

Owner's Manual

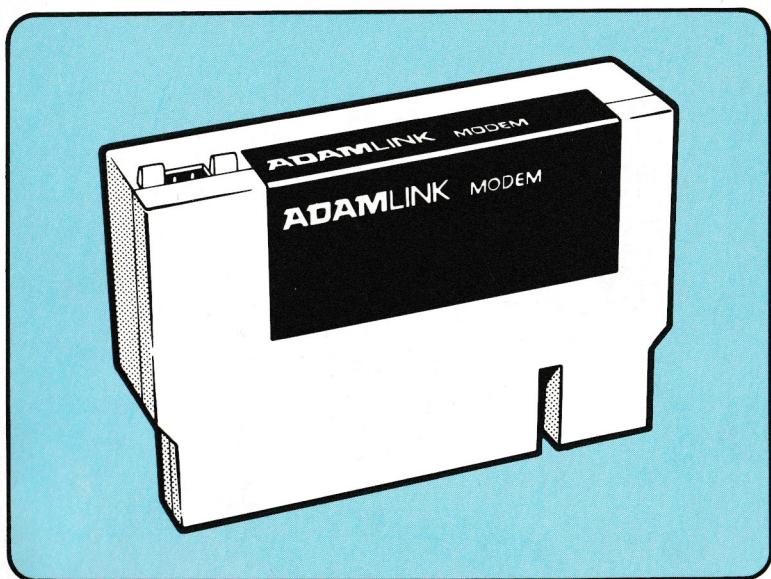
Guide No. 300307

Item No. 7818

ADAM™

THE **COLECOVISION®** FAMILY COMPUTER SYSTEM

ADAMLINK™ MODEM



Connect your ADAM™ to the world of online services!

COLECO
ELECTRONICS

Coleco Industries, Inc. Amsterdam, New York 12010

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When Alexander Graham Bell said, "Watson, come here..." over the first telephone, he had no way of knowing the impact his invention would have on modern communications. From its simple beginning, the telephone has developed into a powerful communications system that allows people from all over the world to talk to one another.

Today's telephone communications aren't limited to calls between people. Computers can talk to one another over regular phone lines, too. With the ADAMLink Modem and your telephone service, you can talk to other ADAM owners, read magazine articles, research topics of interest, and more! ADAMLink can put you in touch with other computers throughout the world.

I. AN OVERVIEW OF MODEM COMMUNICATIONS

What is a Modem?

A modem allows a computer to send and receive information over telephone lines. The information may be as simple as the letter "a" or as complex as a program that makes a robot tie your shoelace. No matter which it is, a modem translates the computer's information into a form that can travel over telephone lines. When the information arrives at the other computer, its modem translates the information into a form the computer can understand.

Sometimes two computers don't handle information the same way. One computer might be able to send and receive information at the same time, and the other might be able to send first, then receive. To overcome this problem, ADAMLink allows you to change parameters. **Parameters** establish the way in which your computer communicates with another computer. If both computers' parameters match, then you can send and receive information by modem.

What's in a Database?

Databases are electronic reserves of information, services, programs, and more! There are community bulletin boards, subscription services to newspapers like THE WALL STREET JOURNAL, shopping services and specialized files that allow you to research almost any subject. Here are a few examples of the database files you can find:

- IRS Rules and Regulations
- Recipes and Cooking Tips
- Current Sports Standings
- World and National News
- Hollywood News and Reviews
- Stock Market Quotes

But reading material isn't all that databases have to offer. If you're planning a trip, you can use one of the travel planners to help you find the best route, restaurants, and lodgings. You can even get a weather report to be sure that your plans won't be rained out! Another special feature of some on-line data services is the community bulletin board where you can find messages, notices of meetings and special events, even ads for computer hardware and software. When you feel comfortable with ADAMLink, you can post messages and ads of your own.

Let Your ADAM Do the Walking!

On-line shopping services let you order flowers, candy, perfume, gourmet foods, stereo equipment, computer accessories, furniture, and more. A little advance planning can keep you away from the crowds at the shopping malls.

Urgent mail delivery is just a modem call away. Instead of rushing to the express mail office at the last minute, you can send letters by electronic mail. Some financial institutions will let you move funds from one account to another at any hour of the day or night. Some even allow you to pay bills electronically. Check with your bank or credit union for the electronic services available to you.

Directories of On-Line Data Services

Take the time to browse through a directory of on-line services. One should be available at your local library, bookstore, or computer store. In the directory, you will find membership requirements, fee schedules, and a list of the information and services that are offered by each online service. Shop around before you subscribe. Compare prices and select the service that meets both your needs and your budget.

Computer-to-Computer Communications

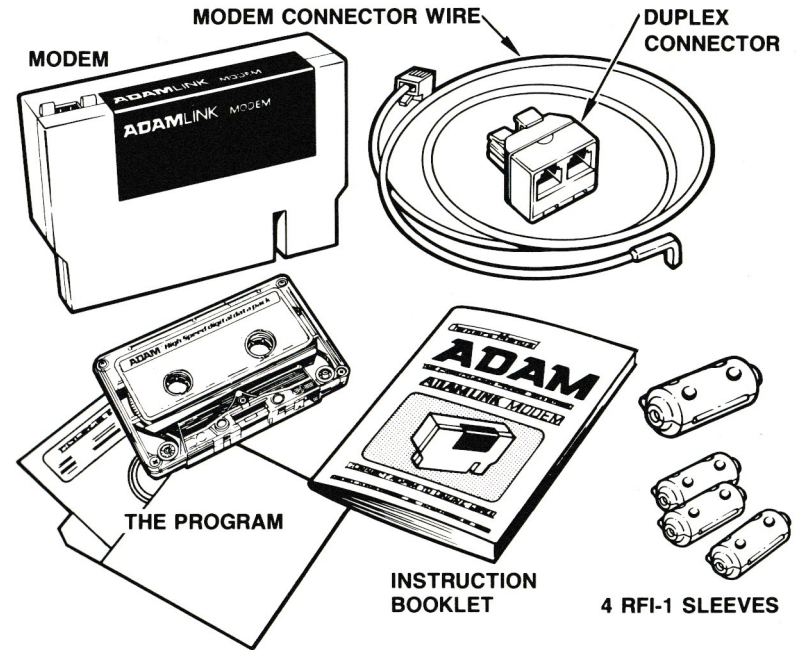
ADAMLink allows you to talk electronically to other computer owners anywhere in the world. You can type messages on your screen and they appear simultaneously on the other computer's screen. Or, you can save time and phone charges by preparing and storing material first, then sending your stored file via modem. What kind of material might you send? How about a newsletter that you wrote and stored with SmartWriter? Or a great SmartBASIC program that you want to share with distant computer buddies. You can even leave messages in the electronic equivalent of a personal mailbox provided by a data service, to be picked up by your friend later.

As you can see, the ADAMLink modem opens up a world of communication to you. The chapters that follow give you step-by-step instructions for making and receiving calls, storing information as your ADAM receives it, sending information directly from data packs or disks, even printing information as you receive it.

