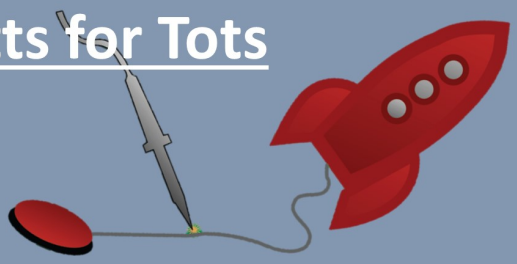
Watts for Tots



A Beginner's Guide to Adapting Toys for Kiddos with Special Needs

Written by Daniel Cavender, Laura Schertz, & Kate Moseley

You'll quickly learn that every toy is different. Many do more than one thing, & some have more than one switch. So, we wrote these general instructions to guide you through the process. Ready?

1. Get Your Tools Together

There are some important tools you'll need before you start. We have provided them for you.

- Screwdriver
- Scissors
- Wire cutter
- Wire stripper
- Soldering iron
- Solder
- Flux
- Electrical tape
- Female connector
- Super glue (optional)

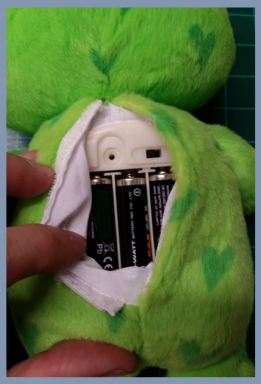
You may have not used some of these tools before, but don't fear. We can teach you some basic soldering & electrical wiring.

2. Play with the Toy

By playing with the toy, you are also learning how it is made. What does it do, & how is it turned on? Where are the *squeeze me's* or *press me's*? That is where the switch will be. Are there more than one? If so, you may have to choose to modify one, some, or all the switches, or find an easier toy to adapt if you're new at this.

3. Make a Plan in your Head

You are about to perform major surgery on a toy, so think about how you will get inside & modify it without hurting it. *Do No Harm* is the motto. Most of the toys have an easy way to get to the battery. You may be able to get to the switch or the wires in that area. Also, you may be able to use the switch already in the toy, so try not to cut it out or break it before you know. Think about where you want the switch connector to come out of the toy. You may bring it out the back, the bottom, or even a foot.



4. Safety First

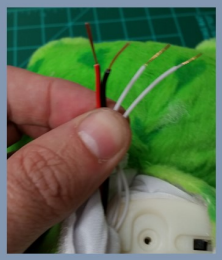
Take the batteries out of the toy. If you don't, you may be in for a shock. You may need a screw driver. Oh, & don't lose the screws & stuff that you take off. You will need them again when you put the toy back together.

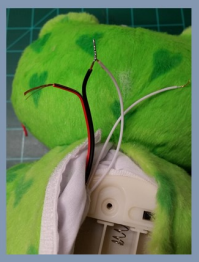
5. Find the Wires & Switch

Once you find a way to work inside the toy, you'll be looking for a pair of wires going to each switch. You may be able to flip some of the toy inside-out or remove some stuffing to make it work easier. If you can see the switch & can pull it out, then do that. If you can't, then leave the switch there & cut the wires just above it with wire cutters or scissors.

6. Add Female Connector

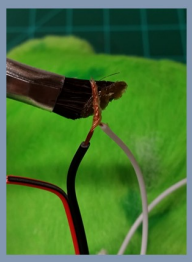
This is where stuff gets fun, & by fun, we mean harder. But, you'll do just fine. Feed the female connector into the toy where you have planned. Use wire strippers to strip about a finger's width of the plastic insulation off each wire. Do the same to the female connector's wires. Pair one wire coming from the toy's battery pack with one wire from the female connector & twist them together. Do the same with the remaining two wires.

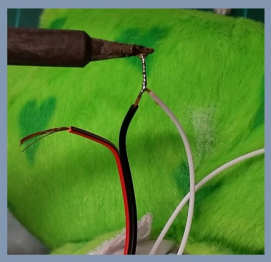


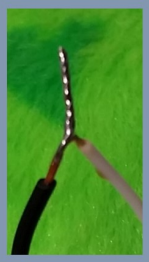


7. Solder Wires Together

Wipe some solder flux onto a pair of twister wires. Add some solder onto the soldering iron tip & place against the flux-covered twisted wire pair. You'll see the solder wick over to coat the wires. There will be a little smoke as the flux burns away, but it won't hurt you. Use the wire cutters to trim the wires a bit. Do all this again for each wire pair.







8. Tape the Wires

You'll need to cover the wires with electrical tape. This will stop them from *shorting*. Wrap a small strip of electrical tape around each wire & cover all of the bare wire. You're almost done!

9. Put It Back Together

Push all the stuffing & wires back inside the toy. Parts that you took off earlier need to go back on. A little bit of super glue can act like stitches if you had to cut your way into the toy. Lastly, put the batteries back in the toy.

10. Play with the Toy Again!

Plug in a switch & try it out. Does it work? We bet it does. Because you did it! You just made some lucky kiddo's Christmas more special. Thank you. Now, on to the next toy!

TASC UCP United Cerebral Palsy of Huntsville & Tennessee Valley, Inc. Life without limits for people with disabilities AIAA