

THE C-INTERFACE FROM CAPITAL SOFTWARE

We want you to be satisfied with your C-Interface, and we realize that you may find problems or have suggestions that would help us to improve it. If you can suggest any changes that you think other C-Interface users would find valuable, please send them to us. Changes we make to the C-Interface software while your 1-year warranty is in force will be sent to you, the original purchaser, to help you get the most out of your printer interface.

TM - ADAM, Smartbasic, Smartwriter Trademark Coleco Industries, Inc.

INTRODUCTION

The C-Interface is a single circuit board that plugs into your ADAM (TM) computer and allows you to put words and pictures on paper with many different printers. With the driver software included, it allows you to print color or black and white graphics, BASIC programs, Smartwriter (TM) documents, or any combination of words and pictures a particular printer will allow. Most printers give you the added benefits of greater speed and dependable continuous paper feed.

WHAT IS AN INTERFACE?

Computers move data between themselves and peripherals (printers, disk drives, modems, tapes, etc.) through INTERFACES, which consist of electrical connectors on which voltages change with time according to very specific rules. There are different types of interfaces, and each type can talk ONLY to others of its kind. The C-Interface is designed to talk to peripherals using the Commodore Serial Bus Interface. Because of the large number of Commodore computers existing, there are many products available that use this interface. The C-Interface has all the electrical lines for any peripheral, but the data movement rules in its software limit it only to printers.

Another common interface is the Centronics Parallel Interface. This is a standard used by a large number of different computer and printer manufacturers. For those people who want to use a printer with a Centronics Parallel Interface on their ADAM, an additional product is available that will plug into the C-Interface with one cable and your printer with another cable. This is a small box we have simply called our Centronics Port.

CAUTION

NEVER CONNECT OR DISCONNECT YOUR PRINTER CABLE UNLESS BOTH ADAM AND THE PRINTER ARE TURNED OFF.

Software to drive your C-Interface is included on a Digital Data Pack. You should make a copy of the most important sections of this software on another DDP just in case the original DDP fails or you accidentally destroy the programs. The most important programs are comprint or cenprint (depending on your printer), and CDRIVER. To save CDRIVER use these commands:

LOMEM:40000

BLOAD CDRIVER

<put the DDP you want to save the file on into your drive>

BSAVE CDRIVER, A27986,L1481

SETTING UP YOUR SYSTEM

WHAT YOU WILL NEED

First, make sure you have all the parts. Besides this manual, you should have a Digital Data Pack with the C-Interface driver software and the C-Interface circuit board itself. Check your printer manual to make sure you have all parts of the printer.

For installation you will also need a ruler, a pencil, a flat piece of wood slightly smaller than ADAM's removable cover, and a drill that can drill holes $5/8$ inch (to use the Commodore compatible printers) or $3/4$ inch (to use the Centronics interface) in diameter. A standard $1/4$ inch electrical drill can do this using a wood boring bit or a hole saw.

CHECKING YOUR VERSION OF BASIC

Before you actually install the C-Interface, make sure that you have a version of BASIC that will run with the C-Interface software. To do this, run the program cdiagnosis before you have changed LOMEM:. Select the operation called: Verify BASIC version.

C-INTERFACE SETUP

Make sure the power to both ADAM and the printer is turned off.

Remove the plastic cover by placing your finger in the notch near the center of ADAM's top and prying firmly. One side of the top will pop up, allowing you to remove it.

Take the C-Interface circuit board and place it in expansion slot #1 of ADAM, making sure the side with all the chips on faces toward slot #2.

If the edge of the board touches the plastic bar across the slot, the board is in backwards. Expansion slot #1 is marked with the numeral 1 in the plastic just to its right. It is the leftmost slot if you are looking at ADAM from the front. Press it straight down into the slot about 1/4 inch deep until it hits the bottom. It should sit straight up in the slot, with equal amounts of all its metal contacts showing above the slot.

