field are:

N PCBoard assumes the UART it detects is the real UART you have installed.

Y This option forces PCBoard to operate as if a 16550A UART was detected. This enables the use of FIFO buffers for both transmit and receive operations. **Do not set this option to `Y` unless you have a 16550A UART**.

Share IRQs on MCA Buses

PS/2s and other Micro Channel based machines have the ability to share interrupts among different hardware devices. This setting will not work unless the IRQ is being shared with software that is loaded *before* the multitasker. Valid options are:

N PCBoard will operate in normal asynchronous mode where it expects each port to have a unique IRQ for each port.

Y PCBoard will try to share the interrupt that is used by the serial port.

NOTE: Sharing interrupts slows down processing. Therefore, it is recommended that you only use this option when necessary.

Allowed Access Speeds

```
                    Modem Information
                 Allowed Access Speeds

Allow Callers at 7,E,1  : N

Lowest Desired Baud     :  1200
Allow Lower Speeds      : N
Begin Time              : 00:01
End Time                : 24:00
Security Level Override :   0
```

Allow Callers at 7,E,1

The majority of PC communications will communicate at 8,N,1 which refers to 8 data bits, no parity, and 1 stop bit. However, some of your callers may use the less frequently used 7 data bits, even parity and 1 stop bit (7,E,1).

N Callers who call in using 7,E,1 will be refused access to your system.

Y Callers may connect with your system using 8,N,1 or 7,E,1. Be aware that if a caller connects using 7,E,1 then file transfers will be disabled for that session. This is done because 7,E,1 does not have the capability of properly transferring binary data.

Lowest Desired Baud

You can set a minimum speed that a caller must have to log into your system. For example, if you want to let only users who have are able to connect at 1200 or higher then you would enter 1200 in this field. The

next three fields on this screen determine if you will allow slower speeds and if so, at what time during the day lower connection speeds will be allowed. This setting affects *all connections* including Fido callers.

Allow Lower Speeds

Sometimes you may want to allow callers to connect at a slower speed than the one entered in the *Lowest Desired Baud* field. PCBoard will give you the ability to let users connect at a slower speed but only during a specific time during the day.

N Users must connect at a speed equal to or greater than the value that you enter in the *Lowest Desired Baud* field. If a caller attempts to connect at a slower speed, a message (PCBText record #270) notifying the user the connection speed is not supported on your system will be displayed.

Y Users may connect at a slower speed than the value that you enter in the *Lowest Desired Baud* field. However, the connect must be made during the time range that you define with the *Begin Time* and *End Time* field on this screen.

Begin Time

In this field you can specify the beginning time (hhmm format) when users can call in at a slower speed than what is defined by the *Lowest Desired Baud* field. All times you enter must be done in 24 hour format. If you answered N to the *Allow Lower Speeds*, the starting and ending times are ignored.

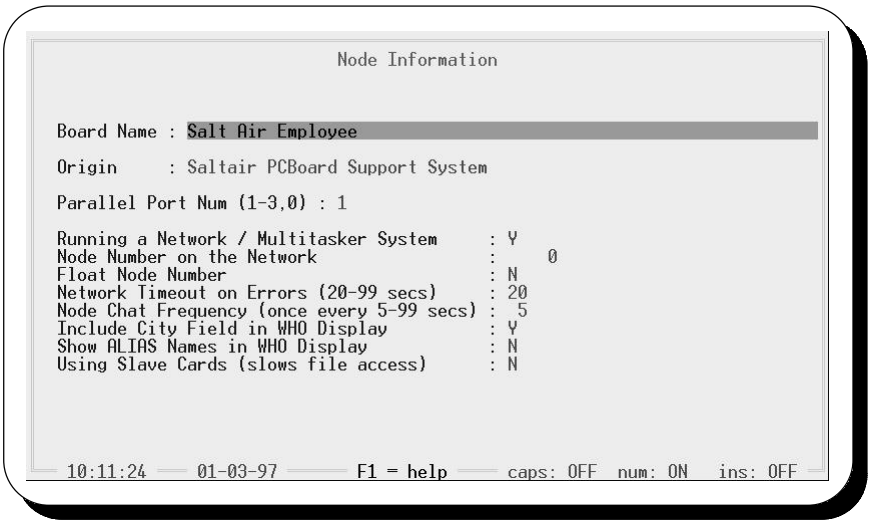
End Time

In this field you can specify the ending time (hhmm format) when users can call in at a slower speed than what is defined by the *Lowest Desired Baud* field. All times you enter must be done in 24 hour format. If you answered N to the *Allow Lower Speeds*, the starting and ending times are ignored.

Security Level Override

If you enter any security level other than 0 in this field, users that have an equal or greater than security level will be able to login to the system regardless of the time of the login. The security level override is valid regardless of the *Allow Lower* setting.

Node Configuration



Board Name

In this field, enter here the name of your bulletin board system. This name is shown to the caller at connect time together with the PCBoard copyright notice. In addition, it is displayed when someone uses the I user command and at the top of the call waiting screen. You can enter up to 63 characters to identify your bulletin board system in this field.

Origin

This field is reserved primarily for use with netmail networks to identify your system. The format of the information you enter here depends on the netmail software you are using and the netmail system you are connecting to. Contact the netmail software authors and/or your netmail system administrator for details.

Parallel Port Num (1-3,0)

There are a few places within PCBoard where you can send output to the printer. For example, you can press A - P while a user is on-line to start capturing the text on the screen to the printer. Likewise, you can toggle printing of the caller logs from the call waiting screen. All of these functions need to know what LPT port to send the output to. In this field, enter the LPT port you want PCBoard to send printout to. Valid entries are 0-3. If you enter a value of 0, no printer output will be sent.

Running a Network / Multitasker System

If you are running more than one node on your system, you must let PCBoard know so that it can use the proper file sharing routines and otherwise take care of other multiple node concerns.

N PCBoard allows a single node to operate. No file sharing is used and many of the user and SysOp commands relating to multiple nodes are disabled.

Y PCBoard enables file and record sharing so that multiple nodes can access system files at the same time. PCBoard uses the DOS standard for file sharing. If you enable this option, make sure you either load SHARE.EXE in your AUTOEXEC.BAT, or that your multitasker/network provides the sharing functions that are completely compatible with SHARE.EXE.

Node Number on the Network

In this field, enter the node number you wish to assign for the node you are configuring with PCBSetup. Node numbers must be from 1 to the highest number supported by the software you have purchased. Numbers higher than that will default back to 1 by PCBoard.

If you have told PCBoard to run more than one node, you must assign each node a unique node number. On the other hand, if you answered *N* to the *Running a Network* question, the answer to this question is ignored.

Float Node Number

The ability to float node numbers is a feature designed for enabling a large group of local network users to login to a limited amount of PCBoard nodes. What makes this feature even more desirable is that you can mix these local nodes with your dial-in nodes (if you have any).

When this option is enabled, PCBoard starts looking for a free node number in your system starting with the node number defined earlier on this screen. If a node is found, the user is logged in, using the free node number. If no free nodes are found, a message is printed to the user stating that no nodes are available and that they should try again in a few minutes.

The setup for floating nodes is more complicated than simply enabling a switch in PCBSetup. You need to modify some of your batch files and other system files to make it work properly. For additional information on setting up float nodes, see the *Networking* section in the *Multiple Nodes* chapter of this manual. Valid options for this field are:

N Node numbers are not floated. You will want to use this switch for your dial-in nodes since you most likely want their node numbers to remain fixed.

Y Node numbers are floated. This is most useful when operating in a local environment where several callers are trying to use a few nodes to logon over the network.

Network Timeout on Errors (20-99 secs)

This is the number of seconds that PCBoard should wait after it has detected a network time-out before failing the operation. You can enter any value between 20 and 99 seconds.

In other words, it is common for resources on a network to be in use at the time that another user wants to use the same resource. This is normal and should be allowed. You should set this value depending on the size and speed of your system. The bigger and slower the network is, the longer the network time-out delay might need to be.

Node Chat Frequency (once every 5-99 secs)

In this field, enter the number of seconds that PCBoard should wait in between each checking of the USERNET.XXX file. This file is used for node chat requests, broadcasts, drop to DOS commands, mail waiting notices, etc.

The lower the number the less delay there will be after an action is requested. However, a low number also increases traffic on the network or multinode system and can slow it down.

Include City Field in WHO Display

When the WHO user command is used in PCBoard, a display of the users that are currently logged onto the system is shown. Depending on how sensitive the city/location information is to your callers, you may choose whether or not to show the city/location information.

N Only the node number and the user currently logged in is displayed in a WHO display.

Y The WHO display includes the city/location field of each of the users currently online.

Show ALIAS Names in WHO Display

For some systems it may not be desirable to display the alias names in the who display even though aliases are allowed. For example, a public system with an adult section might allow adult oriented aliases in the adult conference, but displaying those names in a public WHO display might not be desirable. Other systems, which are either not adult oriented or are not open to the public, may not experience this problem in which case showing the alias might be okay. Valid responses are:

Remember: You must install the Alias PSA for PCBoard to allow alias names on your system.

N Always display the real name of the caller in the WHO display even if their alias is current active. If you have only certain areas that allow aliases it might look funny if you have a user named JIM SMITH on one node and CAPTAIN HOOK on another.

Y When the user's alias is active, show their alias in the WHO display. When an alias name is shown in the WHO display no city/location information is displayed to help protect the identity of the user.

Using Slave Cards (slows file access)

Answer *Y* to this question if you have an Alloy Slave system and are running NTNX prior to version 2.0.

NOTE: This option does slow down access to some files.

Event Setup

An event is simply a batch file that gets executed during a specific time of the day. In this event batch file you can do the following (and more):

- Pack your users and/or message bases
- If you are part of a mail network, you can transfer mail packets
- Some third party products you use on your bulletin board may need to run utilities to update data bases, etc.
- Create a list of files on your system using PCBFiler and the /LIST parameter.
- Backup your system

The previous examples are but only a few of the things you can do in your event. Since events simply execute batch files you are more or less limited by your imagination as far as what you want to run in your event.

To define your event information you need to select *Event Setup* from *Main Menu* of *PCBSetup*. When you select this option, you will see the following screen:

```
                              Event Information


Is a Timed Event Active                : Y
Name/Location of EVENT.DAT             : P:\EVENTS\EVENT.DAT
Location of EVENT Files                : P:\EVENTS\

For EXPEDITED Events:

Minutes Prior to Suspend All Activity :  5
Disallow Uploads Prior to Event       : N
Minutes Prior to Disallow Uploads     : 15
```

Is a Timed Event Active

Enter a `Y` in this field if you want to run the events that you have defined in your EVENT.DAT file. To disable running events, enter an `N` in this field instead.

Name / Location of EVENT.DAT

The EVENT.DAT file holds all of the information that defines the timed events on your system. To edit/define the events that run on your system, edit your EVENT.DAT file. By pressing 2 while the `Name / Location of EVENT.DAT` field is highlighted, the editor for your EVENT.DAT is loaded.

The *Events* section in the *SysOp's Guide* chapter of this manual contains a more thorough discussion of events and how to define them for your system.

Location for multiple nodes

Because the event data file stores information about each node, it is required that all nodes access the same data file. If all nodes do not use the same file, your events may not run reliably.

Location of EVENT Files

This field stores the location where your event batch files are located. When an event runs, it looks for the event batch file to be located in the subdirectory that you specify.

> **Location for multiple nodes**
>
> You should insure that all nodes in your system point to the same location for event files. The event system was designed to store the batch files in one physical location. If the nodes on your system all point

Minutes Prior to Suspend All Activity

If an event is defined as an expedited event, you can define the number of minutes prior to the event time that all activity on the system will cease. If your event is defined to run at 2:00am and you configure PCBoard for a 15 minute suspense time, PCBoard attempts to insure that every user has logged off by 1:45am.

The suspense time is used as a safety zone to make sure all users that are in doors or other applications outside of PCBoard's control return to the system in time for the event. Another reason why you may want to suspend activity prior to the event running is to let any file transfers finish. Even though PCBoard makes its best estimate in regards to how long it takes to download files, sometimes line noise or other conditions extend the time of the transfer. Suspending activity prior to the event running helps insure that all expedited events run on time.

Dwring the suspense time, the phone is taken off-hook and a message is printed at the top of the scregn to let you know that PCBoard is waiting for the event time. During this time, the phone will be busy to all callers that attempt to call.

Disallow Uploads Prior to Event

This field is used primarily to try to guarantee that the system will be able to run an expedited event at the time you have defined. When downloading files, PCBoard knows how many bytes will be downloaded and approximately how long it will take for the transfer. When a user uploads a file, PCBoard does not know how big the upload is or even if it consists of multiple files (batch protocols only). Because of this unknown factor, you may want to restrict uploads before an expedited event runs. Valid options for this field are:

N Do not make any special restrictions in regards to uploading files prior to an event. If the user has any time left on the system, they may begin an upload. This may mean that a user could begin an upload just before they are forced off (because they still have time available). Because no restrictions are made on uploads, they could overrun your suspense time and even your normally scheduled event time. When you use this setting you may want to consider a substantial suspense time to prevent this scenario.

Y Disable uploads prior to a schedule event. The value you enter in the *`Minutes Prior to Disallow Uploads`* field determines when uploads are disabled if you choose to disable them before an event.

Minutes Prior to Disallow Uploads

For this field to have any meaning you must have chosen to disallow uploads prior to an event. In this field, enter the number of minutes prior to the event running that uploads will be disallowed. You can enter any

value between 0 and 99 in this field. If you enter a 0, uploads are disabled anytime the user's time limit is adjusted for an upcoming event.

Subscription

```
                    Subscription Information


Enable Subscription Mode              : N
Default Subscription Length in Days   :  365
Default 'Expired' Security Level      :  19
Warning Days Prior to Expiration      :   30
```

When you have enabled subscription mode, you can control the security level and conference access of each user based expiration date entered in the user record. When a user logs into the system on or after their expiration date, they are considered to be expired. PCBoard assigns the user the security level entered in the expired security level of their record. This security change is in effect until the user is no longer expired. In addition, the user is denied access to any conference that they do not have the X conference registration flag set in.

By selecting *Subscription* from the Main Menu of PCBSetup, you can choose to enable subscription mode. If subscription mode is enabled, you can also modify some of the parameters that control how subscription mode is handled.

Enable Subscription Mode

Subscription mode makes PCBoard look at the expiration date of each user to determine if their subscription has expired or not. When the user's subscription is current, they are given their normal security level and are able to join any conference they are registered in. When a user is expired, they are assigned the expired security level in the user record and may also have conference access restricted. This setting determines whether or not subscription mode is enabled. Valid options are:

N Subscription mode is disabled. The user's expiration date is ignored even if the user would normally be expired.

Y Subscription mode is enabled meaning that PCBoard checks the expiration date of all users when they logon. The security level and conference access of the user are set according to the user record (Expired Security Level and X conference flags).

Default Subscription Length in Days

This field controls what the expiration date of new users will be. The number of days entered in this field are added to the current date to determine the expiration date of the new user. If you enter a default length of 0, the expiration date of new users is 00-00-00 which is a date that never occurs and therefore they will never expire. In other words, a setting of 0 disables subscription mode for new users.

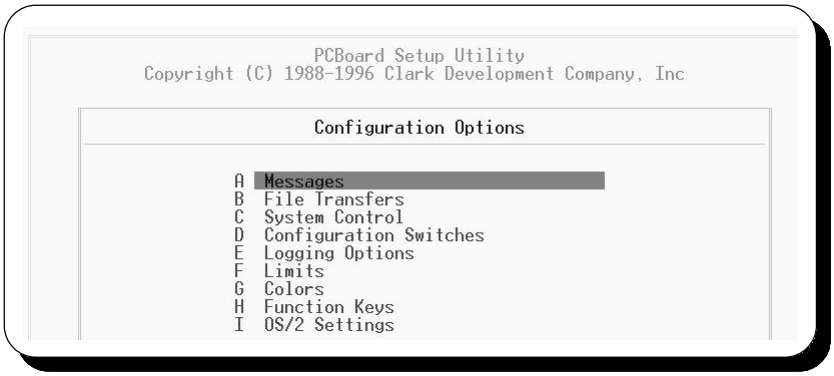
Default 'Expired' Security Level

Just as you can set a default expiration date for new users, you can also choose the default expired security level for new users as well. Enter the security level to assign new users when they expire in this field. Remember that a security level of 0 locks the user out of the system.

Warning Days Prior to Expiration

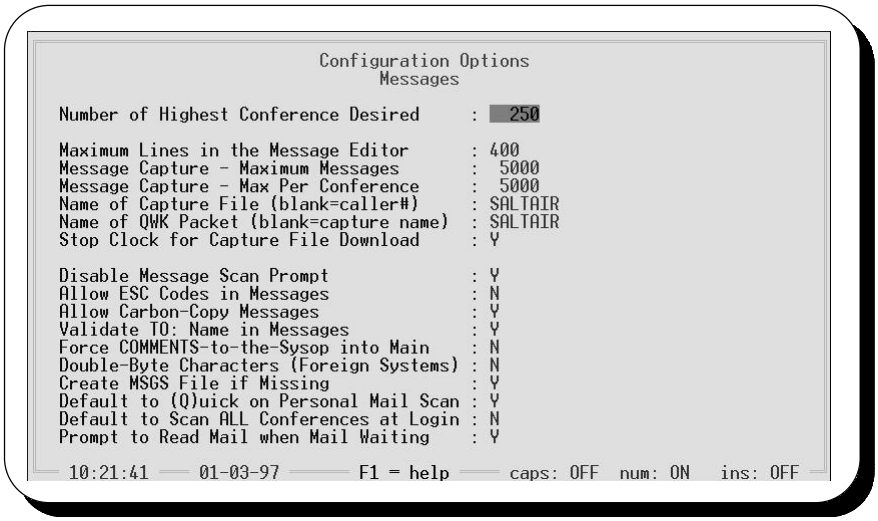
The value you enter in this field determines how many days a user is warned before their subscription expires. PCBoard displays the WARNING file at login specified in *PCBSetup | File Locations | Display Files* during the warning period.

Configuration Options



The `Configuration Options` menu selection lists options controlling the way PCBoard behaves. There are options controlling file transfers, messages, and other items.

Messages



Number of Highest Conference Desired

In this field, enter the highest conference number you want to be able to define on your system. PCBSetup uses the number entered in this field to determine the highest conference number you can define from the *Conferences* Main Menu Option in *PCBSetup*.

If you enter a value higher than 39 in this field, you may have to *update your conference allocations* from *System Manager | Users Info File Maintenance*. Whenever you change the value in this field, load System Manager and see if you need to update your conference allocations. If you are running multiple nodes, make sure all nodes have the exact same value for this field. If all nodes do not have the same value for this field,

it is quite possible one or more of your nodes will not load because the conference allocations are out of sync.

NOTE: Reducing the number of conferences deletes any conferences above that conference number. For example, if you set PCBoard to handle a maximum of 1000 conferences, and had up to 750 defined, lowering the maximum value deletes conference 501-750.

Maximum Lines in the Message Editor

This field gives you the ability to limit the total number of lines a user may enter if they use PCBoard to enter their message. The limit you enter in this field is enforced when a user uploads a REP packet using the QWK command or even if they upload the message into the message editor. You can enter any value between 17 and 400.

The value entered in this field helps control the length of messages entered by your users. If your users are leaving excessively long messages, lower the maximum number of lines to help encourage your users to be more brief in their messages.

NOTE: Any messages posted by software other than PCBoard (such as an off-line mail reading door) may not honor this limit. Anytime a third party software adds a message it is up to the author of the program to honor the settings you have defined.

Message Capture - Maximum Messages

This setting allows you to control the maximum number of messages that can be captured into a message capture file or a QWK packet. The reason for setting this value to something other than a maximum number would be to either, limit the length of time it takes the caller to download a set of messages, or to keep a message capture from filling up the disk (especially if a ram disk is specified for the location of temporary files).

Message Capture - Max Per Conference

This setting allows you to control the maximum number of messages in each conference that can be captured into a message capture file or a QWK packet. The reason for setting this value to something other than a maximum number would be to either, limit the length of time it takes the caller to download a set of messages, or to keep a message capture from filling up the disk (especially if a ram disk is specified for the location of temporary files).

Name of Capture File (blank=caller#)

The name you enter in this field is the file that is created for message captures. A user can create a message capture file using the C, D, and Z subcommands of the R user command. If this field is blank, the caller number is used as the filename instead. The capture file PCBoard creates, is stored in the `Location of Temporary Work Files` specified in *PCBSetup | File Locations | System Files*.

It is quite conceivable that a user could exceed the limits set for maximum messages per capture or conference. In a situation where this occurs, they may decide to perform another capture. To prevent this new packet from overwriting the packet they just downloaded, PCBoard renames the capture file using the following conventions:

- If the filename field is blank or if the capture filename is 7 characters or less, PCBoard increments the filename by adding the letter A to the end of the filename after the first packet is downloaded. If another packet is downloaded, PCBoard adds a B and so on.
- If you specified a capture filename that has 8 characters in it, PCBoard cannot add a new character to the filename and still have a valid DOS filename. Therefore, it will increment the last letter in the capture filename until it reaches the letter `Z`.

Name of QWK Packet (blank=capture name)

In this field, enter the name that will be used when creating QWK mail packets for users to download. If you leave this field blank, then PCBoard uses the filename entered as your capture filename (in the previous field).

Be forewarned, however, that if you leave the capture filename blank as well, that your QWK packets will not be created. The reason that no packet is created is that the QWK mail standard expects to have a consistent base filename to work on. Of course, the caller number varies with each call so that cannot be used as a QWK packet name. Usually, the best thing to do is to summarize your board name in 7 characters or less, use that abbreviation as the capture filename, and then leave your QWK packet filename blank.

As with capture files, if a user attempts to download more than one packet during a call, PCBoard increments the filename so that the previous packet does not get overwritten. QWK files are handled a little differently. PCBoard gives the first QWK packet an extension of QWK. If another packet is downloaded, PCBoard gives it an extension of QW0 and so on.

Stop Clock for Capture File Download

During the download of a message capture or QWK packet file, you can determine if you want to charge the user time for downloading the file or not. The valid options are:

N Any time spent downloading a capture file or QWK packet will be counted against the user's daily/session time limit. If the user had 30 minutes available before the transfer began and it takes them 5 minutes to download, they will have 25 minutes of time left.

Y No time is deducted from the daily/session time limit when the user is downloading a capture file or QWK mail packet. You may choose to set this option to give your users extra incentive to download messages and read them off-line.

Disable Message Scan Prompt

Normally when you login to PCBoard it will ask you if you wish to scan for messages. This option controls whether or not that question is asked. Valid responses are:

N With this setting, PCBoard asks if the message base should be scanned each time a user logs into the system. In addition, any conference that you join and did not scan at login also asks if you wish to scan the new mail. The difference is that at login, PCBoard scans all conferences you have selected for new mail. It shows you how many messages are new and if any are addressed to you. If you join a conference which you have not selected for scanning and are prompted to scan for new mail, only the current conference is scanned.

Y The prompt which asks the user if they want to scan for messages is disabled. This means that the user is not asked at login or even when they join conferences.

Allow ESC Codes in Messages

E (escape) codes are generally used to transmit ANSI sequences across the modem. These codes can define color changes, cursor movements, etc. To enter the E character into the message editor the ASCII 029 character should be used instead of ASCII 027. This avoids any conflicts with the full-screen editor and its use of E . From the keyboard, the ASCII 029 character can be entered by holding down A while typing 029 on the numeric keypad (a double sided arrow is printed). This option controls whether or not you want to allow users to enter the E character in the message editor. The valid choices are:

N Users are not allowed to enter the E character in their messages. In effect this disables users from entering ANSI color screens in their messages. This in itself is not a bad idea, because not all of your callers are capable of ANSI color graphics. Colors can still be used in messages using

PCBoard's @X color codes because PCBoard can interpret the @X codes and send ANSI codes if they are capable of receiving them.

Y Users may enter E characters in their messages. This allows users to enter ANSI screens inside of a message. Remember that not all of your callers are capable of ANSI so the ESC codes may appear to be garbage if a user is not capable of ANSI.

Allow Carbon-Copy Messages

When a group of people are targeted for a particular message, one of the most practical methods for getting the message across is to carbon copy the message to several users. This can be done by typing S C while at the message editor command prompt. Instead of simply saving the message, the user is prompted for additional names the message should be carbon copied to. Each of the users specified in the list are sent a copy of the message entered. Valid options are:

N The ability to save carbon copies of a message is not available to any user.

Y Users may save carbon copies of messages to other users on the system. The maximum number of carbon copies is adjustable for each conference from the *conference options* screen.

Validate TO: Name in Messages

To insure mail gets properly addressed to users on the system, you can enable this option to verify names entered in the TO: field of messages. When a name is validated, PCBoard checks to see if the user name entered exists in the user file. If no validation were done, a user may enter a message to a user who does not exist and wonder why a response was never received. The valid options are:

N No validation of the name that messages are addressed to will be performed. This means that it is up to the user to properly enter the name of the user.

Y PCBoard makes sure that the name to whom the message is being addressed, exists on the system. If the name does not exist, the user is warned that the user name could not be found and given three options. The user can choose to re-enter the name, continue with a name which does not exist, or perform a Soundex search to see if a similar sounding name can be found.

NOTE: Regardless of how you answer this question, no name validation will be done in a conference which has been configured as an *echo* conference.

Force COMMENTS-to-the-Sysop into Main

When you have several conferences on your system, you might find it very desirable to consolidate all of the messages that are entered using the C user command into the Main Board. This makes it easy to read all of your comments without having to join all of the conferences on your system to see if you have mail waiting. The valid options are:

N Leave the comment to the SysOp in the conference that the user was in when the message was written. The advantage to selecting this option is that the message remains in the conference where it was left leaving no doubt as to where the user entered it. The disadvantage is that you may find comments in any conference.

Y Any comments to the SysOp (using the C user command) are moved transparently to the Main Board conference. The advantage to selecting this option is that all comments are in one single location. An additional benefit comes into play if you have netmail conferences and do not want the comments to the SysOp to get transferred to the other systems in the network.

When comments are forced into the Main Board conference, the subject of the message is modified to show the conference name in parentheses so the origin of the message is known.

Double-Byte Characters (Foreign Systems)

PCBoard supports double byte (DB) characters by allowing changing line delimiters in the message base. If you enable this feature, you are able to use DB characters in your messages, however, it is important to realize that the format of messages stored in this format are not compatible with systems or third party software that do not have DB characters enabled. **Do not enable DBCS unless you need it**. The valid options are:

N When you select this menu option, PCBoard stores message in the standard message base format.

Y Using this option causes PCBoard to use a different line delimiter in the message base. This may very well render any third party software for the message bases useless (unless they also recognize DB characters). Because DB characters are comprised of high-ASCII, make sure you **disable** the high-ASCII filter in *PCBSetup | Configuation Options | Configuration Switches*.

NOTE: If you change this setting, you must delete all of your message bases because they are stored in a different format based on this setting. If you do not delete the message bases, your users may see message headers with no body.

Create MSGS File if Missing

If the message file is missing when a user joins a conference, PCBoard normally creates the file. In certain situations though, it may be desirable to let PCBSetup create any missing message files for you. In particular, if your system has a lot of nodes (e.g., more than 75), it is quite possible that some other process could be accessing the message base (such as PCBPack) and for PCBoard to not find the message base. PCBoard would create the message base which could destroy the pre-existing message base. The valid options are:

N PCBoard will not create the message base file if it does not exist when a user joins a conference. This disables all of the message functions if the message base does not exist, but it still allows the user to join the conference without the risk of interfering with other processes. The only way to create the message base is to exit and save from within PCBSetup having your entire system checked. If PCBSetup finds a missing message base file it creates it for you.

Y For most systems, this is the desired setting. This way you do not have to worry about creating the message base file. Instead, PCBoard does all of the work for you.

Default to (Q)uick on Personal Mail Scan

There are two formats that can be used for scanning for personal mail—the long and quick formats. The quick format uses one line per conference and lists the number of messages scanned and how many were addressed to you. The long format displays more information and consequently takes more than one line for each conference. This option allows you to determine if the quick format is the default for message scans. Valid options are:

N All mail scans default to the long format. If the short format is desired, the Q subcommand can be used on those commands which involve mail scans.

Y When you select this menu option, all mail scans default to quick mode. If long mode is desired, the L subcommand can be used on commands involving mail scans.

Default to Scan ALL Conferences at Login

When you login and just after PCBoard scans for new bulletins, you are asked if you want to scan the message base since the last message you have read. This option decides if only the current conference is scanned or if all selected conferences are scanned. Valid options are:

N When this option is used, only the current message base is scanned for new messages. Normally this refers to the Main Board, but remember you can define auto-rejoin conferences so users rejoin the conference they logged off in.

Y All conferences selected for scanning are searched for new mail. Conferences are selected for scanning best by using the S E L E C T user command.

Prompt to Read Mail when Mail Waiting

When a caller has new mail waiting for them, PCBoard notifies them what conferences they have mail waiting in. This option controls whether or not the user is shown this prompt:

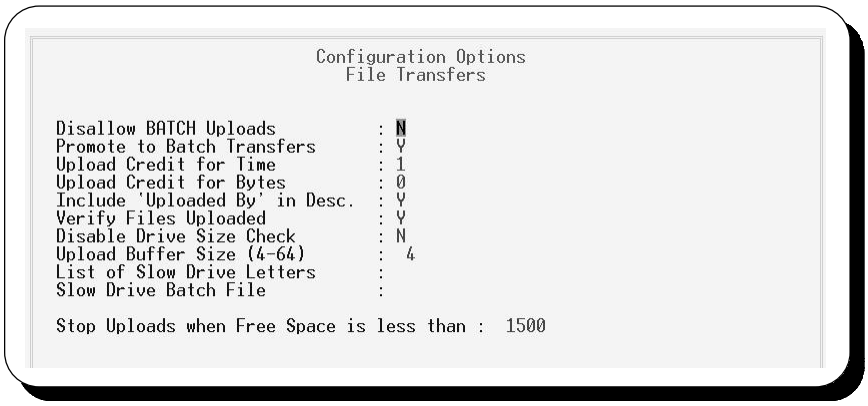
```
Read your personal mail now: (Y)es, (N)o, (A)ll new mail?
```

N Display the pop-up message only. The user will not be asked if they wish to read the new mail.

Y As soon as the pop-up message is displayed, the user is prompted to read their personal mail. If the user's security level is defined to force the reading of new mail, no prompt is displayed. Instead, the user is taken directly to the waiting mail.

NOTE: Not all messages that are left on the system will set the mail waiting flags. For example, some third party software does not update the flags nor will any generic messages you enter in PCBoard (e.g., *@USER@*, *@###@*)

File Transfers



Disallow BATCH Uploads

Normally you want to encourage uploads to your system any way possible, and disabling batch uploads can hinder rather than promote uploads. For systems that accept uploads from foreign computing environments, such as a Macintosh, where the file naming conventions do not translate straight across to the DOS environment, it can sometimes be necessary to disallow batch uploads. This avoids the problem that occurs when the batch protocol tries to convert the filenames. Valid options are:

N This option makes PCBoard operate normally—users may do batch uploads.

Y Users are not be able to do batch uploads when this option is set. Because a user must enter a valid DOS filename to begin an upload, this setting forces an upload to the filename specified by the user. This can help avoid the problem when uploading a filename from a foreign system may create an invalid DOS filename.

Promote to Batch Transfers

PCBoard has two commands for uploading files (U and U B). The U command is usually recommended if one file is uploaded and the U B command works best when used to upload more than one file (a batch

upload). Some of your users may find this method complex or easy to forget and therefore, you are given the ability to automatically promote the U command to the U B command. Valid options are:

N The U command always prompts for file one at a time. Batch transfers can still occur by performing an unannounced upload with a batch protocol. However, the descriptions are not be asked for up front.

Y The U command automatically promotes to the U B command if the caller has selected a batch protocol (or no protocol at all).

Upload Credit for Time

The value you enter in this field determines how much of the time spent while uploading files is refunded to the user if their upload passes the integrity checks. The default is 1.0 which means that, by default, PCBoard stops the clock during an upload. That is, for every minute a caller spends uploading, 1 minute of credit is refunded. Effectively, the caller had the same amount of time left after the upload terminates as when the upload began.

Setting this value to something higher, such as 2.5, refunds 2.5 minutes of time for every minute spent uploading. This means that if a user uploads for 2 minutes, they receive a five minute refund. Remember, that they also spent two minutes downloading so this means that a net credit of 3 minutes is received.. Once disconnected from the system, all time credits are lost.

NOTE: No time credits are added if the user's time has been adjusted for an upcoming expedited event. This helps prevent your system from missing the expedited event.

Upload Credit for Bytes

This value defines the number of credits given to the caller for each byte uploaded. The default is 0 giving no credits at all. In other words, the user has the same amount of daily download bytes available as when they began the upload. You can reward the user for uploading by setting this value to any value above 0. A setting of 1 gives the caller a 1 daily download byte credit for every byte uploaded. The upload byte credit is a credit against the daily download byte limit. Therefore, **the credits must be used on the same day** they are given.

NOTE: If you are testing your uploads via PCBTEST.BAT, the upload must pass or no credit is given.

Include 'Uploaded By' in Desc.

When a user uploads a file, this option will control whether or not the user who uploaded the file will be added as the last line in the description. Enabling this option is useful for quickly determining who uploaded a particular file to the system.

N The name of the user who uploaded the file is not added to the file description.

Y An additional line is added to the end of the upload description. This additional line says `Uploaded by:` followed by the user name who uploaded the file.

Verify Files Uploaded

After a file is uploaded, you can have PCBoard shell out to a batch file called PCBTEST.BAT to perform tests on the uploaded file(s). The filename being tested is passed to the batch file as the first parameter. You can use any program you want in the PCBTEST.BAT file to test any criteria that you desire. Most SysOps are quite content to verify the integrity of compressed files and to check all files for viri. For more information on PCBTEST.BAT please see the *Batch Files* chapter of this manual. Valid options are:

N No testing is performed on files that are uploaded.

Y PCBoard tests each file (individually) after the upload is complete.

Disable Drive Size Check

PCBoard normally checks the size of the hard disk and the amount of free space left before allowing an upload to take place. This information is displayed to the caller when they begin their upload (for informational purposes). You can choose whether or not to enable the drive size check. Valid options are:

Y PCBoard will not check to make sure sufficient space is available before an upload begins. Likewise, the amount of free space on your upload drive will not be printed to your callers. If your system does not properly support the checking of free space or if you simply do not want the information shown to your callers, select this option.

N PCBoard checks to ensure there is enough free space on the hard drive before beginning an upload. The amount of free space required is determined by the `Stop Uploads when Free Space is less than` field on this screen.

Upload Buffer Size (4-64)

Enter the size of the upload buffer. This setting can affect the performance of your system during uploads. You should experiment with different values between 4 and 64 for your own system to see what works best.

List of Slow Drive Letters

If you have a slow server, a CD-ROM, or even more importantly, a carousel (multi-disk) CD-ROM, it may be beneficial to copy files that are to be transferred off the slow drive down to the temporary directory which could possibly be a faster local hard drive or ram drive.

PCBoard used to allow only one node at a time to access the changer. So if node 1 locked drives F-J in order to access files on drive G:, the entire changer would be inaccessible to the rest of the system.

Now, the other nodes will be allowed to determine which specific drive letter is in use and, if it is the same drive, PCBoard will go ahead and access it. For example, if drives F-J are locked, and drive G: is in use, and another node tries to access a file on drive F:, it will be denied access and have to wait. But if the node tries to access a file on drive G: then it will be permitted to access the files and this will allow the changer to service both nodes without having to wait for the lock to be removed by the first node.

The second enhancement is that PCBoard used to stop and wait if the drive range it wanted to access was currently in use. For example, if you have drives F-J and K-O and PCBoard needed to access a file on drive F: while another node already had a disk in drive G:, then PCBoard would be forced to wait until the F-J drives were unlocked.

Now, if the caller has flagged up multiple files on multiple drives, PCBoard will skip over the locked drive and see if it can service other requests first and then go back and copy the files that were on the locked drives.

Combining the two enhancements together, PCBoard v15.3 first reduces contention for slow drives, and second it more efficiently gets to the files that it is able to access. The end result is the caller spends less time online waiting for the CD-ROM drives.

NOTE: If there is insufficient space in your temporary directory to hold all files that are requested for download, PCBoard will not copy the file. Instead, it will continue with the download of the file leaving it on the slow drive for the transfer.

Slow Drive Batch File

If you have designated some drives as *slow drives*, you can optionally have PCBoard execute a batch file once the file has been copied. PCBoard will run the batch file that is specified in this field and pass the filename as the first parameter to the batch file. Inside of the batch file, you can run a program to set the comment in a compressed file or whatever your needs dictate.

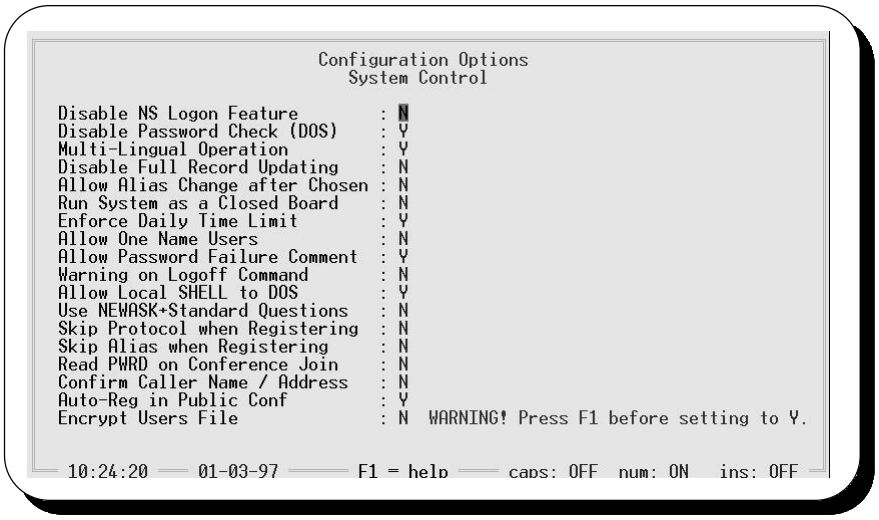
Stop Uploads when Free Space is less than

The value that you enter in this field is multiplied by 1024 to determine the number of bytes that should be free on your upload drive before allowing an upload to occur. For example, if you enter 100 here, you will need to have 100 kilobytes of free disk space or PCBoard will not allow the user to upload any files.

The fact is, you do not know how big an upload is going to be and you want to make sure you do not run out of storage space on your drive or it may present a problem for other users. The most detrimental situation would be if you store your users file and your uploads on the same drive.. If you allow that drive to fill-up, your user file could not be increased in size. If the user file cannot grow, new users will not be allowed to log into your system.

If you store system files on the same drive as your upload drive, you should set this value to something in excess of 3000 to give yourself some safe breathing room. The best alternative may be to use separate drives for your system files and files that get uploaded to your system.

System Control



Disable NS Logon Feature

If a user adds NS to his response at the *Do you want graphics* prompt at login, PCBoard will not display the news file. The will enable the user to login to the system faster than they would if he had to view the news file. You may find some users will use this option and never check the news for updates. This does not present a good situation if you use the news file to display important information. Valid options are:

N Allow users to skip the news file at login.

Y Do not allow users to skip the news file at login.

Disable Password Check (DOS)

If you have your modem configured to automatically answer the phone (instead of PCBoard), you run the risk of a security breach when returning back from a non-shelled door application. What could happen is that the user could drop carrier after he exits a door but before PCBoard reloads. If it takes a while for PCBoard to reload, a user could conceivably establish carrier before PCBoard reloads. Of course, if there is carrier when PCBoard resumes, it must assume the user is still on-line. In a situation like this it might be desirable to verify the password of the user when returning from a door. Valid options are:

N When returning from any door application, PCBoard will not ask for any passwords. This is the desired setting for most systems since they will be configured to let PCBoard answer the phone. This eliminates the possibility of having someone connect while PCBoard is reloading.

Y The option gives you the ability to verify the password of the user that PCBoard thinks is on-line upon returning from a non-shelled door application. The disadvantage to this is that your callers may become easily annoyed especially if they open several doors. You should only enable this if you **must** force your modem to answer the phone instead of PCBoard which is not recommended.

Multi-Lingual Operation

In *PCBSetup | File Locations | Configuration Files* the filename for the multi-lingual data file is specified. PCBoard uses this file to determine which operational languages can be selected at login. Valid options are:

N Multi-lingual operation is disabled. Even if you have defined the languages in your multi-lingual data file, the user is not prompted to select a language.

Y Select this option if you have defined your languages in the multi-lingual data file and if you want to prompt your users to select a language at login.

Disable Full Record Updating

You may want to protect certain user information that a user is normally allowed to edit with the W user command. This option determines if the user can edit their city, phone numbers, comment #1 field of their user record. The valid options are:

N All fields that can be edited using the W user command can be modified.

Y The editable fields are restricted to: password, message customization, conference selection, and QWK packet related fields. The rest of the fields such as address and phone information cannot be changed.

NOTE: The description of the W user command in the *PCBoard Commands* chapter gives a full list of which prompts are available when full record is enabled and when it is disabled.

Allow Alias Change after Chosen

After a caller has selected an alias it may not be desirable to allow the caller to change the alias without SysOp intervention. Preventing the caller from changing his alias avoids problems where one caller tries to leave messages (or other things) using many names to create confusion.

N Once the alias is entered the first time (using the W user command), the user may not change their alias. Instead, they must request that the SysOp change their name.

Y The user may change their alias at any time by using the W command.

NOTE: For aliases to be active you must install the Alias PSA from within System Manager. See the System Manager chapter in this manual for further information.

Run System as a Closed Board

Normally PCBoard will allow new callers to call in and log into the system creating a new user record in your users file as they log into the system. However, you may wish to restrict new users from logging into your system. Valid options are:

N New users may login to your system without being restricted.

Y New users will not be allowed to login to your system unless a NEWASK questionnaire exists. If the NEWASK questionnaire exists, the user will be allowed to login, and answer the questions.

However, no user record will be created for this user. The intention here is that you can use the NEWASK questionnaire to screen your callers and then manually enter a user account for them.

Enforce Daily Time Limit

Depending on the nature of your system, you may want to restrict your users to an absolute daily time limit, or simply a session limit. With a session limit, your users can call back as many times as desired during the day but they are only given a set amount of time for each call.

N With either this option set or if the *Enforce Time Limit* field in the PWRD file is set to *N* for the security level of the user, the time limit defined in the PWRD file will be considered a session time limit.

Y When this option and the *Enforce Time Limit* field in the PWRD file is set to *Y*, the time limits defined are daily time limits.

Allow One Name Users

Normally PCBoard requires two or more names be used when logging into the system. There are some people who have only one name (believe it or not) and some SysOps like to run alias systems where real names are not used and these sometimes are only a single name. An additional possibility for a one name user would be when you assign all of your users a number or unique ID for their name. Valid options are:

N Users will be forced to enter at least two names to login (e.g., first name and last name). If they attempt to login with one name, PCBoard will inform them they must enter a first and last name to login.

Y Users may enter one name to login to the system. If the majority of your users will have one name, you may want to modify the *Enter your first name* prompt in PCBTEXT to say something like *Enter your user name* instead.

Allow Password Failure Comment

When logging into the system, the user is given four attempts to enter the correct password. This field controls what happens if the user does not enter the proper password after four attempts. Valid options are:

N The user will be informed that the password is incorrect and that they are being logged off for excessive password failures.

Y The user will be asked if they wish to leave a comment to the SysOp. This option would be useful because the caller could give you a voice number or some other type of identification so that they may login to the system again. Otherwise, they would have to create a new user account to get your attention.

Warning on Logoff Command

If you have users that accidentally log off of your system quite often, you may want to use this option to ask the user if they really wish to log off of your system. Valid options are:

N The connection will be terminated without confirmation.

Y PCBoard asks the user to confirm that they want to log off. This question is skipped even when enabled if the B Y E command is used instead of the G command.

Allow Local SHELL to DOS

You may want to disable the ability for users who are logged in locally to shell to DOS using the 5 key. Valid options are:

N Do not allow local shells to DOS. That means that whenever a user is logged in locally, they cannot press 5 to shell to DOS. This would be useful if you have a lot of users who log in locally and you want to refuse their access to DOS.

Y While logged in locally, 5 shells to DOS allowing users to enter DOS commands.

Use NEWASK+Standard Questions

When a new user calls in PCBoard will normally ask **either** the built-in new user questions, the ones required to set up a user record in the users file, **or** it will ask the questions in the NEWASK file and not register the user (if you are running your system as a *closed board*). Valid options are:

N New users are asked only the standard questions.

Y The built-in questions (phone numbers, protocol, etc.) are asked in addition to the NEWASK questionnaire. This gives you the ability to gather more information.

Skip Protocol when Registering

New users are normally asked to select a default protocol when connecting to the system for the first time. Your application for the bulletin board may not require file transfers or you may want to simplify the logon process. In situations like this, you may find it desirable to skip asking for a default protocol. Valid options are:

N New users will be asked to choose a default protocol.

Y The default protocol question will not be asked for new users.

Skip Alias when Registering

While you can make the logon process simpler by disabling asking for an alias at login, it is more likely you want to manually assign the alias for the caller. Available options are:

N If enabled for the security levels assigned to new users, ask for an alias name to use.

Y Do not ask new users for an alias name to use.

Read PWRD on Conference Join

Normally PCBoard does not re-read the PWRD file after the caller joins a conference. If, however, you have a security level increase (or decrease) in a particular conference you may want to reread the PWRD file to determine new limits for the user. Valid options are:

N When the user joins a conference, PCBoard uses the values stored in memory when it initially read the PWRD file.

Y Each time a user joins a conference, PCBoard will re-read the PWRD file to update the user's time limit, ratio, etc.

Confirm Caller Name / Address

If you have a large number of users, it is quite possible that you may have people that attempt to login using common names. For example, you may already have a BOB SMITH on the system (from Tulsa, Oklahoma). A few months later, a new user attempts to login as BOB SMITH and is greeted for a password prompt. Obviously, there is a name conflict, and the new user will have to pick a new name. This field allows you to confirm the city name of the user before asking for the password. Valid options are

N Do not confirm the city name after the user name is entered. This setting is recommended if you do not have a large user base (5000+ users)

Y This setting is recommended if you have a large user base. After the user name is entered, PCBoard confirms the city/location information.

Auto-Reg in Public Conf

This option controls whether or not *new users* will be *automatically* registered in **public** conferences. When a new user calls, PCBoard automatically registers the caller in *public* conferences where the security level required to join is set to 0. It does this by scanning all existing conferences and setting the R, X, and S conference flags in the user's record. This process can take a long time if you have a large number of conferences. Valid options are:

N Do not automatically register users in public conferences. Users will not have any conference flags set in the public conferences aforementioned.

Y Users will have the R, X, and S conference flags set in public conferences which require a security level of 0 to join.

Encrypt Users File

For some installations of PCBoard, the ability to encrypt key information in the user file is critical. For example, when PCBoard is used for local access across a network it would not be unlikely for one of your users to copy your USERS file from the network. However, if your file is encrypted, they will not be able to easily obtain the critical information of the user file. The following field in each user file will be encrypted:

- password
- city
- phone numbers (data and voice)
- the two comment fields

If you plan on encrypting your user file, you need to run ENCRYPT.EXE on your user file. This is the utility that will actually encrypt the user file. This field, is used only to tell PCBoard if your user file has been encrypted. Valid options for this field are:

N Your user file has not been encrypted. This forces PCBoard to access the user file as if it is **not** encrypted. This setting is used by the majority of PCBoard systems.

Y If you have already run ENCRYPT.EXE on your user file, this forces PCBoard to work in encryption mode. Your user file is be encrypted on disk, but PCBoard can still read the information from disk properly. It is critical that this setting be the same on all nodes. Otherwise, PCBoard encrypted data could be mistaken as unmodified data (or vice versa) and end up corrupting information in the user file.

Configuration Switches

```
                          Configuration Options
                                Switches

Disable 3-minute Screen Clear      : N
Disable Registration Edits         : N
Disable High-ASCII Filter          : N
Default to Graphics At Login       : Y
Use Non-Graphics Mode Only         : N
Exclude Local Logins from Stats    : N
Exit to DOS After Each Call        : N
Eliminate Screen Snow in PCB       : N
Display NEWS Only if Changed       : Y
Display User Info at Login         : N
Force INTRO Display on Join        : N
Pre-load PCBTEXT File              : N
Pre-load CNAMES File               : N
Scan for New Bulletins             : Y
Swap Out During Shell              : Y
Swap Out During $$LOGON/LOGOFF.BAT : N
Create USERS.SYS for $$LOGON.BAT   : N
Capture GROUP CHAT Session to Disk : Y
Allow Handles in GROUP CHAT        : N

10:26:28 ── 01-03-97 ──── F1 = help ── caps: OFF  num: ON   ins: OFF
```

Disable 3-minute Screen Clear

At the call waiting screen, PCBoard automatically clears the screen after three minutes of inactivity. In essence, PCBoard is enabling a screen-saving feature. Valid options are:

N PCBoard will enable the screen-saving feature after three minutes of inactivity. This is especially useful if you leave your monitor(s) on for extended lengths of time.

Y Do not clear the screen if the system has been inactive for more than three minutes.

Disable Registration Edits

Normally, PCBoard attempts to control what the user can enter at certain prompts when a new user is logging on to the system. The prompts that are effected by the setting of this switch are:

- first and last name prompts (high ASCII characters are normally disabled)
- new user questions (phone numbers, city/location, etc.)

For example, when PCBoard asks for the phone number of the user, it is expecting that only numbers and certain punctuation characters be entered in this field. If you use MKPCBTXT to ask a question other than the user's phone number, you most likely do not want to restrict entry of that field to numbers. Valid options are:

N PCBoard operates in normal mode. This means certain fields have restricted input.

Y Any data can be entered in the affected fields. In essence, these fields become free-form edit fields where no checking is performed.

Disable High-ASCII Filter

With non-error correcting modems line noise could come in the form of any characters including high ASCII characters. Since most users do not enter these characters at the keyboard, this switch is used to control if high ASCII characters can be entered at various prompts and in the message editor. Of course if you want to allow your users to enter high-ASCII characters or if you are using a foreign language which makes use of the high-ASCII then you may want to disable the filter. Valid options are:

N PCBoard continue to filter high ASCII characters. If you are doing this to prevent line noise from being input, you may want to reconsider because error-correcting modems prevent line noise from being mistaken for valid input.

Y The high ASCII filter is disabled allowing users to enter these characters at most prompts and also inside of the message editor. This is the ideal setting if you use languages that make use of these characters or if users upload a graphics screens.

Default to Graphics At Login

Throughout the operation of PCBoard, the default choice is usually the safest choice. In certain circumstances, however, you may not want this. For example, if the majority of your users have ANSI capabilities but regularly press R at the *Do you want graphics* prompt then they will default to no graphics. You can make it so that the default selection at that prompt is to select ANSI graphics based on the answer you enter in this field. Valid options are:

N This will provide the safest choice. If a user presses R when asked if they wish to have graphics, PCBoard will default to non-graphics mode. This way a user does not see meaningless ANSI escape sequences if they are not capable of ANSI.

Y If the user presses R when asked if they want graphics, PCBoard will default to ANSI graphics mode. If the user is not capable of ANSI graphics, their screen will appear to filled with garbage characters. You may only want to use this if a majority of your callers are capable of ANSI.

NOTE: Setting this option to *Y* does not automatically cause the change to be reflected in the *Do you want graphics* prompt. You must manually change record #149 in your PCBTEXT file using the MKPCBTXT utility to show the new default selection.

Use Non-Graphics Mode Only

If you do not want to have ANSI graphics mode available to your callers, you may want to enable this option. When this option is enabled, PCBoard will not even ask the user if they want graphics. Instead, it will assume that the user does not want graphics. PCBoard will still send the ANSI detection sequence to see if the user is capable of ANSI so that screen displays can be drawn faster, etc. Valid options for this field are:

N Operate in a normal fashion by letting the user determine if they want graphics or not. This means that the question about wanting graphics will be asked at login.

Y The user is not asked if they want graphics. Instead, PCBoard defaults to no graphics.

With this option enabled, users cannot change their graphics mode with the M user command because non-graphics mode is being forced.

Exclude Local Logins from Stats

On the call-waiting screen, PCBoard keeps track of how many calls, messages that have been entered, and files that have been transferred since the last time you reset the stats. This option will control whether or not the actions that take place on local logins (SysOp or user logging in from the call-waiting screen) will affect the stats on the call-waiting screen. Valid options are:

N All calls, whether remote or local will affect the call-waiting stats.

Y Do not increment the statistics on the call waiting screen when yourself or another user logs into the system locally.

Exit to DOS After Each Call

Normally PCBoard recycles after each call by closing all files and restarting itself. However, you may need to perform some task between the time PCBoard disconnects the caller and returns to the call waiting screen.

An additional possibility is that you may need to load another application which answers the phone instead of PCBoard. If either of these situations fit into your configuration, you will need to exit to DOS after each call. Valid options for this field are:

N Recycle using the normal sequence (return directly to the call-waiting screen).

Y Exit to DOS after each call. The structure of the BOARD.BAT file will make sure PCBoard reloads.

Eliminate Screen Snow in PCB

When PCBoard updates the screen, it does so by writing directly to the video buffer which can, on some CGA-based systems, cause snow to appear on the screen while it's being updated. Your callers will not see this but it could be distracting to you.

N Operate normally in respect to writing data directly to the screen buffer. If you have a CGA adapter, you may need to select Y instead.

Y Disables the screen snow that is possible with certain CGA adapters. Selecting this option will slow down screen updates slightly.

Display NEWS Only if Changed

This field has one purpose—to control when the news file will be displayed to the caller. Valid options for this field are:

A Display the news file every time a conference is joined. If this is what you desire, you may find that the conference INTRO (defined in the configuration for each conference) may be better suited for this purpose.

N Display the news file for each conference once per day. Once the news file has been displayed that day, it will not be shown again.

Y Display the news file only if the data of the news file is the same as or more recent than the caller's last logon date.

Display User Info at Login

This field controls whether or not you wish to display some user statistics at login. Information such as the last call date, the number of calls made to the system, expert mode status, and similar information is displayed. Valid options are:

N Do not display user information at login. Nearly all the information PCBoard displays can be accessed using @ macros. Therefore, you can incorporate the user statistics into one of your display screens if you wish.

Y The user statistics will be displayed just before the conference command prompt when a user is logging in. In addition, when a user joins a conference, they will be shown the last message they have read, the high message number, and the number of active messages in the conference. This will only be displayed once per conference.

Force INTRO Display on Join

In conferences where you have defined an INTRO file, it is normally displayed to the caller when a conference is joined. If the user types J;Q to join the conference, they are doing a quick join which bypasses all conference intro screens and prompts. You may force conference INTRO files to be displayed even when a user does a quick join. Available options are:

N Do not force the INTRO file to be displayed on conference join. Users may do a quick join with the J;Q command.

Y Always force the INTRO file to be displayed no matter how the conference is joined.

Pre-load PCBTEXT File

All of the prompts and other messages that PCBoard displays come out of the PCBTEXT file. You can speed up some of PCBoard's displays by having PCBoard load this file into memory. This is called pre-loading. Valid options are:

N When needed, read the information required from the PCBTEXT file on disk. This may slow down performance, but it saves the memory that would otherwise be taken by pre-loading the file.

Y The PCBTEXT file is loaded into memory. This reduces the amount of time it takes to retrieve text from the PCBTEXT file. Additionally, if you store the PCBTEXT file on a network server, this option reduces network traffic on your system. The disadvantage is that additional memory is used by pre-loading PCBTEXT.

Pre-load CNAMES File

Whenever a caller joins a conference or scans for mail in different conferences PCBoard must get the conference information from the CNAMES.@@@ and CNAMES.ADD files. This can put a lot of wear on your hard disk and it can be relatively slow depending on how fast your hard drive or network connection is. You can choose to pre-load the CNAMES information into memory to speed-up access to that information. However, you do so at the expense of memory. Valid options are:

N The CNAMES information will not be pre-loaded. Instead, the information will be obtained directly by accessing the disk as needed.

Y The CNAMES information will be loaded into memory. This allows PCBoard to access the information quicker and also increase the memory requirements of PCBoard. Nearly 1 kilobyte of memory is used for each conference in your system.

Scan for New Bulletins

This question determines if PCBoard should scan for new bulletins during every login. Normally, the scan for new bulletins occurs around the time the NEWS file is displayed. You may not want to scan for new bulletins if you have a large number of bulletins on-line.

N Do not scan for new bulletins. This setting would reduce the amount of time it takes to login if you have a large number of bulletins on-line.

Y Scan for new bulletins. PCBoard is able to scan hundreds of bulletins in a very brief amount of time. If you have a lot of bulletins on-line, you may not want to scan for new bulletins to reduce the login time for your users.

Swap Out During Shell

DOS

Normally the PCBoard executable, and all of the data it is currently working on, remains in memory while it is operating. This information remains in memory even when shelling to DOS thereby reducing the amount of free memory by the amount that PCBoard, and its data, occupy.

This option controls whether or not PCBoard swaps out of memory during various shell to DOS operations (executing PCBTEST.BAT, PCBVIEW.BAT, etc.). Valid options for this field are:

N When shelling out, do not swap any data out of memory. You will have less memory available when shelling to DOS (usually under 300 kilobytes).

Y PCBoard will swap itself out of memory (leaving about 25K of memory behind to re-load) during a shell to DOS operation. It will swap this information out to whichever storage medium is available (EMS, XMS, and finally disk). This will generally increase the amount of memory by about 200 kilobytes or more.

Swap Out During $$LOGON/LOGOFF.BAT

DOS

Due to the need to speed up the processing of $$LOGON.BAT and $$LOGOFF.BAT, PCBoard normally does not swap itself out when running these batch files - regardless of the previous setting (Swap Out During Shell).

If you are running software that requires more memory than is available during a non-swap shell to $$LOGON or $$LOGOFF, you may want to swap memory to disk or EMS/XMS memory when these batch files are run. Valid options are:

N The swap during shell setting will be ignored and a normal DOS shell will be performed to execute the $$LOGON.BAT and $$LOGOFF.BAT files.

Y PCBoard will swap memory out leaving approximately 25 kilobytes to reload whenever the logon and logoff batch files are executed.

Create USERS.SYS for $$LOGON.BAT

In order to keep $$LOGON.BAT processing quick, PCBoard will not normally take the time required to create a USERS.SYS file since most programs that run in $$LOGON.BAT file do not require it.

N This is the default setting. No USERS.SYS file will be created when the logon batch file is executed.

Y If you have an application that needs USERS.SYS while running in your logon batch file, you should choose this setting.

Capture GROUP CHAT Session to Disk

Normally PCBoard will not capture information that is typed in by callers during group chat due to the disk intensive nature of group chat. If you would like to keep a record of what users type while in group chat, enable this option. Valid options for this field are:

N Do not capture what is said during group chat. This will save you disk space and will not burden group chat with any more disk-intensive operations.

Y PCBoard will record what is written but only after a user presses R . The capture file will contain the date, time, user name, node number, and what was typed. There is a capture file for each channel (up to 255) in group chat. The location of the chat capture files are determined by *PCBSetup | File Locations | System Files*.

Allow Handles in GROUP CHAT

In group chat, PCBoard normally allows the user to select a handle to use while in chat. For some systems the ability for the user to hide his identity may not be desirable. Because of this, PCBoard gives you the choice to allow users to use a handle while in chat. Valid options are:

N Users may not choose a handle while in group chat. Instead, their first name will be used while in group chat.

Y When entering group chat, users will be asked to enter a handle they wish to use to identify themselves while in group chat. If the user wants to change their handle while in group chat, they can type H A N D L E at the chat command prompt.

Logging Options

```
                    Configuration Options
                         Callers Log

Log Caller Number to Disk  : N
Log Connect String to Disk : Y
Log Security Level to Disk : Y
```

Log Caller Number to Disk

PCBoard stores the vital information about each call in what is termed the caller logs. These provide a call-by-call history of each node on your system. You may want to record the caller number of each user for reference purposes. Valid options are:

N PCBoard will not write the caller number to the caller logs.

Y The caller number of each caller is written to the log file. The format is:

```
Caller Number: 9,999,999
```

Log Connect String to Disk

With all of the various connection types and possibilities of today's modems, it might be useful for you to be able to see what type connect a user established for their session. For example, if a user complains about slow transfer rates, it could be that the modem did not connect at full-speed initially due to poor phone lines. By logging this information to disk, this information is available to you. In addition, Caller ID information is written to disk as well.

N The connect string that the modem gave PCBoard will not be written to the caller logs.

Y The connect string and any Caller ID information will be written to the caller logs.

NOTE: In order for Caller ID information to be written to the caller logs, you must set PCBoard to answer after at least 2 rings and have this option enabled.

Log Security Level to Disk

Sometimes it is useful to have the security level of the user at login written to the caller log. This option will control whether or not the security level at login will be written to the caller log. Valid options for this field are:

N The security level of the caller will not be written to the caller log.

Y The security level of the caller at login will be written to the caller log. Remember that the security level of a user can be reduced or increased when joining a conference.

Limits

```
                    Configuration Options
                           Limits

Keyboard Timeout (in min, 0=disable)   : 0
Max Number of Upload Description Lines : 10
Maximum Number of Lines in Scrollback  : 100
DOS Environment Size When Shelled Out  :  768

Number Days Before FORCED Password Change  :   0   (0=disable)
Number Days to Warn Prior to FORCED Change :   0
Minimum Password Length                    :   6

Allow Sysop Page Start Time : 00:00
Allow Sysop Page Stop Time  : 23:59
```

Keyboard Timeout (in min, 0=disable)

Sometimes users will have to walk away from their system or may forget they were on-line. To prevent the connection from being active until the user's time limit expires or they finally remember, PCBoard allows you to set a keyboard time-out value.

If no activity is detected from the caller in the number of minutes that you specify in this field, PCBoard will automatically disconnect the caller for inactivity. This will free up the node for other callers to get in and may also save money for those callers that are calling in long distance.

In this field, enter the number of minutes of inactivity a user can have before they will be logged off of the system. As a general rule, a value between 3 and 5 is best for most callers. If you enter a value of 0, the keyboard time-out will be inactive which will enable the caller to stay on-line until their daily/session time limit expires.

No warning is given to the user about keyboard inactivity until the final minute before they are disconnected. During this final minute, PCBoard will send a beep every 10 seconds to alert the caller. After this minute expires, PCBoard will disconnect the caller.

Max Number of Upload Description Lines

This field controls how many lines the user is given to enter descriptions for their uploads. You may enter any value between 1 and 60. Each description line may contain 45 characters of text to describe the uploaded file. In general a limit of 8 to 10 is sufficient for most systems.

Maximum Number of Lines in Scrollback

While logged on locally, PCBoard maintains a scrollback buffer which you can use to review information that has already scrolled off the screen. The scrollback buffer can be viewed by pressing the o key.

The maximum lines that you can specify is about 400 which will use up approximately 64 kilobytes of memory. Setting a lower number will save some memory and a setting of 0 will totally disable the scrollback buffer.

NOTE: A minimum of 30 lines is required unless you disable the scroll back buffer completely. In other words, if you set your scrollback buffer to any value between one and 30 lines, the value of 30 will be forced regardless of your setting.

DOS Environment Size When Shelled Out

When PCBoard shells out to DOS via COMMAND.COM it is possible to request (of COMMAND.COM) a larger environment size. The value you set here will be passed to COMMAND.COM as a command line parameter such as /E:768 (where 768 would be the value that you have chosen).

Increasing the environment size may be required if you have a large number of environment variables. In general, a value of 1024 or higher is not recommended.

Number Days Before FORCED Password Change

When you have installed the Password Changing PSA, it gives you the ability to force the caller to change their password after a certain amount of days. By forcing your users to regularly change their password, you can be help increase the overall security of your system, because a user's password may not be as easy to hack.

This particular field allows you to determine after how many days the user will be forced to change their password. A setting of 0 will disable the automatic renewal of forced password changes and, instead, the only way to force a password change is to manually edit the user record (via System Manager) and change the expiration date on the password.

A setting such as 90 will cause the caller's password to expire every 90 days. This will cause PCBoard to automatically require a new password, for continued access, every 90 days.

NOTE: For this field to have any effect, the Password Changing PSA must be installed properly.

Number Days to Warn Prior to FORCED Change

If the user's password is set to expire, either from manually setting the expiration date, or from the automatic setting caused by the *Number of Days Before FORCED Password Change*, PCBoard gives the caller a warning of the upcoming expiration during the login process. In this field, specify the number of days prior to expiration that this warning is displayed to the caller.

NOTE: For this field to have any effect, the Password Changing PSA must be installed properly.

Minimum Password Length

When the Password Changing PSA is installed, PCBoard automatically forces a minimum length for a password. The minimum password length is determined by the number entered in this field. If you enter a value of 0, there is no password length restriction enforced.

NOTE: For this field to have any effect, the Password Changing PSA must be installed properly.

Allow Sysop Page Start Time

When the page bell is toggled **on** from the call-waiting screen or by pressing 4 while logged in, this field defines the time at which you begin to allow callers to page the SysOp. If the user attempts to page the SysOp during off-hours, they are informed the SysOp is not available for chat and asked if they want to leave a comment instead. For example, you may want to be available for chat between the hours of 8:00 am to 5:00 pm. If so, enter `08:00` in this field.

Allow Sysop Page Stop Time

When the page bell is toggled **on** from the call-waiting screen or by pressing 4 while logged in, this field defines the end time at which callers can no longer page the SysOp. If the user attempts to page the SysOp during off-hours, they are informed that the SysOp is not available for chat and asked if they want to leave a comment instead. For example, you may want to be available for chat between the hours of 8:00 am to 5:00 pm. If so, enter `17:00` in this field.

Colors

```
                    Configuration Options
                           Colors

Default Color (@X code format)     : 07
Color for Message Header DATE Line : 1F
Color for Message Header TO   Line : 3F
Color for Message Header FROM Line : 3F
Color for Message Header SUBJ Line : 3F
Color for Message Header READ Line : 3E
Color for Message Header CONF Line : 3E
```

The fields on this screen let you control the color used by PCBoard. All color specifications are in @X code format. For more information on @X codes and the various colors you can select, please see the *Display Files* section in the *Customizing Your BBS* chapter of this manual.

Default Color (@X code format)

In certain areas of your system, PCBoard uses a default color for displaying text. The color of the text used in the body of a message is just one example. In this field, enter the @X color you want to use as your default color. For example, to make your default light gray on a black background, enter 07 in this field.

Color for Message Header DATE Line

The color code entered in this field controls the color used for the first line of the message header. This is the line that displays the date, message number, etc. For example, to make the color white text on a cyan background, enter 3F in this field.

Color for Message Header TO Line

The color code entered in this field controls the color used for the second line of the message header. This is the line that displays the user who the message is addressed to. For example, to make the color white text on a blue background, enter 1F in this field.

Color for Message Header FROM Line

The color code entered in this field determines the color for the third line of the message header. This is the line that displays who the message is from. For example, to make the color white text on a blue background, enter 1F in this field.

Color for Message Header SUBJ Line

The color code entered in this field determines the color used for the forth line of the message header. This line in the header displays the subject of the message. For example, to make the color white text on a blue background, enter 1F in this field.

Color for Message Header READ Line

The color code entered in this field controls the color displayed on the fifth line of the message header. This line is only displayed when the long style message header is displayed. On this line PCBoard displays whether or not the message has been read by the recipient and what type of security is in use for the message. For example, to make the color cyan text on a blue background, enter 13 in this field.

Color for Message Header CONF Line

The color code entered in this field controls the color displayed on the sixth line of the message header. This line is only displayed when the long style message header is used. On this line PCBoard displays the conference number and the type of read that is currently in use. For example, to make the color cyan on a blue background, enter 13 in this field.

Function Keys

Pre-defined function keys allow you to send text by holding down S and pressing the function key listed to the left of each field on this screen. For example, if you regularly add a signature to the bottom of your messages, you may want to define a function key to do it for you. In other words, when you execute the function key, your signature will be typed in for you instead of you having to type it in.

Sending Text

You are given 60 characters to enter text you want sent when you execute a function key. The text that you enter in this field will be sent directly to PCBoard with one exception. If you enter *^M* anywhere in a function key field, it is treated as if you pressed R .

Sending The Contents Of A File

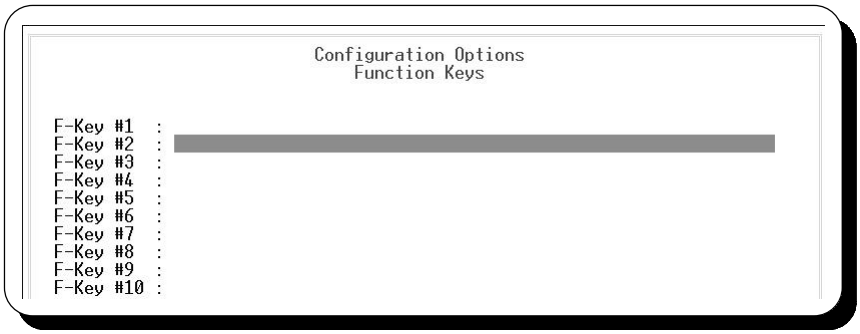
If you need more than 60 characters to be sent by a function key, you can tell PCBoard to send the contents of an entire file. To do this, begin the line with a % followed by the filename to send to PCBoard.

Executing A PPE File

Another action you can define is to run a PPE file when a particular function key is executed. To run a PPE from a function key, begin the line with an *!* followed by the filename of the PPE (including the .PPE extension) you want to execute.

Examples

Let's assume that you have entered the following information for your function keys:



The following describes each action that would occur for the function keys defined in the previous screen capture are executed:

S - 1 This particular example might be used as a signature when leaving messages on your system. Instead of repetitively typing your name you could press S - 1 to have PCBoard enter all of this text for you.

S - 2 When PCBoard detects file access errors it will write an entry to the caller logs. This entry will usually contain either the word *FAIL* or *ERROR*. This particular example would be quite useful if you wished to regularly scan your caller logs to see if your system may have a configuration error or problems accessing certain files. Instead of typing the command in every day, you could use a function key to do all of the work for you.

S - 3 This example demonstrates how to have PCBoard stuff the contents of a file into the keyboard. When you press S - 3 , PCBoard will enter the contents of *C:\PCB\GEN\NEW-WELC* just as if you had typed it yourself. Remember, when you want to have the contents of a file stuffed, you need to begin the function key definition with a % character.

S - 4 The simple fact that you may run a PPE opens up numerous possibilities. The example shown in the previous screen capture would execute *C:\PCB\PPE\TAGLINES.PPE*. Remember, to specify that a PPE file should be used for a function key definition, you need to enter an ! as the first character of the definition field. In addition, you must also specify the filename extension of .PPE on your file you wish to execute.

OS/2 Settings

```
                          Configuration Options
                              OS/2 Settings

Minimize Window Settings      PCBoard   Shell
=========================     =======   =====
$$LOGON/$$LOGOFF Processing  : N      : Y
External Protocols           : Y      : N
Door Applications            : Y      : N
Upload Verification Process  : N      : Y
File Viewer                  : Y      : N
PCBQWK & PCBCMPRS Processing : N      : Y
All Other Shells             : N      : Y

Priority Settings
=================
Normal Processing            :   0
External Protocols           :   0
PCBQWK & PCBCMPRS Processing :   0
Fido Import Processing       :   0
Fido Export Processing       :   0
All Other Shells             :   0

 13:49:50 == 07-27-95 ====== F1 = help ==== caps: OFF  num: ON   ins: OFF
```

This screen controls numerous items regarding PCBoard for OS/2 and how it behaves. All of these options can be broken down into two different categories. Rather than discuss, each item individually, just the two categories will be covered.

Minimize Window Settings

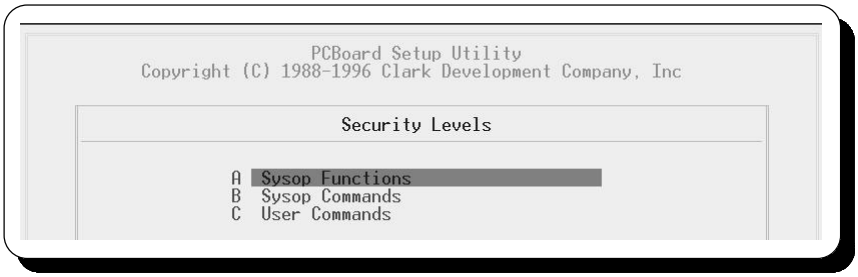
When PCBoard shells to a process, there are now two windows for that single node. The window with PCBoard in it, and the window running the shelled process. This group of options controls whether PCBoard minimizes itself when it shells to another process, or whether the process itself is minimized. For example, you may want to see what is going on while shelled out to a protocol, but you do not necessarily want to watch PCBoard compress a mail packet. Generally either the PCBoard or Shell column contains a Y unless you want neither or both windows minimized. For a set of sample settings, see the screen capture prior to this section.

Priority Settings

You have the option to control the priority level assigned to various aspects of PCBoard. Normally, OS/2's scheduler takes care of the priority handling to make sure all processes get the CPU time they need. This is what occurs when these settings remain at 0. If you want to control the settings yourself, you can enter a value from -31 to 31 to adjust the scheduling. A value of -1 or less reduces the priority, while a value of 1 or more increases the priority.

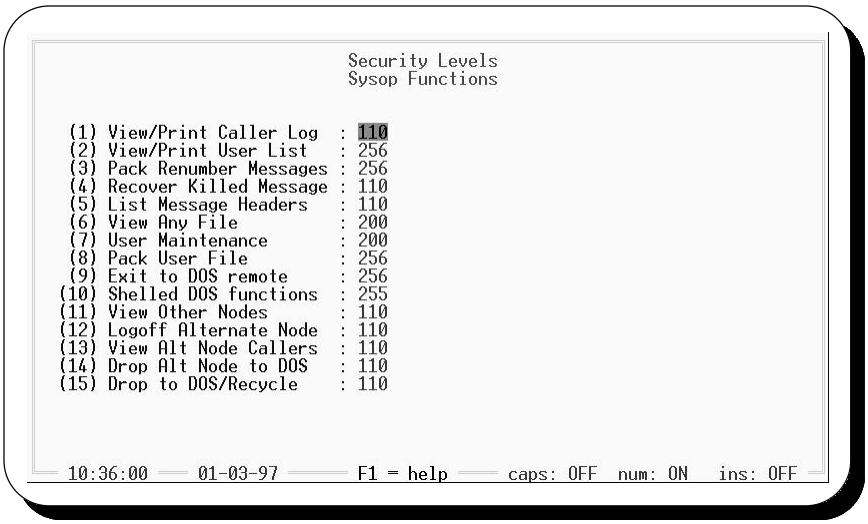
CAUTION: When in doubt - leave the settings at 0! By messing with priorities, you can really foul up the scheduler. So use this power and flexibility wisely. If you make a change, be sure to test it afterwards so that you understand the implications of the change.

Security Levels



This section discusses the Security Levels menu option of PCBSetup. From this menu option, security to execute commands and other functions is controlled.

Sysop Functions



The fields on this screen control what security level is required to execute the SysOp Commands (1-16). Each of the 16 SysOp commands are represented on this screen. The fact that you can assign different levels to different commands, gives you the ability to have several users who help with SysOp duties. You can then give users access to only those commands that they are required to perform their tasks. The rest of the commands can have higher security levels assigned to them to prevent unauthorized access.

Sysop Commands

```
                              Security Levels
                              Sysop Commands

 Sysop Level (for Sysop Menu and F1-Temp-Sysop Upgrade) : 100
 Level Needed to Read All Comments                      : 110
 Level Needed to Read All Mail Except Comments          : 110
 Level Needed to Copy or Move Messages Between Areas    : 110
 Level Needed to Enter @-Variables in Message Base      : 110
 Level Needed to Edit Any Message in the Message Base   : 110
 Level Needed to NOT Update Msg Read Status (R O cmd)   : 110
 Level Needed to Use the BROADCAST Command              : 110
 Level Needed to View the Private Upload Directory      : 110
 Level Needed to Enter Generic Messages (@USER@)        : 110
 Level Needed to Edit Message Headers                   : 110
 Level Needed to Protect/Unprotect a Message            : 110
 Level Needed to Overwrite Files on Uploads             : 110
 Level Needed to Set the Pack-Out Date on Messages      : 110
 Level Needed to See All Return Receipt Messages        : 255

 10:36:51 ═══ 01-03-97 ═══ F1 = help ═══ caps: OFF  num: ON   ins: OFF
```

Throughout PCBoard there are certain operational characteristics that were designed for SysOp use. For example, there are subcommands available at the *End of Message Command* prompt that will enable a user to COPY or MOVE the current message to a new conference. Obviously, you do not want all users to have this capability. The security levels required to use functions/commands like the previous example are controlled on this screen.

Sysop Level (for Sysop Menu and F1-Temp-Sysop Upgrade)

The value entered in this field determines the minimum security level that constitutes a user being seen as a SysOp. For example, entering 100 in this field means any user with a security level of 100 or higher is seen as a SysOp by PCBoard. These users see the SysOp menu at the conference command prompt instead of the normal user menu. Just because a user is seen as a SysOp does not mean that they have free reign on your system. Remember that you can control the security level required to execute virtually all of the functions and commands. In addition, The security level entered in this field is given to users under the following circumstances.

- You temporarily upgrade the access of a user that is online by using the `1` keyboard command. This new security level will only be in effect for the duration of the call. When the user calls in the next time, their old security level will be used.
- There is a conference flag (C) which can be set in the user record which designates a user as a conference SysOp. If this flag is set in a conference that your user joins, their security level is upgraded to the SysOp security level. This security level change is in effect while the caller is in the conference where they are designated as a conference SysOp. Once a new conference is joined the conference SysOp access is removed.

Level Needed to Read All Comments

In this field, enter the security level required for a user to be able to read comments left to the SysOp. Comments are seen as any messages left by users using the `C` user command. Because comments are assumed to be of the highest security nature, a user who meets the security level requirements of this field may also read any message on the system.

Level Needed to Read All Mail Except Comments

The security level that you enter in this field will be used to determine if a user may read private mail that is not from or to the current user. If a user has a security level that is equal to or greater than the level that is entered in this field then they may read any private mail with the exception of comments to the SysOp. The level needed to read comments is determined by the previous field on the screen.

Level Needed to Copy or Move Messages Between Areas

Sometimes it is extremely useful to be able to move or copy a message to a new conference. However, you do not want everyone to have this capability for obvious reasons. In order for a user to have the capability of moving or copying a message to a new conference, they must have a security level equal to or greater than the value that you enter in this field.

Level Needed to Enter @-Variables in Message Base

With the exception of @HANGUP@ and @DELAY:nn@, all macros can be entered in a message and displayed when viewing the message. For this reason, you may not want all callers to have this capability. For a user to be able to enter all @ macros such as @USER@ and @MORE@, they must have a security level equal to or greater than the value entered here.

NOTE: All users, may enter @X color codes in their messages regardless of the security level entered. Also note, if a user lacks security to enter an @variable in the message base but does so anyway, PCBoard will automatically convert the @variable to its lower case equivalent thereby rendering it ineffective.

Level Needed to Edit Any Message in the Message Base

There are two settings in PCBSetup that will determine if a user will be able to edit a message. This setting controls whether or not a user can edit any message they can read regardless if it was entered by them. There is also a setting in *PCBSetup | Security Levels | User Levels* which controls the security level required for a user to edit messages they have left. Obviously, you are going to want to set the security level required to edit any message higher than the level required to edit the user's own messages as it follows the rules of common sense.

In order for a user to edit any message that they can read, they need to have a security level that is greater than or equal to the value you enter in this field. The ability to edit any message is a some-what powerful function, because you can make it look like people said something in a message that they really did not. Remember, to edit a message use the `EDIT` command at the `End of Message Command` prompt.

Level Needed to NOT Update Msg Read Status (R O cmd)

The R O user command enables you to read messages without having your last message read pointer updated. This is quite useful for skimming through the message base because you can spend more time reading the messages at a later time. All of this is possible because when using this command, your last message read pointers are not updated.

This field controls whether or not PCBoard should avoid marking the message as having been read when reading messages in read only mode. You may not want all callers to be able to have this ability and thus defeat the ability to tell if they have read their messages yet. Setting the security level here outside the reach of your callers keeps them from using this capability.

Level Needed to Use the BROADCAST Command

The broadcast command is used to send a one line message to a user on another node (or all nodes). In order for the user to be able to use the B R user command they must have a security level that is equal to or greater than the value that you enter in this field.

Level Needed to View the Private Upload Directory

The value entered in this field controls whether or not a user can view the private upload directory of the current conference while logged on. If the security level of the caller is greater than or equal to the value entered, they are allowed to view the private upload directory. When logged into the system, you can view file directories using the F user command. To view the private upload directory of the conference, enter P at the directory number prompt.

Level Needed to Enter Generic Messages (@USER@)

When addressing a message, you can address it to *@USER@*, *@###@* or *@##-##@* (where ## is a security level) to make it appear that the single message is a personal message for each individual user. All of these messages are referred to as *generic messages* because one single message can appear to be a personal message for every user on your system.

The advantage of this is that a personal message gets more attention from the user than a message addressed to *ALL*. The disadvantage to using this method is that it can be obnoxious if used too frequently. You can control what users are able to enter generic messages by entering the required security level to enter these messages in the field.

Level Needed to Edit Message Headers

The security level entered in this field will determine whether or not a user will be able to edit additional information of the message header by entering E at the *End of Message Command* prompt. The ability to edit the message header information gives you the ability to perform such operations as re-addressing the message, changing the security on the message, changing the FROM field, and more.

Level Needed to Protect/Unprotect a Message

At the *End of Message Command* prompt, you can enter U to make a message public or P to make a message private. The value you enter in this field will set the security level that is required for a user to be able to enter these commands.

Level Needed to Overwrite Files on Uploads

When a file already exists on the system, PCBoard does not allow the same file to be uploaded. A user with a security level equal to or greater than the value entered in this field may choose to:

1. Remove the existing file
2. Continue with the upload (leaving both the old and new files online)
3. Abort the upload.

Level Needed to Set the Pack-Out Date on Messages

When entering a message, you can set the message security to D if you have sufficient security. This will enable you to set a date when the message you are about to enter will be automatically removed from the message base. This would be useful if whatever message you are entering is date sensitive. For example, if you offering a special subscription rate until July 1, 1994, you may want to set the pack-out date of the message to July 2, 1994 so that people logging in after the first will not see the message.

Level Needed to See All Return Receipt Messages

Normally a Return Receipt is useful only to the person that requested the return receipt. With this in mind, PCBoard will normally not show the Return Receipt to other users, not even the SysOp. In order to see return receipts that belong to others, you must have a security level equal to or greater than the level specified in this field.

User Commands

```
                          Security Levels
                            User Levels
A) Abandon Conference   :  9          Q) Quick Message Scan   :   8
B) Bulletin Listings    :  8          R) Read Messages        :   8
C) Comment to Sysop     :  8          S) Script Questionnaire :   8
D) Download a File      :  8          T) Transfer Protocol    :   8
E) Enter a Message      :  9          U) Upload a File        :  15
F) File Directory       :  8          V) View Settings        :   8
H) Help Functions       :  8          W) Write User Info.     :  15
I) Initial Welcome      :  8          X) Expert Mode Toggle   :   9
J) Join a Conference    :  9          Y) Your Personal Mail   :   8
K) Kill a Message       :  9          Z) Zippy DIR Scan       :   8
L) Locate File Name     :  8          Group CHAT/CHAT Status  :  19
M) Mode (graphics)      :  8          OPEN a DOOR             :  15
N) New Files Scan       :  8          TEST a File             :   0
O) Operator Page        :  8          USER Search/Display     :   0
P) Page Length          :  9          WHO is On Another Node  :   0
```

Security Levels Required

The top portion of this screen is split into two columns. These two columns list most of the user commands available inside of PCBoard. Next to each command description is a field. In each field, enter the minimum security level that is required to execute the command. If the user does not have sufficient security, the user will receive a notice stating that the command is not available. In each field enter any value between 0 and 255.

The rest of the commands (that are not listed) will be controlled by one of those that are listed. For example, the FLAG command can be used if the D command is accessible to the user. This makes sense, because the FLAG command simply marks files for download. If the user is not capable of downloading files, you do not want them flagging files. On this screen you will also see four other fields you can define the security level for.

Level Required for BATCH File Transfers

In order for a user to transfer more than one file at a time, they must have a security level that meets or exceeds the value you enter in this field. When batch transfers are disabled, a user may only upload or download a single file at a time.

Level Required to EDIT Your Own Messages

In this field, enter the security level that is required for a user to be able to edit the contents of messages he has entered on the system. Messages are edited by using the `EDIT` command at the *`End of Message Command`* prompt.

Users may find that editing their messages would be useful when carrier is lost while entering their message, or if they discover a spelling/grammatical error after saving the message. If you do not want to let your users edit their own messages, set this value to a high security level.

Level Given to Users Who Agree to Register

This field will enable you to determine what security level new users who agree to register on your system will be assigned. After the NEWUSER file is displayed, PCBoard asks the new user if they would like to register on the system. If they agree to register, they will be assigned the security level you enter in this field.

Level Given to Users Who Refuse to Register

If a new user decides not to register on your system, they will be given the security level that you enter in this field. By refusing to register, PCBoard is going to allow the user to look around and will not create a user record because they chose not to register.

You can immediately log the user off of the system if they refuse to register by assigning them a security level of 0. The security level of 0 will tell PCBoard to inform the user that they are being logged off because they refused to register.

Accounting Configuration

The accounting system built into PCBoard is extremely flexible utilizing several configuration options, data files, and display files. The purpose of this section is to familiarize you with the *Accounting Configuration* menu item from the PCBSetup main menu. Additional information regarding configuring your system for a pay-to-play, pre-pay, or ratio system can be found in the *Accounting System* chapter.

Accounting Options

The options listed on this configuration screen control the characteristics of the accounting system. There is also an option used to globally turn the accounting system on or off.

Enabling Accounting System

In order for the accounting system to be enabled, this option must be set to Y. Additionally, you must check the PWRD file and make sure the appropriate security levels are configured to enable accounting. Valid responses for this question are:

N The accounting system is **disabled** for all callers.

Y All security levels configured to use the accounting features (PWRD) are able to.

Displaying In Money Form

Accounting units can be displayed by PCBoard in two different forms: 1) Actual values or 2) monetary form. Examples:

```
0.0667
$0.67
```

This example shows the same number of units but displayed in different forms. The first line shows the units displayed in *actual* form while the second line shows it in *monetary* form (for the United States). Valid responses for this question are:

N Units will display in actual unit form (e.g., `1.2268`)

Y Units will display in monetary form based on the country information in your computer (e.g., $1.23).

The form you choose to display values will **NOT** alter the calculation for units in any way. Therefore you must choose what form your users will prefer to display account status in.

Concurrent Usage Tracking

PCBoard tracks nearly every activity taking place on the system. Minutes used, doors opened, files transferred, message read and entered are all activities tracked by PCBoard. Concurrent tracking is where PCBoard will determine the account balance by looking at all activity charges in the account and deducting only the highest charge. Example:

- Starting balance: 50.00
- Charges accumulated downloading bytes: 10.00
- Charges accumulated reading messages 18.00

- Charges accumulated using Group Chat 5.00

In this example, the current balance will be 32.00 (50.00-18.00) because 18.00 is the highest charge for the user. When not using concurrent tracking, PCBoard will subtract all charges from the starting balance meaning the calculated balance will be 17.00 (50.00-33.00).

Your answer to the `Concurrent Tracking of Charges` question determines whether PCBoard accounts for charges using the concurrent or total method. Valid responses are:

N The total tracking method is used. All charges are recorded.

Y The concurrent tracking method is used meaning only the highest accumulated charge is subtracted to determine the current balance for the user.

Ignore Empty Security Level

When a user runs out of accounting credits, PCBoard normally changes their security level to the value entered in the Accounting PSA form of their user record. In some configurations this action may not be desirable. Instead, the optimal solution may be to leave the security level alone and simply deny access to the elements of the system that require accounting credits. Valid responses for this field are:

N When a user depletes their accounting credits, change their security level to the value entered in their user record.

Y Do not alter the user's security level. Simply deny access to all areas of the BBS that require accounting credits for access.

Configuring Peak Time

Certain times of the day or week may be considered peak usage for your system. To help even out the usage on your system, you may want to charge more for time used during the peak time. PCBoard allows you to configure peak times by time of the day or by days of the week. During peak times, the value contained in the following field in the ACCOUNT.CFG file is added to the amount of accounting units charged to all users:

```
Per Minute Online Peak Time
```

Time of Day

Two fields on this configuration screen control what time of day is considered the peak time for the day. These fields are:

```
Peak Usage Start Time            : 00:00
Peak Usage End Time              : 00:00
```

In the start time field enter the time of day (in 24 hour format) when the peak time begins and in the end time field enter the time which ends the peak period. For example, if you want to configure the peak time to be between 8am and 5pm, enter:

```
Peak Usage Start Time            : 08:00
Peak Usage End Time              : 17:00
```

Setting both values to 00:00 will force PCBoard to ignore peak time on a daily basis. You can still utilize peak days of the week though.

Days of Week

Certain days of the week may see peak usage on your system. For example, a bulletin board dedicated to entertainment may be busier on the weekends than during weekdays. With this type of system, the peak days are on the weekend and therefore you may want to charge more for the activities.

The field labeled `Peak Days of Week` allows you to determine which days of the week should be considered peak days. To tell PCBoard that Saturday and Sunday are peak days as discussed in the previous example, enter

```
Peak Days of Week                : YNNNNNY  (SMTWRFS)
```

Disabling Peak Time on Special Days

There are certain days of the year that you may want to *disable* the peak time. For example, you may want to reward your users and make the first of every year exempt from being charged peak time. PCBoard keeps track of these dates in a separate file known as the *Peak Holidays List* file or HOLIDAYS.CFG for short.

Press `2` to edit the holiday list file specified by the `Name/Loc of Peak Holidays List File` . When editing the file, you'll see the following screen:

```
      Disable Peak
         Dates
      ------------
   1)
```

You can enter normal dates such as 10/31/94 to make Halloween of 1994 exempt from peak time charges. You can make an entry more generic by wildcarding the date. Entering a date of 10/31/XX means every October 31st no matter what year, the entire day will be exempt from peak time charges. Any portion of the date can be wildcarded as shown in these examples:

03-XX-95	Every day in March of 1995 will be exempt from peak times
XX-01-94	The first day of every month in 1994 will be exempt from peak times.
XX-01-XX	The first day of every month and every year will be exempt from peak times.

Account Configuration File (ACCOUNT.CFG)

The location and filename of the account configuration file is listed in the field titled `Name/Loc of Account Configuration File` . In this file the core information about the credit system is controlled. Information like starting balances for new users, charges for messages, time, and files transferred are all recorded in this file.

Starting Balance

When new users log into the system, begin with the account balance entered in this field. To start with a 10 credit balance, simply enter 10 into this field.

Balance Level to Warn Callers

As users approach an account balance of 0, it is advantageous to warn the caller that their account is about to run dry. In this way, you can display the options to caller to renew the account or increase the balance. In this field, enter the location and filename of the text file to display to callers whose accounts are about to reach 0.

Defining Charges

The next section of the account configuration screen lists the areas you can charge for and how much you want to charge for each. In all of these options you can specify a charge between .000001 -

999,999,999,999. Specifying a negative value means the user earns accounting units for the activity instead of being charged for it. The following describes each chargeable item

Per Logon: This charge occurs every time the user logs in and only incurs once per call.

Per Minute Online: The amount users are charged for every minute used on the system.

Per Minute Online Peak Time: The value specified in this field is **added** to the amount charged for each minute but only if the time falls into a defined peak period.

Per Minute in Group Chat (Add): Specifies the amount to add to every minute spent in chat. If the normal rate per minute is .005 and you enter .003 in this field, users are charged .008 per minute in group chat.

Per Message Read: The value to charge for every message read on the system. If users read mail via a third-party program such as a mail door the only way they will be charged is if the door updates PCBoard's accounting information.

Per Message Captured: The amount to charge for each message captured (C, D, and Z subcommands of the R user command) or put into a QWK packet (PCBoard's internal QWK command). Setting this value to something slightly lower than the each message read value may encourage users to get on and off the system faster.

Per Message Written: In this field enter the value to charge for each message written on the system which is neither private or echoed.

Per Message Written (Echoed): All echoed messages (whether private or public) are charged the amount listed in this field.

Per Message Written (Private): If a message is private but not echoed, users are charged the amount entered in this field.

Per File Downloaded: Users are charged the amount specified for evern file downloaded.

Per 1K-Bytes Downloaded: Each kilobyte downloaded is charged the amount entered in this field. If a value of .001 is entered, users are charged .60 for a 600 kilobyte file.

Defining Earnings or Pay-Backs

Users can increase their account balance by performing certain activities on the system. The following describes the activities which earn accounting units:

Per File Uploaded: The number of units entered in this field determines how many units a user earns for uploading a file.

Per 1K-Bytes Uploaded: The number entered in this field determines how many credits users are given per kilobyte uploaded to the system. A value of .003 in this field will yield earnings of .96 for uploading a file of 320 kilobytes.

Tracking File

When a user is charged or earns units for an activity, PCBoard records the transaction in what is referred to as the *tracking file*. The following information is written to the log file.

- Date and time of the activity
- Caller's name
- Node caller was on
- Conference in at the time the activity took place
- Activity performed

- Per unit (minute, kilobyte, etc.) cost for the activity
- Number of units spent
- Total charge for the activity.

This log can then be used for billing purposes, or it can be used to show the caller a record of his activities to breakdown the costs levied. This log can also be accessed via PPL for the purposes of analyzing the log. To better suit your needs, PCBoard can output the tracking file in two different formats—ASCII and DBF. The tracking file can be written to either format but not both. If the filename you enter in the `Name Loc of Account Tracking File` ends with .DBF, the tracking file is in dBASE format. Otherwise, the ASCII format is used.

ASCII Standard

Each transaction is recorded on a single line. Each piece of information recorded is recorded in a fixed length field to make it easier to read in data. The following chart shows the breakdown of each record in the ASCII file:

Field	Size	Justification	Field Separator
Date	8	Left	single space character
Time	5	Left	single space character
Name	25	Left	single space character
Node #	5	Right	single space character
Conf. #	5	Right	single space character
Activity	15	Left	single space character
SubActivity	25	Left	single space character
Unit Cost	14	Right (4 decimal places)	single space character
Quantity	9	Right	single space character
Value	14	Right (4 decimal places)	CR/LF (End of record)

It is important to realize that the size of the field does **NOT** include the field separator. Therefore, the entire size of the record is 136 bytes. Without the field separators, you may calculate a field record of 125 characters which is incorrect.

dBASE Format

When recording the activities in a DBF file, the usefulness of the tracking file has increased greatly because DBF is a recognized standard in gathering information. Instead of a proprietary ASCII tracking file, you now have an industry standard tracking file which can be used with numerous dBASE compatibility utilities. The record definition for the DBF file is as follows:

Field Name	Type	Len	Dec	Description
Date	'D'	8		Date when activity occurred
Time	'C'	5		Time when activity occurred
Name	'C'	25		The name of the user performing the activity
NodeNumber	'N'	5	0	The node number activity occurred on
ConfNumber	'N'	5	0	Conference number in at the time
Activity	'C'	15		Brief description of activity being performed
SubAct	'C'	25		Extended information about activity
UnitCost	'N'	14	4	Unit cost of activity (e.g., per minute, kbyte)
Quantity	'N'	9	0	Number of units used (e.g., minutes, kbytes)
Value	'N'	14	4	Total cost (unit cost * quantity)

Activity Descriptions In The Tracking File

Looking at the formats for the tracking files, you'll notice reference is made to activity and sub-activity description. The purpose of this section is to describe the possible values of these fields. The activity field will always contain a fixed description of the activity. The sub-activity description contains clarifying details such as the filename being downloaded, who a message was addressed to, etc. The following describes each activity description and what information is stored in the sub-activity field if any:

CMD USAGE: A command was executed from CMD.LST. The actual command value entered is recorded in the sub-activity of the tracking file.

CMD USAGE MIN: A command was executed from CMD.LST and was designed to charge for the number of minutes used in the command. The sub-activity records the command executed.

DOOR USAGE: The user was charged for opening a door. The sub-actvity field tracks the name of the door.

DOOR USAGE MIN: The user was charged for every minute while in a door. The sub-activity field tracks the name of the door.

MSG READ: The caller read messages on the system. Each message read is counted for.

MSG READ CAP: Records the fact that messages were captured either to a QWK packet or with one of the capture subcommands for the R user command. Normally the sub-activity field is blank but it may contain the word CREDIT. The word credit signifies that the transfer of the captured files was aborted and therefore a refund must be issued.

MSG WRITE: Units were charged because a non-private, non-echoed message was written. The sub-activity field contains the name of who the message was addressed to.

MSG WRITE PRIV: The user wrote a private message on the system. The user to whom the message was addressed is recorded in the sub-activity field.

MSG WRITE ECHO: A message was written and set to be echoed. The sub-category field contains the name of whom the message was addressed to.

DNLD FILE: Records the amount of units charged to download the filename specified in the sub-activity field.

DNLD BYTES: This activity description shows the amount charged (in 1 kilobyte units) to download the filename specified in the sub-activity field.

UPLD FILE: Records the amount of units charged to upload the filename specified in the sub-activity field.

UPLD BYTES: This activity description shows the amount charged (in 1 kilobyte units) to upload the filename specified in the sub-activity field.

CHAT TIME: These records show the amount charged for time spent in group chat.

CONF TIME: Records the amount charged for the time spent in the conference recorded elsewhere in this record.

TIME ONLINE: Users can be charged for every minute used on the system. This record reports details regarding how much was charged for the time spent on the system. If the sub-activity record contains the word PEAK, the record is reporting how much was charged in *addition* to the normal time charges.

LOGON: Users can be charged a fixed amount for every logon to the system. Records with this type of activity description record the amount charged for the logon to the system. The sub-activity record contains the carrier speed the caller logged in at.

Display Files

Being able to track usage on the system and to charge for it is one thing, but it is also very important to present the account status to all callers. PCBoard has display files you can use to achieve this goal.

Account Information

Two display files can be used to display accounting information at logoff and logon.

```
Name/Loc of Account INFO File
Name/Loc of Account LOGOFF File
```

These two files are used for displaying at logon and logoff respectively. Utilizing the @ macros for displaying account credits left, you can produce informative displays to your callers.

Global Search and Replace

A new option to the PCBSetup main menu which lets you perform a global "Search and Replace" operation against all of the file name and path fields in the PCBoard configuration. This includes updating not only the pcboard.dat settings, but also settings inside of the CNAMES.* files, including settings inside of each of the *.LST files (doors, blts, scripts, dirs, dlpath and cmds). You can specify which areas you want to be scanned at the same time that you enter the search and replace criteria. Then press PGDN to begin the process which, by utilizing expanded memory, won't take long even if you have thousands of conferences on your system.

The biggest advantage to this new option is the ability it provides for moving your system from one drive to another. For instance, if you used to have PCBoard set up on drive C: in the \PCB directory, and it is now stored in drive D: in the \P directory, you could search for "C:\PCB" and replace it with "D:\P" and have PCBSetup search the entire configuration and change everything at once.

Balance Warning File

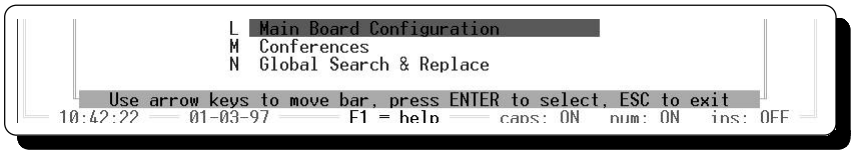
When you operate on a pre-paid accounting system, you need some way to notify your users when their account balance is about to reach zero. Earlier in this screen you saw the field controls at what balance the balance the warning file is displayed to callers. Specify the filename to display as a warning in the field titled:

```
Name/Loc of Account WARNING File
```

6

Conference Setup

The PCBSetup Main Menu contains two menu items that will help you setup conferences. The first selection allows you to modify the configuration of the Main Board (conference 0) while the second option allows you to select the conference number you want to modify (1-65,535).



Main Board Configuration

The Main Board is a special conference. This conference is the base conference of PCBoard and it is sometimes referred to as conference 0. By default, it is a public conference and the one most people will login to. Because it is seen as the starting conference for the majority of callers, the Main Board configuration is in a separate menu option for faster access.

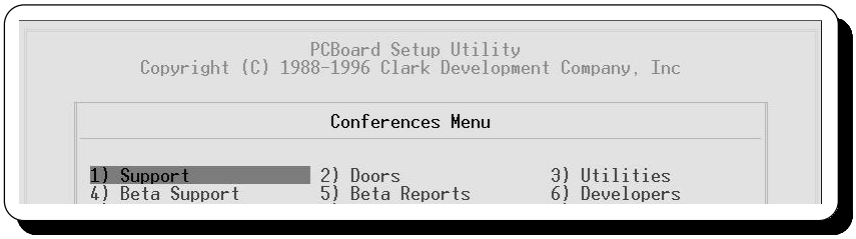
All fields and options available in the Main Board conference are exactly the same as those in other conferences. The next section in this chapter discusses conferences in detail. In particular, the first part of the section shows how to select a conference and the remainder of the section discusses the file specifications and options presented.

Conferences

When the Conferences option from the Main Menu is selected, a list of conferences defined is shown on the screen. To edit or view the configuration for a conference, the conference must be selected from this list.

Selecting a Conference To Edit

The screen that lists your conferences looks similar to the following:



To edit a conference, move the selection bar to the conference to edit and press R . The keyboard commands to move the highlighted bar are:

[conf. #] When you begin typing a number, you will see a field show up on the screen which is a fast way to jump directly to any conference. The field appears towards the top of the screen as shown on this screen:

```
PCBoard Setup Utility
Copyright (C) 1988-1996 Clark Development Company, Inc

Conferences Menu  Conference Number ? 35

1) Support          2) Doors            3) Utilities
4) Beta Support     5) Beta Reports     6) Developers
```

d	View the next 42 conferences in your system.
u	View the previous 42 conferences in your system.
h	Highlight the first conference on the current screen.
e	Highlight the last conference on the current screen.

As the highlighted bar moves around the screen it may disappear once a certain number is passed. When the bar disappears, PCBSetup is letting you know the maximum conference number entered in the *Number of Highest Conference Desired* field in *PCBSetup | Configuration Options | Messages* has been exceeded. Another indication occurs when a beep is emitted as you attempt to edit the conference.

Once you have selected the conference to edit, press R to see the first screen of fields relating to that conference. When editing a particular conference pressing d takes you to the second configuration screen (conference options) while pressing d twice takes you to the next conference. To go to the previous conference, press u .

Conference Name / Definition

```
Name (#1)      : Support
Public Conference           : Y          Req. Security if Public :  20
Password to Join if Private :            Auto-Register Flags     :
```

Conference Name

In this field, enter the name to use for this conference. This name is shown at the conference command prompt. For example, when you are in the Chit-Chat conference the conference command prompt will resemble the following:

```
(13 min. left) Chit-Chat Conference Command?
```

This name is also used when a user attempts to join a conference because PCBoard allows conferences to be joined by name or number.

Public Conference

A conference can be configured to be either a *public* or *private* conference. A public conference can be joined by anyone having sufficient security to do so (see the discussion about the *Req. Security if Public* field on this screen for further information). A private conference requires a user to be registered (the *R* conference flag set) to join the conference.

