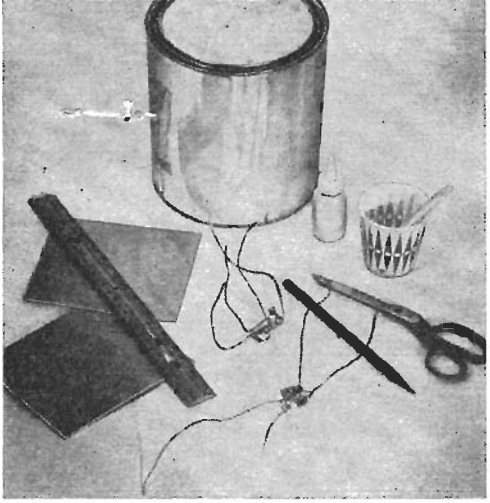
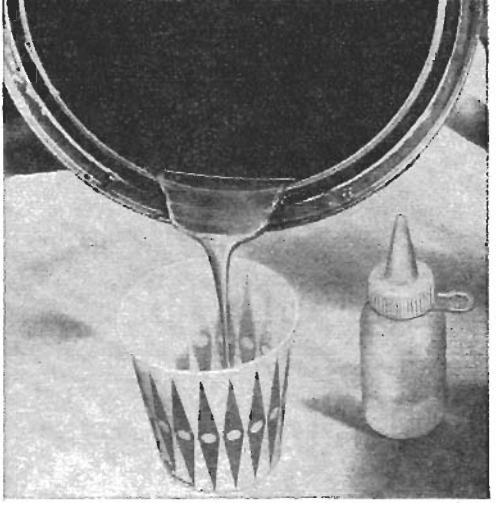


Except for epoxy resin compound and hardener (in can and small bottle at top), all materials used in circuit potting are common household items.



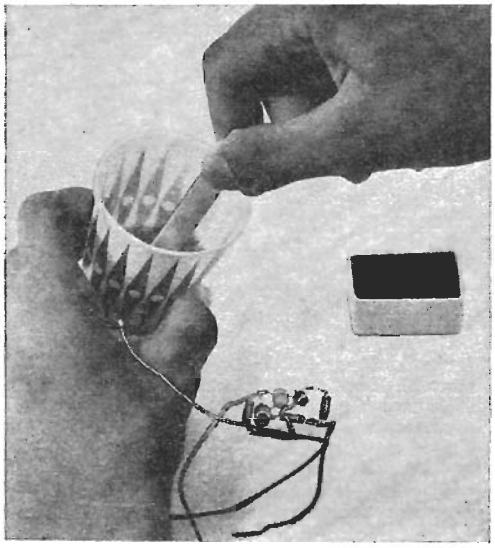
Using wood stirrer and paper cup, mix just enough resin compound and hardener to pot circuit adequately. (See mixing instructions on resin can.)

ENCAPSULATE YOUR CIRCUITS

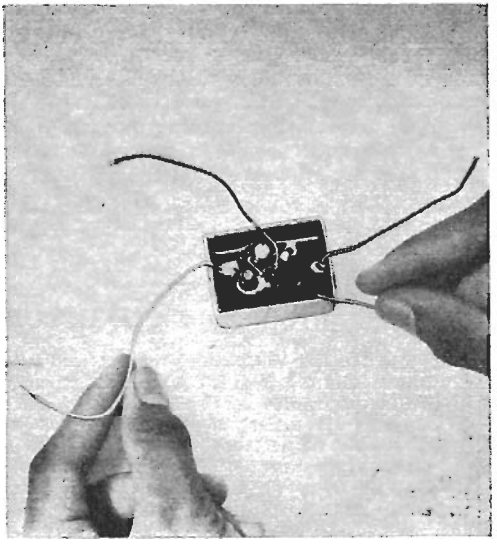
BY ALBERT H. COYA

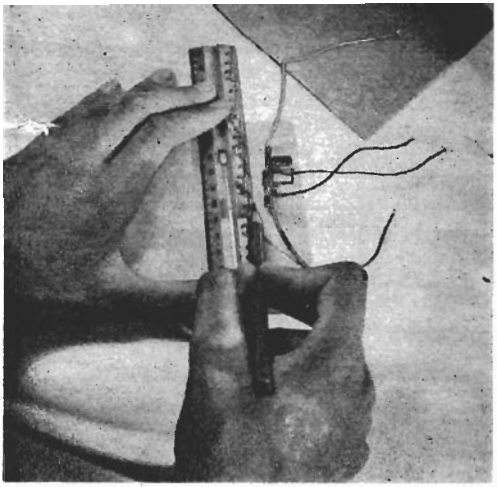
IF YOU'RE tired of making printed circuit boards for your simpler projects, why not borrow the casting technique some electronics manufacturers use for their experimenter modules? In addition to being inexpensive, the casting technique produces a finished circuit that is immune to moisture and foreign matter and is much more durable than either printed or chassis wired circuits.

After checking self-supporting circuit for shorts, being sure all components are in a single plane, stir the potting compound once more before pouring.



Set circuit into the form and pour in enough potting compound to cover half way. Orient leads as desired. Then pour in the rest of the compound.





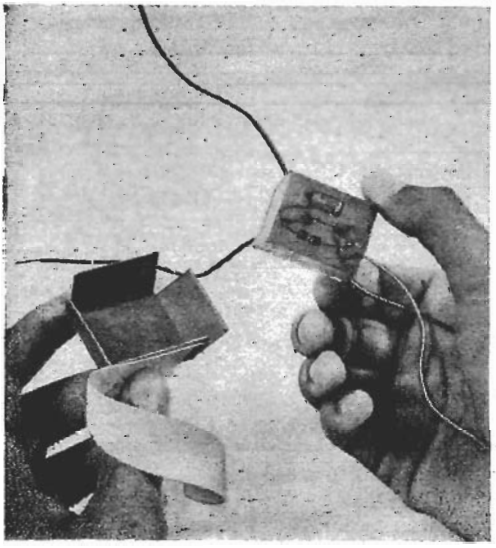
Next, prepare your potting form from lightweight cardboard (allow 1/4" clearance on all sides of the circuit) and secure the edges with masking tape.

To prevent potting compound from adhering to form, liberally coat all interior surfaces of the form with Vaseline using a brush or a scrap stirrer.

Commercially available modules are commonly cast in a black opaque epoxy resin. But for your purposes, the crystal-clear resin available from most marine supply stores is preferable. The clear resin allows you to read color codes and identifying numbers of components and to trace out the circuit if your module ever has to be replaced or reproduced.

Circuit construction inside the block of resin is simple. After assembling the circuit, making it self supporting and as compact as possible, check that the components are oriented so that their value coding and markings are unobstructed. Make sure that no unwanted short circuits exist and that all joints are properly soldered. Now you're ready to encapsulate the circuit following the instructions in the photos and captions.

After allowing enough time for compound to set, remove the circuit from the form; discard form. Clean away Vaseline, and circuit is ready to use.



Crystal-clear block permits you to trace circuit, interpret color codes, and—if components are properly oriented—even read identification numbers.