DO NOT TRY TO PUT THE C-INTERFACE ANY PLACE BUT EXPANSION SLOT #1! The slots are all different, and using the wrong one can damage ADAM or the C-Interface! ADAM can not have its modem, which also uses slot #1, installed at the same time as the C-Interface.

DRILLING THE HOLE

The next step is to drill the hole for the printer cable in ADAM's removable plastic top. This hole is very important, because it keeps the C-Interface board from moving from side to side when the printer cable moves and damaging itself or wearing out the expansion slot connector. The C-Interface should only be operated with ADAM's plastic cover installed.

EXPANSION MODULE #1 USERS—

Do not use the measuring instructions below to determine where to drill the hole. Instead, place an object on top of the installed C-Interface with a drop of paint or nail polish on it. Make sure that the paint is centered over the cable connector on the C-Interface, then place the cover on. This will leave a mark where the hole must be drilled.

If you draw on the cover lightly, pencil marks will wash off later with soap and water.

Place the plastic cover right side up and measure $2 \frac{9}{16}$ inch in from the middle of the edge with the row of slots closest to it. Mark this point and do the same thing 1 or 2 inches further down the edge. Then use a ruler to draw a straight line through the two marks.

Next, measure 5 inches from the edge that was next to the notch you used to pry off the cover. Make a mark at this distance on the straight line you just drew. This is where you will drill the hole.

Before you drill, place the cover back on ADAM to make sure that your drill point is directly above the connector that the printer cable plugs into on the C-Interface board.

A $\frac{5}{8}$ inch hole works well for the cables that come with the Commodore compatible printers, while a $\frac{3}{4}$ inch hole fits the Centronics Interface cable.

Remove the plastic cover and clamp it to a piece of wood, making sure that there is wood below the drill point. The wood behind the plastic will allow a clean hole to be drilled without hurting your table or floor. Now put the tip of the drill on the drill point, make sure the drill is held straight, and drill the hole.

Replace the cover and make sure that the hole is directly above the C-Interface connector. Left to right error is not as serious as front to back, since the C-Interface can move left to right slightly.

Remove the cover and the C-Interface, and feed one end of the printer cable through the hole in the cover from the top. Holding the C-Interface by its cable connector, plug the printer cable all the way into it. Lay the cover back on ADAM, making sure that the C-Interface is started into expansion slot #1. Firmly snap the cover in place, and press down on it just above the C-Interface to make sure the board is pushed all the way into expansion slot #1. Do not use more force than it took to insert the C-Interface by itself. If you cannot get the cover down completely flat with the top of ADAM, the hole in the cover is probably not in the right place. In this case, you may have to use a larger diameter drill to make the hole big enough so the entire C-Interface cable connector can be seen through it.

PRINTER SETUP

Follow the setup instructions that came with your particular printer, including running of the self test. Below are some hints to help owners of particular printers set them up.

CENTRONICS INTERFACE ONLY

Right now all you need to know about your Centronics Interface is how to set up the DIP switches on the MW-302C. Switch #3 should be set to ON, and the other three switches should be set to OFF.

The C-Interface software assumes that a printer will automatically advance to the next line when it gets a carriage return. Most printers with a Centronics interface do not come from the factory set up this way, so you will probably have to see your manual to learn how to change this. If your printer prints over the same line many times, the automatic line feed setting is probably the problem. For example, an Epson LX-80 requires that DIP switch SW2, number 3 be changed from off to on before it will send the automatic line feed.

CR220 ONLY

Paper must be forced into the printer by pushing it into the slot at the top in a direction downward and toward the front of the printer. The best way to do this is to hold it at the edges with both hands and work it into the slot by rocking it back and forth, pulling out with one hand while pushing in further with the other. The paper will eventually appear just under the print head.

If the print head sticks or almost sticks when it tries to return from right to left, raise the right side of the printer slightly to allow gravity to help the carriage return.

