



Build Numeric Glow Tube DCU

Nixie Readout at \$15 per Decade

BY DON LANCASTER

NOW IT IS possible to build a high-speed, decimal counter module (complete with logic and Nixie[®] tube readout) at a cost of \$14.90 per decade. This counter, with speeds from d.c. to either 8 or 12 MHz (depending on the type of logic used), can be built with 2½ decades (0-199), 3½ decades (0-1999), or 4½ decades (0-19999) using a single printed circuit board. No mounting or front brackets are needed and there is a minimum of interconnections to be made.

The design provides an overflow indicator and latch which operate when full scale is exceeded. This function is useful for overrange indication or as a "turn-around" command on dual-slope DVM designs. Display blanking, in which the readout can be turned off or on by an external 0-2-volt d.c. control signal is also available. This feature eliminates

display bobble or blur and back-and-forth numeral motion during rapid counting.

There is also a self-contained "gate" input that permits turning the counters on and off and is useful for period or frequency measurements. This feature eliminates quite a bit of external circuitry.

You have a choice of the type of logic you use in building the DCU. If RTL is used, the unit is fully compatible with previous POPULAR ELECTRONICS projects. Or you can use Utilogic[®] (Signetics Corp.), a faster type of logic with a higher voltage swing that is compatible with industrial TTL and DTL circuits. Both types of logic cost the same.

The IC counters are "weighted" in the industrial 1-2-4-8 manner to provide electrical as well as visual outputs if de-