

Wireless Switch ASSEMBLY GUIDE

1 Required Components



BOM

1. Wireless Relay Remote Control Switch
2. Battery Holder for 3 AA batteries
3. 3x AA batteries
4. 2x Latching Switches
5. 3.5 mm Extension Cable

2 Required Tools

- Small Phillips screwdriver
- Soldering Iron and Solder
- Wire strippers

3 Required Personal Protective Equipment (PPE)

- Safety Glasses

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4 Assembly Instructions

4.1 Preparation

4.1.1 Cut Cable

With the 3.5 mm male to female cable, cut the cord so that the end with the jack (male end) is 60 cm (2 ft) long and the end with the plug (female end) is 30 cm (1 ft) long. If your cable is longer than 90 cm (3 ft), you can discard the remainder of the cable.



4.1.2 Strip Cable Ends

Once the cable is cut, strip both the cut ends of the female and male wires about 2 cm. If there are still two wires enclosed in plastic, the individual wires will also have to be stripped approximately 0.5 cm. Twist the wires so that they don't get mixed up.



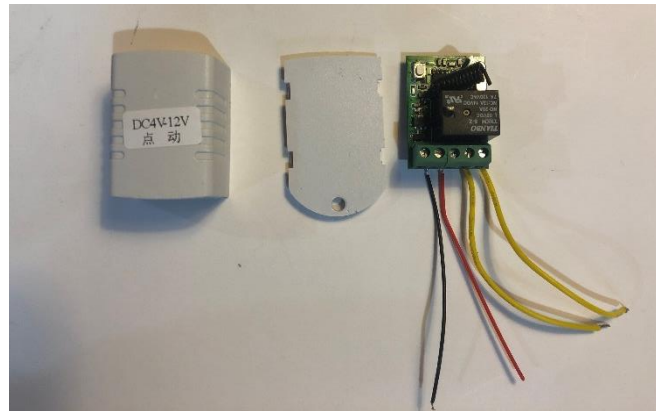
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4.2 Receiver

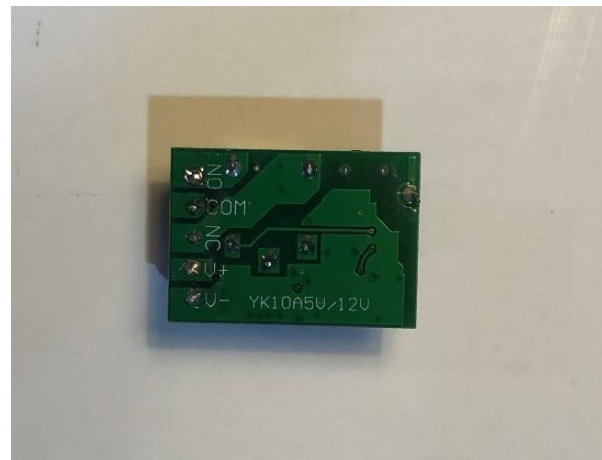
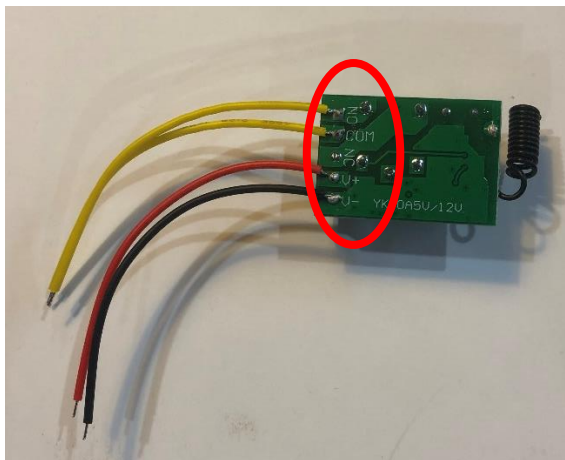
4.2.1 Remove Enclosure

Open and set aside the case around the receiver.



4.2.2 Desolder wires

Desolder all 4 wires from the bottom of the receiver. Set these wires aside for later use.

