Parts of this manual refer to software modules that are not included in the public domain release. Please consult the Release Notes in the TOPS Terminal READ ME file for details.

TOPS Terminal®

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

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newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

newpath
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468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

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newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
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468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
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468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

newpath
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468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Preface:

Before You Begin

Welcome to TOPS Terminal! TOPS Terminal allows you to use your Macintosh to communicate with other computers on a local area network or over a modem and phone line. This section tells you what hardware you need to use TOPS Terminal and how to install TOPS Terminal software on your Macintosh. It also includes information about this manual and about on-line and telephone help.

Hardware & Software Requirements

To use TOPS Terminal, you need:
  • **Macintosh computer**

    - 512KE, Macintosh Plus, Macintosh SE, or Macintosh II
    - System 4.1 and Finder 5.5, or higher

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

- Two two-sided (800K) floppy drives or one 800K + hard disk
   (a hard disk is recommended for best performance)

• Network and/or phone connection for Macintosh

The network connection can be an AppleTalk-Ethernet combination or direct Ethernet. (*AppleTalk* in this context refers to a local area network cabling system which plugs directly into a standard Macintosh.) If you do not have a direct Ethernet connection, your AppleTalk network must be connected to Ethernet through an AppleTalk/Ethernet gateway (such as the Kinetics, Inc. FastPath product).

TOPS Terminal will also allow you to connect directly to a remote computer through the Macintosh modem port using what is known as a "null-modem" or "modem eliminator" cable (Apple Part Number 590-0029-00).

Copy Master Disk

The TOPS Terminal software is distributed on one 800K floppy disk. The programs contained on the disk are not copy-protected, so you may run them either from a floppy disk or from a hard disk. The first thing that you should do, however, even before installing TOPS Terminal, is to make a copy of the master distribution disk. Then put the master disk in a safe place. If the copy is lost or becomes damaged, you can always make another copy of the master disk.

Software Installation

The TOPS Terminal program disk contains the System Administrator folder and three files: the TOPS Terminal program itself, TOPS Terminal Help, and the TOPS TCP/IP module (TCP/IP is a recognized standard for network specification; see the Introduction following this Preface for a detailed description).
See the "System Administration Guide" (Appendix G) if you are responsible for installing network software from the System Administrator folder. Kipper, a program that automatically assigns addresses to the Macintoshes on a network, is included in the System Administrator folder; Appendix G includes a description of Kipper and instructions for installing it.
Follow the instructions below to install TOPS Terminal, TOPS Terminal Help, and TOPS TCP/IP.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Installing TOPS Terminal & TOPS Terminal Help

• Copy *TOPS Terminal* and *TOPS Terminal Help*

• **Hard disk system**: copy *TOPS Terminal* and *TOPS Terminal Help* into a folder on your disk.

• **Floppy-disk system**: use your copy of *TOPS Terminal* and *TOPS Terminal Help* in the external drive, while keeping your system disk in the internal drive.

Installing the TOPS TCP/IP Module

Note: If you plan to run TOPS Terminal over modem or direct serial connections only, you do not have to install the TOPS TCP/IP module. In that case, you may skip the following procedure.

1. Copy *TOPS TCP/IP* into the System folder.

Copy onto your hard disk or a floppy, depending on what kind of system you have.

Software installation is complete, except for restarting your Macintosh to install the TCP/IP module.

2. Restart your Macintosh to install the TCP/IP module.

Ideally, your network has been set up with Kipper, a dynamic IP address server. If Kipper is running on your network, TOPS TCP/IP will find an address for your Macintosh automatically every time you restart the Mac. If the address is found, the TOPS Terminal logo will appear momentarily as your Macintosh is starting up and you will reach the Macintosh Desktop. There is no need for you to do any further configuration. You may now start TOPS Terminal, as explained in Chapter 1.

If Kipper or another KIP server has not been installed on your network, you may see the following dialog window when you restart your Macintosh, in which case you may have to configure TOPS TCP/IP by hand:

There's a problem starting TOPS TCP/IP.

Either I can't find a KIP server with which I could set up TOPS TCP/IP, or you haven't set it up correctly by hand.

Don't Install TOPS TCP/IP   Configure TOPS TCP/IP By Hand   Try To Find a KIP Server
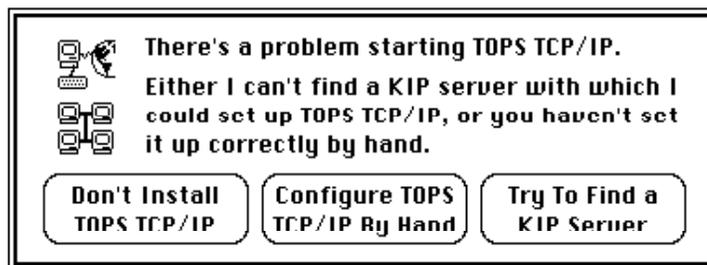
This indicates that you have installed TOPS TCP/IP in your system folder, but that necessary network information about your Macintosh is not available to TOPS Terminal. To continue now, you have three choices:

• **Select *Don't Install TOPS TCP/IP.***

This means that you will not be able to use TOPS Terminal to log on to a computer on your local network. You will be able to start up TCP/IP by configuring it from the Control Panel, as

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

described in "Setting Your Mac's Network Address" below. Phone connections are not affected by TCP/IP.

- **Select *Try To Find a KIP Server.***

    This tells the Macintosh to look again for a KIP server which has your Macintosh's network address and other network information.

- **Select *Configure TOPS TCP/IP By Hand.***

    This involves providing the network address of your Macintosh, plus other configuration information. See the instructions below.

Setting Your Mac's Network Address

Note: you can skip this procedure if you will be making phone connections only or if your network is using Kipper to automatically assign an address to your Macintosh. System administrators should see Appendix G for a discussion of Kipper and instructions for installing it.

1. Click on *Configure TOPS TCP/IP By Hand*.

    You will be asked to set the addresses of your Macintosh and your AppleTalk/Ethernet gateway (if you are using one), and subnet shift and size if appropriate on your network; see your system administrator if you have questions about these numbers.

```
You may set the addresses of your
Macintosh and a local gateway,
and the subnet shift and size.
See your system administrator if
you need help.

Your Macintosh: [0.0.0.0        ]

A Gateway:      [0.0.0.0|       ]

⊠ Are subnets in use locally?

Subnet Shift:   [0             ]

Subnet Size:    [0             ]

        ( OK )        ( Cancel )
```

2. Type the IP address of your Macintosh.

    Replace the first *0.0.0.0* with the IP address of your Macintosh. An IP (Internet Protocol) address is composed of four numbers separated from one another by periods. Get this number from your system administrator.

    Use the mouse or press the *Tab* key to move the vertical cursor to the gateway box.

3. Type the gateway address.

    Replace the second *0.0.0.0* with the IP address of your AppleTalk/Ethernet gateway. Get this number from your system administrator, also.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

4. Enter subnet shift and size, if necessary.

Check with your system administrator to see if you need to include subnet shift and size values; if so, enter the appropriate values. Otherwise, uncheck the box labeled "Are subnets in use locally?".

Assuming subnet shift and subnet size of eight, which is common, the dialog window will look like the following, with your Macintosh's address and gateway (if any) filled in:
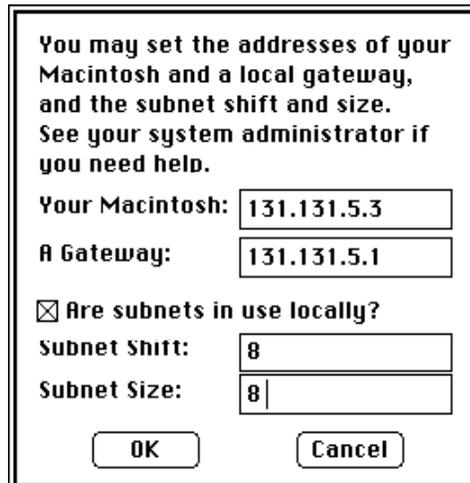
```
You may set the addresses of your
Macintosh and a local gateway,
and the subnet shift and size.
See your system administrator if
you need help.

Your Macintosh:  131.131.5.3

A Gateway:       131.131.5.1

⊠ Are subnets in use locally?
Subnet Shift:    8
Subnet Size:     8|

      OK              Cancel
```

5. Click *OK*.

You are finished setting up IP addresses for your Macintosh and its gateway (if any). Check the address as described below, read "About this Manual" starting on page xvi, or go on to Chapter 1 if you want to see how to start TOPS Terminal.

Checking Your Mac's Network Address

If you want to check that TOPS TCP/IP got these addresses right, do the following:
1. Select the *Control Panel* Desk Accessory.

Select the Control Panel, which is one of the accessories listed in the Apple (□) menu at the top left of the Macintosh screen.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
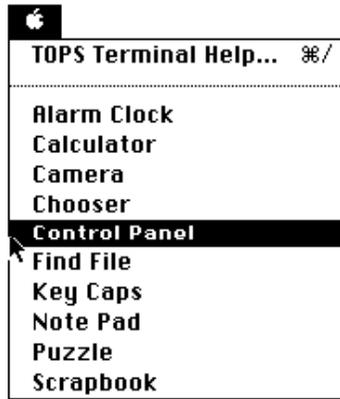
The Control Panel will be displayed. TOPS TCP/IP should be one of the entries. (Resources are arranged alphabetically along the left side, so you may need to scroll downward to find TOPS TCP/IP.)

2. Click on the *TOPS TCP/IP* icon.

The Control Panel will display TOPS Terminal information. The value for *My Internet Address* at the top right of the window should be the one you specified above.
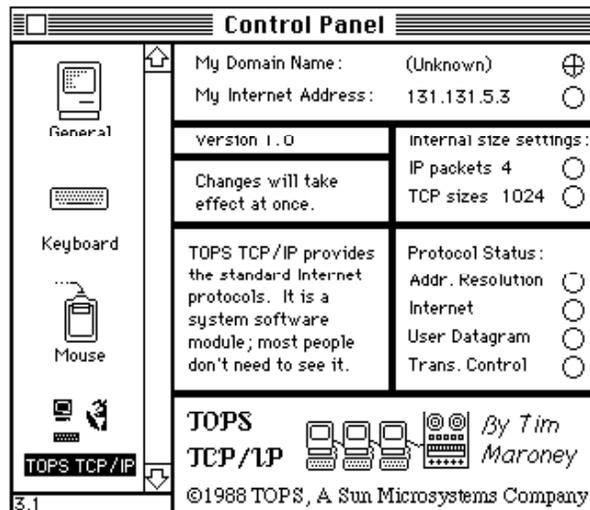
3. Change IP address, if necessary.

If the address isn't correct (perhaps because you mistyped the address), you can change the IP address without having to restart your machine by clicking on the round button to the right of the Internet Address. The dialog window for entering your Mac's address and its gateway will reappear. Enter the correct addresses and click *OK*.

You can also enter a domain name by clicking on the *My Domain Name* button above the

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Internet button. A domain name gives a computer a name within a group of networks on the ARPANET. An example is *suntops.sun.com,* which identifies the computer *suntops* in the subdomain *sun* in the subdomain *com* (commercial). See your system administrator if you have questions about domain names.

4. Click the close box.

When you are finished, click the close box in the upper left-hand corner of the Control Panel. See Chapter 1 for instructions for starting TOPS Terminal.

About this Manual

This manual contains information for three types of TOPS Terminal users: those who want to use TOPS Terminal's basic functions, those who want to customize TOPS Terminal and use its more advanced functions, and those who will be administering a network of Macintoshes running TOPS Terminal.

If you are in the first category, use this manual to learn how to use TOPS Terminal and to refresh your memory about specific functions. The material of most interest to you is the Introduction, Chapters 1 to 6, Appendix A, and Appendix H.

If you are a more advanced user, you will refer to the material in Appendices B to F. If you are responsible for assigning network and IP addresses, you will need to read Appendix G, the "System Administration Guide."

This section gives you an overview of the chapters and appendices in this manual and explains organizational and typographic conventions that have been followed.

Manual Overview

Introduction, "About TOPS Terminal," is an overview of TOPS Terminal, with discussions of its primary functions and features, plus a description of TCP/IP (network protocols), and an explanation of how you can use TOPS Terminal with TOPS Network or other file server software.

Chapter 1, "Getting Started," shows you how to start and quit TOPS Terminal and describes some basic TOPS Terminal concepts and terms you need to know.

Chapter 2, "Manual Connections," leads you through two sample TOPS Terminal sessions: a manual network connection and a manual phone connection.

Chapter 3, "Automatic Connections," shows you how to create computer and account descriptions for making automatic connections to remote computers. You also learn how to modify and remove computer and account descriptions. Finally, you learn how to make automatic connections for various purposes, and about saving transcripts of terminal sessions.

Chapter 4, "Terminal Emulation," discusses terminal sessions, the primary type of connection you will make to a remote computer with TOPS Terminal. In particular, you learn about using your Macintosh in terminal-emulation mode on a remote computer, and the functions that are available to you in the *Network* menu during terminal sessions. Also included is an explanation of "power keys," which give you keyboard equivalents for menu selections, mouse movements, and button pushes.

Chapter 5, "File Transfers," explains file transfer formats and file-naming conventions, and shows you how to copy files between your Macintosh and remote computers.

Chapter 6, "Text Editing and Printing," shows you how to edit text files — on your Macintosh or on a remote computer connected to your Macintosh with TOPS Terminal — and how to print those files.

Appendix A, "Quick Reference Guide," displays TOPS Terminal menus, which include keyboard

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

equivalents for the menu functions, and gives you step-by-step summaries of TOPS Terminal functions.

Appendix B, "Preference Settings," describes the *Settings* menu selection, *Your Preferences*, which lets you set a number of TOPS Terminal variables, including printing font, display of full or short menus, and text wraparound during terminal sessions.

Appendix C, "Modems," tells you how to create, modify, or remove modem descriptions.

Appendix D, "Scripts and Macros," explains how to write, test, and edit scripts and macros to customize the interface between your Macintosh and other computers.

Appendix E, "Operating Systems & Services," tells you how to create, modify, and remove operating system and service descriptions. It also includes a graphic depiction of the hierarchical structure of TOPS Terminal.

Appendix F, "Sign Up Files," explains how to create and edit a sign-up file, a file that lists computers that can be used in account descriptions.

Appendix G, "System Administration Guide," provides technical information about IP addressing on your network; included are descriptions of subnetting, dynamic addressing, and the Kinetics FastPath gateway.

Appendix H, "Trouble Shooting," tells you what to do if something goes wrong while you are using TOPS Terminal.

The **Glossary** lists and describes many of the networking and communications terms that are used to describe TOPS Terminal. If you are uncertain about the meaning of a term encountered in the manual, look there for a brief definition.

The **Index** at the back of the manual will help you find specific procedures and functions in the manual.

Organizational and Typographic Conventions

Major Heading

Major headings are in 14-point, Italic bold type, underlined. They are the major entries under chapter titles in the Table of Contents.

Secondary Heading

Secondary headings are in 12-point, Italic bold type; they appear in the Table of Contents indented under major headings.

Procedures you perform are indented one-half inch from left margin, numbered, and in bold type:

1. Do this step.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

2. Read the text below this step.

Explanatory text often follows numbered steps, describing what you should see on the screen, explaining the logic behind the step performed, or explaining your options. In some cases, you may be referred to another section of the manual for further information.

The names of menus, items in menus, and specific text from dialog windows are shown in Italics. For example:

To describe accounts to be used for making automatic connections, you will select *Accounts* in the *Settings* menu. Such text will be both bold and Italic when it is used in a procedure step:

3. Click *Connect* to start the connection process.

Bold type is sometimes used for **emphasis** within a sentence.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

TOPS Terminal Help

Besides this manual, there are two places to look when you have questions about TOPS Terminal: on-line help and telephone help.

On-line Help

On-line help is available for most TOPS Terminal functions. In many cases there is a help button in a dialog window:
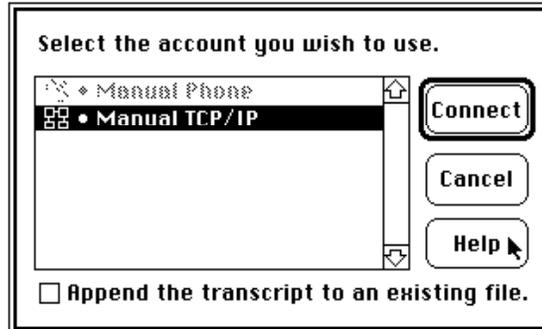
Just click on the button to see an explanation of the particular function and a list of related help articles. At other times there may not be a help button, but you can usually find out more about a subject by pulling down the Apple menu and selecting TOPS Terminal Help:

You will see a list of basic help subjects:
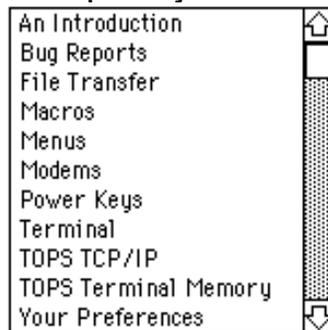
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Select an entry and click the *Next* button to read about the selected subject:

There will usually be a list of related subjects, which you might want to read, also. After you have read a few subject entries, you can trace your way back to where you started by selecting *Back* repeatedly:

Select *All Topics* to see an alphabetic list of all help subjects. Note that *All Topics* is always the last entry in the list of topics; you may have to scroll down the list to display *All Topics*.   Scroll through the list to find what you need and double click on an entry to read more:
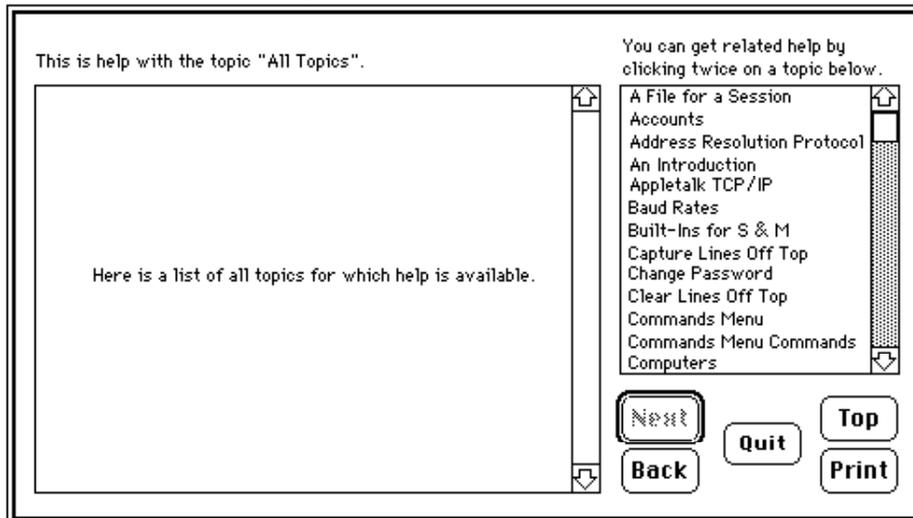
Click the *Top* button to go back to the help Introduction screen. Click the *Print* button to print the current help entry. When you are finished with help, click on the *Quit* button:
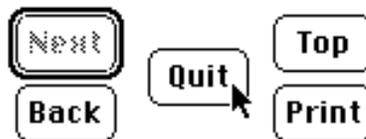

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Introduction:

About TOPS Terminal

This introduction explains what TOPS Terminal is and describes its basic functions and features. It also discusses network communications and TOPS Network software.

Why TOPS Terminal?

The primary purpose of TOPS Terminal is to give you a simple way to connect your Macintosh to another computer so that you can use your Macintosh as if it were a terminal connected to the computer. Two secondary purposes of TOPS Terminal are to make it easy for you to work on the remote computer once you are connected to it, and to

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

provide as many functions between the remote computer and your Macintosh as possible.

TOPS Terminal accomplishes all three of these goals: 1) all you have to do to connect your Macintosh to a remote computer is describe the computer, describe an account on that computer, and select *Terminal Session* in the TOPS Terminal *Network* menu. 2) TOPS Terminal makes it easy for you to work on the remote computer by providing menus of commands and control-key functions that let you work on the remote computer even if you don't know anything about its operating system interface. And 3) TOPS Terminal gives you two other major functions besides terminal emulation: file transfers between the remote computer and your Macintosh, plus a

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

full-featured text editor that you can use to edit files on your Macintosh or on the remote computer.

Continue reading to learn more about why TOPS Terminal is needed, and how TOPS Terminal accomplishes its goals.

What is a Terminal?

To understand what TOPS Terminal is and what it does, it is useful first to understand what a terminal is and why you might want to have one. A terminal, quite simply, is a device that lets you communicate with a computer. The computer may be sitting on your desk in front of you, or it may be somewhere else (in the basement, across the street, or in another city). Usually, a terminal consists of little more than a video display screen and a keyboard, although a more elaborate terminal may also

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

have a modem built into it and perhaps even a mouse or printer attached to it. Computer terminals used to be much more common than they are today, and for good reason: until recently, computer processors, memory, and disk storage devices were very expensive. It made sense to centralize with large, expensive computers, known as mainframes, and later with smaller, but still expensive minicomputers. By attaching inexpensive terminals to a central computer, a computing installation could greatly increase the number of people able to use the computer. The common situation was thus to have many people using a single computer.

The Computer-Terminal Dilemma

As prices for computer processors,

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

memory chips, and disks gradually decreased, many more people were able to afford entire computer systems of their own. The Apple Macintosh and the IBM PC are two common examples of such systems, commonly known as personal computers, microcomputers, or desktop computers. The typical situation with these kinds of computers is to have one person using one computer.

The advent of desktop computers increased the amount of computing power available to the average user, but it drastically reduced file and data sharing, as well as the ability to communicate with other users that was common in a centralized, multi-user environment.

One solution to this dilemma was to write software that permitted personal

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

computers to pretend they were terminals, allowing one computer to connect to another over phone lines or over a direct serial cable. A second solution was to create hardware and software that allow multiple computers to communicate and share resources among themselves over a local area network. In these two different ways, a distributed computing environment was created, so that one person could now access the resources of many computers.

The TOPS Terminal Solution

With TOPS Terminal your Macintosh takes advantage of both of these schemes for sharing resources: it can act as a terminal, able to access the processing power and disk storage of other computers, it can transfer files to

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

or from another computer, and it can edit files on another computer. Thus TOPS Terminal allows your Macintosh to combine both terminal and networking functions.

The special advantage of TOPS Terminal over other solutions is that it gives you operating-system independence: TOPS Terminal does all the remote-computer-interface work for you, allowing you to use the familiar Macintosh-style menu and screen operations for editing, file transfers, and making automatic connections to other computers.

And you can maintain connections with several computers at once, using Macintosh file management and windowing capabilities. TOPS Terminal thus allows you to accomplish much more than you could if you were using a

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

typical, "dumb" terminal. You may think of TOPS Terminal not simply as another communications program, but as a high-powered sessions manager that coordinates single or multiple conversations between your Macintosh and any number of other computers. TOPS Terminal also contains a full-featured text editor, which you can use to edit files on your Macintosh or on a remote computer. When you edit files on a remote computer, TOPS Terminal's windowing capability allows you to open several files at once and to copy text from one file to another file. TOPS Terminal's operating-system independence ensures that the the text you paste into a file on a remote computer adheres to the conventions of that computer's operating system.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

TOPS Terminal Basic Functions

TOPS Terminal performs three basic functions, which are described briefly here and discussed in detail in later chapters:

- **Terminal Emulation**
  TOPS Terminal allows you to conduct terminal sessions on remote computers with your Macintosh, pretending that your Macintosh is any one of a number of kinds of terminals: VT52, VT100, VT102, adm3a, and a simple (or "dumb") terminal. You can access the remote computer with a network connection or with a modem over a phone line.

- **File Transfer**
  TOPS Terminal allows you to copy files from a remote computer to your Macintosh or from your Macintosh to a remote computer. File transfer can be performed with network or phone connections.

- **Editing and Printing**
  TOPS Terminal has a robust, Macintosh-style text editor built into it, which allows you to edit Macintosh text files without leaving TOPS Terminal. The editor can also be used to edit a text file on a remote computer; the file is copied from the remote computer and opened as a TOPS Terminal editor document. You then edit the file using familiar Macintosh editing operations such as selecting, copying, cutting, and pasting. When you save the document, TOPS Terminal automatically copies the edited version of the file back to the remote computer, replacing the original file.

  You can, for example, edit a file on a UNIX system using the TOPS Terminal text editor. Even if you are a novice computer user you can edit non-Macintosh files with ease, without having to learn a complicated text editor.

  You can print a TOPS Terminal editor document (or selected portions of the document) while you are editing it with the TOPS Terminal editor or after you have ended the edit session. You can also print a session transcript (or selected portions of it) during a terminal session on a remote computer. Since the transcript of your terminal session is saved as an editor document by TOPS Terminal, you can also print it after you have logged off from the remote computer.

TOPS Terminal Features

In addition to the three primary functions described above, TOPS Terminal has all the features that you would expect to find in a modern networking and communication software package, plus several others that are not so common:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

- **Operating System Independence**
  TOPS Terminal provides a consistent and uniform user interface, regardless of the operating system the remote computer is running. TOPS Terminal enables you to connect to a computer, execute commands, and disconnect from it by choosing the appropriate menu selections, without having to remember commands and control sequences of the operating system on the remote computer. You can also add new operating system interfaces or customize the ones built into TOPS Terminal.

- **Automatic Connection - TOPS Terminal Memory**
  TOPS Terminal maintains a record of the computers that you connect to, and can, with a click of the mouse, connect to any of them automatically. TOPS Terminal will connect to a remote computer using a user name and password that you have previously supplied. If you select a remote computer that you connect to by phone, TOPS Terminal will automatically dial the appropriate number.

  Your descriptions of accounts and computers are saved in a file called TOPS Terminal Memory. The file is created when you first use TOPS Terminal and is updated every time you make any changes to computer or account descriptions. TOPS Terminal uses this file to make connections to other computers; once you have set up your accounts you don't need to remember the settings, since the connection will be made automatically.

- **Multitasking**
  One of TOPS Terminal's strongest features is its ability to take full advantage of Macintosh windows to allow you to manage several conversations at once. You can, for example, connect to the same remote computer several times, or connect with several remote computers at one time. You can even establish a communications link to a remote computer over a phone line using a modem at the same time that you manage direct communications to one or more hosts on your local area network.   For instance, you could be in the middle of transferring a rather large file from a remote computer to your Macintosh in one window at the same time that you are reading your mail on a different computer in another window.

  TOPS Terminal is fully compatible with the MultiFinder and supports background file transfers.

- **Session Transcripts**
  TOPS Terminal retains the transcript of a terminal session in memory during the session, and saves the transcript as a file on your Macintosh unless you specify otherwise. You can study the transcript, edit it, and print it after you have ended the connection with the remote computer.

- **Scrolling During a Terminal Session**
  Since TOPS Terminal retains the transcript of a terminal session in memory, you can scroll back and forth within the transcript, reviewing previous commands and the results of those commands. Besides giving you a historical record of the transcript, this reduces the need to have the remote computer break the output of commands into screen-sized pages.

- **Power Keys**
  Once you become familiar with TOPS Terminal, you can speed up your terminal sessions by taking advantage of numerous built-in "power keys." Some of these power keys are keyboard shortcuts that reduce your need to move your hands away from the keyboard to use the mouse to select menu items. Other power keystrokes choose buttons in dialog windows.

- **Scripts and Macros**

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Scripts and macros are kinds of programs that perform common tasks such as dialing up remote computers and automatically connecting to them. TOPS Terminal has a number of scripts built in, and you can write your own, if you like.

- **Error-Correction**
 Phone lines and even direct-connect network cables are sometimes "noisy," with the result that the data that one computer sends out may not always be exactly what the other computer receives. For this reason most communications programs employ some method of making sure that the data transfer is being accomplished reliably and without error. The particular way that a program does this is called its "error-correction protocol." TOPS Terminal employs an error-correction protocol known as TCP when operating over a network, and XMODEM when transferring files over phone lines.

Communications Protocols

To communicate across a network or an interconnected group of networks (called an "internet"), TOPS Terminal uses a set of languages or protocols known as the Internet Protocol suite, or more commonly as TCP/IP. This allows your Macintosh to communicate with any remote computer that supports the TCP/IP protocols, without making any modifications to the remote computer's operating system.