II. INSTALLATION

This chapter tells you how to install the modem in your ADAM computer.

ADAMLink comes with everything you need to connect your ADAM computer with the world. ADAMLink is both the modem hardware and the program that operates the modem. The illustration below shows all the parts that are included in the package. Be sure you have everything before you begin the installation. You will find either a data pack or a disk, depending upon which version of the program you purchased. If your ADAMLink modem is incomplete, call Coleco's toll-free Customer Service hotline, described on page 46.



Your Modem and the Telephone Company

Your ADAMLink Modem is designed for standard device telephone lines. It should not be used on coin service lines or party lines. If you have any questions about your telephone line, call your telephone company.

You are required by law to inform the telephone company that you plan to install a modem on your line. Failure to do this could result in loss of your telephone service. However, the telephone company cannot charge you for this connection since, by law, you are allowed to own your telephone and accessories.

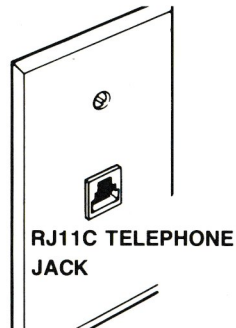
When you are ready to install the ADAMLink modem, call your local telephone company and give them the following information:

- The telephone number of the line to which you will connect the ADAMLink modem.
- The FCC registration number of your modem located on the back of the modem.
- The ringer equivalence number (REN) of your modem, also located on the back of the modem.

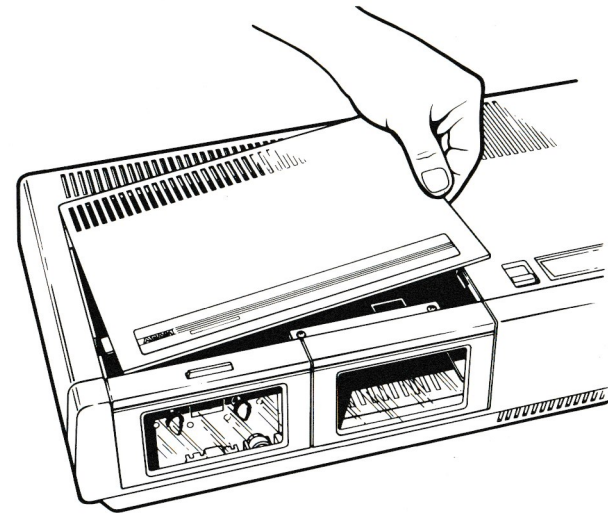
Your modem connects to the telephone line through a standard jack called the RJ11C. If this type of jack is not available where you want to install the modem, you must buy it from your local phone or electronics store.

If any of your telephone equipment does not operate properly after you have installed your ADAMLink Modem, remove the modem **immediately**.

If the telephone company discovers a problem with your telephone service, it may temporarily disconnect you. When practical, the telephone company will notify you in advance of the disconnection. However, if there's no time for advance notice, the telephone company will notify you as soon as possible. When you are notified, you will be given the opportunity to correct the problem, and you will be informed of your right to file a complaint with the FCC.



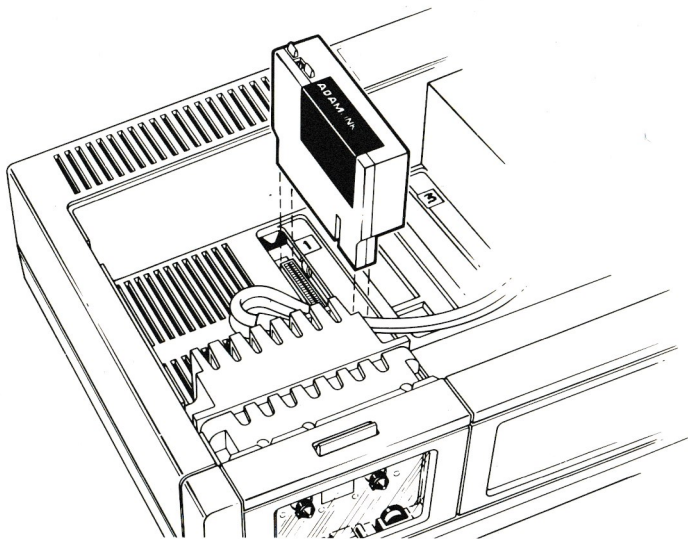
How To Install Your Modem



Step 1. Turn off the power to your ADAM and **unplug it**. Failure to do so could damage your ADAMLink Modem and your ADAM computer.

Step 2. Locate the indentation on the right side of the Memory Console cover slide your finger or the blade of a flathead screwdriver into the indentation and lift up.

Step 3. Look inside the Memory Console. There are three expansion ports. To the right of each port, you will see a label: 1, 2, or 3 from left to right.



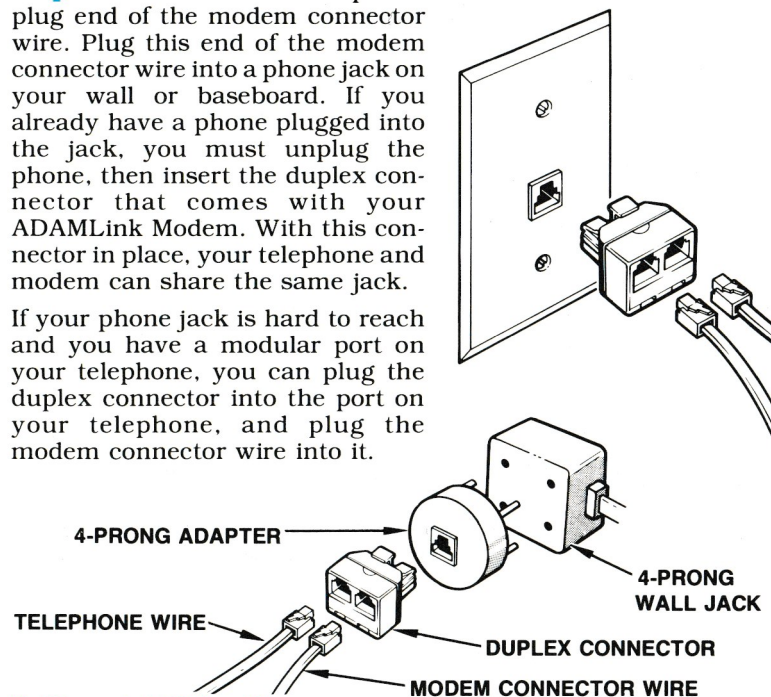
Find the expansion port labeled #1. Pick up your modem so that the ADAMLink label faces to the left. Keep your fingers clear of the opening at the top. Position the modem over the expansion port labeled #1, then slide it into place the same way you would insert a game cartridge.

The base of the modem has a notch so that it can only be inserted one way. If the modem doesn't fit easily, don't force it. Instead, be sure that you have positioned it correctly and try again.