N	The conference is considered to be a private conference. Users must be registered in the conference before they may join the conference.

Y The conference is a public conference. In order to join a public conference, the user must have a security level greater than or equal to the value entered in the *Req. Security if Public* field.

Req. Security if Public

If you have defined your conference to be a public conference, enter the security level required to join the conference in this field. A user attempting to join the conference without having sufficient security, is not allowed to join. One exception to this rule is that PCBoard allows a user to join a public conference if the *R* flag is set in their record. This allows you to manually register users in a public conference even if the security level requirements are not met.

Password to Join if Private

If you have defined a conference as a private conference, PCBoard can automatically register users in the conference if they know the proper password. This is likely when you want only select few persons in a conference but do not want to manually register them in the conference. If an unregistered user attempts to join, they are prompted for a password.

The user is given one attempt at guessing the password each time he attempts to join the private conference. If the user gets the correct password, PCBoard registers the user in the conference with an R flag. By doing this, the user will not have to enter the password each time he joins.

If you decide you want to change the conference password, you should de-register all users in the conference via *System Manager | Users File Maintenance | Remove Group Conference*. After you do this, all users will have to re-enter the correct password to become registered in the conference again.

NOTE: To help deter hackers from gaining access to a conference, PCBoard hangs up on the caller if he fails to get the right password after 8 attempts per session.

Auto-Register Flags

In a public conference, conference registration flags are not necessary to join the conference. The ability to join a conference is based on the security level of the user and the minimum security level required to join the conference. However, by setting the conference flags, you can speed up the caller's access to the conference. This is possible because PCBoard does not have to read in the conference information to determine the public/private status or the security level requirements. Valid characters in this field are:

[blank] When a user joins a conference for the first time, no changes are made to their conference registration flags. Each time the user joins the conference, PCBoard checks to make sure the user has sufficient security.

R When joining a conference for the first time, the R conference flag is set in the user's record so that their security is not checked each time they join the conference. This enables the user to join the conference quicker. If you do not also set the X flag, the user cannot join the conference when their subscription expires (assuming subscription mode is enabled).

X When joining a conference for the first time, the X conference flag is set in the user's record. When this flag and the R conference flag is set, the user has access to the conference at all times (even when their subscription has expired). If the X flag is set, but not the R flag, the user is locked out of the conference.

S The S conference flag is set if the user is joining the conference for the first time. The S flag marks the conference for scanning when reading mail within PCBoard.

You can enter any combination of the R, X, and S conference flags in this field or you may leave the field blank. For example, you may want to enter R, RX, or even RXS.

NOTE: When a new user logs into the system, PCBoard scans all conferences and sets the auto-registration flags during the first call. On systems with a large number of conferences, this can result in an excessive delay for new users. The `Auto-Reg in Public Conf` setting in *PCBSetup* | *Configuration Options* | *System Control* disables the auto-registration for new users and sets the flags as the user joins the conference for the first time.

Display Files And Message Locations

```
Number of Message Blocks    :  8
Name/Loc of MSGS File       : P:\CONF\001\MSGS
Name/Loc of User's Menu     : P:\PCB\GEN\BRDM
Name/Loc of Sysop's Menu    : P:\PCB\GEN\BRDM
Name/Loc of NEWS File       : P:\PCB\GEN\NEWS
Name/Loc of Conf INTRO File : P:\CONF\001\INTRO
Location for Attachments    : P:\ATTACH\001\
```

Number of Message Blocks

Versions of PCBoard prior to v15.0 used a different method of indexing the message bases. If you are running third-party software which requires the older index files, PCBoard can maintain them by using the /OLDINDEX environment setting for PCBOARD.EXE or by setting the option in each conference configuration regarding old index support. In this field, enter the number of message blocks to use for this older message index format.

NOTE: If you are not maintaining the older index formats, the value in this field is ignored.

Name/Loc of MSGS File

Each conference has a message base file where messages left in the conference are stored. In this field, enter the name and location of the message file to use for this conference. Normally, the filename specified is unique to any other conference but it is not absolutely required to be unique. For example, if you enter *`H:\PCB\MSGS\CONF001`* in this field, PCBoard thinks the message base is stored in H:\PCB\MSGS\ using the filename CONF001.

Name/Loc of User's Menu

PCBoard, by default, has one main menu that is displayed at each conference command prompt when in novice mode. This menu is used by callers so they know which commands are available on the system. The menu file is simply a text file so it can be customized any way you think will make it easier for users to navigate the system. In this field, enter the name and location of the user menu for this conference. Remember, several conferences can point to the same menu file which greatly reduces the complexity of your system.

Editing The User Menu File

To edit the user menu file, press `2` to edit the non-graphics files and `3` to edit the graphics specific file. To create security specific and language specific files, you will need to do so directly from the DOS prompt using PCBoard's display file conventions. See the *Customizing Your BBS* chapter

Name/Loc of Sysop's Menu

Because the SysOp has more menu options available than regular users, this file is displayed as the menu for those users who have SysOp security level or higher. The SysOp security level is defined in *PCBSetup* | *Security Levels* | *Sysop Commands*. In this field, enter the name and location of the SysOp menu to use. If

you do not want to maintain two separate menu files (one for SysOps and one for regular users), enter the filename of the user menu in this field.

> **Editing The SysOp Menu File**
>
> To edit the SysOp menu file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create security specific and language specific files, you will need to do so directly from the DOS prompt using

Name/Loc of NEWS File

Each conference can specify a different news file. The news file is typically used to make the users aware of upcoming events, policies of the board and general information users should be aware of. In this field, enter the name and location of the news file for the conference. If you leave this field blank, no conference news will be available.

> **Editing The Conference News File**
>
> To edit the news file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create security specific and language specific

Name/Loc of Conf INTRO File

Each conference may have an introduction file; a file typically used to remind the user of any particular items of interest about the conference. For example, to inform users what is expected in the conference each time they join it, use the introduction file. Remember, this file is displayed each time the user joins a conference unless the Q subcommand is used when joining. This file may is displayed during mail scans when the *Show INTRO in `R A' scan* (Conference Options Screen) option is enabled. In this field, enter the name and location of the introduction file for the conference. If left blank, no introduction file is displayed.

> **Editing The Conference Introduction File**
>
> To edit the conference introduction file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create security specific and language specific files, you will need to do so directly from the DOS prompt

Location for Attachments

The drive and subdirectory entered in this field determines where file attachments are stored for this conference. If you leave this field blank, the default or current subdirectory is used which is not recommended.

Public Uploads

```
              Sort   Name/Loc Upload DIR File       Location of Uploads
Public  Upld: 4    : P:\PCB\PUBLIC                : Q:\PUBUPLD\
```

Sort

In this field, enter the sort type to be used by PCBFiler for the public upload DIR (description) file. Valid values are:

0 Do not sort.

1 Sort by filename (ascending / A-Z)

2 Sort by filename (descending / Z-A)

3 Sort by file date (ascending)

4 Sort by file date (descending)

Name/Loc Upload DIR File

PCBoard stores the file descriptions in a separate file for each directory (including upload directories). In this field enter the name and location of the public upload DIR (description) file. This file contains the name, size, date, and file description of files uploaded to your system when uploads are public.

Location of Uploads

In this field, enter the drive and subdirectory where the actual files uploaded as public uploads are stored. If running multiple nodes, make sure this location is the same for all nodes. Otherwise, files may be available on one node, but not available on another node. For example, you may enter *F:\PCB\UPLOADS* in this field.

Private Uploads

```
Private Upld: 4   : P:\PCB\PRIVATE              : Q:\PRIVUPLD\
```

Sort

In this field, enter the sort type to be used by PCBFiler for the private upload DIR (description) file. Valid values are:

0 Do not sort.

1 Sort by filename (ascending / A-Z)

2 Sort by filename (descending / Z-A)

3 Sort by file date (ascending)

4 Sort by file date (descending)

Name/Loc Upload DIR File

PCBoard stores the file descriptions in a separate file for each directory (including upload directories). In this field, enter the name and location of the private upload DIR (description) file. This file contains the name, size, date, and file description of files uploaded to the system when uploads are private.

Location of Uploads

In this field, enter the drive and subdirectory where the actual files uploaded as private uploads are stored. If running multiple nodes, make sure this location is the same for all nodes. Otherwise, files may be available on one node, but not available on another node. For example, you may enter *F:\PCB\PRIVUPLD* in this field.

Doors

```
                Menu Listing                    Path/Name List File
Doors        : P:\PCB\GEN\DOORS             : P:\PCB\GEN\DOORS.LST
```

Menu Listing

When a user executes the O P E N or D O O R user commands without specifying a door name or number, PCBoard displays a menu of doors available. The filename entered in this field is the file displayed to the caller. This file is a standard display file so you can have security, graphics, and language specific versions of the menu. Because different versions of the doors menu can exist, do not specify a filename extension or the ability to have language specific files is eliminated. For example, enter *C:\PCB\GEN\DOORS* in this field.

> **Editing The Door Menu File**
>
> To edit the door menu file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create security specific and language

Path/Name List File

The *Path/Name List File*, as it is called, refers to the data file used to define the doors available in the conference. This is the file you will edit to define, delete, or alter the configuration of the doors available in this conference. To edit this file, press 2 while the filename is highlighted. Please refer to the *Doors* section in this chapter for additional information on editing this file.

NOTE: Even though this file is not a display file, you may create security specific versions of the Path/Name List File. For example, if the file is called DOOR.LST, you can create a DOOR50.LST that is used exclusively by those with a security level of 50.

Bulletins

```
Bulletins   : P:\PCB\PPE\WBMS_112\GOBLT    : P:\PCB\GEN\BLT.LST
```

Menu Listing

When a user executes the B user command without specifying a bulletin number, PCBoard displays a menu of bulletins available. The filename entered in this field is the file displayed to the caller. Even though this file is a standard display file, you cannot have a security specific version of this menu but you may create graphic and language specific versions. Because different versions of the bulletin menu can exist, do not specify a filename extension or the ability to have language specific editions of this file is eliminated. For example, you may enter *C:\PCB\GEN\BLTS* or any other valid filename in this field.

> **Editing The Bulletin Menu File**
>
> To edit the bulletin menu file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create language specific files, you will

Path/Name List File

The *Path/Name List File*, as it is called, refers to the data file used to define the bulletins available in the conference. This is the file used to define, delete, or alter the configuration of the bulletins in this conference. To edit this file, press 2 while the filename is highlighted. Please refer to the *Bulletins* section in this chapter for additional information on editing this file.

NOTE: Even though this file is not a display file, you may create security specific versions of the Path/Name List File. For example, if the file is called BLT.LST, you can create a BLT50.LST that is used exclusively by those with a security level of 50.

Scripts

```
Scripts     : P:\PCB\GEN\SCRIPT            : P:\PCB\GEN\SCRIPT.LST
```

Menu Listing

When a user executes the S user command, PCBoard displays a menu of available script questionnaires. The filename entered in this field is the file displayed to the caller. Even though this file is a standard display file, you cannot have a security specific version of this menu. However, you can create graphic and language specific versions of this menu. Because different versions of the script menu can exist, do not specify a filename extension or the ability to have language specific versions is eliminated. For example, enter *C:\PCB\GEN\SCRIPTS* or any other valid filename in this field.

> **Editing The Script Questionnaire Menu File**
>
> To edit the script questionnaire menu file, press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create language specific files, you must do so from the DOS prompt using PCBoard's display file

Path/Name List File

The *Path/Name List File*, refers to the data file used to define the script questionnaires available in the conference. This is the file used to define, delete, or alter the configuration of the scrkpt questionnaires available in this conference. To edit this file, press 2 while the filename is highlighted. Please refer to the *Script Questionnaires* section in this chapter for additional information on editing this file.

NOTE: Even though this file is not a display file, you may create security specific versions of the Path/Name List File. For example, if the file is called SCRIPT.LST, you can create a SCRIPT50.LST that is used exclusively by those with a security level of 50.

Directories

```
Directories : P:\PCB\GEN\DIR               : P:\PCB\GEN\DIR.LST
```

Menu Listing

When a user executes the F user command without specifying a subcommand, PCBoard displays a menu of available file directories. The filename entered in this field is the file displayed to the caller. Even though this file is a standard display file, you cannot have a security specific version of this menu but you can create graphic and language specific versions. Because different versions of the directory menu can exist, do not specify a filename extension or the ability to have language specific versions is eliminated. For example, enter *C:\PCB\GEN\DIRS* or any other valid filename in this field.

> **Editing The File DIrectory Menu File**
>
> To edit the file directory menu file you can press 2 to edit the non-graphics files and 3 to edit the graphics specific file. To create language specific

Path/Name List File

The *Path/Name List File*, as it is called, refers to the data file used to define the file directories available in the conference. This is the file used to define, delete, or alter the configuration of the file directories

available in this conference. To edit this file, press 2 while the filename is highlighted. Please refer to the *File Directories* section in this chapter for additional information on editing this file.

NOTE: Even though this file is not a display file, you may create security specific versions of the Path/Name List File. For example, if the file is called DIR.LST, you can create a DIR50.LST that is used exclusively by those with a security level of 50.

Download Paths

```
Download Paths (listing only)              : P:\PCB\GEN\DLPATH.LST
```

Path/Name List File

The *Path/Name List File*, refers to the data file used to define the paths PCBoard will search to locate files available for downloading in this conference. This is the file used to define, delete, or alter the configuration of the paths that search for downloadable files. To edit this file, press 2 while the filename is highlighted. Please refer to the *File Directories* section in this chapter for additional information on editing this file.

NOTE: Even though this file is not a display file, you may create security specific versions of the Path/Name List File. For example, if the file is called DLPATH.LST, you can create a DLPATH50.LST that is used exclusively by those with a security level of 50.

Conference Options Screen

```
Name (#1)     : Support

Auto-Rejoin into this Conf.     : Y   Additional Conference Security  :   0
Allow Viewing Conf. Members     : N   Additional Conference Time      :   0
Make All Uploads Private        : N   Level to Save File Attachment   :   0
Make All Messages Private       : Y   Level to Enter a Message        :   0
Echo Mail in Conference         : N   Level to Request Return Receipt :   0
Force Echo on All Messages      : N   Level to Enter Carbon List Msgs :   0
Type of NetMail Conference      : 0   Carbon Copy List Limit         :   0
Allow Internet (long) TO: Names : N   Charge Per Minute          :       0
Make Conference Read-Only       : N   Charge Per Message Read    :       0
Disallow Private Messages       : N   Charge Per Message Written :       0
Place ORIGIN Info in Messages   : N   Last Message Exported      :       0
Prompt for ROUTE Info           : N
Allow Aliases to be used        : N
Show INTRO in 'R A' Scan        : N
Maintain Old MSGS.NDX File      : N
Conf-Specific CMD.LST File      :

NetMail Conference Types:
0=Normal Conference  2=Internet/Usenet Junk        4=Usenet Public Newsgroup
1=Internet E-mail    3=Usenet Moderated Newsgroup  5=Fido Conference

11:46:17 ── 01-03-97 ──── F1 = help ── caps: OFF  num: OFF  ins: OFF
```

These conference options are made available when you press d while in the conference configuration screen. These options give you more control over how the conference operates.

Auto-Rejoin into this Conf.

In certain situations it may be desirable to have the user automatically re-join a conference if they disconnect while in the conference. For example, you may have a conference set aside for each of several groups of users on your system. You can lock the user into their conference by using this option and setting the L conference flag for all other conferences. Valid options are:

N When the user logs in the next time, he will be placed into the Main Board (Conference 0).

Y The next time the user logs onto the system, he will automatically rejoin this conference if he disconnected from the system while in this conference.

Allow Viewing Conf. Members

This option controls whether or not a user is asked to view a list of registered users when they join the conference. This question is asked only once per session (when the conference is joined for the first time). Valid options for this field are:

N Users are not asked to view conference members when joining the conference. The users can still use the USERS command to see the same information. This command is controlled by security level in *PCBSetup | Security Levels | User Commands*.

Y Users are asked if they want to view conference members when joining the conference for the first time during the session.

Make All Uploads Private

With the concern of virus infected or other damaging files being sent over the modem, you may want to screen all uploads before making them available to the callers. An additional concern is that of callers uploading files deemed inappropriate for your system. In each case, uploads should be made private. By making uploads private, PCBoard places all files uploaded in the conference to the private upload directory specified on the first conference configuration screen. Valid options for this field are:

N All uploads in the conference are considered public uploads unless the user enters a / as the first character of their description. Once the file is uploaded, callers are able to download it without you screening the files.

Y All uploads are sent to the private upload directory even if the description the user entered does not begin with a / . It is then your responsibility to screen the uploads and move them (using PCBFiler) out of the private upload directory to one of the download directories. If you have defined your public upload directory (even though you are making all uploads private), PCBoard considers the public upload directory valid. This means you can screen uploads and move them to your public upload directory where users can easily locate new files to the system.

Make All Messages Private

Not only can all uploads to a conference be made private, but all messages can be too. While it is less likely you want to screen messages, the conference you are editing may have a lot of one on one conversations where making all messages private is ideal. Valid options are:

N When entering a message, the user assigns the message security of their choice when prompted. This means they can choose to make a message private, public, group password or any other valid message security.

Y Users are not given the choice to assign security to a message. Instead, all messages are deemed `RECEIVER ONLY`. As these private messages are read, you can unprotect them (making them public messages) by using the U subcommand at the `End of Message Command` prompt.

Echo Mail in Conference

The primary purpose of a bulletin board system is to gather and distribute information to the callers of the system. Some systems get involved with echo mail networks where several bulletin board systems exchange messages with one another. Valid options for this field are:

N You do not plan on sharing the messages in this conference with other systems. Users are not asked any questions about echoing the message being entered.

Y When entering a message, the user is asked if this message should be echoed to other systems or not. Aside from UUCP and Fido based networks, PCBoard does not transfer the mail (that is up to the network mail software). Therefore, it is up to the network mail software to honor the echo flag if it is set. If you want to force all messages to be marked as messages for echoing, enable the *Force Echo on all Messages* option on this same screen.

Force Echo on All Messages

If you want to force all messages left in the conference to be marked for echoing, enable this option. When entering messages, users are not allowed to choose whether or not the message should be marked for echoing or not. Valid options for this field are:

N Allow the user to choose whether the message being entered is marked for echoing.

Y Force all messages entered in the conference to be marked for echoing. The user is not given a choice.

Type of NetMail Conference

PCBoard has extensive built-in capabilities for what is often termed netmail or echo-mail. This type of mail refers to messages which are exchanged between different hosts or bulletin boards to broaden the number of people who can read a given message. Direct support for Internet e-mail, Usenet, and Fido are included with PCBoard. When participating in one of these world-wide networks, the proper type of conference must be selected from the following list:

0 **Normal conference**. This setting must be used for all non-internet/UUCP and non-Fido conferences.

1 **Internet E-Mail**. Select this option if the conference sends and receives Internet e-mail messages.

2 **Internet/Usenet Junk**. A junk conference is where all messages not able to be placed will be put in. Use this setting if the conference is defined as the junk conference.

3 **Usenet Moderated Newsgroup**. Conferences using this type are Usenet newsgroups that are moderated (articles or messages are screened before being posted).

4 **Usenet Public Newsgroup**. Conferences of this type are Usenet newsgroups where all articles or messages are posted immediately.

5 **Fido Conference**. Select this option if the conference imports or exports Fido mail.

Allow Internet (long) TO: Names

The normal limit for user names when addressing message is 25 characters. However, some networks such as the Internet can have extremely long identities or addresses. If you are echoing a conference that requires the TO: field to allow input of more than 25 characters, you can choose to do so based on the answer to this field. Valid options for this field are:

N Users are given up to 25 characters to address their message.

Y Users are given up to 120 characters to address their message.

Conferences configured with this option do allow messages to be entered with blank subjects where PCBoard normally uses blank subjects to abort a message. Blank subjects are sometimes a requirement of automated list and mail servers on the Internet.

Make Conference Read-Only

You may desire to make some conferences read-only. Users cannot reply or enter messages in conferences that are marked as read-only. To limit who can enter messages by security level, refer to the `Level to Enter a Message` field on this screen instead. Valid options are:

N Users can enter and reply to messages as they read them.

Y Users (not even the SysOp) will be able to enter messages in this conference.

Disallow Private Messages

Private messages are not often supported in echo mail networks. Therefore, you may want to disallow users to leave private messages in these conferences. This field controls whether or not a user can enter private messages in a conference. Valid options for this field are:

N Users can choose to enter private messages if they are prompted for message security.

Y Users are not able to enter a private message if they are prompted for the message security. If they attempt to, PCBoard warns them that private messages cannot be left in this conference and then prompts them again for the message security.

Place Origin Info in Messages

When you participate in an echo mail network, information referring to where the message originated from is usually appended to the end of the message. You can tell PCBoard to include this origin information directly into the message. The origin information is taken directly from the `Board Name` field in *PCBSetup | Node Information*. For most systems, it is up to the echo mail software if you should have PCBoard include the origin information or not. Please refer to the documentation for your mail software to see if it requests that PCBoard include this information. Valid options for this field are:

N Do not place origin information in each message entered in this conference.

Y Include the origin information for each message entered in this conference.

Prompt for ROUTE Info

Some mail networks allow messages to be routed directly to a particular site in the echo mail network. Check with your echo mail documentation to see if it supports routing and if it knows how to extract routing information directly from PCBoard. In order for a user to be prompted for routing information the following must be true of the message being entered:

- The message must be marked for echoing
- The message must be a private (`RECEIVER ONLY`) message

If prompted for routing information, the user can enter up to 58 characters to identify where the message should be directed to. The echo mail software you are using will determine the format the routing information should be entered in. Valid options for this field are:

N Users are not prompted for routing information.

Y Users are prompted for routing information if the aforementioned conditions are met.

Allow Aliases to be used

Once the Alias PSA is installed, you must determine which conferences aliases are allowed in. Each conference can be configured to accept aliases via this setting. Valid settings are:

N Even if the user has defined an alias to use (using the W user command), only his real name is used while in this conference.

Y While in this conference, the user's alias name is in use.

Show INTRO in 'R A' Scan

The conference introduction file is normally only displayed when a caller uses the J user command to join a conference. To help separate conferences and make the transition from one conference to the next more obvious, you can display the introduction file more often. When using the A or A L L subcommands with the R user command, this setting determines if the introduction file for the current conference is displayed prior to scanning the conference for mail. Remember, this setting is conference specific. If you want the introduction file for all conferences displayed, change this setting for all conferences. Valid options are:

N Conference introduction files are only displayed when joining conferences.

Y In addition to being displayed when joining a conference, the introduction file is displayed when scanning for new mail using the A or A L L subcommands.

Maintain Old MSGS.NDX File

Older (non-v15.0 compliant) software will not read the message index (IDX) files and consequently cannot recognize messages on the system. This setting determines whether or not PCBoard maintains the older NDX format for this conference. Valid options are:

N PCBoard continues to maintain only the IDX file (not the older NDX file) for the conference.

Y In addition to maintaining the IDX file, PCBoard also maintains the NDX file allowing non 15.x compliant third-party software to work properly.

OTE: To force all conferences to maintain the older NDX format, use the /OLDINDEX environment itch for PCBoard.

Conf-Specific CMD.LST File

Recall that the global CMD.LST file is defined in *PCBSetup | File Locations | Configuration Files*. Normally, the commands you define in that file are available in all conferences. If you want a conference to use a different CMD.LST, specify the CMD.LST to use in this field. By entering a filename in this field, you are overriding the entire contents of the global CMD.LST file with whatever commands are defined in the conference specific version.

```
    Command     Security  PPE/MNU File -or- Keystroke Replacement
--------------  --------  ---------------------------------------
SPECIAL             0     C:\PCB\PPE\SPECIAL.PPE
                          %C:\PCB\MAIN\CMD.LST
```

This example is a sample of a CMD.LST which defines a SPECIAL command and uses the rest of the commands defined in the CMD.LST stored in C:\PCB\MAIN\CMD.LST.

Additional Conference Security

In this field, enter the amount of security to add to the user's security level at the time he joins this conference. The value entered can be positive or negative with the range of -99 to 999. If the value is negative, the caller's security is lowered upon joining the conference. Also, remember that PCBoard supports security levels up to 255 so keep your entry below that value. Entering 0 in this field leaves the security level unchanged when joining the conference.

NOTE: The change in security level is only in effect while in the conference. When the conference is abandoned or another one is joined, the user returns to the normal security level.

Additional Conference Time

In this field, enter the amount of time to add to the user's time remaining on the system at the time the conference is joined. You can enter any value between 0 and 999 in this field. A value of 0 will not adjust the time of the caller when joining the conference.

Once the time is added, it is not removed until the caller logs off of the system. This means a user could join this conference to get a additional boost in time. Perhaps the additional time could be used as some sort of incentive. The additional time is not added each time the user joins the conference. Instead, it is added the first time he joins the conference during each call.

Level to Save File Attachment

The ability to attach files to messages can be both a powerful and annoying feature if abused. In this field enter the security level required to save a message with an attached file in this conference. The value entered must be between 0 and 255. By setting this value to a high value, you let your most trusted users attach files without having to worry about it being abused.

Level to Enter a Message

For some conferences, you may want the primary purpose of the conference to have users read messages. You can disable the ability to enter messages (or replies) by entering `Y` in the `Make Conference Read-Only` field. Enabling this setting, however, would not allow you to enter messages directly into this conference. In this field, enter the security level required for a user to leave a message in this conference. If this conference is configured as a read-only conference, the value will have no effect.

Be aware there is a global security level that can be assigned to the E user command in *PCBSetup | Security Levels | User Commands*. Whichever value is higher (the global setting or the conference setting) is the controlling security level for entering messages and replies.

Level to Request Return Receipt

Like the file attachment feature, users can end up abusing the ability to request return receipts on their messages. If this feature is abused, your message bases could quickly become full of un-necessary messages because each return receipt is a message. Enter the security level required for a user to be able to request a

return receipt in this conference. You can enter any value between 0 and 255. Entering a high value in this field disables the ability to request return receipts for all or some of your callers.

Level to Enter Carbon List Msgs

To address a single message to a group of users on the system, the message can be addressed to `@LIST@`. Once the message is addressed, PCBoard prompts the user for a list of names the message should be addressed to. The security level required to enter these messages can be controlled. In this field enter the security level required for a user to address a single message to a group of users. When a user attempts to address a message to `@LIST@` and either does not have sufficient security or the `Carbon Copy List Limit` is set to `0`, the message is addressed to `ALL` instead.

Carbon Copy List Limit

When addressing a message to a group of users, you can set the maximum number of users the message can be addressed to. In this field enter a value between 0 and 99 that determines the maximum number of users that can be addressed. A value of 0 disables the ability to enter `@LIST@` messages. When a user attempts to address a message to `@LIST@` and either does not have sufficient security or the `Carbon Copy List Limit` is set to `0`, the message is addressed to `ALL` instead.

Charge Per Minute

Conference areas are a way to separate groups of peoples and topics. When using the accounting system, an additional per-minute charge can be levied against the caller. To charge the normal per-minute value in ACCOUNT.CFG (*PCBSetup | Accounting Configuration*), enter a value of 0 in this field.

Charge Per Message Read

An additional charge to the default value charged for reading a message can be specified by entering a non-zero value in this field. To charge the default value in ACCOUNT.CFG (*PCBSetup | Accounting Information*), enter a zero in this field. The ability to charge various rates per conference means you can charge to read messages in echo conferences where it costs money to import, while giving credits for reading in local conferences to help encourage traffic.

Charge Per Message Written

Setting this value to anything other than 0 means the value entered is added to the default value charged for writing a message but only while in the current conference. Users entering messages on your system can be both a blessing and a curse. In netmail conferences, it costs money to export messages to the net hub. In other conferences areas that are local, users can enter all of the messages they want because the only resource tied up is hard drive space. Therefore, you may want to encourage users to be active in these conferences by giving them credits for entering messages.

Last Message Exported

PCBoard has Fido and UUCP netmail capabilities built-in. This field is used to keep track of the last message exported by either the Fido or UUCP module. Knowing the last message number exported, new messages needing to be exported can be quickly found.

Sharing Files Between Conferences

The conference configuration screens specify the location of several files. As you know, conferences are designed to separate groups of people and or common information together.

You will have different message bases for every conference but may want to use the same door, script, and bulletin configurations for multiple conferences. For example, conference 1 and conference 3 may have separate message bases, but you may want to make the same doors available in both conferences.

Rather than maintaining two separate DOORS.LST files, you can have both conferences use the same DOORS.LST file. When you make a change to the file, the change is seen in both conferences (because they are both reading from the same configuration file on disk). This means conference 1 and 3 may have C:\PCB\GEN\DOORS.LST entered while conference 2 would have something like C:\CONF\2\DOORS.LST because it has different doors defined. This concept can be applied to any of the file locations in the conference configuration screens.

File Directories

In order for users to be able to transfer files on the system, at least one file directory must be available. Each conference can specify a different set of file directories and each file directory can contain virtually an unlimited number of files. The file directories simply store the filename, date, size, and description of a file available for download.

Creating

To create a file directory, you must understand how DIR, DIR.LST, and DLPATH.LST interact with one another to form the file directory system. The following lists the three files that make up your file directories in each conference configuration screen:

```
Directories : C:\PCB\GEN\DIR            : C:\PCB\GEN\DIR.LST
Download Paths (listing only)           : C:\PCB\GEN\DLPATH.LST
```

To help illustrate how these files interact with one another we are going to go through a step by step process on how to setup some file directories. First, you need to have a brief overview of DIR, DIR.LST, and DLPATH.LST.

DIR is the file that gets displayed to the user when he uses the F user command.

DIR.LST is the file PCBoard uses to determine where file descriptions are stored, and the description for the directory contents. PCBFiler uses DIR.LST to determine where the files are stored on your hard drive or similar device. PCBFiler also determines what method to use when sorting directories by reading DIR.LST.

DLPATH.LST is a file containing a list of paths PCBoard searches for files a user requests to download. Only the paths listed in this file are searched for downloadable files.

The first thing you should do is think about categories to define as file directories. For example, you may have categories called Printer Fonts, Adventure Games, Disk Utilities, etc. Once you have determined the file categories to create, you are ready to begin adding entries in DIR.LST.

To edit DIR.LST, load PCBSetup by either loading PCBSETUP.EXE or select the PCBSetup button from your call-waiting screen. Once in PCBSetup, select either L or M from the PCBSetup Main Menu to enter

one of the conference configuration screens. Now move your cursor to the DIR.LST entry and press 2 to edit the file. The screen resembles the following:

```
                    DIR.LST Editor
                      Main Board

     DIR Text File Name & Path      Hard Disk Subdirectory      Sort

 1)  R:                             R:                           0
 2)  R:                             R:\                          0
```

The first field you edit is labeled *DIR Text File Name & Path*. This is the full path and filename where PCBoard stores descriptions (not the actual files for download) for the directory number identified at the left hand side of the entry. This name can be anything you want, although filenames without extensions are recommended. The descriptions look like the following:

```
PCBSHOW.ZIP     89722  02-20-91  PCBoard v14.5 Introductory SHOW dated
                                 2/20/91.  This program gives a quick
                                 demonstration of installing PCBoard
                                 It's final goal being that of giving
                                 new sysops a quick start.  Other SHOWs
                                 may follow in the future.
                                 Uploaded by: Dan Moore
```

The next field in your DIR.LST is *Hard Disk Subdirectory*. This field contains the drive and subdirectory where a majority or all of your files are stored for this file directory. PCBFiler uses this field to help determine where the files are located on disk when files and file descriptions are moved/copied. Remember, PCBoard never uses this field to locate files for download.

It is only possible to assign one drive and subdirectory per file directory. If you have files stored in more than one drive and directory, enter the drive and directory where the majority of the files for this directory are located.

The last field on this screen asks what type of sort method to use. You can specify any of the five choices (0-4) listed at the bottom of your screen. When using PCBFiler to edit/move files and file descriptions, the sort method specified will be used to rearrange the file descriptions.

There is one more screen to edit before you are finished. If you press 2 , notice the screen changes. You still see the column labeled *DIR Text File Name & Path*. However, the *Hard Disk Subdirectory* and *Sort* fields are no longer on this screen. Instead, there is a field called *Description of Directory Contents*.

In this field, enter a description of what type of files can be found in this directory. If one of your directories contains laser printer fonts, enter `Laser Printer Fonts` in this field. When your users are doing file scans using the (Z)ippy, (L)ocate, and (N)ew commands they see these descriptions to the right of the directory number. Example:

```
Scanning Directory 1  (Printer Fonts)
Scanning Directory 2  (Adventure Games)
Scanning Directory 3  (Disk Utilities)
Scanning Directory 4  (Security Related Files)
```

All of the descriptions between the parentheses were entered in DIR.LST on the second screen. If you do not enter any descriptions in the Description of Directory Contents field, the following is seen when doing a directory scan:

```
Scanning Directory 1  ()
Scanning Directory 2  ()
Scanning Directory 3  ()
Scanning Directory 4  ()
```

If you have not yet defined all of your file directories in DIR.LST do so now. If you do not have enough lines and need more, use A - I to insert a new line. Likewise, if you have defined a file directory you do not want, use A -D to delete it.

Assuming you have defined all of the desired file directories, it is now time to move on to DLPATH.LST. This file contains a list of paths that PCBoard searches when a user requests a file to download. **This is the ONLY file PCBoard searches to determine if a file is available for download**. Even if the description for the file is listed in one of the file directories, it cannot be downloaded unless the file is found in one of the directories listed in DLPATH.LST. For the most part your DLPATH.LST contains all of the directories listed in the *Hard Disk Subdirectory* column in DIR.LST and the location where all new uploads are stored.

Because the DLPATH.LST is not directly tied into DIR.LST, you can enter any subdirectories in this file. You might want to have a special directory set aside where users can download files not listed in the directories. These may be private files you want to make available to individuals who know specific filenames.

The final file to edit is the DIR *Menu Listing* file and your file directory setup will be finished. See *Creating Menu* later in this section.

Adding Files To

Adding files for download in the file directories can be an easy process. What you need to do is copy the files to a file directory and use PCBFiler to provide the descriptions for the files. See the *PCBFiler* chapter of this manual for additional information on adding files to your system.

Disabling

The easiest way to disable your file directories (leaving only your upload directories working) is to blank out the DIR and DIR.LST fields. For example, if the fields in the conference configuration screen look like the following:

```
Directories : C:\PCB\GEN\DIR              : C:\PCB\GEN\DIR.LST
```

Modify them to look like this to disable your file directories:

```
Directories :                             :
```

When your file directories are disabled, users receive a message stating there are no directories when they try to access your file areas.

Creating Menu

In order for your users to know what file directories are available on your system (if any), edit the *Directory Menu Listing* file. This file is commonly referred to as DIR. This is the file that is displayed to the user when he executes the F user command. This file is nothing more than a text file. Because it is a text file, it can be designed to look or display anything you want. As a general rule it should contain each directory number and should also list a description of the contents of each file directory. The following is a sample menu text file.

```
You have access to the following directories in this conference:

1 - PCBoard DEMO Software & Text Files 2 - PCBoard Program Files
3 - Multi-language Files & Menus       4 - Display Files/PCBText Replacments
5 - Menu (MNU) Systems/Samples         6 - PPE Menu Systems
7 - Menu Display Files                 8 - Help/Tutoring
9 - Manufacturer's Offers              10- Games : Adventure/Role playing
11- Games : Entertainment              12- Games : Board game
```

Doors

When a door is added to the system, functionality is added to it. A door application can enable users to play on-line games, access databases, and just about anything else imaginable.

When a user opens a door he temporarily exits PCBoard and run a batch file called the *door batch file*. This batch file will execute some other application—be it a game, utility or other program.

Usually the program being run is designed to be a door application, or is designed to accept input and output via the serial port so the remote user can control the operation of the program. Programs that do not provide input and output through the serial port may not be able to run as a door unless you use a program like DOORWAY which redirects both text screen and keyboard i/o to the remote caller.

Probably the most popular type of door programs are games. However, there are utility type doors that may allow users to store additional time on the system, read off-line mail, etc. Virtually anything that communicates via a serial port is considered a door application.

What Type of Applications Can I Run As a Door?

You may be asking yourself if there is anyway to run a non-door application as a door. This can be done but it means some sort of software must monitor what is on the screen and output it to the remote user's screen. DOORWAY by TriMark Engineering does exactly this. It monitors any 80x25 text mode application and draw it on the remote users screen using ANSI codes. Using this program virtually any text mode DOS application can run as a door.

For the most part door applications are all character-mode based. This means you cannot run Windows application or other graphical applications as a door. The primary reason you cannot run graphical applications as doors is because there is no standard way to send graphical data over the modem and have the majority of modem users be able to view that information.

Adding A Door

When loading PCBSetup and selecting a conference to edit you see the following fields:

```
                Menu Listing                      Path/Name List File
Doors       : C:\PCB\GEN\DOORS            : C:\PCB\GEN\DOORS.LST
Bulletins   : C:\PCB\GEN\BLT              : C:\PCB\GEN\BLT.LST
Scripts     : C:\PCB\GEN\SCRIPT           : C:\PCB\GEN\SCRIPT.LST
Directories : C:\PCB\GEN\DIR              : C:\PCB\GEN\DIR.LST
Download Paths (listing only)             : C:\PCB\GEN\DLPATH.LST
```

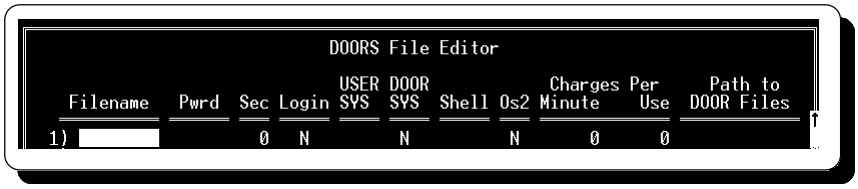
The two fields relating to door operation are:

```
                Menu Listing                      Path/Name List File
Doors       : C:\PCB\GEN\DOORS            : C:\PCB\GEN\DOORS.LST
```

The following is a brief description of each of the files:

DOORS - This is the menu file displayed to the user when they type either O P E N or D O O R. This file is a normal PCBoard display file. It lists all available doors on the system and their corresponding numbers or names. Creating the door menu is discussed later in this section.

DOORS.LST - This file stores all of the setup information about the doors defined in this conference. PCBoard will read this file to determine what batch file executes the door, where the batch file is found, and other options controlling access to the door. To edit this file press 2 and the following screen is displayed:



The number at the very left of each line is the door number. The rest of the fields are not always so intuitive. The following briefly describes each field in the DOORS.LST file:

Filename: This is the exact batch filename PCBoard executes. You are given up to 8 characters for a door name and should not put a .BAT extension in the filename field or add the .BAT to your batch file if you create the file manually. Make sure you do not enter a filename that is equivalent to an internal PCBoard command. For example, if you enter TEST as a filename, the door will never run because PCBoard has an command with the same name.

Pwrd: If you want users to enter a password in order to access a particular door, enter up to 12 characters in this field. If you do not want a password to be asked, make sure this field is blank.

Sec: Enter the security level required in order to be able to open a particular door. A user may open the door if their security level is equal to or greater than the security level in this field. Of course, if the security level is 0, everyone has sufficient security to open the door.

Login: This field may contain either a *Y* or an *N*. If a *Y* is entered in this field, this door loads when a user logs into the system. In fact, the door only loads for those users who match the security level entered in the previous field. If you want the door to open every time any user logs into the system, enter a security level of 0 in this field.

NOTE: If you have any conferences defined as auto-rejoin, be aware that if a user logged off of the BBS in one of these conferences, they rejoin that conference on the next login. Consequently, make sure the proper doors are defined in this conference because this is the conference PCBoard reads the DOORS.LST from.

USER SYS: In this field you can enter a *Y*, *N*, 1 or 2. The letter you enter in this field determines if a USERS.SYS is created and if so, what type. If you enter a *Y*, PCBoard creates a USERS.SYS in the same directory that you loaded PCBoard from. You can enter three other responses if you need a USERS.SYS compatible with older versions of PCBoard. Entering 1 makes a v14.5 compliant file while an entry of 2 makes a v15.0 compliant USERS.SYS file. Check the documentation for the door you are about to add to see if it requires a USERS.SYS file and if so, what type. If the door does not need a USERS.SYS file, enter *N* in this field.

DOOR SYS: Like the USER SYS field, this field determines if PCBoard should create a DOOR.SYS file for the door. Again, check the door documentation to see if a DOOR.SYS file is required for door operation. If not, leave this field set to *N*.

SHELL: This field has three possible options (Y, N, and S).

F Perform a fast shell to run the door. The files and com port controlled by PCBoard is not closed which is the way some doors prefer to operate. However, the majority work just fine with the normal shelling option (S) instead.

N Do not shell to the OS to execute the door. PCBoard unloads from memory and loads the door which results in the maximum amount of memory being available.

DOS

S If you use this option, PCBoard shells to the OS, swapping itself to XMS, EMS, or to Disk (whichever is available) and executes the door batch file. Using this method results in about 25k of memory less than if the N response was used.

Y Shell to the OS and then execute the door rather than exiting PCBoard completely to load the door. Less memory is available but reloading PCBoard afterwards is faster.

OS/2

OS/2: PCBoard for OS/2 has the capability of running OS/2 door programs in addition to DOS applications. Since each is handled differently, PCBoard has to know which method to use. When this field is set to *Y*, the door is run in an OS/2 window. A setting of *N*, tells PCBoard to run the program in a DOS window instead.

Minute: Holds the amount of accounting credits to charge for each minute the user is in the door. The value entered is additive. That means if you are charging 10 units for each minute online and want to increase it to 15 units for each minute in this door, enter 5 in this field.

Per Use: Specifies the number of accounting credits to charge each time this door is opened.

Path to..: In this field, enter the path where your door batch file is. For example, if the batch file for this door is stored in C:\PCB\, enter *C:\PCB* in this field

Editing/Creating Your Door Batch File

By far the easiest method to create or edit door batch files is while editing DOORS.LST. First of all, make sure that you have defined a text editor in System Manager. If you have, highlight the filename field in DOORS.LST and press 2 . This allows you to create or edit the batch file. To edit the file manually, look at the entry in DOORS.LST to determine the name and location of the batch file. The following is a sample entry in DOORS.LST

```
                                 USER DOOR          Charges Per      Path to
  Filename  Pwrd Sec Login SYS  SYS  Shell OS2 Minute    Use    DOOR Files
 ---------- ---- --- ----- ---- ---- ----- --- --------------- -----------
1) TESTDOOR        0   N    N    N     N    N        0       1 C:\PCB\DOR\
```

C:\PCB\DOR\TESTDOOR

You can see PCBoard thinks the door batch file is C:\PCB\DOR\TESTDOOR. Notice there is no .BAT extension. Even though it sounds strange it executes properly because PCBoard copies the door batch file to DOOR.BAT or DOOR.CMD and executes that file instead.

Running DOS Doors with PCBoard for OS/2

PCBoard has a huge third-party door market with the majority of these applications designed for DOS. Because OS/2 is quite capable to run DOS programs, it is important to dedicate a section of this manual discussing topics relating to this topic.

There are a few things you need to be aware of in regards to running DOS doors with the PCBoard for OS/2:

1. In the DOORS.LST file, make sure the OS/2 field is set to *N*. This causes PCBoard to create a DOOR.BAT instead of a DOOR.CMD.
2. Most doors that run in this type of scenario communicate with a FOSSIL driver rather than the OS/2 communications driver. Therefore, make sure a FOSSIL driver is loaded. This procedure varies based on the communications driver and equipment.
3. When the DOS window launched to run the door, your default AUTOEXEC.BAT file is run. This is the batch file located in the root of your boot drive. Within this file, you can modify PATH statements, add environment variables, etc.
4. Any environment variables you want in a DOS window must be set in the AUTOEXEC.BAT file. Otherwise, only PCBoard specific variables are available.

Returning Back To PCBoard From A Door

After your door program has completed executing, it is extremely important that the batch file provide the means necessary to reload PCBoard. This can be accomplish by adding some lines to the end of the batch file. Add the following lines to the end of every door batch file.

```
%PCBDRIVE%
CD %PCBDIR%
```

These lines simply make sure we return back to the directory we started from before attempting to reload PCBoard.

Troubleshooting/Debugging

Debugging a door is an easy process. There are two commands designed for batch files you may want to keep in mind -- *PAUSE*, and *ECHO ON*. The *PAUSE* command can be used to delay further execution of the batch file. This is useful when trying to catch errors that might be displayed as your batch file is running. The pause command will ask you to strike a key when it runs. Therefore you can put a *PAUSE* command after every command until you find the offending line in the batch file.

In conjunction with the PAUSE command you can put a line that says ECHO ON at the beginning of the batch file. This lets you see each command of the batch file as it runs. This method is useful for checking to see if the environment variables are being correctly substituted, changing to the wrong directory, and for tracking other obvious errors.

Using these two commands together can really help track down some of the problems you may incur wile creating door batch files. If you have used these techniques and are unable to track down the problem, contact the author of the door for further help.

WARNING: The procedures discussed in this section do not work when testing from remote. Make sure you are troubleshooting from a local computer if you use this procgdure.

Multiple Nodes

This section discusses various techniques for installing door programs on a multi-node setup. All of the techniques in this section are designed to help save time both in the present setup and in the future when more nodes are added. Use these instructions for setting up door programs in a multitasking or network environment.

It is assumed you already know how to setup a door under PCBoard. If not, please refer to the *Creating a Door* section. It is also assumed you have a good grasp on creating batch files and passing parameters inside of batch files.

You do not have to be a batch file wizard but should be familiar with the following topics:

- What a batch file is
- How to create and edit a batch file
- Batch file commands (IF, GOTO, etc.)
- Using replaceable parameters in batch files (environment variables in particular)

If you are not familiar with batch files or any of the above topics, please consult your DOS manual's batch file section for more information.

Because door programs are written by different authors and the fact there are so many door programs available, the methods required to setup a particular door program differ greatly. Some door authors may require you to pass specific information on the command line of the executable file while other door authors may store the information in a configuration file. Other door programs may use a combination of configuration files and command line parameters.

Because setting up door programs requires a comprehensive knowledge of creating batch files, setting up door programs in a multinode environment may prove tricky at first. However, your efforts will pay off in the long run especially when adding new nodes. By using the methods discussed in this section you will learn how to use one batch file for each door on all nodes.

You can set up your system so each node has a different DOORS.LST. However, this entails adding your door configuration to each node rather than making the change on one node and spreading the change automatically through the entire system. It is strongly recommended to use one DOORS.LST for your entire system. See *Using A Different DOORS.LST For Each Node* for additional information.

Using One Batch File For All Nodes

The first step in setting up a door is to browse the documentation included with the door package. Look to see if the door requires any special hardware or software. Make sure that the door works with the communications hardware you are using. For example, if you are using an OS/2 com port, make sure the application can also talk to the OS/2 API. Many applications and serial port hardware support the FOSSIL interface which provides a possible solution to run a wide varieties of third-party programs on your system.

The next step is to install the door on the system as per the instructions provided by the author. If you have questions on the installation of the door, contact the author for further assistance. Test the door program and make sure it works on at least one node; do not proceed until it does.

> If the door does not work correctly, your best chance of getting the door program to operate correctly is to contact the author of the program directly since he knows how his program functions. If the author of the program is no longer available, try contacting other SysOps to see if they might already have it up and running. The PCBoard technical support staff is very familiar with the PCBoard program, but are not very

Now that you know that the door works, examine the batch file you use to run the door. When looking at this batch, search for anything that is specific to a particular node. Example:

```
C:
CD\DOORS\ABCGAME
ABCGAME  C:\PCB\NODE2\
C:
CD\PCB\NODE2
```

Notice how this batch file uses C:\PCB\NODE2\. This means that if you run this door batch file on node 3, it will not work because the C:\PCB\NODE2\ is hard-coded into the batch file. Not all of the node specific information is so easy to spot. Let's take a look at another example:

```
C:
CD\DOORS\NEATDOOR
NEATDOOR ND.CFG
C:
CD\PCB\NODE2
```

On the outside it appears this door does not reference any node-specific information. However, looking at the configuration file for this door (ND.CFG) notice it contains some node specific information. This node specific information might be where to find PCBOARD.SYS, DOOR.SYS, or even what serial port to use.

Once the node specific information is identified, you must find a way to make it generic so one batch file can be used for all nodes. PCBoard sets several environment variables which will help. They are as follows:

PCBNODE Contains the number of the node that is executing the door (e.g., *3)*

PCBDRIVE Contains the drive letter that PCBOARD.EXE was run from. This is sometimes referred to the *home* drive for the node (e.g., *D:*)

PCBDIR This variable contains only the directory that PCBOARD.EXE was run from. This is sometimes referred to as the *home* directory for the node and is also the location where, PCBOARD.SYS, USERS.SYS, and DOOR.SYS are created (e.g., *\PCB\NODE3*)

PCBDAT Contains the full drive, path and filename of the PCBOARD.DAT that is being loaded for this node.

If you did not heed the previous warning regarding environment variables and how to use them in batch files, consult your DOS manual for that information at this time.

A batch file not using the environment variables might look like the following:

```
C:
CD\DOORS\ABCGAME
ABCGAME C:\PCB\NODE2\
C:
CD\PCB\NODE2
```

The same batch file using the environment variables provided, might look like the following:

```
C:
CD\DOORS\ABCGAME
ABCGAME %PCBDRIVE%%PCBDIR%\
%PCBDRIVE%
CD %PCBDIR%
```

The following describes each line in the above example. It will help you understand how and why the environment variables were used:

C: Change to the C: drive because that is where the door is installed

CD\DOORS... Change to the \DOORS\ABCGAME subdirectory (where the door is)

ABCGAME... Execute the door program. Uses the PCBDRIVE and PCBDIR environment variables to tell the door where it can find specific files (e.g., PCBOARD.SYS) for the node running the program.

%PCBDRIVE% Change to the PCBoard drive (where the node subdirectory is located)

CD %PCBDIR% Change to the PCBoard directory (the node subdirectory)

The variables (surrounded by % signs) are replaced by the appropriate values as they are set for each node. At this point you may be asking, "If this makes my node configuration easier, why are the batch files larger?" What is not quite obvious is that this batch file can be used for EVERY node. This makes both your maintenance and system configuration less complex. A tradeoff well worth the results.

Consider the following two examples to really appreciate how using environment variables in door batch files help:

1. You add more nodes to your system.
2. You change the location or delete the door from your system.

In the first example nothing has to be done to activate your new nodes on the system. In the second example, if you move the location of the door file only one batch file must be changed to reflect the new location (The first CD command in the batch file). Can you imagine running 19 nodes and having to change 19 different batch files? Additionally, having numerous batch files for one door also increases your chance of making a configuration mistake.

Some door programs use a configuration (config) file for normal operation and store node-specific information in these files. Remember, environment variables can only be used in the batch files themselves

(i.e., not in config files). This may lead you to wonder how you can use environment variables and create one batch file for all. The answer is quite simple. Create multiple config files and use the PCBNODE environment variable to load the proper one.

Let's assume you have the following batch file:

```
C:
CD\DOORS\NEATDOOR
NEATDOOR ND.CFG
C:
CD\PCB
```

Now, lets say in the ND.CFG file is the following:

```
C:\PCB\NODE3\PCBOARD.SYS ;location of PCBOARD.SYS
5                        ;number of times game can be played per day
400                      ;points per win
```

If config files could use environment variables, the solution would be to replace the *C:\PCB\NODE3\PCBOARD.SYS* with *%PCBDRIVE%%PCBDIR%\PCBOARD.SYS*. However, you cannot do that because environment variables cannot be read in from configuration files. Therefore, an alternative must be found.

At this point create a configuration file for each node. Use a standard naming convention for all config files. Since the original config file was called ND.CFG you can tack on the node number to each config file (e.g. ND1.CFG, ND2.CFG, ND3.CFG). By naming them with the node numbers in the filename we will be able to use the PCBNODE environment variable. The most important thing to remember is to remain consistent in your naming conventions. If you do not, environment variables will not be effective.

Once a config file has been created for each node change the first line to reflect the location of the PCBOARD.SYS for each node. Next, make the make the modification to the batch file. After the environment variables have been added, the batch file will resemble the following:

```
C:
CD\DOORS\NEATDOOR
NEATDOOR ND%PCBNODE%.CFG
%PCBDRIVE%
CD %PCBDIR%
```

The following describes each line in the previous example:

C:	Change to the C: drive (where the DOOR is installed)
CD\DOORS...	Change to the \DOORS\NEATDOOR subdirectory (where the DOOR is installed)
NEATDOOR...	Execute the DOOR program using a config file. Because of the PCBNODE environment variable a different file will be loaded for each node.
%PCBDRIVE%	Change to the PCBoard drive (where the node subdirectory is located)
CD %PCBDIR%	Change to the PCBoard directory (the node subdirectory)

And finally, a more complex batch file might look something like the following:

```
C:
CD\DOORS\PMAIL
PMAIL PMAIL.CFG C:\PCB\NODE3\ /PORT:3E8:5
C:
CD \PCB\NODE2
```

This batch file represents a door which points to a single config file and does not contain information specific to any node (maximum plays per day, points rewarded, etc.). Also passed on the command line is the location of this node and the final parameter passed on the command line is the base address and IRQ for the COM port (*/PORT* parameter).

Do not let the additional parameters worry you. Your goal is still the same—replace the node specific information with environment variables. What makes this problem different is that PCBoard does not create environment variables for the base address and IRQ for COM port. However, you can create these easily enough in your NODEx batch file by adding these lines:

```
SET COMBASE=2e8
SET COMIRQ=5
```

The base address of 2E8 and IRQ 5 are sample values and most likely don't match how the nodes are configured. Make sure the correct information is entered in each NODEx.BAT.

We have now assured ourselves of having environment variables useful in replacing node specific information in the previous batch file we are ready to change the batch file. The final batch file should resemble the following:

```
C:
CD\DOORS\PMAIL
PMAIL PMAIL.CFG %PCBDRIVE%%PCBDIR%\ /PORT:%COMBASE%:%COMIRQ%
%PCBDRIVE%
CD %PCBDIR%
```

One thing that should be noted about the above batch file is the door used for this example uses a configuration file called PMAIL.CFG. However, this configuration file does not contain any node specific information and that is why we did not have to make any changes. All of the node specific information is passed on the command line. Therefore, it is pointless to create multiple configuration files. This batch is a little more difficult because it contains more node specific information on the command line. However, the technique is the same as previous examples.

Notice that the only line changed is the one that actually runs the program. For the most part this is the way the door batch files will look—change to the door directory, run the program, and return to PCBoard.

Once the node specific information is replaced by environment variables, test the door to make sure that, with the changes you have made, the door still works. If it works on one node, try it on another node and make sure everything still works correctly. As an extra precaution try the door on every node (especially when a door uses config files) to make sure all nodes work correctly. If the door works correctly on all nodes, it is properly setup for use in a multi-node environment. If you have problems with any nodes, use the debugging information described previously to help locate the problem.

There are about as many ways to configure a door as there are door programs out there. The previous examples assist you in several of the more popular types of door configurations. Not all of the configurations could be covered in this section so remember that you may run into differing door configurations. If you do run into such a configuration, identify the node specific information and use environment variables to create one batch file for all nodes.

Using One Batch File For Each Node

To use one door batch file for each node, you must configure each of your nodes to use a unique DOORS.LST file. Since the location for the door batch file is specified in the DOORS.LST file, you can specify a different path for each node thereby creating a different batch file. For example, instead of storing the batch file in C:\PCB\DOOR\, you may instead choose to locate the batch file in C:\PCB\DOOR\N1\ for node 1, and C:\PCB\DOOR\N2\ for node 2.

The problem with this type of setup is that as the number of nodes on the system increases, the time it takes to change the batch files also increase. If you have two nodes, you may only have to edit two batch files. However, a 20 node system would require 20 batch files to be edited and results in a lot of lost time.

If it is decided that separate DOORS.LST files are the way for you, the setup can be accomplished very easily. Since all nodes likely share the same CNAMES file, change the location of DOORS.LST to resemble:

```
                Menu Listing                    Path/Name List File
Doors       : C:\PCB\GEN\DOORS             : DOORS.LST
```

Notice that only the filename DOORS.LST is in this field. With the filename specified this way, PCBoard will search the current directory to find the file instead of an absolute location like C:\PCB\GEN\DOORS.LST. Since all nodes have different subdirectories, a unique DOORS.LST will exist in each node directory.

Where to find DOOR.SYS, or USERS.SYS

Because PCBoard creates DOOR.SYS and USERS.SYS before the door is run and deletes them when returning, there may be some confusion as to where these files are created. These files will be located in the same location as PCBOARD.SYS for the nodes. The best way to determine the subdirectory is to log into the node locally and press `5`. The subdirectory displayed is the subdirectory where the files will be stored.

NOTE: This subdirectory is the subdirectory PCBOARD.EXE was loaded from. In addition, it is also the subdirectory specified by the PCBDRIVE and PCBDIR environment variables.

Opening A DOOR

There are three methods with which a door may be opened via PCBoard:

1. Using the OPEN command from the conference command prompt.
2. Using the DOOR command from the conference command prompt.
3. Typing the name of the door at the conference command prompt. For example, typing MAIL at the *`(53 min. left) Main Board Command?`* prompt will load a door called MAIL.
4. If using an MNU file, one of your options in the MNU file can execute a door.

The third and forth methods provide the most interesting possibilities because you can make the door appear to be a more integrated function of your bulletin board system.

Accessing Parameters Passed To A Door

Any text entered after the door name or number will be passed as command line parameters. These command line parameters are available to the door application if they will read the PCBDOOR environment variable. If you open a door called MAIL by typing the following,

```
MAIL D;Y;G
```

PCBoard stores *D;Y;G* in the PCBDOOR environment variable. In order for the door to see these parameters, the door batch file must be modified. For the MAIL door mentioned previously, the batch file may resemble the following:

```
@ECHO OFF
CD\DOORS\MAIL
MAIL
%PCBDRIVE%
CD %PCBDIR%
```

The only change which has to be made is to change the line which executes the door program. Here you want to pass the command line parameters stored in the PCBDOOR environment variable to the door application as shown:

```
MAIL %PCBDOOR%
```

NOTE: For more information on accessing environment variables in batch files, please refer to your DOS manual.

Stuffing The Keyboard Upon Return

Upon returning from a door, PCBoard checks to see if a file named PCBSTUFF.KBD exits in the current directory. If it does, the contents are stuffed into PCBoard's keyboard buffer.

Example

If you have a door which creates a file for the user to download and you want it flagged for download, this can be done with a door. The first thing to do is create a file which is stuffed into the keyboard. For this example, the filename created by the door is DATA.ZIP.

In your PCBoard directory create a file named. DATA.STF. The contents of this file will contain the following:

```
FLAG;DATA.ZIP
```

The only change that must be made to the door batch file is to add a line which copies DATA.STF to PCBSTUFF.KBD. In your batch file, this line may appear as:

```
COPY C:\PCB\DATA.STF %PCBDRIVE%%PCBDIR%\PCBSTUFF.KBD
```

The %PCBDRIVE% and %PCBDIR% environment variables are used to insure the PCBSTUFF.KBD file is created in the proper directory. If it is not, PCBoard will not find it and nothing is stuffed into the keyboard.

NOTE: Once the PCBSTUFF.KBD file has been read by PCBoard, it is deleted.

Displaying A File Upon Return

When PCBoard returns from running a door it checks to see if a file named PCBDOOR.TXT exists in the current directory. If it does, the contents of this file is displayed.

Example

After a door is installed, it may have to be temporarily disabled due to some problems which have developed. You could delete the definition of the door from the DOORS.LST file, but that is more trouble than it is worth if it is only going off-line temporarily.

Instead, try inserting a *REM* before each line in the door batch file When you have done this, create a text file that you want to display to your callers. The next step is for you to add the following line to the end of the door batch file.

```
COPY C:\PCB\CLOSED.TXT %PCBDRIVE%%PCBDIR%\PCBDOOR.TXT
```

Assuming the display file is named CLOSED.TXT and is stored in C:\PCB, the file is displayed to anyone running the door. All lines beginning with REM are skipped but the new line is executed. Finally, control is returned to PCBoard which finds PCBDOOR.TXT and displays it.

NOTE: Once the PCBDOOR.TXT file has been read by PCBoard, it is deleted.

Disabling

To disable doors in a particular conference, clear out the fields related to door configuration as shown in the following example:

```
                Menu Listing                    Path/Name List File
Doors       :                               :
```

When a user attempts to open a door they are informed that no doors are available.

NOTE: Doors are always disabled for users who do not have established accounts on the system. The following lists the possibilities for a user to not establish an account on the system:

- The caller logged in as a new user on a node defined as a closed board and you have a NEWASK questionnaire defined.
- A user calls for the first time. When asked if they want to register, they choose not to. In order for the user to remain online, you must give those who *refuse to register* a security level other than 0.

Creating Menu

If doors are available in a conference, when a user types OPEN or DOOR from the conference command prompt, they are shown a file which lists all of the available doors on the system. This file is specified by the following field in the conference configuration:

```
                Menu Listing
Doors       : C:\PCB\GEN\DOORS
```

This file is commonly referred to as the DOORS file. You can edit this text file by pressing 2 or 3 as listed on the bottom of the screen. When creating this file, list either the door number or door name (filename in DOORS.LST) and a description of the door for your users. The user can open the door by typing the door name or door number.

Script Questionnaires

Script questionnaires provide a method which you can ask the user questions and record their responses to a text file.

Creating

Two types of questionnaires can be created. The normal question type is a text file with a question on each line. The second type is a PPE file. PCBoard can run any existing PPE but to create a PPE you must have the optional PPL (PCBoard Programming Language) Compiler.

Scripts are defined for the conference in the SCRIPT.LST file. This file contains the location of the script file and where the answers for the script are stored. When SCRIPT.LST is edited by pressing 2 , a screen resembling the following appears:

```
Conference Name  (#0)       : Main Board

      SCRIPT Questionnaire Files      SCRIPT Answer Files
      --------------------------      -------------------
1)
```

The first field specifies the location of the script questionnaire. The second field specifies the location where the response file is stored. PCBoard determines if the file is a standard questionnaire or a PPE file based on the filename extension specified. If the filename of the questionnaire ends with PPE, the questionnaire is treated as a PPE. Otherwise, the file is treated as a standard questionnaire.

Standard Questionnaires

Standard questionnaires are very easy to setup because the questionnaire itself is a text file. Questions are asked one line at a time (79 characters max) and the user is given the ability to respond to each question with a 60 character response. There is no method provided to check the response of the user but this can be done by creating a PPE file instead.

The easiest way to load the script questionnaire file is to press 2 while highlighting the script to edit in the SCRIPT.LST editor. PCBSetup will use your text editor to load the script questionnaire.

The first five lines of your questionnaire file are called the *script header*. You can use these five lines to give users a brief overview of the questionnaire. After PCBoard displays the header to the user, they are asked if they want to continue answering the script. If they choose not to answer the questionnaire, they return to the main menu.

Anything after line five in your questionnaire file is considered a question. Each line is a question. The following is a simple example of a questionnaire:

```
----------------------------------------------------

This questionnaire asks for your name

----------------------------------------------------
Enter your first name?
Enter your last name?
```

If a user will executes this script, they see the following:

```
----------------------------------------------------
```

```
This questionnaire asks for your name

-----------------------------------------------------

Complete the Questionnaire (Enter)=no? (y)

Enter your first name?
? (Jim                                                        )

Enter your last name?
? (Smith                                                      )
```

As you can see, every line after the fifth line is considered as a question. If you want to only display text and not ask a question, begin the line to display with a semi-colon. This is referred to as a *comment line*. If you want, you can use comment lines to ask questions which use more than one line. Look at the following questionnaire file:

```
-----------------------------------------------------
We have several items available for sale.  From
hardware to software, we have products that fit your
needs and wants.  If we don't have it, just ask!
-----------------------------------------------------
;We have the following products available for sale:
;
; 1.  Complete 80486 system with SVGA video system
; 2.  Whiz-bang hard-drive
; 3.  Plain paper bag software
Which item would you like to order?
```

When the user executes this script, they will see the following display:

```
-----------------------------------------------------
We have several items available for sale.  From
hardware to software, we have products that fit your
needs and wants.  If we don't have it, just ask!
-----------------------------------------------------

Complete the Questionnaire (Enter)=no? (y)

We have the following products available for sale:

 1.  Complete 80486 system with SVGA video system
 2.  Whiz-bang hard-drive
 3.  Plain paper bag software

Which item would you like to order?
? (3                                                          )
```

Notice how those lines prefixed with a semicolon were only displayed on the screen. Only after the items for sale were listed was the user prompted for input by the line in the questionnaire not having a semicolon in front of the line.

PPE Files

Because PPE files are made from the PCBoard Programming Language the actual creation of these files are too complex to cover in this section. Instead, refer to the documentation included with the optional PPL Compiler package for further instructions.

If you are given a PPE file and need to install it on your system, enter the PPE filename in the *Script Questionnaire Files* field including the .PPE extension. PCBoard knows it is a PPE file and execute it properly.

Reading Responses

The entire purpose behind questionnaires is to get responses from the users who fill them out. The responses to the questionnaire are stored in the filename specified in SCRIPT.LST as the answer file. The following is a sample entry in SCRIPT.LST:

```
        SCRIPT Questionnaire Files      SCRIPT Answer Files
        --------------------------      -------------------
1)      C:\PCB\MAIN\SCRIPT1             C:\PCB\MAIN\ANSWER1
```

In this example, all answers are written to a file called *ANSWER1* located in the *C:\PCB\MAIN* subdirectory.

Standard Questionnaires

The response or answer file for a standard questionnaire follows a very rigid format. PCBoard begins the response with a row of asterisks (*) to help separate this response from others. The next line contains the name of the user that filled out the questionnaire, the date and time the questionnaire was filled out, the node number the user was on, the security level of the user, and finally the expiration date of the user. he rest of the lines in the response file show the question, and the response of the user. Only the question line is recorded. If you use comment lines in your script questionnaire they are not recorded.

PCBoard continues to append responses to the file so you may want to periodically delete the response file after you have reviewed the answers.

PPE Files

Because PPE files are created using PPL (PCBoard's Programming Language) the way the responses are stored is the responsibility of the PPE author. Therefore, if you do not understand the response format, contact the author of the PPE file.

Session Time Limits When Answering Questionnaires

While a user is answering or running (in the case of a PPE) a questionnaire, the session time limit is suspended to insure the questionnaire can be completed before the user is logged off. If the user's time has been adjusted for an upcoming expedited event, the session time limit will not be suspended to make sure the event runs on time.

Disabling Scripts

You can disable script questionnaires simply by blanking the SCRIPT and SCRIPT.LST fields in the conference configuration of PCBSetup. If it used to look like

```
Scripts     : C:\PCB\GEN\SCRIPT            : C:\PCB\LST\SCRIPT.LST
```

change it to read

```
Scripts     :                              :
```

By doing this, your users will be notified that no scripts currently exists when they try to fill out a script questionnaire.

Creating The Menu

In order for your users to know what scripts are available on your system (if any), edit the *Script Menu Listing* file. This file is commonly referred to as SCRIPT.

This is the file displayed to the user when they execute the S user command. This file is nothing more than a text file. Because it is a text file, you can design it to look or display anything desired. As a general rule it should contain the script number and a description of each script questionnaire. The following is a sample script questionnaire menu file:

```
Scripts Available On This System
----------------------------------------

[1] Order a subscription to this system
[2] Order a product we sell
```

You can create this text file using just about any text editor. Better yet, if you have defined your text editor or graphics editor in System Manager, press 2 or 3 (depending on which file you want to edit). Otherwise you will have to manually edit the files while at the DOS prompt.

Bulletins

Bulletins provide a method with which text files can be displayed to callers. Text files can be created with text editors or even with word processors that allow you to export to ASCII format. You can use bulletins to list current events, rules of your system, legal information in regards to communications services, etc.

Creating

Bulletins are very easy to setup. To configure the bulletins available in a conference, highlight the following field in the conference configuration screen:

```
             Path/Name List File
Bulletins   :C:\PCB\LST\BLT.LST
```

Now press 2 to edit the BLT.LST file. A screen resembling the following will appear:

```
Conference Name  (#0)       : Main Board

Enter a list of BLT Paths & Names
-----------------------------------
 1)
```

The number on the left hand side of the screen represents the bulletin number. In the edit field specify the filename to display when a user chooses the bulletin number listed to the left. As an example, you may want users to view C:\PCB\GEN\ORDER when bulletin 1 is selected. If so, make the following entry in the BLT.LST file:

```
Enter a list of BLT Paths & Names
-----------------------------------
 1)   C:\PCB\GEN\ORDER
```

Adding another bulletin can be done by pressing A - I . You will now see there is an entry for bulletin 2 which can be filled in to display any file you desire.

Adding Bulletins That Can Be Searched As Records

To add a bulletin that can be treated as a textual database, follow the previous instructions for adding a bulletin. The difference is in the contents of the bulletin file, not in how it is defined in PCBoard's setup.

There are a few things to keep in mind when designing bulletins of this type:

1. Any line that begins at column 1 with an = (equals sign) or - (dash) is considered to be a *separator*.
2. All text above the first separator is called the *header*.
3. There is no limit to the number of records in the bulletin.

When a search is entered using the B;S user command (and a match is found), PCBoard first displays the header, and then proceeds to display only matching records. No other information is displayed. Remember, records are defined using separators as shown in this simple example:

```
This is header line #1
This is header line #2
This is header line #3
---------------------------------------------
This is line #1 of record 1
This is line #2 of record 1
==========================================
This is line #1 of record 2
This is line #2 of record 2
```

Making Bulletins Available For Download

Any bulletin(s) can be downloaded. When the request to download a bulletin is made, PCBoard checks the FSEC file to see if any security restrictions or other special conditions relate to the bulletin being downloaded. The B user command provides subcommands and explanations for downloading any bulletin number.

As desired, compressed versions of bulletins can be made available for download instead. PCBoard will look at the `Filename EXTENSION for compressed files` in *PCBSetup | File Locations | Configuration* to find the extension for compressed files on your system. For example, if you have a bulletin entitled BLT1 and it is stored in the C:\PCB\GEN subdirectory, PCBoard searches for a filename called BLT1.ZIP in the same subdirectory if the compression extension is .ZIP.

NOTE: If PCBoard can find a file with the same name as the bulletin and with your compression extension, it will pick that file for download instead of the uncompressed version.

Disabling

To disable bulletins in a conference, clear out the fields that relate to bulletins in a conference configuration screen. For example, if the bulletin fields contain the following information:

```
                Menu Listing                    Path/Name List File
Bulletins    : C:\PCB\GEN\BLT               : C:\PCB\GEN\BLT.LST
```

blank the fields out making them look like the following:

```
                Menu Listing                    Path/Name List File
Bulletins    :                              :
```

Your bulletins will be disabled and your users will be warned no bulletins are currently available on the system when trying to view them.

Creating Menu

Whenever a user presses B and R , a list of available bulletins is displayed. The file displayed is the *bulletin menu listing*. The filename for this menu or the actual menu itself may be changed by editing the following field in the conference configuration screen:

```
                Menu Listing
Bulletins    : C:\BLT\BLTMENU
```

7

Multiple Nodes

Overview

PCBoard is designed with multi-user access to a system in mind. Each user that accesses the system must log in through a node. A node refers to a copy of PCBoard that is running on a network, multitasker, or some other system that has the ability to share resources through shared file access. Users may access the system remotely through a modem or locally through a network or local node.

What Is Needed to Run More Than One Node?

There are two different ways to run multiple nodes with PCBoard: multitasking and networking. Each method has various advantages and disadvantages but they all have one thing in common—the ability to share files.

What is Multitasking

Multitasking is a method of running more than one program at a time on a single machine. When multitasking, you are not actually running all of the programs at the same time as the CPU is not capable of doing so. Instead, the multitasking software manages the resources of the CPU and switches **very quickly** between each program. Of course, since you are switching back and forth between each task, having a faster CPU will make each task run more smoothly. *To really be effective in running multiple nodes, you need an 80386 based machine or higher*.

What is a Network?

A network allows several different computers to share resources (hard drives, printers, etc.) with each other. In order for a resource to be considered *sharable*, it must be stored on a computer that is referred to as a server. The workstations (other computers in the network) can use the resources located on the server as if they are installed on the workstation computer.

The most popular network is called a Local Area Network (LAN). All communications in a LAN is done between cabling which is hooked into each machine. Another network type is called a Wide Area Network (WAN). The machines in these networks are so far apart you could not use cabling to connect them. Instead, alternate methods such as dedicated phone lines are used to send data across the network.

As an example of shared resources, if you had a 1.2 gigabyte drive on one machine and you hooked up a LAN, the server is the computer with the large hard drive and the workstation is the computer that will access that drive via the network. The server drive can then be accessed from the workstation as if it were installed on the workstation itself.

Should I Use a Network or a Multitasker?

There are a few questions you need to ask yourself when considering a multi-node setup. These questions will help you get a better feel if a network, multitasker, or a combination of both should be used.

How many nodes do I plan to run?

If you are considering running more than 16 nodes on one machine, immediately rule out running them on one single machine. With the multi-port (/M) version of PCBoard, you can take advantage of some of the 4, 8, or 16 port intelligent serial boards provided by Arnet and DigiBoard and others. The intelligent boards off-load some of the processing from the main CPU allowing you to run more ports on a single machine. If using non-intelligent or standard ports driven by UARTs, you may not be able to run as many ports on one machine as you can with an intelligent card. The limitation with standard boards where each port uses it's own IRQ is the number of free IRQs on the system (a total of 16 exist in the machine). With non-intelligent boards the limitation is if your computer will be able to service all of the ports in a timely manner.

A network gives you the ability to expand beyond the 4-16 node limit imposed by running on a single machine. For example, you can have a dedicated server and 20 workstations on the network. On each workstation, you can run a multitasker and consequently 4-16 nodes on each workstation. Conceivably, you can run up to 320 nodes in a 21 machine network if you used a multitasker on all of the workstations with intelligent serial cards. Of course, you do not have to run multitaskers on each of your workstations. Instead, you could run one copy of PCBoard on each workstation resulting in 20 nodes on 20 machines.

How important is performance?

When multitasking nodes on a machine you do pay a price -- performance (because you are running multiple copies of PCBoard on one processor). If you get a faster computer, the constant switching between tasks in a multitasker will seem much smoother. If performance is extremely important to you, invest in a network with fewer copies of PCBoard running on each workstation. A network would be pointless though from the performance angle if you were to use slow machines like XTs as your workstations. Using XTs for your workstations would defeat the purpose. Instead, you would be better served by using 386 or higher machines as your workstations and multitask on them.

How much money is in the budget?

Whether you choose networking, multitasking, or a combination of both, the primary expense will be the hardware required to run the number of nodes desired. Some of the more expensive items to consider in your setup are the computers, network cards (if you choose networking) or the intelligent serial boards (for multitasking). Of the items listed, the computers are the likely to be the most expensive item. Therefore, everything you can do to reduce the number of computers to buy while still meeting your performance requirements will be to your advantage.

As an example, if you need to run five nodes and performance is rather important to you, setup a three machine peer-to-peer network with one server and two workstations. On each of the workstations multitask two nodes using a 386 or 486 and on your server run a single node. Running two nodes on a workstation means less computers in your network and it also means lower overall cost.

How much room is available for computer equipment?

Another valid concern about your multi-node setup is how much physical room it is going to take. This is especially true of a setup which uses a network because there are multiple machines in the network. If space is limited and you are using a network, perhaps you will want to multitask on your workstations to reduce the number of machines required for the network.

Can I fit all of the storage space on one machine?

Another item you will need to plan for is how much file storage space will you have online and will it all fit on one machine. For example, if you wanted to put 16 gigabytes online, it may be very difficult to do so inside of one machine. In a situation like this, you would have to go to a network setup with multiple servers to accommodate all of the storage space.

In summary, the following tables list the advantages and disadvantages of multitasking, networking, and running a multitasker on the workstations of a network:

Multitasking: Advantages

- You can run more than one node on a single computer
- Less hardware cost per node (hard drives, monitors, etc.)
- Different nodes are a keyboard away

Multitasking: Disadvantages

- System is harder to tune.
- A system which uses serial ports other than COM1 or COM2 may find that not all third party programs accessing the COM ports will work with *non-standard* or *FOSSIL* ports.
- If a multitasking machine crashes or hangs, all nodes on the machine will be hung.

Networking: Advantages

- Each node uses a dedicated CPU. This can increase performance.
- You are not limited to the number of nodes you can run on one machine.
- When one workstation crashes, the entire system is not down.

Networking: Disadvantages

- Cost. A LAN configuration requires both hardware and software.

Networking - multitasking workstations: Advantages

- More than one node can be run from one computer while still retaining all of the advantages of a network.
- More economical than running one node per workstation
- Saves space because you do not use a computer for each node

Networking - multitasking workstations: Disadvantages

- Requires that both your multitasking setup and network setup are

The remaining sections in this chapter will cover setting up multiple nodes using either a multitasker or a network. Please refer to the appropriate section for the method you have chosen to implement your multiple node setup.

Using An External Comm Driver

PCBoard supports four different types of "comm" drivers to connect with serial devices. The asynchronous (async) driver is internal to PCBoard. The remaining drivers all rely on external support. COMM-DRV and FOSSIL require you to load drivers in your AUTOEXEC.BAT or CONFIG.SYS. The OS/2 driver in PCBoard talks directly with OS/2's communications API allowing you to use any serial device supported in the OS/2 environment.

NOTE: If you will not be using an external comm driver such as COMM-TSR, FOSSIL, or OS/2, skip this section and proceed to *Multiple Nodes Using Multitasking Software*.

Use of an external comm driver is only required when you want to talk with a *non-standard* multi-port card. What makes these cards non-standard? Standard serial ports require a unique base address and IRQ to communicate properly with software. Some multi-port boards will let you configure all ports to communicate on the same IRQ and additionally may have processors on the board to enhance processing speed. For software to communicate with these cards, an external driver must be loaded.

Many of the multiport cards include their own drivers but these drivers are usually proprietary in design. The goal behind PCBoard's support for multiport cards is to only support the drivers which support a wide-range of cards. This way PCBoard keeps your options open as to what hardware you want to use on your system.

The following sections discuss more about the external drivers supported in PCBoard. In each section, detailed descriptions and examples will be given to help you configure your hardware to work with PCBoard.

COMM-DRV

COMM-DRV is a third-party communications driver which is included with your copy of PCBoard. COMM-DRV supports non-intelligent (dumb) and intelligent cards alike. At the time this manual was printed the following cards were supported:

Intelligent:

- *Arnet*: Smartport / Smartport Plus
- *Boca Research*: BB1610, BB8002
- *DigiBoard*: PC/Xe, PC/Xi, PC/Xm, 2Port
- *GTEK*: PCSS-8FA, PCSS-8FX

Non-intelligent:

- AST 4 Port
- Intel HUB 6
- Arnet
- Boca Research
- DigiBoard
- GTEK

Because COMM-DRV is a third-party driver, it is likely that support for new cards will be added between PCBoard releases. If you want to know whether your serial hardware is supported or not, call technical support.

Configuring COMM-DRV

When you installed PCBoard, you were asked if you wanted to install COMM-DRV. If you elected to install it, the necessary files for COMM-DRV will be stored in the `\COMMDRV` directory on the same drive where PCBoard is installed.

In the `\COMMDRV` subdirectory is a program named `DRVSETUP.EXE`. Using this program, you will create a data file defining each port you want COMM-DRV to control. For each port you specify what type of serial card the port is on and any additional information necessary for proper operation such as IRQ, I/O addresses, and memory segments. Because you control the parameters for each port, card types can be mixed and matched in the same machine.

NOTE: If any drivers are included with your serial card, do not install them. COMM-DRV will talk directly with the hardware as configured with DRVSETUP.

If you will be using a multiport card in conjunction with standard serial ports, defining the standard serial ports with DRVSETUP will result in more overhead. One advantage to defining the ports with DRVSETUP is when doors and other third-party software is used on the system. By having COMM-DRV provide FOSSIL support for every port (even the standard serial ports), the configuration for the system will be easier to maintain. For better performance on the standard serial ports, have PCBoard use the Asynchronous COMM driver (*PCBSetup | Modem Information | Modem Setup*) and enter the COM port to use. This will avoid the extra overhead of defining the COM port to be used with COMM-DRV.

Loading DRVSETUP

As mentioned previously, you need to use DRVSETUP.EXE to configure COMM-DRV. This utility is in the \COMMDRV subdirectory on the same drive where PCBoard was installed. The syntax for DRVSETUP is as follows:

```
DRVSETUP config.dat
```

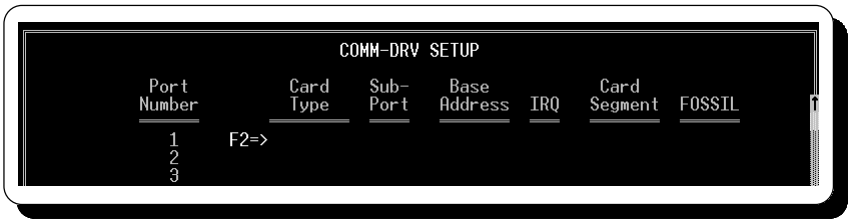
`config.dat` is the setup file that you want to create or edit. You may enter any valid DOS filename. For example:

```
DRVSETUP COMMDRV.DAT
```

If the filename you specify does not exist, it will be created. If it does exist, the existing port definitions will be loaded into the editor where you may make any necessary changes to the file.

Configuring COMM-DRV

To properly configure COMM-DRV, load DRVSETUP as described in the previous section. When you do, you will see a screen which resembles the following:



Within the DRVSETUP editor, the following keyboard commands are valid:

E	**Exit the DRVSETUP editor**. If you have made any changes to the config file, you will be asked if you wish to save the changes that have been made.
u	**View previous 16 entries**. Only a portion of the possible entries can be viewed on the screen at one time. To view the previous 16 entries, use this keyboard command.

d	**View next 16 entries**. Only a portion of the possible entries can be viewed on the screen at one time. To view the next 16 entries, use this command.
2	**Pick card type**. When the `Card Type` field is highlighted, a list of card types that are supported by COMM-DRV will be listed. Pick the type that matches your serial card.
A - R	**Repeat currently highlighted line**. If you are creating entries that are very similar in definition, use this keyboard command to duplicate the currently highlighted entry. The new entry is inserted just below the current line.
A - I	**Insert a new entry**. If you need to add a new entry between two existing entries, use this keyboard command. A new blank entry will be inserted just below the current line that you can edit to suit your needs.
A - D	**Delete current entry.** This keyboard command will delete the currently highlighted entry. There is no undo function to get the original line back. If you make a mistake, exit without saving and make the changes again.

The following describes each of the fields that are displayed on the DRVSETUP screen:

Port Number

This field represents the port number to define. This is the number you will specify in *PCBSetup | Modem Information | Modem Setup* for the `Comm Port` if you answered `C` to the `Comm Driver to use` question. You cannot edit the contents of this field.

Card Type

When this field is highlighted, press 2 to pick a list of supported card types. The following card types are available:

UART: If you will be using a standard serial port that has a 16550, 16450, or 8250 UART (e.g., COM1, COM2), select this option. If you plan on running multiple nodes, you should be using serial ports that are equipped with 16550 UARTs to prevent data loss. Each port that you define using this card type must have a unique base address.

HUB6: Choose this option if you have an Intel HUB6 non-intelligent serial card installed in your machine. This card can share one IRQ for all ports but it cannot share one base address for all of the ports. Each port must have a unique base address.

COM/XI: Select this if you have a DigiBoard® COM/XI serial card installed in your machine.

ARNET: Choose this option if you have an Arnet® SmartPort or SmartPort Plus intelligent serial card installed in your system.

BOCA1610: Select this option if your multiport card is a Boca BB1610 or a BB8002.

PC/XI: Choose this option if you have a DigiBoard® PC/Xi, PC/Xe, PC/Xm, or 2Port serial card installed in your system.

GTEK: Support for the GTEK intelligent cards include the PCSS-8FA and PCSS-8FX models. Select this option if using either of these models.

PC-COM: If you have a Willies (WCSC) non-intelligent 4 or 8 port serial card installed, select this menu option.

BOCA-DMB: Choose this option if your card is a non-intelligent Boca serial card.

AST: If you have an AST® non-intelligent serial card installed, select this menu option.

Sub-Port

On multiport cards which share the same IRQ for all ports, a method for identifying each port is necessary. Sub-ports are used to identify the ports on the multiport cards using one IRQ for all ports. With a serial card requiring all ports to have unique IRQs, always enter a sub-port of 1.

How do you know what the sub-port number is? Use the port number on the multiport card as the sub-port number. Do not confuse the port number field on the left side of the setup screen with the sub-port number because these numbers do not have a direct relation to one-another.

For example, if you are using an Arnet SmartPort 8, you will have 8 different ports on the card. Enter the appropriate port number on the card into the sub-port number on the screen. The following is an example setup for an Arnet SmartPort 4 port card:

COMM-DRV SETUP

Port Number	Card Type	Sub-Port	Base Address	IRQ	Card Segment	FOSSIL
1	ARNET	1	0	0	0	Y
2	ARNET	1	0	0	0	Y
3	ARNET	1	0	0	0	Y
4	ARNET	1	0	0	0	Y
5						

If you want to use a standard serial card in addition to an intelligent serial card, you can with COMM-DRV. The following shows a configuration where COM2 is defined in the first entry, and the rest of the entries define the 4 ports on the Arnet card:

COMM-DRV SETUP

Port Number	Card Type	Sub-Port	Base Address	IRQ	Card Segment	FOSSIL
1	F2=>UART	1	0	0		Y
2	ARNET	1	0	0	0	Y
3	ARNET	1	0	0	0	Y
4	ARNET	1	0	0	0	Y
5						

Notice how the sub-port value for the COM2 entry is one but so is the first port of the Arnet card. Because these entries refer to two separate serial cards (a standard serial board and an Arnet SmartPort), there is no conflict to be concerned with.

Base Address

In this field, enter the base or i/o port address (in hexadecimal) which will be used for the port being defined. The value you enter must match the way the serial card is configured. If it does not, PCBoard will not be able to communicate with the serial port.

When configuring your serial card, make sure it is configured to not conflict with any other devices or cards in your system. Conflicts with i/o addresses on your computer will prevent you from communicating with the serial port(s). Refer to the documentation for your serial card for additional information on configuring the base addresses for your serial ports.

IRQ

This field identifies the IRQ used for the port you are defining. As with the base address, you must refer to how you have configured your serial card to determine the proper setting for this field. Most of the multiport cards will allow you to use one IRQ for all of the ports on the card. Standard serial ports, however, require each port to use a unique IRQ to operate properly. Refer to the documentation for your serial card for more information on this subject or to determine if it supports one IRQ for all ports.

It is **critical** that the IRQ selected for use with your serial card does not conflict with any other devices in your system. For example, you cannot have two serial boards using the same IRQ nor can you have a network card and a serial card sharing the same IRQ. If you do, your system may become prone to lockups or function in an unpredictable manner.

NOTE: It is recommended that you do not use IRQ2 or IRQ9 for any of your devices if at all possible. These IRQs are known as the cascading interrupts because they are used to communicate with IRQs above 8. If you use IRQ2 or IRQ9 and you have devices which use IRQs above 8, you can run into some serious conflicts which may cause unpredictable operation.

Card Segment

Intelligent serial cards such as those produced by Arnet commonly use a 32 or 64 kilobyte segment in high memory for transferring data to and from the serial card. In this field, enter the starting address value for the memory segment the serial card uses. For example, if your intelligent card uses a 64 kilobyte segment beginning at D000h, enter `D000` in this field.

When you have finished configuring DRVSETUP, configure your memory manager to exclude this 32 or 64 kilobyte region to prevent conflict with other programs. Refer to the documentation for your memory manager for additional information on excluding memory.

FOSSIL

The value of this field will determine whether or not COMM-DRV should provide a FOSSIL interface for the port you are defining. Valid options for this field are:

N No FOSSIL interface will be provided for this port. Select this option if PCBoard will be the only application communicating with the port. If you run doors or other third party applications which access the serial port, they will not be able to function properly with this setting.

Y The FOSSIL interface will be provided for this port. Select this option if you use or will be using any third party applications which access the serial port. You should check all third party applications to insure they will communicate with a FOSSIL interface before installing them on your system.

If one or more of your ports are configured to enable FOSSIL, you cannot exceed an opening port speed of 38400 because the current FOSSIL specification allows a maximum communications speed of 38400.

When you have finished configuring all the serial ports in DRVSETUP, press E to exit the editor, and when prompted if you want to save the changes, answer *Y* and press R . Next, add the driver to your AUTOEXEC.BAT and test to make sure it is configured properly.

Installing COMM-DRV

Once DRVSETUP is used to configure the ports, install the driver in the AUTOEXEC.BAT file. The program to execute is called COMMTSR.EXE and the syntax is as follows:

```
COMMTSR -i filename.dat
```

The *filename.dat* parameter is the filename defined earlier using DRVSETUP. The configuration file should be stored in the same directory as the rest of the COMM-DRV files. By keeping the files together, you can change to the COMMDRV directory in AUTOEXEC.BAT, load the driver, and return back to the root directory as shown in the following example:

```
CD\PCB\COMMDRV
COMMTSR -i COMMDRV.DAT
CD\
```

NOTE: The *-i* parameter is case-sensitive and must be entered in lower-case. Otherwise, the driver will not load and will report that an invalid option was specified.

This line, which loads COMM-DRV, should be entered towards the top of your AUTOEXEC.BAT file because the driver must be loaded before your multitasking software is loaded. The driver itself uses quite a bit of memory and may affect the configuration of your machine by leaving you less conventional memory available than before you installed the driver. Loading the driver in high-memory is not recommended but may be possible if you load it as the first program in AUTOEXEC.BAT.

Once you have made the necessary changes, reboot your system to make sure your setup is correct and COMM-DRV initializes properly. If you define four ports with DRVSETUP, the display you may see when the driver is initialized will resemble the following:

```
(COMMTSR)COMM-DRV v15.0b Copr (C) 1989-1995 Willies' Computer Software Co.
ALL RIGHTS RESERVED. Houston, Texas (713) 498-4832
COMMDV00.DRV installed(GENERIC     1.01). ADR=171B:0000 SIZE=1118
Port #0 Installed successfully
Port #1 Installed successfully
Port #2 Installed successfully
Port #3 Installed successfully
Attaching to INT14H Handler
COMMDRV Installed START=1461:0000 END=1863:0100 MPX=C0
```

Notice that all 4 ports were *Installed successfully*. A port which is installed successfully means the preliminary checks on the hardware checked out okay. This is no guarantee that there is no problems with your configuration as many other factors can affect proper operation. If you have problems getting PCBoard to recognize your modem, refer to the troubleshooting section of the manual.

COMM-DRV refers to ports 0 through 3, which PCBoard translates to ports 1 through 4 (because port 0 in PCBoard refers to a local login). If you receive any error messages when the ports are initializing, double check your configuration, making sure all base addresses, IRQ, and memory segment settings are correct and reboot the system. If you still experience a problem, contact technical support for additional assistance.

FOSSIL

Unlike COMM-DRV, a FOSSIL driver is not created or maintained by any one entity. FOSSIL is a standard developed in the late 1980s to help reduce the time required to program serial-based programs (BBS, terminal package, etc.). Another goal of the FOSSIL driver was to replace standard DOS serial port routines to better enhance performance of high-speed communications. FOSSIL refers to the standard developed by this group. Because FOSSIL is just a standard, you may find several different drivers are available and all have different authors. Throughout this section of the manual, we will use Ray Gwynn's X00 FOSSIL driver in all examples. X00 is a third-party file available on our support bulletin board.

The majority of FOSSIL drivers support standard serial ports but no specialized hardware like intelligent cards. Since PCBoard already has high-performance serial routines for accessing standard serial ports, why

would you want to use a FOSSIL driver instead? Many FOSSIL drivers will let you use a 4 or 8 port non-intelligent card and share the same IRQ amongst all ports. With PCBoard's internal routines, you would have to configure each port to use a unique base address and IRQ.

Installing A FOSSIL Driver

Installing X00 requires you to add it in your CONFIG.SYS. The format to specify a port is:

PORTn=HEXADDRESS,IRQn

To define port 0 for what is known as COM1 (hex address of 3f8 and IRQ4), enter the following for the port definition:

0=3F8,IRQ4

An example configuration of a 4-port card capable of sharing the same IRQ on all ports using X00 might look like this:

```
DEVICE=C:\X00.SYS T=2048 0=2E0,IRQ3 1=2E8,IRQ3 2=2F0,IRQ3 3=2F8,IRQ3
```

OS/2

As with many operating systems, OS/2 uses device drivers to talk to devices or equipment in your computer. A device driver is used for your video card, hard drive, and even your serial port hardware. Unlike most DOS applications, PCBoard can communicate directly with the OS/2 v2.x driver controlling the serial port in your system. By talking directly to the communications driver, any serial device that has an OS/2 driver can be used with PCBoard.

Installing An OS/2 Driver

You should refer to the author of the OS/2 driver for detailed instructions on how to install your OS/2 driver into your system. The driver will most likely be loaded in CONFIG.SYS and may look something like this:

```
DEVICE=C:\ARNET\ASP.SYS /F:C:\ARNET /a:Q /N:5 /m:D0000 /p:300 /t:L /Z:1
```

The example shown above is a sample configuration line for an Arnet SmartPort card using a memory segment of D000h, base address of 300h. The device names for the ports will begin at COM5 (/n:5) and be defined up to COM8.

The only other change you must make is in *PCBSetup | Modem Information | Modem Configuration*. Here you need to change the `Comm Driver` to `O` so PCBoard will know it has to communicate with the OS/2 driver as shown in the following example:

```
Comm Driver to use (A/C/F/O)   : O   A=ASYNC, C=COMM-DRV, F=FOSSIL, O=OS/2
```

Answers To Common Questions

Question: Every time a user tries to use an external protocol or open a door, he loses carrier. What could be causing this?

Answer: It is quite common for an OS/2 driver to be configured to lower the DTR signal on the serial port when the port closes. This presents a problem to host communications software such as PCBoard because it is quite likely to pass control from one application to another on a bulletin board system. Each time control is passed, it is proper to close the port which lowers the DTR signal. Since most modems are configured to drop carrier when DTR is lowered, you can see why carrier is dropped. Contact the developer of the OS/2 driver and ask them to implement a "Sticky DTR" option which does not lower the DTR signal when the port is closed.

Question: PCBoard runs fine, but none of my door programs recognize my serial port hardware. What can I do?

Answer: PCBoard is unique because it is one of only a few DOS applications capable of communicating with the OS/2 communications driver directly. While PCBoard will work well communicating this way, your door applications will not. A popular solution is to install a FOSSIL "middle-man" driver. This middle-man driver translates OS/2 communications driver calls to corresponding FOSSIL calls and vice versa. FOSSIL support is built in to a large suite of door applications opening up your possibilities. You can find a driver like this on our support board by (Z)ippy scanning for FOSSIL & OS/2.

Configuring PCBoard to Use One of the External Drivers

When installing PCBoard, you should have been asked if you wanted to install COMM-DRV. If you answered *Y* to that question, the install program properly configured PCBoard to operate with multiport driver. If you answered N to that question, change the following in your PCBoard Configuration:

- In *PCBSetup* | *Modem Information* | *Modem Setup* change the response to the `Comm Driver to use` question to match the driver being used: C for COMM-DRV, F for FOSSIL, or O for OS/2.

PCBoard is now be ready to function properly with your multiport card. At this point, setup your first node and test to make sure it is operating properly. Once you get one node setup, you may proceed to the next section which discusses the steps necessary to add the remaining nodes.

Multiple Nodes Using Multitasking Software

Getting Started

Whether you are using standard serial ports or intelligent serial boards, multitasking enables you to run several nodes on a single computer. This type of setup may seem complicated at first, but after reading this explanation the majority of your questions about setting up a multi-node system should be answered.

Recommended Hardware:

- 80386 (or better) based computer with 1 megabyte of memory for each node. The memory recommendation is up and above the requirements for the operating system.
- One serial port for each modem you plan to use per machine. If you are using standard serial ports, make sure they are equipped with NS16550AFN UARTs. Each standard serial port must use a unique base address and unique IRQ. If you are using any other type of serial board (such as an intelligent Arnet or DigiBoard card), make sure it is supported by PCBoard.
- Floppy drive (5 1/4" or 3 1/2")
- Hard drive
- Monitor and video card
- Modem for each phone line

Necessary Software:

- MS-DOS (V3.3 or higher)
- Multitasking Software (e.g., DESQview, OS/2, or Windows)
- PCBoard
- Disk caching software

Modifying System Files

DOS

There are a few changes you will likely have to make to your AUTOEXEC.BAT and CONFIG.SYS system files. You should already have an AUTOEXEC.BAT and CONFIG.SYS for your system. This section details what you must have in these files in order to properly run a multinode setup using multitasking software. If you have other items in these files, do not worry as they may be necessary for your particular system (hardware drivers, etc.)

CONFIG.SYS

At this point, make sure you have the following items in your CONFIG.SYS:

```
DEVICE=[memory manager] [optional parameters]
DEVICE=[disk cache program]
FILES=nn
BUFFERS=nn
STACKS=0,0
SHELL=C:\DOS\COMMAND.COM C:\DOS\ /E:512 /P
FCBS=n,n (This line is optional)
```

DEVICE=[memory manager]: On this line load your memory manager (e.g., QEMM, 386MAX, HIMEM.SYS, etc.) The installation program for your memory manager will place this line in your CONFIG.SYS. If not, please consult the instructions for your memory manager for proper installation instructions. Almost every memory manager has parameters you can use to customize what memory will be used. Unless you have a good reason to specify different parameters, leave them as is. If you do have to make changes, be sure to consult your manual.

DEVICE=[disk cache program]: A good disk cache will do wonders for your system performance. A disk cache is similar to a dynamic ram disk. Instead of reserving memory and storing files in memory, a disk cache stores the most frequently accessed data in memory. If a program requests a read from disk and the data is in the disk cache, your machine will pull the data from the cache rather than the hard disk. If your system does not already have a disk cache installed, check your DOS manual to see if one is included with your package.

Some disk caches load in AUTOEXEC.BAT rather than CONFIG.SYS. Check the disk cache manual to see if the disk cache needs to be loaded in AUTOEXEC.BAT or CONFIG.SYS.

You may be asking "Why not use a ram disk instead of a disk cache?" If you use a ram disk instead of a disk cache, you are more likely to lose data if the power goes down. Additionally, you may not really be putting the files in the ram disk which will give the biggest performance boost to your system. A ram disk is advantageous if you use a program which creates numerous temporary files. The best bet is to use a disk cache instead of a ram disk.

FILES=nn: On this line replace **nn** with 25 multiplied by the number of nodes you plan to run. For example, if running 3 nodes on your machine, set this value to 75 (25*3).

BUFFERS=nn: For optimum performance, this value should be set to 8 if using a disk cache (hardware or software) and 30 if not using disk-cache.

STACKS=0,0: If you do not already have a *STACKS=* line in your CONFIG.SYS file, add this line to it. This line is necessary when running multitasking software. By making this change you will also free up additional memory. On some systems, using no interrupt stacks may cause lockups or other unexplained problems. If you are experiencing any strange problems or your system becomes unstable, try setting your *STACKS=* statement to *9,128*.

FCBS=n,n: FCBs were only used in older DOS programs. If you are not running old programs that use FCBs, you may be able to omit this line. The first parameter is the number of FCBs you want, and the second number is the number to lock. If you do not need FCBs, set this to *1,0* and free up even more memory for your multitasker.

SHELL=C:\DOS\COMMAND.COM: Increases the available environment space to 512 bytes. This should be plenty of room for the environment variables PCBoard will create along with any other variables you or any other programs you run may create.

> **If You Are Using OS/2**
>
> The changes outlined in this section are different for OS/2 because you will change the settings for one window rather than the entire system. For additional information, see *Setting Up*

AUTOEXEC.BAT

DOS

1. The path to locate your PCBoard executable and utilities must be in your *PATH=* statement (e.g., *PATH=C:\DOS;C:\PCB*).
2. Make sure SHARE.EXE is being loaded inside your AUTOEXEC.BAT. Reports have indicated that loading SHARE in high memory can slow system performance. It is up to you whether you load it in high memory or in conventional memory. The actual difference in system performance is very small.
3. Add a line at the end of your AUTOEXEC.BAT to load your multitasker. Whatever multitasker you choose it should be able to automatically bring up your nodes when you load your multitasker. If your multitasker does not have this ability, you cannot load the nodes automatically if your machine gets rebooted. Examples on how to load your nodes automatically are provided for DESQview, Microsoft Windows and OS/2 in *Automatically Loading Your Nodes at Bootup* later in this section.

NOTE: If you are using OS/2 as your multitasker, skip items 2 and 3 as they do not apply to the OS/2 operating system.

An example AUTOEXEC.BAT might look like the following:

```
@ECHO OFF
C:\DOS\SHARE.EXE
PATH=C:\PCB;C:\DOS;C:\UTILITY
PROMPT=$P$G
```

If you are using DESQview, add the following lines to your AUTOEXEC.BAT:

```
CD\DV
DV
```

If you are using Windows, add these two lines:

```
CD\WINDOWS
WIN
```

Now that you have modified AUTOEXEC.BAT and CONFIG.SYS you are ready to install additional PCBoard nodes.

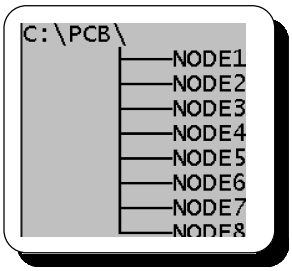
Installing Additional Nodes

If you have not already installed PCBoard, refer to the *Installation* chapter in this manual before proceeding. Next, get all of your files created and make sure that node 1 is running properly. It makes setting up additional nodes *much* easier. For the remainder of this section, we assume that you installed PCBoard in the `C:\PCB\` subdirectory.

Creating the NODE Subdirectories

You need to create a **separate** subdirectory for each PCBoard node you plan to run. The system already comes with NODE1 and NODE2 subdirectories underneath C:\PCB. If you plan to run additional nodes on this machine, be sure to create the additional subdirectories. For example, node 4 uses the directory C:\PCB\NODE4. From here on, these subdirectories are referred to as **node subdirectories**.

You should have a directory structure that resembles the following:



Next, copy the REMOTE.SYS file from the C:\PCB subdirectory into each **node** directory: For example, you can copy REMOTE.SYS to the node 1 subdirectory by typing:

```
COPY C:\PCB\REMOTE.SYS C:\PCB\NODE1
```

Repeat this step for each file and each node. **Once you have copied the above list of files to each of the NODE subdirectories, delete the files listed from the C:\PCB subdirectory**. If you do not delete these files, there is the chance you could load a node using the wrong files.

Copy the NODE1.BAT file found in \PCB to a NODE2.BAT, NODE3.BAT and so on until you have a batch file for every node running on the machine. The number at the end of the filename corresponds to the node to run. For example, NODE4.BAT loads node 4 on the system.

NOTE: If more than one node will be sharing a single copy of PCBOARD.EXE, you must make the file read-only using the DOS ATTRIB command or you will experiencing sharing violations when loading each node. You can also copy PCBOARD.EXE into each node directory to prevent the sharing violations.

Setting Up PCBoard

In your PCBoard setup you will have to modify a few items for proper operation. This section details some changes you must make to your configuration using PCBSetup and also how you should modify the NODEx.BAT files.

