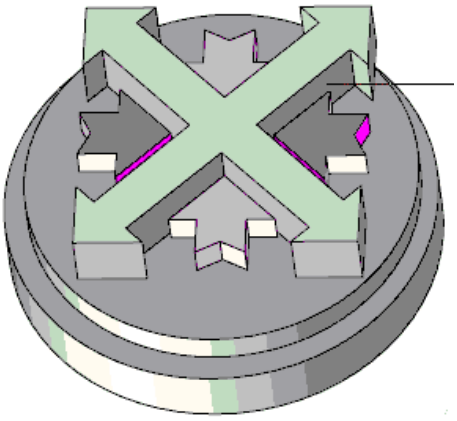
MacComCenter™



USER'S GUIDE

Documentation Revision 2.0

SMITHMICRO SOFTWARE

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Read me first

Go over these three important points before running MacComCenter. Place a check in each box as you complete the step.

- ❑ **Fax/Modem Type**

  Follow the installation instructions in Chapter 2 carefully. In particular, be sure to configure MacComCenter for your type of fax/modem. We recommend you take advantage of MacComCenter's auto detection feature to find the fax/modem type automatically. For questions about the class type of your particular modem please refer to your fax/modem manufacturer's user's guide.

- ❑ **Default Settings**

  MacComCenter is designed to let you start sending and receiving faxes and uploading and downloading files immediately upon installation on your system. Before you begin, it is recommended that you review the MacComCenter settings and compare these settings with your fax/modem manufacturer's default specifications. Verify that the modem settings are correct for your particular fax/modem requirements. We also recommend reading Chapter 3, Getting Started, which provides an overview of the MacComCenter program. A few minutes of your time will ensure that you get the most out of MacComCenter.

- ❑ **Keyboard Shortcuts**

  The MacComCenter User's Guide uses certain conventions that describe specific keyboard shortcuts. A keyboard shortcut is a single keystroke or a combination of keystrokes that execute a command. For example, the keyboard shortcut, **⌘-N**, provides the same result as choosing **New...**, located under the **File** Menu.

User's Guide Contents

This User's Guide contains all of the information needed to install, configure, use, and troubleshoot MacComCenter. For your convenience, the guide is divided into five sections:

- **Section 1 —** Provides installation and setup information, as well as an overview of how to use MacComCenter.
- **Section 2 —** Describes MacComCenter's faxing capabilities in detail.
- **Section 3 —** Describes MacComCenter's data communications capabilities.
- **Section 4 —** Describes all MacComCenter menu options.
- **Section 5 —** Appendices and the Index.

The following summary describes the contents of this User's Guide:

Section 1 - Overview

Chapter 1: Introduction — describes MacComCenter's features, functions, and user interface.

Chapter 2: Installation — provides step by step instructions for installing MacComCenter on your computer.

Chapter 3: Getting Started — describes how to send and receive faxes. Provides instruction on how to connect to data services and perform file transfers. It is **highly recommended** that you read this chapter.

Section 2 - Fax Operation

Chapter 4: Receiving, Viewing, and Printing Faxes — provides information on receiving, viewing, and printing faxes.

Chapter 5: Other Fax Functions — describes advanced faxing functions such as fax scheduling, fax logs and using the fax phone list.

Section 3 - Data Communication

Chapter 6: Data Communication — expands on the information contained in Chapter 3 regarding data communicaion. Explains the various file transfer protocols.

Chapter 7: Automating Data Connections — describes various ways to automate repetitive data communications tasks through macro keys and scripts.

Section 4 - Menu Options

Chapter 8: File and Edit Menus — shows the options available from the File and Edit menus in MacComCenter. Provides a brief description of each item.

Chapter 9: Setup Menu — shows the options available from the Setup menu in MacComCenter. Provides a brief description of each item.

Chapter 10: Data Menu — shows the options available from the Data menu in MacComCenter. Provides a brief description of each item.

Chapter 11: Fax Menu — shows the options available from the Fax menu in MacComCenter. Provides a brief description of each item.

Chapter 12: Tools and Macros Menus — shows the options available from the Tools and Macros menus in MacComCenter. Provides a brief description of each item.

Section 5 - Appendices and Index

Appendix A: Scripting Commands — describes the commands used to perform script functions.

Appendix B: Terminal Emulation Keys — describes the keys applicable to various terminal emulations.

Appendix C: ASCII Character Table — lists the complete set of ASCII characters.

Appendix D: AT Command Set Summary — provides an abbreviated list of AT commands.

Appendix E: Troubleshooting — describes possible problems that may arise and their solutions.

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Chapter 1
Introduction

Welcome to MacComCenter. MacComCenter is a communications software package that controls the exchange of information between your fax/modem and a remote modem, fax/modem, or facsimile machine at the other end of the telephone line. MacComCenter represents the latest technology in fax and data communications software design, and fully conforms to the standard Apple Macintosh User Interface.

MacComCenter allows you to utilize all of the features of your modem or fax/modem. MacComCenter will operate with AT command set (Hayes) compatible modems. The fax mode of MacComCenter is designed to be used with EIA Class 1, 2 or 2.0 compatible fax/modems.

Unpacking Your Components

MacComCenter comes on a standard Apple 1.4 MB 3.5 inch diskette. If the diskette is missing or damaged, please contact your place of purchase immediately. Along with the diskette is this MacComCenter User's Guide.

Before you install the MacComCenter diskette, please read the accompanying License Agreement. Installing the diskette means you have agreed to all terms and conditions in the License Agreement.

Features

This section briefly describes the general fax and data communications features which MacComCenter provides.

General Features

Complete Apple Macintosh User Interface. MacComCenter uses standard pull down menus, windows, and mouse controls, so all features are only a familiar click away.

ToolBar. Many of MacComCenter's features are accessible through the **ToolBar**, so that most commands are only a mouse click away.

On-line Help. Help is always available on-line by accessing *About MacComCenterÔ…*, located under the *APPLE* Menu.

Finder-like interface. MacComCenter provides you with a Finder-like interface to the fax and data phone lists, Send and Receive Fax Logs, fax archive, and the MCC Fax Scheduler through the use of Drag-and-Drop. You can drag an entry from one of these windows and drop it onto a button in the window's **ToolBar** to perform the appropriate action. Double clicking on an entry will also perform an appropriate action. You can also select multiple entries by using "shift-click" selection **or** region selection. To shift-click select, hold down the **Shift** key and click on entries you wish to select. To de-select an item just shift-click the undesired selected entry. Region selecting is performed by clicking and holding the mouse down while dragging the selection rectangle through the desired entries.

Fax Features

The following section describes some of the fax features provided in MacComCenter.

Foreground and Background Fax Capability. In the foreground, you can manually send and receive faxes. In the background, you can send and receive faxes while you use your computer for other applications.

Sending Faxes. Faxes can be sent using any Macintosh application which has printing capabilities. This means that faxes can be sent from most Macintosh word processors, database, spreadsheets, or planner programs. Faxes can be sent immediately, or at scheduled times, when telephone line charges are at their lowest or when you are certain that the remote facsimile machine or fax/modem will be accessible. You can even broadcast your faxes to multiple recipients when several people are to receive identical faxes.

WYSIWYG Faxing. Faxes sent out use the same fonts, layout, and graphics as the original document. As a result, you can create faxes that consist of high quality fonts and graphics.

Cover Page. MacComCenter allows you to include a cover page with your faxes. Your cover page can include graphics that have been scanned into your computer or created in your favorite drawing and paint programs, as well as any desired text.

Printing Received Faxes. If you prefer a hard copy of a fax, MacComCenter's **QuickView** can be used to send faxes to your printer. Any Macintosh supported printer (dot matrix, laser, or PostScript printer) can print received faxes.

Fax Phone List. Multiple fax phone lists can be maintained for sending faxes to frequently dialed telephone numbers. Each entry can be assigned to one or more groups, so that a fax can be easily sent to any number of fax machines with just a few keystrokes.

Data Communication Features

The following section describes some of the telecommunication features that MacComCenter provides.

File Transfers. MacComCenter allows for transferring files to and from remote computers.

Transfer Protocols. For your convenience, MacComCenter provides eight transfer protocols: ASCII, Kermit, Xmodem (CRC), Xmodem 1K, Ymodem, Ymodem-G, Zmodem and CompuServe B/B+.

Terminal Emulators. Five terminal emulators are provided: ANSI, TTY, VT52, VT100 and VT102.

Complete Scripting Language. This feature allows you to write miniature programs, so that logging on to host computers can be done automatically with little, if any, keyboard input.

Easy Access to Popular On-line Services. MacComCenter automates the log-on sequence for popular services such as CompuServe, Dow Jones, and GEnie.

Chapter 2
Installation

This chapter describes the system requirements necessary to install MacComCenter, outlines MacComCenter installation and describes the elements of the MacComCenter main screen.

Minimum System Requirements

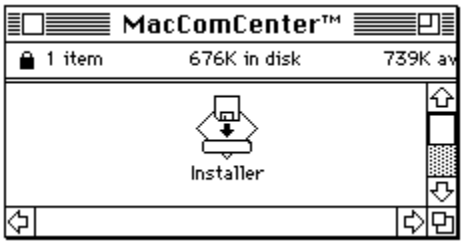
To use MacComCenter on your Apple Macintosh computer, you must have the following **minimum** system requirements:

- Hard disk based Apple Macintosh Plus or newer, running System 7 or later.
- 2 MB of RAM. 4 MB or greater recommended.
- 5 MB of hard drive space.
- EIA Class 1, 2 or 2.0 standard fax/modem.

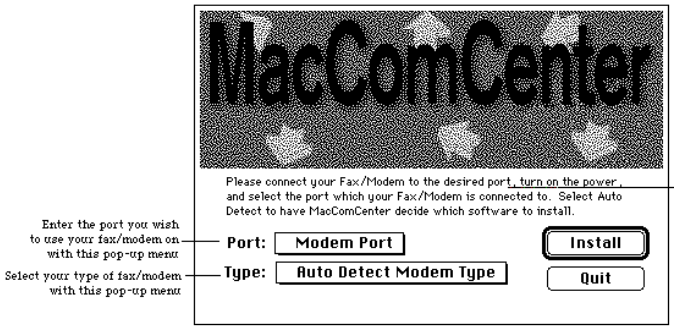
Hard Drive Installation

To install MacComCenter on your hard drive, follow these steps.

1. Power on your Mac while holding down the **Shift** key, to keep Extensions from being loaded.
2. Insert the MacComCenter 3.5 inch diskette in your floppy disk drive. It should appear on your desktop as in the example below. If not, double click on the diskette icon.



3. Double click on the **Installer** icon. The following dialog box will appear.

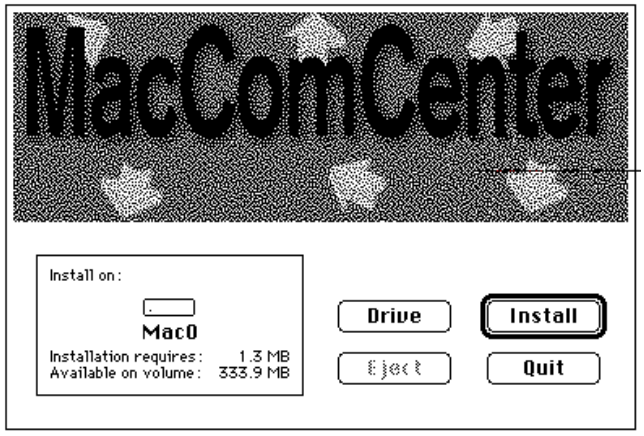


4. Select the port to which your modem is attached. For easiest installation, allow MacComCenter to automatically detect your fax/modem type.

   If you cannot connect and power up your fax/modem during installation, you will need to specify your fax/modem type as Class 1, Class 2 or Class 2.0. Consult your hardware manual for assistance.

☞ ***Note:*** *If you choose Auto Detect Modem Type, ensure that your fax/modem is powered on and connected to the specified port on your Macintosh.*

5. After you have made your selections, the Installer will review your choices and allow you to continue or change any of your selections. To continue with the current settings, click on *Install*. To change the drive to which MacComCenter will be installed, click on *Drive*. To exit without installing the software, click on *Quit*.



6. Once the Installer is finished, it will have placed the main application and its accompanying files on your hard drive. Some files are placed in the MacComCenter folder, others are placed in the System folder. All INITs and Desk Accessory files will be installed automatically to enable MacComCenter to receive faxes in the background while you use your computer for other applications.

7. After installation is complete, you will be prompted to restart your Macintosh. This step will initialize all files which the Installer copied to your system.

8. After your Macintosh has been restarted, the MacComCenter folder will appear on the specified drive. Included in the MacComCenter folder you will find an icon labeled **ReadMe!**, which contains important information and any last minute changes that may not have made it into this manual. We recommend that you read the file by double clicking on the **ReadMe!** icon.

9. Remove the MacComCenter diskette from the floppy drive and put it in a safe place away from heat, dust, and magnetic fields.

Elements of the Main Screen

When you start MacComCenter, the Menu Bar, ToolBar, Scheduler and Receive Log appear.

The **Menu Bar** consists of pull down menus which contain all of MacComCenter's commands. They can be accessed with the mouse.

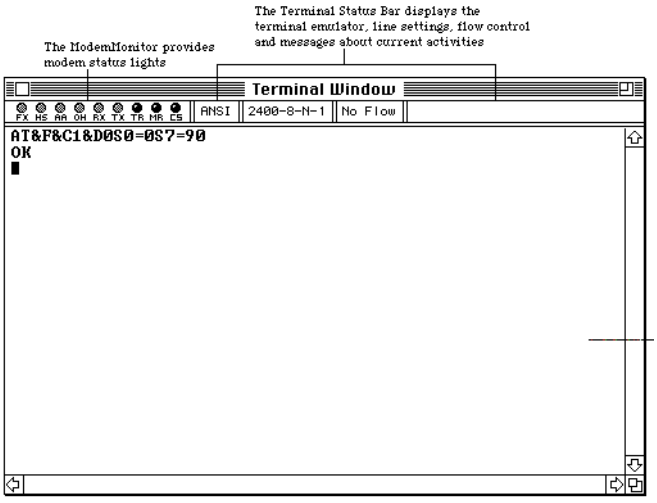
The **ToolBar** provides quick access to MacComCenter's most frequently used commands. The ToolBar is a window which, when displayed, will float on top of all other windows. The ToolBar may be hidden or displayed by selecting either *Show ToolBar* or *Hide ToolBar* from the *TOOLS* menu.

The **Receive Fax Log** provides a line of information for each fax transmission received. The log displays the date, time, document file name, number of pages received, and status of the received document. The *More* button will display the status of the received fax including *remote ID*, *document file name*, *pages received*, *resolution*, *date*, *time*, and *status*. This information can also be displayed by double clicking on the specific entry. A single entry can be removed with the *Delete* button. The entire log can be cleared by clicking on the *Remove All* button.

The **Fax Schedule** dialog provides name, phone number, date, time, destination, number of locations and the number of pages of faxes which are scheduled to be sent at a later time.

To remove an entry, highlight the entry you wish to remove and click on the *Delete* button. To remove all entries, click on *Remove All*.

If you wish to perform **data communication** functions, press the *On-Line* button on the ToolBar, or select *On-line* from the *DATA* menu. The **Terminal Window** will appear. The Terminal Window is located beneath the ModemMonitor™ / Terminal Status Bar. When you perform data activities, the data will appear in the Terminal Window as it is sent to or received from the remote modem. Direct communication with your fax/modem takes place within the Terminal Window. AT commands can also be typed in directly and the modem responses can be read. For example, the *Initialization String* is comprised of AT commands. The modem response to the initialization string is the *OK*, directly beneath it. To the right of the Terminal Window is a scroll bar, which allows for reviewing data that has scrolled up beyond the top of the Terminal Window.



The **ModemMonitor** runs along the top of the Terminal Window. The ModemMonitor is used in the same way status lights are used on an external modem. The ModemMonitor is a set of modem status lights on the Terminal Window. These status lights allow the user to be aware of

the current modem status. There are 9 modem status lights visible in the ModemMonitor. which indicate the following:

FX: **Fax Connection -** The incoming or outgoing call is a fax.

HS: **High Speed -** The established connection is at 9600 baud or higher.
AA: **Auto Answer -** Flashes whenever a RING is detected by the modem.
OH: **Off Hook** - The modem has picked up the telephone line.
RX: **Receive Data** - The modem is receiving characters or data.
TX: **Transmit Data** - The modem is transmitting characters or data.
TR: **Terminal Ready** - The modem/computer is ready to send and receive commands.
MR: **Modem Ready** - The modem is powered on.
CS: **Clear to Send** - The modem is ready to receive more data.