Step 4. Replace the Memory Console cover by sliding the tabs on the left side of the cover into the Memory Console, and slowly lowering the cover into place. You should be able to see the two tabs on top of the modem through one of the vent holes in the cover. If the cover is not positioned properly over the modem, adjust the modem to the left or the right until you can see the two tabs through the vent holes. Press down to snap the cover into place.

Step 5. Locate the modular phone plug end of the modem connector wire. Plug this end of the modem connector wire into a phone jack on your wall or baseboard. If you already have a phone plugged into the jack, you must unplug the phone, then insert the duplex connector that comes with your ADAMLink Modem. With this connector in place, your telephone and modem can share the same jack.

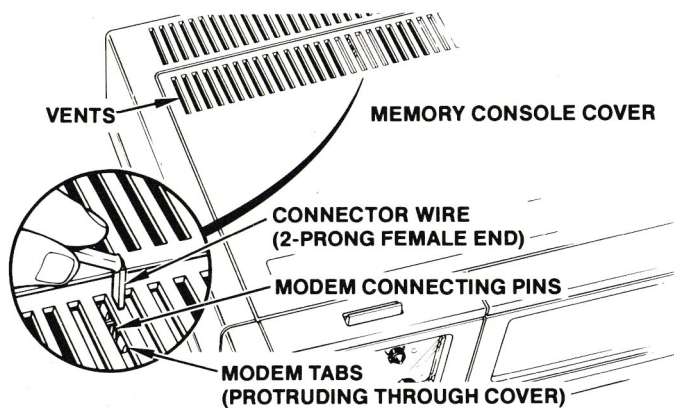
If your phone jack is hard to reach and you have a modular port on your telephone, you can plug the duplex connector into the port on your telephone, and plug the modem connector wire into it.



A Special Situation

If you have the older style, four-prong telephone jack, you can buy a modular phone adapter from your local phone or electronics store. Connect the modular phone plug end of your modem connector wire to the adapter, then plug the adapter into your four-prong jack.

Step 6. Push the two-pin connector end of the modem connector wire through the vent hole on the Memory Console. Make sure the wire goes toward the back of the computer. The connector should plug into the two pins on top of the modem. If you can still see either of these pins after you've plugged in the two-pin connector, then you have not made the proper connection. Re-align the two-pin connector with the modem pins and plug it in again. (See illustration on page 14.)



Step 7. Install the RFI-1 sleeves as described in the accompanying instructions. This reduces interference to FCC acceptable levels when you are using the modem.

Step 8. Plug in your ADAM and turn on the power. Your modem will be ready to use as soon as you load the ADAMLink program.

Installation Hints

Keep the modem connecting wire away from the monitor or television and the cable to the Memory Console. These wires and devices can cause interference. If you see random graphics or characters on the screen while you are using ADAMLink, your cables are probably picking up interference. Be sure to use the Coleco RFI-1 sleeves with your ADAM to maintain proper interference levels.

If you plan to use your modem frequently, you may want to devote a telephone line to the modem. Then you can have one telephone number for regular telephone calls and one telephone number for modem calls.

If you connect the modem to a phone line that offers a call-waiting signal you may experience interference during modem calls. More importantly, ADAMLink may disconnect you if you get a call-waiting signal while the modem is in use.

III. OPERATING YOUR MODEM

This chapter contains step-by-step instructions for placing and answering a modem call. Special features such as transmitting and receiving files are also explained.

1. Loading the ADAMLink Program

If the program is on data pack: Insert the data pack into the drive with the tape down and the label facing out. Close the door. Pull the Computer Reset Switch.

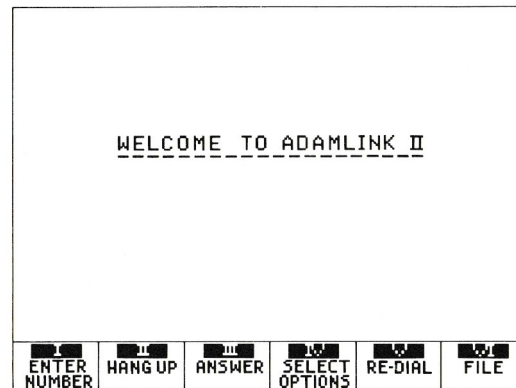
If the program is on disk: Insert the disk into the drive so that the label faces up and the notch faces to the left. Close the drive door by pulling the drive latch down. Pull the Computer Reset Switch.

When the program is loaded, the Welcome Screen appears.

The ADAMLink program operates in two modes:

Command

Terminal

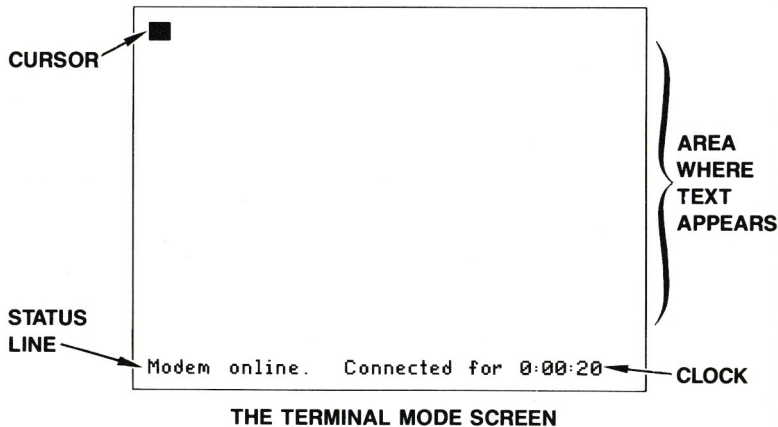


THE COMMAND MODE SCREEN

Command Mode

When the ADAMLink program is fully loaded, ADAM is in the Command Mode. In the command mode, you use smart keys to give

ADAM commands that get you ready to communicate with another computer. For example, the smart keys let you place and answer modem calls, prepare files for use with the modem and change parameters. The instructions in this chapter tell you all about what these commands are for and how to use them.



Terminal Mode

When ADAM makes contact with another computer, ADAM switches into the Terminal Mode. In the terminal mode, ADAM is actively communicating with another computer. The smart keys are replaced by a status line. Here you will find messages that identify what ADAM is doing, such as "Modem on-line." or "Transfer Complete." You will also see a clock that indicates how long you have been connected to the other computer. This is important because on-line services charge for your "connect time." Keep track of it to verify your bills.

Information that you type or receive appears in the area above the status line. Your cursor indicates where the next character will appear on the screen. Unlike ADAM's word processing screens, you cannot scroll up and down through your text during a modem call. Once the information leaves the screen it is gone.

Switching between Command Mode and Terminal Mode

During a modem call (Terminal Mode), you might want to send information that you have stored on a data pack or disk, or store the information you're receiving. You might also need to change parameters so you can communicate properly with the other computer. These tasks are accomplished through commands to ADAM, not the other computer, so you must switch to the Command Mode to do them. Make the switch by pressing the WILD CARD key. To switch back to Terminal Mode during the call, press WILD CARD again.

