

## **Using Term at Brown**

# **Computing and Information Services**

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## Using Term to log on to the mainframe from your Macintosh

### **I. Introduction**

Term is a terminal emulation program written at Brown University to allow using a Macintosh computer with our mainframe IBM VM/CMS system. Term supports both line-mode and full-screen connections. In full-screen mode, Term emulates a TVI950 terminal. Efficient file transfer is possible with either type of connection.

### **What do you need to use Term?**

To use Term you need a Macintosh computer and either a modem connected to a telephone line or a T-box connected to an active Brunet port (Brunet is available in many Brown offices). If you are using the Brown mainframe, be sure that you have gone to the Customer Relations Office in the CIT and been given a userid and password.

### **What if you're not using the Brown mainframe?**

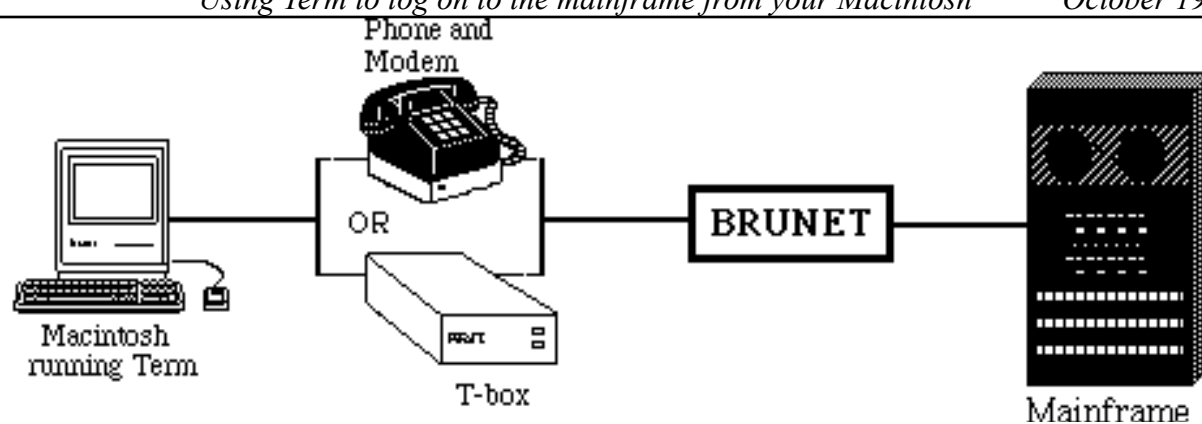
You should be aware that the procedures for logging on and data transfer may be quite different on your computer. The examples given in this document will provide you with a general idea of how to use Term but it's best to ask a consultant or other knowledgeable person who uses your host computer for specific communications information such as parity, data and stop bit settings.

### **Where can you get the latest version of Term?**

Whenever improvements and enhancements are added to Term it is given a new version number. The distribution disks at the Brown Computer Store contain the most recent version of Term. Student consultants also have the most recent version of Term to distribute. Another way to make sure you are using the most recently updated version is to download a copy from the Brown mainframe, where it is stored on the *Mac disk*. Later in this documentation we will explain how to download a program from the Mac disk on the mainframe.

### **How does Term connect you to the Brown mainframe?**

Between your Macintosh and the mainframe lies an intermediate system, a network known as Brunet. With help from a modem or T-box, Term forges the link between your Macintosh and Brunet; you complete the connection by "calling in" to the mainframe from Brunet. Once you have reached the mainframe, you can access your own mainframe files by logging on to your userid.



## II. Starting Term

Put the Term disk into the disk drive of your Macintosh. If you are using the distribution disk from the Brown Computer Store, then you will need to start up with a system disk (a disk with a System Folder) first, because the distribution disk does not contain a System Folder. Once you have inserted your Term disk, you may see a *window* like the one in Figure 2. If you do not see this, then double-click (click twice, fast) on the disk *icon* on the right hand side of the screen and the window will open. Now you will see icons representing the programs on your disk.

