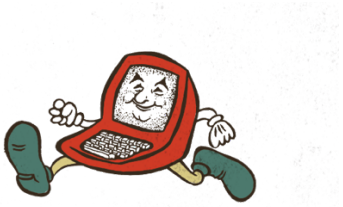
ACE80 ACE 80 XL



Eighty Column Screen Display for Atari Computers

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Introduction

ACE-80 is a software-generated eighty column display device for Atari computers. It uses Atari's video hardware to display eighty remarkably legible characters across the screen. A monochrome monitor provides the Clearest display, but ACE-80 is usable with color monitors and quality B&W and color TVs. ACE-80 provides an economical alternative to eighty column boards, which are available only for the Atari 8OO.

ACE-80 automatically installs itself in the Atari operating system in place of the E: and S: devices, the standard forty column screen editor and display. It uses about 12K of RAM when active but gives up that RAM when other screen modes are used. The cartridge itself does not displace any RAM.

ACE-80 comes in two versions. ACE-8OXL is a left cartridge that works in all Atari computers (400/600XL/800/B800XL/1200XL/130XE] with at least 48K RAM. It can work with BASIC if BASIC is built into the machine (60OXL/800XL/130XE models). The right cartridge version, ACE-8O, is only for the Atari 800. It allows BASIC to be available in the left slot.

Getting Started

When the computer powers up with ACE-8O installed, it immediately displays its title and waits for a key to be pressed, providing you a chance to adjust the screen to your liking. The **[START]** and **[SELECT]** buttons, along with the **[SHIFT]** key, make the following adjustments:

- **[START]** varies the brightness of the displayed characters.
- **[SELECT]** varies the brightness of the background.

- **[SHIFT]**-**[SELECT]** varies the background color. Use this to increase the readability of color displays.
- **[SHIFT]**-**[START]** changes the cursor from flashing to steady or invisible.

When you've adjusted the display, press any key to boot the disk. The eighty-column display remains active. It differs in minor ways from the standard screen editor. The maximum logical line length is eighty characters, so you cannot edit a line of more than eighty characters. To do so, you must return to the forty-column mode.

In BASIC, `GRAPHICS 16` or `OPEN #6,12,0,"S:"` reverts to 40 columns. To return to 80 columns, either `GRAPHICS 0`, `OPEN #6,28,0,"S:"` or `OPEN #1,12,0,"E:"` can be used.

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All graphics commands work as usual in eighty column mode except the DRAWTO and FILL commands. All editing and cursor control keys also operate, except the clear tab and set tab. Tabs are permanently set at every eighth position. SETCOLOR and most POKEs, such as cursor enable, left and right margins, work as well. All other graphics modes work normally.

ACE-8O's cursor is only visible when the screen editor is waiting for a keypress. To enable the cursor at other times, use **POKE 54286,192**. Be sure to turn it off with **POKE 54286,64** before doing any I/0 with external devices such as the disk or printer.

ACE-80 is not disturbed by ae **[RESET]**-warm start, but it disappears if the computer performs a cold start without being turned off first. So, to cold start or reboot the computer with ACE-80 active, turn it off for a few seconds and then turn it back on.

Some programs designed to work under forty columns may not operate in eighty. There are several possible sources of incompatibility. Programs that do not use the operating system for screen I/O or use custom displays will not work. Some programs may have conflicting memory demands. ACE-8O uses the top 12.5K of RAM and a few bytes at the bottom of page one. Some incompatible programs can be altered to work with ACE-8O. Useful programs such as word processors really shine in eighty columns. ACE-80 brings the Atari into a world of more powerful and professional applications.

ACE-8O and Your Favorite Program

ACE-80 works with most programs that access the screen through the Atari operating system. If your Favorite program doesn't quite work and you're up to changing it, Vintage Computer Center will supply you with helpful patching information. The technical notes can be downloaded from our website, as well as two patch disk images.

LETTER PERFECT AND ACE-80/ACE-8OXL Patching Process

This BASIC program patches Letter Perfect (ver. 6.xx) to work with the ACE-8O/ACE-8OXL. Follow these steps to perform the patching process:

1. Make a backup copy of the Letter Perfect program disk using any duplicating utility (Letter Perfect has one built in).

