

# How to Adapt a Toy

## 1. Toy Selection

Please choose a toy to adapt. Consider the toy's exterior. Is it a plastic toy or a fabric toy? These two types of toys will require different disassembly (unscrewing or seam ripping) and reassembly techniques.

## 2. Toy Assessment

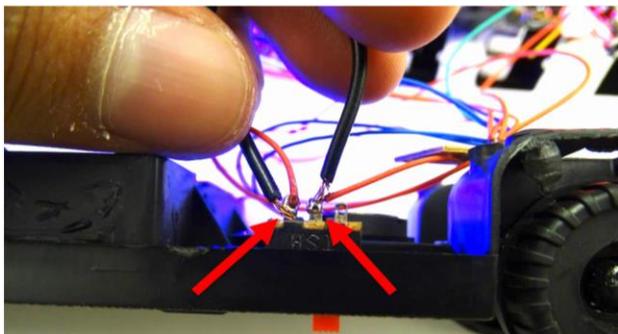
Remove the toy from the box. Examine how the toy is activated (a button, remote, etc.) and what it does (movement, lights, sound). Decide which function is most appropriate for adaptation. If the toy does not activate, try new batteries.

## 3. Toy Disassembly

Take the necessary section of the toy apart to find the circuitry controlling the selected function. This typically includes unscrewing or seam ripping. Do this carefully because you will need to put it back together!

## 4. Preliminary Testing

Use a test wire to find what two points complete the circuit to activate the function you've selected. See picture below. Do not attach the battery directly to anything else in the circuit!



## 5. Exit Plan

Make a game plan for how the wire will exit the toy after it is soldered. This may mean that you need to make a hole in the toy. Keep in mind, the points that complete the circuit are the points to which you will solder the wire attached to the female jack. Remember that you still want the original activation to work.

## 6. Wire Preparation

Acquire 1.5 feet of wire. On each end, separate one inch of wire. Strip ¼ inch of insulation off each wire on both ends.

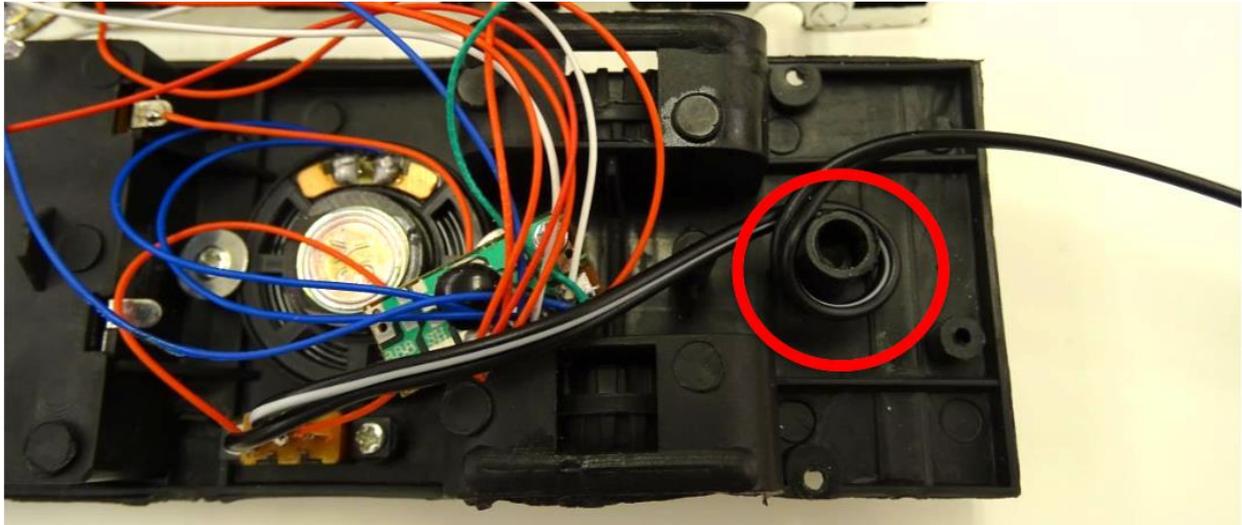
## 7. Jack Preparation

Unscrew the black cover off of the female jack. Thread the cover onto the wire.

## 8. Jack Soldering

Solder one end of the 1.5-foot wire to the jack. One of the ends should be soldered to the tall silver post and the other to one of the copper posts (either is okay) as seen below. When you solder, be sure to solder so that it is possible to reattach the cover. Please use safe soldering techniques! When the joint is cool, reattach the case onto the jack.





## 9. Wire Soldering

Solder the other end of the wire attached to the jack to each of the two points that complete the circuit (found in step 4). Please use safe soldering techniques!

## 10. Wire Strain Reduction

Reduce strain on the wire by circling or tying it around a sturdy component within the toy so that when used often by a child, unnecessary strain is not put on the wire. See above. You may want to use zip ties or a glue gun to secure the wire.

## 11. Wire Testing

While the toy is still open, test the toy using your switch. Does the toy

activate? If not, seek help from a TAP mentor.

## 12. Toy Reassembly

Close the toy as carefully as possible noting how you disassembled the toy initially. Remember that a child will be using this, so there should be no sharp pieces or rough edges exposed. Test the toy again with your switch. If it does not work, seek help from a TAP mentor.

## 13. Before Leaving

Carefully repackage the toy in its original packaging so the toy looks new. Thank you for your participation!

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