2. Getting Connected

Modem calls are easy to make and receive. And there are many, many ways to use modem calls to enrich your use of the ADAM computer system. But no matter how complex your calls might be, they always involve the following steps:

- Enter the telephone number you want to reach
- Dial
- Sign on (if you have dialed an on-line service).
- Perform the functions you want
- Sign off (if you have dialed an on-line service)
- Hang up

Read on for detailed instructions!

Before You Call

No matter if you're calling a friend's computer or a data service, make sure that the following items are in order before you start:

1. The phone number is in front of you. If you are calling a data service, make sure you have the data service's user's manual, your ID and password.
2. The modem is properly installed.
3. The ADAMLink program is loaded.
4. Your parameter values match those of the computer you are calling. If they don't, see Changing Parameter Values on page 34 to change them.

Ready? Press ENTER NUMBER (Smart Key I). A new set of smart keys appears.

Typing Your Number

After you press ENTER NUMBER (Smart Key I), you must type the phone number you want to reach. You can include parentheses and dashes if you want, but they aren't necessary. You can tell ADAM to pause for one second between numbers as they are being dialed by typing a p. Pauses are usually necessary when you are dialing out of your immediate area. How do you know when you need a pause? Try dialing the number yourself. If you need to wait for the telephone to respond to a part of the number (for example, the area code) you should insert a pause. You can increase the length of the pause by typing two or more p's in succession.

If you make a mistake while entering a phone number, you can correct it by pressing the backspace or left arrow keys. Each press erases one character. You can also press CANCEL (Smart Key V) to erase the number entirely. Then you can retype the number from scratch.

When the number is correct, press DIAL (Smart Key VI). A message tells you that ADAM is dialing. When ADAM is finished, the message changes to indicate that ADAM is waiting for a response. This message remains on the screen until the connection is made.

Don't panic if it takes a while to get a response, especially if you're calling a data service. These services are shared by many people within a geographic area. If you are the only caller, your call will be picked up quickly. If there are 200 other people waiting to connect, it's going to take a little longer! Some services send a busy signal if all the local lines are tied up. Other services keep your call ringing until it can be answered.

One Important Note

Do not pick up the phone once you are connected with another computer. This scrambles the information being received and sent over the telephone line and could disconnect you.

No Answer?

If your call isn't answered after about 45 seconds, ADAMLink displays a message that suggests you call again. Calling again is recommended.

There are two ways to redial. The first way is to press CANCEL (Smart Key V) which makes ADAM hang up. The entry level smart keys reappear. Press RE-DIAL (Smart Key V). The smart keys change. Press DIAL (Smart Key VI) to dial the number again.

The second way is to set the AUTO RE-DIAL parameter (see Changing Parameter Values on page 34). When this parameter is set, ADAM redials the number automatically every 45 seconds up to a maximum of ten times. But don't abuse redialing conveniences. U.S. government standards allow you to try the same number only fifteen times (ten times in Canada).

If you turn off the power to your ADAM between modem calls or press either reset switch on the Memory Console, ADAM loses the last number you called.

A Bit of Etiquette

Do your neighbor a favor — check the number before redialing. Computers speak very well to computers. But people don't understand or appreciate their phones ringing every 45 seconds only to deliver an uncompromising buzz!

A Few Hints on Calling A Data Service

Keep the data service's user's manual at hand. Remember that once you get connected with a data service's computer, you have to communicate in a way *that* computer understands. Look up the list of commands the computer understands so you know how to select the kind of information you want and flip through the "pages" of information you get. Often, you can read instructions right from the screen. Many data services have a "help" or "information" command that displays and further explains instructions. If you need even more help, see if the data service employs a system information operator, a person you can call for advice and answers to your questions.

Calling Another Computer

To call another computer that is not always set up to answer calls, you should call its owner on the telephone and tell him or her that you're about to place a modem call. Trade information on the parameter values your computers require. Hang up. Now follow this procedure:

- Step 1.** Load the ADAMLink program.
- Step 2.** Set your parameter values to match those of the computer you are calling. If you're calling another ADAM, be sure your duplex parameter value is set to HALF and the AUTO LF parameter is ON (see Changing Parameters, page 34).
- Step 3.** Press ENTER NUMBER (Smart Key I). The smart keys will change. Type the phone number of the computer owner you want to call, then press DIAL (Smart Key VI).
- Step 4.** When the computer you are calling answers, ADAM automatically switches from Command mode to Terminal mode. Now you can begin sending messages.
- Step 5.** After you begin communicating with the other computer, you may need to give a command to ADAM only. For example, you may need to get ready to send or receive a file. Return to Command Mode by pressing WILD CARD and enter your commands. To resume communications in Terminal mode, press WILD CARD again.

When ADAM Rings

If you are expecting a modem call, prepare your ADAM to answer before the phone starts ringing. Get the time of the call and parameter information straight with the caller before he or she starts the modem call.

- Step 1.** Load the ADAMLink program.
- Step 2.** Be sure your parameter values are set to match the incoming call (see Changing Parameters, page 34). If the call is coming from another ADAM, the duplex parameter must be set to HALF and AUTO LF must be ON.

- Step 3.** When the phone rings, press ANSWER (Smart Key III). The smart keys change. Press ON LINE (Smart Key IV). If you press the ON LINE Smart Key before the phone rings, the calling computer gets a busy signal.
- Step 4.** When the connection is made, ADAM enters the Terminal mode. You can now send and receive messages.

Remember

Do not pick up the phone while your modem is in operation. This scrambles the information being received and sent over the telephone line and could disconnect you.

Clear the Clutter

Sometimes while you are communicating with another computer, you may find yourself with a screen full of material that you don't want. Press the HOME key to clear the screen and place your cursor in the upper left corner. Remember before you do this: once you clear the screen, you can't get the information back without calling it in from its source. Be careful!

Connection Hints

Suppose you can't connect with that other computer, no matter how hard you try. The first thing to do is re-check the installation of the modem. If all of the cables and connectors are securely in place, consult this list of expert solutions to some possible problems, maybe even yours!

Dialing

ADAMLink appears to dial the number, but no connection is made. Make sure you have entered the number correctly, complete with pauses (p's). Sometimes the addition of a pause or a longer pause (several p's in succession) makes the connection easier.

Can't Sign On to a Data Service

The data service may require a system account number and password. If you entered this information correctly and the computer still won't let you log on, then it may be temporarily out of service. Relax and try again later. Don't forget to hang up the modem first, or other people won't be able to reach you by telephone.

Later, Still no Answer

Try dialing with your ear close to the modem. In a quiet room, you should be able to hear a clicking sound, similar to that of a rotary dial telephone. If you don't, make sure the modem, especially the modem connector wire, is properly installed.

To verify that you are actually reaching a computer's telephone number, dial the number yourself on a regular telephone and listen for a clear tone. If the modem was clicking and you hear a clear tone on the line, the computer you are calling might not be able to communicate with ADAM. ADAMLink communicates ASCII characters at 300 baud. If the other computer can't handle that, then you're out of luck.