A number of network services can be built on top of TCP/IP protocols. The two most common services provided by a network communications package are terminal emulation and file transfers, both of which are described below, after the discussions of TCP/IP.

TCP/IP - the Network Communicator

TCP/IPgets its name from the fact that TCP and IP are the two most commonly utilized protocols in the Internet suite. IP is the Internet Protocol; it sends "packets" of network data to other computers, but does not guarantee their ordering or correctness. TCP (the Transmission Control Protocol) makes sure that network transmissions arrive at their assigned destination intact. It monitors what is sent into the network and arranges to re-transmit any data packets that do not arrive correctly. TCP is also responsible for breaking large network transmissions into bite-sized packets, called "datagrams."

TOPS Terminal allows your Macintosh to speak TCP/IP and thereby to perform the numerous network operations that are built on top of TCP/IP. TCP/IP protocols can be used to communicate across quite different types of physical networks. TOPS Terminal operates over Ethernet alone (for those Macintoshes that have a direct Ethernet connection) or over a combined Local Talk/Ethernet network (bridged by a Kinetics FastPath gateway or other connective hardware).

TCP/IP demands only that the network it operates over be a "packet-switching" network. This means that data transmissions from every computer on the network are broken up into small packets and sent out over a single network wire. Each packet is labeled with the address of its destination (provided by IP) and a number that allows the remote computer to detect whether the packet has been damaged in transit (provided by TCP).

TELNET - Network Terminal Emulation

Network terminal emulation, or the ability to use your local computer as if it were a terminal directly connected to a network host, is provided by a further protocol known as TELNET. TELNET services are built on top of the underlying TCP/IP protocols.

In TOPS Terminal, TELNET services are provided by the *Terminal Session* command under the

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Network menu. Once you have successfully opened a terminal session on a remote network computer (which can be handled automatically by TOPS Terminal), characters typed in a session window on your Macintosh are sent to the remote computer. When connected to the remote computer your Macintosh behaves exactly as if were a terminal connected directly to that host. (TOPS Terminal provides additional capabilities not possible with a standard terminal, as described in "TOPS Terminal Features" above.)

FTP - File Transfer Protocol

File Transfer Protocol (or FTP for short) defines a protocol for transferring files to and from any network computer that the user has permission to access. Like TELNET, FTP services are built on top of the underlying TCP/IP protocols.
In TOPS Terminal, FTP services are provided by the *File Session* command under the *Network* menu. Once you have successfully opened a file transfer session on a remote computer, you can use the *Send File* and *Receive File* commands in the *Network* menu, as well as other TOPS Terminal menu functions. The details of FTP file transfer are displayed in the file session window; the transcript of this conversation between the two computers might be useful if there are any problems with the transfer.

XMODEM - Phone-Connection Protocols

For communications between modems over phone lines, TOPS Terminal employs XMODEM protocols, which provide terminal session services only; phone-connection file transfers must be accomplished during terminal sessions, and not during file sessions as they are for network connections.

TOPS Terminal and TOPS Network

If you are using TOPS Terminal in conjunction with TOPS networking software, you can derive additional benefits. You can use TOPS Terminal's built-in text editor to edit files mounted from a remote TOPS server. For example, you can edit IBM PC text files on your Macintosh if you have mounted the PC directory as a local Macintosh volume.
If you are using the TOPS networking software, you can also effect "third-party" file transfer by using TOPS Terminal to copy files from a TOPS server to a network computer that is not running TOPS. You can copy a file from an IBM PC or a Sun Workstation running TOPS to a mainframe connected to the network by mounting the PC or Sun directory as a TOPS volume on your Macintosh and using the *Send File* command in TOPS Terminal. Similarly, you can copy a file from the mainframe to a Sun or a PC running TOPS: mount a directory from the Sun or the PC as a TOPS volume on your Macintosh and execute the *Receive File* operation from TOPS Terminal.
Chapter

1

Getting Started

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

This chapter explains how to start up and quit TOPS Terminal, explains some basic TOPS Terminal concepts and terminology, and describes the primary TOPS Terminal menus.

Starting Up & Quitting TOPS Terminal

Startup

Once the software has been installed, as described in the Preface, you are ready to run TOPS Terminal.

1. Double click on the TOPS Terminal icon.

TOPS Terminal

This will start up TOPS Terminal. If you have not run TOPS Terminal before, you will see the following box:

Help screens are available from almost anywhere in TOPS Terminal, as explained in the Preface. If you were to click on the *Help Me* box, you would see a list of help topics to choose from. To continue the startup process, do the following:

2. Click *Don't Help Me*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

You will see the TOPS Terminal startup logo in the center of the screen, with four of the TOPS Terminal menus — *File, Edit, Network,* and *Settings* — listed at the top:

```
  File  Edit  Network  Settings



          TOPS Terminal

      © 1988 Sun Microsystems, Inc.
                        All rights reserved.
```
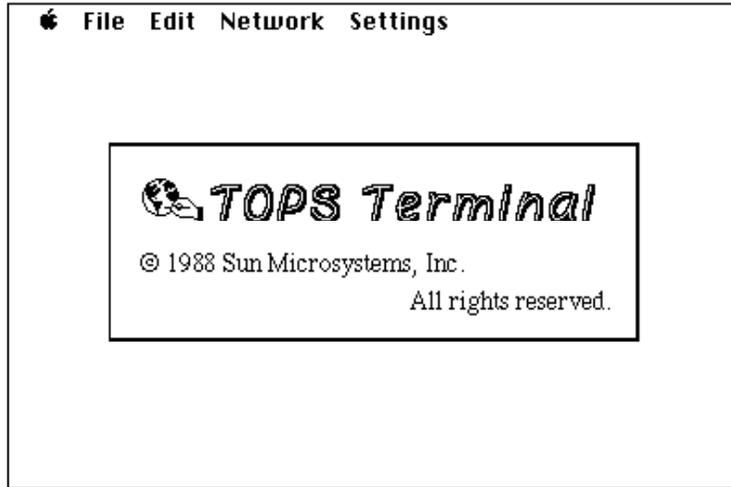
You are now ready to use TOPS Terminal for terminal emulation, file transfers, or document editing. See Chapters 2 to 6 for detailed explanations and instructions.

Quitting TOPS Terminal

When you are finished working with TOPS Terminal:

1. Select *Quit* in the *File* menu:

```
File
New               ⌘N
Open              ⌘O

Close             ⌘W
Revert To Saved...
Delete...

Save              ⌘S
Save As...        ⌘Y
Save Selection... ⌘

Page Setup...     ⌘J
Print Document... ⌘P
Print Selection...⌘M
Print Many...     ⌘L

Quit              ⌘Q
```
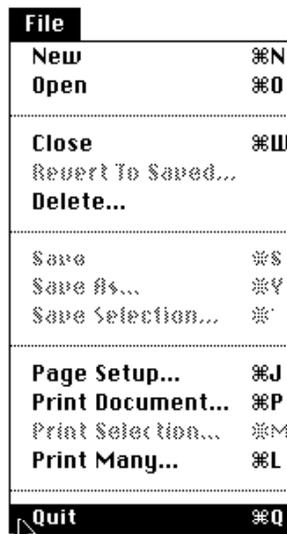
Normally you will log off from remote computers and close all session windows by clicking on the close box before quitting. In that case, TOPS Terminal will close all its files and processes and return you to the Macintosh Desktop (unless you are using MultiFinder).

If you quit TOPS Terminal without logging off from a remote computer connection, which is not recommended, you will be asked if you really want to terminate the connection:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
Are you quite sure that you
want to kill the connection to
Manual Phone?

      Yes          No
```
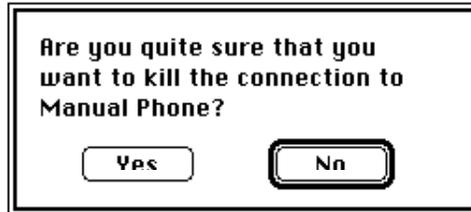
2. Click *Yes* or *No*.

If you have not saved changes to an editor document or to a session transcript that was being saved, you will be asked if you want to save the changes:

```
You have made changes to "file
1," but you have not saved them.

Do you want to save the changes
that you have made?

          Yes

      No        Cancel
```
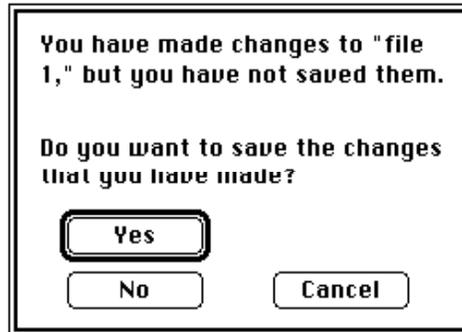
3. Click *Yes* or *No*.

Unless other sessions are active or unsaved files are open (or unless you are using MultiFinder), you will be returned to the Macintosh Desktop.

To learn about TOPS Terminal concepts, terminology, and conventions, continue reading below. If you are anxious to start using TOPS Terminal, skip ahead to the locations noted in parentheses:
- Making a manual connection to a remote computer (Chapter 2)
- Creating computer and account descriptions for automatic
   connection to a remote computer (Chapter 3)
- Automatically connecting to a remote computer (Chapter 3)

What You Need to Know

A number of concepts and terms are discussed below, with the idea that this background will make it easier for you to understand TOPS Terminal and its capabilities:
- Automatic connections and accounts
- Network accounts and phone accounts
- TOPS Terminal Memory
- Windows
- Session transcripts
- File Naming

See the Glossary at the back of this manual for explanations of additional concepts and terms.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Automatic Connections and Accounts

One of the most important features of TOPS Terminal is that it enables you to log on to remote computers automatically, and, once you are logged on, to perform various terminal emulation, file transfer, and document editing functions without being familiar with the operating system of the remote computer to which you have logged on.

To prepare for an automatic connection to a remote computer, therefore, you must not only provide TOPS Terminal with login information, but also with information TOPS Terminal needs in order to interface with the computer's operating system. This preparation entails creating an account description, which is then used to automatically connect to a remote computer. In creating the account description (see Chapter 3), you tell TOPS Terminal how to interface with the remote computer.

TOPS Terminal then provides you with a number of terminal and file transfer services, which are part of an operating system description. You can use TOPS Terminal menus during terminal emulation sessions on a remote computer, and you can transfer files or edit documents, without knowing the details of how TOPS Terminal interfaces with the remote computer's operating system.

TOPS Terminal includes descriptions of several of the most common operating systems. To learn how to create new operating system descriptions or customize existing descriptions and to see a graphic depiction of the hierarchical structure of TOPS Terminal, see Appendix E.

Network Accounts & Phone Accounts

The terminal and file transfer services provided by TOPS Terminal depend on whether the connection between your Macintosh and the remote computer is a network or phone connection.
Network connection: one made to a remote computer located on a network that you can reach without using a modem attached to your Macintosh. In most cases such a network is a local area network located in the same building as your Macintosh and physically attached to the same network cable. In other cases one or more of your computers may be connected to a wider network community (or Internet) such as ARPANET; to TOPS Terminal this represents a network connection, even if phone lines and modems are involved — as long as your personal modem is not being used.
Phone Connection: one made through a modem attached directly to your Macintosh or one shared by your AppleTalk network (Shiva NetModem, for instance).

Because of differences between the communications protocols used by network and phone connections, some TOPS Terminal functions work differently, depending on whether you are using a network or phone account to make an automatic connection to a remote computer. The differences are summarized in the table below:

Function to Perform	TOPS Terminal Service to Use	
	Network Account	**Phone Account**
Terminal Emulation	Terminal Session	Terminal Session
File Transfer	File Session	Terminal Session
Remote Editing	File Session	Not available

As you can see from the table, terminal emulation is accomplished with terminal sessions for both network and phone accounts. File transfers, however, are performed differently for the two types of accounts. Specifically, network account file transfers are performed during file sessions, with FTP (File Transfer Protocol) available to make the process very simple. Phone account file

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

transfers are performed during terminal sessions; you log on to the computer, start up a transfer process on the remote computer, and then do the transfer from TOPS Terminal.

TOPS Terminal Memory

TOPS Terminal Memory is the file where TOPS Terminal stores descriptions of accounts, computers, operating systems, and services that you create or modify. The file is kept in your System folder. Since it contains important information that you will use regularly for making automatic connections to remote computers, you should back it up to a floppy disk whenever you make changes to it.

Windows

Whenever you start a terminal session or file session, or when you edit a document, you open a TOPS Terminal session window. These windows, like most Macintosh windows, can be moved or sized, and you can scroll in a window by using the scroll arrows and scroll bars.
The kind of TOPS Terminal window displayed (terminal session, file session, editor document, editing a macro or script) is indicated by a status box in the lower left corner of the window.
To move a window, position the pointer in the title bar at the top of the window (the pointer will become a hand), hold down the mouse button, and move the mouse. Note that many of the TOPS Terminal dialog windows can be moved in the same way.
To change the size of a session window, position the pointer in the size box at the lower right of the window (the pointer will become a hand), hold down the mouse button, and move the mouse to shrink or expand the size of the window. Click on the zoom box at the top right of a window to toggle between a full-size and a smaller window.
You may open several terminal or file session windows at once, making several connections to the same computer or separate connections to several computers (you can only make one phone connection at a time, however). You can open a number of editing windows, as well.
Although you can open a number of windows at one time, you can only work in the 'active' window — the one in the foreground. There are two ways to bring a background window to the foreground: if the window you want to switch to is partially visible behind the active window, click anywhere in the window you want to move to; the selected window will move in front of any windows that were previously covering it, and it will become the active window for any keyboard or mouse functions.
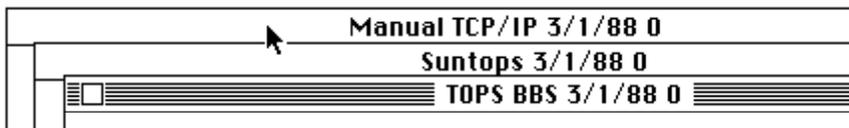
If the window that you want to move to is obscured by other windows, you can bring it to the foreground by using the *Windows* menu. When you click and hold on the menu, you will see a list of all the windows currently open; for example:
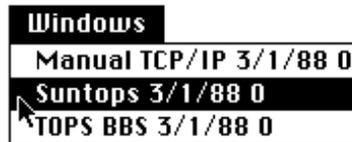
To select a window, click and hold while moving the mouse until the window you want is highlighted; then release the mouse button to bring the selected window to the foreground.

Session Transcripts

When you connect to a remote computer, all that you type, plus the remote computer's

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

responses, are displayed in a session window. During a session, the status box at the bottom-left of the session window reads "Connected to [name of computer]."

Some or all of what appears in the session window remains in memory on your Macintosh during a terminal session; that which remains in memory is the session transcript. A check box in the *Description of an Account* dialog window and the two *Network* menu commands, *Clear Lines Off Top* and *Capture Lines Off Top,* determine whether all or part of what is displayed during a session remains in memory. The *Don't Capture Lines Off Top* check box is explained in Chapter 3; the two *Network* menu commands are described in Chapter 4.

A session transcript may or may not be saved to a disk file, depending on choices you make when you describe an account, when you select an account to start a terminal session, during a terminal session, or after you log off from a remote computer. Saving session transcripts to disk is discussed in Chapter 4.

When you log off from a remote computer during a terminal or file session, a session transcript becomes an editor document — a document that can be edited with the TOPS Terminal editor. The status box at the lower-left of the session window changes from "Connected to [computer name]" to "Editor Document." Editing is discussed in Chapter 6.

File Naming

When you name files within TOPS Terminal, you should be aware of the naming conventions for the system you are working on. The chart in Chapter 5 gives you a brief summary of naming conventions for UNIX, VMS, and Macintosh operating systems. Note especially the special characters that are not allowed on the various systems: slashes, asterisks, question marks, and other special characters on UNIX; colons on Macintosh; just about any special character except a hyphen on VMS.

Note: TOPS Terminal automatically creates terminal session transcript names that include slashes as part of the date; since slashes are not allowed on UNIX systems, you will have to rename these files before copying them to a UNIX computer (unless you copy them with TOPS).

TOPS Terminal Menus

The Apple menu and four primary TOPS Terminal menus are available when you start TOPS Terminal:

🍎 File Edit Network Settings

When you are connected to a remote computer or when you are editing a file, two additional menus — *Windows* and *Text*— will be available.

🍎 File Edit Network Settings Windows Text

See brief descriptions of each menu below, and further explanations throughout the manual. Select an item in a menu as with any Macintosh application: move the arrow cursor to the menu you want to select, click and hold the mouse button while you move the mouse down until the item you want is selected, and release the button.

File Menu

The *File* menu looks like a standard Macintosh *File* menu:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌─────────────────────────┐
│ ▐ File ▌                 │
├─────────────────────────┤
│ New              ⌘N      │
│ Open             ⌘O      │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Close            ⌘W      │
│ Revert To Saved...       │
│ Delete...                │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Save             ⌘S      │
│ Save As...       ⌘Y      │
│ Save Selection... ⌘'     │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Page Setup...    ⌘J      │
│ Print Document... ⌘P     │
│ Print Selection... ⌘M    │
│ Print Many...    ⌘L      │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Quit             ⌘U      │
└─────────────────────────┘
```

The TOPS Terminal *File* menu has a few extra functions, though, including *Revert to Saved* (restores file to its state at the time you last saved the file), *Save Selection* (saves selected text to a new file), *Print Selection* (prints selected text), and *Print Many* (selects a number of files to print in succession).

Use the *File* menu to create new text files or open existing text files for editing, and to print these files. See Chapter 6 for details about editing and printing from TOPS Terminal. You can also use the *File* menu to create or edit sign-up files, as described in Appendix F.

Edit Menu

The *Edit* menu, like the *File* menu, looks like a standard Macintosh menu:

```
┌─────────────────────────┐
│ ▐ Edit ▌                 │
├─────────────────────────┤
│ Undo             ⌘Z      │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Cut              ⌘X      │
│ Copy             ⌘C      │
│ Paste            ⌘V      │
│ Clear                    │
│ Select All       ⌘A      │
│ ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄ │
│ Show Clipboard           │
└─────────────────────────┘
```

Use the *Edit* menu to edit text files within TOPS Terminal. You can use the standard Macintosh procedures to *Cut* or *Copy* selected text from one location in a document and *Paste* it in a new location; you can change windows to copy text between two or more different documents or session transcripts. See Chapters 3 and 4 for details about session transcripts, connecting to remote computers, and changing windows. See Chapter 6 for more about editing text files.

Network Menu

The *Network* menu is used to make connections to a remote computer and to perform functions while connected to the remote computer. It is a specialized TOPS Terminal menu, with short and full versions (the display of short or full menus is determined by a setting in *Your Preferences*, explained in Appendix B). The short version, which is what you see when you first start up TOPS

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Terminal, provides eleven options:

```
┌─────────────────────────────────┐
│ Network                         │
├─────────────────────────────────┤
│ Terminal Session...       ⌘T    │
│ File Session...           ⌘D    │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ Send File...              ⌘U    │
│ Receive File...           ⌘I    │
│ Edit File...              ⌘E    │
│ Send Text...                    │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ Interrupt                 ⌘.    │
│ Clear Lines Off Top...          │
│ ✓Capture Lines Off Top          │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ Commands                    ▶   │
│ Controls                    ▶   │
└─────────────────────────────────┘
```

The primary uses for the *Network* menu are to:
- Establish a terminal or file session on a remote computer
- Send files to a remote computer
- Receive files from a remote computer
- Edit files on a remote computer.

See Chapters 3 and 4 for more about establishing a terminal or file session on a remote computer and what you can do once the session is established, Chapter 5 for details about sending and receiving files, and Chapter 6 for information about editing files on a remote computer.

During a terminal session, the *Network* menu is also used to:
- Send text from a Mac file to a program on a remote computer
- Interrupt the execution of a function on a remote computer
- Clear or capture lines of text from the top of a session transcript
- Issue commands on a remote computer
- Execute control-key sequences on a remote computer

See Chapter 4 for details about those functions, and Appendix B for a discussion of the full *Network* menu.

Settings Menu

The *Settings* menu is also a specialized TOPS Terminal menu, with short and full versions (the display of short or full menus is determined by a
setting in *Your Preferences*, explained in Appendix B). The short menu has four entries:

```
┌──────────────────────────┐
│ Settings                 │
├──────────────────────────┤
│ Accounts...              │
│ Computers...             │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ Modem...                 │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ │
│ Your Preferences...      │
└──────────────────────────┘
```

Use the short version of the *Settings* menu to:
- Describe computers that you wish to connect to
- Describe accounts for automatic connections to remote computers
- Specify a modem type and phone settings
- Specify your preferences while using TOPS Terminal

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

See Chapter 3 for instructions for creating computer and account descriptions and Appendix B for a description of *Your Preferences*, including a discussion of the full *Settings* menu.

Windows Menu

The *Windows* menu, which shows you what windows are open in TOPS Terminal, is similar to the *Window* or *Windows* menu in other Macintosh applications:

```
Windows
  Manual TCP/IP 3/1/88 0
  Suntops 3/1/88 0
  TOPS BBS 3/1/88 0
```
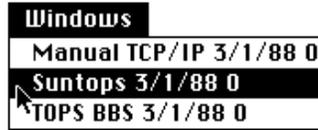
Use the *Windows* menu to switch back and forth between windows in TOPS Terminal. See Chapter 4 for a discussion of session windows and Chapter 6 for information about TOPS Terminal editing windows.

Text Menu

The *Text* menu, which is available once you have opened an edit document or established a terminal session, is similar to the *Search* menu in other Macintosh applications, and is primarily used to find or replace typed or selected text:

```
Text
  Shift Left              ⌘[
  Shift Right             ⌘]
  ..........................................
  Jump To Selection       ⌘=
  Find Selection          ⌘-
  ..........................................
  Find Forward...         ⌘F
  Find Backward...        ⌘B
  Repeat Find             ⌘G
  ..........................................
  Replace Forward...      ⌘R
  Replace Backward...     ⌘\
  Repeat Replace          ⌘H
```

The find and jump functions can be used while using the TOPS Terminal editor or during a terminal session, but the shift and replace functions can only be used in an editor document. See Chapter 4 for information about terminal sessions and Chapter 6 for detailed descriptions of all editing functions.

Dialog Window Conventions

The standard way to activate a function in a TOPS Terminal dialog window (a window on the screen to which you are expected to respond) is the same as for most Macintosh applications: use the mouse to move the arrow cursor to an item you want to select, click the mouse button to select the item, and click on an action button to perform some function (such as opening a file). But as with many other Macintosh applications, TOPS Terminal gives you optional ways to do things.

Using the Keyboard or the Mouse

You can always use the mouse to move around the window and select items in a list or click on

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

an action button. But you may sometimes find it more convenient to use the keyboard for some of these functions. In this section we talk about the **tab key, arrow keys**, and the **default button** in a dialog window. See "Power Keys" in Chapter 4 for an explanation of more complex things you can do from the keyboard.

Tab Key

If there is more than one text box in a dialog window, you can move from one box to the next by pressing the *Tab* key. In the *Description of a Computer,* for instance, the *Tab* key moves from computer name to its location to its TCP/IP address, and finally to the TCP/IP timeout.

```
┌──────────────────────────────────────────────────────┐
│ □            A Description of a Computer               │
│                                                        │
│  Computer's Name:  ┌──────────────────┐   ╔══════════╗ │
│                    │                  │   ║          ║ │
│     Its Location:  ┌──────────────────┐   ║    OK    ║ │
│                    │                  │   ╚══════════╝ │
│                                                        │
│  Its Operating System:    TCP/IP Address:  ┌─────────┐ │
│  ┌────────────────────┬─┐ ┌─────────────┐  │ Cancel  │ │
│  │ FidoNet            │⇧│ │ 0.0.0.0     │  └─────────┘ │
│  │ Red Ryder Host     │ │ TCP/IP Timeout:            │ │
│  │ UNIH™              │ │ ┌──────┐           ┌───────┐ │
│  │ VAH/VMS            │⇩│ │ 0    │ seconds   │ Help  │ │
│  └────────────────────┴─┘ └──────┘           └───────┘ │
└──────────────────────────────────────────────────────┘
```
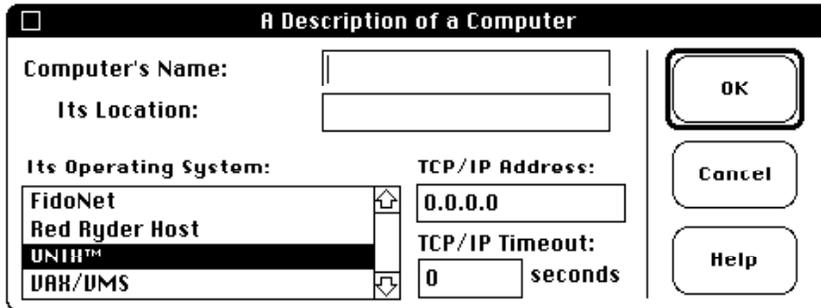
Arrow Keys

When there is a single list of items to choose from, the arrow keys will move from one item to the next (down with down arrow, up with up arrow), selecting each item successively.

```
┌──────────────────────────────────────────────────────┐
│ □              List of Known Computers                 │
│  ┌──────────────────────────┬─┐   ┌──────────────┐    │
│  │ ABC                      │⇧│   │     Open     │    │
│  │ CompuServe               │ │   └──────────────┘    │
│  │ DowJones                 │ │   ┌──────────────┐    │
│  │ New2                     │ │   │     Done     │    │
│  │ Suntops                  │ │   └──────────────┘    │
│  │ TOPS BBS                 │ │   ┌──────────────┐    │
│  │ XYZ                      │ │   │   Remove     │    │
│  │                          │ │   └──────────────┘    │
│  │                          │ │   ┌──────────────┐    │
│  │                          │ │   │     New      │    │
│  │                          │⇩│   └──────────────┘    │
│  └──────────────────────────┴─┘   ┌──────────────┐    │
│                                   │     Help     │    │
│                                   └──────────────┘    │
└──────────────────────────────────────────────────────┘
```
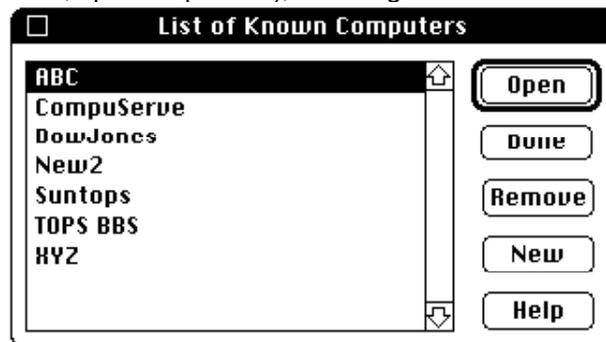
Default Button

When TOPS Terminal presents a dialog window requesting that you do something, there are usually some action buttons on the screen for you to choose from. You can use the mouse to click the desired button, or, if the button you want to click is the default button — the button with a thickly outlined box — you can press the *Return* or *Enter key*. The button indicating that you are finished with a dialog window — *OK* or *Done* — is usually the default button, as in the example below.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
What baud rate do
you wish to use?

