

**OWNER'S MANUAL**

**80/64e**

**AMERICAN MICRO RESEARCH**

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## INTRODUCTION

The 80/64e Card for your Apple IIe computer is a peripheral card that gives you 40 extra characters per line on your display, makes some additional features available to BASIC users and provides an additional 64K memory capacity for your computer. The firmware that supports special features associated with the 80-column display is part of the Apple IIe computer itself, and works the same regardless if the card is installed or not. The standard Apple IIe displays up to 40 columns of text on the video screen. The 80/64e Card enables the Apple IIe to display up to 80 columns of text on the standard 24 line screen. It also allows you to switch back and forth easily between 40 and 80 column displays.

### System Requirements

The 80/64e Card is designed specifically for the Apple IIe computer with its auxiliary slot (labeled AUX. CONNECTOR). This card cannot be used with the Apple II or Apple II-Plus computers, which do not have this special slot. Although there is also an expansion slot 3 inside the Apple IIe, the auxiliary slot effectively replaces and renders this slot inoperable when the 80/64e Card is installed in the AUX CONNECTOR slot.

Television sets lack the capacity to display 80 columns of text clearly, so you must use a black-and-white video monitor rather than a television set while displaying 80 columns of text. If you want to use a color television set with your Apple IIe, to do color graphics, for instance, while the 80/64e Card is installed, you can do so as long as you switch back to the 40-column display.

Take a close look at the circuit board and you will notice that one end is labeled "KEYBOARD END" (on the component side). This end of the board must be toward the keyboard of your computer. The 80/64e Card actually performs two functions; the first and most useful being that it allows you to expand the screen to handle 80 characters of text, instead of the 40 characters that is standard with your Apple IIe computer; the second function is that it increases the memory capacity of your Apple IIe to 128K bytes. Let's call this additional 64K bytes of memory (your Apple IIe has a built-in memory of 64K bytes) Auxiliary Memory. Most programs will only use the 64K bytes of main built-in memory. To use the auxiliary memory, a program must set special switches in the Apple IIe so the auxiliary memory will substitute for the main built-in memory. Neither DOS, PRODOS, nor PASCAL will support this memory substitution, therefore your application programs will have to handle it themselves.

## INSTALLATION

### Opening The Computer

Open the computer as follows:

1. Turn off the computer power switch (located in the left rear corner of the computer). The lower part of the toggle switch should be pressed in when the power switch is in the off position.
2. Remove the cover of your computer by pulling up on the rear edge at each corner until the cover snaps up. Slide the cover towards the back (away from the keyboard) and lift it off of the computer. Now put the cover in a safe place until you are ready to reinstall it.
3. Touch the power supply cover to discharge any static electricity you may be carrying on your clothes or body.

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*****IMPORTANT*****
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* IF YOU DO NOT DEACTIVATE THE 80/64e CARD WHEN YOU ARE USING
* A PERIPHERAL DEVICE (SUCH AS A PRINTER OR DISK CONTROLLER
* CARD), YOU WILL GET AN UNPREDICTABLE RESULT AND A CONFUSING
* DISPLAY. REFER TO THE INSTRUCTIONS AT THE BEGINNING OF THIS
* PARAGRAPH FOR THE STEPS YOU MUST GO THROUGH TO DEACTIVATE
* THE 80/64e CARD.
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4. Locate the auxiliary slot inside your Apple IIe; it is labeled "AUX. CONNECTOR". When you are looking inside the computer from the keyboard end, the AUX. CONNECTOR is located on the left side of the main logic board next to the power supply toward the front of the computer.
5. Pick up the 80/64e Card without touching the gold fingers; turn the card so the end labeled "KEYBOARD END" is toward the keyboard end of the computer and the component side of the board is facing away from the power supply.
6. Position the 80/64e Card over the auxiliary slot and engage the gold fingers with the connector on the main logic board. Use your thumb placed on the top of the card to start the card into the slot and gently rock the card back and forth while pushing down on it until it is fully seated in the slot.

7. You can now reinstall the cover on your Apple IIe. Insert the front edge of the cover under the front of the cabinet just behind the keyboard. Press down firmly at each corner of the back edge of the cover until it snaps into place.
8. Start up (boot) your computer with a startup disk. The terms "start up" and "boot" mean the same thing.
9. Now you are all set to start up your 80/64e Card, but you may want to adjust your video monitor. In most cases the video monitor owner's manual will tell you everything you will need to know about good screen resolution. You may want to adjust the brightness, contrast, vertical and horizontal hold even after you have used your system for a while. Your eyes will get used to the screen and you may want to change the contrast or brightness to make it easier on your eyes.

Now that you have installed your 80/64e Card, you can continue to learn how to activate and operate your system with the 80/64e Card. If you are not going to write programs with your computer, this is all you will have to know about the 80/64e Card, except for how to turn off the card if one of the programs you have run leaves the card turned on after the program has finished running. Refer to the following section for instructions on how to turn off your 80/64e Card.

## ACTIVATING AND DEACTIVATING THE 80/64e CARD

Starting up with BASIC, DOS, or PRODOS

Step 1 - Startup the Apple IIe with a startup disk or if you do not have a disk drive, turn the computer on.

Step 2 - Make sure the CAPS LOCK key is in the down position.

Step 3 - Type "PR#3" to activate the 80/64e Card.

Now that the 80/64e Card is active, the only thing you have to do to get your 40-column display back is to type "ESC" and "4". This will get you temporarily back to 40 columns; if you want to get back to the 80-column display, type "ESC" and "8" and the system will shift back to the 80-column display.

### Deactivating the 80/64e Card

Instead of just switching to 40 columns, as was previously described, you MUST deactivate the 80/64e Card if:

You Are planning to run an application program designed for the Apple II or Apple II-Plus computers, or

You want to switch your output from the screen to a printer or another peripheral device.

NOTE: Make sure you want to deactivate the card, not just switch back to a 40-column display, before you use the procedure described below.

Type "ESC" and CONTROL Q" and the computer will switch the display back to the 40-column mode, the blinking checkerboard cursor will be displayed at the bottom of the screen, an inverted bracket "]" will appear to the left of the checkerboard and a backward slash "\" will appear on the line above the cursor. To activate the 80/64e Card again, you have to type "PR#3" again.