2. Shut off the computer, insert the backup copy in the disk drive, and while holding down the ESC key, turn on the computer. This will bring up the Video Control menu.

3. Press 2, and RETURN to select the Bit-3 option.

4. Continue, as explained in the Letter Perfect "Configuring the Program" section of the manual. Remove the Letter Perfect disk when the configuration operation is complete.

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5. Turn off the computer and insert the patch disk (see "Making a Patch disk" if you do not have one).

6. Insert the BASIC cartridge (800) or do not hold down **[OPTION]** (XL/XE}. Turn on the computer.

7. The message "Insert Backup copy of Letter Perfect 6.xx in Drive 1 and Press RETURN" will appear on your screen.

8. Remove the Patch disk, insert the backup copy of Letter Perfect, and press RETURN. The patch program will write a patch to the Letter Perfect disk. This procedure is a one-time process. The Letter Perfect disk can be reconfigured by itself from now on.

9. Leave the Letter Perfect disk in, shut off the computer, and insert the ACE-8O/ACE-8OXL cartridge. Remove the BASIC cartridge (800) or hold down **[OPTION]** (XL/XE] and turn on the computer. The ACE screen will appear. Adjust the display (Try pressing **[SELECT]** 5 times and **[START]** 3 times and adjusting the brightness of the screen).

10. Press the [SPACE] bar to boot Letter Perfect.

Making a Patch Disk

1. At step 5 of the "Patching Process," insert a disk with DOS on it and a BASIC cartridge (800), or do not hold down the **[OPTION]** key (XL/XE].

2. Type in the Patch Program.

3. Type: **SAVE" D1:LPPATCH.BAS"** and press [RETURN]. This will save the program.

4. Type: RUN and press RETURN.

5. Proceed to step 6 of the "Patching Process

```
0 REM          VINTAGE COMPUTER CENTER
1 REM              PATCH PROGRAM
2 REM       FOR LETTER PERFECT & ACE80(XL)
3 REM                          05/20/85
4 REM Make sure you are using a fresh
5 REM backup copy of Letter Perfect,
6 REM Ver 6.00 to 6.05 installed for the
7 REM Bit 3 80 column board.
10 Graphics 0: Trap 30
20 Read D:S=S+D:Goto 20
30 If S<>16008 Then ? "Error in DATA Statements.":End
70 ? : ? "Insert BACKUP copy of Letter Perfect "
75 ? "6.xx into drive 1 and press Return."
80 Open #1,4,0,"K:": Get #1,D:Close #1
90 Dsk=1536:Buf=1664
100 Data
104,104,104,141,2,3,104,104,141,1,3,104,141,5,3,104,141,4,3,104,141,11,3
,104
101 Data 141,10,3,32,83,228,132,212,160,0,132,213,96
```

