

For more information about ProDOS and the startup procedure, see the *ProDOS Technical Reference Manual*.

The cold-start procedure

If the reset vector is not valid, either the Apple IIe has just been turned on or something has caused memory contents to be changed. The reset routine clears the display and puts the string "Apple //e" ("Apple][" on an original IIe) at the top of the display. It loads the reset vector and the validity-check byte as described below, then starts checking the expansion slots to see if there is a disk drive controller card in one of them, starting with slot 7 and working down.

If the reset routine finds a controller card, it initiates the startup (bootstrap) routine that resides in the controller card's firmware. The startup routine then loads DOS or ProDOS from the disk in drive 1. When the operating system has been loaded, it displays other messages on the screen. If there is no disk in the disk drive, the drive motor just keeps spinning until you press Control-Reset.

If the reset routine doesn't find a controller card, or if you press Control-Reset again before the startup procedure has been completed, the reset routine will continue without using the disk, and pass control to the built-in Applesoft interpreter.

The warm-start procedure

Whenever you press Control-Reset when the Apple IIe has already completed a cold-start reset, the reset vector is still valid and it is not necessary to reinitialize the entire system. The reset routine simply uses the vector to transfer control to the resident program, which is normally the built-in Applesoft interpreter. If the resident program is indeed Applesoft, your Applesoft program and variables are still intact. If you are using DOS, it is the resident program and it restarts either Applesoft or Integer BASIC, whichever you were using when you pressed Control-Reset.

Important

A program in bank-switched RAM cannot use the reset vector to regain control after a reset, because the Apple IIe hardware enables ROM in the bank-switched memory space. If you are using Integer BASIC, which is in the bank-switched RAM, you are also using DOS, and it is DOS that controls the reset vector and restarts BASIC.