PCBSetup

There are a few setup items which you may wish to change if you are running under a multitasking environment. Change to a node subdirectory and execute PCBSETUP.EXE. Once PCBSetup is loaded, perform the following steps:

1. In *PCBSetup | Node Configuration* answer `Y` to the `Running a Network / Multitasker System` question.

2. Whenever possible, specify the fully qualified path to a file. This is inclusive of batch files and your setup of PCBoard in general. This can slightly enhance the speed of your system and it can make it less complex.
3. In *PCBSetup | File Locations | Configuration Files* make sure PCBPROT.DAT contains the path to locate the file. For example: C:\PCB\PCBPROT.DAT. In a default PCBoard setup, `PCBPROT.DAT` is entered on the line. Because no path is specified, it will cause problems in your multiple node setup. By changing all nodes to read one PCBPROT.DAT file, you will find that adding, changing, or deleting protocols will become a lot easier.
4. Like the entry for PCBPROT.DAT in *File Locations | Configuration Files*, make sure the entry for your `Color Definition File` contains the full path and filename. The default configuration will assume the file will be found in the default subdirectory. By changing all nodes to point to the same file, your file directories will be colored on-the-fly. If one or more of your nodes do not display your file directories in color, run PCBSetup from the node subdirectory and verify that a valid PCBFILER.DEF file is specified.
5. Verify that all of the options and file locations in *PCBSetup Main Menu* contain the proper values and settings you desire for each node. Normally you will be concerned most with file locations, but you may also want to change the way a particular node operates as well. You should not concern yourself with the conference configuration at this time because all of that information is contained in the CNAMES file you specify in *PCBSetup | File Locations | System Files*.
6. When you have completed steps 1 through 5, exit PCBSetup and save your changes.

Modifying The NODEx.BAT Files

The structure of a NODEx batch file looks like the following:

```
ECHO OFF

SET PCB=/NODE:1 /PORT1F:

SET PCBDRIVE=C:
SET PCBDIR=\PCB\NODE1
SET PCBDAT=C:\PCB\PCBOARD.DAT

BOARD
```

This is the batch file that prepares the node specific information such as the node subdirectory, COM port to use, and node number before turning control over to BOARD.BAT which loads PCBoard. We need to make some modifications to each of these files (one for each node).

In particular, we'll focus on three lines. First of all the `SET PCB=` line which sets the node number and COM port information to use for the node. The example used here shows a node number of 1 that uses COM2 to communicate with the modem. Using the /PORT, /COM, /BASE, and /IRQ PCBoard environment switches (see the *PCBoard* chapter), you control the method PCBoard uses to communicate with the serial port.

The other two lines we are concerned with are the `SET PCBDRIVE=` and `SET PCBDIR=` lines. Most likely the former will not change because the drive for the node directories will all be the same. However, the subdirectories are different. Therefore, modify the `SET PCBDIR=` line to point to the proper location.

Lastly, it may be helpful to add an environment variable of your own creation so you can keep track of the serial port used by the system when using third-party programs such as doors. The following example shows the changes incorporated into a NODE2.BAT file:

```
ECHO OFF

SET PCB= /NODE:2 /PORT2F:
```

```
SET PCBDRIVE=C:
SET PCBDIR= \PCB\NODE2
SET PCBDAT=C:\PCB\PCBOARD.DAT
SET PORT=2

BOARD
```

Setting Up Your Nodes Under a Specific Multitasker

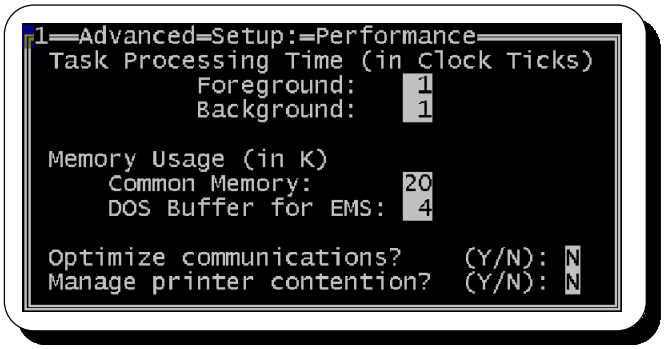
The instructions that follow detail the steps you need to take in order to add nodes to DESQview, Windows 3.1, and OS/2. This first section details how to setup the PIF files for both DESQview and Windows 3.x. This same section also details how to setup the icon for your nodes under OS/2. The next section details how to automatically load your nodes each time you run your multitasker. Each section also lists any special considerations you should be aware of with each multitasker. The other information provided throughout this section (except where appropriately titled) is independent of the multitasker you are using.

Once you have followed the instructions detailed in the specific section for the multitasker you are using, proceed to the section entitled *Automatically Loading Your Nodes at Bootup.*

DESQview®

Before proceeding with a setup under DESQview you should first become familiar with how to add programs in your DESQview environment if you are not already familiar with that topic.

To configure your nodes to run under DESQview, load the setup program for DESQview. To do this, change to your DESQview directory and at the DOS prompt type SETUP and press R . Next, select *Performance.* Your screen resembles the following:



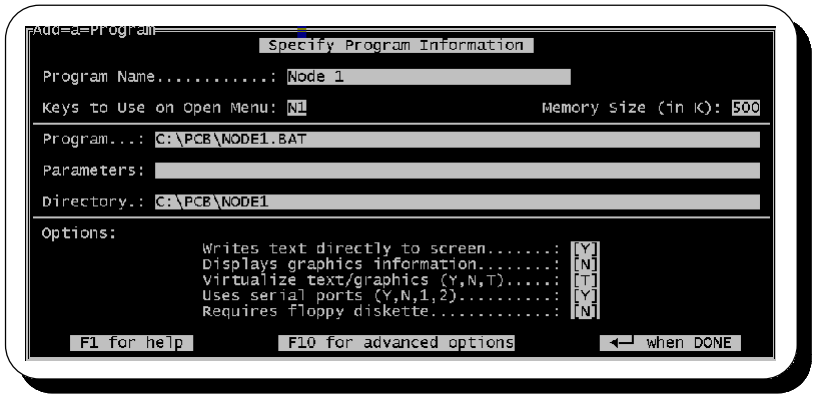
Foreground and Background Processing Time: It is very important that you set the foreground and background ticks to an equal value. Otherwise, performance suffers which your callers see as an intermittent, jerking display. The exact value for these two settings varies depending on how many nodes you are running and the processing speed of your computer. Experiment with this value to see which works best on your machine, though a value between 1 and 3 seems to be best.

Two of the most important settings you will change are *Optimize Communications* and *Manage printer contention*. Set both of these to *N* to help avoid possible system lockups.

Next, you need to add each of the nodes to your DESQview menu so you can bring up a node with just a couple of keystrokes. To add each node to the DESQview menu, do the following:

1. Select Open Window from the DESQview main menu
2. Select Add Program
3. Select Other (Add program not found in list). You will be asked to specify a path to the program. Supply your PCBoard directory (e.g., *C:\PCB*).

4. Once you have typed in a path you are taken to the Add a Program screen where the PIF file for this program is edited. You must go through this procedure for each node you plan to run. The two following screen captures show the recommended PIF settings for your first node:



There are four fields you should pay special attention to in this setup screen:

Program Name: Enter any text in this field since it is the title that is displayed on your window (e.g., *NODE 1* or *NODE 2*). The only thing to be mindful is that the title for each node is unique to make identification easier. If they all display *Alphabet BBS*, you will have a hard time discerning which node is which on the screen.

Keys to Open: In this field enter the two keys which will be used to open the window from the DESQview menu. See your manual for more information. The keys chosen must be unique. You may want to enter something like *N1* or *N2* to distinguish between your node numbers.

Program: In this field, enter the name of the NODEx batch file for the node you are defining (e.g., *C:\PCB\NODE1.BAT*, *C:\PCB\NODE2.BAT*, etc.)

Directory: This field should point to the node subdirectory for each node. For example, in node 2's PIF file, enter *C:\PCB\NODE2* in this field. For node 3, enter *C:\PCB\NODE3*.

When you are finished editing the first screen, press 1 for advanced options. You are presented with another screen. When you are finished filling in the values for this screen, your screen should resemble the following:

System Memory: Enter *0* in this field since PCBoard is not a DESQview specific application.

Maximum Program Memory Size: Enter 640 in this field. When the node window is opened in DESQview, the amount of memory available to the window will be no less memory than the value specified in the *Memory Size* field on the previous screen but no more than the value specified in this field.

Script Buffer: Unless you are using DESQview scripts inside of this window, save additional memory by entering *0* in this field.

Close on Exit: Since PCBoard exits to run some doors, you do not want the window to close as PCBoard transfers control to the door. Therefore, answer *N* to this question.

Uses own colors: Entering *Y* in this field allows PCBoard to set the colors for the window rather than using DESQview's default colors.

Allow Close: Entering *N* in this field disables the *Close Window* command to be executed from the DESQview menu. Instead, you must properly exit the program or reboot the window to close the window. Remember, it is always best to properly exit a program when possible.

Runs in background: In this field, enter a *Y* on all dial-in nodes and an *N* on any local nodes you may have. Setting local nodes to not be active in the background can save precious processor time in case you accidentally leave your maintenance node running in the background.

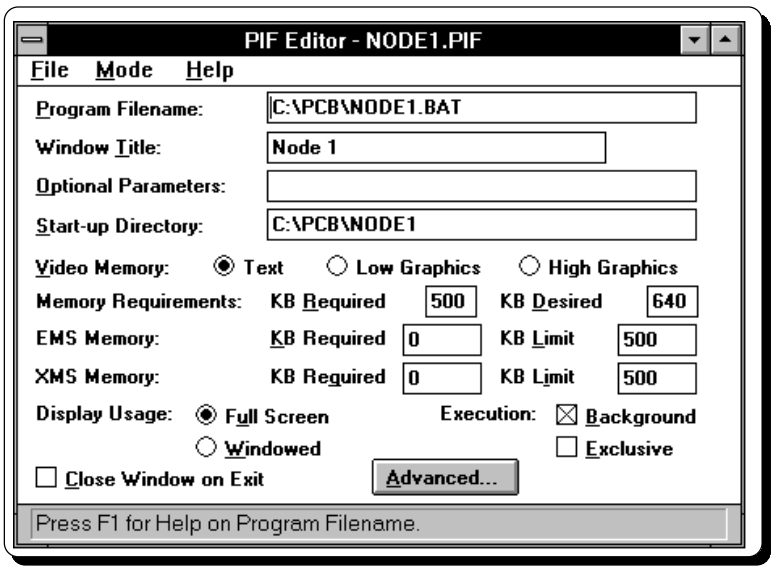
Uses Math Coprocessor: Enter an *N* in this field since PCBoard does not utilize any math coprocessors. You will save precious memory and may even slightly improve performance.

Can be swapped: In this field, enter an *N* for any PIFs you are setting up for communications programs (such as PCBoard). If you set this field to *Y*, it may eventually cause a lockup.

Microsoft Windows® v3.1

In order to run multiple nodes under Windows you must create a PIF file for each node. It is assumed you have some knowledge on how to create a PIF file under Windows. If this area is new to you, it is suggested you first read the section in your Windows manual detailing how to create a PIF file before continuing.

While you are in the Windows environment, load the PIF editor. This program is used to create the PIF files for each node. Create a new PIF file. When you have finished filling in the required information on the first screen of your PIF file, it should resemble the following:



Program Filename: In this field, enter the name of the node batch file used to load PCBoard. For node 1, enter *C:\PCB\NODE1.BAT* and for node 2, enter *C:\PCB\NODE2.BAT*.

Window Title: You may enter anything you wish here as it is the title displayed on your window. You may want to enter something like *NODE 1* or *NODE 2*. It does not matter what name you wish to have displayed as your window title. Make sure the title you enter is unique for each node so you can easily identify your windows when they are displayed on the screen or when you switch to them. If they all are titled *Alphabet BBS*, you will have a hard time discerning which node is which on your screen.

Start-up Directory: In this field, enter the node subdirectory. For example, node 2's PIF file will contain *C:\PCB\NODE2* in this field. For node 3's PIF file, enter *C:\PCB\NODE3*.

Display Usage-Full Screen: Mark this setting so each node runs in full-screen mode rather than in windowed mode. When a non-Windows application is running full-screen, the overhead of virtualizing the screen in a window is eliminated which yields better system performance.

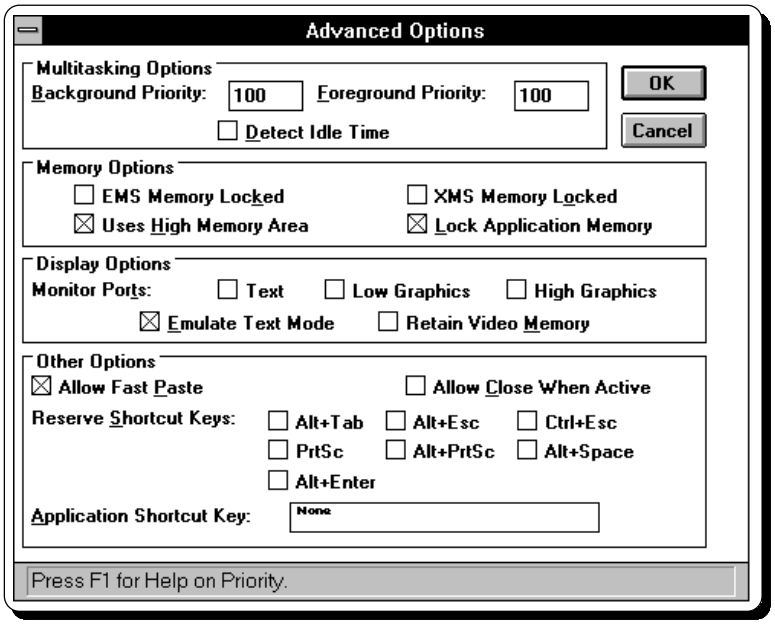
Close Window on Exit: Leave this option de-selected to prevent the window from closing when opening a door.

In addition to the changes made to the PIF file, an additional line must be added to SYSTEM.INI to help ensure proper operation under Microsoft Windows. In SYSTEM.INI there is a section titled [386enh]. In this section, the line

```
UniqueDOSPSP=1
```

must be added. If you do not feel comfortable making this change to your Windows configuration, find someone that it is—this is an important change.

You should now click the **Advanced** button to get to the second screen for your PIF file. When you are finished filling in the requested information, your screen should resemble the following:



Background Priority: Make sure the value entered in this field is equal to the value entered in the **Foreground Priority** field. If it does not, the nodes running in the background will run slower than the node in the foreground.

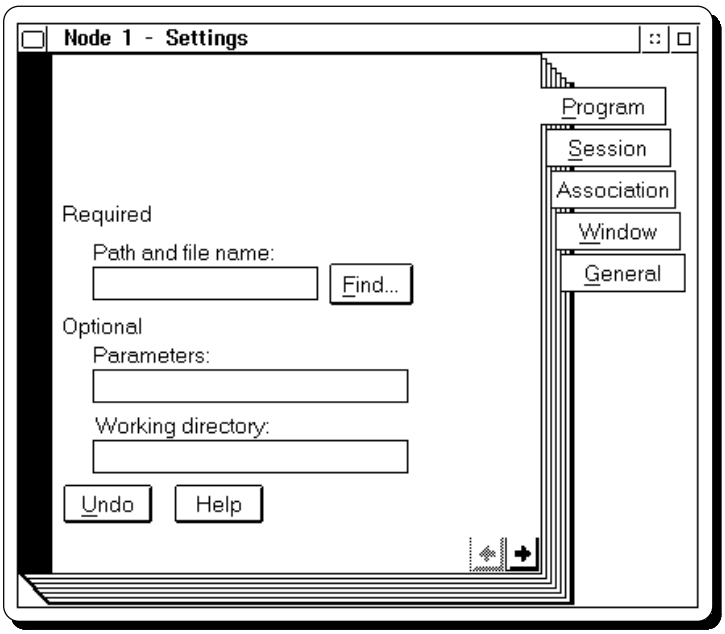
Lock Application Memory: You want to lock the application memory so the window will not swap out of memory while your node is running. If the window swaps out of memory, the node will quit functioning.

Once you have the PIF files defined, add each node as an icon to Program Manager. When setting up the icon to load your program, specify the filename of the PIF file just created as the program to run. Loading the PIF file guarantees your settings are used with each node. Consult your Windows manual for further information on adding programs to Program Manager.

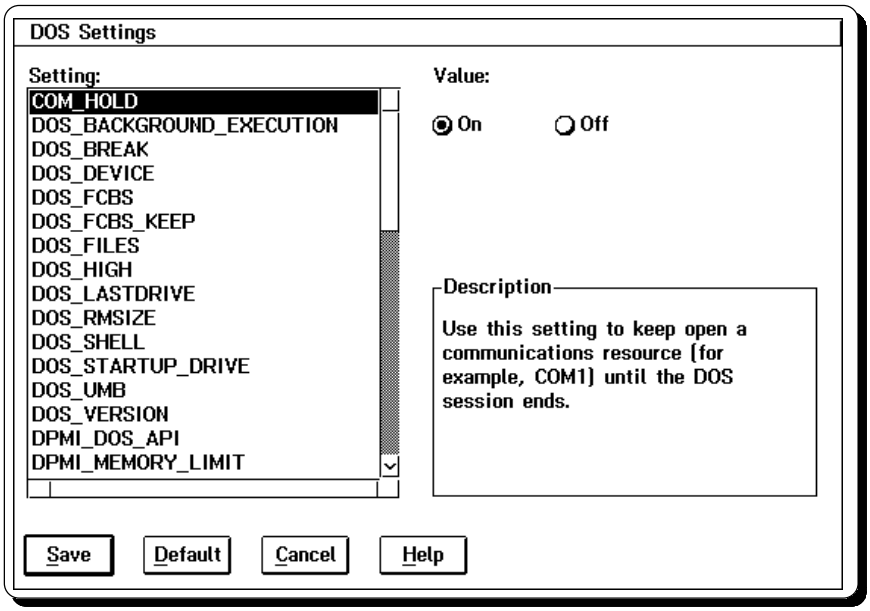
OS/2 v2.x

To run multiple nodes under OS/2, create program objects for each of your nodes and store them in a folder on the desktop for easy access. It is assumed you have a good knowledge of how to work with objects in the Workplace Shell environment. If this area is new to you, become familiar with this concept by reading the OS/2 manuals.

The first place to start is to create a folder on your desktop that will hold the program objects for your nodes. One way of doing this is to open up your templates folder and drag a folder to the desktop and change the name of the folder in the settings for the object. Next, add a program object to this folder. As with the folder, you can drag a program object from your templates folder to the new folder. When you do, the following dialog box appears on the screen:



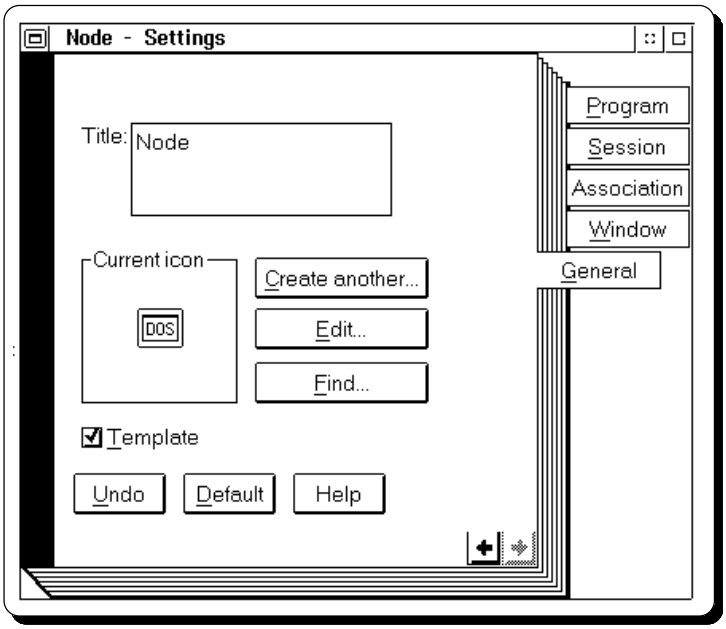
You can skip this screen as you will fill it in later for each object you create for your nodes. The next thing you need to do is to change some of the DOS settings for PCBoard. To do this, click on the **Session** tab and then click on the **DOS settings** box. When you do, you see a dialogue box that resembles the following screen:



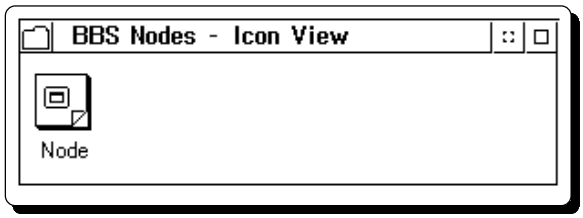
You need to change the following settings for this object to reflect the values to the right of the equal sign:

```
COM_HOLD         = ON
COM_DIRECT       = OFF
DOS_BACKGROUND   = ON
DOS_BREAK        = OFF
DPMI_DOS_API     = DISABLED
EMS_MEMORY       = 512
IDLE_SECONDS     = 0
IDLE_SENSITIVITY = 75
XMS_MEMORY_LIMIT = 0
```

Click on the **Save** button to store the changes you have made to the DOS settings. Next, click on the **General** tab so you can change the name of the object. In the **Title** box, enter text that will be used to identify this object. For example, you can enter *Node* in this field. To help make adding new node program objects easier, you should also click on the **Template** check box to make this object a template. Your screen will resemble the following:



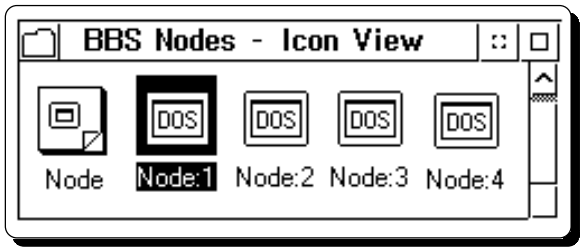
Next, close the Settings notebook to return to the Workplace Shell. Notice, you now have a new object in your folder and that it is titled whatever you entered previously. Your folder may look like the following:



Next, you need to simply copy objects for the rest of your nodes. Highlight your template and drag an object out of your template for each of your nodes and place them in the folder you created. Each time you drag a copy and let go of the mouse button, you will be asked to supply the program that you wish to run. Once you have copied the objects, you need to change the following information for each of the objects:

- **Path and file name**: Enter the node batch file used to run this node. For example, enter *C:\PCB\NODE1.BAT* for node 1's object.
- **Working directory**: In this field, enter the node subdirectory for each node. For example, you may enter *C:\PCB\NODE1* for node 1's object.

Once you have finished these steps, the folder you created for your nodes may resemble the following if you define four nodes:



At this point, you can click on any of your node objects to load the corresponding node on your system. The next step is to automatically configure OS/2 to load your nodes at startup.

Automatically Loading The Nodes at Bootup

Since, for the most part, your bulletin board will be unattended, you will want your nodes to automatically load when you boot your machine. This prevents situations such as power outages from bringing down your system until you can manually bring up your bulletin board system. This section gives you detailed instructions for automatically bringing up your system under DESQview, Windows, and OS/2.

DESQview

In order to have all of your nodes load up every time you start DESQview, you must use a script. The following key sequence creates a script for starting up your nodes on one machine.

1. Initiate DESQview's script learning mode by pressing S - A .
2. Select **Start Script.** When prompted for a key to define, hold down A while typing 2 5 5 on the *numeric keypad*. By assigning it to an obscure key you lower the chances of accidentally activating the script.
3. Give your script a name. Make sure it starts with an ! (exclamation point) or it will not be executed when you start up DESQview.
4. Open all of your nodes manually from the DESQview *Open Window* menu. When you are finished, press S - A and select **Finish script**.
5. Close all of the nodes by selecting *DOS - Not Busy* from each call waiting screen.
6. Quit DESQview. When quitting, you are informed you have scripts that have not been saved and are asked if you want to save them. Save the scripts to a filename called DESQVIEW.DVS.

Microsoft Windows v3.1

To automatically load your nodes under Microsoft Windows, simply move the icons for your nodes to the Startup folder in Program Manager. When Windows loads, it automatically loads all programs that are in the Startup folder.

OS/2 v2.x

Select all of your node objects (but not the node template) and hold down the C key while dragging them to the Startup folder in your OS/2 System folder. The program objects will be moved to that folder. When OS/2 loads, it executes any programs in the Startup folder.

NOTE: If you have PCBoard for OS/2, it comes with a program called Control Panel that not only launches nodes at startup, but also monitors the running nodes. Refer to the Control Panel section of this chapter for more details.

PCBoard And Local Area Networks

Getting Started

A local area network enables you to expand the system to run more than four nodes and also enable you to add even more storage space than you can fit in one machine. The next few sections detail how to configure your network to work with PCBoard. You may not need all of the information provided, but reading it will help give you a better overview of how PCBoard works in conjunction with networks.

Required Hardware

- Enough computers to handle your desired nodes. You can run one node per machine or you can use a multitasker on a workstation to run multiple nodes on each machine.
- Network card for each machine
- If you are running standard serial ports in each machine, they should have 16550 UARTs for each serial port (prevents COM overruns).
- If you are using a multi-port card in conjunction with the multiport version of PCBoard, make sure the card you are using is supported by COMM-TSR.EXE.

Required Software

- PCBoard Bulletin Board Software
- Networking software that compliments the network hardware you have installed.

Types of Networks Supported

PCBoard works with virtually all of the DOS based LAN products including 3COM, Banyan, LANtastic, and Novell NetWare. PCBoard requires the network to support DOS 3.1 and higher file/record locking procedures. Almost any NETBIOS compatible network will work since these networks typically support the proper file/record locking procedures.

Testing Network Compatibility

If you are unsure whether your network software will meet PCBoard's requirements, you should to test your network for compatibility. The next few steps will show you a short test to make sure PCBoard will work correctly.

NOTE: It is assumed that by now you have at least installed PCBoard. If you have not yet installed PCBoard, refer to the *Installation* chapter of this manual for further instructions. You must have an installed copy of PCBoard before you test your network for compatibility. Additionally you must either load SHARE.EXE that comes with DOS or check your network software to see if it has the functionality of SHARE built in.

If you are unsure if your existing network works with PCBoard, run PCBDIAG.EXE. When you run PCBDiag you see the following questions:

```
Print ALL configuration files
Perform the Analysis Section
Analyze USERS and INDEX files
```

These questions determine how thorough of a diagnostics report you want to run. The analysis section of the report is the part that contains the information on whether your existing network will work with PCBoard or not. Therefore, answer *N* to all of the questions except to *Perform Analysis Section* which you should answer with a *Y*.

When you press d , you are asked for the printer specification. Type in the device name for your printer (e.g., LPT1). To send the report to disk instead, type in a filename such as *DIAG.TXT*. After you have printed or saved your report to disk look for the following section towards the top of the report:

```
Test SHARE functions:
Open DENY ALL  / attempt to share file by second process failed- OKAY
Open DENY NONE / attempt to share file by second process succeeded - OKAY
Attempt to lock record #1 by first  process succeeded - OKAY
Attempt to lock record #1 by second process failed    - OKAY
Attempt to read record #1 by second process failed    - OKAY
```

These are the results you see if your network is compatible with PCBoard. All tests should report *OKAY*. If not, try loading the DOS *SHARE* command and re-run the test. If some of the tests still fail, you do not have a compatible network.

Planning Your Network Setup and File Locations

What Type of Computers Should Be Used?

A common question most people ask if they are setting up a network for the first time is "What type of computers should I get for the servers and the workstations?" There is no definite answer to this question. In fact, the answers you get depend on how you want the system setup.

For example, you may have a network setup with one server using a 80486 processor and have one node per workstation with each workstation using an 80386 processor. Of course the ideal situation is to have the absolute fastest computers possible as both the servers and the workstations. In most cases, however, those type of machines would not be economically feasible so you must decide which would be best for your setup.

When you are planning what type of machines to use, keep the following in mind:

Server: Your server needs to be powerful enough to support the number of nodes in your network. For a 2-3 node setup you can most likely get by with an 80486. As you add more nodes, however, you will want a more powerful machine like a Pentium. The faster machine will give the server the capability to keep up with all of the workstation requests.

Workstations: This is where the majority of your processing will go on. Since the programs will be running on these machines, do not hesitate to put a reasonably fast computer on the network as one of your workstations. Most people are under the misconception that you need to have an extremely fast server and put XTs on the network as your workstations. Weigh your needs and remember a fast workstation will make your system look like it is running even faster.

One popular solution is to use a 80486 as your server and then use 80386 or 80486 computers as your workstations. On each workstation multitask several nodes to help keep the overall floor space used to a minimum. This type of setup does require you to properly setup your multitasker using the instructions outlined earlier in this chapter. In addition, you must also setup the workstation properly as far as the network is concerned. This will include such items as assigning network drives and checking for IRQ conflicts.

Where Should The PCBoard Files Be Stored?

Once you have your network set up and working correctly, configuring PCBoard for multiple nodes is really not much more difficult than setting up a single node. This is due to the fact that PCBoard enables you to specify where just about any file is located. You need to insure the file is really where you specify—whether it is a network or local drive.

There are only a handful of files that must be located on a shared drive (server drive). You need to make sure the following files are all located on a server drive because they are automatically updated as people call into the system.

```
Name/Loc of Users File
Name/Loc of Users Info File
Name/Loc of Group CHAT File
Name/Loc of Caller Log
Name/Loc of Statistics File
Name/Loc of USERNET.XXX File
```

```
Location of USERS File Index Files
Name/Loc of MSGS File (All conferences)
Name/Loc Upload DIR File, Location of Uploads (all conferences)
```

The locations for these files are specified in *PCBSetup | File Locations | System Files* with the exception of those relating to conferences which can be found in each conference's configuration screen. If you store these files on your workstations, you have no way to update the other workstations when a new user logs in or as the files listed below change. There are more files that are *recommended* you store on a server drive but are not required to be stored on a server drive:

```
Name/Loc of Conference Data
Doors - Menu Listing, Path/Name List File (all conferences)
Bulletins - Menu Listing, Path/Name List File (all conferences)
Scripts - Menu Listing, Path/Name List File (all conferences)
Directories - Menu Listing, Path/Name List File (all conferences)
```

With the remaining files in your PCBoard configuration, you must decide if you wish to put them on the server, the workstation, or put some on the server and some on the workstations. The following lists a few reasons you may wish to store a majority of the files on a workstation:

- Running on a slow network (e.g., 2 mpbs)
- You want to keep network traffic down
- You have a large number of nodes on your network (e.g., 20+) and your server cannot handle all of the nodes requests if the files are stored on the server.

The following lists a few reasons you may wish to store a majority of files on the server:

- You do not want to update all of the workstations every time a file on the server changes
- Your workstations do not have hard-drives in them
- You have a relatively small network and accessing all of the files across the network will not degrade network performance.

When deciding where to store a file on your system it always helps to have a strategy or a plan to help guide you. One that works well for most systems is to store a file on the server if it changes often. Otherwise, store the file on each workstation to help keep network traffic down.

If speed is your primary concern, you will end up putting most of your files on the workstations. This usually means more maintenance for you when updating the files on the workstations because you can have a lot of workstations to update.

If you desire the easiest setup instead of speed, store most of your files on the server. When a file is updated on the server, any nodes or workstations that access that file will automatically see the change in the file because they read from a shared location.

For now, use the above information to help you consider where files will be stored on your network. In the section titled *Installing Your Other Nodes*, you will actually make the changes to your system configuration.

Configuring The Network Drives

To save a lot of confusion in your network setup, configure the network so that the server drives are the same letters throughout the entire network. Setting up your network in this manner allows you to specify the same drive throughout PCBSetup on all nodes and third party utilities.

If you do not make it so that the server drives use the same letter on all workstations, your setup and configuration will be more complex. For example, you may find it confusing and more complex if the drive with the message bases is referred to as drive H on one workstation, and drive J on another workstation. With the server drives using the same letters on all workstations, it is easier to expand and maintain the system.

To help illustrate how to configure your workstations and servers to refer to the same drive letters for all drives, look at the following example 4 machine - 2 server system:

Machine 1 - Server (Network name: SERVER1)

System Drive	Network Resource Name
C:	DRIVE-C
D:	DRIVE-D
E:	DRIVE-E
F:	DRIVE-F
G:	DRIVE-G

Machine 2 - Server (Network name: SERVER2)

System Drive	Network Resource Name
C:	DRIVE-C
D:	DRIVE-D

Machine 3 - Workstation

System Drive	Network Resource Name
C:	N/A (not a server)

Machine 4 - Workstation

System Drive	Network Resource Name
C:	N/A (not a server)

NOTE: All of the examples in this section use Artisoft's LANtastic syntax. If you are not using LANtastic, please consult the documentation for your network to find out how your network refers to network resources.

You can see we have a little dilemma in this setup. Not only do all of the computers in this example have C: drives, but the two servers both have a drive D as well. To further complicate matters, you will want to let every computer have their own local drive C. What you need to do to rectify this conflict is to begin using all of the network drives at drive H.

You can begin by first assigning drive letters of your network drives on SERVER1. As was mentioned before, you can begin at drive letter H and work your way down to drive Z. You can do this because you do not have any local drives that use the drive letter H. The highest local drive letter is G and that is on the first server.

To assign the drive letters on the various machines of the network, use one of two methods. If the drive is a physical drive in the server, use the SUBST command provided by DOS to assign the appropriate drive

letter. Otherwise, use the command your network provides for assigning drives. The examples shown in this section use LANtastic format for the network commands. If you use a different network, consult your documentation for further instructions.

Now that you understand why we used SUBST in some cases and the NET USE command in others you should be ready to assign the drives for all four nodes. The following shows you the commands that should be added to AUTOEXEC.BAT or your network startup batch file:

Machine 1 (SERVER1)

```
SUBST H: C:\
SUBST I: D:\
SUBST J: E:\
NET USE K: \\SERVER2\C-DRIVE
NET USE L: \\SERVER2\D-DRIVE
```

Machine 2 (SERVER2)

```
NET USE H: \\SERVER1\C-DRIVE
NET USE I: \\SERVER1\D-DRIVE
NET USE J: \\SERVER1\E-DRIVE
SUBST K: C:\
SUBST L: D:\
```

Machine 3 (Workstation)

```
NET USE H: \\SERVER1\C-DRIVE
NET USE I: \\SERVER1\D-DRIVE
NET USE J: \\SERVER1\E-DRIVE
NET USE K: \\SERVER2\C-DRIVE
NET USE L: \\SERVER2\D-DRIVE
```

Machine 4 (Workstation)

```
NET USE H: \\SERVER1\C-DRIVE
NET USE I: \\SERVER1\D-DRIVE
NET USE J: \\SERVER1\E-DRIVE
NET USE K: \\SERVER2\C-DRIVE
NET USE L: \\SERVER2\D-DRIVE
```

If you look at each node, you will see drive H refers to the same drive on all four nodes. Likewise, the rest of the drives (I-L) also reference the same drives on all nodes. This is the setup you want to achieve. It does not matter what drive letters you use, but it does matter that the same drive letters are used across the entire network.

Modifying Your System Files

There are a few changes you will likely have to make to your AUTOEXEC.BAT and CONFIG.SYS system files. You should already have an AUTOEXEC.BAT and CONFIG.SYS for the system. This section details what must be in these files in order to properly run a multinode setup using multitasking software. If you have other items in these files, do not worry as they may be necessary for your particular system (hardware drivers, etc.)

CONFIG.SYS

In your CONFIG.SYS files, modify the number of file handles for the system. Your server should have the number of file handles equal to 25 times the number of nodes the server will manage plus 25 for itself. In other words, if 7 nodes are running on the network (including the server), add *FILES=175* to CONFIG.SYS.

Workstations need 25 file handles for each DOS process. Unless you are using a multitasker to run more than one node per workstation, add *FILES=25* to CONFIG.SYS. If you are running more than one node per

workstation, add 25 times the number of nodes running on the machine. For example, a 4 node system requires *FILES=100* is the workstation's CONFIG.SYS.

DOS cannot provide more than 255 file handles in CONFIG.SYS. If you need more than 255 file handles consult your network documentation to see if a method to override the CONFIG.SYS settings is provided.

Normally, DOS allows you to address up to drive E without having to modify CONFIG.SYS. In the examples used in this section, notice we went past drive E. For DOS to be able to access these drives, add the *LASTDRIVE=Z* statement to CONFIG.SYS.

AUTOEXEC.BAT

For a multi-node setup, you must ensure SHARE is either loaded or built-in to your network. By now you should have already completed the network compatibility test described earlier. If you had to load SHARE.EXE for the test and you have not added it to your AUTOEXEC.BAT, do that now.

Installing Dial-In Nodes

There are basically two types of nodes in a network setup—dial-in and local. Dial-in nodes are those expecting calls to come from a modem or serial port.

Once you have installed PCBoard on your server, there are numerous ways you can go about adding nodes. You can add one node per workstation on the network or you can setup a multitasker on your workstations and run more than one node on each workstation.

There are three primary steps you should follow when adding new nodes to your network configuration. They are:

1. Each workstation should have a hard drive and a *\PCB* subdirectory. The following files should be copied from the *\PCB* subdirectory on the server to the *\PCB* subdirectory on the workstation.

   **.EXE*
   **.COM*
   **.BAT*
   REMOTE.SYS
   PCBOARD.DAT
   PCBFILER.DEF
   PCBSM.HLP

2. In *PCBSetup | Node Configuration* make sure you have answered *Y* to the *Running a Network / Multitasker System* question.
3. Also make sure that each NODEx batch file has been modified to specify the correct node number and serial port information on the *SET PCB=* line. See the *PCBoard* chapter for more information on the *SET PCB=* line.
4. In menu options A-H from the PCBSetup Main Menu, insure you have properly specified all drive and path references. You should use the information provided in *Where Should The PCBoard Files Be Stored* to determine where the files pointed to in menu options A-H should be stored.

If you plan on setting up your dial-in nodes on a multitasking workstation, reference the multitasking section earlier in this chapter. About the only difference between multitasking on a stand-alone machine and on a workstation is that you must realize some of the files in your configuration will be read from the server rather than from a local drive. This means you simply change the location of files like your users file and you will be up and running.

If you decide to multitask nodes on a workstation, there are a few considerations to be aware of:

- You should reduce the amount of time that your workstation spends monitoring the network. This will make network transfers a little less snappy, but will allocate more system time to your multi-tasker which means snappier displays for your users. LANtastic uses the *run_burst* command line switch on the *AILANBIO* program. If you are using a different network consult your manual.
- Most multitasking programs have provisions for networks such as network buffers, etc. Consult the manual for your multitasking manual to see exactly what type of support for networks that it offers.
- If you are using QEMM as your memory manager, increase the number of tasks. To do this add *tasks=nn* (where *nn* is the number of tasks to allocate) to your QEMM386.SYS line in CONFIG.SYS. Set this value to 16 times the number of nodes you plan to run. In QEMM, a task is a data structure that is used to handle interrupts out of protected mode. If you are using a different memory manager, consult your manual for further details.

Installing Local or In-House Nodes

There are basically two types of nodes in a network setup—dial-in and local. A local login is where the user runs PCBoard directly and interacts using the local keyboard.

PCBoard works equally well across a network as it does when accessed through external connections. When users login across the network, they are simply running a copy of PCBoard which has its own setup (PCBOARD.DAT) file. Because this method is used, PCBoard does not have to talk directly to the network operating system (NETBIOS, IPX, etc.).

Protecting Files From Local Users

Some may question if allowing users to run PCBOARD across the network will compromise security of the system by allowing users to access SysOp functions. When you use the /LOCALON command line parameter for PCBOARD.EXE, it causes PCBoard to bypass the call waiting screen and go directly to the *Do you want graphics?* prompt. In addition, the user may not shell out to PCBFiler, PCBSetup, PCBSysMgr, or PCBMoni while logged in.

To prevent your users from accessing some of the setup and configuration utilities, you can make a separate subdirectory for those files and move them to that subdirectory where they can be protected via network security. Be careful about what you do with network security, however, as all of the PCBoard files must have full read, write, and delete network rights.

Floating Local Node Numbers

Setting up local login nodes for network access is, for the most part, easier than setting up dial-in nodes because you can *float* the node number. When you float the node number it allows PCBoard to pick a node that is not being used and assign the local user this node number. This method of assigning node numbers avoids the need to assign everyone a unique node number and also makes your batch files and general setup much easier. If you float the node numbers of your local users, you could easily have 1000 or more users vying for access to a 100 node system. If PCBoard is unable to find a free node (all nodes are busy), the user receives an **ALL NODES ARE BUSY** message.

What makes the ability to float a node so useful is that you can have one batch file and one setup file for all local nodes. Not only that, but you can start your local logins at any node number and automatically have them float all the way until you run out of the concurrent logins you software license allows. This means less maintenance for you in the long run and you can protect your dial-in nodes (if you have any) from being used by local logins. Having one batch file for all of your logins, however, means you will not be able to hard code drives and subdirectories in your batch files.

Every user must have a home directory to be used by PCBoard. You must guarantee that this home directory is unique to each local user. This subdirectory could be on the server set aside for a particular user, or it could be a subdirectory set aside on the local hard drive of every workstation. In this subdirectory PCBOARD.SYS and ENDPCB are created for each user. PCBOARD.SYS is created for every user and

contains information like the last time they logged on, user name, city, etc. ENDPCB is created by PCBoard when exiting. These are the only files that remain in this unique subdirectory.

Configuring Your System To Float Nodes

The first thing you should do is create a subdirectory on the file server where files relating to local logins are stored. You may want to call it *LOCAL* and create it under your *PCB* subdirectory. For example, if your server drive is F:, create an *F:\PCB\LOCAL* subdirectory which will hold the local login files. From now on, this is referred to as your *local subdirectory*. Once you have created the subdirectory, copy BOARD.BAT to this new subdirectory.

Now you need to make some changes to the BOARD.BAT file in the local subdirectory. There are some lines in this batch file that are not necessary for local logins and also some information you must add. You can trim your BOARD.BAT so these lines remain:

```
@ECHO OFF
:TOP
IF EXIST DOOR.BAT  DELETE DOOR.BAT
IF EXIST ENDPCB    DELETE ENDPCB
PCBOARDM /FILE:%PCBDAT%
IF EXIST DOOR.BAT CALL DOOR.BAT
IF NOT EXIST ENDPCB GOTO TOP
```

At this point you are probably wondering why the new BOARD.BAT is so small. The lines removed have no bearing to a local type of connection. For example, floating nodes do not run events nor will they need to deal with REMOTE.SYS. Now we need to make some changes to accommodate the local node setup.

PCBOARDM should be changed to

```
PCBOARDM /FILE:<local subdirectory>\PCBOARD.DAT /LOCALON
```

The /FILE parameter tells PCBoard where it can find the PCBOARD.DAT file. Since the only thing that really changes with floating nodes is the node number, it makes sense to share one PCBOARD.DAT for all local logins. The *<local subdirectory>* should be replaced with the drive and subdirectory of the local subdirectory created previously. If this subdirectory is *H:\PCB\LOCAL*, your new **PCBOARDM** line becomes:

```
PCBOARD /FILE:H:\PCB\LOCAL\PCBOARD.DAT /LOCALON.
```

The */LOCALON* parameter totally bypasses the call-waiting screen and places the user at the *Do you want graphics?* prompt. From this prompt, the user can choose if they want to use graphics or not, type in their user name and password and continue on. When the */LOCALON* switch is used, almost all of the SysOp functions are disabled except the following:

A - F	**File Out**. This can be used to output the text PCBoard displays to a text file
A - I	**File In**. Used to import text from an ASCII file. This keyboard command is useful for importing prepared ASCII messages into the message editor.
A - P	**Printer**. PCBoard will echo text it displays on the screen to the printer port defined in *PCBSetup	Node Configuration*. In this example, PCBoard looks in H:\PCB\LOCAL\PCBOARD.DAT to find the printer port.
A - T	**Top of Form**. Sends a form feed to the printer you have defined in *PCBSetup	Node Configuration*.

5 **Shell**. Allows the person at the computer to shell to DOS. You can disable this option in *PCBSetup | Configuration Options | System Control* by answering *N* to *Allow Local SHELL to DOS*.

You can also have BOARD.BAT stuff the keyboard so users logging in locally do not have to answer the *Do you want graphics* prompt. For more information on how to do this, refer to the **/KEY** command line parameter in the *PCBoard* chapter.

If PCBOARD.EXE is not located in the current directory or in a directory listed in your *PATH=* statement, you will receive a *bad command or filename* message. If you do, tell the batch file where to find your executable file. For example, if PCBOARD.EXE is located in *Q:\PCB* (which is not in your path), you type *Q:\PCB\PCBOARD.EXE* to load the PCBoard executable. Do the same thing to BOARD.BAT—add *Q:\PCB* in front of *PCBOARD.*

One other addition to make to this file is a line that makes sure that PCBoard knows it is not communicating with a modem. This can be done with a line just underneath the *:TOP* label that reads *SET PCB=/COM0:*

You final BOARD.BAT looks like the following if your local subdirectory is setup as *H:\PCB\LOCAL*:

```
ECHO OFF
:TOP
SET PCB=/COM0:
IF EXIST DOOR.BAT  DELETE DOOR.BAT
IF EXIST ENDPCB    DELETE ENDPCB
PCBOARD /FILE:H:\PCB\LOCAL\PCBOARD.DAT /LOCALON
IF EXIST DOOR.BAT  CALL DOOR.BAT
IF NOT EXIST ENDPCB GOTO TOP
```

One last thing that should be mentioned is that if all nodes are busy, PCBoard exits with a DOS errorlevel of 99. Therefore, you can use an *IF ERRORLEVEL* statement in your BOARD.BAT file to check for errorlevel 99. If you detect this errorlevel, you known an error occurred and that you should notify the user if desired. For additional information on testing errorlevels, refer to your DOS manual.

When floating nodes, PCBoard begins by filling up the nodes at the node number specified in PCBSetup. Since PCBSetup gets most of its information from PCBOARD.DAT, the file has to be copied into your local subdirectory so changes can be made to it. An advantage of having this separate DAT file for local nodes is that you can disable certain features which are not necessary for local logins.

Testing Your Configuration

Before testing the floating nodes, insure that the node number in the PCBOARD.DAT you are using is set to the proper value. To change the node number, load PCBSetup from the local subdirectory. After PCBSetup is loaded, select *Node Configuration* from the menu. The fifth item from the top of the screen is *Node Number on the Network*. In this field, enter the first node number that will be used by your local login users. Once you have made this change, exit PCBSetup and save the changes.

At this point your floating node setup should be complete. To test your setup you can follow these steps:

1. Find two stations on the network that you can use for testing.
2. Change to the unique drive and directory on both workstations. This should be a drive and directory nobody else on the network can/would use.
3. Run BOARD.BAT on each workstation.

The machine which ran BOARD.BAT first should come up as the node you specified in the PCBOARD.DAT stored in your local subdirectory. You can verify this by completing the login and typing WHO at the command prompt. The other machine should be listed as the next node. In other words, if you

set your beginning node number to 4, the first machine should come up as node 4 and the second machine should come up as node 5.

If the first local node shows node 4 and the second shows node 5, everything (as far as PCBoard is concerned) is working correctly. If it did not, your configuration is not correct. Double check the setup and make sure you followed all of the previous instructions.

If two or more users try to login using the same directory PCBoard goes directly to the command prompt rather than the familiar `Do you want graphics?` prompt. In addition, PCBoard also thinks this new person is the same name and node number as the other person. In a sense, the second person is invisible. However, with two or more people accessing the system like this, you are likely to have file access errors and other unforeseen problems. If a user reports that they went immediately to the PCBoard command prompt on their first login, make sure they immediately logoff and check your configuration to insure two nodes do not and cannot conflict.

If your nodes do not return to the same directory after loading a third party program they left from, there is a chance they could stomp on someone else's session or could come up under a different node number. If this happens, the user is told that their name is already in use on another node when they attempt to login. If this occurs, use the USERNET utility to clear names out of the USERNET.XXX file. You will find instructions for USERNET in the *Utilities* chapter of this manual.

Once PCBoard is working correctly, verify all third party programs to make sure they are setup properly (if you have any installed). It is strongly recommended that you read the Multiple node section for Doors in the *Conference Setup* chapter of this manual for additional information on running doors in a multi-node environment.

> In your setup, you may find it useful to know how PCBoard determines if a node is busy or not. PCBoard first scans the PCBOARD.DAT pointed to by the /FILE parameter to determine the beginning node number it can start floating from. Once PCBoard finds this number, it scans USERNET.XXX beginning at that node number up to the number of nodes that your software license allows. If a free node is found, the user is logged in. If it cannot find a free node, PCBoard prints the all nodes are busy message.
>
> If you would like to verify PCBoard's findings you can always log into the system and issue the WHO command to see who is currently online.

Optimizing A Network Setup

- Nothing helps a system out more than a good disk cache. You should use a disk cache both on your server and on your workstations. If you do, you will see a dramatic improvement in your hard disk performance. The most recent versions of MS-DOS and other DOS variations come with disk caching programs. Consult your DOS manual for more information on how to install the disk cache.
- In *PCBSetup | Node Configuration* there is a field labeled `Node Chat Frequency`. This field is used to determine how often a node scans USERNET.XXX (to update who is online, etc.) and also how often each node is checked for new lines of text when two users are in node chat. If you find that your system is really strained, increase the value of this field so that the network is strained less often. Do not make this value too large though, as it may end up slowing down some of the functions of your system.

- When determining how big to set your network buffers in the network, consider a buffer size that is in multiples of 2k or 4k. Because PCBoard does so many different tasks and because the type of network and computers you are using vary so much, there is no optimal size to recommend. Use a trial and error method where you login, perform what you think is a normal BBS call, check the performance time and then change your network buffer size and repeat the test.
- To help conserve a little bit of memory, add a statement in your CONFIG.SYS which says *FCBS=1,0*. DOS usually defaults to a higher number of FCBs (File Control Blocks). Very few programs use FCBs anymore so by setting it to the minimum that DOS allows, 1 FCB, you can save some additional conventional memory.

Special Considerations For Novell Networks

If you are running Novell NetWare, modify the way it searches for data files so it behaves more like DOS. This change is recommended at least on the PCBoard executables—it may not be appropriate for all files on the system.

Novell, unlike DOS, searches the path not only for executable files but for data files as well. This can cause problems for PCBoard. Therefore, it is recommended that you change to the subdirectory where PCBoard is installed and type:

```
SMODE *.EXE 2
```

By doing this, NetWare searches the path for data files when programs are executed. In actuality, you have made NetWare behave more like DOS in regards to the search path.

Possible IRQ Conflicts

When adding hardware to a system (whether it be more COM ports or a network card), you need to be concerned about IRQ line conflicts. IRQ lines are used to pass hardware interrupts which are used to notify the CPU that the device has some input/output that needs to be taken care of. If two devices use the same IRQ line, serious conflicts arise. Multitasking and networking setups have different scenarios which are described in the next two sections.

Multitasking

When running three or more standard COM ports in a single machine, it is quite likely you have already experienced an IRQ conflict. The following is a table which lists typical defaults for 4 COM ports:

COM	Base Address	IRQ
1	03F8h	4
2	02F8h	3
3	03E8h	4
4	02E8h	3

Right away you should notice a problem. COM1 and COM3 are set to share IRQ 4. Likewise, COM2 and COM4 share the same IRQ. This **DEFINITELY** does not work. Therefore, you need to do find two different IRQs to use for COM3 and COM4. At this point, you are probably asking "What IRQs can I use?" IRQs 2 and 5 are usually available in a system and a wide variety of serial port boards support IRQs 2-5. Below is a table listing base addresses and IRQs which might be used in a computer with four serial ports:

COM	Base Address	IRQ
1	03F8h	4
2	02F8h	3
3	03E8h	5
4	02E8h	2

If you decide to use IRQ 2, realize that it is special. IRQ 2 is used to cascade the interrupts from the upper IRQs (8-15). Therefore, if you have any devices using IRQs 8-15 make sure that by using IRQ 2 you do not cause problems for other devices because their interrupts cannot be properly cascaded through IRQ 2. If you do run into a problem, try using IRQ 7 instead. This IRQ is used for LPT1 but it is usually safe to use.

If you have two COM ports or a COM port and another device which conflict with one another, modem reset errors will occur. This is because two or more devices are trying to get exclusive use of one IRQ. Another thing that can happen is that the second device, which was contending for the IRQ, will get it making the other device appear as if it has ceased functioning. The solution to these symptoms is to resolve the IRQ conflict. Double check your configuration and make sure that no two devices conflict.

One of the reasons external modems are recommended instead of internal modems is that internal modems rarely let you select a large range of IRQs for the COM ports. If you are using external modems and run into an IRQ conflict, you can change the settings on the serial port card rather than a modem card. If your serial port card does not allow you to select a wide range of IRQs, buy one that does.

Networking

Like COM ports, LAN cards must communicate with the computer through using an IRQ. Therefore, make sure the IRQ settings for the COM port(s) and your network card do not conflict with one another. If they do, you could experience lockups, excessive network time-outs, or while PCBoard is running you may see constant `Network Delay...` messages.

Restricting Access To A Node

When dealing with multiple nodes, you may need to restrict the users which can access a particular node. This section discusses how to prevent users from logging into the system based on their security level or connect speed.

Throughout this section, we will be referring to a *public* node as a node which any user can access. *Private* nodes are nodes that restrict access.

By Security Level

If you are trying to restrict access to a node based on security level, it is usually because you have public and private nodes with the private nodes requiring a higher security level to access.

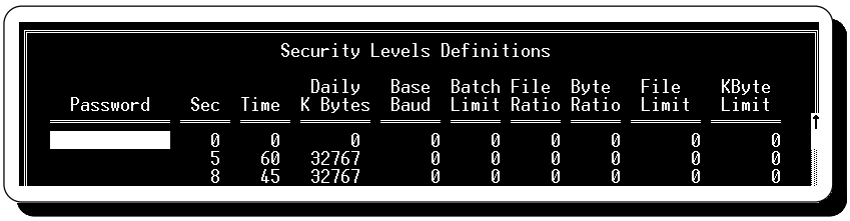
At this point, you probably have one single PWRD file (*PCBSetup | File Locations | Configuration Files*) for all of your nodes. If you are going to restrict access to nodes by security level, you must specify different PWRD files for the public and private nodes.

First of all, the public and private nodes must use a different PCBOARD.DAT because the location for the PWRD file is stored there. Therefore, copy your existing PCBOARD.DAT to a new location or file and use PCBSetup with the /FILE option to change the PWRD file on the private nodes to something like PRIVPWRD.

To save time, copy the PWRD file to PRIVPWRD. For example, if you were at the DOS prompt and in the same directory where the PWRD file is, type the following:

```
COPY PWRD PRIVPWRD
```

Next, run PCBSetup on one of your private nodes and edit the PWRD file (*File Locations | Configuration Files*). You should see a screen which resembles the following:



Security Levels Definitions

Password	Sec	Time	Daily K Bytes	Base Baud	Batch Limit	File Ratio	Byte Ratio	File Limit	KByte Limit
	0	0	0	0	0	0	0	0	0
	5	60	32767	0	0	0	0	0	0
	8	45	32767	0	0	0	0	0	0

To lock out a security level, set the time limit to 0 minutes per day. When PCBoard sees the security level is set to zero, it displays the CLOSED file and disconnects the caller.

By Carrier Speed

If you look at the options available in *PCBSetup | Modem Information | Allowed Access Speeds*, you will see several fields that control what speeds are allowed to login to this node. As an example, let's assume we want the following:

- Anyone can access this node at anytime if they connect at 2400 bps or higher.
- Anyone who connects at a speed less than 2400 bps will not be allowed to login to the system unless they call between 1 am and 8am.

To accomplish this, enter the following values:

```
Lowest Desired Baud     :   2400
Allow Lower Speeds      : Y
Begin Time              : 01:00
End Time                : 08:00
```

To cover all of the bases, PCBoard can also override the connection speed checking for security levels equal to or greater than the level specified in the following field:

```
Security Level Override :   0
```

If you enter a security level of 0, the override function is disabled. With the security level override disabled, everyone that logs into your system must meet the connect speed requirements specified. If you enter a security level override, users who have a security level equal to or greater than the value entered are allowed to login regardless of the time they call or the speed of the connection.

DOORWAY And Multiple Nodes

The shareware version of DOORWAY is included with PCBoard so you can access DOS from remote via your REMOTE.SYS file. Each node should have a REMOTE.SYS file in the node directory. If you look at this file, it should resemble the following:

```
set box=no
doorway com1 /v:d^O /m:600 /g:on /o: /k:v0 /c:dos
set box=
c:
cd \pcb
board
```

If you are using a serial port other than COM1, change this value to reflect the correct serial port. If you are using a serial port other than COM1 or COM2, you must change the way the serial port information is specified.

When using standard serial ports (normal serial cards but using a non-standard IRQ or base address), you need to tell DOORWAY what IRQ and base address is used. For example, a node that uses COM3 with a base address of 3E8h and an IRQ of 5, uses

```
doorway port:03e8:5 ... ... ... ...
```

instead of

```
doorway com3 ... ... ... ...
```

NOTE: The 0 in front of the three digit hexadecimal base address is necessary on the DOORWAY command line because it is the expected syntax. If it is not, an error message informing you that the syntax for the *PORT* parameter is incorrect will be displayed.

Up to this point, the information covered is for standard serial ports. When you are taking advantage of other serial port access methods (FOSSIL, OS/2, etc.), the only way to communicate with DOORWAY is via the FOSSIL interface as the following illustrates:

```
doorway com2f
```

Notice that you enter the port number after the *com* and then add an *f* so DOORWAY knows this is a FOSSIL port rather than a standard serial port. For further information about DOORWAY, refer to the manual which accompanies DOORWAY or to DOORWAY.ZIP in the directory where PCBoard is installed.

Answers to Common Multinode Questions

When I make a change to one of the conferences (including the Main Board), the change shows up on all of the nodes. Why?

The reason that this happens is that all of your nodes point to the same Conference Data file (*PCBSetup | File Locations | System Files*). Since this file contains all of the conference information for the system and you are using one file, you see the changes on all nodes.

The obvious solution is to specify different Conference Data files for each node. This solution is not recommended though, because changes made to a conference must be repeated for each node. Specifying a different Conference Data file for each node increases your chances of making errors in your system configuration. If you determine that you must have some nodes that do not share the same information as the rest, use what is referred to as *relative addressing*.

Relative addressing depends on the current subdirectory to determine where it looks for files. If you enter the filename (no drive or subdirectory locations) in a field, PCBoard will look for the file in the current or default directory. Because each of your nodes use a different node subdirectory, you can keep one copy of your Conference Data while still being able to have unique conference files for each node.

Relative addressing looks like the following examples:

1. DOORS.LST
2. GEN\BLT
3. \PCB\MAIN\SCRIPT.LST

1. Because no directory information is specified you are telling the program to look in the current subdirectory for the filename DOORS.LST. If your current subdirectory is C:\PCB\, the program is going to try and open C:\PCB\DOORS.LST. On another machine your current subdirectory may be D:\PCB\. If so, the program will look for D:\PCB\DOORS.LST instead.
2. This example does have a directory included in the file specification but notice that there is no backslash (\) at the beginning. This simply means to look for a subdirectory called GEN underneath the current subdirectory. For example, if your current subdirectory is C:\PCB\, the GEN\BLT will be added on to create C:\PCB\GEN\BLT.
3. If all that is different is the drive letters that you use between machines, you may want to use the type of relative addressing shown in this example. Notice how this example starts with a backslash. This will cause the program to begin looking for that file from the root subdirectory on the current drive.

Be careful when using relative addressing. You may end up creating a message base or user file that is specific to one particular node. For example if you have two nodes running and you are having problems with one node not being able to read the MSGS file you may be tempted to use relative addressing. If so, you will not get the file not found errors, but you will end up creating two separate files with each copy specific to a particular node. This means that a message entered on one node will never show up on another node because each node is using separate message base files.

Absolute addressing, on the other hand, looks like the following:

1. C:\PCB\GEN\DOORS.LST
2. D:\PCB\GEN\BLT
3. F:\PCB\GEN\DIR.LST

Notice that each of these examples are quite similar. The reason they are is that absolute addressing requires you to start with the drive letter and give the complete path and filename.

I am planning on running multiple nodes but I only want one phone number to access all of my nodes. How can I do this?

This is something you need to consult your local telephone company about. Your phone company provides a service called hunt groups or ring-down groups. You get a phone number for each incoming line, but if the first number is busy the call goes to the next available line.

When I try to login to a second node, the first node's session is accessed instead of a new session. What am I doing wrong?

You are attempting to start PCBoard from the same directory that another node has started from. Recall that PCBoard requires being loaded from a unique drive and subdirectory because it writes PCBOARD.SYS, DOOR.SYS, USERS.SYS, and ENDPCB to the directory PCBoard is loaded from. If two nodes try to load from the same directory, they will conflict.

Will PCBoard use a modem on another computer via a network?

If a FOSSIL or OS/2 driver is available to communicate with the modem on the communications server, it will be possible. Remember PCBoard has to live within the restrictions of the comm drivers it supports. With the asynchronous comm driver, PCBoard talks directly to the serial port hardware. The rest of the comm drivers are all external drivers and therefore the types of serial port hardware and connections supported depends on the capabilities of each driver.

Every once in a while I see a message that says SHARING VIOLATION. What exactly is a sharing violation?

A sharing violation occurs when two programs attempt to access the same file when one of the programs has the file *locked*. In normal multi-node operations, it is quite common for two or more programs to read/access a file at the same time. Sometimes though, a program needs to update a file and while it writes to the file it locks it. When a file is locked, it means that no other program can read from or write to the file. These errors can be reported by the programs themselves or by DOS. To resolve the conflict check and see what programs are accessing the same files and try to prevent this from occurring.

In my network startup batch file I tell it to redirect the local C: drive to the C: drive on the server. Just after this line executes in my batch file, the batch file stops running. Why?

This is one of the reasons why you should not redirect you local C: drive. Presumably you were redirecting drives in your AUTOEXEC.BAT file which is loaded from your C: drive at bootup. When you reassigned your local C: to another drive while the batch file is running on C:, DOS can no longer find the same batch file it was executing and consequently stops.

When a door runs it will display the opening screen okay but when a user types something it does not show up on the screen.

This problem occurs more often on a multitasking setup that uses non-standard COM ports. The door programs you are running are not currently setup to use non standard COM ports. In other words, the IRQ the door thinks you are using and the one you are actually using are different. You should check the documentation for your door program to see if there is a way to specify the IRQ you are using for the COM port on your system.

I have often noticed that some programs that wish to run in the event require that all nodes be down while one node runs the event. How can I make sure that all of the nodes are down?

The most common solution to this dilemma is to have the other nodes run a program which waits x minutes while the other node does its processing. There is a third-party freeware utility available on Salt Air under the filename of WAIT4.ZIP. If you have an event defined that uses PACKIT for the batch file and has node 1 pack your message bases, your batch files may resemble the following:

PACKIT.001

```
@ECHO OFF
PCBPACK /AREA:ALL /DAYS:90 /KEEP
```

PACKIT

```
@ECHO OFF
WAIT4 360
```

Using these example event batch files, node 1 packs the message bases and returns control to BOARD.BAT upon completion. In the meantime, the rest of your nodes are on hold for 360 seconds (6 minutes). After the 6 minute countdown is done, BOARD.BAT is re-loaded.

I am running multiple nodes using standard serial ports. Everyone seems to recommend 16550 UARTs for my COM ports. What are they? How do I find out what type of UART I have? And why do I need them?

A UART is the chip on standard serial port boards which handles the input and output of the serial port. What makes the 16550 UART important to multiple node setups is that it can buffer more data than other UARTs. The 16550 will buffer up to 16 bytes of data as opposed to the one byte most other UART chips handle. In order to maintain error-free connections with high speed modems, multitaskers, or networks a 16550 is highly recommended.

You can find out what type of UART you have by loading PCBoard (with the COM port you want to check specified in *PCBSetup | Modem Information | Modem Setup*) and logging in as the SysOp. Once you are in the BBS, press A -H four times. You will notice that the status line changes each time and looks like the following example:

```
1 PC-Modem: 38400 Overrun:  0 Parity  :  0  InBuf:    0  OutBuf:    0  CTS:up
  Carrier : 38400 Framing:  0 ErrCorr :YES  16550A FIFO
```

Notice that on the bottom line towards the right hand side is the text *16550A FIFO*. If you have a different type of UART (e.g., 8250A/16450) you may want to upgrade to the 16550.

I seem to see a message that always says out of environment space while my BBS is running. What does that mean and how do I fix it?

When you receive an out of environment space message from DOS it means you did not have enough room in your environment to store an environment variable you attempted to create or modify. You can increase the size of your environment by using the *SHELL=* statement in CONFIG.SYS. It is not recommended that you exceed 1000 bytes for your environment size because some programs have exhibited problems with environments of that size. An environment between 768 and 950 bytes should be more than adequate for most systems. In your CONFIG.SYS, an example SHELL statement may look like the following:

```
SHELL=C:\DOS\COMMAND.COM C:\DOS\ /E:768 /P
```

If you have Windows 3.1, you will need to modify your SYSTEM.INI to increase the size of the environment available in a DOS window. Windows 3.1 allows you to specify the size you want for your DOS windows via your SYSTEM.INI file. In the *NonWindowsApp* section of your SYSTEM.INI should be a line that says *CommandEnvSize=512*. This line tells Windows how much environment space to allow to each DOS window that is opened. You should note that the default value is 512 bytes which should be fine for nearly all systems. If you need to change that value (or add the line to your SYSTEM.INI) please refer to your Windows documentation for further instructions.

I seem to be experiencing sharing violations when PCBoard is loading or returning from DOOR applications. What is causing this?

PCBoard is overlaid which means it stores some of the executable code on disk. There is a chance that two or more nodes can conflict while loading. To help prevent this, make your PCBOARD.EXE file *read only*. To make this file read only, use the *ATTRIB* command provided by DOS as in the example below:

```
ATTRIB +R PCBOARD.EXE
```

PCBoard Control Panel For OS/2

The OS/2 version of PCBoard includes a utility titled PCBoard Control Panel. This small utility has a lot of features to aid you in the operation of your system under OS/2. After we explain what its purpose is, and how to install it, the rest of this section covers the menu options and some more specific topics of how this program benefits you.

What Does It Do?

The PCBoard Control Panel for OS/2 (PCBCP) is a utility for configuring, launching and controlling various nodes running PCBoard for OS/2 (PCB-OS2). At its simplest, it is a GUI version of the PCBMONI2 program included with PCB-OS2. However, it does much more:

- It makes it easy to set up multiple nodes under OS/2
- It can also bring nodes to the foreground simply by double clicking on the node in the status window.
- Further, combined with the SIO VMODEM driver (virtual modem driver for internet usage), you can configure Control Panel so that it does not start up a node until a call comes in (Telnet only).
- Finally, Control Panel is able to monitor the status of your nodes and provide you with both a visual and audible warning if a node appears to have locked up.

Running The Control Panel

There are several ways to run the Control Panel. The method you choose depends a lot upon how you use it to aid you with the system. For example, if you use it to warn for inactive nodes, it's wise to load it with every bootup. On the other hand, a quick change to a node can be made by loading it from a command prompt. We detail the three most common methods of accessing the Control Panel in this section.

From The Desktop

1. Create an icon object that loads PCBCP.EXE. Consult your OS/2 manual if you need assistance creating a program icon.
2. Modify the parameters section of the object to pass the filename of the USERNET.XXX file to monitor. The location of this file is stored in *PCBSetup | File Locations | System Files*.

From A Command Prompt

This is the simplest way to run Control Panel because you simply execute the program at the command prompt and pass the filename and location of the USERNET.XXX file (See *PCBSetup | File Locations | System Files* for the location.) Example:

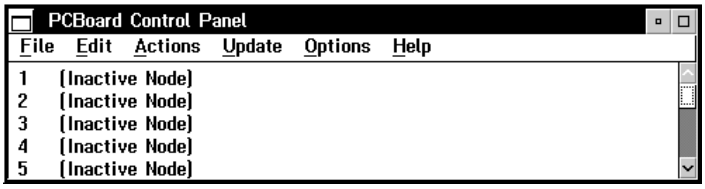
```
C:\PCB\PCBCP C:\PCB\MAIN\USERNET.XXX
```

At Startup

The easiest way to start Control Panel when OS/2 boots is to put it in your startup folder. Because Control Panel can also load nodes, you only have one object in your startup folder instead of one for each node. Consult your OS/2 manual for more information on adding objects to the startup folder.

Menu Options

Like any other GUI application, Control Panel has a ribbon of menu choices across the top of the window. This section briefly describes the functionality of each of these menu options. More in depth discussions on particular topics occur in the remaining areas of this section.



File

Open Usernet...: The Control Panel gathers the current information about the nodes by reading the USERNET.XXX file. While the filename can be passed as a parameter when it is loading, this menu option can also be used to load the file.

Node Limits...: With this menu option, you control the beginning and ending node number that is monitored. In a case where you have a 25 node license but are only running 5 nodes, limiting the maximum node to 5 instead of 25 improves performance.

Node Settings...: When you use Control Panel to run or launch nodes, this menu option helps you control the characteristics of the windows, and information required to load the nodes.

Exit: Quits the Control Panel and closes the window. ***All nodes launched by Control Panel will also close.***

Edit

With this menu option, the information in the USERNET.XXX file can be modified. This includes information such as the user name, their city, or even their current status. Additionally, a broadcast message can be sent.

Actions

Nodes on Screen...: Underneath the menu bar is a window listing nodes on the screen. This menu option allows you to perform actions on these nodes such as flagging the nodes to drop to DOS at logoff, recycle, or to clear them from the USERNET.XXX file.

All Nodes...: The actions available from the menu option are identical to that of the *Nodes on Screen...* item with the exception that the action takes place to **all** nodes set to be monitored, not just the ones on the screen (see the File menu to determine which nodes are monitored.)

Run/Switch to Nodes: This menu option acts on all selected nodes. Any nodes not currently open are run assuming the appropriate node information was entered in the File menu. If the node is already running, that node is brought into the foreground.

Restart Inactive Nodes: You can restart all nodes that Control Panel opens when it first runs by selecting this menu option. This is useful when you need to take down the nodes on a machine and want to quickly restart those nodes.

Update

Now: This menu option refreshes the screen and updates the information for the nodes.

Set Interval: With this menu option the amount of time between each automatic refresh or update is controlled. The longer the interval, the less impact Control Panel has on performance. A good setting is at 10 seconds or higher.

Options

Font: The font used to display the node information on the screen is set with this menu option. Characteristics such as font type, bold, underline, and point size are set here.

Display: From this menu option, two characteristics are controlled: 1) Whether the display of nodes is fixed or proportional, and 2) The beginning node number to display. The difference between proportional and fixed displays is discussed in detail near the end of this section.

Warnings: One of Control Panel's capabilities is to warn of nodes that have not been updated over a specific amount of time. This menu option allows you to determine how long is too long, and what type of warnings you want.

StartUp: Sometimes it is desirable to override the nodes from running at startup or on connect. This menu option allows you to disable nodes on a group basis rather than having to manually change each node's configuration. Normal operations is to have all fields enabled.

Mouse: Control Panel allows you to determine what action the right mouse button has when it is over a node entry. Either it will launch/switch to the node or it will pop up the edit box so information the user on that node can be changed. Pick whichever activity you perform most.

Save Settings: This option saves the settings regarding fonts, warning parameters, etc.

Help

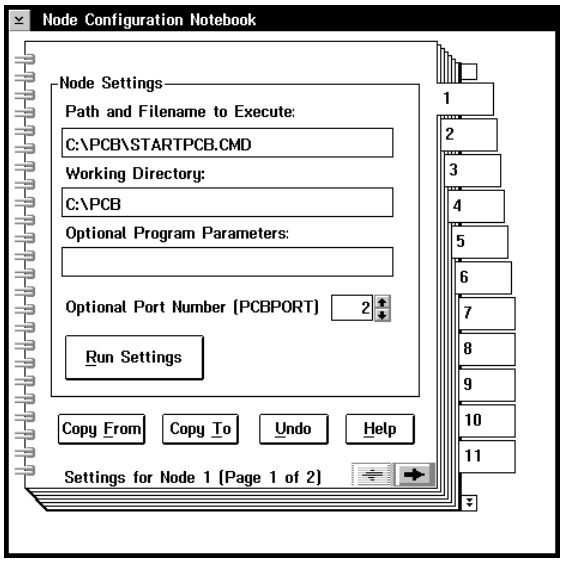
This menu option access the online help for the Control Panel.

Launching/Running Nodes

As you are aware, one of the functions of Control Panel is to help run nodes easier. The goal of this section is to tie the various menu items and changes to files that are required to run nodes more effectively using Control Panel. The method chosen to launch the nodes revolves around minimizing the number of CMD files and data files used.

Configuring Node Information

In the *File | Node Settings* screen, you can configure one or more PCBoard nodes. There are two screens to this menu option. The first screen lets you define the path and filename to execute, the working directory, any optional parameters, and optionally a port number. An example setup might look like this:



To get a better understanding of the settings on this screen, let's discuss each in greater detail:

Path and Filename: This is the path and filename of the .CMD file to run when launching a node from Control Panel. More information on what this file should look like can be found in the STARTOS2.CMD section.

Working Directory: In this field, enter the subdirectory you want to be in when the .CMD file is run. As a general rule, it's good to set this as the same directory the CMD file is in.

Optional Program Parameters: Should you need to pass any command line parameters to the CMD file, enter them here. These values are passed as normal parameters (%1, %2, etc.) If one or more nodes needs special attention, you can pass a parameter and have the CMD do the special processing required.

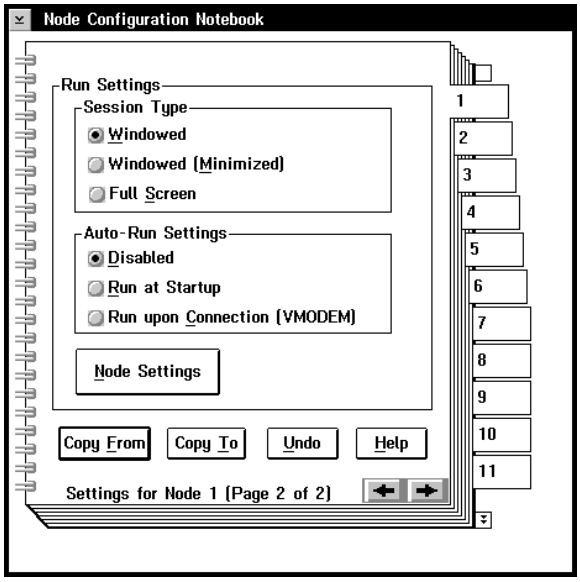
Run Settings: Pressing this button takes you to the second node configuration screen where you determine what window type the node uses and when it is run.

Copy From: This button sets the node number to copy node setup information from.

Copy To: To copy setup information from one node to a range of nodes, press this button. You control the beginning and ending range of conferences that are modified.

Undo: This button undoes any changes made to this screen.

The second configuration screen (Run Settings) controls information about how the node is run. A sample of how this screen appears is as follows:



Windowed: Open the node in a window on the desktop.
Windowed (Minimized): The node is opened in a window but in a minimized state.
Full Screen: Run the node in full-screen non-windowed mode.
Disabled: Do not automatically launch the node.
Run at Startup: Run the node when Control Panel starts. An entry is made in the PCBCP.LOG file located in the current subdirectory.

Run upon Connection: Run the node only when a call comes in via a VMODEM port. This has the advantage that nodes only load when there is a call that needs to be attended to. The benefit is that nodes are not sitting around using CPU cycles when they are not needed. You don't want to run all of you nodes with this setting, but rather use this to handle above average situations. Remember, *this setting only works with OS/2 ports controlled by VMODEM* (Telnet). An entry is made in the PCBCP.LOG file located in the current subdirectory.

Node Settings: Return to the first configuration screen.

Now that we have a better understanding of the node configuration screen and have entered the settings desired for the first node, let's focus on the next step, the CMD file that loads the nodes.

STARTOS2.CMD

An example of the STARTOS2.CMD file might look like this:

```
@echo off
rem set any common variables here such as dszlog
set dszlog=pcbdsz.log
rem set the port and node parameters to override pcboard.dat
set pcb=/PORT%PCBPORT% /OS /NODE:%PCBNODE%
rem now run board.cmd
board.cmd
```

The purpose of STARTOS2.CMD is to simply setup some environment variables that are specific to each node and then to turn control over to BOARD.CMD. Two environment variables are set by Control Panel:

PCBNODE	the node number as shown on the Control Panel display
PCBPORT	refers to the port number specified in the *File | Node Settings screen*.

Notice how these environment variables are used with the SET PCB= statement in the file. Since this is node specific information, we need to take care of it before we can load the more generic BOARD.CMD which ultimately loads PCBOARD2.EXE.

BOARD.CMD Changes

There is only one change that must be made to BOARD.CMD in order for it to work with Control Panel. Because we are using one PCBOARD.DAT for all of the nodes and overriding node specific information with environment variables, we need to tell PCBOARD2 where to find the data file. This can be done quite easily as the following illustrates:

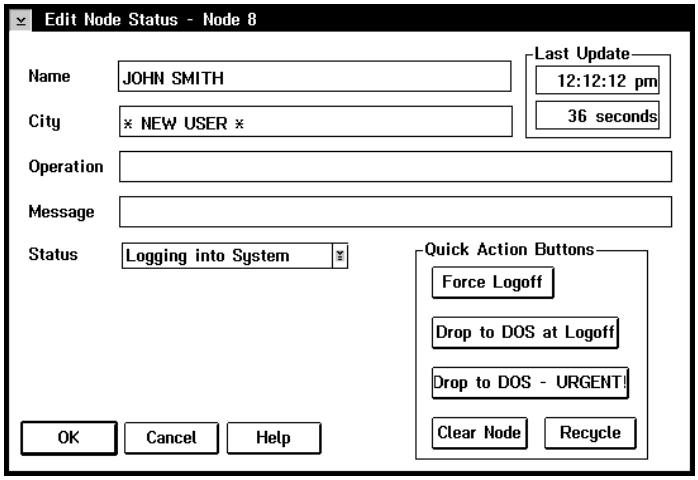
```
pcboard2 /file:c:\pcb\pcboard.dat
```

Copying The Settings To Other Nodes

What's left is for you to simply copy the first node settings to each of your other nodes! Once you have one node up and running, you can set up more in a matter of seconds by using the Copy To button in the *File | Node* Settings screen. Using Copy To, you copy an existing setup to a range of other nodes and then edit the settings for the node to set the proper port number.

Editing The Node Status

Like PCBMoni, you can edit the information stored in the USERNET.XXX file for a particular node. The information that can be edited includes the user name, city, node status, etc. Furthermore, you can broadcast other users too.



For information about fields on this screen, refer to the discussion of PCBMoni in the Utilities chapter. It gives detailed information about these fields.

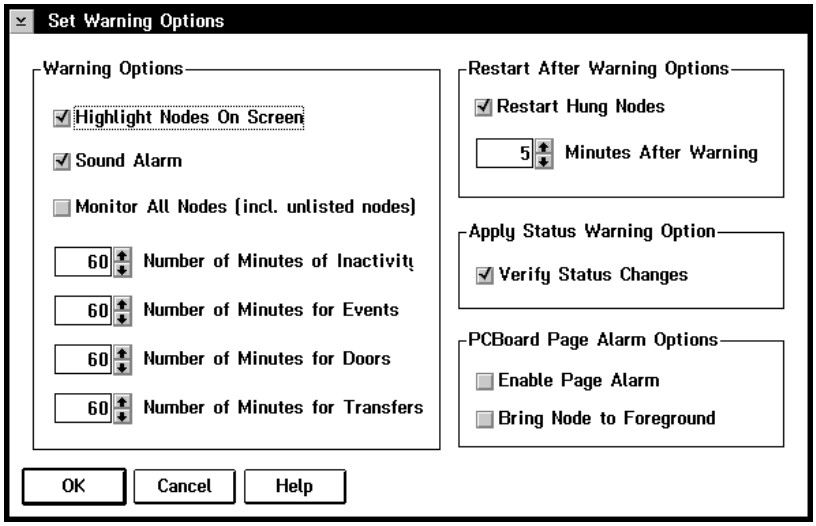
System Inactivity Warning

In a perfect world, nothing ever goes wrong. The reality as it relates to your bulletin board is that something will happen that will make one of your nodes inactive at some time. This is not too unreasonable to expect given the complexity of most of the modern operating systems and the amount of software running on one machine (nodes, doors, operating system utilities, etc.)

One of the Control Panel's strengths is in it's ability to warn when a node *appears* to be inactive or locked up. It does this by monitoring the last update to the USERNET.XXX file and when it occurred. If a node has not been updated for a while, there is a good chance either a node has become inactive or the whole machine has locked up.

This concept of how Control Panel checks for potential problems is very similar to what a security officer on patrol does. If the officer fails to check in at the appointed time, the central office becomes suspicious and may even sound some alarms..

Control Panel has two methods to warn you of inactivity. It can highlight the node in the display window, or it can send out an audible alarm to get your attention. These settings are controlled in *Options | Warnings*.



Highlight Nodes: If a node is determined to be inactive, highlight the node whenever it appears in the display window.

Sound Alarm: Sound an audible alarm whenever a node is considered inactive. This alarm will get your attention and sounds every time the display window is updated. See the *Update | Set Interval* menu option for more details.

Monitor All Nodes: When this switch is enabled, the range of nodes specified in *File | Node Limits* are scanned for inactivity. Otherwise, only the nodes in the Control Panel display window are scanned.

Minutes of inactivity: This field controls the number of minutes that Control Panel uses to determine when a node is inactive.

Minutes for Events: Because events can be quite lengthy in nature, a separate inactivity value is maintained. Typically this value is set higher than the general inactivity field.

Minutes for Doors: Doors are similar to events in that PCBoard turns control over to another process so it may be that a user is in a door longer than the general inactivity timer accommodates for. Therefore, you may want to set this field to a higher value to accommodate.

Minutes for Transfers: Most likely, some of the file transfer protocols installed on your system are external protocols. As a result, this option lets you control how many minutes must elapse before a warning is sounded when a user is out in a transfer.

Restart Hung Nodes: When this option is enabled and a node that Control Panel started has gone inactive for more than one minute, an attempt is made to close the node and reload it. If a node is restarted, a log entry is written to the PCBCP.LOG file in the current subdirectory.

Minutes After Warning: In accordance with the *Restart Inactive Node* setting, this field determines the number of minutes that must elapse ***after*** the first warning is given before the node is restarted.

Verify Status Changes: When you change the status of a node (e.g., from Unavailable to Chat to Entering a Message), Control Panel normally pops open a dialog box asking your to confirm the change. If this option is deselected, Control Panel does not ask you to verify the change.

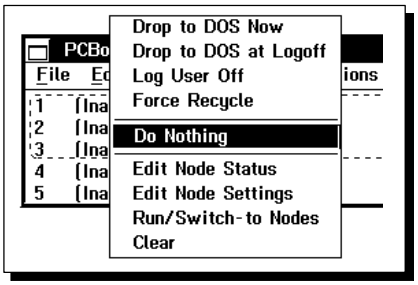
Enable Page Alarm: With this option enabled, an audible tone different from that of the warning tones is emitted to notify you a node is requesting a chat with the SysOp.

Bring Node to Foreground: If the page alarm is enabled, this option brings the node requesting the page to the foreground making it easier to chat with the user.

PCBoard for OS/2 maintains the USERNET.XXX file with a separate thread which means it is updated even during events and doors. It will only fail to update if the machine has complete locked-up.

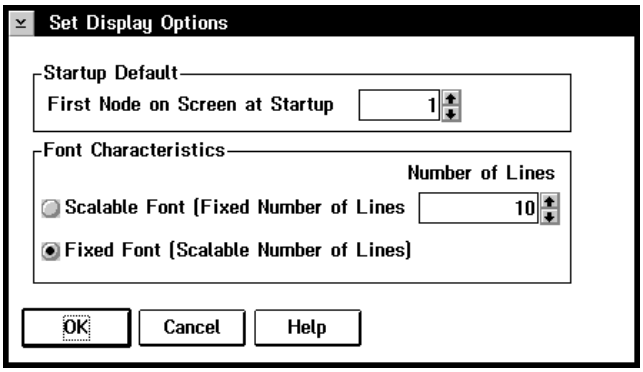
Acting On Several Nodes At Once

Like PCBMoni, Control Panel can set the status of nodes of the system. Unlike PCBMoni, it can do these actions on a range of nodes. Using the mouse, you can select several nodes on the display window and press the right mouse button to display a pop-up box with common actions. This box resembles the following:



Fixed Versus Proportional Display

In the *Options | Display* screen, there is a pair of radio buttons that let you decide if you want to use a fixed font or a scaleable font.



With fixed fonts, you size your window and either increase or reduce the number of nodes that are visible in the window (as well as increase or decrease the right margin of text).

With the scaleable fonts, everything always fits on the screen, according to the number of nodes you want to view, and Control Panel then adjusts the size of the font accordingly, in order to make it fit. So you can get really small text or really huge text, or just right text, by resizing your window. You never have to adjust the size of the window to get the number of nodes on the screen that you want to monitor.

To use the Scaleable Fonts, you must also indicate the number of lines that you want to appear on screen. This is done in the same *Options | Display* dialog box. You can optionally set a different node number to be the "first node on the screen" when Control Panel starts up.

Of the two methods, the fixed font size will always display faster, but the scaleable font size may be more convenient and is definitely easier to use than having to go to the Font Dialog and pick a size from the menu then return back to see the results.

NOTE: For the scaleable font selection to work, you must be using an outline font (i.e. not a bitmap font). It can be proportional, but does not have to be. If you have selected a bitmap font, and then go into *Options | Display* and select scaleable fonts, the Control Panel window will blank out and remain blank until you either change it back to a fixed font, or go into *Options | Fonts* and select a different font.

While the Scaleable Fonts option is enabled, the fonts that appear to be available in the *Options | Fonts* dialog will be shortened to include only outline fonts to aid in determining which fonts you can use. Also, it should be noted that the **size** field in the *Options | Fonts* dialog is meaningless when using scaleable fonts since the actual size of the font is determined by scaling it to the window size.

8

SysOp's Guide

File Transfers

Uploading Files

When uploading files, you are adding files to the bulletin board system. The files are posted so other users may download the files.

How to Upload Files

In order to upload a file, specify the filename(s) and a description for file you are uploading. Once all of the files and descriptions are entered, begin the file transfer. As an example, we will upload a file called MNHIT110.ZIP. Begin by entering U at a *conference command* prompt to initiate an upload. PCBoard displays the following prompt:

```
(1) Enter the Filename to Upload (Enter)=none?
```

At this prompt, enter the filename which is *MNHIT110.ZIP*. Next, enter a description for the filename just entered. Each description line is 45 characters in length and the maximum number of lines can be entered is displayed on the screen. Let's enter the following description:

```
Before beginning, enter a description of: MNHIT110.ZIP
Begin description with (/) to make upload `Private'.
Enter your text. (Enter) alone to end. (45 chars/line, 12 lines maximum)
? (MANHIT v1.10 -- Utility you can use to enhance)
? (your computer/system security.                )
```

On the next blank description line, press R to finish entering the description. You are either asked for another filename to transfer or the transfer will begin. It all depends on how you answered the *Promote to Batch Transfers* question in *PCBSetup | Configuration Options | File Transfers*. If you are asked for another filename, you may enter another filename to transfer or press R to begin the transfer. The transfer should now begin. There is a different method for uploading from remote or locally. The following describes each.

Remote: You need to transfer a file using your communications program which can typically be done by pressing u . You are usually prompted for the protocol to use for the transfer; make sure the protocol you select is the same as the BBS is set to use. Once the protocol is selected, you are asked for the filename(s) to transfer. Enter the location to find the files to upload on your disk and press R . At this point you will see the files being transferred.

Local: Local uploads are different because PCBoard is in control. To perform a local upload, make sure you select an internal protocol to PCBoard. At the point where you press u from remote to begin the transfer, the following prompt is displayed at the top of your screen:

```
Local Upload Path or Filename? (                        )
```

In this field, enter the filename(s) to upload. For example, to upload a single file called MNHIT110.ZIP located in D:\TEMP\, enter *D:\TEMP\MNHIT110.ZIP*. To upload every file in D:\TEMP\, enter *D:\TEMP*.*.

If the file transfer is aborted, it may occur for any of the following reasons:

- You used an internal protocol and one or more of the files you were transferring duplicated filenames already on the system. The non-duplicate files are transferred, but the transfer aborted message is printed to let you know one or more files were aborted.

- You took too long to begin the transfer. The internal protocols in PCBoard give you approximately 60 seconds to begin the transfer. Most external protocols have a built in time-out value as well.

If you are prompted for any descriptions after the transfer has taken place, an *unannounced upload* has been performed. With batch transfers, multiple filenames can be sent because the filename information is sent with each transfer. Therefore, it is possible to send more files than PCBoard expected. All filenames that CBoard does not have a description for are considered unannounced and a description must be obtained before the upload is deemed successful.

Before PCBoard asks for a description of an unannounced upload, it checks to see if it has a FILE_ID.DIZ in it. If so, the file is immediately tested without prompting for a description. PCBoard is able to determine if a ZIP, ARJ, LZH, PAK, or ARC file has a FILE_ID.DIZ file. If it does, the description file is used to describe the file. If PCBoard is unable to find a description in the file, it asks for a description of the file.

Testing Uploaded Files

If the system is configured to test all uploaded files, successfully uploaded files will be tested (one at a time) using PCBTEST.BAT. Even if carrier is lost during the transfer, PCBoard tests all files successfully transferred. For more information about testing files, see the *Batch Files* chapter (PCBTEST.BAT) of this manual.

Disabling Uploads

There are two methods to disable uploads on your system: 1) the **entire system** or 2) on a **conference by conference** basis. Uploads can be disabled over the entire system by setting the security level required to execute the U command in *PCBSetup | Security Levels | User Commands* very high so no one can upload.

To disable uploads for a conference, clear out the field containing the location of where uploads are stored. The field to clear depends on how the `Make All Uploads Private` question is answered. If you answered with a `Y`, clear out the location of private uploads. The following is a sample display:

```
              Sort   Name/Loc Upload DIR File       Location of Uploads
Public  Upld: 0   : C:\PCB\MAIN\UPLOAD            : C:\PCB\MAIN\UPLOAD
Private Upld: 0   : C:\PCB\MAIN\PRIVATE           :
```

If you answered with an `N` instead (making all uploads in the conference public), clear out the *Location of Uploads* for the public upload directory instead.

Determining Duplicates

PCBoard uses a semi-intelligent method to determine if the file that is about to be uploaded is a duplicate of a file already on the system. A list of the filename extensions used by the most popular file compression programs is stored in memory. If it appears that the file is simply compressed with a different program, the file is rejected as a duplicate.

For example, if you have a file called SPECIAL.ARJ on your system and an attempt is made to upload SPECIAL.ZIP, the file is rejected as a duplicate. However, a file like SPECIAL.TXT can be uploaded, because the TXT extension is not used by any compression programs. Therefore, this file most likely has contents that are different from SPECIAL.ARJ.

NOTE: The file extensions that are recognized as being used by compression programs are: ZIP, ARJ, LZH, LHA, ARC, PAK, ZOO, DWC, and EXE.

PCBoard checks the filename being uploaded against entries in DLPATH.LST to determine what files exist on the system. If the file already exists, a message stating the upload is a duplicate of a file already on the system is displayed. If you have a security level equal to or greater than the value specified by the `Level`

Needed to Overwrite Files on Uploads (*PCBSetup | Security Levels | Sysop Commands*), the option is given to remove the file from disk or to continue with the upload.

You may also want to use what is called an ALLPATH.LST (*All-Files DLPATH.LST* in *PCBSetup | File Locations | Configuration Files)*. In this file you can list all of the paths you want PCBoard to check when uploading a file. This way you could include download paths from multiple conferences so users do not upload files that may be located in another conference. Since the ALLPATH.LST file is never checked for downloads, you do not compromise the security of your system. If this field is left blank, PCBoard resorts to using only the DLPATH.LST method for duplicate checking.

Downloading Files

When downloading files, you are transferring a file from the bulletin board to your machine.

How to Download Files

In order to download a file, you must enter the filename(s) to download. To help find the filenames, use the L, N, Z, and F user commands. All of these commands list files. To actually download the file(s), use the D command to download a single file or the D B command to download more than one file. If you have answered *Y* to the *Promote to Batch Transfers* question, the D command behaves like the D B command.

You will see the following prompt when downloading a file:

```
(1) Enter the filename to Download (Enter)=none?
```

At this prompt enter the filename to download. You may stack multiple filenames at this prompt by separating each filename by either a space or a semi-colon. For example, enter BLADAR10.ZIP to download a file called BLADAR10.ZIP.

If the file is found on disk, you are shown the filename, how many bytes are in the file, and an estimate of how long it will take to transfer at your current speed. You are then asked for another filename. If finished entering the files to download, press R . After the filenames are entered, you are ready to begin the transfer. As with uploads, PCBoard treats remote and local transfers differently. The following describes each method:

Remote: You need to signal your communications program to receive a file. With most communications programs pressing d will start a download. The program will usually prompt for the protocol to use for the transfer. Make sure you select the same one as you did on the bulletin board system. Once you select the protocol, the location where the downloaded file(s) will be placed is asked. Enter any valid subdirectory or filename in this box as necessary for your communications program. At this point you will see the files being transferred.

NOTE: Some communications programs support what is called *auto-downloading*. This is where the transfer automatically begins as soon as the communications program recognizes the protocol. This is most common with protocols like Zmodem.

Local: Local downloads are a little different because PCBoard is in control. To perform a local download, you need to make sure you have selected an internal protocol to PCBoard. At the point where you would usually press d from remote to begin the transfer you will see the following prompt at the top of your screen:

```
Local Download Path? (                                    )
```

In this field, enter the drive and subdirectory where you want to store the file(s) download. For example, to store them in D:\TEMP\, enter *D:\TEMP* at this prompt.

If your file transfer is aborted, it may mean you took too long to start it. Internal protocols allow you about 90 seconds before they will abort. Local downloads abort if you do not type anything in the box within 30 seconds.

If your download is aborted, PCBoard remembers the filenames you typed in and they will remain as flagged files. Therefore, if you attempt to do a download again, you are asked if you want to download flagged files.

Flagging Files For Download

You can mark or flag files for download while viewing the file listings. When viewing file listings, notice the *More?* prompt has a *(F)lag* option. When selecting this option, you are asked what filename to flag for download. If the filename entered is found, the filename, file size, and approximate minutes to download are shown. Because the file is flagged for download, you can finish looking at the file listings without beginning the transfer right away. When you are ready to begin your transfer, simply use the D or D B commands.

Disabling Downloads

Disabling downloads is a very simple process. To disable downloads across the entire system, set the security level in *PCBSetup | Security Levels | User Commands* for the D command very high. To disable downloads in a particular conference is very easy. Simply make sure that the DLPATH.LST field in the conference configuration is blank. If it is blank, PCBoard informs the user that downloads are currently disabled. The following illustrates:

```
Directories : C:\PCB\MAIN\DIRMNU           : C:\PCB\MAIN\DIR.LST

Download Paths (listing only)              :
```

Making files FREE for download

When downloading files, you can define three special cases where the bytes, time, or both are not charged to the user for a download. For example, if a user has 280k of bytes available for the day and a free file is downloaded, 280k of bytes will still be available for downloading. Likewise, if you define a file to be free time, a user who has 28 minutes when starting the download will still have 28 minutes of time remaining when the transfer is completed.

To make a file free, you need to use the FSEC file which can be edited via *PCBSetup | File Locations | Configuration Files*. A file is considered FREE if the password required for the download is set to FREEFILE, FREETIME, or FREETIMEFILE. The following explains:

FREEFILE: The number of files or bytes downloaded are not updated in the user record. Therefore, any ratios or download limits being enforced are not be affected.

FREETIME: When downloading a file of this type, no time is charged against the daily or session limit of the user. In other words, if the caller had 35 minutes before the file was downloaded, they will still have 35 minutes when the file transfer is completed.

FREETIMEFILE: This type of free file combines the elements of FREETIME and FREEFILE. No time, bytes or files information are charged to the user.

A couple of examples will help illustrate the point best. For example, all files in the G:\FORALL\ subdirectory are considered FREEFILES files. You entry in FSEC looks like this:

```
          Drive \ Path              File Name    Sec     Password
------------------------------- -------------- ----- --------------
 G:\FORALL\                      *.*            0     FREEFILES
```

Because almost all bulletin boards store files on the system as compressed files, you may want to make the utility necessary to uncompress the files a file free of being charged bytes or time. For example, the decompression utility may be called ARJ300.EXE. If so, you may want to make the following entry in the FSEC file:

```
          Drive \ Path              File Name    Sec     Password
------------------------------- -------------- ----- --------------
                                ARJ*.EXE       0     FREETIMEFILE
```

Notice how the *Drive/Path* field is left blank. This means that anytime a user downloads a file beginning with ARJ and that has an extension of EXE, no time or bytes are charged.

Batch Versus Single File Transfers

You must use a file transfer protocol to transfer any files over the modem. As it turns out, some protocols can handle sending multiple files in a single transfer while others may be only capable of sending one file at a time. If a protocol can send more than one file in a single transfer, it is known as a *batch* protocol. On the other hand, if the protocol is capable of sending only one file at a time, it is sometimes termed a *single file protocol*.

If you flag or attempt to download more than one file for a single transfer, PCBoard only allows you to transfer the files using the batch protocols available on the system. If your default protocol is set to a single file protocol, you are prompted for the batch protocol you want to use.

Aborted Transfers

An aborted file is any file which was not fully transferred. The following details some reasons why files may be aborted:

- **excessive errors**: Almost every protocol has some error-checking routines built in to assure the proper transfer of information. If an error in the transmission is detected the data packet is re-sent. Most protocols also have a built in error limit. For example, if 10 successive errors occur, the protocol may abort the transfer.
- **line noise**: No transmission over phone lines is immune from line noise. If you do not have an error-corrected connection, this may cause transmissions errors and if bad enough, could cause the transfer to be aborted. If you do have an error-corrected connection, it is quite unlikely that the transfer will be aborted (because modems are doing the error correcting automatically). However, if the line noise is extremely bad, your modem may decide to automatically drop carrier instead.
- **dropped bytes**: The popularity of high-speed modems makes it more important than ever to have adequate serial port hardware that can handle the speed of the modem. If you plan on using a modem which uses a port speed of 19200 or higher, plan on either using a supported intelligent serial card or at the very least make sure all of your serial ports have NS16550AFN UARTs installed.
- **flow control**: It is very important that you use the right flow control. There are two types of flow control—software and hardware. The former is commonly referred to as XON/XOFF flow control and the latter is referred to as CTS/RTS flow control. It is important that your modem and your software be configured to use CTS/RTS flow control exclusively. Protocols such as Ymodem/G assume that flow control is operating properly. If flow control is not working properly, file transfers will not work correctly.

NOTE: If the connection is set to be disconnected once the file transfer has completed and the file transfer aborts, PCBoard waits 45 seconds instead of the normal 10 seconds.

Messages

Messages are a vital part of just about any bulletin board system. Messages are used to leave messages to the SysOp or to other users. Messages are the most common way of communicating with other users on the system.

Reading A Message

Because reading messages is one of the most commonly used functions when on a bulletin board system, PCBoard has numerous commands and subcommands dealing with reading messages. You can use the subcommands to view only those messages which interest you. For example, to only see messages from JIM SMITH, use the F R O M subcommand.

Reading new messages

Bulletin board systems are basically information banks. Because so much information is stored on a bulletin board system, you most likely want to view only new information that is placed online. Viewing any new messages on the system is very easy to do. From the *conference command* prompt you can type in the following:

```
R S A
```

This will R ead mail S ince the last time you were on in A ll conferences you have selected for scanning. If the bulletin board brings in a lot of mail each day, you may want to read only messages that are addressed to you. If so, use the following command instead:

```
R Y S A
```

The only change is the addition of the *Y* to tell PCBoard to only read messages that are addressed to Y ou. There are numerous other subcommands you can use with the R command. For a detailed list, see the R user command in the PCBoard Commands chapter of this manual.

Downloading an attached file

If you are reading a message which has an attached file, notice that you have the ability to flag the attached file for download. At the *End of Message Command* prompt, type *FLAG*; the file will then be flagged for download. When you are done reading messages, use either the D or D B command to download the file.

Entering A Message

One of the most popular methods of communicating on a bulletin board system is via the message system. To communicate with another user or group of users in this manner, you must enter a message. This section briefly describes how to do this. For more details about entering a message, refer to the E user command in the *PCBoard Commands* chapter. To begin entering a message, use the E user command by typing E followed by pressing R .

Addressing a Message

Once you press E and R you will see the following prompt:

```
To (Enter)='ALL'? (                    )
```

This prompt asks to whom the message should be addressed to. Press R to address the message to ALL, enter any valid user name on the system, or you can use some of the special addressees discussed in the *Entering a Message* section of the *PCBoard Commands* chapter (e.g., *@USER@*, *@LIST@*, etc.).

The Subject Of The Message

Just as you would enter a subject on a memorandum or other correspondence, PCBoard uses the same information in its messages. A subject may use up to 53 characters in length to describe the content of the

message. The subject of the message is displayed when the message is read, when using the Q user command, etc.

Assigning Message Security

Unless the current conference is defined to make all messages private, you'll be prompted for the type of security to use for the message being entered. You may choose to make the message public so other users on the system may read it or the message can be made private so only certain persons can read the message. The most popular security options are *N* for a public message and *R* for a message which can be read only by the receiver of the message.

Requesting A Return Receipt

If entering a *RECEIVER ONLY* message, you may be asked if a return-receipt is desired. If you request a return receipt, a message is sent to you when the recipient reads the message.

Echoing a Message

If leaving a message in a conference configured to allow echo-mail, you may be asked if the message is to be echoed. Choosing not to echo the message means the message is not sent to the network sites. Instead, the message remains on the local system only.

Routing A Message

A conference can be configured to request routing information if a message is private and set to be echoed. The routing information allows the message to take a direct route to the recipient rather than being broadcast over the entire mail network. The routing information depends on the software used for echoing mail as each can require different types of routing information. Check with the software to see if message routing is allowed and what format is required.

Choosing a Message Editor

PCBoard gives you the option to ask if the full-screen editor should be used each time a message is entered. If this feature is enabled, the question is asked before the message is entered. If you always use the full-screen editor or the line-editor, use the W user command to change the *Use Full Screen Editor?* prompt to reflect the appropriate default response.

The Message Editor

Once the questions about the message have been answered, you are placed in the message editor. In the editor, type the message as you want it to read. To perform various functions inside of the editor such as deleting lines, saving the message, etc. access the editor commands. To access these commands in the full-screen editor, press E and in the line editor press R on a blank line. There are far too many commands to discuss in this section of the manual, however they are discussed in detail in the *User Commands* section (E user command) of the *PCBoard Commands* chapter. Once the text is entered, the message is ready to be saved.

Message Indicator

A feature to beep if you read a message that is addressed to you. If the message is to you, and if you are not capturing mail, then PCBoard will make a bell sound to a remote caller, but the sound will be heard by the local sysop only if the Alarm flag is set to ON.

NOTE: If you are doing an R Y command it won't make the bell sound (but will if you do an R YA command) because by definition an R Y command will find *only* mail that is TO you, and that means every message found would sound the alarm, making the alarm redundant.

Saving the Message

To save a message, simply access the editor command prompt by pressing either E or R on a blank line depending on which editor you are using. Next, press S and R . The message is now saved to the message base on the bulletin board system.

Attaching A File To A Message

Sometimes you need to distribute a file to a select group of users. What you can do is attach the file to a message. This way, only users which can read the message with the attached file can flag the file for download. To attach the file, select S A from the editor command prompt instead of S to save the message.