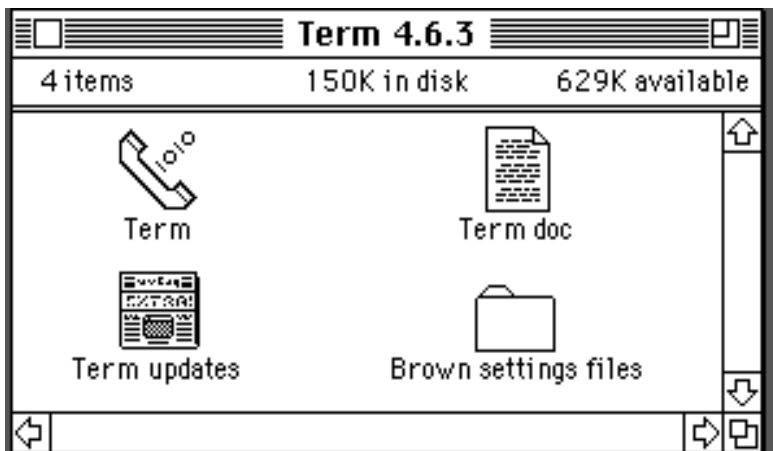
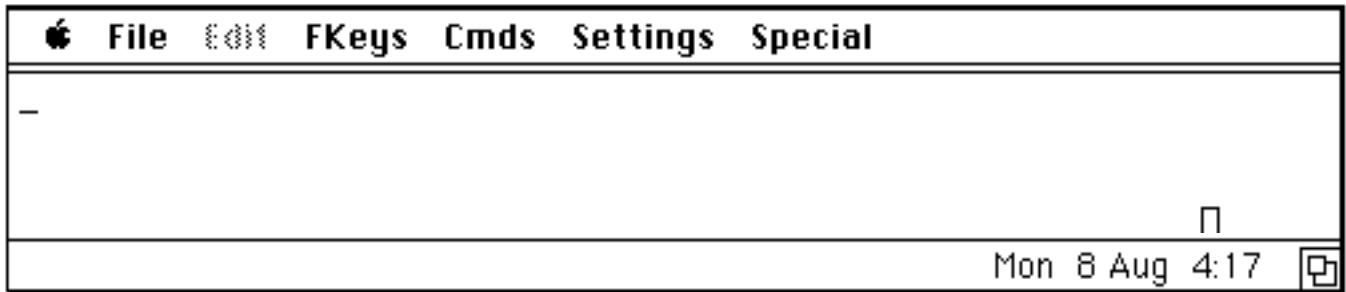


Figure 2

The Term program is the one on the left in this particular window. The folder called *Brown settings files* contains settings files that will help your Macintosh to emulate a mainframe terminal. To start Term, double-click on the Term icon, open the *Brown settings files* folder, and select the right baud setting for your modem or T-Box.

Now you should see a window which looks something like this:



Fig

ure 3

Term allows you to use some features of the Macintosh while you are logged on to the mainframe. For example, the headings you see across the top of the screen are menu headings, with commands underneath that you can select with your mouse. The size of the Term window can be adjusted by moving your mouse to the bottom right hand corner of the window, clicking, and dragging the window to the desired size. Some mainframe functions such as cursor position and PF keys can also be controlled with the mouse, if you so choose. The specifics will be explained later in the section on Keyboard Mapping.

### Using Term with other programs

You can run Term under Multifinder if you want to run other Macintosh applications at the same time. Term is pre-configured to request the right amount of memory from these programs, and it is able to process modem data and continue file transfers while running in the background.

### III. Communications Settings

The Settings menu allows you to customize the way Term works with your Macintosh. In this section, only settings essential to logging on are explained. Other Settings options are explained in Section VII, "Customizing Term."



In order for Term to communicate with the Brown mainframe (or any other computer) it must have some information about how the computer processes data. This information can be entered or changed with the commands under the Settings menu. The first time you use Term, you must check a few of these settings before calling in to the mainframe. If you then want to save the settings for your subsequent Term sessions, you can do this; see Section VIII, "Saving your Settings."

*Figure 4*

- **Select** Compatibility. Make sure the baud rate in the dialog box matches the baud rate of your modem or T-box (T-boxes run at 9600 baud).



Compatibility Settings:			
Baud:	<input type="radio"/> 300	<input type="radio"/> 600	<input type="radio"/> 1200
	<input type="radio"/> 1800	<input type="radio"/> 2400	<input type="radio"/> 3600
	<input type="radio"/> 4800	<input type="radio"/> 7200	<input checked="" type="radio"/> 9600
	<input type="radio"/> 19200	<input type="radio"/> 57600	
Flow Control:	<input checked="" type="checkbox"/>	Start char:	<input type="text" value="11"/>
		Stop char:	<input type="text" value="13"/>
Host prompts:	<input type="checkbox"/>	Prompt char:	<input type="text" value="&gt;"/>
		Xf Flow Ctl:	<input type="checkbox"/>
Type ahead:	<input type="checkbox"/>	Max type ahead:	<input type="text" value="0"/>
UM host:	<input checked="" type="checkbox"/>	Local echo:	<input type="checkbox"/>
		Auto record:	<input type="checkbox"/>

Figure 5

- Check the Communications settings. These settings control how data is transmitted. If you are using the Brown mainframe, the selections must be Parity none, one stop bit and eight data bits.

