



NEON NOVELTIES



THIS is the third of a series of short articles illustrating some of the many uses of neon lamps. The neons employed are all miniature wire-ended types as shown above.

Two examples which are ideally suited to these applications are those supplied by Radiospares (striking voltage 65 volts), and the Hivac type 3L general purpose neons. The latter type requires a striking voltage of 80 volts and maintaining voltage of 60 volts.

Some neon indicators have a resistor wired in series with one of the neon wires to make them suitable for mains voltages. These would normally be unsuitable for the circuits described unless the resistor is removed or short-circuited.

THREE

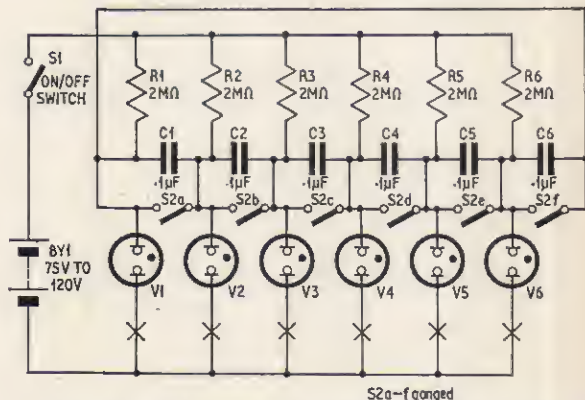
ELECTRONIC DICE by R. Bebbington

GRAD.I.E.R.E.

THIS is merely an extension of the "heads or tails" principle that was described last month. Six miniature neons are used in a ring circuit with six associated capacitors and resistors. When the battery is connected the neons will flash sequentially at a rate determined, as before, by the choice of the R-C time constants of the circuit.

In order to "freeze" the flashing, all six capacitors must be short circuited simultaneously and this is the only problem that the circuit presents. Any differences in the times taken for the separate contacts of the six-pole two-way switch to close will "load" the dice in favour of certain numbers. This is accentuated if the speed of flashing is rapid, so if this trouble is encountered then the values of the R-C networks should be increased.

A chassis type of construction is best for this circuit with the six neons inside peeping through six holes patterned in true dice-fashion on the uppermost surface. Since only one neon lights at any one time they will have to be numbered one to six. A wafer switch has been used successfully in this circuit, the contacts being doctored where necessary to ensure that all switches are "made" in the same time.



With the addition of six single contacts, this one will incorporate the panel game switch circuit, described previously. The "make" contacts should be inserted in each of the neon leads at the points marked with an "X". With the six-pole switch closed the circuit is functionally the same as the panel game switch described in the September issue.