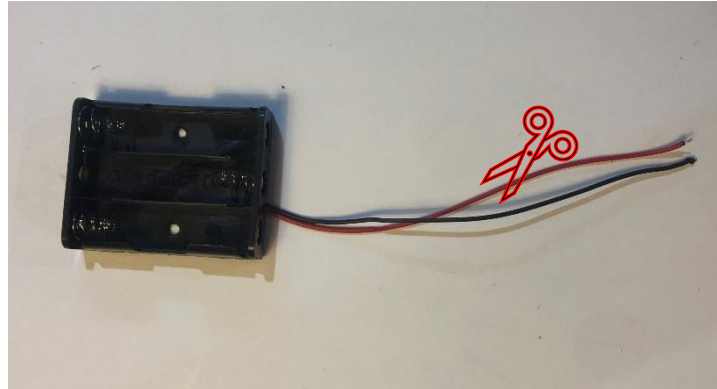


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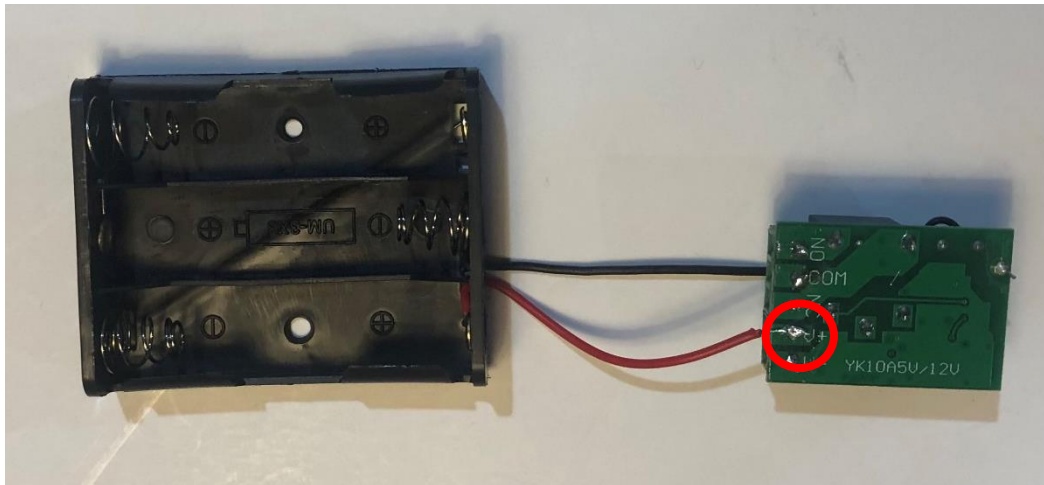
4.2.3 Trim battery holder wires

Cut off approximately 8 cm from the red wire from the battery terminal. Strip off 0.5 cm to expose the wire.



4.2.4 Solder one battery holder lead to receiver PCB

Solder the other end of the red wire on the battery compartment to the V+ pin on the bottom of the receiver.

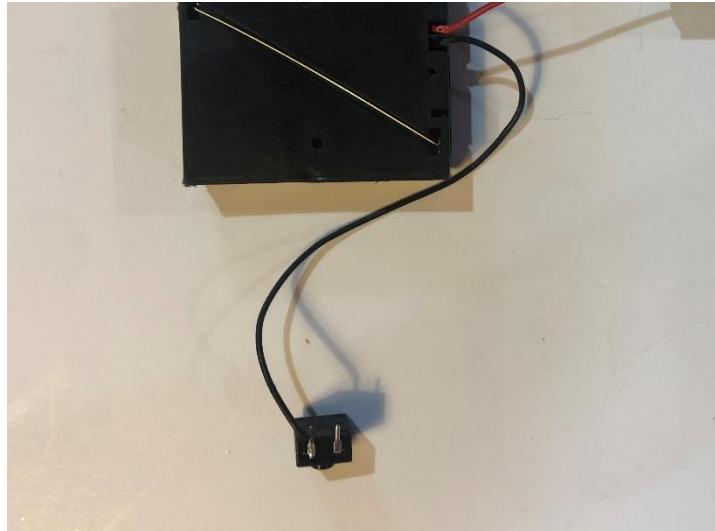


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4.2.5 Solder other battery holder lead to On/Off Switch

Solder the other end of black wire on the battery compartment to one leg of a latching switch.



4.2.6 Prep wire

Grab one of the 4 wires that were desoldered earlier from the receiver. Strip 0.5 cm from the end of each wire.

