

**Apple III**

# Modem 300/1200 User's Manual

Part II: Guide to Apple III



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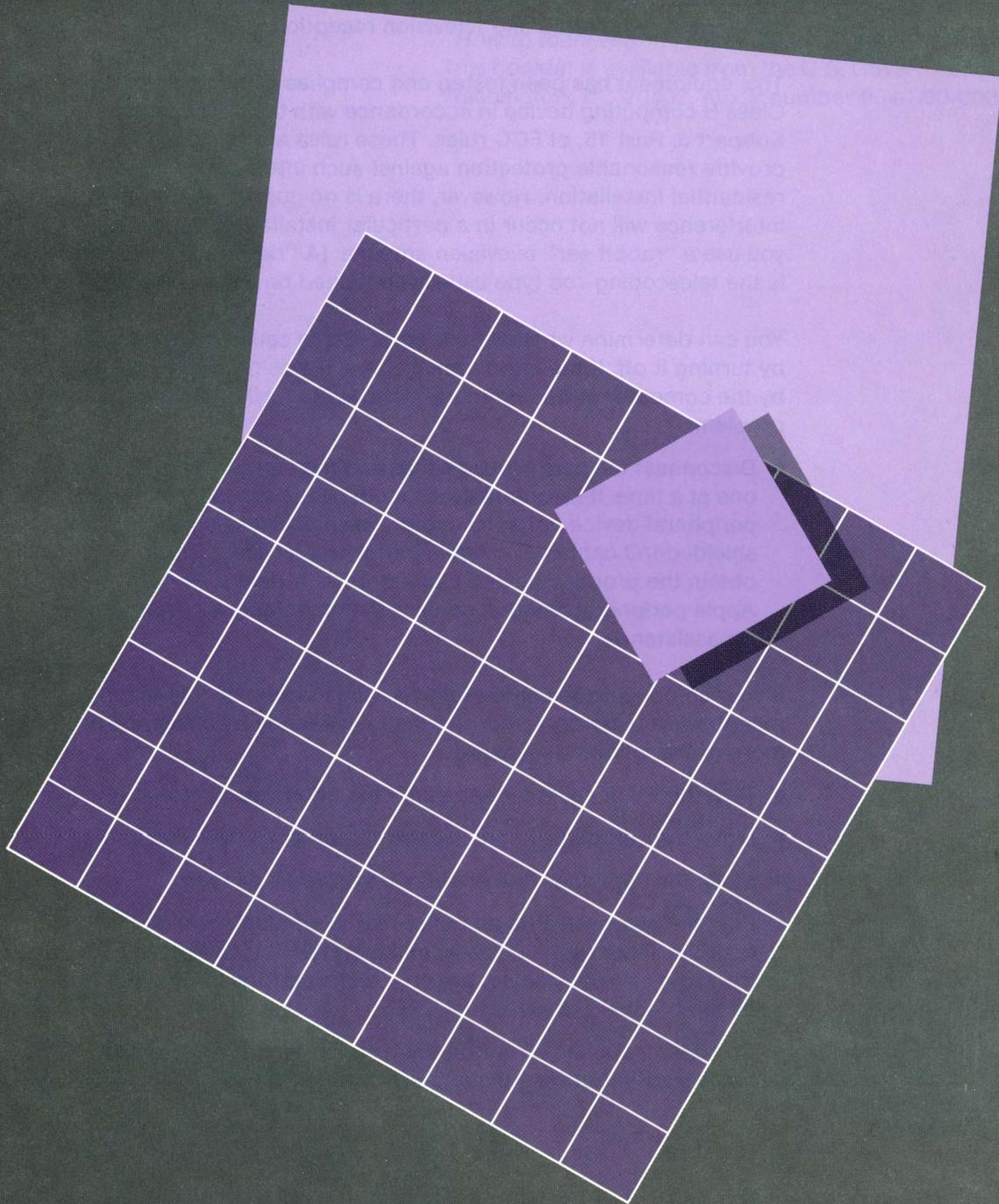
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## **Warning**

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception. The Apple 300/1200 Modems are FCC certified with a shielded interface cable to prevent radio and television interference.

**Apple III**

Modem 300/1200 User's Manual  
Part II: Guide to Apple III



## ***Radio and Television Interference***

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception.

This equipment has been tested and complies with the limits for a Class B computing device in accordance with the specifications in Subpart J, Part 15, of FCC rules. These rules are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation, especially if you use a “rabbit ear” television antenna. (A “rabbit ear” antenna is the telescoping-rod type usually contained on TV receivers.)

You can determine whether your computer is causing interference by turning it off. If the interference stops, it was probably caused by the computer or its peripheral devices. To further isolate the problem:

- Disconnect the peripheral devices and their input/output cables one at a time. If the interference stops, it is caused by either the peripheral device or its I/O cable. These devices usually require shielded I/O cables. For Apple peripheral devices, you can obtain the proper shielded cable from your dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

If your computer does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interference stops.
- Move the computer to one side or the other of the TV or radio.
- Move the computer farther away from the TV or radio.
- Plug the computer into an outlet that is on a different circuit than the TV or radio. (That is, make certain the computer and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet, prepared by the Federal Communications Commission:

*“How to Identify and Resolve Radio-TV Interference Problems”*

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, stock number 004-000-00345-4.



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# Introduction to Part II

This version of Part II is written for Apple III owners.

This book is a continuation of Part I of the *Apple Modem 300/1200 User's Manual*. We have published it as a separate volume because it contains information that is specific to your Apple III system. Other versions of Part II, covering other Apple computers, are available.