OKIMATE 10 ONLY

When pulling the printhead back just before installing the ribbon, it will at first move back just a little, then it will snap back about 1/4 inch into open position and stay there.

CONNECTING THE PRINTER

Then, after making sure the printer and the computer are both off, plug the other end of the cable attached to the C-Interface into the printer.

CENTRONICS INTERFACE ONLY

DO NOT turn the printer on until after the C-Interface has been initialized by the CALL 28325 statement described later on. Otherwise, the printer's power supply will fight with the C-Interface voltages and problems may result.

STARTING UP ADAM

Next turn on your ADAM and load the BASIC language. The first thing to do in BASIC is set the LOMEM: value to make room for the assembly language CDRIVER software. The location you set depends on what you will be doing with your C-Interface before the next time you turn ADAM's power off. The easiest thing to do is to give the command

LOMEM:40000; because you can do any kind of printing with this value.

You can turn on you printer any time before you actually start to print unless you are using the Centronics Interface, in which case you should wait until after the first CALL 28325.

FIRST PRINTING WITH THE C-INTERFACE

Here are a few BASIC commands that will demonstrate printing words and pictures from ADAM. Just run them and watch the results:

COMMODORE COMPATIBLE PRINTERS ONLY

```
RUN graphprint
RUN comtext
RUN bwtest
```

CENTRONICS INTERFACE ONLY

```
RUN graphprint
RUN centext
```

Now you are ready to learn how to print your own creations!

PRINTING BLACK AND WHITE PICTURES

After you have set up LOMEM: correctly, load the assembly language software that talks to the printer. All the assembly language software for the C-Interface is contained in the file CDRIVER, so if you have already loaded it to print text, you can skip this step.

The command to load it is:

BLOAD CDRIVER: REM CDRIVER must be in capital letters

Next, initialize the C-Interface board by calling an assembly language routine in CDRIVER:

CALL 28325

Now you can write a program or load in a program you bought that uses the BASIC HGR or HGR2 modes to create pictures on the screen. Before you run this program, find a line where you would want a printout made of that picture, and add one statement there:

CALL 28647

Then run your program. When this statement is executed, an assembly language routine in CDRIVER will print out the picture.

You can print as many pictures in a row as you want, but if your printer automatically skips over perforations in the paper some pictures can be divided in two. To keep this from happening, either make sure there is a form feed between each picture or turn off the printer for a second between pictures so that the skip won't happen in the wrong place.

A more convenient way to set LOMEM:, load CDRIVER, and CALL 28325 is to give the command:

RUN graphprint

PRINTING COLOR PICTURES

If you have an Okimate 10 printer, follow the directions for black and white printing, but change the line you insert in your BASIC program to:

CALL 28690

MAKE SURE YOU HAVE THE COLOR RIBBON IN THE OKIDATA 10 OR IT WILL USE UP YOUR ENTIRE BLACK RIBBON SEARCHING FOR THE COLOR ALIGNMENT MARK.

For the best pictures, the color of the background should be changed from black to white before entering graphics mode. You can do this with a POKE:

POKE 25471,31

PRINTING BASIC OR SMARTWRITER FILES

Like graphics printing, the first three steps are to set LOMEM:, load CDRIVER, and initialize the C-Interface with CALL 28325. As long as you have set LOMEM: to a value above 29723, this can be accomplished by simply running the text print program for your printer:

COMMODORE COMPATIBLE PRINTERS ONLY

RUN comprint

CENTRONICS INTERFACE ONLY

RUN cenprint

The program will then ask you whether you want to pause between printing each page or not, then it will ask you the name of the file you want to print and whether it is a BASIC or a Smartwriter file. When you have answered these questions, the file will be printed out and the program will start over by asking for another filename. To stop the program use a control-C code, and to restart it you can enter the command CONT, or you can run it again. If you have run it once you do not have to execute the first few lines again, which take up time loading CDRIVER, but instead you can give the command

RUN 42020

This will cause the program to quickly restart at the point where it asks if you want to pause between each page.