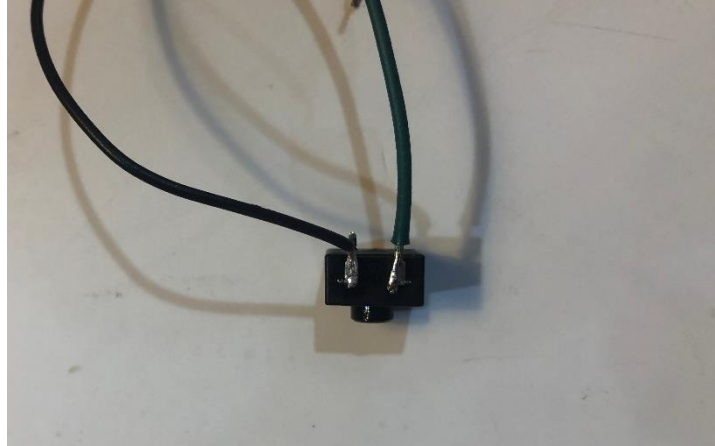


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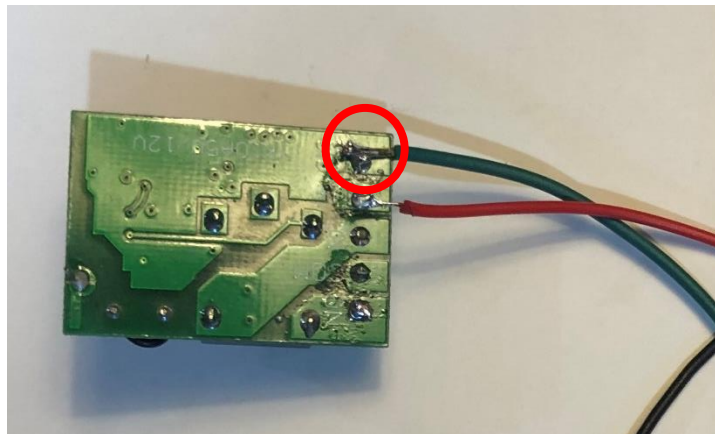
4.2.7 Solder wire to On/Off Switch

Solder one end of the wire to the other leg of the same latching switch. This will be the On/Off switch for the device.



4.2.8 Solder Wire from On/Off Switch to Receiver PCB

Solder the other end of the wire to the V- pin on the bottom of the receiver.

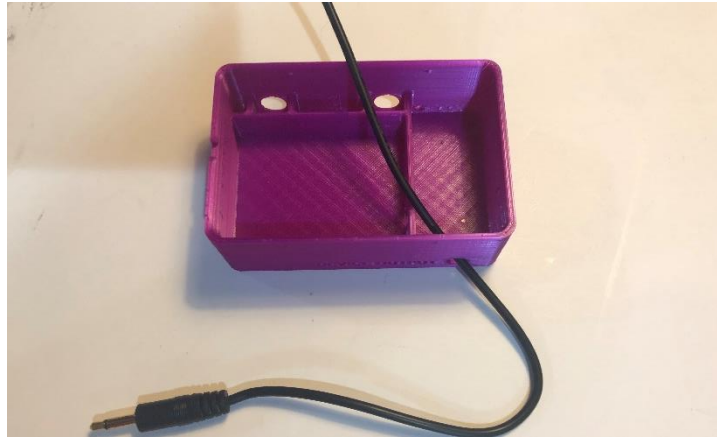


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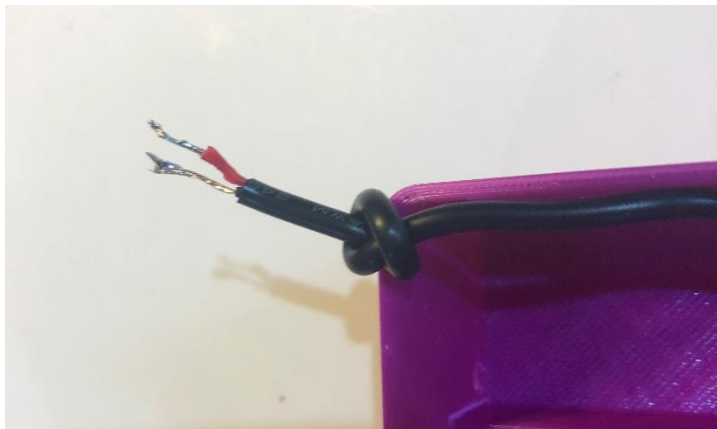
4.2.9 Insert Cable into Receiver Enclosure

Thread the stripped ends of the male cable through the hole in the 3D print labeled Device Output.