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## Warning

If your computer system is not an Apple III you have the wrong book, and probably the wrong Apple Modem Accessory Kit as well. Check with your Apple dealer.

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We strongly recommend that you read at least the introduction and Chapter 1 of Part I before trying to read this book. The discussion in Part II assumes that you are familiar with certain material presented in Part I.

## Who Should Read What

The following chart shows which chapters are recommended for various kinds of readers. You may fall into more than one of the categories (for example, you may be a first-time user setting up your own system).

Reader	Chapters			
	1	2	3	4
Person setting up the system	.	.	.	
First-time user	.	.	.	
Experienced Apple computer user		.	.	
Programmer			.	
Business person		.	.	
User with a modem problem				.

## ***Aids to Understanding***

Look for these visual aids throughout the manual:

- Gray boxes contain incidental information you may find useful.
- Warning boxes indicate potential problems or disasters.
- Notes in the margins point to useful information contained elsewhere in the manual.



---

### **Warning**

This equipment is intended to be electrically grounded.

This product is equipped with a three-prong power module. As a safety feature, the plug is designed to fit only into a polarized, grounded three-hole outlet. If you don't have such an outlet, have a licensed electrician install one (and a grounding conductor, if necessary) where you will use the computer. Do not defeat the purpose of the grounded plug.

---

# Connecting the Modem to Your Computer

Review Chapter 2 in Part I first.

Chapter 2 of the *Apple Modem 300/1200 User's Manual, Part I* (hereafter referred to as Part I) explains how to set up your Apple Modem and get it ready to accept commands from your computer. Read that chapter first and follow its directions, before trying to make the final connections.

**Important note:** If you are going to use your telephone for normal call-in use (voice communications) make sure to switch your modem off, or send a command to your modem to tell it not to answer the phone; otherwise, your modem will sound a tone while you are answering the call.

When you have finished the installation procedure described in Part I, Chapter 2, you are ready for this chapter. It tells you how to get your Apple III system ready to communicate with your modem, and how to complete the hookup.

## What You Need

To complete the installation of your Apple Modem, all you will need is the Apple Term program disk, Apple no. 658-5131.

## Configuring Your System

Your Apple III computer already contains all of the electronic circuitry it needs to communicate with your modem. You don't need to reconfigure your system to accept your modem, if you use the Apple Term program disk that came with your Apple Modem 300/1200 Accessory Kit. We strongly urge you to use the Apple Term program to bring your system up to check it out, whether or not you are contemplating using another communications program.

**Advanced Users Note:** If you use another modem program, other than the Apple Term program, make sure to read the *Apple III Standard Device Drivers Manual* to set the RS-232 driver and reconfigure the system to accommodate your modem.

---

## ***Adjusting the Modem***

Locate the DIP switches on the back of the modem, as shown in Figure 1-2. Check that the switches are positioned as follows:

**Note:** The following description of what the DIP Switches do need not concern you if you are a beginner—simply check that the switches are positioned as indicated.

See Part I, Appendix D for pin configurations.

### **Apple Modem 1200:**

- Switch 1—DOWN—This setting dictates that your modem will supply Carrier Detect signals which are set high.
- Switch 2—UP—This setting dictates that your modem will not unnecessarily compensate for non-standard phone lines caused by some PBX or CBX systems which do not meet Bell® specifications.
- Switch 3—UP—This setting dictates that your computer will supply the Data Terminal Ready signal to the modem.

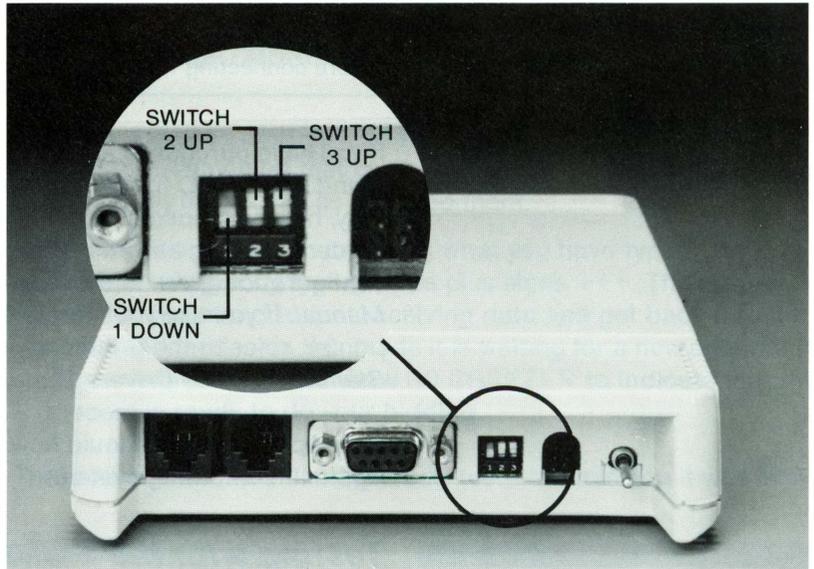
### **Apple Modem 300:**

- Switch 1—DOWN—This setting dictates that your modem will supply Carrier Detect signals which are set high.
- Switch 2—UP—This setting dictates that your computer will supply the Data Terminal Ready signal to the modem.
- Switch 3—Not connected.

See Part I, Appendix D for pin configurations.

If they are not set correctly, move them into the correct position with a toothpick or similar tool.

