

Lesson 12 Building a small car IV: Wiring the remote controller

Objectives: Students will understand how to wire the remote controller for their car.

Materials: For class:

- ∞ Screw drivers
- ∞ Wire strippers (not for student use)

For each student:

- ∞ Student's partially built car
- ∞ Plastic box with hole drilled for switch and for wire
- ∞ Radio Shack DPDT center off switch
- ∞ 2 short wires, 2 medium wires, 2 long wires (4 ft. each)
- ∞ Battery in battery holder with double-stick tape attached
- ∞ Wiring diagram

Sponge:

Initial

Discussion: Show students a completed switch box. Remind them that they have built circuits using a switch that allows them to switch the direction of the motor.

Project: Students do the following:

- ∞ Remove screws from switch (will not be used – wires will be soldered to switch)
- ∞ Attach the small wires to opposite connectors on switch.
- ∞ Attach switch to plastic box.
- ∞ Attach wires to battery holder. Test battery and holder before attaching to box. (Test by connecting to motor on car.)
- ∞ Attach battery holder to plastic box. Be sure to place battery holder in a location where soldering iron can get to terminals and where there will be little movement of wires when box is opened and closed.
- ∞ Attach medium length wires from battery to switch.
- ∞ Work in pairs to twist long wires.
- ∞ Put long wires through hole in switch box. Attach one end of wires to switch and the other end to switch box.
- ∞ Test switch. If students want to change the location of forward and reverse on their switch boxes, reverse wires connected to motor.

Vocabulary:

Final

Discussion: Discuss what students accomplished and any questions, comments, and what they learned.

Clean up: Put all parts into plastic bags.

Home

Connection: Tell families about progress on cars.