the output ahead of it during subtraction. The add bus is normally positive; its
inversion is normally grounded. Either the look-ahead or look-behind gate is
inhibited, depending on the add-subtract command.

![Diagram of two-input gates decoding into ten lines]

**Fig. 7-6. Decoding of walking-ring decade counters.**

JK flip-flops may be used by first converting them into Type-D flip-flops by
providing an inverter between the S and C inputs. This change requires five
extra inverters, as shown in Fig. 7-7B.

**Programmable-Divide Walking Ring**

The programmable-divide circuit using a walking ring counter needs the basic
ring, a single-pole, ten-position selector switch, and a full monostable for
resetting (Fig. 7-8). The selector switch determines which negative going
transition will trip the monostable, produce an output, and reset the counter to
state zero. A full monostable is needed because one half of the selected
outputs will go positive upon reset, creating a self-annihilating coincidence.
The counter can be decoded in the normal manner if desired.