300 baud        ⬆
600 baud
1200 baud
1800 baud
2400 baud
3600 baud       ⬇

  OK      Cancel

      Help
```
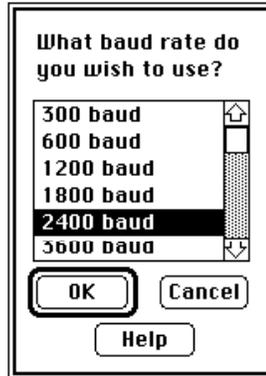
If, however, some other button in the dialog window has a thick outline around it, the *Return* or *Enter* key selects that option.

Select and Click or Double Click

In most cases you can either select and click or double click to perform a function on TOPS Terminal. If you want to open the computer description *Suntops*, for instance, in the following dialog window:


```
☐        List of Known Computers

  Suntops              ⬆     ( Open )
  TOPS BBS
                             ( Done )

                             (Remove)

                             ( New )

                       ⬇     ( Help )
```
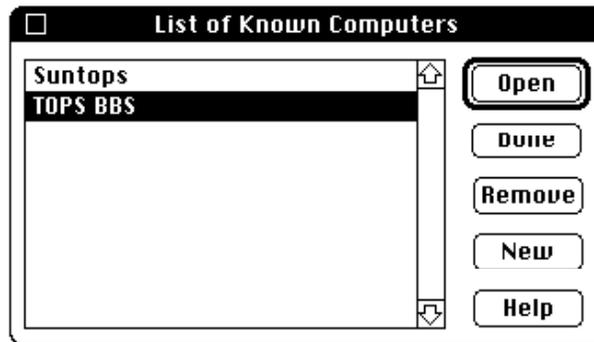
You could use the mouse to move the arrow cursor to the *Suntops* line, click on the mouse button to select *Suntops*, and then move the cursor to the *Open* button and click the mouse button to open the description of *Suntops.* But an alternative way to do the same thing is to move the cursor to the *Suntops* line and double click the mouse button. A double click indicates that you want to select *Suntops* and to do whatever the default button says (*Open*, in this case).

Selecting From a List

Sometimes TOPS Terminal provides you with a list of choices, such as a list of available computers or a list of available accounts, from which you need to select a single choice. If there are no text boxes for you to fill in, you can select a list item from the keyboard by typing the letter that your choice begins with. To select *TOPS BBS* from the list of computers below, for instance, just press the letter *T* and *TOPS BBS* will be selected:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```
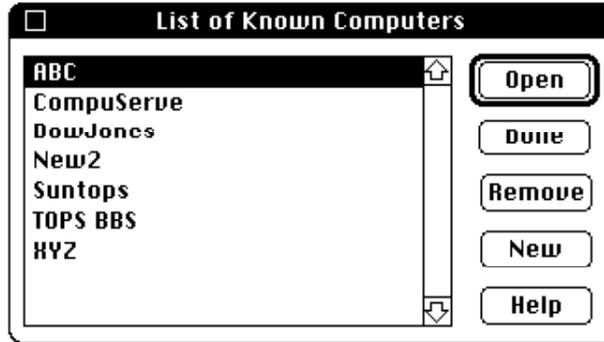
(If there were two computers that started with *T*, you could select the second one by pressing the first two letters of the computer name in rapid succession.)

Multiple Choices in a List

There are two ways to select more than one item in a list. To select a group of contiguous items in a list, select the first item, then hold down the *Shift* key and select the last item in the group:
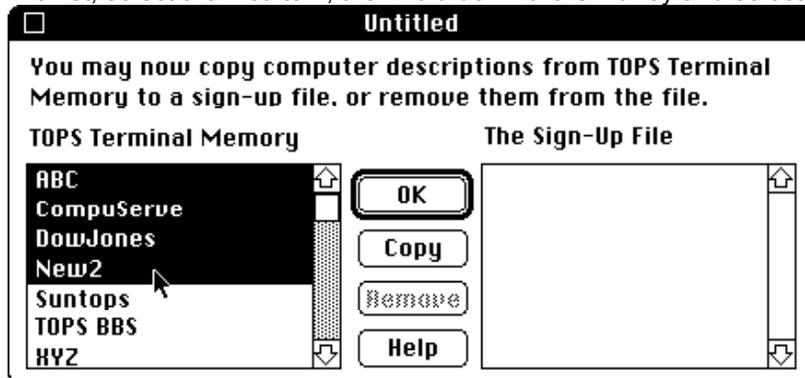
To select two or more noncontiguous items in a list, hold down the *Option* and *Clover* (⌘) keys together and click on the items one at a time. If your modem works at 300, 1200, or 2400 baud, for instance, you can select all three speeds:
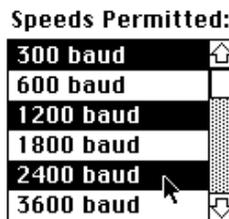
A Note About Upper and Lower Case

As with many Macintosh applications case is generally ignored in TOPS Terminal; file, computer, and account names are case-insensitive. The file name "XYZ" is the same as the file name "xyz."

Chapter

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

2

Manual Connections

This chapter walks you through two manual connections — one to a computer on a local area network and one to a computer dialed up over a phone line.

Note: because many more functions are available with automatic connections, you will normally be making automatic connections to remote computers — selecting an account you have previously created, clicking *Connect,* and sitting back as TOPS Terminal automatically connects you to a remote computer. Manual connections are discussed first because they may allow you to see TOPS Terminal in action a little sooner the first time you use it. Skip ahead to Chapter 3 if you want to learn about automatic connections.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

To make a manual connection to a computer on a local network, follow the instructions below. To make a connection using a modem, see "Making a Manual Phone Connection" on page 24.

Making a Manual Network Connection

This section shows you how to use TOPS Terminal to log on to a remote computer on your local network. To make this manual connection TOPS Terminal needs the following information:

- IP address of your Macintosh (See Preface)
- Type of terminal to emulate
- Network name or address of the remote computer
- Your user name and password (if any) on the remote computer

After starting TOPS Terminal, do the following to make the manual connection:

1. Select *Terminal Session* in the

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Network menu.

```
Network
Terminal Session...    ⌘T
File Session...         ⌘D
··························
Send File...            ⌘U
Receive File...         ⌘I
Edit File...            ⌘E
Send Text...
··························
Interrupt               ⌘.
Clear Lines Off Top...
✓Capture Lines Off Top
··························
Commands                ▶
Controls                ▶
```

The Account Selection dialog window will be displayed and you will be asked to select an account to use to log on to the computer. Normally, only two choices — *Manual Phone* and *Manual TCP/IP* — will be listed when you first use TOPS Terminal, and *Manual Phone* will probably be "grayed out," indicating that you cannot select it because it is disabled:

```
Select the account you wish to use.

  ⊠ ◆ Manual Phone            ⬆    ┌─────────┐
  ▦ ◆ Manual TCP/IP                │ Connect │
                                   └─────────┘
                                   ┌─────────┐
                                   │ Cancel  │
                                   └─────────┘
                                   ┌─────────┐
                              ⬇    │  Help   │
                                   └─────────┘
  ☐ Append the transcript to an existing file.
```
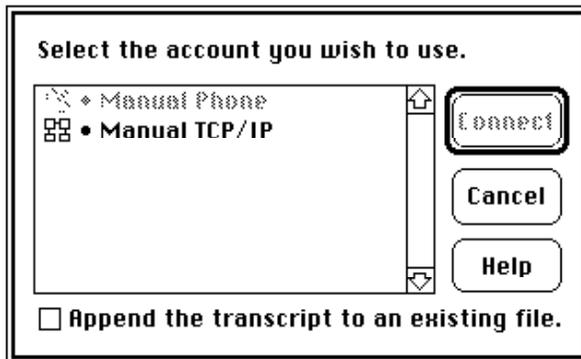
Note the network connection icon to the left of the account name:

▦

2. Select *Manual TCP/IP.*

Use the mouse or the arrow keys to select *Manual TCP/IP* if it is not selected. When you select *Manual TCP/IP* you are telling TOPS Terminal that you will not be logging on automatically, but will be providing information about the connection as it is requested.

Note: if the selection *Manual TCP/IP* is not enabled, it is probably because you did not install the TOPS TCP/IP module in your System folder, as described in "Software Installation" in the Preface.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

3. Click *Connect.*

This tells TOPS Terminal to begin the account connection process. You are first asked what kind of terminal should be emulated:

```
What kind of terminal
should be emulated?

 vt100
 vt102
 vt52
 adm3a
 simple

    OK        Help
```
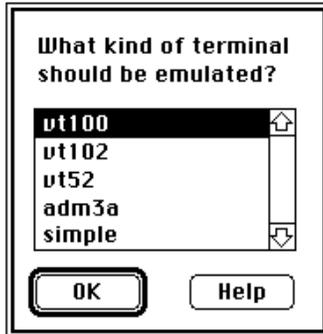
4. Select a terminal type and click *OK.*

You can press *Return* to select the default terminal, the VT100; select another terminal in the list, if appropriate.

Note: The Terminal-Type question means "What kind of terminal does the remote computer think you are using?" If you see some strange-looking characters when you are logging on, the terminal type you chose may have been incorrect or your account may have been set up improperly on the remote computer; see your system administrator.

You will next be asked to pick the remote computer to call from a list of computers, or to fill in the computer's network (IP) address. If this is your first use of TOPS Terminal, there will probably be no computers listed.   You will have to provide an IP address, which is comprised of four sets of digits, separated by periods. See your system administrator if you do not know this number.

```
Please pick the computer to call,
or type in its IP address.




   OK      Cancel      Help
```
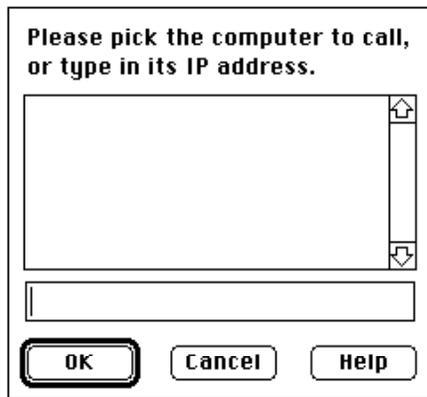
5. Type in the IP address and click *OK*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

In the example shown below the address (131.131.5.3) is for "Suntops," a Sun Workstation on our local network running the UNIX operating system.

```
Please pick the computer to call,
or type in its IP address.
```

```
131.131.5.3
```

`UK` `Cancel` `Help`
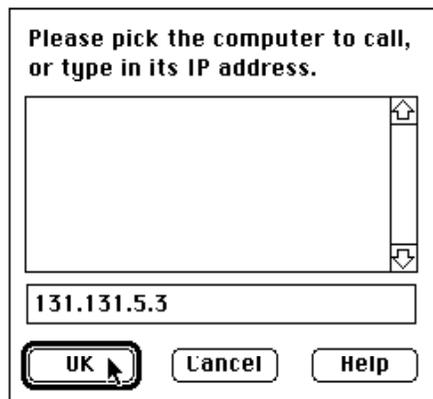
TOPS Terminal will open a session window and attempt a connection to the remote computer. When the connection succeeds, you will see a normal login prompt in the window. In this example we are connecting to a UNIX system:

```
suntops 3/29/88 0
login:
```

```
Connected to suntops
```
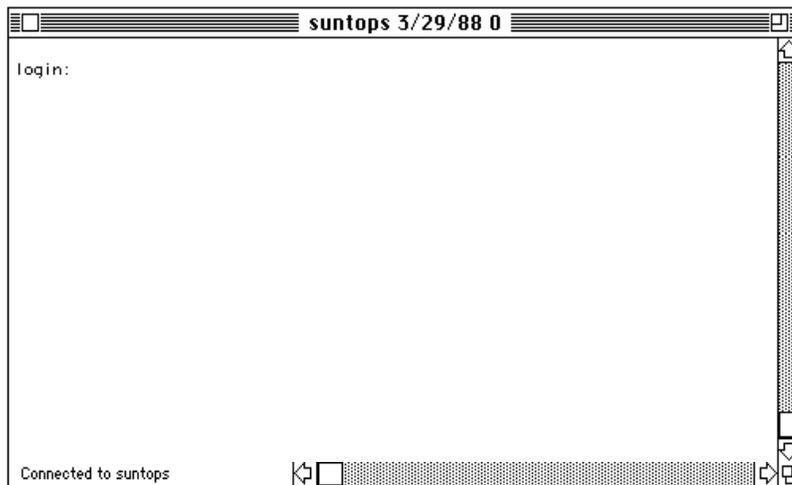
6. Log on to the computer in the normal way.

To gain access to the other computer, you may have to specify a user name (in this example, *dave*) and a password.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
┌─────────────────── suntops 3/29/88 0 ───────────────────┐
│                                                        ▲│
│ login: dave                                            ▒│
│ Password:                                              ▒│
│ Last login: Thu Mar 24 14:32:35 from 129.149.1.72      ▒│
│ Sun UNIX 4.2 Release 3.5 (SUNAPPLE) #3: Sun Mar 20 17:41:37 PST 1988 │
│ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ │
│                      oOo                                │
│                    SunTops                             │
│                      oOo                                │
│                                                        │
│ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ │
│ You have mail.                                         │
│ suntops_dave% █                                        ▒│
│                                                        ▼│
├──────────────────────────────────────────────────────┤
│ Connected to suntops                                   │
└──────────────────────────────────────────────────────┘
```
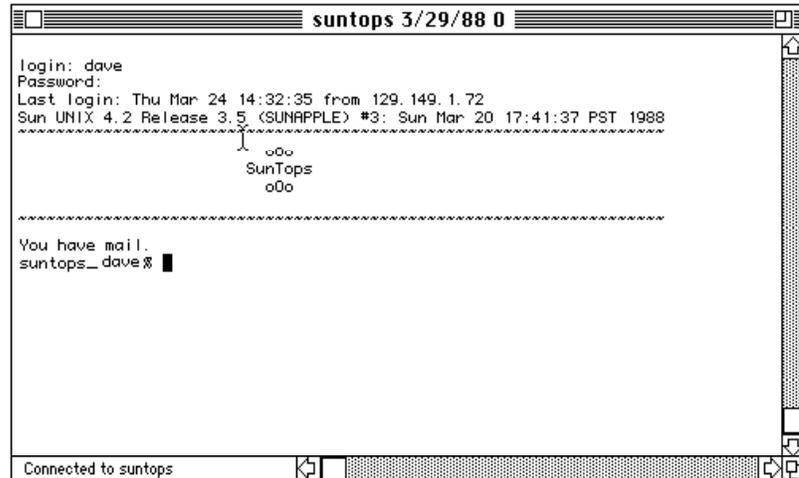
7. Execute some commands on the computer

When you have made the connection and logged on you can execute commands on the computer exactly as if you were sitting at a terminal attached to the computer.

8. Log off from the computer in the normal way.

Type *logout* (or whatever the appropriate command is for the computer you actually connect to).

9. Click the close box at upper left of session window.

This will terminate the connection. The session window will disappear and the TOPS Terminal menu bar will be displayed.

You have completed the manual network connection. Try the manual phone connection that follows, if you like, or go on to Chapter 3 to see how to create computer and account descriptions which will allow you to make automatic connections to remote computers.

__Making a Manual Phone Connection__

If you have a Hayes or Hayes-compatible modem connected to your Macintosh you can use TOPS Terminal to manually connect to a remote computer over a phone line (if the computer has a modem attached).   In the following example you are shown how to make a connection to the TOPS Talk Bulletin Board System (an information service about TOPS products).
To make this manual connection TOPS Terminal needs the following information:
- Type of terminal to emulate
- Baud rate of modem
- Telephone number of the remote computer's modem
- Your user name and password (if any) on the remote computer
After starting up TOPS Terminal:
### 1. Select *Modem* from *Settings* menu

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Settings

Accounts...
Computers...

Modem...

Your Preferences...
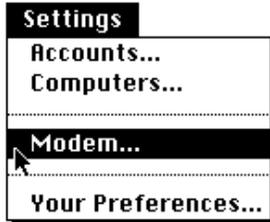
(If you selected a modem previously, skip steps 1 and 2.)

2. Select a modem type and click *OK*.

What modem is attached?

Please tell me what kind of modem is attached to the Macintosh.

(None)
Hayes 300/1200
Hayes 300/1200/2400
Manual Modem
Shiva NetModem™

☐ Call with modem speaker turned on
☐ Use pulse (rotary) dialing
☐ Dial 9 for an outside line

[OK]   [Cancel]   [Help]
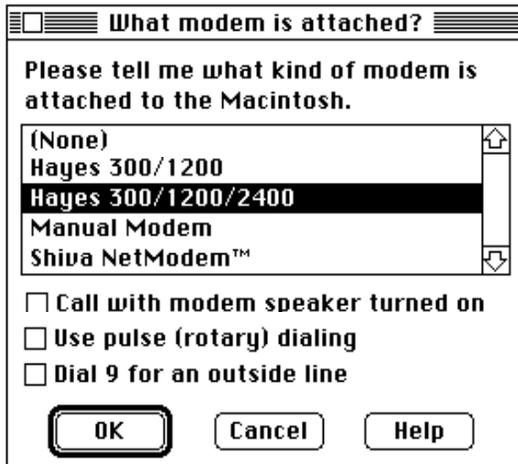
(You need to select a modem type or all modem accounts will be disabled; that is, when you select *Terminal Session* in the *Network* menu, *Manual Phone* and any other phone accounts will be "grayed out," indicating that they cannot be used.)

3. Select *Terminal Session* in the *Network* menu.

Network

Terminal Session...   ⌘T
File Session...   ⌘D

Send File...   ⌘U
Receive File...   ⌘I
Edit File...   ⌘E
Send Text...

Interrupt   ⌘.
Clear Lines Off Top...
✓Capture Lines Off Top

Commands   ▶
Controls   ▶

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

The Account Selection dialog window will be displayed and you will be asked to select an account to use to log on to the computer. Normally, only two accounts — *Manual Phone* and *Manual TCP/IP* — will be available when you first use TOPS Terminal:

```
Select the account you wish to use.

 ☏ • Manual Phone          ⇧   ┌─────────┐
 ▦ • Manual TCP/IP             │ Connect │
                               └─────────┘
                               ┌─────────┐
                               │ Cancel  │
                               └─────────┘
                               ┌─────────┐
                            ⇩  │  Help   │
                               └─────────┘
 ☐ Append the transcript to an existing file.
```
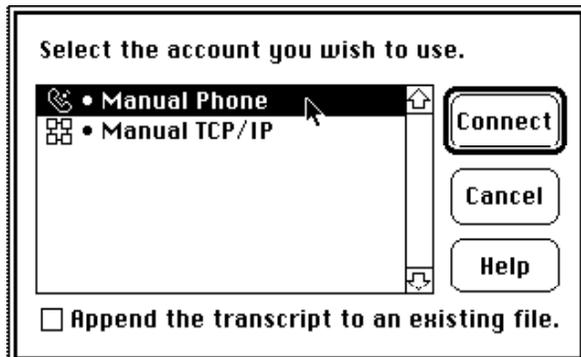
Note the phone connection icon to the left of the account name:

4. Select *Manual Phone.*

Use the mouse or the arrow keys to select *Manual Phone* if it is not selected. When you select *Manual Phone* you are telling TOPS Terminal that you will not be logging on automatically, but will provide the remote computer's modem phone number and other information when it is requested.

5. Click *Connect*.

This tells TOPS Terminal to begin the account connection process.

(Note that you could instead double click on *Manual Phone,* or, since *Connect* is highlighted, press *Return* to start the dialog.)

Next you will be asked to name the file where the session transcript will be saved. TOPS Terminal will generate a name automatically, using the account name plus today's date and a number; you can change the name by typing in something else.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌─────────────────────────────────────────┐
│         ┌───┐                             │
│         │ 🗁 │ TOPS Terminal              │
│         └───┘                             │
│  ┌──────────────────────┐┌─┐  ⊂⊃ Hard Disk│
│  │🗋 Manual Phone 2/24/8...│⇧│             │
│  │🗋 Manual Phone 2/24/8...│ │  ┌─────────┐│
│  │🗋 name on mac          │▓│  │  Eject  ││
│  │🗋 New CPU 2/24/88 0    │▓│  └─────────┘│
│  │🗋 NW-Capture lines     │ │  ┌─────────┐│
│  │🗋 Questions - 2/8      │⇩│  │  Drive  ││
│  └──────────────────────┘└─┘  └─────────┘│
│  Save transcript to what file?  ┌───────┐ │
│  ┌──────────────────────────┐   │ Save  │ │
│  │Manual Phone 3/21/88 0    │   └───────┘ │
│  └──────────────────────────┘   ┌───────┐ │
│                                  │ Cancel│ │
│                                  └───────┘ │
│                                  ┌───────┐ │
│                                  │ Help  │ │
│                                  └───────┘ │
└─────────────────────────────────────────┘
```
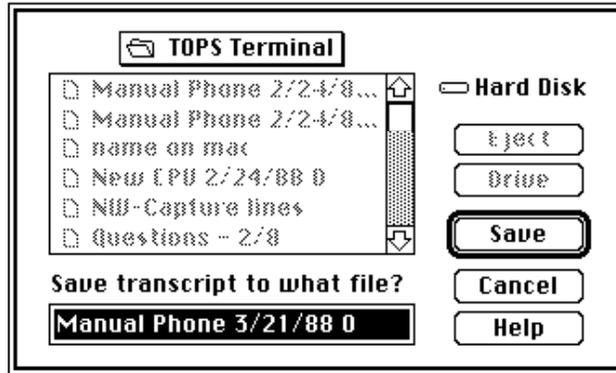
(If you tried the manual network connection in the previous section you may recall that you were not asked this question — because that account was set up so that session transcripts are not saved. See "Modifying an Account Description" in Chapter 3 to learn how to tell TOPS Terminal whether or not you want to save session transcripts.)

6. Type a different file name (optional).

Type in a file name, if you do not want to use the name automatically generated by TOPS Terminal.

7. Click *Save*.

This tells TOPS Terminal to save a transcript of the terminal session — your keystrokes plus the computer's responses — in the file you specified.

TOPS Terminal then asks you what kind of terminal you wish to emulate:

```
┌──────────────────────────┐
│ What kind of terminal     │
│ should be emulated?       │
│                           │
│  ┌────────────────────┐┌─┐│
│  │vt100              ▓│⇧││
│  │vt102              ▓│ ││
│  │vt52                │ ││
│  │adm3a               │ ││
│  │simple              │⇩││
│  └────────────────────┘└─┘│
│  ┌──────┐   ┌────────┐    │
│  │  OK  │   │  Help  │    │
│  └──────┘   └────────┘    │
└──────────────────────────┘
```
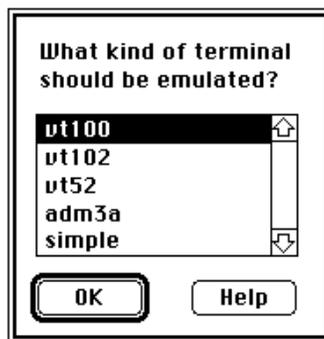
Note: If you see some strange-looking characters when you are logging on, the terminal type you chose may have been incorrect or your account may have been set up improperly on the other computer; see your system administrator.

8. Select a terminal type and click *OK*.

Just press *Return* to select the default terminal, the VT100; select another terminal in the list, if appropriate.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

You will then be asked the baud rate of your modem:

```
What baud rate do
you wish to use?

  300 baud        ⬆
  600 baud
  1200 baud
  1800 baud
  2400 baud
  3600 baud       ⬇

  [  OK  ]   [ Cancel ]

      [  Help  ]
```
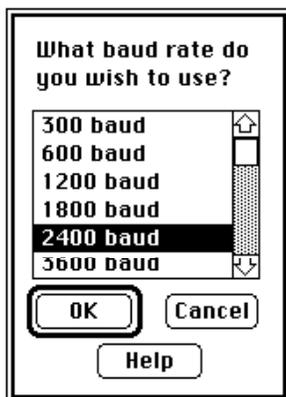
9. Select a baud rate and click *OK*.

This is the baud rate for the modem that is attached to your Macintosh (probably 1200 or 2400).

A new, empty session window will be drawn, with a cursor in the top-left corner:

```
▁▁▁▁▁▁▁▁▁▁▁ Manual Phone 4/20/88 0 ▁▁▁▁▁▁▁▁▁▁▁
■                                              ⬆



│



│


│
                                               ⬇
Connected to Manual Phone                      ⬀⬔
```
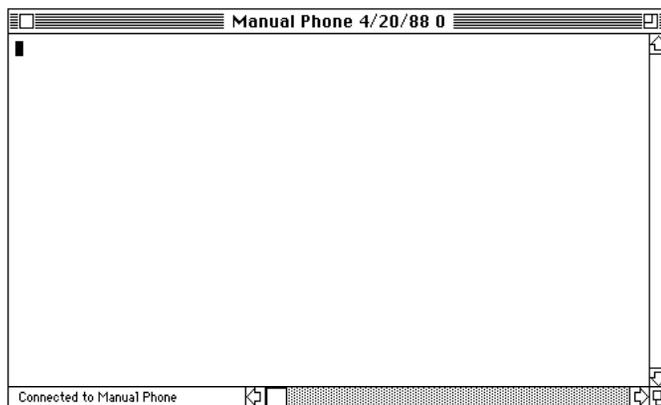
10. Type *ATDT*, phone number, and press *Return*.

This tells your modem to call the phone number you specify.

If you don't have a computer to call, try the following, which is the number for the TOPS Talk Bulletin Board System (TOPS BBS):

> A T D T 5 5 5 - 1 2 1 2 *[Return]*

Note the following when you try to make this connection:

• **Outside the 415 area code, type**:

> A T D T 4 1 5 - 5 5 5 - 1 2 1 2 *[Return]*

• **If you need to dial 9 for an outside line, type:**

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

<div align="center">A T D T 9 , 5 5 5 - 1 2 1 2 *[Return]*</div>

Include 415 if outside the area code. The comma after the 9 is a pause signal, giving the phone time to get a dial tone before dialing the rest of the number.

(Also note that this number is often busy; you may have to close the connection and start over again at step 3 if the line is busy; wait 30 seconds before you try again or power cycle your modem between attempts. Otherwise your modem may still be trying to make the connection when you try again.)

(If your keystrokes are not displayed in the session window, something is wrong:

- Do you have a modem connected to your Macintosh?
    - Is the modem turned on?
    - Did you specify the correct baud rate in step 9?
    - Does the status box at the lower-left of the window say
      "Connected to Manual Phone"?

If the answer to any of those questions is No, you will have to close the connection — by clicking on the close box at the top-left of the window — and start the process over at step 3 above. If you know what the problem was, correct it before you start over: turn the modem on if it was off; select a different baud rate in step 9, if that was the problem; turn the modem off and then on to recycle it if it was on.)

11. Press Return when you see the response *CONNECT*.

(This step may vary, depending on what modem you have and what system you are connecting to.)

Here is the dialing sequence and connection dialog for connecting to TOPS BBS:

The title bar at the top of the terminal session window shows the name of the current document; this is the file in which the text of the current session is being saved. In the lower-left corner is the window status; here it shows a connection to the computer named *Manual Phone*.

12. Log on to the computer in the normal way.

You now need to identify yourself to the computer by typing in your user name and a password, if any. If you are dialing in to TOPS BBS, you will be asked for your first name, last name, and a password. If this is your first time calling TOPS BBS you can enter any password, which will become your regular password on the system.

Once you are logged on to TOPS BBS or another computer, you can run commands on it exactly as if you had dialed it up using a standard terminal and modem.

TOPS BBS is mostly self-explanatory. The general rule on TOPS BBS is to press the space bar to read additional screens of messages and to press the escape key to interrupt whatever you are doing and return to the main menu. If you do not have an escape key (esc) on your keyboard you can simulate an escape-key press by using the Clover key (⌘) and the backward single quote key together. See "Your Preferences" in Appendix B for details about simulating an escape key press.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

The Main Menu on TOPS BBS lists a number of functions which you can perform by pressing a single letter. Try some of them if you like.

13. Log off from the computer in the normal way.

On TOPS BBS type the letter *g* to log off; you have to be at the TOPS BBS main menu. You may have to press the escape key (esc), Clover-C (⌘-C), or Clover-Shift-C to reach the main menu.

14. Click the close box at upper left of session window.

You will be asked if you want to terminate the session:

```
┌──────────────────────────────┐
│ Are you quite sure that you   │
│ want to kill the connection to│
│ Manual Phone?                 │
│                               │
│    ┌──────┐      ┌────────┐   │
│    │ Yes  │      │  No    │   │
│    └──────┘      └────────┘   │
└──────────────────────────────┘
```
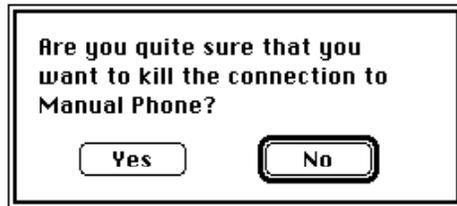
Note: You are not asked this question when you terminate a network connection after logging off. This has to do with the sequence of characters that must be sent to a modem to tell it you want to disconnect.

15. Click *Yes*.

16. Click the close box again.

This will terminate the connection. TOPS Terminal will respond with a warning:

```
┌──────────────────────────────┐
│ You have made changes to      │
│ "Manual Phone 4/20/88 0," but │
│ you have not saved them.      │
│                               │
│ Do you want to save the changes│
│ that you have made?           │
│                               │
│  ┌──────────┐                 │
│  │   Yes    │                 │
│  └──────────┘                 │
│  ┌──────────┐  ┌──────────┐   │
│  │   No     │  │  Cancel  │   │
│  └──────────┘  └──────────┘   │
└──────────────────────────────┘
```
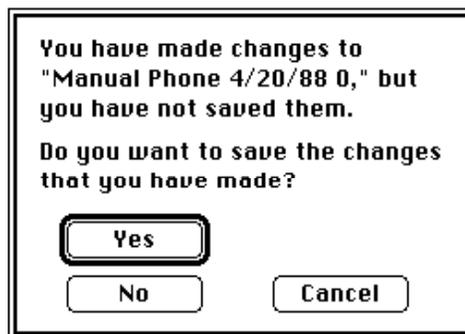
17. Click *Yes* or *No*.

Click *Yes* to save the transcript of the terminal session, *No* if you do not want to save the transcript. See page 8 for a discussion of session transcripts.

The session window will disappear and the TOPS Terminal menu bar will be displayed. (If you

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

have another terminal session window open, it will be displayed when the top window is closed.)

You have completed the manual phone connection. See Chapter 3 on the following page to see how to create computer and account descriptions for making automatic connections.

Chapter

3

Automatic Connections

When you make an automatic connection to a remote computer with TOPS Terminal, you can perform a variety of terminal emulation, file transfer, and document editing functions on the computer, even if you don't know anything about the computer's operating system. To prepare for an automatic connection, you first create a computer description for the remote computer and then you create an account description for logging on to that computer.

This chapter explains how to create, modify, and remove computer and account descriptions, and how to make automatic connections to remote computers. Chapters 4, 5, and 6 explain the TOPS Terminal services available after you make an automatic connection: Chapter 4 describes terminal emulation, Chapter 5 file transfers, and Chapter 6 text editing and printing.

To automatically connect to a remote computer TOPS Terminal needs:

- **A computer description**
  - Computer's network address or phone number
  - Computer's operating system
  - Modem and phone information (for phone accounts)

- **An account description**
  - Computer to connect to
  - Type of terminal to emulate
  - Your user name on the computer
  - Your password on the computer (optional)

See your system administrator if you do not have all the information required to complete the following procedures.

Overview of Automatic Connections

This chapter includes information you need to prepare for and make an automatic connection to a remote computer. The process generally follows this pattern:

1. Create a computer description.

See "Creating a Computer Description" below for details. The computer description tells TOPS Terminal what operating system the computer uses and how the connection will be made (network or phone). Computer descriptions for network and phone connections are discussed separately.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

2. Create an account description.

> See "Creating an Account Description" on page 44 for details. An account description is what you use to make an automatic connection. It includes the name of the remote computer specified in your computer description as well as your login identification on that computer.

> There are three ways to link a computer description to an account description: choose it from your TOPS Terminal Memory, choose it from a sign-up file, or create a new computer description as you create the account description. If you are not sure about which of these methods to use, check with your system administrator. Each method is described separately below.

3. Make an automatic connection.

> See "Making an Automatic Connection" on page 56 for details. Once you have made the connection, you can perform terminal emulation, file transfer, or document editing functions on the remote computer; these functions are explained in Chapters 4, 5, and 6.

If you want to modify or remove computer or account descriptions, see the sections that explain those procedures. Pay special attention to "Modifying an Account Description" on page 68, since that section includes information about session transcripts and passwords.

Creating a Computer Description

As explained in Chapter 1, there are two kinds of connections with TOPS Terminal: network and phone. Each type of connection is explained separately below.

Network Connection

To create a computer description for a remote computer on your network, do the following after starting up TOPS Terminal:

1. Select *Computers* from *Settings* menu.

