CIRCUIT IDEAS

Pulse generator

The number of pulses at the input of this circuit determines which output will produce one pulse. Input pulses can be applied by a push-button switch via a Schmitt trigger to remove contact bounce, or by other logic circuitry. The first positive edge triggers a monostable which disables the AND gate latches of the 7490 output. Every other positive edge retriggers the monostable and keeps the AND gates disabled until all of the negative edges have been counted by the 7490. The period of the monostable must be longer than the pulse width of the input. A b.c.d. output from the AND gates is decoded and the eight-input NAND gate resets the 7490 counter so that a single pulse is produced. The output can be applied to bistables for two-state control, or to counters for step-by-step control.

R. Champaneri
Sparkhill
Birmingham