The **Terminal Status Bar** located to the right of the ModemMonitor provides you with a display of important communications settings and messages about current activities. For example, if you hang up following a modem call, the message *DISCONNECTING...* appears. Information in this message area also displays the current terminal emulation, the current line settings (baud rate, data bits, parity, stop bits), and the flow control being used.

The default settings allow the majority of users to begin fax and data transmissions immediately. In order to return to the default settings, if your settings have been changed, select *Default Settings* from the *SETUP* menu.

Removing MacComCenter

If for some reason you desire to remove MacComCenter from your hard drive, delete the MacComCenter folder and all of it's contents, as well as the following files found in the System folder:

File	Folder
Fax Manager	Extensions
MCC Fax Print	Extensions
Fax Controller	Apple Menu Items
MCC Prefs	Preferences

You have now learned how to install MacComCenter, as well as how to remove the program. The next chapter explains how to setup the software, and how to perform the most commonly used functions of MacComCenter.

Chapter 3
Getting Started

The easiest way to learn MacComCenter is to install the program and begin using it. This chapter outlines MacComCenter setup, and explains how to perform the most common faxing and data communications functions with MacComCenter. This chapter does not explain every option and function available, but rather guides you through configuring and performing the most common tasks.

Fax/Modem Setup

To run MacComCenter:

1. Open the MacComCenter Folder and power on your fax/modem.
2. Double click on the **MacComCenter** icon to start the program.

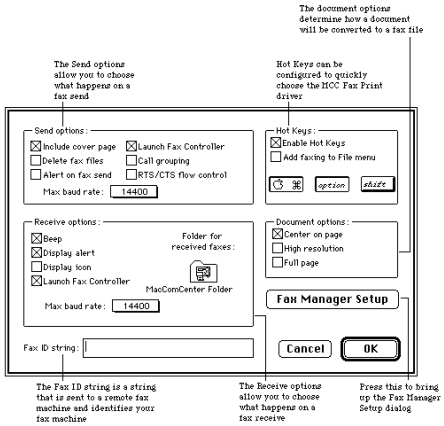
The MacComCenter main screen as outlined in the previous chapter will appear. As this is the first time you have started the MacComCenter application, please check the following items to ensure that the modem setup matches your hardware specifications, and that the fax setup is configured for your needs.

Fax Setup

A complete fax setup involves three steps: the Fax ID string; which identifies your fax/modem to remote fax devices; the cover page, which identifies your fax to the receiver; and the fax startup options, which allow you to specify the fax reception features which will be available on startup.

To set the Fax ID string and configure the startup options:

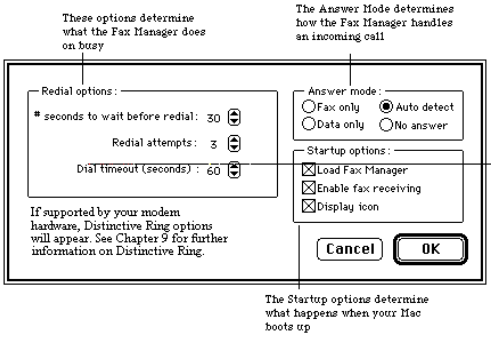
1. Pull down the *SETUP* menu.
2. Select the *Fax Setup* option.



3. The *Fax ID string* edit field is located in the bottom left corner of the screen. You may set this to any value, but it is customary to set the Fax ID string as your fax telephone number or company name.

You may also change the folder in which received faxes are stored. It is recommended that received faxes are **not** routed to a diskette (floppy) drive.

To access the startup options, click on the *Fax Manager Setup* button. The *Fax Manager Setup* dialog box will appear.



4. The *Fax Manager Setup* dialog contains setup information that controls how the Fax Manager will answer a call, how it will react when it detects a busy signal, and whether the Fax Manager will load and enable Fax Receiving on startup. If you rarely receive faxes, but plan on using your modem extensively for data communications, you may wish to deselect the *Enable Fax Receiving* startup option.

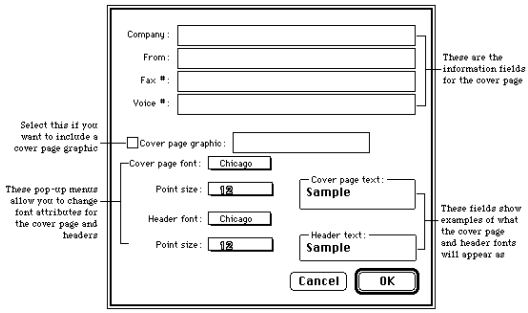
☞ ***Note:*** *If you choose to disable Fax Receiving under the startup options, you can still enable Fax Receiving at any time with the Fax Controller desk accessory found under the APPLE menu. However, if the Fax Manager is not loaded on startup, this option must be changed and the Macintosh restarted in order to perform any faxing functions.*

☞ **Note:** If your modem **hardware** supports Distinctive Ring, you can configure the ring type(s) which will cause your modem to answer the line from this dialog. See Chapter 9 for further information on Distinctive Ring.

6. After updating these fields, select *OK* to return to the *Fax Setup* screen. Select *OK* from this screen to return to the main screen.

To make changes to the cover page:

1. Pull down the *SETUP* menu.
2. Select the *Fax Cover Page* option. The following dialog box will appear.



Use the mouse pointer or **Tab** to move the cursor from one edit field or drop-down menu to the next.

3. You will need to enter your company name (if applicable), your name, your fax telephone number, and your voice telephone number.

☞ ***Note:*** *When these fields are filled out, each page you fax will have a standard header at the top.*

A graphic can be added to the cover page by clicking on the check box and selecting the graphic filename from the resulting file selection dialog. Cover page graphics must be less than half a page and previously converted to faxable format.

Fonts and point sizes for the cover page and header are controlled with the drop-down menus, and are previewed on the right side of the *Cover Page Setup* dialog box.

4. After updating the cover page information select *OK* to save your information and remove the dialog box from the screen.

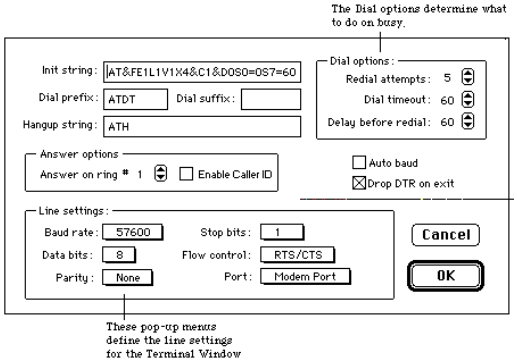
MacComCenter is now configured and ready for fax communications. We will next show how to setup MacComCenter for data communications, and then describe how to perform the most common fax and data communications functions.

Data Setup

Please check the following items to ensure that your MacComCenter setup matches your modem hardware specifications so you can achieve optimal communications. Standard data setup includes checking the line and flow control settings.

The Macintosh to modem speed is the most basic parameter to be adjusted. This is expressed in the software by the *Baud Rate* setting. To adjust this setting:

1. Pull down the *SETUP* menu.
2. Select the *Modem...* option. The *Modem Setup* dialog box will appear.



3. The *Line Settings* box at the bottom of the screen contains the options we are concerned with at this time. To change the Baud Rate, click anywhere in the *Baud Rate* box, and a pop-up menu with the supported speeds will be displayed.

   In general, you will want to set the baud rate to the highest speed reliably supported by both your modem and your Macintosh. Older Macintosh models may not be able to efficiently handle speeds greater than 19,200 bits per second (bps). These settings are independent of the settings in the data phone list, discussed later in this chapter.

4. The *Flow Control* option controls **local** flow control. Local flow control is the process of regulating the flow of data between your computer and your modem. This provides time to process the data received. Flow control is usually not needed for 2400 bps connections. To change the Flow Control settings, click anywhere in the *Flow Control* box, and a pop-up menu with the supported flow control options will appear. When using a high speed modem, RTS/CTS flow control is recommended.

   There are two type of flow control:

- XON/XOFF is a software flow control that involves sending special control codes as part of the data stream.
- RTS/CTS is a hardware flow control that must be implemented in both the software and the modem hardware. The RTS/CTS method is more reliable than XON/XOFF as it relies on changes in the voltage of pins in the serial port, and not on characters in the data stream. However, this means that your Mac to modem cable must also support this method of flow control. Most cables supplied with high speed modems support RTS/CTS flow control. These cables are usually called Hardware Handshake cables.

As factory settings for the other options are sufficient in most cases, these settings can be left at default (factory settings) for now. These options will be detailed fully later on in the manual.

Using Your Fax/Modem

Now that the basic setup options have been configured, it's time to begin using MacComCenter.

Receiving Faxes

Receiving a fax is an almost automatic procedure. To receive a fax, simply have the Fax Manager loaded into memory and Fax Receiving enabled (this is the default). Since the default setting enables fax reception, the Fax Manager is ready to receive immediately. The Fax Manager is loaded automatically when your Macintosh starts up.

The Fax Manager normally stays in an idle state while waiting for a call. It switches over to active mode when answering a call. When a fax is received, the call is automatically logged in the Receive Fax Log. The first received fax file is named with the format, mm/dd/yy#001, where mm/dd/yy represents the month, day and year the fax was received. The number after the pound sign **(#)**, represents the current number of the fax. This number will increase sequentially with each received fax. The received fax file can be viewed or printed at any time once saved to disk. MacComCenter can be configured to automatically alert you upon receipt of an incoming fax. The different ways MacComCenter can alert you of an incoming fax are by *alert box*, *system beep*, or *icon in the menu bar*. Receive fax alerts are setup in the *Fax Setup* dialog.

By default, the Fax Manager will wait for an incoming call and receive in the manner just described; automatically launching the Fax Controller, if this option is enabled. If the incoming call is not an incoming fax or a remote modem, MacComCenter will display a message on screen to inform you that a voice call has come through. Fax Manager will answer all incoming telephone calls unless otherwise configured.

Faxing From a Macintosh Application

The most convenient way to send a fax is directly from the application that created the file. The benefits of sending out faxes in this manner are many. You do not need to interrupt your work to send the fax; all fonts, graphics, and formatting are automatically incorporated, and you do not need to manually convert the document before sending. This method of faxing is as simple as switching printer drivers. The driver can be switched via user configured Hot Keys, or by changing the printer driver to MCC Fax Print with the *Chooser* under the *APPLE* menu.

To fax from a Macintosh application:

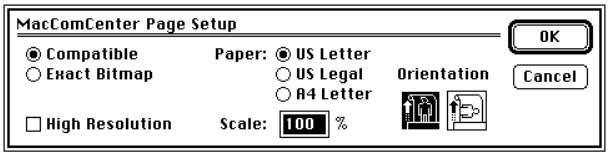
1. If the MacComCenter main application is running, select *Quit* from the MacComCenter *FILE* menu.

2. Start the Macintosh application from which you wish to fax a document. Either open or create the document to fax.

3. Select *MCC Fax Print* as your current printer. Pull down the *APPLE* menu and select *Chooser*. The Chooser dialog box will appear. Note your current printer driver, then select *MCC Fax Print* and close the Chooser window.

   This will change your default printer driver to MCC Fax Print.

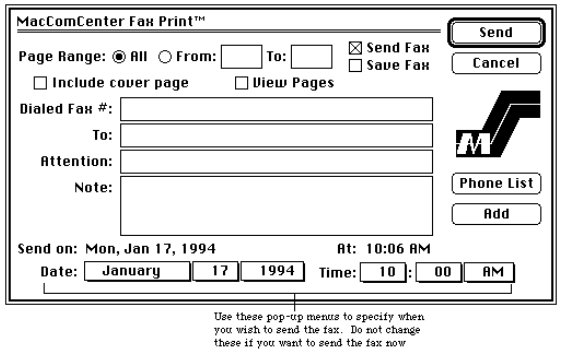
4. In your application, pull down the *FILE* menu and select *Fax Setup...*. The MCC Fax Page Setup dialog box will appear.



   The MCC Fax Page Setup configures the attributes for sending a fax through MCC Fax Print.

5. Choose the desired options, and select OK.

6. Pull down the *FILE* menu and select *Fax...*. The MCC Fax Print dialog box will appear.



   From this dialog box you can fill out the destination fax number, name, attention and note fields. You can also choose to see a preview of the fax, save the file as a converted fax file, view a fax phone list, or schedule the fax to be sent at a later time.

7. Ensure that *Send Fax* is selected. Click on the *Send* button to send the fax.

The document will now be converted into a faxable format, and sent to the number entered in the MCC Fax Print dialog box. You have now sent your first fax!

Faxing From the MacComCenter Application

While faxing directly out of your application is probably the most convenient way to fax a document, there are instances when faxing out of the MacComCenter application makes sense, such as when you want to quickly fax out a previously converted fax file, or a received fax.

☞ ***Note:*** *The only file types that can be faxed directly from MacComCenter are:*

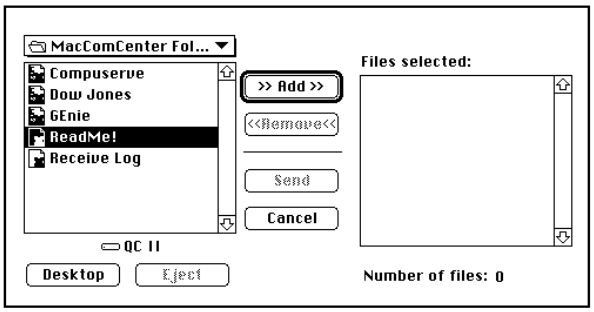
- ASCII text files
- PICT files
- TIFF files

- MacPaint files
- Previously converted fax files
- Received fax files
- QuickFax files

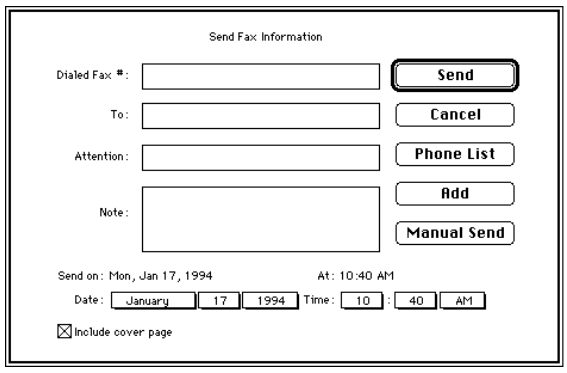
For our example we'll fax the ReadMe! file, an ASCII text file, which is located in the MacComCenter folder after installation.

1. Launch the MacComCenter application.
2. Pull down the *FAX* menu and choose *Send Fax*.

   The file selection box will appear.



3. Select the ReadMe! file from within the MacComCenter folder and click on the *Add* button. While it is possible to send multiple files as a single fax, for our example just select the ReadMe! file. A window will appear displaying the conversion status of the ReadMe! file from an ASCII text file to a fax file. The Send Fax Information dialog box will then appear.
4. Fill out the information for the destination fax phone number, name, attention, and note fields.



5. Click on the *Send* button to send the fax.

As with our previous example, the document will be sent to the number entered in the Send Fax Information dialog box.

☞ ***Note:*** *Sending ASCII text files from MacComCenter will cause all font and style formatting to be lost.*

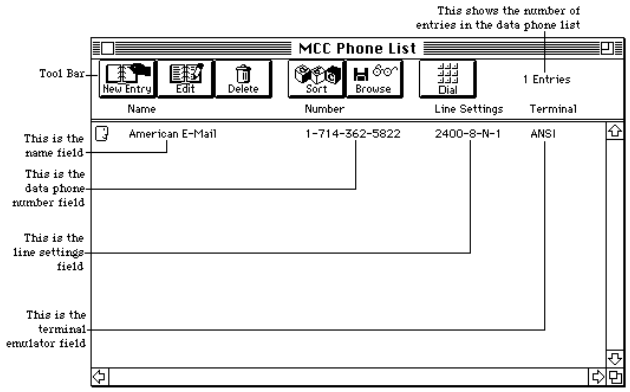
You have now faxed documents using both methods available with MacComCenter. However, MacComCenter is not simply a fax program, but provides advanced data communications features as well.

Dialing a Modem Number

MacComCenter is your gateway for connecting your modem to a wide variety of bulletin board systems (BBS), on-line services, and even internet providers. No matter what type of system you are calling, the concept remains the same.

This example will guide you through connecting to Smith Micro Software's support BBS. The BBS name is American E-Mail, and the number is included in the data Phone List with every copy of MacComCenter. You are invited to use this system to test the data communications portion of MacComCenter. There is no charge for using this BBS other than possible long distance tolls charged by your phone company.

