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Using MTERM with the Epson QX-10™

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How to Use This Manual

This manual is intended for use by novices as well as by people who are experienced in computer communication and, therefore, contains both tutorial and reference material.

Chapters 1 and 2 are introductory, while Chapter 3 provides more advanced material. Here is an overview of the chapters to follow:

1 MTERM and the QX-10

This is an introductory chapter that presents an overview of MTERM software and a summary of the hardware that you need to use MTERM.

2 MTERM Operation

This is a tutorial chapter that leads you through the setup procedures for using MTERM. You will be up and running in a matter of minutes.

3 MTERM Commands

This is a reference chapter. It gives detailed information about all MTERM functions, arranged in the order you will use them. Refer to it when you want to understand a particular prompt or function.

For novice users, Appendix A presents some very basic concepts that will help you understand the communication terminology that is used in this manual. For experienced programmers, Appendix B presents material that is more technical.

A glossary concludes the manual.

Chapter 1
MTERM and the QX-10

This chapter includes an overview of MTERM software and a summary of the hardware that you need to use MTERM.

Software Survey

MTERM is a software package designed for communication between your QX-10™ and other microcomputers, between your QX-10 and large mainframe computers, and between your QX-10 and the many timesharing services that are available for home and business use.

You receive the MTERM system on the system diskette which also contains your QX-10's CP/M-80™ operating system.

MTERM provides many unique features designed to make communicating with another computer simple and efficient. Because of MTERM's flexibility, almost any communication configuration can be accommodated.

The following list summarizes the features and benefits of MTERM. If you don't understand all of these features at this stage, don't worry. The purpose of this manual is to introduce these concepts and to show you how easy it is to get two computers to talk to each other by using MTERM.

Here are the major MTERM features:

- Data can be temporarily stored in the computer so that you can work on it before you transmit it.

- Each system device, including the memory buffers and the communication line itself, has its own translation table. This lets you easily match any computer's codes.

- An unlimited number of *MacroKeys* can be programmed so that at the touch of a single key you can transmit up to 64 characters of text to a remote system.

- Full error checking is provided.

- MTERM supports baud rates from 110 to 9600 bits per second.

- Two features, Modem switch and Auto-dial telephone, allow you to transmit files to a remote computer at any hour of the day or night.

- A table of telephone numbers is stored by the system so that, provided you are using an auto-dial modem, MTERM can dial a telephone number for you at the press of a single key.

- MTERM allows you to view your disk directory without exiting from the program to the operating system.

- MTERM allows you to set a variety of parameters by creating files for different options. Different files can then be loaded right along with the MTERM program. If you want to change a parameter while you have MTERM loaded, you can do so without leaving MTERM—and the new parameter will take effect immediately. If you are transmitting or receving, not one character of data will be lost.

Hardware Summary

Here is a list of the hardware you need to use MTERM:

- Your Epson QX-10.

- A communicating device. Figures 1-1 through 1-3 show the three types of communicating devices that you can use with MTERM on the QX-10. You can use:

  — A modem that uses the QX-10's built-in RS-232C serial port (Figure 1-1), such as the Hayes Smartmodem 1200™ or Smartmodem 300™.
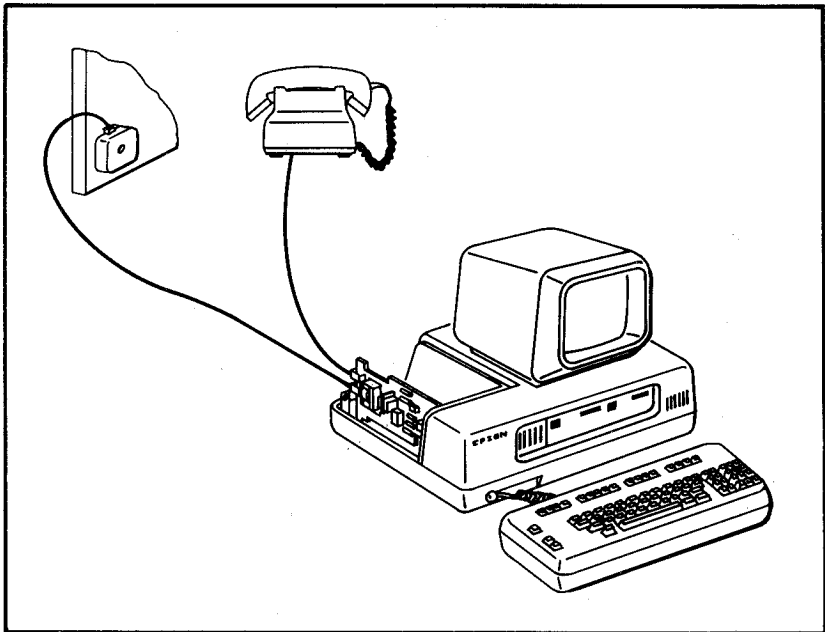
Figure 1-1. QX-10 with modem and port on one board

