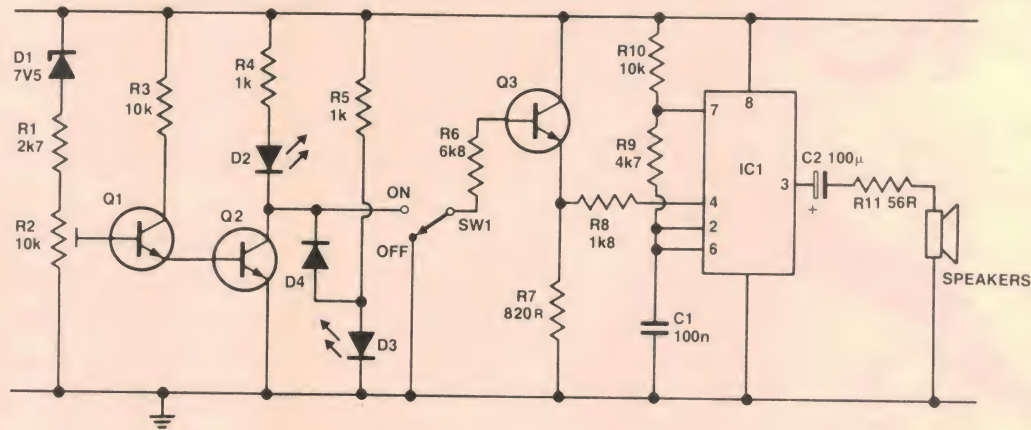


-V_{CC} (10 V-14 V)



Low voltage alarm

A little ingenuity should find numerous applications for this circuit. It was designed by **R. Sinclair** of **Arnccliffe, NSW** who says that it provided reliable service in an amateur station.

This circuit was originally used in conjunction with an automatic mains/battery dc supply for transceiver operation. It detected the drop in dc

voltage (mains supply normally 13.6 V, battery 12 V) to give visual and audio warnings of the voltage decrease.

It is suitable for any application requiring detection of a drop in normal dc supply voltage with the advantage of an audio warning. This would be particularly suitable in a vehicle where a visual indicator may be easily overlooked.

D1, R1 and R2 provide a

stable voltage reference and the preset R2 is adjusted so that D2 lights under normal conditions. D4 is then forward biased, keeping D3 off.

When the input supply causes a voltage drop across Q2, D3 turns off and Q3 now turns on through SW1. The voltage on pin 4 (reset) of the 555 goes positive, enabling the 555 which is connected as an astable. The frequency is varied by R9.

To disable the audio alarm function, SW1 is operated cutting Q3 off, but D3 will still give visual indication.

D1.....	7V5 400 mW Zener
D2.....	green LED
D3.....	red LED
D4.....	1N914
Q1, 2, 3.....	BC108
IC1.....	555 timer
SW1.....	SPDT toggle