

## Modifying SpongeBob

Go Baby Go Central Ohio

**IMPORTANT!** Do wiring modifications first. Follow the manufacturer's instructions to assemble the car LAST.

### WIRING MODIFICATIONS

There are two wiring modifications:

- Replace the steering wheel switch with a jack
- Add a Kill Switch

### Replace the Steering Wheel Switch with a Jack

- 1) Locate the steering wheel:

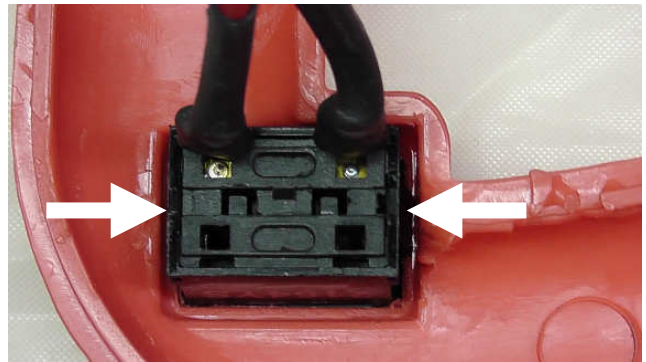


- 2) Remove the four screws and separate the halves of the steering wheel

- 3) Cut the switch cable near the switch



- 4) The switch is held in by tabs on the left and right sides. Push on these with a screwdriver, and press the switch out through the front of the steering wheel. **Reassemble the steering wheel.**

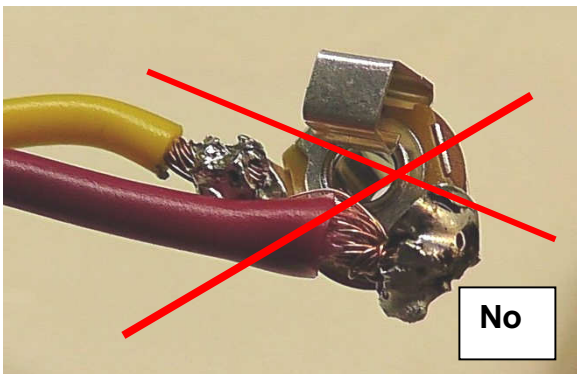
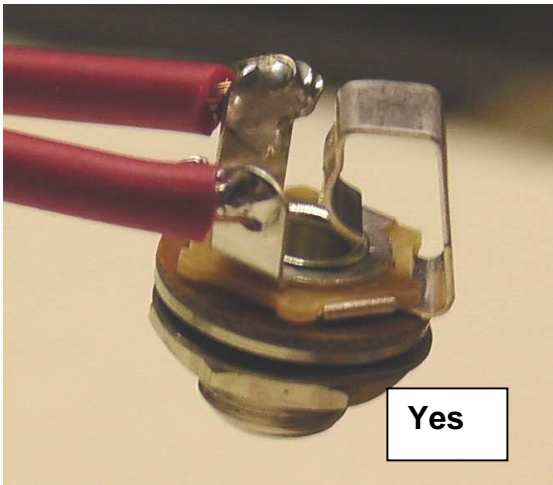


- 5) Solder a jack to the cable you cut off the switch. Either wire can go to either lug.

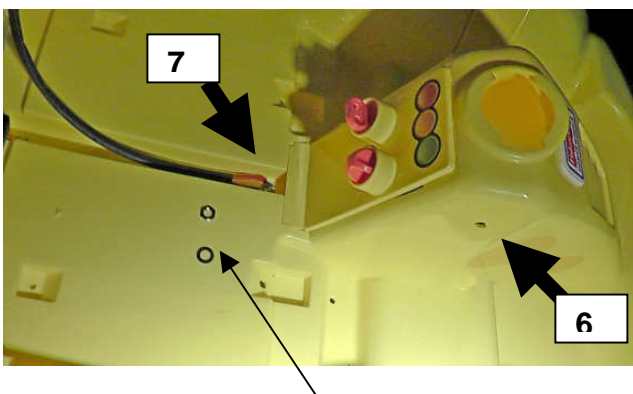


**If you are not experienced at soldering, ask for help.**

The solder joints must be smooth and shiny with good flow. No solder drops on other parts of the jack. No frayed wire segments sticking out. After the solder cools, try to move the wires -- they must not have any looseness.