— An acoustic coupler that uses the RS-232C (Figure 1-2), such as the Epson CX-20™.

— A modem and port on one board (Figure 1-3), such as the Comrex ComMunicator™ CR-103.

   When you use the built-in RS-232C serial port, you need a cable to connect the communicating device to the serial port on the back of your QX-10.

   When you use an acoustic coupler, you also need a standard telephone, either the touch-tone or the pulse-dialing type.
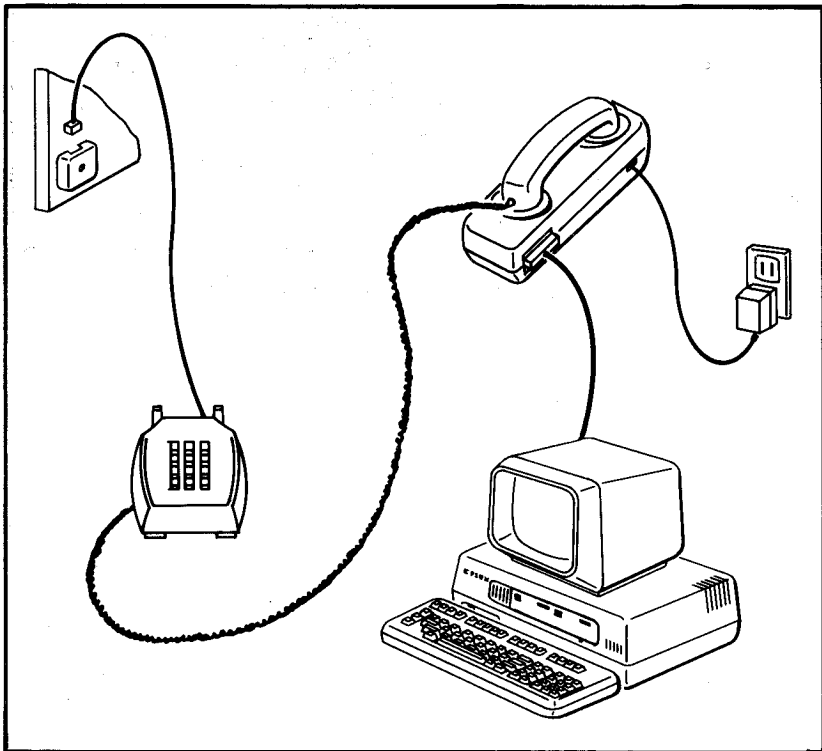
Figure 1-2. QX-10 and acoustic coupler
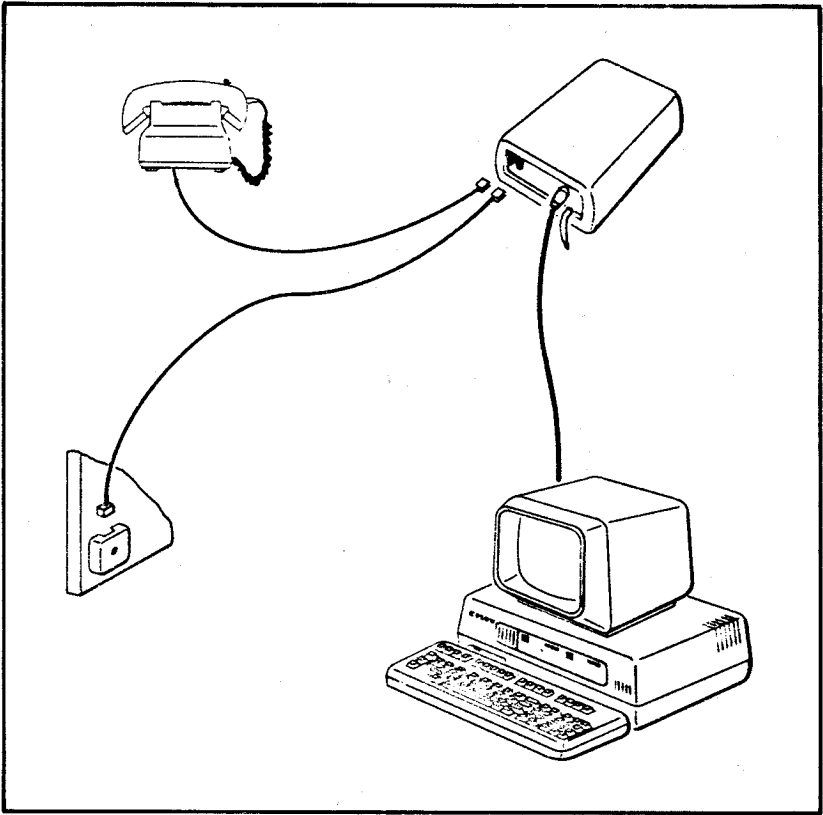
Figure 1-3. QX-10 with modem using built-in port