4.2.10 Knot Cable

Tie a knot in the end of the wire approximately 2-3 from the ends of the stripped wires.



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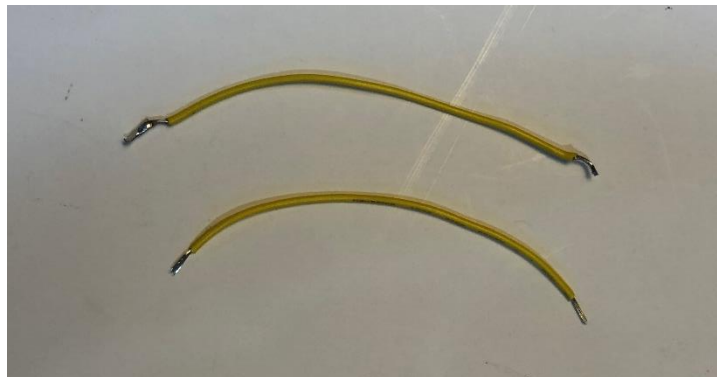
4.2.11 Solder 3.5 mm cable to Receiver PCB

Solder the two ends of the wire to the “NO” and “COM” pins on the bottom of the receiver.



4.2.12 Prep Mode Switch Wires

Grab 2 more of the wires you previously desoldered and set aside. Strip 0.5 cm from each end of the wire.

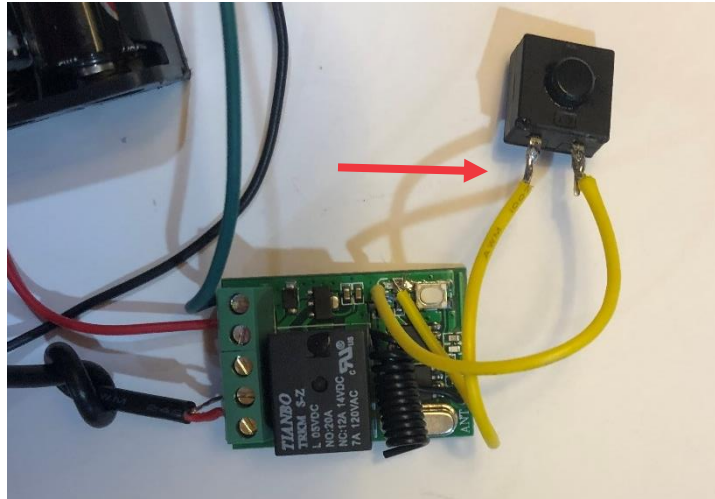


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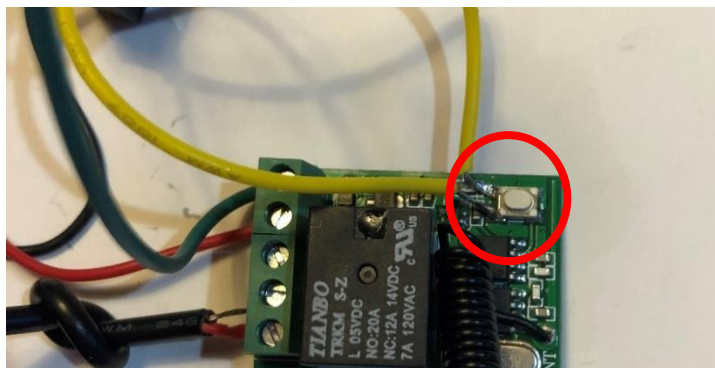
4.2.13 Solder Mode Switch Wires to Mode Switch

Solder one end of each of the wires to the legs on the second latching switch. This will be the mode button for the device.



4.2.14 Solder Mode Switch Wires to Receiver PCB

Solder the other two ends of the wires to the two legs of the switch located on the receiver as shown.



