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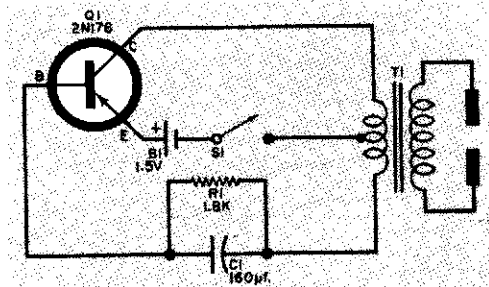
*Tickler or stimulator—
take your pick;
once you grab it,
you'll let go quick*

By FAIRIS S. BURT



ONE LOOK at the foil-covered electronic stimulator is enough to give you the creeps. Do you have enough guts to hold onto it with both hands? Under that shiny aluminum "skin" beats a "stout heart" with enough zip to pulse your muscles without so much as moving a finger. After your first reaction, if you are still holding on, you will feel great—especially after you let go. While it may come as a shock to you, the stimulator is completely safe; there's no dangerous high voltage or current to worry about.

How It Works. Pulses generated by a simple single-transistor modified Hartley oscillator are transformer-coupled by a reverse-connected filament transformer to a couple of electrodes. Resistor *R1* and capacitor *C1* determine the frequen-



Unusual application of filament transformer steps up Q1's pulse output to excite the electrodes—and any one who happens to be holding on to them.

cy of the pulses; changing the values of either of these components or changing battery voltage will change the frequency. Different frequencies create different effects.
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ferent sensations, but it's best to stick to the values given in the Parts List.

Construction. All components are mounted inside a cardboard tube about 9" long and 2½" in diameter. End plugs for the tube can be fashioned from styrofoam plastic such as that used in packaging. They can easily be cut to shape with a small knife. (If you can't get styrofoam, you can use wood, metal, or even cardboard.) Hollow out one plug to hold the on-off switch. Then drill a ¼" hole ½" from each end of the tube to accommodate the wires for the electrodes.

Follow the pictorial diagram when wiring the unit. Note that the transistor is mounted directly onto the transformer mounting flange and the flange is bent upward slightly to allow clearance when you insert the circuit into the tube.

Use long leads between the components and the tube to allow for the removal and replacement of the entire electronic package, or just removal of the battery. Leads of 8" or more should be used to connect *T1*'s center tap to *S1*, the emitter of *Q1* to the battery holder, and one side of the secondary winding of *T1* to the cardboard tube. The other side of *T1*'s secondary should be made about 12" long. Strip about 3" of insulation from the 8" and 12" leads attached to the primary winding of *T1*, and insert one lead through the hole in the one end of the cardboard tube and the other lead in the other end of the tube.

Wrap the leads around the tube at each end once or twice.

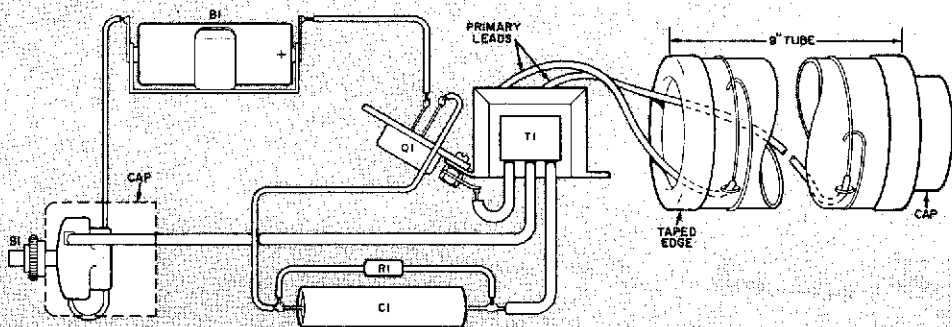
Now cut two 4" x 14" strips of aluminum foil and roll them "squarely" over the tube flush with the ends of the tube, leaving a 1" separation in the middle as shown in the photo on page 82. To obtain good electrical contact with the bared wires coming from the inside of the tube, roll the aluminum foil on tight, smooth and squeeze out any trapped air, and tape the ends. Each strip of foil must make contact with only one lead. Incidentally, a good source of aluminum foil is your local grocery store.

Using the Stimulator. After you insert the circuitry into the tube, tissue or other soft filler can be stuffed in to keep the works in place. Cap the two ends of the tube with the styrofoam, and you're ready to go into the shocking business.

Push the button, hold on to the two aluminum electrodes and you'll feel that stimulating flow of current travel up your arms. Then try it out on your friends. Stimulation, anyone? -30-

PARTS LIST

- B1*—1.5-volt battery
- C1*—160- μ l., 10-volt electrolytic capacitor
- Q1*—2N176 transistor (or equivalent)
- R1*—1800-ohm, ½-watt resistor
- S1*—S.p.s.t. switch
- T1*—Filament transformer: 117-volt primary, 6.3-volt CT secondary (Thoradson 21F09 or equivalent)
- 1—9" x 2½" cardboard tube (approx.)
- Misc.—Aluminum foil, wire, solder, etc.



All components, including battery, fit into cardboard tube. Primary leads from *T1* pass through inside of tube to the outside, and are covered with foil. About 1" of space separates the 4"-wide electrodes.