6) Drill a 1/4" hole in the side of the steering column for the jack.

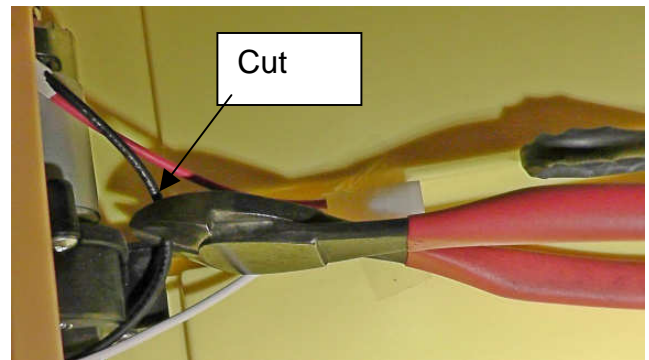


7) Remove the nut and washer from the jack. Slide the jack up into the steering column through the wire channel in the floor of the car.

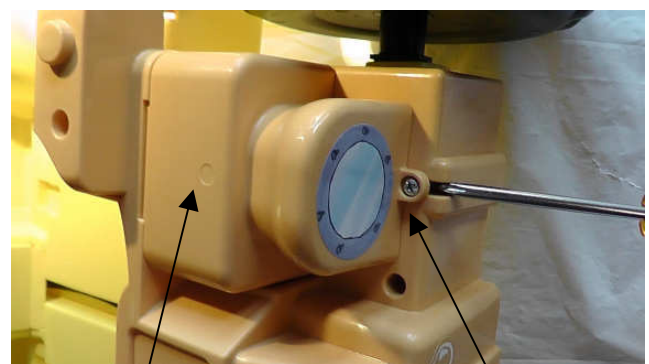
8) Push the jack through the hole. Put the washer and nut on. The nut must be tightened with pliers. Hold the jack secure while tightening. The jack must not be loose nor twist.

### Add a Kill Switch

9) In the motor compartment at the rear of the car, locate the black wire connected to the motor. Cut it in the middle where it crosses in front of the transmission



10) Remove the battery cover by removing one screw and flipping the cover up. (On the rear of the car)



Battery Cover

Remove screw.

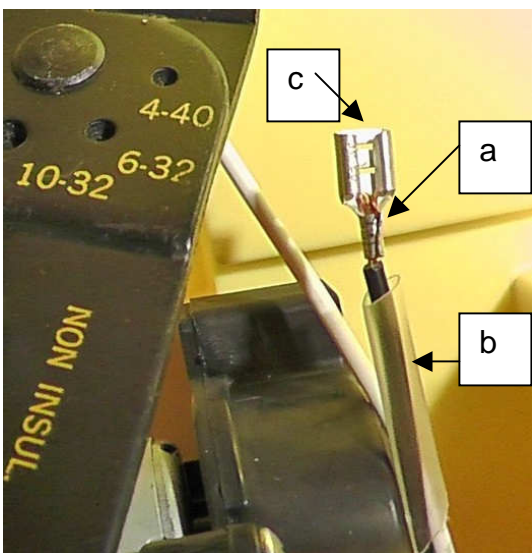
11) If the motor connector is inside the battery compartment, temporarily push it back into the motor compartment. (This will make the wiring easier. You will have to lift the battery out first.)



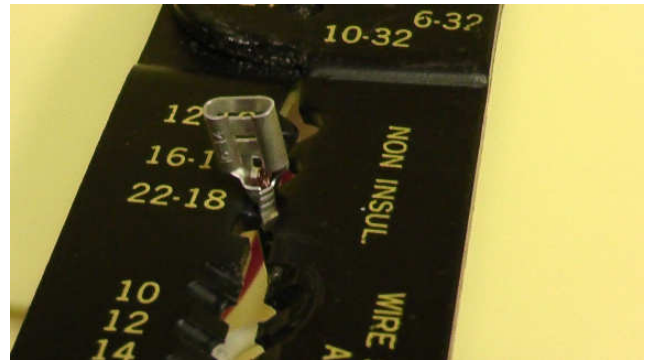
Motor connector still inside the battery compartment.