You are asked for the filename to attach. You may attach only one file to each message. If you need to attach more than one file, use a compression program that compresses the files together. After the filename has been entered, upload the file just as you would any other file to the system. If the transfer is successful, you are notified that the message was saved. On the other hand, if the transfer is aborted, or if the file was tested and failed testing, control is returned to the editor command prompt.

Editing A Message

Not everyone is perfect the first time around. Sooner or later, you may need to edit a previously saved message. Editing a message allows you to change the message body, who the message is addressed to, etc. The following sections describe how to edit these aspects of a message.

Header information

If you entered a message to the wrong name, or want to change the subject of a message, type E at the *End of Message Command* prompt. If you do not have SysOp security, only the header information of messages left by you can be edited. By editing the header information, the name of who the message is to, the subject, message security/protection, and the reference number of the message can be changed. With SysOp security, you may also change who the message is from and whether it has been read or not.

Body of message

To edit the body of the currently message, use the E D I T command at the *End of Message Command* prompt. The message can be edited if it was left by you or if you have the appropriate SysOp security. To edit the body of a message, the message editor is used to original enter the message is used. Make the necessary changes and re-save the message. All changes made will be saved to the original message.

NOTE: If numerous changes are made, PCBoard may have to delete the original message and create a new message at the end of the message base. Therefore, if you see *Message Killed* when the message is saved, PCBoard had to kill the original message and create a new message at the end of the message base.

Forwarding a Message

A key component of any e-mail or message system is the ability to forward a message to another user on the system. PCBoard can forward a message by typing F O R W at the *End of Message Command* prompt. When a message has been forwarded you see the line

```
Forwarded By: JOHN DOE
```

at the top of the message. If the message was forwarded from another conference, you will see:

```
Forwarded From: Main Board
```

The security required to execute this command is controlled in two areas. First of all you must have enough security to enter a message in the conference where the message will be forwarded to. Additionally, you must be able to join the conference the message will be forwarded to.

The message forwarding command behaves differently for SysOps and users. The following sections describes how the command works for each.

Users

A user may forward any message addressed directly to him. If the security of the caller is greater than or equal to the level to move/copy messages (*PCBSetup* | *Security Levels* | *SysOp* Commands), the message can be forwarded to another conference area.

SysOps

SysOps can forward any message they can read. Messages can also be forwarded to any conference on the system that they can join.

NOTE: For callers to forward messages they must also be able to enter a message in the destination conference for the forwarded message. This means the following areas should also be checked for both SysOps and Users:

1. Security is high enough to enter a message (global and conference setting)
2. Caller forwarding the message can join the conference where the message is being forwarded to.

Searching

PCBoard provides extensive search capabilities. This section describes some very simple searches you can use to help find messages.

For Text

To display messages which contain particular text, use the T S subcommand. For example, if you enter the following:

```
R;TS
```

You can perform a text search on any message. PCBoard asks for the text to search for. After the search text is entered, the beginning message number to begin the search from is asked.

Multiple commands can be stacked onto one line as shown in this example:

```
R;TS;EDITOR;1+
```

This command performs a text search, looking for any message in the current conference containing the word *EDITOR*. The search can span across the conferences selected for scanning by using the following command:

```
R;TS;EDITOR;1+;A
```

Notice that only the *A* was added to the command. This tells PCBoard to search all conferences selected for scanning. To search all conferences you are able to join, use *ALL* instead.

NOTE: Text searches within PCBoard are not case-sensitive. Therefore, do not worry about matching the case of the text being searched for.

For User

Sometimes you may only want to read messages which are to or from a particular user. There is a U S E R subcommand which can be used to do just this. The following is an example:

```
R;USER
```

PCBoard will ask for the user to search for. The user name can be stacked on the command line as shown in the following example:

```
R;USER;JIM BROWN
```

This example searches for messages in the current conference that are to or from JIM BROWN.

For User & Text

To perform an even more specific search, you can combine the U S E R and T S commands. Using these two commands, messages to or from a user **and** containing the text specified can be found. The following is an example:

```
R;TS;USER
```

PCBoard prompts for the text to search for and the user to restrict the search to. As in the previous examples, the information can be stacked on the command line:

```
R;TS;EDITOR;USER;JIM BROWN
```

In this example, it is important to place the text to search for after the *TS* and the user to search for after *USER*. Otherwise, PCBoard will not be able to properly discern the difference between the search text and the user. Look at the following example:

```
R;TS;USER;EDITOR;JIM BROWN
```

If you type this in, PCBoard thinks the user name was *EDITOR;JIM BROWN* and consequently prompts you for the text to search for.

Capturing A Single Message

The ability to capture a message to a printer or file can be important because it gives you a method to copy a message to a format which can be shared or used in a different manner. Messages can be captured to a file or to the printer (if logged on locally).

To the Printer

If logged on locally, the text PCBoard displays can be captured using the A - P keyboard command. To capture a message, do the following:

- Read the message you want to capture.
- At the End of Message Command prompt, press A - P to turn on the printer.
- Now type / and press R . This will re-display the message. Since printer capturing is turned on, the message will be captured when it is redisplayed.
- Press A - P to turn off printer capturing and you are done.

To a Text File

A message can be captured to a file using the following steps:

- Read the message you want to capture.
- At the *End of Message Command* prompt, enter C to download the message.
- Download this file like any other file on the system and a hard-copy of the message in text file format will exist in the location where the file was downloaded.

Capturing Multiple Messages

The ability to capture messages to a printer or file can be important because it provides a method to copy messages to a format which can be shared or used in other manners. You can capture messages to a file or to the printer (if logged on locally).

To the Printer

If logged on locally, you can capture text displayed by PCBoard to the printer using A - P. Therefore, to capture several messages, do the following:

- Press A - P to turn on printer capturing.

- Read the messages you want to capture.
- When done reading the messages, press A -P to turn off printer capturing.

To a File

The easiest way to capture messages to a file is to use the C subcommand of the R user command. Simply tack the C on to the end of your read command and those messages will be sent to a file instead of being displayed on the screen. Example:

```
R;S;A;C
```

This reads new messages in all conferences selected for scanning and capture them to a file. Once the messages are captured to the file, you are directed to download the capture file to your system. Of course, once you download it, you have an ASCII text capture of those messages.

To a QWK Packet

One of the most popular ways to read messages off-line is via a QWK packet off-line mail reader. PCBoard can capture messages into a QWK packet which can be used with an off-line mail reader. If you want all of the new messages on the system, use the QWK command from the conference command prompt. To capture a certain range of messages, or perhaps only messages containing certain text, use the QWK *subcommand* of the R user command.

To captures messages to a packet, simply tack on QWK to the end of your read command. For example, to select only new messages in the current conference instead of all conferences selected for scanning, enter the following command:

```
R;S;QWK
```

Taking this idea one step further, all messages containing the word *INERTIA* in the current message base can be captured to a QWK packet with the following command:

```
R;TS;INERTIA;1+;QWK
```

Conferences

Conferences provide a way to separate information or group topics on the bulletin board system. Each conference can have different message bases, file areas, bulletins, scripts, etc.

Creating

Because the conference configuration screens are so extensive, it can take a while to create a conference. PCBSetup tries help with the configuration when creating a new conference.

To create a conference, load PCBSetup and select *Conferences* from the Main Menu. A screen showing a list of conferences on the system is displayed. To create a conference, press R on a blank conference number. You are informed that a new conference is being setup. Next, PCBSetup asks if it should provide defaults for the conference. If you do not see this screen, but heard a beep instead, it means the *Number of Highest Conference Desired* in *PCBSetup | Configuration Options | Messages* must be increased.

If you choose not to have PCBSetup provide the defaults, you are placed in the conference screen for the conference being created. All of the fields will be blank and the fields described in the *Conference Setup* chapter of this manual must be manually entered. If you choose to let PCBSetup enter the defaults, additional questions are asked:

Conference Name: Enter up to 13 characters to describe the new conference. Both upper and lower case letters may be used.

Number of conference to clone (leave blank to skip): Sometimes your conferences may be very similar in configuration with only a field or two in the configuration screen being different. If you enter a number in this field, PCBoard copies the conference settings for a conference and uses them for the new conference. Before the conference is cloned, you are asked for the *Default Conference Location*. This is where the MSGS, INTRO, and NEWS files are stored for this conference. These are the only files that change from the conference being cloned. All other file locations and settings are copied from the conference being cloned.

For systems that have a lot of NetMail conferences, cloning conferences can save a lot of time because the MSGS file location is about the only thing different between each NetMail conference.

Enter the Conference # on which to base the defaults: If you decide not to clone a conference, PCBSetup asks what conference the defaults for the new conference should be based on. Once a valid conference number has been entered, the next question asks for the *Default Conference Location*. This is the location where all conference specific information will be stored (message base, etc.)

PCBSetup now proceeds to ask you about various file locations in the conference configuration screen to see how they should be configured. You are first asked about *Upload definitions*. The options presented specify information about the public and private upload directories. The following options are available at this prompt:

1 **Copy the default upload paths and DIR file specifications**. The sort method, name/location of the upload DIR file, and the location of uploads are copied from the conference defaults are based on. In other words, the following fields are copied:

```
             Sort   Name/Loc Upload DIR File       Location of Uploads
Public  Upld: 0   :                              :
Private Upld: 0   :                              :
```

2 **Create new upload paths and DIR files for this conference**. PCBSetup creates defaults for the private and public upload directories based on what was entered as the *Default Conference Location*. For example, if `C:\CONF\1\` was entered for the default conference location, your description files will be stored in *`C:\CONF\1\`*, your private uploads will be stored in *`C:\CONF\1\PRIVUPLD\`*, and your public uploads will be stored in *`C:\CONF\1\UPLOAD\`*.

3 **Leave the upload path and DIR file specifications blank**. If this option is selected, your private and public uploads locations are left blank. Select this option if uploads are to be disabled for this conference.

Next, you are asked about the following file locations:

- **DOORS Files**: The locations of the door menu and door configuration files. These are commonly referred to as DOORS and DOORS.LST.
- **BULLETINS Files**: The locations of the bulletin menu and bulletin configuration files. These are commonly referred to as BLT and BLT.LST.
- **SCRIPTS File**: The locations of the script menu and script configuration files. These are commonly referred to as SCRIPT and SCRIPT.LST.
- **DIR File**: The locations of the file directory menu and file directory configuration files. These are commonly referred to as DIR and DIR.LST.
- **Download Paths File**: The location of the download path list file. This file is sometimes referred to as DLPATH.LST.

For each of these locations, you will be given the following options:

1 **Use the default conference definitions directly. If you make any changes it will affect all conferences sharing the same definitions**. Selecting this option, PCBSetup stores the same file

locations used in the conference you are basing the new conference on. Because the new conference and the base conference share the *same file*, any changes made in one conference are reflected in the other conference.

2 **Copy the default conference definitions into a conference-specific file which you may then add to or delete from without affecting any other conference**. PCBSetup uses new files based on your Default Conference Location, but copies the data from the files in your base conference. This way, you can have conference specific files that you may change freely without affecting the base conference.

3 **Start out with an empty conference-specific file which may be modified without affecting any other conference.** PCBSetup will create new files based on your Default Conference Location. These files are empty so they may be customized or edited to suit your needs.

Once these questions have been answered, you are returned to the conference configuration screen where any or all of the fields may be edited or reviewed.

Registering Users In A Conference

There are several methods for registering users in a particular conference. Some methods will only register one user at a time. Other methods will register an entire group of users.

Registering A Group Of Users In A Conference

You can register a group of users in a conference at the same time. To accomplish this, load System Manager. Next, select *Users File Maintenance*, followed by *Insert Group Conference*. You see the following fields on your screen:

```
First number of conferences to be inserted in registrations  :     0
Last  number of conferences to be inserted in registrations  :     0

Adjust conferences user is normally allowed to join          : Y
Adjust conferences user can join with expired subscription   : Y
Adjust the user selected conferences for scanning            : Y
Adjust conferences where user becomes a sysop when joining   : N
Adjust conferences where user has Net Status                 : N
Reset user's last message read to zero in these conferences  : N

Adjust users with a security level greater than or equal to  :   0
                                  and less than or equal to  : 110
```

Begin by specifying the beginning conference number followed by the ending conference number to register the users in. To register the users in just one conference, specify the same number for the first and last conference number.

Next, determine the conference flags that will be set in the user record. The following lists the flag that is set in the user record based on how you answer the questions in the second section:

R **Adjust conferences user is normally allowed to join**. If you put a *Y* in this field, the R flag is put in the conference flag section of the user record. This flag controls if the user is able to join a particular conference or not.

X **Adjust conferences user can join with expired subscription**. If you put a *Y* in this field, an X is placed in the conference flag section of the user record. When the X flag is set, the user can join the conference if their subscription has expired.

S **Adjust the user selected conferences for scanning**. If you put a *Y* in this field, an S is placed in the conference flag section of the user record. This means that conference has been selected for scanning/reading.

C **Adjust conferences where user becomes a sysop when joining**. Putting a Y in this field puts the C flag in the conference flag section of the users file. When users who have this flag join the conference, they are automatically upgraded to the security level specified by the *Sysop Level* field in *PCBSetup | Security Levels | Sysop Commands*.

N **Adjust conferences where user has Net Status**. Users who have net status in a conference can use the QWK command to transfer net-mail in the standard QWK format. These users may also import messages into the conference even if not addressed from them.

Finally, specify the range of security levels the conference flags will be altered for. In the first field, enter the lowest security level and in the last field, enter the highest security level. All security levels between the low and high security levels will also have their flags altered.

Registering A Single User Via System Manager

If you need to register just one or two users in a particular conference, the easiest way to do it is via System Manager. Select *Users File Maintenance,* then *Edit Users File*. Your user record will be displayed on the screen. Next, press A - F and type the name of the user to register in the conference. Once the record is on the screen, press 2 twice to go into conference view. A list of conferences on the system with a *Flags* column next to each conference is displayed.

To move between the fields on the screen use the T key. When you are in the Flags field, any of the flags described previously (R, X, S, C, and N) can be changed. To save the new information, press E and tell System Manager to save the changes made to the user record.

Registering A Single User While Online

With SysOp security level and sufficient security to access the 7 command, you can edit almost any user record on the system. See the *SysOp Commands* section in the *PCBoard Commands* chapter of this manual for more information on the 7 command. First, locate the user record to edit, then select `C` to change the current user record. As you step through the various items, you see one which says `Select Conferences`. By answering Y to this question, the conference registration information for this user can be modified. Once the conference(s) to modify have been selected, enter the flags to set in these conferences and press R .

Restricting Access To A Conference

There are five methods you can use to keep a user out of a conference. They are as follows:

1. The conference is a private conference and the user does not have the R conference flag set in his user record.
2. The conference is private and the user does not know the password required to join.
3. The conference is public and the user does not have sufficient security required to join a public conference or does not have the R conference flag set.
4. The L conference flag has been set in the user record to lock the user out of the conference.
5. The subscription for the user has expired and the X conference flag is not set for the conference you are restricting them from.

Deleting

PCBSetup does not provide a method for deleting a conference. However, you can have PCBSetup re-ask the initial questions for the conference so it can be re-configured. To do this, clear out the name of the conference in the configuration screen by positioning your cursor in the name field and pressing C - e . Next, press E to get back to the conference listing. Select the conference number you just cleared the name out of. PCBSetup will now assume a new conference is being created and will ask if you want assistance with the defaults.

NOTE: You can temporarily disable a conference by clearing out the conference name or the location of the MSGS file. If a user attempts to join a conference when either of these fields are blank, they are told the conference is an invalid conference.

Sharing Information Between Conferences

A conference has a few fields which give the location for configuration fields. If you have more than one conference which needs to share the information, the easiest way to do it is to specify the same filenames in both conference configuration screens. For example, let's say you have one conference which has the following information stored for your BLT and BLT.LST file:

```
Bulletins   : C:\PCB\GEN\BLTMENU          : C:\PCB\GEN\BLT.LST
```

If you want another conference to have the same bulletins available, enter the same filenames on the second conference. Because both conferences point to the *same configuration files*, the information stored in those files is shared between the two conferences. When you edit one of the configuration files, any changes made are written to the configuration files. All conferences using these configuration files see the changes because they all read the same files. This method can be used to share data for any fields in the conference configuration screens pointing to files.

Creating Conference Menu

In order for users to know what conferences are available on the system (if any), you need to edit the *Name/Loc of Conference Join Menu* in *PCBSetup | File Locations | Display Files*. This file is commonly referred to as CNFN. The following is a sample CNFN file:

```
 #       Name                          Description
---  -------------  ------------------------------------------
 1   PARANOID       Discussions include paranoia and fears.
```

The user can join a conference either by typing in the number or the name. Therefore it is not necessary to include both the conference number **and** name. You can, instead, list the conference number **or** conference name.

This file can be created using just about any text editor. Better yet, if you have defined a text editor or graphics editor in PCBSM, press 2 or 3 (depending on which file you want to edit) while the filename is highlighted. Otherwise the file must be manual created from DOS.

Events

An event is simply a batch file that gets executed during a specific time of the day. The following lists a few things that can be done in an event:

- Pack your users and/or message bases
- If part of a mail network, mail packets can be transferred at the same time every day.
- Run utility programs for some third party products may need to update their databases, etc.
- Create a list of files on your system using PCBFiler and the /LIST parameter.
- Backup your system

The previous examples are but only a few of the things you can do in your event. Since events execute batch files, anything that can be done in a batch file can be done in a system event.

Adding An Event

To define the events on your system, go to *PCBSetup | Event Setup*. Next, make sure you answered *Y* to the *Is a Timed Event Active* question. Cursor down to the EVENT.DAT line and press 2 , a screen resembling the following will be displayed:

```
Node: 115                          Event Editor

                   Batch     Begin  End                          Last
      Act  OS/2  Mod File      Time   Time   SMTWTFS    Date      Date
      ___  ___   ___ ________  _____  _____  _______  ________  ________
 1)    N    N                                NNNNNNN            00-00-00
 2)    N    N                                NNNNNNN            00-00-00
 3)    N    N                                NNNNNNN            00-00-00
 4)    N    N                                NNNNNNN            00-00-00
```

The number to the left of each line is the event number being defined. The rest of the fields on the screen are as follows:

Act: Either a Y or an N can be entered in this field. A Y signifies that the event is *active* and should be executed as configured. If you enter an N, the event is considered *inactive* and will not run as defined.

OS/2: This switch determines whether or not the event runs in an OS/2 window or a DOS window. When it runs in an OS/2 windows, PCBoard creates an EVENT.CMD file rather than an EVENT.BAT file. When this is set to *Y*, the DOS version of PCBoard ignores the event.

Mod: This field determines what type of event it is. If an E is entered, the event is a non-sliding or *expedited* event where PCBoard makes it best attempt to execute the event at the time specified even if it means cutting the user's time short.. If you enter an S as the event type, the event is known as a *sliding* event. Two additional event types are available for Fido related activities: *F* and *M*. The *F* event type allows for Fido verbs to be acted upon while the *M* type defines when mail hour.

Batch File: In this field, specify the batch file to execute. You are given 8 characters for the batch filename. The reason for this is that by default this batch file runs on all nodes. However, you can make node specific batch files by making the node number the filename extension. For example, if you enter DAILY in the field and want node 5 to execute a different batch file, create a DAILY.005 file in the same directory where the DAILY file is located.

Begin Time: In this field, enter the earliest time the event can run. The time entered in this field must be in 24 hour format and there must be a colon between the hour and minutes.

End Time: The end time is the latest possible time an event will run. If the event has not run by the time entered, the event is skipped.

Days: This field controls which days the event runs. In this field all seven days of the week are listed beginning with Sunday and ending with Saturday. Enter a *Y* or *N* to determine if the event runs on a specific day.

Date: This field enables you to specify the dates PCBoard will run the event. Entering a 00 signifies a wildcard. For example, to run the event on the first day of every month, enter a date of 00-01-00. This means the event will run for any month, and any year, but only when the day of the month is equal to 01. Another example is to set the date to 07-04-00. This means the event will run every July 4th, no matter what the year is.

Last Date: Contains the date the event last run on the node number specified in *PCBSetup | Node Configuration*. Not all events run system-wide. Therefore, this field only contains the last date run for the ***current node***. To view the last date for other nodes, press A-V.

As an example for setting up an event, let's say you want to have an event that runs at 3:00 am every morning and packs the message bases. The first step is to edit EVENT.DAT in *PCBSetup | Event Setup*.

First, place *Y* in the **Act** column, because this is an active event and you do want it to run. Next, place an *S* in the **Mod** column because you want the event to run at 3:00 am but do not mind waiting for a caller to logoff before running the event. Next, enter a batch filename; PACKMSGS will do. In the next field, enter the earliest time the event will run. As outlined earlier, this event should run at 3:00 am so enter 03:00 in this field. If the latest that the event should attempt to run is 08:00 am, enter 08:00 in the **End Time** column.

Finally, specify the date and days the event will run. By leaving the **Date** column blank the event will run every day of the week specified in the **Days** columns. Because the event packs the message bases, running every day of the week is a good idea so put a Y in every day of the **Days** column. Once this is done an entry resembling the following is created:

```
                  Batch     Begin  End                          Last
     Act  OS2 Mod File      Time   Time   SMTWTFS   Date      Date
     ---  --- --- --------  -----  -----  --------  --------  -------
1)    Y    N   S  PACKMSGS  03:00  08:00  YYYYYYY   00-00-00  00-00-00
```

Next, create the batch file that will be used to execute the event. This is very easy to do; simply highlight the batch file field to edit and press 2 . The default text editor defined in *System Manager | Define Text & Graphics Editors* is used to edit the batch file. For example, your batch file might look like this:

```
PCBPACK /AREA:ALL /MAXMSGS:1024 /PURGE
```

By default this event runs on every node. Obviously this is not a good idea for every node to be packing the message base at the same time. What you should do instead is rename the batch file to make it a node specific event batch file. To make this batch file run on node 3 only, rename the batch file from PACKMSGS to PACKMSGS.003. Adding the .003 to the end of the filename, tells PCBoard it is a node specific file and only node 3 should run the event.

Multiple Nodes

Frequently more than one node may need to participate in an event. Whether you want each node to perform a particular task, or if you need all nodes to be down, it is important to understand how to control your events.

Node Specific Events

Most likely not all of your nodes will run the same event batch file. You may have one node doing all the work while the others wait or do other tasks. In the EVENT.DAT file, specify the base event batch filename. This is the batch file that is executed for all nodes unless there is a node specific event batch file.

To create a node specific event batch file, create a file with the event batch filename and an extension of the node number. For example, if your event batch file is called MAINT1 and if you want to make a batch file that only node 6 executes, create a batch file called MAINT1.006. When event time rolls around, all of the nodes except node 6 will run the event using the MAINT1 file. Of course, node 6 will use the MAINT1.006 file.

If you want only node 6 to run the event and the other nodes to not even both going down for the event, create the MAINT1.006 file and delete the MAIN1 file. Since the other nodes will not have a batch file to execute, they do not execute the event.

Making Sure All Nodes Are Down

To perform *global changes* to the system such as sorting the user file, or doing a total backup of your system, all nodes must be down (off-line). Perhaps the easiest way to accomplish this is to have the nodes simply run a program as they begin the event which counts for a certain amount of minutes or seconds while the event is running. When the nodes are done counting, they reload the board.

As an example, let's assume you are operating a three node system. You want node 1 to sort the users file. In order to do this, nodes 2, and 3 must not be operating. Quite simply, you create a node specific event file for node 1. If your event batch file is called USRSORT, create an event file called USRSORT.001. This batch file might look like the following:

```
@ECHO OFF
PCBSM /SORT;SECURITY;PRIREVERSE
```

In your testing, you have found out that it takes about 4 minutes to complete the sorting process. Therefore, you need to make sure the other nodes stay down for a bare minimum of 4 minutes. Just to be safe, you could even keep them down for 10 minutes or so because the time it takes to sort the file will increase as the number of users on your system increases.

You should be able to find several utilities for counting a set amount of seconds or minutes on the PCBoard Support BBS. For example, if you found one called Count which counts for the number of seconds specified, make your USRSORT batch file look like the following:

```
@ECHO OFF
COUNT 480
```

Quite simply, this would make nodes 2 and 3 (because a USRSORT.002 or USRSORT.003 file was not found) count for 480 seconds and reload the bulletin board. This should give more than ample time for the sort process to be completed.

There are several other methods you can use to make sure all events are down and stay down. Most of these have been addressed by third party authors and are available on the PCBoard Support BBS by using the Z user command and searching for *EVENT*.

Returning From An Event

Once all tasks have completed in your event, the event batch file must reload PCBoard in order to ready for callers to the system. Adding the following lines to the end of all event batch files insure proper reload:

```
%PCBDRIVE%
CD %PCBDIR%
```

System Security

An integral part in operating a bulletin board system is the security of the system. You need to be able to control what actions or commands a user can execute based on their security level. In fact, you should use security levels to determine what a user can do while online.

Protecting SysOp Related Commands

If you allow unauthorized users to access SysOp related commands they can do a great deal of damage to your system. That is why it is so important for you to properly protect these commands with a security enabling only authorized users access to the SysOp commands. Some commands are more dangerous than others if put in the wrong hands. Therefore, PCBoard enables you to specify the security level required to execute each SysOp related function. A command like the `1 1` which displays information about the callers currently online would not be as dangerous as the `9` command which allows a drop to DOS from remote. Careful planning of the SysOp security levels and making sure you trust the users whom access is given to is the best way to prevent unauthorized users from accessing sensitive commands.

There are two sections in PCBSetup which determine the security levels protecting SysOp commands and functions. These sections are found by selecting *Security Levels* from the Main Menu of PCBSetup. From there you can choose to define security levels for *SysOp Functions* or *SysOp Commands*

Defining Which User Is The Main SysOp

The user in record #1 of the USERS file is considered to be the Main SysOp. This record has certain privileges not associated with any other record. For example, when you select *Sysop - Busy* or *Sysop - Not Busy* from the call-waiting screen the user in record #1 is logged in. In addition, the user in record #1 is the only one who can join a conference when not registered or if lacking sufficient security to join a public conference.

Protecting SysOp Accounts

There are no back-doors which users can log into PCBoard and gain SysOp access. The only way a user may log in using a SysOp account is to know the name of the account to log in under and the password for that account. Therefore, it is very important for you to change your password frequently to prevent an unauthorized user from hacking your account.

To prevent users from knowing the name of the user in record #1 of the USERS file, you can answer *N* to the *User Real Name* question in *PCBSetup | Sysop Information*. If you do this, the users will know you only as SYSOP on the BBS. All messages entered by you on the system will be from SYSOP and when a user displays who is online you are listed as SYSOP.

You can then have a different name in record #1 of the USERS file which means a user attempting to hack your account needs to know two items of information—your user name and your password. To prevent a breech in security, PCBoard does not allow a user to login with a user name of SYSOP.

Protecting Files For Download

PCBoard provides a method to protect any filename available for download by security level, password or both. This protection is done via the FSEC file which can be edited from *PCBSetup | File Locations | Configuration Files*. If you have sensitive files online, use the FSEC file to protect those files. As an example, To protect the filename SENS0001.ARJ so only users with a security level greater than or equal to 100 and those knowing the password can download it, make the following entry in the FSEC file:

```
                                                   Debit
            Drive \ Path            File Name  Sec Multiply   Password
   ------------------------------ ------------ --- -------- ------------
1)                                SENS0001.ARJ 100        1 ENTER_THISPW
```

The FSEC file is discussed in more depth in the *PCBSetup* chapter of this manual.

Protecting Files From Being Uploaded

PCBoard also provides a method to protect files from being uploaded to the system. Uploading files does not usually present a problem to system security however PCBoard still provides the capability. This protection is done via the UPSEC file which can be edited from *PCBSetup | File Locations | Configuration Files*. A good example would be if you were just informed that a file called VIRALM33.LZH contained a virus and was being distributed in your area. To protect this file from being uploaded, you can make the following entry in your UPSEC file:

```
                                                  Credit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
                               VIRALM33.LZH 255        0
```

With this entry a user must have a security level of 255 or higher in order to upload the VIRALM33.LZH file to your system. Since very few of your users will have a security level of 255, chances are the upload will never make it through. The UPSEC file is discussed in greater detail in the *PCBSetup* chapter of this manual.

Maintenance Tasks

Once you have finished your system configuration, the majority of your time is spent maintaining the system. You will need to answer questions and comments left to the SysOp, pack the message base and user files, back-up your system in case of data loss, etc. The following section describes various examples of maintaining your system.

File Maintenance

If your bulletin board system encourages file transfers, you will most likely have a lot of uploads to your system. Use PCBFiler on a regular basis to move the files in the upload directories to one of the file directories you have defined. By regularly moving the new files out of the upload directories, your users can find files that interest them easier.

Log Maintenance

PCBoard uses three system log files to record activity on the system.

- The caller logs record items of interest that occur while a user is logged into the system. The time the user logged in and logged out is recorded. In addition, events such as joining a conference, transferring a file, and entering a message are also recorded. If a user tries to access a command that is not available to them, it is also recorded in the log file to help keep you informed of possible breeches in security.
- The DOWNLOAD.TXT file stores information about every transfer (both uploads and downloads) on the system. Each line in this file stores the name of the file, the user who transferred the file, transfer speed, size of the file, and number of errors.
- With the Accounting PSA installed, all accounting related activities (charges and earnings) are recorded in the account tracking file.

If these files are not deleted or archived on a regular basis, the free space on your drive may be used unnecessarily. On a regular basis, delete or archive these log files in one of your events.

Packing files

Both the USERS file and your message bases should be packed on a regular basis. Doing so helps ensure data integrity and also removes all user records marked for deletion.

Users File

You can pack in interactive mode by loading *System Manager* and selecting *Users File Maintenance*. However, most SysOps elect to pack the users file during a daily event instead. System Manager provides command line parameters that you can use to pack the USERS file. To pack the file and ensure data integrity, issue the following command:

```
PCBSM /PACK
```

You may choose to pack-out or delete any user which has not called the system within the last 90 days. In this case, issue the following command:

```
PCBSM /PACK;DAYS:90
```

For more information on the command line parameters for System Manager see the *Command Line Parameters* section in the *System Manager* chapter of this manual.

Message Bases

If a lot of conferences are defined on your system, a lot of active message bases also exist. Int therefore becomes essential to pack the message bases down on a regular basis to prevent the message bases from taking too much disk space. Like the USERS file, most SysOps elect to pack the message bases in daily events. Use the PCBPack program supplied with PCBoard for packing the message bases.

To help keep the size of your message bases down, you can pack all of your message bases so no message base contains more than 500 messages. This is easy to do by entering the following:

```
PCBPACK /AREA:ALL /MAXMSGS:500
```

You may choose to pack only messages older than 45 days by entering the following command:

```
PCBPACK /AREA:ALL /DAYS:45
```

PCBPack has other options available too. See the *Utilities* chapter for additional details.

Backing Up

Most bulletin board systems contain several gigabytes of data. Therefore, it always wise to have some sort of backup system in place to perform regular backups in case of data loss, hardware failure, etc. While you do not have to back up your system every day, it certainly is a good idea to do a backup every other day, or perhaps once a week. Sooner or later, you will probably experience some sort of data loss where you need to access a backup to restore files.

WARNING: PCBoard keeps some files open during normal operation (e.g., user files, message bases, etc.) Since some backup software will not backup open files, you should consider taking all nodes down to insure all files are properly backed up.

New Users

Whenever users who have not established an account on your system log into your system, they become new users to the system. When the user enters a name not in the current user file, PCBoard asks them to confirm their name. If the name is correct, the new user process begins. First of all, the NEWUSER file is displayed (as defined in *PCBSetup | File Locations | Display Files*). This file usually contains an introduction to your system. Once that information is displayed, the user is asked if he wants to register. If he chooses to register, additional new user questions are asked.

Asking Questions

PCBoard begins by asking for the following information:

- Password
- City/State
- Business/Data Phone
- Home/Voice Phone
- Brand of CPU
- Clear Screen Between Messages
- Default Protocol for File Transfers

The answers to these questions are stored in the user file record. You may have noticed there is no Brand of CPU field in the user record. The answer to this question is stored in the Comment #1 field. All of the above questions are records in the PCBTEXT and may be changed to ask any question desired. However, the location of where the answers are written cannot be changed. If you want to disable some of the questions, blank out the appropriate record in your PCBTEXT file using MKPCBTXT.

Adding Your Own Questions

In addition to the regular questions asked to new users, PCBoard can utilize what is known as a NEWASK questionnaire for asking additional questions. The NEWASK questionnaire can be a standard text file listing one question per line or a PPE can be used if you need more control over the questions asked and answers the user enters. Refer to the *PCBSetup* chapter for additional information on the NEWASK questionnaire.

Defining Security Level

There are two security levels which come into play for new users to the system. The security level of the new user depends on if he chooses to register or not. If you look at *PCBSetup | Security Levels | User Levels* the following fields are listed:

```
Level Given to Users Who Agree  to Register :
Level Given to Users Who Refuse to Register :
```

You can specify the security level that users get when they agree or refuse to register. When a user agrees to register, a new record in the user file is created. However, when they refuse to register, no user record is created. By default the security level given to users who refuse to register is 0. This means that if the user refuses to register they are immediately logged off. Change this value to another security level if you want to allow new users to look around the system without creating an account on the system.

Defining Expiration Date

If you have enabled subscription mode, PCBoard assigns new users the value entered for the *Default Subscription Length* in *PCBSetup | Subscription*. If subscription mode is **not** enabled, new users have an expiration date of 00-00-00 which means their accounts never expire. The *Default Subscription Length* is in days and you can enter any value up to 9999 in that field although something like 365 may be more reasonable.

Disallowing

If you do not want to allow new users, there are a few ways you can accomplish this setup:

1. In *PCBSetup | Configuration Options | System Control* set the *Run System as a Closed Board* to `Y`. With no NEWASK questionnaire defined, the CLOSED file will be displayed when a new user attempts to login. In the CLOSED file you can explain why your system does not allow new users and any further instructions required.
2. If a NEWASK questionnaire is defined, the user is allowed to continue and fill out the NEWASK questionnaire. However, no user account is created. Use this type of setup to screen new callers and add them manually to the user file after reviewing their answers to your questions.
3. Set the time limit for new users who agree to register to 0 minutes. Any new user attempting to call the system will be shown the CLOSED file and promptly logged off. The CLOSED file is displayed even if the NEWASK questionnaire is defined.

User Subscriptions

A *subscription* is where a user is given a certain security level for a set period of time. Once the *expiration date* of the subscription is reached, the security level is switched to the *expired security level* (normally a lower security level). With the lower security level, the commands and features available to the user can be restricted. Both the expiration date and expiration security level are stored in each user's record.

Enabling Subscription Mode

Enabling subscription mode is very easy. Load PCBSetup and select *Subscription* from the Main Menu. The first option on the screen asks if you want to enable subscription mode. If you enable subscription mode, PCBoard pays attention to the expiration date and assigns the default expiration length to all new users who call the system.

Setting Expiration Date

When subscription mode is enabled, new users are assigned the default subscription length. What do you do about the existing users on your system? Expiration dates for existing users can be set in one of two ways. 1) manually set the expiration date in each user record. 2) use *System Manager | User File Maintenance | Adjust Expiration Dates* to alter the dates for a group of users.

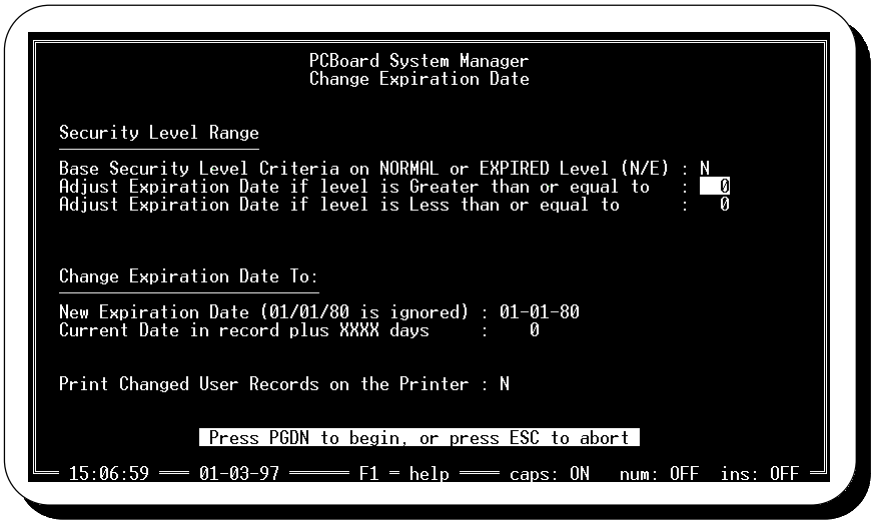
Once the subscriptions have been enabled for some time, users will expire and must follow some sort of instructions you may have outlined in the EXPIRED file. Once the instructions are followed, the expiration date must be manually changed to reflect the new expiration date.

Manually Entering Expiration Date

Because the expiration date is stored in each user record, you can manually enter any expiration date by editing the date in the user record. For example, to edit the expiration date of a user so it is a non-expiring account, load System Manager, select *Users File Maintenance*, then *Edit Users File*. Record number one is displayed on your screen. Next, locate the user name to update by pressing `A -F`. Cursor down to the expiration date field and type in `00-00-00` signifying the user never expires.

Group Security Levels

Changing expiration dates one user at a time would be a pain if it had to be done one user record at a time. Within System Manager there is a function which allows expirations dates to be changed based on the security levels of the users. To access this function, load System Manager, select *Users File Maintenance* and then select *Adjust Expiration Dates*. Your screen should resemble the following:



If you want to adjust everyone with a security level between 20 and 30 to an expiration date of 05-05-94, modify the following fields:

```
Base Security Level Criteria on NORMAL or EXPIRED Level (N/E) :   N
Adjust Expiration Date if level is Greater than or equal to   :  20
Adjust Expiration Date if level is Less than or equal to      :  30

New Expiration Date (01/01/80 is ignored) : 05-05-94
Current Date in record plus XXXX days     :    0
```

Once d is pressed, all users with a security level between 20 and 30 are assigned an expiration date of 05-05-93.

Setting Expired Security Level

If the expiration date in the user record is equal to or prior to the current date, the user is considered expired and is given the expired security level as shown in the user record field:

```
Expired Sec :
```

When a new-user logs into the system, they are given the default expired security level as defined in *PCBSetup | Subscriptions*. To assign a different expired security level to a user, manually edit the expired security field in the user record.

Warning Users Who Are About To Expire

Another option you can configure within *PCBSetup | Subscription* is the number of days prior to expiring that users are warned. For example, setting this value to 30 causes the warning message to be displayed from 03-01-97 up to the user's expiration set to 03-31-97.

PCBoard provides a file called WARNING which may be edited in *PCBSetup | File Locations | Display Files*. This is a display file which can be customized to suit your tastes. As described in the *Customizing Your BBS* chapter of this manual, this display file can create security, language, and graphic specific versions of this file.

Notification Of Expiration

If a user has expired, PCBoard displays the EXPIRED file. This file location can be found in *PCBSetup | File Locations | Display Files*. Like the WARNING file, security, graphic, and language specific versions of this file can be created.

Searching for Text

Throughout this manual you have seen references to searching for text and the fact that PCBoard supports Boolean operands. This section discusses how to enter the text to search for when at the *Enter the Text to Scan for (Enter)=none* prompt. To begin with, you will be shown how to do some simple searches. From there, you'll learn how to do more complex searches involving Boolean operands.

Simple Searches

Single Word

The simplest search to perform is a single word search. Enter the word to search for and PCBoard will search the criteria specified for that word. For example, if using the Z command, the file directories are searched. If using the T S command, the message base is searched. For example, to search all messages in the current conference for the word **monitor** type the following at a conference command prompt:

```
TS   R

Enter the Text to Scan for (Enter)=none?   monitor   R
Msg # to Begin Search from (1052-3904)?   1   R
```

At this point, the search begins for the word *monitor*. PCBoard will display any message having the word *monitor* in it. While searching, PCBoard does not pay attention to the case of the word so it can be either upper or lower case and a match will still be found.

Phrase

Taking the single word approach one step further, you can search for a phrase that consists of one or more words. If searching for *monitor* finds too many matches and consequently was not being effective, search for something more specific like **vga monitor** instead. This will reduce the number of matches and help find the desired messages faster. This time, type the following at the conference command prompt:

```
TS   R

Enter the Text to Scan for (Enter)=none?   VGA monitor   R
Msg # to Begin Search from (1052-3904)?   1   R
```

The search begins again. However, this time, only messages which have the word **VGA** immediately followed by the word **monitor** are displayed. When the message is displayed, PCBoard highlights the match (if your graphics mode allows) so that it stands out.

Complex (Boolean) Searches

Boolean operands allow more complex searches than is possible by searching for a single word or phrase. With Boolean operators PCBoard only displays a match if it meets certain criteria. A Boolean search involves two key items—an expression, and operands.

An **expression** is made up of an operator which acts on one or more **operands**. With text searches, the operators are the Boolean operators. The operands are the word or phrases being searched for. Do not over-burden yourself trying to remember the difference between operands and operators as you will find the examples in this section will help you better understand the concept of Boolean text searching. The following discusses each of the Boolean operators.

& - The And Operator

The Boolean AND operator enables searches to occur in disjointed mode. In other words, both operands must exist in the target (message, file description, etc.) but do not have to be in consecutive order. To help illustrate this, let's say you attempt to search for text editors available for download. Because you have no idea what the filename is, you used the `Z` user command to search for text in the file directories. When prompted for the text to search for, you entered *`text editor`* because that is what you are looking for. From there you began the search which may list a few programs that may interest you.

The problem with this type of search is you may have missed some files because PCBoard was told to find anything having the *`text editor`* phrase in the description. What you may discover later when viewing file directories is the following file description:

```
TXED100.ZIP    168046  12-28-93  TexEdit v1.00 -- Utility you can use to
                                | edit any text file.  Supports VGA text
                                | mode.  Includes mouse support.
```

Obviously, this looks like a file you would be interested in. Why did this description not show in your previous search? Quite simply, nowhere in the description is the phrase *`text editor`* contained. Obviously your previous search is not catching all of the desired files.

This is not only where the Boolean AND operator becomes useful but also where it makes sense. If you had to sum up the type of file being looked for, you may say any file that can *edit text*. The italicized words are the key. To find any description having both the word *`text`* and the word *`edit`* somewhere in the description is the goal. You do not know if the description will say something like "A utility to edit text" or if it says "a wonderful text editor". Therefore, enter the following expression to search for:

```
TEXT & EDIT
```

The `&` in the search string represents the Boolean AND operator. If your translate the & into the actual word *and* it makes even more sense. This search would mean you are searching for *text* **and** *edit* to be in the same description. It does not matter in what order, just simply that they occur in the description to become a match.

You can have as many Boolean operands as you wish in your search string. For example, you can enter the following search:

```
DISK & FORMAT & FLOPPY
```

This will search for the words *`DISK`*, *`FORMAT`*, **and** *`FLOPPY`* to exist in any matching text.

¦ - The Or Operator

Like the Boolean AND operator, this operator enables you to search in disjointed mode. With this operator only one of the words or phrases need to be in the target (message, file description, etc.) to be considered a match.

As an example, you may want to search the message bases using the `T S` user command for any message which talks about hard drives. You remember that some people call them hard drives and others may call

them hard disks. In a case like this, use the OR operator to find any message that matches either phrase. Type the following *Enter the Text to Scan for (Enter)=none* prompt:

```
HARD DISK ¦ HARD DRIVE
```

Any message that contains *either* the phrase *hard disk* or the phrase *hard drive* will be displayed to you.

! - The Not Operator

Sometimes you may want to display all **non-matching** records. This is precisely the user of the Boolean NOT operator.

For this example, we will search a file directory of GIF graphic images where the descriptions contain the resolution of the pictures. You decide not to view the description of any pictures having a resolution of 320x200. If this is the case, type the following at the *Enter the Text to Scan for* prompt:

```
! 320x200
```

Any description containing the phrase *320x200* is not displayed because of the Boolean NOT operator (*!*). Continuing on with the GIF examples, let's assume you want to see all pictures on the system that have a resolution of 1024x768 but do not want to see files having *swim* in the description. If so, enter the following:

```
1024x768 &! SWIM
```

If you read that out in English it says *1024x768* ***and not*** *SWIM*. This will display all file descriptions having a 1024x768 in the description (denoting the resolution of the picture) and that do not have the word SWIM anywhere in the description.

Using Parentheses To Group

Remember in mathematics how you used parentheses not only make your problems clearer and easier to understand but more importantly to control the order of operations? With Boolean operators the exact same thing can be done. If you take the example that illustrates using the AND Boolean operator one step further, you can see how parentheses help group expressions.

If you recall, we used the AND operator to search for descriptions that contained both the words TEXT and EDIT. What happens if someone chooses to use the word ASCII instead of TEXT when entering their description? To help find this description, use parentheses to group items together. This may result in the following search string.

```
EDIT & (TEXT ¦ ASCII)
```

This tells PCBoard to find any description containing the word *edit*, and *either* the word *text* or the word *ASCII*. If you do not use parentheses, PCBoard evaluates from the left to the right. This means it would only display files containing both the words *EDIT* and *TEXT* or the word *ASCII*.

While it appears to be a very subtle difference, parentheses can make or break your search. Remember the easiest way to do Boolean searching is to read out the search in English. If you look at the previous example which uses parentheses you could read it as follows:

```
EDIT and either Text  or ASCII.
```

Including The Boolean Characters In Your Search

If you need to include any of the following characters in your search, use quote marks to prevent them from being interpreted by PCBoard's searching routine:

```
&, |, !, (, ), [space]
```

Obviously, these characters all have special meanings when involved in a search so you need some way of expressing them. For example, you may want to search for the phrase *SMITH & JONES*. If you type that phrase in as-is, the search will turn up anything with the word *SMITH* and the word *JONES*. What you would do in this case is to simply surround the entire search phrase with quote marks as illustrated in the following:

```
"SMITH & JONES"
```

9

Customizing Your BBS

Internationalization

Adding A Language

To add a language to your system, you need to edit your PCBML.DAT file (*PCBSetup | File Locations | Configuration Files*). By default, your file should look like the following:

```
      Language             Extension  Country  CodePage  Yes  No
-------------------------  ---------  -------  --------  ---  --
English (Default)                                         Y    N
```

To add the French language to your system, press A - I to insert a new line. The following describes each of the fields in this file:

Language: The name of the language. This is the text displayed to users when they are asked to choose a language at login. You should include the number of the language on this line.

Extension: The filename extension for the PCBTEXT file and language specific files. For example, if you are adding the French language, make the extension .FRE. This means a PCBTEXT.FRE must exist in the same directory as PCBTEXT and you can create language specific versions of display files such as WELCOME.FRE for the French callers.

Country: If you also want PCBoard to add date, numerical separator, and capitalization support for the language you are defining, enter the country number to use as defined by COUNTRY.SYS. For the French language this value is 033.

CodePage: The code page is also a function of COUNTRY.SYS and defines what characters are available in the language you are defining. This information should be provided in your operating system manual. As an example, the French language uses 850 in this field.

Yes: Since Yes and No are not the same in all languages, you can define the character that will be used to represent a response of Yes. In French, you most likely would like to use the letter O to represent a response of Oui.

No: As with the Yes field, the language you are defining may use a character other than N to represent a response of No. Simply enter the character to use to represent a No response.

Keeping the previous information in mind, your entry for the French language might resemble:

```
      Language             Extension  Country  CodePage  Yes  No
-------------------------  ---------  -------  --------  ---  ---
1 - English (Default)                                     Y    N
2 - French                    FRE       033      850      O    N
```

Country Support

PCBoard has the ability to extract the dates, thousands separator, and upper/lower case information from COUNTRY.SYS you install with your operating system (DOS or OS/2). These changes take effect when a language is chosen which selects a different country code.

NOTE: If a user is on remotely, your status line continues to use the default information as specified in your computer setup. That way, a user can be logged in using the French language, but you as the SysOp continue to see the dates and numbers displayed as you expect them.

Dates

Dates are displayed and entered using the country information specified by the language. For example, the United States uses a *mmddyy* format, where European countries use the *ddmmyy* format for specifying dates. This depends on the information provided by COUNTRY.SYS.

If you are using a country which specifies dates in a format other than *mmddyy*, you will need to modify some of the records in the PCBTEXT file for the language. In particular, modify records 72, 266, and 688 because they ask the user to enter the date in *mmddyy* format. Use the MKPCBTXT program to edit these records in the PCBTEXT file.

Thousands Separator

As with dates, PCBoard is able to decide if the language specified needs to use the comma or the period for the thousands separator. For example, in the United States, a number could be displayed as 1,024,000 whereas with periods it is displayed as 1.024.000.

Upper And Lower Case

In addition to reading the date and number information from COUNTRY.SYS, PCBoard can also determine what the proper capitalized and lower case characters are for a particular language. PCBoard uses this information throughout the system so users can enter responses in the syntax they are most familiar with.

Installing COUNTRY.SYS

For PCBoard to support internationalization of dates, thousands separator and capitalization, COUNTRY.SYS **must** be installed on the system. COUNTRY.SYS comes with your operating system, including the instructions on how to install it in your system. The following sections show samples of how to install COUNTRY.SYS in both DOS and OS/2.

DOS

In your CONFIG.SYS file, add:

```
COUNTRY=001,437,C:\DOS\COUNTRY.SYS
```

This example shows an entry for the United States. By referring to your operating system manual, you should be able to see that 001 is the country number, 437 is the code page number to use, and the last parameter is the location of your COUNTRY.SYS file.

OS/2

The configuration for OS/2 is quite similar to the configuration for DOS machines. You need to add the following line to your CONFIG.SYS file:

```
COUNTRY=001,C:\OS2\SYSTEM\COUNTRY.SYS
```

This example also shows you the configuration as it appears for the United States. As you can tell, you need to only enter the country number and the location of the COUNTRY.SYS file.

International Fonts

The code-page information specified in PCBML.DAT gives PCBoard the ability to change the font used by the display adapter whenever a caller changes languages. The font change only shows up on the local screen and then only when it is a local login. In addition, you must have an EGA/VGA adapter in order to setup the ability to change fonts.

The previous section discussed how to add the French language to your system. The examples, for this section will also revolve around installing French on your system.

DOS

In your CONFIG.SYS, add the following:

```
DEVICE=C:\DOS\DISPLAY.SYS CON=(EGA,437,2)
```

In your AUTOEXEC.BAT, add these lines:

```
NLSFUNC
MODE CON: CP PREPARE=((437 850) C:\DOS\EGA.CPI)
```

For additional information on *DISPLAY.SYS*, *NLSFUNC*, and *MODE*, refer to the DOS manual.

If you are running multiple nodes under DESQview, be aware that the font support is a little unpredictable in that the font changes in one node may show up in another node's display instead. In addition, Microsoft Windows shows the font change in full-screen windows only.

OS/2

In your CONFIG.SYS add the following:

```
CODEPAGE=437,850
```

OS/2 does a good job of displaying fonts. You can easily have two separate windows using two different fonts.

For additional information on using the *CODEPAGE* line in your CONFIG.SYS, please refer to your OS/2 manual.

Multiple Languages And Caller Logs

The PCBTEXT file contains almost all of the text that is written to the caller log files. If you have several languages available on your system, you may find it difficult to interpret the information written to the caller log because it would be written in the language the user chose.

To help ease the reading of the log files, PCBoard uses the entries from the default PCBTEXT file (the one with no file extension) when writing to the log files. This means all of the entries will be the same for your callers no matter what language they select.

Menus

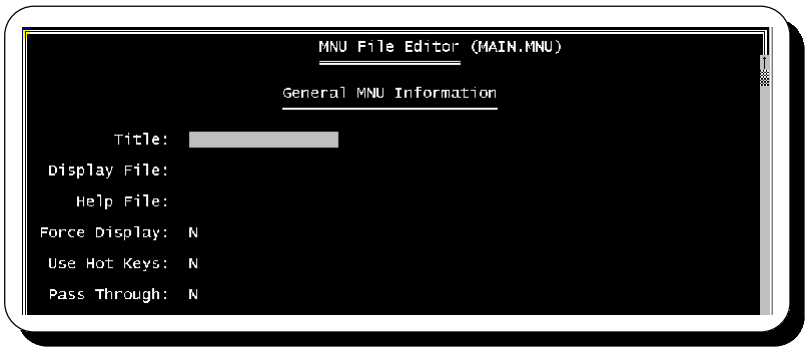
There are several hooks in PCBoard where you can use a menu instead of the normal input. By using menus, you can help distribute the information presented to the caller so they do not become overwhelmed with the choices available at any one prompt. You can access doors, bulletins, scripts, and more from within the menu.

Creating A Menu

To create a menu, you must create what is called a MNU file. To create this type of file, use the MKPCBMNU program included with PCBoard. To create or edit a MNU file, specify the file to edit on the command line. For example, to edit or create C:\PCB\MNU\MAIN.MNU, type the following at the DOS prompt:

```
MKPCBMNU C:\PCB\MNU\MAIN.MNU
```

If you do not specify a filename to edit, the *usage* screen is shown to you which details how to specify a MNU file to edit. If you specify a valid filename to edit or create, the MKPCBMNU program is loaded.



If the filename you specify already exists, you can edit the contents of that file. If the file does not exist, a new MNU file is created. The first screen has three fields. To access the rest of the fields, press `2` to toggle between the various configuration screens.

Title

In this field, enter the title or name of this menu. This title is used for the prompt after each menu is displayed. For example, if you enter a title of **`FILE`**, you will see the following prompt at the end of the menu:

```
FILE Menu Command ('MENU' for options)
```

The rest of the prompt can be configured to read however you wish by using MKPCBTXT.EXE to edit record #682 in your PCBTEXT file. For example, you may want it to say

```
FILE Selection ('MENU' for options)
```

in which case you would edit record #682 in PCBTEXT to look as follows:

```
@OPTEXT@ Selection ('MENU' for options)
```

As you can see, the @OPTEXT@ in the prompt is replaced by whatever you enter as the title for the prompt.

Display File

This is the file you want to display for the menu. This file should list all of the options that are available in this menu. As with virtually any other file that PCBoard displays, you can make security, graphics, and language specific versions of this display file.

When a user is in novice mode, this file is displayed each time they are asked to make a selection. This file is not normally displayed to expert users unless the `Force Display` option is enabled in which case everyone sees the menu regardless of expert status. Expert users can view this file at any time by typing `M E N U` at the input prompt.

Help File

Keeping in line with PCBoard's extensive online help system, you can have help files for each menu you create. Simply enter the filename to display when a `?` is entered at your prompt for the menu. Instead of the ? a user could also enter *H*, *HE*, *HEL*, *HELP* unless you have replaced those commands in your menu.

Force Display

Under certain circumstances it is desirable to force the menu display file to be shown regardless of expert status. As an example, if you are designing RIPscrip screens, your display files will most likely have buttons allowing the user to navigate through the menu system. In this application, it is essential that the menu

display files be shown regardless of expert status so the necessary buttons are shown on the screen. Available responses to this field are:

N Do not force the menu to display.

Y Force the menu to be displayed regardless of expert status.

Use Hot Keys

Normal menus require you to type in a command and press R to act on the command. The option is available to make your menus hot-key related. When a user presses a key, PCBoard searches for the first command to match your letter. Once a match is found, the command is acted on without requiring R to be pressed.

N Hot keys are not used. Commands must be entered followed by R .

Y Hot keys are enabled. The first key pressed is matched against the commands defined in the MNU file without requiring R to be pressed.

Pass Through

Sometimes you want to define a limited number of commands in an MNU file while still allowing the normal commands to be executed without defining them in the MNU file. For example, you may be utilizing BRDM.MNU to replace the main menu for a conference. In this MNU file, you want to add 5 new commands, and redefine a couple others. With nearly 40 commands available at the menu prompt that would be a lot for you to enter.

Utilizing the pass through option in the MNU file, you can tell the MNU to pass any command not defined in the menu to PCBoard for handling. The normal process is for the MNU to not recognize the command and to redisplay the prompt.. Valid responses to this field are:

N All commands must match what are defined in the MNU file for action to take place.

Y If a command is not defined in the MNU, the command is turned over to PCBoard for processing. This is equivalent to stuffing the text using the STFQ menu option type.

Menu Prompts

There is a default prompt in PCBTEXT (record #682) that is used by all menus. It may not meet your needs for every menu though. However, since it is used by all menus, it cannot easily be modified by MKPCBTXT to handle different situations without making it useless for other menus. Because of this, you can create different custom language prompts for each menu. MKPCBMNU allows the editing of 32 language specific menu prompts.

The second screen in the menu editor (accessible via 2) is where multi-lingual prompts are defined. Simply type in the prompt as you want it to appear for the defined language. Notice that the first entry automatically has an extension of *DEFAULT*. This is the prompt displayed to the user if they have the default language. If you leave this blank, PCBoard uses the prompt from record #682 in your PCBTEXT file.

In a previous example, you were shown how to change the prompt from **@OPTEXT@ Menu Command ('MENU' for options)** to **@OPTEXT@ Selection ('MENU' for options)**. You could accomplish the same thing without modifying your PCBTEXT file. Instead, change the default prompt on this screen to look like the following:

```
@OPTEXT@ Selection ('MENU' for options)
```

To add other language specific prompts, press A - I . In the extension field, type in the language extension of the prompt to replace. Press T to go to the MNU Prompt field and type in the prompt for that language. If a prompt cannot be found for the current language, the default prompt is used.

Just as PCBText prompts can be replaced to display entire text files or even run PPEs, so can MNU prompts. To force a prompt to display a file begin the prompt with a % followed by the filename to display. To run a PPE instead of the normal prompt, begin the prompt with an ! followed by the filename of the PPE to execute.

Examples:

```
   Extension   MNU Prompt
   ---------   ----------
1)  DEFAULT    %C:\PCB\MENUS\PRMPT

   Extension   MNU Prompt
   ---------   ----------
1)  DEFAULT    !C:\PCB\PPL\MNUPRMPT.PPE
```

Defining Options

The final configuration screen is where you define the menu options that will be available.

Keyword: This represents the command to define. You can enter any command name up to 8 characters in length. This means you are not limited to single letter commands, but you may certainly use single letter commands if it will make it easier for your users. Regarding single letter commands, having hotkey mode enabled causes PCBoard to search only the first character of the keyword for a matching entry.

Defining an option with no keyboard (i.e., leaving this field blank) means the option executes every time a user presses R at the menu command prompt. Depending on your needs, you can display online help, exit the caller out of the menu system, etc.

Sec: In this field you need to enter the minimum security level required to access the command you are defining. You may enter any value between 0 and 255.

Type: Each menu option can be of a certain *type*. In other words, one menu option may execute a door program, while another may display a bulletin. The following list details each of the types you can assign to a command.

BLT This option type enables you to display any bulletin that is defined in the current conference. In the *Parameters* field, enter the number of the bulletin to display. To get a list of bulletins available and allow the user to select from the list, leave the *Parameters* field blank.

BYE This option is identical to using the B Y E user command available in PCBoard; any warnings or questions at logoff are skipped. By default, this menu option is available in every menu you create, unless you override the command in your menu definition.

CLST Process the string entered in the *Parameters* field as a command line to PCBoard via the CMD.LST file. If the command does not exist in CMD.LST, an attempt is made to process it as an internal command. If that fails, no further attempts are made.

CMD Process the text entered in the *Parameters* field as a command line to PCBoard without searching the CMD.LST file.

CONF This option type enables you to change the conference number. In the *Parameters* field, specify the conference name or number to join. To display a list of conferences available and allow the user to select from it, leave the *Parameters* field blank.

DIR You can display any of the file directories available in the current conference. Specify the directory number to display in the *Parameters* field. Leaving the *Parameters* field blank produces a list of available file directories and allows the user to select from it.

DIS If you want to disable a menu option without actually deleting it from the list of options available, use this option.

DOOR If you want to execute a door application from a menu, you may do so using this option type. Only the doors normally available in the current conference are available for execution. Specify the door number or name to execute in the *Parameters* field of the option you are defining. To get a list of doors available and allow the user to select from the list, leave the *Parameters* field blank.

DORX This option is equivalent to the DOOR type with one exception. Upon completion of the door, the MNU system is not automatically reloaded.

EXIT While this option type is similar to QUIT, it is different because it quits active menus.

FILE If you want to display a text file to the caller, use this option type. As with normal PCBoard display files, you can create security, graphics, and language specific versions of the file. In the *Parameters* field, specify the path and filename to display.

GBYE This option is identical to the G user command available in PCBoard. By default, this command is available in every menu you create, unless you define G to perform some other action in your menu.

MENU If you have assigned a menu command to have this type, you can load another MNU file as specified in the *Parameters* field. This effectively lets you create a sub-menu type system that is very easy to navigate.

PPE Using this option, you can execute any PPE file. This only further enhances the options or tasks you can perform with each menu. Note that any text stuffed by the PPE is interpreted at the menu prompt and not at the main PCBoard command prompt.

PPEX This option is equivalent to the PPE type with one exception. When the PPE has finished executing, the MNU system is not automatically reloaded.

QUIT To quit the current menu and return to the previous menu (if any), define a menu option that uses this option type. Remember that only the current menu is exited. To exit all menus, use the EXIT option instead.

SCR Execute a script file. The script number to execute is specified in the *Parameters* field. For example, to execute script #3 in the current conference, set the type of the option to *SCR* and in the parameters field enter *3*.

SFNR To increase the capcbility of MNU files, this option type enables you to stuff any text into the keyboard. The text to stuff comes from the file specified in the *Parameters* field. Stuffing the keyboard makes it appear the user typed in the text when in reality it is your menu. Once the stuffed text has been acted upon, the user is not returned to the menu file.

SQNR Stuff the keyboard with the text entered in the *Parameters* field. The text that is stuffed is not displayed on the screen. Additionally, the user is not returned to the menu once the stuffed text has been acted upon. Any commands using this type cannot access commands in the CMD.LST file.

SSNR Stuff the keyboard with the text entered in the *Parameters* field. Once the stuffed text has been acted upon, the user is not returned to the menu.

STFF Stuff the keyboard with the contents of the file specified in the *Parameters* field. Once the stuffed text has been acted upon, the user is returned to the menu.

STFQ Stuff the keyboard with the contents of the string specified in the *Parameters* field. The stuffed text is not shown on the screen. Any commands using this type cannot access commands in the CMD.LST file.

STFS Stuff the keyboard with the text entered in the *Parameters* field. To represent the user pressing R, use ^M where R would normally be used. Once the stuffed text has been acted upon, the user is returned to the menu.

XPRT Using this option, you can toggle expert mode status or explicitly state if you want expert mode on or off. In the *Parameters* field, enter *ON*, *OFF*, or *TOGGLE* based on the action desired.

Parameters: In this field, enter any parameters required for the option type that you are defining. For example, if you use the *STFF* option type, a way to specify the filename to stuff must be found. In the Parameters field, enter the filename that you want to display. The description for each option informs you if anything needs to be entered in this field.

NOTE: There are some commands that are available with every menu even if you do not have them defined in your MNU file. The following lists all of the default commands in all menus:

- **?**, **H**, **HE**, **HEL**, **HELP** - Displays the help file for this menu (if it exists)
- **ME**, **MEN**, **MENU** - Displays the menu file which shows menu options available
- **Q** - Quit the current menu and return to the previous menu (if applicable)
- **X** - Toggle expert mode off
- **G** - Logoff the system. Warnings are displayed at logoff
- **BYE** - Logoff the system. Warnings are not displayed

The only commands that you cannot change or create are the top two items in the list which display the help files and display file for the current menu. All the rest of the options have option types you can assign to other commands.

Stuffing Commands

Several of the menu options types stuff text that make PCBoard think the user typed in the text. These numerous option types vary in functionality such as whether they stuff a text string or an entire file, or if they display the text as it is stuffed. The following chart helps differentiate the options by highlighting each option's functionality.

	Stuffs a		Stuff Mode		Return to menu?
Option	String	File	Quiet	Echo	
SFNR		✓		✓	
SQNR	✓		✓		
SSNR	✓			✓	
STFF		✓		✓	✓
STFQ	✓		✓		✓
STFS	✓			✓	✓

Adding A Menu

There are three ways to install a menu file into PCBoard. They are as follows:

- Menu display files (e.g., BRDM, CNFN)
- Most display files (e.g., WELCOME, NEWS)
- CMD.LST (*PCBSetup | File Locations | Configuration Files*)
- Virtually any PCBText Entry
-

Using these methods, a menu file can be installed virtually anywhere in the system. The following sections describe the various methods for installing a menu.

Menu Display Files

The most common place for you to insert a menu is when the user is going to be prompted for input. If you have a lot of conferences on your system, chances are that your users will have difficulty deciding the conference to join. By using menu files instead of a single display file, you can help your users find what they are after. The following lists some likely candidates for installing menus by adding a .MNU on the name of the menu display file:

- **BRDM** (*PCBSetup* | *Conference Configuration*) - Displayed at the conference command prompt, but only when in novice mode, or when the *MENU* command is used.
- **CNFN** (*PCBSetup* | *File Locations* | *Display Files*) - Displayed when a user uses the J user command.
- **DOORS** (*PCBSetup* | *Conference Configuration*) - Displayed when a user uses the O P E N or D O O R user command.
- **BLT** (*PCBSetup* | *Conference Configuration*) - Displayed when the B user command is executed.
- **SCRIPT** (*PCBSetup* | *Conference Configuration*) - Displayed when the S user command is executed.
- **DIR** (*PCBSetup* | *Conference Configuration*) - Displayed when the F user command is executed.

For any of these display files, you can create a menu file that is used instead of the normal display file by adding a .MNU extension on the filename. For example, to create a menu for your conferences, follow these steps:

1. Look at the location of your CNFN file (*PCBSetup* | *File Locations* | *Display Files*). You may see *C:\PCB\GEN\CNFN*. In this case, you would create a MNU file called CNFN.MNU and store it in the C:\PCB\GEN\ subdirectory.
2. Use MKPCBMNU to create the C:\PCB\GEN\CNFN.MNU file. Follow the instructions for creating a menu as outlined previously. When you have finished defining your menu file, save it.

Now when you enter J and R the menu file is used instead of the normal display file.

The most important thing to remember is that menus are only used when the normal display file would have been used. If a user were to type *J;3*, the is never used because the conference menu is not displayed because of the stacked commands. Likewise, if you replace the BRDM file with a BRDM.MNU, it is only used when the BRDM file is displayed. This means that if a user is in expert mode, they will not see the menu, because the main menu is not normally displayed to them. However, if a user in expert mode types *MENU*, the menu file is used.

CMD.LST

In the CMD.LST file (*PCBSetup* | *File Locations* | *Configuration Files*) new commands can be added to the system. The commands defined in this file are only available from the conference command prompt. If you edit your CMD.LST file, a screen resembling the following is shown:

```
                                File Locations

        Command     Security  PPE/MNU File -or- Keystroke Replacement
   --------------  --------  ----------------------------------------
1)
```

You can add a MNU file by specifying the command to use for the menu, the security level required to execute the command, and the actual location of your MNU file. For example, to add a command called ORDER which puts the user into a menu system where you can help them make purchasing decisions, add the following entry:

```
                                File Locations

        Command     Security  PPE/MNU File -or- Keystroke Replacement
   --------------  --------  ----------------------------------------
1) ORDER               0     F:\PCB\MENUS\ORDER.MNU
```

PCBText Entry

Instead of displaying a PCBTEXT record, you can use a menu file instead. To use a menu file, begin the PCBTEXT record with a *$* followed by the name of the menu filename that you want to use. For additional information, refer to the *PCBText Utilities* section in the *Utilities* chapter of this manual.

Passing Parameters To Commands

Normally menu systems are designed to accept input for one command at a time. When a user types more than one command in PCBoard's MNU system (each command is separated by either a space or semi-colon), the additional commands will be passed to the next menu. If there is no menu, these additional commands or parameters the user typed will be lost.

What happens if you want to let your users take advantage of the command stacking PCBoard is famous for? For example, you may have defined a menu option for download a file. In PCBoard the user can press R and let PCBoard prompt for a filename or the user can type *D FILENAME.EXT* and specify the filename right on the command line. If your menu command for downloading a file resembles the following entry

```
      Keyword    Sec   Type   Parameters
      -------    ---   ----   ----------
   1) D          0     STFQ   D
```

the filename the user passes is lost. If you want any additional command or parameters the user types to be passed to your option, make use of the @PARAMS@ macro available in the MNU system. Using the previous example, we want any additional parameters the user types to be passed with the keyboard stuff of the D command. Therefore, we put @PARAMS@ in the location where we want the parameters to be added as shown in the following example:

```
      Keyword    Sec   Type   Parameters
      -------    ---   ----   ----------
   1) D          0     STFQ   D @PARAMS@
```

Keyboard stuffing is not the only time you may want to pass additional commands the user types. For example, you may have a door which allows users to pass parameters to it (a mail door is a good example). In such a case, you may want to pass the additional parameters the user types to the door. An example menu option which runs a door and passes the parameters may resemble the following:

```
      Keyword    Sec   Type   Parameters
      -------    ---   ----   ----------
   1) Q          0     DOOR   MAIL @PARAMS@
```

Sample Menu Exercise

This sample exercise shows you not only how to create a simple menu file but also how to make this new menu appear as a command on your main menu. In an effort to consolidate some of the menu options in the main menu, we are going to combine all of the commands which relate to personal settings into a single command from the main menu.

The first thing you need to do is to make a directory where the menu files will be stored. For this example, create a subdirectory underneath your \PCB directory called MENU. We will store all of our MNU and display files in the \PCB\MENU subdirectory for this example.

Once you have created this subdirectory, load PCBSetup, and edit your CMD.LST file (*File Locations | Configuration Files*). In the CMD.LST, add the following:

```
        Command     Security  PPE/MNU File -or- Keystroke Replacement
   --------------  --------  ---------------------------------------
1) YS                   0     C:\PCB\MENU\STNGS.MNU
```

This entry simply defines a new command called *YS* which loads the STNGS.MNU file we will create in the next step. When a user enters *YS* at the conference command prompt, PCBoard attempts to load the *STNGS.MNU* file to determine the next set of options available to the caller.

Next, create your menu using the MKPCBMNU utility described earlier in this section. At a DOS command prompt type MKPCBMNU C:\PCB\MENU\STNGS.MNU and press R . You will see a warning message stating the file could not be found since you are creating this file. Once the MNU file is saved, this message is not displayed when MKPCBMNU is loaded. At this point the MKPCBMNU utility is loaded and you will see three fields on the screen.

```
                         General MNU Information
                         -----------------------


        Title:

Display File:

   Help File:
```

In the *Title* field, enter *Your Settings*. In the *Display File* field, enter *C:\PCB\MENU\SETNGS*. Your screen should now look like this:

```
        Title:  Your Settings

Display File:  C:\PCB\MENU\SETNGS

   Help File:
```

Now, press 2 twice to get to the screen where we define the options that are available from this menu. The next step is to define the menu options as shown in the following:

```
   Keyword    Sec   Type   Parameters
   -------    ---   ----   ----------
1) X          0     XPRT   TOGGLE
2) Y          0     STFQ   W
3) C          0     STFQ   M @PARAMS@
4) AC         0     STFQ   CHAT A
5) UC         0     STFQ   CHAT U
6) V          0     STFQ   V
```

What function do each of these commands perform?

X Toggles expert mode on/off by using the XPRT menu option type.

Y Stuffs a *W* into the keyboard to tell PCBoard to execute the internal W user command.

C Stuffs an *M* (and any additional parameters specified) to PCBoard. In effect, this menu option toggles graphics mode on/off by using the internal M user command.

AC Makes the user available for chat by stuffing *CHAT A* into the keyboard buffer and letting PCBoard act on it.

UC Makes the user unavailable for chat by stuffing *CHAT U* into the keyboard buffer and letting PCBoard act on it.

V Enables the user to view additional information about his account on the system by stuffing a V into the keyboard buffer.

Once you have entered all of the menu options, press E to save the MNU file and answer Y to the question about saving the file.

The final step in creating your menu is designing the screen which is displayed to the user before being asked for a command to enter from your menu. The location and filename of this screen is determined by what you entered in the *Display File* field when editing your MNU file. Use a text editor like PCBEdit to create your C:\PCB\MENU\SETNGS display file. You may want to make it look like the following sample:

```
V)iew your settings
Y)our personal settings (password, message editor default, etc.)
C)olor graphics mode (toggle on/off)
X) Toggle expert mode on/off
AC) Make yourself available for chat
UC) Make yourself unavailable for chat
G)oodbye (Logoff the system)
Q)uit to the Main Menu
```

Next, log into your system and at the conference command prompt or main menu and enter Y S for the command to execute. This loads your menu. If you do not see your menu and are instead returned to the main menu, check your callers log using the 1 SysOp command to see if there are any error messages about PCBoard not being able to find your MNU file.

Adding Commands

One of the requirements of a bulletin board system is that it be customizable to meet the needs of your users. PCBoard gives you the ability to add new commands to the system. You can define these new commands to do the following things:

- Open a door - When you define a door, you must give it a name. You can execute this door by typing entering the door name at the conference command prompt. There is no need to use the O P E N or D O O R user commands. This method enables you to add the door name to your main menu making it appear as a command on your system.
- Stuff the keyboard - Sometimes you may want to make things easier for your users by combining commonly used commands into one single command. For example, if your users have a hard time remembering that `R;Y;ALL` would read their own mail, create a command called YOURMAIL which stuffs the keyboard with `R;Y;ALL`.
- Run a PPE - A PPE can be generated by the PPL Compiler or by downloading a pre-compiled PPE.
- Execute a menu file - If you want to run a menu file as a new command, specify the menu file to execute.

All new commands you add to your main menu (with the exception of doors) need to be added in the CMD.LST file (*PCBSetup | File Locations | Configuration Files*).

Stuffing Text Into The Keyboard

Perhaps the most common way to add a new command is to stuff text into the keyboard buffer. Using this method you can create commands based on common things your users may do. In the CMD.LST, specify the text to stuff in the right-most field on the screen (`PPE/MNU File -or- Keystroke Replacement`.) The text you specify is stuffed into the keyboard buffer as if the user entered it directly from their keyboard. For example:

```
        Command     Security  PPE/MNU File -or- Keystroke Replacement
    --------------  --------  ---------------------------------------
1) #                    0     D;ALLFILES.ARJ;N^M
```

This entry defines the *#* command. When this command is executed, the commands necessary to download ALLFILES.ARJ are executed. In addition the *;N* is added which forces PCBoard to use the (N)one protocol. In essence, this forces a protocol to be picked for transfer even if a default protocol has already been selected.

There are two things you need to be aware of when stuffing the keyboard. To simulate pressing R add a *^M* to the text that you are stuffing into the keyboard buffer. In addition, you must realize that any text you stuff into the keyboard buffer is lost if you run a door. To stuff more characters than are available in the field, stuff a file instead.

Stuffing A File To The Keyboard

To stuff an ASCII text file instead of the text string, enter a % followed by the filename to stuff. For example, to create a command called VIEW that stuffs the text file C:\TEMP\STUFF.TXT, add this entry:

```
        Command     Security  PPE/MNU File -or- Keystroke Replacement
    --------------  --------  ---------------------------------------
1) VIEW                 0     %C:\TEMP\STUFF.TXT
```

Stuffing the keyboard buffer with a file is virtually identical to stuffing the keyboard buffer with text (described in previous section) with the following exceptions:

- You may stuff as many characters as necessary. Stuffing a text string limits you to 256 characters where there is no limit when stuffing a file.
- Instead of using ^M to represent R , press R when you are creating your ASCII file to stuff into the keyboard buffer.

  If you stuff *S^M2^M*, the *^M* characters are converted to carriage returns If you stuff the same text from a file, it would resemble the following:

  ```
  S
  2
  ```

Using A PPE File

Creating or modifying a command to execute a PPE can be done by specifying the command to alter, the security level required to execute the command, and finally the name of the PPE filename to execute. For example, to create a command called STATS which executes C:\PCB\PPE\STATS.PPE, make the following entry:

```
        Command     Security  PPE/MNU File -or- Keystroke Replacement
    --------------  --------  ---------------------------------------
1) STATS                0     C:\PCB\PPE\STATS\STATS.PPE
```

Using A Menu File

You can add a MNU file by specifying the command you want to use for the menu, the security level required to execute the command, and the actual location of your MNU file. For example, if you want to add a command called ORDER which would put the user into a menu system where you could help them make purchasing decisions, add the following entry:

```
                                File Locations

          Command     Security  PPE/MNU File -or- Keystroke Replacement
      --------------  --------  ---------------------------------------
   1) ORDER               0     F:\PCB\MENUS\ORDER.MNU
```

Replacing Existing Commands

Using the CMD.LST file, it is possible for you to override PCBoard's internal commands. The commands defined in CMD.LST have the highest priority of any command or function.

Even when you override a command, you can still access the original internal command. As a very simple example, add the following entry to your CMD.LST file:

```
          Command     Security  PPE/MNU File -or- Keystroke Replacement
      --------------  --------  ---------------------------------------
   1) N                   0     N
```

As you can see, this example stuffs *N* into the keyboard buffer when the user executes the N user command. If you login and execute then *N* command you will notice it operates just as it did before the changes were made. To make sure everything is working properly, modify the N command in CMD.LST to look like the following:

```
          Command     Security  PPE/MNU File -or- Keystroke Replacement
      --------------  --------  ---------------------------------------
   1) N                   0     N;S
```

If you login and execute the *N* command, you are not prompted for the date. Instead, you are asked immediately for the directory numbers to search through. This is because the internal N command is still being used.

The Look And Feel Of Your BBS

PCBoard uses several display files and hundreds of text records (PCBTEXT) to display information to the caller of the system. Each of these display files and nearly all of the text records can be modified to your liking.

Without a doubt, you will spend a large amount of your time customizing your bulletin board system to suit your needs and to help differentiate it from other systems. This section describes some ways to customize the look and feel of your system.

Colorizing Screens

To help enhance the presentation of your display files, PCBoard allows you to create graphic specific versions of all of your display files by adding a G to the end of the filename to be displayed. For example, if you use a file called WELCOME and you want to create a graphics specific version of the file, create a file called WELCOMEG. These graphic specific files are usually created using either ANSI codes or @X color codes. There are several ANSI screen and @X editors such as PCBEdit (included with PCBoard). Simply use the editor program to create your file and save the file using ANSI or @X codes.

One great advantage to PCBoard's @X code graphic format is that you don't actually need both graphic and non-graphic versions of the same display file. For example, PCBoard can use the same WELCOME display file colored with @X color codes and use it for both graphics and non-graphics callers. To produce a non-colorized screen, PCBoard does not transmit the color codes to the caller. For the graphics caller, the codes are translated to ANSI sequences.

Editing PCBText Records

Because most of the text that PCBoard displays comes from the PCBTEXT file (for each language) you can put a great deal of time into customizing the PCBTEXT records. Each PCBTEXT record varies in length up to 79 characters. There are over 700 records in the file that you can customize to fit your needs.

To edit the PCBTEXT file, use the utility called MKPCBTXT.EXE which is included with your package. This utility edits each record in the file (one at a time) to say what you want it to say.

If you browse through the records, you may notice what appears to be duplicate records which contain the same text. One record is displayed to the user when they are in novice mode, and the other record is displayed when the user is in expert mode. The best way to determine which is which is by trial and error—there is no set method.

To increase the flexibility of each PCBTEXT record, there are some special characters you can use at the beginning of a line to do signify that something else should be done besides display the record text. For example, if you begin a record with a % followed by a filename, PCBoard displays the file instead of a single line of text.. This enables you to break the record length limit in case you need to display additional text. The following screen shows what a record looks like that displays a text file.

```
                    PCBTEXT File Generator/Editor

Enter filename to edit/convert: \PCB\GEN\PCBTEXT

  Record No.:  1          Record Length:  60        Justification:  Left

Leave a comment for the sysop (Enter)=no

    <ESC>       = Save & Quit.          <F2>        = Text-Search.
    <F3>        = Jump to Record #      <F4>        = Restore Default.
    <Up>        = Back 1 record.        <Dn>        = Ahead 1 record.
    <PgUp>      = Back 10 records.      <PgDn>      = Ahead 10 records.
    <Ctrl-PgUp> = Begin. of file.       <Ctrl-PgDn> = End of File.
   Use the tilde (~) character to add hard-spaces to the end of a string.
```

You can also elect to execute a menu rather than displaying a particular record. This can be done by starting the line with a `$` followed by the MNU file to use for your menu. If you have a PPE file to execute in place of a normal record, begin the record with an `!` followed by the filename of the PPE to execute.

NOTE: There are some records that are built by PCBoard on the fly and therefore cannot use the %, $, or ! characters as the first line. A good example is record #609 in the PCBTEXT file which displays the credits rewarded to a user after uploading. PCBoard replaces the 0 in that record with the appropriate values, hence it builds the record before displaying it to a user. If you use %, $, or ! as the first character, it is ignored. For more information on MKPCBTXT, refer to the *Utilities* chapter of this manual.

Perhaps the greatest way to customize how your bulletin board system operates is to use PPE files. You can use PPE files in the following places:

- In a PCBTEXT record as described in the previous section
- In place of a standard script questionnaire file simply by specifying the filename of the PPE (including the PPE extension) in SCRIPT.LST.
- In place of any menu display file (BRDM, CNFN, DIR, BLT, etc.) by creating a PPE file using the base name. For example, to execute a PPE file instead of displaying the normal menu, create a file called BRDM.PPE in the same location as BRDM.
- Within any display file by beginning a line (column 1) with an ! followed by the filename of the PPE to execute.
- From a menu selection as defined in a MNU file.

A PPE (PCBoard Programming Executable) file is simply the compiled version of a PPL file. While any copy of PCBoard can run a PPE, you must purchase the optional PPL Compiler to compile your own PPEs. If you have any background in BASIC or batch file programming, you will be able to easily understand the PPL language.

Configurable Online Help

PCBoard uses standard text files for its context sensitive help system. Therefore, you may modify the files that make up the help system to suit your needs. Your help files are located in the directory specified in the `Location of Help Files` (*PCBSetup | File Locations | System Files*). The following lists the help file names included with PCBoard and a description of the command or function that they provide assistance with:

HLP!	(!) Repeat last command.
HLPA	(A)bandon a Conference

HLPALIAS	(ALIAS) enable/disable
HLPB	(B)ulletins
HLPBRD	(BR)oadcast another node
HLPC	(C)omment to SysOp
HLPCHAT	(CHAT) or (NODE) commands
HLPCMENU	Menu available by pressing E while in chat.
HLPD	(D)ownload file(s)
HLPE	(E)nter a message
HLPENDR	Options available at the *End of Message Command* prompt.
HLPF	(F)ile directories
HLPFLAG	(FLAG) a file for download
HLPFSCRN	Full-screen editor (entering a message)
HLPG	(G)oodbye
HLPH	(H)elp
HLPI	(I)nitial Welcome
HLPJ	(J)oin a conference
HLPK	(K)ill a message
HLPL	(L)ocate a file
HLPLANG	(LANG) Change active language
HLPM	(M)ode of graphics (if any)
HLPN	(N)ew file scan
HLPNEWS	(NEWS) Online news
HLPO	(O)perator Page
HLPOPEN	(OPEN) a (DOOR)
HLPP	(P)age length setting
HLPQ	(Q)uick message scan
HLPQWK	(QWK) mail transfers
HLPR	(R)ead a message
HLPREG	Set conference registrations (within user record edit)
HLPREP	(REPLY) to a message
HLPRM	(RM) Re-read memorized message number
HLPS	(S)cript questionnaire
HLPSEC	Message security (when entering a message)
HLPSEL	(SELECT) conferences to include in message scan
HLPSRCH	Examples using Boolean searching. Displayed at *Text to Scan for* prompts.
HLPT	(T)ransfer protocol
HLPTEST	(TEST) a file that is available for download.
HLPTS	(TS) Search messages for text
HLPU	(U)pload a file
HLPUSERS	(USER) Display list of users on the system

HLPV	(V)iew user statistics
HLPW	(W)rite personal information
HLPWHO	(WHO) is currently online
HLPX	(X)pert mode toggle
HLPY	(Y)our mail scan
HLPZ	(Z)ippy search the file directories.

Display File Conventions

Display Filename Conventions

With virtually any filename that PCBoard displays to the caller, you can send different versions of the file based on the *security level* of the user, the current *language*, and the *graphics mode* (if any) being used.

Base Filename

Before you can understand how this works, you must know what PCBoard calls a *base filename*. The base filename is what you enter for the filename in a PCBSetup location. Look at the following example:

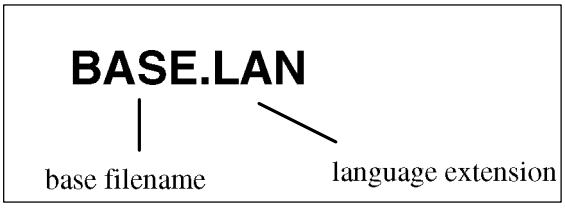
```
Name/Loc of Conference Join Menu  : C:\PCB\GEN\   CNFN
```

In this example, the filename is CNFN and hence it is the base filename.

By creating new files which have special characters added to the filename, you can make special versions of the display files for a restricted group of users. These special characters are described below:

Language Specific

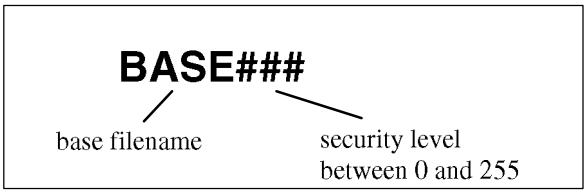
To make a display file for a particular language make the filename extension equal to the filename extension of the language as listed in your PCBML.DAT (*PCBSetup | File Locations | Configuration Files*).



Remember, that the default language does not have a file extension. Therefore, you would use the base filename with no file extension specified.

Security Specific

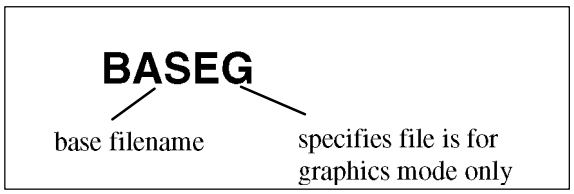
A file can be made viewable only to a certain security level by adding the security level to the base filename. For example, to create a BRDM file that is only displayed to users with a security level of 40, create a new file called BRDM40.



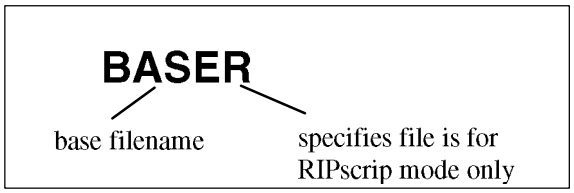
NOTE: Never precede the security level in the filename with a zero. Example: BRDM040 is invalid while BRDM40 is valid.

Graphic Specific

PCBoard supports two different graphics specific files—ANSI and RIPscrip. To make separate files for the users that are currently using graphics mode on your system is very easy. Simply add a **G** to the base filename for ANSI specific files and an **R** to the base filename for RIPscrip files. For example, to create a version of the BRDM for users who have graphics mode enabled, create a file called **BRDMG**.



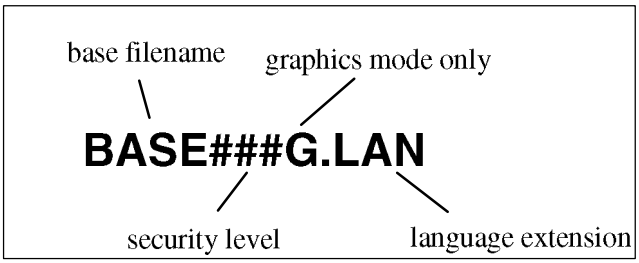
Likewise, if you want to create a file that is viewable only to those in RIPscrip mode, create a file called **BRDMR**.



If the user is in RIPscrip mode, but a RIPscrip version of the file does not exist, PCBoard attempts to find an ANSI or graphics version of the file (because RIPscrip also supports ANSI). If no ANSI file is found, the base filename is used.

Combining

You are not limited to using one specific method. For example, you can make graphics and non-graphic versions of security specific files. Look at the following figure:



Order Of Language, Security, and Graphic Specific Files

In order to properly use language, security, and graphic specific files, you need to understand the process that PCBoard goes through in case the specific file does not exist. PCBoard uses the most specific file it can find. For example, you may have the following specific versions of your NEWS file:

```
NEWS
NEWS10
NEWS20
NEWS20G
NEWS.SPA
```

For this first example a user logs into the system selecting the default language, and the user also selects graphics mode. This sample user has a security level of 20. When the NEWS file is displayed to the caller, PCBoard checks to see what language the user selected. In this case, the user selected the default language so no language specific files are looked for.

Now, PCBoard checks to see if there is a security specific version of the file. Upon searching, security specific files are found for levels 10 and 20. Because this user has a security level of 20, PCBoard must display either the *NEWS20* or *NEWS20G* file. Of course the final check is for the graphics mode of the caller. If you recall, this user selected graphics mode so the *NEWS20G* file is shown.

The caller hangs up and calls back again. This time, the caller selects language which happens to have an extension of SPA defined in the PCBML.DAT file. The news file is displayed to the caller only this time, the user has selected a language other than the default. PCBoard begins by checking to see if there are any language specific files. In our list of NEWS files, there was a file called NEWS.SPA. This was the only file with the SPA extension. Therefore, PCBoard will stop there since there are no security or graphic specific versions of the NEWS file with an SPA extension. This means that the caller is shown the NEWS.SPA file.

For the final example, another user calls into your system. This caller selects the default language and chooses to enable graphics mode. This sample caller is assigned a security level of 25. When the NEWS file is displayed to the caller, PCBoard does not check for language specific files because the caller chose the default language. Next, PCBoard searches for security specific files but only security specific files for levels 10 and 20 are found. Since there were no language or security specific matches, PCBoard checks for a graphics specific file (NEWSG). However, that file does not exist, so the NEWS file is displayed instead.

All Possible Specific Files

The following examples will help better illustrate the various files that you can create to make specific files based on language, security level, and graphics mode.

If PCBoard is going to display the C:\PCB\GEN\BRDM text file, you can create the following language, security, and graphics specific versions of that same file:

```
BRDM
BRDMG
BRDMR
BRDM###
BRDM###G
BRDM###R
BRDM.LAN
BRDMG.LAN
BRDMR.LAN
BRDM###.LAN
BRDM###G.LAN
BRDM###R.LAN
```

Remember, the *###* in each of these examples represents a security level. Therefore, you could conceivably have 255 different security specific files if you have defined all 255 security levels. In addition, the *.LAN*

represents the language extension. You can define multiple languages in your PCBML.DAT file so you would replace the *.LAN* with whatever language you want to make the display file for.

PCBoard @ Macros

In some of your display files, you may want to display information that is specific to the caller (e.g., name, connect speed, node number, etc.). Another possibility is that you may want to control the display of some of your files so that they pause at a particular point. PCBoard uses @ macros to help you accomplish these tasks. These macros are special codes that you can enter in text files to make PCBoard display certain information or perform a particular action. All macros must begin and end with the @ character with the text between being in uppercase.

The following groups the macros into sections. Following the brief summary is a list of all @ macros in alphabetical order for easy reference.

Accounting System Macros

@CREDLEFT@	Calculated balance of credits left (includes current session)
@CREDNOW@	Credits used so far this session (includes current session)
@CREDSTART@	The starting balance (no credits added or subtracted)
@CREDUSED@	Total credits used (@CREDSTART@-@CREDLEFT@

Action Related Macros

@AUTOMORE@	Subsequent more prompts are treated as @PAUSE@.
@BEEP@	Send a beep to the caller.
@CLREOL@	Clear all text on the current line to the right of the cursor.
@CLS@	Clear the screen.
@DELAY:nn@	Pause for nn tenths of a second.
@HANGUP@	Disconnect the caller.
@MORE@	Interrupt display asking caller if they wish to see more.
@PAUSE@	Same as @MORE@ but continues after 10 seconds.
@POFF@	Disable normal more prompts when screen fills up.
@PON@	Enable normal more prompting usage.
@POS:nn@	Advance cursor to position nn.
@QOFF@	Do not allow the display of the file to be aborted.
@QON@	Allow the file display to be aborted.
@XOFF@	Disables the interpretation of @X color codes.
@XON@	Enables the interpretation of @X color codes.
@WAIT@	Interrupt display of file with a *Press Enter* prompt.

File Transfer Related Macros

@BYTECREDIT@	Number of bytes credited towards a user's byte ratio.
@BYTELIMIT@	Number of bytes that can be downloaded on a daily basis.
@BYTERATIO@	Current byte ratio of caller.
@BYTESLEFT@	Number of bytes user can download during current call.
@DAYBYTES@	Number of bytes downloaded today.

@DIRNAME@	The name of the current file directory being viewed.
@DIRNUM@	The number of the current file directory being viewed.
@DLBYTES@	Total number of bytes downloaded by the caller.
@DLFILES@	Total number of files download by the caller.
@FBYTES@	The number of total bytes flagged for download
@FFILES@	Displays the number of files flagged for download
@FILECREDIT@	Shows the number of files credited towards a file ratio.
@FILERATIO@	Current file ratio of the caller.
@FNUM@	Next file number in a batch transfer.
@KBLEFT@	@BYTESLEFT@ expressed in kilobytes.
@KBLIMIT@	@BYTELIMIT@ expressed in kilobytes.
@MAXBYTES@	Maximum bytes a user can download (byte limit in PWRD).
@MAXFILES@	Maximum files a user can download (file limit in PWRD)
@NUMDIR@	Number of file directories in current conference.
@PRODESC@	Description of the default protocol selected.
@PROLTR@	Default protocol selected by the current caller.
@RATIOBYTES@	Displays byte ratio that must be maintained by the caller.
@RATIOFILES@	Displays the file ratio that must be maintained by the caller.
@UPBYTES@	Total number of bytes uploaded by the caller.
@UPFILES@	Total number of files uploaded by the caller.

Message Related Macros

@CURMSGNUM@	Current message number being read.
@HIGHMSGNUM@	High message number in message base.
@LMR@	Last message read by user in the current conference.
@LOWMSGNUM@	Low message number in the message base.
@MSGLEFT@	Total number of messages entered by the user.
@MSGREAD@	Total number of messages read by the user.

Miscellaneous Related Macros

@BOARDNAME@	The name of the bulletin board system.
@CONFNAME@	The name of the current conference.
@CONFNUM@	The number of the current conference.
@EVENT@	The time that the next event is scheduled to take place.
@FREESPACE@	Bytes available for uploading in the current conference.
@INCONF@	Current conference number and name.
@LASTCALLERNODE@	The last user that called the current node.
@LASTCALLERSYSTEM@	The last user that called the system.
@NOCHAR@	Character representing a no response (language specific).
@NODE@	The current node number.
@NUMBLT@	The number of bulletins defined in the current conference.

@NUMCALLS@	Total number of calls answered by the BBS.
@NUMCONF@	Highest conference numbered allowed.
@OFFHOURS@	Hours that lower speed callers can call into the system.
@OPTEXT@	Used in PCBTEXT to transfer information by PCBoard.
@SYSDATE@	The current system date.
@SYSOPIN@	Beginning time when the SysOp is available for chat.
@SYSOPOUT@	Ending time when the SysOp is available for chat.
@SYSTIME@	The current system time.
@WHO@	Prints a list of who is currently online.
@YESCHAR@	Character representing a yes response (language specific).

User Related Macros

@ALIAS@	Alias name defined for the user or blank if inactive.
@BPS@	Carrier speed of caller as reported by PCBoard.
@CARRIER@	Carrier speed of caller as reported by the modem.
@CITY@	Information entered in the city field of user's record.
@DATAPHONE@	Information entered in the data phone field of user's record.
@EXPDATE@	Expiration date of the caller.
@EXPDAYS@	Number of days until the user's subscription will expire
@FIRST@	First name of caller displayed in mixed case.
@FIRSTU@	First name of caller displayed in all upper case.
@HOMEPHONE@	Information entered in the home phone field of user record.
@INAME@	Support for Internet E-mail address
@LASTDATEON@	Last date the caller called the system.
@LASTTIMEON@	Last time the caller called the system.
@LOGDATE@	Displays the date the current session began.
@LOGTIME@	Displays the time the current session began.
@MINLEFT@	Minutes left on system (includes download time estimates).
@NUMTIMESON@	Number of times user has called the system.
@PWXDATE@	Date the current password will expire
@PWXDAYS@	Shows the number of days until the user's password expires.
@REAL@	The user's real name on the system.
@SECURITY@	Current security level of the caller.
@TIMELEFT@	Minutes left on system (excludes download time estimates).
@TIMELIMIT@	The daily/session time limit of the caller.
@TIMEUSED@	Total number of minutes used during current call.
@TOTALTIME@	Total number of minutes used during current day.
@USER@	The caller's name displayed in uppercase.

Formatting @ macros

With the exception of the *Action Related @ Macros*, you can apply the following formatting to any macro:

- The total number of characters used to display the macro. This is commonly referred to as the *minimum field length*.
- Whether the text should be center, right, or left justified when a minimum field length is specified.

To specify a minimum field length for a macro, enter a colon followed by the field length before the last @ of the macro. For example, to display the user's name in a 30 character field, enter the following macro:

```
@USER:30@
```

Text is normally left justified in a field. If you want the text to be right or center justified, add a special character after the field length. To make the text in the field right justified, add an `R` to the field length. To make the text center justified, add a `C` to the field length. For example, to make the user's name in the previous example center justified, enter the following instead:

```
@USER:30C@
```

To make the same display right justified, enter *`@USER:30R@`*. If you want to guarantee a *maximum* size to a field (e.g., 10 characters), enter *`@USER:10T@`*.

Alphabetical List Of @ Macros

The following table lists all of the @ macros that PCBoard will allow you to use. The list is arranged in alphabetical order for easy access.

@VARIABLE@	Description / Sample
@##@	When entered in the *TO:* field of a message, you can address a message to a particular security level. Replace the ## with the actual security level you want to address the message to. **This macro can only be used in the *TO:* field of a message**. ***Example***: *@20@*
@##-##@	When entered in the *TO:* field of a message, you can address a message to a range of security levels. Replace the first ## with the lowest security level to address the message to and the second ## with the highest security level. **This macro can only be used in the *TO:* field of a message**. ***Example***: *@20-35@*
@ALIAS@	Prints the alias name the user has assigned to his account. The alias name is always printed in upper case. ***Example***: BIG BROTHER
@AUTOMORE@	Any *More?* prompts displayed after this macro are interpreted as @PAUSE@ codes. If the user does not respond to the *More?* prompt within 10 seconds, the default of Y is accepted.
@BEEP@	This macro sends an audible tone (C -G) to the remote caller. In order for you to hear this audible tone, you must have the Bell turned on at the call waiting screen.
@BICPS@	Used internally by PCBoard to display file transfer statistics.
@BOARDNAME@	Displays the name of the BBS. This information is stored in *PCBSetup* | *Node Information*
@BPS@	Displays the connect speed that PCBoard announced at login. For error-correcting connections, the opening port speed is displayed. Otherwise, the actual carrier speed is displayed. To always display the carrier speed of the caller, use the @CARRIER@ macro instead. ***Example output***: *38400*
@BYTECREDIT@	In the PWRD file, you can give a security level a byte credit towards a byte ratio . This @ macro displays the amount of byte credits given to the caller. ***Example output***: 500
@BYTELIMIT@	Displays the daily download byte limit of the caller. ***Example output***: *737,280*
@BYTERATIO@	Displays the byte ratio for the current caller. The format for the output is downloads:uploads. For example, if a caller has downloaded 10,000 bytes and uploaded 2,000 bytes, they have a 5:1 byte ratio. In other words, for every five bytes they download one byte has been uploaded. ***Example output***: *5:1*

@VARIABLE@	Description / Sample
@BYTESLEFT@	Displays the number of bytes the caller has left for the day. If the caller has been given unlimited downloads, the word `Unlimited` is displayed. ***Example output***: `325,567`
@CARRIER@	Displays the connect speed of the caller as returned by the modem. If the user is on via a local login, the opening port speed is reported. ***Example output***: `14400`
@CITY@	This macro displays the caller's city. This information is stored inside of the user file in the City field. ***Example output***: `MURRAY, UT`
@CLREOL@	Clears the current text line to the end of the line (the last column on the display screen). This is useful to make sure there is no other text to the right of the @CLREOL@ macro or if you are using a background color in your color displays and want it to extend to the end of the line.
@CLS@	Clears the screen (i.e., no information is displayed on the screen immediately after this macro is used).
@CONFNAME@	Displays the current conference name. This is quite similar to the @INCONF@ macro except it doesn't display the conference number. ***Example output***: `Main Board`
@CONFNUM@	Displays the current conference number ***Example output***: `3`
@CREDLEFT@	Displays the calculated account balance by taking the starting account balance, adding all earnings and subtracting all charges. The net result is the current account balance and does include the activities during the current session. ***Example output***: `5.0823` or `$23.05`
@CREDNOW@	Shows the total number of credits charged toward the user's account during the current session. This includes pay-backs or earnings into account for this session. A user charged 5 credits for logging in and earning 2 credits for uploading results in a value of 3. ***Example output***: `21.2328` or `$18.81`
@CREDSTART@	This macro displays the starting or opening account balance for the user. The value printed does **not** take into account any earnings or charges on the account. In fact this value is an exact copy of the Beginning Balance field in the Account Form screen while editing a user record. ***Example output***: `10,000` or `$40.00`
@CREDUSED@	When you want to display the total number of credits charged over all calls to the system for the current caller, use this macro. This value is a total of all charges minus any earnings or pay-backs. ***Example output***: `45.8232` or `$10.27`

@VARIABLE@	Description / Sample
@CURMSGNUM@	Displays the last message number the caller read, not necessarily the highest message number the caller has read. For example, if the caller had read to message number 532 but decided to go back and read message number 1, this macro displays *1* because that is the last message the caller read. ***Example output***: *32,322*
@DATAPHONE@	This macro displays the business/data phone number stored in each user record. The actual text is not formatted; it is taken straight from the user record. ***Example output***: *801-261-8976*
@DAYBYTES@	Displays the number of bytes downloaded on the current day. If the value displayed is negative, the caller has been given credit for an upload. Negative bytes are added to the daily byte limit of the caller. For example, if this displays *-52,322*, that means the caller can download 52,322 bytes in addition to their normal daily limit. ***Example output***: *332,356*
@DELAY:nn@	Delays for **nn** tenths of a second. If you enter *@DELAY:50@*, PCBoard pauses for 5 seconds (50 * .10 = 5.0). You can enter any value between 0 and 255 (0-25.5 second pause).
@DIRNAME@	While displaying a file directory listing, this macro returns the description (from the DIR.LST) for the file directory being viewed. At all other times, this macro returns nothing. ***Example output***: `Compression Utilities`
@DIRNUM@	While displaying a file directory listing, this macro returns the file directory number currently being viewed. At all other times, this macro returns no value. ***Example output***: `42`
@DLBYTES@	Displays the total number of *bytes* the caller has downloaded. ***Example output***: *2,352,597*
@DLFILES@	Displays the total number of *files* the caller has downloaded. ***Example output***: *1,054*
@ENV=[variable]@	Displays any text you can store in a DOS environment variable. Obviously this presents you with a lot of opportunity to display all kinds of information in a display file. To take advantage of this feature, define a variable in your DOS environment area that is defined as `SET @variable@=text to assign` . To display the contents of the @variable@ environment variable, use `@ENV=variable@` . Notice how @ symbols are used to surround the variable when creating it in the DOS environment. These special characters must surround the variable to prevent accessing of normal environment variables such as PATH and COMSPEC.