## IV. Connecting to Brunet

### Modem users:

After opening Term and selecting the appropriate settings, modem users need to perform a couple of extra steps to connect their Macintoshes to Brunet. If you are using a T-box, skip to the next section.

First, make sure that your modem is properly connected between your Macintosh and telephone, according to the instructions that came with the modem. After making this physical connection, you are ready to make the phone connection to Brunet by having your modem dial the appropriate telephone number. Modems have different *baud rates*, which require different telephone numbers.

300 Baud	457-5100
1200 Baud	457-5000 to 457-5135
1200 Baud (Vadic)	457-5160
2400 Baud	457-5120 to 457-5135

All these numbers are in area code (401)

The commands that you type to make your modem dial this number vary according to the type of modem you have, but one of the most common methods is to type the command ATDT followed by the phone number (for touch-tone phones) or ATDP followed by the phone number (for rotary and other pulse phones). Check your manual to find the commands your modem needs. Remember to type any code you might need for outside access (e.g. dial 8) and if necessary, the area code; don't type in the hyphen between numbers. Thus, if you are calling from a Brown dorm room with a pulse phone connected to a 2400 baud Hayes modem, the command you type is ATDP 84575120.

Press Return several times, until you see a pound (#) sign. Then go to Section V, "Connecting to the Mainframe".

### T-box users:

After you open Term and select the correct communications settings, press Return several times until you see the pound (#) sign which signifies that you are connected to Brunet. If you do not see the pound sign, first check the connections between your Macintosh, T-box and Brunet outlet to make sure they are secure. If your connections seem all right, reset your T-box by pushing the small (usually white) reset button on the back of the unit. Now try pressing Return again.

Once you see the pound sign, go to Section V, "Connecting to the Mainframe".

## **V. Connecting to the Mainframe**

When you see a pound (#) sign on your screen, you know that your modem or T-box has successfully made the connection to Brunet. Now you can make the final connection to the mainframe.

There are two general types of terminal emulation available: full-screen and line-mode. Full-screen emulation allows you to use the whole screen of your Macintosh for editing functions and is definitely the mode of choice. Some people, however, must use line-mode emulation because of the constraints of the computer which they are using. The two different methods of "calling up" the mainframe are explained separately below.

### **Full-screen emulation.**

- Under the Settings menu, select TVI950
- Type `CALL 110` (You can also type `CALL 120` or `CALL 130`)
- Press the Return key
- You will be prompted to "Enter terminal type." Type in `TVI950` and press Return.
- The BROWN logo will appear on your screen. Now skip down to "Logging on".

### **Logging on (all users)**

If you are not familiar with the procedures for logging on to the Brown mainframe, you should read the documentation titled "Getting Started on the Mainframe," available at the public computer clusters at Brown University and on Pdoc. This document is usually given out by the Customer Relations Office when one receives a new userid there. You may also wish to take one of the courses offered by Computing and Information Services. Call x7576 (x7LRN) for CIS Training or x7272 (x7CRC) for the Computing Resource Center for more information about training. Also, the Student Computer Consultants (x7457) are helpful with specific questions about connecting and logging onto the mainframe.

Basically, the steps are as follows:

- \* You will see a display screen which says BROWN. Type in your userid in the appropriate field. Then enter your password in the second field. Press Return.
- \* If you mistype, clear the screen and type: `L <STxxxxxx>`, substituting your userid for `<STxxxxxx>`. Press Return. You will see the message "Enter logon password." Enter your password. Press Return.
- \* You are now connected to the mainframe. If you want to read some of the on-line documentation, type `PDOC`. If you want help on any specific commands type `HELP <command name>`, substituting the specific command for `<command name>`. For example, you could type `HELP XEDIT`.

## VI. Saving Commands

There are several commands which you will use every time you use Term. To save yourself from typing these commands again and again, you can make your own customized menu of commands.

Your copy of Term probably already has a couple of commands saved in the Cmds menu. You can add more, or edit the existing commands, by pulling down to Commands...



Figure 6

This will produce a window like the one below. You can actually save nine commands, but this figure has been cut off to save space.