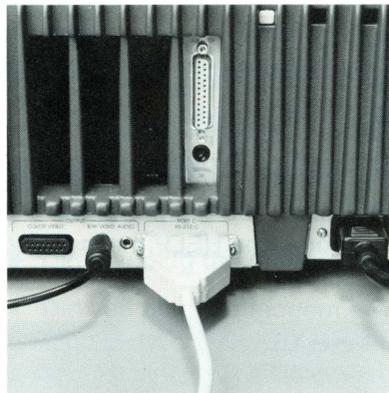
**Figure 1-1.** Modem DIP Switches



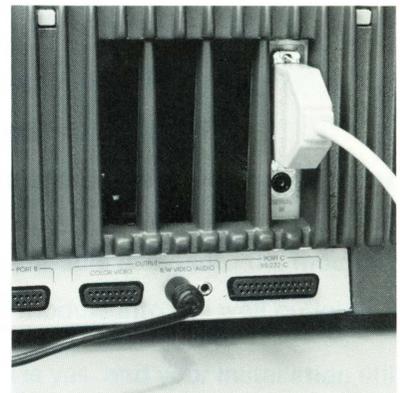
## ***Hooking up the Modem***

Chapter 2 of Part I covers the installation of the data cable for your modem, and also discusses the telephone connections to the modem. Plug the other end of the data cable into the RS-232-C Port (Port C) at the rear of your computer, as shown in Figure 1-2.

**Figure 1-2.** Apple III RS-232-C Port (Port C)



Connected to Port C, RS232C



Connected to Serial Card III

**Note:** Port C is also used for Apple Serial Printers and Plotters—if you have one of these devices hooked up to this port, remove its data cable and plug in your modem data cable. You may wish to purchase an Apple III Serial Card, so that you can run your printer in conjunction with your modem. Do not use a modem eliminator cable with your modem; otherwise, your modem will not function.

---



### Warning

As always, be sure both the modem and the computer are switched off before connecting them together.

---

If you have purchased an Apple III Serial Card, hook your printer to it and use Port C for your modem—this is the preferred port. You may, however, specify either Port C or any serial card to run your modem, as long as you configure it to the RS-232 driver configuration given in the *Apple III Standard Device Drivers Manual*. If you use your Apple III Serial Card to run your serial printer, refer to the printer driver configuration in the *Apple III Standard Device Drivers Manual*, and the printer manual.

Your Apple Modem should now be ready to function as part of your Apple III computing system.

### **Testing with the Self-Test Procedure**

Your Apple Modem responds only to software commands issued by your computer. So to test your finished hookup you must run a program. The easiest and best way to do this is to run the modem self-test procedure.

In order for the modem to talk to your computer and across the telephone lines, you need to load the Apple Term program supplied in your Accessory Kit. This program is required to let your computer communicate with the self-test procedure, and enable it to pass on the results of the test to your monitor screen.

To run the self-test do the following:

1. Switch your modem on.
2. Load the Apple Term program disk.
3. Switch your computer on—then type `E` to enter the Terminal Mode (the HELP message screen appears on your monitor screen).

**Note:** You can use either upper or lower case letters for modem commands.

4. Type the modem command `ATL`, then press `(RETURN)`—the letters `ATL` should appear on the screen as you type them.

The modem will click, emit a short tone, the indicator will flash, and the message `CONNECT` will be displayed on your monitor screen.

5. When you see `CONNECT` on the screen, type in a short test message—anything that crosses your mind. The letters should appear on the screen as you type them.
6. When you are through admiring what you have typed, stop the modem self-test by typing three plus signs `+++`. This is the modem command to quit receiving data and get back into the command mode—in this mode it is waiting for a new command. The screen should now show `NO CARRIER` to indicate that the modem is ready to do your bidding.

That's all there is to the modem self-test—we told you it was easy.

## ***If It Doesn't Work***

Don't be discouraged if your modem doesn't work the first time. Just go back and check your connections and DIP switch settings—90 percent of all initial problems can be traced to errors in installation.

Go through the following checklist step-by-step:

- Did you verify the setting of the switches on the back of your modem, as shown in Figure 1-1?
- Did you use the correct Apple data cable to connect your modem to your computer?
- Did you turn on your modem, computer, and monitor?
- Did you connect your telephone to the modem?
- Did you connect your modem telephone cable to the telephone wall jack?
- Did you plug the modem power module cable into the modem?
- Did you plug the modem power module into the wall outlet?

If the answer to all these questions is yes, and your installation still doesn't work, consult your Apple dealer.



# Using the Apple Term Program

See your Apple dealer for special communication programs, such as Access III®.

You don't have to be a programmer to work with the Apple Modem. This chapter familiarizes you with the Apple Term program, which allows you to control your modem. In Chapter 3 you will actually begin using what you've learned. The Apple Term program allows you to call bulletin boards and computer services, such as THE SOURCE<sup>SM</sup>, CompuServe®, and others. You can send the received information directly to a printer, if one is connected, but the program will not allow you to send or receive files. If you wish to use your modem to handle files or programs, see your dealer for other communication programs, such as Access III®.

The Apple Term program is used in conjunction with the self-test procedure to allow you to check out your system, as described in Chapter 1, "Testing with the Self-Test Procedure."

You should take special care of your Apple Term disk. So before you do anything at all, it is important that you make a copy of the terminal program. The Apple III Owner's Guide tells you how. Then put the original disk in a safe place.

Place your newly-copied disk in Drive 1 and turn the computer off then on, or press **(CONTROL)-(RESET)**. The program will load automatically and then display the Main Menu screen.

