

Auto down AND up windows for the Mazda RX-8

A D.I.Y. by Chuck Wrzesniewski (Lurch519)

We all know that the Mazda RX-8 is one of the coolest vehicles on the road today, and it has many cool features. But I felt that the auto-down only on the driver's window was not enough. So I decided to add not only auto down to the passenger window, but also have auto-up for both windows from the driver's side controls. (unfortunately auto up and down from the passenger window would require another module)

If you are not comfortable working on your car, or are not familiar with basic electrical principals, and have a little patience, please do not attempt this yourself.

I do not take any responsibility for damage due to miswiring or incorrect disassembly.

For this transformation to occur, you will need some basic hand tools.

#2 phillips screwdriver

Wire cutters

Wire strippers

Crimpers

A multimeter (for testing wires)

Panel popper (anything relatively thing and sturdy can accomplish this with come care)

Also, you will need the following materials

Zip ties

Butt connectors

T-taps

Insulated spade connectors

Hook and loop Velcro (or equivalent)

And of course the Directed Electronics 530t module



On to the fun

First, open your driver's door.



Next we (GENTLY!!) pry up under the switch panel in the driver's door,



and disconnect the 2 connectors from the panel. Lay this aside so it wont be damaged, we don't want to scratch up the interior panels of our 8 do we?



Now remove the screw behind the interior door handle by first gently prying up the little circle cover, then unscrewing screw.



Then remove gold colored screw located behind the switch panel that we already removed.



And the last screw we need to remove is the one located underneath the door handle and towards the rear of the door panel.



Now remove the bezel around the interior door handle by sliding forward slightly and then prying up gently from the front, and work around door handle and lock



Remove the door panel by inserting your panel popper between the panel and the metal part of the door, gently prying out, while pulling gently as well on the panel, working from the bottom of the door. Once you have popped the panel loose, lift from the back of the panel, keeping it relatively parallel to the door. The door panel should come off relatively easily, but be careful as there are 2 sets of wires connected to the panel still, the LED illumination for the switches



and the light at the rear lower portion of the door. The light pops out by applying slight pressure perpendicular to the direction to which the light is inserted into the door panel.



This is what you should be presented with.

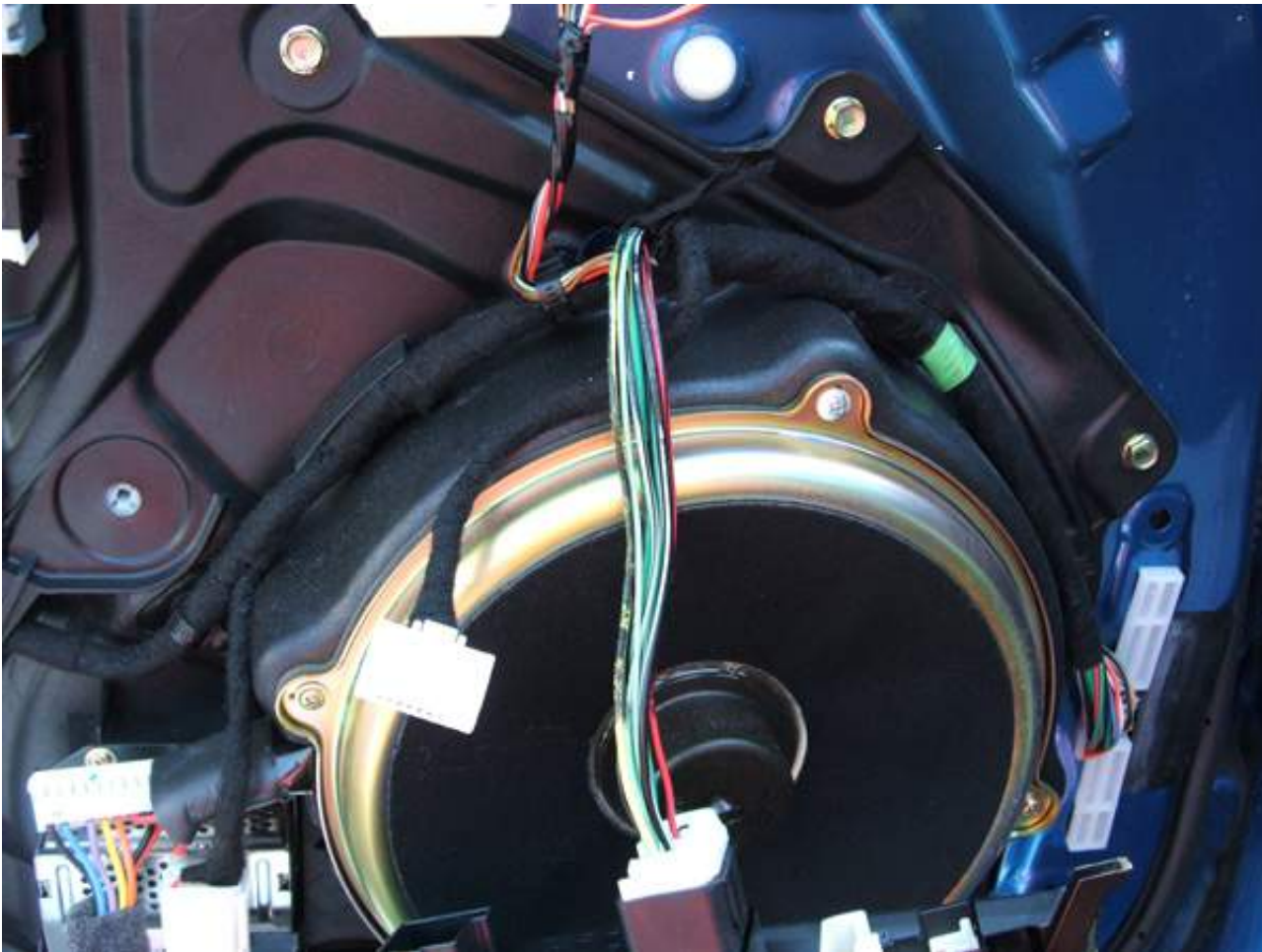


This is where I chose to mount the DEI 530t module using velcro, but for it to fit correctly, you must remove the piece of Styrofoam from the inside of the door panel.