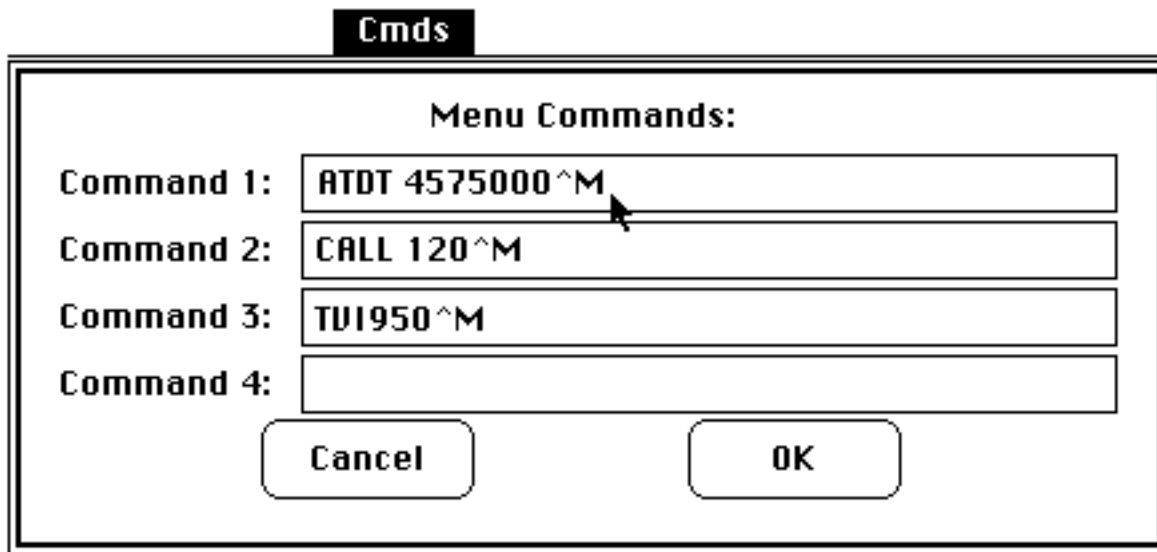


Figure 7

Here, we add the command that someone with a Hayes-compatible 1200 baud modem would issue to reach Brunet. Note the ^M following the text of the command—this is equivalent to pressing the Return key. The caret (^) sign is found over the "6" on the Macintosh keyboard. After we click on the OK button, this command will be placed under the Cmds menu and can be selected with the mouse like any other menu command. If you are calling from a telephone line on campus, you will need to dial "8" first, e.g. "ATDT8,4575000" (the comma following the "8" is a common command to the modem to wait for a dial tone before dialling further). Also, turn off call waiting if you have it ("\*70" is usually the code for Providence, but you can ask your phone company).



## VII. Customizing Term

This section explains Settings menu options which are not essential to using Term but rather control how the Term window will look. If you just want to know how to use Term, you may wish to skip to Section IX now.

### Highlighting...

The dialog box below shows the default settings for screen display. Most people find that some types of display are more legible than others; thus, you may for example wish to change all bold type displays into underlined type. Simply click in the appropriate box.

		Screen Display			
		non-display	bold	reverse	underline
Field Type	default	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	half-intensity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	non-display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	reverse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	blink	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	underline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	attributes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="button" value="Cancel"/> <input type="button" value="Set Defaults"/> <input type="button" value="OK"/>					

Figure 8

### Miscellaneous...

This allows you to select whether you want the time displayed on your screen in 12 or 24-hour format, whether you want the cursor to appear as a line or a block and whether you would like the coordinates of the cursor position displayed. You can also change the beep sound for Term to be other than the system alert beep sound.

### Color...

This option is not yet enabled (Version 4.6.3), but will eventually allow customization of screen color for those with color displays.

### Screen Format...

If you have a large screen display, then you may control whether the Term window will appear as a 24x80 display with 9-point or 12-point type, or a 32x80 display with 9-point type.

## VIII. Saving Settings

Remember how you clicked on a file called TVI950 to start Term? This is a *settings file*, which contains all the initial settings for options such as baud rates and highlighting preferences. It is possible for you to create your own settings file which will contain your preferences and thus save you from having to customize these options each time you open Term.

Simply enter the settings you prefer, as explained in Sections III, VI and VII, then select Save Settings under the File menu. Enter the name which you want to give this file (you can even call it TVI950 again, if you like) and click on OK. Let's say you called this file "newsettings". The next time that you want to open Term, you can double click on the file called "newsettings" and Term will start with all your preferred settings chosen.