@VARIABLE@	Description / Sample
@EVENT@	Displays the time (in 24 hour format) that the next system event will run. If you do not have your system scheduled to run an event or no events are defined, the time displayed is `00:00`. ***Example output:*** `14:30`
@EXPDATE@	This macro displays the expiration date of the current caller. If a user has no expiration date or if subscription mode is disabled, `00-00-00` is displayed. ***Example output:*** `08-30-94`
@EXPDAYS@	Displays the number of days until the caller's subscription expires. If the user does not have an expiration date, or you have disabled subscription mode, nothing is displayed on the screen. ***Example output:*** `325`
@FBYTES@	Displays the number of total bytes currently flagged for download. ***Example output***: `4892174`
@FFILES@	Shows the number of files flagged for download. ***Example output***: `58`
@FILECREDIT@	In the PWRD file, you can give a security level credit towards a file ratio . This @ macro displays the amount of file credits given. ***Example output***: `5`
@FILERATIO@	Displays the file ratio for the current caller. The format for the output is downloads:uploads. For example, if a caller has downloaded 150 files and uploaded 30 files, they have a 5:1 file ratio. In other words, for every five files downloaded, they have uploaded one file. ***Example output:*** `5:1`
@FIRST@	This macro displays the first name of the caller. When the caller's first name is displayed, the first letter is capitalized and all subsequent letters in the first name are lower case. ***Example output:*** `Stanley`
@FIRSTU@	This macro displays the exact same information as @FIRST@ only the first name is displayed in all upper case letters. ***Example output:*** `STANLEY`
@FNUM@	Shows the next number in a batch transfer. Use of this variable is primarily useful with the `Filename to upload` or `Filename to download` prompts. ***Example output***: `7`
@FREESPACE@	Displays the amount of drive space in bytes that are available on the private upload drive of the current conference. ***Example output:*** `122,346,098`
@HANGUP@	This macro disconnects the caller. When the caller is disconnected, the number of minutes used and the `Thanks for calling` message is displayed. This macro can only be used in display files, not in messages. In order for PCBoard to recognize this macro, it must begin at the first character of the line.

@VARIABLE@	Description / Sample
@HIGHMSGNUM@	Displays the high message number for the conference the caller is in. ***Example output:*** `11,523`
@HOMEPHONE@	This macro displays the home/voice phone number stored in each user record. The actual text is not formatted; it is taken straight from the user record. ***Example output:*** `202-555-1212`
@INAME@	Added support for the @iname@ macro, which is translated to the internet e-mail address of the user that is online. NOTE: For this macro to work properly, you must set the UUCP Domain Name Field in PCBSetup's UUCP section.
@INCONF@	Displays the conference name and conference number the caller is currently in. The word `Conference` is added to end of the conference name and number. The only exception is the Main Board conference which simply displays `Main Board`. If you do not want the word `Conference` to be added, use the @CONFNUM@ and @CONFNAME@ macros instead. ***Example output:*** `Support (1) Conference`
@KBLEFT@	Displays the number of kilobytes the caller has available for the rest of the day. If a user has earned upload bytes, they are added to their normal daily limit. ***Example output:*** `768`
@KBLIMIT@	This macro displays the total number of kilobytes the caller is normally allowed to download each day. ***Example output:*** `2,048`
@LASTCALLERNODE@	Displays the name and city of the last caller to the current node. ***Example output:*** `JIM SMITH (ANYWHERE, USA)`
@LASTCALLERSYSTEM@	Displays the name and city of the last caller to the entire system (all nodes are searched). ***Example output:*** `BOB JONES (ANYPLACE, USA)`
@LASTDATEON@	This macro displays the last date the caller was on the BBS. The current call is not taken into account. ***Example output:*** `09-25-93`
@LASTTIMEON@	This macro displays the last time the caller was on the BBS. The time is displayed in 24-hour format. This macro does not take the current call into account. ***Example output:*** `16:32`
@LIST@	This macro enables you to address a single message to a list of users on the system. You can only enter this macro in the TO: field when addressing a message.

@VARIABLE@	Description / Sample
@LMR@	Displays the highest message number the caller has read in the current conference. This is sometimes referred to as the *Last Message Read pointer* and is stored inside of the user's record. ***Example output***: `7,938`
@LOGDATE@	This macro displays the last date the caller logged into the system. Using the @LOGTIME@ variable you can also include the time of day the account was last accessed. ***Example output***: `03-09-95`
@LOGTIME@	Shows the time (24 hour format) that the user last logged on. To display the date last logged on, use the @LOGDATE@ macro. ***Example output***: `11:06`
@LOWMSGNUM@	Displays the lowest message number in the conference the caller is in. ***Example output***: `11,523`
@MAXBYTES@	This macro displays the maximum bytes the caller can download. This value is equal to the *byte limit* field in the PWRD file. ***Example output***: `2,097,152`
@MAXFILES@	This macro displays the maximum number of files the caller can download. This value is equivalent to the *file limit* field in the PWRD file. ***Example output***: `200`
@MINLEFT@	Displays the total number of minutes the caller has remaining for this session. If a user has flagged files for download, the estimated time that it will take to transfer those files is reflected in the @MINLEFT@ macro. In other words, if a caller has 35 minutes left for the session and they flag 10 minutes worth of files, the @MINLEFT@ macro displays *25*. If you do not want to take the flagged files into account, use the @TIMELEFT@ macro instead. ***Example output***: `34`
@MORE@	Displays a `More?` prompt. This is the same prompt that is normally displayed when the screen is full. You can manually insert a `More?` prompt to help control the display of a text file. ***Example output***: `(57 min left), (H)elp, More?`
@MSGLEFT@	Displays the number of messages the user has entered on the BBS. This information is stored in the user record.
@MSGREAD@	Displays the number of messages the user has read on the BBS. This information is stored in the user record.
@NOCHAR@	The internationalization of PCBoard means you can defined different no characters for each language. While the English no character might be `N`, the Turkish no character is `H`. ***Example output***: `N`
@NODE@	Displays the node number the caller is currently using. ***Example output***: `10`

@VARIABLE@	Description / Sample
@NUMBLT@	This macro displays the number of bulletins in the conference. ***Example output:*** `32`
@NUMCALLS@	Displays the number of calls the BBS system has answered. ***Example output:*** `124,329`
@NUMCONF@	Shows the total number of conferences which can be configured on the system. This value is identical to the value entered in the `Highest Conference Number Desired` in *PCBSetup* | *Configuration Options* | *Messages*. ***Example output***: `250`
@NUMDIR@	Displays the number of file directories available in the conference. ***Example output:*** `60`
@NUMTIMESON@	This macro displays the number of times the caller has called the system. This number is stored in the user record. ***Example output:*** `365`
@OFFHOURS@	This macro displays the hours lower speed callers can call the system. All hour displays are in 24 hour format. These hours are defined in *PCBSetup* | *Modem Information* | *Allowed Access Speeds.* ***Example output***: `01:00-06:00`
@OPTEXT@	This macro is used by PCBoard to store temporary information for display in PCBTEXT records, or by PPEs that use this macro.
@PAUSE@	Displays a `More?` prompt. If the caller does not respond to the prompt within 10 seconds, the default value of `Y` is assumed and the display continues. ***Example output:*** `(38 min left), (H)elp, More?`
@POFF@	Disables the `More?` prompt from stopping the display. If you use this command, make sure you use the @PON@ command at the end of the file to enable the more prompt again.
@PON@	Enables the `More?` prompt to stop as each screen fills up. The default is to always display a `More?` prompt. However, if you use the @POFF@ macro, use this macro to enable `More?` prompts again.
@POS:nn@	Moves the cursor to position **nn** on the current line. If the cursor is already beyond the position entered, no action is taken. Otherwise, spaces are printed until the cursor reaches the position specified. This macro is extremely useful to align items or @macros which may print different lengths of data for different callers.
@PRODESC@	Displays the description of the file protocol the caller has selected. ***Example output:*** `Zmodem`
@PROLTR@	Displays the protocol letter the caller chose for their default protocol. ***Example output:*** `Z`

@VARIABLE@	Description / Sample
@PWXDATE@	This macro displays the date at which the current password expires and the caller must enter a new one. If the password changing PSA is not enabled, there is no expiration date so `Unlimited` is printed. ***Example output***: `06-27-95`
@PWXDAYS@	Number of days remaining until the current password expires. If the password changing PSA is not installed, `Unlimited` is printed.***Example output***: `20`
@QOFF@	This macro disables `C-X / C-K` checking. This means the caller cannot interrupt or abort the display of the file. Any *`More?`* prompts displayed after a @QOFF@ macro become *`Press (Enter) to continue?`* prompts because the caller cannot abort the display.
@QON@	This macro enables `C-X / C-K` checking. Use this macro when you have turned off the checking and want to turn it back on again.
@RATIOBYTES@	Each security level can have a different byte ratio limit or no limit at all. This macro displays the limit defined for the caller. In the case where byte ratios are not enforced, `Unlimited` is printed. ***Example output***: `20:1`
@RATIOFILES@	Each security level can have a different file ratio limit or no limit at all. This macro displays the limit defined for the caller. In the case where file ratios are not enforced, `Unlimited` is printed. ***Example output***: `10:1`
@RBYTES@	Used internally by PCBoard for file transfer statistics.
@RCPS@	Used internally by PCBoard for file transfer statistics
@REAL@	Displays the real name of the caller. Other associated @macros are @USER@, and @ALIAS@. ***Example output***: `JOHN DOE`
@RFILES@	Used internally by PCBoard for file transfer statistics.
@SBYTES@	Used internally by PCBoard for file transfer statistics.
@SCPS@	Used internally by PCBoard for file transfer statistics.
@SECURITY@	Displays the security level of the user. Any security level adjustments added when joining a conference are reflected in the value displayed. ***Example output***: *`60`*
@SFILES@	Used internally by PCBoard for file transfer statistics.
@SYSDATE@	Displays the current date. ***Example output***: *`09-23-93`*

@VARIABLE@	Description / Sample
@SYSOPIN@	Displays the beginning time a user may page the SysOp for chat. This time is defined in *PCBSetup* | *Configuration Options* | *Limits.* All time displays are in 24-hour format. ***Example output:*** `18:00`
@SYSOPOUT@	This macro displays the ending time a user may page the SysOp for chat. This time is defined in *PCBSetup* | *Configuration Options* | *Limits.* All time displays are in 24-hour format. ***Example output:*** `17:00`
@SYSTIME@	Displays the current time. All time displays are in 24-hour format. ***Example output:*** `15:32`
@TIMELEFT@	Displays the amount of time the caller has left for this session. This macro does not take into account any files the user has flagged for download. If you want to take flagged files into account, use the @MINLEFT@ macro instead. ***Example output:*** `32`
@TIMELIMIT@	Displays the total time in minutes a user can use per day/session. This limit is defined in the PWRD file in PCBSetup. ***Example output:*** `60`
@TIMEUSED@	Displays the number of minutes used during the current call. ***Example output:*** `12`
@TOTALTIME@	Displays the total amount of time (in minutes) that the caller has used on the system for the day. ***Example output:*** `128`
@UPBYTES@	Displays the total number of bytes the user has uploaded to the BBS. ***Example output:*** `36,928,674`
@UPFILES@	Displays the total number of files the user has uploaded to the BBS. ***Example output:*** `352`
@USER@	This macro displays the full user name of the caller in all uppercase letters. You can also use this macro in the `TO:` field of a message. If you do, your single generic message will appear as a personal message to each user reading it. When the caller's alias is being used that name is printed by this macro. ***Example output:*** `EDWARD B. SMITH`
@WAIT@	This macro displays a `Press (Enter) to continue?` prompt to the user. Of course, the only way to continue past this prompt is for the caller to press R .

@VARIABLE@	Description / Sample

@WHO@	This macro displays the exact same thing as who WHO command. The display includes all active node numbers and who is on each of the respective nodes.
	
	NOTE: Once the @WHO@ macro is used, the page line counter is reset to maximize screen output. Therefore, if you put the @WHO@ macro in the middle of the screen, be aware that the top of the screen may scroll off. To prevent this, use @PAUSE@ or an @MORE@ just before the @WHO@.
	
	Example output:
	
	`(#)  Status  User`
	`---  ---  ---`
	`  1  No Caller this Node`
	`  2  Unavailable for CHAT  GREGORY GLENN (CHARLTON, ID)`
	`  3  Entering a Message  HUGH MCDEVITT (ARROYO, CA)`

@XOFF@	Disables @X color code interpretation. The @X codes are left in place just not acted upon.
@XON@	Enables @X color code interpretation. This is normal operation for PCBoard except in conferences allowing long Internet TO: names.
@YESCHAR@	The internationalization of PCBoard means you can defined different yes characters for each language. While the English yes character might be Y, the Spanish no character is S. ***Example output***: Y

@X Color Codes

In addition to supporting ANSI display files, you can choose to use PCBoard's @X color codes to colorize your display file and PCBTEXT prompts. If you choose to use ANSI to colorize your display files, you need to create a graphics specific version of each display file in addition to the regular file.

The @X codes are eventually translated to ANSI so the caller can view the color screens. Before this occurs, PCBoard checks to see if the caller is capable of ANSI. If they are, PCBoard translates the color codes into ANSI. If they are not, PCBoard bypasses the color codes so the user does not end up seeing what appears to be garbage on their screen. Because PCBoard is smart enough to determine if the caller is capable of ANSI or not, you can create one single display file for both your ANSI and non-ANSI callers. This saves you time when creating and updating your display files.

Included with your PCBoard package is a program called **PCBEdit**. This program should be used to create screens that are colorized with @X codes. You should also be aware that there are several other shareware programs which you can use to create screens in the PCBoard @X color code format.

If you want to enter @X codes in message or if you manually create your display files, you must know the proper format for the @X codes. The format is as follows:

```
@X[background value][foreground value]
```

After you enter @X, enter a background value, followed by a foreground value. If you look at the table which follows this paragraph, notice that it is broken down into two halves. One half shows the values for

the background colors and the other half shows the values for the foreground color. Notice also that the background and foreground sections are also divided. Background colors can be set to be blinking or not, and foreground values can be set to be bright or normal (dull) versions of the color that is shown in the left column of the table.

	Background (1st Digit)		Foreground (2nd Digit)	
Color	**Normal**	**Blinking**	**Normal**	**Bright**
Black	0	8	0	8
Blue	1	9	1	9
Green	2	A	2	A
Cyan	3	B	3	B
Red	4	C	4	C
Magenta	5	D	5	D
Yellow	6	E	6	E
White	7	F	7	F

Using the color code table you can quickly determine that by entering @X1F, you are setting the current color to bright white text on a blue background.

NOTE: @X00 and @XFF have special meaning to PCBoard. @X00 saves the current color and @XFF restores that saved color. These two codes are extremely useful when you want to change the color and always restore the original color when done.

To help illustrate the color selection scheme, the following are sample @X color codes:

```
@X07 - Dull white (gray) text on a black background
@X47 - Dull white (gray) text on a red background
@X0B - Bright cyan text on a black background
@X8F - Bright white text on a blinking black background
@XC7 - Dull white (gray) text on a blinking red background.
```

Using @ Macros and @X Codes

There are primarily three places in PCBoard where you can use @ macros and @X codes:

- Display files
- Most PCBTEXT entries (some do not support @ macros or @X codes).
- Inside of messages left on the BBS.

To use the macros or codes, simply enter them into the display file, PCBTEXT entry, or message editor in the proper format. To help illustrate how to use macros and codes, this next example shows you how to enter an @ macro and then to colorize the text that is displayed by the @ macro.

1. Begin by logging into PCBoard as the SysOp and getting to the conference command prompt.
2. Shell to DOS by pressing `5`. You should be at a DOS prompt. If you are not, local shells to DOS are disabled in *PCBSetup | Configuration Options | System Control*.
3. Using a text editor of your choice, edit a file called TUTOR in the current directory. In this file, enter *@USER@* and save the file and exit your text editor.
4. When you are back at the DOS prompt, type EXIT to return back to PCBoard. Now, type *6 TUTOR* at the conference command prompt. You are using the 6 SysOp command which enables you to view any file on disk.

5. Once the command is entered, you should see one line which prints your user name on the screen. Since you are the SysOp, it will print *SYSOP* instead of your user name. You will notice that if you log in as a different user, the user's name is displayed on the screen.
6. Next, we will colorize the name to help provide emphasis. Shell to DOS again, and edit your TUTOR file.
7. In front of the *@USER@*, enter *@X1F*. After the *@USER@*, enter a space followed by *@X07is the current user.* Save the file, exit your text editor and type *EXIT* to return to PCBoard.
8. View the TUTOR file using the 6 SysOp command. This time, your user name is in white text on a blue background. After your user name, the text changes back to gray on black and the *is the current user* is printed.

Even though this example showed only one of the places @X codes and @ macros can be used, the principles learned in this example can be applied to the other places where these flexible tools can be used.

Command Display Files

Is it not uncommon for you to want to display information before a command is executed on the system. Having the ability to display information beforehand gives you the ability to clarify what the command does or even more about what is expected of the caller.

For example, you may operate a system slanted towards file transfers where numerous uploads are received each day. How nice would it be to display guidelines for files accepted to the bulletin board each time a user performs an upload? With command display files this is exactly what can be done.

Because command display files are normal display files to PCBoard, you inherit all of the display file features of PCBoard. You can create language, graphics, or security specific versions of each command display file. You can also imbed display files, PPEs, and MNUs into a command display file just as you can with other display files.

There is much more to command display files. In addition to prefacing main menu commands, you can have a file displayed before a particular door, or in special areas of the bulletin board. Each of the next sections describes in detail the various uses for command display files.

Main Menu Commands

Before each main menu command, you can display a file to the caller. This display file can restate rules regarding a particular function of the bulletin board such as uploading, or because display files can launch PPEs or MNUs, command display files give you an extra hook into configuring PCBoard in almost limitless fashion.

File Naming Convention

Through PCBSetup you know the location of command display files, but how do you know what to name them? The naming convention for the command display files is simple; it is the same as the command being executed. As an example, to display a file before the `N E W S` command is entered, create a file named `NEWS`. Likewise, a command display file named `E` is displayed before the enter a message command.

Example

Displaying the types of files accepted as uploads is extremely useful information to display prior to each upload. To create this file, refer to *PCBSetup | File Locations | System Files* to determine where the command display files are stored. Knowing this location, create a file called `U` (the name of the command being executed). In this file, display any text to display before an upload.

Door Programs

Because a door program can be seen as a command from the main menu, a command display file can be used to display a file before any door is executed. With each door being treated as a separate command, you have full control of which doors will show a file beforehand. For example, if a door is named BANK, create a command display file called BANK and it is displayed before anyone opens the BANK door. It does not matter if the user opens the door from the main menu, or from the OPEN user command. Either way, the file is shown.

Special Situations

In addition to the command display files outlined in the previous sections, numerous special command display files can be created. These command display files can either precede or replace specific actions within PCBoard. The next few sections describe the special command display files, their filenames, and how or where they will appear.

Before File Listings

A file listing is that familiar display showing the filename, date, size, and description of files available for download. A sample might resemble:

```
Filename         Size    Date    Description
============ ========  ========  ===========================
ORDER.ZIP        2258  04-18-94  PCBoard Ordering Information
                                 includes CDC products and some
                                 third-party products
```

Before the first line of the file listing is shown on the screen, PCBoard checks for a command display file called **PREFILE**. If the file or any language, graphics, or security specific version exists, the file will is displayed followed by the file listing. If a caller is using RIPscrip, the PREFILE file can be used to put a control bar at the bottom of the screen allowing the user to use the mouse to navigate the file listing.

Before Editing a Message

Prior to editing or entering a message, it may be desirable to display a file. If a command display file by the name of **PREEDIT** (or any of the specific versions) exists, the file is displayed just prior to being placed into the message editor. An ideal use is to display a RIPscrip file which draws a control bar on the screen, making it easier to save or abort the message when done.

Before Displaying a Message

Just before the message header is displayed, PCBoard searches for a command display file called **PREMSG**. If the file or any of the language, security, or graphics specific versions of the files exist, they are displayed followed by the message header. This particular command display file would be most useful to generate a button bar on the screen to make reading messages easier with the mouse.

Prior to Opening a Door

As you have read, you can create a display file for specific doors. You can use the **PREOPEN** command display file to display when any door is opened on the system. Utilizing PCBoard's credit system, you may be charging users credits for opening doors on the system. Having a display file remind the callers they are being charged credits serves as a very useful reminder.

Before Viewing a File

Typing F;V from the menu, or by using the V command at the more prompt while viewing a file listing allows you to view a file available for download. Using the **PREVIEW** command display file, you can show the contents of a file before viewing a file online.

Before Displaying the List of Protocols

When selecting a default transfer protocol or when transferring a file, PCBoard displays a list of transfer protocols available. Using the **PREPROT** command display file, a file can be displayed before the list of protocols is shown on the screen. This command display file would be most useful if a PPE was launched within the file for your RIPscrip callers setting up regions the user could click on to select a protocol.

In Place of the Protocol List

The PREPROT file can be used to display a file in place of the protocol list. To be effective, this display file should execute a PPE or MNU file. The filename checked to determine if the protocol list responsibilities should be turned over is a file called **PROT**.

Prior to Displaying User Statistics

PCBSetup | Configuration Options | Configuration Switches has a field titled Display User Info at Login. When this option is enabled, PCBoard displays user statistics at login and during conference joining. If a command display file called **PRESTAT** exists, it is displayed before the statistics are shown to the screen.

In Place of Displaying User Statistics

The user statistics displayed by PCBoard at login or at conference join (if enabled) is just a portion of the statistics you can show to the callers. You can replace the statistics displayed by PCBoard with your own using a command display called **STAT**. Using this display file a more comprehensive display can be generated or you can launch a PPE or MNU system to provide the information you desire.

Before Displaying Available Languages

When the system is configured to handle more than one language, users are prompted to select their language of choice as the first option when logging in. Another language can also be selected using the L A N G user command. A display file can be shown before the languages are listed to the caller by utilizing the **PREML** command display file.

In Place of Available Language Lists

The list of languages shown to the caller can be totally replaced by a display file of your own choosing by using the **ML** command display file. One important item to keep in mind is that by overriding the display of languages it is your responsibility to display only those languages available on your system. If invalid languages are selected, an error message is displayed.

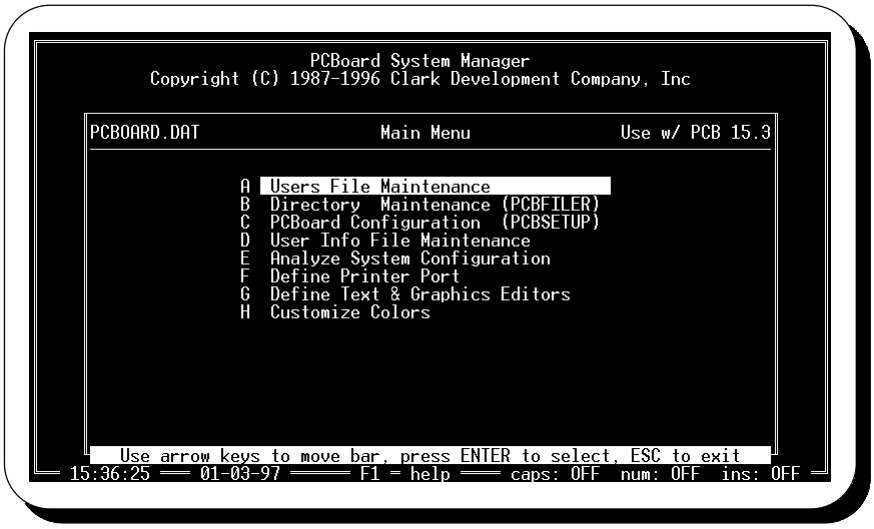
10

System Manager

System Manager, as the name implies, is a utility designed to help manage your system. Not only can you make global changes to the users file, but you can also access other frequently used utilities such as PCBSetup and PCBFiler.

There are three ways that you can access System Manager:

- From the call waiting screen, select **PCBSysMgr**.
- While logged in locally (not with the */LOCALON* switch for PCBoard), press A-S.
- From the DOS prompt, load PCBSM.EXE. If a PCBOARD.DAT file cannot be found in the current directory and you have not used the */FILE* command line parameter, you will receive an error message stating that PCBOARD.DAT could not be found.



Once System Manager is loaded, you see the Main Menu. The various functions of system manager are available from these menu options. To select a particular option, press the letter at the beginning of the line, or move the highlight bar using the cursor keys and press R to select the option. If you make a mistake, you can always use the E to go back.

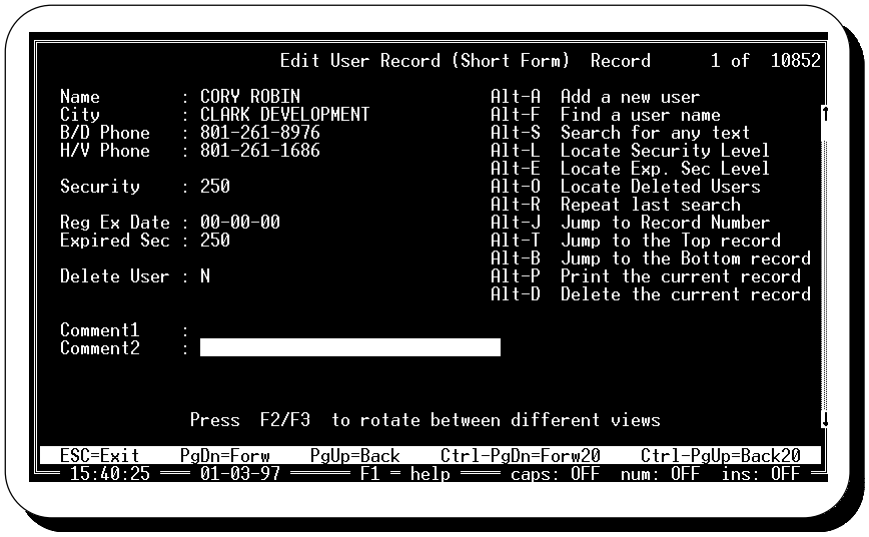
This section describes each menu item in detail including any sub-menus. In addition, the command line parameters for System Manager are described in detail at the end of this chapter.

Users File Maintenance

This menu option is the one used most frequently. Once selected another menu with options relating to user file maintenance is presented on screen. These new menu options give you the ability to edit an individual user record, register ranges of users in conferences, sort the users file, pack the users file, etc.

Editing A User Record

When you select this menu option, you will see user record number one on your system.



On the left hand screen is a limited number of fields that you can edit. On the right is a list of keyboard commands you can use to jump to another record, add a new user, etc. This is called the *short form*.

User Record Forms

PCBoard stores a lot of information about each user. Because all of this information cannot fit on one screen, PCBoard has multiple views which you can switch between to edit various information about each user. To switch between views, use the 2 and 3 keys. Pressing 2 moves forward one screen or form, and pressing 3 switches to the previous form.

The default view is called the **Short Form**. When this form is active, you can edit the bare essential information about each user. The following information may be edited on this screen:

Security: The normal security level that is assigned to the user.

Reg Ex Date: If subscription mode is active, this is the date when the subscription expires.

Expired Sec: When subscription mode is active and a user is expired. The expired security level is used instead of the normal security level. This field shows you the security level of the user when their subscription has expired.

Delete User: Mark the current user for deletion. Confirmation is required before it is marked. The actual record is not deleted until the next time you pack the users file.

Comment 1: This is the response the user enters to PCBTEXT record #2 when creating a new account on the system.

Comment 2: This comment field is for your use only. You can enter a brief comment about the user without having to worry about it being viewable by the user.

The next view that is available by pressing 2 is called the **Long Form**. This is the view that is used to edit a majority of the information about each user. You can edit number of bytes transferred, messages left, user name, password, etc. The following describes each of the fields:

Name: Each person that logs into your system must use a user name. Most commonly this is the name of the caller. This name simply identifies the caller.

City: The city or location information entered when creating a new account on the system.

B/D Phone: The business or data phone entered when creating a new account on the system.

H/V Phone: The home or voice phone number entered when creating a new account.

Password: Stores the password selected for logging into the system. Each user must know their password in order to log into the system. If this field is blank, the user is not prompted for a password at login.

Security: The normal security level that is assigned to the user.

Expert: This field contains a *Y* if the user wishes to default to expert mode at login. Otherwise, this field will show an *N* which means the user will default to novice mode.

Protocol: Stores the default protocol the user wishes to use for file transfers. This question is asked when a new user logs in, but it may also be changed using the T user command.

Page Len: In order to help control the display of information, PCBoard uses a *More?* prompt when the screen fills up. In this field, the height of the caller's screen is stored. For most callers this should be either 22 or 23. If you set the value in this field to 0, PCBoard sends data in non-stop mode. The user may change this value with the P user command.

Reg Ex Date: If subscription mode is active, this is the date which the subscription expires.

Expired Sec: If a user's subscription has expired, the expired security level is assigned at login. This field shows the expired security level assigned to the user.

Msg Clear: This field contains a *Y* if the user wants to clear the screen before a new message is displayed. If this field contains an *N*, the screen is not cleared between messages.

Last in: The conference number the user was in at logoff. If you have a conference defined as auto-rejoin, this field becomes of great importance. For example, a 3 in this field means the user logged off while in conference 3. The next time the user logs in, PCBoard checks to see if conference 3 is defined as an auto-rejoin conference. If so, the user is returned there.

Delete User: Mark the current user for deletion. Confirmation is required. The actual record is not deleted until the next time you pack the users file.

Comment 1: This is the response the user entered to the *Brand of CPU* question.

Comment 2: This comment field is for your use only. You can enter a brief comment about the user. The user will not be able to view the contents of this field.

Last DIR Listing: PCBoard keeps track of the latest valid file date that you have seen when viewing file directories. This field is used for two purposes. 1) For new file scans to determine what the default scan date should be. 2) While viewing file directories * (asterisks) will be placed by any files which are new to the caller.

Last Date On: Stores the last date the user logged into the system.

Last Time On: Stores the last time the user logged into the system.

Elapsed Time On: Contains the total amount of time that was spent on the last date the user called on the system. If the last date the user called is equal to the current date, this field contains how much time the user has spent for the current day.

Number Times On: The number of times this user has successfully logged into your system.

Number Uploads: The total number of files this user has uploaded to your system.

Number Downloads: The total number of files this user has downloaded from your system.

Daily Download: Contains the total number of bytes this user downloaded the last date on the system. If the last date on is equal to today's date, the value of this field will reflect the total number of bytes downloaded today. If you see a negative value in this field, more bytes have been uploaded than downloaded. In essence, the user has a *byte credit*.

Total Upload: This field displays the total number of bytes the user has uploaded.

Total Download: Displays the total number of bytes the user has downloaded.

Messages Read: The total number of messages the user has read.

Messages Left: The total number of messages the user has entered.

Full Scrn Editor: This field contains either *Y*, *N*, or *A*. A *Y* means the full-screen editor is always used for entering messages. An *N* signifies that the line editor is used for entering messages. Finally, an *A* means the user is asked which editor to use each time they leave a message. The user may change this default with the W user command.

79-Column Editor: If this field contains a *Y*, both the line and full-screen editor use 79 character-wide entry lines. If an *N* is specified, the default of 72 characters is used instead.

Scroll Long Msgs: This field may contain either *Y* or *N*. If this field contains a *Y*, the message header will scroll off of the screen if the message requires more than one screen full to display. If this field contains an *N*, the message header will be fixed at the top of the screen with the message body being displayed underneath it.

Long Headers: If this field contains a *Y*, long message headers will be used. Otherwise the short message headers will be used. See the R user command for more information on the difference between long and short message headers.

Chat Status: PCBoard will remember the chat status of the caller. This means that if a caller has made themselves unavailable for group chat using the CHAT;U command, this field will contain a U to reflect the user was unavailable. When the user logs into the system the next time, the chat status from their previous call will be reinstated.

```
                    Edit User Record (Conferences)  Record      1 of  10852

 Name        : CORY ROBIN

 Num   Conference     Flags  Last Msg   Num   Conference     Flags  Last Msg

   0 Main Board    : RS   :   145478    15 PCBoard UUCP  : RS   :      260
   1 Support       : RS   :   190572    16 PCBoard and O : RS   :     3288
   2 Doors         : RS   :    17067    17 PCBoard and W : RS   :      903
   3 Utilities     : RS   :      103    18 Internet Coll : RS   :     4246
   4 Beta Support  : RS   :    10991    19 Metaworlds    : RS   :     2041
   5 Beta Reports  : RS   :   117209    20 PCBoard Sourc : RS   :       73
   6 Developers    : RS   :    11930    21 Clay          :      :      277
   7 Alpha Test    : RS   :     2451    22 MetaWorlds Be : RS   :     3106
   8 BBS Advertise : RS   :     1873    23               :      :        0
   9 For Sale      : RS   :     5798    24 FIDOnet Sysop :      :        1
  10 Sysop Chat    : RS   :    11360    25 FIDOnet PCBoa : RS   :     5643
  11 Toolkit       : RS   :     2272    26 FIDOnet PCBoa : RS   :      359
  12 PPLC Programm : RS   :     7227    27 FIDOnet PCBoa : RS   :     2016
  13 PPE Applicati : RS   :     2910    28 FIDOnet MetaW : RS   :      250
  14 PCBoard FIDO  : RS   :     2533    29 FIDOnet Salt  : RS   :      386

  ESC=Exit    PgDn=Forw    PgUp=Back    Ctrl-PgDn=Forw20    Ctrl-PgUp=Back20
 15:49:36 ── 01-03-97 ──── F1 = help ── caps: OFF  num: OFF  ins: OFF
```

You can control the conference specific information for each particular user from the **Conference View**. Primarily you will register users in conferences from this view, but you can accomplish other tasks as well.

You will notice this screen is split into two lists with 15 conferences listed in each list. Within each list is four columns. The first column displays the conference number, the next displays the name of the conference. The last two columns are fields you can actually edit. The first field you can edit is the flags field, the last column in each list keeps track of the last message that each user read in each conference.

To move between the various fields on the screen, you can use b, t, T, or S - T. If you have more than 30 conferences, use u, and d to move forward or back 30 conferences at a time.

There are several flags you can set for each conference. Each flag specifies the access the user has to each conference. The following describes each flag in detail:

R **Register**. This flag is used to control the ability of a user to join a conference. The main use of this flag is to control who will have access to private conferences you create. A user may not join a private conference unless they have an *R* flag set. You do not need to use this flag for public conferences unless you want to give access to the conference even if the user does not have sufficient security to join the conference. This flag is also used for PCBFido to allow Fido nodes to access this conference.

X **Expired**. When used with the *R* flag, the user continues to have access to the conference even when their subscription expires. Subscription mode (*PCBSetup | Subscriptions*) must be enabled or this flag has no effect.

S **Selected**. Even though there may be several conferences defined on your system, only a few of those conferences may interest the user. Using the SELECT user command, users may *select* those conferences which are of interest to them. There are subcommands for all of the mail reading or scanning commands which permit users to scan either all conferences they can access or only those conferences selected by the user. For example, *R;S;ALL* will read new mail in all conferences the user can join whereas *R;S;A* will read mail only in selected conferences. PCBFido also uses this flag to determine if a conference is selected for importing/exporting of messages.

C **Conference SysOp**. If you wish to give a user what you have defined as SysOp security level (*PCBSetup | Security Levels | Sysop Commands*) when the conference is joined, use this flag. When the user joins another conference, the security level is changed back to the original security level.

L **Locked Out**. If this flag is set, the user will not be able to join the conference under any circumstances. When you specify the *X* flag without an *R* flag, the *X* flag will be translated to an L flag thereby locking the user out of the conference.

N **Net Status**. PCBoard's internal QWK command can act as a very simple means to exchange mail between bulletin boards using standard QWK packets. Exchanging mail in this manner means a user must be able to grab all mail designed to be echoed and be able to import that mail to another system. This access is granted by the *Net Status* conference flag. Setting this flag does not give the user access to read any messages they could not already read, just a different way of transferring them.

The only other edit field on this screen is the last message read field. In this field, PCBoard keeps track of the last message the user has read in each conference. If you need to, you can edit the last message read in any conference for any user.

The rest of the views are only active when you install a PSA. Each PSA has a separate screen which you can view information about each PSA. The following describes each PSA screen:

```
                    Edit User Record (Alias Form)    Record     1 of     4

Name        : SYSOP

Alias Name  : CAPTIAN HOOK
```

If you have the Alias PSA installed, this next screen contains the alias the user has selected. Unless you have given the user the ability to edit their alias (*PCBSetup* | *Configuration Options* | *System Control*), the only way the alias can be changed is while viewing the **Alias Form**.

```
                    Edit User Record (Address Form)   Record     1 of     4

Name        : SYSOP

Address #1  : P.O. Box 966643
Address #2  : 100 W. Broadway
City        : Farr
State       : MI
Zip Code    : 43238-3297
Country     : U.S.A.
```

By installing the Full Address PSA, the **Address Form** screen is enabled. From this screen, you can edit the fields that make up the user's address. You will notice that this screen lists the more popular components that make up a mailing address such as street address, city, state, etc.

```
                    Edit User Record (Password Form)   Record     1 of     4

Name        : SYSOP

Previous Password 1 : NOPENOTTHIS!
Previous Password 2 :
Previous Password 3 :

Last Change Date    : 04-01-93
# of Times Changed  :     1

Expiration Date     : 09-01-93
```

If you install the Password Changing PSA, the **Password Form** will also be active when editing a user record. The following fields are active in this form:

Previous Password: Lists the most recently used passwords. A password may not be used if it is listed in one of these fields. Of course, each password will eventually be removed as it no longer becomes one of the three most recently used passwords.

Last Change Date: The date when the password was last changed by the user.

# of times Changed: Displays the total number of times the password has been changed. Multiple changes on the same day will not be recorded.

Expiration Date: The date at which the current password will expire. If the user changes the password before the expiration date, the date will be adjusted for the new expiration date.

```
                    Edit User Record (Verification Form) Record     1 of     4

Name         : SYSOP

Verification Information : JET_FUEL
```

If you have installed the Verification PSA, the **Verification Form** is active. This screen is very simple in design because there is only one field you can edit. This field contains the information the user entered as verification information when logging in as a new user. This information can be used by you as an additional piece of *secret information* to identify the caller. Considering the caller may not view or edit this information once it has been entered, it should be relatively safe to assume the user knows this information they are the original caller.

```
                    Edit User Record (Statistics Form)  Record     1 of     4

Name         : SYSOP

First Date On : 04-15-93
Last Date On  : 04-15-93
Num Times On  :        22

# Times Paged Sysop    :     0          # Times On at   300  :     0
# Times Group Chat     :     0          # Times On at  1200  :     0
# Comments to Sysop    :     0          # Times On at  2400  :     0
# Messages Left        :   432          # Times On at  9600  :     0
# Messages Read        :  1093          # Times On at 14400+ :     0

# Security Violations  :     0
# Un-Reg Conf Attempts :     0
# Password Failures    :     0
# Dnld Limit Reached   :     0
# Dnld File Not Found  :     0
# Upld Verify Failed   :     0

ESC=Exit    PgDn=Forw    PgUp=Back    Ctrl-PgDn=Forw20    Ctrl-PgUp=Back20
 01:28:06 ---- 04-19-93 ------ F1 = help ------ caps: OFF  num: ON   ins: OFF
```

If you have installed the Caller Statistics PSA, the **Statistics Form** will be active. This form stores various statistics about the caller. The following describes each field:

First Date On: This date will be equal to the date the user first logged into your system or the date you added the Caller Statistics PSA (if they already had an account).

Last Date On: The last date the user logged into your system. You can also see this date on the Long Form screen.

Num Times On: The total number of times this user has accessed your system. This information is also available on the Long Form screen.

 # Times Paged Sysop: This field records the total number of times this user has paged the SysOp to chat. It does not matter if the page was answered—all attempts are recorded.

 # Times Group Chat: If a user uses group chat to chat with others on the system, the total number of chat sessions the user has participated is recorded in this field. SysOp chats are not included in this total.

 # Comments to Sysop: This field records the total number of comments the user has left to the SysOp using the C user command. If the user begins a comment, but aborts the message, it does not count as a comment to the SysOp.

 # Messages Left: For those users that are more active in the message base, this field will store the total number of messages the user has entered. You should be aware that while PCBoard may update this statistic, off-line mail reading doors may not.

 # Messages Read: Displays the total number of messages the user has read on your system. While PCBoard will update this field, some off-line mail door programs may not.

 # Security Violation: You can easily see who may be trying to access restricted functions on your system, by watching this field. It will total up the number of times a user has attempted to access a command which requires a higher security level.

 # Un-Reg Conf Atmpt.: Records the total number of attempts made to join a conference which the user is not registered to join.

 # Password Failures: Displays the number of times the wrong password was used at login. If you keep tabs on this statistic, you may be able to catch someone who is trying to hack an account.

 # Dnld Limit Reached: Anytime a user exceeds their defined ratio, daily bytes, or total bytes / files allotted, the count in this field will increase by 1.

 # Dnld File Not Fnd.: If the user attempts to download a file, but the filename could not be found on disk, it will be recorded in this field.

 # Upld Verify Failed: After uploading a file, PCBoard will test the file via PCBTEST.BAT unless you have disabled upload testing. If the file uploaded fails the integrity tests, it will be recorded in this field.

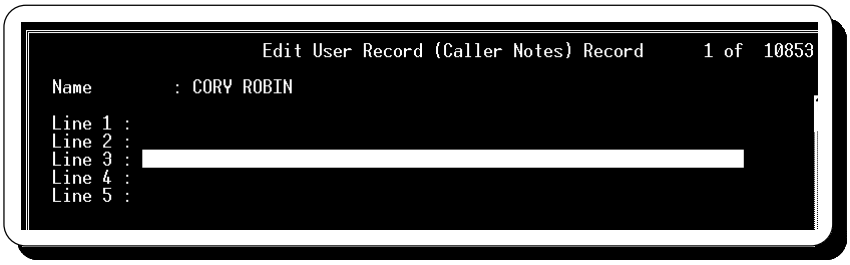
 # Times On at 300: The total number of times the user connected at 300 bps.

 # Times On at 1200: The total number of times the user connected at 1200 bps.

 # Times On at 2400: The total number of times the user connected at 2400 bps.

 # Times On at 9600: Displays the total number of times the user connected at 4800, 7200 or 9600 bps. All three speeds are shown in this field, because they are all only possible with 9600 bps modems.

 # Times On at 14400+: Displays the total number of times the user connected at 12000 bps or higher. The reason 12000 bps is included in this statistic is because it is a fall-back speed for 14400 connections.



This screen shows the **Caller Notes** PSA screen and is only active when the Caller Notes PSA is installed. You are given 5 lines of 50 characters to enter information about the caller. The caller is not able to edit or view the information contained in these notes.

```
                    Edit User Record (Account Form) Record      1 of     13

Name        : JOHN SMITHFIELD

Beginning Balance       :          50
Calculated Balance      :  49.548676
Security (When Empty)   :  15

Accumulated Charges                         Accumulated Earnings
Calls Made              :         0.1       Uploading Files       :    -0.0269
Spending Time Online    :        0.08       Uploading Bytes       :          0
Reading Messages        :     0.00041       Other Earnings        :          0
Capturing Messages      :    0.000012
Writing Messages        :           0
Writing Echoed Messages :           0       ALT-C: Clear Accumulated Values
Writing Priv. Messages  :    0.000002
Downloading Files       :       0.004
Downloading Bytes       :        0.22
Using Group Chat        :        0.02
Using 3rd Party App     :           0
Other Charges           :           0

ESC=Exit    PgDn=Forw    PgUp=Back    Ctrl-PgDn=Forw20    Ctrl-PgUp=Back20
 10:33:10 ═══ 06-21-94 ═══ F1 = help ═══ caps: OFF  num: OFF  ins: OFF
```

The previous screen shows a sample capture of the **Account Form** PSA screen. Notice all pertinent information such as beginning balance, current balance and itemized totals are shown on this screen. The value of each field on this screen can be changed with the exception of the Calculated Balance field. On the screen are two fields that report balance information—starting and current. Additionally, there is a field to define the security level users will be drop to when the balance reaches 0. Finally, the rest of the fields are either charge or earning fields. Charges are subtracted from the starting balance and earnings are added to the starting balance. Of all the fields on this screen, some need to be described in more detail.

`Security (When Empty)`: When PCBoard is **not** in *tracking* mode and the user's account balance reaches 0 credits, PCBoard drops the security level of the caller to the value entered here. The normal or expired security levels remain unchanged in the user record making it easy to restore the user to their original level when updating the account balance. It is strongly recommended to only enter security levels in this field that do not have accounting turned on or that use tracking mode. Otherwise, a user with a balance of zero will not go far.

`Other Charges`: This field can be used as a miscellaneous charge field. You can manually adjust this value or use a PPE to modify the value.

`Other Earnings`: Similar to the other charges field, this field acts as a miscellaneous earnings field. The value of this field can be modified manually from this screen or with a PPE.

This screen is different than other PSA status screens because it also performs calculations. As you adjust credit or debit fields, the account balance is recalculated. For example, if you enter a value of 50 into the `Other Charges` field, the calculated balance will go *down* by 50. Likewise, entering a value of 50 in the `Other Earnings` field will cause the calculated balance to go *up* by 50.

There is an additional keyboard command defined on this screen to help expedite the time it takes to reset all of the charge and earning fields. When you press `A-C`, all charge and earning fields are reset to 0 values. If you are using the accounting system to operate in a pre-pay system, this keyboard command allows for a quick an easy reset of the account.

```
                    Edit User Record (QWK/Net Form) Record     13 of  10853

 Name        : SEAN POPHAM

 Maximum Messages in QWK Packet  (0=Setup Defaults)   :      0
 Maximum Messages Per Conference (0=Setup Defaults)   :      0

 Download Attach Limit for Personal Messages (0=None) :          0
 Download Attach Limit for Public Messages   (0=None) :          0
```

The previous screen shows a sample capture of the **QWK/Net Form** PSA screen. The fields on this screen give more control over how big the QWK packets are on a user by user basis. Users may control how many messages are included for the entire QWK packet or for each conference on the system. Also built into this screen is the ability to control the maximum number of bytes of attached files to include in the packet. The following describes each field:

Maximum Messages in QWK Packet: Controls the maximum number of total messages to be captured in a mail packet download using the QWK user command. If the value in this field is zero, the defaults specified in PCBSetup | Configuration Options | Messages will be used.

Maximum Messages For Conference: This field controls the maximum number of messages captured from each conference. For example, if 200 is entered in this field, and a user is trying to capture mail in a conference where 345 messages are waiting to be read, only the first 200 messages are captured. The user can generate subsequent QWK packets if desired.

Download Attach Limit For Personal Messages: Attached files are automatically included within the QWK packet as long as the size of the attached file does not exceed the value entered in this field. Attached files on RECEIVER ONLY messages exceeding this limit are not included in the QWK packet. A value of 0 in this field prevents files from being included.

Download Attach Limit For Public Messages: To prevent abuse from other callers, PCBoard allows a different maximum byte limit for public message and attached files. In this field, the size of any files attached to PUBLIC messages must be less than or equal to the size specified. A size of 0 in this field will prevent all attached files from being included.

Keyboard Commands

While you are editing a user record, there are several keyboard commands you may use to perform functions such as printing the current user record, jumping to another record, deleting the current record, etc. The following details each of these keyboard commands:

u	**Move backward one user record**. If you are at user record number one, System Manager goes to the last record in the users file.
d	**Move forward one user record**. If you are at the last record in the users file, record number is the new record you are editing.
C - u	**Move backward twenty user records**. When you need to move several records at a time, you can use this keyboard command which will go backwards 20 records at a time.
C - d	**Move forward twenty user records**. When you use this keyboard command, you advance 20 records at a time.
A - A	**Add a user**. Enables you to add a new record to your users file. You can then manually fill in all of the user information.

A - B **Jump to the last user record**. Moves you to the last record in the users file. Since new users are added to the end of the users file, this keyboard command provides an easy way to access the records of your newest callers.

A - D **Delete current user**. Marks the current user for deletion. You are asked to confirm your request to delete the current record. If you continue, the security level is reduced to 0 and the record is marked for deletion. The actual record will is not deleted until you pack the users file. To undelete the record, simply change the answer to `Delete User` in the *Long Form*.

A - E **Located expired security level**. Locates the first user in the users file who has an expired security level equal to the one you specify. If you want to search for other users who have the same security level, use the A - R keyboard command.

A - F **Find a user name**. Enables you to search for a particular user record. When prompted, enter the full name of the user you wish to search for. If the user could not be found, you will be asked if you would like to perform a *sound alike* search. PCBoard will attempt to find names which sound like the name you typed in. If no matches can be found, you will be returned to the last record you were editing.

A - J **Jump to a record number**. To jump to a specific user record number, use this keyboard command. You are asked for the record number to jump to. You can see the range of users on your system by looking at the upper right hand side of the screen. There you will find `Record # of #`. If you enter a value that is out of range, your request is ignored.

A - L **Locate a security level**. When you need to search for a particular security level, use this keyboard command. You are asked for the security level to search for. Once you enter the security level, PCBoard takes you to the first record in the users file that matches the security level. You can then use A - R to search for additional matches throughout the users file.

A - O **Locate deleted user**. This keyboard command will locate the first record in your users file that is marked for deletion. This is useful when you have marked a record for deletion but then decide not to delete the record. Of course, if you have already packed the users file, there is no way to recover the deleted user record. As with other searches, A - R finds additional records that are marked for deletion.

A - P **Print current user record**. The current user record will be printed. The format of the printout is identical to the format displayed by the 7 SysOp command. See the SysOp Commands section in the *PCBoard Commands* chapter of this manual for further details.

A - R **Repeat last search**. When you use a keyboard command that searches the users file, you can repeat the search (looking for additional matches) by using this keyboard command. If no additional matches are found, you will be returned to the previous user record you were editing.

A - S **Search for text**. This keyboard command allows you to search all of the data stored in the users record (and optionally the PSA information) for the text you specify, excluding dates, times, and numerical values which are stored in a special format on disk.

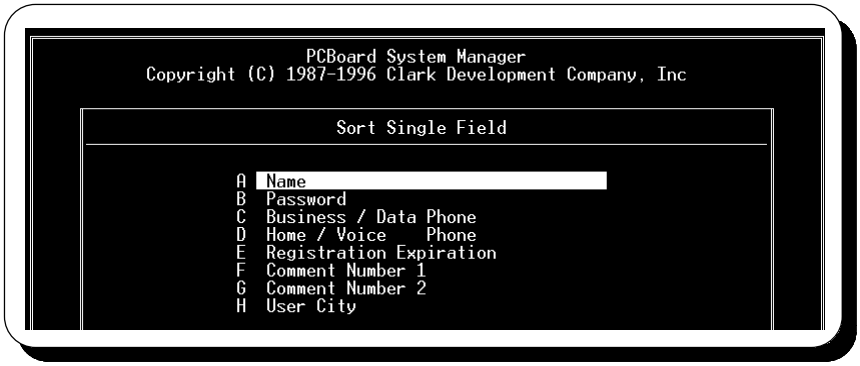
A - T **Go to first record**. Takes you to the first record in the users file (the SysOp record).

If you prefer to have the users in your system sorted in a particular manner, select this menu option from the Main Menu of System Manager. For example, some SysOps prefer to have their users sorted by security level in descending order so users with the highest security levels are at the beginning of the users file. It all depends on your personal preference. One thing to remember is the first record in your users file is never included in the sorts you perform because it has special privileges. You can choose to do a single or a multiple field sort.

Sorting Users

Single Field Sorts

Single field sorts are most useful when you want to sort users by a field which does not commonly have duplicates. For example, you can sort by user name and since there cannot be duplicate names on your system. The following screen shows the sorts you can perform:



Once you select your sort method, you are asked if you want to sort in reverse order. Reverse order means the sort is done in descending order. In the case of sorting by names, those that begin with Z are at the top, while names that begin with A are at the end of the users file.

System Manager attempts to lock the users file for exclusive access so that it may begin sorting the users file. If you do not have all nodes down, you will see a sharing violation message. This message means System Manager cannot gain exclusive access to the users file which it needs in order to resort the file. Make sure all nodes are down and no other programs are accessing the users file before you continue.

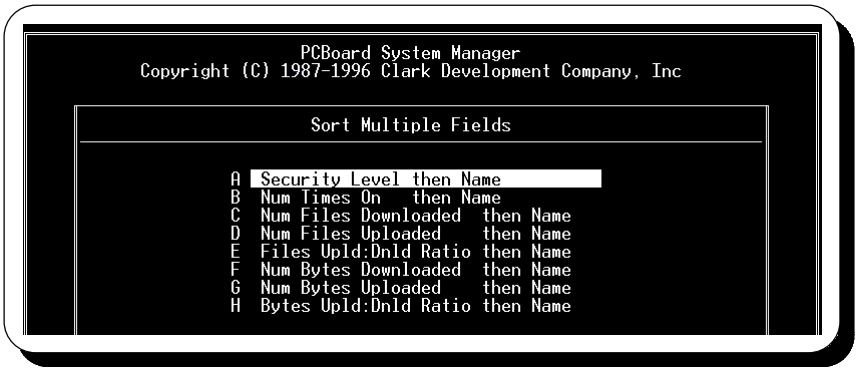
Sorting your users directly from the DOS prompt

You can sort your users directly from the DOS prompt using the /SORT command line parameter.

Multiple Field Sorts

Multiple field sorts enable you to sort by items such as security, number of times on the system, ratios, and more. All of these fields could easily contain duplicates when sorted, which presents a problem. If there are duplicates, how should the duplicate files be sorted (if at all)? You will notice with multiple field sorts, it will first sort by the primary field, such as security level, and then use the user name as a secondary sort.

The following screen shows the sorts you can perform:



Once you have selected your sort method, you will be asked if you wish to sort the primary key in reverse order. Reverse order means the sort will be done in descending order. The primary key is the main sorting method. For example, if you select *Security Level then Name* from the menu, the primary key is the Security Level and the secondary key is Name. You will also be asked if you wish to sort the secondary key in reverse order.

As an example, if you select *Security Level then Name* from the menu and choose to sort the primary key in reverse order but the secondary key in the normal order, the following occurs:

- Your users are sorted by security level—those with the highest security level are at the beginning of your user file.
- If you have more than one user with the same security level, the order users are listed with the same security level will be determined alphabetically by the user name.

Once you have selected your sort criteria, System Manager attempts to lock the users file for exclusive access so it may begin sorting the users file. If you do not have all nodes down, you will see a sharing violation message. This message means System Manager cannot gain exclusive access to the users file which it needs in order to resort the file. Make sure all nodes are down and no other programs are accessing the users file before you continue.

Sorting your users directly from the DOS prompt

You can sort your users directly from the DOS prompt using the /SORT command line parameter.

Packing The Users File

When you pack your users file, you can accomplish the following:

- Physically remove any records marked for deletion. Once a record has been packed out, it is permanently deleted and cannot be undeleted.
- Remove inactive users from your system to help conserve disk space.
- Make sure your USERS file is correctly in-sync with your USERS.INF.

When you select the option to pack your users, you will see the screen on the following page.

```
                          PCBoard System Manager
                              Pack Users File

 Criteria for User Record Removal

 Remove Users that are Deleted or 'LOCKED OUT'     : Y
 Remove Users who have not been on for XXXX days   : 9999
 Remove Users who have not been on since           : 01-01-80
 Remove Users whose Reg. Exp. Date is older than   : 00-00-00

 Criteria for Keeping User Record

 Keep Users with security greater than or equal to : 100
 Keep Users that are 'LOCKED OUT'                  : Y

 Print Deleted User Records on the Printer         : N

                 Press PGDN to begin, or press ESC to abort

 16:25:04 ═══ 01-03-97 ═══════ F1 = help ═══ caps: OFF  num: OFF  ins: OFF =
```

Notice the pack criteria screen is divided into two logical sections—removal and keep criteria. You can set the criteria you want to remove user records from and you may also set the criteria to keep a user record. The keep criteria always takes precedence over the removal criteria.

If you choose to accept the default values only the following will happen:

- Any users marked for deletion are physically removed from the system.
- The USERS.INF is checked to make sure it is in sync with the USERS file.

Criteria For Removing Records

This section of the screen gives you the ability to specify which users are removed from the users file when the file is packed. There are four options for removing a user record:

Remove Users that are Deleted or 'LOCKED OUT': When this field is set to *Y*, any record that has a security level of 0 or has been marked for deletion will be deleted out of your users file. Remember, there is an option to keep locked out users (those with a security level of 0 but not marked for deletion) and the criteria for keeping a record takes precedence.

Remove Users who have not been on for XXXX days: If you want to pack out inactive users on a regular basis, you will most likely use this option. If you enter 45 in this field, every user who does not meet the keep criteria is deleted from the users file if they have not called within the last 45 days. If you do this on a regular basis, you can be sure only active users are stored in your users files. The default number of days is *9999* which disables this option.

Remove Users who have not been on since: You may also choose to pack users out of your system by the last date they logged into the system. For example, you can choose to delete anyone who has not called your system since *01-01-93* by entering that date in this field. The default date is *01-01-80* (the beginning of time for the PC) which disables this option.

Remove Users whose Reg. Exp. Date is older than: If you run with subscription mode enabled, you may find it useful to be able to remove those accounts which have been expired for quite some time. The date you enter in this field will be compared against the expiration date in each user record. If the expiration date in the user record is older than the date entered, the user record will be removed. The default date is *00-00-00* which disables this option.

Criteria For Keeping User Record

This section of the screen gives you the ability to specify the criteria for keeping a user record when packing. The criteria for keeping a record takes precedence over removal criteria. This means even if a user record would be removed, it will not be removed if it meets the criteria for keeping. The following two options are available:

Keep Users with security greater than or equal to: Any user who has a security level equal to or greater than the security level specified will not be packed out of the user file. This is useful for making sure everyone above a particular security level is not packed out. For example, if you setup your system so everyone above security level 100 are SysOps, you may want to specify 100 in this field.

Keep Users that are 'LOCKED OUT': A *Y* in this field will retain user records which have been marked as locked out (security level of 0 but not marked for deletion). As an example of why you may want to keep these records, suppose you have a user who has consistently violated system rules and has been locked out. Keeping the user record prevents this user from accessing your system again with the same user name and information.

Performing The Pack

One last option you can specify is whether you wish to print out the users that are deleted during the pack. If you choose to print deleted records, you will have a record of those users who are deleted. In each record, most of the user information is printed, so you may later re-enter a user whom you have deleted. The information is identical to the information displayed by using the 7 SysOp command. See the *PCBoard Commands* chapter of this manual for more details.

Once you have chosen whether or not to print the deleted records, press d to begin the packing process. Because packing will cause a global change to the users file, System Manager requires exclusive access to both your USERS and USERS.INF files. This means no other nodes should be online. System Manager does, however, provide an option which allows you to pack the users file while users are online.

The difference between packing off-line and online is the fact that users who are currently online or were online when the process began will not be affected by the pack criteria you specify. When possible, it is always best to do a normal pack with no nodes online.

Packing Users From The DOS Prompt

If you may want to pack the users file on a regular basis, use the /PACK command line parameter to pack during an event or directly from the DOS prompt. If you need to perform an online pack, use the /PURGE

Print Users File

Using this menu option, you can print a portion or the entire users file by specifying the starting and ending user records to print. There are three fields that determine which records to print.

Starting Record: The starting record number to print. The default is 1 which begins printing with the first record in the users file.

Ending Record: The last record number you wish to print. The default is the last record number in your users file. The number you enter must be larger than the number entered as the starting record or your print request is aborted.

Exp. users Only: Setting this option to *Y* means only users in the specified range whose expiration date is earlier than today's date will be printed. Setting this option to *N* will print all users regardless of their expiration date.

You may pick from three different formats for printing the users file. The information will be sent to the printer you defined in System Manager; all reports will be less than 80 characters in width and will include form feed codes. Each printing form is described in detail:

Short Form

The short form will print one user per line. On each line is the following information:

- Name
- City/State
- Security Level
- Business / Data Phone
- Home / Voice Phone

Long Form

Each record printed in this style contains the same information shown via the 7 SysOp command. For information on this format, refer to the *PCBoard Commands* chapter.

Reg. Expiration Form

Like the short form, this form will print one user per line. The information printed in this form is designed to help you easily locate users whose subscription has expired or is about to expire. The following information about each user is printed:

- Name
- Business / Data Phone
- Home / Voice Phone
- Security
- Expiration Date
- Expiration Info - If the user has expired then *(EXPIRED)* will be printed. If the user is within the warning period you have specified for subscriptions (*PCBSetup* | *Subscription*), the number of days until the user expires will be printed. Otherwise, this area of the report will be blank.

Make Users File Index

In general, both PCBoard and System Manager take care of the users index files automatically. If for some reason you suspect the indexes are out of sync, use this selection to recreate all user index files.

When your user index files are out of sync with the users files, you may experience a problem when a user attempts to login, types in the correct password, but PCBoard will report that the password is incorrect. It does not hurt to recreate the index files and it does not take very long. If you get reports such as the one described previously, re-index your users files.

Adjust Security Levels

This selection brings up a sub-menu allowing you to globally adjust security levels in the users file according to the upload/download ratio, their number of uploads or to convert one range of security levels to a new security level. You can also globally initialize all upload/download counters and change the normal security level of users to equal their expired security level.

The following screen displays the security level adjustments you can perform.

Adjust by Ranges

Use this menu option to assign a new security level to a group of users within a specified security level range. For example, if you need to change every user with a security level of 35 to a security level of 33, enter the following:

```
Change users whose security is greater than or equal to : 35
      and whose security level is less than or equal to : 35

To a new security level of :  33
```

You may need to consolidate a range of security levels into one single security level. This can be done with the menu option very easily. To change every user with a security level between 20 and 29 to security level 20, enter the following:

```
Change users whose security is greater than or equal to : 20
      and whose security level is less than or equal to : 29

To a new security level of :  20
```

Adjust by Ranges (Expired)

This menu option is identical to *Adjust by Ranges* with one major exception: Instead of modifying the actual security level of the user, only the expired security level is modified. As an example, if you need to change every user who has an expired security level of 45 to reflect a new expired security level of 55, enter the following:

```
Change users whose security is greater than or equal to : 45
      and whose security level is less than or equal to : 45

To a new security level of :  55
```

You may need to consolidate a range of expired security levels into one single expired security level. To change every user with an expired security level between 30 and 49 to an expired security level of 25, enter the following:

```
Change users whose security is greater than or equal to : 30
      and whose security level is less than or equal to : 49

To a new security level of :  25
```

Adjust by Up/Dn File Ratio

This menu option gives you the ability to globally adjust security levels of users according to file ratio of each user. System Manager refers to the file ratio table you create to determine what security level is assigned based on the user's ratio. See *Create Up/Dn File Ratio Table* for information about creating the table.

Before you begin, you are asked if you wish to print the users who have their security level changed. If you choose to print the report, it will be sent to the printer defined in System Manager. The report includes:

- User name
- Number of files uploaded
- Number of files downloaded
- File ratio
- Old security level
- New security level

Adjust by Up/Dn Byte Ratio

This menu option gives you the ability to globally adjust security levels of users according to the byte ratio of each user.

System Manager refers to the byte ratio table you create to determine what security level is assigned based on the user's ratio. See *Create Up/Dn Byte Ratio Table* for information about creating the table. Before you begin, you are asked if you wish to print the users who have their security level changed. If you choose to print the report, it will be sent to the printer defined in System Manager. The report includes:

- User name
- Number of bytes uploads
- Number of bytes downloads
- Byte ratio
- Old security level
- New security level

Adjust by Number of Uploads

You may also adjust the secwrity level of users based on the number of files they have uploaded to the system. System Manager references the table created via *Create Upload Table*. Before beginning, you are asked if you want to print the users who will have their security level changed. If you choose to print the report, it will be sent to the printer defined in System Manager. The report includes:

- User name
- Number of uploads
- Old security level

- New security level

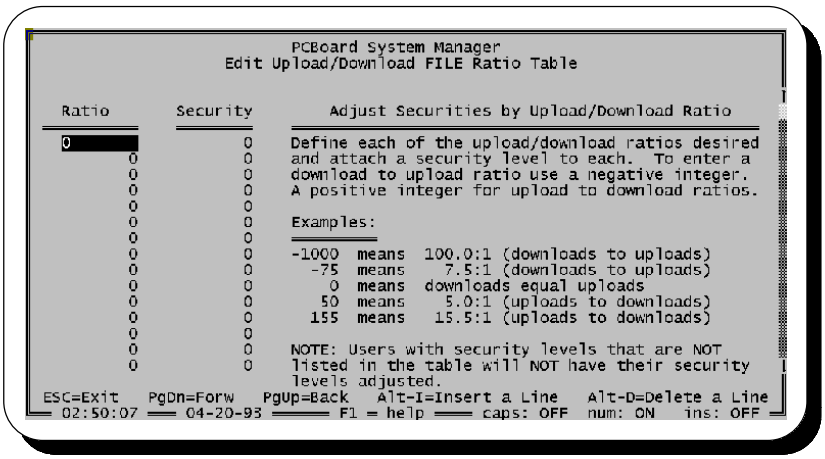
Adjust by Number of Downloads

You may also adjust the security level of users based on the number of files they have downloaded from the system. System Manager references the table created via *Create Download Table*. Before beginning, you are asked if you want to print the users who will have their security level changed. If you choose to print that report, it will be sent to the printer defined in System Manager. The report includes:

- User name
- Number of downloads
- Old security level
- New security level

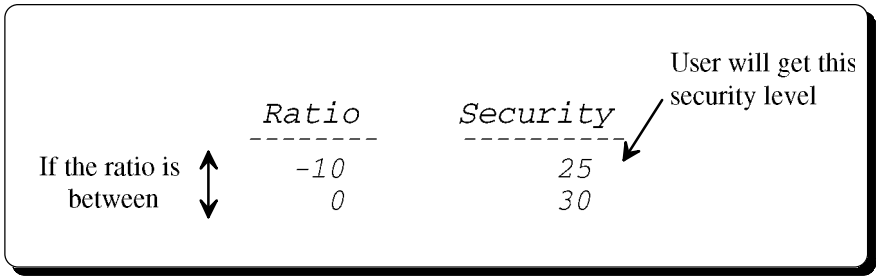
Create Up/Dn File Ratio Table

This menu option is the one you want to use to create the table used for adjusting security levels by the file ratio of a user. When this menu option is selected, you will see the following screen.



Notice that there are two columns where you edit data. One column is titled **Ratio** and other is titled **Security**. Based on the file ratio of the user, a new security level will be assigned.

When designing your table, keep in mind how System Manager reads the table. It reads two ratio entries at a time. If a user falls in-between the two ratios, the user gets the security level listed to the right of the first ratio. The following illustrates:



System Manager continues to search through the table until a match is found. Notice that the key is the ratio. The user is assigned a security level based on their ratio. If you are looking to assign a ratio to a particular security level, define the ratio in the `PWRD` file (*PCBSetup | File Locations | Configuration Files*).

Normally a ratio is specified as something like 10:1 (10 to 1). Entering a ratio in that manner is cumbersome, so an alternate method had to be devised. System Manager determines a ratio less than 0 to be a download to upload, while a positive ratio number is considered an upload to download ratio. What is the difference? A download to upload ratio means more has been downloaded than uploaded, while an upload to download ratio means more has been uploaded than downloaded.

Rather than limiting you to whole number ratios only (e.g., 25:1) you may enter up to the tenths digits (e.g., 25.3:1). To specify a ratio of 25.3, enter either 253 to specify an upload to download ratio or -253 to specify a download to upload ratio. Remember that 25 is really 25.0 so you must enter it as 250 or -250. If you enter 25, it is interpreted as 2.5.

The following are some important items to remember about creating your ratio table:

- The ratios you enter should be ordered from smallest to greatest. This means you should enter the negative ratio values at the top of your list and your positive values at the end of the list. Your ratio table is sorted before it is saved to disk.
- The ratio you enter for the first entry is ignored because it represents the absolute largest download:upload ratio. The security level for the first entry is important though, because it is the security level used when System Manager compares the first two entries in your table.
- The security level to the right of your last entry in the ratio table is only assigned if the user has a better ratio than the ratio defined on the last line. This means that if your last line is set for a ratio of 50 and a security level of 40, the user only gets a security level of 40 if they have a ratio that is better than 5 uploads for every download.
- A ratio of 0, 10, or -10 implies that uploads are equal to downloads.
- Only security levels listed in the security column are included in ratio checking. This means you can have users that are exempt from being adjusted due to their ratio by simply excluding their security in your ratio table definition.

As an example, let's assume you want to create a simple ratio table where if a user has a download:upload ratio greater than 20:1, a security level of 20 is assigned. In addition, a ratio between 10:1 and 20:1 will result in a security level of 30, and a ratio above 10:1 gets a security level of 40. To accomplish this, create the following table:

```
  Ratio       Security
----------    --------
  -9999999          20
      -200          30
      -100          40
         0           0
```

It is very easy to add another ratio to this table. Let's say you want to give users that have uploaded more than they have downloaded a security level of 50. This can be done simply by adding a new line after the -100 line making your table resemble the following:

```
  Ratio       Security
----------    --------
  -9999999          20
      -200          30
      -100          40
         0          50
         0           0
```

Now you get a feeling of how System Manager uses your table to assign security levels, let's look at three sample users and see how their security levels will be adjusted.

```
Security    : 20
Number Uploads   :     8
Number Downloads :   523
```

Calculation of this user's ratio reveals it to be about 65.4 downloads for every upload, which is expressed in System Manager as -654. System Manager looks at the first two lines of the table:

```
-9999999          20
    -200          30
```

As you can see, this particular user has a ratio in-between these two lines so a security level of 20 is assigned (which the user already has). The next user has the following record:

```
Security    : 30
Number Uploads   :   353
Number Downloads :   751
```

This user has a ratio that equates to approximately 2.1 downloads for every file uploaded. In System Manager terms this is expressed as -21. System Manager analyzes your ratio table from the top, down to the bottom looking for a match:

```
-9999999          20
    -200          30
```

The ratio for this user does not fit between this range so the next two lines are analyzed.

```
    -200          30
    -100          40
```

This user's ratio does not fit between this range either, so the next two lines are analyzed.

```
    -100          40
       0          50
```

Finally, a match. This user's ratio was -51, which falls within this range. Now looking at the security level of the first line, we can see the user will receive a security level of 40. This particular user was upgraded from a security level of 30 to a new security level of 40 because of the improved file ratio.

The last user has the following information:

```
Security    :  35
Number Uploads   :     7
Number Downloads :    43
```

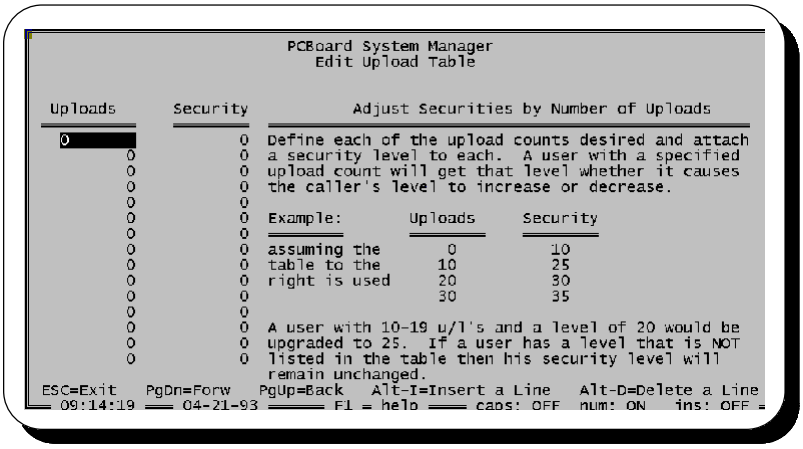
This user is not affected. It's not because the ratio would leave him at security level 35, but rather because security level 35 is not even listed in the ratio table. As stated earlier, *security levels not listed in the table are not adjusted*.

Create Up/Dn Byte Ratio Table

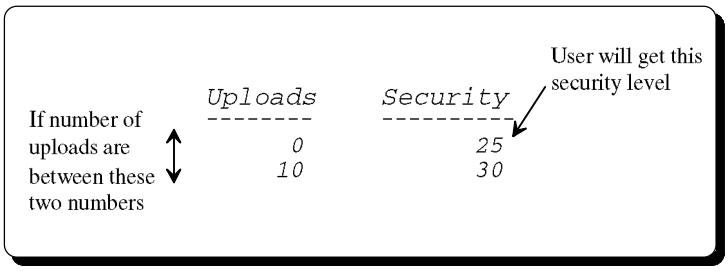
The only difference between this option and adjusting by file ratio is that System Manager determines the ratio based on bytes uploaded and downloaded instead of files transferred. Everything else about byte and file ratios are the same including creating the ratio table. For more information on creating the table, see the previous section about creating a file ratio table.

Create Upload Table

This option gives you the ability to adjust the security level of a user based on how many files they have uploaded to the system. When you select this option, notice that it looks quite similar to ratio tables.



This table does not try to relate uploads and downloads to one another so you may find it easier to setup. System Manager simply analyzes two lines of your table at a time. If the number of files a user has uploaded falls between two entries, the user will be given the appropriate security level as shown in the following sample:



As an example, let's assume you create the following table:

Uploads	Security
0	15
1	20
50	40
0	0

Until a user uploads a file, the security level will remain 15. A user who has uploaded more than one file, but has not yet uploaded 50 files, receives a security level of 20. If a user has uploaded 50 or more files, a security level of 40 is given.

Create Download Table

The creation and use of this table is identical to the Upload table. The only exception is that the number of files downloaded are checked instead of the number of files uploaded. Refer to the previous section about creating an upload table for additional information.

Change Security to Expired Level

When a user's subscription expires, PCBoard leaves the security level intact but gives the user their expired security level at login. By doing this, a user can renew their subscription and you simply update their expiration date to restore the old security level.

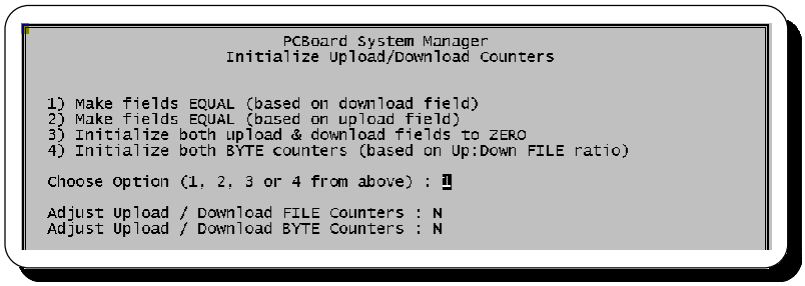
Sometimes, however, you may want to make permanent the expired security level of a user whose subscription has expired. This menu option allows you to make this change, adjusting the user's normal security level to match the level in the expired security level field.

Before you make this change, PCBoard asks if you desire to print a list of users who have their security levels changed. Answering `Y` at this prompt causes a report to be printed to the printer defined for System Manager to use. This report includes the following information:

- User name
- Old security level
- New permanent security level (expired security level)
- Date of expiration

Before System Manager makes the change, it must verify it is the only application accessing the users file. If it cannot gain exclusive access to the users file, you are notified that all nodes must be down before you can make this change.

Initialize Upld/Dnld Counters



You can use this option to reset or change the upload/download byte and file counters for every user on the system. You can choose any of the following options:

1. Make the upload counter equal to the download counter.
2. Make the download counter equal to the upload counter.
3. Set both the upload and download counters to 0.
4. Initialize upload and download BYTE counters to be equal to the current users file ratio. If you select this option you are given the option to specify a number to multiply the number of files transferred to store in the bytes transferred fields. For example, if a user has uploaded 3 files and downloaded 10 files and you specify a multiplier of 100, the user's byte counters will show 300 bytes uploaded and 1000 bytes downloaded. The multiplier is simply for cosmetic purposes. Also, you should be aware that if you select this option, your answers to the *`Adjust Upload / Download FILE/BYTE Counters`* questions will be ignored.

There are two other questions on this screen. Your answer to these questions determine which counters are set.

```
Adjust Upload / Download FILE Counters
Adjust Upload / Download BYTE Counters
```

For example, if you select option number 3, and you set *Adjust Upload / Download FILE Counters* to *Y*, the following fields are set to 0 in each user's record:

```
Number Uploads
Number Downloads
```

Of course, if you answer *Y* to both questions, the following fields are reset to 0 for all users:

```
Number Uploads
Number Downloads
Total Upload
Total Download
```

Registering Users In A Conference By Security Level

When you need to modify the conference registrations of a large number of users, you certainly would not want to do so manually. System Manager gives you the ability to modify a range of conference flags for users within a particular security range.

Selecting Conferences To Modify

The following fields control which users will have their conference flags modified:

```
First number of conferences to be inserted in registrations
Last  number of conferences to be inserted in registrations
```

Enter the beginning conference number to be modified in the first field, and in the second field, enter the last conference number to be included in the list of conference registrations to be modified. For example, to modify the conference registrations for conferences 3 through 10, enter the following:

```
First number of conferences to be inserted in registrations :     3
Last  number of conferences to be inserted in registrations :    10
```

If you need to modify just one conference, enter the conference number as both the first and last conference to modify.

Setting Conference Flags

Once you have selected the conferences to modify, you must determine how you will alter the access to the conference. The following five fields control what access you can give:

```
R - Adjust conferences user is normally allowed to join
X - Adjust conferences user can join with expired subscription
S - Adjust the user selected conferences for scanning
C - Adjust conferences where user becomes a sysop when joining
N - Adjust conferences where user has Net Status
    Reset user's last message read to zero in these conferences
```

The first five questions are simply the conference flags you may set (*R*, *X*, *S*, *C*, and *N*). For additional information on conference flags, see *Editing a User Record* in the *Users File Maintenance* section of this chapter. If you wish to reset the last message read pointer for each conference you modify, answer *Y* to the *Reset user's last message read to zero in these conferences* question.

Selecting User Records To Modify

The last thing you must determine is the range of users who will have their conference registration information changed. Simply state the lowest security level you wish to modify and then the highest security level to modify. Every user with a security level between the two levels you enter will have their conference information modified.

Making The Change

When you have finished entering the security levels, conference numbers and the conference flags you wish to modify, press d to begin the process.

Before System Manager actually begins modifying the user file, it attempts to make sure it has exclusive access to both the USERS and USERS.INF files. If it cannot get exclusive access to these files, it will not be able to modify the records for each user. Make sure all nodes are down before you attempt to make a global change such as inserting group conference registrations.

Examples

Let's assume you just created conference #3 on your system which displays community event information. If you want to have that conference selected for reading by every user on your system, enter the following into each field:

```
First number of conferences to be inserted in registrations  :     3
Last  number of conferences to be inserted in registrations  :     3

Adjust conferences user is normally allowed to join          : N
Adjust conferences user can join with expired subscription   : N
Adjust the user selected conferences for scanning            : Y
Adjust conferences where user becomes a sysop when joining   : N
Adjust conferences where user has Net Status                 : N
Reset user's last message read to zero in these conferences  : N

Adjust users with a security level greater than or equal to  :   0
                                  and less than or equal to  : 255
                  Press PGDN to continue or ESC to abort

== 01:31:17 == 04-21-93 ====== F1 = help ==== caps: OFF  num: ON   ins: OFF ==
```

As another example, suppose you want to create conference #53 to be a private conference for those with a security level of 90 or higher. Since an R flag is required to be able to join a private conference, you might go about setting the flag manually in all user accounts with a security level of 90 or higher; this would be quite an undertaking on a large system. Instead, you can let System Manager do all of the hard work for you by entering the following information:

```
First number of conferences to be inserted in registrations  : 53
Last  number of conferences to be inserted in registrations  :    53

Adjust conferences user is normally allowed to join          : Y
Adjust conferences user can join with expired subscription   : N
Adjust the user selected conferences for scanning            : Y
Adjust conferences where user becomes a sysop when joining   : N
Adjust conferences where user has Net Status                 : N
Reset user's last message read to zero in these conferences  : N

Adjust users with a security level greater than or equal to  :  90
                                  and less than or equal to  : 255
                  Press PGDN to continue or ESC to abort

== 01:36:37 == 04-21-93 ====== F1 = help ==== caps: OFF  num: ON   ins: OFF ==
```

Removing Access To A Conference By Security Level

When you need to modify the conference registrations for a large number of users, you certainly do not want to do it manually. System Manager gives you the ability to modify a range of conference flags for users within a particular security range.

Selecting Conferences To Modify

The following fields allow you to control the users that will have their conference flags modified:

```
First number of conferences to be inserted in registrations
Last  number of conferences to be inserted in registrations
```

Enter the beginning conference number to be modified in the first field, and in the second field, enter the last conference number to be included in the list of conference registrations to be modified. For example, if you wanted to modify the conference registrations for conferences 3 through 10, enter the following:

```
First number of conferences to be inserted in registrations :     3
Last  number of conferences to be inserted in registrations :    10
```

If you need to modify just one conference, enter the conference number as both the first and last conference to modify.

Deselecting Conference Flags

Once you have selected the conferences to modify, you must determine how you will alter access to the conference. The following five fields control what access you can remove:

```
Adjust conferences user is normally allowed to join
Adjust conferences user can join with expired subscription
Adjust the user selected conferences for scanning
Adjust conferences where user becomes a sysop when joining
Adjust conferences where user has Net Status
Reset user's last message read to zero in these conferences
```

The first five questions are simply the conference flags you may set (*R*, *X*, *S*, *C*, and *N*). For additional information on conference flags, see *Editing a User Record* in the *Users File Maintenance* section of this chapter. If you wish to reset the last message read pointer for each conference you modify, answer *Y* to the *Reset user's last message read to zero in these conferences* question.

Selecting User Records To Modify

The last thing you must determine is the range of users who will have their conference registration information changed. Simply state the lowest security level you wish to modify and then the highest security level to modify. Every user with a security level between the two levels you enter will have their conference information modified.

Making The Change

When you have finished entering the security levels, conference numbers and the conference flags you wish to modify, press d to begin the process.

Before System Manager actually begins modifying the user file, it attempts to make sure it has exclusive access to both the USERS and USERS.INF files. If it cannot get exclusive access to these files, it will not be able to modify the records for each user. Make sure all nodes are down before you attempt to make a global change such as removing group conference registrations.

Examples

If you have 50 conferences on your system (conferences 0-49) and you want to make sure no users have conference SysOp status (the *C* flag), enter the following information:

```
First number of conferences to be removed from registrations :    0
Last  number of conferences to be removed from registrations :   49

Adjust conferences user is normally allowed to join          : N
Adjust conferences user can join with expired subscription   : N
Adjust the user selected conferences for scanning            : N
Adjust conferences where user becomes a sysop when joining   : Y
Adjust conferences where user has Net Status                 : N
Reset user's last message read to zero in these conferences  : N

Adjust users with a security level greater than or equal to  :   0
                                  and less than or equal to  : 255
                 Press PGDN to continue or ESC to abort

01:59:07 ═══ 04-21-93 ═══ F1 = help ═══ caps: OFF  num: ON   ins: OFF
```

Another example may be when you want to remove everyone with a security level less than 50 from conference #9 which is a private conference. For this task you may want to remove all of their conference flags and reset their last message read to 0 as well.

```
First number of conferences to be removed from registrations : 9
Last  number of conferences to be removed from registrations :    9

Adjust conferences user is normally allowed to join          : Y
Adjust conferences user can join with expired subscription   : Y
Adjust the user selected conferences for scanning            : Y
Adjust conferences where user becomes a sysop when joining   : Y
Adjust conferences where user has Net Status                 : Y
Reset user's last message read to zero in these conferences  : Y

Adjust users with a security level greater than or equal to  :   0
                                  and less than or equal to  :  49
                 Press PGDN to continue or ESC to abort
```

Moving Access From One Conference To Another

```
REMOVE user(s) from which conference :   0 ADD to which conference :    0

Adjust conferences user is allowed in (at all times)         : Y
Adjust conferences user is allowed in (expired subscription) : Y
Adjust conferences user-scan preference list                 : Y
Adjust conferences where user becomes a sysop upon joining   : N
Adjust conferences where user has Net Status                 : N
Set the 'Last Conference In' flag                            : N
Move the 'Last Message Read' pointer to the new conference   : N

Include users with security levels GREATER THAN or EQUAL TO  :   0
Include users with security levels  LESS THAN   or EQUAL TO  : 110

                 Press PGDN to continue or ESC to abort
16:52:22 ═══ 01-03-97 ═══ F1 = help ═══ caps: OFF  num: OFF  ins: OFF
```

From this menu option, you can move the access of users from one conference to another conference. Not only can you move the conference flags from one conference to another, but you can also move the last message read to the new conference.

Specifying Conferences

In the *REMOVE user(s) from which conference* field, enter the conference number to remove the conference access from. In the *ADD to which conference* field enter the conference number that the settings are to be copied.

Moving Conference Information

The following lists which questions control the conference flags. For a detailed description of each flag, see *Editing a User Record* in the *Users File Maintenance* section of this chapter.

R *Adjust conferences user is allowed in (all times)*
X *Adjust conferences user is allowed in (expired)*
S *Adjust conference user-scan preference list*
C Adjust conferences where user becomes a sysop upon joining
N Adjust conferences where user has Net Status

System Manager moves each conference flag field to the new conference exactly as set in the original conference. It is recommended that you either leave all three of these questions set to Y or set to N.

The next question you are asked gives you the ability to modify the user record so it shows the *Last Conference In* field to reflect the new conference. Of course, this will not be of much use unless the new conference is defined as an auto-rejoin conference. If the new conference is defined as an auto-rejoin conference, affected users will be logged into this conference the next time they log in.

The last question asks if you want to also move the last message number read from the old conference to the new conference. If you answer *Y* in this field, the last message read number is moved to the new conference, and the old conference has the last message read set to 0.

Selecting Security Levels

As with other functions in System Manager, you determine what users have their records modified by a range of security levels. Simply enter the lowest and highest security level for the records to modify. Every record in the indicated security level range is modified.

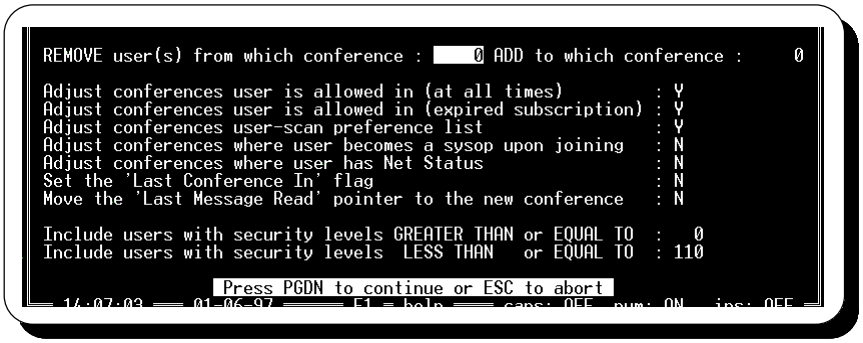
Example

The following illustrates what to do if you want to move the conference information from conference 2 to conference 3 for users with a security level of 50.

First, while editing a user record for which you will be moving conference information, look at the conference form in System Manager. You should see something similar to the following:

```
 Num   Conference    Flags   Last Msg
----- -------------  -----   --------
    0 Main Board    : RXS  :    51371
    1 OpSys         :      :        0
    2 Admin         : RXS  :   120022
    3 Chatter       : RX   :        0
```

Next, enter the following after selecting *Move Users BETWEEN Conferences* from the *Users File Maintenance* menu:



Finally, press d to begin moving the conference information. System Manager requires exclusive access to USERS and USERS.INF, so make sure no other nodes are online before you press d . Otherwise, you receive an error message and System Manager continually tries to access the file until you press E to abort the process or the file is no longer in use.

Once the change has been made, you will see the user records have been updated. Looking at the same record we reviewed before we made the change, you now see:

```
 Num   Conference    Flags   Last Msg
----- -------------  -----   --------
    0 Main Board    : RXS  :    51371
    1 OpSys         :      :        0
    2 Admin         :      :        0
    3 Chatter       : RXS  :   120022
```

Notice that the conference information from conference 2 has been moved to conference 3.

Adjusting Expiration Dates

When you need to upgrade the expiration date of several users, let System Manager's *Change Expiration Date* menu option do the work . Use this menu option to change the expiration date of the users to a new date, or add additional days to their subscription expiration date.

Security Level Criteria

In order to modify the expiration date of users on your system, specify a range of security levels to modify. First however, select the security level range to be based on the normal or expired security level of each user. The following are valid options for this field:

E **Expired security level**. Base the range of security levels that will be affected on the expired security level of each user instead of the normal security level.

N **Normal security level**. Base the range of security levels that will be affected on the normal security level of each user.

Specifying Security Range

Using the following fields, a range of security levels (normal or expired) to modify is defined.

```
Adjust Expiration Date if level is Greater than or equal to
Adjust Expiration Date if level is Less than or equal to
```

For example, to modify the range of security levels between 20 and 30, enter a 20 in the first field and a 30 in the second field.

Setting New Expiration Date

You can choose to either set an actual date to change all records to, or you may choose to simply add a certain amount of days to the expiration date of the user. To make the new expiration date uniform throughout the range selected, specify the date at the following prompt:

```
New Expiration Date (01/01/80 is ignored)
```

If you leave the date in that field as 01-01-80, System Manager assumes you want to extend their current expiration date by the amount of days specified in the following field:

```
Current Date in record plus XXXX days
```

Printing Changed Records

The final question on this screen asks if you want to print a report of users who have their user records changed. If you answer *Y* to this question, a report is printed to the port defined in System Manager. This report contains:

- User name
- Security level
- Old expiration date
- New expiration date

Making The Change

When you have filled in all of the fields, press d to begin changing the records. If System Manager can gain exclusive access to the users file, it begins modifying the specified records. If System Manager cannot guarantee it has exclusive access, it prints a message that states *LOCK FAILED*. In order to gain exclusive access to the users file, make sure you do not have any nodes up and running or ready to take calls.

Example

To help illustrate the advantage of being able to globally change expiration dates, let's use the following example:

- You accept subscriptions to your system where your users will pay money for one year of access.
- Your subscribers occupy security levels 60-80.

Keeping all of this in mind, let's assume you had system troubles that caused you to be down for two days in a row. To help relations with what may be several angry subscribers, you decide to extend all subscription by an additional week (7 days). Rather than manually modify each record you can use System Manager's *Change Expiration Date* menu option. Fill in the fields on the screen as follows:

```
Security Level Range
--------------------
Base Security Level Criteria on NORMAL or EXPIRED Level (N/E) : N
Adjust Expiration Date if level is Greater than or equal to   :  60
Adjust Expiration Date if level is Less than or equal to      :  80

Change Expiration Date To:
--------------------------
New Expiration Date (01/01/80 is ignored) : 01-01-80
Current Date in record plus XXXX days     :    7

Print Changed User Records on the Printer : N
```

Adjust Account Balances

The situation may arise where you need to modify the accounting information for numerous user records. This menu options allows you to make modifications to the accounting information for users who fall in the security level range you specify. Some brief applications for this menu options may include:

1. Giving all users on the system a credit. To celebrate a holiday you may want to increase the starting balance of all users by one or two units as a gift.
2. Circumstances may have required you to temporarily take your system down for an extended period of time. To reward your users for their loyalty, you may want to increase the starting balance by a few credits.
3. Having experimented with the accounting system you decide to make major modifications on how activities are charged for. For a fresh start, all charges and earnings are reset.

The screens presented when this menu option is selected is as follows:

```
Modification to Account Starting Balance            :        0

Add Value to Existing Starting Balance              : N
Zero Accumulator Values at the Same Time            : N
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :   0
                          and less than or equal to : 110

Security Level Given to Users on an Empty Account   :   0
```

Setting Balance Adjustment Value

To adjust the balance of an account, you can increase, decrease, or reset the starting balance for the user records to be modified by modifying the value in the following field:

```
Modification to Account Starting Balance            :        0
```

To increase a balance specify any positive number. Likewise, a negative number will reduce the starting balance. Resetting the starting balance to the value specify requires you to answer `N` to the `Add Value to Existing Starting Balance` option.

You will not always want to enter a value in this field. For example, you may be utilizing this menu option to reset all charges and earnings for a range of users. In this case, there is no need to modify the starting balance so leave the value set to 0.

Setting Adjustment Options

On this screen are three options that control how the account records are modified. How these questions are answered determines what modifications are made to the account records.

The `Add Value to Existing Starting Balance` field determines if you will be adding/subtraction or resetting the starting balance. Valid responses to this option are:

N The value entered as the modification to the account balance will be used as the new starting balance for all user records in the security range specified.

Y The value specified as the starting account balance will be added to the existing balance for each user in the security range specified.

The `Zero Accumulator Values at the Same Time` field can be used to reset all charges and earnings to 0. Valid responses to this option are:

N Do not adjust any of the charges or earnings in user records affected. For example, if total charges amounted to 50 and earnings amounted to 10, these values will remain unchanged.

Y Reset all charges and earnings. For example, a user with charges of 35 and earnings of 28 will have all fields reset to 0 so total charges and earnings are 0.

When a user has exhausted their account balance and tracking mode is not on, PCBoard will set his security level to the value specified as `Security (When Empty)` in the user record. The `Set the Security Level Applied on an Empty Account` field will determine if this security will be modified. Valid responses to this question are:

N The security level will not be modified.

Y The value entered in the `Setting Security When Balance Reaches 0` field is the new level for all users falling in the security range specified.

Selecting Security Levels to Modify

You have to define the users whose accounts are modified. The way you select users is by defining the minimum and maximum security levels of the users to modify. For example, to modify all users between the security level range of 10 and 40, enter `10` as the security *greater than or equal to* and `40` as the *less than or equal to* field. To adjust a single security level, enter the same security level in both security fields.

Setting Security When Balance Reaches 0

If you answered `Y` to the `Set the Security Level Applied on an Empty Account` option, all users falling between the security level range specified will have their accounting security level changed.

Examples

Adding 10 units to all user accounts with a normal security level between 20 and 50:

```
Modification to Account Starting Balance            : 10

Add Value to Existing Starting Balance              : Y
Zero Accumulator Values at the Same Time            : N
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :  20
                          and less than or equal to :  50

Security Level Given to Users on an Empty Account   :   0
```

Resetting all charges and earnings for all users on the system:

```
Modification to Account Starting Balance            : 0

Add Value to Existing Starting Balance              : N
Zero Accumulator Values at the Same Time            : Y
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :  0
                          and less than or equal to :  255

Security Level Given to Users on an Empty Account   :   0
```

Standardizing Phone Formats

Selecting this menu option standardizes the phone fields for every user on your system. Essentially, this option merely strips all non-numerical information from the phone field and attempts to fit the phone number into the following format:

999 999-9999

If the phone number is shorter than 10 digits, 1t will start building the phone number from the right. Therefore, if one of the phone numbers in the user record was 323-835, System Manager will convert this phone number to 32-3835. Once all of your phone numbers are standardized, you can reliably sort the users file by the contents of this field.

Undo Previous Change

Selecting this menu option will enable you to undo any global changes you have made to the users file while in System Manager. The following lists all of the global changes you can make in System Manager:

- Sort Users File
- Pack Users File
- Pack Users File while Online
- Adjust Security Level by Ranges
- Adjust Expired Security Level by Ranges
- Adjust Up/Dn File Ratio
- Adjust Up/Dn Byte Ratio
- Change Security to Expired Level
- Initialize Upld/Dnld Counters
- Insert Group Conference
- Remove Group Conference
- Move Users BETWEEN Conferences
- Adjust Expiration Dates
- Standardize Phone Formats

When you select the undo option, you will be asked to confirm that you really wish to undo your most recent global change. If you select to undo your changes, System Manger restores the last backup of the USERS and USERS.INF file and re-indexes the users file to make sure the index files are current.

User Info File Maintenance

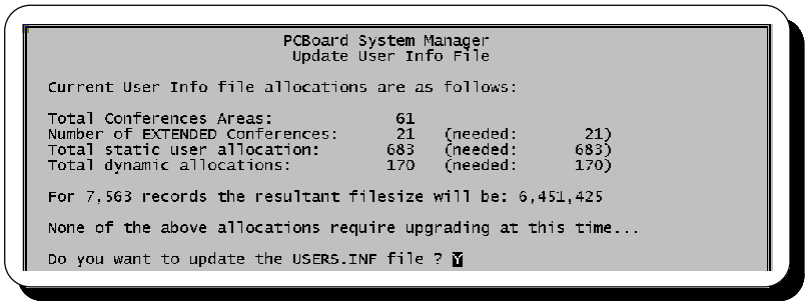
User Info File Maintenance refers to maintaining your USERS.INF file. Because the USERS.INF file is so flexible there are a lot of functions you can use, although not nearly so many as with the USERS file alone. Everything you will need to do with the USERS.INF file will be controlled from the menu that will appear after you select *User Info File Maintenance* from the System Manager Main Menu.

Change Conference Allocations

The size of the USERS.INF file is dynamic. This means it can grow or shrink based on the components installed inside of the file. For example, PCBoard stores the last message read pointers in this file. As expected, the more conferences you have, the bigger the file will be because you have more last message read pointers to store.

To make sure the USERS.INF file is properly configured for the number of conferences installed, select this menu option. If you see an error message that says **Need to update User Info File Conference Allocations**, select this menu option to properly ensure your USERS.INF file is properly sized. If you receive this previously mentioned error message, load System Manager from the DOS prompt because you cannot access it from the call-waiting screen. Simply change to your PCBoard subdirectory and execute PCBSM.EXE.

When you select this menu option you will see a status report about your USERS.INF file. Each section is detailed in the following sections.



Total Conference Areas

This lists the total number of conferences defined for your system. PCBoard determines this number by reading the PCBOARD.DAT that System Manager reads when it loaded and looking at what is set for the **Number of Highest Conference Desired** in *PCBSetup | Configuration Options | Messages*. System Manager then adds one to the number for the Main Board.

For this reason, it becomes important that if you increase the maximum number of conferences desired, you should also update every PCBOARD.DAT on the system. Otherwise, you will find yourself repeatedly updating conference allocations because you have a different amount of conferences available depending on which PCBOARD.DAT is used.

Number of EXTENDED Conferences

This field reports how many extended conferences you have (or 0 for none). Any conferences above the first 40 are considered *extended* conferences. This is simply a name reference and does not signify a difference between conferences. The name reference is used because earlier versions of PCBoard supported 40 conferences which has long since been surpassed.

Total static user allocation

This field tells you how many static bytes are allocated for each record. Static allocations are not dependent on the number of conferences.

Total dynamic allocations

Dynamic allocations are dependent on the number of conferences allocated on the system. As the number of conferences increases, so do the dynamic allocations on your system.

Updating USERS.INF Conference Allocations

After the report of allocations and total conferences on your system, you will see one of the following messages:

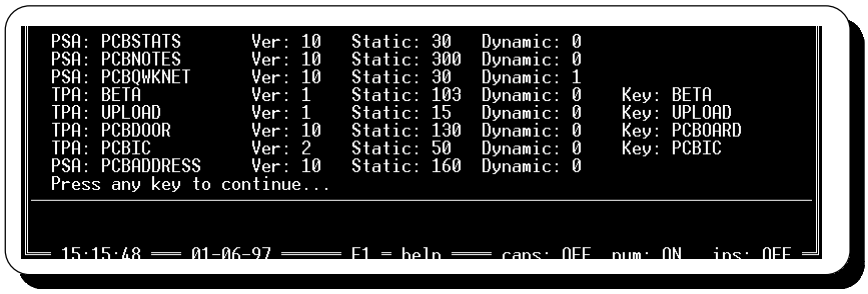
```
None of the above allocations require upgrading at this time...

WARNING:  One or more of the above allocations requires updating
```

If you see the first message, do not worry about updating conference allocations. However, if you see the second message, the allocations must be updated or PCBoard will not load.

List Installed PSA/TPA Areas

This menu function lists all of the third party allocation (TPA) and PCBoard support allocation (PSA) areas that are currently installed. TPAs are areas in your USERS.INF file reserved for specific third party applications. PSAs are specific features you can add such as full address support, alias support, etc.

When you choose this menu option, you will see a list of all TPA and PSA areas installed.



If you have not installed any TPAs or PSAs, you are notified that you do not have any installed. If you have one or more installed, System Manager displays information about each one.

The first piece of information displayed is if the allocation is a PSA or a TPA followed by the name of the allocation. Even though you may not need to know any additional information, you are also shown the version number and the total static/dynamic space allocated for each user. For TPAs, System Manager also shows the *Key* information which is used by the program.

Add PCBoard Supported Allocations

From this menu option, you can install a PCBoard Supported Allocations (PSA). These give you the ability to add functionality to your system such as alias or full-address support. For more information on adding a PSA please see the Adding An Allocation section on page 395.

Remove PSA From User Info File

Simply select the PSA you wish to remove from your system. Before System Manager removes the PSA it will ask to confirm that you really wish to delete it. For additional information, please see the *PCBoard Supported Allocations* section in this chapter.

Add/Update Third Party Application

A TPA gives a third party application the ability to have PCBoard reserve space in the USERS.INF file for its use. Most applications will use this reserved area or allocation to store information about each user. Using this method, an application does not have to create a separate data file to store redundant user information, nor does it have to worry about maintaining this file of active user data. The TPA is actually part of the USERS.INF file, so when a user is deleted from your system, all TPA information for that user is deleted too.

Normally, you will only install a TPA if the application you are installing explicitly tells you to setup a TPA in System Manager.

When you choose to add a TPA, you will be asked to enter the TPA name. Enter the name in this field as specified by the author of the application. If you do not, the application may error upon loading because the wrong name was entered in this field.

If you enter the name of a TPA which already exists, the existing information will be displayed and you can edit the fields as your needs dictate.

Once you have entered a new application name, you will be asked to specify the *version number*, *static allocation*, *dynamic allocation*, and a *keyword*. The author of the application should provide the values you should enter for everything except *keyword*.

Version: Just as most programs have a version number, a TPA can have a version number as well. The application which uses this TPA may use this version number to verify it is indeed reading proper data.

Static Size: There are two size types in a TPA. Static size never changes—it is a fixed size. Enter the value the author of the application specifies. If you enter a value which is too high or too low, chances are the application will error on load or behave unpredictably.

Dynamic Size: Enter the value the author of the application specifies for this field. This determines how many bytes are reserved for each conference. Consequently, the more conferences defined in your system, the more space used on your hard drive.

Keyword: In this field, enter the door name this TPA uses. This information can be obtained from the **filename** field in your DOORS.LST file. If you do not specify a valid door name, the information in the TPA is not available to the application requesting the information.

Remove TPA From User Info File

To remove a TPA, you must know the name. If you do not know the name, you can use the *List Installed PSA/TPA Areas* menu option for a list of installed allocations. When you enter the name of the TPA that you wish to remove, System Manager checks to see if it exists. If it does, you are asked to confirm the removal. If you choose to remove it, all data stored in the TPA is lost.

Create User Info File

Normally you will not need to create your USERS.INF file because PCBoard will take care of that for you. However, if you lose the file or if it becomes corrupt beyond repair, you may elect to recreate the file.

If System Manager detects a USERS.INF file when you attempt to re-create it, you are warned that it already exists and will be asked to confirm that you want to recreate the file. Recreating the file causes all TPA information to be lost as well as the loss of some conference information for all conferences numbered 40 and above.

Analyzing Your System Configuration

This menu option will load PCBDiag which you can use to help analyze your system configuration. When you select this menu item, you are presented with a list of items that you can analyze the system. To do a full analysis, make sure you enter a *Y* in all of the fields.

