

HOBBY SCENE



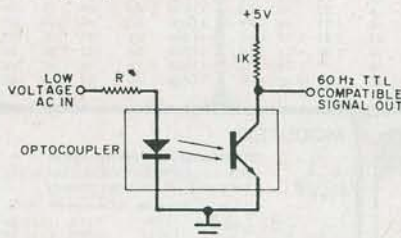
By Joe Desposito

ANOTHER TTL TRIGGER

In the March issue, we gave a circuit for obtaining a 60-Hz, TTL compatible signal. Reader John Wettroth sends the following comments:

Your circuit was fine, but there is an easier way to do it as shown below.

R^* must be chosen to give the required current through the LED for reliable operation. For example, using a typical power-supply transformer delivering 7.5 V ac and a 15-mA diode current (sufficient for most optocouplers), R^* is approximately equal to 0.5 kilohms.



Some other nice features of the circuit are: 1) by connecting two of the above circuits to the same ac input with their diodes reversed, two signals 180° out of phase can be obtained; 2) if you use a neon-input optocoupler (Clairex makes many or a hobbyist could build one), the idea would work directly from the line and is isolated! It might be necessary to also insert a diode in series with the neon lamp or you'll get a 120-Hz output (desirable for some designs).

One thing to watch is the maximum reverse voltage on the LED in

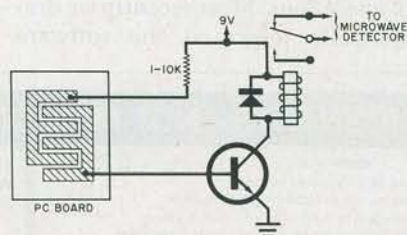
the isolator (many are about 5 V). This is easily remedied with a series conventional diode or a parallel reverse-biased diode.

Thanks for the contribution.

MICROWAVE SHUTOFF

Q. I have several microwave detectors outside to let me know when someone approaches the front or back doors of the house. However, they will give a "false" alarm when it rains. I need a circuit that can turn off power to the detectors when it is raining hard enough to make them false. When the rain stops, the power would be restored.—R.J., Clayton, MO.

A. A simple way to detect rainfall is with the transistor circuit shown be-



low. Connect the two wires to a pc board that has an interleaved pattern. Mount the board on an angle. When it rains, the wires will conduct, turn the transistor on, and energize the relay.

CAPACITOR RATINGS

Q. I am building a project and need a capacitor that can carry 3 A at 125 V. I can find capacitors rated for 125 V but how can I find one that will carry 3 A?—Jerry R. Lane, New York, N.Y.

A. Don't knock yourself out looking for current ratings on capacitors—they don't exist. If you can find a capacitor with the correct voltage rating, use it.

Have a problem or question in circuitry, components, parts availability, etc.? Send it to the Hobby Scene Editor, COMPUTERS & ELECTRONICS, One Park Ave., New York, NY 10016. Though all letters can't be answered individually, those with wide interest will be published.