To access the data Phone List, select *MCC Phone List* from the *FILE* menu, or press the *Data List* button on the ToolBar. The data phone list dialog box will appear.



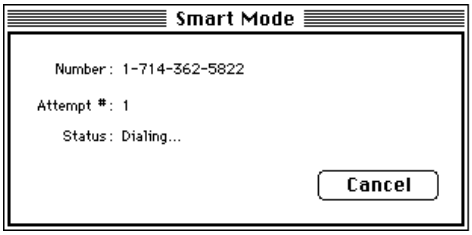
If you are in the 714 area code, or have special dialing requirements, you must perform the following steps before dialing the BBS:

- Highlight the American E-Mail phone list entry.
- Click on the *Edit* button, or drag the American E-Mail entry onto the *Edit* button.
- Click on the Number field to edit the phone number to meet your telephone system requirements. Note that a comma (,) in the telephone number field will send a two-second pause to the dialer.
- Adjust the Baud Rate as appropriate for your modem. All other settings are proper by default. These settings will take precedence over the settings entered under *Modem Setup* in the *SETUP* menu when dialing from this phone list entry.
- Select *OK* after completing the editing process.

☞ ***Note:*** *New entries can be added in the same manner by clicking on the New Entry button.*

When all dialing requirements are set and the American E-Mail entry is highlighted, select *Dial* to dial the BBS. You can also dial by double clicking on the selected entry, or by dragging the entry onto the *Dial* button. A Dialing Status window, similar to the following will appear.

☞ ***Note:*** *Ensure that the Terminal Window is active before dialing. If the Terminal Window is not open, press the On-line button on the ToolBar to access the Terminal Window.*



Depending on your modem's volume setting, you may hear a dial tone and the tones (or pulses) as your modem accesses the phone line and dials the number.

After the line rings, your modem will "negotiate" with the remote modem and you may hear high-pitched squeals. When the two modems have finished their negotiations, you will receive a CONNECT message.

You are now connected to the BBS using MacComCenter and your modem. If desired, follow the prompts to create a new user account. You will be prompted at every step and must create a password of your own choosing to enter the system for future on-line sessions. When connected to the American E-Mail BBS, you may upload and download public domain and utility files and programs, visit the On-Line Software Store, or get on-line technical support in one of the support forums. All selections are menu driven. If you are unsure of your options, you can always enter a question mark (**?**) for help. To disconnect from a remote system, pull down the *DATA* menu, and select *Hang Up*.

Unlike faxing, file transfers do not happen automatically; there are certain steps that must be accomplished by the user. Fortunately, MacComCenter makes the procedure as intuitive as possible.

File Transfers

A file transfer is nothing more than transferring a file from one computer to another. The modem is the medium of transfer, and a file transfer protocol is used to denote the beginning and end of the file.

File transfers are divided into two basic types: Downloads and Uploads. When you download a file, you are copying a file from a remote computer to your local machine. When you upload a file, you are sending a file from your local machine to a remote computer. The following steps outline the general process used to transfer files.

Computer to Computer Transfers

1. Establish communications with the remote system.
   - Use the *Phone List* or *Dialer* to call the remote system.
   - If the remote system is calling your computer, ensure the answer mode selected under *Fax Manager Setup* is either *Auto Detect* or *Data Only*. The actual connection will be automatic.

   Ensure that you can communicate with the remote side by typing a short message, and then reading the reply.
2. Inform the remote user that you are interested in transferring a file.
3. Inform the remote user of the file(s) you with to send or receive.

4. Inform the remote user of the file transfer protocol to use.

   File transfer protocols are explained in Chapter 6.

5. Pull down the *DATA* menu, and select either *Send File* or *Receive File*, depending on whether you are uploading *(Send File*) or downloading (*Receive File*).

   Choose the protocol that was previously decided on in Step 4.

6. If uploading, select the file(s) you wish to send to the remote user, and press *OK* for the transfer to begin.

   Note that the Xmodem and ASCII protocols require the user to name the file to be received on a download. The other available protocols will automatically acquire the name of the file being transferred.

BBS File Transfers

Transferring a file to or from a BBS is usually simpler than transferring files between two computers.

1. Establish communications with the remote system.

   - Use the *Phone List* or *Dialer* to call the remote system.

2. Enter your logon name and password to access the BBS.

3. Select the option on the BBS to send or receive a file. Respond to all prompted questions until the BBS indicates that it is ready to send or receive the file. The file transfer protocol is usually selected in one of the prompted questions.

4. Pull down the *DATA* menu, and select either *Send File* or *Receive File*, depending on whether you are uploading (*Send File*) or downloading (*Receive File*).

5. Select the file transfer protocol previously selected for use with the BBS.

6. If uploading, select the file(s) you wish to send to the remote user, and press *OK* for the transfer to begin.

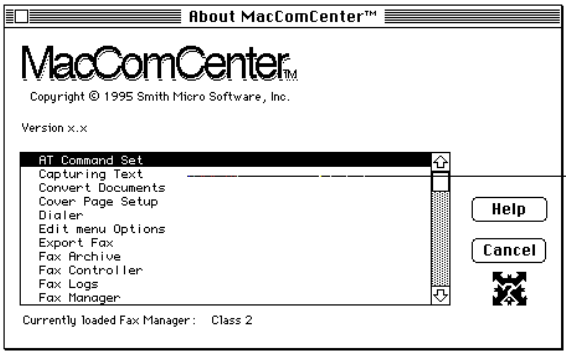
   Note that the Xmodem and ASCII protocols require the user to name the file to be received on a download. The other available protocols will automatically acquire the name of the file being transferred.

You have now used both the fax and data portion of the MacComCenter software and your modem hardware. Both portions are fully integrated for ease of use and maximum utility.

Help

Help is always available in MacComCenter from the *About MacComCenterÔ* item, located under the *APPLE* menu. A list of the on-line helps subjects will appear. Selecting any of these topics will provide detailed help explaining the selected subject.

☞ ***Note:*** *The help screen also displays the version of MacComCenter being used, as well as the Fax Manager Class currently installed.*



Chapter 4
Receiving, Viewing and Printing Faxes

MacComCenter offers the ability to receive faxes manually or automatically. Of course, there is not much use for a received fax unless it can be easily viewed and printed. Chapter 4 describes how to receive, view and print faxes.

Naming Conventions

MacComCenter has a standard naming convention for received faxes and the files to which they are saved. The first received fax file is named with the format, mm/dd/yy#001, where mm/ dd/yy represents the month, day and year the fax was received. The number after the pound sign **(#)**, represents the current number of the received fax. This number will increase sequentially with each fax received.

Fax files created by you to fax out, have a **.Fax** extension added to the end of their names. This allows you to easily keep track of which faxes are incoming and which are outgoing. Faxes created by using *MCC Fax Print* will be stored in the MCC OutBox Folder which can be found in the System Folder. If the *Save Fax* option in the *MCC Fax Print* dialog box is selected, you can save the converted file with any name, and to any folder you specify.

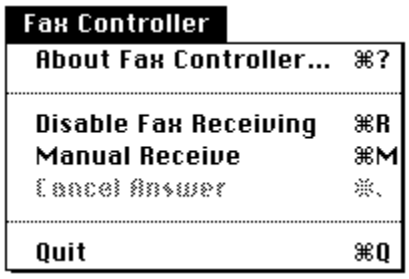
Fax Reception

MacComCenter offers the ability to receive faxes manually or automatically. In most cases you will want to receive automatically, as this allows faxes to be received in the background without additional commands or input. However in some cases it may be necessary to receive a fax manually, such as with some fax on demand services.

Automatic Reception

The Fax Manager is responsible for all fax functions with MacComCenter. To allow automatic reception, the Fax Manager extension must be loaded on system startup. Unless disabled in the Fax Manager Setup, the Fax Manager will always be loaded when the Macintosh is started.

The Fax Controller desk accessory can be used at anytime to control the reception abilities of MacComCenter.



Fax Receiving is a toggled option. When this option reads *Disable Fax Receiving*, Fax Receiving is enabled and faxes will be received by the Fax Manager. This option can be toggled by choosing it from the Fax Controller menu. When this option reads *Enable Fax Receiving*, fax receiving is disabled, and MacComCenter will not receive faxes.

Fax reception can also be toggled from the *FAX* menu within the MacComCenter application by choosing *Enable/Disable Fax Receiving*.

The different ways MacComCenter can alert you of an incoming fax are by *alert box*, *system beep*, or *icon in the menu bar*. You can set up the receive fax alerts in the *Fax Setup* dialog.

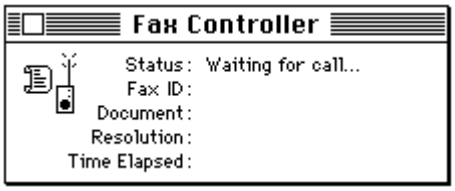
Manual Reception

If you have a phone connected to your modem line, you can use the Fax Controller to instruct your modem to manually receive a fax. Note that this is a hardware dependent feature that not all modems support. A manual reception is useful on occasions where you are already speaking to someone on the telephone, and they want to send you a fax by pressing the send button on their fax machine. Some fax on demand services will not work unless the *Manual Receive* option is used.

To begin a manual reception:

1. Open the *Fax Controller* from the *APPLE* menu.
2. Instruct the remote side to begin sending.
3. Select *Manual Receive* from the *FAX CONTROLLER* menu. The Fax Controller will begin sending fax response tones to negotiate a connection with the remote device.
4. Hang up the telephone handset.

The Fax Controller dialog box will keep you informed of the status of the reception.



Viewing Faxes with QuickView

MacComCenter has a separate module, QuickView, which is used to view fax documents. QuickView can be accessed several different ways. Once QuickView is active, you can then open fax files to view by selecting *Open* under the *FILE* menu. QuickView allows you to rotate, zoom, and export fax files. QuickView can be accessed in the following ways:

1. Double click on the QuickView icon in the MacComCenter folder.
2. Click on the *View Fax* button on the MacComCenter ToolBar.
3. Select *View Fax* from the *FAX* menu in the main application.
4. Select *Launch QuickView* from the *TOOLS* menu in the main application.
5. Select *Open...* from the *FILE* menu, and then select a fax file.
6. Double click on a received fax icon in the MacComCenter folder.

QuickView can also be used to create or edit ASCII text documents. New documents can be created by selecting *New...* from the *FILE* menu.

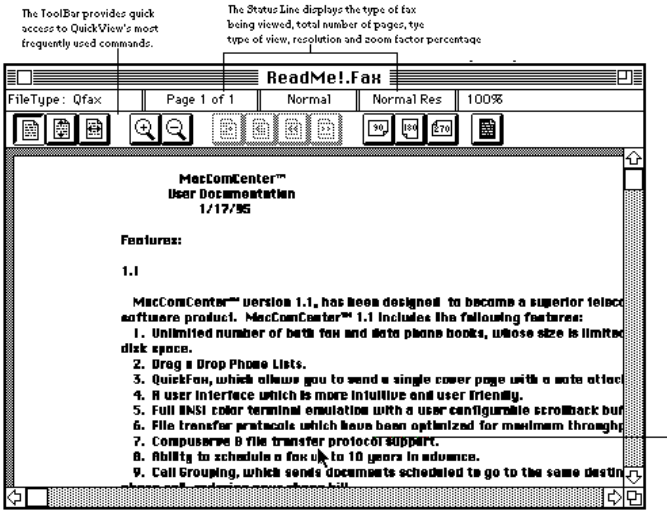
When you start QuickView, the QuickView main screen appears. The QuickView main screen is composed of four elements.

The Menu Bar consists of pull down menus which contain all of QuickView's commands; they can be accessed with the mouse.

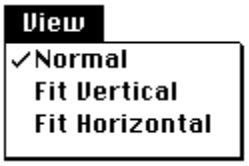
The QuickView ToolBar provides quick access to QuickView's most frequently used commands. Options for changing the method of viewing the fax, zoom features, as well as the ability to rapidly move among the available pages are offered on the QuickView ToolBar.

The Status Line displays the type of fax being viewed, the current page, the total number of pages, the type of view, the resolution and the zoom factor percentage of the fax currently being displayed.

The Fax Viewer window is located beneath the Menu Bar. When a fax is selected, it will appear in the Fax Viewer window.

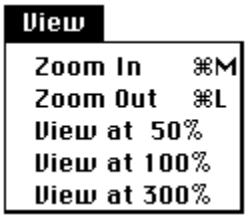


Positioning a Fax in the Viewer



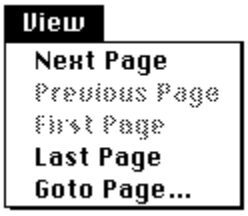
MacComCenter offers three different methods of displaying a fax in the Fax Viewer window. Each of these options can be selected either from the *VIEW* menu, or with the buttons on the QuickView ToolBar. Normal displays the fax at its actual size. This is the default view type. Fit Vertical will make the current page fit in the window vertically. Fit Horizontal will make the current page fit in the window horizontally. Note that the last two options can dramatically affect the view of the fax.

Magnifying a Fax



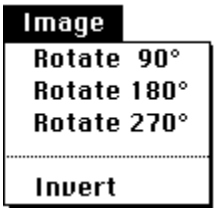
MacComCenter offers a wide range of magnification levels for viewing your faxes. You can set the magnification level from 25% to 900%. The various levels can be accessed either from the VIEW menu, or with the zoom buttons on the QuickView ToolBar. To increase the magnification of the fax, select Zoom In. To decrease the magnification of the fax, select Zoom Out. To quickly go to a preset magnification (50%, 100%, or 300%), select the appropriate option from the *VIEW* menu.

Changing Pages



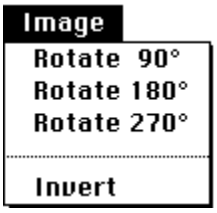
MacComCenter allows you to quickly move among the pages of a multi-page fax so you can efficiently find the information you need. Different pages can be accessed either from the *VIEW* menu, or with the *Page* buttons on the QuickView ToolBar. The *Next Page* and *Previous Page* buttons will move you from one page to the next. The *First Page* button will bring you to the first page of the fax. The *Last Page* button will bring you to the last page of the fax. To quickly go to any page you wish, select the *Go To* option from the *VIEW* menu.

Rotating Faxes



MacComCenter allows you to rotate the image to account for faxes that may have been received upside down or sideways. The different rotation levels can be accessed either from the *IMAGE* menu, or with the rotation buttons on the QuickView ToolBar. The *Rotate 90°* button will rotate the image 90° clockwise from the original position. The *Rotate 180°* button will flip the image upside down from it's original position. The *Rotate 270°* button will rotate the image 270° from the original position.

Inverting the Fax Image



The final option to adjust the view of a fax image is the Invert option. This option can be accessed either from the IMAGE menu, or with the *Invert* button on the QuickView ToolBar. This option will invert the image of the fax. In other words, it will make black text on a white sheet of paper appear as white text on a black sheet of paper like a photo negative.

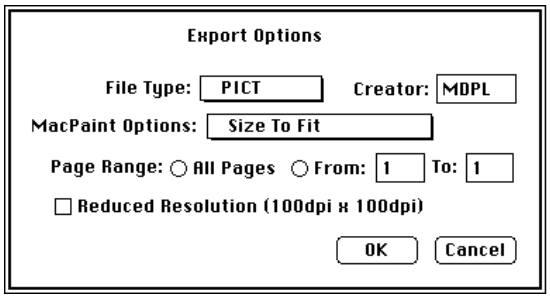
When you are finished viewing a fax, select *Close* or *Quit* from the *FILE* menu, which will close the QuickView screen. Note that no matter what view options were selected in QuickView, no alteration of the actual fax file is made.

Exporting Faxes

QuickView also allows you to export a fax file into one of the following graphic formats:

- PICT
- TIFF
- MacPaint

To export a file from fax format to one of these other formats, select *Export* from the *FILE* menu. The export dialog box will appear.



Use the mouse pointer or **Tab** key to move from one option to the next.

File Type

This pop-up menu allows you to choose the format to which your fax file will be converted.

Creator

This field specifies the application which will be associated with the exported file. After the file is exported to the new format, the specified application will be opened when the file icon is double clicked.

MacPaint Options (MacPaint conversions only)

This option only affects MacPaint files. This option can be used to change the size of the exported graphic file or to specify a specific portion of the fax file to export.

Available options are:

- Size to Fit
- Top Left Corner

- Top Right Corner
- Bottom Left Corner
- Bottom Right Corner

MacPaint files are fixed size bitmaps which are smaller than a typical fax page. The MacPaint options allow you to export all portions of a fax page.