If the service can accommodate ADAMLink (and most can), pick up the receiver of an extension phone after the modem has dialed the last digit of the number. You should hear your modem's tone, the service's phone ring, and finally, the other computer answering with a different tone. If all you hear is a dial tone, then your modem may be defective. Don't worry if you hear a busy signal—just try your call again later.

Did They Answer?

If you are calling another ADAM, make sure that the user of the answering ADAM pressed ANSWER (Smart Key III).

3. Saying Goodbye

At the end of each modem call, it's a good idea to let your ADAM hang up the phone. If you are calling a data service, be sure to end your call properly. Each service has its own rules for ending a call or logging-off. Check your service's user's manual for details.

Failure to log off properly can be expensive! Most services base their charges on "connect time". If a data service computer thinks you're still connected, it adds charges to your account. Some services have a "time-out feature" that checks for disconnections. If you're disconnected, the service automatically logs you off. The trouble is, a service can take several minutes before it checks your connection. So it's much cheaper if you log off yourself! Once you have logged off, press HANGUP (Smart Key II).

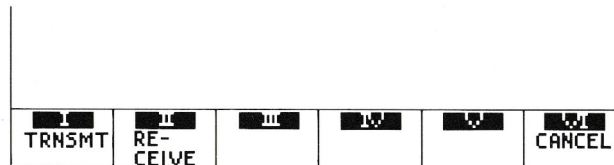
Whenever you pull the Computer Reset switch ADAM automatically hangs up the phone for you. ADAM also hangs up the phone if the power switch is turned off. However, **ADAM never logs off for you.**

4. File Transfer

Receiving a File

Suppose you want to save the pearls of wisdom that your friend or data service is sending you. ADAMLink allows you to store information on a data pack or disk as it appears on the screen. Here's how you do it:

- Step 1.** Using commands that the other computer recognizes, get to the point where you want to start saving information. When you are communicating with a data service computer, you often make selections from several lists of available information before you get what you want.
- Step 2.** Press the WILD CARD key to put ADAMLink into Command mode.
- Step 3.** Press FILE (Smart Key VI). The smart keys change. Press RECEIVE (Smart Key II).



- Step 4.** ADAM asks you to select the drive that contains the data pack or disk to which you want to store the information. ADAM then asks you to type the name of the file that you want to put the information in. When you're finished typing the name of the file, press DONE (Smart Key VI).
- Step 5.** ADAM tells you when it's ready to accept the file. Press the WILD CARD key to return to Terminal mode. The screen is now empty with the exception of your cursor and the status line. A message appears in the status line telling you how many pages ADAM can store on your data pack or disk.
- Step 6.** You may need to give a command to tell the other computer to start sending information. Check the data service user's manual for instructions.
- Step 7.** Any information that appears on the screen is stored on the data pack or disk you selected under the file name you typed.

That's all there is to it. As ADAM receives a little more than a screen of information (one half "page"), the display stops and ADAM stores the information. Once this half page has been stored, another half page appears on the screen, and ADAM pauses to store again.

You can see how many pages are being stored by watching the page counter on the status line. Be careful that you don't store more than about 14 pages of information in one file. That's all ADAM can take at one time. If the information you are receiving exceeds the limit, you should store it to several different files.

To stop and re-start the transmission of data, check the data service user manual for the proper commands. Most other computers respond to CONTROL s and CONTROL q to stop and re-start transmission of data. To stop the flow of data, hold down CONTROL and press s at the same time. To re-start the flow of data, hold down CONTROL and press q at the same time.

If the file you are receiving is too large to fit on the data pack or disk, ADAM automatically stops reception and closes the file. Place another data pack or disk in the drive, open another file as described in Steps 2, 3, and 4 and start again.

Closing the File

When the entire file has been received, you must press the Undo key to close the file. This is very important, because closing the file tells ADAM that you have put all of the information you want into the file. If you don't close the file, ADAM continues to store every character that appears on the screen. More importantly, if you remove the data pack or disk from the drive before closing the file, you won't be able to store anything else on that data pack or disk. Also, you won't be able to get the unclosed file.

If you open a file before you connect with another computer, then use the smart key CANCEL (Smart Key VI) to hang up, don't worry about your file...it's automatically closed.

Hints for Receiving

Naturally, any dialogue between two anythings won't always be dainty. Here are a few hints to smooth over the rough spots. Some of these appear as error messages on your screen; others describe a problem you may encounter.

Can't Return to Terminal Mode

You answered a modem call, pressed WILD CARD to return to Command mode, followed the procedure outlined in steps 3 and 4 of the Receiving a File instructions, and now you can't return to Terminal mode. Try pressing ANSWER (Smart Key III). If that doesn't work, you have been disconnected. The person who called you must call again. Make sure you do steps 3 and 4 in the Receiving a File instructions **before** you answer the call.

Unable to create this file.

ADAM has determined that there is not enough space on your data pack or disk to receive a file. Insert a new data pack or disk.

System error. File closed.

If a power surge or other electrical disturbance causes an error, ADAM automatically closes your file. This prevents inadvertent damage to your data. If nasty electrical devices such as hair dryers, electric drills and refrigerators share the same electrical line as your ADAM, relocate the appliance or your ADAM. Then try to receive the file again.

Running out of Space

You are receiving data from another computer, and you notice the page counter on the status line is running dangerously close to zero. Stop the flow of information, change data packs or disks, open a new file and then re-start the transmission.

To do this, hold down the CONTROL key and press the s key. The information should stop coming in. Close the file by pressing UNDO, remove the data pack or disk and insert a new one. Open another file on the new data pack or disk following Steps 2, 3 and 4 of Receiving a File. Once you return to Terminal Mode, hold down the CONTROL key and press q. This should cause the other computer to continue the transmission.

Consult the manual for your data service to make sure CONTROL s and CONTROL q work. Most, but not all, computers use CONTROL s and CONTROL q to stop and re-start transmission.

Its best to use data packs and disks with plenty of free space. If there are more than four or five files on a data pack or disk, use a different one with more space.

File was received but you can't read the data pack or disk

In all likelihood, you finished receiving a file, logged off, disconnected, and returned to Command mode without pressing UNDO to close the file. Having an unclosed file on the data pack or disk means you won't be able to use the unclosed file and you won't be able to store anything else on that data pack or disk. Most of the time, you can fix the problem by using the SmartBASIC CLOSE command to close the file.

If that doesn't work, you'll have to receive the file again on a different data pack or disk.

There is a way to salvage other files on the old data pack or disk. Copy any files you want to keep to another data pack or disk. Then clear the old data pack or disk with SmartBASIC's INIT command.

Warning

Using SmartWriter, you can't safely edit and save a text file captured by ADAMLink.

SmartWriter uses special information to keep track of the length of its files. If you use ADAMLink to capture a file, then add or delete characters with SmartWriter, you probably won't be able to save the edited file to DDP or disk. You can however safely use SmartWriter to view or print a captured file. You can even edit a file and then print it—you just can't save it first!

