

# TESTBENCH TIPS

## Tip on a Tip

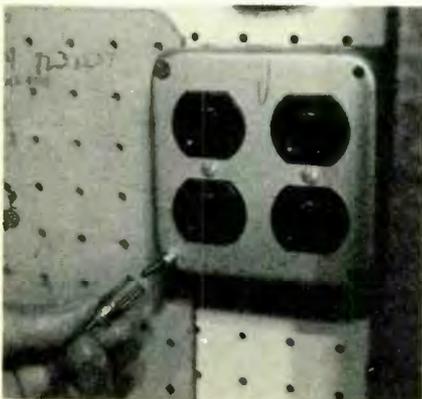
Some printed-circuit boards are so delicate that anything more than a touch of heat will destroy the copper foils. If you're stuck with a *monster* soldering iron, and you can't wait to make repairs, wrap a length of #20 or #22 bare solid wire into a tight spiral around the tip of your soldering iron and extend one end about an inch beyond the iron's regular tip.



Plug the iron in, and after a few minutes you'll have a *needle-point* soldering tip suitable for delicate repairs. To prevent the wire tip from moving backward when pressed against a connection, stretch the spiral so that the end is right up against the body of the soldering iron. The spiral serves as a spring, producing a slight *give* as the tip is pressed against the foil surface. —L.M., Price, UT

## Shocker Stopper

Modern electronics hardware is so sensitive to static electricity that very often you have to connect yourself, the tools you're using, or the equipment being repaired to an electrical ground. If you in-



stall a banana plug on the cover of a grounded electrical box you get the ground connection almost instantly. The plug will hold an alligator clip; you can just wrap several turns of a *ground wire* around the plug; you can attach the wires from your *grounding bracelet* to a banana jack for quick connect/disconnect, or even use a VOM's test lead for a ground wire by placing a banana jack-to-jack adapter on the test lead's plug. However you do it, having a ground plug mounted on an outlet box's cover is a lot easier and safer than trying to wedge a clip lead under the metallic cover.

—S.J., Silver City, NM

## Shock Absorber

Polyester clothes, carpet on the floor, household pets: They all cause static electricity—which can instantaneously *zap* a home computer's memory or a disk. I eliminated the problem by placing a piece of grounded conductive foam adjacent to the computer. (The pad is grounded by a short length of wire connected between



the pad and the nearest electrical ground.) Prior to touching the computer or its accessories, I brush my fingers against the pad, instantly discharging any static voltage I might have accumulated. The conductive foam is the stuff used to store or ship integrated circuits. Many electronics shops sell small sections, or will give the scraps away at no charge.

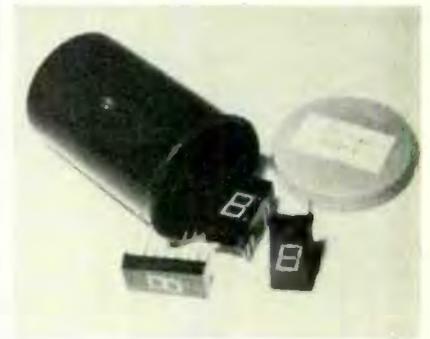
—A.B., Twin Falls, ID

## Film Containers

Those little black or gray plastic containers that protect 35-millimeter film car-

The very next time you come up with a simple, but clever, idea that helps you build a better project, or do a better job of installing, or testing, a project, let us know about it. Put your idea on paper (typewrite it), spelling out the details on one sheet. Take a black-and-white photo of the idea in action and send it to the Editor. (Color photos lose too much contrast.) If your tip is used in this column, you will receive a check for \$20. Sorry, we will be unable to return your tip or photo, and all entries become the property of **Hands-on Electronics**. Send all mail to **Hands-on Electronics Testbench Tips**, Room 1101, 200 Park Avenue South, New York, New York 10003.

tridges are handy storage containers for small parts in your junkbox. For example, the photo shows a container used to store delicate LED displays. Those DIP de-



vices, like other DIP chips, are prone to pin damage when stored in a bigger container where the weight of other parts will bend the pins. Also, with the lid of the container marked to indicate the contents, the experimenter will have no trouble finding the desired part quickly!

—K.O., Macon, GA

## Polarized Connector

Polarized connectors are all around the workbench, and still the experimenter purchases them for each project. Use the matching connectors for a DC power plug-pack and a damaged calculator. Salvage the connector in the calculator and tape it to the plug-pack. That way, when the time comes, the power plug-pack can be connected to a project with its original mating connector. Should the plug-pack and the calculator both be defective, then snip off the defective parts leaving as much cable length as possible attached to molded parts. Store in a safe place, and the day will come—not too far away—when you'll be using the polarized connectors. —D.F., Muskogee, OK