

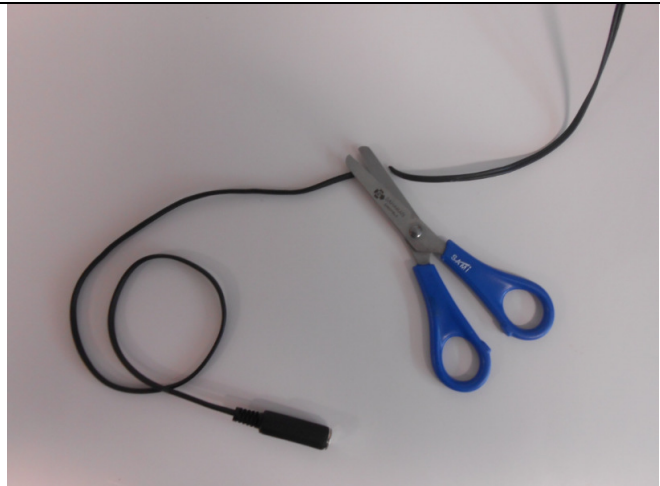
How to make a £10 battery interrupter for £1 or less.

Things you will need.

- (1) A battery operated toy. Simple ones which go when you turn them on and stop when you turn them off are best.
- (2) A stereo extension lead, (less than £1 online).
- (3) Wire cutters/strippers.
- (4) Scissors.
- (5) A small triangular file.
- (6) Adhesive copper tape, (this can be found as slug barrier tape in the gardening sections of most bargain stores or online, 1m of tape makes approx. 50 battery interrupters).
- (7) Some thin clear plastic such as the packaging from soft fruits, tomatoes etc.



Cut off the male (pin) end of the extension lead leaving about 30cm of wire attached to the female (socket) end. The male end is not needed so can be discarded.



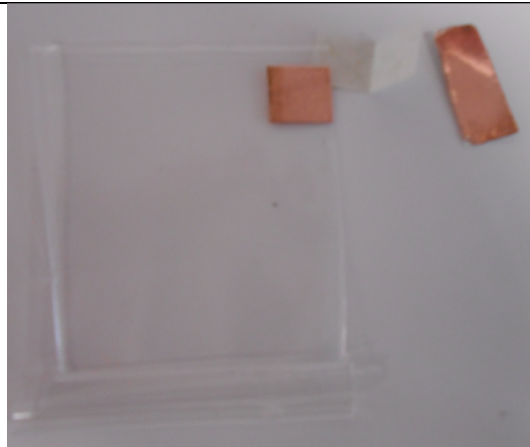
The cable is usually made of two plastic coated wires side by side. Strip off a bit less than 1cm of the plastic coating on each wire to reveal the metal wire inside. Fan out the wire strands on each wire so they form a flat fan shape.



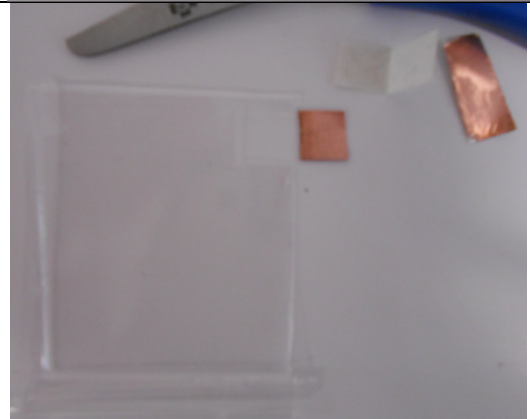
Next, cut two 1cm wide strips from the end of the copper tape.



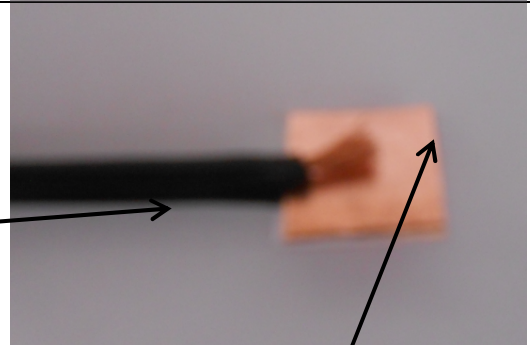
Remove the backing from one strip of copper tape and carefully fold it over the edge of the clear plastic so that both sides are as equal as you can get them.



Cut out your double sided, copper coated wafer, taking care to leave a tiny border around the edges.

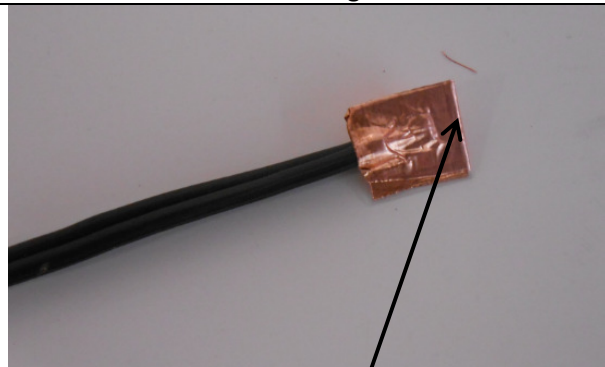


Place the copper wafer between the two fanned out wires making sure that the edge with the tape folded over it is opposite the wire. It's important that the wires don't touch each other so make sure that a little of the plastic coating on the wires overlaps the copper wafer. It's also a good idea to flatten this bit of plastic coating using the crimping part of your wire cutters. This will make it easier to fit between the battery terminals later.



Folded edge.

Remove the backing from the other piece of copper tape and carefully fold it over the edge of the copper wafer so that both sides and all of the wire are covered.



Folded edge.

Trim off the edge of the copper wafer where the copper tape is folded over.
It is very important that neither the wires nor the copper tape on either side of the wafer touch each other so check carefully to make sure that they are completely separated from each other by the piece of plastic packaging.



Open the battery compartment on your toy.



Position the copper wafer between the end of a battery and the terminal inside the battery compartment.
It makes no difference which battery or which end, it will still work.
If you need to you can trim the wafer to fit, just make sure that you check that none of the wires or copper tape from either side are touching afterwards.



Using a file, cut a notch in the casing where the wire will come out. This will allow the battery compartment door to close and stop the wire from becoming trapped and damaged.



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Close the battery compartment door.
Turn on the toy; if you have been successful the toy should remain off even though you have switched it on.



Plug in a switch and press; the toy should work while ever the switch is being pressed. (Direct access).
If you want the switch to turn the toy on then off again, (Latched) you will need a Switch Latch Timer.
If you want the toy to work for a short period then stop until the switch is pressed again, (Timed) you can also use a Switch Latch Timer or plug in via a Big Mack with a blank message on it. The toy will operate for as long as the message runs.



Troubleshooting.

The toy operates when the battery interrupter is in place but the switch is either not attached or not pressed.
This happens when an unwanted connection is made. Check that the interrupter is inserted correctly so that the end of the battery is not in contact with the terminal.
Check that there is no connection between both sides of the copper wafer, sometimes running a knife around the edges of the wafer helps.

The toy does not operate when the switch is pressed.

- Is the toy switched on?
- Is the toy broken? Does it work without the battery interrupter?
- Check the batteries. Are they flat?
- Check the switch. Does it work with another toy?