If you need to print files from a different tape, stop the program and run a CATALOG command on the new tape, then continue the program with a CONT or RUN command.

PRINTING DIRECTLY FROM BASIC

After you have set LOMEM:, loaded the assembly language software with a BLOAD CDRIVER, and initialized the C-Interface hardware with a CALL 28325, load the file print routine for your printer:

COMMODORE COMPATIBLE PRINTERS ONLY

LOAD comprint

CENTRONICS INTERFACE ONLY

LOAD cenprint

Next, type in your own program in front of the loaded program. Statement numbers in the loaded program run from 42000 to 46000, so you can enter your program at statement numbers 10 to 41990. The first statements in your program must set up the variables used by the printing subroutines, just like the first few statements in the loaded program:

otbufptr=27440 : REM next character store location = print buffer start

cr\$=CHR\$(13) : REM carriage return code

COMMODORE COMPATIBLE PRINTERS ONLY

ul\$=CHR\$(17) : REM select upper and lower case character set
GOSUB 45600 : REM initialize character lookup table

Then put the characters you want printed in the string variable outstr\$ followed by a carriage return (and with the ul\$ character in front for Commodore printers), GOSUB to a routine to put the string into the print buffer, and GOSUB to a routine to send the contents of the print buffer to the printer:

COMMODORE COMPATIBLE PRINTERS ONLY

```
outstr$ = ul$ + "Print this string" + cr$
```

CENTRONICS INTERFACE ONLY

```
outstr$ = "Print this string" + cr$
```

```
GOSUB 45500 : REM put string in print buffer  
GOSUB 45700 : REM send print buffer to printer
```

And that's all there is to it.

Direct printing from BASIC allows you to do two very useful things. The first is to send control characters that will allow your printer to perform any special functions it has that other printers don't have. In this way you can set up different character sets, line spacings, character widths, and other modes that will affect everything printed from that point on. Such control codes may be available only on one type of printer, so you will have to look them up in your printer manual.

The second thing you can do is to create pictures without using HGR mode on the screen. You can create bar charts, banners, huge characters, patterns, etc. just by following the instructions in your printer manual for graphics output. This is the only way to create pictures on any printer attached to the Centronics Interface.

For an example of a program that prints from BASIC, look at one of the files comtext or centext.

You may want to delete lines that are not used by the printing subroutines to make your program take up less space when you store it. These are lines 42000 to 44990, plus any unused subroutines. If you don't delete these lines and LOMEM: is large enough, you will still be able to print files directly from your program by giving the comand RUN 42000.

COMMODORE COMPATIBLE PRINTERS ONLY

When sending printer codes with the GOSUB 45500 command, they can be accidentally destroyed by the table lookup that changes ADAM's ASCII character codes to PET ASCII for the printer. The best way to get around this is to put printer codes in the print buffer one at a time using another subroutine:

```
outch% = printer code  
GOSUB 45300
```


MAKING THE C-INTERFACE DO MORE

This section is a collection of changes you can make to the C-Interface software to get it to act differently. They are mainly changes in BASIC language statements and POKES for the assembly language CDRIVER or the operating system. These changes can be made permanent by saving the changed software under a new name, and then running the new file. To save any POKES made in CDRIVER, use the command:

BSAVE NEWNAME,A27986,L1481

PRINTING FROM SECOND TAPE OR DISK DRIVE

You can choose which disk or tape drive to print from by changing location 28411 in the CDRIVER assembly language software. This is the AdamNet device number, and it can be set to the values:

- 8 - Tape 1, the original CDRIVER value
- 24 - Tape 2, the second tape drive
- 4 - Floppy drive 1
- 5 - Floppy drive 2

After loading CDRIVER, issue the command: POKE 28411,device number

Then do a CATALOG on the new drive, and you will be able to print files from that device. If you always want to print from that device, you can save CDRIVER with the new device number. One warning: with this change, the checksum function in cdiagnosis won't work.