Figure 9

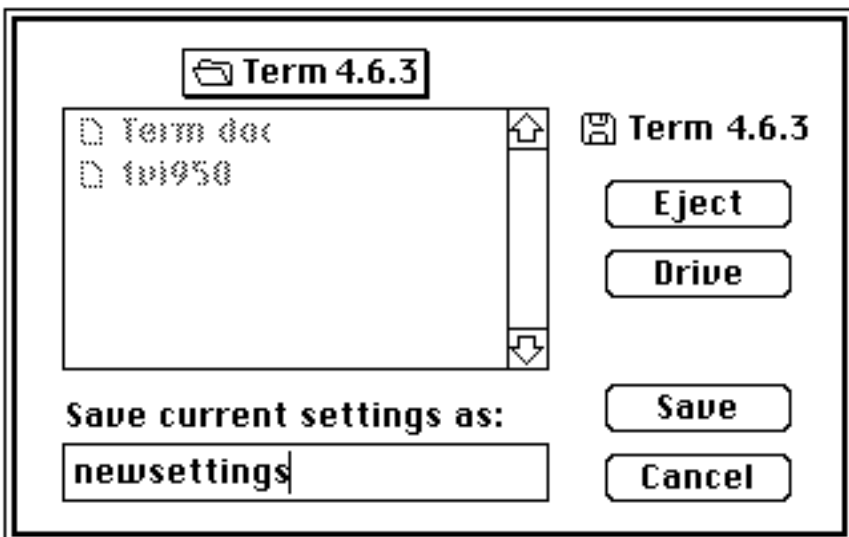


Figure 10

### Other options on the File menu

**Open Connection:** Not yet implemented.

**Close Connection:** Not yet implemented.

**Get Settings:** Lets you load pre-saved settings even after starting Term.

**Transmit File:** Will let you transmit a file from your Macintosh to the mainframe, as if you had typed its contents. At Brown, you can use the mainframe command RMAC instead (read pages 12-15 and `HELP RMAC` on the mainframe for more information on RMAC).



**Save Session:** Allows you to save a record of your mainframe session on your Macintosh disk. This only works well with a line mode connection.

**Update Session:** After Save Session, updates the file on your Macintosh disk to include recent changes.

**Close Session:** Stops recording your session.

**Transfer To:** Allows you to transfer directly to another Macintosh application, bypassing the Finder. This is helpful for those not running Multifinder.

## IX. Full-Screen Keyboard Mapping

When you use Term, your Macintosh keyboard is substituting for a standard type of IBM keyboard known as a 3270 keyboard. In addition to the regular typewriter keys, these keyboards contain keys with labels such as PA2 or PF12 which provide some useful functions when you are logged onto the mainframe. Term redefines your regular Macintosh keys so that you can also easily have these functions.

### Keyboard types

There are currently four types of Macintosh keyboards available. You should find out which kind of keyboard you have so you can use Term's keyboard mappings to best advantage:

- APPLE STANDARD: Essentially a standard typewriter keyboard, with the addition of a couple of keys.
- MACINTOSH PLUS: Apple Standard, plus a keypad integrated into the unit.
- MACINTOSH II: Macintosh Plus, plus a control key and cursor keys on the bottom row of the unit.
- APPLE EXTENDED: Keyboard, keypad, control key, cursor keys to the left of the keypad, six extra keys above the cursor keys, and 15 function keys along the top row.