If you want to try to edit and save a captured file anyway, read the file into SmartWriter's workspace, then replace the original DDP or disk with one containing no other files. In this way, an attempt to save the edited file might not work, but it couldn't hurt anything.

Transmitting a File

Suppose you have prepared some information for your data service's community bulletin board or your friend's newsletter. You've stored the information and now you want to send it by modem. ADAMLink provides a simple method for transmitting the file. Here's how:

- Step 1.** Place or answer a call as described in GETTING CONNECTED.
- Step 2.** Press the WILD CARD key to put ADAMLink into the Command mode. Press FILE (Smart Key VI). The smart keys change. Press TRANSMIT (Smart Key I).
- Step 3.** ADAM asks you to select the drive that contains the data pack or disk where your file is stored. ADAM then asks you to type in the name of the file you want to transmit. When you have typed the name, press DONE (Smart Key VI).

Step 4. When ADAM locates the file, a message appears telling you to press STORE/GET in the Terminal mode to start transmission. Press WILD CARD to return to Terminal mode.

Step 5. When you're ready to send the file (you or the other computer's owner may have to create a receiving file on the other computer), press the STORE/GET key. ADAM starts sending the file, and the message on the status line changes to "Press UNDO to cancel."

You see the file on your screen as ADAM transmits it. Don't worry if there are occasional pauses in the process. This happens because the other computer may be too busy to receive ADAM's information at that moment, or because ADAM may need to read more information from the data pack or disk to send to the other computer.

If at any time you want to end the transmission completely, just press the UNDO key. ADAM sends no further lines, and you see the message "File transfer terminated." on the status line. At this point, you are free to start another operation.

When the entire file has been sent, no further lines appear on your screen and you see the message "Transfer complete." on the status line.

Hints for Transmitting

If you follow the Transmitting a File procedure, you should have no problem sending a file from ADAM to any computer that has answered your modem call. But here are a few hints, just in case you see a message you don't understand on the status line.

No file was found by that name.

You probably typed a file name that isn't on the data pack or disk you selected. Make sure you have the correct data pack or disk in the drive. Then try typing the name again with the correct upper and lower case letters, just in case you made a typographical error before.

If you still get this message, examine the directory of the data pack or disk in SmartWriter to re-check the name. To do this, properly end your modem call, remove any data packs or disks and pull the Computer Reset Switch. Now GET the directory of the data pack

or disk in question using SmartWriter. If you've been typing the name correctly, try to GET the file in SmartWriter. If you can get and make sense of the file as it appears in SmartWriter, you should be able to transmit it over the modem. Examples of files you can transmit are SmartWriter, SmartBASIC, SmartLOGO and ADAM-Calc files. Examples of files you can't transmit are SmartFiler files and most game files.

Trouble reading this file.

For some reason, the information in the file is damaged. There is some chance that you can save the file through SmartWriter. Properly end your modem call, remove the data packs or disks and pull the Computer Reset Switch to get into SmartWriter. GET the file in SmartWriter and store it to a different name. Once you have done this, reload ADAMLink and try to transmit the file under the new name.

Transmission paused.

It is possible to send information too quickly to another computer. When this happens, the other computer sends a special code to tell ADAM to pause its transmission. When the computer is ready for more, it sends another code to tell ADAM to continue transmitting.

If you feel you've been waiting too long for the transmission to continue, you can tell the other computer to continue by holding down the CONTROL key and pressing q. But this is risky business. If the other computer is still not ready, the information you transmit may be lost. It is recommended that you wait for the other computer to resume transmission.

Transfer complete. (before the transfer is complete)

ADAM believes it has transmitted the last piece of data in the file. Press UNDO and try sending the file again. If this doesn't work, store the file to another name and try sending it again.

Cannot access this file.

You start transmitting a file, but before it's completely transmitted, you see the message "Cannot access this file." Make sure the data pack or disk is still in the drive. If it's okay, then your problem is similar to "Trouble reading this file." The solution is exactly the same!

Slow Character Flow

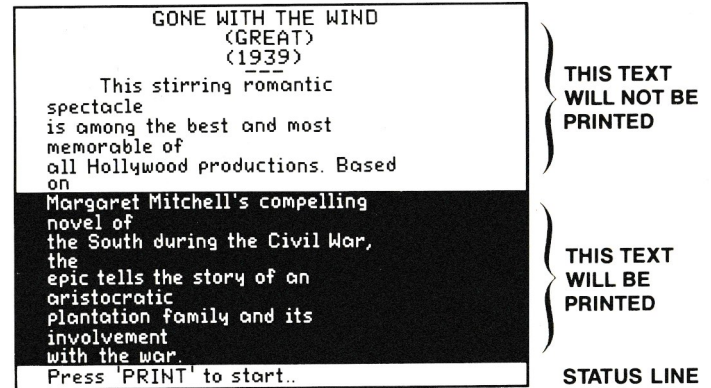
You are transmitting a file when suddenly the character flow practically stops. Pause the flow of data with CONTROL s. Press WILD CARD, then change the duplex parameter to HALF (See Changing Parameter Values, page 34). Press WILD CARD again to return to Terminal Mode. To restart the flow of data, use CONTROL q. If this doesn't improve the situation, the other computer may have a problem. Press UNDO to stop the transmission. Try again later.

5. Printing

You can print information as it appears on your screen during a modem call. ADAMLink prints in one of two ways. Either it prints each character as it appears on your screen, or it prints a screen full of characters. ADAM cannot print while you are using the FILE commands (TRANSMT or RECEIVE), but you can store the file and later use SmartWriter to print it.

Printing Data as it's Received

- Step 1.** Place or answer a call as described in GETTING CONNECTED. When you're ready to print, press the SHIFT and PRINT keys simultaneously.
- Step 2.** Each incoming character is now printed at the same time it is displayed on your screen.
- Step 3.** If you need to change paper, press the INSERT key. This pauses the display and printing. Press INSERT again to restart the printing.
- Step 4.** To stop printing incoming characters but continue displaying them on the screen, press the SHIFT and PRINT keys simultaneously a second time. Resume printing by pressing SHIFT and PRINT again.



TERMINAL MODE SCREEN WITH TEXT MARKED FOR PRINTING

Printing a Screen

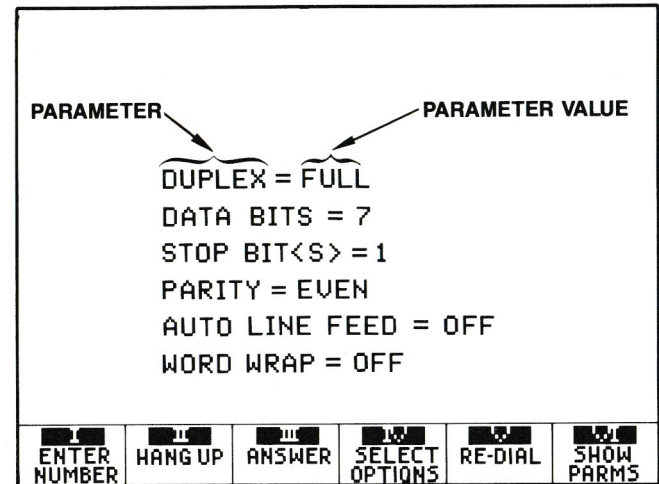
- Step 1.** When the information you want to print is displayed on your screen, press PRINT.
- Step 2.** ADAM reverses the colors of the letters and background.
- Step 3.** To select the text you want to print, use the UP and DOWN arrow keys. As your cursor moves down the screen, the text returns to its normal appearance. As your cursor moves up the screen, the text reverses again. ADAM will print the text that is reversed.
- Step 4.** Press PRINT again to print the reversed text.
- Step 5.** Press UNDO at any time to stop printing.

