

IN THIS feature we hope, from time to time, to be able to publish suggestions submitted by some of our readers on the possible improvement of projects previously described in PRACTICAL ELECTRONICS; short contributions on other subjects may be included. The aim is not to find fault or undermine the abilities or knowledge of our contributors. It may well be that the original article is *par excellence* but it could be improved or adapted to suit individual requirements. The views expressed by readers are not necessarily those of the Editor.

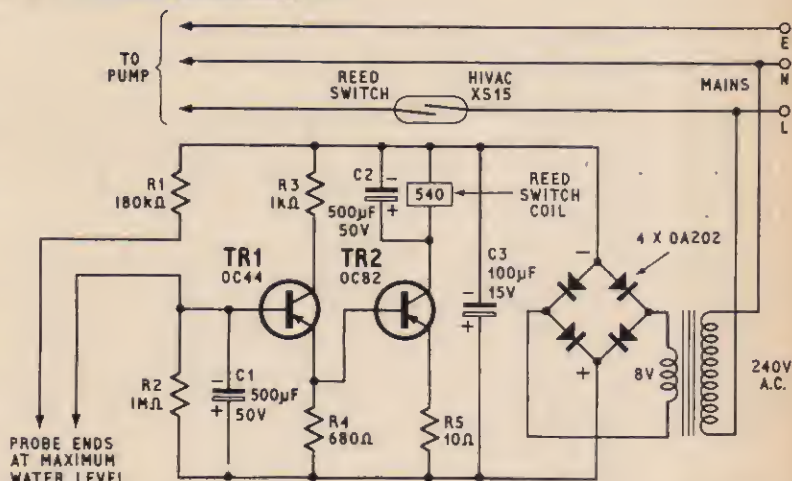
## AUTOMATIC WATER PUMP

THE following describes the adaptation of the P.E. *Parking Light* circuit to automatic operation of a water pump.

The circuit, adapted as shown in the diagram, includes a heavy duty reed switch which operates a mains water pump. No arc suppression is shown for the reed switch contacts as this would vary with the type of pump in use.

The capacitors C2 and C3 serve to form a time delay which keeps the pump running for 15 to 20 seconds after the probe has become dry. As a result of this, the cut-in and cut-out level can be kept very close; an advantage in this particular case.

The probes were simply the bared ends of a piece of twin plastic covered lighting flex. As little as  $\frac{1}{4}$  in bared is quite sufficient with the two ends about 1 in apart suspended at the required height to start the pump. The unit is extremely sensitive and has in practice been found to be very reliable.



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## OSCILLOSCOPE VISOR

I AM in the process of constructing the *Investigator Oscilloscope* described in your July and August issues. I have stumbled on the following adaption which produces pleasing results.

I was unable to find the aluminium tubing specified for the visor and tube support so I looked for a substitute. I was fortunate enough to find something which could have been specially made for the job. It consists of a part supplied with the new p.v.c. drainpipes and gutterings (see drawing). The first coincidence was that the narrow dimension of the tube was  $2\frac{1}{2}$  in as specified for the hole in front panel; the larger dimension was 3 in and has an attractive lip each end (this also assists glueing to the panel). The clip supplied with the tube is sawn at "X" as is the tube and the parts are then Araldited to back and front of the panel respectively.

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