## Apple Term Program Screens

Your Apple Term program has four menus:

- Main Menu
- Terminal Mode
- Update Phone Menu
- Configuration Menu

The Main Menu screen is displayed when the program is first loaded into the system. This menu lists four functions that the program makes available to you.

```
Apple Term /// Ver 1.0  
(C) 1983 Apple Computer
```

```
Main Menu
```

```
-----  
Main Menu
```

```
E - Enter Terminal Mode  
C - Change Current Configuration  
U - Update Phone Directory  
Q - Quit Program
```

```
-----  
Enter Selection, or Use the Arrow and the Return Keys
```

**Echo:** to send an input character back to the originating device for verification or display.

The four options on the Main Menu are:

**Enter Terminal Mode** - This option allows the characters represented by the keys that are pressed to be transferred to the modem. If the modem is connected to another computer, the modem will in turn transfer the character to the connected computer. If the other computer echoes the data, any character that the modem receives will be printed on the monitor screen—another Apple computer will not normally echo data. If the modem is not connected to another computer, such as when it is in the Command Mode, it will echo back characters as they are received.

**Change Current Configuration** - This option lets you set up the features of the modem for the computer system that you will be calling. Each computer system (THE SOURCE<sup>SM</sup>, CompuServe<sup>®</sup>, etc.) has its own characteristics and you should look at the user's manual for each of the systems to find out exactly what they are.

**Update Phone Directory** - This option lets you store up to 14 individual names and telephone numbers, each with its own separate configuration, for automatic dialing.

**Quit Program** - This option is the preferred method for quitting the Apple Term program. When you exit using this option, all of the telephone directory and configuration data is saved to the Apple Term disk, so that they will be available the next time you use the program.

**Note:** To return to the Main Menu from the Configuration Menu or the Telephone list, press (ESCAPE). To return from the Terminal Mode to the Main Menu, press (⌘)-(Q)

## Terminal Mode

When you type **E** from the Main Menu or place the cursor over the **E** selection and press **(RETURN)**, the Apple Term program enters the Terminal Mode, which means that all characters that you type are transmitted to the modem through the RS-232 Port on your computer.

---

### The HELP Message

The HELP message is displayed on your monitor screen the first time you type **E** from the Main Menu or place the cursor over the **E** selection using **(↑)** and **(↓)**, and pressing **(RETURN)**. The HELP message indicates all the Apple Term program commands available to you. These commands operate only in the Terminal Mode.

Here is how the Terminal Mode HELP screen appears on your monitor screen:

```
Q-Quit/Return to Main Menu
P-Send Output to Printer
D-Dial Selected Number
H-Hang up Modem
?-Print this Menu

TerminalMode->
```

The HELP commands are defined as follows:

#### Quit/Return to Main Menu—**(↑)**-**(Q)**

This command exits from the Terminal Mode to the Main Menu—it does not disconnect you from the telephone line if you are connected.

#### Send Output to Printer—**(↑)**-**(P)**

This command controls the printer, if you have one attached to your computer, while in Terminal Mode. Press it once, and all data that appear on your screen will print out on your printer. Press it a second time, and the printer will stop printing, though the data will continue to appear on your screen.

**Note:** You must have a printer properly installed and configured for the printer command **(↑)**-**(P)** to work.

### Dial Selected Number—(C)-(D)

This command dials the telephone number marked on the Phone List screen.

**By The Way:** The (C)-(D) command can be used as many times as necessary to dial a number. If a number is busy, you can wait a few minutes and then redial using the (C)-(D) command.

### Hang Up Modem—(C)-(H)

This command hangs up the telephone when you are in Terminal Mode. The computer accomplishes this by typing the escape sequence code +++ for you. See Part I of this manual for escape sequence information.

### Print this Menu—(C)-(?)

Type this command at any time from the Terminal Mode to print the list of commands.

## *The Phone Directory Screen*

The Phone Directory screen displays a list of up to 14 frequently-called telephone numbers, selected and typed in by you, which the program can dial automatically.

This screen lets you select the number you wish to dial, add a number, delete a number, or alter a number.

Type U from the Main Menu Screen to update the Phone Directory Screen.

**Note:** The selected telephone number appears at the top of all menus. If there are no selected numbers, nothing will appear in this position.

Apple Term /// Ver 1.0  
(C) 1983 Apple Computer

Phone Directory

Name	Phone Number
-----	
There are No Current Phone Numbers	
-----	

⌘A Add, ⌘D Delete, ⌘E Edit, <ESC> Exit to Main Menu  
Use Arrow Keys to Select Phone Number

---

### ***Adding a Phone Number***

From the Phone Directory Screen, add a telephone number to the list by typing:

⌘-A

The cursor will appear at the first available line on the telephone list.

Type the name or label that lets you identify the number to be added. You may use up to 35 characters in the name. Press **(RETURN)** and the cursor will move to the number column from the name column.

Type the telephone number. You may imbed modem command letters within your phone number. For example, if you are calling from a telephone system which requires a prefix 9 to get an outside line, you would type a 9 and a comma followed by the rest of the number. The comma allows a brief pause during the dialing to enable outside line connection. You may type up to 35 characters in the number that the modem will dial.

**Note:** The program will not accept blank entries (no number and no name)—the program will accept a number without a name, or a name without a number.

Press **(RETURN)** when you are finished changing the information. To add another phone number, repeat the procedure.

**Note:** The new number you just added includes the current configuration settings from the Configuration Menu. To change these settings return to the Main Menu and refer to the section on Changing the Configuration Settings.

