

Turn Your Tap Light Into a Switch

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Inexpensive tap lights are a great starting point for homemade switches. You'll use the existing button switch that comes inside the tap light. Please note that these switches latch, meaning they stay in the "on" position until they are pressed again, which is different from how most pressure switches operate. Adapted tap light switches do not require batteries.

There are a few different ways tap lights might be wired, but this handout will walk you through the steps for adapting the most common type. These instructions assume you already have a basic understanding of stripping wire and soldering. As always, take precautions when soldering to protect yourself and your work surface.

Materials needed:

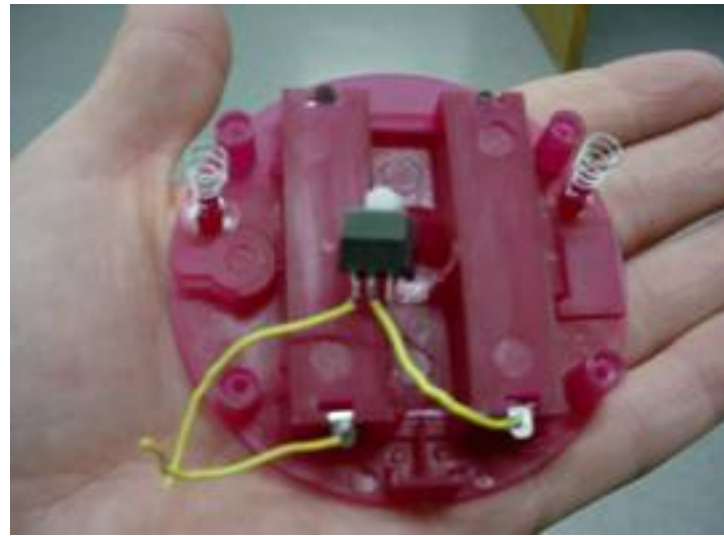
- Tap light
- Protected surface for soldering
- Soldering iron
- Standard 60/40 rosin-core solder (Radio Shack #64-009 E)
- 22-gauge 2-conductor speaker wire (Radio Shack #278-1385)
- Wire stripper
- 1/8" male mono phone plug (Radio Shack #274-286)
- Masking tape
- Scissors
- Small screwdriver
- Sharpie Marker
- Notching file



- 1 Remove the batteries. Turn the light over and remove the screws that hold it together. Take the top off and set it aside. The bottom should look like something like the picture on the right.



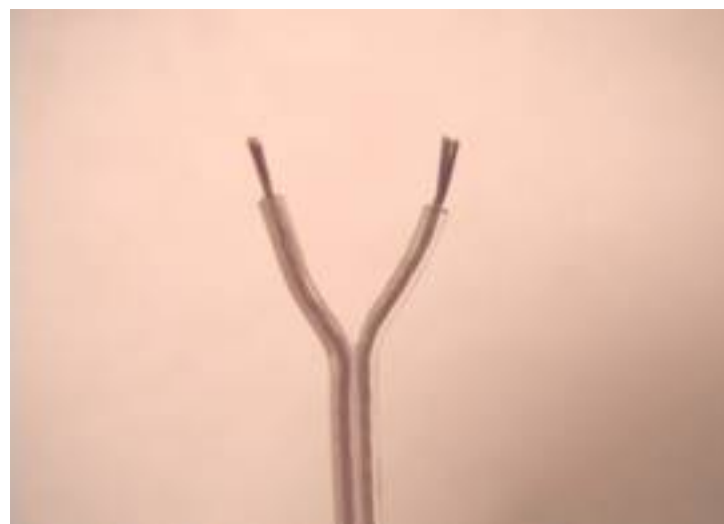
- 2** Remove the light bulb and cut the wires that attach to it. Pull the switch up out of its slot.



- 3** The push-button switch has 3 prongs but the existing wires are only connected to 2 of them. Mark those 2 prongs with a marker or piece of tape. Cut the existing wires. The switch should be free now for you to move to a protected surface for soldering.



- 4** Cut speaker wire to the desired length (most switches have about 24" cords). Separate the strands on one end and strip about 1/8" to 1/4" of the plastic off both strands.



- 5** Tape the switch down. Solder the 2 strands to the 2 switch prongs that you marked in Step 3. The picture to the left shows the first of the 2 strands soldered to the first prong.



- 6** Put the switch back into the tap light. You won't need batteries for your new switch, so you may be able to feed the speaker wire cord out through the battery compartment. If not, use a file to make a notch for the cord to go through. Replace the top of the tap light and screw the case back together.

- 7** Remove the cap from your plug and slide it onto the cord. Separate the

end of the wire and strip about 1/8" to 1/4" of the plastic. Solder the wire to the plug.



8 Screw the cap back over the plug. You're ready to try it out!

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