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Chapter 2
MTERM Operation

This chapter will help you use MTERM for the first time. With it you should be able to set up communications in a matter of minutes and then immediately transmit or receive some data.

Making a Working Copy of MTERM

Note: If you have not already made a backup copy of your original CP/M-80 system diskette, stop what you are doing and make a copy of the diskette now. *Using CP/M-80 with the Epson QX-10* contains specific instructions for creating copies.

Before using MTERM, you need to make a working copy of the MTERM files. Because you have already made a backup copy of your original CP/M-80 diskette, you only need to make one MTERM diskette.

You need to have the following items on hand to create an MTERM working diskette:

- CP/M-80 operating system diskette.

- A blank diskette and label for your working copy of the MTERM files.

- Write-protect tabs (these come in the box with blank diskettes).

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To protect your original diskette, place a write-protect tab over the notch on the diskette. If you do not have any write-protect tabs, you can use a small piece of masking tape to cover the notch.

Make a label for the working diskette. Here is a sample of such a label:

<div align="center">

MTERM
WORKING COPY
Date MM/DD/YY

</div>

Apply this label to the upper-right corner of a blank diskette. Don't let the label touch any of the magnetic surface or overlap the notch area.

Switch on your QX-10. You see the message INSERT DISKETTE in the center of the screen. Insert your CP/M-80 operating system diskette into the left drive. The screen displays the CP/M-80 system message and the A > prompt. The A > prompt indicates that the system is waiting for you to enter a CP/M-80 command.

Now place your *blank* diskette labelled CP/M-80 WORKING COPY in the right drive. In response to the A > prompt, press the **COPYDISK** function key.

The screen displays:

```
    MAIN OPTION LIST:
 1 - Format and Erase a Diskette
 2 - Copy the Contents of One Diskette to Another
 3 - Create an Application Program Diskette
 E - EXIT TO CP/M

 ENTER OPTION = = >
```

Press **1** to prepare your blank diskette for use on the QX-10. The screen displays:

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```
    STATUS        FORMAT OPTION LIST
    RIGHT         1 - Location of Diskette to be Copied TO

    FORMAT COMMAND LIST:
    S - Start FORMAT Operation
    E - EXIT to Main Menu

    ENTER OPTION = = >
```

Press **S**. The screen displays:

```
    Mount Diskette in RIGHT drive.

    This operation will erase the contents of the diskette in
    RIGHT drive.

    DO YOU WANT TO CONTINUE? (Y/N):
```

Press **Y**; the format procedure begins. When it is finished, press
E to exit to the COPYDISK command menu.

   At the main menu, press **2** to copy the contents of one diskette
to another. The screen displays:

```
    STATUS              COPY OPTION LIST

    LEFT                Location of Diskette to be Copied FROM
    RIGHT               Location of Diskette to be Copied TO
    ALL         1 — Copy All, System or Data Tracks

                COPY COMMAND LIST:
                S — START COPY OPERATION
                E — EXIT TO MAIN MENU

                ENTER OPTION = = >
```

Press **1**. The screen displays:

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0=Copy Entire Diskette 1=Copy System Only 2=Copy Data Only

Press **1** to copy only the CP/M-80 information. To verify your choice, the ALL in the STATUS column changes to SYSTEM.

Press **S** to start the copy operation. The screen displays:

```
Mount Diskette to be 'Copied FROM' in LEFT drive.
Mount Diskette to be 'Copied TO' in RIGHT drive.

