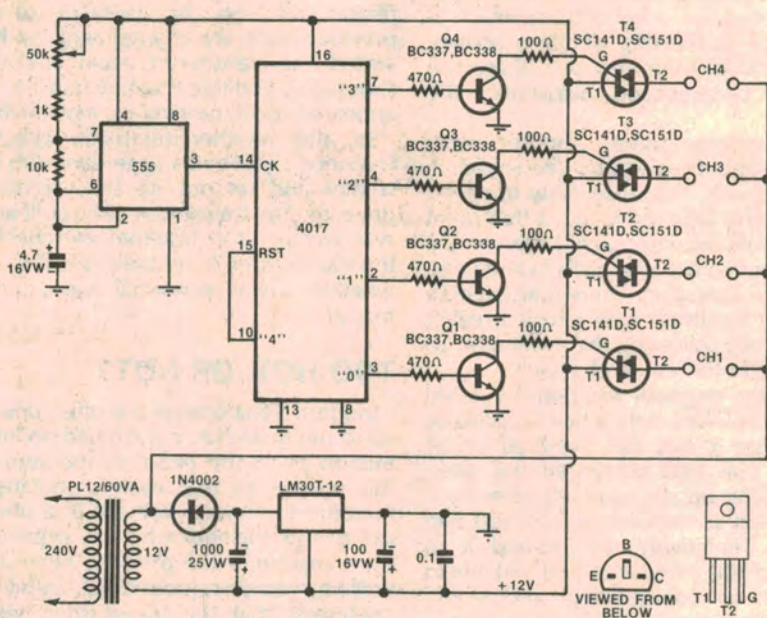


## Low voltage light chaser provides four separate outputs

The low voltage light chaser circuit shown provides four separate outputs suitable for driving 12V light globes. Lights in the chaser display can be connected in parallel and hence if any light in a particular channel fails, the other lights in that channel will still function. One advantage of the low operating voltage is that the circuit is quite safe to work on and there are no problems if the light display is accidentally broken.

As with most mains voltage light chasers we have used Triacs as the main switching elements, with gate triggering provided by transistors. The heart of the circuit is the 4017 which is a decade counter with decoded outputs. When the counter is clocked, each of the decoded outputs numbered from "0" to "9" turns on in sequence, with the other outputs all remaining off. We have connected the first four outputs to the trigger transistors Q1 to Q4 while the fifth output of the counter, "4", is connected back to the reset of the counter so outputs "0" to "3" turn on in sequence and thus turn on the triacs T1 to T4.

A simple 555 oscillator circuit provides the clock pulses to the counter. The frequency of the oscillator and hence the "speed" of the chaser is set by a 50k



potentiometer and 1k resistor in series, from pin 7 of the 555 to the +12V supply.

We used a Ferguson low profile transformer PL12/60VA in the circuit but any 12V transformer with sufficient VA rating for the load could be used. For ex-

ample, the 60VA transformer which we used should drive a load of around 60W per channel, (for example, 60 1W lights or 12 5W lights) or a total load of 240W for the four channels.

(By Ron de Jong, "Electronics Australia".)