```
Settings
  Accounts...
  Computers...
  
  Modem...
  
  Your Preferences...
```
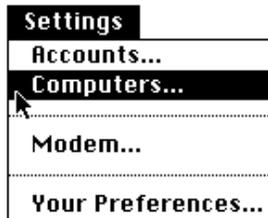
> The list of known computers will be displayed; if you have not created any computer descriptions and none have been copied from a sign-up file, no computers will be listed:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

List of Known Computers

Open
Done
Remove
New
Help
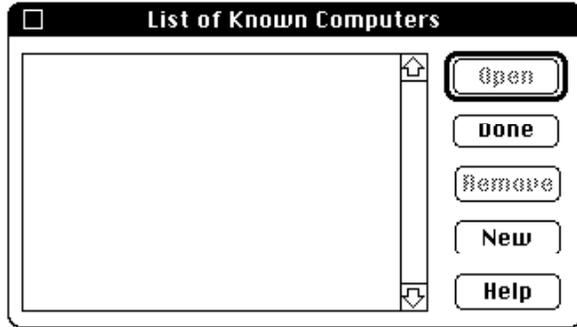
2. Click the *New* button.

A blank *Description of a Computer* will be shown:

A Description of a Computer

Computer's Name:
Its Location:

OK
Cancel
Help

Its Operating System:
FidoNet
Red Ryder Host
UNIII™
VAX/VMS

TCP/IP Address:
0.0.0.0

TCP/IP Timeout:
300 seconds
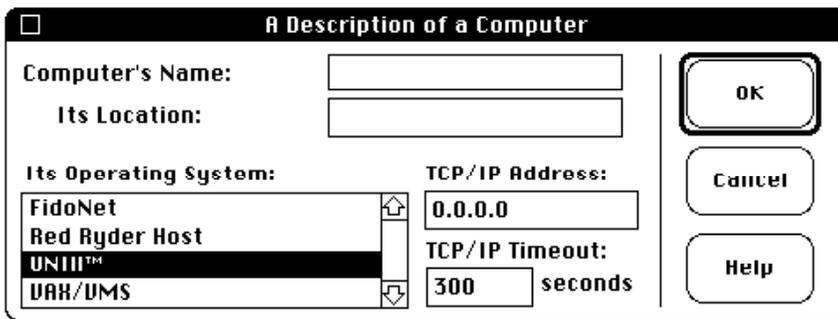
Note: the short version of the computer description is shown here; if you selected a modem type in Chapter 2, phone connection information will be included at the bottom of the description. Since you are describing a computer with no phone connection, ignore that information.

3. Type the computer's name.

This is the name by which the computer is known on the network. Check with your system administrator if you do not know the name. The limit for computer names on TOPS Terminal is 16 characters.

Note: to move around in the dialog window, use the mouse or press the *Tab* key. If the short version of the dialog window — without phone information — is displayed, the *Tab* key moves the cursor in this sequence: Computer's Name, Its Location, TCP/IP Address, TCP/IP Timeout.

4. Type the computer's *Location* (optional).

This is an optional field and normally not important for network computers.

5. Type the computer's *TCP/IP address*.

This is the network address of the computer. If you have Kipper or another KIP server running on your network, you will not need to enter the TCP/IP address; the name of the computer will be sufficient. When you press *Return* or click *OK* after completing the rest of the description, the TCP/IP address will be entered automatically into the address box.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

6. Select the computer's operating system.

Select a different operating system, if appropriate. Check with your system administrator if you are unsure.

Here is an example of a completed computer description, for a computer called *Suntops*, located in Alameda, California, running UNIX, with a TCP/IP address of 131.131.5.3:

```
┌──────────────────────────────────────────────────────┐
│ ☐              A Description of a Computer             │
├──────────────────────────────────────────────────────┤
│ Computer's Name:    [Suntops          ]   ┌─────────┐ │
│    Its Location:    [Alameda, CA       ]   │ ► OK    │ │
│                                            └─────────┘ │
│ Its Operating System:    TCP/IP Address:   ┌─────────┐ │
│ ┌──────────────────┬─┐  [131.131.5.3  ]    │ Cancel  │ │
│ │ FidoNet          │⇧│  TCP/IP Timeout:     └─────────┘ │
│ │ Red Ryder Host   │ │  ┌───┐               ┌─────────┐ │
│ │ UNIX™            │ │  │300│ seconds       │ Help    │ │
│ │ Unknown OS       │⇩│  └───┘               └─────────┘ │
│ └──────────────────┴─┘                                 │
└──────────────────────────────────────────────────────┘
```
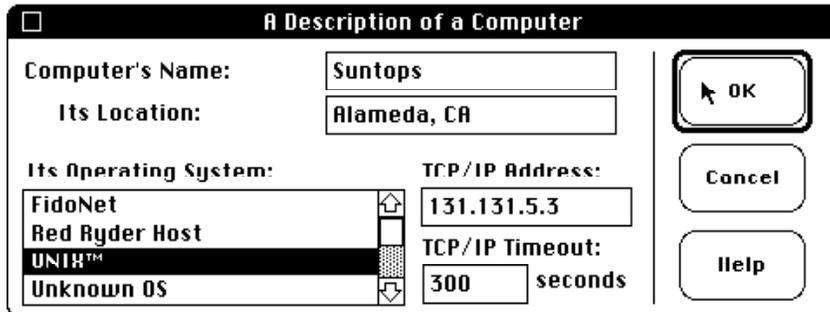
> **Note for VMS system administrators and users:** you must include the following command in your login.com file on the VMS system: set term/inquire

7. Specify *TCP/IP Timeout*.

This tells TOPS Terminal how long, in seconds, to wait for a response from the other computer before terminating the connection; the default value is 300 seconds (five minutes). This lack of response might occur because the computer is down or because there was a failure in the network.

8. Click *OK* to complete the description.

Now that you have given TOPS Terminal all the necessary information, click *OK*. The name of the computer you have just described will appear on the list of known computers:

```
┌──────────────────────────────────────────────────────┐
│ ☐              List of Known Computers                │
├──────────────────────────────────────────────────────┤
│ ┌──────────────────┬─┐   ┌──────────┐                 │
│ │ Suntops          │⇧│   │  Open    │                 │
│ │                  │ │   └──────────┘                 │
│ │                  │ │   ┌──────────┐                 │
│ │                  │ │   │  Done    │                 │
│ │                  │ │   └──────────┘                 │
│ │                  │ │   ┌──────────┐                 │
│ │                  │ │   │ Remove   │                 │
│ │                  │ │   └──────────┘                 │
│ │                  │ │   ┌──────────┐                 │
│ │                  │ │   │  New     │                 │
│ │                  │ │   └──────────┘                 │
│ │                  │⇩│   ┌──────────┐                 │
│ └──────────────────┴─┘   │  Help    │                 │
│                          └──────────┘                 │
└──────────────────────────────────────────────────────┘
```
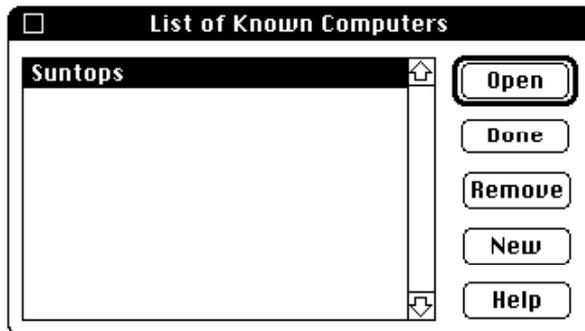
Note: if your KIP server did not find a TCP/IP address for the computer you named, or if you did not enter a proper TCP/IP address, your Macintosh will beep when you click *OK*, telling you that the description must have a proper TCP/IP address.

9. Click *Done*.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Or click on the close box; this step is not strictly necessary, since the computer description was stored in TOPS Terminal Memory when you clicked *OK* in step 8.

You have completed the description of a computer for a network account. Go to page 44 to see how to create an account description for the computer description you created.

Phone Connection

The procedure for creating a computer description for a phone connection is much like that for creating a computer description for a network connection, presented above; the first four steps below and steps 10, 11, and 12 are specifically for phone connection computers. Skip this section if you do not plan to make phone connections.
Note that TCP/IP address and timeout are not included below; if you include both a TCP/IP address and a phone number, TOPS Terminal will try to make a network connection.
To create a computer description for a remote computer that you will connect to by phone, do the following after starting up TOPS Terminal:

1. Select *Modem* from *Settings* menu.

```
Settings
Accounts...
Computers...
..............
Modem...
..............
Your Preferences...
```

2. Select a modem type.

```
What modem is attached?
Please tell me what kind of modem is
attached to the Macintosh.

(None)
Hayes 300/1200
Hayes 300/1200/2400
Manual Modem
Shiva NetModem™

☐ Call with modem speaker turned on
☐ Use pulse (rotary) dialing
☐ Dial 9 for an outside line

   OK      Cancel      Help
```
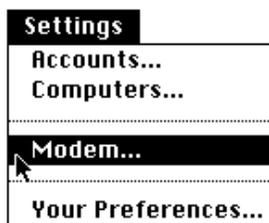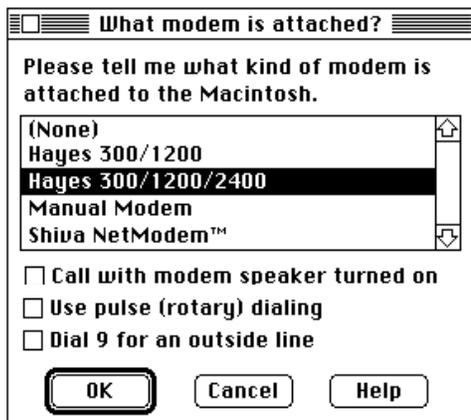
3. Change phone settings.

Click on any of the three check boxes to change the settings, if necessary.

Modem speaker on: This can be very handy, if your modem is close enough so that you can hear it. With the modem speaker on, you can hear when you get a wrong number or if the line is busy.

Use pulse dialing: If your phone uses pulse rather than tone dialing, check this box.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Dial 9 for outside line: If you need to dial 9 to get an outside line on your phone, click on the bottom box; do not include the 9 in the phone number if you check this box.

4. Click *OK*.

5. Select *Computers* from *Settings* menu.

```
Settings
  Accounts...
  Computers...
  ┊
  Modem...
  ┄┄┄┄┄┄┄┄┄
  Your Preferences...
```

The *List of Known Computers* will be displayed:

```
List of Known Computers
┌──────────────────────┐   ┌─────────┐
│ Suntops            ⇧ │   │  Open   │
│                      │   └─────────┘
│                      │   ┌─────────┐
│                      │   │  Done   │
│                      │   └─────────┘
│                      │   ┌─────────┐
│                      │   │ Remove  │
│                      │   └─────────┘
│                      │   ┌─────────┐
│                      │   │  New    │
│                    ⇩ │   └─────────┘
│                      │   ┌─────────┐
└──────────────────────┘   │  Help   │
                           └─────────┘
```
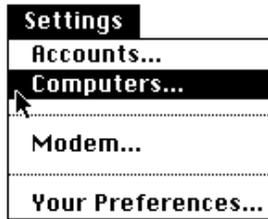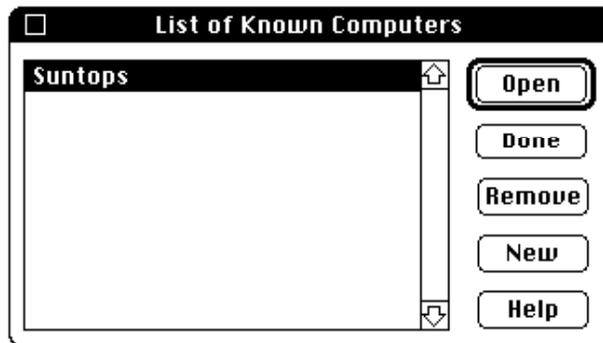
6. Click the *New* button.

A blank description of a computer will be displayed, in its long form, with phone and modem information included at the bottom:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

A Description of a Computer

Computer's Name: [   ]

Its Location: [   ]

OK

Cancel

Help

Its Operating System:
- FidoNet
- Red Ryder Host
- **UNIX™**
- VAX/VMS

TCP/IP Address: 0.0.0.0

TCP/IP Timeout: 300 seconds

Its Phone Number: [   ]

Stop Bits: ◉ 1   ○ 1.5   ○ 2
Attention: ◉ CR   ○ ^C   ○ Break
Parity: ○ Even   ○ Odd   ◉ None
Handshake: ☐ Input   ☐ Output

Speeds Permitted:
- 300 baud
- 600 baud
- 1200 baud
- 1800 baud
- 2400 baud
- 3600 baud

☐ Seven Data Bits

Repeat: [0]

7. Type the remote computer's name.

Check with your system administrator for this and all other requested information, if you are not sure. In this example the computer is called *TOPS BBS*. (The limit for computer names on TOPS Terminal is 16 characters.)

Computer's Name: [TOPS BBS]

8. Type the computer's location (optional).

This is an optional field, which is important for phone connections; you will want to have some idea of toll charges. TOPS BBS is located in Alameda, California.

Its Location: [Alameda, CA]

9. Select the computer's operating system.

Select a different operating system, if appropriate. Check with your system administrator if you are unsure. TOPS BBS runs on *Red Ryder Host*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Its Operating System:

```
FidoNet              ⇧
Red Ryder Host       ▢
UNIX™                ▒
Unknown OS           ⇩
```

10. Type the computer's phone number.

Include the area code, if it is not the same as your area code. The number for TOPS BBS is (415) 555-1212.

11. Select the baud rate for the modem.

Click on the appropriate rate in the list (1200 in this example).

Speeds Permitted:

```
300 baud       ⇧
600 baud       ▢
1200 baud      ▒
1800 baud      ▒
2400 baud      ▒
3600 baud      ⇩
```

12. Change communication settings, if necessary.

If any of the settings (Stop Bits, Attention signal, Parity, Handshake, Seven Data Bits, and Repeat) are not correctly set, correct them; see your system administrator if you are not sure about these settings. Note that *Repeat* refers to the number of times to repeat the *Attention* signal.

```
Stop Bits: ◉ 1     ○ 1.5 ○ 2    ┌─────────┐
Attention: ◉ CR    ○ ^C  ○ Break│1200 baud│▒   ☐ Seven
Parity:    ○ Even ○ Odd ◉ None  │1800 baud│       Data Bits
Handshake: ☐ Input ☐ Output     │2400 baud│    Repeat: │0│
                                 │3600 baud│⇩
                                 └─────────┘
```

A completed computer description for the TOPS Bulletin Board System is shown on the opposite page:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

A Description of a Computer

Computer's Name: TOPS BBS
Its Location: Alameda, CA

Its Operating System:
FidoNet
Red Ryder Host
UNIX™
Unknown OS

TCP/IP Address: 0.0.0.0
TCP/IP Timeout: 300 seconds

OK
Cancel
Help

Its Phone Number: 415-769-8774
Stop Bits: ● 1 ○ 1.5 ○ 2
Attention: ● CR ○ ^C ○ Break
Parity: ○ Even ○ Odd ● None
Handshake: □ Input □ Output

Speeds Permitted:
300 baud
600 baud
1200 baud
1800 baud
2400 baud
3600 baud

□ Seven Data Bits
Repeat: 0

13. Click *OK*.

The name of the computer description you have just created will appear on the list of known computers, in alphanumeric order:

List of Known Computers

Suntops
TOPS BBS

Open
Done
Remove
New
Help

14. Click *Done*.

Or click on the close box; this step is not strictly necessary, since the computer description was stored in TOPS Terminal Memory when you clicked *OK* in step 13.

You have completed the creation of a computer description for a phone-connection account. See "Creating an Account Description" below to learn how to create an account description for the computer description you just created.

Creating an Account Description

An account description includes all the information needed by TOPS Terminal to establish a connection with a remote computer: the computer description, your user name, and the type of terminal you wish to emulate. Optionally, you can also include your password on

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

the remote computer in the account description. This section shows you how to create an account description; instructions for modifying or removing account descriptions follow on 68 and page 73, respectively.

Each account description is linked to a particular remote computer by including a computer description in the account description. There are three ways to do this:

- Choose a computer description from TOPS Terminal Memory (*Memory*)
- Choose a computer description from a sign-up file (*Sign Up*)
- Create a new computer description as you create the account description (*New*)

```
There are three ways     [ Memory ]
to create an account.

You may use a            [ Sign Up ]
computer description
already in TOPS          [  New  ]
Terminal Memory
("Memory"), or one       [ Cancel ]
stored in a sign-up
file ("Sign Up"), or a   [  Help  ]
new one that you will
create ("New").
```
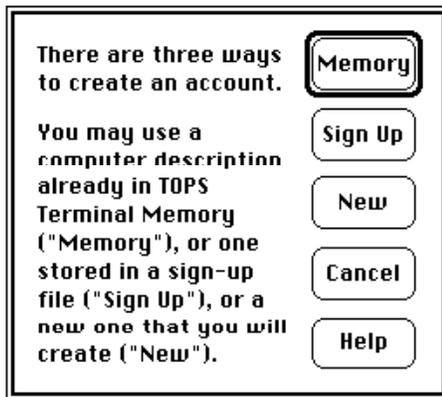
Each of these methods is explained separately below.

Choose a Computer from TOPS Terminal Memory

To create a new account description using a computer description from TOPS Terminal Memory, do the following after starting up TOPS Terminal:

1. Select *Accounts* from *Settings* menu.

```
Settings
Accounts...
Computers...

Modem...

Your Preferences...
```
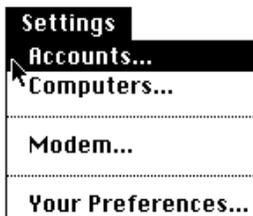
The *List of Known Accounts* will be displayed; if you have not created any account descriptions, none will be listed.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
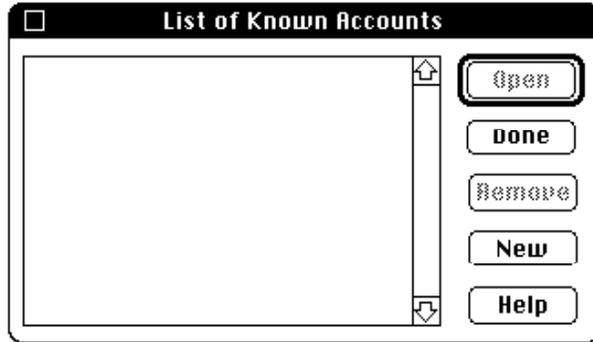
2. Select *New.*

This indicates that you want to create a new account description.

When you select *New,* a dialog window will be displayed, giving you three methods (*Memory*, *Sign Up*, or *New*) for including a computer description as part of an account description:
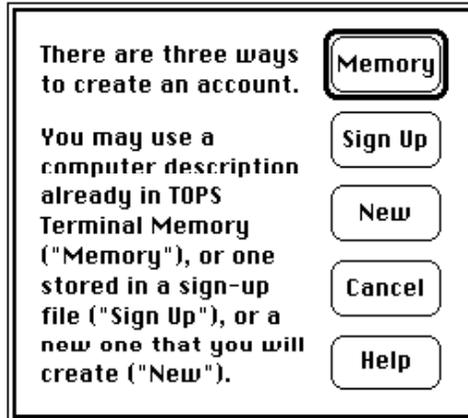
3. Click *Memory.*

When you select *Memory* you are indicating that you want to select a computer description from the list of computer descriptions in your TOPS Terminal Memory.

You will be asked to select a computer for the new account:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
What computer will the new account use?
⊞ Suntops          Alameda, CA
✆ TOPS BBS         Alameda, CA

        OK            Cancel          Help
```
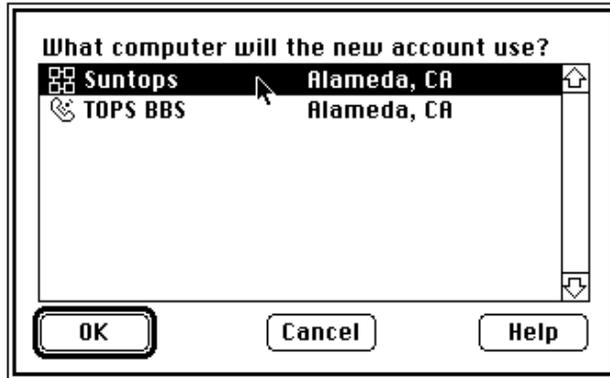
4. Select a computer description and click *OK*.

Use the mouse or the arrow keys to select the computer description you want to use for this account description and click *OK*. In this example we will use the computer *Suntops* (which was described earlier in this chapter). You will be asked to enter your user name and a password (if any) on the computer.

5. Type your user name.

Your user name is the name or ID you use to log on to the computer. This name (*dave* in the example below) is normally assigned by the system administrator of the computer you selected for this account. Press the *Tab* key or *Return* to move the cursor to the password box.

6. Type your password (optional).

Type your password if you want it included in the account description; if you don't enter it here, you will be asked for it when you try to connect to the remote computer automatically.

Your password will not print on the screen, preventing anyone from reading it as you type it. Some computers you connect to will have no password security; ignore this step if that is the case. The completed user name and password dialog window looks like the following, if you enter a password:

```
Please tell me your user name and your password.

 The password you type will not be shown on the screen,
 so anyone standing behind you won't see it.

 If you give your password      If you do not give me your
 to me, anyone who can get      password, I will ask you to
 physical access to your disk   type it in every time you
 will be able to steal it from  connect to the computer.
 my memory.  This is unsafe.    This is inconvenient.

 User name:   dave
 Password:    ••••••

        OK            Cancel          Help
```

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Note: Entering your password here does not set up a password on the other computer; this only tells TOPS Terminal what your password is on the computer; see "Commands Menu" in Chapter 4 to see how to change your password on the other computer using TOPS Terminal. See "Password Saved in TOPS Terminal Memory" on page 68 for a discussion of password security.

7. Click *OK.*

If you included your password in step 6, you will be asked to type it a second time, to be sure you typed it correctly. Type it again and click *OK*.
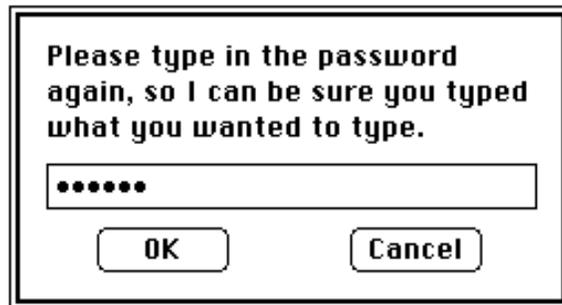
```
Please type in the password
again, so I can be sure you typed
what you wanted to type.

●●●●●●

[   OK   ]      [ Cancel ]
```

You will be asked what kind of terminal should be emulated:

```
What kind of terminal
should be emulated?

vt100
vt102
vt52
adm3a
simple

[  OK  ]    [ Help ]
```
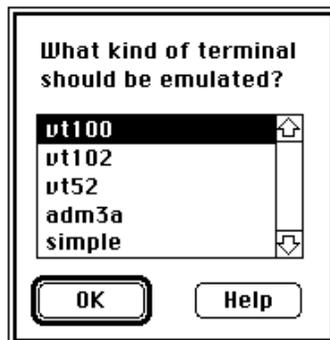
If you see some strange-looking characters when you are logging on, the terminal type may be incorrect; try another type or see your system administrator.

8. Select a terminal type and click *OK*.

The *Description of an Account* dialog will be displayed:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌──────────────────────────────────────────┐
│ ☐  Description of an Account             │
├──────────────────────────────────────────┤
│  User Name:  dave                         │
│  Computer:   Suntops                      │
│  ☐ Password Saved in TT Memory            │
│  ☐ Don't Save Session Transcripts         │
│  ☐ Don't Capture Lines Off Top            │
│  ┌─────────────┬─┐  ┌──────────────┐      │
│  │ vt100      │⇧│  │      OK       │      │
│  │ vt102      │ │  └──────────────┘      │
│  │ vt52       │ │  ┌──────────────┐      │
│  │ adm3a      │ │  │   Cancel     │      │
│  │ simple     │⇩│  └──────────────┘      │
│  └─────────────┴─┘  ┌──────────────┐      │
│                     │    Help      │      │
│                     └──────────────┘      │
└──────────────────────────────────────────┘
```
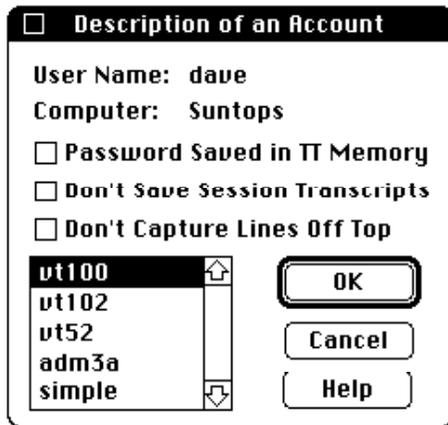
9. Change settings and terminal type, if necessary.

Click on a terminal type and one or more of the check boxes, if you wish to change any of these settings. See "Modifying an Account Description" on page 68 for discussions about selecting a different terminal type or changing the settings of the three check boxes.

10. Click *OK*.

You have completed the account description; the list of described accounts will be displayed again, with the new account description added to the list, in alphanumeric order.