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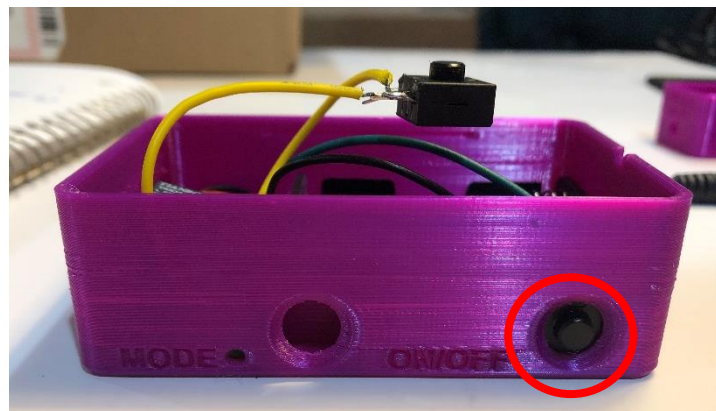
4.2.15 Insert Components into Receiver Enclosure

Place the battery compartment and the receiver in the 3D printed base as shown.



4.2.16 Insert On/Off Switch into Receiver Enclosure

Locate the switch soldered in Step 9 known as the On/Off Switch. While depressing the switch, slide it vertically down into the slot labelled "ON/OFF" on the print.

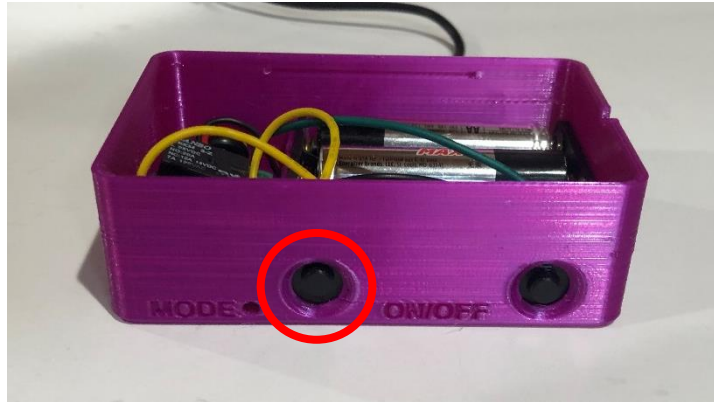


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4.2.17 Insert Mode Switch into Receiver Enclosure

Do the same with the second latching switch. This time it will slide into the slot labelled “MODE”



4.2.18 Insert Batteries into Battery Holder

Insert 3 AA batteries into the battery holder. If the receiver starts blinking red, press the “MODE” button and it should turn off.



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4.3 Transmitter

4.3.1 Open Transmitter Case

Remove the three screws from the back of the remote.



4.3.2 Disassemble Transmitter

Remove and set aside the remote casing.



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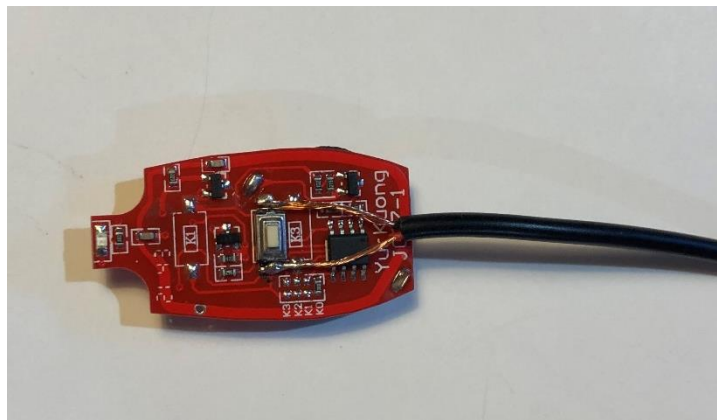
4.3.3 Insert Cable into Transmitter Enclosure

With the female end of the 3.5 mm cable, thread the wire stripped end of the wire through the hole in the smaller 3D printed base labelled “Switch Input”.