Once you determine what you want to analyze, press d to begin. You are asked where the report should be printed. You can enter any printer port or filename. Specifying a printer port such as LPT1 sends the report to the printer attached to LPT1, while entering a filename prints the report to the file you specify.

When you are working with the technical support staff to resolve a problem with your system, you may be asked to print or output your analysis to a file. In this situation always print the report to a file and upload the file to Salt Air. The technician assisting you will review the file and continue working with you on the problem.

Defining Printer Port

There are several places in System Manager that allow you to print out reports or results of a particular action. System Manager will use the printer that you define using this menu option.

The first thing you will notice about the printer definition is that you can enter more than a simple port number. You can enter any filename or device. If your printer is on LPT1, enter *LPT1* in this field. If, instead, you wish to send all printer output to a text file, you can do so by specifying a filename to send the output to.

The following are sample printer definitions:

- **LPT1**
- **C:\PCB\PRINTER.OUT**
- **COM2**

Defining Your Editors

When you are configuring your system in PCBSetup, there are several places where you need to load an editor to edit a batch file or a display screen. This menu option allows you to specify the editors you want to have available while in PCBSetup. There are two editors you may specify—text and graphics.

Text Editor

Throughout PCBSetup you will notice that you can press 2 in several places to edit a particular file. If the file you are editing is a display file or a batch file, PCBSetup will use the editor you define in this field to edit the file.

By default, the editor selected here will be PCBEdit, which is a text/graphics editor which ships with PCBoard. If you have a favorite text editor, you may specify that program name instead. However, if you opt to change the editor, you will want to pick a small ASCII text editor rather than a word processing type program because of the memory constraints involved, and because the file must be saved in DOS text format.

When PCBSetup calls your editor, it will run the program and pass the filename to edit as the first and only parameter. Therefore, the editor you install must be capable of accepting the filename to edit on the command line.

Graphics Editor

When a display file is highlighted in PCBSetup, you can use 2 to edit the normal display file, or 3 to edit the graphics specific version of the same file. When you press 3 , System Manager uses the graphics editor to edit the **graphics specific** version of the display file. This is most useful when you need to create a plain ASCII file for your non-graphic callers and make a graphics specific file with animation or similar effects for color ANSI callers.

You will want to use a graphics editor that supports either ANSI or PCBoard @X codes. Included with your PCBoard package you will find PCBEDIT.EXE. PCBEdit creates ASCII text files and has the ability to create colorized display screens using PCBoard @X color codes.

The graphics editor is called in the same manner as the text editor. The filename to edit is passed on the command line so you need to use a graphics editor program that is capable of accepting the filename on the command line.

Customize Colors

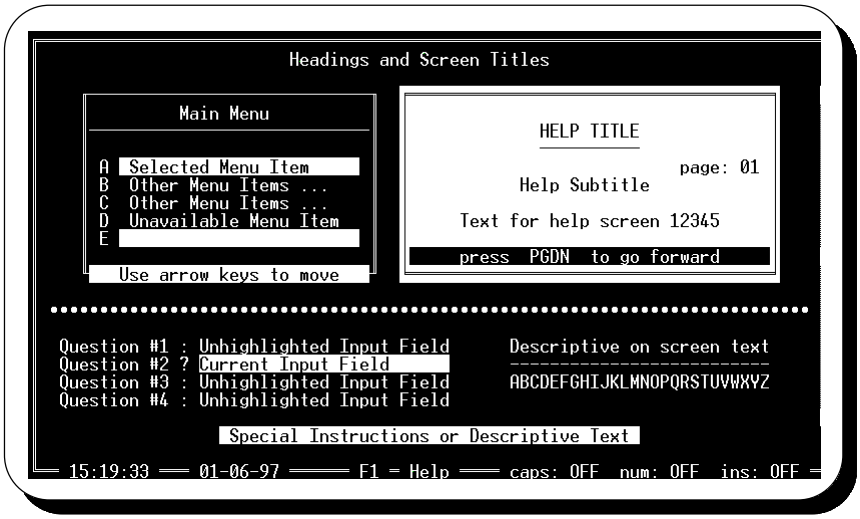
Everyone has their own likes and dislikes—color is no exception. Using this menu option you can customize the colors used for the PCBoard utilities (PCBSetup, System Manager, etc.)

Using Predefined Defaults

System Manager provides you with several default color schemes you can use by simply selecting the menu options on your screen. The first color set is the default color set when you first receive PCBoard. If you do not like any of the default color sets you may customize the colors manually using the *Customize Colors* menu option.

Customizing Your Own Colors

Upon selecting the *Customize Colors* menu option you will see the following screen (once you have read the instructions and pressed R):



This screen contains several objects. You will notice part of a help window, a menu listing, questions, and many other fields and borders. The instructions for colorizing this screen to your own tastes are very simple:

1. Move the cursor (using the t, b, l, and r keys) until the cursor is on top of the item or object you wish to modify, and press R.
2. From the color box that pops up, use the cursor keys to select the color you wish to use for the currently selected item. It is important to remember that each color selection contains a background and a foreground color. The foreground attribute for each color is represented by an *X*; this is the color the text will be for the currently selected item. The background attribute is the color the text will be written on.
3. Repeat steps one and two as many times as you need until you have finished customizing your colors. When you are done, press E. You will be returned to the *Color Customization* menu. If you press E again to return to the *Main Menu* you will be asked if you wish to save your color set.

PCBoard Supported Allocations

You can optionally install what are called PSAs (PCBoard Supported Allocations). These are features that are added into your users file.

What Are Supported Allocations

A supported allocation is a module you can add to your users file which both PCBoard and System Manager are able to understand and manipulate. These allocations are quite similar to TPAs you can install for doors. The difference is that PSAs are officially recognized by PCBoard and are used to add new features to your system. The following PSAs are available:

- **Alias Support** - Enables a user to use an alias in those conferences which have been designated to allow aliases.
- **Full Address Support** - Gives you the ability to store street, city, state, zip code, and country information for each user on your system.
- **Password-Changing Support** - Gives you the ability to force your users to change their passwords over a pre-determined amount of time.

- **Verification Support** - This PSA will store the response to the question asked when a new account is created on your system. You can use this response to help verify the validity of the caller.
- **Caller Statistics** - Provides additional statistics about each user on your system. Records statistics such as security violations, speed of connections, etc.
- **Caller Notes** - Provides you five additional comment lines which you can store information about each user. These lines may be useful for jotting down general notes.
- **Account Support** - Gives you the ability to implement a pay-to-play or a pre-pay system where activities on the board either debit or credit the account balance. For example, you could have a pre-pay system where users may pay $50.00 for access to the system. Once they have performed a certain amount of activities, they may have used this balance up and must give you another $50.00 to reset their balance. You can also implement a pay-to-play system where all user activity is recorded in a log file which can be read to create bills based on the activities performed.

Adding An Allocation

First of all, you need to make sure all nodes on your system are down—you cannot add a PSA while nodes are online.

To add a PSA to your system, select *Add PCBoard Supported Allocations* from the *User Info File Maintenance* menu in System Manager. Choose the PSA you wish to add to your system from the menu presented to you. Next, you will be shown information about the PSA you are about to install and are asked to confirm you wish to continue with the installation.

If you received an error which said there was a sharing violation with USERS.INF, this indicates all of your nodes are not down or something is accessing your USERS.INF file. System manager needs to have exclusive access to that file before it can add a PSA.

When you add a PSA, the size of your USERS.INF file increases in size. The following lists shows how many bytes the file will increase for each users on your system:

- Alias - 25 bytes
- Full Address - 160 bytes
- Password Changing - 42 bytes
- Verification - 25 bytes
- Caller Statistics - 30 bytes
- Caller Notes - 300 bytes
- Accounting Support - 137 bytes

If you have 2000 users in your system, your USERS.INF will grow by 60,000 bytes (2000 * 30) if you add the Caller Statistics PSA.

Using An Allocation

The following section gives specific details as far as what you can expect after you install each PSA in your system. You will know what changes will be made to your system operation and how to access the various information that each PSA provides.

Alias

Alias support is added on a conference by conference basis. After you have installed the Alias PSA in System Manager as outlined in the previous section, you need to configure which conferences will enable alias support.

When you are editing conference information, you can press d to access conference switches. You will see an option labeled `Allow Aliases to be used`. If you want aliases to be used in the conference you are editing, change this option to `Y`. Once the desired conferences have been set to allow or disallow alias usage, edit your PWRD file in *PCBSetup | File Locations | Configuration Files*. The second screen of the PWRD file contains a setting which determines if a particular security level can use aliases or not.

In order for a user to define the alias they wish to use, the W user command must be used. Alias names can only be changed or created in conferences that have been defined to allow Aliases. The name entered must be unique -- it cannot duplicate any user or alias name currently in use on the system. In *PCBSetup | Configuration Options | System Control* there is an option which reads *Allow Alias Change After Chosen*. When this option is set to `N`, a user must request any alias changes be done by you. Otherwise, the alias name can be changed at will by using the W user command.

At any time, you can edit or view the alias for any given user through System Manager by editing the user's record. Press 2 until you get to the Alias support screen. On this screen, is the alias name the user has chosen. If the field is blank, the user has not defined an alias.

If you are editing the user record and you press 2 several times but do not see the Alias support screen, chances are you have not installed the Alias PSA. To make sure you have installed the PSA, check the list of installed TPA Areas in *System Manager | User Info File Maintenance | List Installed TPA Areas*. When you select this option, you should see a TPA called PCBALIAS. If you do not, you have not installed the alias PSA yet.

Aliases are only active when a user joins a conference that has been defined to allow aliases. In the rest of the conferences, the user's real name is always used. Of course with users switching between their real name and alias name upon joining conferences, hiding the name change becomes important to protect the identity change.

To help protect the alias, there is an option in *PCBSetup | Node Configuration* which asks `Show ALIAS Names in WHO Display`. If you answer `Y` to this question, PCBoard will modify the node display to show that a user is logging in under that node where the name change is occurring. This will remain for approximately one minute before it changes the actual name in the node display. On the other hand, if you answer `N` to this question, real names will always be displayed even when a conference is joined where aliases are allowed.

Two other changes are made in the way PCBoard operates in order to protect the alias identity.

1. While inside a conference where aliases are allowed, the security level requirement for the U S E R S command is changed to become equal to that which is required to use the 7 SysOp function. This enables you to still use the U S E R S command while making it impossible for normal callers to access the command. If users could access the command, they may be able to simply compare logon dates/times to figure out the real name of a particular user.
2. The City/State information normally shown by the W H O user command or the 1 1 SysOp command will not be shown when a user is using an alias. If that information were available to all callers, it would make it easier for other users to figure out the true identities of those using aliases.

When a user has defined an alias either the real name or alias of the user can be used to login to the system. If the user chooses to login using the alias and the conference joined at login is not an alias conference, PCBoard will properly use their real name instead of their alias.

Address

If you want to keep track of addresses for each of your users, install the Address PSA. This PSA, will store lines for the street address, city, state, zip code and country.

If you have the Address PSA installed, new users will be asked to provide address information when the registration questions for creating a new account on the system are asked. If you have existing users on your system who have not entered their address information, you can tell your users to use the W user command to update their address information, or you can use a PPE that is designed to assure that every user has a valid address. On Salt Air (the support BBS for Clark Development) you will find a PPE which will do this under the filename GET-ADRS.ZIP.

If you clear out any of the PCBTEXT records between 699 and 704 with MKPCBTXT, those questions will not be asked. This would be useful if you want to eliminate a question such as `Country` from being asked.

The address information can be edited via the W user command or by loading System Manager and editing the user record (Pressing 2 to switch between views). When you use the 7 SysOp Command to edit a user record, you can view but not change the address information.

Password Changing

When you install the Password Changing PSA, you add the capability to force your callers to change their password over the period of time that you specify.

PCBoard keeps track of the last date the password for each user was last changed, the number of times it has changed, and the last three passwords used. By accessing the last three passwords used, the user is prevented from toggling between two or three passwords. In addition, the passwords chosen must contain the minimum number of characters as defined in *PCBSetup | Configuration Options | Limits* and must not contain either the first or last name of the user.

If you load System Manager and access a user's record, you can look at the password information by pressing 2 until you get to the Password Form screen. On this screen you will see information such as the last three passwords used, the last date the password was changed, etc. The *Expiration Date* is used to determine when this particular user needs to change their password. When the password is expired, the user cannot login to the system until a new valid password is entered. The following restrictions are in place for the new password:

- The new password must meet the minimum length requirements specified in *PCBSetup | Configuration Options | Limits*.
- Users may not use their name as their password. For example, a user named James Brown could not use either `James` or `Brown` as his password.

Of course, if you want to expire a particular user's password, edit their user record so the password expiration date is equal to or earlier than today's date.

You can control how often a user needs to change their password by changing the `Number Days Before FORCED Password Change` in *PCBSetup | Configuration Options | Limits*. If you want to temporarily disable the Password Changing PSA but plan on enabling it at a later date, enter a value of 0 in this field to disable the Password Changing support.

You can warn callers of the upcoming need to change their password so they are not caught totally off-guard by the request to change their password. In *PCBSetup | Configuration Options | Limits* the following field can be changed:

```
Number Days to Warn Prior to FORCED Change
```

Set this value to the number of days you want to warn the caller before their password will expire. When users log into the system during the warning period, record number 711 in your PCBTEXT file will be displayed to let them know their password is about to expire.

In recent years, automated calling to pick up messages or files has become very popular. Since PCBoard normally displays a simple ong-line message to notify the user their password is about to expire, some of your users may miss the warning. If this becomes a problem on your system, you may want to modify this PCBTEXT record so that it displays a file (which can be multiple lines), or even a PPE which can leave a personal message so they could pick up the notification in their automated mail or file runs.

Whatever warning method you ultimately choose, it should be as obvious as possible. Otherwise, your callers who use login scripts, automated calling programs, and such may wonder why they cannot log into the system properly. For this very reason, it might be advantageous to give a two to three week password expiration warning.

Verification

Verification support adds one 25 character field you can use to store information to help determine the validity of a particular caller. If you have the verification PSA enabled, new users will be required to answer the registration question. By default, this question will ask for the maiden name of the caller's mother. However, you can change this to ask any question you would like by using MKPCBTXT to edit record #706 in PCBTEXT.

Once the new user enters the information, it cannot be modified. In fact, users cannot even view the information. The only one who can change or view the verification field is you. There are a lot of things you could use this verification field for. The following is just a short list:

- **Birth date**. You could modify record #706 in PCBTEXT so the user is asked for their birth date. When you view a user record with the 7 SysOp command you would be able to quickly and easily reference what a particular user entered for their birth date.
- **Password change request**. When a user fails to enter the right password for login, you have the capability of enabling the user to leave a comment. If you have that option enabled in *PCBSetup | Configuration Options | System Control*, you may want to use a PPE that could ask the user to enter their verification information. If they enter the right information you could use that same PPE to change their password.
- **System security**. If the information you distribute on your system requires you to be conscious about system security, you can use the verification field and a PPE to ask each user to enter the data in the verification field at each login. In essence, this will give the user a second password and would greatly diminish the capability of hacking a user account by the brute force method.

Caller Statistics

If you enjoy gathering statistics about your callers, you may want to enable the Statistics PSA. PCBoard will keep track of how many times a user has connected to the system, what speed they connected at, and numerous other pieces of information. The following is a sample of the Statistics View available when you are editing a user record in System Manager:

```
                    Edit User Record (Statistics Form)Record      1 of  10804

 Name        : CORY ROBIN

 First Date On : 09-20-95
 Last Date On  : 01-06-97
 Num Times On  :    35413

 # Times Paged Sysop    :     0            # Times On at   300  :     0
 # Times Group Chat     :   143            # Times On at  1200  :     0
 # Comments to Sysop    :     0            # Times On at  2400  :     2
 # Messages Left        :       5998       # Times On at  9600  :    49
 # Messages Read        :    1006085       # Times On at 14400+ :   790

 # Security Violations  :    43
 # Un-Reg Conf Attempts :     0
 # Password Failures    :     4
 # Dnld Limit Reached   :     0
 # Dnld File Not Found  :    50
 # Upld Verify Failed   :     1

 ESC=Exit    PgDn=Forw    PgUp=Back    Ctrl-PgDn=Forw20    Ctrl-PgUp=Back20
```

To view this information for a particular user, load *System Manager*, select *Users File Maintenance*, and *Edit Users File*. Next, press 2 until you see the Statistics Form screen.

The following list describes each of the statistics that are tracked:

First Date On: This date will be equal to the date the user first logged into your system or the date you added the Caller Statistics PSA if the account already existed.

Last Date On: The last date the user logged into your system. You can also see this date on the Long Form screen.

Num Times On: The total number of times this particular caller has accessed your system. This information is also available on the Long Form screen.

 # Times Paged Sysop: This field will record the total number of times this user has paged the SysOp to chat. It does not matter if the page was answered or not -- all attempts are recorded.

 # Times Group Chat: If a user uses group chat with others on the system, the total number of chat sessions the user has participated in will be recorded in this field. SysOp chats are not included in this total.

 # Comments to Sysop: This field records the total number of comments the user has left to the SysOp using the C user command. If the user begins a comment but aborts the message, it does not count as a comment to the SysOp.

 # Messages Left: This field stores the total number of messages the user has entered. You should be aware that while PCBoard may update this statistic, off-line mail doors may not.

 # Messages Read: Displays the total number of messages the user has read on your system. While PCBoard will update this field, some off-line mail door programs may not.

 # Security Violations: You can easily see who may be trying to access restricted functions on your system, by watching this field. It will total up the number of times a user has attempted to access a command which is not available to the user's security level.

 # Un-Reg Conf Attempts: Records the total number of attempts to join a conference the user is not registered to join.

 # Password Failures: Displays the number of times the wrong password was used at login. If you keep tabs on this statistic, you may be able to catch someone who is trying to hack into a given account.

 # Dnld Limit Reached: Records the total number of times the user has exceeded the defined download limits. Any file that will exceed the user's ratio or daily download limit is recorded as a violation.

 # Dnld File Not Found: If the user attempts to download a file, but the filename could not be found on disk, it will be recorded in this field.

 # Upld Verify Failed: After uploading a file, PCBoard will test the file via PCBTEST.BAT unless you have disabled upload testing. If the uploaded file fails the integrity tests, it will be recorded in this field.

 # Times On at 300: Displays the total number of times the user connected at 300 bps.

 # Times On at 1200: Displays the totcl number of times the user connected at 1200 bps.

 # Times On at 2400: Displays the total number of times the user connected at 2400 bps.

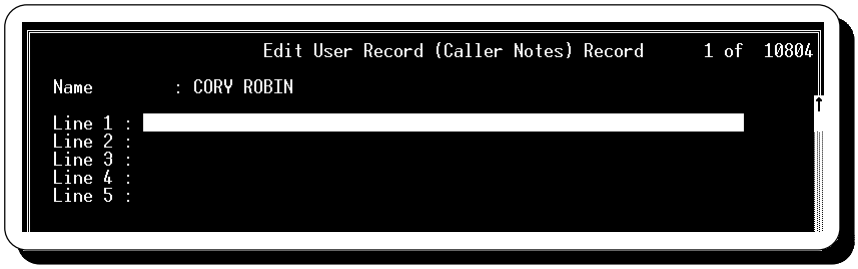
 # Times On at 9600: Displays the total number of times the user connected at 4800, 7200 or 9600 bps. All three speeds are shown in this field, because they are all only possible with 9600 bps modems.

 # Times On at 14400+: Displays the total number of times the user connected at 12000 bps or higher. The reason 12000 bps is included in this statistic is because it is a fall-back speed for 14400 connections.

All of these statistics are stored in your USERS.INF file. Therefore, if you lose your USERS.INF or it becomes corrupted for some reason, you risk the chance of losing your statistics. In addition, you can lose your statistics if you re-create your USERS.INF file via *System Manager | User Info File Maintenance | Create User Info File*.

Caller Notes

If the 30 characters allocated in comment 2 of the user record is insufficient, install the callers note PSA. This PSA allows an additional 5 lines of 60 characters each to be entered as notes.



As you can see there is plenty of room to leave comments about any user on your system. The notes section provides a good place where you can enter things you want to remember about a particular user. The user cannot edit or even view these notes.

Credit Support

The accounting functionally added into PCBoard when you install this PSA is **extremely flexible**. From the surface, you may look at it as a simple accounting system where a user has an account balance and certain items are charged for.

The possibilities with the accounting system are numerous and therefore an entire chapter has been dedicated to the accounting system. Please refer to the *Accounting System* chapter of this manual for additional installation and configuration information.

QWK/Net Support

There are two major changes in regards to the operation of PCBoard when this PSA is installed: 1) Users get the opportunity to set how many messages they want per packet or per conference instead of relying on what the SysOp has set. 2) Users may obtain *net status* (via the N conference flag) in a conference. With this change in status, a user may use the `QWK NET` command to exchange messages with another system.

As far as users are concerned, they are given more control over the maximum size of file attachments to automatically include in a packet and more as this PSA screen capture shows:

```
                    Edit User Record (QWK/Net Form) Record      1 of  10804

 Name        : CORY ROBIN

 Maximum Messages in QWK Packet  (0=Setup Defaults)   :  100
 Maximum Messages Per Conference (0=Setup Defaults)   :  100

 Download Attach Limit for Personal Messages (0=None) :          0
 Download Attach Limit for Public Messages   (0=None) :          0
```

Viewing PSA Information

There are two methods of viewing information on the various PSAs you have installed. From within System Manager each PSA has a separate screen. These screens can only be viewed while editing a user record. Press 2 to switch between the various screen views. Normally, the Short Form, Long Form, and Conference screens are the only screens available. However, when you install a PSA, additional screens will become available when you press 2 . When viewing PSA information in System Manager, you can also edit it.

While inside PCBoard, you can also view selected PSA Information with the 7 SysOp command. All PSA information with the exception of the Password Changing, and Caller Statistics can be viewed with the 7 command.

```
13: SEAN POPHAM              CLARK DEVELOPMENT        P/W:
D: 801-261-1686  V: 801-261-8976   LD: 01-06-97  LT: 15:41  EX: Y  PR: N
Sec: 250  E/Sec: 250  TO: 219  PL: 23  UP: 0  DN: 2  ET: 306  DL: N
E/Date: 00-00-00  D/D: 0  T/D: 1,378,934  T/U: 0
C1:                                C2:
ST#1: Clark Development Company
ST#2: 3950 south 700 East
CSZC: SLC, UT  84107  SUPPORT
NOTE: note1
NOTE: note2
NOTE: note3
NOTE: note4
NOTE: note5
```

This is the information that is displayed via the 7 SysOp command if you have all of the PSAs installed and there is information in each PSA. Notice, that only the Alias, Address, Notes, and Verification information is displayed. To edit this information or to view the rest of the PSA information, use System Manager.

Removing An Installed PSA

To remove a PSA you have installed, you will need to select *System Manager | User Info File Maintenance | Remove PSA From User Info File* simply select the PSA you wish to remove. If the PSA does exist, you will be asked to confirm that you really wish to delete the PSA. If the PSA was not installed, you will receive an error message notifying you that you attempted to remove a PSA which is not installed.

Command Line Parameters

Most of the functionality of System Manager can be accessed directly by using command line parameters when you load PCBSM.EXE. Since you can access most common functions of System Manager from the command line, you can setup your event or other batch files to perform these tasks without actually having to move around in the menu structure or even be present to fill in all of the options.

To specify a command line parameter, add it after PCBSM.EXE as the following shows:

```
PCBSM.EXE /ADJUST;byteratio
```

In this example, the *`/ADJUST`* is the **command line parameter** and *`byteratio`* is a **sub-parameter** used to specify more information or to further clarify the command line parameter. As shown in the previous example, separate sub-parameters with semi-colons (*`;`*). You will learn more about /ADJUST in the detailed explanations of the command line parameters that follow.

/ADDTPA

This particular command line switch is designed for third party authors to use so they can easily install a TPA for their software without making you do all the hard work. This is the format of the command line:

```
/ADDTPA;[App_Name];[Version];[Static];[Dynamic];[Keyword]
```

App_Name	The name of the application
Version	The version number to install (digits only)
Static	Represents the static size (in bytes) to allocate or 0 for none.
Dynamic	Represents the number of bytes to allocate for each conference or 0 for none.
Keyword	The keyword for the TPA.

For additional information on installing a TPA, please see *Add/Update Third Party Application* earlier in this section.

Example

```
PCBSM /ADDTPA;mail;10;128;1;mail
```

Add a TPA with an application name of Mail and a version number "10". 128 bytes will be reserved for each user on the system with an additional 1 byte per conference. Finally, the

/ADJUST

This command line parameter gives you the ability to adjust the security level of users based on their upload and download activities. You can adjust based on their file or byte ratio, or by the number of file transfers the user has completed. To control which method you will use to adjust their security levels, use the following sub-parameters.

fileratio

This sub-command adjusts user security levels using the file ratio table created in *System Manager | Users File Maintenance | Adjust Security Levels | Create Up/Dn File Ratio Table*.

Using this sub-parameter performs the same action available via *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Up/Dn File Ratio*.

byteratio

This sub-command will adjust the security levels of users by using the byte ratio table you have created in *System Manager | Users File Maintenance | Adjust Security Levels | Create Up/Dn Byte Ratio Table*.

Using this sub-parameter will perform the same action available via *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Up/Dn Byte Ratio*.

uploads

If you use this sub-parameter, the security levels of the users on your system will be adjusted based on the table you have setup in *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Upload Table*

Using this sub-parameter is identical to *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Number of Uploads*

downloads

If you use this sub-parameter, the security levels of the users on your system will be adjusted based on the table you have setup in *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Download Table*

Using this sub-parameter is identical to *System Manager | Users File Maintenance | Adjust Security Levels | Adjust by Number of Downloads*

print

Use this to specify you wish to print any users who have their security level changed. The output will go to the printer defined in System Manager. This is the only sub-parameter in this section that you can combine with others. For example, the following is perfectly valid:

```
PCBSM /ADJUST;byteratio;print
```

However, this example is not:

```
PCBSM /ADJUST;byteratio;fileratio
```

Example

```
PCBSM /ADJUST;byteratio;print
```

This command line would load System Manager and adjust security levels based on the byte ratio of each user. All users who have their

/COPYEXPIRED

This command line parameter will change the normal security level of users whose subscription has expired to that of their expired security level. This type of change is most helpful when you do not plan on renewing the subscription for a particular user. Usually, the user's normal security level will remain unchanged so that when they renew their subscription they will retain their old access. Using this parameter is the same as

selecting *System Manager | Users File Maintenance | Adjust Security Levels | Change Security to Expired Level.*

print

This is the only sub-parameter you may specify. If you use it, any users who have their security levels changed will be printed to the printer defined in System Manager.

Example

```
PCBSM.EXE /COPYEXPIRED;print
```

This example will change the security level of any user whose subscription has expired. The user's normal security level will be set to equal their expired security level. In addition, because the print sub-command was specified, any user who has their record

/EDIT

Use of this command line parameter provides a fast way to bring up a user's record without having to go through the initial System Manager menus.

```
PCBSM /EDIT:[first];[last];[other]
```

first This parameter is equivalent to the user's first name.

last Enter the user's last name (if they have one) in place of this parameter.

other If the user has a third name such as JR., III, or otherwise, use this parameter to enter the remaining portions of their name.

NOTE: When entering the name after /EDIT: you cannot enter any spaces in the user's name. Instead always use ; (semi-colons) in place of spaces.

Example

```
PCBSM.EXE /EDIT:JOHN;SMITH;JR
```

This example loads System Manager and immediately brings up the user record for JOHN SMITH JR.

/EXPIRE

This command line parameter will allow you to change the expiration date of a group of users. The group of users who have their expiration date changed is based on either a range of normal or expired security levels.

normalsec

If you use this sub-parameter, the security levels you specify using the **lowsec** and **highsec** sub-parameters will be based on the normal security level of the user. You must select either this or the **expiredsec** sub-parameter to tell System Manager whether it should use the regular or expired security level.

expiredsec

If you use this sub-parameter, the security levels you specify using the **lowsec** and **highsec** sub-parameters will be based on the *expired* security level of the user. You must select either this or the **normalsec** sub-parameter to tell System Manager whether it should use the regular or expired security level.

lowsec:[security level]

This sub-parameter will specify the lowest security level for which to adjust the expiration date. Remember that the security level you specify will be based on the normal or expired security level, depending on whether you used the **normalsec** or **expiredsec** sub-parameter. Replace **[security level]** with the actual security level (e.g., **38**). This sub-parameter is required.

highsec:[security level]

This sub-parameter will specify the highest security level for which to adjust the expiration date. Remember that the security level you specified will be based on the normal or expired security level, depending on whether you used the **normalsec** or **expiredsec** sub-parameter. Replace **[security level]** with the actual security level (e.g., **75**). This sub-parameter is required.

date:[date]

You can modify the expiration dates for users specified via the *lowsec* and *highsec* parameters, either by a entering a specific date or by increasing the current expiration date by a set amount of days. If you use this parameter, the user's expiration date will be set to the calendar date entered here. The date you specify must be in the **MMDDYY** format where **MM** is the month, **DD** is the day, and **YY** is the year. You are required to use either this sub-parameter or the **days** parameter but you may not specify both.

days:[number of days]

You can modify the expiration dates for users specified via the *lowsec* and *highsec* parameters, either by a entering a specific date or by increasing the current expiration date by a set amount of days. If you use this parameter, the user's current expiration date will be increased by the number of days you specify. You are required to use either this sub-parameter or the **date** parameter but you may not specify both.

print

This parameter prints information about users whose expiration dates have been modified. This report is printed to the location you specified in *System Manager | Define Printer Port*.

Example

```
PCBSM /EXPIRE;normalsec;lowsec:30;highsec:40;days:30
```

This example will add 30 days to the subscription of every user

/EXPSECURITY

This parameter performs the same function as the /SECURITY parameter, but the **expired** security level is used instead of the normal security level. For example, using this parameter will prove useful if you have a group of users with **expired** security levels between 30 and 40 but realize you can save time by consolidating them into one single **expired** level.

lowsec:[security level]

Specifies the lowest expired security level of the range you wish to adjust. You need to also use the *highsec* sub-parameter to specify the highest number in the range of expired security levels. Any user record with an expired security level that is either equal to or between the *lowsec* and *highsec* sub-parameters will have its security level adjusted. Replace **[security level]** with an expired security level between 0 and 255 (e.g., **82**).

highsec:[security level]

Specifies the highest security level of the range you wish to adjust. You need to also use the *lowsec* sub-parameter to specify the lowest number in the range of expired security levels. Any user record with an expired security level that is either equal to or between the *lowsec* and *highsec* sub-parameters will have its expired security level adjusted. Replace **[security level]** with a valid expired security level between 0 and 255 (e.g., **105**).

newsec:[security level]

This sub-parameters defines what the new security level will be for the security levels specified with the *lowsec* and *highsec* sub-parameters. Replace **[security level]** with the actual security level between 0 and 255 (e.g., **35**).

Example

```
PCBSM /EXPSECURITY;lowsec:50;highsec:70;newsec:45
```

Will modify the user records of those who have an expired security level between 50 and 70. Their old expired security

/FILE:[location of PCBOARD.DAT]

System Manager needs to access the PCBOARD.DAT file so it can determine where your user files (and other configuration files) are stored. Normally, System Manager will only look in the current directory for the PCBOARD.DAT file. However, you can tell it where to find the file by using this command line parameter.

Simply replace **[location of PCBOARD.DAT]** with the full path and filename where it can be found (e.g., C:\PCB\PCBOARD.DAT).

Example

```
PCBSM /FILE:H:\SHARE\PCBOARD.DAT
```

The example above will load System Manager and specify that it should use the PCBOARD.DAT located in H:\SHARE to find the information about PCBoard.

/GROUP

This command line parameter will enable you to set or remove the three most commonly used conference flags for a group of users in a range of conferences you specify.

insert

Use this sub-parameter if you wish to *set* the flags for the conference(s) you specify. Using this parameter also requires that you use the **first**, **last**, **lowsec**, and **highsec** parameters.

remove

Use this sub-parameter if you wish to *remove* the flags for the conference(s) you specify. Using this parameter also requires that you use the **first**, **last**, **lowsec**, and **highsec** parameters.

first:[conference number]

This sub-parameter specifies the first conference number in which users will have their flags modified. This is always used in conjunction with the **last** sub-parameter to define the range of conferences to be acted upon.

last:[conference number]

This sub-parameter specifies the last conference number in which users will have their flags modified. This is always used in conjunction with the **first** sub-parameter to define the range of conferences to be acted upon.

lowsec:[security level]

This sub-parameter is used to define the lowest security level which will be affected by the conference registration flag modifications. When used in conjunction with the **first**, **last**, and **highsec** sub-parameters, the group of users who will have their conference registration flags modified is defined.

highsec:[security level]

This sub-parameter is used to define the highest security level which will be affected by the conference registration flag modifications. When used in conjunction with the **first**, **last**, and **highsec** sub-parameters, the group of users who will have their conference registration flags modified is defined.

main

This sub-parameter will either set or remove the conference registration flag (**R**). Whether the flag is set or removed depends on if the **insert** or **remove** sub-parameter is used.

expired

This sub-parameter enables you to set or remove the expired access flag (**X**). If you use the insert sub-parameter, the user will be given access to the conferences specified even if their subscription has expired. If you use the remove sub-parameter, the users will not have access to the conference when their subscription expires (assuming you have subscription mode enabled).

NOTE: Setting the X flag without having an R flag set will lock the user out of a conference. If you really wish for a user to have non-expiring access to a particular conference, you should use the **main** sub-parameter in conjunction with the **expired** sub-parameter.

scan

This sub-parameter sets the scan conference flag (**S**). Setting this flag selects the conference to be included in any message scans performed, and is similar in effect to the user SELECT command. If a user is unable to join a conference where the S flag is set, the flag will be ignored and the conference will not be included in the scan.

reset

If this parameter is specified, the last message read pointer will be set to 0 in the conferences specified by the **first** and **last** parameters.

Example

```
PCBSM /GROUP;insert;first:0;last:2;lowsec:20;highsec:30;main;expired
```

This example registers users who have a security level between 20 and 30 in conferences 0, 1, and 2. In addition to being registered, all users are given access to the conference when their subscription expires because the expired sub-parameter is

/INDEX

Use this parameter to re-index the user file. For this operation all nodes do not have to be down. Normally, you will not need to re-index the user file because PCBoard takes care of maintaining it. However, there are circumstances that can occur in your system configuration (corrupt media, etc.) which may corrupt your index files.

Example

```
PCBSM /INDEX
```

This example indexes the user file making sure that it is current.

/PACK

Packing your user file can do the following for you:

- Insure the USERS, USERS.INF and user index files are all in sync with one another.
- Remove users from your system who have not called in a specified amount of time.
- Delete user records that have been marked for deletion or that have been locked out from the system.

If you do not use any sub-parameters, System Manager will ensure the USERS, USERS.INF, and user index files are in sync with one another. Because this is a global change to the user file, all nodes must be down before selecting this option. Otherwise, System Manger will continually try to open the USERS file.

remove

When this sub-parameter is specified, any user who has been marked for deletion (A -D when editing user records) or who has a security level of 0 (locked out) will be physically removed from the user file. If you do not want to remove users who are locked out from the system so as to prevent them from recreating a new account, use the **lockout** sub-parameter.

da{s:[number of days]

To help keep the size of your user file in check, you may wish to remove accounts of users who have not called in a certain number of days. This sub-parameter gives you this ability. Replace **[number of days]** with the actual number of days to have elapsed since the user's last call to be considered an inactive account which may be purged from the user file.

since:[date]

This sub-parameter will remove users who have not accessed the system since the date you specify. That date you specify must be in **MMDDYY** format where **MM** is the month, **DD** is the day, and **YY** is the year.

expdate:[date]

When you use this sub-parameter, any user who has an expiration date earlier than the one you specify (**MMDDYY** format) will be removed from the user file.

keep:[security level]

This sub-parameter will prevent users who have the security level you specify (or higher) from being removed regardless of any criteria specified.

lockout

When you use this sub-parameter it will prevent any users who have been locked out of your system (security level 0) from being deleted. Use this subparameter in conjunction with the **remove** sub-command.

print

Any users who are removed from the users file will be printed to the location you specified in *System Manager | Define Printer Port*

Example

```
PCBSM /PACK;remove;lockout;days:180
```

The example above will remove any user who has been marked for deletion or who has not called within the last 180 days. Because the lockout parameter is specified, users who are locked out of your system will not be deleted.

/PURGE

This command line parameter is identical to the /PACK parameter except the entire system does not need to be down to pack the users file. This will enable you to perform an online pack of the users file without having to take the entire system down, which becomes increasingly difficult as you add more nodes to your system.

Any user who is online when the pack is performed will not be affected. This means that even if the user would have been packed out with the criteria that you specified, the record will not be deleted because the user was currently online. This should not present much of a problem though, as you can pack the file again at a later time when the user is not online.

NOTE: Online packing is disabled if you have installed the Alias PSA.

Example

```
PCBSM /PURGE;since:010194;keep:100
```

The example above will remove any user who has not called since January 1, 1994. The **keep** parameter will insure that no

/RETRY:[max number of retries]

This command line parameter specifies the number of attempts System Manager should retry on an error. Most commonly, the error will occur when trying to access the USER file when all nodes are not down. However, it is conceivable for the error to be an error reading from disk or other critical error.

When you are using the command line parameters to run System Manager in your event, this command line parameter can prove very useful. With the exception of the /PURGE, /INDEX, /RETRY, and /FILE command line parameters, all others require all nodes to be down before proceeding. If all nodes are not down, System Manager will make continuous attempts every 10 seconds to access the USERS file until it becomes free.

Of course there is a real problem if you are trying to sort the user file in your 1:00 am event but one of your nodes either failed to go down for the event or was improperly configured. If you were not to catch this until 7:00 am the next morning, you could have lost 6 hours of dial-in time. In a situation like this, using the

/RETRY parameter to make 10 retry attempts and then exit to DOS (returning control to your event batch file) is very advantageous.

Example

```
PCBSM /PACK;remove /RETRY:20
```

The example above would pack the users file removing any user that has been marked for deletion or who has a security level of 0. Should an error occur, 20 attempts will be made before

/SECURITY

This command line parameter will allow you to assign a new security level to an existing range of security levels on your system. For example, if you wished to change the security level of everyone between 20 and 30 to simply have security level of 25, use this parameter.

lowsec:[security level]

Specifies the lowest security level of the range you wish to adjust. You need to also use the *highsec* sub-parameter to specify the highest number in the range of security levels. Any user record that has a security level which is either equal to or between the *lowsec* and *highsec* sub-parameters will have its security level adjusted. Replace **[security level]** with the actual security level between 0 and 255 (e.g., **82**).

highsec:[security level]

Specifies the lowest security level of the range you wish to adjust. You need to also use the *lowsec* sub-parameter to specify the lowest number in the range of security levels. Any user record that has a security level which is either equal to or between the *lowsec* and *highsec* sub-parameters will have its security level adjusted. Replace **[security level]** with the actual security level between 0 and 255 (e.g., **105**).

newsec:[security level]

This sub-parameter defines what the new security level will be for the security levels that are specified with the *lowsec* and *highsec* sub-parameters. Replace **[security level]** with the actual security level between 0 and 255 (e.g., **35**).

Example

```
PCBSM /SECURITY;lowsec:32;highsec:42;newsec:58
```

Would change the security level of any user with a security level

/SORT

Sorting the user file gives you a quick method to access information. For example, if you want to find out who has uploaded the most to your system, you can sort the user file by total number of bytes uploaded. When a user file is sorted, you have all of the users in order based on how many bytes they have uploaded. You can sort on a single field or with multiple fields.

When you sort on a single field, select an item such as the number of times a user has called the system. System Manager will sort users by the total number of times they have called. If two users have called the

same number of times, no attempt is made to put those users in any particular order. If you wish to sort these users by name, do a multi-field sort.

Multi-field sorts, will sort any of the following fields:

- Security level
- Times on
- Files download
- Files uploaded
- File ratio
- Bytes downloaded
- Bytes uploaded
- Byte ratio

When using a multi-field sort by security level and two or more users have the same security level, System Manager will sort these users who have the same security level alphabetically by name. Once the users are sorted by name, it will move on to the next security level. As a quick example, let's assume you have 5 users in your system:

```
JOHN SMITH        Security: 10
JIM JONES         Security: 20
SPENCER KORM      Security: 20
BILL THECAT       Security: 0
PAUL BRAINERD     Security: 20
```

If you were to do a single field sort, the users will most likely end up in this order:

```
BILL THECAT       Security: 0
JOHN SMITH        Security: 10
JIM JONES         Security: 20
SPENCER KORM      Security: 20
PAUL BRAINERD     Security: 20
```

Notice that the security level 20 users are not sorted by name. While this does not present much of a problem for 5 users, it could be very annoying if you have 30,000 users on your system.

If you do a multi-field sort based instead on security level then on name, the five users will be sorted in the following order:

```
BILL THECAT       Security: 0
JOHN SMITH        Security: 10
JIM JONES         Security: 20
PAUL BRAINERD     Security: 20
SPENCER KORM      Security: 20
```

With the exception of the **prireverse** and **secreverse** sub-parameters, all parameters specify types of sorts you can perform. All of these sorts, use the name of the user as the secondary sort-field. Therefore, it is not necessary to specify what you want to use as the secondary sort field. Use any of the following parameters for multi-field sort:

- **security** - Security level
- **timeson** - Times on
- **dlfile** - Files download

- **ulfile** - Files uploaded
- **fratio** - File ratio
- **dlbyte** - Bytes downloaded
- **ulbyte** - Bytes uploaded
- **bratio** - Byte ratio

The following is a list of the many sub-parameters you can specify for this parameter:

name	Sort by user name field.
password	Sort by password field.
dataphone	Sort by the business/data phone number field.
homephone	Sort by the home/voice phone number field.
expdate	Sort by the expiration date of each user.
usercomment	Sort by the comment #1 field.
sysopcomment	Sort by the comment #2 field.
city	Sort by the city field.
security	Sort by the security level field.
timeson	Sort by the number of times the user has successfully logged in.
dlfile	Sort by the number of files downloaded.
upfile	Sort by the number of files uploaded.
fratio	Sort by the file ratio.
dlbyte	Sort by the number of bytes downloaded.
upbyte	Sort by the number of bytes uploaded.
bratio	Sort by the byte ratio.
reverse	This sub-parameter is used when you sort by a single field. If you use it, the records will be sorted in reverse order. For example, if you sort by security level, the highest security level will be first in the user file and the lowest security level will be the last record in the file.
prireverse	This sub-parameter is used in conjunction with multiple field sorts. Normally sorts are performed in ascending order. When you use this parameter, the primary sort field will be sorted in descending order.
secreverse	Since the only field you can use as a secondary field is the user name, this will cause any duplicates caught by the first sort field to be sorted by first name (then last name) in reverse order. This means that William Plasger will be placed before Andrew Leaver.

Examples

```
PCBSM /SORT;security;reverse
```

Sort the user file by security in reverse order placing those with the highest security level at the beginning of the file.

```
PCBSM /SORT;dlbyte;prireverse
```

Sort the user file by the number of bytes downloaded (in reverse order) placing those who have downloaded the most towards the beginning of the user file. If two users have the same number of bytes downloaded, they will be sorted by name to determine who

/STANDARDIZE

Use this command line parameter if you plan on sorting your users file by phone number, or if you desire a more "standard" looking phone number format for all of your users. When this parameter is specified, System Manager will strip all of the non-numerical data from the phone number fields and reformat it into the following format:

```
999 999-9999
```

If a number is shorter than 10 digits, System Manager will begin formatting from the right. This means that if a user enters 5551212 for the phone number, it will be formatted as:

```
555-1212
```

Example

```
PCBSM /STANDARDIZE
```

Adjust the home/voice and business/data phone number fields to a standard 999 999-9999 format.

11

PCBFiler

PCBFiler is designed to help you maintain the file directories on your bulletin board system. With PCBFiler, you can move/copy files between file directories and conferences. In addition, you may also create complete file lists and even more.

Accessing PCBFiler

There are several ways to access PCBFiler. Simply pick the method corresponding to what you are doing at the time. The following describes the various ways PCBFiler can be loaded.

At a DOS prompt: Because PCBFiler is an executable file, you can load it from the DOS command line by changing to a directory which has a PCBOARD.DAT file in it and typing `PCBFILER` on the command prompt. The only way to pass command line parameters to PCBFiler is via the DOS command prompt. See *Command Line Parameters* towards the end of this chapter for additional details.

From the call-waiting screen: Simply move the selection bar over to the box which shows *PCBFiler* and press R .

While logged into PCBoard: While logged in locally to PCBoard, press A -D to load PCBFiler. This method is disabled when the /LOCALON parameter for PCBoard is used.

From System Manager: From the Main Menu in System Manager, select *Directory Maintenance (PCBFILER)* to load PCBFiler.

Explanation of PCBoard's File System

If you understand how PCBoard's file system works, it will be easier to setup your system to work the way you want it to work. The following is a brief explanation of all files that are relevant to the file directory system.

DIR: This is the file displayed to users when they select F from your main menu to view the file directories on your system. In essence, this is a text file which lists what each file directory on your system contains so users can select the file directory they wish to view.

DIR.LST: This is the file PCBoard uses to determine where the file descriptions are stored, and the description for the directory contents. PCBFiler uses DIR.LST to determine where the files are stored on your hard drive or similar device. PCBFiler also determines what method to use when you sort your directories by reading DIR.LST.

DLPATH.LST is a file which contains a list of paths and/or index files PCBoard will search for files a user requests to download. Only the paths listed in this file are searched when a user requests a download.

There is no direct relation to downloading and the description of the files. The descriptions for the files are merely a convenience to the user so they know what files are on your system.

The PCBFiler Menu

When you load PCBFiler, the main menu is displayed on the screen. From the Main Menu, you can edit directory files, configure the PCBFiler options, and perform other tasks related to maintaining file directories. The following describes each menu option.

Edit DIR Files

This menu option enables you to edit the file directories on the system. When editing file directories, you can move, copy, or delete the files that are listed. When this menu option is selected, the following choices are presented:

Main Board Directories

This menu option allows you to edit the file directories for the Main Board Conference (conference #0). To edit conference directories, select *Conference Directories* instead. From this point on, the screens are exactly the same as if you selected *Conference Directories.* Therefore, see the following section, *Conference Directories*, for more information.

Conference Directories

If you have conferences in which files are available for download, this option enables you to access these conferences. You are shown a list of available conferences. After you select a conference, you are presented with a new screen.

This new screen informs what the available directory numbers are for the current conference. This information is determined by examining the DIR.LST file for each conference. Private uploads can be viewed by selecting directory 0. If unsure of the file directory number to edit, press 2 to see a list of directories defined in DIR.LST. Use your cursor keys to move the highlight bar. When the directory you want to edit is highlighted, press R to select it.

You may notice that PCBFiler lists one more directory than you have defined in your DIR.LST file. If you have answered *N* to the *Make All Uploads Private,* PCBoard adds your public upload directory as the last directory in the conference. If you have defined 14 directories in DIR.LST, the public upload directory is listed as directory 15.

Once you select a directory to edit, you are shown some information about that directory. The following is a sample:

```
Selected DIR Text File: C:\PCB\GEN\UPLOAD
Attached Subdirectory : C:\PCB\UPLOAD\
DIR File Description  : Main Board upload
```

Selected DIR Text File: Displays the location of your description file. This is the file you entered in the *DIR Text File Name & Path* field in DIR.LST.

Attached Subdirectory: This field should contain the disk directory where the majority of files are physically located for this file directory. If you have not specified a subdirectory in your DIR.LST file, you are informed there is no attached subdirectory.

DIR File Description: In DIR.LST you are given over 30 characters to describe the file directory. For example, you may have entered something like *Miscellaneous Screen Utilities*. Whatever is entered in that field will be displayed here.

Next, you asked two questions. The following describes each question:

Include files found on DISK that are not listed in the DIR file: There are two valid responses to this question. The valid responses are:

N Only files which have descriptions are listed in the editor.

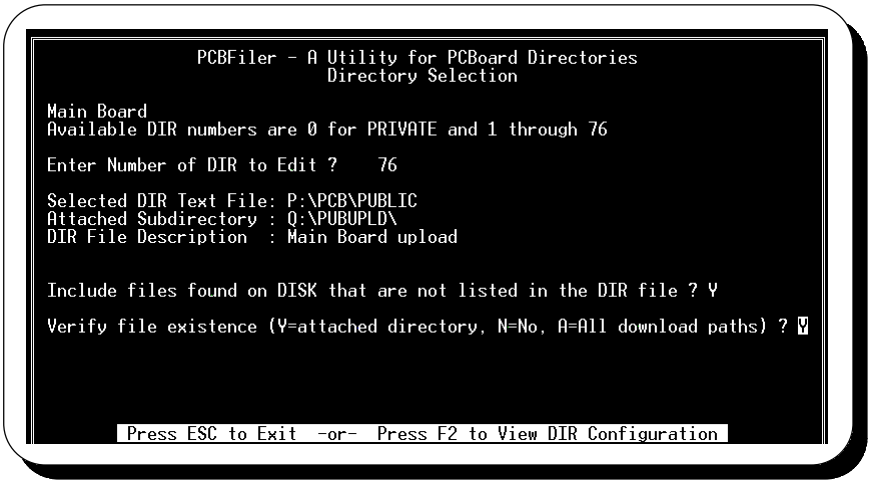
Y All files in the attached subdirectory are listed in the editor. The files that do not have descriptions have *DSK* or *D* next to each filename.

Verify file existence: There are three valid responses to this question—Y, N, and A.

A Verify all files in the directory listing to see if the actual file exists in one of the directories listed in DLPATH.LST. Use this option to make sure a file can be downloaded. If the file is not found in any of the directories listed in DLPATH.LST, the editor displays notification to the left of the filename. Selecting this option significantly increases the time it takes to load the DIR file into the editor.

N Do not verify any of the files listed in the directory listing. Select this option to do some quick editing of a directory.

Y Verify all files listed in the directory listing to see if they exist in the directory defined as the *Attached Subdirectory*. PCBFiler will report if the file actually exists when you are in the editor. Depending on how many files you have in the file directory, it may significantly increase the time it takes to load the file into the directory editor.



Once these questions are answered, the directory file is loaded and you in what is known as the directory editor. For instructions on how to use it, see the section titled *The Directory Editor*.

Off-Line Directories

If you select this option, you are immediately taken into the directory editor and all of the files stored in your off-line directory are displayed inside the editor. Since there is no description file associated with the off-line file directory, you do not see any descriptions. See *The Directory Editor* and *Maintaining Files* section of this chapter for additional information.

Undo last change

Whenever you perform operations in the directory editor (e.g., moving or copying these files), PCBoard records the changes made in case you need to undo them. Only one level of undo is maintained. To undo the most recent changes, select this menu option.

If you moved files, PCBoard moves both the descriptions and files back to the original directories. If you copied files, the copies of the file and description that were made are deleted. However, if you deleted files, only the description is recovered because it cannot undelete files.

Sort all DIR Files

This option allows you to sort file directories in all conferences using the sort method specified in DIR.LST and in the conference configuration (for the upload directories). Once this option is selected, you are asked if only the upload directories of each conference should be sorted. If you select only the upload directories, both the private and public upload directories for each conference are sorted (if they exist).

Create Files List

To compile a list of all files available in a particular conference, use this menu option. PCBFiler creates a file called *PCBFILES.LST*. This file contains a compilation of all of the directories in the conferences you defined in the PCBFiler Defaults menu option. PCBFiler puts a header before each file directory so your directories can be easily distinguished. The header has the following format:

```
[Conf_Name] : [Directory_Number] ) [Directory_Description]
=========================================================
```

where *[Conf_Name]* is the name of the conference, *[Directory_Number]* is the number of the file directory and *[Directory_Description]* is the description of the file directory. For example, you may see the following in your PCBFILES.LST file:

```
Main Board: 1) Sample Files
===================================

SAMPLE1.FIL    168046  12-28-90  Filename and description holder
SAMPLE2.FIL      2662  12-10-92  No description available
TEST3.TXT        2839  04-01-92  No description available (yet)
```

When you create a file list using this menu option, PCBFiler strips all @X color codes in the description file, and automatically includes any files pointed to by %filename.

Scan for Duplicate/Missing Files

Periodically you may want to scan your file system for duplicate or missing files. This menu option prints a comprehensive report to a file called *ANALYSIS.RPT* in the default directory. Use this report to help fix problems in your setup or to eliminate redundancy. The duplicate/missing report contains the following information:

Conferences Included in Scan: This lists all conferences you have told PCBFiler to include in the missing/duplicate scan. This can be changed in *PCBFiler | Defaults Page 2*.

Disk directories scanned: Lists the disk directories that were scanned for duplicates or missing files. This information is obtained from DLPATH.LST in each conference scanned.

DIR files scanned: Lists the directory description files (sometimes called DIR files) that were scanned for duplicates or missing files. This list comes from each conference's DIR.LST.

Files listed in DIR files but missing from Disk: The files listed in this section were listed in a directory description file, but when the entries in DLPATH.LST were scanned, the corresponding file was not found on disk. This means the file is not available for download.

Duplicate Files found in Disk subdirectories: The files listed in this section were found in more than one subdirectory. To determine this information, PCBFiler scans the DLPATH.LST file for all conferences. If the file is available in more than one subdirectory, it is a duplicate.

Files found on Disk but missing from DIR files: These files were found to be downloadable but no descriptions were found for the files. The report entry shows the filename, size, date, and path to where the file is located.

Duplicate Files found in DIR files: If a file has descriptions in more than one directory, it is listed in this section of the report. You are shown what directory numbers each description number is in so you may fix the problem if necessary.

Similar Files found in DIR files: A common problem in file libraries is tracking and deleting older versions of files. The filenames for different versions of the same program are different because of the version number designation in the filename. This section of the report shows you filenames that have similar base filenames. By checking the descriptions of matching files in the file directories, you can determine if you have more than one version of the same file online.

Locate File Spec on Disk

This menu selection is almost identical to the L user command that can be used to search for filenames matching a particular filename or wildcard. PCBoard does not search the file directories. Instead, it searches the download paths in all conferences to look for matching files. This menu option is useful if you are looking for a file you think might be available for download but are not sure where it can be found on your system.

The following lists the differences between this menu option, and the L user command.

- PCBFiler searches the disk instead of the description files.
- All conferences are searched
- PCBFiler searches through all subdirectories listed in the DLPATH.LST for each conference to find a match.

When this option is selected, you are asked for the filename or filespec to search for. Enter any valid filename (including wildcards). Once you have entered the filename to search for, PCBFiler will begin scanning all conferences for matches. If a match is found, the drive, path, and filename will be displayed to help you locate the file on disk faster.

```
                    Scan Download Paths for P*.*

Main Board conference downloads
.\WORK\PCBOARD.ZIP
Q:\FILES\PPEMENUS\P.ZIP
Q:\FILES\TIMDOORS\P-BANK.ZIP
Q:\FILES\RIPUTLS\P152-153.ZIP
Q:\FILES\UPLDUTLS\P205.ZIP
```

Notice how the scan begins with the Main Board conference. All matches show the complete path and filename where the file can be found. Files are listed even if they do not have descriptions written for them. To see only files with descriptions, use the *Locate File Spec in DIR Files* menu option instead.

Locate File Spec in DIR Files

If you select this menu option, you are asked for a filename to search the directory descriptions for. To help find multiple files, specify wildcards. PCBFiler scans all directory description files in all conferences for a match. If a match is found, the description is displayed on the screen as shown in the following example:

```
                         Scan DIR files for P*.*

Conf: 0    Num: 1    PCBoard DEMO Software & Text Files
PCBCOMP.ZIP      2948  12-01-93  PCBoard Comparison Guide
                                  Use this to compare other BBS packages wit
                                  PCBoard.

PCBDEMO.ZIP   1295543  12-19-96  PCBoard v15.2 DEMO -- Fully functional
                                  demonstration copy of PCBoard Bulletin Boa
                                  software.  While there are some built in
                                  limits, such as in the number of users,
                                  messages, conferences and directories, the
                                  DEMO is largely functional giving you a
                                  pretty good feel for PCBoard v15.2 and how
                                  operates.  Copyright (C) 1989, 1994 Clark
                                  Development Company, Inc.
PCBFILES.ZIP   591661  01-06-97  Complete List of All Files on Salt Air
```

The scan begins in the first file directory of conference 0 (the Main Board) and proceeds to scan all file directories in all conferences. Any matching files show the complete file description including the date, file size, and filename.

Locate Text in DIR Files

To search the descriptions of all files in all conferences, select this menu option. You are asked for the text to search for. Once you type in the text, PCBFiler begins searching all files in all conferences for the text entered. As with just about any other text searching function associated with PCBoard, you can specify Boolean operators to help narrow your search.

```
                         Scan DIR files for HELP

Conf: 0    Num: 1    PCBoard DEMO Software & Text Files
Conf: 0    Num: 2    PCBoard Program Files
Conf: 0    Num: 3    Multi-language Files & Menus
ARABIC.ZIP      36466  02-10-95  arabic Pcbtext , with arabic software , if
                                  you find any thing that need fixing please
                                  let me know , i am working on the mneus an
                                  the help files to ,,this is only for PCBoa
                                  Bulletins
                                  Uploaded by: Fahad Al-Afaliq
FLAGHLP.FRE      1288  09-23-93  This is the FRENCH translation of the help
                                  text to be used with FLAG21.ZIP
                                  Uploaded by: Olivier Junod
```

Notice that the description for CALGUIDE.ZIP contains the word `HELP` on the fourth line of the description. Since all file directories were being scanned for the word `HELP` and this particular description has the word `help`, the entire file description is displayed.

Edit PCBFiler Defaults Page 1

There are numerous configuration options you can configure to help control how PCBFiler operates. There are two menu options (Defaults Page 1 and Default Page 2). This section describes each of the options available in Page 1 of the defaults.

Default to 50-line mode in DIR File Editor

While in the directory editor, PCBoard has the capability of displaying either 25 lines per screen or 50 lines per screen on VGA equipped systems. Valid options for this field are:

N Defaults to 25 line mode. If the system is equipped with a VGA video card, you can switch to 50 line mode in the directory editor by pressing `A-5`.

Y With systems equipped with a VGA video card, the directory editor defaults to 50 line mode. With more lines per screen, you are able to see more files on your screen. 25 and 50 line modes may be toggled by pressing **A - 5**.

Default to showing Primary Lines Only in Dir File Editor

File descriptions in PCBoard can vary in length from one line to well over 20 lines. The majority of descriptions consist of anywhere between 2 and 10 lines each. On the first line of every description the most important information such as program name and version number are shown. You can configure the directory editor to default to showing full descriptions or just the first line of every description. Valid choices for this field are:

N Show full descriptions of all files when in the directory editor.

Y In the directory editor, show only the first line of every description.

Include files found on DISK that are not listed in the DIR file

This option enables you to control what the default will be for the *Include files found on DISK* question when loading files into the directory editor. The following are valid defaults:

N Include only those files which have descriptions.

Y Include files found in the attached subdirectory (contained in DIR.LST) which do not have descriptions yet. This option is useful for adding new files to the system.

Verify file existence

When loading files into the directory editor, you can have PCBFiler verify that a file really exists on one of the drives in your system. The following are the valid options for this field:

A Verify file existence by searching all entries in the DLPATH.LST for the current conference. This is extremely useful if you have a file directory which has files in two or more different subdirectories. For example, you may have some of the files stored on a hard drive and the rest of the files stored on a CD-ROM. If both paths are listed in your DLPATH.LST file, the files are verified properly. Basically, if the file is available for download, it is verified properly.

N Do not verify file existence. This reduces the time it takes to load the file into the directory editor because PCBFiler does not have to check and see if each file exists.

Y Verify file existence, but only verify using the attached subdirectory listed in the DIR.LST file.

If you use either the Y or A option when loading a directory into the editor, you will see the status of the file existence to the left of each filename when in the editor. The following are keywords you may see:

[blank] If the file is found, no status codes are shown.

DIR If there is a description for a file, but the corresponding file could not be found, you see *DIR* next to the filename (novice mode). If you are in expert mode, an *L* appears to the left of the filename.

NOTE: If you choose to verify file existence, the file date and size are updated when the file is loaded into the editor. The file date is only updated when the *Update FILE DATE with date found on disk file* option is enabled.

Perform operation (Move/Rename/Delete) on marked files

If you have made changes while in the directory editor, you are asked if you want to perform the file operations (Move/Rename/Delete). The valid options are as follows:

A PCBFiler searches for the entries in the DLPATH.LST for the current conference to see if the file exists. If it does, it is moved, copied, or deleted as specified.

N Only the descriptions of the files that have been marked to be copied, moved, or deleted, are processed. This means the physical files on disk remain untouched.

Y Both the files and the file descriptions are processed as specified in the editor.

Check for duplicate files in each text DIR listing processed

After all of the changes have been made as specified in the directory editor, PCBFiler can check all of the processed directories to see if there are any duplicates in any one file directory. The following are the valid options for this field:

N Do not check for duplicates after all files have been processed. In all likelihood, you do not need to check for duplicates each time you make changes to a directory. However, it is recommended that you do check for duplicates from time to time.

Y Defaults to check for duplicates each time changes are made to file directories. If duplicates are found, you are shown the duplicates and asked which description (if any) to delete from the file directory.

Perform DIR processing in NON-STOP mode (no pause when screen full)

When PCBFiler is processing changes, it outputs what it is currently doing to the screen. You can control whether or not PCBFiler pauses after each screen of data is displayed on your screen. The following are the valid options for this field:

N If you select this option, PCBFiler pauses after each screen of data is displayed on your screen. At each pause you are given the option to go into continuous or non-stop mode by pressing C at the prompt.

Y Process the files in non-stop or continuous mode. PCBFiler will not pause each time the screen fills up.

Delete tagged files from disk

If you have selected files to be deleted, you are asked during processing to confirm the deletion of the files from disk. The following are the valid defaults for this field:

A If you select this default, the files are deleted from disk. In fact, you are never even asked if you want to delete the files—PCBFiler does it automatically.

N Default to not delete the files from disk. If you answer *N* to the *Delete tagged files from disk*, the descriptions are still deleted, but the files remain on disk. This means only the file description is removed.

Y Default to delete any files that have been marked for deletion in the directory editor. This means both the file description and the file itself are deleted from the directory.

Update FILE DATE with date found on disk file

If you have chosen to verify file existence when loading a file into the directory editor, you may also choose to have the file date updated to the date found on disk or leave the date unchanged. The following are the valid defaults for this option:

N Do not update the description to reflect the current file date found on disk. The date listed in the description remains as the date for the file.

Y Update the file date listed in the description to reflect the date of the file on disk. If a file is updated frequently or changes file dates, select this option to update the date.

Set FILE DATE to today when moving/copying files

This option allows you to choose the date to set in the description when moving or copying files. The following are valid defaults for this field:

- **A** Ask each time files are processed. By defaulting to ask, you choose how the files are dated each time you move files interactively.
- **N** Leave the file date as listed in the directory editor when moving or copying files.
- **O** Set the file date to the oldest file date in the archive (.ZIP, .ARJ, .etc.). Dates for non-archived files remain unchanged.
- **R** Set the file date to the newest file date in the archive. Dates for non-archived files remain unchanged.
- **T** Always change the file date to the current date of any file being moved or copied.

Create 0-byte file when moving OFF-LINE or creating DELETED entries

This option allows you to control if a zero-byte file is left behind when a file is removed from the file directory (using `7` in the directory editor) or moved to the OFF-LINE directory. The following are the valid defaults for this field:

- **N** A zero-byte file is not left in the directory where the file used to reside. A user can then re-upload the file to the system because the file no longer exist on the system.
- **Y** A zero-byte file with the same name is left in the directory where it used to reside. This prevent users from uploading a file with the same name as the one just deleted.

Remove 'Uploaded By:' lines when files are moved

In *PCBSetup | Configuration Options | File Transfers* is an option to include an `Uploaded by` line to every file on the system. This identifying line can be used to quickly identify who uploaded a file to the system in case there is a problem or question about the upload.

Once the uploaded file has been moved from the upload directory, this additional line may no longer serve its purpose and is therefore wasting space on your system. This default option determines whether the line is kept or deleted when the file is moved. Valid answers are:

- N Do not alter the description when moving the file.
- Y Remove the `Uploaded by` line from the description when the file is moved.

Remove 'Files:/Oldest:/Newest:' lines when files are moved

One of the utilities which comes with PCBoard called PCBDescribe is used to extract FILE_ID.DIZ files during the file testing on new uploads. One of the options for PCBDescribe is to append a line in the description listing the number of files in an archived file, and what the newest and oldest dates of the files in the archive are.

Having this profile of the file, callers can quickly tell how recent the contents of the archive is. For those callers who are always on the lookout for only the newest files, this can be a real time-saver. While it does save a lot of time, this feature can waste a lot of disk space. Since the primary purpose of this additional line is to aid those searching for new files to the system, it may be advantageous to remove the line when moving files out of the upload directory. This option controls whether the line is kept or not. Valid responses to this question are:

- N Do not remove the profile line from the description. Leave the description unaltered.
- Y Remove any archive profile lines left by PCBDescribe when the file is moved.

Default to Expert Mode inside DIR File Editor

There are two modes of operation in the directory editor—novice and expert. You can choose the preferred default for the directory editor. The following are valid selections:

N Defaults to novice mode. This means you will see meaningful status indicators when verifying file existence. For example, expert mode shows a *D* next to the left of a filename if it exists on disk but has no description. In novice mode, PCBFiler prints *DSK* instead.

Y Defaults to expert mode. When in expert mode, you see a shortened status indicator, conference number, and directory number to the left of each filename. Expert mode is very useful when moving a large quantity of files to many different subdirectories because you can quickly change the directory number or conference number where the file will be moved. You can do all of this without selecting the file and using A -M to move the file.

NOTE: You can toggle between expert and novice modes while in the directory editor by pressing A -X.

Default indentation for vertical bar on Secondary Lines

When you are inserting secondary lines in the directory editor, you can control what position the secondary line character (|) is placed. Enter a value between 2 and 79. You cannot enter 1 because PCBoard requires a space preceding the secondary line character. To match the 45 character lines PCBoard uses, enter a default indentation of 32. Speaking of PCBoard, this option will not change the 45 character limit per description line when uploading files.

Overwrite Files (A=Ask First, Y=Assume Yes, N=Assume No)

When moving or copying files, it is possible that the destination directory already has the filename you are trying to move. In this situation, PCBFiler needs to know how to handle the possible overwrite. The possible actions are:

A Before overwriting files, PCBFiler asks for confirmation.

N Never overwrite a file. Instead, the move or copy is aborted.

Y Always overwrite the existing file. You are never prompted.

Edit PCBFiler Defaults Page 2

Like Defaults Page 1, this screen allows you to change options that affect the operation of PCBFiler. The following describes each of the fields available via this menu option.

Include Conferences in File List

This field specifies the conferences to include when you create a file list from either the main menu in PCBFiler or with the /LIST command line parameter. You may specify a single conference, a range of conferences, or a combination of the two in this field. For example, to include conference 0 (Main Board), conferences 10-15, and conference 22 in your file lists, enter the following in this field:

```
0,10-15,22
```

Include for Missing/Dupe Scan

In this field, specify the conferences to include in the missing/dupe scan that you can select from the Main Menu. Like the previous field, you can specify a single conference, a range of conferences, or a combination of the two.

Default Rules File

The *rules file* is used for auto-selecting files in a directory for moving. By telling PCBFiler the key words or phrases to look for in a file description, a file can be automatically marked for moving to a particular directory in the system. This particular field in the configuration screen controls what the default filename for the rules file is.

Single node systems should leave the default filename as PCBFILER.RLS. All multinode systems must store the PCBFILER.RLS file in a commonly shared location for all nodes.

Examples:

Single node:	`PCBFILER.RLS`
Multiple nodes:	`F:\PCB\PCBFILER.RLS`

Default Moves File

With PCBFiler's ability to schedule moves for a later date it needs some way to remember what files need to be moved. This information in stored in what is referred to as the *moves file*. This field in the configuration screen controls what the default filename for the moves file is.

Single node systems should leave the default filename as PCBFILER.MOV. All multinode systems must store the PCBFILER.MOV file in a commonly shared location for all nodes.

Examples:

Single node:	`PCBFILER.MOV`
Multiple nodes:	`F:\PCB\PCBFILER.MOV`

Off-line directory

In this field, specify the drive and subdirectory where you want to store files marked as being moved off-line. PCBFiler copies the files to the location specified in this field and marks the file as being off-line in the file description.

If you are really moving the files off-line, you may want to specify the location of a DOS device which supports removable media (e.g., floppy disk drive, magneto-optical drive, etc.). If you move files to a location which has removable media, you can fill up one disk or cartridge, store it, then put in a new one and move more files off-line.

Backup directory

When PCBFiler processes files, it makes backups of all directory files it modifies so that changes can be undone. This field enables you to specify where the backup files are created. In this field, specify the drive and subdirectory where you want your backup files to be created. If this field is blank, the backup files are created in the default or current subdirectory.

Original Directory

Some SysOps may copy their directory files to RAM disks when their system boots while the masters are stored on a hard-drive or other fixed media device. If you use this type of setup, PCBFiler can make all changes to the physical copies of your DIR files stored on the hard-drive. In this field, enter the name of the directory you want to translate to a new location. For example, you may physically store your directory files in C:\PCB\GEN\ but copy them out to F:\, a ram drive, for quicker access. If this resembles your setup, enter F:\ in this field. The F:\ is replaced with whatever you enter in the *New Directory* field.

NOTE: If you do not intend to use this feature, you must leave this field blank.

New Directory

If a file directory is found which includes the path specified in the *Original Directory* field, the original directory is replaced with your entry in this field. If your system resembled the previous example, enter C:\PCB\GEN in this field.

File VIEWERS

When you are in the directory editor, you have the ability to view the currently highlighted file by pressing A-V. In this section you may specify up to six viewable extensions. Each viewable extension can execute a program or batch file which may then allow you to view the file while in the directory editor.

In the *File Extension* field, enter the viewable extension. In the *DOS Command* field, enter the DOS command whenever you press A-V in the directory editor while a filename with this particular extension is highlighted. PCBFiler runs the command you specify after it appends the filename you are viewing onto the command. For example, if you enter *EDIT* in this field and you press A-V while viewing a file called *TESTRUN.TXT* stored in *C:\PCB\DL01*, PCBFiler executes the command as *EDIT C:\PCB\DL01\TESTRUN.TXT*.

PCBFiler begins scanning the file extensions in the *File VIEWERS* block from the top down to the bottom acting upon the first match found. There is a special extension which matches on every extension. If you want to take advantage of this, make this new entry your last file extension. The extension to enter is *???*. The question marks are wildcard characters which match any filename extension. What type of viewing utility should be used for this entry? Most SysOps use an all-purpose viewing utility that shows the raw content of the file.

The following is a sample setup.

```
File Extension : ZIP      DOS Command : PCBFV C:\PCBFV\PCBFV.CNF /L
File Extension : ARJ      DOS Command : PCBFV C:\PCBFV\PCBFV.CNF /L
File Extension : ARC      DOS Command : INTERNAL
File Extension : ???      DOS Command : LIST
```

If a filename is viewed which has an extension of ZIP or ARJ, PCBFiler executes *PCBFV C:\PCBFV\PCBFV.CNF /L [filename]*. If a filename is viewed which has an extension of ARC, PCBFiler uses its internal viewer for ARC compressed files. All other files are viewed (because of the *???* extension) using a utility called LIST.

NOTE: PCBFiler has two internal viewers. One internal viewer is for ARC compressed files and the other is for ZIP compressed files. These internal viewers simply list the files stored in the compressed file and their sizes. To use these internal viewers, specify *INTERNAL* in the *DOS Command* field with an extension of either ARC or ZIP.

Edit Auto-Selection Rules

Upon selecting this menu option, a dialog box will pop-up asking you which rules file to edit. The filename shown will be either the default filename in *PCBFiler | Defaults Page 2* or if you have already been in PCBFiler and changed the filename when previously editing the rules file, that filename is the one shown.

Once the proper rules filename is entered, press R to load the rules editor. A sample rules file in the editor may resemble the following:

```
                          Auto-Selection Rules

  Target          File Name   File Name
 Cnf  Dir  Days w/ Wildcards   Inside     Boolean Search Criteria
 ---  ---  ---- ------------  ---------   ------------------------------- 1
0     47   15                            (NETWORK INFORMATION & FIDO | NETWO
  0   10   15                            (ADVENTURE | ROLE PLAY)
  0   24   15                            (BBSLIST | BBSLIST & PPE)
  0   43   15                            (QWK & MAIL & READER | QWKSCAN)
  0   44   15                            (UUCP & INTERNET | INTERNET  & EMAI
  0   39   15                            (LASTCALLER)
```

The fields for each entry in the rules editor is defined as:

Target Cnf: Specifies the target conference where matching files are sent.

Target Dir: Sets the directory number of the target conference where matching files are sent.

File Name w/ Wildcards: Use this field to restrict the filenames that will have the rule applied. If this field is blank, `*.*` is assumed.

File Name Inside: When a filename (wildcards are allowed) is specified in this field, PCBFiler searches inside of archived files (see *PCBDescribe* in the *Utilities* chapter for a list of supported formats) for matching filenames. If the field is blank or contains `*.*`, the contents of archived files are not searched.

Boolean Search Criteria: This field contains the text to search for in the description of a file. Search strings can be a smngle word or phrase, or a complex search utilizing Boolean search strings. For more information on Boolean searches, refer to the *SysOp's Guide* chapter.

NOTE: When the cursor enters the *Boolean Search Criteria* field, PCBFiler adjusts the view to make more of the field viewable. At the same time, the field is scrollable. In other words, up to 1024 characters can be entered and if necessary the field will scroll to allow 1024 characters to be entered. You can see the entire contents of the field by using the left and right arrow keys.

Using rule files to auto-select files is a very powerful feature of PCBFiler. For more information and examples on defining rules, refer to the *Creating Auto-Selection Rules* section.

Edit Scheduled Moves File

When a file is marked for moving or copying but the move is not to occur until a future date, PCBFiler must record the file move/copy information in a *scheduled moves* file. You can edit some information in the moves file at any time using this menu option. Why would you need to edit the file? A classic example is if you were to change your mind about where a particular file should be moved. While it is awaiting the day to be moved, you can change the destination directory to a new one and the file will be moved to the new location when scheduled.

The first four fields shown in the editor cannot be altered. This information is displayed only as a point of reference so you understand what filename is being moved, its current location, and what the upload date of the file is. The following describes each of the information only fields:

Source Cnf The conference the file shown by the file name field is currently stored.

Source Dir The directory in the specified conference where the file is currently stored.

File Name	Specifies the filename to be moved.
File Date	Shows the date the filename specified was uploaded to the system.

The remaining five fields on the screen can be edited on an as-need basis. These fields control items such as the date to be moved, target conference, and more. These fields can be edited.

Target Cnf	The conference where the file name will be moved.
Target Dir	Specifies the directory in the conference where the file is to be moved.
Move Days	The number of days from the date uploaded when the file is moved. As you update this value, the *Move Date* field updates to reflect the new date.
Move Date	Shows the date when the file is scheduled to be moved. If you change this date, the *Move Days* field is updated to show the new number of days before the file is moved.
Copy Move	This column shows one of two values describing if the file is to be moved or copied. The possible values are: `M` for move or `C` for copy.

The name of the scheduled moves file PCBFiler loads from this menu option is stored in *PCBFiler | Defaults Page 2*.

Move Scheduled Files

Whenever you use this menu option, PCBFiler checks the scheduled moves file listed in *PCBFiler | Defaults Page 2* to determine if files need to be moved. Any files ready to be moved to the destination directory are moved to their new location.

This menu option can also be activated from the command line by using `/MOVE` parameter. Refer to the Command Line Parameters section of this chapter for more information.

Choose PCBoard DIR File Colors

PCBoard will colorize your file directories on the fly. You can colorize the following elements of your directory files:

- Header or banner at the top of a directory file
- Filename, size, and date
- First line of a description
- Any additional lines of a description
- Text lines in the middles of a directory file
- OFF-LINE notices (in the date field)
- DELETED notices (in the date field)

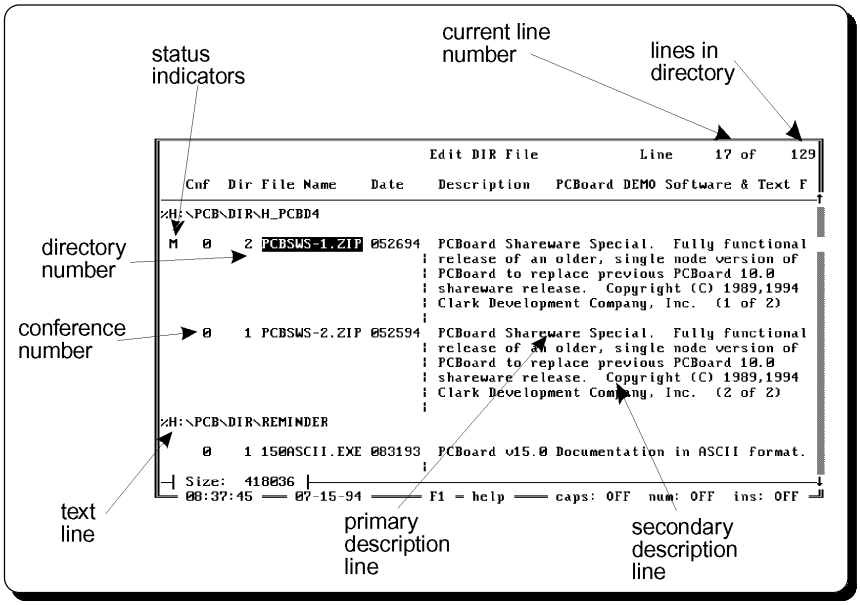
To choose your colors, simply move the cursor on the sample screen to the color or section you want to change and press R . When you press R , you are presented with a box which shows all possible color selections you may choose. Move the cursor around in the box until you have found the color you wish to use. Once you press R on the color to use, you will see the sample screen update to reflect what your directories will look like. When you are done making all of your selections, press E to exit. If changes were made, you are asked if you want to save them. To save the changes, answer Y to this question.

The Directory Editor

The directory editor is the heart and soul of PCBFiler. Within the editor, you can easily maintain your file directories by moving, copying, or deleting files located in a particular directory. Once you understand how the directory editor works, you will be able to quickly and easily place files where you want them.

The Directory Editor Screen

Understanding the directory editor screen will help you be more productive while using it. The following screen shows points of interest. Following the screen, an explanation is given in regards to what each arrow points to.



status indicators: The status indicators are always displayed but are different for novice and expert users. These status indicators are typically shown in bright red on the left side of the screen. The following explains each status indicator and what it looks like in both novice and expert modes.

Status Codes		Detailed Description
Novice	Expert	
DIR	*L*	There is a description for this file. However, the actual file could not be found on disk. PCBFiler will either check the attached directory as defined in DIR.LST or for all paths listed in DLPATH.LST depending on how you choose to verify existence.
DSK	*D*	This file was found on disk, but does not have a description yet. You must enter a description for this file if you want it listed in the file directories.

Action Codes		Detailed Description
Novice	Expert	
CPY	*C*	The file and description are marked for copying.
DEL	*D*	The file and description are marked for deletion.
MOV	*M*	The file and description are marked for moving.
REM	*R*	The description will be deleted, leaving a 0-byte file.
SEL	*S*	The file has been selected. You can move all files that are selected, by pressing A-M while you

current line number: Represents the current line number highlighted in the directory file. These line numbers include all description lines, text lines, blank lines, etc.

lines in directory: Displays the total number of lines in the file directory.

primary description line: The first line of the description is known as the primary description line because it is required. Every file needs a description if you want it listed in the directories.

secondary description line: A secondary description line is any line in a multi-line description other than the first line. This line always has a vertical bar (|) to help separate it from a primary description line. When the file is listed in the file directory, the vertical bar is not shown to the user.

text line: Any line in a file directory which does not describe a file, is considered a text line. You have 79 characters on a text line which you can enter text. The previous example points to a text line that says *%H:\PCB\DIR\H_PCBD2*. The % in the first column is a special feature of PCBoard and PCBFiler. In this case, PCBFiler displays the file H:\PCB\DIR\H_PCBD2.

conference number: The conference number is only displayed when you are using expert mode in the editor. If you change the value in this field, the file is automatically marked for moving to the new conference specified. If you want to move the file to the off-line directory, enter an X for the conference number.

directory number: Like the conference number, the directory number is only displayed while you are using expert mode in the editor. If you change the value in this field, the file is moved to the new directory specified.

Navigating The Directory Editor

There are some keystrokes you will want to remember to help you navigate while you are in the directory editor. These keys will easily let you go to the beginning or end of a directory file. In addition, you can use these keystrokes to step through fields in the editor.

You can tell what the current field is, because it is highlighted. For example, if the date field is the current field, you can enter any valid date into the field and it is saved. Likewise, you can move over to the description area, and enter or change text in that field.

Keystroke	Description of action
t	Move to the field above the currently highlighted field.
b	Move to the field below the currently highlighted field.
l	Move the cursor one character to the left in the current field.
r	Move the cursor one character to the right in the current field.
T	Move to the next field.
V - T	Move to the previous field.
h	Move the cursor to the beginning of the current field.
e	Move the cursor to the end of the current field.
u	Display the previous 15 lines (page) of the file directory.
d	Display the next 15 lines (page) of the file directory.
C - e	Delete everything from the cursor to the end of the field.
C - u	If you press this once, PCBFiler will move to the first field on the current screen. If you press this keystroke twice (quickly), you will be placed at the beginning of the file directory.
C - d	If you press this once, PCBFiler will move to the last field on the current screen. If you press this keystroke twice

Commands Available

Within PCBFiler there are several commands you can execute which will allow you to perform actions on various files, check free space, shell to DOS, etc. The following is a list of commands available while you are in the directory editor of PCBFiler:

E **Exit the directory editor**. When you are done making changes, press this key to exit the editor. If changes were made, you are prompted if you want to save the changes made. You can choose to save the changes, abort the changes, or return to the editor.

1 **Access on-line help**. On-line context sensitive help is available from just about anywhere in PCBFiler. To access this on-line help, press 1 .

2 **Picklist move/copy destination**. When a filename is highlighted, this command prompts which conference the file should be moved or copied to. Once the conference has been selected, a list of directories in that conference is shown. Use the cursor keys to move the file

3 **Convert to upper-case**. All alphabetical characters in the current field are converted to upper-case letters. Numbers are not effected.

4 **Convert to lower-case**. All alphabetical characters in the current field are converted to lower-case letters. Numbers are not effected.

5 **Convert file listing to text line**. Normally, PCBFiler will split-up a file description into various fields (filename, date, size, etc.). You can tell PCBoard to convert the current file description into a text line using this command.

6 **Convert text line to file listing**. If a text line is in the proper format for a file description (see *The File Directory Format*), the text line is changed back so you can access one field at a time rather than the entire line.

7 **Remove file**. Marks the current filename to be removed. When the file is removed, the file description remains but the date changes to show that the file was deleted. A zero byte file is also

usually left (Depending on *Defaults Page 1*) where the file used to be so the file cannot be uploaded again.

8 **Copy file**. After you have marked a filename to be moved, you can change it so the file is copied instead of moved. This means both the file and the description are left in the current directory and also copied to the destination directory.

9 **Delete file**. The current filename is marked for deletion. This means both the file on disk and the file description are permanently deleted.

0 **Undo line**. If you have made changes to a field, you can undo those changes while you are still in the field by pressing 0 . Any changes you have made are lost.

A - 5 **Switch between 25/50 line mode**. With systems equipped with VGA graphics cards, video modes can be switched between 25 and 50 line mode. In 50 line mode, more files can be displayed on screen making it easier to do file maintenance. On non-VGA systems, this keyboard command has no effect.

A - A **Select all files**. Forces all files in the directory editor to be selected. If a filter is enabled, only the files displayed while the filter is active are selected. This makes it extremely useful to locate all filenames (using A - L) beginning with CD*.* and select them for moving to a new location.

A - B **Sort files in the directory editor**. All file directories within PCBoard have a permanent definition for the type of sort order to maintain. You can temporarily change the sort order within the directory editor to better facilitate your file maintenance needs. Using this command select the temporary sort order to use when prompted. While a filter is active, you cannot alter the sort order. Instead, press E , change the sort order, and reselect your filter.

A - D **Delete current line**. The current line is deleted from the directory editor. If the highlight bar is on the first line of a description, the entire description for the file is deleted. The deletion cannot be undone while in the editor short of using E and aborting all changes.

A - F **Filter/find files**. With file directories having hundreds or thousands of files, it can be extremely useful to limit the files shown in the editor. For example, to see only files containing the word (DISK), use the *Locate By Description* filter to limit the files to work with. To return to the full list of files, press E . For more information on filters, refer to the *Using Filters* section of this chapter.

A - G **Apply auto-selection rules**. From the PCBFiler main menu the auto-selection rules file(s) can be edited. These rules can be used to automatically move files to a defined directory based on the words or phrases found in the description. This keyboard command will apply a rules file to **ALL** files in the directory editor. Because needs may vary, you are asked to specify the filename of the rules file to apply.

A - I **Insert a line**. Somewhere down the road, you may need to insert a line in your file directory. PCBFiler allows you to enter three different types of lines. If you select the first type, a totally blank line is inserted. If you pick option B, a line is inserted that shows the fields in a file description. Finally, if you choose the default (option C), a secondary description line is entered. This is most useful when you are adding a new line to a description.

A - J **Join a line**. This keyboard command attempts to gather as much text from the next description line and fit it into the current line. Attempting this keyboard command from a field where there is no next description line or from a non-description line field, causes PCBFiler to emit a beeping sound.

A - L **Locate a filename**. When you are working with several files, you may need to locate a particular filename. This command allows you to display all files matching a particular filename. You may enter a filename to search for or you may enter any valid wildcards. Once at least one match is found, the *Locate Filename Filter* is active. To return to the full list of files, press E .

A - M **Move a file**. If your highlight bar is currently on a file description, you can mark the file to be moved to another directory. You are prompted for the conference and directory number the file will be moved to. You are also asked if you want to copy the file instead. See *Moving or Deleting Files*.

A-N **Check free drive space**. When you are moving files around it may become essential to see how much space you have available on a system drive. When you issue this command, you are asked for the drive letter (and path) to check the free-space on. Once valid information is entered, the total space available on the drive and the amount of free space on the drive is shown. The reason you are able to specify subdirectories is because some networks allow you to combine several physical drives under one network drive and access the drives as subdirectories off the root subdirectory.

A-O **Shell to DOS**. Nothing is more handy than being able to shell to DOS when you need to. You can shell to DOS at any time while in the directory editor by pressing A-O.

A-R **Repeat current line**. This keyboard command repeats or duplicates the currently highlighted line in the directory editor. If on the first line of a valid file description, the entire file description is duplicated.

A-S **Select current file**. When your highlight bar is on a file description, the current file is marked as a selected file. You can use A-M to move all selected files to a new directory. This is very handy when moving lots of files and you do not want to press A-M on each file description.

A-T **Change file date to today's date**. The date of the current filename is changed to today's date.

A-U **Import description file.** Some archives (.ZIP, .ARJ, etc.) have files in the archive containing description for the file. Using this keyboard command, PCBFiler checks in an archive file to see if a FILE_ID.DIZ description file exists. If so, the description is extracted and you are asked if you want to replace the current description with the one found in the archive. With files that are not archives, an error message is printed which states the file is not a valid archive file.

A-V **View current file**. PCBFiler views the currently highlighted filename using the programs defined in *Defaults Page 2*.

A-X **Toggle expert/novice mode**. As mentioned previously, there are two different modes of operation within the directory editor—novice and expert. You can toggle novice and expert mode using this command.

A-y **Toggle between primary and full description modes**. Primary description mode lists only the first line of every file description while the full description mode lists the entire description. Use this keyboard command to toggle between the two modes.

A-Z **Search for text**. Like the (Z)ippy command in PCBoard, you can use this command to search for text in a description. Once one or more matches are made, the Locate by Description Filter is enabled showing just the matching files in the directory. To return to the full listing of files, press E.

Moving or Deleting Files

An integral part of the file system is the ability to move and delete files. Most SysOps have several file directories defined. Since all uploads go into one directory, you need a way to move files out of the upload directory into a new directory. Likewise, you may need to delete a file because you do not want to put it online for download and you do not want it wasting space.

Moving Files To Another Directory

There are two different ways to move files within the directory editor. Each method has advantages and disadvantages. The following discusses the two methods:

A-M If you press A-M while your highlight bar is on a valid file description, you will see a box pop up. This box asks you the following information:

Conference Number: The conference number to move the file to.
Directory Number: The file directory to move the file to.
Days After Upload: # of days to move the file after date uploaded.

Move or Copy (M/C): Enter *M* to move or *C* to copy the file.
Move File Offline: Enter *Y* if you wish to move the file off-line.

Simply fill in this information, and press E to mark the file for moving. You will see either a *MOV* or an *M* next to the filename showing you that the filename is marked to be moved. If you press A -M while files are selected (*SEL* or *S*), the files are moved to the location specified. This action also unselects the files.

Expert While you are in expert mode in the directory editor you can change the number located in either the conference or directory number field. If a new number is specified in either of those fields, the file is marked for moving. Using this method can save time because you never have to press A -M and do not have to select files. Another advantage is you can see the conference and file directory the files are designated to be moved to.

Moving Files Off-Line

Just as there are two ways to move a file, there are two ways to move a file to the off-line file directory. When you press A -M you will notice there is a prompt asking you if you want to move the file off-line. If you answer *Y*, the file is moved to the off-line file directory and a zero-byte file is left behind to prevent the filename from being uploaded again.

In expert mode, you can simply put an *X* in the conference column. You will immediately notice the file is marked for moving. The file is moved to the directory specified as the off-line directory and the date in the description is changed to read *OFF-LINE*.

Deleting Files

You may either delete a file or remove a file from a file directory. The following describes the difference between deleting and removing a file:

Deleting: Both the file description and the file are marked for deletion. This is the method to use if you want to totally purge a file and its corresponding description from the system.

Removing: Only the physical file is deleted leaving the file description behind. To help differentiate a normal file from a file which has been removed, the date in the file description will be changed to *DELETED*. In addition, a zero-byte file is left behind on disk to prevent a file with the same name from being uploaded again.

Changing a Filename, Date or Description

Changing a filename, date or description is extremely easy. All you have to do is move your highlighting bar to one of the fields mentioned previously and type in the new filename, date or description. When you exit the directory editor, the changes are made to both the file description and the physical file on disk.

Multi-line descriptions

Obviously it would be quite difficult to describe a file with only 45 characters. PCBoard and PCBFiler allow you to enter up to 65 lines for your file descriptions. To add a description line to an existing file description insert a new line using A - I . Insert a secondary description line and start typing. If you need another line, press A - I again to insert another secondary description line.

Make sure whenever you are entering a description and it is not the first line that it has a | character before the place where your description begins. Otherwise, your description line is treated as a text line.

Processing changes made in directory files

Once all of the changes have been made in the directory editor, you need to actually carry out those changes. To do this, press E to exit the directory editor and save your changes. At this point you are asked some questions regarding processing.

Viewing Directory Files

This the ability is to display file directories either in the traditional LONG format (as many lines as are available in the description) or a new SHORT format which displays only the first line of each file description.

This feature is enabled (or disabled) at the following points:

1) Logging in as a new user, or using the (W)rite User Info command, you can set your "default" preference for long or short (the default for existing users is long format).

2) From the File List Command prompt, you can type "LONG" or "SHORT" to set the current status. This status will be reset to your default anytime you log off or go out through a door, etc.

In addition, when in "short" mode, you will see a new "more?" prompt which includes a (S)how Description option. If you see a file whose description you would like to read in full, you can type "S" and press enter, then
type in the name of the file to view when prompted, or you can type "S" and the name of the file on the same line. This will allow you to, for example, stay in short mode for most of your file viewing needs and then switch to long mode to examine the descriptions you are more interested in.

Perform operation (Move/Rename/Delete) on marked files

PCBFiler allows you to control if the physical files are processed in addition to the file descriptions. In most situations, you want to move the physical files with their descriptions. The following are the valid responses to this question.

- **A** PCBFiler searches for the entries in the DLPATH.LST for the current conference to see if the file exists. If it exists, it is moved, copied, or deleted as specified.
- **N** If you select this option, any files that are marked to be copied, moved, or deleted, have only the descriptions acted upon. The physical files remains untouched.
- **Y** If you select this option, both the files (on disk) and the file description are processed as you have specified in the directory editor.

Check for duplicate files in each text DIR listing processed

After all of the changes have been made as specified in the directory editor, you can have PCBFiler check all of the directories that were processed to see if there are any duplicates in any one file directory. The following are the valid responses for this field:

- **N** Do not check for duplicates after all files have been processed. In all likelihood, you will not need to check for duplicates each time changes are made to a directory. However, it is recommended you check for duplicates from time to time.
- **Y** Yes, check for duplicates after all files have been processed. Defaults to check for duplicates each time changes are made to file directories. If duplicates are found, you are shown the duplicates and asked which description (if any) to delete.

Set FILE DATE to today's date when moving/copying files

This question only appears if you set the default of this field to *A*. This option allows you to choose if you wish to set the file date in the description to the current date when moving or copying files. The following are valid responses.

N Always leave the file date as listed in the directory editor when moving or copying files.

Y Always change the file date to the current date of any file that is moved or copied.

Processing The Files

Once you have answered all of the questions, PCBFiler will begin processing each of the file directories involved. A single line will be displayed showing what is currently being processed. For example, you may see the following:

```
Backing up: H:\UTIL\FDIR2
Changed   : HISTRY14.ZIP file date
Moved File: HISTRY14.ZIP to Area 9, DIR 8
Sorting   : H:\DOOR\UPLOAD by Date (Ascending)
```

The first line shows PCBFiler backed up the directory file which allows all changed to be undone if requested. Next, the file date on HISTRY14.ZIP was changed to reflect the new date entered in the editor. Finally, the file was moved to conference 9, file directory 8 and the destination file directory was sorted using the method specified in DIR.LST.

Sharing Violations

As your system becomes larger there is a better chance you will start to see sharing violations. These are notifications that the current action could not be processed yet, because someone is accessing the file that is needed for processing. These errors are common in a multinode environment and are normal. Whenever PCBFiler runs into a sharing violation, it will wait 10 seconds and try to access the file again.

The best way to avoid or minimize the number of sharing violations you get while processing files is to answer `N` to the following question:

```
There are files that are marked for processing today.
Do you want to process them now?
```

By electing to process files later, the `/MOVE` command line parameter can be used with PCBFiler to move the files in your event when all nodes can be done and therefore all sharing violations avoided.

The File Directory Format

PCBoard stores the file directories in ASCII format. In other words, you can look at your file directories with a text editor and see exactly what they look like. Because the file directories are stored in ASCII format, the text must be placed in certain positions and follow certain rules in order to be considered valid.

If you do not manually edit your file directory listings, skip this section. Those that manually edit their file directories will find this section full of useful information.

Text lines: Any line that is not part of a file description is considered a text line. Obviously, there is no format required for a text line. Enter up to 78 characters per line and it will be displayed as entered. You can use text lines at the top of your file directory as a header to describe the contents of a file directory. There is no real limit to what you can do with text lines. Remember that even text lines get sorted if you have chosen to sort the file directory.

```
---------------------------------------------------------------------
Directory 1 - PCBoard Bulletin Board Software
---------------------------------------------------------------------

+-------------------------------------------------------------------+
¦ PCBoard software is only available from inside the Support        ¦
¦ Conference.  However, the files below can be downloaded by any    ¦
¦ caller to this system - including the complete PCBoard documentation ¦
¦ file.  It is provided for your use in the event you are considering ¦
¦ the purchase of PCBoard software.  You can order PCBoard software  ¦
¦ while online with us by completing Script Questionnaire #2.        ¦
+-------------------------------------------------------------------+

PCB145AM.ZIP   168046  12-28-90  PCBoard v 14.5 ASCII Manual
PCBORDER.ZIP     2662  12-10-92  PCBoard v 14.x Ordering Information
PCBCOMP.ZIP      2839  04-01-92  PCBoard v 14.5a Comparison Guide
                                 Use this to compare other BBS packages
                  with PCBoard.
```

In the previous screen capture the text lines are the dashed lines explaining the directory, and the box.

Include files: An included file is a line which begins with a % followed by a valid filename. The file specified will be viewed at the point it is stored in the directory file. The include file feature is very handy to use especially if you have a disclaimer in each file directory. This way, you may only have to enter something like *%C:\PCB\GEN\DISCLAIM* on a blank line instead of all of the text. When a change is made to the DISCLAIM file the changes are automatically spread through all directories which display the file.

Primary description line: This is the line that contains the filename, date, size, and first line of the description. The following specifications must be met for this line to be considered as a valid primary description line.

- The file name is valid and contains no spaces within it.
- The file size is flush right in column #21. No commas or numeric processors.
- The file date begins in column #24 and uses dashes to separate the date (e.g., 03-19-94). All values less than 10 include leading zeroes as in "01" instead of " 1".
- The file description begins in column 34 and must not extended beyond 78.

The following shows some sample primary description lines:

```
PCB145AM.ZIP   168046  12-28-90  PCBoard v 14.5 ASCII Manual
PCBORDER.ZIP     2662  12-10-92  PCBoard v 14.x Ordering Information
PCBLINFO.ZIP     7205  01-18-89  PCBoard/LANtastic Thoughts/Ideas
PCBFILES.ZIP   259861  02-23-93* Complete List of All Files on Salt Air
```

As you can see, these listings all adhere to the proper format. If you do not adhere to the format as outlined previously, the entire line is considered to be a text line and is treated as such.

Secondary file listings: Secondary lines allow you to improve the description of a file by providing a much longer description. Rules for valid secondary lines are as follows:

- Must follow a valid primary or secondary file listing.
- Must begin with a space in the first column.
- Must include a vertical bar (a ¦ character) somewhere on the line (the default is in column 32 at the end of the date field).

PCBoard will, when displaying the file to the caller, remove the vertical bar so as not to clutter the display.

Colorization: PCBoard performs automatic colorization of the DIR files as they are being displayed by recognizing text lines, filenames, sizes, dates, descriptions, and secondary lines according to the previous rules and according to the color scheme defined in PCBFiler's *Choose DIR Colors* menu option.

Any additional colorations desired (via @-codes) are permissible as long as they are placed in non-column-sensitive areas such as text or secondary lines. You cannot place color codes anywhere to the left of the description field on a primary description line.

Using Filters

While in the directory editor, filters can be used to restrict the files and descriptions to work on within a given file area. When a filter is active, you can still move, delete, and copy files or descriptions of those files. Essentially, the filters just restrict what is seen in the editor.

As an example, assume you want to only work with files beginning with an A and temporarily forget or bypass the rest of the files in the directory. This can be done using the *Locate by Filename* filter. Being able to show just a subset of files in the directory lets you focus your efforts where desired. The following shows a list of filters available from within the directory editor:

```
                    Set Search Filter

L - Locate by Filename or by Wildcard      (ALT-L)
Z - Locate by Description                  (ALT-Z)
M - Display Files Marked For Moving or Copying
D - Display Files Marked For Deleting
U - Display Un-Marked Files
S - Display Selected Files,
N - Display non-Selected Files
R - Display Files Found in DIR but Missing from Disk
K - Display Files Found on Disk but Missing Description

Enter Filter Selection ? [blinking]       Press ESC to Exit
```

When a filter is active, a blinking message in the upper-left corner of the screen is displayed making you aware of which filter is active. The following table lists the message displayed on screen and which filter is active at the time:

`L-Filter`: Files matching a particular filename or wildcard specification are shown.

`Z-Filter`: File descriptions containing the search string entered are the only files displayed in the editor.

`Move-Filter`: Displays all files marked for moving or copying.

`Delete-Filter`: Shows all files marked for deletion.

`UnMark-Filter`: Displays all files **NOT** marked for moving, copying, deleting, removing, or being selected.

`Selected-Filter`: Displays all files which have been selected.

`Non-Selected-Filter`: Shows all files which are not selected.

`In-DIR-Only-Filter`: Displays all files which have descriptions in the DIR file but no corresponding files on disk.

`On-Disk-Only-Filter` : Shows filenames which do not have file descriptions yet.

`Rules-Filter` : Displays files marked for moving due to applying auto-selection rules (`A -G`).

The next few sections discuss each filter in detail including examples where appropriate.

Filename Filter

This filter will restrict the files displayed in the editor to just those matching the filename specification given. Using DOS wildcard characters, matches on filenames equal to `PCB*.*`, `*.ARJ`, or even `*.GIF` are possible. When asked, type in the filename to use for the filter and press `R` . If you do not specify a full filename (e.g., `PCB`), an `*.*` is added to the filename for completeness.

If one or more matches are found, the matching entries now comprise all entries in the directory editor. When finished manipulating the entries, press `E` to return to the full listing of files.

Example

Processing new uploads to the system, you want to work only with new GIF files uploaded to the system. Recognizing this as a prime opportunity to use the file location filter, press `A -F` and select the *Filename filter* using `L` from the list. When asked for the filename to find, enter `*.GIF`. All GIF files are now shown on your screen and you do not have to hunt through all new uploads looking for GIF files—all matching files are now the only ones shown.

Description Filter

The ability to list only files matching the given search string is the purpose of this filter. When this filter is enabled, enter the text to search for in the descriptions of files in the directory editor. You can enter a word, phrase, or using Boolean operators a more complex search. For more information on Boolean searches, refer to the *SysOp's Guide* chapter.

If one or more matches are found, the matching entries now comprise all entries in the directory editor. When finished manipulating the entries, press `E` to return to the full listing of files.

Example

You are checking all file directories to see if you have any non-archived files. You've been using PKZip as your file compression utility and want to check for all files which have not been zipped. The easiest way to do so is using the *description filter*. When asked for the text to search for, enter `! .ZIP`. The exclamation mark is equivalent to the *Not* Boolean operator. Therefore, every description not containing `.ZIP` in the filename, size, date, or description is a match.

Move/Copy Filter

Moving and copying files is a fundamental feature of PCBFiler. This filter shows only files in the directory editor which have been marked for moving or copying. If no files are set to be moved or copied, an error message notifying you that no matches were found is printed. Once finished using the filter, press `E` to return to the full-listing of files.

Example

Having marked several files for moving, you want to verify the moves to make sure all files are being moved to the appropriate conference and directory. You could start at the top of the directory and carefully watch the status indicators on the left side of the screen trying to catch all the files marked for moving and stop. Why do that when you have the *move/copy filter*? Using this filter, only those files which have been marked

for moving or copying are displayed. The task of verifying the destination for these files suddenly becomes much easier.

Deleted Filter

This filter displays all files marked for deletion or removing. If you'll recall, a file marked for deletion has both the file on disk and the description deleted. Files which are removed, have the files set to 0 byte files on disk and the description remains in place with a `DELETED` notice in it. While these are two distinct method of removing a file from the system, both are considered as deleting a file and are shown with this filter.

If any matches are found by the filter, the files are shown in the editor. When done viewing the restricted list of files, press `E` to return to the full listing.

Example

Removing or deleting files with PCBFiler is a one way process. Once the file has been deleted on disk or turned into a 0 byte file, no provisions are available to recover the files. Keeping this in mind, it is extremely wise to review the list of files marked for deletion to insure these are files you want to delete. Using the *deleted filter*, all files marked for deletion are shown to you and not in a form where they are intermixed with other files in the directory. Your verification job is now much simpler.

