
The reset routine

To put the Apple IIe into a known state when it has just been turned on or after a program has malfunctioned, there is a procedure called the *reset routine*. The reset routine is built into the Apple IIe's firm.ware, and it is initiated any time you turn power on or press Reset while holding down Control. The reset routine puts the Apple IIe into its normal operating mode and restarts the resident program.

When you initiate a reset, hardware in the Apple IIe sets the memory-controlling soft switches to normal: main board RAM and ROM are enabled, and, if there is an 80-column text card in the auxiliary slot, expansion slot 3 is allocated to the built-in 80-column firmware. Auxiliary RAM is disabled and the bank-switched memory space is set up to read from ROM and write to RAM, using the second bank at \$D000.

The reset routine sets the display-controlling soft switches to display 40-column text Page 1 using the primary character set, then sets the window equal to the full 40-column display, puts the cursor at the bottom of the screen, and sets the display format to normal.

The reset routine sets the keyboard and display as the standard input and output devices by loading the standard I/O links. It turns annunciators 0 and 1 off and annunciators 2 and 3 on, clears the keyboard strobe, turns off any active peripheral-card ROM, and outputs a bell (tone).

The Apple IIe has three types of reset: power-on reset, also called **cold-start** reset; **warm-start** reset; and forced cold-start reset. The procedure described above is the same for any type of reset. What happens next depends on the reset vector. The reset routine checks the reset vector to determine whether it is valid or not, as described later in this chapter in the section "The Reset Vector." If the reset was caused by turning the power on, the vector will not be valid, and the reset routine will perform the cold-start procedure. If the vector is valid, the routine will perform the warm-start procedure.

For information about the I/O links, see the section "Changing the Standard I/O Links" in Chapter 6.

For more information about peripheral-card ROM, see the section "Peripheral-Card ROM Space" in Chapter 6.