4.3.4 Solder Cable to Transmitter PCB

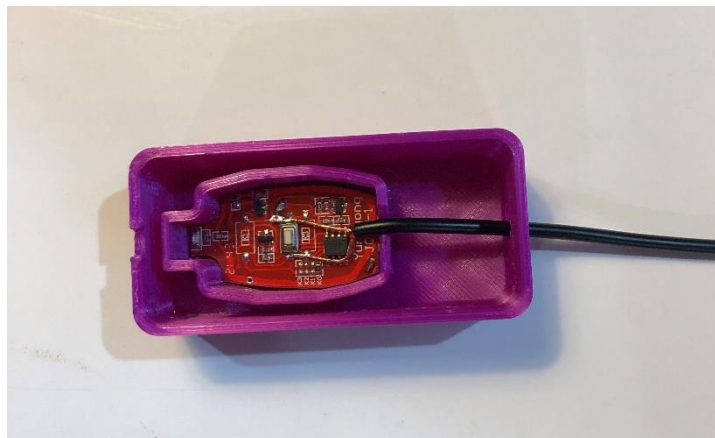
Solder the two stripped wires to each side of the switch located in the middle of the board of the transmitter.



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4.3.5 Insert Transmitter PCB into Transmitter Enclosure

Place the transmitter in the 3D printed base as shown.



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4.4 Testing

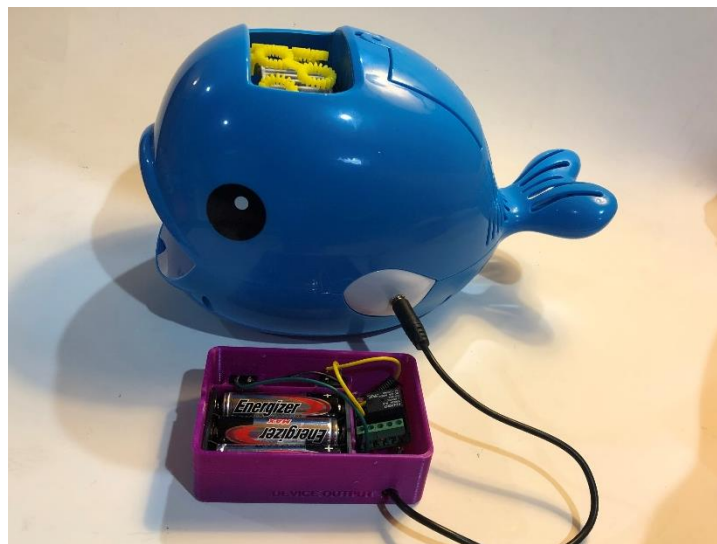
4.4.1 Attach Assistive Switch to Transmitter

Test the transmitter and receiver before putting on the enclosure covers. Plug a 3.5 mm switch into the female end of the 3.5 mm cable (on the transmitter).



4.4.2 Attach Receiver to Output Device

From the receiver, connect the 3.5 mm male plug to the 3.5 mm connection on an output device such as a switch adapted toy.



4.4.3 Test the Device

Activate the assistive switch. The toy should activate. If nothing happens, press the “ON/OFF” button on the receiver and try again. The toy might not activate yet but there will be a “clicking sound and a red-light flash

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4.5 Final Assembly

4.5.1 Add Covers to Enclosures

Once the devices are working, add the cover to each enclosure by snapping them in to place.



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4.6 Setting Activation Mode

4.6.1 Change Activation Mode

There are several different modes offered on the receiver. If you press the “MODE” button, the device should start to flash. It will do one flash, pause, two flashes, pause, 3 flashes, pause, all the way up to 7 flashes. To select a mode, press the “MODE” button again after you see the number of flashes for the setting you want. For example, if you want to use to momentary switch function, press the mode button, then wait for the red light to flash twice in a row, then press the mode button again. The following is a guide to explain the different modes:

1 flash = What seems to be an infinite latch? It does not appear to be useful and would recommend not using it.

2 flashes = momentary switch. The output device will turn off about 0.5 seconds after the user stops pressing the switch.

3 flashes = latching switch. It will stay on until you press the assistive switch again to turn it off.

4 flashes = switch latches for 10 seconds and then turns off.

5 flashes = switch latches for 1 minute and then turns off.

6 flashes = switch latches for 5 minutes and then turns off.

7 flashes = An “error”. Avoid using this setting. If you accidentally set the device to the 7th setting, it will not do anything. The device will have to be resynced by pressing the mode button twice quickly until the red light stays on. Next, click the assistive switch. Then, press the mode button again to pick the mode you want. The device should work again once this is complete.