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Apple IIc: 80/40 switch

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Security: Everyone

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The 80/40 switch on the Apple IIc only sets a bit in memory. While a program can read this bit and use the setting in a decision to display 80 or 40 columns, in practice, only a few programs, e.g. Apple Writer, take advantage of the switch in that way. In itself, the 80/40 switch does not force 80 column firmware on or off; only a software command like Applesoft's PR#3 or PR#0 can do that.

The 80/40 switch on the Apple IIc was designed for customers who use their television set as a monitor. A television set doesn't display 80 columns of text very legibly; 40 columns reads much better. Unfortunately, most Apple II software packages, written before the Apple IIc, don't check the bit set by the 80/40 switch.

Because the bit setting is independent from the PR#3 command, programmers can use the bit set by the 80/40 switch for features other than 80/40 column display:

```
10    TEXT:HOME:REM INITIALIZATION
100    SWITCH = PEEK(49248):REM MEMORY LOCATION FOR CURRENT SWITCH SETTING
110    VTAB 12
120    IF SWITCH > 127 THEN PRINT "80/40 SWITCH DOWN":REM OR ANYTHING ELSE
130    IF SWITCH < 128 THEN PRINT "80/40 SWITCH  UP ":REM OR ANYTHING ELSE
140    GOTO 100
```

For more info, see the two-volume Apple IIc (16K ROM) Technical Reference Manual, pages 5 and 77 of Volume I and page 128 of Volume II, or the one-volume manual published by Addison-Wesley, pages 5, 80, and 342.

Apple Technical Communications

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