DO YOU WANT TO CONTINUE? (Y/N):
```

Press **Y**; the copy procedure begins. When the copying is complete, the screen displays:

ENTER OPTION == >

Press **E** to exit to the COPYDISK main menu. Press **E** again at the main menu to leave the COPYDISK program.

Now that you have created a diskette (in the right drive) that contains the necessary system information, you are ready to copy the MTERM files to it. At the A > prompt, type:

SUBMIT MTERM

and press **RETURN**.

The screen displays the following sequence of commands as it copies files from the left drive to the right drive.

```
A > PIP B:=A:MTERM.*[OV]
A > PIP B:=A:DISKCOPY.COM[OV]
A > PIP B:=A:PIP.COM[OV]
A > PIP B:=A:STAT.COM[OV]
A > PIP B:=A:SETUP.COM[OV]
```

At the A > prompt, replace the system diskette in the left drive with the MTERM working copy.

Enter a **CTRL/C** to reset the system by holding down the **CTRL** key and pressing **C**.

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Note: To use MTERM properly, you must have the file MTERM.DAT present on your diskette.

Accessing MTERM

Press **MAIL**. The screen displays the word MTERM. Press **RETURN**. The screen clears and displays:

```
MTERM - Epson QX-10 Smart Terminal Communications
(c) Copyright 1984, Micro-Systems Software Inc.
MTERM Version 1.40, EPSON QX-10 Release 1.0
```

The n.nn numbers on the bottom line are the MTERM version number followed by the release number.

As soon as MTERM is finished loading, you will be in terminal mode. You use two distinct levels of operation with MTERM:

1. Terminal mode
2. Command mode

You use terminal mode for communicating and command mode to establish or change MTERM features and settings.

Press **MENU** to select the command mode (and use **MENU** again later to switch back to terminal mode). When you first press **MENU**, the command menu shown in Figure 2-1 displays. Take a few moments to study this menu.

```
MTERM Command menu:

A: Set/examine MacroKeys          K: Execute CP/M-80 command
B: Buffer switch                  L: Load buffer from file
C: Clear buffer                   M: Display/print buffer
D: Duplex switch                  N: Auto-dial telephone
E: Exit MTERM                     O: Change/examine tables
F: Set display width              P: Save MTERM data file
G: LF suppression switch          Q: Load MTERM data file
H: CR suppression switch          R: Set RS-232C parameters
I: Modem switch                   S: Save buffer to file
J: Printer output switch          T: Transmit buffer switch