12) Returning to the black wire you cut in Step 9:

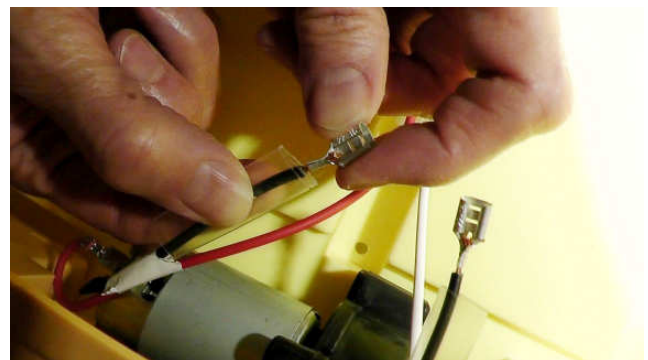
- a) Trim 1/4" of insulation off each end.
- b) Slide approx 3/4" of 7mm Heatshrink tubing over each wire.
- c) Slide a Crimp-on female Disconnect for 18 AWG wire onto each wire end



13) Crimp the Disconnects onto the wire ends



14) **TEST** the crimp on both wires. Grasp each Disconnect in turn with two fingers from one hand, and the wire with two fingers from your other hand. Without clenching your other fingers, try to pull the Disconnect off the wire with two fingers. You should not be able to do so.



15) Push the Heatshrink tubing up so it covers the Disconnect (but not beyond) and shrink it with a heat gun.

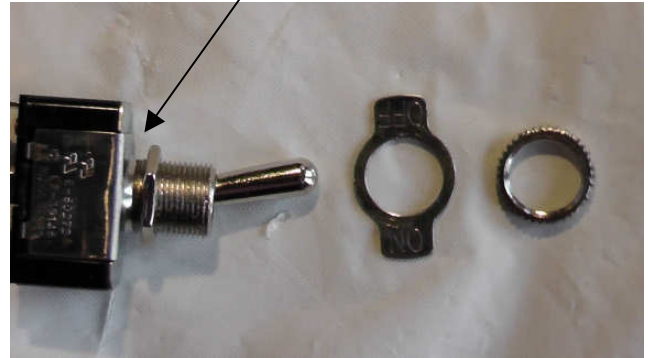
16) Push the Disconnects onto the Kill Switch lugs. Be sure the switch lug goes all the way into the Disconnect.  
It does not matter which wire goes on which switch lug.



17) Drill a 1/2" hole for the Kill Switch in the car body above the motor. Be careful not to drill into the motor, transmission, or wires below.



18) Remove the switchplate ring and switchplate from the Kill Switch. Turn the switch shaft nut tight against the switch body, then rotate it backward two full turns away from the switch body.



19) Slide the Kill Switch into the motor compartment, and out the hole you drilled. Put the switchplate and switchplate ring back on. Be sure that "ON" is "up" (toward the front of the car) and stays that way.

20) Holding the switch from inside the motor compartment, tighten the switchplate ring with pliers until the switch cannot rotate.

21) With the Kill Switch in the OFF position, slide the motor connector back into the battery compartment and connect the battery. **Be careful not to tug the wires too hard.**

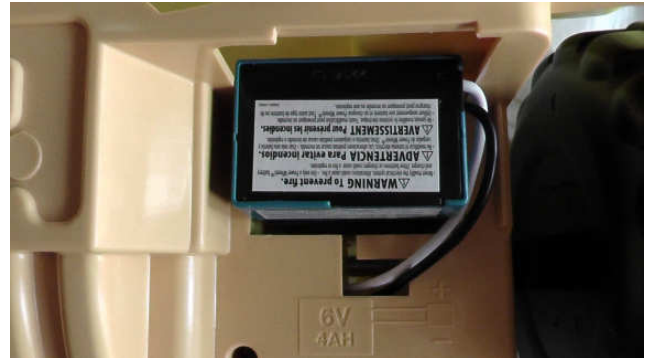


Connect

22) Slide the joined connectors back into the motor compartment such that the battery wires go in the slot at the rear of the battery compartment:



23) Replace the battery, such that the battery wires are on the right side of the battery compartment:



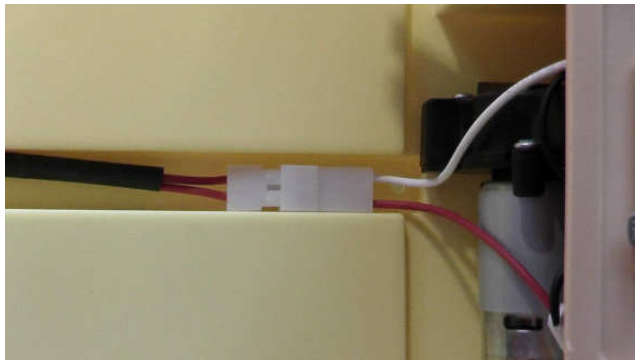
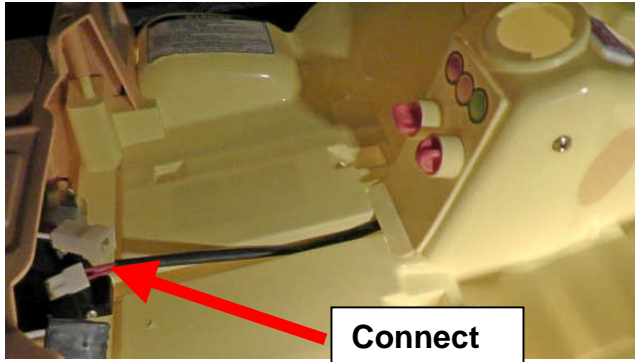
24) Replace the battery cover. **Note: there is a sort of “channel” on the top edge of the battery cover. It must be snapped upwards under the lip of the car body before you put the screw back. You cannot just set the battery cover down over the battery and put the screw back in.**

Snap this upwards.



25) Connect the white connectors (one from the motor compartment and one from the jack cable).

Lay them in the wiring channel on the body of the car:



### Test the Wiring

26) With the Kill Switch OFF, plug a button switch into the jack. Lift the back of the car so the rear wheels are off the ground. Press the button switch. Nothing should happen.

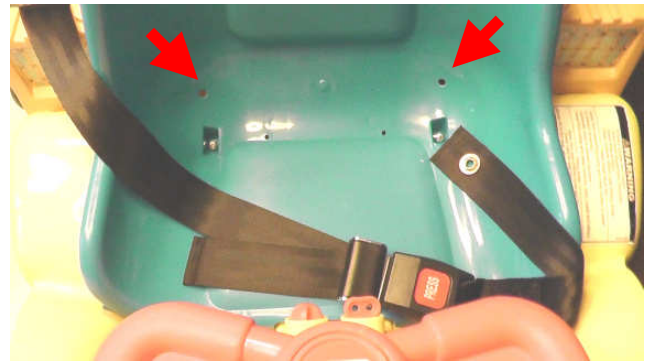
Turn the Kill Switch ON. Press the button switch. The rear wheels should turn in a "forward" direction.

Turn the Kill Switch off again.

### Add a Seat Belt if Needed

If the child will need a seat belt, you can attach it to the car's seat at this time.

27) Drill two 9/32" holes in the outside back corners of the seat for the seat belt.



28) Attach the seat belts with a 3/4" 1/4x20 round head machine screw, washer, and self-locking nut. **Do not overtighten the nut.** The seat belt must still be able to rotate.

Note the orientation of the belt. The "inside" of the belt (faces the child) is "up" under the head of the machine screw.



### Assemble the Car using the Manufacturer's Instructions

Note: you have already installed the battery, so the steps on pp. 13-14 are already done.