---

### ***Deleting a Phone Number***

To delete a phone number, position your cursor in line with the phone number that you wish to delete, and type:

**(C)-(D).**

The message:

Are you sure?

will appear at the bottom of the screen. Type **Y** if you wish to delete the phone number, and **N** if you do not. The Apple Term program will delete the phone number from the phone list if you have typed **Y**, or will retain the phone number and place you back into the phone directory, if you have typed **N**.

**By The Way:** You can enter **Y** or **N** in either upper or lower case.

---

### ***Editing a Phone Number***

To edit a phone number, position the cursor in line with the phone number that you wish to alter, and type:

**(C)-(E).**

The following list of commands appears at the bottom of your screen:

```
␣C Clear Entry, ␣R Restore Entry  
␣ Left-Arrow Delete Character, <RETURN> Accept Entry
```

The following editing commands are used to make corrections on your phone numbers:

**Clear Entry—(C)-(C)**

This command clears the present entry.

**Restore Entry—(C)-(R)**

This command restores the entry to its pre-edited state.

**Delete Character**—(C)-←

This command deletes one character to the left of the cursor.

**Accept Entry**—(RETURN)

This command accepts the current entry as it is displayed.

All other normal characters will be accepted, as will ← and →.

---

**Selecting a Phone Number for Automatic Dialing**

To select a phone number for automatic dialing, position the highlight to line up with the number that you wish to dial, then press (ESCAPE) to return to the Main Menu. In the uppermost right hand corner of the screen appears the name, or label, of the number you selected for automatic dialing—this is the number that is dialed, when you enter the Terminal Mode and press:

(C)-(D)

---

**Leaving the Phone Directory Screen**

To leave the Phone Directory screen, press (ESCAPE) to get to the Main Menu screen.

**Changing the Configuration Settings**

The Configuration Menu displays the current Apple Term program settings. For most of the work you will be doing on your modem, these settings will work perfectly well without change. However, if you wish to modify the settings, do the following:

From the Main Menu screen, type C, or position cursor using (↑) or (↓) and depressing (RETURN), to get into the Change Current Configuration screen.

To move the cursor to the line in the Configuration screen you wish to change, use:

(↑) and (↓)

To make the desired changes to the line:

← and →

```

APPLE TERM /// Ver 1.0                               Change Configuration
(C) 1983 Apple Computer
-----
=> Baud Rate           110      300      1200
   Duplex              Full     Half
   Dial                Pulse   Touch-Tone
   Bit & Parity        8 No   7 odd   7 even  7 Mark  7 Space
   Delay               30 Sec 60 Sec  90 Sec
   LF with CR          No LF   LF
   Printer Driver      UNSET
-----
Use Arrow Keys to Change Configuration & <CR> to Set Printer Driver
<ESC> to Exit to Main Menu

```

The Configuration screen allows you to define or modify seven different parameters:

**Baud Rate**—This setting selects the modem speed in bits per second for your phone system.

**Duplex**—This setting changes the terminal mode software so that the characters are displayed on the screen when the keys are pressed.

**Note:** If your Configuration is set at full-duplex and the computer system you are calling is set at half-duplex, that system will not echo characters back to your system, and you will not see any characters displayed on your monitor screen. If you receive double characters after connecting to another computer system, the problem could be that you are talking to a full-duplex system with half— duplex selected in the Configuration Menu. If you receive no characters at all, after you connect to a computer system, the reverse could be true, and you may be connected to a half-duplex system with full-duplex selected in the Configuration Menu.

**Dial**—This setting selects the type of dialing (pulse or Touch-Tone<sup>SM</sup>) for your phone system.

**Bit and Parity**—This setting selects the parity preference and the parity setting. It is important to know the requirements of the system you are calling. The default setting is 8-bits with no parity (8 No).

**Carrier Delay**—This setting controls how long the modem will ring a number, without it being answered. For example, when set to 30 Sec, it will ring the selected number for 30 seconds before it displays the message:

```
NO CARRIER
```

The default setting is 30 Sec.

**LF with CR**—This setting controls whether or not a line feed (LF) is to be generated by the terminal program to be sent to the host computer system, when the Carriage Return (CR) is sent.

**Printer Driver**—This setting indicates whether or not you have a printer configured and attached to your system—UNSET means no printer is attached.

**Note:** If you wish to change your printer driver, you must first return to the UNSET state. After positioning the arrow to Printer Driver, press **RETURN** and use the space bar to completely “erase” the current entry. Then add your new driver as explained below.

To add your printer to the system, place the cursor next to the Printer Driver line and press **RETURN**. Then type in the the name of the printer driver your system is configured for, and press **RETURN**. If your selection is accepted, the name of the driver will be displayed; otherwise, the display will return to UNSET—meaning that your driver was not accepted for one reason or another; check your printer driver configuration and try again.

To leave the Configuration screen and return to the Main Menu screen, press **ESCAPE**.

## ***Quitting the Apple Term Program***

Always select **Q** on the Main Menu screen when you finish (quit) the Apple Term Program. This is extremely important, especially if you have made any changes to the Configuration Menu. In this way you will make sure that all of the changes that you made to the program (addition of phone numbers and configuration changes) are saved to the Apple Term disk for the next time you use the program.

**Note:** When you quit the Main Menu, Are you sure? appears at the bottom of the screen. Type **Y** for Yes to quit the Apple Term Program, or **N** for No to return to the Main Menu. If you select **Y**, the current configuration is stored on the Apple Term disk, and the message INSERT SYSTEM DISKETTE & REBOOT appears on the screen.



