



Appendix B



Directory of Built-in Subroutines

Here is a list of useful subroutines in the Apple IIe's Monitor. To use these subroutines from machine-language programs, store data into the specified memory locations or microprocessor registers as required by the subroutine and execute a JSR to the subroutine's starting address. After the subroutine performs its function, it returns with the 65C02's registers changed as described.

Warning Do not jump into the middle of Monitor subroutines. Although the starting addresses are the same for all models of the Apple II, the actual code is different.

BASICIN Read the keyboard \$C305

When the 80-column firmware is active, BASICIN is used instead of KEYIN. BASICIN operates like KEYIN except that it displays a solid, nonblinking cursor instead of a blinking checkerboard cursor.

BASICOUT Output to screen \$C307

When the 80-column firmware is active, BASICOUT is used instead of COUT1. BASICOUT displays the character in the accumulator on the Apple IIe's screen at the current output cursor position and advances the output cursor. It places the character using the setting of the Normal/Inverse location. It handles control codes; see Table 3-3b. BASICOUT returns with all registers intact.