Page Range

This option allows you to specify the range of pages you wish to export. *All Pages* will export the entire fax, otherwise select *From* to specify the page range you wish to export.

Reduced Resolution

This option will convert the selected document to the new file type at a lower resolution (100dpi x 100dpi). This will result in a smaller file size which may be necessary when file size is more important than image quality.

Printing Faxes

Faxes can be printed with any Macintosh compatible printer. MacComCenter supports all standard Macintosh printer drivers.

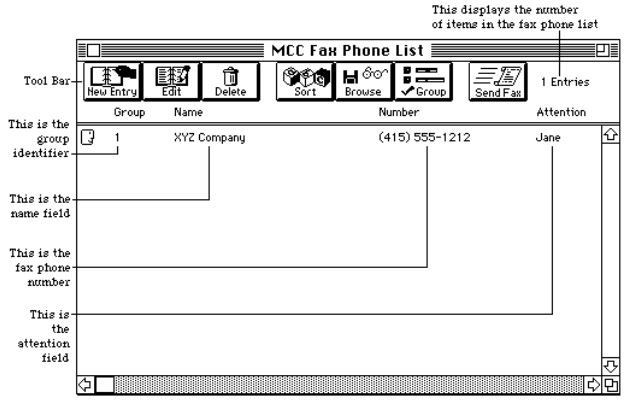
To print a fax file, open the file under QuickView. Ensure that your standard printer (and not MCC Fax Print) is selected in the Chooser under the *APPLE* menu. Depending upon the printer you are using, the *Page Setup...* option under the *FILE* menu may be used to set print quality, image scale, paper size and paper orientation. When the setup is complete, select *Print...* to begin printing the fax.

Chapter 5
Other Fax Functions

MacComCenter offers other features that make faxing more convenient, as well as allowing you to keep records of the faxes which have been sent and received. Chapter 5 discusses various fax features including fax phone lists, the fax logs, scheduling faxes and how to manually send faxes. The Fax Controller desk accessory is also discussed.

Fax Phone List

The fax phone list provides access to your personalized phone list(s) for frequently dialed fax numbers. It can be accessed in a variety of ways. Choose *MCC Fax Phone List* from the *FILE* menu. The Send Fax Information dialog box gives you the option to access the fax phone list. You can select the *Fax List* button from the ToolBar or, finally, you can choose *Open...* from the *FILE* menu and select a fax phone list. The fax phone list offers a Finder-like interface for ease of use. You can create new fax phone lists by selecting the *New...* option from the *FILE* menu, and specifying fax phone list as the type of document.



The Fax Phone List Dialog

The fax phone list dialog contains a ToolBar and a list of the fax phone list entries. The ToolBar provides seven options for working with the list entries.

The *New Entry* button allows you to add a new entry to the fax phone list.

The *Edit* button is used to modify an entry listing. To select an entry to edit, highlight the desired entry and click on *Edit*. You can also drag the entry onto the *Edit* button.

The *Delete* button will remove the selected entry.

The *Sort* button will sort the fax phone list entries. You can sort in ascending or descending order by name, group, or ascending order only by fax number.

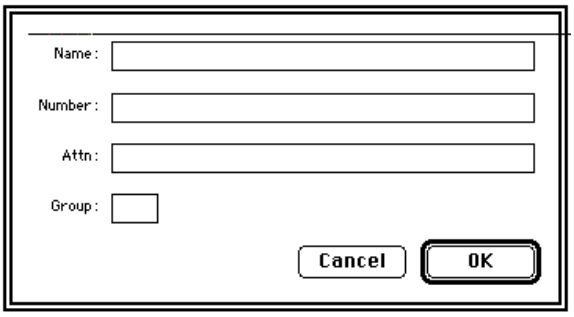
The *Browse* button allows you to select a different fax phone list, if you have created multiple fax phone lists. Many users prefer to keep separate business and personal fax phone lists.

The *Mark Group* button will select all entries that belong to the same group as the currently highlighted entry.

The *Send Fax* button will begin the fax transmission process to all of the selected entries.

Adding and Editing Fax Entries

After selecting either the **New Entry** or **Edit** option from the fax phone list dialog, the Add/Edit dialog will appear.



The *Name* field is where you specify the company name of the recipient.

The *Number* field is where you enter the fax phone number of the selected entry.

The *Attention* field is where you can specify a particular person in the company to receive the fax.

The *Group* field allows you specify a letter or number which can be entered in any or all fax phone list entries. When the Mark Group button is selected, all entries that share the same Group Identifier will be marked. The Group Identifier is an optional entry.

After all the required information is entered, click on the **OK** button to save the information to the list.

Dialing Numbers from the Fax Phone List

The fax phone list allows you to easily select any number of entries to receive your fax transmission. Sending faxes to multiple recipients is know as **fax broadcasting**. Multiple entries can be selected by clicking on the desired entries while holding down the **Shift** key. This same method can be used to de-select a previously selected entry.

You can send a fax to as many different numbers as you have entries in the fax phone list. A range of numbers can be selected by dragging the selection rectangle through the desired entries. Entries will become highlighted when selected, to show their marked status. Note that you can use the *Mark Group* button to quickly select all entries which share the same group identifier.

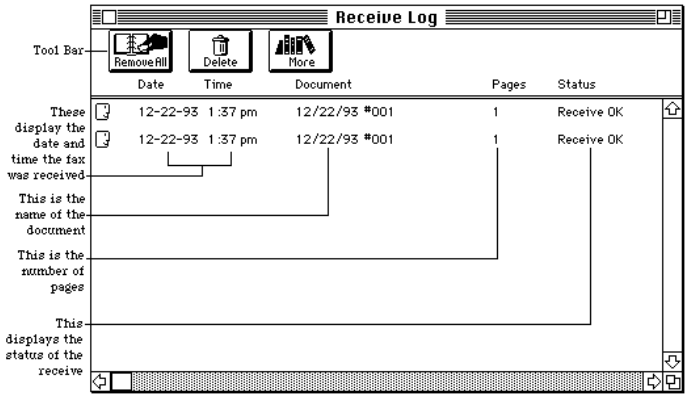
After all desired entries are marked, click on the *Send Fax* button to begin the fax transmission.

Fax Logs

MacComCenter provides logs of information for both sent and received faxes. These logs can be accessed from the *FAX* menu with the *View Send Log* or *View Receive Log* options, or with the appropriate buttons on the Advanced ToolBar.

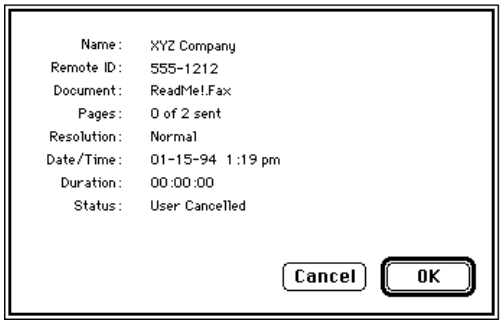
The Receive Fax Log

The Receive Fax Log provides a line of information for each fax transmission received. The log displays the date, time, document file name, number of pages received, and status of the received document. The *More* button will display the status of the received fax including *remote ID*, *document file name*, *pages received*, *resolution*, *date*, *time*, and *status*. This information can also be displayed by double clicking on the specific entry. A single entry can be removed with the *Delete* button. The entire log can be cleared by clicking on the *Remove All* button.



The Send Fax Log

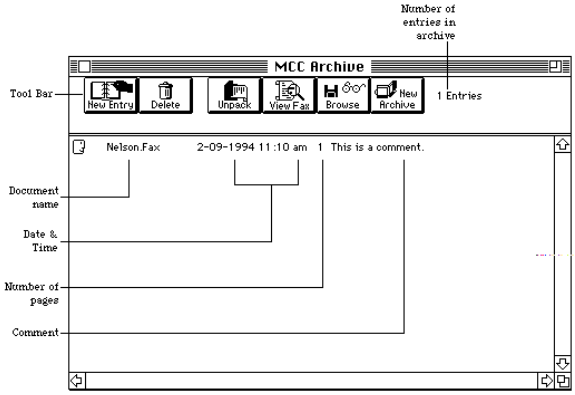
The Send Fax Log provides a line of information for each fax transmission sent. The log displays the date, time, document file name, number of pages sent, and status of the sent document. The *More* button will display additional information about the sent fax including name, remote ID, document file name, pages sent, resolution, date, time, duration, and status of the sent fax. This additional information can also be displayed by double clicking on a specific entry. A single entry can be removed with the *Delete* button; the entire log can be cleared by clicking on the *Remove All* button. The following illustration shows an example of the information displayed when the *More* button is selected.



Fax Archives

All fax files are graphics files. As graphic files are significantly larger than text files, they take up more hard disk space than non-graphic files. MacComCenter allows you to create and use fax archives which allow you to compress fax files and store them in a single file for later reference. You can create as many archives as you wish. Each archive can contain any number of fax files, with free space on your hard drive the only limit. Naturally, MacComCenter also allows you to

view, unpack, and delete files from your archives. The archiving utilities can be accessed via the *Fax Archive* option from the *FAX* menu.



The fax archive ToolBar offers six options for working with archives.

The *New Entry* button allows you to add files to the currently selected archive.

The *Delete* button allows you to delete the selected files from the currently selected archive.

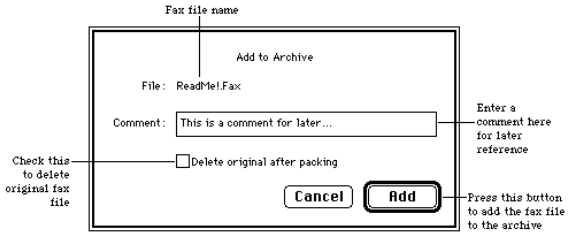
The *Unpack* button will decompress the highlighted entries and restore them to their original size.

The *View Fax* button will allow you to view the selected fax.

The *Browse* button allows you to select the archive you wish to examine.

The *New Archive* button will create a new fax archive. You will need to provide a name for the new archive.

When you select the *New Entry* button, a standard Macintosh file selection box will appear. After you select the fax file you wish to add to the archive, the following dialog box will appear. This dialog will display the name of the fax file, and provide you with an option to delete the original fax file to save disk space. The comment field allows you to enter a description of the fax file so the file can be easily identified at a later time.



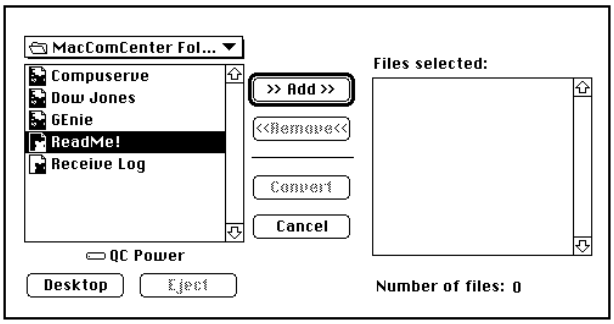
Manual Conversion to Fax Format

As explained in Chapter 4, MacComCenter provides the ability to export a fax document into various graphic formats. The main MacComCenter application can also convert a limited number of file formats directly into faxable format. Note that for most circumstances, you would want to use the *MCC Fax Print* driver to perform the majority of conversions. The following is a list of the formats that MacComCenter can directly convert to faxable format:

- ASCII text files
- PICT files
- TIFF files
- MacPaint files

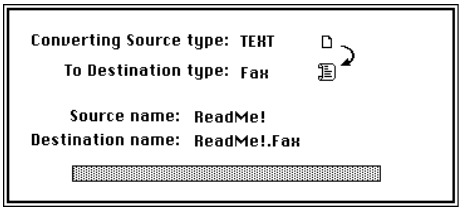
The following steps explain how to manually convert a file into fax format.

1. Start the MacComCenter main application.
2. Select *Convert Documents* from the *FAX* menu.
3. The conversion dialog box will appear. To convert a document, select the file from the left selection box and press the *Add* button. This will add the selected file to the right selection box. You may select multiple files if desired. To remove a selected file, highlight the file and press *Remove*.



☞ ***Note:*** *Only files with a valid file format outlined previously will appear in the left dialog box for selection.*

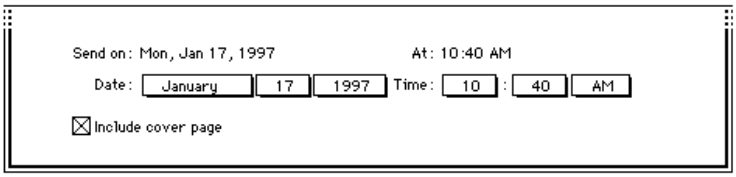
4. When all desired files are selected, press the *Convert* button to begin the conversion process. The conversion dialog box will appear to show the progress of the file conversion.



5. The converted file will be saved in the same folder as the original file, with a **.Fax** extension added to the name.

Scheduling Fax Transmissions

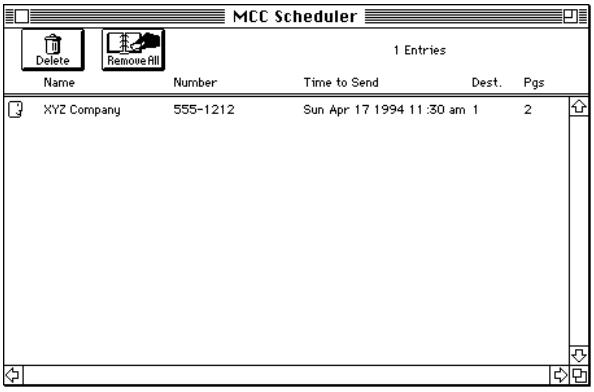
MacComCenter provides the ability to schedule fax transmissions minutes or even years in the future. This feature is especially convenient because it allows you to send documents during the night when telephone rates are lowest. Regardless of the method chosen to send the fax, you can access the fax scheduler from the Send Fax Information or MCC Fax Print dialog boxes.



You can set the month, day, year and time when the fax is to be sent. Each option provides a pull down list from which to choose. Simply click the mouse pointer on the desired option. By default, these settings are set to send the fax immediately. MacComCenter accesses your Macintosh's system clock to determine when the fax should be sent.

Viewing the Fax Schedule

To view a list of all faxes currently scheduled to be sent at a later time, select *View Schedule* from the *FAX* menu. The Fax Schedule dialog box will appear.



The Fax Schedule dialog provides name, phone number, date, time, destination, number of locations and the number of pages of the fax document.

To remove an entry, highlight the entry you wish to remove and click on the *Delete* button. To remove all entries, click on *Remove All*.

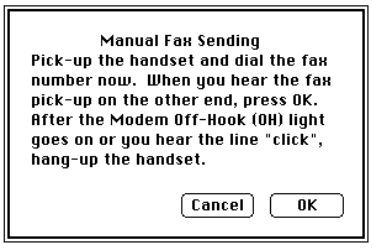
Manually Sending a Fax

One of the nice features of a true fax machine is the ability to send a fax to someone who is already on the phone with you. MacComCenter provides this function with your fax/modem. This feature is not supported by all fax/modems; check the documentation that came with your modem or contact your modem manufacturer to ensure that your modem hardware will support this option.

To manually send a fax:

1. Launch the MacComCenter application.
2. Pull down the *FAX* menu and choose *Send Fax*.

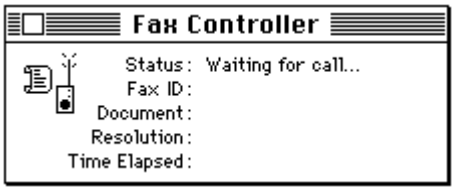
3. Select the previously converted fax file(s) you wish to send. Press the *Send* button.
4. When the Send Fax Information dialog box appears, click on the *Manual Send* button. The Manual Fax Send dialog will appear.



5. Dial the fax number. When you are finished talking with the remote party, press *OK* to begin the fax transmission.

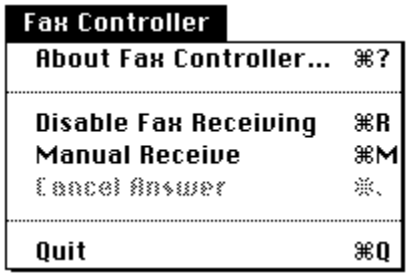
The Fax Controller

The Fax Controller is a Macintosh desk accessory (DA) which monitors the status of the fax/modem when sending faxes and answering incoming calls. The Fax Controller can be accessed from the *APPLE* menu, or from the *TOOLS* menu in the main MacComCenter application.