```
┌──────────────────────────────────────────┐
│ ☐      List of Known Accounts            │
├──────────────────────────────────────────┤
│  ┌─────────────────────────┬─┐ ┌────────┐ │
│  │ dave at Suntops        │⇧│ │  Open  │ │
│  │                        │ │ └────────┘ │
│  │                        │ │ ┌────────┐ │
│  │                        │ │ │  Done  │ │
│  │                        │ │ └────────┘ │
│  │                        │ │ ┌────────┐ │
│  │                        │ │ │ Remove │ │
│  │                        │ │ └────────┘ │
│  │                        │ │ ┌────────┐ │
│  │                        │ │ │  New   │ │
│  │                        │ │ └────────┘ │
│  │                        │⇩│ ┌────────┐ │
│  └─────────────────────────┴─┘ │  Help  │ │
│                                └────────┘ │
└──────────────────────────────────────────┘
```
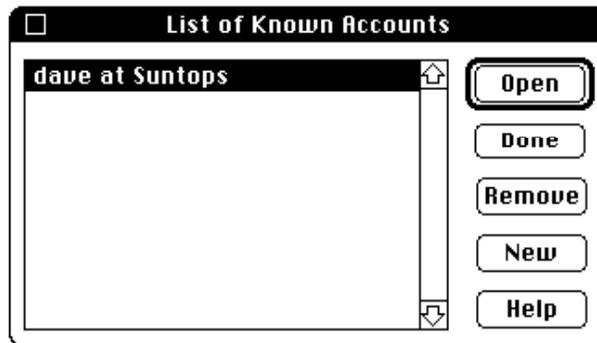
11. Click *Done.*

The new account description has been saved in TOPS Terminal Memory and is ready to be used to make an automatic connection. See page 56 for a discussion of automatic connections.

Choose a Computer from a Sign-Up File

In the example above, the computer description used in creating an account description was taken from TOPS Terminal Memory. The computer description can also be taken from a sign-up file provided by your system administrator. Sign-up files are explained in detail in Appendix F. To create a new account description using a sign-up file, do the following after starting up TOPS Terminal:

1. Select *Accounts* from *Settings* menu.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

The *List of Known Accounts* will be displayed:
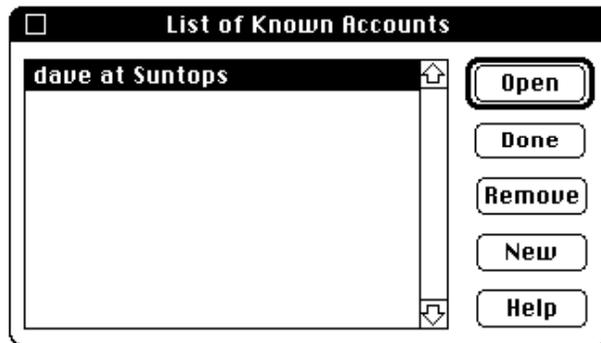
2. Select *New.*

The *Three Ways to Create an Account* dialog will be displayed:
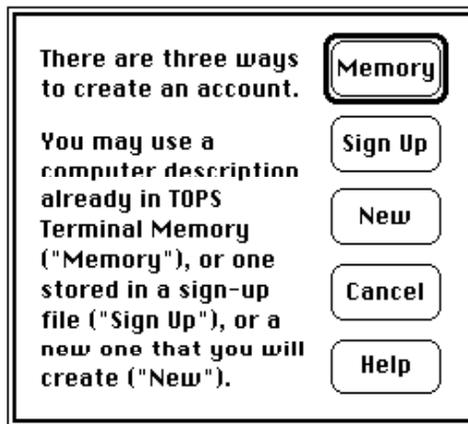
3. Click *Sign Up.*

You will be asked where the sign-up file is:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```
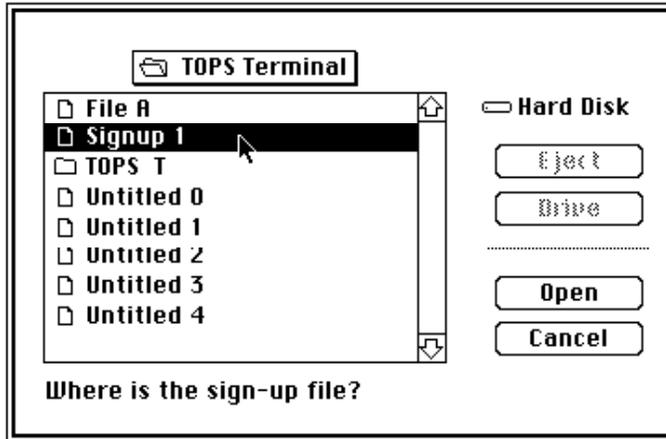
4. Select a sign-up file.

Select the sign-up file from the current folder or change folders to find the sign-up file. Your system administrator, who provides sign-up files to users, will tell you where to find it. A sign-up file can have any name.

5. Click *Open*.

You will be asked to select a computer for the new account description:
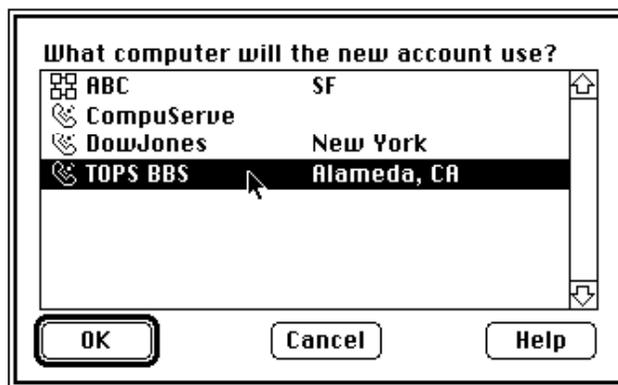
This dialog has the same look as that displayed when you choose a computer description from your TOPS Terminal Memory, but the computer descriptions in the list are not the same; these computer descriptions are in a sign-up file and not in your TOPS Terminal Memory.

6. Select a computer description and click *OK.*

Select a computer description from the list of computer descriptions and click *OK* or double click on the computer description in the list (TOPS BBS in this example). The user name and password dialog will be displayed.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Note: The computer description you select is added to the account description you are creating — plus it is added to the list of known computer descriptions in your TOPS Terminal Memory.

From here on the instructions are the same as for creating an account description using a computer in TOPS Terminal Memory (see steps 5 to 11 starting on page 46 if you have any questions).

7. Type your user name.

8. Type your password (optional).

9. Click *OK*.

If you included your password in step 8, type it a second time and click *OK*.

10. Select a terminal type and click *OK*.

11. Change settings and terminal type in the *Description of an Account*, if desired.

12. Click *OK*.

You have completed the account description. The list of known accounts will be displayed again, with the new account description added to the list, in alphanumeric order:
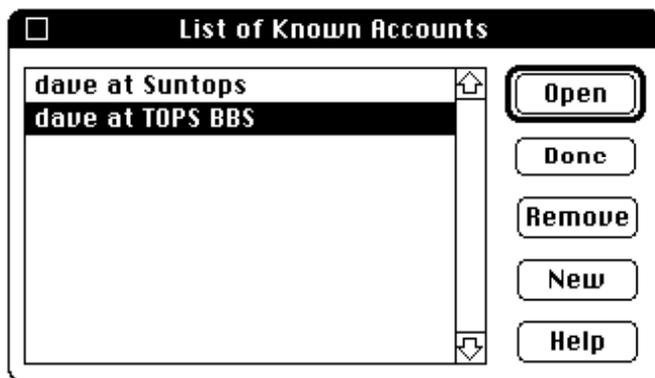
13. Click *Done*.

The new account description has been saved in TOPS Terminal Memory and is ready to be used to make an automatic connection. See page 56 for a discussion of automatic connections.

Create a New Computer Description

To create a new computer description in the process of creating a new account description, do the following after starting up TOPS Terminal:

1. Select *Accounts* from *Settings* menu.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Settings
Accounts...
Computers...
Modem...
Your Preferences...

The *List of Known Accounts* will be displayed:

List of Known Accounts

dave at Suntops
dave at TOPS BBS

Open
Done
Remove
New
Help
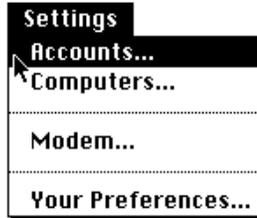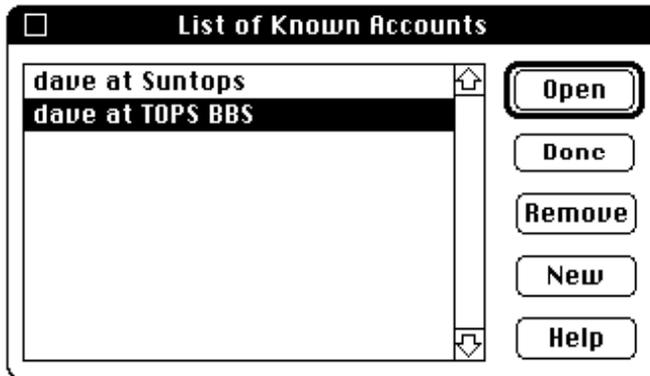
2. Click *New* in *List of Known Accounts*.

The *Three Ways to Create an Account* dialog will be displayed:

There are three ways to create an account.

You may use a computer description already in TOPS Terminal Memory ("Memory"), or one stored in a sign-up file ("Sign Up"), or a new one that you will create ("New").

Memory
Sign Up
New
Cancel
Help
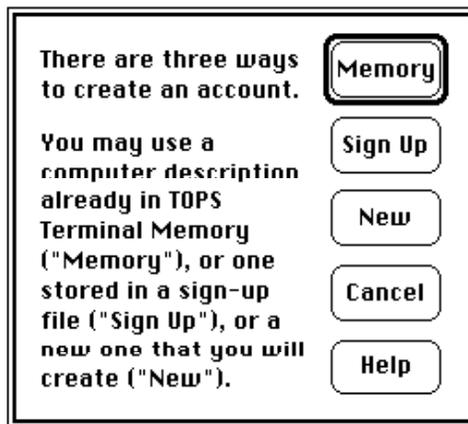
3. Click *New* in *Three Ways to create an account*.

You will be asked what name you would like to use for the computer.

4. Type in a name and click *OK*.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

What name would you like to
use for the new computer?

ABC

[OK ▶]   [Cancel]
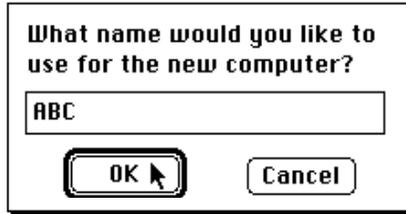
The user name and password dialog window will be displayed.

5. Type in your user name.

6. Type in your password (optional).

7. Click OK.

If you included your password in step 6, type it a second time and click *OK*. You will be asked what kind of terminal to emulate.

8. Select a terminal type and click OK.

A blank *Description of a Computer* will be displayed, with the name you chose filled in:

A Description of a Computer

Computer's Name: ABC
Its Location:

Its Operating System: TCP/IP Address:
FidoNet   0.0.0.0
Red Ryder Host
UNIX™   TCP/IP Timeout:
Unknown OS   300   seconds

OK
Cancel
Help

Its Phone Number: Speeds Permitted:
                               300 baud
Stop Bits: ● 1   ○ 1.5 ○ 2   600 baud
Attention: ● CR ○ ^C ○ Break 1200 baud
Parity: ○ Even ○ Odd ● None 1800 baud   □ Seven
Handshake: □ Input □ Output   2400 baud   Data Bits
                               3600 baud   Repeat: 0

9. Complete the computer description and click OK.

Complete the computer description as explained in "Creating a Computer Description" on page 35. When you click *OK* after completing the computer description, the *Description of an Account* will be displayed:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
┌──────────────────────────────────────┐
│ ☐  Description of an Account          │
├──────────────────────────────────────┤
│  User Name:  dave                     │
│  Computer:   ABC                      │
│  ☐ Password Saved in TT Memory        │
│  ☐ Don't Save Session Transcripts     │
│  ☐ Don't Capture Lines Off Top        │
│ ┌────────────────┐⇧  ┌─────────────┐  │
│ │ vt100          │   │     OK      │  │
│ │ vt102          │   └─────────────┘  │
│ │ vt52           │   ┌─────────────┐  │
│ │ adm3a          │   │   Cancel    │  │
│ │ simple         │⇩  └─────────────┘  │
│ └────────────────┘   ┌─────────────┐  │
│                      │    Help     │  │
│                      └─────────────┘  │
└──────────────────────────────────────┘
```
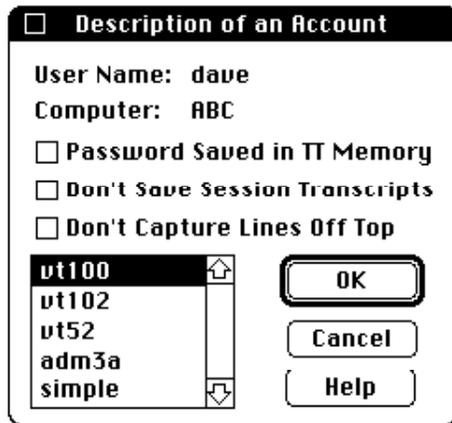
10. Change settings and terminal type in the *Description of an Account*, if desired.

See "Modifying an Account Description" on page 68 for discussions of the check boxes and terminal type.

11. Click *OK*.

You have completed the account description. The list of known accounts will be displayed again, with the new account description added to the list, in alphanumeric order.

```
┌──────────────────────────────────────┐
│ ☐      List of Known Accounts         │
├──────────────────────────────────────┤
│ ┌────────────────────────┐⇧ ┌───────┐│
│ │ dave at ABC            │  │ Open  ││
│ │ dave at Suntops        │  └───────┘│
│ │ dave at TOPS BBS       │  ┌───────┐│
│ │                        │  │ Done  ││
│ │                        │  └───────┘│
│ │                        │  ┌───────┐│
│ │                        │  │Remove ││
│ │                        │  └───────┘│
│ │                        │  ┌───────┐│
│ │                        │  │ New   ││
│ │                        │⇩ └───────┘│
│ └────────────────────────┘  ┌───────┐│
│                             │ Help  ││
│                             └───────┘│
└──────────────────────────────────────┘
```
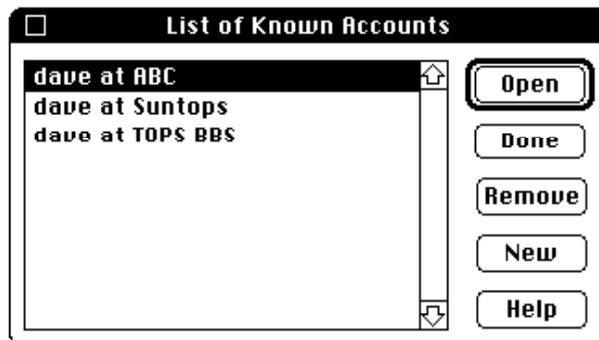
12. Click *Done.*

The new account description will be saved in TOPS Terminal Memory, ready to be used to make an automatic connection. See below for a discussion of automatic connections.

Making an Automatic Connection

Once you have created computer and account descriptions, you will make automatic connections to remote computers for terminal emulation, file transfers, and remote editing. There are two ways to make an automatic connection to a remote computer:
- Select *File Session* in the *Network* menu
- Select *Terminal Session* in the *Network* menu

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Which of these you use depends on what function you want to perform (terminal emulation, file transfer, text editing) and whether you will be using a network or phone account. See Chapter 1 for a discussion of the differences between network and phone accounts, and the services available with each.

Both ways of making an automatic connection to a remote computer are explained below; the process is very simple when you select *File Session*, which is explained first. The process is more complicated when you select *Terminal Session* because session transcripts may or may not be saved during terminal sessions.

File Session

To make an automatic connection to a remote computer on your network for file transfers or remote editing, do the following after starting TOPS Terminal:

1. Select *File Session* in *Network* menu.

You will be asked to select the account you wish to use to make the automatic connection:

```
┌─────────────────────────────────────────────┐
│ Select the account you wish to use.          │
│                                              │
│  ┌─────────────────────────┐ ┌──────────┐   │
│  │ ▓▓ dave at Suntops    ⬆ │ │ Connect  │   │
│  │ ⬚ dave at TOPS BBS      │ └──────────┘   │
│  │ ⬚ ◆ Manual Phone        │                │
│  │ ▓▓ ● Manual TCP/IP      │ ┌──────────┐   │
│  │                         │ │  Cancel  │   │
│  │                         │ └──────────┘   │
│  │                       ⬇ │ ┌──────────┐   │
│  └─────────────────────────┘ │   Help   │   │
│                              └──────────┘   │
│  ☐ Append the transcript to an existing file.│
└─────────────────────────────────────────────┘
```
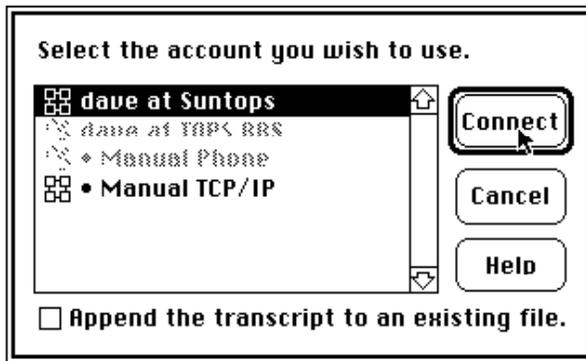
Note that phone accounts are not enabled — because file sessions are for network accounts only.

2. Select an account and click *Connect*.

A new session window will be drawn and an FTP file session will be started up. If you have not included the password in the account description, you will be asked for the password before the connection is completed. A list of the commands available during a file session is the last item in the window.

```
┌─────────────────────────────════ suntops 4/6/88 1 ════──────────────────┐
│▐□▌                                                                        │
│ 220 suntops FTP server (Version 4. 15 Sat Nov 7 15:24:41 PST 1987) ready. │
│ USER dave                                                                 │
│ 331 Password required for dave                                            │
│ PASS                                                                       │
│ 230 User dave  logged in.                                                 │
│ MODE S                                                                     │
│ 200 MODE S ok.                                                            │
│ STRU F                                                                     │
│ 200 STRU F ok.                                                            │
│                                                                           │
│ You may now use these TOPS Terminal commands:                             │
│                                                                           │
│ Network  Menu:  Send File,  Receive File,  Edit File.                     │
│ Commands Menu:  List File,  Delete File,   Move File,                     │
│                 Go To,      File Info,     Type File,                      │
│                 Goodbye.                                                   │
│                                                                           │
```
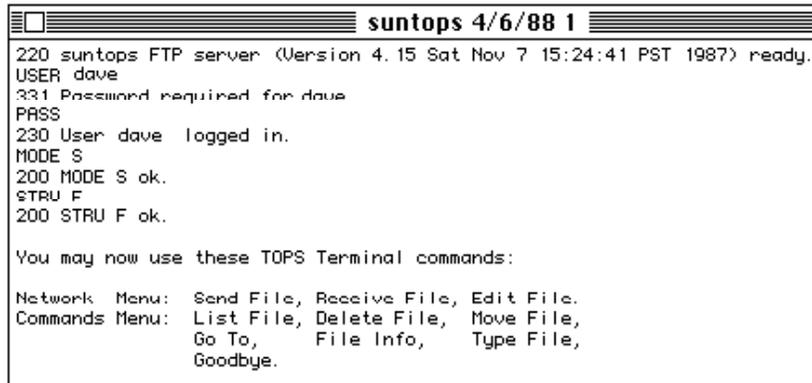
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Once the connection is made, the file transfer services of TOPS Terminal are available: you can send or receive files (Chapter 5), perform remote editing (Chapter 6), or execute the commands listed in the file session window. Note that these commands are invoked using the *Network* or *Network/Commands* menu; you can't type commands during a file session.

Terminal Session - Introduction

Three variations for making an automatic connection with the *Terminal Session* command are presented below. Once you have made the connection, there are a number of functions you can perform on the remote computer. See Chapters 4, 5, and 6 for discussions and specific instructions about terminal emulation, file transfers, and text editing and printing, respectively. When you make an automatic connection to a remote computer, you may or may not want to save the transcript of the terminal session you are starting. By default, session transcripts will be saved to a new file, automatically created by TOPS Terminal. You have two other options, however: you can tell TOPS Terminal not to save transcripts when you describe an account, or you can tell TOPS Terminal to append the transcript of this session to an existing file. All three options are described separately below.

A note about disconnecting: log off from the remote computer and close the terminal session window by clicking on the close box when you are finished.

Terminal Session - Save Transcript

Use one of the accounts you described earlier in this chapter to start a terminal session on a remote computer. If you did not check *Don't Save Session Transcripts* in the account description, the transcript will be saved. Do the following after starting up TOPS Terminal:

1. Select *Terminal Session* in the *Network* menu.

```
Network
Terminal Session...   ⌘T
 File Session...        ⌘D

 Send File...          ⌘U
 Receive File...       ⌘I
 Edit File...          ⌘E
 Send Text...

 Interrupt             ⌘.
 Clear Lines Off Top...
 √Capture Lines Off Top

 Commands            ▶
 Controls            ▶
```

You will be asked to select an account to use to log on to the remote computer:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Select the account you wish to use.

- ▣ dave at Suntops
- ✆ dave at TOPS BBS
- ✆ • Manual Phone
- ▣ • Manual TCP/IP

Connect
Cancel
Help

☐ Append the transcript to an existing file.
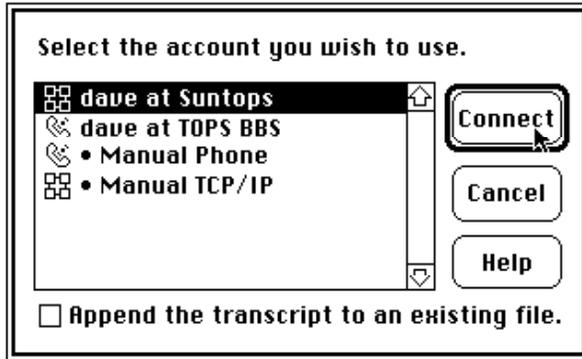
2. Select an account and click *Connect*.

You will be asked where you want to save the transcript:

🗁 TOPS Terminal

- ☐ Manual Phone 2/24/8...
- ☐ Manual Phone 2/24/8...
- ☐ New Text (UNIX)
- ☐ NW-Capture lines
- ☐ Questions – 2/8
- ☐ Questions/Bugs

▭ Hard Disk

Eject
Drive
Save
Cancel
Help

Save transcript to what file?
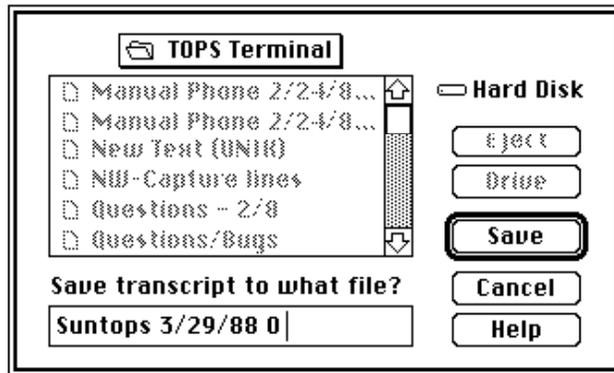
Suntops 3/29/88 0|

3. Name the file and click *Save*.

You can save the transcript to the automatically-generated file name ("Suntops 3/29/88 0" in the example above), or you can type in a new file name. If you want the transcript saved in a different folder than the current one, select a folder from the list, click *Save* to open the folder, and click *Save* a second time.

When you click *Save* or press *Return,* a new session window will be drawn and TOPS Terminal will make the connection to the remote computer and begin the login process. If you have included the password in the account description, you will be logged on to the computer, ready to work; if that is the case, skip step 4 below.

4. Type password (if necessary) and press *Return*.

If you did not include your password when you described the account, type it when it is requested in the session window and press *Return*. You are logged on to the computer, ready to work.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌─────────────────────── suntops 3/29/88 0 ───────────────────────┐
│                                                               ⇧  │
│  login: bloom                                                    │
│  Password:                                                       │
│  Last login: Thu Mar 24 14:32:35 from 129.149.1.72              │
│  Sun UNIX 4.2 Release 3.5 (SUNAPPLE) #3: Sun Mar 20 17:41:37 PST 1988│
│  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~  │
│                        oOo                                       │
│                       SunTops                                    │
│                        oOo                                       │
│                                                                  │
│  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~  │
│                                                                  │
│  You have mail.                                                  │
│  suntops_bloom% ▮                                                │
│                                                                  │
│                                                               ▭  │
│                                                               ⇩  │
│  Connected to suntops        ⇦▭▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒⇨    │
└──────────────────────────────────────────────────────────────────┘
```
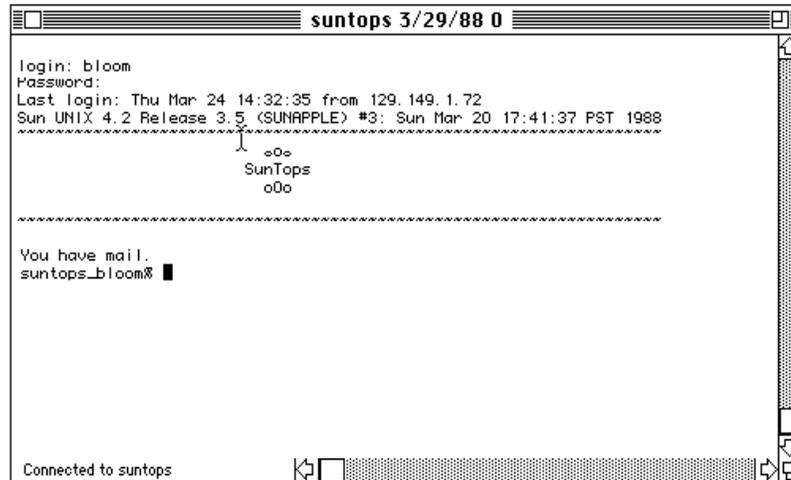
Once you have made a terminal session connection to a remote computer, there are three major functions you can perform: terminal emulation (Chapter 4), file transfer (Chapter 5), or remote editing (Chapter 6).

Terminal Session - Don't Save Transcript

If you checked *Don't Save Session Transcripts* in an account description, connecting to a remote computer is a two or three-step process. After starting up TOPS Terminal:

    1. Select *Terminal Session* in the *Network* menu.

```
┌─────────────────────────┐
│ Network                 │
├─────────────────────────┤
│ Terminal Session... ⌘T  │
│ File Session...     ⌘D  │
│                         │
│ Send File...        ⌘U  │
│ Receive File...     ⌘I  │
│ Edit File...        ⌘E  │
│ Send Text...            │
│                         │
│ Interrupt           ⌘.  │
│ Clear Lines Off Top...  │
│✓Capture Lines Off Top   │
│                         │
│ Commands             ▶  │
│ Controls             ▶  │
└─────────────────────────┘
```

You will be asked to select an account to use to log on to the remote computer:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
Select the account you wish to use.

⊞ dave at Suntops          ⬆         Connect
✆ dave at TOPS BBS
✆ • Manual Phone                     Cancel
⊞ • Manual TCP/IP
                            ⬇         Help

☐ Append the transcript to an existing file.
```
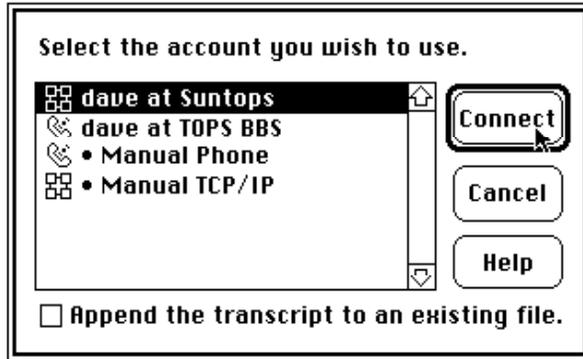
2. Select the account to use and click *Connect*.

When you click *Save* or press *Return,* a new session window will be drawn and TOPS Terminal will make the connection to the remote computer and begin the login process. If you have included the password in the account description, you will be logged on to the computer, ready to work; if that is the case, skip step 3 below.