B: Close    H: Off     Baud: 300   Prty: Even    Buf totl: 34094
D: Full     I: One     Word: 7     Xmit: Off     Buf used: 0
G: On       J: Off     Stop: 1     Dspw: 80      Buf free: 34094
```

Figure 2-1. Original MTERM command menu

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The area at the bottom of the screen is called the status area. Here you can see the current status for the menu items that have options. When you use MTERM for the first time, the status settings are the defaults that come with the standard MTERM program; these are stored in the default file, MTERM.DAT.

The first item in the status area (B) indicates the current status of your buffer; this setting is either open or closed. The J display tells you the status of the printer, which is on or off. You will use these two status displays most frequently.

Look at the three status displays on the right. *Buf totl* indicates the available memory after MTERM has been loaded into the QX-10's random access memory (RAM). *Buf used* shows how much of this memory you have used. *Buf free* shows how much free space you have remaining. The use of buffers is discussed in Chapter 3, MTERM Commands, in the Buffer Commands section.

Now experiment a little with command mode. Press **D** for Duplex switch. Watch the table at the foot of the screen. The status display following D: will change from Full to Half and vice versa.

Note: Do not experiment with the P command. Using P causes any changes you make to the display settings to be saved in the permanent file MTERM.DAT. Because you are not ready to make any permanent changes at this time, do not press P. You will learn how to use the P option in the next subsection.

You can experiment with any of the command keys except P. If you should press a key that causes the bottom area of the command menu to disappear and a prompt line to appear, press **MENU** to return to the command menu. Any changes you make on the screen will affect your current session but they will not become permanent changes as long as you avoid pressing P.

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If you press **E**, MTERM restores the original default settings and takes you out of the MTERM program, returning you to the CP/M-80 prompt, A > .

If you do leave the program by mistake, return by pressing **MAIL** followed by **RETURN**.

Changing MTERM Settings

The settings you see displayed in the example above are the system defaults, that is, the selections stored in the file MTERM.DAT. You may want to store a different set of defaults in that file. When you change any of these settings, save them to the diskette by using the Save MTERM data file function (command P). This creates a new MTERM.DAT file with your own system defaults.

When you use the P command to save a new set of defaults, the system automatically uses the filename MTERM.DAT. If you wish to store alternate settings for such special applications as a variety of communication networks, simply set them as you desire, then save those settings under different filenames. Refer to Chapter 3, MTERM commands, for a complete description of the Save MTERM data file command.

Once you have saved each configuration under its own filename, use it when loading MTERM by specifying the filename after pressing the **MAIL** key.

For example, if you configure MTERM to transfer data between your QX-10 and an HX-20™, you may need to change some of the feature settings, such as display width and carriage return suppression. After making the changes, save the new settings in a file that you call HX20.DAT. You then use this file each time you communicate with the HX-20 by pressing **MAIL** followed by typing a space and the alternate filename:

MTERM HX20.DAT

Here are three more examples of using files of alternative feature settings:

        MTERM TRANS.M2
        MTERM BBS
        MTERM COMPSRV

Each of these filenames gives you a set of options for a different communication network. The MTERM program loads its default values from the TRANS.M2, BBS (a Bulletin Board Service network), or COMPSRV files, eliminating the necessity of having to change the option settings every time you want to use a different service.

The above filenames are examples only. You can use any valid CP/M-80 filenames for your MTERM files of alternative settings. The number of files is limited only by your available diskette space.

Switching Modes

To switch back and forth between the terminal and command modes, press **MENU**.

While you are in command mode, incoming information is stored in a temporary capture area. It is not displayed on the screen until you return to terminal mode.

When you return to terminal mode, the screen is updated at a rapid rate. Also, if you have selected the printer (J command), the incoming data is printed as soon as you return to terminal mode. While you are in command mode, everything is stored in the temporary capture area until you return to terminal mode.

There is a limit to how much incoming data will be stored while you are in command mode. The capture area is about 512 bytes in size. If it becomes full while you are in command mode, all subsequent characters will be lost.

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Now place your system in terminal mode. You will spend most of your time in terminal mode. After you dial a phone number and make a connection, this is the mode you use to communicate with another system or service.

Using the QX-10 Keyboard

The QX-10 keyboard is auto-repeating. If you hold down any key for approximately 1/2 second, the character will begin repeating.

MTERM defaults to lowercase; you get uppercase by using the **SHIFT** key. To lock into uppercase only, use the **SHIFT LOCK** key.

Function Keys