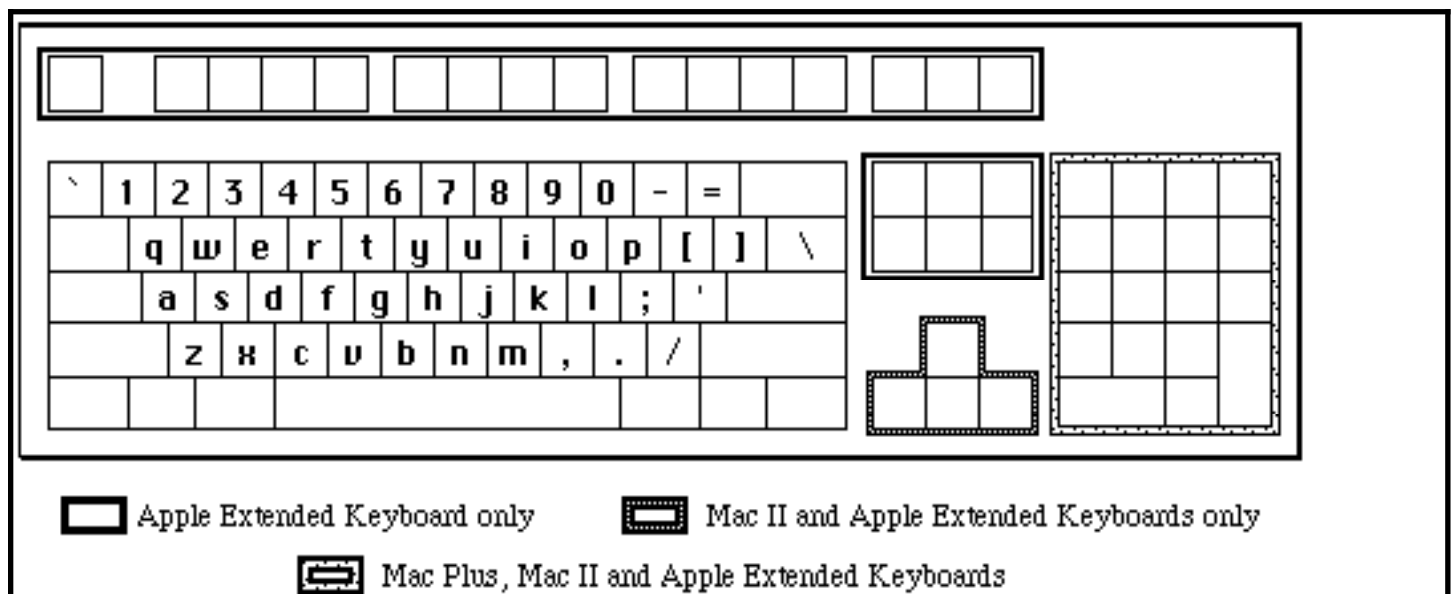


Figure 11

### Generating Keyboard Functions

Depending on the type of keyboard you have, there are up to four ways to generate keyboard functions:

- A. With the key combinations explained in the chart on the next page.
- B. With the mouse, using the FKeys menu and mouse double click.
- C. With the numeric keypad and cursor keys
- D. With the extra keys on the Apple Enhanced Keyboard

You certainly do not have to use all of these methods, but you may wish to try the various options to find which suit you best. The chart on page 10 cross-references the other methods, which are explained further on Page 11.

**A. Key combinations**

Name	Mapping	Function	Other Mappings
<b>Attention Keys</b>			
Enter	Return	transmits information on screen	
PA1	Command-,	enters CP environment	Keypad, Fkeys
PA2	Command-.	next screen if MORE or HOLDING shown	Keypad, Fkeys
SYS REQ	Command-/	puts last command back into the input area	Keypad, Fkeys
CLEAR	Command-c	clears screen without sending changes	Keypad, Fkeys
CURSEL	Command-l	simulates light-pen selection (seldom used)	

Name	Mapping	Other Mappings
<b>Program Function Keys*</b>		
PF1 through PF12	Command-1 through Command-=	Keypad, Fkeys, Enhanced
PF13 through PF24	Option-1 through Option-=	Keypad, Fkeys, Enhanced
<b>Editing Keys</b>		
erase to end-of-field	Command-e	Fkeys
toggle insert mode	Command-i	Fkeys
delete character	Shift-Backspace	Fkeys, Enhanced
<b>Special Keys</b>		
dup	Command-d	
field mark	Command-f	
<b>Emulation Control Keys</b>		
stop data sent from host	Command-s	
resume data sent from host	Command-q	
master reset	Command-g	
redraw screen	Command-v	
reset error mode	Command-r	
unlock keyboard	Command-t	
purge typeahead buffer	Command-x	
send escape	Command-[	
<b>Cursor movement**</b>		
cursor left	Backspace or Command-h	Left arrow
cursor right	Command-j or Command-k	Right arrow

cursor up	Command-u	Up arrow
cursor down	Command-m or Command-n	Down arrow
tab	Tab	
backtab	Shift-Tab	
newline	Enter or Shift-Return	
home	Command-Return	Enhanced

\*When it does not conflict with one of the above mappings, the Command key may be used as a Control key to generate control characters. There is never a conflict when line-mode mapping is selected. Also, the Control key on a Macintosh SE or Macintosh II may always be used to generate control characters.

\*\*A single mouse click moves the terminal's cursor to the character position closest to the Mac's cursor.

## B. The Mouse: FKeys Menu and Mouse Double-Click

1. PF keys and other keyboard functions can be generated using the FKeys menu. Simply use the mouse to select the function which you would like to execute.

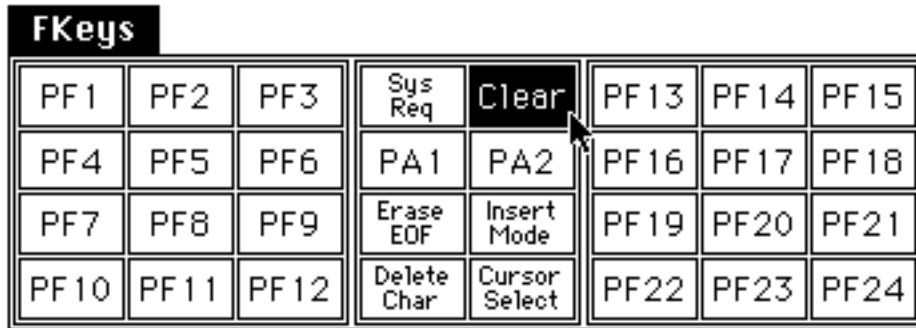


Figure 12

2. You can define a mouse double-click to emulate any one function key using the Double-Click item of the Settings menu. By default, double-clicking the mouse generates PF23, which most programs consider equivalent to PF11. PF23 is XEDIT in FILELIST, PEEK in RDRLIST, and SPLIT/JOIN in XEDIT.