3. Type password (if necessary) and press *Return*.

If you did not include your password when you described the account, type it when it is requested in the session window and press *Return*. You are logged on to the computer, ready to work.


```
▤▤▤▤▤▤▤▤▤▤▤▤▤ suntops 3/29/88 0 ▤▤▤▤▤▤▤▤▤

login: bloom
Password:
Last login: Thu Mar 24 14:32:35 from 129.149.1.72
Sun UNIX 4.2 Release 3.5 (SUNAPPLE) #3: Sun Mar 20 17:41:37 PST 1988
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                        oOo
                      SunTops
                        oOo

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

You have mail.
suntops_bloom% █



Connected to suntops
```
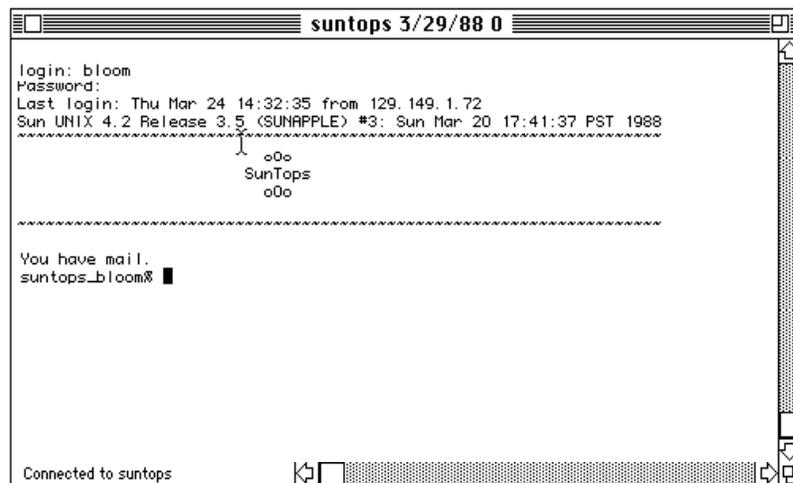
Once you have made a terminal session connection to a remote computer, there are three major functions you can perform: terminal emulation (Chapter 4), file transfer (Chapter 5), or remote editing (Chapter 6).

A note about saving the transcript: you can save the transcript by selecting *Save* in the *File* menu before disconnecting from the remote computer.

Terminal Session - Append Transcript

Whether or not you elected to save session transcripts in an account description, you can tell TOPS Terminal to append a transcript to the end of an existing file before you choose the account to use for the connection. After starting up TOPS Terminal:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

1. Select *Terminal Session* in the *Network* menu.

```
Network
Terminal Session...    ⌘T
File Session...         ⌘D

Send File...            ⌘U
Receive File...         ⌘I
Edit File...            ⌘E
Send Text...

Interrupt               ⌘.
Clear Lines Off Top...
✓Capture Lines Off Top

Commands                ▶
Controls                ▶
```

You will be asked to select an account to use to log on to the remote computer:

```
Select the account you wish to use.

 ⊞ dave at Suntops      ⇧      ┌─────────┐
 ✆ dave at TOPS BBS            │ Connect │
 ✆ • Manual Phone              └─────────┘
 ⊞ • Manual TCP/IP             ┌─────────┐
                               │ Cancel  │
                               └─────────┘
                        ⇩      ┌─────────┐
                               │  Help   │
                               └─────────┘
 ☐ Append the transcript to an existing file.
```
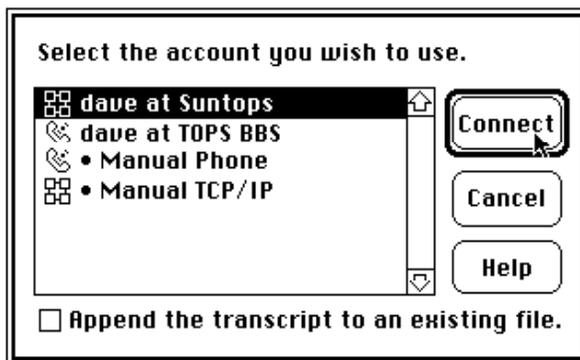
2. Check *Append the transcript to an existing file*.

If you check *Append the transcript to an existing file,* the transcript of the session will be added to the file you select in step 4 below. This is a handy way to keep all transcripts for a given account in one place; use this for saving all transcripts from connections to a bulletin board system, for instance.

3. Select the account to use and click *Connect*.

After you click *Connect*, you will be given the opportunity to select the file from the list of text files in the current folder, or to change folders and select a file.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
┌─────────────────────────────────────────────────┐
│   ┌──────────────────────┐                        │
│   │ 🗁 TOPS Terminal      │                        │
│   │ ┌──────────────────┬─┐    ⊂⊃ Hard Disk        │
│   │ │ 🗋 Manual Phone 2/24/88 0 │⇧│                │
│   │ │ 🗋 Manual Phone 2/24/88 1 │█│  ┌──────────┐  │
│   │ │ 🗋 New CPU 2/24/88 0      │█│  │  Eject   │  │
│   │ │ 🗋 New Text (UNIX)        │█│  └──────────┘  │
│   │ │ 🗋 save as name           │█│  ┌──────────┐  │
│   │ │ 🗋 save as UNIX text      │ │  │  Drive   │  │
│   │ │ 🗋 Suntops 2/24/88 0      │ │  └──────────┘  │
│   │ │ 🗋 Suntops 2/24/88 1      │ │  ┌──────────┐  │
│   │ │ 🗋 Suntops 2/24/88 3      │⇩│  │ ▶ Open   │  │
│   │ └──────────────────┴─┘     └──────────┘  │
│   │                            ┌──────────┐  │
│   │                            │  Cancel  │  │
│   └──────────────────────────────────────────┘
└─────────────────────────────────────────────────┘
```
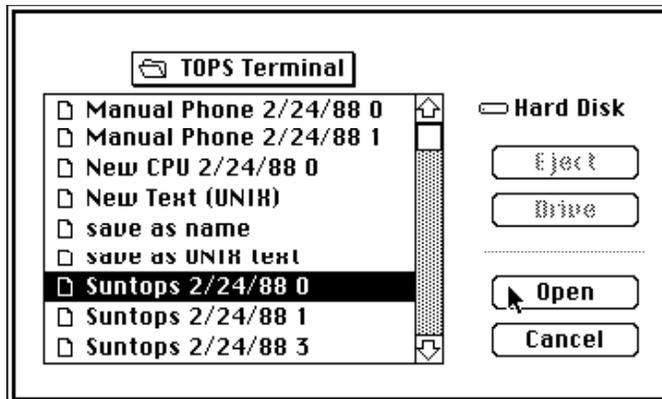
4. Select a file and click *Open*.

If the file to which you wish to append the transcript is in a different folder than the current one, select the folder from the list, click *Open* to open the folder, select the file, and click *Open* a second time.

After you have selected the file and clicked *Open*, a new session window will be drawn and TOPS Terminal will make the connection to the remote computer and begin the login process. If you have included the password in the account description, you will be logged on to the computer, ready to work; if that is the case, skip step 5 below.

5. Type password (if necessary) and press *Return*.

If you did not include your password when you described the account, type it when it is requested in the session window and press *Return*. You are logged on to the computer, ready to work.

The file you selected to append the transcript to will be opened and displayed, with the cursor sitting at the end of the file, waiting for you to issue commands on the remote computer.

Note the scroll bar at the right of the window, which indicates that you can scroll back in the file. If you type anything after scrolling back, however, the window will automatically scroll to the end of the transcript, which is where the typed text appears.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
┌──────────────────────────────────────────────────────┐
│▧▧▧▧▧▧▧▧▧▧▧▧▧ Suntops 2/24/88 0 ▧▧▧▧▧▧▧▧▧▧▧│
│                                                   ⬆  │
│  suntops_dave% logout                                │
│                                                      │
│                                                      │
│   4.2 BSD UNIX (suntops)                             │
│                                                      │
│  login: dave                                         │
│  Password:                                           │
│  Last login: Wed Feb 24 14:54:17 from 129.149.1.104  │
│  Sun UNIX 4.2 Release 3.2 (TOPSFS) #229: Wed Dec 16 08:22:51 PST 1987 │
│  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~│
│                    o0o                               │
│                   SunTops                            │
│                    o0o                               │
│  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~│
│                                                      │
│  ▮                                                   │
│                                                   ⬇  │
│ Connected to suntops      ◁□▧▧▧▧▧▧▧▧▧▧▧▧▧▧▧▧▷⬛│
└──────────────────────────────────────────────────────┘
```
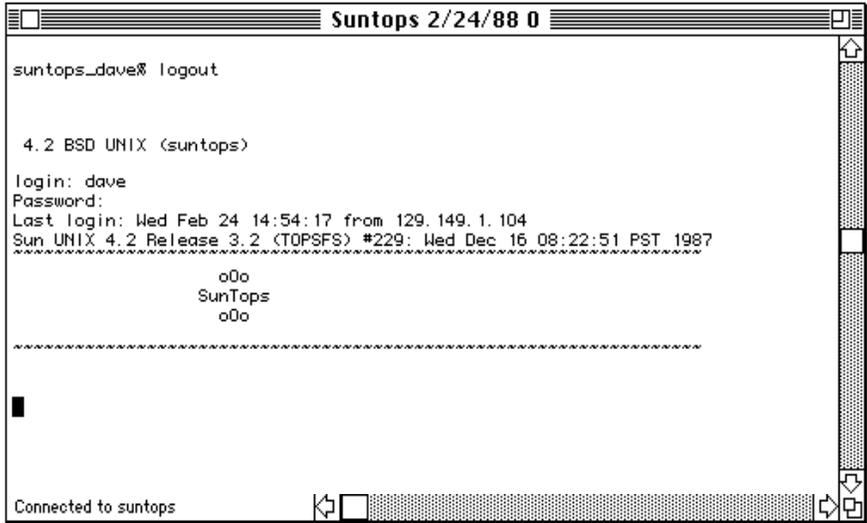
Once you have made a terminal session connection to a remote computer, there are three major functions you can perform: terminal emulation (Chapter 4), file transfer (Chapter 5), or remote editing (Chapter 6).


Modifying a Computer Description

To modify an existing computer description do the following after starting up TOPS Terminal:
    1. Select *Computers* from *Settings* menu.

```
┌─────────────────────────┐
│ Settings                │
├─────────────────────────┤
│ Accounts...             │
│▐ Computers...          ▌│
│ ⬉⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯│
│ Modem...                │
│ ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯│
│ Your Preferences...     │
└─────────────────────────┘
```

    The *List of Known Computers* will be displayed.

```
┌──────────────────────────────────────────┐
│ □      List of Known Computers            │
├──────────────────────────────────────────┤
│ ┌──────────────────────┬─┐  ┌──────────┐ │
│ │ Suntops             ⬆│ │  │   Open   │ │
│ │ TOPS BBS             │ │  └──────────┘ │
│ │                      │ │  ┌──────────┐ │
│ │                      │ │  │   Done   │ │
│ │                      │ │  └──────────┘ │
│ │                      │ │  ┌──────────┐ │
│ │                      │ │  │  Remove  │ │
│ │                      │ │  └──────────┘ │
│ │                      │ │  ┌──────────┐ │
│ │                     ⬇│ │  │   New    │ │
│ │                      │ │  └──────────┘ │
│ │                      │ │  ┌──────────┐ │
│ │                      │ │  │   Help   │ │
│ └──────────────────────┴─┘  └──────────┘ │
└──────────────────────────────────────────┘
```
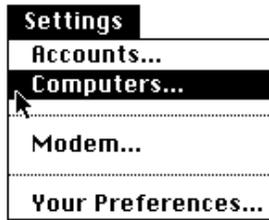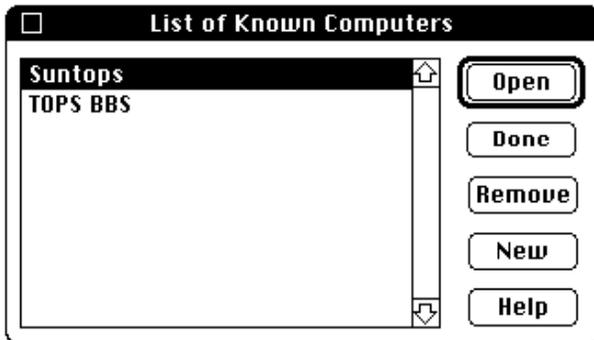
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

2. Select the computer description to be modified and click *Open:*

List of Known Computers

Suntops	**Open**
TOPS BBS	Done
	Remove
	New
	Help
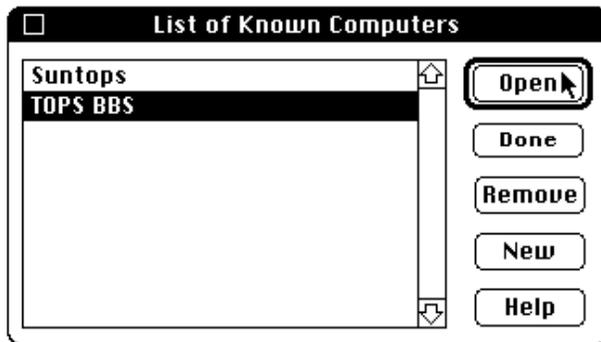
The description of the selected computer will be displayed:

A Description of a Computer

Computer's Name: TOPS BBS
Its Location: Alameda, CA

Its Operating System:
FidoNet
Red Ryder Host
UNIX™
Unknown OS

TCP/IP Address: 0.0.0.0
TCP/IP Timeout: 300 seconds

OK
Cancel
Help

Its Phone Number: 415-769-8774

Stop Bits: ● 1 ○ 1.5 ○ 2
Attention: ● CR ○ ^C ○ Break
Parity: ○ Even ○ Odd ● None
Handshake: □ Input □ Output

Speeds Permitted:
300 baud
600 baud
1200 baud
1800 baud
2400 baud
3600 baud

□ Seven Data Bits
Repeat: 0

3. Modify the computer description.

You can modify anything but the name. If you change the name, you will be creating a new computer description when you click *OK*. Use this method for testing various settings.

4. Click *OK*.

The *List of Known Computers* will be displayed. Click on the close box, if you are finished with computer descriptions.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

List of Known Computers

Suntops
TOPS BBS

Open
Done
Remove
New
Help
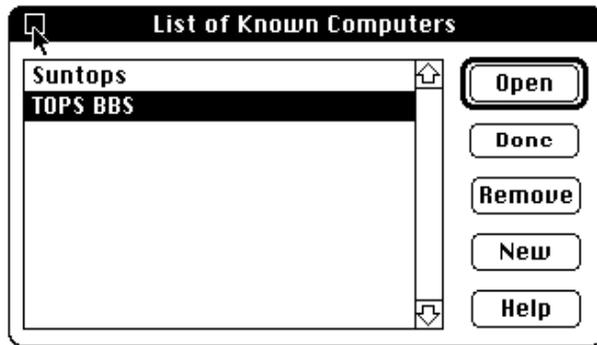
Removing a Computer Description

To remove an existing computer description:

1. Select *Computers* from *Settings* menu.

Settings
Accounts...
Computers...
Modem...
Your Preferences...
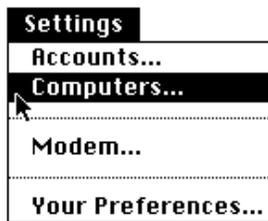
The *List of Known Computers* will be displayed.

2. Select the computer description you want to remove.

3. Click *Remove.*

List of Known Computers

Suntops
TOPS BBS

Open
Done
Remove
New
Help
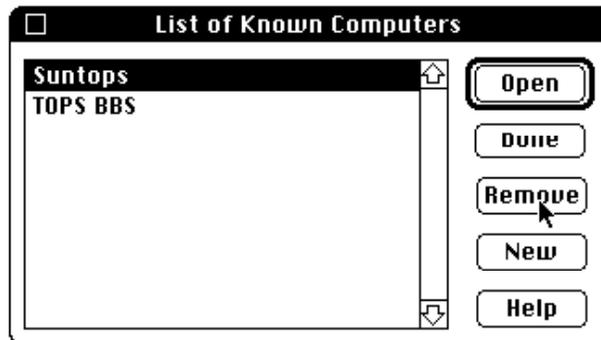
If the computer description you are trying to remove is used in an account description, you will see the following:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
You can't remove that now; an account
description is using it.

        OK
```

You will have to remove the account description before you will be able to remove the computer description. See "Removing an Account Description" on page 73 below.

Modifying an Account Description

Once you have created an account description, you may want to modify the description. You modify the description by displaying the *Description of an Account* and clicking on one of the check boxes or selecting a different terminal type.

The *Description of an Account* is displayed in two circumstances: near the end of the process of creating a new account description and when you select an account from the *List of Known Accounts* and click *Open*.

```
☐  Description of an Account

User Name:  dave
Computer:   Suntops
☐ Password Saved in TT Memory
☐ Don't Save Session Transcripts
☐ Don't Capture Lines Off Top

vt100                        OK
vt102
vt52                       Cancel
adm3a
simple                      Help
```
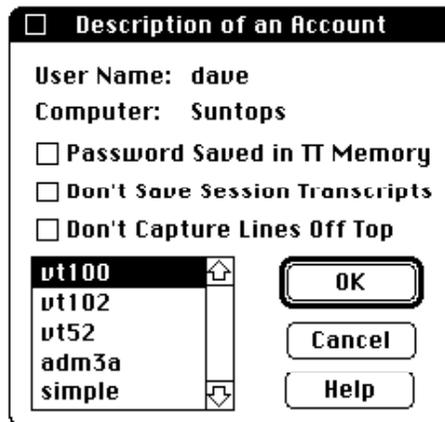
You may change four things in an account description:
- Whether your password is saved in TOPS Terminal Memory
- Whether session transcripts are saved
- Whether lines that scroll off the top of a session window are retained in memory during a terminal session
- What type of terminal to emulate during a terminal session

Each of these is discussed in detail below.

Password Saved in TOPS Terminal Memory

A password is part of the login process on many computers. When you create a TOPS Terminal account description, you can include the password or not, as you wish. If you enter a password, the *Password Saved in TT Memory* box will be checked when the *Description of an Account* is displayed; if you don't enter a password the box will be blank.

If you change your mind and want to change the password-saved setting, click on the *Password Saved in TT Memory* box and click *OK*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
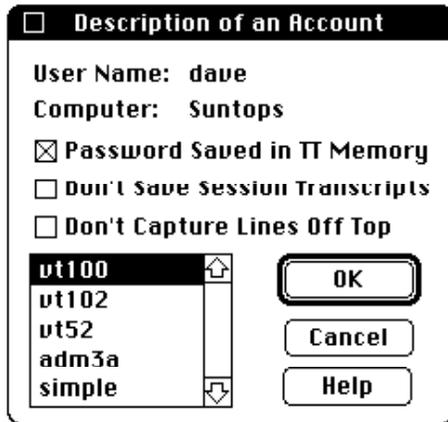
If the box is not checked when you click on it, clicking on it will cause it to be checked; when you click *OK* you will be asked to type the password for the account, and then to type it a second time. The password will be saved in TOPS Terminal Memory and you will not have to type it when you connect to the remote computer.

If the box is checked when you click on it, clicking on it will uncheck it; the password for the account will no longer be stored in TOPS Terminal Memory.

Changing Your Password

The best way to change your password on a computer you connect to with TOPS Terminal is to select *Password* in the *Network/Commands* menu during a terminal session; the password will be changed on the remote computer and in TOPS Terminal Memory.

If you change your password on a remote computer in any other way and if you have checked "Password Saved in TT Memory" in the *Description of an Account*, you will have to change it in TOPS Terminal separately. After displaying the *Description of an Account*, do the following:

    1. Click on *Password Saved in TT Memory.*
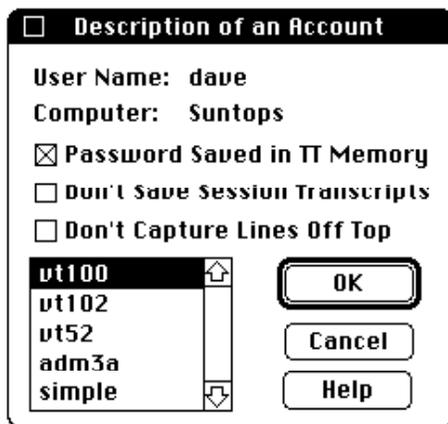
    This will 'uncheck' the box.

    2. Click on *Password Saved in TT Memory* again.

    You will be asked to type the password:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌─────────────────────────────────────┐
│ ┌─────────────────────────────────┐ │
│ │ Please type in the password used│ │
│ │ on this account.                │ │
│ │                                 │ │
│ │ ┌─────────────────────────────┐ │ │
│ │ │▏                            │ │ │
│ │ └─────────────────────────────┘ │ │
│ │   ┌──────────┐   ┌──────────┐   │ │
│ │   │   OK     │   │  Cancel  │   │ │
│ │   └──────────┘   └──────────┘   │ │
│ └─────────────────────────────────┘ │
└─────────────────────────────────────┘
```

3. Type password and click *OK.*

You will be asked to enter the password again.

4. Retype password and click *OK.*

The *Description of an Account* will be displayed; the new password has been added to the account description in TOPS Terminal Memory.

About Password Security:
If you type in your password as part of an account description, the connection to the computer will be completely automatic, but there will be a security risk: anyone who has access to your TOPS Terminal Memory file can discover your passwordand anyone who runs TOPS Terminal from your Macintosh can log on to the computer by selecting this account.
The safest thing to do, if you are concerned about this breach of security, is to **not** include your password when you describe an account. You will be asked for it whenever you use the account to connect to the computer. Another way to get around this problem is to keep your TOPS Terminal Memory file on a floppy disk and to lock the disk away when you are not using it.
Note: entering your password as part of an account description has nothing to do with whether passwords are saved in RAM memory during a TOPS Terminal session. This is a preference in *Your Preferences*, which is discussed in Appendix B.

Don't Capture Lines Off Top

When you connect to a remote computer, you begin a terminal session. TOPS Terminal maintains a transcript of each terminal session in memory on your Macintosh. This allows you to scroll back in the session transcript: if you want to see something that occurred earlier in the session, you can click in the scroll bar or scroll arrows at the right of the window and see what has scrolled off the top of the window.
If you want to preserve memory for other activities, and if you are sure you won't need to scroll back during a terminal session, click on the *Don't Capture Lines Off Top* box:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
┌─────────────────────────────────────────┐
│ ☐  Description of an Account             │
├─────────────────────────────────────────┤
│  User Name:  dave                         │
│  Computer:   Suntops                      │
│  ☐ Password Saved in TT Memory            │
│  ☐ Don't Save Session Transcripts         │
│  ☒ Don't Capture Lines Off Top            │
│ ┌──────────────┐ ┌──────────────┐        │
│ │ vt100      ⬆ │ │      OK       │        │
│ │ vt102        │ └──────────────┘        │
│ │ vt52         │ ┌──────────────┐        │
│ │ adm3a        │ │    Cancel     │        │
│ │ simple     ⬇ │ ┌──────────────┐        │
│ └──────────────┘ │     Help      │        │
│                  └──────────────┘        │
└─────────────────────────────────────────┘
```
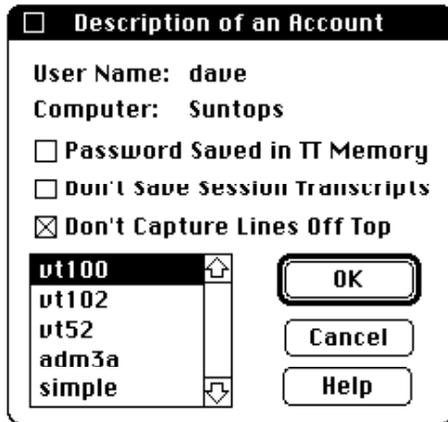
Subsequently, during any terminal session for this account, anything that scrolls off the top of window will be gone and will not be part of the transcript; the scroll bar at the right of the window will not be active.

See "Clear Lines Off Top" and "Capture Lines Off Top" on pages 83 and 84 to see how to clear lines off the top of a transcript and how to change the *Capture Lines Off Top* setting during a session.

Don't Save Session Transcripts

TOPS Terminal will save the transcript of a terminal session in a disk file, unless you specify that you don't want it saved. You will often want to save transcripts, especially if you are calling a bulletin board system such as TOPS BBS or CompuServe. Be aware, however, that saving many terminal session transcripts can use up a lot of disk space.

If you don't want transcripts for an account saved to disk, click on the *Don't Save Session Transcripts* box:

```
┌─────────────────────────────────────────┐
│ ☐  Description of an Account             │
├─────────────────────────────────────────┤
│  User Name:  dave                         │
│  Computer:   Suntops                      │
│  ☐ Password Saved in TT Memory            │
│  ☒ Don't Save Session Transcripts         │
│  ☐ Don't Capture Lines Off Top            │
│ ┌──────────────┐ ┌──────────────┐        │
│ │ vt100      ⬆ │ │      OK       │        │
│ │ vt102        │ └──────────────┘        │
│ │ vt52         │ ┌──────────────┐        │
│ │ adm3a        │ │    Cancel     │        │
│ │ simple     ⬇ │ ┌──────────────┐        │
│ └──────────────┘ │     Help      │        │
│                  └──────────────┘        │
└─────────────────────────────────────────┘
```
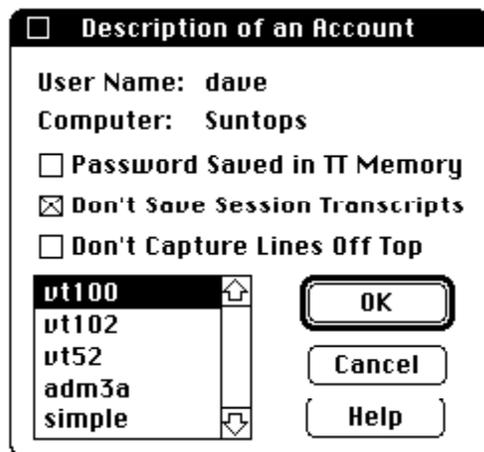
(If you click in the box when it is checked, it will no longer be checked and session transcripts will be saved for the account.)

Note: even if you check *Don't Save Session Transcripts* for an account, you can still save the

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

transcript during a terminal session, as will be explained in Chapter 4.

Change the Terminal Type

TOPS Terminal gives you the choice of five types of terminals to choose from during account descriptions. You can change the terminal type in the *Description of an Account* dialog:

```
┌─────────────────────────────────────┐
│ ☐  Description of an Account         │
│                                      │
│  User Name:  dave                    │
│  Computer:   Suntops                 │
│  ☐ Password Saved in TT Memory       │
│  ☐ Don't Save Session Transcripts    │
│  ☐ Don't Capture Lines Off Top       │
│  ┌──────────┬─┐  ┌──────────────┐    │
│  │ vt100    │⇧│  │      OK       │   │
│  │ vt102    │ │  └──────────────┘    │
│  │ vt52     │ │  ┌──────────────┐    │
│  │ adm3a    │ │  │    Cancel     │    │
│  │ simple   │⇩│  └──────────────┘    │
│  └──────────┴─┘  ┌──────────────┐    │
│                  │     Help      │   │
│                  └──────────────┘    │
└─────────────────────────────────────┘
```
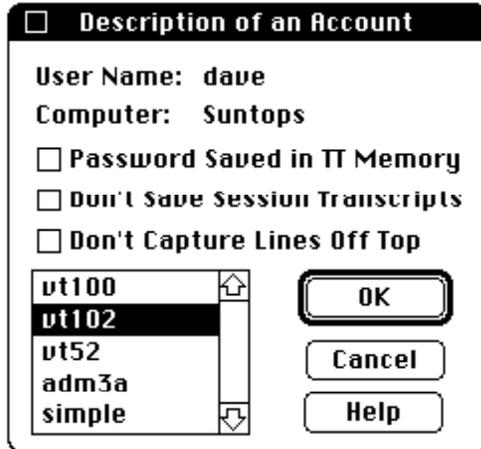
If you are getting strange results when you log on to a remote computer from TOPS Terminal, you might try a different terminal type to see if that is the problem. Use the mouse or the arrow keys to select a different terminal.

Removing an Account Description

To remove an account description from the *List of Known Accounts*, do the following after starting up TOPS Terminal:

1. Select *Accounts* from the *Settings* menu.

