

HAVE YOU EVER MISSED AN IMPORTANT telephone call because you were in your basement or garage and didn't hear the phone ring? Or perhaps you heard it ring, but you heard it too late and, although you rushed as fast as you could, you couldn't get to the phone in time. And, even if the call is not important, missing it by a few seconds can be, to say the least, annoying.

Of course one solution to the problem is to stay near the phone when you are expecting a call. (Unfortunately, that doesn't work if you get an important call when you're not expecting it.) Yet there is another solution—the remote telephone ringer that we'll discuss here.

The ringer that we'll describe solves the problem of incompatibility between telephone equipment and a conventional AC alarm bell or 110-volt electric light outlet.

wire it into the phone itself. If you decide to do that, all you have to wire it in parallel with the phone's bell. The circuit is centered around the two neon bulbs, NE1 and NE2. Those bulbs will light when more than 100 volts is across the ringing circuit. The bulbs also provide line isolation between the unit and the telephone line. Finally, they act as a voltage divider for the bridge rectifier made up of D1-D4. That creates a positive voltage that is then applied through D5, is filtered by R2, R3 and C2, and causes Q1 and Q2 to conduct. When that happens, triac TR1 is fired through the optical coupler IC1. Using the optical coupler assures that the load is isolated from the telephone lines—an important consideration.

None of the parts used in the circuit are very critical and any wiring method can be used. And many of them, including the triac, optical coupler, neon bulbs, and

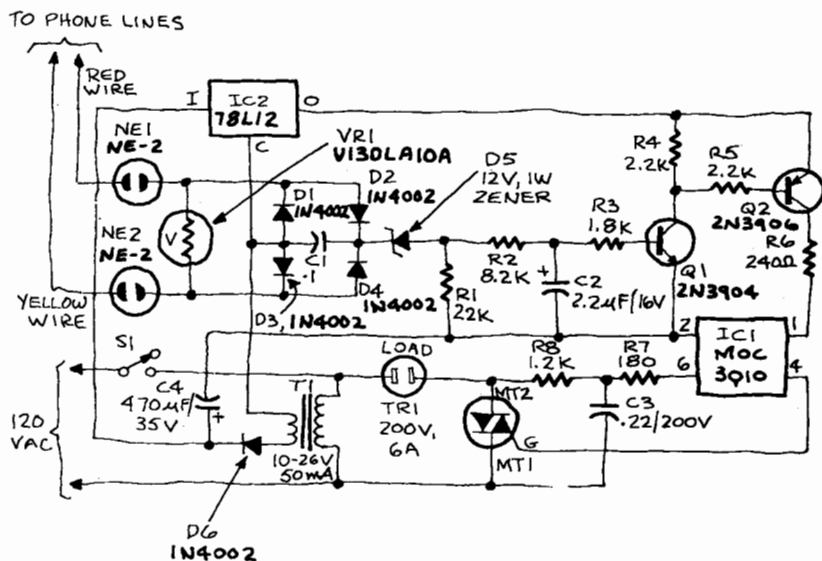


FIG. 1

Why do I mention the electric light outlet? Well, for the hearing impaired, a light is an excellent way to signal a telephone call. It might also be a good idea, say, in a workshop. It's easier to see a light than to hear a bell when you're running a power tool.

To hook up the circuit (its schematic is shown in Fig. 1), you can wire it to an existing junction box. An alternative is to

VR1 transient protector can be found at Radio Shack. The voltage of the transformer's secondary can be anywhere between 10 and 26 volts.

Before we go, we should make one final note: It is advisable to check with your local telephone company to make sure that you follow the area's rules and regulations regarding the use of such an extension ringer.—Craig K. Sellen