Fax Controller Options

In addition to providing the status of the fax/modem, the Fax Controller can be used to toggle Fax Receiving or perform a manual fax reception.



Fax Receiving is a toggled option. When this option reads *Disable Fax Receiving*, Fax Receiving is enabled and faxes will be received by the Fax Manager. This option can be toggled by choosing it from the Fax Controller menu. When this option reads *Enable Fax Receiving*, fax receiving is disabled, and MacComCenter will not receive faxes.

To begin a manual fax reception, click on this option from the *Fax Controller* menu.

If the Fax Controller is currently answering the phone line, you can hang up the line by selecting *Cancel Answer*.

The *About Fax Controller* option will display the version number of the Fax Controller.

Chapter 6
Data Communication

An introduction to data communications was covered in Chapter 3, *Getting Started*. If you have not already read that chapter, we strongly suggest that you go back over the information contained therein. Chapter 6 expands upon that information as well as explaining the various file transfer protocols.

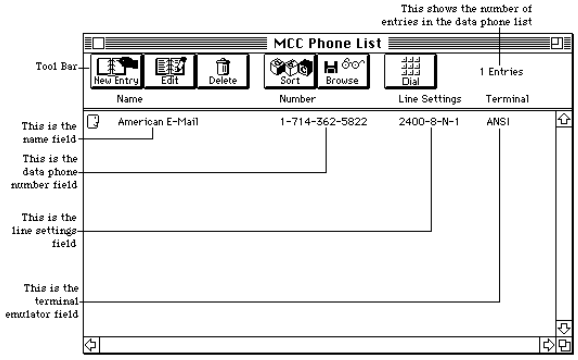
Dialing With MacComCenter

There are two ways to dial out of MacComCenter to achieve a data connection. For any number that you plan on calling repeatedly, the data phone list is the best choice. The second way to dial a number is via the MacComCenter *Dialer*.

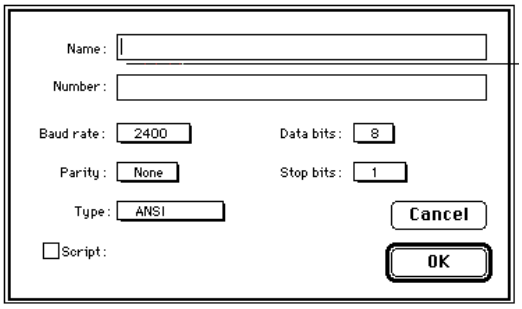
Using the Data Phone List

The data phone list feature allows you to create a list of data numbers and settings to simplify dialing frequently called services.

To access the data phone list, select *MCC Phone List* from the *FILE* menu, or press the *Data List* button on the ToolBar. The data phone list dialog box will appear.



To add a new number to the list, click on the *New Entry* button. To edit a previously entered number, click on the *Edit* button. Either option will bring up the phone list edit dialog box.



Use the *Name* field to specify the name of the BBS or service for the entry. The *Number* field allows you to specify the phone number for the service.

The other fields deal with the more technical aspects of the connection. All of the option fields are pull down menus which show the available options for the selected field. While there is no set standard terminal type and line setting combination for every modem connection, there are some guidelines to follow which may be helpful.

- Set the *Baud Rate* to the highest your modem will support, or to 2400 if you are getting poor connections. When you dial other modems, the two modems will establish the highest connection speed possible automatically. Most modems cannot connect at speeds higher than speed set in the Baud Rate field.

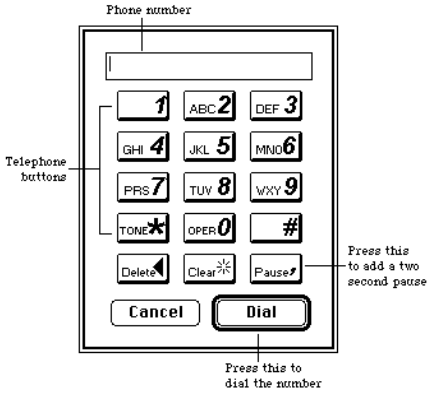
☞ ***Note:*** *Older Macintosh models may not be able to efficiently handle speeds greater than 19,200 bps.*

- BBS's tend to use the ANSI terminal type with 8 data bits, no parity, and one stop bit (8-N-1 for short).
- Large installations (such as mainframes and on-line services like GEnie and CompuServe) tend to use the VT100 terminal type with 7 data bits, even parity, and 1 stop bit (summarized by 7-E-1).

To dial a number from the phone list, simply highlight the desired entry, and click on the *Dial* button. A short cut is to double click on the desired entry.

Using the Dialer

The majority of data communications sessions will begin with you dialing out to another modem, BBS or on-line service. The quickest way to perform this task is to simply dial the modem with the *Dial* command available under the *DATA* menu or from the ToolBar. The Dialer dialog box will appear.



Simply enter the number by clicking on the desired numbers on the stylized phone pad, or type the numbers directly from your Macintosh keyboard. When the number has been entered, click on the *Dial* button, or press **Return**. MacComCenter will dial the number entered. The dialer will use the specified *Baud Rate*, *Terminal*, and *Line Settings* set in the *Modem Setup* option under the *SETUP* menu.

File Transfers

A file transfer is nothing more than copying a file from one computer to another. The modem is the medium of transfer, and a file transfer protocol is used to denote the beginning and end of the file.

File transfers are divided into two basic types: Downloads and Uploads. When you download a file, you are copying a file from a remote computer to your local machine. When you upload a file, you are sending a file from your local machine to a remote computer. The steps necessary to perform a file transfer are outlined in Chapter 3. This chapter provides advanced information about the different file transfer protocols, and the advantages and disadvantages of each.

Transferring a Single File

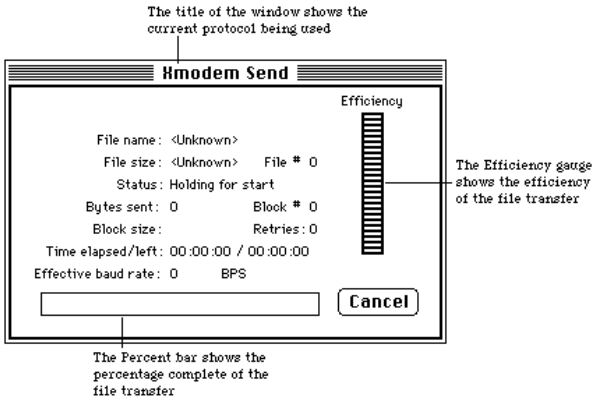
Some file transfer protocols can only handle a single file at a time. The ASCII, Xmodem (CRC) and Xmodem 1K protocols are examples of this type of protocol. When downloading, (copying a file from a remote computer to your local machine) you will need to enter a name for each file when using any of these protocols.

Transferring Multiple Files

The Kermit, Ymodem, Ymodem-G, CompuServe B/B+, and Zmodem protocols let you transfer more than one file during the same transmission. They will also allow you to transfer a single file. When downloading, all of these protocols will receive the name of the file during the transfer, so it is impossible for files to be named incorrectly.

File Transfer Status Dialog

During a file transfer, the File Transfer Status dialog box will appear to keep you informed of the upload or download status. It will display the following information:



Protocol

The file transfer protocol is displayed in the window title.

File name

This is the name of the file currently being transferred.

File #

This is the number of the current file being transferred in a batch. If you are sending a single file, the file number should be 1.

File size

This item displays the size of the current file being transferred. Some protocols do not have the file size information on downloads. If this is the case, the file size would read < Unknown > .

Status

The status of the file transfer contains the current action that MacComCenter is performing during the file transfer.

Bytes sent/rcvd

This field displays the number of bytes sent or received so far.

Block #

This field displays which block of data is being transferred.

Block size

This displays the size of each block being transferred. A block is the unit of data being transferred.

Retries

This field displays how many retry attempts have occurred during the file transfer. These retransmissions are usually caused by line noise.

Time elapsed/left

This displays how long the current transfer has lasted and how long until it's done.

Effective baud rate

This displays the actual number of bits transferred per second.

Efficiency gauge

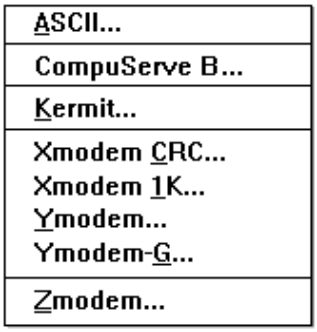
The Efficiency gauge graphically displays the effective baud rate versus the connected baud rate. The higher the gauge reads, the better the efficiency.

Percent bar

The Percent bar graphically displays the percentage complete for the current file transfer.

File Transfer Protocols

This section describes the various protocols that MacComCenter provides for transferring data files.



ASCII

The ASCII protocol is a seven-bit protocol that consists of the 128 characters that make up the uppercase and lowercase alphabet, numbers, characters available on a standard keyboard, and certain special control characters.

There is no additional error checking characters sent during a transmission when using an ASCII transfer. ASCII is good for sending a burst transmission of raw text/data uninterrupted.

Kermit

MacComCenter provides the standard Kermit protocol. It was developed to meet the needs for file transfer between a number of different types of computers, including mainframes, mini computers and personal computers. Unlike Xmodem and Ymodem, Kermit uses variable packet sizes, with a maximum size of 1024 bytes. Like Ymodem, Kermit provides for batch file transfers.

Xmodem CRC

In an effort to guard against undetected errors the original Xmodem was enhanced by replacing the 8 bit checksum with a 16 bit Cyclic Redundancy Check (CRC). This change provides a 99.9984% assurance of detecting any transmission errors. With the checksum method, it is possible for 1 out of 256 bad packets to have a valid checksum, and thus go undetected. With the CRC method only 1 out of 700 billion bad packets will generate a valid CRC. The CRC method also transmits 128 byte blocks or packets of data. If you select Xmodem CRC and the other system does not support it, MacComCenter will automatically switch over to the standard Xmodem; to the user both methods appear to operate identically.

Xmodem 1K

This method of Xmodem data transfer replaces the original 128 byte packets with packets of 1,024 bytes when possible. Assuming that no transmission errors are detected, this method of Xmodem data transfer will enlarge the packet size to 1K and maintain that packet size for as long as possible. Enlarging the packet size will improve the speed of the file transfer. If you attempt to receive a file using Xmodem 1K and the other side only supports Xmodem CRC, MacComCenter will fall back to Xmodem CRC.

Ymodem

The Ymodem protocol (also called Ymodem Batch, Ymodem 1K, and Ymodem CRC) is very similar to Xmodem 1K, with two major differences — with Ymodem you can automatically receive or send multiple files in one session, and file names are included with the transfer. In general, Ymodem is very fast, very safe and preferable to Xmodem, even for single files.

Ymodem-G

Ymodem-G is a file transfer protocol that provides the same error checking as Ymodem, but it will not perform any error recovery. Therefore, Ymodem-G requires an error-correcting modem or fax/modem with either MNP 2-4 and/or V.42. If both ends of the transmission meet the requirements, transfers can be exceptionally fast.

Zmodem

The Zmodem protocol is a popular protocol that lets you send multiple files in one transfer. Features include automatic downloading and the ability to send file names, sizes, and creation dates of each file. Also, if a data transmission is interrupted midway, Zmodem lets you resume the data transmission from the point where it left off.

The size of the data block varies with Zmodem, depending on the condition of the connection of the telephone line between the communicating devices. Moreover, both 32-bit and 16-bit CRC error-checking are available with Zmodem.

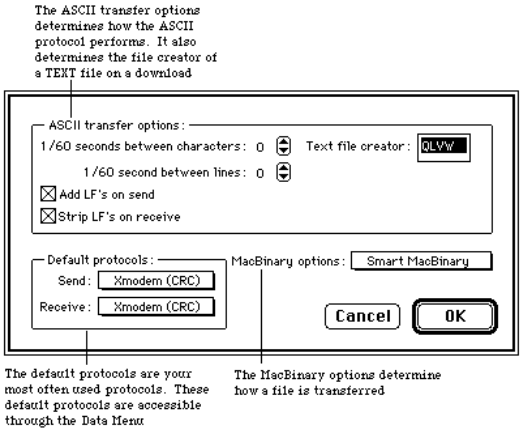
Zmodem is a relatively young transfer protocol, not identically implemented at all sites. If you are having problems with Zmodem transfers, you may wish to try Ymodem.

CompuServe B/B+

The CompuServe B/B+ protocol should be used when communicating with CompuServe.

File Transfer Setup

The *File Transfer Setup* dialog allows you to set the file transfer attributes you want MacComCenter to use. A number of check boxes are provided to turn options on or off. The *File Transfer Setup* dialog is available by selecting *File Transfer...* from the *SETUP* menu.



ASCII Transfer Options

1/60 seconds between character

This allows you to enter the number of seconds to wait before a character will be sent during a data communication session.

1/60 seconds between lines

This allows you to enter the number of seconds to wait before a line will be sent during a data communication session.

Text file creator

This allows you to enter the creator of a file to use as the default text editor. The default is QLVW (QuickView). The file creator you choose will be the application that opens up the text file when you double-click on it from the Finder.

Add LF's on send

This instructs MacComCenter to add line feeds during the sending of a file during a data file transfer.

Strip LF's on receive

This instructs MacComCenter to remove line feeds during reception of a file during a data file transfer.

Default Protocols

Default Send protocol

This instructs MacComCenter which protocol to use as a default when sending files. This will give you quick access to the most frequently used file transfer protocol for sending files. The command key equivalent for this is **Command-U**.

Default Receive protocol

This instructs MacComCenter which protocol to use as a default when receiving files. This will give you quick access to the most frequently used file transfer protocol for receiving files. The command key equivalent for this is **Command-I**.

MacBinary Options

This instructs MacComCenter which MacBinary option to use during a data file transfer. The options are Smart MacBinary, Always MacBinary, and Never MacBinary. MacBinary should be used when downloading a Macintosh file. A Macintosh file consists of two forks, or parts. Using MacBinary when sending and receiving a file will put the two forks in their proper place. MacBinary files also contain file information.

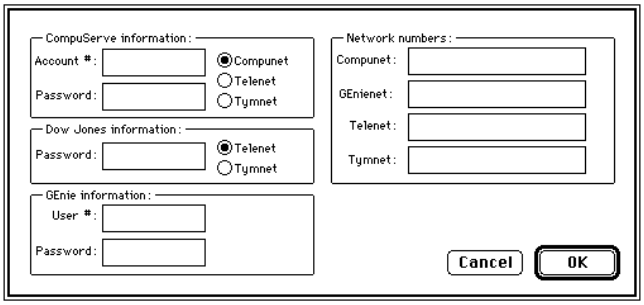
Chapter 7
Automating Data Connections

MacComCenter has several advanced features which can make your on-line communications sessions quicker and easier to manage by automating various functions.

MacComCenter can quickly connect you to your accounts on some of the major on-line services. Before it can do this, however, you must set up MacComCenter with the proper account information. When configured, you can connect to on-line services such as Dow Jones, CompuServe, and GEnie with a single click of the mouse.

Services Setup

The *Services Setup* dialog allows you to specify account information for the Dow Jones, CompuServe, and GEnie on-line services. Choosing *Services...* from the *SETUP* Menu opens the *Services Setup* dialog, which is where the actual account information is entered into MacComCenter.



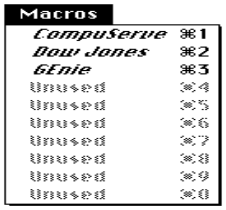
Follow the appropriate section(s) for your on-line service account(s):

CompuServe: If you will be calling CompuServe, use this section to enter your Account number and Password, and select the public network (Compunet, Telenet, or Tymnet) you want to access by entering the phone number and selecting the corresponding radio button.

Dow Jones: If you will be calling Dow Jones, use this section to enter your Password and select the public network (Telenet or Tymnet) you want to access by entering the phone number.

GEnie: If you will be calling GEnie, use this section to enter your User ID and Password. Do not enter the separating comma. Enter the telephone number needed to connect to GEnie in the GEnienet field.

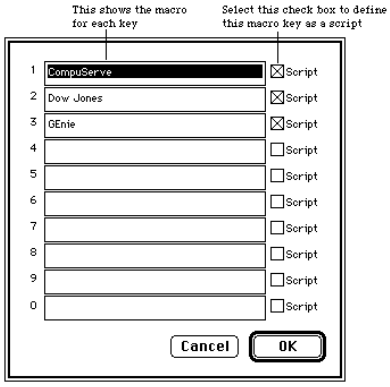
Connecting to On-Line Services



Once the account information is entered, simply pull down the *DATA* menu and select *Run Script*. Selecting the appropriate on-line service will automatically dial your modem, log you in, and enter your password. You can also select the desired on-line service from the Macros menu.