```
┌─────────────────────┐
│ Settings            │
├─────────────────────┤
│ Accounts...         │
│ Computers...        │
├·····················│
│ Modem...            │
├·····················│
│ Your Preferences... │
└─────────────────────┘
```
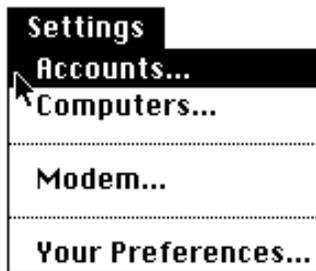
2. Select the account description to remove*.*
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
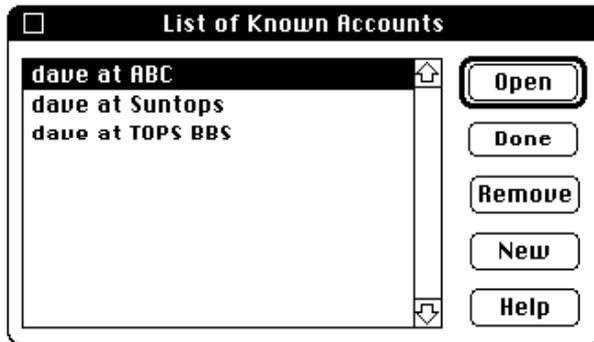
3. Click *Remove.*

The selected account description will be removed from the *List of Known Accounts.*

Chapter

4

Terminal Emulation

Once you have created computer and account descriptions, you can connect to a remote computer automatically and take advantage of all of TOPS Terminal's services: terminal emulation, file transfer, and remote editing.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

This chapter describes terminal emulation functions you can perform from your Macintosh, including:

- Using the Network/Commands menu
- Using the Network/Controls menu
- Using Power-key equivalents for menu and dialog functions
- Sending a text file to a program on a remote computer
- Interrupting a script or file transfer command
- Executing the Reset Terminal command
- Killing the connection to a remote computer
- Executing a macro on a remote computer
- Editing during a terminal session
- Saving a session transcript to disk
- Disconnecting from a remote computer

Terminal Services on a Remote Computer

When you make an automatic connection to a remote computer, TOPS Terminal helps you perform a number of functions on that computer, including executing commands and issuing control-key sequences from the *Network* menu. These terminal services make work on the remote computer easy for you, if you are not familiar with that computer's operating system.

Commands Menu

The *Commands* menu lets you execute certain commands on a remote computer even if you don't know the command structure on that computer. Once you are logged on to a computer with TOPS Terminal, you can execute commands by typing them and pressing *Return* or *Enter*. But suppose you don't remember the command names. If you select *Commands* under the *Network* menu, the available commands will be listed:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
Commands  ▶   List Files...   Opt-⌘L
              Delete File...  Opt-⌘D
              Copy File...    Opt-⌘C
              Move File...    Opt-⌘M
              Go To...        Opt-⌘G
              File Info...    Opt-⌘F
              Type File...    Opt-⌘T

              Password...     Opt-⌘P
              Goodbye         Opt-⌘Y
```

Do the following to select one of the listed commands:

1. Select *Commands* menu.

Click and hold on the *Network* menu, moving the mouse down until the *Commands* menu is displayed.

2. Select the command to execute.

While continuing to depress the mouse button, move the mouse to the right and move it up or down in the *Commands* menu until the command you want to execute is highlighted; release the mouse button to execute the command.

3. Type in the dialog windows.

Type the requested file name, directory name, or password in the dialog windows (displayed below, as each command is described).

The period that you see in the dialog window for some of the commands represents the current directory (your login directory is the default) on a UNIX system. You can list a different directory by including the full path name for the directory you want to list.

4. Click *OK*.

For all but *Goodbye*, click on the *OK* button.

After you click *OK* the command will be displayed in the session window and will be executed as if you had typed the command and pressed *Return*.

Note: these commands can also be issued by using the "power key" equivalents, which are listed to the right of the function in the *Commands* menu. See "Power Keys" later in this chapter for details.

Here are the commands in the *Commands* menu, with their UNIX equivalents in parentheses:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

List Files (UNIX = ls)
Lists the files in the selected directory on the remote computer.

> **What file or directory do you want to list?**
>
> [OK] [Cancel] [Help]
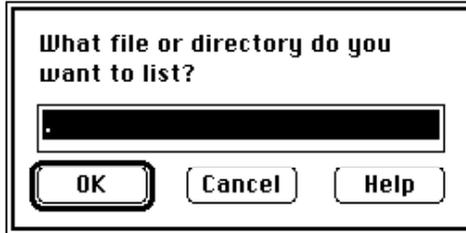
If you were logged on to a VMS system, the *List Files* command would execute the VMS command *DIRECTORY*.

Delete File (UNIX = rm)
Deletes the selected file on the remote computer. Include the path name if the file is not in the current directory. Depending on your profile on the remote computer, you may have to respond *Y* or *N* to delete the file selected.

> **What file do you want to delete?**
>
> [OK] [Cancel] [Help]
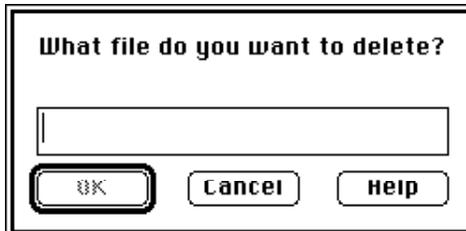
Copy File (UNIX = cp)
Makes a copy of a file on the remote computer. Type the name of the existing file, press the *Tab* key to move to the other box, type the name you want for the copied file, and click *OK*.

> **Please enter the name of the existing file...**
>
> **...and of the copy you want to create.**
>
> [OK] [Cancel] [Help]
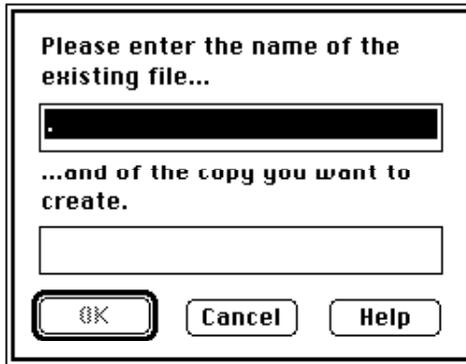
Move File (UNIX = mv)
Moves a file from one directory to another, or gives a file a new name on the remote computer. Type the name of the existing file, press the *Tab* key to move to the other box, type the new name for the file, and click *OK.*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
Please enter the name of the
existing file...

[_____]

...and the new name you want
to give it.

[_____]

( OK )   [ Cancel ]   [ Help ]
```

Go To (UNIX = cd)
Changes the current directory. Type the name of the directory you want to change to, including the path name, if necessary.

```
What directory do you want to
go to?

[_____]

( OK )   [ Cancel ]   [ Help ]
```

File Info (UNIX = ls -l)
This gives you a more complete listing than *ls*, by displaying file ownership information, file modification dates, and file sizes. Include the path name if you want to list something other than the current directory.

```
What file or directory do you
want information on?

[_____]

( OK )   [ Cancel ]   [ Help ]
```

Type File (UNIX = cat)
Lists the contents of the designated text file on the screen.

```
What text file do you want to
type on the screen?

[_____]

( OK )   [ Cancel ]   [ Help ]
```

Password (UNIX = passwd)
Allows you to change your password on the remote computer. If you have included your password as part of the account description on TOPS Terminal, this password will be changed,

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

also. You will be asked to type the password a second time to be sure you typed it as you intended.

```
┌─────────────────────────────────┐
│  Please type in the password    │
│  which you want to start using.  │
│                                 │
│  ┌───────────────────────────┐  │
│  │ │                         │  │
│  └───────────────────────────┘  │
│   ┌──────────┐   ┌───────────┐  │
│   │    OK    │   │  Cancel   │  │
│   └──────────┘   └───────────┘  │
└─────────────────────────────────┘
```

Note: Use this method to change your password rather than changing it on the remote computer directly; if you change it on the remote computer, you will have to change it on TOPS Terminal, also, or automatic connections will not work.

Goodbye (UNIX = logout)
Logs you off from the remote computer immediately. The connection to the remote computer is terminated and the session transcript becomes an editor document.

Controls Menu

Many of the operating systems to which you will connect using TOPS Terminal require you to send certain control-key sequences in order to perform various functions. For example, on a UNIX system you can issue an interrupt to the current program with *Control-C* (hold down the *control* key and press the 'c' key).
TOPS Terminal frees you from having to remember some of the most important of the control characters by including a *Controls* menu. If you select *Controls* under the *Network* menu, you will see the available selections:

```
┌──────────────────┐ ┌──────────────────────┐
│ Controls      ►  │ │ Flush Output  Opt-⌘ O │
└──────────────────┘ │ Zap Program   Opt-⌘ A │
                     │ End of File   Opt-⌘ Z │
                     │ Erase Word    Opt-⌘ W │
                     │ Erase Line    Opt-⌘ X │
                     │ Literal       Opt-⌘ U │
                     │ Send Break    Opt-⌘ B │
                     └──────────────────────┘
```

If Your Keyboard Has No Control or Escape Key

Some Macintosh computers that run TOPS Terminal do not have a Control key or an Escape (*esc*) key. In that case, use the *Network/Controls* menu to execute the control-key sequences available there, as described above. If you want to execute other Control-key functions or if you need an Escape key, TOPS Terminal lets you simulate Control and Escape key sequences during terminal emulation sessions, as follows:

   • ⌘-Shift for *Control*
   • ⌘-` (Clover-backquote) for *Escape*

If you wish, you can change the key combinations by selecting *Your Preferences* in the *Settings* menu, as explained in Appendix B.
Do the following to select one of the menu choices:
   1. Select *Controls* menu.

   Click and hold on the *Network* menu, moving the mouse down until the *Controls* menu is displayed.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

2. Select function to perform.

> While continuing to depress the mouse button, move the mouse to the right and move it up or down in the *Controls* menu until the function you want to perform is highlighted; release the mouse button to execute the function.

> **Note:** These control-key sequences can also be issued by using the "power key" equivalents, which are listed to the right of the function in the *Controls* menu. See "Power Keys" later in this chapter for details.

When you select one of the control functions, TOPS Terminal sends the appropriate control sequence to the remote computer. For example, selecting *End of File* will send the end-of-file character (CTRL-D on a UNIX system) to the remote computer. The other Control characters (and their UNIX equivalents):

Flush Output (UNIX = CTRL-O)
Terminates listing of output. Use this when you have issued a command which is generating a long output stream which you are not interested in.

Zap Program (UNIX = CTRL-\)
More serious interrupt than the *Interrupt* command in the *Networks* menu. Tries harder (and with less finesse) to stop the current program or function.

Erase Word (UNIX = CTRL-W)
Erases the last word typed on the command line.

Erase Line (UNIX = CTRL-U)
Erases the text on the command line, back to the prompt.

Literal (UNIX = \)
Interprets character literally. Use this to tell the computer's operating system that you do not want the next character you type to be interpreted as a control character, but rather as a character only.

Send Break (UNIX = CTRL-C)
Sends the break character for the operating system. The result depends on the context; for a phone connection, a break may hang up the phone or change the baud rate on remote computer's modem. For a network (TCP/IP) connction, it may act as an Interrupt.
Note: most of the control functions (*zap*, *end of file*, *erase word*, *literal*) do not work with manual connections; your Macintosh will just beep when you select one of these.

Send Text

The *Network* menu command *Send Text* allows you to include the contents of a text file in the data flow of a program on a remote computer; the file is sent as if you are typing it from the keyboard. Before selecting *Send Text* you must give some command on the remote computer that will accept the contents of the file. You could, for instance, start up a text editor, go into insert mode, select *Send Text* from the *Network* menu to insert the contents of the file into the edit document.
Or you could start up a mail program on the remote computer, and once you have designated to whom the mail is to be sent, include the contents of a file as the message:
    mail tim [*Return*]
    Subject: [type message subject] [*Return*]
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Select *Network/Send Text*
Select a file from the list of files
Click *OK* (the text in the file will be inserted into the message)
Type more text, if you wish
Select *End of File* from *Commands* menu to send message

Note: *Send Text* uses no protocol, so on phone connections it is possible that a file sent this way will be corrupted by line noise. If possible, XMODEM should be used for file transfers over phone lines; where it is impossible or highly inconvenient to do so, use *Send Text*.

Also, *Send Text* will not send files longer than 16 kilobytes, because of the danger of flooding the other computer's typing reception buffers. *Send Text* is meant for short files, particularly bulletin board and mail messages. Use *Send File* (which use FTP or XMODEM) for longer files; see Chapter 5 for a description of *Send File*.

Interrupt

The *Interrupt* command in the *Network* menu terminates whatever function is currently executing on a session. If the session is transferring a file, the transfer is aborted. If the session is running a program, an interrupt signal is sent to that program, which may handle it in a variety of ways, but usually will simply die. If the session is running a script or macro, that script or macro will be terminated.

Clear Lines Off Top

You can determine what part of what appears in a session window is stored in memory (and is thus included in the transcript) by using *Clear Lines Off Top* and *Capture Lines Off Top* in the *Network* menu.

Select *Clear Lines Off Top* to discard everything above the last screen in the session transcript. Use this feature to discard unneeded startup text at the beginning of the connection dialog, or any text that you do not want saved in the session transcript.

To clear the transcript of all lines above the last window in the transcript, do the following during a terminal session:

1. Click and hold on the *Network* menu.

2. Select *Clear Lines Off Top*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
Network
Terminal Session...    ⌘T
File Session...         ⌘D
..........................................
Send File...            ⌘U
Receive File...         ⌘I
Edit File...            ⌘E
Send Text...
..........................................
Interrupt               ⌘.
Clear Lines Off Top...
✓Capture Lines Off Top
..........................................
Commands                ▶
Controls                ▶
```

3. Release the mouse button.

> Everything above the last window in the transcript will be discarded, even if you have scrolled to a previous window in the transcript.

Capture Lines Off Top

When there is a check mark next to *Capture Lines Off Top*, everything that happens in the session window is being stored in memory; you can scroll back above the current screen during a session.

Capture Lines Off Top is a toggle selection, meaning that if you select it when it is on, it will be turned off; if you select it when it is off, it will be turned on. For example, if it is checked, click on *Capture Lines Off Top* to stop saving to the session transcript from the current screen on.

```
Interrupt               ⌘.
Clear Lines Off Top...
✓Capture Lines Off Top
```

Note that you have to release the mouse button to change the setting, then select the *Network* menu again to see that the change was made.

```
Interrupt               ⌘.
Clear Lines Off Top...
Capture Lines Off Top
```

Reset Terminal (full menu only)

Reset Terminal recovers from certain kinds of errors during a terminal session. During a phone session, for instance, "line noise" might make TOPS Terminal think it should change into some other mode, thus making the session window difficult to read. Selecting *Reset Terminal* may solve this problem. Note, however, that if you select *Reset Terminal* you will be warned that this might cause problems, especially if you are running a graphics program, and you will be given a chance to change your mind.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Kill Connection (full menu only)

Normally you will log off and click on the close box to end a session. If this does not work, you may have to use the *Kill Connection* command in the *Network* menu. *Kill Connection* is meant only for recovering from serious errors, such as when the other computer refuses to respond to you. Killing a session in this way may have undesirable side effects, such as leaving files locked on the other computer or incurring connect charges on a commercial, modem-based computer.

Macros (full menu only)

Use the *Macros* selection in the full *Network* menu to execute a macro you have written. You can use macros to save the trouble of typing repeatedly-used sequences of commands. A macro can be as small as sending a single command or as elaborate as reading and saving all your new mail. See Appendix D for a full explanation of macros.
There are two ways to execute a macro once you have selected *Macros* in the *Network* menu: move the pointer to the macro you want to execute and release the mouse button, or select *Pick Macro* — which will display a two-column list of the macros — and select *OK*.
You can also execute a macro from the keyboard with the "power-key" combination, ⌘-; (Clover-semicolon). (Power keys are discussed in the section following this one.) A two-column list of the macros available will be displayed, as when you select *Pick Macro*. Select a macro with the mouse or type the first letter of a macro name to select it, and execute the macro by clicking on the *OK* button or pressing *Return*. (If two macros start with the same letter, type the first two or three letters of a macro name in rapid succession to select the one you want.)

<u>Power Keys</u>

Like most Macintosh applications, TOPS Terminal provides a number of "power-key" shortcuts that you can use to minimize switching between the keyboard and the mouse to perform operations. This capability is especially important in a terminal emulation program, since your work with the remote computer will largely consist of typed command lines.
Some of the power-key functions were explained in "Dialog Window Conventions" in Chapter 1: using the keyboard or the mouse, double clicking, selecting from a list, and making multiple choices in a list. Executing a macro from the keyboard was discussed above; other functions are described below.

Mac Shortcuts for Menu Selection

Most TOPS Terminal menu commands have keyboard shortcuts, which are displayed next to the menu item when a menu is displayed. Instead of pulling down a menu and selecting an item, you can type the keyboard equivalent, which usually entails holding down the ⌘ key (next to the space bar — sometimes called the Clover or Command key) and pressing a single letter or punctuation mark. For example, you can display the macros available to you by typing ⌘ - ; (Clover-semicolon). Here are a few other useful keyboard menu shortcuts:

⌘ - /	TOPS Terminal Help
⌘ - s	Save file
⌘ - o	Open file
⌘ - t	Start a terminal session
⌘ - e	Edit a file on a remote computer
⌘ - q	Quit TOPS Terminal

There are many more menu selection shortcuts; for a complete list, see "Menus and Keyboard Equivalents" in Appendix A.

Button Press Equivalents

As explained in Chapter 1, the default button (the one that is heavily outlined) in a dialog window can be selected by pressing *Return* or *Enter*. If a *Cancel* button is displayed, it can be selected by using the ⌘-.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

(Clover-period) combination, unless the Cancel button is thickly-outlined, in which case *Return* or *Enter* selects it.

If a *Help* button is present, it can be selected by typing ⌘ - Shift-H.

Finally, any other button which is presented to you may be selected by pressing the ⌘ and Shift keys and then typing the first letter of the button name. For instance, you can select a button labeled *Sign Up* by giving the power key combination ⌘ - Shift-S.

Editing During a Terminal Session

You can use the *File*, *Edit*, and *Text* menus for limited editing during a terminal session. See Chapter 6 for detailed descriptions of TOPS Terminal editor functions, which you can use on a session transcript after you have logged off from the computer and the transcript has become an editor document, as described below.

Copy and Paste to a Text File

Since TOPS Terminal uses standard Macintosh windows and commands, you can select text in a session window and copy it to the Clipboard with the *Copy* command in the *Edit* menu. If you want to save the selected portion to a text file while you are in TOPS Terminal, open a file with the *New* or *Open* command in the *File* menu and *Paste* the selected text in the file. Alternatively, you can select a section of text and use *Save Selection* from the *File* menu.

You can select the entire session transcript by selecting *Select All* in the *Edit* menu, select *Open* or *New* in the *File* menu to open a file, and select *Paste* to copy the transcript's contents to the file.

You can use the scroll bar to scroll up and down in the session transcript. And finally, you can use the *Find* functions in the Text menu to find selected or typed text anywhere in the session transcript.

You cannot *cut*, *clear*, or *replace* any text during a terminal session; these functions are reserved for editing sessions, which are described in Chapter 6.

When a Transcript Becomes an Editor Document

When a terminal session ends — that is, if you log off from the remote computer or the connection fails — the session transcript becomes a TOPS Terminal editor document. You can tell when a session transcript becomes an editor document by observing the status box at the lower left of the window; it will change from "Connected to [computer name]" to "Editor Document." You can use all the editing features described in Chapter 6.

You will have to re-establish the connection to the remote computer if you want to continue working on the computer.

Saving a Session Transcript to Disk

When you describe an account for connecting to a remote computer, you tell TOPS Terminal whether or not you want to save a transcript each time you connect to the computer. And when you make a connection to the computer you decide where the transcript will be saved.

Note, however, that during the terminal session you can modify what is included in the transcript by clicking on *Clear Lines Off Top* and *Capture Lines Off Top* in the *Network* menu (see discussions of these items starting on page 83 above. And regardless of what you tell TOPS Terminal in the account description, the transcript is not saved to disk until you explicitly tell TOPS Terminal to save it.

A session transcript will be stored in memory unless you tell TOPS Terminal otherwise, but it is not saved to disk until you explicitly tell TOPS Terminal to save it. There are three times when you can tell TOPS Terminal to save a transcript of a terminal session to disk:

- During a terminal session
- After logging off from a remote computer
- When closing or quitting

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Saving a Transcript During a Terminal Session
Select *Save* in the *File* menu to save a session transcript while you are still logged on to the remote computer (with "Connected to [computer name]" displayed in the status box of the session window). The transcript will be saved in a file with the name displayed at the top of the session window.

Saving a Transcript After Logging Off
When you log off from a remote computer, the session window remains in place, but the status changes from "Connected to [computer name]" to "Editor Document." You can now edit the document however you like, as described in Chapter 6.

You can save the document by selecting *Save* or *Save As* in the *File* menu. If you select *Save*, the document will be saved in a file with the name displayed at the top of the session window. If you select *Save As*, you can save the document under any file name you choose.

Saving a Transcript When Closing or Quitting
If you click on the close box in a session window or if you select *Quit* in the *File* menu during a terminal session, you will get the opportunity to save the session transcript to disk — if the transcript has been designated to be saved. The only time you would not be able to save the transcript would be if you have checked *Don't Save Session Transcripts* in the account description.

See "Disconnecting" below for more about this method of terminating a session, which is not recommended. Normally, you should log off before closing or quitting.

Disconnecting

When you are finished working on a remote computer you will want to terminate the connection; this is especially important for phone connections. The normal procedure is to log off first and then close the TOPS Terminal connection. There may be times when this method does not work, in which case you will have to kill the connection less gracefully. See "Kill Connection" on page 85 to see what to do if you can't disconnect in the two ways described below.

Log Off and Close Connection

1. Log off.

Use the normal logoff procedure for the computer you are connected to (type *logout* or *exit*, for example). You could instead pull down *Commands* in the *Network* menu and select *Goodbye*, as explained earlier in this chapter.

The session window will remain, but it will become an editor document: the status area at the bottom left will reflect this change.

2. Edit the transcript, if you wish.

If you were planning to save the transcript of this computer session, you may want to make some changes to it before you close it. You can edit the transcript like any other TOPS Terminal editor document, as explained in Chapter 6.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

3. Save the transcript, if you wish.

If you want to save the transcript, select *Save* in the *File* menu before clicking the close box in step 4 below.

4. Click the close box at upper left of window.

If you have saved just before clicking on the close box or if the transcript is not being saved, the session window will disappear and whatever was displayed before you opened the session will be visible. Ignore the following step, if that is the case.

If the transcript is being saved, and you have not just saved, you will be warned:

```
You have made changes to
"suntops 11/19/07 0", but you
have not saved them.

Do you want to save the changes
that you have made?

      Yes

   No        Cancel
```
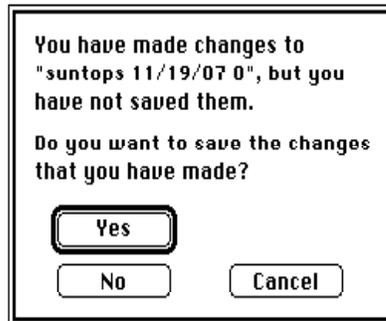
5. Click *Yes* or *No*.

Click *Yes* if you want to save the changes, *No* if you don't want to save the changes since the last save (which might have been when the session started).

The session window will disappear and whatever was displayed before you opened the session will be visible.

Close Connection without Logging Off

If you click on the close box without logging off, which is not recommended, you will be asked if you really want to close the connection:

```
Are you quite sure that you
want to kill the connection to
Manual Phone?

   Yes        No
```
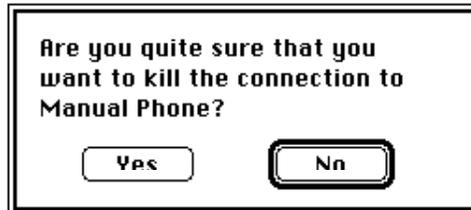
Click *Yes* or *No*.
If the transcript was being saved, you will be asked if you want to save the changes:

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
You have made changes to "file
1," but you have not saved them.

Do you want to save the changes
that you have made?

        Yes

   No          Cancel
```
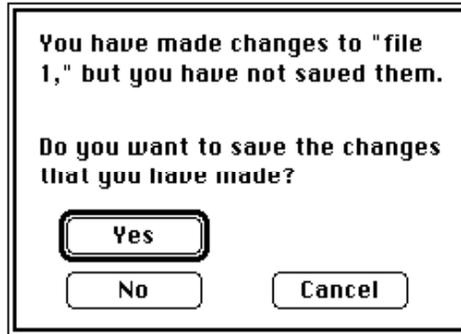
Click *Yes, No,* or *Cancel*.
The session window will disappear and whatever was displayed before you opened the session
will be visible.

5

File Transfers

TOPS Terminal makes copying (or
"transferring") files to and from your
Macintosh easy. As noted in Chapter 1,
file transfers are accomplished
differently for network and phone
connections. For file transfers with local
area network accounts, you connect to
the remote computer with the *File
Session* command, which invokes TOPS

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Terminal's file transfer service (FTP), and then select *Send File* or *Receive File* to copy the file.

For file transfers with phone accounts, you connect to the remote computer with the *Terminal Session* command, since file transfer service is not available for phone accounts. Once you have established a terminal session on the remote computer, you start the file transfer function appropriate for the remote computer and then use *Send File* or *Receive File* in the *Network* menu to copy the file.

If you try to do a network account file transfer with a terminal session window active, you will see the following message:

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
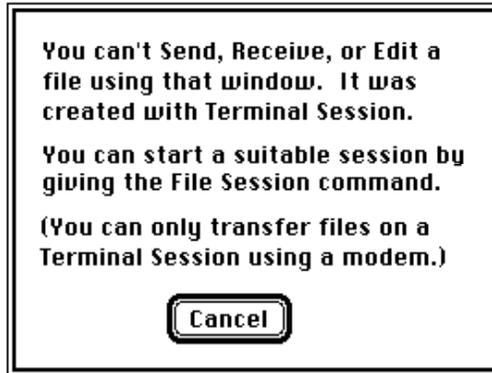
File transfers for network and phone accounts are described separately below, after discussions of file transfer formats and file naming conventions.

File Transfer Formats

Most operating systems have two main file types — plain text and one-part binary. Macintosh files, however, are more like two-part binary, since two separate "forks" (resource fork and data fork) make up a Macintosh file. Because of this difference, it can be a little more complicated to transfer Macintosh files to other computers

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

(unless they are text files).

The two primary formats for file transfer with TOPS Terminal are Text and MacBinary; in special cases you may want to use data or resource formats, which are the two separate elements of Macintosh files.

Note that you do not always have a choice of what format to use when transferring files. Depending on which file you select, some formats are not enabled when you use *Send File,* and only Text format is enabled when you use *Edit File* (see Chapter 6, "Text Editing and Printing").

Text Format

Use Text format to transfer plain text documents. Plain text documents include those created by TOPS Terminal's text editor and by other

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Macintosh applications such as MPW and MacTerminal.

Also included are MacWrite and Microsoft Word documents saved in "text only" mode, and the output of text editors on most other computers. Text transfers automatically convert to and from the text conventions of the operating system on the remote computer.

MacBinary Format

MacBinary is a format which combines the two separate forks of a Macintosh file with some additional header information. Use MacBinary format to transfer Macintosh applications and documents from graphic programs such as MacPaint, MacWrite, MacProject, and MacDraw. Also use MacBinary to copy word processing files that include

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

formatting commands; examples are MacWrite and Microsoft Word documents that were not saved as "text only."

Note: You cannot change the name of a MacBinary file when you copy it from a remote computer with *Receive File*; the name of the file is included in the file itself, so changing the name externally does not affect the name. If you want to change the name, copy the file to your Macintosh and then change the name.

Data and Resource Formats

For some applications it may be useful to copy only one of the forks of a Macintosh file to a remote computer. The remaining two file transfer formats, data and resource, transfer the data fork and the resource fork, respectively. Data is the appropriate format for all

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

non-text files that are not MacBinary format. Suppose, for example, that you want to copy a public-domain UNIX executable program file to your Macintosh. Use data format; you will not be able to run the program on your Macintosh, but you can later copy the program from your Macintosh to another compatible UNIX computer and run it there.

File Naming Conventions

Restrictions and guidelines for file names vary widely from one operating system to another. If all the computers on your network and all the computers that you were to connect to over phone lines were to use the same operating system, file naming conventions would not be a problem. The best solution to

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

problems caused by file naming differences is to give files names that work on all systems; this will make file transfers much simpler.

The table below presents naming conventions for Macintosh, UNIX, and VMS names. Although you can rename files when you transfer them from one operating system to another, it is easier to choose file names that don't have to be changed during transfer between computers.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

<u>**Macintosh Name**</u>	<u>**UNIX Name**</u>	<u>**VMS Name**</u>
• Up to 31 characters	• Up to 256 characters	• Up to 39 characters, followed by period
• Blank spaces OK	• Blank spaces OK	• No blank spaces
• Can't use colon	• Can't use slash (/); avoid $, *, ?, !, #, brackets, parentheses, single or double quotation marks.	• Can't use most special chars; hyphen OK; semicolon for version #.

In general, any VMS name shorter than

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

32 characters, and any UNIX name shorter than 32 characters and not containing a colon, is acceptable to the Macintosh. Similarly, any Macintosh file name is acceptable to a UNIX system unless it has a slash (/) or other special characters listed above in it. If you follow VMS limitations for all file names, you will probably have no problems with the Macintosh or UNIX systems as long as you don't exceed 31 characters and don't use a slash in a name. Note especially that most special characters are not allowed in VMS names; hyphens are OK.

Note for UNIX users: When TOPS Terminal creates an automatic file name for session transcripts, the name has slashes in it. Be aware of this if you are sending such files to a UNIX system; you will have to rename the files as you

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

send them. Also note that if you send a file with a name that includes a blank from your Macintosh to a UNIX system, you will have to quote the file name to access it on the UNIX computer; that is, you will have to put quotation marks or some other special character around the name. For example, to copy a file whose name has blanks in it:

    cp "file with blanks" newname

File Transfer - Network Account

File transfers with network accounts use File Transfer Protocol (FTP), which is built onto TCP/IP protocols. Network file transfers are performed during file sessions.

Send File - Network Account

To copy a file from your Macintosh to a remote computer with a network

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

account, start a *File Session* to connect to the computer and select *Send File* to start the transfer process.

Do the following after starting TOPS Terminal:

1. Select *File Session* in the *Network* menu.

You will be asked to select an account. Note that only network accounts are active:

2. Select account and click *Connect*.

A new session window will be drawn and an FTP file session will be started up. If you have not included the password in the account description, you will be asked for the password before the connection is completed. A list of the commands available during a file session is the last item in the window.

Note that these commands are invoked using the *Network* or *Network/Commands* menu; you can't type commands during a file session.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

```
 ▓▓▓▒□▒                    suntops 4/6/88 1  ▒▒▒▒▒
 220 suntops FTP server (Version 4.15 Sat Nov 7 15:24:41 PST 1987) ready.
 USER dave
 331 Password required for dave.
 PASS
 230 User dave  logged in.
 MODE S
 200 MODE S ok.
 STRU F
 200 STRU F ok.