Unmarked Filter

Files marked for deletion, copying, moving, removing, or selection are all considered to be *marked* files. It is these files that some sort of action can or will occur on. To view all files which are not set to be acted on in some manner, use the *unmarked filter*. Press `E` to return to the full-listing of files available in the file directory.

Example

Utilizing PCBFiler's auto-selection feature, you apply a rules file to the directory in the editor. Several matches are found, and you verify the files are moved to the proper destination. Pressing `E` to exit the rules filter, it becomes apparent some files were not processed by the auto-selection rules. You want to see all files not affected by the rules so new rules can be defined to process these files. Using the unmarked filter, a list of all files not currently marked for processing are shown. Now, utilize `A -G` to edit the rules file and you are on track.

Selected Filter

This filter displays all files selected using (`A -S` or `A -A`). Once you have finished viewing all selected files, press `E` to return to the full listing of files.

Non-Selected Filter

Exactly opposite of the *selected filter*, this filter shows all files which have **not** been selected. Once done viewing the list of non-selected files, press `E` to return to the full listing.

In-DIR-Only Filter

When a file is listed in the file directory but not found on disk, PCBFiler puts the `DIR` or `L` status indicator next to the file. To restrict the list of files in the editor to just those found in the file directory only, use the *in-DIR-only filter*. When finished viewing the abbreviated listing, press `E` to see the full listing again.

For PCBFiler to properly determine if a file has an entry in the file directory but no corresponding entry on disk, you must verify file existence when loading the directory into the editor. This is done with the `Verify file existence` question.

Example

CD-ROMs containing hundreds of megabytes of shareware files are a very popular feature on bulletin board systems. Like any other software, new versions of shareware files are released making the older versions antique. It is not uncommon for new CD-ROMs to be released on a periodic basis.

What happens to those systems where you have intermixed CD-ROM files with files on the hard drive? You have to find and delete the file descriptions that used to be located on the CD-ROM and delete the descriptions. A positive step in this direction is to first of all answer `A` to the `Verify file existence` question when loading the directory into the editor. Now all files which are not available for download will have the `DIR` or `L` indicator next to the filename. Using the *in-DIR-only filter*, you can quickly locate the files on the old CD-ROM and delete the descriptions using `A -D`.

On-Disk-Only Filter

A file which is in a download directory but does not have a description is signified with the `DSK` or `D` status indicator. To view only those files which do not yet have descriptions, use the *on-disk-only filter*. Press `E` to view the full list of files to cancel the filter.

For PCBFiler to properly determine if a file does not yet have a question, you must answer `Y` to the `Include files found on DISK that are not listed in the DIR file` question when loading the directory into the editor

Example

The entries in the editor for files without descriptions are always positioned as the last files in the editor. To quickly list just those files, use the disk-only filter.

Adding New Files

At some point you will need to add files to your file directories. You could be starting your BBS for the first time and adding new files, or you may have obtained a large number of files you want to add to a particular file directory. This section discusses the steps necessary to add files to a particular file directory.

To help illustrate this technique we are going to use a very simple setup as an example. In our sample setup, all files are stored in the Main Board and there are only two directories defined in DIR.LST which looks like the following:

```
     DIR Text File Name & Path       Hard Disk Subdirectory        Sort
     -------------------------       ----------------------        ----
1)   C:\PCB\GEN\DIR1                 D:\DEMO\                        1
2)   C:\PCB\GEN\DIR2                 F:\UTILS\                       1
```

The first thing you need to do once you have decided on the directory that you want to add files to is to copy the files you want to add to the subdirectory specified in the *`Hard Disk Subdirectory`* field. Once the files have been copied to the subdirectory, run PCBFiler so you can describe the files you just copied.

Use the *Edit DIR Files* menu option to load the directory you copied the files to into the directory editor. Make sure you answer *`Y`* to the *`Include files found on DISK that are not listed in the DIR file`*. If you do not, the files will not show up in the directory editor.

Once the file is loaded into the editor, you can quickly find the files without descriptions by selecting the `Display Files Found on Disk but Missing Description` filter from the `A -F` pick-list. You will see the filenames you copied to the directory listed with either a *DSK* or a *D* next to the filename. This is telling you that file exists in the subdirectory but there is no description for the file.

Now simply move over to the description field and start entering descriptions for the files you copied to the directory. When you are done entering all of the descriptions, press `E` to exit the Editor and save your changes.

Creating Auto-Selection Rules

Auto-selecting files for moving based on rules files is a powerful and complex feature of PCBFiler. The goal of this section is to help you better understand how PCBFiler can auto-select files and how to form a strategy for defining rule files.

The Role of Auto-Selection Rules

Utilizing rules to move your files is as close as you can come to using artificial intelligence to move files to the appropriate directory. Because configurations and uses of PCBoard vary so greatly, it is up to you to give PCBFiler the intelligence required to move the files. It is not as complicated as it may sound. After all, a strategy for moving files already exist in your head.

Realize that the auto-selection rules in PCBoard are not designed to be able to move every single file uploaded to your system. To do so would be an immensely complex system. Instead, the goal of the rules is to help you move the majority of files and do so with little effort on your part.

The next section will help transfer the strategy for moving files from your mind into auto-selection rules to help with your file maintenance tasks.

Forming a Strategy

To form a strategy for building rules files, you must understand more about how:

- rules are selected.
- to effectively use rule files.
- to translate your thoughts in moving files to rules files.

How A Rule is Selected

When applying a rule file to a file directory, PCBFiler scans from the top of the rule file to the bottom looking for the first matching entry. If a matching entry is found, the file is marked for moving based on the match. When no match is found the file remains in the current directory and no action takes place.

Because the first match is the one that counts, you want to be the most specific entries at the beginning of the file and the more generic or encompassing entries at the bottom of the file. The following illustrates you not to define a rules file:

```
  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ ---------------------------------
   0   10    0 *.*
   0    3    0 *.GIF
```

From the initial appearance, it looks like these rules would move all GIF files to conference 0, file area 3 and all other files to file directory 10 in the same conference. This is not the case because of the order these rules were made in. Remembering the first match is the one that counts, how is any file going to make it past the first entry since *.* encompasses all files and there is nothing entered for the *File Name Inside* or *Boolean Search* fields?

If the order is reversed, things start working much more intuitively. Making the first entry search for all .GIF files and then catch all other non-matching files with the second entry makes much more sense and operates as one would expect.

Putting Your Thoughts Into Rules

Three criteria may be used to select files for automatic movement:

1. Filename of uploaded file
2. A filename inside the uploaded file (if a valid archive such as a .ZIP, .ARJ, etc.)
3. Text found in the description of the uploaded file.

When you stop to think about it, is this not the same criteria you use when manually moving files? Sure it is. So now the question becomes, how can I translate my usual actions and observations into individual rules for the rule file?

The most important step is to write down the mental steps you make when determining if and where a file needs to be moved. Example step to move a GIF picture file may look like this.

1. Look at the filename. Is the extension equal to .GIF?
2. If so, we have three file directory candidates: *GIF-Persons* (directory 27), *GIF-Places* (directory 28), and *GIF-Things* (directory 29). The only way the proper directory can be selected is by analyzing the text in the description.

Step #2 is very simplified and needs some further explanation. If we could expect all callers to put the words `PERSON`, `PLACE`, or `THING` in the file description, our job would be very simple. That is simply not a realistic thing to expect. That means it boils down to you making your best guess at what type of keywords determine if a file is a person, place, or thing.

Before discussion some keywords you can use and pitfalls you may run into, let's begin by setting up three entries in the rule file to handle each subdirectory.

```
  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ ---------------------------------
   0   27    0 *.GIF
   0   28    0 *.GIF
   0   29    0 *.GIF
```

We now have three entries -- one for each possible GIF directory. What we do not have is any keyword searches in the *Boolean Search* field. It is this field which will help determine what text words or phrases will trigger the destination for the .GIF file.

The first step to take is to brain-storm for some search phrases you can use for each category. Examples for each may look like this:

GIF - Persons

MODEL

PORTRAIT

SWIMWEAR

SWIMSUIT

POSING

GIF - Places

BUILDING

VACATION

SCENE

SCENERY

GIF - Things

We consider this directory to be the unclassified directory of GIF picture files. That is, if it cannot classified as a person or place, the picture will be put in this directory.

Translating this to the rules file, the entries look like the following:

```
  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ --------------------------------
   0   27    0 *.GIF                     MODEL | PORTRAIT | POSING
   0   27    0 *.GIF                     SWIMWEAR | SWIMSUIT
   0   28    0 *.GIF                     BUILDING | VACATION
   0   28    0 *.GIF                     SCENE | SCENERY
   0   29    0 *.GIF
```

Line 1: If the filename extension is `.GIF` and the description contains either the words `MODEL`, `PORTRAIT` or `POSING` anywhere in the description the file is moved to conference 0, directory 27.

Line 2: If the filename extension is `.GIF` and the description contains either the words `SWIMWEAR`, or `SWIMSUIT` anywhere in the description the file is moved to conference 0, directory 27.

Line 3: If the filename extension is `.GIF` and the description contains either the words `BUILDING`, or `VACATION` anywhere in the description the file is moved to conference 0, directory 28.

Line 4: If the filename extension is `.GIF` and the description contains either the words `SCENE`, or `SCENERY` anywhere in the description the file is moved to conference 0, directory 28.

Line 5: Because only the filename expression of *.GIF is the only criteria specified, all GIFs not matching on any of the first four lines will match on this last line and be moved to conference 0, directory 29.

Utilizing More Than One Rule File

Each time you edit or apply a rules file, PCBFiler prompts for the filename to use. This is done because it is highly desirable for most systems to utilize multiple rules files. For example, let's assume you run a bulletin board where most files are kept in the Main Board conference but to help focus things, you moved all online games, files, and messages to another conference.

Because these two conferences have totally separate file areas, why store all of the rules necessary to move files in one single rules file? If you do, you are going to make it more likely to find the wrong matches and it will take longer to apply the rules with the larger file.

The following samples show an excerpt of the one file approach, and then how it could be broken down into two files:

One File Approach

```
  Target         Filg Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ ------------------------
   0   10    7 *.GIF
   0    6    0                           (DISK | FLOPPY) & UTIL
   0    8    0                           (SCREEN | MONITOR) & UTIL
   5    1    0                           GAME & ADVENTURE
   5    2    0                           GAME & EDUCATION
   5    3    0                           GAME
```

Obviously this is a very short example. A more applicable rules file may have several hundred entries. Keep this in mind when you are evaluating the use of multiple files versus the single file approach.

Multiple File Approach

```
  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ ------------------------
   0   10    7 *.GIF
   0    6    0                           (DISK | FLOPPY) & UTIL
   0    8    0                           (SCREEN | MONITOR) & UTIL
   5    3    0                           GAME


  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ ------------------------
   5    1    0                           ADVENTURE
   5    2    0                           EDUCATION
```

Notice how the files were separated? All of the non-game related entries are in one file and all game related entries are in the other file. The only exception is the last entry in the file for the Main Board. That particular entry is there to make sure all game uploads go to conference 5.

Remember, the benefits in separating rule files into multiple files are:

- Reduces the amount of time necessary to apply the rules in the directory editor
- Makes it less likely to accidentally find a match because the entries in each rule file are focused to a given topic.

Maintaining Your Rules File

Creating the rules for auto-selection is not a one-time task. You should update or maintain your rules as you get new files to your system. The new files to your system will have different file descriptions which may not be caught by your existing rules. Therefore, it becomes necessary to follow up and create new ones if you want the files moved automatically.

The files not affected by auto-selection will remain in the upload directory and therefore easy to spot. The biggest challenge comes not in determining what files need processing but in adding the appropriate rules and in the appropriate position in the file.

The two steps to remember are:

1. The *Putting Your Thoughts Into Rules* section earlier in this chapter outlines the steps to go through when creating the rules files. Refer back to that section if you need help in forming the rule.

2. Now is also the perfect time to remind you of the importance of the position of a rule in the rules file. Since PCBFiler scans from the top to the bottom and acts on the first match found, the most specific entries must be at the top of the file and the more generic or encompassing rules need to be towards the bottom.

Example

The following example shows a more complicated and thorough example of what can be done with a rules file. Each line of the rules file is discussed in great detail.

```
  Target         File Name   File Name
 Cnf  Dir Days w/ Wildcards   Inside     Boolean Search Criteria
---- ---- ---- ------------ ------------ --------------------------------
   0    0    0 *.*                       FILE FAILED VERIFICATION
   0   27   30 *.*                       (" PPE " | .PPE) & (UTIL |ADD-ON)
   0   28   30 *.GIF
   0    0    0 *.*          *.PPE        PPS | PPE
```

These rules can be understood in the following manner:

1. Any file (*.*) found with *FILE FAILED VERIFICATION* in the description is moved immediately (0 days) to the private upload directory (directory 0) in the Main Board. In this example, we don't want to *ever* allow a file which failed verification to be moved out to a download directory. Therefore, the above rule quickly flags the entry and tells PCBFiler to move it out of the way, out to the private upload directory where the SysOp can then examine the file and discard it as necessary.
2. Any file (*.*) found with either *" PPE "* or *.PPE* in the description (the quotes are being used to require spaces around the word PPE) and *also* either the word *UTIL* or the word *ADD-ON* in the description, is moved to directory 26 of the Main Board 30 days after uploaded.
3. All GIF files (*.GIF*) are moved to directory 28 of the Main Board 30 days after being uploaded. Note here that the search criteria is blank. If something like *320x400* is included in the search criteria, PCBFiler will move only `*.GIF` files with the text *320x400* in the file description.
4. Any file which PCBFiler is able to detect is an archive can be examined to see if, inside the archive, it has a file matching a specified wildcard or filename. In this case, PCBFiler checks to see if a `*.PPE` file is inside the archive, but it will only perform this check if the description for the file contains either the word `PPS` or the word `PPE`.

Command Line Parameters

Command line parameters can be used to modify what PCBFiler does when it loads. To use a command line parameter add it after PCBFILER.EXE. For example, you may type *PCBFILER.EXE /LIST:3*. The */LIST:3* in this example is the command line parameter.

/AUTO:[conf]:[dir]:[rules filename]

Once you have defined rules to help automate the movement of files, you can use PCBFiler to automatically apply the rules to a file directory. When the rules are applied, the files are automatically moved if they fit the specified criteria.

Example

```
PCBFILER /AUTO:0:21:C:\PCB\PCBFILER.RLS
```

The example above marks files in conference 0, file directory 21 for moving based on the rules defined in

/CONF:[conf]

When PCBFiler loads, you are immediately taken to the conference number specified so you can begin editing file directories. You are locked into this conference, and cannot return to the Main Menu of PCBFiler.

For example, if you typed in *PCBFILER /CONF:0* you may see the following:

```
PCBFiler - A Utility for PCBoard Directories
             Directory Selection


Available DIR numbers are 0 for PRIVATE and 1 through 1

Enter Number of Main Board DIR to Edit ? 1
```

Notice that you do not have to go through all of the menus to get where you need to get going. In addition, this is very handy if you have conference SysOp or co-SysOps you want to lock into a particular conference so they do not edit files in conferences you do not want them to access.

/CONF:PCBOARD.SYS

This command line parameter is identical to the /CONF:[conf] parameter with one exception. Instead of specifying a conference number to be locked into, PCBFiler uses the current conference from the PCBOARD.SYS in the current directory. If the PCBOARD.SYS does not have a conference number in it (because nobody is online), PCBFiler returns to DOS.

/FILE:[location of PCBOARD.DAT]

PCBFiler needs to access the PCBOARD.DAT file so it can access information about various file directories. Normally, PCBFiler looks in the current directory for the PCBOARD.DAT file. However, you can tell it where to find the file by using this command line parameter. Simply replace the **[location of PCBOARD.DAT]** with the full path and filename where it can be found (e.g., C:\PCB\PCBOARD.DAT).

Example

```
PCBFILER /FILE:C:\PCB\PCBOARD.DAT
```

The example above will load PCBFiler and tell it to use the PCBOARD.DAT located in C:\PCB\. If you did not use this parameter, only the current directory will be searched.

/INDEX:[conf range]

PCBoard uses index files to help speed-up (L)ocate and (N)ew file scans. Under normal circumstances, PCBoard always maintains the index files to make sure they are up-to-date. Circumstances may arrive where a third-party program may not update the index files or something similar. In this type of situation, it is desirable to recreate the index files.

If you use the `/INDEX` parameter without passing the range of conferences to recreate, all conferences will be regenerated. To focus on a particular range of conferences, specify the range of conferences following the `/INDEX` parameter.

Example

```
PCBFILER /INDEX
PCBFILER /INDEX:0-10
```

The first example reindexes all file directories while the second example will index only conferences 0 through 10.

/LIST:[conferences to include in the list]

Using this command line parameter is equivalent to selecting *Create Files List* from the PCBFiler Main Menu. If you use /LIST as the command line parameter, the conferences that are included in the list are those listed in Defaults Page 2. You may override these conferences by specifying a : after the /LIST followed by a list of conferences to include in the file lists.

Examples

```
PCBFILER /LIST:1
```

The above example would create a file list using only the files that are available from conference 1 on your system.

```
PCBFILER /LIST:0-10,15
```

This command line creates a file list of all files available in

/MOVE

When this command line parameter is used, all files currently marked for moving are moved to the new destination. Being able to move files via a command line parameter has some very distinct advantages. On large systems, it may be difficult to move files because callers are always viewing and downloading files. Using PCBFiler, you can mark files for moving. Once the files have been marked, you can run PCBFiler with the /MOVE command line parameter in an event to move all of the files when all of your other nodes are down. This makes sure the files are moved as quickly as possible.

/NODOS

A common practice with larger bulletin boards is to off-load some of the file maintenance to another individual. In a situation such as this, it may not be wise to give them free reign on the system. Use of this command line parameter disables the A -O keyboard command to shell to DOS from within the directory editor. For other security restricting command lines, see the /CONF and /PROTECT command line parameters.

Example

```
PCBFILER /NODOS
```

This example protects users from shelling to DOS using A -O.

/PROCESS:conf:dir:[A]

If you have files that change dates or sizes on a regular basis, you may want to update the file descriptions to show the current file date and size. This command line option enables you to update the file size and the file date.

NOTE: In order to update the date, you must have answered `Y` to the `Update FILE DATE with date found on disk file` option in *Defaults Page 1*.

In order for this command line switch to work, you must specify the conference number and the directory number in the conference you want to update.

By adding `:A` to the end of the command line, PCBFiler searches all directories in your DLPATH.LST for the conference you specify to see if it can find the file on disk. If the file cannot be found in the default location for the file directory or in the DLPATH.LST file, PCBFiler will not be able to update the file information.

Examples

```
PCBFILER /PROCESS:0:1
```

This example would update the file information of file directory #1 in conference #0 (Main Board)

```
PCBFILER /PROCESS:1:1:A
```

The example above would update the file directories in directory #1 of conference #1. Because the `:A` is specified, PCBFiler will search all subdirectories listed in DLPATH.LST if it cannot find

/PROTECT

This command line switch prevents the person running PCBFiler from seeing information about other conferences on the system. To determine what conference the executor of the program is locked into, you must use the /CONF parameter for PCBFiler. For additional security in regards to PCBFiler, also refer to the /NODOS switch.

Example

```
PCBFILER /CONF:0 /PROTECT
```

This example forces all file maintenance activity to take place in the Main Board conference (#0) only.

/SCAN

This is the equivalent of selecting *Scan for Duplicate/Missing Files* from the PCBFiler Main Menu. This is most useful if you regularly scan for duplicate or missing files within an event. Remember, the report is written to ANALYSIS.RPT in the current subdirectory.

/SCAN:[conferences to include in scan]

The only exception between this and the /SCAN parameter is that you may override the conferences you listed to include in dupe/missing scan in *Defaults Page 2*. Simply enter the conferences to include in the scan after the colon. For example, to include conferences 0-39 in the duplicate/missing scan, enter the following:

```
PCBFILER /SCAN:0-39
```

/SORT

Using this command line parameter is equivalent to selecting *Sort all DIR Files* from the Main Menu. The only difference is you are not asked if you want to sort only the upload directories of each conference. All directory files are sorted according to the methods specified in DIR.LST.

/SORT;UPLOAD

All upload directories in all conferences will be re-sorted. The sort method used is the one defined in the conference configuration. Remember, only the upload directories (private and public) are sorted. If you want to have all directories sorted, use *`/SORT`* instead.

/SORT;LIST:##-##

Sort the range of conferences specified by ##-##. To sort conferences 10-35, enter: *`/SORT;LIST:10-35`* as the command line parameter. When sorting a single conference, it is not necessary to specify a range. Instead, list just the conference number to sort using the following syntax: `/SORT;LIST:10`

12

Utilities

File Testing & Viewing Utilities

The utilities described in this section are used in the PCBTEST.BAT and PCBVIEW.BAT files. Each utility is described in detail.

PCBDescribe

PCBDescribe (PCBDESC.EXE) checks uploaded files for FILE_ID.DIZ files provided by the program author. If the uploaded file contains a description file, it replaces the description the user supplied with the one provided in the file.

PCBDescribe is compatible with the following archive formats and requires the specified program to uncompress the description files when found:

File Extension	Requires
ARC	PKXARC
ARJ	ARJ
LZH	LHA
PAK	PAK
ZIP	PKUNZIP

Installing PCBDescribe

PCBDescribe is used inside of the PCBTEST.BAT file, which is run to test each upload to the system. Place the PCBDESC.EXE file in your default \PCB directory and insert the following line toward the top of your PCBTEST.BAT:

```
IF %2==UPLOAD PCBDESC %1 %3
```

There is only one option; if you would like to have an additional line in the description showing the date of the oldest and newest files in the archive, use this command instead:

```
IF %2==UPLOAD PCBDESC /D %1 %3
```

The word *UPLOAD* in the above example is case sensitive. Make sure you type it in uppercase letters. Also, make sure that you have a copy each of the required unarchive programs (PKUNZIP, ARJ, LHA, PAK, PKXARC) according to the types of files you expect to receive. These unarchive programs should be placed either in your default \PCB directory, or in a subdirectory referenced by your PATH.

PCBDescribe can be the first thing in your PCBTEST.BAT file; it will only operate on ZIP, ARJ, LZH, PAK and ARC files (as well as self-extracting versions of those files).

Protecting Your System From DOS Reserved Words

PCBDescribe will watch for harmful DOS reserved words such as CON, AUX, PRN, CLOCK$, COMx, LPTx, and, if found in the archive, will **rename** the file by incrementing the last letter of the filename by one. The following illustrates what the filenames will be renamed to:

*.ARC	⇨	*.ARD	*.EXE	⇨	*.EXF
*.ARJ	⇨	*.ARK	*.LHA	⇨	*.LHB

Once the filename has been renamed, a line is added to the description of the file indicating the reason for the rejecting. Finally, PCBDescribe exits to DOS with an errorlevel of 5 to indicate a problem with the file so

further testing of the file can be *avoided* saving the system from a lockup that could occur if you have a testing program that doesn't watch for reserved words.

It is recommended that immediately after the execution of PCBDescribe, you insert a line in the PCBTEST.BAT file which reads:

```
IF ERRORLEVEL == 5 GOTO END
```

At the bottom of your PCBTEST.BAT file have a line which has nothing but *:END* on it. This allows PCBDescribe's errorlevel 5 to signal that the rest of the testing process should be skipped. For more information on testing errorlevels in batch files, refer to your DOS manual.

Errorlevels Returned

PCBDescribe returns errorlevels to your batch file to indicate what it has done. These errorlevels can be tested and used for your own purposes. The following values are returned:

0	No processing performed
1	File was not a supported archive or contents were damaged
2	Description was updated (found a FILE_ID.DIZ or DESC.SDI)
3	Description was updated (no description file found but the line showing the newest and oldest dates was added to the description).
4	Found description file but unable to process. This could occur if the program to uncompress the archive is not found.
5	Found a DOS reserved word, renamed the file, modified the description. No further actions have been taken nor should be taken by other programs.

The Description File

PCBDescribe accepts descriptions contained in FILE_ID.DIZ files found in the archive being tested. The FILE_ID.DIZ file is an ASCII text file, and can contain up to 10 lines of 45 characters each. The first line of this file is the program name and version, and the following lines describe the function of the program. Formatting codes (such as ASCII line drawing characters) should **NOT** be used.

PCBDescribe also detects and uses descriptions contained in DESC.SDI files if they are present. No other description file formats are supported.

ATTENTION! The FILE_ID.DIZ file format is intended for the program author's use in providing a coherent description of the program. In this way, the author and the SysOp can be assured that the program will be properly described when uploaded to a BBS. **DO NOT** use this file for BBS advertising!

TESTFILE

This program is used to determine the extension of a filename and exit with an errorlevel.

Syntax

```
TESTFILE [filename] [ext] [ext] ... [ext]
```

Command Line Parameters

[filename] This parameter represents the filename to test the extension of. When using this in the PCBVIEW or PCBTEST batch files, specify *%1* for the filename.

[ext] These parameters reference the filename extensions to check for. If the filename specified matches one of the extensions entered as a parameter, PCBoard will exit with a unique errorlevel. By testing the errorlevel returned, you can determine the extension of the filename.

Description

When passing a filename as a parameter to a batch file, quite often it is useful to know the extension of the file. Once you know the extension of the file, you can perform special processing. For example you may want to treat files ending in .TXT different from those ending with .ZIP or .ARJ. To determine the extension of the file, specify the filename to test and the extension to test on the command line when executing TESTFILE. The errorlevel returned determines the extension.

Errorlevels Returned

The errorlevel returned by TESTFILE is based on the placement of the extension on the command line. The following example illustrates:

```
TESTFILE FILENAME.TXT ZIP ARJ LHA TXT
```

If you type this line at a DOS command prompt, TESTFILE returns an errorlevel of 4. Why 4? The reason errorlevel 4 is returned is that it is the fourth extension specified on the command line. What if the extension of the file is not specified on the command line as shown in the following example?

```
TESTFILE CONFIG.SYS ZIP ARJ LHA TXT
```

In this situation, TESTFILE returns an errorlevel of 98. You do not know the file extension, but you do know that it is not one included on the command line.

Example

Assuming you are using the following batch file named TESTIT.BAT

```
@echo off
testfile %1 zip arj gif
if errorlevel==98 goto notknown
if errorlevel==3 echo GIF file specified.
if errorlevel==2 echo ARJ file specified.
if errorlevel==1 echo ZIP file specified.
goto end

:notknown
echo Could not determine extension.

:end
```

the following table shows the response for the value you pass as %1 to the batch file:

%1 Parameter	Response From Batch File
TEXTEDIT.ZIP	*ZIP file specified.*
TEXTEDIT.EXE	*Could not determine extension.*
WOODGRAN.ARJ	*ARJ file specified.*
README.TXT	*Could not determine extension.*
SCENE.GIF	*GIF file specified.*

VIEWZIP

This utility is designed to be used in PCBVIEW.BAT. The ZIP filename you specify as the first parameter is examined. If the file is a valid ZIP, a list of the files contained in the archive is written to PCBVIEW.TXT. When PCBoard returns from PCBVIEW.BAT, it checks to see if PCBVIEW.TXT exists. If it does, the contents of the file are displayed to the caller. Using this method, your callers can see a list of files in a ZIP archive.

Example

In the PCBVIEW.BAT supplied with your copy of PCBoard, you see the following line:

```
viewzip %1
```

Upon returning from PCBVIEW, a report resembling the following is displayed:

```
  Filename     Length     Method    SF   Size Now    Date     Time
------------  ---------  --------  ---- ---------- ---------  -----
INSTALL.EXE       40517  DeflateX    3%     39219  15 May 92  09:29
PCB145.EXE       134833  DeflateX    0%    133740  09 Sep 92  11:28
PCBDISK1.EXE      43774  DeflateX    0%     43633  15 May 92  10:05
FILE_ID.DIZ         245  DeflateX   13%       213  08 Sep 92  12:07

Total       4    219369              1%    216805
```

VIEWARCH

This utility is designed to be used in PCBVIEW.BAT. The ARC filename you specify as the first parameter is examined. If the file is a valid ARC file, a list of the files contained in the archive are written to PCBVIEW.TXT. When PCBoard returns from PCBVIEW.BAT, it checks to see if PCBVIEW.TXT exists. If it does, the contents of the file are displayed to the caller. Using this method, your callers see a list of files in an archive.

Example

In the PCBVIEW.BAT supplied with your copy of PCBoard, you see the following line:

```
viewarch %1
```

Upon returning from running PCBVIEW on a file with an ARC extension, a report resembling the following will be put in PCBVIEW.TXT and displayed by PCBoard:

```
  Filename       Length     Method    SF    Size Now     Date     Time
------------   ----------  --------  ----  ----------  ---------  -----
PC-PR.EXE          69,776  Squashed   28%      49,824  14 Jan 91  10:40

Total         1    69,776             28%      49,824
```

MAKEIDX

If you want to speed up the time it takes PCBoard to scan the files for download on your CD-ROM or hard drive, create one or more index files using MAKEIDX. The IDX format includes file sizes within the index so that when PCBoard is flagging files for download, it can immediately determine the size of the file without having to perform a directory lookup. While this provides only a marginal improvement in efficiency for hard disk and network based systems, it can provide hug improvements in efficiency when dealing with CD-ROM "changers" since the files being flagged may reside ona CD which is not currently loaded in the changer.

Syntax

```
MAKEIDX [path file] [index file]
```

[path file] The path file is read by MAKEIDX to determine the filenames stored in the index file. This file is a regular ASCII file with one path listed on each line. If you do not include an extension for this file, .PTH is assumed.

[index file] This is the index file created by MAKEIDX. The index contains all files stored in the paths listed in the path file. There is a limit of 4g per index. If you have more than 4g files, create more index files. If no extension is specified, .IDX is assumed. You also use a single file if desired and, in the process, you can increase the efficiency with which files are found on your system by reducing IDX overhead.

Creating the Path File

Use any ASCII text editor to create the path file. On each line, type in a path that you want MAKEIDX to search for files to put in the index. If the path specified has child subdirectories, they are automatically included in the index. For example, if you have a CD-ROM (drive J) and want to create an index file of the entire drive, create a path file that contains the following line:

```
J:\
```

Since MAKEIDX searches paths recursively, it searches all files on drive J. This is much faster than having to type in all of the paths on your CD-ROM into the path file.

Another example may involve one of the hard drives on your system. This index may be a little more tricky because you do not want to make all of the files on that drive available for download. What you need to do is specify only the paths you want MAKEIDX to search in the path file as shown in the following example:

```
D:\DL1\
D:\DL2\
D:\DL3\
D:\SPECIAL\
```

When you create the index, all files in the D:\DL1\, D:\DL2\, D:\DL3\, and D:\SPECIAL\ subdirectories are included in the index file.

> **NOTE**: Do not include the paths to any public or private upload file directories in your index files. The index files are static and do not get updated when files

Creating the Index File

Once you have created a path file you can create the index file using MAKEIDX. For this example, let's assume your path file is called CDROM1.PTH and the contents of the file are:

```
I:\
```

To create the index, type the following:

```
MAKEIDX CDROM1.PTH CDROM1.IDX
```

On the upper left-hand corner of your screen you will see a list of the paths being searched. Once the paths have been searched, PCBoard sorts the files and write the index to disk. The index file is located where you specified on the MAKEIDX command line. Now that the index file has been created, modify the configuration of PCBoard to use the new index file.

Updating PCBoard to Use Index Files

The only place PCBoard recognizes index files is inside of the DLPATH.LST file. Each conference has a field that specifies the DLPATH.LST to use. Once you have created an index, edit DLPATH.LST and make sure any paths listed in your DLPATH.LST are deleted. For example, if your original DLPATH.LST resembles the following

```
D:\DL1\
D:\DL2\
D:\DL3\
D:\DL4\
D:\DL5\
D:\UPLOAD\
```

and you create an index which stores the filenames of the first five directories, modify your DLPATH.LST file to read:

```
D:\UPLOAD\
```

Next, insert a line and type % followed by the location and filename of the index you want PCBoard to use. If you create your index in the C:\PCB\INDEX\ subdirectory and called it CONF0.IDX, make the following entries in the DLPATH.LST file:

```
D:\UPLOAD\
%C:\PCB\INDEX\CONF0.IDX
```

If you do not put the % at the beginning of the line, PCBoard will not find the index. Instead, it treats C:\PCB\INDEX\CONF0.IDX as a subdirectory and attempt to search it for files.

Using Index Files With Hard Drives

Unlike a CD-ROM, the data on a hard drive can change. Files can be deleted, renamed, moved, or added to the drive. To help accommodate the use of an index file with a hard drive, PCBFiler runs REFRESH.BAT if it exists and files have been moved, copied, or deleted. In the REFRESH.BAT file, add the necessary lines that will run MAKEIDX to re-create all of your index files. For example, your REFRESH.BAT may resemble the following:

```
MAKEIDX C:\PCB\INDEX\CDROM1.PTH C:\PCB\INDEX\CDROM1.IDX
MAKEIDX C:\PCB\INDEX\GIFS.PTH C:\PCB\INDEX\GIFS.IDX
```

The REFRESH.BAT file should be put in the same directory as PCBFiler or in a subdirectory that is specified by your *PATH=* statement.

PCBEdit

PCBEdit is a utility which you can use to edit text files. Support for PCBoard's @X color codes and @ macros is directly integrated into PCBEdit.

Starting PCBEdit

There are several command line parameters or options you can specify when loading PCBEdit. These parameters control how PCBEdit behaves. If you are not yet familiar with PCBEdit, skip the sections that discuss command line parameters.

The PCBEdit command line uses the following format:

```
PCBEDIT /parameter /parameter ... /parameter [filename]
```

Command Line Parameters

/ATMAC:[@macro@]:[replacement text]

When a PCBoard @ macro is displayed in PCBEdit, default text is displayed in their place. To change the text that is displayed for each @ macro, use this command line parameter. After the colon, specify the @ macro you want to change the default text followed by a colon and the next text to be displayed. Example:

```
PCBEDIT "/ATMAC:@USER@:JIM SMITH"
```

NOTE: Quotes must surround any parameter which contains a space. If no quotes are used, the command line parameters will be misinterpreted.

/COLOR

Forces PCBEdit to use a color display adapter card even if a monochrome card was detected.

/LLEND:[ASCII code(s)]

Specifies a different character sequence to be appended to the last line when a file is saved. By default, the last line is written with a carriage return / line feed appended to it. With this switch, you can change it to several carriage return/line feed pairs, an end of file character, etc. Replace [ASCII code(s)] with any valid ASCII codes. Example:

```
PCBEDIT /LLEND:013,010,013,010
```

/MACRO:[filename]

Loads the macro filename specified by [filename]. Example:

```
PCBEDIT /MACRO:C:\PCB\PCBEDIT.MAC
```

/MONO

Forces PCBEdit to use a monochrome display adapter card even if a color display is detected.

/NOAT

Forces PCBEdit to not interpret @ macros or @X codes (regardless of whether or not /ATX is in effect). This setting is useful for using PCBEdit as a text editor.

/NOATX

Forces PCBEdit to ignore @X codes and to display all text in the attribute specified via the /STARTATTR option.

/NOBAK

Forces PCBEdit to not keep backup files.

/NOBUZZ

Disables the buzzing sound for alerting the user about error conditions.

/NODOS

Forces PCBEdit to not allow shells to DOS.

/NOIO

Disables the A-I, A-K and A-L functions. Also disables the ability to specify the filename to save in the A-S function.

/NOQUICK

Displays the welcome screen when PCBEdit starts.

/NOSS

Tells PCBEdit to not strip trailing spaces from lines.

/SET:[filename]

Loads the file specified by [filename] as the function key character set (available by pressing A-F in PCBEdit). Example:

```
PCBEDIT /SET:C:\PCB\PCBEDIT.KEY
```

/SNOW

Tells PCBEdit to test for CGA screen snow.

/SS

Tells PCBEdit to strip trailing spaces from lines.

/STATUS:[type]

Changes the default status bar type to the type specified:

0 = detailed status bar with code ribbon (Default)

1 = function key status bar with code ribbon

2 = no status bar or code ribbon

/STRIPG

Always strip the G graphics file specification (if present) prior to attempting a file load.

/TRYNOG

Strip the G graphics file specification if a file with the G as part of the filename doesn't exist.

REM [/option]

Removes the command line parameter from processing (works with any parameter which begins with a forward slash [/].

Specifying Command Line Parameters

There are three ways of specifying startup options. The first is on the PCBEdit command line. For example:

```
PCBEDIT /NOQUICK /MACRO:MAIN.MAC /SET:MAIN.SET NEWSG
```

The second means of specifying startup options is through the PCBEDIT environment variable, which you can SET in your AUTOEXEC.BAT file. An example line looks like this:

```
SET PCBEDIT=/QUICK "/ATMAC:@USER@:SCOTT ROBISON"
```

Finally, startup options may be specified in a configuration file. It is named PCBEDIT.CFG and can be located in the same directory as PCBEDIT.EXE or in the current directory. It can be created with any text editor, may have as many lines as necessary, and may have several options on one line, as long as all lines are limited to 127 characters or less. Here's an example:

```
"/ATMAC:@USER@:FIRST LAST"
/NOBAK
/MACRO:C:\PCB\PCBEDIT.MAC
/STATUS:1
```

PCBEdit searches for startup options in the following order:

- PCBEDIT.CFG (first in the directory with PCBEdit, then in the current directory)
- PCBEDIT environment variable
- PCBEDIT command line.

In this way, an option in the PCBEDIT.EXE directory configuration file can be overridden by another option later in the same file, in the other configuration file, environment variable or command line.

NOTE: Parameters specified on the command line always override any prior settings.

PCBEdit Macros

Fifteen sets of user-defined macros are supported by PCBEdit. Each set consists of ten strings that may be accessed via the F1 - F10 function keys. Different sets may be accessed by utilizing the S-A-1 - S-A-0 keys for sets 1 - 10 and the S-C-1 - S-C-5 keys for sets 11 - 15. The macros may be selected from and maintained with the A-G key. Each macro may consist of whatever text the user would like. Additionally, the following special sequences are recognized by PCBEdit:

\X	Stuffs the character following backslash in the keyboard buffer (\\ to stuff a literal backslash)
\	By itself at the end of a macro with nothing following it will stuff a literal backslash in the keyboard buffer
~X	Stuffs the lowercase letter X in the keyboard buffer
~#	Stuffs the code for function key F# in the keyboard buffer

~	By itself at the end of a macro with nothing following it will stuff a literal tilde in the keyboard buffer
#X	Stuffs the uppercase letter X in the keyboard buffer
##	Stuffs the code for function key Shift-F# in the keyboard buffer
#	By itself at the end of a macro with nothing following it will stuff a literal pound sign in the keyboard buffer
^X	Stuffs a C-X in the keyboard buffer
^#	Stuffs the code for function key control F# in the keyboard buffer
^	By itself at the end of a macro with nothing following it will stuff a literal carat in the keyboard buffer
!X	Stuffs an A-X in the keyboard buffer
!#	Stuffs the code for function key alt F# in the keyboard buffer
!	By itself at the end of a macro with nothing following it will stuff a literal exclamation point in the keyboard buffer

Using PCBEdit

PCBEdit is not meant to replace screen-design programs such as TheDraw. These programs are still incredibly useful for screen design. PCBEdit is designed to allow you to write what we call *information intensive* display files (such as NEWS and BLT files), as opposed to *display intensive* files (such as WELCOME and BRDM.)

PCBEDIT.EXE exists in the same directory where PCBoard is installed. In fact, if you installed a brand new PCBoard, you will notice the default editor defined in *System Manager | Define Text & Graphics Editors* is PCBEdit. Because it deals with PCBoard's @X codes and @ macros, it can be used to design all files, eliminating the need for separate graphics display files. To load PCBEdit, type the following at the DOS prompt:

```
PCBEDIT
```

If you already know the filename you want to edit, specify it on the command line when you load PCBEdit. The following illustrates how to edit C:\PCB\GEN\NEWS:

```
PCBEDIT C:\PCB\GEN\NEWS
```

When PCBEdit is loaded, you see a screen with the following status line:

This is the screen where you will do all of the editing. A brief summary of the most commonly used keyboard commands follows:

A-A	Change the current color attribute. Use this to insert a color at the current cursor position.
A-L	Load a file into the editor. Only one file can be loaded at a time.
A-S	Save the current file to disk.
A-X	Exit PCBEdit.
d	View the next 23 lines in the file.
u	View the previous 23 lines in the file.
t	Move the cursor up one row.

b Move the cursor down one row.

l Move the cursor to the left.

r Move the cursor to the right.

Answers To Common Questions

PCBEdit saves files with a carriage return/line feed after the last line, but I need an end of file character after the last line. Is there a wey to accomplish this?

There are a couple of ways to do this. One is to position yourself at the end of the last line just before saving it and press C - Z or A -026 (on the numeric keypad). Another option, if you want it to save that way every time you save the file, is to use the /LLEND option to change the last line ending sequence of characters. /LLEND:26 will save an end of file marker after the last line instead of a CR-LF.

When I change background colors and type spaces all the way to the end of the line it displays as expected. But sometimes if I move the cursor off of that line (and always after a save and reload of the same file) the background color no longer appears across the entire line. What happened?

The effect you desire is automatic when using screen oriented editors (such as TheDraw and PCBDraw) because they save the entire screen (80X25), and that's why you can only edit that size of display with those programs. Since PCBEdit functions more as a text editor instead of a screen editor, it attempts to optimize the output of the file before saving by stripping trailing spaces before writing the file to disk. This is easily avoided by including a color change at the end of the line back to the original background color. For example, to include a blue bar on a line (with nothing else) on a line, type the following:

```
@X00@X1F     @XFF
```

Since the @XFF appears after the spaces, the spaces are treated as significant and are saved with the file. Since the @XFF only performs a color change, nothing textual is displayed after the spaces, giving you the desired effect. Additionally, if you want to have the color change affect the rest of the current line, use an @CLREOL@ macro to change the color of the line.

I prefer the status bar format from TheDraw and PCBDraw. Is there any way to implement this?

You can use the A - T key to toggle status line types between the default one, one that appears more like the TheDraw/PCBDraw status line, or no status line at all. Or you can use the /STATUS configuration option to select which one you want by default

If I mark a block to change the color or delete, it also removes the color codes and non-displayable macros to the left and right of the block. Why does this happen and is there a way around it?

There are three block types: block, line and character. Line and character are straight forward; they mark a range from the beginning to the end and everything in-between.

A true block (any rectangular region) is different though. In PCBoard display files, one physical character in the document does not necessarily equal one displayable character. For example, @QON@ does absolutely nothing to the display, but instructs PCBoard to do something. Alternatively, @BOARDNAME@ can potentially be much longer than the physical 11 characters it occupies. PCBEdit needs to take these cases (and others) into account in a true rectangular block so that it can line up correctly on the left and right sides of the block. The only way around it is to select a line or character block instead of a true rectangular screen block. Just remember that L and C blocks are handled differently than B blocks.

PCBModem

PCBModem is the utility that you should use to make sure that your modem and copy of PCBoard are properly configured to work with one another.

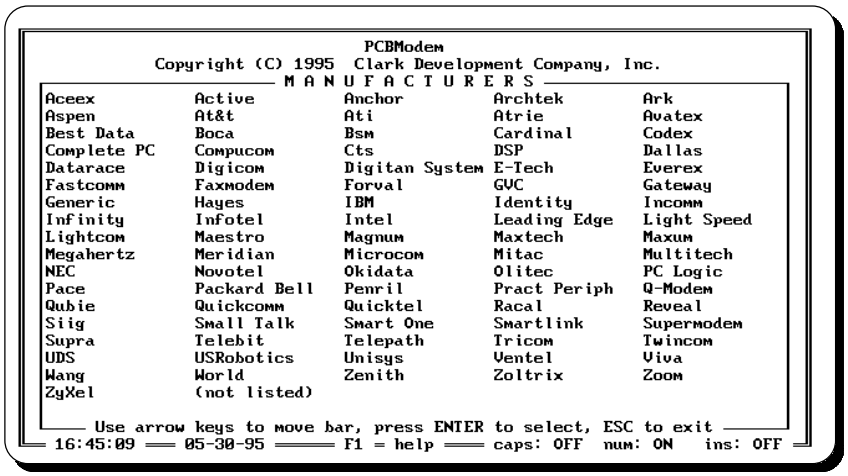
Loading PCBModem

To load PCBModem, change to the drive and subdirectory where you installed PCBoard. At the DOS prompt, type:

```
PCBMODEM
```

Selecting A Modem

Upon loading PCBModem, you will see a screen resembling the following:



On your screen, you will find a list of manufacturers. Use the cursor keys to move the highlight bar on your screen until your modem manufacturer is highlighted. When it is, press R to view the modems of that manufacturer. For example, to configure a generic modem, select *'Generic'* from the following menu: Next, pick your modem and press R . For the purpose of this example, we will select *9600 & 14400 modem*. Once your modem is selected, you will be asked a few questions before your modem is initialized.

Enter the port opening speed

In the field on your screen, enter a valid port opening speed which is less than or equal to the maximum value allowed (shown on the same line as the question). Common port opening speeds are 2400, 9600, 19200, 38400, 57600, and 115200. If you enter an invalid speed or a speed that is not supported by your modem, the default answer is re-entered into the field.

Communications driver to use (A, F, C, O)

This question is asking you which method PCBModem (and PCBoard) will use to communicate with your modem. The following are valid responses:

A — Use the standard communication routines built into PCBoard. These routines can access any serial port using a standard UART. If you are using COM1, COM2, COM3, or COM4, enter this response. Next, enter the COM port you are using. Enter a response

between 1 and 8. If you enter a value higher than 2, the base address and IRQ of the serial port you are using must be specified.

F — Communicate with the modem via a FOSSIL port. Enter the port number to access when prompted.

C — COMM-DRV is used to communicate with the modem. When prompted, enter the appropriate port number for the modem you are initializing.

O — Communicate with the modem via an OS/2 driver. PCBoard can communicate with any OS/2 device as long as it begins with the name COM (e.g., COM1, COM2, COM3, etc.)

The Initialization Screen

Now that you have answered all of the questions, you are shown information about your modem including the modem number, description, port, and opening speed. Any special comments about your modem are listed in this section of the screen. The next section of the screen shows the modem commands used to initialize the modem.

When you agree with all of the information that is on the screen, answer *Y* to the *Do you wish to proceed with the initialization* question—your modem will be initialized. If you answer *N* to this question, you are returned to the screen where you select modems from your manufacturer.

PCBModem now attempts to initialize your modem. It sends each command line to your modem and waits for an *OK* response. If there is no response from your modem or the response is invalid, PCBModem reports there is a problem with your modem . Refer to the next section for tips on finding the problem. If your modem successfully initializes, you are asked if the new file should be created. Answer *Y* to this question to update your PCBoard configuration.

If There Is A Problem

There are numerous reasons why PCBModem may fail to initialize your modem. The list that follows give a few suggestions to help find the solution to the problem:

- Check the cabling between modem and computer. Make sure it is plugged in well.
- Insure that the RS-232 cable between your modem and your computer has all of the necessary wires. A DB-25 pin straight-through cable is highly recommended. Some 25-9 pin cables are not properly wired for use with modems.
- If PCBModem cannot communicate at all with your modem, check your system for potential IRQ conflicts. If you have two or more devices that attempt to use the same IRQ, you will cause a conflict which may render both devices inoperable.
- If PCBModem reports that no modem is present or it found a bad UART, make sure that the proper base address was specified for the port.
- If you see the word ERROR printed on the screen with the initialization string, an invalid command was sent to your modem. Contact technical support for additional guidance.

Command Line Parameters

The following lists the command line parameters available when running PCBModem:

/NODEBAT:[filename]

This parameter tells PCBoard which NODE.BAT file to update. As you know, PCBoard is started using NODE1.BAT, NODE2.BAT, etc. Each of these batch files contains information about your communication port that PCBModem automatically updates if told the appropriate location. Example:

```
PCBMODEM /NODEBAT:C:\PCB\NODE1.BAT
```

PCBMoni

PCBMoni enables you to view a list of who is currently online and what they are doing on the system. The list shown on your screen is updated every few seconds. In addition to viewing who is online, you can modify the information that is shown on the screen; or if you have a network and a spying utility, you can spy on the node number to see what is on the screen.

To load PCBMoni, change to the subdirectory where you installed PCBoard. At the DOS command prompt, type *PCBMONI* followed by the necessary command line parameters and press R .

Syntax

PCBMONI [filename] [NumNodes] [MaxOnScreen]

Command Line Parameters

[filename]

This parameter specifies the complete path and filename to your USERNET.XXX file. The location of this file can be found in *PCBSetup | File Locations | System Files*. If this parameter is not specified or the filename you specify is invalid, a usage screen will be displayed showing you the correct syntax for PCBMoni. **This parameter is required for PCBMoni to be loaded**.

[NumNodes]

If you want to limit the number of nodes that will be shown on the screen, use this parameter. For example, you may have a 100 node license, but decide to monitor only the first 30 nodes. In this case, specify 30 for the number of nodes to monitor.

[MaxOnScreen]

Normally the maximum number of nodes is shown on the screen. If you need to limit the number of nodes shown, use this command line parameter. Enter the number of lines that you want to view on the screen at any given time—the default is 22.

Keyboard Commands

t	Move the highlight bar up one line. If you are at node 1, the bar will not move.
b	Move the highlight bar down a line. If you are at the last node, the bar will not move.
d	Move the highlight bar to the next screen.
u	Move the highlight bar to the previous screen.
R	Execute NODE.BAT passing the node numbers as parameters. For additional information about spying on a node, see the *NODE.BAT* section in the *Batch Files* chapter of this manual.
M	Edit the node record that is currently highlighted. *The Edit User Net Status* screen appears on the screen.

Modifying A Node Record

To edit a node's record, move the highlight bar to the node number that you want to edit and press M . When you do, the following screen is displayed to you:

```
                              Edit User Net Status

Name      : TEST USER                 Record Last Updated: 08:22:04
City      : NOWHERE
Operation :
Message   :

Possible Status Bytes:
   A=Available            L=Logoff pending          T=Transfer file
   B=Out to DOS           M=Message                 U=Unavailable
   C=Chat w/Sysop         N=Running Event           V=No Caller online
   D=In a DOOR            O=Logging in              W=Wait/Drop to DOS
   E=Enter msg            P=Paging Sysop            X=Drop to DOS now
   F=File View            R=DOS Recycle Pending     Y=No caller (clear)
   G=Group chat           S=Answering Script        Z=Node is offline

Status    : U

                 Press ESC to abort or PGDN to apply changes

 08:22:25 ── 06-28-93 ──── F1 = help ── caps: OFF  num: ON  ins: OFF
```

Fields You Can Edit

Name: This field contains the name of the user that is currently online. If nobody is connected to this node, the field is blank.

City: In this field, the location that the user entered when creating their account is shown.

Operation: The operation field is used by PCBoard to display information about the current operation that the user is performing. For example, if the user is answering a script questionnaire, this field shows the script number and the conference it is being answered in. For a list of information that is displayed in this field, refer to the *1 1 SysOp command* in the *PCBoard Commands* chapter of this manual.

Message: Any text entered in this field is sent to the user as a broadcast message. You can type up to a 64 character message to send to the caller on the node. When the message is displayed, PCBoard sends an accompanying beep to help get the attention of the caller.

Status: This field contains one character that describes what the user is currently doing on the system. A list of possible status values are listed above this field. Pick the status value you want to assign to this node number.

Saving Your Changes

Once you have updated the desired fields, press d to save the changes or E to abort the changes that you have made.

OS/2 Version of PCBMoni

An OS/2 version of PCBMoni is available under the filename PCBMONI2.EXE. This executable only comes with the PCBoard for OS/2 package and is functionally the same as its DOS counterpart.

PCBNum

This utility updates the number of callers to your system. This number is stored in the message base file for the Main Board conference. To load PCBNum, change to the subdirectory where PCBoard is installed and type *PCBNUM* R . The following question is asked:

```
Location+Name of Main Message Base?
```

Enter the drive, path, and filename of your Main Board message base. If you are unsure of the location of this message base, abort the program by pressing C -C and load PCBSetup to check the location of this

file. Next, enter the new number of callers that have called your system. Once you have entered this number, the message base is updated and your system uses the new number entered.

PCBPack

This utility is used to maintain the message bases. You can delete old or received messages and even weed out duplicate messages using PCBPack. The interface for PCBPack is done strictly on a command parameter level. To pack your message bases, use the desired command line parameter(s) which are described later in this section. First, you must know the syntax to execute PCBPack.

Syntax

```
PCBPACK /parameter /parameter ... /parameter
```

/parameter Refers to one or more command line parameters described later in this section.

An OS/2 version of PCBPack is available under the filename PCBPACK2.EXE. This executable only comes with the PCBoard for OS/2 package and is functionally the same as its DOS counterpart.

Using A Configuration File

A configuration file enables you to specify the default command line parameters that are used each time PCBPack is run. The configuration file must meet the following criteria:

- The config file must be in the current directory and named PCBPACK.CFG
- PCBPACK.CFG must be an ASCII text file.
- Each command line parameter must be entered on a separate line in the config file.

An example PCBPACK.CFG may contain the following:

```
/KEEP:45
/PURGE:7
/MAXMSGS:500
/MINMSGS:200
```

Using this config file you could enter `PCBPACK /AREA:0-10` at the DOS command prompt and it will be the equivalent of typing:

```
PCBPACK /AREA:0-10 /KEEP:45 /PURGE:7 /MAXMSGS:500 /MINMSGS:200
```

NOTE: To specify a different configuration file, use the @ sign followed by the configuration file to use as shown in the following examples (/AREA switch is included for completeness)

```
PCBPACK /AREA:[range] @[filename]
```

[filename] refers to the filename being used for the configuration file. The following illustrates:

```
PCBPACK /AREA:100-200 @C:\PCB\NETMAIL.CFG
```

Miscellaneous Command Line Parameters

/AREA:[conferences]

This is the only required command line parameter. Use this to specify the conference number to pack. To specify a range of conferences to pack, enter the beginning conference number, followed by a dash and the ending conference number to pack (e.g., *3-10*). In addition, you can separate conferences and conference ranges with a semicolon. If you enter *ALL*, each message baseon the system is packed. Example:

```
PCBPACK /AREA:ALL
PCBPACK /AREA:3-15
PCBPACK /AREA:1-10;12;18-35
```

/CAP:[filename]

Specifies the filename to use for capturing the results of packing. Most SysOps pack during their event which may run at late hours. By referring to a capture file, errors and other information can be monitored. Replace **[filename]** with the filename of the capture file to create. If the file exists, the new data is appended to the end of the file. The format of the capture file is shown in this example:

```
*** Packing Conference (0) -- Main Board ***

Memory available: 550552 bytes

10149888 bytes available.

Number of messages kept      = 0
Number of messages removed   = 0
Number of messages processed = 0
Number of extraneous blocks  = 0
```

Example Usage:

```
PCBPACK /AREA:3 /CAP:PCBPACK.LOG
```

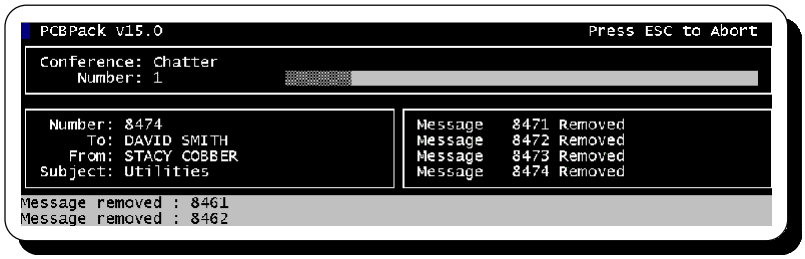
/CRC:[days]

In order to kill duplicate messages (/KILLDUP), you must maintain a CRC database. Each message generates a unique CRC value. If two messages generate the same CRC value, the latter message is packed out. Replace **[days]** with the number of days that the CRC database will be maintained. Example Usage:

```
PCBPACK /AREA:33 /CRC:90 /KILLDUPS
```

/FAST

Instead of displaying the normal message and packing statistics, display the minimum amount of information about each conference. The following shows a conference being packed in regular mode:



while this shows a conference being packed using the /FAST command line parameter:

```
PCBPack v15.0                                          Press ESC to Abort

*** Packing Conference (1) -- Chatter ***

Memory available: 389608 bytes

23867392 bytes available.

Message removed : 8418
Message removed : 8455
Message removed : 8456
```

Example Usage:

```
PCBPACK /AREA:ALL /FAST
```

/FILE:[filename]

Normally, PCBPack looks for the PCBOARD.DAT file to exist in the directory that PCBPack is run from. If you want to specify where PCBPack can find the PCBOARD.DAT file, use this command line parameter. In place of **[filename]**, specify the path and filename where the PCBOARD.DAT you want to use is found. Example Usage:

```
PCBPACK /AREA:32 /FILE:C:\TEMP\PCBOARD.DAT
```

/HELP

This parameter displays brief descriptions of the PCBPack command line parameters.

/INDEX

If you want to generate only an index for a message base, use this command line parameter. If you suspect that an index has become corrupt, use this command line parameter.

NOTE: When this parameter is used, PCBPack ignores all command line parameters that pack the message base. For example, you cannot use the /MAXMSGS parameter with the /INDEX parameter. Example Usage:

```
PCBPACK /AREA:9-12 /INDEX
```

/KILLBAK (/KB)

When PCBPack processes message bases it creates backup files for each conference that is processed. Should something go wrong with a message base, you may want to use these backup files to help rebuild the message base. If you have no desire to leave these backup files on your drive, use this command line parameter. When this parameter is used, the backup files are deleted after each message base is processed. Example Usage:

```
PCBPACK /AREA:10-35;50 /KILLBAK
```

/NOCALLER (/NC)

When this command line parameter is used, no information about the packed message bases are written to the caller logs. When information is written to the logs, the following format is used:

```
*** Packing Conference (0) -- Main Board ***
*** Packing Conference (1) -- Chatter ***
```

Each line written shows the conference number and name that was packed. Having this information in the caller logs is most useful when you run your events at hours when you are not available to watch it run. Example Usage:

```
PCBPACK /AREA:2-13 /NOCALLER
```

/OLDINDEX

PCBPack checks the PCB environment variable and the conference information to determine if it needs to create the old index files (v14.x compatible). To force PCBPack to create the older index files, use this command line parameter: Example Usage:

```
PCBPACK /AREA:32-60 /OLDINDEX
```

/QUIET

This command line switch is identical to the /FAST switch. See the description of that switch for additional details.

/RENUMBER:[beginning number]

PCBoard allows you to enter in excess of 16 million messages before you reach a point where you must renumber the message base(s). If you need to renumber the message bases to begin with a new number, enter the new beginning message number in place of [beginning number].

NOTE: When a message base is renumbered, the user records are not updated. If you renumber you message bases, reset the last message read pointers for all users affected. If you do not, your users may miss new messages left in the renumbered conference. Example Usage:

```
PCBPACK /AREA:99 /RENUMBER:1
```

/REPORT:[filename]

To help you keep tabs on how active the message base in each conference on your system is, use this command line parameter replacing **[filename]** with the filename to output the report to. If the filename specified exists on disk, the contents of the file will be overwritten with the new report. The following shows the format of the report.

```
Conference             High      Low       Active
=====================  ========  ========  ========
(    0) Main Board          263      4264      1256
(    1) Chatter              62       264       125
(    2) Debate             3325      5634       896
                                           ========
                                               2277
```

Each line shows the conference number, conference name, high message number, low message number, and total active messages. The last line in the report summarizes the total number of active messages in the report.

If you use this command line parameter with any packing command line parameters, the report will be generated for each conference **before** the message base is packed. Example Usage:

```
PCBPACK /AREA:ALL /REPORT:PCBPACK.RPT
```

/THRESHOLD:[# of active messages]

The entire function of this command line switch is to reduce the amount of time PCBPack takes to do its job. Using this switch, PCBPack will know to only process message bases having the same or more active messages you specify. For example, suppose you want to only process message bases that have 500 or more active messages and to pack them down to a maximum of 500 messages. In this case, enter the following:

```
PCBPACK /AREA:ALL /MAXMSGS:500 /THRESHOLD:500
```

/TIMEOUT:[seconds]

If PCBPack attempts to pack a message base that is currently in use, it attempts to access it for 60 seconds before skipping the message base. If you want to change the default wait time, use this command line parameter. Replace **[seconds]** with the number of seconds you want PCBPack to attempt to access a message base. Example Usage:

```
PCBPACK /AREA:1-10 /TIMEOUT:90
```

/UPCASE (/UC)

This command line parameter converts the subject of all messages to uppercase. Even though PCBoard is capable of handling messages with mixed case subjects, it may be desirable to have all of your subjects in uppercase. Example Usage:

```
PCBPACK /AREA:ALL /UPCASE
```

/UPDATE

PCBoard's message base format has remained the same for v14.x and v15.x. Both versions of PCBoard use different index files. If you are using third-party software which supports the v14.x index files (.NDX), use this parameter to update the newer index files (.IDX). For example, if you are using a off-line mail door that imports mail packets but does not update the newer index format, use PCBPack with the /UPDATE parameter to update the new index files. Example Usage:

```
PCBPACK /AREA:ALL /UPDATE
```

Command Line Parameters That Delete (Pack) Messages

One of the primary purposes of PCBPack is to delete or pack messages by removing older messages. The command line parameters described in this section delete messages using the criteria specified in the description of each parameter. Regardless of the command line parameter you select, messages that have been killed on the BBS are deleted.

/COMPRESS

Normally PCBPack uses temporary files and backup files when processing the message bases. This switch is a little dangerous in that it does NOT create any temporary or backup files. Instead, it packs the file in-place. In other words, it takes your MSGS file and compresses the contents of the file, removing packed-out messages simply by moving the next active message
that comes after the deleted message into the space previously held by that message. This new option brings with it the following advantages:

1. **Speed**. If your message bases are packed to a maximum number of messages or not packed at all, this switch reduces the amount of time to complete the process.
2. **Space**. Packing in-place means that PCBPack does NOT require any additional disk space, because no new files are created.
3. **Less fragmentation**. By not using temporary files, there is a lot less disk fragmentation that is caused by running PCBPack. You'll still want to defragment your drives, but now you do not have to do it as often.

There are a few notes you'll want to jot down in relation to this parameter:

- The /KILLBAK parameter no long has meaning since backup files are not created.

- The E key is *disabled* in the middle of the conference, because when you are compressing the file, you cannot abort in the middle without messing up the file. If you press E , PCBPack waits until it finishes the conference it is working on before aborting the pack.
- A reminder: Because no backups are made, rebooting the machine in the middle of a pack can cause problems. It would be best if the machine performing the pack runs on a UPS (uninterruptable power supply) in order to avoid such problems. The problems themselves won't be too serious because re-running PCBPack will fix any actual problems.

Example usage:

```
PCBPACK /AREA:ALL /MAXMSGS:500 /COMPRESS
```

/DATE:[mmddyy] (/DT:[mmddyy])

This command line parameter enables you to delete any messages older than the date you specify. The date should be specified in **mmddyy** where **mm** is the month, **dd** is the day of the month, and **yy** is the year. If you want to pack all messages that are older than 05-23-94, enter the parameter as *`/DATE:052394`*. Example usage:

```
PCBPACK /AREA:3-13;39 /DATE:041893
```

/DAYS:[number of days] (/DY:[number of days])

This command line parameter enables you to delete any message that are older than the number of days specified. For example, to delete any messages that are older than 90 days, enter the parameter as *`/DAYS:90`*. Example usage:

```
PCBPACK /AREA:4 /DAYS:60
```

/IGNORE

If a message is configured to have a pack-out date, it is normally deleted whenever that date is reached. You can tell PCBPack to ignore the pack-out date and essentially render the feature useless by using this command line parameter. Example usage:

```
PCBPACK /AREA:1-10 /IGNORE
```

/KEEP:[days]

This command line parameter does not delete messages. Instead, it prevents PCBPack from deleting any message which meets the following criteria:

- The message is newer than the number of days specified.
- The security on the message is *`RECEIVER ONLY`*.
- The message has not been read yet.

Even if the message is normally be deleted, this parameter takes precedence. Example Usage:

```
PCBPACK /AREA:ALL /MAXMSGS:500 /KEEP:45
```

/KILLALL

If you want to delete every message in the message bases you process, use this command line parameter. You may find this parameter useful for restarting one or more message bases.

NOTE: By default, killing all messages also cleans-up any file-attachments associated with the deleted messages. To quickly erase a message base file *while leaving all file attachments*, use this parameter in conjunction with /FAST (see examples). Example Usage:

```
PCBPACK /AREA:100-150 /KILLALL
PCBPACK /AREA:1-100 /KILLALL /FAST
```

/KILLDUPS (/KD)

With netmail it is quite possible that duplicate messages may get imported into your system. Rather than manually marking each duplicate message to be deleted, you can use this command line parameter. If PCBPack sees two duplicate messages in a message base, the latter message is deleted. See the /CRC parameter for additional duplicate checking options. Example Usage:

```
PCBPACK /AREA:ALL /KILLDUPS /CRC:7
```

/MAXMSGS:[number]

To regulate the maximum number of messages in a conference, use this command line parameter. This parameter is ideal for conferences which have a lot of messages entered each day. By regulating the maximum number of messages, you will have a good estimate of the disk space required to store the messages. Example Usage:

```
PCBPACK /AREA:ALL /MAXMSGS:500
```

/MINMSGS:[number] (/MM:[number])

If you want to force PCBPack to keep a minimum number of messages in a message base, use this command line parameter. This parameter is ideal for message bases that do not have a lot of message traffic. If you were to pack using a date or number of days, there may be only a few message left for users to read on your system. Example Usage:

```
PCBPACK /AREA:53-69;3 /MINMSGS:100
```

/NODATE

PCBPack assumes that all dates are valid. There are some instances, however, where a third-party program may insert messages into the message base that either does not use the correct date format or is simply wrong.

This command line parameter removes all date validation checks and therefore prevents the message from being deleted due to an invalid format. The intention here is to provide some way for you to leave the message in the message base as feedback for the author of the program inserting the messages.

Because the dates are invalid and may be either future or past, we recommend you also use the /MAXMSGS parameter in conjunction with /NODATE. Example usage:

```
PCBPACK /AREA:42-49 /NODATE /MAXMSGS:350
```

/PURGE:[days]

This command line parameter deletes any message which meets the following criteria:

- The message is older than the number of days specified. If the number of days is not specified, PCBPack will not do any date checking on the message.
- The security on the message is *RECEIVER ONLY*.

- The message has been read by the recipient.

Example Usage:

```
PCBPACK /AREA:ALL /PURGE
PCBPACK /AREA:ALL /PURGE:14
```

/RANGE:[low]-[high]

To delete messages which fall in a given range, use this command line parameter. Any message number between the low and high message number specified will be deleted. Example Usage:

```
PCBPACK /AREA:32 /RANGE:100-200
```

Diagnostic And Repair Command Line Parameters

The command line parameters described in this section are used for diagnostics and repair. You should not use these unless instructed to do so by the technical support staff.

/DEBUG:[detail level]

This command line parameter produces diagnostic information for diagnosing problems with PCBPack. Only use this parameter when instructed to do so by the technical support. The technician you work with will provide the detail level number to use. Example Usage:

```
PCBPACK /AREA:ALL /DEBUG:300
```

Examples

To delete any message that is older than 30 days but keep unread RECEIVER ONLY messages in conferences 1 through 10, enter the following:

```
PCBPACK /AREA:1-10 /DAYS:30 /KEEP
```

The following example demonstrates the use of several command line parameters. The actions performed are described after this sample command line:

```
PCBPACK /AREA:1-10;20-100 /MAXMSGS:250 /KEEP /UPCASE
```

- Pack the message bases of conference 1 through 10 and 20 through 100.
- No message base will contain more than 250 messages. Older messages are deleted first.
- Keep any message that has not been read by the recipient and is *RECEIVER ONLY*.
- Convert all subjects to uppercase.

Errorlevels Returned

PCBPack is primarily run from batch files and usually in an automated fashion such as a daily event. Because packing is usually done unattended, PCBPack will exit with an errorlevel allowing you to work around the success or failure of the packing process.

The following lists all errorlevels returned by PCBPack.

0	No errors occurred. The packing process was successful.
1	An error occurred writing to disk. Frequently this may mean the disk was full. You must free-up some space in order to pack the message base(s).
100	E was pressed to abort the packing process.

Example

```
PCBPACK /AREA:0-10 /DAYS:30
IF ERRORLEVEL 100 GOTO END
IF ERRORLEVEL 1 GOTO DISKERR

PCBPACK /AREA:ALL /MAXMSGS:200
IF ERRORLEVEL 100 GOTO END
IF ERRORLEVEL 1 GOTO DISKERR

:DISKERR
ECHO PCBPack: An error occurred writing to disk.  Aborting...
GOTO END

:END
```

Notice how the highest errorlevel is always checked first. This is the correct and only way to test for errorlevels in a DOS environment.

PCBSTATS

Syntax

PCBSTATS /FILE:[filename] /NODE:[number] /parameter

Required Command Line Parameters

These two command line parameters listed in this section are required for PCBSTATS to function properly. If you specify an invalid filename or node number, the program displays an error instead of running.

/FILE:[filename]

In place of the **[filename]** shown with this command line parameter, enter the location and name of your Statistics Files (*PCBSetup | File Locations | System Files*).

/NODE:[number]

In place of the [number] shown with this command line parameter, enter the node number that you want to show statistics. Even if you use a parameter that displays system statistics, you must specify this parameter for PCBStats to function properly.

Command Line Parameters to Update Statistics

If you want to use PCBStats to update the PCBSTATS.DAT file, pick one of the command line parameters listed in this section.

/RESETNODE

Resets the fields and statistics for the node number specified with the /NODE: parameter.

/RESETALL

Resets the fields and statistics for all nodes in your system.

/MAKELOCAL

Modify all nodes so that the local statistics are shown on all call-waiting screens in your system.

/KEEPCALLER

This parameter should only be used in conjunction with either the /RESETNODE or /RESETALL parameters. Normally these parameter resets not only the statistics, but also the last caller to each node. If you want to keep the last caller information in the file while still resetting all of the statistics, use this parameter.

/MSGS:[number]

This parameter adds the number of new messages that you specify to the statistics of the node you specify. Replace [number] with any number between -9,999,999 and 9,999,999. If you specify a negative number, the number of messages is subtracted rather than added.

/UP:[number]

This parameter adds the number of new uploads that you specify to the statistics of the specified node. Replace [number] with any number between -9,999,999 and 9,999,999. If you specify a negative number, the number of uploads is subtracted rather than added.

/DOWN:[number]

This parameter adds the number of new downloads that you specify to the statistics of the node you specify. Replace [number] with any number between -9,999,999 and 9,999,999. If you specify a negative number, the number of downloads is subtracted rather than added.

/NAME:[name]

This parameter specifies the name of the last caller to the node that you specify. Replace [name] with the user name of the caller. This parameter should only be used when you are running a third-party program that does the logoff processing. Otherwise, PCBoard automatically updates this information.

/CITY:[city]

This parameter specifies the city of the last caller to the node you specify. Replace [city] with the city of the caller. This parameter should only be used when running a third-party program that does the logoff processing. Otherwise, PCBoard automatically updates this information.

Command Line Parameters to View Statistics

These command line parameters give the ability to print statistics about a single node, the system or each of your nodes to the screen. If you want to capture one of these reports to disk, refer to redirecting command input or output in your DOS manual.

/SHOWSYS

This parameter shows a single line that summarizes the statistics for all nodes. The format of the report is shown by the following example:

```
SYSTEM  -> Calls:    52  Messages:    30  Downloads:    82  Uploads: 3
```

/SHOWNODE

This parameter displays statistics for the node number specified. The format of the report is:

```
Node 15 -> Calls:     0  Messages:     0  Downloads:     0  Uploads:     0
```

/SHOWALL

This parameter produces a report for your entire system and each of the nodes on your system (whether active or not). The first 4 lines of this report may resemble the following:

```
SYSTEM  -> Calls:    52  Messages:    30  Downloads:    82  Uploads:     3
Node  1 -> Calls:     4  Messages:     0  Downloads:     6  Uploads:     0
Node  2 -> Calls:     8  Messages:     1  Downloads:    12  Uploads:     4
Node  3 -> Calls:     9  Messages:     3  Downloads:     7  Uploads:     0
```

Examples

If your PCBSTATS.DAT file is located in C:\ you would type the following to add one upload to node number 3:

```
PCBSTATS /FILE:C:\PCBSTATS.DAT /NODE:3 /UP:1
```

To reset the statistics for the same node (leaving the last caller to the node intact), enter:

```
PCBSTATS /FILE:C:\PCBSTATS.DAT /NODE:3 /RESETNODE /KEEPCALLER
```

To produce a report that lists the statistics for the entire system, enter the following:

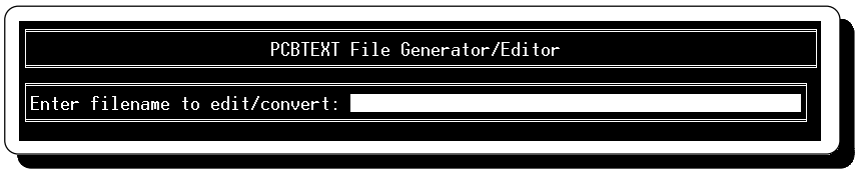
```
PCBSTATS /FILE:C:\PCBSTATS.DAT /NODE:3 /SHOWSYS
```

PCBText Utilities

There are two utilities that are included with your PCBoard package to modify or report the contents of a PCBTEXT file. If you have defined multiple languages on your system, you have more than one PCBTEXT file. The MKPCBTXT utility is used to edit or create a PCBTEXT file, while RDPCBTXT is used to output the contents of a PCBTEXT file to an ASCII file.

MKPCBTXT

PCBoard stores virtually all of the text it displays during program operation in a file called PCBTEXT which is normally located in the \PCB\GEN location on your hard disk. The reason for placing all program text in a separate file is so that the SysOp can alter the default program displays, and also to provide support for multilingual versions of PCBoard. The program used to maintain the PCBTEXT files is MKPCBTXT.EXE. The MKPCBTXT.EXE program is found in the same directory where PCBoard is installed. To run the program, enter *MKPCBTXT* at the DOS command prompt. After loading, the following screen appears:



Syntax

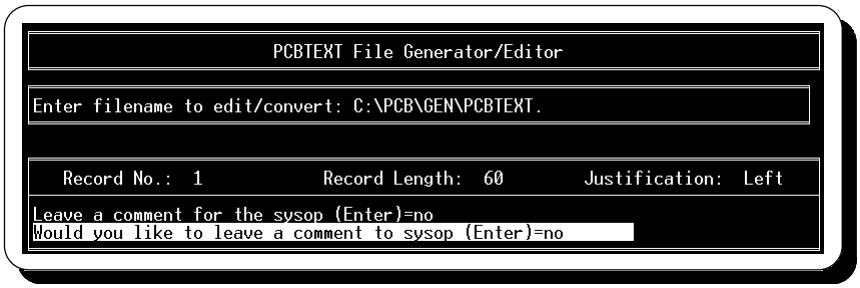
```
MKPCBTXT [filename] /I:[recnum] "new text for the record"
```

[filename] If you want to specify the PCBTEXT file to edit on the command line, enter the filename to edit after MKPCBTXT.

/I: To automate the updating of a record in a PCBTEXT file, use this command line parameter. After the /I:, specify the record number to replace the contents of followed by a space and the new text for the record in quotes.

Choosing the PCBTEXT File to Modify

If you do not specify the PCBTEXT file to edit on the command line, you are prompted to enter the file to edit. In the field at the top of the screen, enter the name of the PCBTEXT file to edit. Your PCBTEXT files are stored in the subdirectory specified by *PCBSetup | File Locations | System Files*. Once a PCBTEXT file has been selected for editing, your screen resembles this:



Keyboard Commands

E Exit the current screen or action. If you are at the first screen, pressing E exits MKPCBTXT and save any changes that you have made.

2 Search for text. This keyboard command enables you to search all of the entries in MKPCBTXT for entries that match the text entered. You can either edit a matching record or continue searching for the next match.

3 Go directly to a particular record. If you know the record number that you want to edit, use this keyboard command to jump directly to that record. For example, if you know you want to change the Do you want graphics prompt, press 3 and type *149* followed by R to go directly there.

4 If you are editing a record and decide that you would rather have it use the default text for the record (shown directly above the edit field), use this keyboard command. Once you press 4 , the text in the edit field will be changed to match the default text directly above it.

t Move to the previous record number.

b Move to the next record number.

u Move back 10 records.

d Move ahead 10 records

C - u Go to record number 1.

C - d Go to the last record number.

Editing a Record

When a record is displayed on the screen, you see the following:

```
Record No.:  1          Record Length:  60       Justification:  Left

Leave a comment for the sysop (Enter)=no
Would you like to leave a comment to sysop (Enter)=no
```

On this screen, notice there is a "header" at the top of the record that shows some useful information. You cannot edit this information. The following briefly describes each piece of information:

Record No Displays the record number you are editing.

Record Length Displays the maximum length of the record.

Justification Displays the type of justification that the field uses: Left, Center, or Right.

To edit a record, start typing text. The edit field is the one that is highlighted on your screen. You can change the text in the field to say anything that you deem appropriate. When you exit the program, your changes are saved to the file automatically.

Special Characters In A Record

When editing a record, there are two special characters that you can enter in the highlighted field. The following describes each character:

~ When MKPCBTXT saves the file, it strips any extra spaces to the right of the last character. If you need extra spaces at the end of the prompt, enter a ~ for each space.

_ This character only has meaning for records that prompt the caller for information. This character signifies the end of the record and informs PCBoard not to display any question mark or guidelines for field entries. This is particular useful when designing RIPscrip files where you want to hide the prompt.

Replacing a Record With a Text File

Sometimes you need to be able to enter more text than the edit field allows you to enter. In this case, have the record display a text file instead. In order to accomplish this, enter a % as the first character followed by the filename to display. For example, to replace record number 116 so that it gives a more thorough explanation of why the time has been adjusted, go to that record using `3`. Once there, clear the entire field by pressing `C - e`. Now, type `%` followed by *`C:\PCB\GEN\EVENT`*. Your record now resembles the following:

```
Record No.:  116        Record Length:  70       Justification:  Left

@FIRST@, your time has been adjusted for our event.
%p:\PCB\GEN\EVENT
```

Whenever the *`your time has been adjusted for our event`* message is shown, the contents of the file C:\PCB\GEN\EVENT is displayed instead. Because PCBoard displays the file, you can create security, graphics, and language specific versions of the file.

NOTE: Not all PCBTEXT records can be replaced with files. As a general rule, any record that PCBoard has to build (place text in the record as it displays) does not support replacement.

Replacing a Record With a PPE File

Replacing a record to use a PPE is very similar to using a text file as a replacement. The only difference is that instead of beginning the line with a `%`, begin the line with an `!` (exclamation point). For example, to replace record number 116 so that it uses a PPE, go to that record using `3`. Once at the record, clear the entire field by pressing `C - e`. Enter `!` followed by *`C:\PCB\GEN\EVENT.PPE`*. Your record now resembles the following:

```
Record No.:  116          Record Length:  70        Justification:  Left

@FIRST@, your time has been adjusted for our event.
!C:\PCB\GEN\EVENT.PPE
```

Whenever the *`your time has been adjusted for our event`* message would normally be shown, the C:\PCB\GEN\EVENT.PPE file is executed instead.

NOTE: Not all PCBTEXT records can be replaced with PPE files. As a general rule, records that PCBoard has to build (place text in the record as it displays) do not support replacement.

Replacing a Record With a Menu File

Replacing a record to use a MNU is very similar to using a text file or PPE file as a replacement. The only difference is that instead of beginning the line with a *`%`* or *`!`*, begin the line with an *`$`*. For example, to replace record number 1 so that it uses a MNU, go to the record using `3`. Once at the record, clear the entire field by pressing `C - e`. Enter *`$`* followed by *`C:\PCB\GEN\COMMENT.MNU`*. The record now resembles the following example:

```
Record No.:  1            Record Length:  60        Justification:  Left

Leave a comment for the sysop (Enter)=no
$C:\PCB\GEN\COMMENT.MNU
```

Whenever the *`Leave a comment for the sysop`* message would normally be shown, the C:\PCB\GEN\COMMENT.MNU file is used instead.

NOTE: Not all PCBTEXT records can be replaced with menu files. As a general rule, any record that PCBoard has to build (place text in the record as it displays) does not support replacement.

RDPCBTXT

This utility is designed to output each record in a PCBTEXT file into a single text file. The filename created is in the current subdirectory and named PCBTEXT.LST.

Syntax

```
RDPCBTXT [filename]
```

[filename]	Specifies the PCBTEXT file that want to convert into ASCII text. If the file is found, the ASCII version of the specified file is output as PCBTEXT.LST in the current subdirectory.

Interpreting the Report

The report generated by RDPCBTXT is output in the following format:

```
2 3 PCBoard Serial No. (if any)
3 1 Access Denied - Upcoming Event Pending ...
```

The first column shows the record number. The second number in this report shows the default color number of the prompt. You cannot change the default color—it is printed for reference purposes only.

USERNET

USERNET.EXE (USERNET) is a utility which allows you to modify the contents of your USERNET.XXX file. What is your USERNET.XXX file you ask? This is the file where information is stored about who is online, where they are from, and what they are currently doing. The file also determines if a user is available for chat and displays who is online via the WHO command. An example WHO command looks like this:

```
(#)   Status                  User
---   ---------------------   ----------------------------
  1   Available for CHAT      JIM SHELBER (PLANTATION, FLORIDA)
  2   Logging into System
  3   Available for CHAT      KIM KARBO (SALT LAKE CITY, UT)
```

As you can see it shows that JIM SHELBER is on node 1 and unavailable for node chat. This display also shows that he is from PLANTATION, FLORIDA.

What Can You Do With USERNET?

You can do all sorts of things with USERNET. Below are some sample uses:

- Change the name of someone in USERNET.XXX
- Change the city of someone in USERNET.XXX
- Immediately drop everyone off of the BBS if they are in PCBoard
- Delete names out of USERNET.XXX that are "stuck"
- Add nodes and users that do not really exist (up to your node limit)
- Show that a node is currently running an event

As you can see there are quite a few things you can do with USERNET. If you use your imagination you can come up with several other uses.

Syntax

```
USERNET [filename] [nodenum] [status] [name] [city] [text]
```

filename

Specifies the full path and filename of the USERNET.XXX file to use.

nodenum

Specifies the node number you want to edit or *ALL* to modify all nodes.

status

Specifies the status the node(s) are set to. For a list of status values, see the *Status Values* heading in this section.

name

Specifies the name of the caller (up to 25 characters) or `*` to leave the name unchanged.

city

Specifies the city or location of the caller (up to 24 characters) or `*` for no change.

text

Specifies the text (up to 48 characters) to place in the operational text field. This text is used to show the filename a user is transferring, the door that is currently opened, etc. To leave the text unchanged, enter `*` for the text. For a list of status values that expect text in the operational text field, refer to the *1 1 SysOp* command in the *PCBoard Commands* chapter of this manual.

NOTE: If multiple words are entered for name or city you must enclose them within quotation marks (e.g. "JOHN DOE" "NOWHERE, USA").

Status values

Letter	As shown in PCBMoni	As shown in PCBoard
A	Available for CHAT	Available for CHAT
B	Out to DOS	Out of Code in DOOR
C	Chatting with Sysop	Entering a Message
D	Inside a DOOR	Out of Code in DOOR
E	Entering a Message	Entering a Message
F	Viewing A File	Transferring a File
G	CHATTING with Group	CHATTING with Group
H	Handling Mail	Handling Mail
L	Auto Logoff Pending	Auto Logoff Pending
M	Message	
N	Running Event	Running Event
O	Logging Into System	Logging into System
P	Paging the Sysop	Paging the Sysop
R	DOS Recycle Pending	DOS Recycle Pending
S	Answering Script	Entering a Message
T	Transferring a File	Transferring a File
U	Unavailable for CHAT	Unavailable for CHAT
V	No Caller Online	No Caller Online
W	Waiting for Node #	Waiting for Node
X	Drop to DOS Pending	Drop to DOS Pending
Y	No Caller this Node	No Caller this Node
Z	(Inactive Node)	

NOTE: With the Y and Z status values no name or city parameters are needed.

Examples

Making It Appear A Caller Is Online

Sometimes as a SysOp you may want to list your name in the USERNET.XXX even when you are not online. Your display might look like this:

```
(#)   Status                  User
---   ----------------------  ----------------------------
  1   Unavailable for CHAT    JOE USER (ANYTOWN, ANYWHERE)
  2   Available for CHAT      JIM USER (ANYWHERE, ANYPLACE)
  3   No Caller Online        SYSOP - NOT CURRENTLY ONLINE
```

To accomplish a similar display, do the following:

```
USERNET C:\PCB\MAIN\USERNET.XXX 3 Y N3 N3 "SYSOP - GONE FISHING"
```

The two *N3*s in this example are place-holders for the user name and city. When there is no caller online, the *text* field is displayed instead of the user name and city. If you normally log into a node other than 3, replace the *3*s in this example with the node number you log into.

Broadcasting All Nodes

If you want to broadcast all of your nodes from a DOS prompt, you can do so using USERNET. For the example let's say that you need to take your system down. Rather than SysOp chatting with all nodes, you can run a batch file which looks like the following:

```
USERNET C:\PCB\MAIN\USERNET.XXX ALL M "PLEASE LOG OFF ASAP"
```

This example uses the *M* status value to send the message. This is quite similar to the BR SysOp command in PCBoard. One thing that is distinctly different in this example is that instead of a node number, the word ALL is shown so that this message is sent to ALL nodes.

NOTE: If the user is not in PCBoard (i.e., they are in a door), the message is not displayed to the user even when they come back to PCBoard. You may want to pay special attention to who is in a door when you broadcast a message.

Clearing A Name From The Node Display

You may run into circumstances when a user name is stuck in the node display. This type of scenario is most likely to happen when your bulletin board system involves local nodes, floating nodes, and users who reboot their system while online. To clear a user's name out of node 11 on the system, issue the following command at a DOS prompt:

```
USERNET C:\PCB\MAIN\USERNET.XXX 11 Z
```

This makes it so that node 11 will not show up on the node display (using the WHO command).

Realistically, you may not be aware of what node needs to be cleared. In such a case, USERNET can be used to clear out any records which have not been updated in a set number of minutes as this example illustrates:

```
USERNET C:\PCB\MAIN\USERNET.XXX ALL Z90
```

This examples shows you how you could clear out entries for a node who has not had their record updated in 90 minutes (not a usual occurrence).

Drop All Nodes to DOS

In this example, we will show you how to immediately log off all nodes that are currently in PCBoard. To do this, change all of the node's status to X. This action drops the node to DOS as soon as possible. If the user is currently in a door or other application, they are disconnected when they return to PCBoard. To mark all of your nodes to drop to DOS, use the following command line:

```
USERNET C:\PCB\MAIN\USERNET.XXX ALL X
```

When PCBoard reads the USERNET.XXX file, it sees the X status and disconnects the user. Beforehand, the *Automatic Logoff Completed* message is displayed.

ENCRYPT

This utility encrypts the user file to prevent unauthorized persons who get hold of your user file from obtaining useful information from it. PCBoard and System Manager automatically unencrypt the file when they open it. The following fields are encrypted:

- password
- city
- data/business phone number
- home/voice phone number
- comment1
- comment2

To encrypt the user file, you must first encrypt your user file using the ENCRYPT program using the following syntax:

```
ENCRYPT [location of user file]
```

If your user file is stored in C:\PCB\MAIN\USERS, enter the following:

```
ENCRYPT C:\PCB\MAIN\USERS
```

Once the user file has been encrypted, you must inform PCBoard that the user file is encrypted. If you skip this step, these fields will appear to be filled with garbage and you can damage your user file. To update PCBoard, answer `Y` to the `Encrypt Users File` question in *PCBSetup | Configuration Options | System Control*.

The USERS.SYS and DOOR.SYS files that are created by PCBoard also have decrypted values so that doors which read these files will continue to operate properly. Third-party programs that read the user file directory most likely will not work with the encrypted file and may end up damaging your user file.

WARNING: You must enable encryption on all nodes that will access an encrypted user file. If you do not, you may damage the user file.

If you would like to decrypt the user file, use the ENCRYPT program with this syntax:

```
ENCRYPT /D [location of user file]
```

For example, if your user file is stored in H:\PCB\MAIN\USERS, enter the following:

```
ENCRYPT /D H:\PCB\MAIN\USERS
```

Encrypting the user file is most useful when you operate in a large network environment where users may be able to directly access the user file. By encrypting the user file, you can protect the accounts on

OVLSIZE

The main PCBoard executable file is overlaid; only a portion of the executable is in memory at any given time. How much of the executable can be held in memory depends on two factors: 1) How much of it is resident (not in the overlay) and 2) How big the overlay buffer is. You can determine how big of an overlay buffer you want to set for each executable using this utility.

A setting of 16 sets up a 64K overlay buffer. This setting allows PCBoard to swap pieces of the executable file in and out of memory keeping up to 64K of it in the overlay buffer.

Syntax

```
OVLSIZE [filename] [buffer size]
```

[filename] This is the filename to update the overlay buffers on. Enter the location of your PCBOARD.EXE or PCBSM.EXE. If OVLSIZE cannot find the file you specified, it prints *unable to open file specified*.

[buffer] This parameter represents the new buffer size. See *Buffer Sizes* for a list of valid buffer values. If you do not specify a buffer size, the current overlay buffer size is printed to the screen.

Buffer Sizes

The following chart in this section shows the valid buffer sizes that you can select:

Value	Size	Value	Size	Value	Size	Value	Size
1	4K	9	36K	17	68K	25	100K
2	8K	10	40K	18	72K	26	104K
3	12K	11	44K	19	76K	27	108K
4	16K	12	48K	20	80K	28	112K
5	20K	13	52K	21	84K	29	116K
6	24K	14	56K	22	88K	30	120K
7	28K	15	60K	23	92K	31	124K
8	32K	16	64K	24	96K	32	128K

A higher value allows more of the executable file to be held in memory. Lower values may hurt performance by causing PCBoard to continually swap code in from disk - creating more disk activity than is otherwise be necessary. You may want to use a smaller value such as 20. This lets PCBoard pull in the code that is running, when it is needed, and leave the rest of the code on disk until it is needed.

Allowing you to pick the buffer size allows you to tune your system to meet your memory and performance needs. If you need more memory, go for a lower overlay buffer size. If you need more performance, go for a higher buffer size.

NOTE: The minimum value that you should select is 14 for PCBoard to operate properly. If you plan to execute any PPE files, the minimum value you should select is 20.

ZMSend & ZMRecv

Included with every package of PCBoard are two programs—ZMRECV.EXE and ZMSEND.EXE. These two programs make up an external version of ZModem which can operate in any environment PCBoard can operate in. You will find that in a new system, the protocols and batch files are all configured and ready to

run in any environment. As a reference the next section shows you the steps necessary to install it in PCBoard .

Installing ZMSend & ZMRecv in PCBoard

Installing our external version of ZModem is a three step process. 1) Add the appropriate entry in PCBPROT.DAT, 2) Create the protocol batch files, and 3) Make sure the DSZLOG environment variable is defined.

- In *PCBSetup* | *File Locations* | *Configuration Files*, the PCBPROT.DAT file can be edited by pressing `2` when the `Name/Loc of Protocol Data File` field is highlighted. Make sure the following entry is in the data file:

```
                    Port Lock
Use Type Size MNP Open Lines             Protocol Description
--- ---- ---- --- ---- ----- ---------------------------------------
 Z   D   1024  N   N     Y   Zmodem (batch)
```

- Make sure you have a PCBRZ.BAT and PCBSZ.BAT in the node subdirectory or in a subdirectory which is in your path. The batch files should look like the following:

PCBRZ.BAT
```
--------------
if exist %dszlog% del %dszlog%
zmrecv.exe %3
```

PCBSZ.BAT
```
--------------
if exist %dszlog% del %dszlog%
zmsend.exe %3
```

- The DSZLOG environment variable must be set in the startup batch file (NODEx.BAT)

Syntax

```
ZMSEND [filename(s)] [/FORCE]
ZMRECV [path] [/FORCE]
```

[filename(s)] **Filename to send/receive**. Specifies the filename(s) to send. There are two ways to specify the filename(s). 1) Specify the filename(s) on the command line (wildcards are allowed), or 2) specify a text file which has a cr/lf delimited list of filenames to send. To do the latter, you have to start with a @ followed by the filename which has the list of files to transfer. PCBoard will send the filenames to send as the %3 parameter to external protocols.

[path] **Path to receive files into**. Specifies the path where files received will be placed. PCBoard passes this value as %3 to external protocols.

/FORCE **Do not require caller information**. ZMSend and ZMRecv usually require a caller to be online before beginning a transfer. Using this *optional* switch, ZMSend and ZMRecv will operate when a user is not logged in yet. **NOTE**: Access is still required to PCBOARD.DAT and PCBOARD.SYS for ZMSend and ZMRecv to operate properly.

/NODLPATH The DLPATH.LST file is not searched for duplicates when receiving files (uploads). The default is to always check.

/TELNET **Zmodem over the Internet**. This parameter is designed to be used when callers are telneting into a node via the Internet because it works around sending control characters. This change increases the chance of the caller being able to do a Zmodem transfer over the Internet but a lot still depends on the Telnet software used.

Examples

The following examples illustrate the points outlined in the syntax of the ZMRecv and ZMSend programs:

```
ZMSEND D:\DL01\REGISTER.TXT
ZMSEND D:\NEWUSER\*.*
ZMSEND @SENDFILE.LST
ZMSEND D:\FREEFILE\GRAFTERM.ZIP /FORCE
ZMRECV D:\UPLOADS\NEW
```

13

Batch Files

This chapter discusses the various batch files used by PCBoard including any special information you should know about these files. PCBoard uses numerous batch files to increase its flexibility. Because batch files are used throughout PCBoard, you can control the programs that are actually run. If you are unfamiliar with batch files, please refer to your DOS manual for further instructions on creating batch files.

DOS Batch Files With PCBoard for OS/2

Not all operating systems use the BAT extension for batch files. For example, OS/2 uses the CMD extension for its batch files. This presents an interesting situation in regards to the batch files PCBoard makes use of. The purpose of this section is to help you understand these differences.

BATch Files With PCBoard for OS/2

Anyplace you use the BAT extension in the DOS version of PCBoard, substitute a CMD file for the OS/2 version. For example, the DOS version runs PCBVIEW.BAT to view files. The OS/2 version runs PCBVIEW.CMD instead.

If a .CMD file cannot be found, PCBoard searches the OS/2 path for a corresponding .BAT file.

Running BAT Files From a CMD File

In situations where you want to run a DOS batch file from an OS/2 CMD file and want access to the environment variables PCBoard sets (PCBDRIVE, PCBDIR, etc.), you must run an additional batch file.

```
PCBDOS.BAT PCBTEST.BAT %1 %2 %3 %4
```

This example shows how to run PCBTEST.BAT from an OS/2 CMD file. Notice that PCBDOS.BAT is run first and PCBTEST.BAT is passed as a parameter. This is done because PCBTEST.BAT is actually run by PCBDOS.BAT after it sets all of the appropriate environment variables.

Door Batch Files

One of the most flexible aspects of PCBoard is its ability to run applications as door programs. As mentioned previously, a door simply executes a batch file. Since it is a batch file, you can run anything for a door. However, if you want the door to interact with the user, you must insure that the program supports the serial ports installed on your machine. If you are using the multiport version of PCBoard and an external comm driver (e.g., COMM-TSR, FOSSIL, or OS/2), the program you want to interact with the user must support the FOSSIL interface.

In the DOORS.LST file for each conference, you specify the batch file that is run when the user opens the door. To find out the filename and the location of the batch file, combine the *Filename* and *Path to DOOR files* fields. The following entry requires that you edit C:\PCB\QUERY to modify the batch file:

```
                                 USER DOOR             Charges Per  Path to
  Filename   Pwrd  Sec Login SYS  SYS  Shell OS2 Minute    Use DOOR Files
 ---------- ------ --- ----- ---- ---- ----- --- ------------- -----------
1) QUERY            0   N    Y    N     N    N       0      0 C:\PCB\
```

Notice that there is no BAT extension that is usually associated with a batch file. Rather than editing the batch file from the DOS prompt, you can highlight the *Filename* field and press 2 to use the text editor defined in System Manager.

Event Batch Files

Each event can have a batch file for each node. If a node-specific batch file is not defined, it will run the batch file without an extension. For example, if you have the following event defined

```
                Batch     Begin  End
     Act  Mod   File      Time   Time
     ---  ---   --------  -----  -----
1)    Y    E    DAILY     06:45  07:00
```

and the location of your event batch files are:

```
Location of EVENT Files              : C:\PCB\EVENTS\
```

you need to edit the *C:\PCB\EVENTS\DAILY* to modify the programs that run during your event. As with door batch files, notice that this batch file does not have a BAT extension. This gives you the ability to create node-specific batch files, if you have different nodes performing different tasks.

Hypothetically, you could have one node packing the message and user files while other nodes run maintenance programs for door or other utility programs you have installed. To perform this in a two node system, create the following batch files

```
DAILY.001
DAILY.002
```

The extension specified represents the node number that the batch file will run on. Under no circumstances will DAILY.001 run on node 2 or likewise DAILY.002 on node 1. If a node cannot find a node-specific event batch file, it checks to see if a batch file exists without the node number extension. If it exists, that batch file runs. If it does not, the node will not run the event.

External File Transfer Protocols

Even though 8 file transfer protocols are provided with PCBoard (7 internal and 1 external), you may need to add additional protocols to satisfy the needs of your users. Any protocols that you add to the system are called *external protocols*. External protocols require two batch files to be created before the protocol will be available to your callers—one for receiving and one for sending. In the batch files, you must run the external protocol program. Most external protocols ship with one executable and you use command line parameters to determine if the protocol is sending or receiving.

Protocols are defined by a letter or digit in PCBPROT.DAT (*PCBSetup | File Locations | Configuration Files*). The receive batch file is named using the following convention:

```
PCBR[protocol letter].BAT
```

Likewise, the send batch file is named:

```
PCBS[protocol letter].BAT
```

In these examples, replace *[protocol letter]* with the character entered in the *Use* column of PCBPROT.DAT to define the protocol.

Because there are so many external protocols, no specific instructions can be given for installing the protocols. To help interface with the external protocol, PCBoard passes parameters to the batch file.

Parameters Passed

To use a variable in your batch file, enter the parameter when you want to use what it represents. For example, %1 for external protocols returns the serial port number used by PCBoard. If your protocol needs this information, place %1 in the appropriate place in your batch file. The parameters passed to external protocols are:

%1	Returns the COM port number defined in *PCBSetup* | *Modem Information* | *Modem Setup*. If you are using standard serial ports with non-standard definitions for the base address or IRQ, you must provide that information to the protocol yourself because PCBoard does not provide it.
%2	Returns the speed between the modem and the computer. This is commonly referred to as the DTE speed. For modems which support locked port rates, the value of %2 is the opening port rate speed defined in *PCBSetup* | *Modem Information* | *Modem Setup*.
%3	Specifies the file(s) to transfer. The actual text passed as the parameter varies depending on the type of protocol and whether files are being sent or received. **Batch file transfers (Protocol types D and B)**: When sending a single file, the location of the file is passed. When sending more than one file, the filenames that are to be transferred are provided in a carriage return / line feed delimited list. An @ sign is specified before the filename to the list as it is the most common way to refer to such a list. Check to make sure that your external protocol supports this method. When receiving files, the private upload directory for the current conference will be passed. **Non-batch file transfers (Protocol type S)**: The filename to be sent or received is always specified.
%4	Returns the connect speed as reported by PCBoard. Error-correcting modems report the locked port rate speed. Other connections report the carrier speed.
%5	Returns the connect speed as reported by the modem. This is referred to as the carrier or DCE speed.
%6	Returns the private upload directory for the current conference. This parameter is most commonly used in conjunction with bi-directional protocols because they need to know where the upload directory is even while downloading.

Logon/Logoff Batch Files

$$LOGOFF.BAT

If you need to do special processing after each caller has disconnected from the system, use $$LOGOFF.BAT. PCBoard checks for the existence of this file in the current directory and in each directory

in your *PATH=* statement. If it is found, it is run after the caller has been disconnected and all files except PCBOARD.SYS have been closed.

$$LOGON.BAT

Similar to $$LOGOFF.BAT, you can use $$LOGON.BAT to do special processing after a user has logged into the system. Once the user has properly entered their name, and password, PCBoard executes $$LOGON.BAT if it can be found. There really is no restriction on what you can run in this batch file, but as a general rule, keep it short so that the callers do not experience excessive delays when logging in.

CDLOST.BAT

When carrier is lost unexpectedly, PCBoard first checks to see if this batch file exists in the current directory or via the search path. If it does, it is run before the rest of the logoff processing is complete. This batch file may be useful to keep track of who lost carrier, or any of a number of items. Since the batch file is capable of running any of a number of programs, there are not a lot of restrictions.

NODE.BAT

In addition to displaying who is online to the system, PCBMoni has the capability to run a batch file for a particular node. Why would you want to do this? Most networks have what may be called a *spy* utility. This utility enables you to spy on another machine in the network. Typically, you can view the screen of this machine and take control of the keyboard. Obviously, this would be handy to be able to access.

When scrolling through the list of nodes in PCBMoni, you can press R on any node and PCBoard will run NODE.BAT. So that you know the node number that was specified, PCBoard will pass two parameters to NODE.BAT. You should use these parameters when calling your spy utility.

Parameters Passed

%1 This parameter contains the node number you pressed R on (i.e., the highlighted node). The actual contents of this parameter is *Node*[number] as shown in the following examples:

Node3
Node5

%2 The node number with no preceding text is passed to the batch file. The following are examples of what is passed:

3
4

PCBCMPRS.BAT

If you will recall, the R user command has a Z subcommand that can be used to capture messages in a compressed format. To compress the captured messages, PCBoard will execute PCBCMPRS.BAT with two parameters.

Parameters Passed

%1 Returns the target filename. PCBoard uses the capture filename entered in *PCBSetup | Configuration Options | Messages* and the extension specified in *PCBSetup | File Locations | Configuration Files*.

%2 Returns the source filename. This is the filename that PCBoard temporarily captured the messages to.

If your file compression program uses the following syntax

```
COMPRESS -a [target filename] [source filename]
```

create a PCBCMPRS.BAT which looks like this:

```
COMPRESS -a %1 %2
```

If the target filename does not exist when PCBCMPRS.BAT is done executing, PCBoard reports that there was an error compressing the file. If you see this error message, check the syntax of your batch file and make sure that you have used the parameters properly.

NOTE: PCBoard ships with a PCBCMPRS.BAT that is already setup for use with PKWare's PKZIP compression program. Example: *`pkzip -es %1 %2`*

PCBQWK.BAT

To create QWK packets and to uncompress REP packets, PCBoard executes PCBQWK.BAT. There are four parameters that are passed to the PCBQWK batch file.

Parameters Passed

%1 Either *`COMPRESS`* or *`EXTRACT`* is returned in all upper case. When COMPRESS is returned, a QWK packet is being created. When EXTRACT is returned, the user uploaded a REP packet and it needs to be uncompressed so that PCBoard can insert the messages.

%2 Returns the target filename to be compressed or extracted. The actual filename is taken from *PCBSetup | Configuration Options | Messages*. If a QWK packet is being created, QWK is added to the filename. Likewise, if a REP packet is being uncompressed, REP is added to the filename.

%3 Returns the work directory specified in *PCBSetup | File Locations | System Files*.

%4 Returns a filename that lists the files that need to be included in the QWK packet. Most compression programs usually have some method for accepting file lists. Check your manual for further details.