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```
110 Restore 100: For I=Dsk to Dsk+36: Re
ad D:Poke I,D:Next I
120 For S=0 to 3
130 Y=Usr(Dsk,Asc("R"),1,Buf,98+s): If Y>1 Then 220
140 Restore 900+12*S
150 Read Ad: If Ad<0 then 190
160 Read N: For I=Buf+Ad to Buf+Ad+N-1
170 Read D: Poke I,D: Next I
180 Goto 150
190 Y=Usr(Dsk,Asc("W"),1,Buf,98+S): If Y>1 Then 200
200 Next S
210 ? : ? "Patch Complete.":End
220 ? : ? "Disk error #";Y:End
900 Data 4,1,136,7,2,138,7,25,4,162,141,234,234,31,3,162,80,234,-1
910 Data 9,20,96,32,15,148,164,209,196,208,240,247,160, 32,140,35,1,
164, 209, 76, 24
8,29
912 Data 44,13,169,1,32,9,148,169,1,32,12,148,76,133,7,120,1,32,-1
920 Data
91,2,198,8,95,17,132,101,72,165,100,32,3,148,162,0,104,32,6,148,164,101,
96,-1
930 Data 8,15,169,192,208,2,169,64,141,14,212,169,0,141,17,208,96
931 Data
23,20,32,0,148,32,140,8,165,9,9,2,133,9,234,234,234,234,234,234,162,0
932 Data 70,11,173,28,2,240,3,206,28,2,76,98,228,101,1,96,-1
```

ACE-B80 Screen Setup Program For BASIC

This program will create an AUTORUN.SYS file that will automatically load and set up the screen for you when you are in the BASIC mode.

Take the following steps to create the AUTORUN.SYS.

1. Insert your ACE-8O(XL) cartridge into the computer (and BASIC).
2. Turn on the computer.
3. Press the **[SELECT]** and **[START]** keys to set the screen display to your liking.
4. Insert a disk with DOS on it into your disk drive.
5. Press any key to boot disk (which will return you to BASIC).
6. Insert the disk (Patch disk) with SETUP.BAS on it in your disk drive.
7. Type: **`RUN "D1:SETUP.BAS"`** and press RETURN
8. Remove that disk and reinsert the disk with DOS on it (that you want to use as a boot-up disk for BASIC).
9. Hit any key to write the AUTORUN.SYS file.
10. "FINISHED" should appear, and you may now use this disk when using BASIC.

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```
0 Rem **   Vintage Computer Center             **
1 Rem ** SET UP PROGRAM FOR ACE 80 & ACE 80XL  **
2 Rem **                 02/16/86 REV 000      **
10 Graphics 0
20 Print "You must have already set up the scree
n display to your liking"
30 Print "with the START & SELECT keys before yo
u run this program..."
40 Print "Hit any key to continue..."
50 Gosub 300
100 C=Peek(288):B=Peek(289):F=Peek(290)
110 ? :? :? "WORKING..."
120 Open #1,8,0,"D:AUTORUN.SYS"
130   For N=1 to 6: Read A: Put #1,A:Next N
140 Put #1,C:Put #1,B:Put #1, F
150   For N=1 to 4:Read A:Put#1,A:Next N
160   For N=1 to 42:Read A:Put #1,A:Next N
170   For N=1 to 6:Read A:Put #1,A:Next N
180 ? :? :? :? "FINISHED...":? :?
190 End
300 Poe 764,255
310 If Peek(764)=255 Then 310
320 Poke 764,255: Return
1000 Data 255,255,32,1,34,1
1010 Data 00,64,41,64
1020 Data 162,96,169,12,157,66,3,32
1030 Data 86,228,169,3,157,66,3,169
1040 Data 39,157,68,3,169,64,157,69
1050 Data 3,169,28,157,74,3,169,0
1060 Data 157,75,3,32,86,228,96,69
1070 Data 58,155
1080 data 226,2,227,2,0,64
```

TERM8O

TERM6O is a simple modem program that was created initially as a demo. It will only work with 850 compatible modems and will only toggle the translation (ASCII and ATASCII), Duplex (Full and Half), and Line Feed. It is a barebones program. To use, you must boot the RS-232 handler with an AUTORUN.SYS then **RUN "D1:TERM8O.BAS"**. This is done with the ACE80(XL) cartridge, and BASIC installed. Press CTRL-O to bring up the option menu and press the first letter of the option to toggle it. Dial the phone number manually and press RETURN when a carrier is detected.

ACE-80 and OS/A+

The OS/A+ disk operating system (version 2.10) interferes with the ACE-80's ability to survive a system reset. To correct this, **RUN "D:OSAPLUS.FIX"** on the patch disk and Follow the prompts of the program to patch OS/A+ on all your working disks.

ACE-80 and EASMD

If you use OSS's early assembler, EASMD.COM, it must be slightly changed to load under ACE-80. **RUN "D:EASMD.FIX"** on the patch disk to patch it for you.

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FujiNet and ACE-80(XL)

To Boot ACE80 then to load an ATR from FujiNet.
FujiNet needs to be powered from an external power supply and the disk images needs to be mounted to D1-D8 prior to inserting the ACE80 cartridge.

Boot the ATARI to FujiNet, then Select and Mount the software you want to boot into to D1-D8 driers, and Press **[OPTION]** then Switch off the ATARI computer, insert ACE80 cartridge and Power on the Machine (make sure that power to FujiNet is not lost during this process) the ATARI will boot into AC80 then will continue to boot your selected software

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Notes

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