CHANGING STARTUP PROCEDURES

The first two lines of the cenprint and comprint routines, 42000 and 42010, perform setup operations that you may want to do differently. Line 42000 sets LOMEM: to its lowest possible value, which may cause problems if you are switching between this program and others that change LOMEM:, and the second line loads the assembly language routines, which only needs to be done once and which takes time and requires a particular tape in the drive.

You can also avoid these lines by running the program at a later line:

```
RUN 42020
```

NUMBER OF LINES PRINTED IN A PICTURE

You can keep the last lines of a picture from being printed by POKEing the number of graphic lines (each one 7 dots high) to be printed out:

```
POKE 28673,lines : REM for black and white graphics only
```

or

```
POKE 28740,lines : REM for color graphics only
```

The number normally used for HGR2 printing is 54, and the number for HGR is 45.

NUMBER OF COLUMNS PRINTED IN A PICTURE

You can leave off the left and/or right edges of a picture with other POKES. The picture will still start at the far left of the paper, but it will only print the middle section you choose.

An HGR or HGR2 picture has 32 columns, each 8 dots wide, numbered 0 to 31. You can change these limits with POKES that affect both color and black&white graphics, but keep the difference between the two numbers below 30. Normal values are 1 and 30.

POKE 28857,left column
POKE 28874,right column

BACKGROUND COLOR IN HGR AND HGR2 MODE

A very useful POKE allows you to change the color of the screen on which you draw pictures. You can POKE a value between 16 and 31 to select different colors. The normal value, 17, is best for black and white graphics because the background will not come out black and wear out or overheat the print head, and because the picture looks better. To keep the color background from printing, use the value 31.

POKE 25471,color

This POKE must be made before you give the command HGR or HGR2.

CHANGING THE PAGE LENGTH

A normal 11 inch long page has 66 single spaced lines on it. For a BASIC printout, line 43160 sets the number of lines per page at 60, assuming a 1 inch blank space between pages created by an automatic perforation skip. For Smartwriter, line 44030 sets the lines per page at 66 (132 half spaces) and assumes no perforation skip. Change these numbers to change the number of lines per page.

UNDERLINING, SUBSCRIPTS, & SUPERSSCRIPTS

COMMODORE COMPATIBLE PRINTERS ONLY

All three of these functions, if used in a Smartwriter file, will print out as reversed characters. If you want to change this, lines 45662 through 45666 can be changed to substitute any single character for the Smartwriter control character. If you need to substitute a string of characters for one control character, then change the code for the Okidata 120 below to work with your own printer.

OKIDATA 120 ONLY

This printer has control codes for these three functions, unlike many other Commodore compatible printers, so here is an addition you can make to comprint that will use these control codes when printing Smarwriter files:

```
44402 IF outch%>31 GOTO 44430
44404 outstr$ = "X"
44406 IF outch% = 19 THEN outstr$ = "C"
44407 IF outch% = 20 THEN outstr$ = "D"
44408 IF outch% = 28 THEN outstr$ = "L"
44409 IF outch% = 29 THEN outstr$ = "M"
44410 IF outch% = 30 THEN outstr$ = "J"
44411 IF outch% = 31 THEN outstr$ = "K"
44412 IF outstr$ = "X" GOTO 44430
44414 outch% = 27: GOSUB 45300
44416 outch% = ASC(outstr$): GOSUB 45300
44418 outch% = 3
```


CHANGING CHARACTER CODES

To make one character in ADAM cause a different character to be sent to the printer, you will have to make a change that depends on the printer type you use.

One of the most commonly changed groups of characters are the special formatting values for Smartwriter. These are:

- 19 - start underlining
- 20 - stop underlining
- 28 - start subscript
- 29 - end subscript
- 30 - start superscript
- 31 - end superscript

A note of caution: if you add tests for certain characters to the printing routines, these tests will have to be performed on every character printed, and this can slow the printing down. If you add several tests looking for several control characters, its best to have a first test that will only allow the other tests to be performed if the character coming in is less than the largest control code. See line 45800 in cenprint for an example.