A sample PCBQWK.BAT might resemble the following:

```
if %1==COMPRESS compress %2 @%4
if %1==EXTRACT uncompres %2 %3
```

NOTE: PCBoard ships with a PCBQWK.BAT that is already setup for use with PKWare's PKZIP compression program. Example

```
if %1==COMPRESS pkzip -ex -m %2 @%4
if %1==EXTRACT  pkunzip -o %2 %3
```

PCBTEST.BAT

One major concern of most system operators is the spread of harmful computer viruses and trojans through electronic means such as bulletin board systems. Another concern is to make sure all files uploaded pass integrity tests especially if the file is compressed. If you want, you can configure PCBoard to test each file uploaded to the system. To enable testing, the `Verify Uploads` switch in *PCBSetup | Configuration Options | File Transfers* must be set to `Y`. When upload verification is enabled, PCBoard executes PCBTEST.BAT with three parameters.

Parameters Passed

%1	Returns the complete drive, path, and filename of the file to test.
%2	Returns one of three responses. If `UPLOAD` is returned, the file being tested has just been uploaded and consequently is a new file to the system. If `TEST` is returned, a user is using the T E S T user command to verify the integrity of the file presumably before downloading it. If `ATTACH` is returned, the file was uploaded to the system as a file attachment. You can use the response to determine what type of tests (if any) should be used on the file.
%3	When %2 returns UPLOAD, this parameter returns the location of the filename that contains the description entered by the user. Programs can modify this description file and PCBoard will import the changes back into the file directory when posting the file.

Returning Status of File Tested

Once PCBTEST.BAT has been executed, PCBoard checks to see if either PCBPASS.TXT or PCBFAIL.TXT exists in the current directory. The existence of one of these files determines whether or not the file passed the tests.

If PCBFAIL.TXT exists, PCBoard displays the contents of the file and then fails the upload. The file that was uploaded remains in the private upload directory for the conference and a `FILE FAILED VERIFICATION CHECK` line is added to the description of the file. In addition, if a file description is modified (%3) and the file fails verification, PCBoard will not add the `FILE FAILED VERIFICATION CHECK` line to the description.

If PCBPASS.TXT exists, PCBoard displays the contents of the file. If you have defined any upload or byte credits for uploads in *PCBSetup | Configuration Options | File Transfers*, those credits are issued.

In the event that both PCBPASS.TXT and PCBFAIL.TXT exist, PCBFAIL.TXT takes precedence. In fact, any time that a PCBFAIL.TXT exists, the file will be failed.

NOTE: The PCBTEST.BAT that comes with your copy of PCBoard tests the integrity of ARC, ARJ, and ZIP compressed files. If you want to do virus scanning and other tasks, you must use a third-party program or make extensive and custom modifications to the batch file.

PCBVIEW.BAT

In addition to testing a file before downloading it, a user may want to view the contents of the file. The user can view a file while listing file descriptions or by entering F ; V at the conference command prompt.

When the user views a file, PCBoard executes the batch file that is specified in the `Batch file for viewing compressed files` field of *PCBSetup | File Locations | Configuration Files*. By default, this filename is called PCBVIEW.BAT. When executing this batch file, only one parameter is passed to the batch file.

Parameter Passed

%1	Returns the full drive, path, and filename of the filename that has been requested for viewing.

After Execution of The Batch File

After the batch file has been executed, PCBoard checks for the existence of PCBVIEW.TXT in the current directory. The contents of this file is displayed to the caller. If it does not exist, it is assumed that an error occurred while viewing the file.

NOTE: The PCBVIEW.BAT that has been supplied with your copy of PCBoard, lists the files stored in ZIP, ARJ, ARC, and PAK compressed files. In addition, it views any filename that has a TXT extension to the screen. If you examine the default PCBVIEW.BAT, notice that it uses TESTFILE.EXE (also included with your copy of PCBoard) to determine the extension of the filename and branch to an appropriate part in the batch file.

REMOTE.SYS

When you request a remote drop to DOS using the 9 SysOp command, PCBoard uses REMOTE.SYS as a batch file. Therefore, you can have REMOTE.SYS load just about anything you desire to drop to DOS.

You must run some sort of program that redirects a local DOS session to a serial port because DOS does not provide this capability. Included with your PCBoard package is a shareware copy of DOORWAY by TriMark Engineering and a REMOTE.SYS that is pre-configured to use DOORWAY on COM1. This program has the capability of redirecting text screens to a standard serial or FOSSIL port. The ASCII version of the DOORWAY documentation is included in a file called DOORWAY.ZIP in your \PCB directory in case you want to make any changes to the default REMOTE.SYS.

14

Accounting System

What is an Accounting System

PCBoard's accounting system is a way to track activity and charge a set amount of *credit* for the action performed. By keeping track of the activities and assigning values to each, you can configure your bulletin board as a *pay-as-you-go* or *pre-paid* system.

Installing the accounting system does not necessarily force a system where money is charged for participating on the system. The accounting system can be used to help form more balanced users who do not always take, take, take. For example, you can setup *ratio access* where callers have to enter a message or upload a file every 10 calls.

Hopefully, you can see from this brief overview of the accounting system just how powerful it can be. Before you continue with this chapter make sure you are familiar with the section in *PCBSetup* discussing the *Accounting Configuration* menu options.

Throughout this section, you will see the term **accounting units** or just plain **units**. PCBoard can be configured to make these accounting units look like credits or even look like monetary units. The *How Users Are Charged* section of this chapter contains more detail on this topic.

Installing the Accounting System

Several steps are required in order to install the accounting system on a PCBoard Bulletin Board System. The following steps are required:

1. Use *System Manager* to allocate space in the user file to record the accounting information for each user System Manager.
2. Determine which security levels the accounting system will be enabled for.
3. Accounts on the system must be initialized to use the credit system.

Allocating Space in USERS File

PCBoard records account balance information within each user record. The space to hold this information is only allocated when you install the *Accounting System PSA* using *System Manager*.

By installing this PSA, each user record will grow approximately 200 bytes to hold the accounting information. The steps necessary to install the PSA are as follows:

1. Take all nodes off-line (down).
2. Run System Manager.
3. Select *User Info File Maintenance* from the Main Menu.
4. Select *Add PCBoard Supported Allocations*.
5. Select *Accounting Support*.
6. Answer Y to the Proceed with Add/Update prompt. After all user records have been updated, you are returned to the menu displayed in step #5.
7. Exit System Manager and return to DOS.

Configuring Security Levels to use the Accounting System

Once the accounting PSA is installed, the security levels you want to enable the accounting system for must be configured properly. Using PCBSetup, modify the PWRD file to enable the required security levels. The following lists the steps necessary to update the PWRD file.

1. Load PCBSetup
2. Select *File Locations* from the Main Menu.
3. Select *Configuration Files*.
4. Press 2 to edit the PWRD file.
5. Press 2 once more to switch to the second PWRD configuration screen.
6. Mark the *Enable Account* column with a Y for all security levels that will utilize a pre-pay or ratio accounting system. Use a T (tracking) for those security levels considered to be pay-as-you-go type billing. All others, leave set to N.

Initializing Accounts

The final step to installing the accounting system is to make sure all user accounts have been properly initialized in regards to account balances for the type of system you want to implement.

Pay-As-You-Go

A Pay-As-You-Go system does not require an opening balance because an open-ended billing method is being used. Users are charged for only the activities participated in. This is very similar to filling up the gas-tank in your car and then going to pay the clerk for the amount of gas put into your car.

All accounts should start with a zero balance. As users continue to call into the system, their account balance will show a negative balance. This is the only type of accounting system which will allow a negative account balance.

If the Accounting Support PSA was just installed, all accounts are already initialized to zero and therefore nothing has to be done to user records. If the Accounting Support PSA has been installed for some time and users have balances on the system, the quickest way to initialize the accounts is via *System Manager | Users File Maintenance | Adjust Account Balances*. Use the following values to properly initialize all user records:

```
Modification to Account Starting Balance            :        0

Add Value to Existing Starting Balance              : N
Zero Accumulator Values at the Same Time            : Y
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :   0
                           and less than or equal to : 255

Security Level Given to Users on an Empty Account   :   0
```

Pre-Pay

A system configured as Pre-Pay requires users to usually pay some monetary amount to get a balance of accounting units or credits. For example, a user may pay $20.00 to start with an account balance of 20.00 credits. They can continue to call the board as long as their balance does not reach zero. As his balance reaches zero, he must either pay more to regenerate his account balance or let his balance reach zero and let his security level be dropped.

Using the analogy of filling your gas tank up, a pre-pay system can be seen as paying the attendant $50.00 allowing you to come in and fill-up your tank several times. When that balance reaches zero you must pre-pay a balance again to enjoy the same benefits.

With a pre-pay type system it is very common to give all users a beginning balance to get familiar with your bulletin board and accounting system. This is very similar to many commercial online services giving you first few hours free.

You can give all users on the system a beginning balance of 10.00 by using the following values in *System Manager | Users File Maintenance | Adjust Account Balances*:

```
Modification to Account Starting Balance            :       10

Add Value to Existing Starting Balance              : N
Zero Accumulator Values at the Same Time            : N
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :   0
                          and less than or equal to : 255

Security Level Given to Users on an Empty Account   :   0
```

Even though this example shows the `Security Level Given to Users on an Empty Account` set to 0, it is very desirable to create a new security level for restricted access if you charge by the minute. When you charge by the minute, the user must have a balance greater than 0 to logon. Keeping this in mind, you can define this new security level to be used for those whose balance has reached zero. The attributes of this new level is that it will not have the accounting system enabled and you can utilize this unique security level (via display files) how a user can renew his subscription. Utilizing a new security level is advantageous for several reasons:

1. The new security level can be configured to not enable accounting features allowing a user with a balance of 0 to log into the system.
2. You can configure an auto-login door to encourage the user to renew a subscription thereby setting up a new balance on his account.

Ratio

If using the accounting system for a ratio system encouraging users to be more participatory. In reality this type of application is very similar to a pre-pay system. The main difference is in how the account balance is increased. With a pre-pay system, the user typically contributes a monetary value to increase his balance. In a ratio system, the account balance is increased by participating in activities beneficial to the BBS (e.g., entering messages, uploading files, etc.)

Because the ratio and pre-pay systems are so similar to one-another, you'll initialize the user accounts in the same manner. This entails giving the user a beginning balance or grace period to get familiar with the system. To configure user accounts to have a beginning balance of 15, use the following values for *System Manager | Users File Maintenance | Adjust Account Balances*:

```
Modification to Account Starting Balance            :       10

Add Value to Existing Starting Balance              : N
Zero Accumulator Values at the Same Time            : N
Set the Security Level Applied on an Empty Account  : N

Adjust users with security greater than or equal to :   0
                          and less than or equal to : 255

Security Level Given to Users on an Empty Account   :   0
```

Areas Affected by the Accounting System

While not every single activity available within PCBoard can be tracked and charged for, all of the heavy use activities are accounted for. The heavy use activities on bulletin boards are:

1. Time spent online
2. Bytes sent/received (uploading and downloading)
3. Group chat
4. Opening door applications

While your system may use one area more than another it is important to realize that the flexibility of PCBoard does allow you to control the usage of each area separately. This understanding is going to help immensely as you continue to plan and develop the accounting system on your bulletin board.

The goal of this section is to briefly outline the activities affected by the credit system and how the activities are charged for (e.g., by the minute or for each invocation). The description for each activity will tell you where to find further information regarding configuring or setting up the activity for use with the accounting system.

Time Used

Charging for time within PCBoard is broken down into two distinct categories—global time charge and premium activity charge.

The global charge is when you charge by the minute for the entire session no matter how much time is spent online. The Regular Usage and Peak Usage topics in this section are considered global time charges. Premium charges are those activities which charge the global time charge plus an additional charge for the activity.

Regular Usage

The ACCOUNT.CFG file (*PCBSetup | Accounting Configuration*) contains a field titled `Per Minute Online`. This charge is made for the total amount of time spent online during the session. For example, a session could be accounted by time in the following manner:

- Login at 08:02
- Read messages for 10 minutes
- Spend 4 minutes reading bulletins
- Use 34 minutes transferring files
- Logoff at 08:50

In this example, the user will be charged for a total of 48 minutes because the difference in time between 08:02 and 08:50 is 48 minutes.

The important to realize about charging for time is that the charge is calculated at the end of the call after PCBoard looks at when the user logged on and what time it is now. This single charge made at the end of the call is independent of every other charge in the system. That means if a user is being charged based on the size of a file being downloaded, he is also being charged for the time required to download the file.

Peak Usage

Also in the ACCOUNT.CFG file (*PCBSetup | Accounting Configuration*) is a field titled `Per Minute Online Peak Time` . The value entered in this field is the value charged for every minute spent online

during what is considered *peak time*. This time period is determined by the following field on the same configuration screen:

```
Peak Usage Start Time
Peak Usage End Time
Peak Days of Week
```

With a peak time you can charge more per minute during a specific time of the day or week. PCBoard is smart enough to determine when peak time occurs in the middle of a session as well. For example, if peak time is considered to be 08:00 to 17:00 and a user is online between 16:45 and 17:10, he will be charged 15 minutes of peak time and 10 minutes of regular time.

CMD.LST Entries (Additional)

When defining entries in the CMD.LST file(s), you may notice the field titled *Charges Per Minute*. Entering any non-zero value in this field means the user is charged that amount per minute **in addition** to the value you charge for regular or peak-time usage.

Group Chat (Additional)

Group chat can be a very time consuming activity on your system because it encourages people to stay online. You can treat group chat as a premium service by levying an additional charge per minute the user is chatting with other users on the system. In *PCBSetup | Accounting Configuration* the amount to charge **in addition** to the value charged for regular or peak-time usage can be set.

Opening a Door (Additional)

When added to your system, door programs open up new opportunities for on-line services. These new services might be expensive though so PCBoard does give you the capability of charging the user for every minute spent in a door. In the DOORS.LST file is a field titled `Charges Per Minute` . The value entered in this field is **added** to the amount being charged for normal or peak usage time.

Some door programs allow the user to logoff of the system while in the door. These same doors may attempt to also do all of the user logoff processing to. With this type of door, an online charge for time has **no effect**. Therefore, it is recommended that you check the configuration for all such doors and see if a configuration option exists to disable the logoff command.

Bytes Transferred

One of the most popular activity on bulletin boards is to upload and download files. Downloads are going to be an expense to the system because time is spent online downloading and it takes space to hold the file online. On the other hand uploads are to be encouraged because with good uploads, users will download the files and be charged for those downloads. Keeping all of this in mind, you can turn file transfers into a premium activity on the system.

Uploads

Uploads are to be encouraged and therefore act as an earning to the account balance of the user rather than a charge. A user's earnings are based on the number of files uploaded, the size of the files uploaded, and the amount you give per byte or per file.

Looking at the ACCOUNT.CFG in *PCBSetup | Accounting Configuration* you'll find the following fields:

```
Per File Uploaded
Per 1K-Bytes Uploaded
```

You can give a user .2 accounting units for every file uploaded by entering `0.2` in the `Per File Uploaded` field. Likewise, you can give a user .0025 units for every 1024 (1 kilobyte) of files uploaded to the system by entering .0025 in the `Per 1K-Bytes Uploaded` field.

PCBoard is also flexible enough to allow the user to earn from both aspects. That means if a user uploaded 4 files totaling 800 kilobytes using the following configuration

```
Per File Uploaded                :         0.25
Per 1K-Bytes Uploaded            :       0.0025
```

a total of 3 credits (one for number of files uploaded and 2 for bytes) is earned for the file transfer.

Downloads

Downloads are very similar to uploads only they are seen as an expense to your system rather than an earning. A quick glance at ACCOUNT.CFG in *PCBSetup | Accounting Configuration* will reveal the following fields:

```
Per File Downloaded
Per 1K-Bytes Downloaded
```

For every byte of file downloaded, you determine the charge the user will incur. For example, users can be charged 5 units for each file downloaded by entering 5 in the `Per File Downloaded` field. A user can also be charged .1 unit for every kilobyte downloaded by entering .1 in the `Per 1K-Bytes Downloaded` field.

PCBoard is also flexible enough to allow the user to earn from both aspects. That means if a user downloaded 10 files totaling 1000 kilobytes using the following configuration

```
Per File Uploaded                :            5
Per 1K-Bytes Uploaded            :          0.2
```

a total of 250 credits (50 for the number of files uploaded and 200 for bytes uploaded) is earned for the file transfer.

Using FSEC and UPSEC to Magnify Charges

Perhaps you want to charge more for some files or even not charge at all. You can accomplish this by utilizing the *Multiplier* column in the FSEC/UPSEC files for downloads or uploads respectively.

As a quick example, assume you want to charge twice as much for .GIF files as you do for all other files on the system. In that case, you could add the following entry to your FSEC file:

```
                                                   Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
                               *.GIF          0        2
```

Along the same lines, assume you want to make all downloads of SUBSCRIB.ZIP free from time and byte charges. In the case, you would enter a multiplier of 0 as shown in the following example:

```
                                                   Debit
         Drive \ Path            File Name  Sec Multiply   Password
------------------------------ ------------ --- -------- ------------
                               SUBSCRIB.ZIP   0        0
```

Messages

A very popular activity on bulletin boards not discussed yet is that of reading and writing messages. PCBoard can charge for messages read, entered, or captured.

Reading

The amount charged for each message read is set in the ACCOUNT.CFG (*PCBSetup | Accounting Configuration*). In this file is a field titled:

```
Per Message Read
```

The value entered in this field reflects the amount PCBoard charges for every message read on-line. Because a system may have several thousand messages online at any one given time, it is wise to keep the amount charged for every message read relatively low such as .001. With a value such as this, the user will be charged 1.0 accounting units for every 1000 messages read.

Entering

The amount charged for entering message is broken down into three categories - echoed messages, private messages, and all other messages. The user is charged based on what criteria the message meets.

The ACCOUNT.CFG file in *PCBSetup | Accounting Configuration* are the fields that control the charges:

```
Per Message Written
Per Message Written (Echoed)
Per Message Written (Private)
```

One of the reasons the charges are broken down into multiple categories is because entering a message can be a double edged sword. For example, a message entered on the system can be seen as something which is spurring on conversation and interest in your system. On the other hand, a message can be entered in an echo-mail conference where it may cost you money to exchange mail with other systems. By breaking down entering messages into categories, you can charge or give credit based on the needs of your system.

Assume for just a moment you want to accomplish the following:

- Charge for every message entered in an echo conference
- Give credit for every public, non-echoed message entered
- Neither give nor take for private messages

This can be accomplished using the following sample values:

```
Per Message Written              :        -0.25
Per Message Written (Echoed)     :         0.15
Per Message Written (Private)    :            0
```

The first thing to notice is the negative value entered in the `Message Written` field. By entering a negative value we are able to turn what would normally be a charge into an earning for the user thereby encouraging him to enter messages. The other thing to notice is the 0 entered in `Message Written (Private)`. With a value of 0, nothing is taken or given for entering private messages.

Capturing/QWK packets

PCBoard can capture messages to ASCII files, compressed ASCII files, or to the popular QWK standard. Capturing messages into one of these forms and downloading the files can be seen as favorable when you look at the following:

1. Capturing messages reduces the amount of time spent online reading the mail. Users must read the messages while off the system thereby allowing more people to logon.
2. Users are more likely to read more mail if they can read it off-line

Keeping this in mind, you most likely want to charge slightly less for each message captured when compared to each message read online.

Per Use

Other areas exist on the system where users incur a one-time charge occurs for each activity. For example, you may want to levy a charge for each call placed into the system making a flat-fee type of system. Likewise, you may have a particular door you want to charge each time it is opened. The remainder of this section discusses these one-time charges.

Per Call

For every call the user makes to the system you can charged a set value. One way of looking at this charge is as a minimum charge to call. For example, you may want to charge 0.50 for every call to the system and also have additional charges for messages and file transfers. The amount charged for every call is set in the following field located in ACCOUNT.CFG (*PCBSetup | Accounting Configuration*):

```
Per Logon
```

Entering a negative value in this field *gives* the user credit for calling into your system. If you are looking for a way to encourage users to call, giving them credit is one way of doing it.

CMD.LST Entries

In CMD.LST, you can define one of three actions: Run a PPE, Run an MNU file, or Stuff the keyboard with some key sequence. Of the three the PPE is the most likely item you want to charge for because PPEs are quite often used to add new features to PCBoard systems. For example, a PPE may be installed on your system which acts as a match-maker type PPE lining up users on your system. This type of PPE would be a high-attraction item and therefore a very likely candidate to charge for. A charge of 1 could be made using the following entry:

```
                     Charges Per     PPE/MNU File Specification -or-
    Command    Sec  Minute    Use    Keystroke Substitution
-------------- --- ---------------- --------------------------------
MATCHMAKE        0        0        1 C:\PCB\PPE\MATCHMAK.PPE
```

Doors

Finally, a one-time charge may be defined for any door on your system. Look for the highly sought after doors on your system as these are the most likely ones to charge for. A good example for this is a multi-player door game where users can engage in battle against one another while online. This type of door would be very attractive to your callers and therefore a high-use item. A sample entry in DOORS.LST is shown here:

```
                              USER DOOR         Charges Per      Path to
Filename  Password Sec Login SYS  SYS  Shell Minute    Use    DOOR Files
--------- -------- --- ----- ---- ---- ----- --------------- ------------
 BATTLE              0   N    N    N     N         0       3 C:\DOORS\BAT
```

A twist on the accounting system to always remember is where you can charge for an activity you can also give the user accounting credits. You may have a door on your system you *want* the user to execute. To encourage a user to open this door, give them credit for opening the door by entering a negative value in the `Charges Per Use` field.

How Users Are Charged

Accounting Units

You've probably noticed by now that PCBoard does not explicitly refer to the units used in the accounting system as either credits or money yet you can really use it either. For example, in a pre-pay system, a user may give you $20.00. For that amount of money you could give him an account balance of $20.00 to represent money or even something like 2000 to represent something like credits.

To PCBoard there is no difference between credit or money. All that is occurring with the accounting system is the user is being charged a certain amount for each activity. In the case of reading a message that might be $.001 per message or in a credit system it could be 1 or even 2 credits.

The advantage to using money as the accounting unit is users can very easily correlate their current balance with money units. On the other hand, a credit system is advantageous if you are not using the accounting system in conjunction with any type of monetary contributions. The following list suggests what type of accounting unit to use based on the system you use:

Money	Pay-as-You-Go
Money	Pre-Pay
Credits	Ratios

The remainder of this section, provides further details on how to configure the accounting system for either credits or units.

Credits

Credits are normally expressed in whole numbers. This means the account balance and all deductions / earnings are expressed in whole numbers. By expressing both in whole number form, users will not see displays like this:

```
Credits Used: 85.6235
```

Instead, the display will look like the following:

```
Credits Used: 328
```

To display values in credit form instead of monetary form, the `Display Money instead of Credits` field in *PCBSetup | Accounting Configuration* **must** be set to **`N`**.

Money

Anytime you are billing the customer in a pre-pay or pay-as-you-go system, the user will want to see account balances and charges in monetary format. When configuring the accounting system you still enter account balances and activity charges just as you would for a ratio system. The difference is the values will probably contain decimal points because that is a very normal format for monetary values to be expressed in. Example:

```
Credits Used: $8.56
```

To display values in money form instead of credit form, the `Display Money instead of Credits` field in *PCBSetup | Accounting Configuration* **must** be set to **Y**.

When displaying monetary values, PCBoard does no conversion of the number display other than to round the number to two decimal points. Some display changes are made in that the major currency character ($ for USA, £ for United Kingdom) is displayed and thousands separator properly displayed.

Method Used to Calculate Account Balance

PCBoard always tracks activity usage into separate sub-totals in each user record. In other words, you can find out at any time how many units a particular user has spent by the number of minutes spent online, the number of units used for downloading files, etc. PCBoard calculates the account balance in one of two ways:

1. All charges are subtracted from the account balance.
2. Only the highest charge is subtracted from the account balance.

The first is called *additive* calculation while the latter is known as *concurrent* calculation.

Additive

Additive tracking is when the system charges you for all activities. If you spend 180 units transferring files, and just 8 credits reading messages, PCBoard deducts 188 units from the balance of the account. With concurrent tracking, the user is charged 180 instead.

Perhaps the best way to describe this is via an analogy centered around a local carnival. You walk up to the carnival gate and purchase tickets for the attractions. You end up purchasing 20 one point tickets. As you walk around, you begin to notice the rides require varying amounts of carnival tickets to ride. Some require 1, others 2, while the best rides require 3. With your 20 tickets you could:

- Ride 20 single ticket rides
- Ride 10 two ticket rides
- Ride 6 three ticket rides and 2 single ticket rides
- Ride 4 three ticket rides, 4 single ticket rides, and 2 two ticket rides.

Several other combinations exist, but this illustrates some of the ways your tickets can be used.

Advantages

- Users do not have to worry about keeping track of which activity has is closest to reaching its limit.

Disadvantages

- Users may feel they are being charged for every little thing they do. This type of feeling may make them feel like they are being restricted in some form.

Concurrent

Concurrent tracking is designed for setups where multiple activities are tracked, but the user is only charged for the activity which has accumulated the most charges (all earnings are still valid). Perhaps the best way to explain this concept by revisiting the carnival analogy used to described additive transaction types.

You go to the local carnival. Entrance to the carnival costs you $20 for which you receive 20 carnival tickets. The person in the ticket booth hands you a punch card. Looking at the card, you see three rows of dots with each row being a different color as shown in the following example:

```
R R R R R
G G G G G
B B B B B
```

In this example, R represents a red dot, G a green dot, and B a blue dot. You are told each ride in the carnival requires either a red, blue, or green dot to be punched on the card. As soon as a full row of dots have been punched, the card is no longer valid.

Let's discuss the advantages and disadvantages to the concurrent transaction type.

Advantages

- Users are given more choices on how to spend the *credits* or *units* allocated to them.
- Helps curtail lopsided usage of the system. Using the previous example, if all I want to do is ride those attractions which require blue dots, I'm only going to be able to ride 5 attractions. I am therefore encouraged to try the other attractions to maximize my money.

Disadvantage

- Users are able to use more of the system. With the concurrent system you can have a system where users are allowed 900 minutes or 50 megabytes (whichever comes first). The point is a user could spend all his time downloading and reach the 50 megabyte limit in 500 minutes. The remaining 400 minutes cannot be used by the caller because the 50 megabyte limit was reached first. The clever user may download only 49 megabytes and use all 900 minutes.

Displaying Account Status

All of the forethought in the world will not make your efforts in the accounting system a success if your callers are not informed of how much they have been charged. PCBoard provides several display files and @ macros you can use to display account status information to your callers.

Remember, all display files can display @ macros. The macros which are of most interest to you are:

@CREDLEFT@	Calculated balance of credits left
@CREDNOW@	Number of credits used so far this call
@CREDSTART@	Starting credit balance (before any charges or earnings)
@CREDUSED@	Total credits used so far

The remainder of this section describes what display files you can use to display account information to callers and when it is displayed.

At Logon

At the beginning of every call and just after the user has entered their password, you can display the Account INFO File defined in *PCBSetup | Accounting Configuration* by the following field:

```
Name/Loc of Account INFO File
```

Remember, this file is displayed at the beginning of every phone call.

As An Account Reaches a Balance of Zero

The ACCOUNT.CFG file defined in *PCBSetup | Accounting Configuration* contains a field titled:

```
Balance Warning Level
```

The value entered in this field determines the trigger point at which a special display file will show to the caller warning him his balance is about to run out. The filename to display is defined in *PCBSetup | Accounting Configuration* by this field:

```
Name/Loc of Account WARNING File
```

This display file will NOT display to security levels with tracking mode enabled. The reason this does not occurs is because the user never starts with a balance, they are always being tracked, so bills or reports can be generated on a periodic basis.

At the End of Each Call

At the end of every call a display file can be shown to the caller to inform him of his account status. Knowing how much you spent during this call and how much you have left is information highly sought after by callers. The filename displayed at logoff is defined in *PCBSetup | Accounting Configuration* by the following field:

```
Name/Loc of Account LOGOFF File
```

Applications Using the Accounting System

This entire section is designed to help you better understand the accounting system by describing samples of the pay-as-you-go, pre-pay, and ratio applications. This section assumes you are familiar enough with the options and terminology of the accounting system. If there is any doubt, re-read this chapter and also refer to the *Accounting Configuration* section of the PCBSetup chapter.

Pay-as-You-Go

Nearly all of the major on-line services operate in a pay-as-you-go environment. If you, the caller, spends 20 minutes online you are charged a certain amount per minute and may also be charged additional money for *special services*. At the end of every month, a bill is received.

This pay-as-you-go system is going to be kept intentionally simple for the caller because we are only going to charge for time and bytes downloaded. The following lists exactly what we want to accomplish:

- Charge $0.02 per minute online
- Charge $0.0005 for every 1 kilobyte downloaded ($0.50 per megabyte)
- Implement the pay-as-you-go system only for security levels 30 and 40.

The steps required to accomplish are:

1. **System Manager**: Install the *Accounting Support PSA*

2. PCBSetup: Modify the PWRD file and set the `Enable Account` column to T for security levels 30 and 40 only.
3. **PCBSetup**: Answer Y to the `Enable Accounting Features` question in the *Accounting Configuration* screen.
4. **PCBSetup**: Also answer Y to the `Display Money instead of Credits` question.
5. **PCBSetup**: Edit the ACCOUNT.CFG file making sure all values are 0 with the exception of `Per Minute Online` which will be set to `0.02` and `Per 1K-Bytes Downloaded` which will be set to `0.0005`.

Pre-Pay

For the pre-pay sample we are going to charge users a set amount of money for access to a set amount of minutes or download bytes (whichever limit is reached first). Once one of the limits has been reached, the user must renew or return to a more restricted security level. The following list shows what we want to accomplish:

- Charge $72.00 for 3600 minutes of 72 megabytes (whichever is reached first).
- Only security level 55 will have these restrictions.
- Once either limit has been exhausted, the user's security level is dropped temporarily to level 20.

Having laid the groundwork for our plan, it can be implemented by following these steps:

1. **System Manager**: Install the Accounting Support PSA.
2. **System Manager**: Make sure everyone at security level 55 has a zeroed out account balance and the Security (When Empty) is set to 20. Use the `Adjust Account Balances` from the `User File Maintenance` menu option to accomplish this.
3. **PCBSetup**: Edit the PWRD file (second screen) so the entry for level 55 has set the `Enable Account` field to Y.
4. **PCBSetup**: Answer Y to the `Enable Accounting Features` question in the *Accounting Configuration* screen.
5. **PCBSetup**: Answer Y to the `Display Money instead of Credits` question.
6. **PCBSetup**: Also answer Y to the `Concurrent Tracking of Charges` question.
7. Calculate the value of $72.00 divided by 3600 to get the amount you should charge for every minute online. Your result will be $0.02 so enter that value in the `Per Minute Online` field of ACCOUNT.CFG.
8. Also calculate the value of $72.00 divided by 7200 (72 megabytes is equal to 7200 kilobytes). The result is $0.01 so enter that value in the `Per 1K-Bytes Downloaded` .

Ratios

A ratio is very similar to the carrot and stick scenario where you hold out a carrot on the stick and tell a user they must do a certain action in order to get the carrot. When the user finally does the action and gets the carrot, they look up only to see another carrot dangling from a stick in front of them.

The incentive for the user is to continue chasing the carrot by performing the same actions over and over again. Applying this analogy to a bulletin board application you could require the user to enter 1 message for every 10 calls made to the system. The next few topics highlight a few ratios which can be setup using the accounting system.

Calls to Messages Entered

To setup a ratio system where a user must enter a message after every 15 calls to the system, follow these steps:

1. **System Manager**: Install the Accounting Support PSA
2. **System Manager**: Give every user a starting balance of 15 credits using *Adjust Account Balances* from the *User File Maintenance* screen.
3. **PCBSetup**: Edit the PWRD file so all user security levels desired to have the ratio are marked with a Y in the *Enable Account* field.
4. **PCBSetup**: Answer Y to the `Enable Accounting Features` question from the *Accounting Configuration* screen.
5. **PCBSetup**: Edit the ACCOUNT.CFG file and enter a new user starting balance of 15. This will give the new user 15 calls to the system before he must enter a message. Also enter the a value of 1 in the `Per Logon` field.
6. **PCBSetup**: Lastly, enter a -15 in the *three* `Per Message Written` fields.

Notice how the negative numbers are used in this example. A user entering a message has 15 credits added to their balance because of the -15 value. However, each time they call, 1 credit is deducted. Once 15 calls have elapsed, the user's balance is 0 and therefore they must enter a message in order to increase his balance again.

The last step of this example setup can be modified slightly to encourage users to start discussions by only giving credit to messages which are not private. Simply answer the questions in this manner:

```
Per Message Written              :          -15
Per Message Written (Echoed)     :          -15
Per Message Written (Private)    :            0
```

Downloads to Messages Entered

A slight twist can be made on messages entered to calls ratio setup to turn it into a messages entered to download ratio. Follow these steps:

1. **System Manager**: Install the Accounting Support PSA
2. **System Manager**: Give every user a starting balance of 20 credits using *Adjust Account Balances* from the *User File Maintenance* screen.
3. **PCBSetup**: Edit the PWRD file so all user security levels desired to have the ratio are marked with a Y in the *Enable Account* field.
4. **PCBSetup**: Answer Y to the `Enable Accounting Features` question from the *Accounting Configuration* screen.
5. **PCBSetup**: Edit the ACCOUNT.CFG file and enter a new user starting balance of 20. This will allow the user 20 downloads for every messages entered. Also enter a value of 1 in the `Per 1K-Bytes Downloaded` field.
6. **PCBSetup**: Lastly, enter a -20 in the *three* `Per Message Written` fields.

Notice how the negative numbers are used in this example. A user entering a message has 20 credits added to their balance because of the -20 value. However, each time they successfully download a file, 1 credit is deducted. Once 20 files have been downloaded, the balance is 0 and therefore a message must be entered in order to increase the account balance.

To accentuate networked mail, you can modify the last step so the only way a user will receive 20 credits is to leave an echoed message. The modification requires you answer the following questions as shown:

```
Per Message Written              :            0
Per Message Written (Echoed)     :          -20
Per Message Written (Private)    :            0
```

Uploads or Messages Entered to Calls

You can create a much more complicated ratio system with a one to many relationship. Imagine requiring the user to either enter a message **or** upload a file after every 50 calls to the system. This type of setup can be created using the accounting system and by following these steps:

1. **System Manager**: Install the Accounting Support PSA
2. **System Manager**: Give every user a starting balance of 20 credits using *Adjust Account Balances* from the *User File Maintenance* screen.
3. **PCBSetup**: Edit the PWRD file so all user security levels desired to have the ratio are marked with a Y in the *Enable Account* field.
4. **PCBSetup**: Answer Y to the `Enable Accounting Features` question from the *Accounting Configuration* screen.
5. **PCBSetup**: Edit the ACCOUNT.CFG file and enter a new user starting balance of 20. This will allow the user to call 20 times before being forced to upload a file or enter a message. You must also enter a value of 1 in the `Per Logon` field.
6. **PCBSetup**: Lastly, enter a -20 in the `Per Logon` **and** the three `Per Message` fields.

The key to remember here is the user is given an opportunity to always replenish their account by performing some sort of action. In this example, the user has to either upload or enter a message to replenish their account. Because the accounting system is so flexible, just about any combination for a ratio system can be configured.

15

PCBFido

Introduction

Welcome to PCBFido! The Fido technology gives you the ability to exchange mail from all around the world or just between a few systems in the same valley.

The configuration of the PCBFido part of PCBoard consists of the following:

- Setting up the Fido portion of the PCBSetup screens
- Creating user accounts for the systems you will transfer messages with
- Getting a node list
- Obtaining a node number by sending netmail to the net coordinator for your area
- Creating and configuring the conferences which will exchange messages and netmail
- Configuring one or more events to exchange messages

This document focuses on giving details and background information of the configuration fields relevant to PCBFido in PCBSetup. **If you need additional information** on how to perform any of the steps outlined above, please **refer to FIDO.DOC in G:\ LOWTEMP.**.

PCBSetup

Nearly every option and file location related to Fido within PCBoard can be edited from the *Fido Configuration* menu on PCBSetup's main menu. Once this option is selected, several other menu options become available. The following sections describe each option:

Fido Configuration

Enable Fido Processing

This selection determines whether or not Fido processing is enabled for the current node. Valid options are:

N Fido processing is disabled.

Y Fido processing is enabled.

Location of FIDO Configuration Files

In this field, enter the location where the Fido configuration files are located. These configuration files store the information you enter on this and subsequent screens. The default for this field is the \PCB\MAIN\ subdirectory.

Import Immediately After File Transfers

An efficient way to handle the importing of mail is to disable all scanning for mail to import (scan every 0 minutes) and enable importing directly after a file transfer. Once mail has been exchanged between two sites, any messages waiting for import will be in the incoming subdirectory on your system. The following are valid responses:

N PCBoard will not scan for mail to import upon hanging up the phone. Make sure periodic scanning of mail to import is enabled (scan every 1 minute or greater) or messages will never get added to the system.

Y A scan for new mail occurs immediately after the call takes place. Any messages waiting to be imported are added to the system at this time. Make sure you disable the periodic scanning of messages to import as it is pointless when this switch is enabled.

NOTE: When enabled, this setting **forces** a node to process mail even if the node is configured to not allow the processing of incoming packets.

Allow Node to Process Incoming Packets

This setting determines if the node processes incoming packets. It is entirely possible for a setup to exist where the node(s) on your system will receive the incoming packets to a network drive and then have a local-only node do all of the processing (importing into the message bases). The valid settings for this field are:

N The node will NOT process incoming packets. Instead, some other node processes or imports the messages into PCBoard's message base files.

Y The node processes all incoming packets as per the *`Scan for Inbound Packets Frequency`* field also found on this screen.

Scan for Inbound Packets Frequency (min)

PCBoard scans for incoming Fido packets while at the call-waiting screen. The value entered in this field determines how many minutes elapse between each import scan. Please understand that the elapsed time is only counted while at the call-waiting screen. If a caller calls in before the time has elapsed, the timer is reset when the caller hangs up. For this reason, it is important to set the value in this field to a small enough value that all mail can be processed. A setting between 2 and 10 is a good starting point. 2 minutes for the busier system and 10 for a system which is not quite as busy. Valid responses are between 1 and 1439.

NOTE: This option is only applicable if the node is configured to process incoming Fido packets. Also note that this field can be set to 0 if this node imports immediately after transfer.

Allow Node to Export Mail

A good recommendation for exporting Fido mail on your system is to allow only one node to export. All other nodes should be configured to **NOT** export mail. This setting controls whether or not the current node builds the outbound packets. Valid responses are:

N Mail is not exported by this node.

Y This node will export mail posted on the system.

Scan for Mail to Export Frequency (min)

This selection is similar to scanning for inbound mail frequency in that it tells PCBoard how often to scan your Fido conferences for outbound mail (in minutes). The same recommendations for inbound frequency settings apply to outbound frequency settings. Valid responses are between 1 and 1439.

NOTE: The value entered here only has relevance when the node is configured to export mail.

Allow Node to Dial Out

This selection determines whether or not this node dials out to send packets or to poll another Fido node. Always make sure at least one node is configured to dial out. Valid selections are:

N This node cannot dial-out.

Y The node can make calls to poll other nodes or to send outbound mail.

Scan for Outbound Packets Frequency (min)

If outbound packets exist and the current node is allowed to dial out, the outbound packets are sent to another node/hub. The amount of time that must elapse between each scan for outbound mail is determined by this field. Remember, only the time spent at the call-waiting screen counts. If you have the frequency set at every five minutes and callers are logging in every 3 minutes to your system, a successful scan will **never** occur. Use a low enough setting that mail can be sent as often as you desire.

NOTE: Each time PCBoard dials a system it only attempts that one system. This is an important fact to remember especially if circumstances require multiple sites to be dialed. The next time the timer triggers, the next system is called.

Default Zone and Net

When used in conjunction with the Default Net field, default values are used when entering an address at the Fido menu available from the call-waiting screen. Using the defaults you can enter just the node number to poll and PCBoard will fill in the zone and net numbers with the default values.

```
You Enter: 5
Site Polled: 1:828/5    (Use default values)

You Enter: 56/6
Site Polled: 1:56/6     (Default net overridden)

You Enter: 2:29/30
Site Polled: 2:29/30    (All defaults overridden)
```

Fido Logging Level (higher=more detail)

This configuration option controls how detailed the log entries are for Fido transfers and tossing. The higher the number you enter, the more detailed the entries in the caller logs are. The following list summarizes the valid options for this field:

0	Normal log entries
1	More details for mail transfers
2	More details for tossing
3	More details for mail transfers **and** tossing
4	Used only for debugging purposes
5	Used only for debugging purposes

NOTE: Because selecting a value higher than 1 results in more information being logged, be aware that the size of logs on disk will increase.

Tosser Configuration

Security Req'd for +C and +D Modifiers

When a netmail message is addressed with a *+C* on the addressee line, it becomes what is known as **crash** mail. Crash mail ignores all event information which means a message can be sent to any sight regardless of the settings of the crash Fido verb in the current event.

Entering the *+D* flag on a netmail message forces PCBoard to ignore any routing and instead go directly to the node. With an international network, this can be a very costly feature if put in the power of unauthorized

individuals. If you give users access to the netmail conference, set an appropriate security level to send crash and direct mail. It's not hard for a user to abuse the netmail privileges if you let them.

Create MSG with Outbound Packets Attached

This option is designed for use with a configuration where PCBoard is not the one exporting the packets to other systems. If PCBoard is the software used to transfer packets to other systems, leave this option set to N. Valid options for this field follow:

N PCBoard handles both the exporting of mail and also the dialing of other systems. This is the default choice.

Y All outbound packets created by PCBoard are placed as file attachment to MSG files. Any MSG compatible mailer can then transfer the mail to the necessary sites. You must simply tell the third-party mailer that the inport/export directory for MSG files is the directory specified by *PCBSetup | Fido Configuration | File & Directory Information*. **Make sure the /MSG switch is not specified in the PCBFIDO environment variable when this option is selected**.

Enable Inbound Routing

The purpose of this option is to control whether inbound routing is enabled. With inbound routing enabled, a packet for another system can be transferred to your system and held in your outbound queue for transfer to another site. In this type of configuration the system operates in a "middle-man" type role. This type of functionality is usually only required by hubs. Valid options for this field are:

N All packets sent to your system are imported regardless of the routing information.

Y Packets can be routed from one system to another through your system.

Secure Netmail

When this switch is enabled, only Fido sites that have an account on your system can send you netmail. If another site sends you mail, these packets are placed in the secure netmail subdirectory (*PCBSetup | Fido Configuration | File & Directory Configuration*). By moving the netmail packets to this subdirectory, you can inspect the mail beforehand. Valid options are:

N All netmail messages sent to your system are automatically imported.

Y Only netmail messages from users with Fido accounts on the system are imported.

Change SYSOP to FIDO_SYSOP

Quite frequently, Fido *echo mail* comes in addressed to or from SYSOP at another site. This commonly results in you being notified of many messages that really are not intended for you. PCBFido can change imported echo mail from SYSOP to FIDO_SYSOP to prevent this scenario. Valid options for this field are:

N Messages imported addressed to SYSOP remain unchanged.

Y All messages addressed to SYSOP are changed to read FIDO_SYSOP.

Check for Dupes using Message Path

This option is one of two duplicate checking methods that PCBFido offers you. This method is fastest because it checks the path traveled in each message to see if it has already been to your system. If not, the message is imported. Valid options are:

N Do not use the message path for duplicate checking.

Y Duplicate checking is performed using the path stored in each message.

Only one duplicate message method may be enabled even though two methods are available. Simply select the one that best matches your needs.

Check for Dupes using MSGID

A more thorough method of checking for duplicate messages is to check the message ID against a database of previous message IDs received. If it matches any of the entries in the database, skip the message and proceed to check the next message. This is known as MSGID duplicate checking. Valid options for this field are:

N Do not use MSGID duplicate checking when importing.

Y Duplicate checking is performed using the MSGIDs. This method is slower, but more thorough than the alternative.

Only one duplicate message method may be enabled even though two methods are available. Simply select the one that best matches your needs.

Number of Messages to Track for Dupes

A database of message IDs are maintained when MSGID duplicate checking is enabled. This field tells PCBFido how many messages to maintain the database for. In other words, if you enter 5000 in this field, only the last 5000 message IDs are stored in the database in revolving-door fashion. In essence, the database auto-maintains itself.

NOTE: Entering a value of -1 in this field causes **every message** to be checked no matter how many there are in the echo area.

Generate Response Messages

With actions such as FREQing and area fixing, it is useful to know the outcome of the requested action. This option determines if these response messages are generated or not. The locations and file information for the response files are specified in *PCBSetup | Fido Configuration | File & Directory Configuration*. Valid options are:

N No response messages are sent after a file or areafix request is received.

Y Responses are sent to the system who sent the file or areafix request so they are aware of the status of the action.

Enable PassThrus

A PassThru area is an echo mail area that you do not carry on your system per se, but rather are getting from a hub for the benefit of a downlink to you. Think of it as forwarding an entire echo mail area from your hub to someone you hub for. In this situation you act only as the middleman. The actual pass through areas are configured with FIDOUTIL Valid options are:

N PassThru areas are not allowed.

Y PassThru areas can be configured via FIDOUTIL.EXE and are recognized.

Enable Areafix Forwarding

Not every Fido hub carries all of the echo mail areas. When areafix forwarding is enabled, requests for areas you do not carry are automatically forwarded to your hub or uplink (specified in each Fido user record.) Valid options for this field are:

N If a request is sent for an area that your hub does not carry, the request is denied.

Y Request for areas that your hub does not carry is forwarded to your uplink.

Auto Add Fido Areas as PassThru's

When Fido imports messages from an echo mail area that does not currently have a conference associated to it on the system, PCBoard can automatically add it as a PassThru area without requiring you to manually make the configuration change using FIDOUTIL. Valid options are:

N Messages that come in from an echo area not defined on the system are placed in the Bad Mail conference.

Y This area is added as a PassThru area to the system meaning that your downlinks can pick up the echo from you even though you're not importing the messages.

Re-Address Routed Packets

Several messages are compiled into a *packet* of mail. Each of the messages have a source and destination address as does the packet file. In a situation where you route packets through another site rather than sending mail directly, it is possible that some mailers may throw away packets not meant for their site. To prevent this from happening, PCBoard can readdress the packet (not the messages) to the site you route messages through. Valid options are:

N The original source and destination sites for the message are retained.

Y Packets are readdressed to the site you route messages through.

Route Echo Mail

This feature is meant for those participating in Fidonet who meet two criteria: 1) they receive echo mail via satellite and 2) they desire to send echo mail originating on their system to a local site in their area rather than potentially long-distance site for the satellite service. Valid options for this field are:

N Echo mail is sent out as normal—to the satellite service site.

Y All echo mail is routed to a hub in your area. Only messages that originate on your system are exported to the uplink.

Node Configuration

When this menu option is selected, an editor screen is displayed where nodes receiving outbound packets can be configured. In other words, this screen lists all nodes who receive mail from your system, what type of archiver they use, and what type of packet to create.

The fields on this screen are as follows:

Node: Enter the node number to which mail will be sent. The format for the node number is <zone>:<net>/<node>.

Arc: Enter the archive type to be used for the node being defined. Valid entries are 0-3: 0=ZIP, 1=ARJ, 2=ARC, and 3=LZH. Make sure the proper entries are made in *PCBSetup | Fido Configuration | Archive Configuration* for each type. If you are unsure of the type to enter, contact the SysOp of the node for the proper setting.

Pkt: PCBoard's implementation of Fido supports two type of packets: 1) Stone Age (type 1) and 2) Type 2+. Select the appropriate type for the node being defined. If unsure of which selection to make, contact the SysOp of the node in question to get the proper setting.

NOTE: The default settings for every site are to use ZIP compression and Type 2+ packets. If the site you are exchanging mail with uses these values, an entry does **not** need to be made. Only add an entry when you must override the default values.

System Address

This screen gives you the opportunity to configure four options relating to your node address and any additional AKA (Also Known As) addresses you may have.

Node

You must supply the Fido address/node number assigned to you in this field. Remember the format is in the <zone>:<net>/<node> format. Use A - I to add new fields where AKA (Also Known As) addresses can be entered.

This selection allows you to tell PCBoard what your Fido system address in the standard form of *zone:net/node*. You can make several entries to allow for AKA's. Why use AKAs? If you are involved with multiple Fido based networks, you'll have more than one node address and will need the AKAs to properly identify your node.

A question that gets asked quite often revolves around node number security. If you can enter any node number, how can you stop someone from entering your assigned node number and picking up your mail? The answer is that you cannot stop them from entering the number. However, a password can be defined on the host system to prevent others from acting as your node number.

Example system addresses follow:

```
10:125/56
1:583/5
6:5/82
```

Primary

It is quite possible for you to have multiple addresses to identify your system even in the same network. One of these addresses is your *primary* address and the others are AKAs or secondary addresses. For each network you participate in, only one address can be the primary one. Valid options are:

N	The address on this line is an AKA address.
Y	This address is the primary address for interaction with a particular network.

Seen-By

One way to prevent duplicates from being imported is to check the seen-by lines in each message. As the name implies, these lines in the message show which addresses (including AKAs) have seen the message. In situations such as receiving messages from a satellite, you may not want to add some of the addresses to the exported messages. Valid options are:

N	This address is **not** added to the seen-by lines of echo mail messages.
Y	Add this address to the seen-by lines of an echo mail message.

Present

As two Fido nodes negotiate a connection, each side presents their primary and AKA addresses. This field lets you control which of the addresses you want to present to other mailers. Valid options for this field are:

N The address on this line is **not** presented to other mailers who call you.

Y This address is given to other mailers during the negotiation process.

Range

In this field, enter the range of conferences where the node address information in the previous field is effective. You may enter a single conference, range of conferences, or even multiple ranges of conferences as the following examples illustrate:

```
100
200-400
500-700,1000-1500
```

NOTE: If running more than one mail network, see *PCBSetup | Fido Configuration | Origin Conference Range* for additional fields you may want to change.

EMSI Profile

EMSI is a negotiation protocol for Fido systems. The information regarding your system name, city, phone number, baud, etc. are sent during the negotiation sequence.

Normally this information is available in the node list but PCBoard gathers the information from this screen and use it to override what is in the nodelist. It is important to enter the information accurately because some hosts may use it to update node lists. The following describes each field:

BBS Name: Enter the name of your BBS in this field.

SysOp Name: In this field, enter the name of the SysOp in the first name / last name format.

City/State: Enter the city and state / province information where your BBS operates.

Phone: Enter the phone number used for incoming Fido calls. Make sure you do **not** list your general BBS number if it is different from the Fido number.

Baud: Enter the maximum baud rate your system supports. In FidoNet, 9600 is generally considered to be a maximum value. What you enter here has no effect on what speed you call other systems; it is for informational purposes only.

Flags : Ask your node coordinator what should be entered in the flags field. If in doubt, leave the default values.

File & Directory Configuration

The Fido configuration needs the locations of several paths defined. On this screen enter the paths for incoming packets, bad packets, etc. Each directory location is described in detail in the following sections:

Incoming Packets

This field refers to the location where incoming mail packets are stored. Realizing that incoming packets can be large in size, specify a drive with plenty of free space.

Outgoing Packets

Enter the subdirectory where compressed outgoing packets are stored before being sent out.

Bad Packets

In this field, enter the subdirectory where bad incoming packets are stored. A packet is considered to be bad when any of the following occur:

- Invalid password in the packet file
- The node does not have access to the area they are attempting to post to
- No area is defined for the packet—either regular or PassThru
- File based errors such as unable to read the file from disk

Nodelist Database

The compiled nodelist database is essential to Fido especially when dialing out. This field points to the *directory* where the nodelist file is stored. The location of the nodelist file to compile is located in *PCBSetup | Fido Configuration | Nodelist Configuration*.

Work Directory

While processing mail packets temporary files must be created. In this field, enter the subdirectory where these temporary files will be stored. Remember, the drive where this is located must have plenty of free space available.

An ideal location to specify is one that is local to the node processing mail. This helps cut down on network traffic and therefore increases performance.

*.MSG Files

A popular standard for messages in FidoNet is known as *.MSG (star-dot-MSG). Using the /MSG switch for the PCBFIDO environment variable, you can have PCBoard keep a mirror image of all netmail messages in MSG format. Additionally, you may place .MSG files in this subdirectory to be imported into the netmail message base. The use of MSG files are particularly useful for third party applications and integrating them with your use of PCBoard.

PassThru Files

When passThru areas are enabled, all of the echo mail messages are stored in a single file in the subdirectory specified in this field. Additionally, the configuration file for which areas are configured as PassThru areas is also stored here.

Secure Mail Packets

This directory holds all of the netmail messages that come in from sites who do not have Fido user records on your system but only when the secure netmail option is enabled. Check this directory regularly to purge any unwanted files.

Message/Response Files

The files in this directory are used to send responses to your downlinks when you request actions such as an areafix or a file request. The following describes each of the files that should be in this subdirectory and what their purpose is:

AFIXAVL.HDR	This file lists the conferences that a given downlink can areafix (their Fido account is registered in) The actual area list is appended to the end of this message so this acts more as a header file.
AFIXFAIL.MSG	The purpose of this file is to notify the downlink that the areafix request they sent failed. It could because they are not registered in the conference or any number of other factors.
AFIXLST.HDR	This file shows the downlinks which areas they are currently receiving (their Fido user account has both the R and S conference flags).
FREQINFO.MSG	This message is sent with every file request received whether it is successful or not.

FRQPFAIL.MSG When a file request fails, this message is sent to the downlink. A file request may fail because the incorrect password was specified, there is insufficient access to the file, or even if the file requested is not available.

Archiver Configuration

The Fido implementation in PCBoard supports four types of compressed packets: 1) PKZIP, 2) ARJ, 3) ARC, and 4) LHA/LZH. This particular screen is where the various compression programs are configured. For each archiver the program name for compressing and decompressing must be specified. Additionally, any necessary switches must be specified. The following shows a sample of what may be entered:

```
ZIP                      : C:\UTL\PKZIP.EXE
Switches for ZIP         : -a
UNZIP                    : C:\UTL\PKUNZIP.EXE
Switches for UNZIP       : -o
ARJ                      : C:\UTL\ARJ.EXE
Switches for ARJ         : a
UNARJ                    : C:\UTL\ARJ.EXE
Switches for UNARJ       : e
ARC                      : C:\UTL\ARC.EXE
Switches for ARC         : a
UNARC                    : C:\UTL\ARCE.EXE
Switches for UNARC       :
LZH                      : C:\UTL\LHA.EXE
Switches for LZH         : a
UNLZH                    : C:\UTL\LHA.EXE
Switches for UNLZH       : e
```

Phone Number Translation

The Fido network spans many countries across the globe and relies on being able to call one node from another. Phone numbers for each site are obtained by searching the nodelist database. Each entry in the nodelist contains the FULL contact number for each site. For example, the phone number for a site in the United States may resemble this entry:

```
1-352-555-1212
```

Why would any type of phone number translation have to be done if the full phone number is there? The quick answer is that many nodes call one another within a local calling area. Using the previous example number, we could say the following two phone numbers exchange mail:

```
1-352-555-5555
1-352-555-1212
```

When the first site calls the second, it needs to be able to strip off the *1-352-* because that is used only for long-distance calling.

Creating the translation is very easy. On this screen are two columns. The first is the information to search for in a phone number and the second column lists the replacement information. If nothing is entered in the *Change To* column, the matching information is stripped. The following entry shows how the *1-352-* can be stripped.

```
    Find                                  Change To
   ---------                             -----------
1) 1-352-
```

International Calling

If the setup of the network requires **international calls** to be made, you must enter two entries in the translation list defining your country information. These entries will look like the following if you live in the United States:

```
    Find                                  Change To
   ---------                             -----------
1) IP                                    011
2) IPX                                   1-
```

The first entry, IP, defines the international prefix. In other words, international calls made from the United States must begin with 011 followed by the country code, and other appropriate phone numbers. If unsure about the international prefix, contact your local phone service provider for additional information.

The second entry, IPX, defines the country code. The United States country code is 1. Most phone service providers make this information available. If in doubt, contact them for additional details.

Prefixes and Suffixes

Your situation may require the use of prefixes (numbers to dial *before* every phone number) and suffixes (numbers to dial AFTER every phone number).

A classic example of this in the United States comes into play if you have call-waiting. It is possible to disable call-waiting by dialing `*70,` before every phone number. Another example for prefixing is in a business situation where a 9 must be entered before all outgoing calls.

Suffixes are not typically used as much but are still quite useful. For example, some long-distance carriers allow you to require a password or special code on every long-distance call. This code is entered after the phone number—a perfect use of the suffix. Prefixes are defined by entering `GP` in the `Find` field. In the `Change To` field, enter the number(s) to add before every phone number. Suffixes are done in much the same manner. In the `Find` field, enter `GS` followed by the suffix to add in the `Change To` field. As you may have guessed by now, GP stands for Global Prefix and GS stands for Global Suffix.

Examples:

```
    Find                                  Change To
   ---------                             -----------
1) GP                                    *70,
2) GS                                    ,,1994
```

The first example shows a prefix defined as `*70,` and the second shows a suffix defined of `,,1994`. The commas are used in modem dial strings to define a 2 second pause.

Nodelist configuration

On this screen, you define where the nodelist file is stored. The nodelist compiler uses this information when compiling the nodelist. There is *no limit to the number of nodelists* you can have. Each file is appended into the database until there are no more lists to compile.

Diff Filenames

A Diff (DIF) file is used to update an existing nodelist. If you are participating in the worldwide Fido network, you have seen how the full nodelist can be several megabytes in size. To prevent members of the

network from having to transfer such a large file each time, updates or DIF files are usually available from the same location where you can find a nodelist.

The nodelist compiler properly updates the local nodelist database using the information stored in these DIF files. To be properly updated, the DIF file must be in the same directory as the nodelist. Just the base filename of the DIF file needs to be entered on the screen as the extension simply refers to the revision of the file.

To help explain the relationship between the nodelist and the DIF files, look at this entry:

```
   Nodelist Path (No Extension)                    Diff Filename
   ----------------------------                    -------------
1) C:\PCB\FIDO\NODELIST                              NODEDIF
```

Here is the procedure that must occur to update the nodelist with a DIF file:

- Begin by compiling just the nodelist file
- As time passes, DIF files are distributed by your network. Pick up the DIF files, uncompress them to the same directory where the nodelist file listed in column 1 is.
- Recompile the nodelist database with the compiler (PCBNLC.EXE) using the /DIFF switch.

NOTE: All filenames listed on this screen refer to the uncompressed filenames. You must uncompress the files manually before attempting to compile the nodelist database. Compression types range from system to system. Ask if you are unsure about the type of compression.

FREQ Path List

When a Fido node requests a file from your site, PCBoard searches all subdirectories listed on this screen. If a matching filename is found in any subdirectory, the file is sent. The second field on each line, *Password*, means the proper password must be sent with the request if the FREQ is to be honored. In this manner, you can secure the information sent out via FREQs.

NOTE: It is important to remember that any file in these subdirectories can be obtained from a remote site. Therefore, do not put confidential files in these directories.

FREQ Restrictions

File Requests (FREQs) tie up your system for the time it takes to pick up the files. Therefore, a way to restrict the amount of time, or bytes another site can pick up. Several fields define how the file requests can be restricted. The following describes each:

Session Max Time
Enter the maximum number of minutes another site can spend FREQing during the current call.

Session Max Bytes
Enter the number of bytes a remote site is allowed to download during a single connect.

Daily Max Time
The value in this field represents the total amount of time a remote site can spend transferring files during any one daily period. A day to PCBoard is considered to be from midnight to 11:59pm (via the host computer not the remote site).

Daily Max Bytes
Enter the total number of bytes a remote site may FREQ during a daily period (midnight to 11:59pm).

Allowed Nodes
This field defines which remote sites can FREQ a file from your system. The following describes each available option:

- A — All Fido sites regardless if they are listed in your user or nodelist can FREQ a file. Keeping in mind it is possible to FREQ using wildcards is another reason not to put confidential information in your FREQ paths.
- L — Any Fido site listed in the nodelist or in your user file can FREQ a file.
- N — Only those Fido sites listed in the nodelist can FREQ a file. This option is ideal when you are involved in a smaller Fido-based network but do not want just any Fido capable mailer to be able to FREQ a file.
- U — Only those sites listed in your user file can FREQ a file.

Min Allowed Baud
Because transferring files can be time consuming, you may choose to limit FREQs to only those sites capable of a certain baud rate or higher. For example, you may want to only allow those systems capable of a 14400 connection or higher to FREQ. With this type of configuration, sites using 9600 baud modems would only be able to transfer mail and not files.

In this field, enter the required baud rate for transferring files. Any site capable of the speed you enter or higher can request files.

FREQ Magic Names

A "Magic Name" can also be seen as an alias to a filename than can be FREQed. A common example of an alias is for a remote site to FREQ a file called "FILES" on your system. This is commonly understood to be a list of files available on your system. What do you do though if your list is called ALLFILES.LST? Since FILES is a de facto standard, you want to make this available to other nodes but do not want to waste the space an additional copy occupies. That is where the magic name comes in handy. Simply make an entry similar to the following:

```
   Magic Name           Filename                      Password
   ----------           --------                      --------
1) FILES                C:\PCB\FILES\ALLFILES.LST
```

From this example you can tell that the alias or magic name is entered in the left column and the actual filename to send is entered on the right.

NOTE: For this to work, the C:\PCB\FILES\ subdirectory **MUST** be listed in the FREQ Path list. FULL pathnames are required.

A more sophisticated example involves wildcarding. You produce a program which consists of 3 zip files (3 disks). Rather than having remote sites requesting BOBOB-1.ZIP, BOBOB-2.ZIP, and BOBOB-3.ZIP have them FREQ BOBOB instead. The following example illustrates:

```
   Magic Name           Filename                      Password
   ----------           --------                      --------
1) BOBOB                C:\PCB\FILES\BOBOB-?.ZIP
```

Notice how the ? DOS wildcard character is used to make sure all 3 disks are included when BOBOB is requested.

Finally, we use an example that shows how to password protect a magic name so only those sites that know and supply the password can transfer it.

```
   Magic Name          Filename                     Password
   ----------          --------                     --------
1) SALESDAT            C:\ACCNTG\SALES.SUM          RESTRICT
```

In order to receive this file, the site calling in must request the SALESDAT magic name and also supply the corresponding password of *RESTRICT*.

FREQ Deny Nodelist

Some remote sites may abuse their ability to FREQ. To deny these sites the ability to FREQ from your system, add them to this list. The entire node number/address must be entered.

Origin Conference Range

Every message exported from your system into a Fido based network has an origin line added to the message. This origin line, located at the end of the message, is used to notify other systems where the message came from. Typically, this information includes your BBS name and the phone number required to contact it.

Because you may be members of several different Fido-based networks, it is understandable that specific conferences need different origin lines. The purpose of this setup screen is to let you do that. Each record on this screen is made up of two fields. Multiple records can be setup to accommodate as your needs dictate by using A - I to add new records.

Origin

Enter the information you want displayed as the origin information for the conference range in the next field. Remember, origin information involves items such as bulletin board name and contact information.

Conferences

The range of conferences where the origin information in the previous field is effective is entered in this field. You may enter a single conference, range of conferences, or even multiple ranges of conferences as the following examples show:

```
100
200-400
500-700,1000-1500
```

Call Waiting Screen

Pressing A - F from the call-waiting screen reveals the following menu (Fido must be enabled in *PCBSetup | Fido Configuration | Fido Configuration*):

```
        Sysop FIDO Menu

  1) Poll a Node.
  2) Request a file.
  3) Transmit a file.
  4) Force next call.
  5) View/Modify Queue.
  6) Scan for outbound mail.
  7) Process inbound mail.
  8) Compile Nodelist.
  9) Send Mail to a Node.

  Enter selection:
```

Poll a Node

Although it is possible to setup a regular Poll to take place in an event, you may want to make a manual run to pick up mail or maybe even poll a site your event does not normally handle.

When this option is selected, you will be asked to enter the address of the node to queue. The full address can be entered in the form of <zone>:<net>/<node> or if defaults have been entered in PCBSetup for the zone and net, just the node number can be entered. Once the address in entered, an entry to crash poll the node is added to the outbound queue.

NOTE: In order to actually poll the node, you must send the packet from the outbound queue. This can be done by selecting either **Force Next Call** or **Send Mail to a Node** from the Fido Menu.

Request a file

It is possible to FREQ a file from another node by selecting this menu option. You are first asked for the address. Any defaults entered in *PCBSetup | Fido Configuration | Fido Configuration* are in effect.

Next, you are prompted for the filename to request from the site. Either a filename or magic name may be entered as both are perfectly acceptable. Once the filename is entered, the request is added to the outbound queue. Finally, you are asked to enter the password for the file request. If no password is required, simply press R .

Transmit a file

To send a file to another site, an entry must be added to the outbound queue by selecting this option. First you are asked to enter the site address where the file is to be sent. Next, enter the filename to send. Make sure you enter the full path and filename to send and that it exists. If the file does not exist, the entry is **not** added to the outbound queue.

Force next call

This option simply forces the next call to occur. If the outbound queue is empty, it will appear as if no activity took place.

View/Modify Queue

The outbound queue stores outbound requests or activities (polling a node, sending a file, FREQing a file, etc.) To view the contents of the queue, use this menu option. When entries are in the outbound queue, entries similar to the following are shown:

```
   View/Modify Outbound Queue
                                        1
Filename : 03172429.PKT
Address  : 1:311/40

F) Flag  : NORMAL
S) Send This Packet
D) Delete
N) Next
P) Previous
C) Clear Failed Connect              0
R) Re-Address Entry
Enter selection :
```

Filename: This field lists the filename to transfer or it shows the activity taking place if not involving a file request (polling is a good example).

Address: Shows the full address where the request is being sent.

F)lag: Allows you to change the flagged status of this entry. Valid options are CRASH (send immediately), NORMAL (wait for normal event processing), and HOLD (wait for the other node to call you).

S)end: Process this request immediately and ignore the flag status (HOLD or NORMAL) of the packet. All packets in the outbound queue for this node are sent once a connection is made.

D)elete: When this menu item is selected, the current queue entry is deleted.

N)ext: View the next entry in the queue.

P)revious: View the previous entry in the queue.

C)lear Failed Connect: Resets the failed call counter to 0 making a dialing attempt appear to be a first time call.

R)e-Address Entry: Use this option to change the current address where a packet is to be sent.

Scan for outbound mail

All netmail and echo mail entered on your system is prepared for sending to your hub. This option is designed to manually scan for mail as this is normally taken care of by the timers in *PCBSetup | Fido Configuration | Fido Configuration*.

Process inbound mail

Manually checks to see if there is any incoming mail to be processed. Normally, PCBoard checks at regular intervals for new mail. However, you may have a need to make a manual run and therefore force the incoming mail to be processed.

Compile Nodelist

This option executes the PCBNLC (node list compiler) program. Use this option to generate a new node list database.

Send Mail to a node

This option lists all nodes with outgoing mail (or requests). Select the site to send all requests to and these requests are processed immediately. This option is identical to the *S)end* option when viewing the queue except it lists by node number instead of by packet.

The Fido Conference Configuration Screen

As you are aware, there is more than one setup screen for a conference. Pressing d when editing the configuration of a conference takes you to a screen full of further options beginning with *Auto-Rejoin into this Conf.* Also on this screen is an option titled *Type of NetMail Conference*. When this field is set to 5, pressing d brings you to what is known as the *Fido Conference Configuration screen*.

```
PCBoard Conference   : 0
Default AKA          :
Default Origin       :

Fido Area Name       :
Allow Private mail   :
Allow File Attach    :
High Ascii (S/R/C/N) :
```

Four of these fields are for reference purposes only and may not be edited. The others, however, can be edited and relate to Fido issues only. The following sections describe each of the available fields and whether they can be edited or not.

Default AKA

When you are involved in multiple networks, you'll have more than one node address. These additional addresses are called **AKA**s which stands for *Also Known As*. This field is for informational purposes only and reflects the node number or AKA assigned to this conference in *PCBSetup | Fido Configuration | System Address*.

Default Origin

Origin lines are added to each message sent out to identify the originating system. While this field cannot be edited, you can change the origin information for conferences in *PCBSetup | Fido Configuration | Origin Conference Range*.

Fido Area Name

This field holds the **tag name** for the conference. Every echo area in Fido has a tag name which identifies the topic of discussion. Simply enter the tag for the echo area this conference represents.

When a large number of conferences needs to be added, look into using FIDOUTIL. See FIDO.DOC in the same directory where PCBoard was installed for further information.

Allow Private Mail

The Fido technology has provisions for exporting private echo-mail. What this entails is a message that is sent to all participating echo mail sites with a message that is *RECEIVER ONLY*. This type of message is not as secure as netmail in the fact that it is sent to every site. Furthermore, not all Fido tossers support private

echo-mail. However, PCBoard does which allows you to take advantage of this feature if desired. Valid options are:

N Do not allow private echo-mail. Private messages are not exported:

Y Private echo-mail is sent to other sites.

Allow File Attach

There is nothing in the Fido technology that disallows file attaches in echo mail. However, this feature is intended for private Fido based networks since sending file-attaches in echo mail is considered to be very taboo in Fidonet itself. Valid options are:

N Messages associated with file attachments are sent, but not the attachments. If you need to get a file attachment to someone, use netmail instead.

Y Both the file attachments and message are sent even if this is an echo mail conference.

High Ascii

Most sites in Fido do not allow high ASCII characters in messages yet if you are involved with other networks they may allow such characters to be entered. To accommodate this problem, PCBoard allows you to determine how high ASCII characters are handled on a conference by conference basis. The following are valid selections:

S Removes all high ASCII characters and replaces with nothing.

R Replaces all high ASCII characters with periods (.)

C Converts high-ASCII characters to similar looking low ASCII equivalents.

N Do no translations or modifications to high ASCII characters.

The safest choice is option C because it guarantees low ASCII characters will be used but yet it still attempts to portray the effect of any high ASCII characters.

Fido Batch Files

There are a few hooks within PCBFido where it is desirable to use third-party utilities to facilitate the flow of messages in a Fido base network. By hooks, we are referring to the use of batch files where these third-party programs can be run. The purpose of this section is to explain detailed information about these batch files.

POSTCALL.BAT

After a successful Fido transfer and the packets are imported, this batch file is run. This is of particular interest to those SysOps involved in a file echo (files are exchanged instead of messages). In this type of scenario, a third-party TIC processor must be used to handle the packets after a mail transfer occurs.

POSTCALL.CMD is the batch filename to use if you are using PCBoard for OS/2. The BAT version of this file is never executed.

PREPROC.BAT

Because needs vary from system to system, PCBoard gives you the ability to shell out and run batch files at critical points during the transfer. If this batch file is found, it is run between the time a file is transferred and before it is processed for importing.

PCBoard for OS/2 is different from the DOS version in that it searches for PREPROC.CMD instead of PREPROC.BAT.

FIDOSEND.BAT & FIDORECV.BAT

Most sites support type 2+ packets which also denote Zmodem capabilities. By default, Fido executes ZMSEND.EXE and ZMRECV.EXE for its Zmodem needs. If you need to use a third-party version of Zmodem, use these two batch files to load the program. The parameters passed to the batch files are identical to those PCBoard passes to an external protocol in your normal configuration (refer to the PCBoard manual for additional information). FIDOSEND.BAT is used when a packet is sent from your system, while FIDORECV.BAT is used to receive a file to your system.

PCBoard for OS/2 searches for both the CMD and BAT version of the files. The only way the BAT versions of these batch files run is if the CMD versions are missing.

Fido-PCBoard Switches

New PCBoard environment switches have been added to help facilitate those who are running multiple nodes off of one PCBOARD.DAT or who may want to manually control mail transfers.

"SET PCBFIDO=" Environment Switches

The existence of the variable enables Fido Processing (just the opposite of the /NOFIDO switch). This new variable supports the following switches:

/DIAL:[min]

This option overrides any setting in PCBSetup and will change the dialing frequency to the number of minutes specified after the colon.

/EXPORT:[min]

Overrides the settings in PCBSetup and checks for items needing export every x minutes with x being the number of minutes specified after the colon.

/IMPORT:[min]

Overrides all settings in PCBSetup and checks for mail every x minutes with x being the number of minutes entered after the colon.

/MSG

Enable the mirroring support for netmail. .MSG files can be imported if put in the .MSG subdirectory and copies of all netmail messages exported are keep in the same directory (in .MSG format.)

/NOEMSI

This switch disallow incoming EMSI connections. In order to connect, a site must use the WAZOO or FTS1 protocol.

/NOFTS1

The FTS1 protocol is the foundation of Fido. It's not commonly used anymore, but it remains a requirement for compatibility purposes. You can disallow incoming FTS1 connections by using this switch.

/NOWAZOO

WAZOO refers to one of the Fido protocols used to connect to another site. When this switch is used, all incoming WAZOO connections are disallowed. Instead, Fido sites must use either an EMSI or FTS1 connection.

Examples:

```
SET PCBFIDO=/IMPORT:5 /EXPORT:3
```

This particular environment setting checks for importing every five minutes and exporting every three minutes.

```
SET PCBFIDO=/DIAL:10
```

PCBoard checks every 10 minutes to see if dialing attempts must be made.

16

PCBoard's UUCP

Introduction

Millions of messages or articles are posted each year on Usenet ranging across a wide variety of topics. Additionally, millions of people communicate using Internet e-mail. With PCBoard and a Usenet feed, both information sources can be tapped.

The configuration of the UUCP part of PCBoard consists of the following:

- Obtaining a Usenet and e-mail feed through a provider
- Configuring the relevant fields in PCBSetup
- Creating and configuring the conferences which will exchange articles and e-mail
- Creating an entry in the SYSTEMS file for your provider
- Configuring one or more events to exchange mail and news

This document focuses on giving details and background information of the configuration fields relevant to UUCP in PCBSetup. In addition, the syntax and options for all of the auxiliary UUCP programs such as UUIN, UUOUT, and UUXFER are described. **If you need additional information** on how to setup a SYSTEMS file, configuring conferences and so forth, please **refer to UUCP.DOC** in your \PCB subdirectory.

PCBSetup

When the *UUCP Configuration* options is selected from the Main Menu, the screen displays the UUCP options and paths for PCBoard. This information is used to determine where outgoing e-mail is found and where incoming e-mail is placed. It also controls addressing information such as domain names and their format.

For the fields on this screen to have any relevance, you must have access to an Internet/Usenet provider. Your answer to the fields like *Email Host*, *Domain Name*, and *News Host* all assume the information can be obtained from your provider if required. Let's start by looking at the UUCP configuration screen and explaining each field:

```
                          UUCP Configuration

Organization : Salt Air BBS / Murray, UT  801-261-1686

Base UUCP Path            : C:\PCB\UUCP\
Spool Directory           : C:\PCB\UUCP\SPOOL\
Log File Directory        : C:\PCB\UUCP\LOGS\
Decompress Batch File     : C:\PCB\UUCP\DECOMP.BAT
Moderator List File       : C:\PCB\UUCP\USENET.MOD

UUCP Name                 : saltair
UUCP Domain Name          : saltair.com
UUCP Email Host           : xmission
UUCP News Host            : xmission
News Distribution         : world
Time Zone Offset from GMT : -0600
Name Separator            : .
Internet Email Conference :   101
Usenet Junk Conference    :   115
Bang Domain               : N
Sub Domain                : N
High Ascii (S/R/C/N)      : 0

13:06:31 ═══ 01-11-95 ═══ F1 = help ═══ caps: OFF  num: ON   ins: OFF
```

Organization

With every message sent out from your system a description of your site is included in the message header. The text you enter in this field is the description PCBoard will add to each message. Common information to include is your BBS name, and a way to contact the system such as a phone number or IP address.

Base UUCP Path

UUCP uses auxiliary files to control many things: alias name translation, determining which message headers are kept, etc. What is important to understand is that these auxiliary files are stored in the directory labeled as the *Base UUCP Path*. The default location is \PCB\UUCP. Information about these files is available in the UUCP Programs section. Specifically, you'll be looking for files like ALIAS.IN, ALIAS.OUT, and HDRKEYS.LST.

Spool Directory

The subdirectory entered in this field represents the *base spool subdirectory*. Underneath this subdirectory are additional subdirectories—one for each site/provider. For example, assuming the name of your email host is **site1** and the base subdirectory is C:\PCB\UUCP\SPOOL\, the spool subdirectory for this site is C:\PCB\UUCP\SPOOL\SITE1. UUOUT and UUXFER will create these subdirectories as needed. The only time you will have to create the spool directory is if your feed is coming off of a satellite service such as PageSat or Planet Connect. The following shows two examples of directory trees.

```
C:\                          C:\
└──PCB                       └──PCB
    └──UUCP                      └──UUCP
        └──SPOOL                     └──SPOOL
            └──SITE1                     ├──SITE1
                                         └──SATELLIT
```

The tree on the left is representative of a system where the email and newsgroups are picked up from one site. On the right is a tree representing a BBS where the newsgroup feed is put into the SATELLIT subdirectory, and the SITE1 subdirectory is used for all e-mail and outbound newgroup articles.

It is important to remember that a subdirectory must exist underneath the base UUCP directory for every site you interact with (either download email/news from or upload email/news to.)

NOTE: UUOUT, the exporting utility, automatically creates the spool files as required. The only time you must concern yourself with creating them is when you have an inbound feed only such as a satellite service.

Log File Directory

The log files for the various UUCP utilities such as UUIN, UUOUT, and UUXFER are stored in this subdirectory. It is useful to look at log files when there is a question as to the activities performed by the programs. For example, to see what messages were exported, you can retrieve this information from the log files (assuming they have not been deleted).

These log files can grow quite large in size. Therefore, it would be wise for you to either backup or delete these log files on a regular basis. Defining an event in PCBoard to do this daily, weekly, or monthly is a good idea.

Decompress Batch File

In this field, enter the path and file name of a batch file to run to decompress batched news. Generally, this is a simple call to a single program. Included with the PCBoard package is a sample DECOMP.BAT in the base UUCP subdirectory. This batch file makes a call to a program called COMP430D.EXE which, due to the unknown origin, we cannot distribute with PCBoard. COMP430D is used by several providers but the assumption cannot be made that it will work for **all** of them. If in doubt or if you experience problems, contact your provider for information on the compression program used for batched news. They should have the necessary software.

Only one parameter, %1, is passed to this batch file. This parameter specifies the path and filename to decompress. Let's look at a sample DECOMP.BAT.

```
@echo off
cls
h:\pcb\uucp\comp430d -db12 %1
```

Moderator List File

Some newsgroups are moderated. This means that an article is not posted until the moderator reviews the message and determines if the content is appropriate. If desired, you can maintain a list of moderators by pressing 2 while this field is highlighted. Leave all entries in this file blank when UUCP should handle the moderating.

NOTE: UUCP automatically sends messages left in a moderated newsgroup to a central hub where it is then forwarded to the current moderator. Therefore, it is best to let this be handled in the normal fashion unless circumstances dictate maintenance of your own list.

UUCP Name

In this field enter your UUCP name. A UUCP site name must be registered by you or with the help of the service provider.

UUCP Domain Name

Every site has a domain name on the Internet. When you setup an account with your provider this information should have been given to you. Typically your domain name is a name consisting of lower case characters with dots as separators as shown in the following example:

```
saltair.com
m.cc.utah.edu
npo.org
```

Applying for a node name is your responsibility although many providers will either do the work for you or at the very least assist your efforts. Contact them for additional information.

UUCP Email Host

An *e-mail host name* refers to the name the provider uses to exchange e-mail. This name is not necessarily the domain name of the provider so consult with the provider to get the proper name. As a general rule, this name is 8 characters or less. There is nothing in the specification that limits the name to 8 characters, but most providers limit themselves to this length to maximum compatibility amongst other systems.

UUCP News Host

In this field, enter the *news host name* of the provider where all outbound news articles are sent.

News Distribution

Enter the default news distribution for your site. (`world` for all sites, `na` for North America only, `usa` for USA, etc.) If you are unsure, enter `world`.

Time Zone Offset from GMT

This field is used to specify how many hours and minutes your site differs from Greenwich Mean Time. Because the Internet communicates around the world, sites typically adjust times. of the messages to reflect local time. Common values for the Unite States time zones are:

```
AST  -0400    ADT  -0300
EST  -0500    EDT  -0400
CST  -0600    CDT  -0500
MST  -0700    MDT  -0600
PST  -0800    PDT  -0700
```

Name Separator

This character is used to separate name elements when converting names from PCBoard format to Internet format. For example, using a period (the default), the name *FRED CLARK* is converted to *fred.clark*.

Internet Email Conference

All incoming e-mail is sent to the conference number entered in this field.

Usenet Junk Conference

This field contains the conference number into which Usenet junk is imported (primarily articles that do not have a valid newsgroup entry for the system). Periodically looking at this conference helps insure all your conferences are setup for the news articles received.

Bang Domain

Normally, UUOUT generates addresses of the form *user@domain* (i.e., *FRED CLARK* at *saltair.com* becomes *fred.clark@saltair.com*). Sometimes other processing is needed. If this field is set to Y, addresses are formed in the following fashion: *host!user@domain*. **With this switch enabled, the name you enter as the `UUCP Domain Name` is the domain name of your email host** as illustrated in this example:

```
UUCP Name                 : yourbbs
UUCP Domain Name          : site1.com
UUCP Email Host           : site1
UUCP News Host            : site1
```

A bang name for a user at this address looks like *yourbbs!user.name@site1.com*.

NOTE: The bang domain or sub-domain name addressing is only used when you do not register a unique domain name through your provider.

Sub Domain

Normally, UUOUT generates addresses of the form *user@domain* (i.e., *FRED CLARK* at saltair.com becomes *fred.clark@saltair.com*). Sometimes other processing is needed. If this field is set to Y, addresses are formed in the following fashion: *user%host@domain*. **With this switch enabled, the name you enter as the `UUCP Domain Name` is the domain name of your email host** as illustrated in the example for bang domain addressing. The generated address for this example using sub-domain processing looks like *user.name%yourbbs@site.com*.

High Ascii

The Internet is made up of a conglomerate of machines. Some of these machines may be PCs, Workstations, Macintosh, etc. Not all of these machines are able to handle high-ASCII characters. Therefore, PCBoard gives you control of how to deal with high-ASCII characters when exporting messages. Valid settings are:

S	Strip all high ASCII on export, replacing with nothing
R	Replace all high ASCII characters with a period (.)
C	Convert all high ASCII to roughly equivalent standard ASCII
N	Perform no processing on high ASCII characters

UUUTIL.EXE

It is common for a system carrying Usenet conferences to handle hundreds or thousands of new conferences. Creating this volume of conferences can entail **a lot** of extra work on behalf of the SysOp. Much of this extra work can be prevented by using a program called UUUTIL which is included with every PCBoard package. Its purpose is simple; assist in the creation and setup of Usenet conferences. To run UUUTIL, load the UUUTIL.EXE using any of the following command line parameters:

/ACTIVE:d:\path\active

This option scans the active file (obtainable from your provider) and sets the appropriate newsgroup type for each newsgroup on your system. The active file is a UNIX formatted text file (i.e., each line ends with a line feed instead of a carriage return/line feed pair).

NOTE: This parameter does NOT create the conference it simply insures a conference has the proper setting (moderator versus unmoderated news group). Furthermore, if moderated newsgroups are not carried, this switch never has to be used because the /IMPORT switch defaults to an unmoderated group.

/EXPORT:d:\path\localng.lst

This option exports a list of all newsgroups on your system in the following format:

```
alt.news.group1,num1
alt.news.group2,num2
```

The text to the left of the comma is the newsgroup or conference name. The number to the right of the comma represents the conference number.

NOTE: This file can be used as the input file for the /IMPORT option.

/IMPORT:d:\path\localng.lst

This option is used to import a list of newsgroups from a text file and set up the basic information for them (location of MSGS file, conference type, etc.) The text file you provide must resemble the following format:

```
alt.news.group1[,num1]
alt.news.group2[,num2]
```

In other words, the exact name of the newsgroup (like *alt.bbs.pcboard*) is the first item on the line. Optionally, you may include a comma and a number if you want that newsgroup to be a specific number. For example:

```
alt.bbs.pcboard,100
news.groups,200
news.answers
```

If this file was used as the import file, the following occurs:

1. The name of conference 100 becomes *alt.bbs.pcboard*. The information for the conference is based on the conference specified with the /TEMPLATE parameter or conference 0 if that parameter is not passed.
2. Conference 200's name is set to *news.groups*

3. Because the last conference number used was 200, the *news.answers* entry is assigned to the next number which in this case is 201.

Note the *[,num?]* portion of the example. This allows you to specify a particular conference number for a particular newsgroup, or the start of a range for a set of newsgroups. If /START is not used, the first conference attempted is 1, otherwise the specified number is used. Any time a conference number appears after a newsgroup name, that number is used as the new "start" number for that conference and all future conferences. Additionally, conference 0 is never overwritten and if a conference is already in use, you are warned and allowed to overwrite, skip, or find the next available conference.

To avoid situations where a single directory is completely overloaded with files (or other directories), this option attempts to create a balanced directory tree off your base UUCP directory to hold each of the necessary message files for each newsgroup initialized. It does this by using the first letter of each newsgroup hierarchy level and as much of the last level as possible. In other words, if you have a base UUCP path of C:\PCB\UUCP, and you are initializing *alt.bbs.pcboard*, the MSGS file entry is specified as *C:\PCB\UUCP\A\B\PCBOA001*.

/INDEX

This option is used to force a rebuild of the CNAMES.IDX file. The index can also be regenerated by doing a full save when exiting PCBSetup.

/MODERATORS:d:\path\moderators

By default, UUCP forwards moderated mail to a big provider like UUNET and lets it forward to the appropriate moderator. Should you desire to control the list of moderators yourself, this parameter can be used to import a list of moderators into your system. The basic format for this file is:

```
newsgroup.name:e-mail.address
```

Example:

```
alt.bbs.pcboard:support@saltair.com
```

The purpose of this option is to scan the moderator file given by your provider and add the appropriate information to the USENET.MOD file for each moderated newsgroup you carry. The moderators file is a UNIX formatted text file (i.e., each line ends with a line feed instead of a carriage return/ line feed pair).

/SETNAMES:d:\path\localng.lst

This option is of particular interest to those currently using third-party products to handle their UUCP needs but are looking to convert to PCBoard. In this scenario it is quite likely the conferences are already setup and ready to go but there are a few items not taken care of:

1. The conference names may not truly reflect the newsgroup they carry.
2. Options in the second configuration screen determining the conference type among other things are not set.

Using this option, the existing conference information is preserved and only necessary options are changed. This is how the option is useful for those seeking to convert from a previous news or e-mail handling program. In all other ways, this option is identical to the /IMPORT option.

/START:confnum

This option is used to specify the start conference number for an import operation. Any conference numbers specified in the text file used by /IMPORT or /SETNAMES override this setting.

/TEMPLATE:confnum

Unless otherwise specified, all new conferences are based on the Main Board (conference 0). To select a different conference from which to clone new ones from, the /TEMPLATE option must be used. After the colon, simply enter the conference number to clone.

The UUCP Programs

There are three programs encompassing the normal operation of UUCP in PCBoard—UUOUT, UUXFER, and UUIN which export, transfer, and import messages respectively. When the feed is coming from and going to a provider via modem, all three programs must be run from an event. On the other hand, if the feed is provided from a satellite or similar device, only UUIN must to be run to import the messages into PCBoard. The following sections describe each of the main programs in the UUCP package.

UUOUT.EXE

The process of transferring mail entered on your system back to the Internet involves what is called exporting mail. This job falls to UUOUT which scans the PCBoard conferences for mail and prepares these messages in the form of packets so UUXFER can send them to the provider.

Running UUOUT with no parameters is the easiest way to get things going as it automatically scans all newsgroups and e-mail conferences. Your situation may require special circumstances in which case look at the *Translating Names* and *Selecting Conferences for Export* topics in this section for more details.

For most configurations, UUOUT is run by executing UUOUT.EXE with no parameters. Mind you, the program must be run from a directory containing a valid PCBOARD.DAT file so information about the base UUCP path and such can be properly located.

Translating Names

When exporting messages to other systems around the world, it is quite likely you may want to change the name used for the FROM name. A good example of this is the SysOp account. As you know, PCBoard gives the SysOp the ability to hide behind an alias (see *PCBSetup | Sysop Information*). In situations such as this, mail goes out as `sysop@yoursite.com`. What if you want to change it so you're real name is used? After all, how will someone half-way around the world know you're the SysOp of the site the message is coming from and will it be of concern to them?

For purposes such as this, create a file named ALIAS.OUT and put it in the UUCP Base Path. This file is a simple ASCII text file listing the Internet name to look for and the replacement name to use as shown in the following example:

```
sysop,john.doe
```

This sample entry makes any message from a user titled `sysop` go out as `john.doe`. Make note, **the period in the replacement name is critical as the Internet does not use a space to separate names**. Also be aware that the first name on the line must be in Internet format. This means it should be in lower case and use a period instead of spaces. Example:

```
john.smith, jsmith
```

The ALIAS.OUT file simply translates the major portion of the FROM address, it also does not update what is referred to as the *short name*, which is the name in parentheses or the name after the comma (if reading with PCBoard). Let's look at a sample FROM line:

```
From: sysop@yoursite.com, SYSOP
```

If you use the ALIAS.OUT example, the name *sysop* is translated to *john.doe* making the FROM address appear as:

```
From: john.doe@yoursite.com, SYSOP
```

From the viewpoint of protecting your identity this is not a good situation because now people can easily tell if you're the SysOp or not. Luckily the *-f* command line parameter for UUOUT which will force the short name to be changed as well as the regular FROM address. An example of how to execute the UUOUT program in this situation follows:

```
UUOUT -f
```

Selecting Conferences for Export

The default for UUOUT is to scan all conferences for mail or news to export. Should your situation dictate only certain conferences be scanned, use the *-c* command line parameter. Let's start by looking at a few sample UUOUT command lines and discuss them so you have a better understanding how this works:

```
UUOUT
UUOUT -c 101
UUOUT -c 101,103-150,160
UUOUT -c 101-
UUOUT -c -150
```

The first line of this example scans all conferences because no -c parameter was used. Only conference 101 is scanned if we use the second line. On the third line, conference 101, 103 through 150, and 160 are scanned. The last two lines illustrate how to setup an *open ended range*—line five will scan all conferences between 101 and your highest defined conference while the last line scans conferences 0 to 150.

Why would anyone want to use an open ended range? Many UUCP configurations will start at a particular conference number like 100 or 101 and go to whatever number is necessary. By using an open ended range, you do not have to remember to update your batch files every time you add a new conference to the system. This is a very time-saving feature.

File Attachments

If a file attachment is found, it is automatically UUENCODED and transmitted as part of the message body. Messages larger than approximately 64k are broken down into multi-part messages. This is done because many sites limit the size of incoming e-mail messages to this limit.

NOTE: It is the responsibility of the recipient to properly DECODE the message to its original form.

RFC-822 Compliancy

The standard referred to as RFC822 is the prevalent format to send messages between Internet addresses. When PCBoard exports the message this is the format it uses. Should you want to override any of the typical message header information such as DISTRIBUTION, FOLLOWUP-TO, NEWSGROUPS, REFERENCES, REPLY-TO, SUBJECT, or TO, you may include the field to replace followed by a colon and the text to be used. For example, to change the REPLY-TO field in a message refer to the following example:

```
To: winbeta@microsoft.com     Subj: We're interested in testing.
(-----------------------------------------------------------------)
1: REPLY-TO: president@saltair.com
2:
3: Hello, we are interested in testing the latest beta.  Please
4: forward appropriate information.
5:
6: Management
```

The allowed headers are DISTRIBUTION:, FOLLOWUP-TO:, NEWSGROUPS:, REFERENCE:, REPLY-TO:, SUBJECT:, and TO:. Scanning continues for as long as valid headers are found. The first invalid header line is considered the first line of the message.

UUXFER.EXE

The sole purpose of UUXFER is to transfer email/news to and from your BBS to a provider over a modem connection. You can think of the program as a very specialized terminal program running a script to get and receive mail. In fact, the instructions required to login to the provider is in what is known as the **systems file**.

Before we start talking about the systems file, you must understand how the UUXFER program is called. This program is used to dial a UUCP service provider, send outbound email and news, and receive inbound email and news. In order to know which provider to call, a site must be specified via the -s switch. For example:

```
UUXFER -s xmission
```

This example shows how UUXFER is used to call up a provider with the site name of *xmission*. By looking at the systems file, UUXFER knows how to dial the site and how to get logged in. The next topic of this section discusses this file in detail.

What is the Systems File?

The only external configuration file required by UUXFER is the SYSTEMS file. It must be created and maintained in the Base UUCP Path.

```
# The # comments out a line in the file
# try modifying one of these lines to match your site
```

This example SYSTEM file gives you some sense for what is required to create or modify an entry. To fully understand this file you must realize that any line not beginning with a # represents an entry for a system. Each entry consists of a set of fields which UUXFER accesses to login the system. A description of each field follows:

1. **xmission** - Quite simply, this is the site name UUXFER looks up based on what you pass via the -s command line parameter. In this case, a site named *xmission* is being defined.
2. **f1** - While this field is not used by UUXFER other programs similar to UUXFER use it to determine valid times of the day to call.
3. **f2** - This field is not used by UUXFER but similar programs use it to determine the serial port to use for communications.
4. **f3** - Some programs use this field to determine what type of serial interface to use but UUXFER obtains this information from PCBoard.

5. **f4** - While UUXFER does not use this field, other similar programs use it to control the opening port rate.
6. **g** - This field represents the protocol to use. UUXFER uses the widely used g protocol. Once you have the entry working and transferring mail/news you may want to adjust a parameter of the protocol to increase performance. The defaults are to use a packet size of 64 bytes and a window size of 3 packets. To override the defaults, put a two digit number to the right of the g (i.e., g3 or g32). The first digit controls the size of the transfer window and must be 1 through 7 (the default is 3 if unspecified). The second digit controls the size of the individual packets and must be 1 through 8 (for packet sizes of 32, 64, 128, 256, 512, 1024, 2048, or 4096, respectively; the default is 2 if unspecified).
7. Everything to the right of the protocol specification is considered the **chat script**. What the chat script amounts to is a string of text to *expect* and a string of text to send when the expected text is *found*. For example, I will have the script wait for login. When that text is received, send my login name. This is expressed in the following manner on the system line:

   login user_name

   Looking at the example SYSTEMS file you may see the special character sequences **\d** and **\c**. The former tells UUXFER to wait 2 seconds before going to the next step. The latter tells UUXFER to suppress the extra carriage return tacked on to everything sent out.

   For a detailed description and some examples of how to create the chat script portion of the entry, please refer to UUCP.DOC mentioned at the beginning of this section.

Command Line Parameters

-7 Start in 7 data bit, even parity, 1 stop bit (7E1) mode for the login connection

-b# This swtich tells UUXFER how many dial attempts to make when the phone is busy. For example, to make 20 redial attempts, pass *-b20* as the command line parameter. Without this command line switch, UUXFER exits when there is a busy signal.

-g This switch gives you the ability to take advantage of file grading if your provider supports it. File grading is where a type of communication like e-mail has a higher grade than that of a newgroup article. By specifying the grade, you can control what type of communications to transmit for **one call**.

-n Overrides the *UUCP Name* field in *PCBSetup | UUCP Configuration*. This option is useful when you call multiple sites to exchange mail/news where your system or UUCP name is different for each system. The name and -n must be separated by a space (e.g., *-n pcboard*)

-o Take the modem off hook when finished

-s This option controls the system name to dial. Enter a specific system name, *all* to dial every site defined in the SYSTEMS file, or *any* to dial only cites with files waiting to be sent.

-t Specifies the time-out during chat script processing (-t 60)

Errorlevels Set Upon Exit

UUXFER.EXE supports several errorlevel codes to alert you (and allow batch file programming) that certain events have occurred or conditions have been met. Following is a list of error codes that will be returned:

0 = No errors
1 = Failure processing chat script
2 = Lost carrier after chat script completion
3 = Site not found in SYSTEMS file
4 = Invalid entry found in SYSTEMS file

5 = No message found during Shere exchange
6 = Bad message found during Shere exchange
7 = UUCP G protocol not available at site
8 = Error during UUCP G protocol

UUIN.EXE

This program is used to import email and news from a spool directory to PCBoard. Its job is accomplished by scanning all spool directories for mail or news to import which is done by typing *UUIN* at a DOS prompt. You may limit the spool directory to scan by using the -s parameter as shown in this example:

```
UUIN -s xmission
```

This shows how UUIN can be used to scan just the spool directory for the xmission site. Assuming the spool directory is defined as C:\PCB\UUCP\SPOOL, UUIN scans C:\PCB\UUCP\SPOOL\XMISSION.

DECOMP.BAT: How it is Used for Importing

Many Internet providers give the news in a format called *compressed batch*. To import the news UUIN does require a packet to be in **uncompressed** batch form. Although two providers may both compress their news packets there is no guarantee they will use the same programs to compress or even uncompress the packets.

Due to a lack of a true standard, UUIN runs DECOMP.BAT (in the base UUCP subdirectory) whenever it examines a packet and finds out if it is compressed or not. "Wait a second. If UUIN can detect a compressed packet, why not just uncompress it?", you ask. The key piece of information to understand is that the packet merely states whether it is compressed or not. No information is provided regarding the type of compression used.

With that settled, let's continue with UUIN running DECOMP.BAT. In running the batch file, only the filename to uncompress is sent. The assumption is made that the decompression program automatically strips the extension of the filename when outputting the uncompressed file.

The following shows the sample DECOMP.BAT included with the package:

```
rem *** This is a sample batch file only!  Customize for your system!
comp430d -db12 %1
```

File Attachments

Message attachments are automatically handled by UUIN and UUOUT. In other words, if a uuencoded message comes into the system, it is automatically added to a message as a file attachment. This saves a lot of time for the users who would otherwise have to manually encode the message to its original form.

NOTE: Many encoded messages are split into multiple parts for transfer. Since there is no standard splitting the messages, there is no guarantee UUIN can properly turn all uuencoded messages into file attachments. You'll know a message was not decoded if you see text similar to the following example:

```
M^<?[SH`^`=`%1"QSISAQFM>\[ZX!KD`,`*%`.@Q]PWC/SNP'^H4J^I`&I1*+&
M2C9MF:^7@#]8"<F8<A/"_M>H`&8#`E%H2!-&DB;^_J98NW>X@:4NZJ=<]"/=U
```

Name Translations and Aliases

It is not common for a business or BBS to want to create an alias to make it easier for others to send mail. For example, on the PCBoard support system we want to allow you to always send mail to *support@saltair.com* and know it will be re-addressed to someone in charge of support (the SysOp for

example.) To translate an incoming name, a file named ALIAS.IN must be created and stored in the UUCP base path. The format of the file is ASCII text. On each line is the incoming user name to translate followed by a comma, and finally the user name the message will ultimately be addressed to. Example:

```
support,bob smith
sales,john clark
```

Automated Replies (Autobots)

Internet e-mail provides an excellent way to send information back to people inquiring for information. For example, as a company, you may want people to send email to info@yourbbs.com to get more information about your system. Rather than type responses to each inquiry that comes in, let UUIN send a text file instead. This feature is accomplished with the ALIAS.IN file as the following example shows:

```
info,%c:\pcb\uucp\info.txt
```

Any messages that come in addressed to *info* are automatically responded to with the file INFO.TXT located in the C:\PCB\UUCP\ subdirectory. Remember, the % is important because it is what tells UUIN that it should send a text file and not translate the name to c:\pcb\uucp\info.txt (which would not make much sense anyway).

Forwarding Messages

As a hypothetical situation, let's assume you or one of your users plan to be out of town over an extended period of time. While you are out of town, you will have full-access to Internet e-mail. You can have UUIN automatically forward all messages addressed to a particular user to another e-mail address. This feature is accomplished by making a special entry in the ALIAS.IN file as the following example shows:

```
john.doe,john.doe@newsite.com
```

Prior to the comma put the addressee to watch for. After the comma, enter the new address for the e-mail message. In the example for this section, any mail coming into the site addressed to John Doe is automatically sent to *john.doe@newsite.com*.

Bouncing a Message

If a message is imported but an alias or user record cannot be found on the system for this user name, the message is **bounced**. When this occurs, notice is sent to the receiver that something was wrong with the message. You may create a custom message to bounce back to the sender of the message by editing a file called BOUNCE.TXT in the base UUCP subdirectory.

NOTE: Messages to the following users are imported regardless of their presence in the users file: *postmaster*, *root*, *uucp*, *sysop*, and *usenet*.

Header Information in Messages

By default, all header lines are imported into the message body, just like they come in from your service provider. However, that can take up a lot of extra space that you might want to use for other purposes. For this reason, you can create a file named HDRKEYS.LST in your base UUCP path directory that has certain keywords to scan for to include in your message. If one of the keywords matches the start of the header, the header is included in the message body. Otherwise, the header itself is scanned for necessary information, but it won't be included in the message body within the PCBoard message base. For example, to include only the FROM:, SUBJECT:, DATE:, and MESSAGE-ID: headers, create a file like this:

```
FROM:
SUBJECT:
DATE:
MESSAGE-ID:
```

UUIN can strip all headers by creating a HDRDKEYS.LST file which contains just the following line:

```
NOHEADERS
```

NOTE: While the colons are not required, they help ensure that you only desired headers are kept with the messages imported into the system.

Satellite Feeds

UUIN.EXE also supports Usenet satellite feeds such as PageSat and Planet Connect. These systems transfer BAG files, which are simply batched (but not compressed) news files. PageSat creates *.BAG files directly. Planet Connect actually creates PCUSENET.* files, which are zipped (compressed) *.BAG files, one per file. To import these sources of news, you must unzip the PCUSENET.* files first (in the case of Planet Connect) and move the *.BAG files to an appropriate spool directory.

Command Line Parameters

-f Force email to be imported regardless of whether or not the user name is found in the USERS file.

-j Normally when mail cannot be properly placed by UUIN (a conference does not exist, etc.) the mail is placed in the junk conference. Use of this switch simply ignores junk mail as if it had never came in. This is useful when the feed comes in via satellite dish setups where it is known in advance that junk is coming in as part of the feed and is not an error in the setup.

-l This switch is used to disable import of long TO names. While they are useful in determining exactly how the original message was addressed, they are not essential. Remember how mail will come in addressed similar to *joe.smith@yourbbs.com, JOE SMITH?* When this switch is used, the message is addressed to *JOE SMITH*.

-o This switch will scan the junk conference and output a list of newsgroups the messages originally came from. This list is in ASCII format and is quite usable by UUUTIL to add these newsgroups as new conferences.

-s Remember that UUIN, by default, scans all spool directories. To single out a specific spool directory to scan, use this switch followed by a space, and the name of the spool directory to scan. For example, if the spool directory is *C:\PCB\UUCP\SPOOL\XMISSION*, run *UUIN -s XMISSION*.

-u Use this switch to disable UUIN's automatic decoding of file attachments. Use of this switch requires the user to decode the message back into the original file type.

-w Sometimes email is split into multi-part messages. UUIN expects to receive all of the parts at the same time. In the case where not all of the parts are received, UUIN puts the incomplete message into a temporary directory where it normally holds onto these files for 7 days. The number of days that UUIN holds on to these files can be changed with this parameter by putting a space followed by the number of days to wait.
Example: *UUIN -s site -w 3*