While your ADAM is printing, information may still be coming in. Will you lose it? Not at all. Any information received during the print process is stored in a temporary storage area called a buffer. As soon as ADAM finishes printing, the information in the buffer is displayed on the screen in the order in which it was received.

IV. ADAMLINK'S PARAMETERS

This chapter describes ADAMLink's parameters and how you can change their values.

At the beginning of this manual, you read that parameters establish the way in which your modem communicates with another computer. If both computers' parameters match, then you are able to send and receive information by modem. How do you know if the parameters match? Refer to the data services' user's manual or call the owner of the other computer to find out. The illustration below displays ADAMLink's parameters and their default values. The default values are values used frequently by other computers.









THE DEFAULT PARAMETERS USED BY ADAMLINK

1. Changing Parameter Values







Press SELECT OPTIONS (Smart Key IV) at the Entry Level. You see eight parameters and eight parameter values. Each of the parameters is represented by a smart key. The smart keys are displayed on two different screens: Parameter Screen 1 lets you change DUPLEX, CHARACTER FORMAT (DATA BITS), STOP BITS, and PARITY. If you press MORE (Smart Key V), you can change AUTOMATIC LINE FEED, WORD WRAP, AUTO RE-DIAL, and CHARACTER FILTER.

```
DUPLEX = FULL
DATA BITS = 7
STOP BIT<S> = 1
PARITY = EVEN
AUTO LINE FEED = OFF
WORD WRAP = OFF
AUTO REDIAL = OFF
CHAR FILTER = ON
```

 DUPLEX	 CHAR FORMAT	 STOP BITS	 PARITY	 MORE	 DONE
--	--	--	--	--	--

PARAMETER SCREEN 1

```
DUPLEX = FULL
DATA BITS = 7
STOP BIT<S> = 1
PARITY = EVEN
AUTO LINE FEED = OFF
WORD WRAP = OFF
AUTO REDIAL = OFF
CHAR FILTER = ON
```

 AUTO LF	 WORD WRAP	 AUTO RE-DIAL	 CHAR FILTER	 MORE	 DONE
--	--	---	--	--	--

PARAMETER SCREEN 2

Suppose you've just loaded the ADAMLink program and you want to call another ADAM. ADAM-to-ADAM communications require a HALF duplex value and AUTO LF ON. Check these parameter values on your screen. You see a FULL duplex value and AUTO LF OFF, which are default values. Change them, starting with the duplex value.

- Step 1.** Press DUPLEX (Smart Key I).
- Step 2.** The smart keys change and you see two choices: FULL and HALF. Press HALF (Smart Key II). The screen display of the duplex value changes from FULL to HALF, indicating that ADAMLink now has a HALF duplex value.
- Step 3.** Notice that the smart keys have changed back to Parameter Screen 1. Now it's time to change the AUTO LF value. Press MORE (Smart Key V) to see the other parameters. You should see AUTO LF on Smart Key I. Press it!
- Step 4.** The smart keys change and you see two choices: AUTO LF ON and AUTO LF OFF. Press AUTO LF ON (Smart Key I). The screen display changes from AUTO LF OFF to AUTO LF ON indicating that ADAMLink's auto linefeed is ON.
- Step 5.** Now you're ready for your ADAM-to-ADAM call. Press DONE (Smart Key VI).

You can use the smart keys to change any parameter value to match that of the computer you want to talk to. Remember that it's easier to change ADAMLink's parameter values before you connect with the other computer. Changed parameter values remain in effect until you change the parameter again or until you reset or turn off the power to your ADAM. When you reload the ADAMLink program, the default parameter values are in effect.

2. More About Parameters

If you'd like a little more technical information on parameters, this section defines each parameter and shows you the available settings.

Duplex Full, Half

A full duplex setting lets both computers send and receive messages at the same time. Even though both computers are talking at the same time, they are both listening as well. The characters you type will not appear on your screen until the host computer sends them back to ADAM. This process is called "echoing."

With a half duplex setting, one computer sends a message, then waits for the other computer to reply. The two computers take turns talking and listening. Each character you type is sent to the other computer while your ADAM displays the character on your screen. This process is called "local echoing." ADAM-to-ADAM calls require a half duplex setting.

Character Format (Data Bits) 5,6,7,8

This is the number of data bits used to represent each character.

Stop Bit(s) 1,1.5,2

This is the number of bits used to tell ADAM that an entire character has been received.

Parity Odd, Even, None

Parity is one way of verifying the accuracy of the data that's being sent or received. As data is sent from one computer to another, the sending computer can add an extra bit to each character. This gives the character an odd or even bit count. The receiving computer checks that each character has the correct parity. If not, then the other computer may send odd characters to your ADAM. Most computers do not check parity.

Auto Line Feed On, Off

Unlike a typewriter, a computer may interpret a RETURN to mean "go back to the beginning of this line" instead of "begin a new line." So, when you're "talking" to another computer, that computer must tell ADAMLink when to return to the beginning of a line and when to advance to the next line.

If you turn the automatic line feed ON, ADAM interprets a carriage return sent by another computer as a carriage return plus one line feed. If the other computer sends both a carriage return and a linefeed, ADAM double-spaces lines of text. In this case, you will probably want to turn Auto Line Feed OFF.

If you turn the automatic line feed OFF and the other computer is sending just a carriage return, ADAM displays a line on your screen, then returns to the beginning of that line and writes another line over the first! If that happens, turn the automatic linefeed ON.

Word Wrap On, Off

The screen displays a maximum of 40 characters from left to right. When Word Wrap is ON, a word that falls at the end of a line will be wrapped down to the next line if that word cannot fit completely on the line. If Word Wrap is OFF, ADAMLink fits as many characters on a line as possible. This means that a word may be split in an unusual place if it cannot fit completely on a line.

Auto Redial On, Off

If you turn on Auto Redial, place a modem call, and ADAM cannot connect with another computer within 45 seconds, ADAM automatically redials the number. Use this feature with caution. If you have entered the wrong number, someone out there could get mighty angry!

Character Filter On, Off

The character filter makes sure that only letters, punctuation, numbers and carriage returns get stored on your files from another computer. Some computers send special control characters along with their information. Sometimes ADAM understands those characters. More often, ADAM doesn't, which results in a display of sailboats, hearts, torpedoes, and other goodies in the files you received. To eliminate these, make sure your character filter is ON.