COMMODORE COMPATIBLE PRINTERS ONLY

The subroutine starting at 45600 sets up a lookup table that is used to change every character from its ASCII form in ADAM to another form for the printer called Pet ASCII. Any character you want to change should be added to the list of POKES after line 45666 in the form:

POKE 29467 + ascii CHR\$ value, value you want substituted

CENTRONICS INTERFACE ONLY

The subroutine at 45800 looks only at nonprinting control characters below 32, but you can change this by changing the test at line 45800. Study this subroutine to learn how to change or add characters. It substitutes a string of several characters for the single character that comes in.

SETTING UP PRINTER CHARACTERISTICS

Many printers allow you to send control codes that change the way all lines printed from that point on will appear. You can turn page perforation skip on or off, change the size, width, and general appearance of your characters, change line spacing and page length, etc.

COMMODORE COMPATIBLE PRINTERS ONLY

To send control characters before each BASIC file is printed, change the two locations 43002 and 43004, which turn on the automatic page skip for Okidata printers. To change the setup for Smartwriter files, change lines 44110 and 44120, which turn off the automatic page skip for Okidata printers.

CENTRONICS INTERFACE ONLY

Line 44090 sets up line spacing for Smartwriter files printing on an Epson LX-80, and line 45420 resets it to single spacing. The variable halfsp% equals the number of half spaces each carriage return should cause (single spacing = 2). These lines can be changed to whatever code your printer uses to set line spacing. Any other printer setup for Smartwriter should be added to the end of outstr\$ just below line 44090. Control codes to set up for printing BASIC files can be added after line 43000, using commands like those at line 45420.

HINTS, EXPLANATIONS, & TRICKS

COMMUNICATIONS SOFTWARE

The CDRIVER assembly language communications software turns ADAM into a Controller and a Talker on the Commodore Serial Bus, not a Listener. It talks to a Listener at Device Address 4, and does not send a Secondary Address to select the character set. Instead, the character set is selected by a control code (17) buried in each line sent to the printer.

To send information out on the serial bus, the user's program first POKES a string of output characters into the 512 byte printer buffer, then POKES the number of characters to send + 256 into a two-byte counter, and finally calls the output routine. This then sends the stream of characters, preceded by the device address, out the serial bus as a single message. On failure, an error code will be returned and the index of the character being sent will be recorded, so the user's program can call a second routine that will try to send the same data out again.

HOW GRAPHICS ARE PRINTED

The CDRIVER software actually reads the image being displayed by ADAM's TMS 9918A graphics chip. It reads the part of the display called the background plane, but does not read the sprites that can move around in front of the background. Each colored dot, or pixel, on the screen is expanded into a 2x2 group of dots on the printer. The 15 colors this chip can display are compressed into the 8 colors the printer can print, and all 4 dots in the group are printed with this color. The compression is done by grouping different shades of the same color into the one basic color the printer has available. Other colors can be produced on the printer by working directly with BASIC and mixing dots of different colors, usually adding white dots to create a lighter shade or black dots for a darker shade.

FREEING MORE RAM FOR PROGRAMS

Setting LOMEM: to 40000 limits the RAM you can use for your BASIC programs, so you may want to set lower values. The lowest value you can use if you will be doing any graphics printing is 38172. If you are only going to print text with a Commodore compatible printer the lowest value is 29723, and for Centronics text printing the low value is 29467. Running the programs graphprint, cenprint, or comprint will set LOMEM: to these values automatically, so as long as you start with a number above them the software will work.

PAUSE BETWEEN PAGES

When printing a BASIC file, this function counts the number of lines to determine where to pause. If you send your printer a line that is too long, it will take two lines to print it. This means that its line count will be wrong, and it will start printing the next page without being told to. If you cannot keep your lines short, the best thing to do is to set up your printer with control codes that select narrow characters, so more characters will fit on each line.

