

A program on a peripheral card can get exclusive use of the expansion ROM memory space by referring to location \$CFFF in its initialization phase. This location is special: all peripheral cards that use expansion ROM must recognize a reference to \$CFFF as a signal to reset their ROM-enable flip-flops and disable their expansion ROMs. Of course, doing so also disables the expansion ROM on the card that is about to use it, but the next instruction in the initialization code sets the flip-flop in the expansion-ROM enable circuit on the card.

A card that needs to use the expansion ROM space must first insert its slot address (\$Cn) in \$07F8 before it refers to \$CFFF. This allows interrupting devices to reenable the card's expansion ROM after interrupt handling is finished. Once its slot address has been inserted in \$07F8, the peripheral card has exclusive use of the expansion memory space and its program can jump directly into the expansion ROM.

As described earlier, the expansion-ROM disable circuit resets the enable flip-flop whenever the 65C02 addresses location \$CFFF. To do this, the peripheral card must detect the presence of \$CFFF on the address bus. You can use the I/O STROBE' signal for part of the address decoding, since it is active for addresses from \$C800 through \$CFFF. If you can afford to sacrifice some ROM space, you can simplify the address decoding even further and save circuitry on the card. For example, if you give up the last 256 bytes of expansion ROM space, your disable circuit only needs to detect addresses of the form \$CFxx, and you can use the minimal disable-decoding circuitry shown in Figure 6-2.

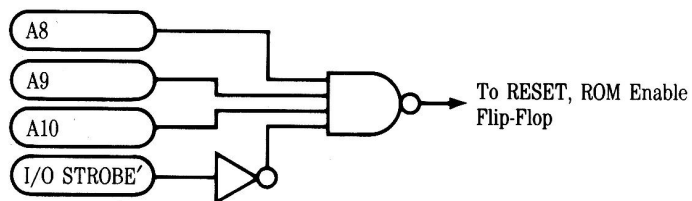


Figure 6-2
ROM disable address decoding

Important

Applesoft addresses two locations in the \$CFxx space, thereby resetting the enable flip-flop. If your peripheral device is going to be used with Applesoft programs, you must either use the full address decoding or else enable the expansion ROM each time it is needed.