MTERM has some special keyboard functions you need to know about. You have already used the **COPYDISK** and **MAIL** function keys. In this section we discuss the other function keys: **MENU**, **UNDO**, and **CTRL**.

MENU. Use the **MENU** key to switch between the command and terminal modes. The **MENU** key is a toggle. Therefore, when you are in terminal mode and you press the **MENU** key, you automatically switch to command mode. When you are in command mode and press the **MENU** key, you automatically switch back to terminal mode.

UNDO. Use the **UNDO** key to terminate the current action.

CTRL. Use the **CTRL** key, with any regular character, to transmit the contol characters of the American Standard Code for Information Interchange (ASCII, pronounced *ask-ee* and shown in the *QX-10 Operations Manual*). To use the control key in this manner, press **CTRL** and another character at the same time.

MacroKeys

A *MacroKey* is a key that you have programmed to display or transmit a message other than that which the key normally displays or transmits.

MTERM provides 10 MacroKeys that you can program to hold up to 64 keystrokes each. MacroKey functions are obtained by holding down the **CTRL** key and pressing one of the numeric keypad keys (0 - 9). By using a MacroKey, you cause the system to transmit whatever message you have stored for that key.

Suppose, for example, you always wish the following message to be transmitted from your terminal to another system:

John W. Everyman
Newark Rep. #123-4
Great Gatsby Manufacturing

In command mode, you press **A** on the command menu and enter this message, then assign it to MacroKey 1. In terminal mode, you send the message simply by pressing **CTRL/1**. MTERM transmits everything you typed, including the carriage returns. Refer to Chapter 3,. MTERM Commands, for a complete description of how to set MacroKeys.

Communicating with a Network

You can use MTERM to communicate with network timesharing services, such as local business bulletin boards or the national network data bases available from THE SOURCE℠ and CompuServe™. With these services you can retrieve information about the weather, stocks, sports, news, and so forth. You can view this information and/or save it for later use. Some services provide electronic yellow pages and catalog shopping. Some bulletin boards have public domain software you can have free of charge. Most services also provide an electronic mail feature that allows you to send letters to other computer users.

Now that you have experimented with the different MTERM command keys and are beginning to feel comfortable with their functions,, you are ready to communicate with a network.

There are several methods of communicating, and which one you choose affects the procedures you use. This tutorial takes you step by step through the most common methods. The examples that follow show only a few of the many things you can do with your QX-10 and the growing number of computer network services. Each example begins with a box that contains the assumptions made for the particular example.

If you plan to use a timesharing service that charges so much for each minute of connect time, you will probably want to experiment with a local, free network until you are thoroughly familiar with MTERM operations.

Example 1: Manual Dialing

Assumptions

Your MTERM command menu is displaying.
Your modem has an acoustic coupler.
The network will be used to access information only.

1 *Set command options*. Set command I (modem switch) to three. The remaining default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Press* **MENU** *to return to terminal mode.*

3 *Establish the connection*. Once you are in terminal mode, dial the number of the network. When you hear the carrier (a high-pitched tone), push the handset into the rubber cups.

4 *Log on*. As soon as the host computer recognizes your terminal, it may ask you for your name and an identifying number, or it may wait for you to enter one or more initial characters, such as ∧ C.

Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

5 *Log off.* When you are finished, follow the service's log-off procedures. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

Example 2: Automatic Dialing

Assumptions
Your MTERM command menu is displaying. **Your modem can automatically dial phone numbers.** **The network will be used to access information only.** **The phone number is not yet in the dialing menu.**

1 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Select the command to enter a phone number.* Press **O** (the letter O) to select the Change/examine tables feature. Type *TE* and press **RETURN** to select the dialing menu.

3 *Type in the phone number.* Press **A** and **RETURN** to select the first line in the dialing menu. When the message *New name:* appears, type the identifying information and press **RETURN**. When the message *New number:* appears, type the phone number itself and press **RETURN**. Press **UNDO** to return to the command menu.

4 *Request the dialing menu.* Press **N** to request the dialing menu.

5 *Select the phone number.* Press **A** and **RETURN** to select the phone number you just entered. As soon as you press **RETURN**, MTERM places you in terminal mode and dials the number.

6 *Log on.* As soon as the host computer recognizes your terminal, it may ask you for your name and an identifying number, or it may wait for you to enter one or more initial characters, such as ∧ C.

Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

7 *Log off.* When you are finished, follow the service's log-off procedures. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

Example 3: Storing Incoming Data for Later Use

Assumptions

Your MTERM command menu is displaying.
Your modem can automatically dial phone numbers.
The network will be used to access information only.
The phone number is already in the dialing menu.