PLACING THE GRAPHIC DUMP CALL

Often it is useful to be able to print a picture on command, rather than every time a certain section of your program gets executed. A good way to do this is to use the trigger button on your game controller to request a printout. Just place a read of the PDL(X) function in an often-executed part of your graphics program, and perform the CALL only if the button has been pressed.

CR220 PRINTER SERVICE

Warranty service locations for the Comrex CR220 printer can be found by calling your local Epson printer dealer.

FINDING THERMAL TRANSFER PAPER

The Okimate 10 printer works best with special thermal transfer paper. This is available through Okidata via their toll-free order number (800) 524-8338. Another source is a local computer store that sells the Okimate 20 color printer, which uses the same type of paper. Hammermill is a manufacturer of this type of paper, and has a toll-free number you can use to find a local source: (800) 621-5199.

FINDING RIBBONS

Ribbons or local sources for them can be gotten from the printer manufacturer. However, many ribbons can be found in local stores. Stores that carry Commodore related products such as Service Merchandise, Target, and Children's Palace also carry ribbons at many locations. Computer stores are another source of ribbons for many printers.

OKIDATA 120 ONLY

The Okidata 120 uses the same ribbon as Okidata's other 100 series printers, such as the Microline 182.

DEALING WITH TROUBLE

NOTHING HAPPENS WHEN YOU TRY TO PRINT

If nothing happens when you try to print, the first thing to do is to double check that the printer is on, that the printer cable is fully inserted, and that the printer is ready to print. Before working with the cable always turn off the power for ADAM and the printer. If no problems are found, make sure the printer (and the Centronics Port) is set up correctly. This usually means checking the positions of DIP switches somewhere on the printer. The C-Interface talks to device number 4, which most DIP switches come set from the factory at, but this is a good setting to double check.

Most printers have a ready light or an on line light that indicates ready to print. If the printer is not ready, this can be due to: Paper not properly installed, the ribbon used up or not properly installed, the on line button not being pressed, or other reasons. Make changes on the printer or its DIP switches with the power off, so when you turn it back on the printer is sure to be affected by the change. DIP switches, for example, are read only when the power is turned on in many printers.

If the printer and cable check out, the next thing to do is to turn ADAM and the printer off, take the cable out of ADAM, and run the program cdiagnosis. First use this program to verify that you have a recent version of BASIC. Then test the C-Interface board to make sure it is operating properly. If both of these work set the LOMEM: value to 40000, and load cdiagnosis again. Then use it to load CDRIVER, and finally to verify the CDRIVER checksum, which tests the assembly language code for errors.

ERROR MESSAGES

Fatal Cinterface error- Printer not present

This means that the C-Interface is not getting any response when it tries to communicate. Check for the problems listed in the section above called "NOTHING HAPPENS WHEN YOU TRY TO PRINT".

Fatal Cinterface error- Printer communications garbled

First turn the printer off and on and try printing again. If you get the same message, BLOAD CDRIVER again and try to print after turning the printer off and on. If this still fails, use the program cdiagnosis as described in the "NOTHING HAPPENS" section to check CDRIVER and the C-Interface.

LIMITED WARRANTY

Capital Software hereby warrants that it will repair or replace, at its option, this C-Interface if it proves defective by reason of improper workmanship and/or material, without charge for parts or labor, for a period of one (1) year. This warranty period commences on the date of original purchase by the buyer.

To obtain service under this warranty you must return your C-Interface, properly packaged in its original container or an equivalent, to Capital Software. Any postage, insurance and shipping costs incurred in sending the C-Interface for service are your responsibility.

This warranty applies only if your C-Interface fails to function properly under normal use. This warranty does not apply if, in the sole opinion of Capital Software, your C-Interface has been damaged by accident, misuse, neglect, or as a result of service or modification by any party other than Capital Software.

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