Macro Keys

The *Macros Setup* dialog allows you to define a custom meaning to the selection of command key combinations, **Command-0** to **Command-9**. The *Macros Setup* dialog can be opened by selecting *Macros...* from the *SETUP* Menu. These macro keys can cause a user defined literal string to be transmitted or can be used to launch a script file. The macro key definitions are displayed on the *Macros Setup* dialog.



The ten text boxes on the *Macros Setup* dialog, allow you to enter the literal string you want transmitted when the selected command key combination is depressed, or to specify a script file name if you want a script file launched when the assigned keys are pressed. To assign a script file, select the Script check box and select the script file from the resulting file selection box. The text box may contain either a literal string or a script file name, but not both.

Scripts

Scripts are miniature programs within a program, and can totally automate your on-line sessions (for example, the on-line services modules are actually script files). Properly programmed, a script can call a BBS, log-on to it and automatically read your mail. This section describes how to run and write scripts; the keyword listing is given in Appendix A.

Running Scripts

The *Run Script...* option under the *DATA* menu allows you to have MacComCenter execute a script file that has been created and stored on disk.

Selecting a Script File

After selecting the *Run Script...* function, a file selection box will appear. Select the script you wish to run by double clicking the script file name when it appears in the file scroll box. The script will proceed to run.

When a script is running, a message will be displayed in the status area of the Terminal Status Bar. You may abort script execution by pressing ⌘ - **.** (**Command** - **period**).

MacComCenter Script Language

The MacComCenter script language is made up of commands that may be used to create a script file. A script file may be created using QuickView. If you save a QuickView file as an executable script file you can execute the script by double clicking on the document icon from the Finder. You may also use any external editor to edit the script file but you will not be able to run the script by double clicking on the icon from the Finder.

The commands that comprise the script language may be entered in either upper or lower case. Each line of the script may contain only one command. The commands may be indented to any point you wish to enhance readability. Blank lines may also be inserted in the script files to show breaks in sections of the script statements.

You may include comments in the script file by starting the comment with "/*" and ending the comment with "*/". For example:

/* This is a sample comment */

When sending strings to a remote computer, a string may be defined to include a literal value, a carriage return character or an ASCII character represented by its decimal value. Literal character strings must be enclosed by double quotes. A return character is defined by including a '\r' in the command line. An ASCII character is defined by including a '\xHH' in the command line, where HH is the hexadecimal value of the ASCII character (see Appendix C for the ASCII Character Table). For example, to send a Control-C to a remote computer the literal string would be:

Out("\x03");

The script must begin with the "main( )" function. This is the function that is first called during execution. It must be followed by a open curly brace "{" and the function must end in a closed curly brace "}". The actual script commands go in the lines between the curly braces and are followed by semicolons ";". A simple script file would look something like this:

```
/* Sample Script 1 */
main( )
{
        Script Command Line 1;
        Script Command Line 2;
}
```

Writing a Sample Script File

The best way to learn is by doing, so let's create a script which will automate logging in to Smith Micro Software's American E-Mail BBS. (This script assumes that you already have an account. If you don't, call American E-Mail to set one up, taking note of your User ID and password.)

When writing a script, thought should be given to the steps you would like the script to perform. In the case of logging into the American E-Mail BBS, a script must do the following:

1. Dial the telephone number
2. Wait for the prompt to enter the User ID
3. Type out the User ID

4. Wait for the prompt to enter the password
5. Type out the password
6. Pass control to the keyboard to continue the on-line session.

The first two lines of the script should be:

main( )

{

You can put comments before this if you wish. Reviewing the list of commands, it can be seen that only three commands are needed in this script: Dial, In, and Out. The script must dial the American E-Mail BBS first, so the next line would be:

Dial(“17143625822”);

The actual script instructions may be typed with one tab stop before it in order to indent each line for easy reading later on.

Next, the script must wait for the User ID prompt, which is:

Otherwise type ‘new’:

It would also be nice if, after a certain amount of time with nothing happening while waiting for the prompt, the script would pass control back to the user. The In command can do all this, so the fourth line should be:

In(“‘new’:”,30);

This will wait for the prompt for 30 seconds before returning control to the keyboard.

After sensing the prompt, the script must type out the User ID, which calls for the Out command. The next script line should be:

Out(“Your ID\r”);

Your ID should be replaced with whatever the User ID of the account actually is. The \r tells the script to send out a carriage return, as if the **Return** key is pressed.

The prompt for the account password is:

Enter your password:

so the next line should be:

In(“password:”,30);

To type the password, the final script line should be:

Out(“Your PW\r”);

where **Your PW** is your actual account password.

To pass control back to the keyboard once the automation is finished, the last line should be a closing curly brace.

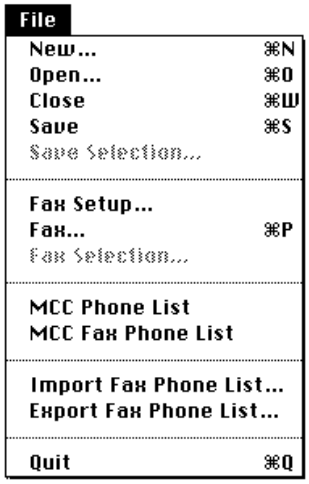
The script file should now look like this:

```
/*American E-Mail Script */
main()
{
        Dial("17143625822");
        In("'new':",30);
        Out("Your ID\r");
        In("password:",30);
        Out("Your PW\r");
}
```

Save this file as an executable script with the file name "American E-Mail" in the MacComCenter folder.

Congratulations, your first script is complete!!!

Chapter 8
File and Edit Menus



The *FILE* menu contains the means to create new phone lists, as well as options to import or export lists. You can also save the contents of any current screen in MacComCenter or print them to your printer.

New

If you wish to create a new data or fax phone list, or even an ASCII text file, select *New* from the *FILE* menu. The following dialog will appear:

Text

The text editor will open and allow you to create an ASCII text file.

Fax Phone List

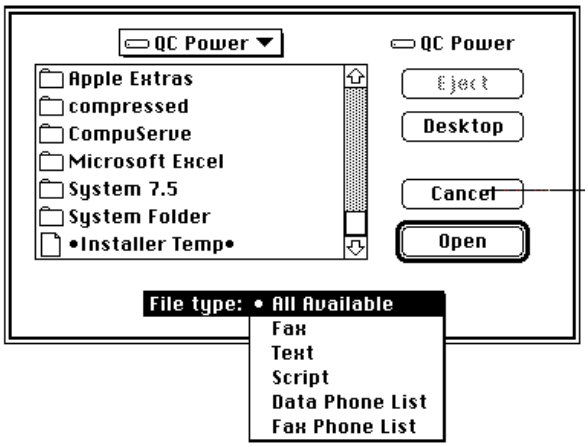
This option will allow you to create a new fax phone list. See Chapter 5 for further information.

Data Phone List

This option will allow you to create a new data phone list. See Chapter 6 for further information.

Open

The *Open* option allows you to open various types of files and view or edit the files. The following dialog box will appear.



All Available

All available file types will be displayed.

Fax

Starts QuickView and allows you to view a fax file.

Text

Allows you to view and edit any ASCII text file.

Script

Allows you to view and edit any MacComCenter script file.

Data Phone List

Opens the default MacComCenter data phone list.

Fax Phone List

Opens the default MacComCenter fax phone list.

Save

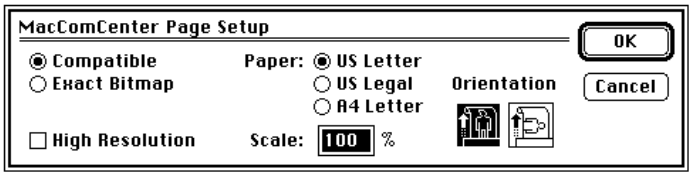
This option will allow you to save the contents of the active window as a text file.

Save Selection

If you only wish to save a portion of the active window, highlight the desired portion and select the Save Selection option to save the highlighted portion as a file.

Print/Fax Setup

As with most Macintosh programs, you can print any file generated by MacComCenter. The Print Setup dialog allows you to specify the page setup for your printer. If MCC Fax Print is selected, this option will read *Fax Setup*. The dialog will vary from printer to printer. The setup options for the MCC Fax Print driver are shown on the following page.



Print Options

The *Compatible* option, which is the default selection, simulates the default output of a LaserWriter and preserves the original size of most documents. This option works best with paint and word processor programs.

The *Exact Bitmap* option produces a fax page at 100 dots per inch (dpi). No scaling is used for this option. The result is a slightly smaller image than displayed on the Macintosh screen. This option produces the best output from drawing and desktop publishing programs.

The *High Resolution* check box changes the destination fax page resolution from 100 dpi to 200 dpi.

Paper Options

This option allows you to specify the size of paper to which you wish to print your document. The default is US Letter.

Scale

To print your document at a percentage of the original size, enter the desired value in the Scale edit box

Orientation

Specify either portrait (vertical) or landscape (horizontal) page orientation by selecting the appropriate icon.

Print/Fax

This option will print the active window to the currently selected printer. If MCC Fax Print is selected as your current printer, this option will read *Fax*.

Print/Fax Selection

If you wish to print only a portion of the active window, highlight the desired portion and select *Print Selection* to print the highlighted section to the currently selected printer. If MCC Fax Print is selected as your current printer, this option will read *Fax Selection*.

MCC Phone List

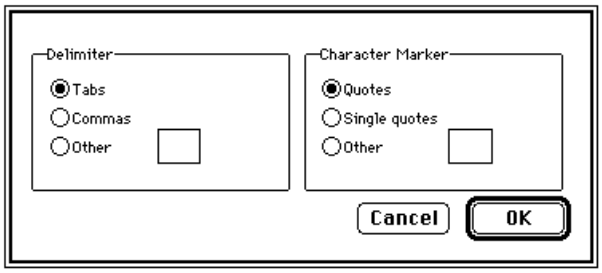
This option will open the default MCC data phone list. See Chapter 6 for further information.

MCC Fax Phone List

This option will open the default MCC fax phone list. See Chapter 5 for further information.

Import Fax Phone List

This option will allow you to import a tab or comma delimited text file as a fax phone list. The following dialog box will appear:



Specify the appropriate delimiters, and MacComCenter will convert the file into a new fax phone list.

Export Fax Phone List

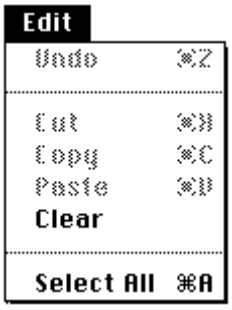
This option will allow you to export a fax phone list as a tab or comma delimited text file. Specify the appropriate delimiters, and MacComCenter will covert the file with the desired parameters.

Quit

This function allows you to exit MacComCenter and return to the Macintosh desktop. Quitting MacComCenter does not terminate the data connection in all cases. The *Drop DTR on Exit* option under *Modem Setup* allows you to determine if DTR will be toggled upon quitting the application.

Edit Menu

The *EDIT* menu provides the standard cut, copy, and paste functions.



Undo, Cut, Copy, Paste, Clear, Select All

These editing functions are the same as those of any Macintosh application. You may copy information from the terminal window and paste to an editor document. When you paste

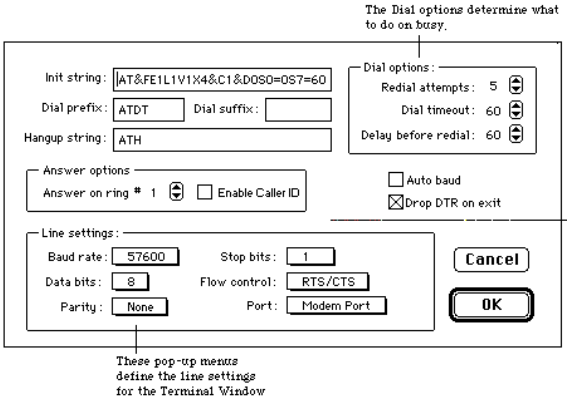
information to the terminal window, MacComCenter will transmit that information through the modem to the remote computer or terminal.

Chapter 9
Setup Menu

The *SETUP* menu is used to define various operating parameters. These parameters include modem settings and commands, terminal setup, and information for the fax cover page. The software can be setup for automatic access to CompuServe, Dow Jones, and GEnie through this menu.

Modem...

Choosing *Modem...* from the *SETUP* menu causes the *Modem Setup* dialog to appear.



Initialization Options

Initialization string

The modem initialization string is the command set that MacComCenter issues to the modem when the application is first started. The default string works with most modems and fax/modems. If your modem has special features or commands, the AT commands needed to enable them are entered here. Check your modem manual for a detailed breakdown of the AT command set. A summary of the AT command set is listed in Appendix D.

Dial prefix

The dial prefix is the command MacComCenter issues to the modem when instructed to automatically dial a number. This entry will be used when dialing from a phone list, using the Dialer or connecting with CompuServe, Dow Jones or GEnie.

Dial suffix

The dial suffix string, if defined, is added to the end of a number dialed with MacComCenter. If this feature is used, you may need to begin the string with a comma to cause a delay before the suffix is transmitted. The dial suffix is useful when using some long distance services or calling cards.

Hang-up string

The hang-up string is the command MacComCenter issues to the modem when the *Hang Up* option is selected from the *DATA* menu.

Dial Options

Redial attempts

Allows you to specify how many times to redial a data number before canceling the data call.

Dial timeout

The number of seconds MCC will wait before canceling the call.

Delay before redial

Specifies the number of seconds to wait before attempting to redial a busy data number.

Answer on ring #

Specifies how many rings MacComCenter will wait to answer an incoming call.

Enable Caller ID

When selected, MacComCenter will display the Caller ID information in both the Terminal window and in the MacComController. Note that Caller ID forces MacComCenter to wait until at least the second ring before answering the phone. You must subscribe to this service from your phone company in order to receive Caller ID information.

Auto baud

Tells MacComCenter to automatically reset the baud rate if the modem makes a connection at a rate other than the rate specified at dialing.

Drop DTR on exit

Specifies that DTR (Data Terminal Ready) will be toggled after exiting from a connection.

Line Settings

These options allow you to select the line speed, data format and flow control to be used during communications; these settings are independent of the settings in the data phone list. The *Cancel* button will exit without saving any changes. Press *OK* to remove the dialog and implement all option changes.

Baud rate

Possible baud rate settings may vary from 300 to 57,600. Refer to your modem manual for the maximum baud rate that your modem will handle.

Data bits

The allowable options are 5, 6, 7 or 8 data bits.

Parity

Parity may be Odd, Even, or None. None only applies only when 8 data bits are selected.

Stop bits

The allowable settings are 1, 1.5 or 2.

Flow control

This option controls *local* flow control. Local flow control is the process of regulating the flow of data between the computer and the modem. This provides time to process the data received. Flow Control is usually not needed for 2400 bps data connections.

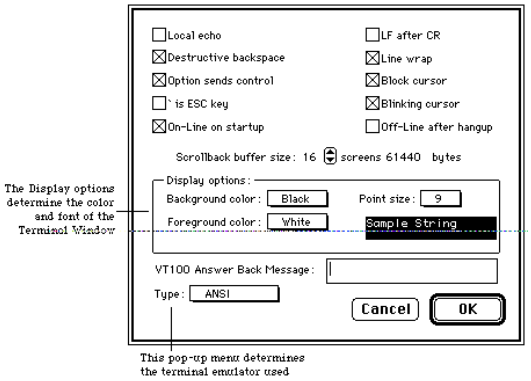
XON/XOFF is a software flow control that involves the sending of special control codes as part of the data. RTS/CTS is hardware flow control that is implemented in both software and the modem hardware. Therefore your modem and cable must support the RTS/CTS standard for this method to be used. The RTS/CTS method is more reliable and is normally used with V.42 and MNP Level 5 and above modems.

Port Selection

You may attach your modem to the Macintosh Modem port, Printer port or any other port supported by the Communications Toolbox. Select the port to which your fax/modem is connected from the pop-up menu. The Printer port is not designed for high speed input, so you may experience problems at high speeds.

Terminal Setup

The *Terminal Setup* dialog allows you to set the terminal attributes you want MacComCenter to use. The Terminal Setup dialog is available by selecting *Terminal...* from the *SETUP* menu.



Local echo

The Local echo option tells MacComCenter to display all keyboard entries directly to the Terminal Window rather than let the remote computer echo the keystrokes back as is normal. If you cannot see what you type, turn this option on. If characters appear double (lliikkee tthhiiss) turn this option off.