# A Sample Session

This chapter provides an overview of the Apple Term program and the modem operation. It takes you through a typical session using all of the necessary aspects of your modem. You should take time to get the feel of going through a session using these procedures once or twice, and before long you will be off and running on your own.

## *Apple Term Overview*

The Apple Term program that came with your Apple Modem is tailored to suit your modem and computer. Chapter 2 takes you through the program screens and shows you how to set them up. The Apple Term program allows you to call up bulletin boards and computer services, but it does not allow you to transfer files. If you wish to transfer files, ask your Apple dealer to provide you with another communications program, such as ACCESS III<sup>®</sup>.

**Note:** You must be a subscriber to a computer service before you can use the service—simply knowing the phone number will not allow you to use that service.

## *Operating Overview*

Operating your modem is not difficult at all—the procedure consists of three simple stages:

- Beginning a Session
- Dialing and Communicating
- Ending a Session

**Note:** If you have not yet read Chapter 2 of this manual for an explanation of the Apple Term program screens and set-up, please read it now — it is necessary to become familiar with the program before going on.

## ***Beginning a Session***

Before you begin, make sure that you have installed your modem correctly, and that the self-test has checked out. See the *Apple Modem 300/1200 User's Manual, Part I*, as well as Chapters 1 and 2 in this volume, and proceed as follows:

1. Turn on your computer and monitor.
2. Turn on your modem.
3. Turn on your printer (if you have one connected).
4. Place the Apple Term program disk in Drive 1 and load the Apple Term program into your computer — the program will load automatically and display the Main Menu screen; see Chapter 2.

**Note:** Press **(CONTROL)-(RESET)**, or turn your computer off, then on, to load the program.

---

## ***Changing Your Phone Directory***

Once you have established a list of telephone numbers, you will not be changing them at every session. If you do not wish to change the telephone directory, skip this set of instructions and go on the section entitled “Changing the Configuration Menu.” If you *do* wish to change the telephone directory, perform the following steps:

**Note:** Refer to Chapter 2 for in-depth instructions on changing your telephone directory listing.

### **To add a phone number:**

- Type **(C)-(A)**
- Type the name or label.
- Press **(RETURN)**—the cursor will move from the name column to the number column.
- Type the phone number.

### **To delete a phone number:**

- Position the cursor in line with the phone number that you wish to delete, and:
- Type **(C)-(D)**

**To edit a phone number:**

- Position the cursor in line with the phone number that you wish to edit, and:
- Type (F)-[E]

**To clear an entry:**

- Type (F)-[C]

**To restore an entry:**

- Type (F)-[R]

**To delete a character:**

- Type (F)-[←]

**To accept an entry:**

- Press [RETURN]

**To leave the Phone Directory and return to the Main Menu:**

- Press [ESCAPE]—along with escaping from the Phone Directory, this will also select the phone number (highlighted number) for automatic dialing.

---

***Changing the Configuration Menu***

Once you have set the configuration settings, you will not be changing them at every session. If you wish to change the configuration settings, perform the following steps. If you do not wish to change the settings, skip these steps and go on to the next main heading, “Dialing and Communicating.”

**Note:** Refer to Chapter 2 “Changing The Configuration Menu” for an explanation of the configuration settings.

1. From the Main Menu: type [C] — this will get you into the Configuration Menu.
2. Press [↑] or [↓] to move the cursor to the line you wish to change.
3. Press [←] and [→] to make the changes to the line.
4. Press [ESCAPE] to leave the Configuration Menu and return to the Main Menu.

**Printer Driver Selection:** The Printer Driver is the only selection that is different from the other configuration selections.

To change the driver:

- Select the line on which the driver appears, and press **(RETURN)**.
- Type the name of your driver, and press **(RETURN)**.

## ***Dialing and Communicating***

Sending and receiving messages through your modem is a simple task. Just follow the steps below:

---

### ***Dialing a Phone Number***

Your modem will automatically dial any number in your directory when you do the following:

1. Enter the Phone Directory Menu.
2. Select a phone number for automatic dialing.
3. Position the cursor to line up with the number you wish to dial, and press **(ESCAPE)** to return to the Main Menu.
4. Type **E** to enter the Terminal Mode.
5. Type **( $\odot$ )-(D)**—this will automatically dial your selected number.

**Note:** The **CONNECT** message will appear on your monitor screen if the modem has connected you with the number you selected—after a period of time a **NO CARRIER** message will appear on your screen if your modem was unable to connect you with the number selected.

---

### ***Sending a Message***

Sending a message is as simple as typing—as a matter of fact, that's all there is to it.

1. If your screen displays **CONNECT**, type your message.
2. If your screen displays **NO CARRIER**, and you are sure that the phone number is correct, go through the automatic dialing procedure once more—repeat this procedure until you have made a connection.

**Note:** You can communicate directly with the number you dialed using the Apple Term program, if the computer or computer peripheral is hooked up to a modem that is configured in the same manner as yours. However, in order to use bulletin boards or computer services, such as THE SOURCE<sup>SM</sup> or CompuServe<sup>®</sup> you must set up your messages in accordance with their instructions, and you must also be a subscriber to that service.

---

## ***Changing from Voice to Data Communications***

A common mode of operation, when using your modem, is to call the person on the phone before you attempt to transmit any data. This is standard practice to ensure that the computer on the other end of the line is hooked up, on line, and running a communications program capable of receiving the data you are about to send.

