

Writing to the soft switch at location \$C003 turns RAMRD on and enables auxiliary memory for reading; writing to location \$C002 turns RAMRD off and enables main memory for reading. Writing to the soft switch at location \$C005 turns RAMWRT on and enables the auxiliary memory for writing; writing to location \$C004 turns RAMWRT off and enables main memory for writing. By setting these switches independently, you can use any of the four combinations of reading and writing in main or auxiliary memory.

Auxiliary memory corresponding to text Page 1 and high-resolution graphics Page 1 can be used as part of the address space from \$0200 to \$BFFF by using RAMRD and RAMWRT as described above. These areas in auxiliary RAM can also be controlled separately by using the switches described in the section “Display Mode Switching” in Chapter 2. Those switches are named 80STORE, PAGE2, and HIRES.

As shown in Table 4-7, the 80STORE switch functions as an enabling switch: with it on, the PAGE2 switch selects main memory or auxiliary memory. With the HIRES switch off, the memory space switched by PAGE2 is the text Page 1, from \$0400 to \$07FF; with HIRES on, PAGE2 switches both text Page 1 and high-resolution graphics Page 1, from \$2000 to \$3FFF.

If you are using both the auxiliary-RAM control switches and the auxiliary-display-page control switches, the display-page control switches take priority: if 80STORE is off, RAMRD and RAMWRT work for the entire memory space from \$0200 to \$BFFF, but if 80STORE is on, RAMRD and RAMWRT have no effect on the display page. Specifically, if 80STORE is on and HIRES is off, PAGE2 controls text Page 1 regardless of the settings of RAMRD and RAMWRT. Likewise, if 80STORE and HIRES are both on, PAGE2 controls both text Page 1 and high-resolution graphics Page 1, again regardless of RAMRD and RAMWRT.

The next section, “Auxiliary-Memory Subroutines,” describes firmware that you can call to help you switch between main and auxiliary memory.

A single soft switch named ALTZP (for *alternate zero page*) switches the bank-switched memory and the associated stack and zero page area between main and auxiliary memory. As shown in Table 4-7, writing to location \$C009 turns ALTZP on and selects auxiliary-memory stack and zero page; writing to the soft switch at location \$C008 turns ALTZP off and selects main-memory stack and zero page for both reading and writing.