Destructive backspace

This option instructs MacComCenter to erase a character when the backspace key is pressed. When this option is not selected, pressing the backspace key will move the cursor back one character but will not erase the character that may be above the cursor.

Option sends control

When this option is selected, pressing the **Option** key is the same as pressing the **Control** key.

‘ is ESC key

When this option is selected, pressing the **‘** key (located in the upper left corner of the keyboard) will cause MacComCenter to send an Escape character to the remote computer. This option is useful for keyboards that do not have an **ESC** key.

On-Line on startup

When this option is selected, MacComCenter will automatically go on-line and open the Terminal Window when launched.

LF after CR

This option tells MacComCenter to translate all outgoing and incoming carriage returns to carriage return + line feed.

Line wrap

This option tells MacComCenter to issue a carriage return + line feed if more than 80 characters are received on a single line.

Block cursor

The default MacComCenter cursor is a block cursor. If not selected, the cursor will be an underscore.

Blinking cursor

By selecting this option, you may change the cursor to a blinking cursor.

Off-Line after hangup

When this option is selected, MacComCenter will automatically close the Terminal Window and go off-line when you select *Hang Up* from the *DATA* menu to terminate a data call.

Scrollback buffer size

This options defines the number of screens that will be stored in Scrollback memory. During an on-line session text may pass from the screen and scroll out of view. This option sets aside memory to enable you to scroll up (back) through the text.

Display Options

Background color

This option allows you to change the background color on the Terminal Window.

Foreground color

This option allows you to change the foreground color on the Terminal Window

☞ **NOTE**: *These options are disabled (“grayed out”) on Macs running in black-and-white mode.*

Point size

This option allows you to change the point size of the Terminal Window text.

Terminal emulation type

On the bottom of the dialog is a line that specifies the current terminal emulator being used. This pop-up menu allows you to change the terminal emulator. MacComCenter supports Teletype (TTY), DEC VT100, DEC VT102, DEC VT52 and ANSI terminal emulation. Terminal

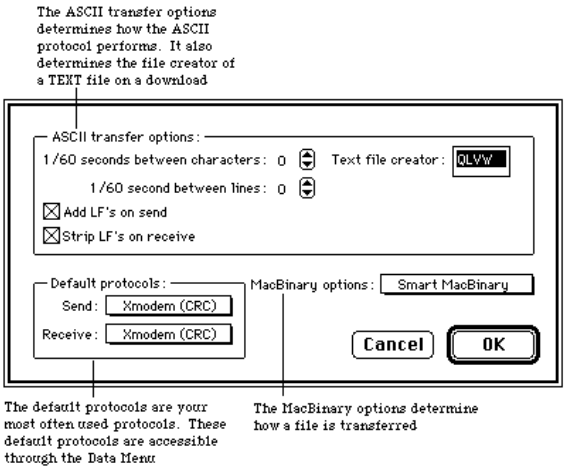
emulation is the ability of MacComCenter to make your Macintosh look like a specific type of terminal to a remote computer.

VT100 Answer Back Message

This allows you to enter a string that will be sent to a called machine at the beginning of a data communication session when the VT100 terminal emulator is used.

File Transfer Setup

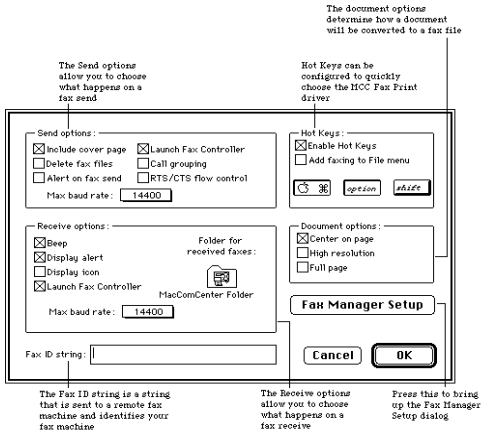
The *File Transfer Setup* dialog allows you to set the file transfer attributes you want MacComCenter to use.



All of the *File Transfer Setup* options are fully explained in Chapter 6.

Fax Setup

The *Fax Setup* dialog contains setup information for sending and receiving faxes, and fax document options. To open the Fax Setup dialog select *Fax...* from the *SETUP* menu.



Send Options

Include cover page

Provides you with the option to include a cover page when sending a fax.

Delete fax files

Instructs MacComCenter to delete the fax file after successful transmission. This can save a good deal of disk space.

Alert on fax send

Instructs the Fax Manager to notify you upon completion of a fax transmission.

Launch Fax Controller

Instructs the Fax Manager to open the Fax Controller DA when it begins to send a fax.

Call grouping

Allows for call grouping. If checked, all scheduled faxes with the same destination fax number will be sent at the earliest scheduled time in a single transmission.

RTS/CTS flow control

Allows for hardware flow control during faxing. If this option is not selected, software flow control will be enabled.

Max baud rate

Defines the maximum baud rate when sending a fax.

Receive Fax Options

Beep

Causes a beep to sound when a fax is received.

Display alert

Displays an alert dialog when a fax is received.

Display icon

Causes the Fax Manager to display an icon in the menu bar when a fax is received.

Launch Fax Controller

Causes the Fax Controller DA to be opened when the Fax Manager answers a call.

Folder for received faxes

Determines the folder in which received faxes will be stored.

Fax ID string

This is the Fax ID transmitted to the sending fax machine. Normally this is your fax phone number or company name.

Max baud rate

Defines the maximum baud rate used for receiving a fax.

Document Options

Center on page

Tells MacComCenter to center both text and graphic images at conversion time. If this option is not selected, images will be left justified.

High resolution

Tells MacComCenter to transmit documents at high resolution (200 dpi x 200 dpi).

Full page

Tells MacComCenter to make all transmitted pages 11 inches long.

Hot Key Options

Enable Hot Keys

Allows the use of defined Hot Keys.

Add faxing to File Menu

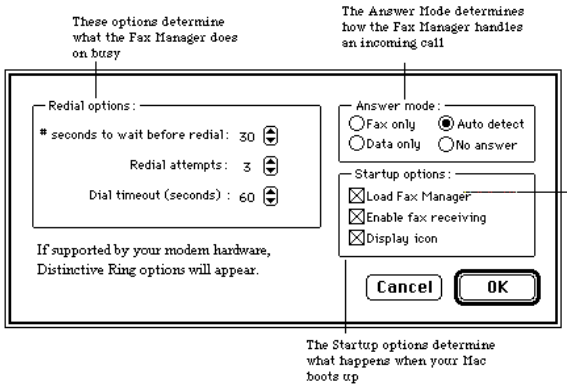
Appends faxing options in the *FILE* Menu for easy access to both your standard printer and MCC Fax Print.

Command, Option, Shift buttons

These buttons allow you to use any combination of the three keys as Hot Keys to invoke faxing. The buttons, when depressed, have been selected as the Hot Keys.

Fax Manager Setup

The *Fax Manager Setup* dialog contains setup information on how the Fax Manager should answer a call, how it dials a fax number, and determines if it is to be loaded at startup. The dialog can be opened by clicking on the *Fax Manager Setup* button in the *Fax Setup* dialog.



Redial Options

# of seconds to wait before redial

Specifies the number of seconds to wait before attempting to redial a busy fax machine.

Redial attempts

Specifies how many times to redial a busy fax machine before logging it as busy in the Send Fax Log.

Dial timeout

The amount of time to let the phone ring when sending a fax before terminating the fax attempt.

Answer Mode Options

Distinctive Ring

If available, you can configure your modem to only answer the line when the selected Distinctive Ring patterns are detected. There are four ring types to choose from, Ring A through Ring D. Select the ring patterns that will cause MacComCenter to answer the phone by clicking on the appropriate ring pattern fields. If MacComCenter did not detect Distinctive Ring support if your modem hardware upon installation, this option will be unavailable.

Fax only

MacComCenter will hang up on any call that is not determined to be a fax call.

Data only

MacComCenter will hang up on any call that is not determined to be a data call.

Auto detect

Instructs MacComCenter to determine the type of incoming call and handle it accordingly.

No answer

Instructs MacComCenter not to answer the phone.

Startup Options

Load Fax Manager

Causes Fax Manager to load at startup.

Enable fax receiving

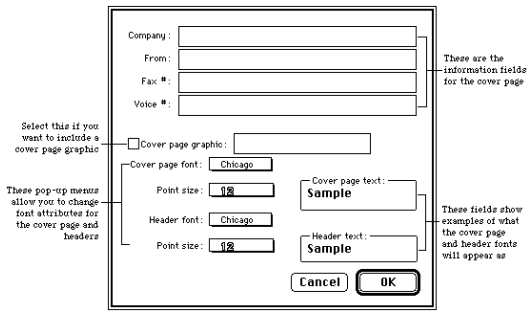
Instructs Fax Manager to receive incoming faxes.

Display icon

Causes the Fax Manager to display an icon at the bottom of the screen at startup.

Fax Cover Page Setup

The *Fax Cover Page Setup* dialog allows you to change various aspects of the cover page that can be sent with all faxes. All Cover Page Setup options are explained in Chapter 3. The dialog can be opened from the *SETUP* menu by selecting *Fax Cover Page...*



Company

The name of your company, if applicable. If there is an entry in this field, each page you send will have a header at the top.

From

Your name. Enter it here if you desire your name to appear on the fax.

Fax #

Your Fax number. Enter it here if you desire your fax number to appear on the fax.

Voice #

Your voice number. Enter it here if you desire your voice number to appear on the fax.

Cover Page graphic

Determines if a graphic will appear on all sent cover pages. When checked a file selection box will appear prompting you for a fax file to be used as your cover page graphic. The cover page graphic fax file must be less than half a page.

Cover Page font & **point size**

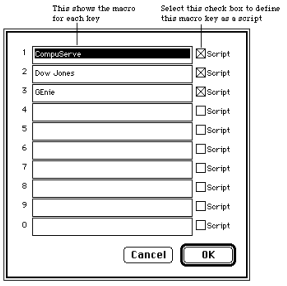
Determines the font and point size of the cover page text.

Header font & **point size**

Determines the font and point size used for the text on the header.

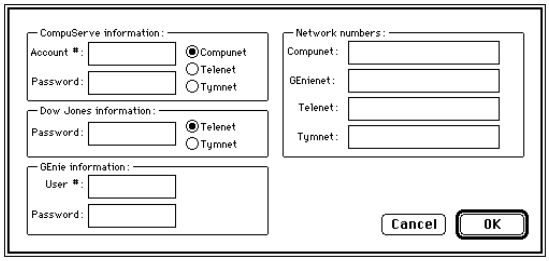
Macros Setup

The *Macros Setup* dialog allows you to define a custom meaning to the selection of command key combinations, **Command-0** to **Command-9**. The *Macros Setup* dialog can be opened by selecting *Macros...* from the *SETUP* Menu. These macro keys can cause a user defined literal string to be transmitted or can be used to launch a script file. The macro key definitions are displayed on the *Macros Setup* dialog. The *Macros Setup* dialog is fully explained in Chapter 7.



Services Setup

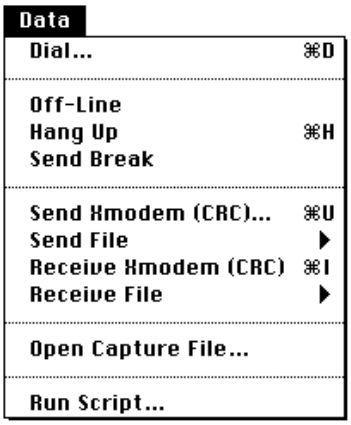
The *Services Setup* dialog allows you to specify account information for the Dow Jones, CompuServe, and GEnie on-line services. Choosing *Services...* from the *SETUP* Menu opens the *Services Setup* dialog, which is where the actual account information is entered into MacComCenter. The *Services Setup* dialog is fully explained in Chapter 7.



Default Settings

The *Default Settings* option will return all setup options to MacComCenter defaults.

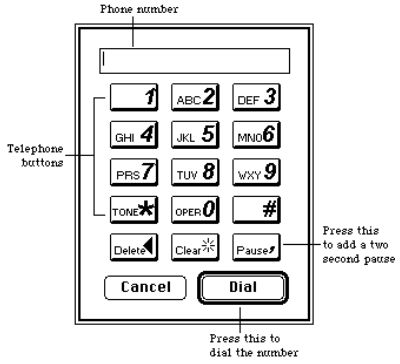
Chapter 10
Data Menu



The *DATA* menu provides access to all file upload and download protocols, the text capture mode, and the dialer window for manual dialing.

Dial...

The Dialer allows you to dial a telephone number without accessing the phone list. Further information on the dialer is available in Chapter 6.



Off-Line

When MacComCenter is active, it takes control of the communications port. Select this function to take MacComCenter off-line. When the program is off-line, it releases the communications port, and closes the terminal window.

Hang Up

This option issues the hang-up string defined in *Modem Setup*, to the modem. A disconnecting message will appear in the status bar. Any data transmission will be terminated.

Send Break

This option transmits a break character to the remote computer. This character is used by many mainframe computers during the logon process to abort the logon, but maintain the connection.

Send (Specified Protocol)

This option is a short cut for sending (uploading) files via the default protocol selected in the File Transfer Setup dialog. Further information on selecting the default protocol is available in Chapter 6.

Send File

This option allows you to select from all of the available file transfer protocols when you desire to upload a file.

Receive (Specified Protocol)

This option is a short cut to initiate receiving (downloading) files via the default protocol selected in the File Transfer Setup dialog. Further information on selecting the default protocol is available in Chapter 6.

Receive File

This option allows you to select from all of the available file transfer protocols when you desire to download a file.

Open Capture

The function is used to capture the transactions of a data transfer session to disk. All data displayed on the terminal window will be captured from the time the capture text function is turned on. Text in the terminal window prior to starting the capture modem will not be recorded. This is a toggled field. When a capture is active, the option will change to read *Close Capture*.

Note that there is no error correction. Any line noise will cause transmission errors and possibly change the text to incomprehensible strings of characters. After capturing text, the file can be edited in any text editor.

The *Capture as Binary* option will cause MacComCenter to capture control characters (such as ASCII escape codes) as well as standard text.

Run Script

This option allows you to run any previously created script file.

Chapter 11
Fax Menu

The *FAX* menu provides access to all of the fax functions available in the MacComCenter application. You can prepare files to be transmitted as fax documents, view a fax document, and view the fax logs.

Send Fax...

Use this function to send fax transmissions to remote locations. Note that you can only send ASCII text, MacPaint, PICT, TIFF or previously converted fax files from within the MacComCenter application.

QuickFax...

A QuickFax is a fax cover page with a note attached to it. This is extremely convenient when all you want to do is fax someone a quick message or a short note.

View Fax

This option opens the QuickView application which allows you to view fax documents. Fax viewing is fully explained in Chapter 4.

View Schedule

The View Fax Schedule function allows you to see what fax transmission are scheduled to be sent and at what times. Additionally, you are provided with the capability to cancel a selected transmission, or cancel all transmissions. The Fax Schedule is fully explained in Chapter 5.

View Send Log

This option opens the Send Fax Log which provides information on previously sent fax transmissions. The Send Fax Log is fully explained in Chapter 5.

View Receive Log

This option opens the Receive Fax Log which provides information on previously received fax transmissions. The Receive Fax Log is fully explained in Chapter 5.

Fax Archive...

The Fax Archive function allows you to save fax documents to an archive file which reduces the amount of disk space required to store fax files. This function is fully explained in Chapter 5.

Enable/Disable Fax Receiving

This is a toggled option that instructs the Fax Manager to attempt to receive fax transmissions if enabled, or not to receive faxes when disabled. When Fax Receiving is enabled, this option will read Disable Fax Receiving.

Convert Documents

The Convert Documents option allows you to manually convert certain types of files into faxable format. This function is fully explained in Chapter 5.

Chapter 12
Tools and Macros Menus

The *TOOLS* menu allows you to configure the ToolBar and allows easy access to the Fax Controller and QuickView.

Show/Hide ToolBar

This is a toggled option which determines if the ToolBar will be displayed.

Normal/Advanced ToolBar

This is a toggled option which controls the buttons displayed on the ToolBar. The normal ToolBar has the following buttons: **On-Line**, **Data List**, **Send Fax**, **Fax List** and **View Fax**. The advanced ToolBar adds **Controller**, **Dial**, **Send Log** and **Receive Log**.

Vertical/Horizontal ToolBar

This option allows you to control how the ToolBar is displayed by MacComCenter.

