



## MAKING A SOFT SINGLE SWITCH

A Very Inexpensive Single Switch You Can Make at Home

By Niall Brown, Administrator, [DeafBlindResources.org](http://DeafBlindResources.org)

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**CAUTION:** Like some store bought switches, the ones produced in this document can be torn open exposing the small switch. The small back switch and the mini plug are both choking hazards. **DO NOT LEAVE THE SWITCH UNATTENDED.** (Note that this is not specific to these switches, it applies to store bought ones as well).

**Please use your judgment when giving this or any switch to an individual. Do they break or rip toys? Are they likely put something in their mouth?**

The two conditions of making this switch are that you please:

1. Write in marker on the back: SUPERVISED USE ONLY
2. Store the switch in a safe place that is out of reach of the individual. The individual can ask for the switch using a cue (like an empty case) rather than the real object.

**Cleaning:** If the individuals using the switch may drip saliva on it, consider buying a CD case that is made of plastic that doesn't allow moisture to penetrate the surface.

If you choose the soft cloth CD case, it can be cleaned of finger grime by using a mist of diluted “Dettol Antiseptic Disinfectant Liquid.”

### You will need:

- CD Case (Must have a hard plastic under the cloth or plastic cover. The zipper must have exposed cloth edges that you can sew into)



- Mini Plug 1/4"



Tact Switch



- Wire (Must have two wires attached together, like speaker wire)



- Cloth Ribbon (should be just the right width to cover the zipper and be sewn onto the zippers cloth edges.)
- Needle and thread
- Glue Gun



- Wire Strippers or Cutters



- Pliers



- Scissors



## Instructions:

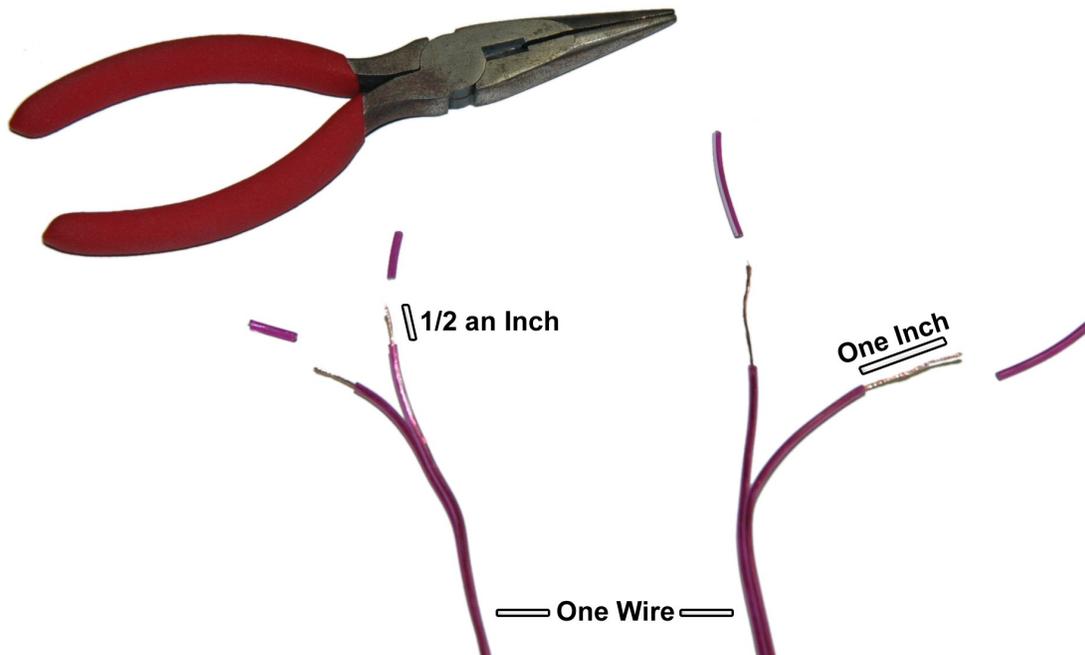
1. Open CD case to reveal CD slips.



2. Rip or cut out the CD slips.



3. Trim ends of wire. The wires on one end should be trimmed about one Inch long. The wires on the other end should be trimmed  $\frac{1}{2}$  an Inch long.



4. Expose the hookups for the  $\frac{1}{4}$  inch mini plug by holding the housing in your left hand and twisting the thin connector counter clockwise.

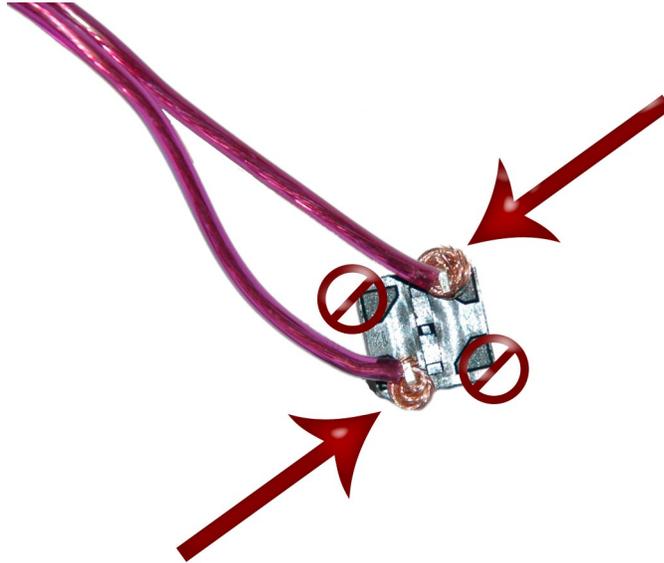


5. Push the trimmed wire (the  $\frac{1}{2}$  inch end) through mini plug housing, through the plastic insert (included inside housing), then attach both trimmed wires to the two mini plug hookups by pushing them through the holes and twisting it around the hookups.



6. Attach the other end of the wire to the tact switch. The wires must be attached on the opposing hookups (kitty corner). Twist the bare wire around the hookup as many times as possible then crimp the hookup with pliers over the wire. Clip off the unused hookups by gently

grasping them with pliers and twisting or sniping them off with wire cutters.



7. If you have a switch device test that the unit is working before continuing. If the device activates when you're not pressing the button you have a short circuit. You should open the mini plug and check that no wires are touching. If they are you can place a small 1cm X 1cm scrap of paper between the hookups. If the device is activating only when you press the switch you may continue to step 8.
8. Glue the switch inside the CD case with the cord exiting out the opening that will be available when the zipper is closed. Before gluing test the switch by placing the tact switch face up in the case and pressing the lid down, listen for a "click" sound. If the case is too deep glue a small square object under it. In the image below several layers of double-sided tape were used to increase the height of the tact switch.



9. Zip up the Case and snip off the zipper tab, do a final test.



10. Sew ribbon by putting the needle through the cloth edges of the zipper on the CD case.



11. The sewing is tricky and may not look great but ensure that it is sturdy so that it cannot be opened easily. It may be a good idea to do several layers if the switch may be used with an individual who will be rough with it.



12. Your final product will look something like this.