## C. Keypad keys

Most Macintoshes now have a numeric keypad as part of the keyboard. You may use these keys as function keys; the mapping is shown in Figure 13. Note that if you want to enter numbers from the numeric keypad, you should select TVI950-num under the Settings menu. When the Shift key is pressed, you will get the mapping shown at right; otherwise the normal keypad mappings will be in effect.

Clear	PA 1	PA 2	Sys Req
PF 1	PF 2	PF 3	Erase EOF
PF 4	PF 5	PF 6	Insert Mode
PF 7	PF 8	PF 9	PF 12
PF 10		PF 11	

Figure 13

## D. Apple Enhanced Keyboard:

Name	Mapping	Function
PF1 - PF15	F1 - F15	program function keys
PF1	help	often invokes CMS HELP

home	<i>home</i>	move cursor to first input field
delete character	<i>X del</i>	delete character before cursor
PF7	<i>page up</i>	often moves toward start of file
PF8	<i>page down</i>	often moves toward end of file

## X. File Transfer

Term allows you to transfer information between a Macintosh and your mainframe account. Transferring files from the mainframe to a Macintosh (or any other personal computer) is known as *downloading*. Transferring files in the other direction is called *uploading*.

The Macintosh and the mainframe have very different operating environments and ways of storing information. What this boils down to is:

- you cannot run Macintosh applications directly on the mainframe
- you must transfer the Macintosh application (download it) to your local Macintosh disk
- you must convert the downloaded application from its mainframe storage format to a format which your Macintosh can use.

This is not nearly as complex as it may sound, since files are stored in only a few standard formats.

### The Mac disk

Information on the mainframe is kept on storage areas known as minidisks. One minidisk which everyone at Brown is free to access is known as the *Mac disk*. This is full of Macintosh programs (in mainframe format) to download. This Mac disk is maintained by interested individuals, not by Computing and Information Services. While many of the programs are very useful, there is no guarantee that they are bug-free or that they will work correctly on every Macintosh computer.

Applications on the Mac disk are of two types—public domain (truly free) or shareware (if you use it, you are expected to pay for it). Most of the time, the author will put his or her name, address, and cost of the program on the first screen you see. If it's not there, select About from under the Apple menu.

Commercially available software, such as Microsoft Word, *cannot* be legally distributed in this manner, unless the vendor and Brown University have entered into a special licensing agreement and have explicitly agreed upon this method of distribution.

### Accessing the Mac disk

Log on to the mainframe using Term. Once you get the *Ready;* prompt, follow the steps below. The commands you type are in **boldface**; the mainframe's responses to those commands are in *italics*. Three abbreviations are used in this list of instructions:

<fn>	filename
<ft>	filetype
<fm>	filemode



Before entering any more mainframe commands, go to the Special menu and make sure that there is a check mark next to the item VM RMAC/WMAC. It is checked by default, but if it isn't, use the mouse to select this item.



To access the Mac Library on Brown's mainframe, type:

```
Library mac * (or "mdisk mac *")
```

This links you to the Mac minidisk on the mainframe. This minidisk will be linked at an address between B and Z. You should make a note of this address or *filemode*, because you will use this later when you download files. You will receive a message like this:

```
DMSACP7231 X (1A1) R/O  
Ready; T=0.32/0.47 09:10:36
```

Remember to note the address where the minidisk was accessed by your account. Look for the letter which immediately precedes (1A1). In the example above, it is "X".

To find out information about files on the Mac disk, type:

```
Help Mac Menu
```

This gives you a list of all the Help files on the Mac minidisk. These include some general information files about the Mac disk. The rest of the Help files are brief descriptions of the applications stored on the Mac disk.

To look at a Help file, click the mouse on the file you're interested in and press the Return key. The selected Help file will be displayed. Use the PF keys to go forward one screen (PF8), backward one screen (PF7), or to exit (PF3). The files -INTRO- and -WMAC are particularly useful to read. If you would like to print any Help file, click on the file and then press PA2.

To list all the files contained on any minidisk you have linked to, type:

```
Filelist * * <fm>
```

**For <fm>, substitute the filemode which you wrote down earlier (the address from B-Z where the Mac minidisk was accessed). Thus, if the Mac minidisk had been accessed at X, we would type **FILELIST \* \* X**. If you like, you can abbreviate **FILELIST** to **FILEL**.**

Since not every application stored on the MAC disk has an associated HELP file, it's often useful to examine the names of all of the files. Sorting them by filetype (PF4) will group those files of like filetype together. When you are ready to quit out of **FILELIST**, press PF3.

