

RePlay for Kids Switch Controller Installation Instructions

Supplies needed:

- Battery-operated toy with at least 2 switches.
- Multimeter
- Switch controller module
- Two-conductor wire (zip cord) for external switch connection.
- Several short sections of single conductor wire of different colors for connecting the power and switches to the switch controller board.
- Soldering iron and solder
- Wire strippers

Directions:

1. Determine the number of switches you want to adapt (between 2 and 8).
2. Program a switch controller module for the correct number of switches (See separate programming instructions).
3. Place the switch controller module in the test jig and see if the correct number of lights are activated when the switch is pressed.
4. Remove the batteries from the toy.
5. Open the toy and locate the switches.
6. Using a multimeter (set to continuity or resistance), determine whether one side of each switch is connected to the positive or negative (ground) battery connection.

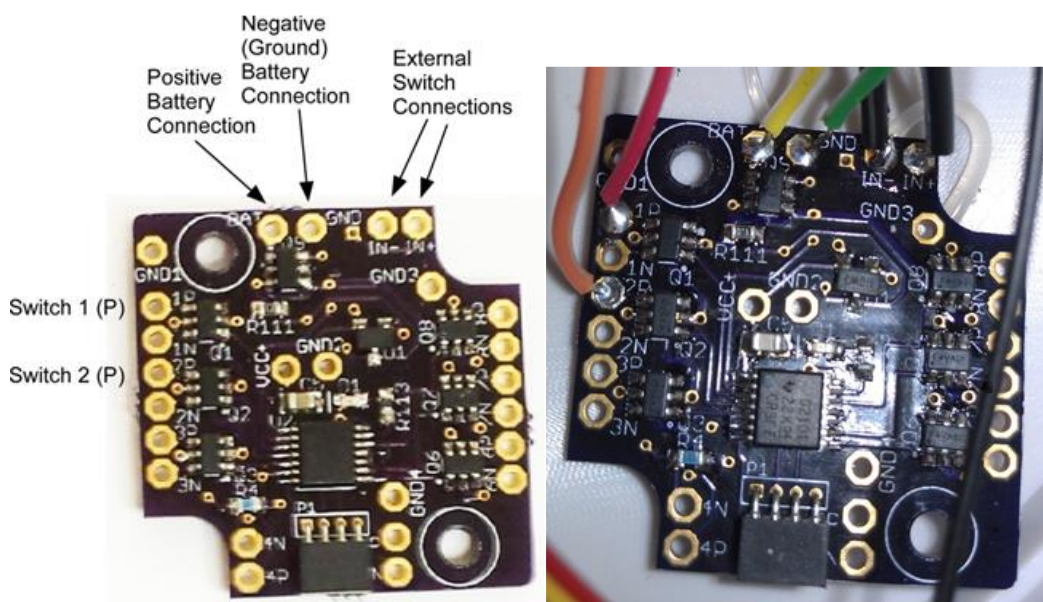


Figure 1. Wiring connections for a 2-switch example.

- a. If one side of the switch is connected to the negative (ground) battery connection, you will be using the 'N' connections on the switch controller ('1N', '2N', '3N' ...). You will connect the other side of the switch (not the one already connected to negative or ground) to the 'N' connection.
 - b. If one side of the switch is connected to the positive battery connection, you will be using the 'P' connections on the switch controller ('1P', '2P', '3P' ...). You will connect the other side of the switch (not the one already connected to positive) to the 'P' connection.
7. Identify where inside the toy the switch controller module is going to be placed.
8. Cut a 2 ft. section of wire (zip cord) and remove the insulation from a ¼" of the end of each wire.
8. Solder the two 'zip cord' wire connections to the "external switch connections" in Figure 1.
9. Locate the positive battery connection on the toy (usually marked '+' or with a red wire). Cut an appropriate length of red wire, and solder it to the positive battery connection on the toy and on the 'positive battery connection' (see Figure 1) on the switch controller.
10. Locate the negative battery (or ground) connection on the toy (usually marked '-' or 'GND', often with a black or green wire). Cut an appropriate length of black wire, and solder it to the negative battery connection on the toy and on the 'negative (ground) battery connection' (see Figure 1) on the switch controller.
11. Use a different color wire (not red or black) to connect the first switch to the '1N' or '1P' connection on the switch controller, using the information you learned in step 5. Repeat this step for all of the switches you are connecting to the switch controller.
12. If possible, put the batteries back into the toy and touch together the deinsulated ends of the 'zip cord'. This is the same as pressing the switch, so the toy should be activated. If it doesn't work, try pressing the original switch and review your connections.
13. If all the switches work in sequence, secure the switch controller module in place with hot glue.
14. Figure out how the 'zip cord' wire is going to exit the toy. Bring it out of the toy through a hole or notch (standard toy adapting procedure).
15. Close up the toy and attach the jack on the end of the 'zip cord' (standard toy adapting procedure).
16. Test the toy again and see if the correct number of switches are activated in sequence.

**IF IN DOUBT, ASK ONE OF THE REPLAY FOR KIDS
REPRESENTATIVES FOR HELP!**