

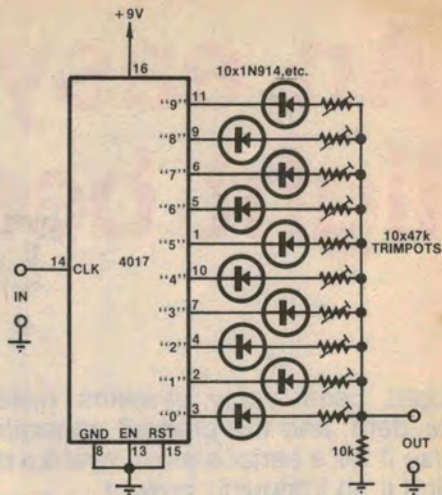
## CIRCUIT & DESIGN IDEAS

### Simple wave shaper uses one 4017 IC

This simple circuit uses only a CMOS 4017 IC, 10 1N914 (or similar) diodes and 10 47k trimpots. A square wave is fed into the "IN" terminal and a waveform one tenth of the input frequency appears at the output. The shape of the output waveform depends upon the settings of the trimpots. To make a stepped sawtooth wave appear at the output, each of the trimpots must be set in a steplike manner with respect to each other. A little experimenting along these lines will soon indicate how the trimpots should be set.

If say only six trimpots are required, disconnect pin 15 from ground and connect it to pin 5 ("6" output). In this way you may choose how many trimpots you want. However, the output frequency will vary accordingly. (In this case, for example, the output waveform will be one sixth of the input frequency). In either case, once the values of each of the trimpots has been determined, they may be replaced with fixed resistors if this is desired.

The input resistance of the following stage should be high, about 100k, to pre-



vent too much loading of the output.  
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