1 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Request the dialing menu.* Press **N** to request the dialing menu.

3 *Select the phone number.* Press the letter that corresponds to the phone number you wish to dial and press **RETURN**. As soon as you press **RETURN**, MTERM places you in terminal mode and displays the number. Press **RETURN** again to begin dialing.

4 *Log on.* As soon as the host computer recognizes your terminal, it will ask you for your name and an identifying number, or it may wait for you to enter one or more initial characters, such as ∧ C.

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Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

5 *Open the QX-10 buffer*. Press **MENU** to return to the command menu. Press **B**; this opens the QX-10's memory buffer. The display at the bottom of the command menu screen will read B: Open.

6 *Return to terminal mode*. Quickly press **MENU** to return to terminal mode. Everything stored in the temporary capture area and everything received from this moment on will be stored in the buffer, until the buffer is full.

7 *Locate information*. Using the network service's menu, request the information you wish to save.

8 *Close the QX-10 buffer*. When you are finished receiving the information you wish to save, press **MENU** to return to the command menu. Press **B**; this closes the QX-10's memory buffer. The display at the bottom of the command menu screen will read B: Close.

9 *Check the buffer*. Before saving the buffer contents in a disk file, check the buffer by displaying it on your screen. This ensures the correct data has been received. Press **M** from the command menu. (You must have data in the buffer for MTERM to recognize the **M** command.) Press **D** to display the contents on your screen. When the buffer contents have finished displaying, go on to the next step.

10 *Save the buffer*. Press **S** to save the buffer in a disk file. MTERM will ask you for the filename. Assign it a name you will remember. Press **MENU** to return to terminal mode.

11 *Log off*. When you are finished, follow the service's log-off procedures. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

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Example 4: Using the MacroKeys to Log on and off

Assumptions

Your MTERM command menu is displaying.
Your modem can automatically dial phone numbers.
The network will be used to access information only.
The phone number is already in the dialing menu.

---

1 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Define the log-on and log-off procedures as MacroKeys.* Press **A** to set the MacroKeys. Select the MacroKey you wish to use for the log-on message and press **RETURN**. Type in the message and press **RETURN**. Select the MacroKey you wish to use for the log-off message and press **RETURN**. Type in the message and press **RETURN**. Press **UNDO** to return to the command menu.

3 *Request the dialing menu.* Press **N** to request the dialing menu.

4 *Select the phone number.* Press the letter that corresponds to the phone number you wish to dial, then press **RETURN**. As soon as you press **RETURN**, MTERM places you in terminal mode and displays the number. Press **RETURN** to begin dialing.

5 *Log on.* As soon as the host computer recognizes your terminal, it will ask you for your log-on message. The host will wait for you to type in your response. Press the **CTRL** key and the number that form the MacroKey you used to enter the log-on message.

Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

6 *Log off.* When you are finished, press the **CTRL** key and the number that form the MacroKey you used to enter the log-off message. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

Example 5: Sending an Electronic Letter

Assumptions
Your modem can automatically dial phone numbers.
The phone number is already in the dialing menu.

1 *Create the letter.* Because network services charge by the hour for the time you are connected, save your letter in a file before accessing MTERM. Use a word processor to create the letter.

2 *Access MTERM.* Press **MAIL** followed by **RETURN** to enter the MTERM program.

3 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

4 *Request the dialing menu.* Press **N** to request the dialing menu.

5 *Select the phone number.* Press the letter that corresponds to the phone number you wish to dial, then **RETURN**. As soon as you press **RETURN**, MTERM places you in terminal mode and displays the number. Press **RETURN** to begin dialing.

6 *Log on.* As soon as the host computer recognizes your terminal, it will ask you for your log-on message. The host will wait for you to type in your response. Use the MacroKey defined in Example 4 to log on or type in the log-on message and press **RETURN**.

Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

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7 *Check the buffer.* Press **M** from the command menu. (You must have data in the buffer for MTERM to recognize the M command.) Press **D** to display the contents of the buffer on your screen. Save any data you want in a disk file because in the next step, you will clear the buffer.

8 *Clear the buffer.* Press **C** to clear the buffer entirely. This ensures you enough room in the buffer for the letter you wish to send.

9 *Load the letter into the buffer.* Before the letter can be transmitted electronically, you must load it into the QX-10 buffer. Press **L** followed by the name of the file you created in step 1 above, then press **RETURN**.

Note: If the file is not on the same disk as the MTERM program, you must define the disk drive on which the file is located.

10 *Close the buffer.*

11 *Go back to terminal mode.* Press **MENU** to return to terminal mode.

