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Using Pseudo-Interrupt Vectors on the M68HC11EVBU

By Janet M. Snyder
Austin, Texas

Introduction

The MC68HC11EVBU *Universal Evaluation Board User's Manual,* Motorola document order number MC68HC11EVBU/AD2, contains a printing error regarding the pseudo-interrupt vectors to be used when running the BUFFALO monitor.

The vectors are located in $0XXX space, not $EXXX space. A correction is shipped with all boards packed since February 1993. Go to Table 3-2 in the manual and draw a line down both sides of your table through the E1s and make them all 01s. The rest of the information is correct.

The technical data manuals show that the interrupt table for M68HC11 devices begins at $FFC0.

At first glance, this seems to contradict the BUFFALO monitor. The "real" vector locations are in the ROM area of the chip, where the user cannot modify them. BUFFALO creates a pseudo-vector table in the RAM area, so the user will be able to write interrupt routines and leave the "jump to" address in this designated location.

On power-up, BUFFALO initializes all the pseudo-vectors with "JMP STOPIT." If the processor gets an interrupt before the interrupt vector has been initialized by the user, the program will jump to the STOPIT

routine in BUFFALO. The STOPIT routine puts the processor into low-power stop mode.

To set an interrupt vector to jump to a user service routine, a JMP USERHANDLER must be written into the associated pseudo-interrupt vector location. "USERHANDLER" is where a user-supplied interrupt handler routine is located.

For instance, to set the timer output compare 3 interrupt vector to jump to 3USERHANDLER.2, the opcode for a JMP instruction ($7E) must be written into location $00D9 and the address of 3USERHANDLER2 into locations $00DA and $00DB.

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