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## UNUSED I/O CONTROL WORD BITS

an internal working paper

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Control words used with SLO and SHO instructions have some unused bits. In most cases error interrupts will occur if these bits are not all zero.

The PCE checks transfers into registers such as the word and address counters by making a parity check on the three rightmost bytes of the half-word plus the half-word parity. Therefore, if the leftmost byte of the half-word contains an odd number of one bits, a parity error alarm will be generated. Also, the control word containing the word count and address has certain information from the SLO or SHO instruction OR'd to it to form the control bookkeeping word. Therefore, any one bits in bytes 0 or 4 of that control word may result in the control bookkeeping word being incorrect.

The only "spare" control word bits which may be set without adverse affect are the left-half of drum control word 1, which is not used, the right-half of tape control word 2 in a binary, ID write operation, where the entire word is transferred to tape, the right-half of tape control word 2 when reading binary tape but NOT storing the ID word, and byte 4 of tape control word 2 when reading and storing the ID word if there are an even number of one bits.

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