 You may now use these TOPS Terminal commands:

 Network  Menu:  Send File, Receive File, Edit File.
 Commands Menu:  List File, Delete File,  Move File,
                 Go To,      File Info,    Type File,
                 Goodbye.
```

3. Select *Send File* in the *Network* menu.

```
┌─────────────────────────────────┐
│ Network                         │
│ Terminal Session...    ⌘T       │
│ File Session...        ⌘D       │
│ ···············                 │
│ Send File...           ⌘U       │
│ Receive File...        ⌘I       │
│ Edit File...           ⌘E       │
└─────────────────────────────────┘
```
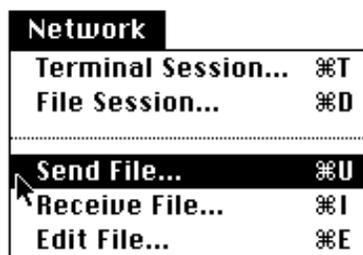
You will be asked to select the file you wish to send, the transfer format, and the name you want the file to have on the remote computer:

```
┌─────────────────────────────────────────────┐
│  Please select the file you would like to send.│
│     ┌─ TOPS Terminal ┐                        │
│  ┌────────────────────────┐  ▭ Hard Disk      │
│  │▒Manual Phone 2/24/88 0▒│⇧                  │
│  │ Manual Phone 2/24/88 1 │▒                  │
│  │ Manual TCP/IP 4/18/88 0│▒  ┌─ Eject ─┐     │
│  │ Manual TCP/IP 4/18/88 1│▒  └─────────┘     │
│  │ New Text (UNIX)        │▒  ┌─ Drive ─┐     │
│  │ NW-Capture lines       │▒  └─────────┘     │
│  │ Questions - 2/8        │⇩  ┌─────────┐     │
│  └────────────────────────┘   │  Send   │     │
│                               └─────────┘     │
│  ┌────────────────────────┐  ┌─ Help ──┐     │
│  │Transfer  ◉ Text ○ MacBinary└─────────┘     │
│  │Format:   ○ Data ○ Resource┌─ Cancel ┐     │
│  └────────────────────────┘  └─────────┘     │
│  The name the file will have on Suntops is    │
│  ┌────────────────────────────────────────┐  │
│  │Manual Phone 2/24/88 0                  │  │
│  └────────────────────────────────────────┘  │
└─────────────────────────────────────────────┘
```
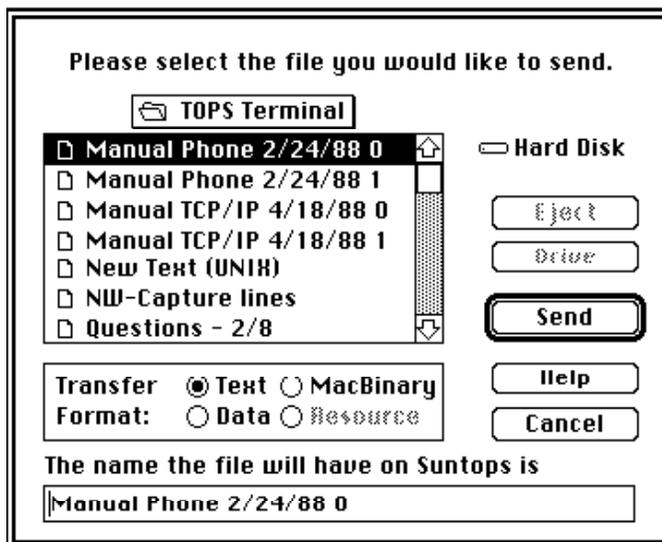
4. Select file to send.

If you do not see the name of the file you want to send, you may have to look into one of the other

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

folders or drives.

Note that the name of the file you select is automatically entered into the box for the name the file will have on the remote computer; TOPS Terminal assumes that you will want the file to have the same name on the remote computer that it has on your Macintosh. If you want to give the file a different name on the remote computer, see step 6 below.

```
Please select the file you would like to send.

    ⬒ TOPS Terminal

┌─────────────────────────────┐ ⬆  ⬒ Hard Disk
│ ▢ Signup 1               │▨│
│ ▢ Signup 2               │ │   ( Eject )
│ ▢ signup 2/23            │ │
│ ▢ Suntops 2/24/88 0   ▶  │▨│   ( Drive )
│ ▢ Suntops 2/24/88 1      │▨│
│ ▢ Suntops 2/24/88 3      │ │   ┌─────────┐
│ ▢ Suntops 3/1/88 0       │⬇│   │  Send   │
└─────────────────────────────┘   └─────────┘

┌─────────────────────────────┐   ( Help )
│ Transfer   ◉ Text ○ MacBinary │
│ Format:    ○ Data ○ Resource  │   ( Cancel )
└─────────────────────────────┘

The name the file will have on Suntops is
┌─────────────────────────────┐
│ Suntops 2/24/88 0            │
└─────────────────────────────┘
```
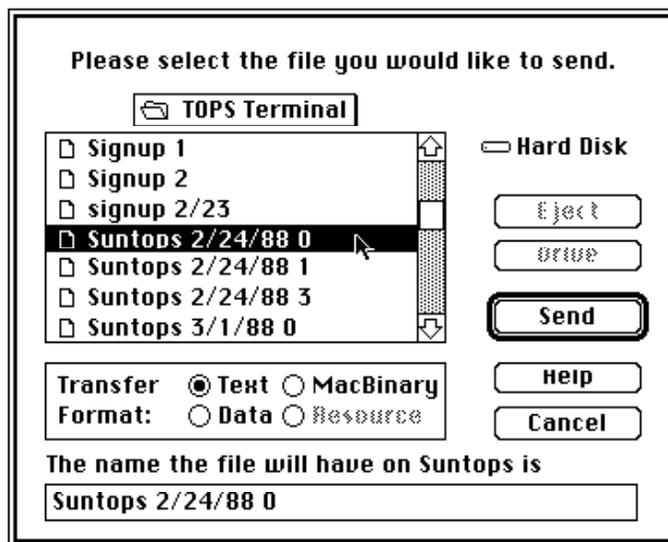
Note also that the selected and available *Transfer Format* options change as different types of files are selected; the file selected above is considered to be a Text file and can only be sent as Text, MacBinary, or Data.

5. Select Transfer Format.

Normally you will use whatever transfer format is selected by TOPS Terminal — Text in this example — but you may want to select another format in some cases. See the discussion of file transfer formats at the beginning of this chapter.

```
┌─────────────────────────────┐
│ Transfer   ◉ Text ○ MacBinary │
│ Format:    ○ Data ○ Resource  │
└─────────────────────────────┘
```
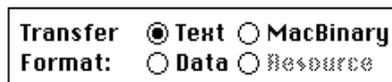
6. Type name for file on the remote computer.

If you want to change the name the file will have on the remote computer, use the mouse to select the name box at the bottom of the dialog window and type in a new name. In this case, we changed the slashes in the date to hyphens, since Suntops is a UNIX system and UNIX file names cannot contain slashes:

```
The name the file will have on Suntops is
┌─────────────────────────────┐
│ Suntops 2-24-88 0            │
└─────────────────────────────┘
```
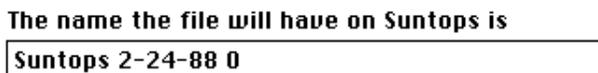
7. Click *Send*.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Once you click *Send* the selected file will be copied from your Macintosh to the other computer.

Details about the transfer will be displayed in the file session window. The text represents FTP commands (from your Macintosh) and FTP replies (from the other computer). The replies, which begin with a three-digit number, may give you helpful information if errors arise.

The main thing you want to check is the end of the transcript, where you hope to see "Transfer complete" (or a similar message). If the transfer fails, you will either see some indication of why it failed, or you will know it has failed because of the missing "Transfer complete" message.
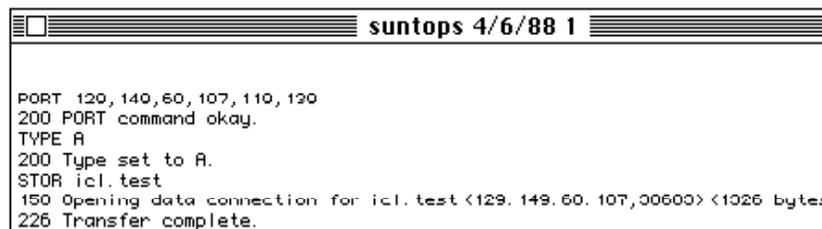
```
≡□≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡≡ suntops 4/6/88 1 ≡≡≡≡≡≡≡≡≡≡≡≡≡

PORT 129,140,60,107,110,120
200 PORT command okay.
TYPE A
200 Type set to A.
STOR icl.test
150 Opening data connection for icl.test <129.149.60.107,30600> <1026 bytes>.
226 Transfer complete.
```

Monitor the progress of the file transfer by watching the number of bytes increment in the status box at the lower left of the file transfer window.

```
Transferred 1408 bytes...          ◁ ▯ ▦
```

Cancel a file transfer by selecting *Interrupt* under the *Network* menu or its keyboard equivalent, ⌘-. (Clover-period).

Copy other files from your Macintosh to the remote computer by repeating steps 3 to 7 above.

8. Save session transcript (optional).

Select *Save* in the *File* menu if you want to save the transcript. It will be saved in the current folder (unless you have checked *Don't Save Session Transcript* for the account, in which case it will be saved in the folder designated as the folder for temporary session transcripts in *Your Preferences*; see Appendix B for details).

9. Select *Goodbye* from the *Commands* menu.

This is equivalent to logging off from a terminal session; since you can't type during file sessions, you have to use menus. Alternatively, you could hold down the Option and Clover (⌘) keys and press the letter *Y*, which is the keyboard equivalent for *Goodbye.*

The connection to the remote computer will be terminated and the file session transcript will become an editor document.

10. Click the close box.

The window will be closed and the window that was active when you started the transfer process will be the active window again.

Note: if you click on the close box without selecting *Goodbye*, you will be asked if you are sure you want to close the connection to the remote computer. This may leave a process running on the

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

remote computer; you should only bypass *Goodbye* if something is seriously wrong with the session.

Receive File - Network Account

To copy a file from a remote computer to your Macintosh with a network account, start a *File Session* to connect to the computer and select the *Receive File* command.
Do the following after starting TOPS Terminal:

1. Select *File Session* in the *Network* menu.

```
Network
Terminal Session...   ⌘T
File Session...       ⌘D
```

You will be asked to select an account. Note that only network accounts are active:

```
Select the account you wish to use.

⊞ dave at Suntops          [ Connect ]
✕ dave at TOPS BBS
✕ ◆ Manual Phone           [ Cancel ]
⊞ ◆ Manual TCP/IP
                           [ Help ]

☐ Append the transcript to an existing file.
```

2. Select account and click *Connect*.

A new session window will be drawn and an FTP file session will be started up. If you have not included the password in the account description, you will be asked for the password before the connection is completed. A list of the commands available during a file session is the last item in the window.

Note that these commands are invoked using the *Network* or *Network/Commands* menu; you can't type commands during a file session.

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

```
                         suntops 4/6/88 1
220 suntops FTP server (Version 4.15 Sat Nov 7 15:24:41 PST 1987) ready.
USER dave
331 Password required for dave.
PASS
230 User dave  logged in.
MODE S
200 MODE S ok.
STRU F
200 STRU F ok.

You may now use these TOPS Terminal commands:

Network Menu:  Send File, Receive File, Edit File.
Commands Menu: List File, Delete File, Move File,
               Go To,     File Info,   Type File,
               Goodbye.
```

3. Select *Receive File* in *Network* menu.

```
 Network
 Terminal Session...  ⌘T
 File Session...       ⌘D
 ....................
 Send File...          ⌘U
 Receive File...       ⌘I
 Edit File...          ⌘E
```
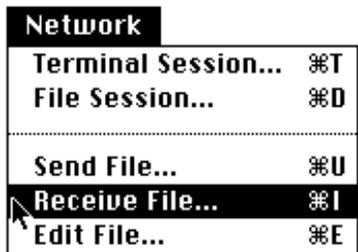
A dialog window will be displayed, asking you to select the file you want to copy from a list of files on the remote computer. There may be a slight delay while TOPS Terminal prepares to list the current directory contents.

```
Please indicate the name of the file on suntops, and the disk, folder,
and name where you want it to arrive on the Mac.

    [ Go To Parent ]                        [💾 tops]

Manual Phone se Manual Phone3 ⇧      ☐ Guru Folder           ⇧
Screen 1       Screen0sent            🗋 Screen 0
beep           file1                  🗋 suntops 4/6/88 0
file2          file2 edit file        🗋 suntops 4/6/88 1
file3          sendfile 2    ⇩        🗋 TOPS TCP/IP           ⇩

Transfer    ○ Text  ○ MacBinary              💾 tops
Format:     ○ Data  ○ Resource        Name: [              ]

[ Receive ]  [ Cancel ]  [ Help ]     [ Eject ]  [ Drive ]
```

4. Change directories, if necessary.

The two rows under the *Go To Parent* box list the files and directories in the current directory on the remote computer (Suntops, a UNIX system, in this case). Use the scroll bar to scroll up or down to find the directory you want.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Manual Phone se	Manual Phone3–
Screen 1	Screen0sent
beep	**file1**
file2	file2 edit file
file3	sendfile 2

To list the contents of a directory in the list, double click on it; a new list will be displayed. To move up one level in the directory structure, click on *Go To Parent*.

Note to UNIX users: directories and files look the same in the list. If you think one of the entries is a directory, but you're not sure, double-click on the name; if it is a directory, the list of files in the directory will be listed.

5. Select the file you want to copy.

When you are in the right directory, select the file you want to copy. Note that the name of the file is automatically inserted into the *Name* box on the right side of the dialog window.

6. Change folders and the file name (optional).

Double-click on a different folder from the list on the right side of the dialog window, if you want the file copied to a folder other than the current one ("tops" in the example above and below). Note that only folders are 'active' in the list. If you want the file to have a different name on your Macintosh, change or replace the name in the *Name* box.

🖫 **tops**

🗀 **Guru Folder**	
🗋 Screen 0	
🗋 suntops 4/6/88 0	
🗋 suntops 4/6/88 1	
🗋 TOPS TCP/IP	

🖫 **tops**

Name: New name
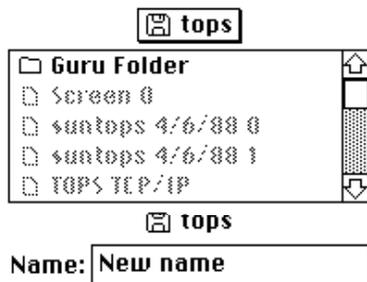
Note about copying MacBinary files: You cannot change the name of a MacBinary file as you copy it from a remote computer with *Receive File*; the name of the file is included in the file itself, so changing the name externally does not affect the name. If you want to change the name, copy the file to your Macintosh and then change the name.

7. Select Transfer Format.

Select one of the transfer formats (Text or MacBinary, probably), depending on what kind of file is being copied. See the discussion of transfer formats at the beginning of this chapter. Until you select a transfer format, the *Receive* button will not be enabled and you will not be able to copy a file.

8. Click *Receive*.

Once you click *Receive* the selected file will be copied from the remote computer to your

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

Macintosh.

If you see the message "Not a plain file" in the file session window after you click *Receive*, the transfer format is wrong or you have selected a directory instead of a file.

Details about the transfer will be displayed in the window. The main thing you want to check for, as explained in the discussion of *Send File - Network Account*, is the message "Transfer Complete" (or a similar message).

```
≣☐ ▤▤▤▤▤▤▤▤▤▤▤ suntops 4/6/88 1 ▤▤▤▤▤▤▤▤▤▤

PORT 129,140,60,101,43,13
200 PORT command okay.
TYPE A
200 Type set to A.
RETR .login
150 Opening data connection for .login (129.140.60.101,11021)(369 bytes).
226 Transfer complete.
```

Monitor the progress of the file transfer by watching the number of bytes increment in the status box at the lower left of the file transfer window:

```
Transferred 1408 bytes...          ◁ ▯ ▓
```
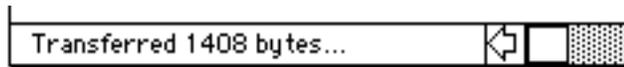
Cancel a file transfer by selecting *Interrupt* under the *Network* menu or its keyboard equivalent, ⌘-. (Clover-period).

Copy other files from the remote computer to your Macintosh by repeating steps 3 to 8 above.

9. Save session transcript (optional).

Select *Save* in the *File* menu if you want to save the transcript. It will be saved in the current folder.

10. Select *Goodbye* from the *Commands* menu.

This is equivalent to logging off from a terminal session; since you can't type during file sessions, you have to use menus. Alternatively, you could hold down the Option and Clover (⌘) keys and press the letter *Y*, which is the keyboard equivalent for *Goodbye.*

The connection to the remote computer will be terminated and the file session transcript will become an editor document.

11. Click the close box.

The window will be closed and the window that was active when you started the transfer process will be the active window again.

Note: if you click on the close box without selecting *Goodbye*, you will be asked if you are sure you want to close the connection to the remote computer. This may leave a process running on the remote computer; you should only bypass *Goodbye* if something is seriously wrong with the session.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```

File Transfer - Phone Account

File transfer with phone accounts is similar to the process for network accounts, except that you use a terminal session instead of a file session, since file transfer service is not available for phone accounts. For this reason, you must prepare for the transfer on the remote computer (step 3 below) before starting the transfer.

Send File - Phone Account

To copy a file from your Macintosh to a remote computer with a phone account, use *Terminal Session* to connect to the computer, prepare for the transfer on the remote computer, and select *Send File* to start the transfer process.

Many of the steps in the process are the same as for copying a file with a network account; common steps are not explained below. See "Send File - Network Account," starting on page 96 for details about those steps. The main difference for phone accounts is that you have to prepare for the transfer process on the remote computer (step 3 below) before selecting *Send File*.

Do the following after starting TOPS Terminal:

1. Select *Terminal Session* in the *Network* menu.

```
Network
Terminal Session...   ⌘T
 File Session...       ⌘D
```

You will be asked to select an account. Both phone and network accounts are active (unless you haven't selected a modem type):
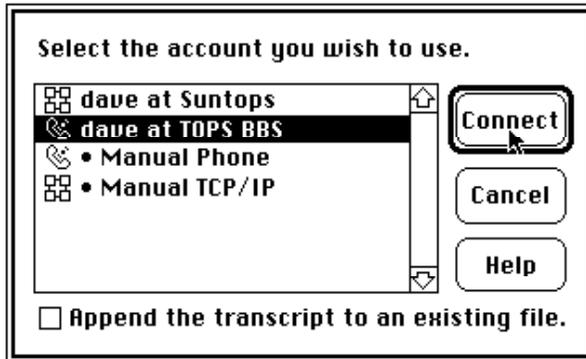
```
Select the account you wish to use.

  ⊞ dave at Suntops          ⇧
  ☎ dave at TOPS BBS             [ Connect ]
  ☎ • Manual Phone
  ⊞ • Manual TCP/IP              [ Cancel ]

                               [  Help  ]
                           ⇩
  ☐ Append the transcript to an existing file.
```

2. Select account and click *Connect*.

A normal terminal session will be started up; you will next be asked where to save the session transcript, unless you checked *Don't Save Session Transcript* in the description of the account. You will be asked for your password if you did not include it in the account description.

3. Prepare for the transfer on the remote computer.

Prepare for the transfer process by starting the appropriate "download" process, which varies with

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

different operating systems (downloading is the act of copying a file from a remote computer to a local computer; when you send a file from your Macintosh to a remote computer, the remote computer regards it is a download).

(This download process must be started because there is no standard file transfer protocol for modems as there is for network transfers.)

4. Select *Send File* in *Network* menu.

```
Network
Terminal Session...   ⌘T
File Session...        ⌘D
..........................................
Send File...           ⌘U
Receive File...        ⌘I
Edit File...           ⌘E
```

5. Select file to send.

6. Select Transfer Format.

7. Type name for file on the remote computer.

8. Click *Send*.

Once you click *Send* the selected file will be copied to the other computer. Depending on what computer you are sending the file to, a message may be displayed in the session window when the transfer is complete.

You can cancel a file transfer by selecting *Interrupt* under the *Network* menu or its keyboard equivalent, ⌘-. (Clover-period).

Send other files from your Macintosh to the remote computer by repeating steps 4 to 8 above.

9. Save session transcript (optional).

10. Log off from the remote computer.

Or select *Goodbye* from the *Commands* menu. The connection to the remote computer will be terminated.

11. Click the close box.

The window will be closed and the window that was active when you started the *Send File* will be the active window again.

Receive File - Phone Account

To copy a file from a remote computer to your Macintosh with a phone account, use *Terminal Session* to connect to the computer, prepare for the transfer on the remote computer, and select *Receive File* to start the transfer process.
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

Many of the steps in the process are the same as for copying a file with a network account; common steps are not explained below. See "Receive File - Network Account" starting on page 101 for details about those steps. The main differences for phone accounts is that you have to prepare for the transfer process on the remote computer (step 3 below) before selecting *Receive File,* and that files on the remote computer are not listed, as they are for network accounts.
Do the following after starting TOPS Terminal:

1. Select *Terminal Session* in the *Network* menu.

```
Network
 Terminal Session...   ⌘T
 File Session...        ⌘D
```

2. Select account and click *Connect*.

> A normal terminal session will be started up; you will next be asked where to save the session transcript, unless you checked *Don't Save Session Transcript* in the description of the account. You will be asked for your password if you did not include it in the account description.

3. Prepare for transfer on remote computer.

> Prepare for the transfer process by starting the appropriate "upload" process, which varies with different operating systems (uploading is the act of copying a file from a local computer to a remote computer; when you copy a file from a remote computer to your Macintosh, the remote computer regards it is an upload).

> (This upload process must be started because there is no standard file transfer protocol for modems as there is for network transfers.)

4. Select *Receive File* in *Network* menu.

> A dialog window will be displayed. You will be asked to type the name of the file on the remote computer and the name the file will have on your Macintosh. Because of the limitations of phone connection protocols, files and directories on the remote computer cannot be listed:

Please indicate the name of the file on the other computer, and the disk, folder, and name where you want it to arrive on the Macintosh.

☐ TOPS Terminal

☐ Manual Phone 2/24/...
☐ Manual Phone 2/24/...
☐ name on mac
☐ New CPU 2/24/88 0
☐ New Text (UNIX)

Name of file on TOPS BBS:
[   ]

Transfer Format: ○ Text ○ MacBinary ○ Data ○ Resource

☐ Hard Disk
Name: [   ]

[Receive] [Cancel] [Help] [Eject] [Drive]
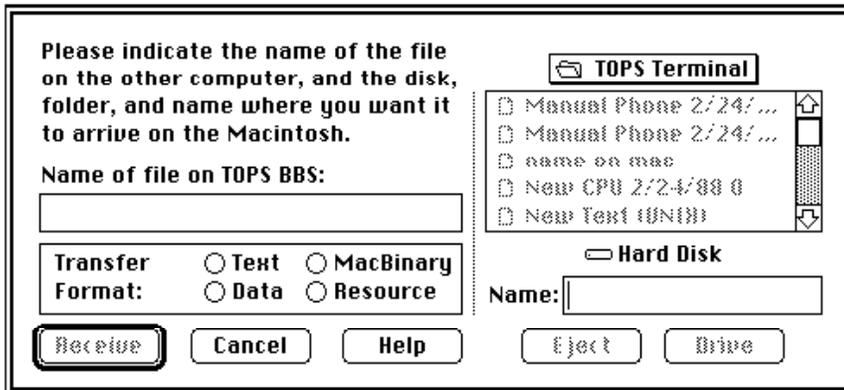
5. Type the name of the file you want to copy.

> Remember to include all the information necessary to allow TOPS Terminal to find the file you

newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468 756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke

want to copy. Depending on what directory you are in when you connect to the other computer, you may have to include the full "path name" of the file.

As you type the name of the file on the remote computer, the same name is being entered as the name of the file on your Macintosh. If you want the file to have the same name on your Macintosh as it has on the remote computer, you only have to type one file name.

6. Change the file name on your Macintosh (optional).

If you want the file name on your Macintosh to be different than the name on the remote computer, select the *Name* box on the right side of the dialog window by clicking and holding the mouse button as you move the mouse, highlighting the part of the name that you want to change. Type the name as you want it.

Note about copying MacBinary files: You cannot change the name of a MacBinary file in this way; the name of the file is included in the file itself, so changing the name externally does not affect the name. If you want to change the name, copy the file to your Macintosh and then change the name .

7. Select Transfer Format.

8. Click *Receive*.

Once you click *Receive* the selected file will be copied from the remote computer to your Macintosh.

Details about the transfer are displayed in the window. The main thing you want to check is the end of the transcript, where you should see "Transfer complete" (or a similar message).

9. Save session transcript (optional).

10. Log off from the remote computer.

Or select *Goodbye* from the *Commands* menu. The connection to the remote computer will be terminated.

11. Click the close box.

The window will be closed and the window that was active when you started the transfer process will be the active window again.

```
newpath
72 144 moveto 0 9 rlineto 0 -9 rmoveto 9 0 rlineto
72 756 moveto 0 -9 rlineto 0 9 rmoveto 9 0 rlineto
468 144 moveto 0 9 rlineto 0 -9 rmoveto -9 0 rlineto
468  756 moveto 0 -9 rlineto 0 9 rmoveto -9 0 rlineto
stroke
```