12 *Get ready to transmit.* The network service you are using will have a procedure for you to follow to transmit a letter. Follow this procedure and when the service is ready to receive the letter, go on to the next step.

13 *Transmit the letter.* Press **MENU** to return to the command menu. Press **T** to begin transmitting the text. You must respond to the three Transmit prompts. (Refer to Chapter 3, MTERM Commands, for a complete description of the T command.) For this example, press **RETURN** to all these prompts. The Xmit status prompt at the bottom of the screen will display On.

14 *Return to terminal mode.* Press **MENU** to return to terminal mode. As soon as you are in terminal mode, the buffer begins transmitting.

15 *Log off.* When you are finished, follow the service's log-off procedures. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

Example 6: Printing Incoming Information

1 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A **>** prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Request the dialing menu.* Press **N** to request the dialing menu.

3 *Select the phone number.* Press the letter that corresponds to the phone number you wish to dial and press **RETURN**. As soon as you press **RETURN**, MTERM places you in terminal mode and displays the number. Press **RETURN** to begin dialing.

4 *Log on.* As soon as the host computer recognizes your terminal, it will ask you for your log-on message. The host will wait for you to type in your response.
   Once you have logged on, the network will usually present you with a menu of options (it will be different for each service you use). Consult the reference information provided by the service you are using for a listing of these options.

5 *Locate information to be printed.* Using the network service's menu, request the information you wish to print.

6 *Initiate printing.* Press **MENU** to select the command menu. Press **J** to turn the printer on. The J: status prompt at the bottom of the screen displays On.

7 *Return to terminal mode.* Quickly press **MENU** to return to terminal mode. Everything stored in the temporary capture area will be printed, and everything received from this moment on will be printed as it is received. All incoming data will also be displayed on your screen.

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8 *Turn the printer off.* Press **MENU** to select the command menu. Press **J** again. This will turn the printer off. The J: status prompt at the bottom of the screen displays Off. When you go back to terminal mode, the information will continue to display on your screen, but it will not print on the printer.

9 *Log off.* When you are finished, follow the service's log-off procedures. Do not simply hang up the phone, as some services will permit you to do this only a limited number of times before denying you future access to the network.

Example 7: Setup for Automatic Transmission at a Later Time

Assumptions

Your MTERM command menu is displaying.
Your modem can automatically dial phone numbers.
The network will receive a file transmitted from your system.
The phone number is already in the dialing menu.

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1 *Set command options.* The default command settings should work for most networks. If you are not sure you have the default settings loaded, leave MTERM by pressing **E** from the command menu. At the CP/M-80 A > prompt, press **MAIL** followed by **RETURN**. The software will load with the default settings.

2 *Request auto-dial telephone procedures.* Press **T** to set up the delayed, automatic transmission feature. Press **RETURN** for the first two transmit parameters. Enter the time you wish to transmit the buffer in the specified format (hh.mm.ss)—using periods as delimiters between the figures—and press **RETURN**. As soon as you press **RETURN**, MTERM selects the MTERM dialing menu. (This feature is completely described in Chapter 3, MTERM Commands. See the T command.)

3 *Select the phone number.* Select the phone number you wish to dial the same way you do when placing an immediate call. That is, press the letter that corresponds to the phone number you wish to dial and press **RETURN**.

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4 *Continue working.* MTERM returns to the commmand menu. If you wish to return to terminal mode at this time, you must select terminal mode manually by pressing the **MENU** key. Continue normal operations. You can even exit from MTERM and use your terminal for some other activity.

5 *Finish preparing for transmission.* Before you leave at night, or some other time before the actual transmission takes place, the following procedures must be followed.

6 *Clear the buffer.* Press **MENU** to select the command menu. Press C to clear the QX-10's memory buffer.

7 *Load the file to be transmitted automatically.* Press **L** followed by the name of the file to be transmitted. This causes the file to be loaded into the QX-10's buffer. Note that if the file is not on the same disk as the MTERM program, you must define the disk drive on which the file is located.

8 *Leave your system in terminal mode.* Press **MENU** to select terminal mode. You must leave the computer in terminal mode for the automatic transmission to work. If you wish the transmission to occur during the night, you must put your system in terminal mode before you go home. When the system clock reaches the time you set, MTERM will dial the number you have chosen and begin to transmit the buffer.

Note: If the service with which you are communicating requires that a log-on message be sent first, the log-on information must be at the beginning of the file you are sending. You cannot use the MacroKeys in this case because you will not be present to press the keys. Any log-off message must be at the end of the file.