Macintosh applications are stored on the mainframe in a special format. Newer applications use a filetype of BIN (single file or program), SEABIN, or SITBIN (several files grouped, or packed, together for convenience in uploading and downloading). These filetypes are the ones you are most likely to be interested in.

### **File Formats**

Macintosh files stored on the mainframe have a file types of BIN, SITBIN, SEABIN, and HQX. All except HQX files are encoded in a scheme known as MacBinary (BinHex 5.0). HQX files are Macintosh files encoded in a text file format.

#### Downloading Text (HGX) files.

To download text files, simply use the WMAC command without any options.

```
WMAC TEST1 HGX <FM>
```

If you are downloading text files sent from a foreign node or host, you may need to use the " (STDXLATE" option (some people use the mainframe XLATE command instead). After successfully downloading the file, you will need to un-binhex any HQX files on using Binhex 4.0 or Stuffit 1.5.1 on the Macintosh (some people use BINHEX CONVERT on the mainframe, then download the files as MacBinary).

#### Downloading MacBinary files.

When downloading files with filetypes of BIN, SEABIN, SITBIN or CPTBIN you need to specify the filename filetype and filemode of the mainframe file and use the " (MACBIN" option. For example,

```
WMAC TEST1 BIN <FM> (MACBIN
WMAC TEST2 SITBIN <FM> (MACBIN
WMAC TEST3 SEABIN <FM> (MACBIN
```

This command can be issued at the *Ready*; prompt, or on the command line. If you're still in *filelist*, a short cut is to click to the left of the file you want to download and type the command WMAC / (m where you've clicked. Also, the filemode is optional.

A dialog box will appear, giving you an opportunity to select which Macintosh disk and under what name you want the downloaded file to be saved. The Macintosh name is stored as part of MacBinary file format. With non-MacBinary files, the filename is taken from the WMAC command.

Once you've selected where you want the file to go, a window will appear displaying the status of the file transfer process itself.

After downloading,

- SITBIN files must be unstuffed with StuffIt 1.5.1.
- SEABIN files are "Self-Extracting Archives". After downloading them using the , simply double-click on the new icon, and the files will self-extract. No Stuffit or Binhex program is needed.
- CPTBIN files must be uncompressed using Compactor Pro.

Compactor and StuffIt are available on the MAC disk.

To check the integrity of any downloadable file, you may want to use the **BINHEX CHECK** command on the mainframe first. The syntax is:

**binhex check <fn> <ft> <fm>**

A message from the BINHEX command will be displayed. If errors are detected, you will not be able to successfully download this file. To find out about other functions of the binhex command, type **HELP BINHEX**.

### On the Macintosh side



Stars 1.8

Successful downloading will produce either an application, document file, font, or desk accessory. If you downloaded any packed files with filetype SITBIN, CPTBIN or SEABIN (they will have .sit, .cpt, or .sea in its filename), these files must be unpacked with StuffIt Compactor respectively before they can be used. SEABIN files need no application to uncompress themselves since they are "Self-Extracting-Archives".



StuffIt



McSink V4.2.sit

Packed files which have been downloaded can be recognized since they have .sit or .sea as a filename suffix. Double-clicking on the .sit or file you want to unstuff/unpack will cause two or more additional files to be created. In most cases, all of these files are required in order to run the application on the Macintosh. To the left are icon examples of a .sit file and the StuffIt program.



disinfectant251.sea

This is an icon example of a .sea file. Simply double-click on the icon to extract the file.



Font/DA Mover

A font or desk accessory can be installed into your system using the Font/DA Mover.

## **Tidying up**

When you're satisfied that you've successfully downloaded, converted and unpacked the application you wanted, you can trash intermediate files with file extensions of .sea or .sit.

## **XI. Disconnecting**

When you are ready to stop using Term, type `LOG` to log off your account. You can then quit Term by selecting End Session from the File menu.

If you are using a modem you should also "hang up" the modem. Users of Hayes-type modems, for example, follow this sequence: Log off your account. You should again see the pound (#) sign. Type three "+" signs in rapid succession (do not hit "enter" in this case). You should be dropped from the Brunet connection and the pound sign should cease. If not, try typing the three "+" signs again. Once the pound sign is gone type ATH, which instructs Hayes compatible modems to hang up the phone line. You should get the response "OK" if it has accepted the ATH command.

Check your manual to find any special instructions for your particular modem.