


Originally published in the April 5, 1979, issue of EDN

Conversion circuit handles binary or BCD

R Srinivasan, R Ramesh, and DK Murthi,
National Aeronautical Lab, Bangalore, India

Systems requiring arithmetic operations on data usually perform those operations in binary form. As a result, they must convert the data to BCD form for display purposes. Address-selection information from digit switches, on the other hand, must be converted to binary form for use in memory-addressing operations.

For applications not requiring fast conversion, a single circuit that can perform both conversions proves adequate. One such circuit (Figure 1) utilizes up/down counters to obtain the desired results. To perform binary-to-BCD conversion, preset the binary value in the binary counter and clear the BCD counter. The binary counter counts down while the BCD counter



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counts up, and when the binary counter reaches zero, the BCD counter holds. For BCD-to-binary operation, the BCD counter counts down from the BCD value while the binary counter counts up. EDN

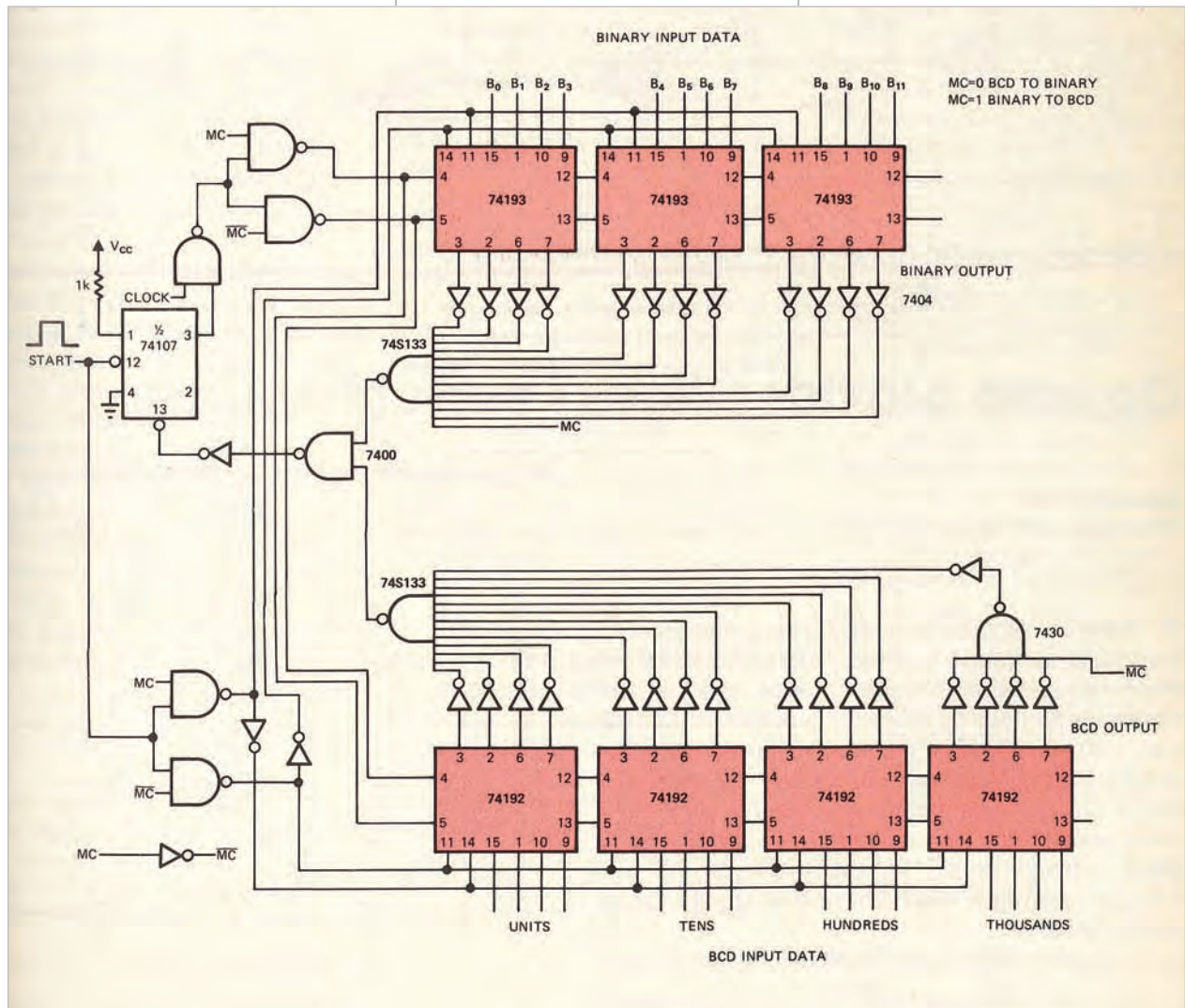


Figure 1 Separate binary and BCD up/down counters permit both binary-to-BCD and BCD-to-binary conversion in one circuit.