

Light Chaser

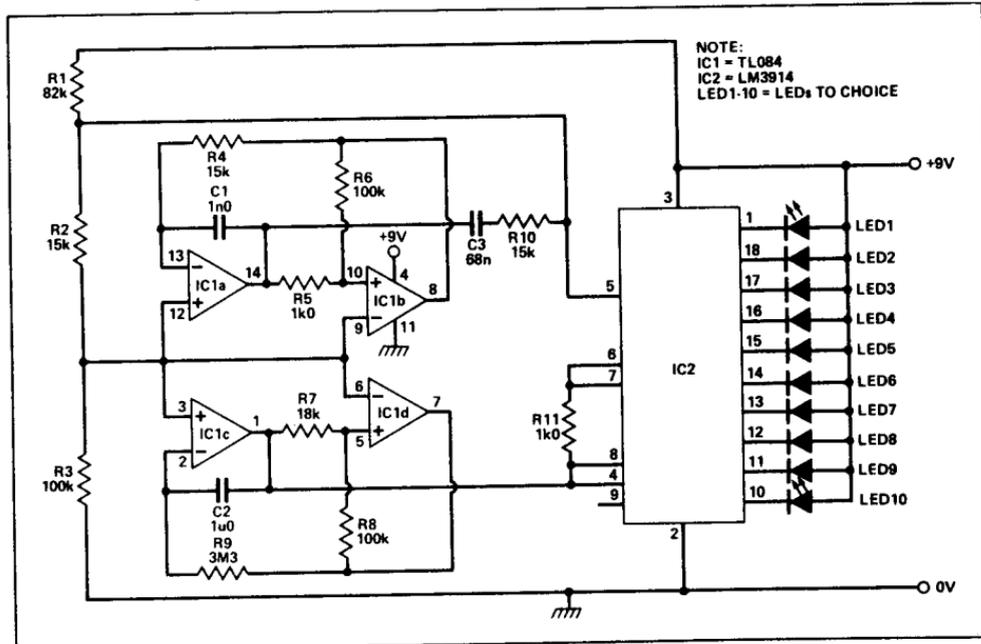
THE DISPLAY consists of ten red LEDs driven by an LM3914 linear bar-graph IC. This IC also contains a voltage reference source and all the necessary comparators to control the display.

In order to produce the smooth to-and-fro sweep two sections of a quad operational amplifier have been configured as a triangle wave generator. The output from this is applied to the lower

end of the voltage reference and comparator chain while the other end of the comparator chain is connected to the upper end of the voltage reference.

This means that reference voltage is sitting on top of the triangle wave generator and is being swept up and down past a reference applied to what is normally the signal input pin. This produces the basic back and forth sweep on the display.

As it stands so far the display would be jerky so some method of smoothing out the transition between adjacent LEDs is necessary. This is done by connecting up the remaining two sections of the quad op-amp to form another triangle wave generator operating at a much higher frequency. The output from this is mixed with the reference voltage to smear the display over two or three LEDs at a time. This makes the display much smoother and more realistic.



Designs By Phil Walker.