List of ADAMLink Terminal Mode Commands

KEYS	FUNCTION
HOME	Clears the screen and moves the cursor to the top left corner.
WILD CARD	Switches between the COMMAND and TERMINAL modes
UNDO	Closes a file; stops file transmission; stops printing
PRINT	Displays characters on the screen in inverse. In this state, you can use the UP and DOWN arrow keys to select portions of the text for printing. Pressing PRINT again causes all characters displayed in inverse to be printed.
SHIFT + PRINT	Stops and starts the printing of characters as they are received.
CLEAR	Erases all characters that have been received but not displayed. This command is often used after printing to clear characters from the buffer.
Arrow Keys	The UP and DOWN arrow keys are used together with the PRINT command to indicate the lines of text that should be printed.
P or p	Used within a phone number to insert a one second pause in dialing between digits. Longer pauses can be created by typing several p's in a row.
INSERT	Pauses and restarts simultaneous reception and printing of information.

GLOSSARY

ASCII: a standardized code used to identify characters.

auto line feed: a feature that advances both the printed and visual display of characters one line vertically before the next line is printed, without receiving a linefeed character.

baud rate: the speed at which data is transferred from one computer to another. One baud equals one bit per second. ADAMLink transfers data at 300 baud or 300 bits per second. This usually results in a data transfer rate of 30 characters per second.

buffer: a temporary storage area where characters that are not currently displayed on the screen are saved.

bulletin board: a computer-based message center where messages can be posted and read via modem. Some bulletin boards charge for their services; others are offered for free by clubs or individuals.

call waiting: a feature offered by some phone systems that signals an incoming call when the phone is in use.

carrier: a tone that allows two computers to establish a communications link.

closing a file: the process by which the computer denotes the last character in a file and prepares itself for further instructions.

command mode: one of the two modes available through ADAMLink. This mode allows you to prepare the modem for a call by setting parameter values, locating files for transmission, opening files for reception, and entering the telephone number that will be dialed. Smart keys are displayed in this mode. See also Terminal Mode.

cursor: a symbol displayed on the screen that indicates where the next character that is typed or received will appear. ADAMLink's cursor is a square.

data bits: the number of bits used to represent a character.

database: A large file of information stored in a computer. The database is organized so users can quickly find the particular information they need.

default values: pre-assigned parameter values which are used by the ADAMLink program unless other values are assigned. Whenever the ADAMLink program is loaded, the parameters are set to their default values.

echo: a process which causes data sent from one computer to another to be transmitted back to the sending computer. This is one way to verify the accuracy of the data that was sent.

electronic mail: a method of sending letters and messages using an on-line data service.

entry level smart keys: the first group of smart keys displayed when the ADAMLink program is loaded.

full duplex: a mode of communication where two computers can send and receive messages at the same time.

half duplex: a mode of communication where two computers must alternate between sending and receiving messages.

linefeed: the vertical advance of a printed or visual display before the next horizontal line is printed or displayed.

log-off: a sequence of commands, codes, or activities that indicates to a data service's computer that the calling computer has completed the call and wants to be disconnected from the service.

modem: a device that allows a user to send and receive messages from one computer to another over phone lines.

data service: a service that provides information by communicating from one computer to another over phone lines. Users usually join the service by subscription and are charged by the amount of time they use the service. A few services are free.

opening a file: a process by which the user creates a file where information can be stored.

parameter: a characteristic of the data being received or sent by the modem; or a characteristic of the modem itself. Parameters establish the way in which the modem receives and sends information.

parity bit: a bit attached to each character used to verify the accuracy of the data being communicated from one computer to another.

password: an identification code assigned to a data service subscriber.

stop bit(s): the number of bits used to indicate that a complete character has been received during a data transmission.

terminal mode: the mode in which ADAMLink communicates with other computers. See also command mode.

word wrap: a feature that allows the program to display only whole words on one line rather than arbitrarily breaking words at the end of a line.

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FCC NOTICE

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

Reorient the receiving antenna.

Relocate the computer with respect to the receiver.

Move the computer away from the receiver.

Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

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

"How to Identify and Resolve Radio-TV Interference Problems".

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 004-000-00345 4.

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.

When you are ready to install your modem, call your local telephone company and give them the following: 1. The telephone number of the line to which you will connect your modem. 2. The FCC registration number of your modem located on the back of the modem. 3. The ringer equivalence number (REN) of your modem, which is also located on the back.

You are required to do this or you could lose your telephone service. The phone company will not charge you for this connection, since by law you are allowed to own your telephone and accessories. However, they must know what you have attached to your line.

Your modem connects to the telephone line by means of a standard jack called the USOC RJ11C. If this type of jack is not available where you want to install the modem, you will need to order it from the telephone company.

Your modem is designed to be used on standard-device telephone lines. It should not be used on coin service lines or party lines.

If you have any questions about your telephone line, the telephone company will provide this information upon request.

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC.

90-DAY LIMITED WARRANTY

Coleco warrants to the original consumer purchaser in the United States of America that this ADAMLink Modem, and digital data pack or disk will be free of defects in material or workmanship for 90 days from the date of purchase under normal in-house use.

Coleco's sole and exclusive liability for defects in material and workmanship shall be limited to repair or replacement at an authorized Coleco Service Station. This warranty does not obligate Coleco to bear the cost of transportation charges in connection with the repair or replacement of defective parts.

This warranty is invalid if the damage or defect is caused by accident, act of God, consumer abuse, unauthorized alteration or repair, vandalism, or misuse.

Any implied warranties arising out of the sale of the ADAMLink Modem, and digital data pack or disk including the implied warranties of merchantability and fitness for a particular purpose are limited to the above 90 day period. Coleco shall in no event be liable for incidental, consequential, contingent or any other damages.

This warranty gives you specific legal rights, and you may have other rights which vary from State to State. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

SERVICE POLICY

Please read this ADAMLink Modem, and digital data pack or disk Owner's Manual carefully before using the product. If your ADAMLink Modem, and digital data pack or disk fails to operate properly, please check the installation instructions. If you cannot correct the malfunction **after** checking the installation instructions, please call Customer Service on Coleco's **toll-free service hotline: 1-800-842-1225 nationwide**. This service is in operation Monday through Friday.

If Customer Service advises you to return your ADAMLink Modem, and digital data pack or disk, please return it postage prepaid and insured, with your name, address, proof of the date of purchase, and a brief description of the problem to the Service Station you have been directed to return it to by the toll-free service information. If your modem and digital data pack or disk is found to be factory defective during the first 90 days, it will be repaired or replaced at no cost to you. If the modem, and

digital data pack or disk is found to have been consumer damaged or abused and therefore not covered by the warranty, then you will be advised, in advance, of repair costs.

If your modem and digital data pack or disk requires service after expiration of the 90 day Limited Warranty period, please call Coleco's toll-free service hotline for instructions on how to proceed: **1-800-842-1225 nationwide**.

IMPORTANT: SAVE YOUR RECEIPTS SHOWING DATE OF PURCHASE.



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