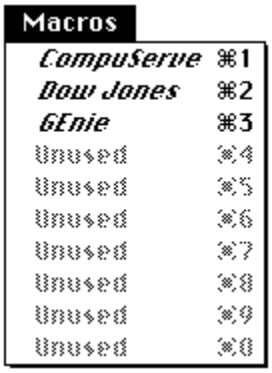
Launch Fax Controller

This option allows you to launch the Fax Controller from the MacComCenter application.

Launch QuickView

This option allows you to launch QuickView for easy access from within the MacComCenter application.

Macros Menu



The *MACROS* menu will display a list of all of the macros entered in MacComCenter. You can also select the desired on-line service from the *MACROS* menu.

Appendix A
Scripting Commands

The MacComCenter script language is comprised of the following commands.

Baud (int BaudRate)

Description — Sets the baud rate

Return value — Returns TRUE if BaudRate valid, otherwise FALSE.

Example:

```
main()
{
        Echo("Changing the baud rate to 2400bps.\r\n");
        Baud(2400);
}
```

CompuAcct ( )

Description — Returns the CompuServe account number string

Return value — Returns the string entered in your services setup for the CompuServe account number.

Example:

```
main()
{
        Echo("Sending acct. number.\r\n");
        Out(CompuAcct());
}
```

CompuPass ( )

Description — Returns the CompuServe password string

Return value — Returns the string entered in your services setup for the CompuServe password.

Example:

```
main()
{
        echo("Sending password.\r\n");
        Out(CompuPass());
}
```

Cls ( )

Description — Clears the screen.

Return value — None.

Example:

```
main()
{
        Echo("Clearing the screen.\r\n");
        Cls();
}
```

CompuNetwork ( )

Description — Returns the CompuServe network

Return value — Returns an integer corresponding to the network selected in your services setup:

0 = Compunet

1 = Telenet

2 = Tymnet;

Example:

```
main()
{
        int network;
        Echo("GettingCompuserve network.\r\n");
        network = CompuNetwork();
}
```

CompuPhone ( )

Description — Returns the CompuServe phone number string

Return value — Returns the string entered in your services setup for the CompuServe number.

Example:

```
main()
{
        Echo("Dialing CompuServe number.\r\n");
        Out(CompuPhone());
}
```

CurrentBaud ( )

Description — Returns the current baud rate

Return value — Returns an integer corresponding to the current baud rate.

Example:

```
main()
{
        int baud;
        Echo("Getting baud rate.\r\n");
        baud = CurrentBaud();
}
```

Data (int DataBits)

Description — Sets the number of data bits.

Return value — Returns TRUE if data bits are valid, otherwise FALSE.

Example:

```
main()
{
        Echo("Changing the data bits to eight.\r\n");
        Data(8);
}
```

Dial (char *Number)

Description — Dials a number.

Return value — Returns FALSE if invalid number or dial attempt failed, otherwise returns TRUE.

Example:

```
main()
{
        Echo("Dialing 555-1212.\r\n");
        Dial("555-1212");
}
```

DowNetwork ( )

Description — Returns the Dow Jones network

Return value — Returns an integer corresponding to the network selected in your services setup:

0 = Telenet

1 = Tymnet

Example:

```
main()
{
        int network;
        Echo("Getting Dow Jones network.\r\n");
        network = DowNetwork();
}
```

DowPass ( )

Description — Returns the Dow Jones password string

Return value — Returns the string entered in your services setup for the Dow Jones password.

Example:

```
main()
{
        Echo("Sending password.\r\n");
        Out(DowPass());
}
```

Echo (char *string)

Description — Sends string to the screen.

Return value — None.

Example:

```
main()
{
        char string[30] = "Hello, world.\r\n");
        Echo(string);
}
```

Exit

Description — Immediately terminates a running script.

Return value — None.

Example:

```
main()
{
        Echo("Exiting script.\r\n");
        Exit;
}
```

GeniePass ( )

Description — Returns the Genie password string

Return value — Returns the string entered in your services setup for the Genie password.

Example:

```
main()
{
        Echo("Sending password.\r\n");
        Out(GeniePass(), number);
}
```

GeniePhone ( )

Description — Returns the Genie phone number string

Return value — Returns the string entered in your services setup for the Genie number.

Example:

```
main()
{
        Echo("Sending phone number.\r\n");
        Out(GeniePhone());
}
```

GenieUser ( )

Description — Returns the Genie user name string

Return value — Returns the string entered in your services setup for the Genie account number.

Example:

```
main()
{
        Echo("Sending user name.\r\n");
        Out(GenieUser());
}
```

In (char *string [, int seconds])

Description — If seconds are specified, the function will wait for the specified number of seconds until the string is received by the modem; otherwise, the next character coming over the modem will be appended to the string.

Return value — Returns FALSE if timed out, otherwise returns TRUE.

Example:

```
main()
{
        char string[50];
        Echo("Adding a character to  string.\r\n");
        In(string);
}
```

LocalEcho (int ON_or_OFF)

Description — Turns local echo on or off.

Return value — Returns TRUE if ON. Returns FALSE if OFF.

Example:

```
main()
{
        Echo("Turning local echo on.\r\n");
        LocalEcho(1);
}
```

Out (char *string)

Description — Sends string to the modem.

Return value — None.

Example:

```
main()
{
        char string[30] = "Hello, world.\r\n";
        Out(string);
}
```

Parity (char N)

Description — Sets the parity

Return value — Returns FALSE if invalid parity, otherwise TRUE.

Example:

```
main()
{
        Echo("Setting parity to even.\r\n");
        Parity(E);
}
```

RtsCts (char *ON_or_OFF)

Description — Sets hardware flow control.

Return value — TRUE if set was accomplished, otherwise FALSE.

Example:

```
main()
{
        Echo("Setting hardware flow control.\r\n");
        RtsCts("ON");
}
```

Stop (char *StopBits)

Description — Sets the stop bits. Valid parameters include: “1”, “1.5”, and “2”.

Return value — Returns FALSE if invalid stop bits, otherwise TRUE.

Example:

```
main()
{
        Echo(“Setting stop bits to one.\r\n”);
        Stop(“1”);
}
```

StrCpy (char *String1, char *String2)

Description — Copies String1 to String2, including the terminating null character.

Return value — The function returns a pointer to string2.

Example:

```
main()
{
        char String1[20] = “STRING”;
        char String2[20];
        Echo(“Copying String1 to String2.\r\n”);
        StrCpy(String1, String2);
}
```

StrLen (char *string)

Description — The StrLen function returns the length in bytes of string, not including the terminating null character (‘\0’).

Return value — The StrLen function returns the string length.

Example:

```
main()
{
        int i;
        char string[20] = “STRING”;
        Echo(“Getting length of string.\r\n”);
        i = StrLen(string);
}
```

TelenetPhone ( )

Description — Returns the Telenet phone number string

Return value — Returns a pointer to the string in your services setup for the Telenet number.

Example:

```
main()
{
        char number[50];
        Echo("Copying info into number.\r\n");
        StrCpy(TelenetPhone(), number);
}
```

TymnetPhone ( )

Description — Returns the Tymnet phone number string

Return value — Returns a pointer to the string in your services setup for the Tymnet number.

Example:

```
main()
{
        char number[50];
        Echo("Copying info into number.\r\n");
        StrCpy(TymnetPhone(), number);
}
```

Wait (int NumSeconds)

Description — Pauses NumSeconds number of seconds.

Return value — Always returns TRUE.

Example:

```
main()
{
        Echo("Waiting ten seconds.\r\n");
        Wait(10);
}
```

XonXoff (char *ON_or_OFF)

Description — Sets software flow control.

Return value — TRUE if set was accomplished, otherwise FALSE.

Example:

```
main()
{
        Echo("Setting software flow control.\r\n");
        XonXoff("ON");
}
```

Appendix B
Terminal Emulation Keys

VT52/100/102 Key Name	Macintosh Key
PF1	Option-F1
PF2	Option-F2
PF3	Option-F3
PF4	Option-F4
Shift-Print (Print Screen)	Shift Option-F1
Ctrl-Print (Autoprint)	Shift Option-F2
Cursor Up	Cursor Up
Cursor Down	Cursor Down
Cursor Left	Cursor Left
Cursor Right	Cursor Right
Application Keypad Mode 0	Keypad 0
Application Keypad Mode 1	Keypad 1
Application Keypad Mode 2	Keypad 2
Application Keypad Mode 3	Keypad 3
Application Keypad Mode 4	Keypad 4
Application Keypad Mode 5	Keypad 5
Application Keypad Mode 6	Keypad 6
Application Keypad Mode 7	Keypad 7
Application Keypad Mode 8	Keypad 8
Application Keypad Mode 9	Keypad 9
Application Keypad Mode (Minus)	Keypad -
Application Keypad Mode (Comma)	Keypad *
Application Keypad Mode (Period)	Keypad .
Application Keypad Mode (Enter)	Keypad +

Appendix C
ASCII Character Table

CTRL	CODE	DEC	HEX
@	NUL	0	00
A	SOH	1	01
B	STX	2	02
C	ETX	3	03
D	EOT	4	04
E	ENQ	5	05
F	ACK	6	06
G	BEL	7	07
H	BS	8	08
I	HT	9	09
J	LF	10	0A
K	VT	11	0B
L	FF	12	0C
M	CR	13	0D
N	SO	14	0E
O	SI	15	0F
P	DLE	16	10
Q	DC1	17	11
R	DC2	18	12
S	DC3	19	13
T	DC4	20	14
U	NAK	21	15
V	SYN	22	16
W	ETB	23	17
X	CAN	24	18
Y	EM	25	19
Z	SUB	26	1A
[	ESC	27	1B
\	FS	28	1C
]	GS	29	1D
^	RS	30	1E
-	US	31	1F

CODE	DEC	HEX
SP	32	21
!	33	21
"	34	22
#	35	23
$	36	24
%	37	25
&	38	26
'	39	27
(	40	28
)	41	29
*	42	2A
+	43	2B
,	44	2C
-	45	2D
.	46	2E
/	47	2F
0	48	30
1	49	31
2	50	32
3	51	33
4	52	34
5	53	35
6	54	36
7	55	37
8	56	38
9	57	39
:	58	3A
;	59	3B
<	60	3C
=	61	3D
>	62	3E
?	63	3F

CODE	DEC	HEX
@	64	40
A	65	41
B	66	42
C	67	43
D	68	44
E	69	45
F	70	46
G	71	47
H	72	48
I	73	49
J	74	4A
K	75	4B
L	76	4C
M	77	4D
N	78	4E
O	79	4F
P	80	50
Q	81	51
R	82	52
S	83	53
T	84	54
U	85	55
V	86	56
W	87	57
X	88	58
Y	89	59
Z	90	5A
[	91	5B
\	92	5C
]	93	5D
^	94	5E
-	95	5F

CODE	DEC	HEX
`	96	60
a	97	61
b	98	62
c	99	63
d	100	64
e	101	65
f	102	66
g	103	67
h	104	68
i	105	69
j	106	6A
k	107	6B
l	108	6C
m	109	6D
n	110	6E
o	111	6F
p	112	70
q	113	71
r	114	72
s	115	73
t	116	74
u	117	75
v	118	76
w	119	77
x	120	78
y	121	79
z	122	7A
{	123	7B
|	124	7C
}	125	7D
~	126	7E
DEL	127	7F

Appendix D
AT Command Set Summary

Most modems used with Macintosh computers implement the AT Command Set as a method of issuing commands to the modem. The actual implementation by your modem's manufacturer is documented in the hardware manual included with your modem. The chart below is a summary of many of the more commonly used AT commands. Many users may never find a need to use this command set, as MacComCenter does much of the work for you.

Command	Description
AT	Attention command. precedes command line
A/	Repeat preceding command
A	Answer call immediately
DT	Dial Touch Tone mode
DP	Dial Pulse mode
E	Command Echo disabled
E1	Command Echo enabled
H	Hangup (on-hook)
H1	Off hook
I	Output product code to Mac
L	Speaker volume (L0, L1, L2, L3)
M0	Speaker off
M1	Speaker on until Carrier Detect
M2	Speaker always on
M3	Speaker on from dial to Carrier Detect
O	Return to on-line communications
O1	Return to on-line communications and retrain
Q	Send result code messages
Q1	Do not send result code messages
Sr?	Read and display contents of register (r)
Sr=n	Set register (r) to value (n), ATS0=1, answer phone on first ring
V	Result code messages sent in numeric format
V1	Result code messages sent in English word format
X	Extended status mode
Y	Long space disconnect
Z	Reset and initialize modem
+++	Escape code from on-line to command state

Appendix E
Troubleshooting

General/Data Communication Troubleshooting

You cannot hear the modem.

- Add M1L3 to the end of your Initialization String in the *Modem Setup* dialog.

When you type a character in the Terminal Window, it appears twice or not at all.

- MacComCenter has its *Local Echo* feature turned on and the modem's echo feature is also turned on. If the system you are calling echoes your typed characters, turn off *Local Echo* in the *Terminal Setup* dialog.

Your modem or fax/modem disconnects while communicating remotely.

- If your connection is at 19200 bits per second or greater and hardware flow control is ON, ensure you have &D0 set in your initialization string.
- The other side has hung up.
- Your telephone line may have call waiting and a call has come in. It can be disabled in the *Modem Setup* dialog by putting the disable call waiting AT command in your Dial Prefix. If this does not work, contact your local telephone company.
- Someone may be picking up an extension connected to the line your modem or fax/modem is using.
- You are using an MNP 5 or V.42bis modem and the other modem does not support MNP 5 or V.42bis. Refer to your modem manual and disable them.

After installation of MacComCenter your menus are slower when using a 68000 CPU Macintosh.

- Disable Hot Keys from the *Fax* dialog, under the *SETUP* menu.

A voice call comes in on the phone line, and the caller hears fax/modem tones.

- If the modem is allowed to answer the phone, it **will** generate tones. If you intend to use the modem software for FAX reception, it's best to tell MCC to answer after the 5th ring. If a call comes in, the modem will remain inactive until the 5th ring is detected. In the mean time, this allows you to answer the phone. If fax tones are heard, you can manually start a FAX reception by selecting *Manual Receive* under the *Fax Controller*, or press **Command - M**.

  Other options are to get a dedicated fax phone line or to purchase a voice\fax switch. A voice\fax switch can determine the type of call and pass the call to the appropriate device. For example a voice call would be routed to your answering machine, while a fax call would be transferred to the fax modem.

Fax Troubleshooting

MacComCenter is not able to connect or receive faxes from remote fax sources.

- Ensure the Fax Manager is loaded and Fax Receiving is enabled.

- Your fax/modem may not be compatible with the specific brand of fax that you are connected with. Contact the modem manufacturer to determine if there is a known problem.
- Some fax machines cannot handle certain Fax IDs. For example, some fax machines require only numbers as the Fax ID, while others require only upper case or no spaces. Your Fax ID can be changed in the *Fax Setup* dialog.

MacComCenter connects to the remote fax machine, but none of the document pages are sent or are blank.

- If you have scheduled the fax to be sent, you may have deleted the fax document before it was sent.
- You may be trying to send a fax from the floppy disk. This is not recommended, since disk access times are longer when files are on the floppy drive. Copy the file to your hard disk and try again.

Faxes are being sent at a lower baud rate than the rated speed of the fax/modem or the specified maximum baud rate in the Send Fax dialog.

- Your fax/modem can't connect at the faster baud rate. This can be caused by poor line quality, speed limitations of the receiving fax machine, or a hardware incompatibility. This is not necessarily indicative of any problem with your fax/modem.

When you view a received fax, there appear to be missing lines, garbage, or "bar code".

- Your fax/modem may be incompatible with the sending hardware.
- There may have been a bad telephone connection for the call.
- Your fax modem may be improperly installed or damaged.
- Toggle RTS/CTS flow control under *Modem Setup*.

You wish to change the fax class used by the Fax Manager.

- At the beginning of the installation, instead of having the Installer auto-detect the fax class, manually select either Class 1 or Class 2 and continue installing.

Error Messages

The Fax Manager could not find your fax/modem on the Modem Port. Fax receiving has been turned off.

- During Macintosh startup, the Fax Manager is loaded automatically to receive any faxes that may arrive during the time that the computer is in use. This message indicates that the modem may not be connected to the correct Macintosh Serial port or the modem is not turned on or is not functioning correctly.

Modem is not responding to initialization string.

- During MacComCenter program execution, Hayes modem initialization commands are sent to the modem to prepare it for data/fax communications. This message indicates that the modem may not be connected to the Macintosh modem port, or that it is not functioning properly. Ensure that the modem is powered on.
- Some modem models require special initialization strings. Refer to your modem manual for information on recommended initialization strings.

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