The manner in which this is done is as simple as placing a phone call, and deciding who is going to be on the calling end and who is answering. Then both of you hang up the phone and:

- Type `ATA (RETURN)` if you are answering the call (answer)
- Type `ATD (RETURN)` if you are calling (originate)

**Note:** If you wish to return to Voice Mode after sending data, both of you should agree in your first conversation to pick up the telephone before you give the escape sequence `+++`. You will then be able to talk over the phone again without being disconnected by your modem.

Once the telephone connection is made between both computers, you and the person at the other end of the line can communicate via your modems as long as you wish.

## ***Ending a Session***

There are two ways a session can end; either you hang up or the other system hangs up—either way a `NO CARRIER` message will appear on your monitor screen to indicate that your modem is disconnected from the telephone.

If you wish to end a session, follow these steps:

1. Return to the HELP screen.
2. Hang up the Modem—Type `(G)-(H)`—this will disconnect the modem from the phone line.

## ***Quitting the Apple Term Program***

When you have finished using your modem, and you wish to shut down your system, use the following Apple Term Quit procedures; otherwise, telephone number and configuration changes that you made during this session will be lost.

Follow the procedures given below to shut down your system:

1. Quit the Apple Term program—Type `⌘-Q`.

**Note:** When you quit the Main Menu, `Are you sure?` appears at the bottom of the screen. Type `Y` for Yes to quit the Apple Term program, or `N` for No, to return to the Main Menu. If you select `Y`, the current configuration is stored on the Apple Term disk, and the message `INSERT SYSTEM DISKETTE & REBOOT` appears on the screen.

2. Remove your Apple Term disk.
3. Turn off your modem.
4. Turn off your computer and monitor.
5. Turn off your printer (if you have one connected).

That's all there is to a session—experiment with your modem, and have fun.

# Troubleshooting Your Modem

This chapter is something that you need not concern yourself with, if your modem is working correctly—and for most modem users this will be the case. However, the information in this chapter should prove a useful troubleshooting tool, should you ever have problems with your modem.

Most of the problems with your modem will occur during the installation procedures, and these are easy to remedy by simply checking the installation. This chapter goes beyond this and helps you adjust your system to solve operating problems. It presents a Quick-Fix list, discusses troubleshooting strategy, and then presents three problem adjustment sections—for installation problems, screen display problems, and general operating problems.

**Important:** This chapter does not present repair procedures. Modems requiring adjustments not covered in this chapter should be returned to your Apple dealer for service.

---



## Warning

Do not remove the modem case. The modem has no parts within the case that you can service. Removing the case will void your warranty.

---

Sending and receiving data requires more than a modem. Your computer is part of a system that includes a telephone line and another computer system similar to yours. You can solve some operating problems by modifying programs and adjusting your modem—you cannot solve problems caused by the telephone line or the other computer system.

Recheck each cable, even though you are sure that they are plugged in properly. Do not try to clean jacks or connectors.

## ***The Quick-Fix List***

You can solve most operating problems by checking these three things:

1. Check to see that all four cables connected to the modem are securely connected at both ends:
  - Modem Data cable—from modem to computer
  - Modem Power cable—from modem to power module (power outlet)
  - Telephone cable (the one that came in the Accessory Kit)—connected to the modem and the telephone.
  - Telephone cable (the one that you removed from your telephone)—connected to the modem and the telephone wall jack.
2. Check to see that the Apple Term program and the remote computer system have each selected the same baud, data bit, and parity selection.
3. Make sure that the DIP switch settings on the back of the modem are set properly. In a normal installation the switches are as follows:

### **Modem 1200:**

- Switch 1 - DOWN
- Switch 2 - UP
- Switch 3 - UP

### **Modem 300:**

- Switch 1 - DOWN
- Switch 2 - UP
- Switch 3 - Not connected

## ***Looking at the Problem***

Operating problems are frustrating because they take you by surprise. However, you can begin to solve any problem by taking note of what has happened. Ask yourself the following:

- Does the modem turn on?
- Does it accept a command?
- Does it display messages?

- Does it send or receive data?
- Does it display improperly or fail to display at all?
- Does the problem repeat, or does it seem to come and go irregularly?
- Can the modem continue to process commands?
- What happens to the command, message or data that fail to work correctly?
- What is the last correct action just before something goes wrong?
- What is the last screen message displayed?

The most common problems can be corrected simply by reseating all connecting cables, or by reconfiguring the Apple Term program.

Check over what you've learned about the problem. Do you have a modem problem—or is it really a problem with something else? You will solve most problems by reseating all the cables, and by reconfiguring the Apple Term program.

---

### ***Fixing Installation Problems***

Always start by looking at the indicator light on the front panel. If it lights continuously, then the modem is ready to receive a modem command. If the indicator light is flashing, the modem is in a self-test mode. If the indicator is off, then the modem is not getting power from the power module.

Refer to Part I, Chapter 2, "Installation and Testing," and to Chapters 1 and 2 of this manual, "Connecting Your Modem to Your Computer" and "Using the Apple Term program" to check over your installation.

---

### ***Adjusting Screen Display Problems***

You may experience several screen display problems after your modem is properly installed. Adjusting the Apple Term configuration screen will eliminate almost all display problems you encounter. Refer to the list below for symptom adjustments.

**Full-duplex** is a setting which causes the character generated by your computer to be sent via your modem to the other computer and then echoed (returned) back to your screen.

**Half-duplex** is a setting which causes the character generated by your computer to be echoed (returned) by your modem back to the screen, without going to the other computer.

#### **When in Data Mode, no characters appear on the screen.**

You are set to full-duplex; the remote system is sending in half-duplex. Change to half-duplex. You may have sent the command, `E0` to the modem—this turns off the display screen. Change to command mode and type `E1` when the `OK` message is displayed.

**When in Data Mode, two characters appear on the screen.**

You are set to half-duplex and the other computer is also echoing characters. Change to full-duplex.

**When in Data Mode, each line of received data overwrites the same line.**

The other computer is not sending a linefeed character with each carriage return. You must supply the linefeed character from the Apple Term program configuration screen.

**Data is received double-spaced.**

The other computer is sending a linefeed character, and your Apple Term program is also adding a second linefeed character to each line of received data. From the Apple Term program make selection to eliminate one linefeed character from the received data.

**Displayed characters sent are frequently incorrect on the monitor.**

Run the self-test feature. If data typed in self-test mode is always correct, then the parity setting is suspect. The other computer requires that you set your system to the same parity setting. Reset your parity from your Apple Term program configuration screen. Note that an occasional bad character or disconnect event is normal for computer communications.

**Displayed characters are usually incorrect (garbage error).**

The other computer and telephone lines can cause this error. You cannot adjust the error if it occurs outside your computer system.

When your computer is the source of the error, it usually indicates that you have an incorrect baud setting (1200 instead of 300), or an incorrect data bit selection—8 bits instead of 7 bits. Readjust the configuration screen to the correct setting.

---

## ***Operating Problems***

Most operating problems involve incorrect data transmission or loss of the carrier signal on the telephone line that carries the data.

If the modem can process a command but does not process data:

- Check to see that you have selected baud, data bit, and parity settings that match those of the other computer. The characters you receive from the other computer will look like a garbage error unless your baud setting and the other computer's baud setting are the same.
- Type the command to display data on your monitor. From the Command mode type `ATF1` or `ATF0`, and return to the session.
- Check for a telephone line problem.

If the modem does not display a command string, but will execute the command—then check DIP switch settings. Also type the command that displays command characters on the monitor, `ATE1`, and rerun the test.

If the modem does not display respond codes , then perform the following steps:

- Check the modem DIP switches for correct setting.
- Type the command `ATZ` to set the modem to default values.

If the modem displays a `NO CARRIER` message in the middle of a transmission, the telephone connection is suspect. A broken telephone connection always causes a `NO CARRIER` message (occasional loss of connection is normal). If you experience systematic loss of connection, the following could be the problem:

- The set-up menu has selected a baud setting or parity selection that either the modem can't recognize, or Apple Term program can't process.
- The remote computer system may have a problem. Phone the person on the other end of the line.

---

## ***Telephone Line Problems***

If it appears that you have a problem with your telephone service, disconnect the Apple Modem to see if the problem goes away—if it does, your modem needs repair. Do not reconnect a faulty modem until it has been repaired. Contact your Apple dealer for assistance.



---

### **Warning**

If the telephone company makes a service call to your home or office and determines that your Apple Modem is responsible for the problem, the telephone company may bill you for the service call. Also, if you leave your Apple Modem connected when it is causing harm to the telephone line, the telephone company has the right to disconnect your service temporarily, until you have cleared the problem.

---

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# ***Apple Modem 300/1200 User's Manual***

## Part II: Guide to Apple III

### **ERRATA**

Please make the following changes to the **Apple Modem 300/1200 User's Manual**, Part II: Guide to Apple III.

Page 2:

The **Apple Modem 300**, Switch 2 and Switch 3, switch descriptions are transposed. The correct description is as follows:

- Switch 2—Not Connected
- Switch 3—UP—This setting dictates that your computer will supply the Data Terminal Ready signal to the modem.

If they are not set correctly, move them into the correct position with a toothpick or similar tool.

Note: Switch 2 on the Modem 300 is not connected, and can be either up or down.

Page 24:

#### **Modem 300:**

- Switch 1 - DOWN
- Switch 2 - Not connected. (Either down or up is OK.)
- Switch 3 - UP

To correct your manual affix the attached self-adhesive patch over Switch 2 and Switch 3 descriptions on page 2 and page 24.

# ***Apple Modem 300/1200 User 's Manual***

Part I: Reference

## **ERRATA**

### **IMPORTANT! –FCC REGISTRATION NUMBER CORRECTION**

Please make the following changes to the **Apple Modem 300/1200 User 's Manual**, Part I: Reference.

Page 10:

The FCC Registration Number is incorrect. The Correct number is as follows:

If you have an Apple Modem 300:

- FCC Registration Number: BCG794-12381-DM-E
- Ringer Equivalence Number: 0.4B
- Manufacturer and Model Number: Apple Computer, Model 300

If you have an Apple Modem 1200:

- FCC Registration Number: BCG794-12381-DM-E
- Ringer Equivalence Number: 0.4B
- Manufacturer and Model Number: Apple Computer, Model 1200

To correct your manual affix the attached self-adhesive patch over the FCC Registration Numbers on page 10.

# Apple Modem 300 / 1200, User's Manual, Part I

## Reference

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- little
- moderate
- extensive

...with modems?

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- little
- moderate
- extensive

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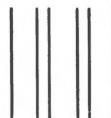
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- extensive

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**4. How can we improve the manual?**

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Name \_\_\_\_\_ Phone \_\_\_\_\_

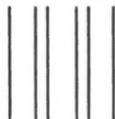
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