Now for the fun stuff.

This is the harness that we will be working with in the door, it is the larger of the 2 that were unplugged from the switch panel. Here it is shown with the black cloth tape removed.



And here with the 2 t-taps for power and ground. To determine the power wire, use your multimeter set to DC volts, with one lead attached to a good ground, and the key turned to the on position. This circuit will only have 12 volts when the key is turned on, so if you desire to also use the module to allow control of the windows from an aftermarket alarm system, you must find a constant 12 volt source. Either you can run a wire into the vehicle through the door boot (it's a royal pain in the ass) or you can tap the orange wire at the power amplifier in the door for the speaker (you can use either one).

To verify which of the wires is ground, set your multimeter to impedance or ohms, again with one lead connected to a good ground, and measure the resistance on the wires. Ground should read close to 0 ohms.

If I remember correctly, the power should be green with a yellow stripe, and the ground should be black with a white stripe, and both wires should be the thickest in the harness.



Neatly run all the wires from the 530t module over to the harness for the power windows. Use zip ties to neatly attach the wires.



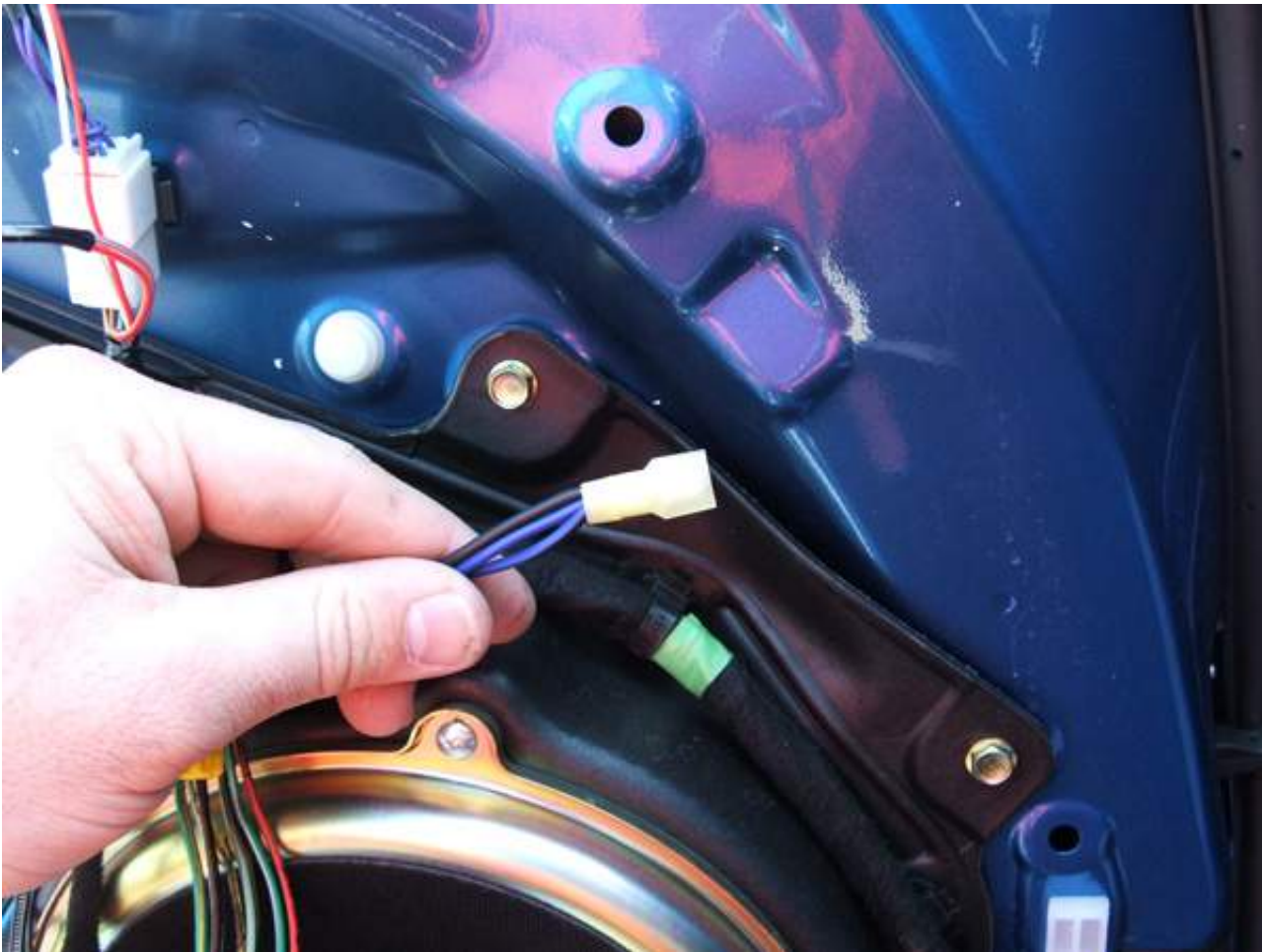
Strip back approx 3/8" insulation from the black, purple, and purple/black wires from the 530t,



twist the ends together



and crimp an insulated spade connector onto the bare wire

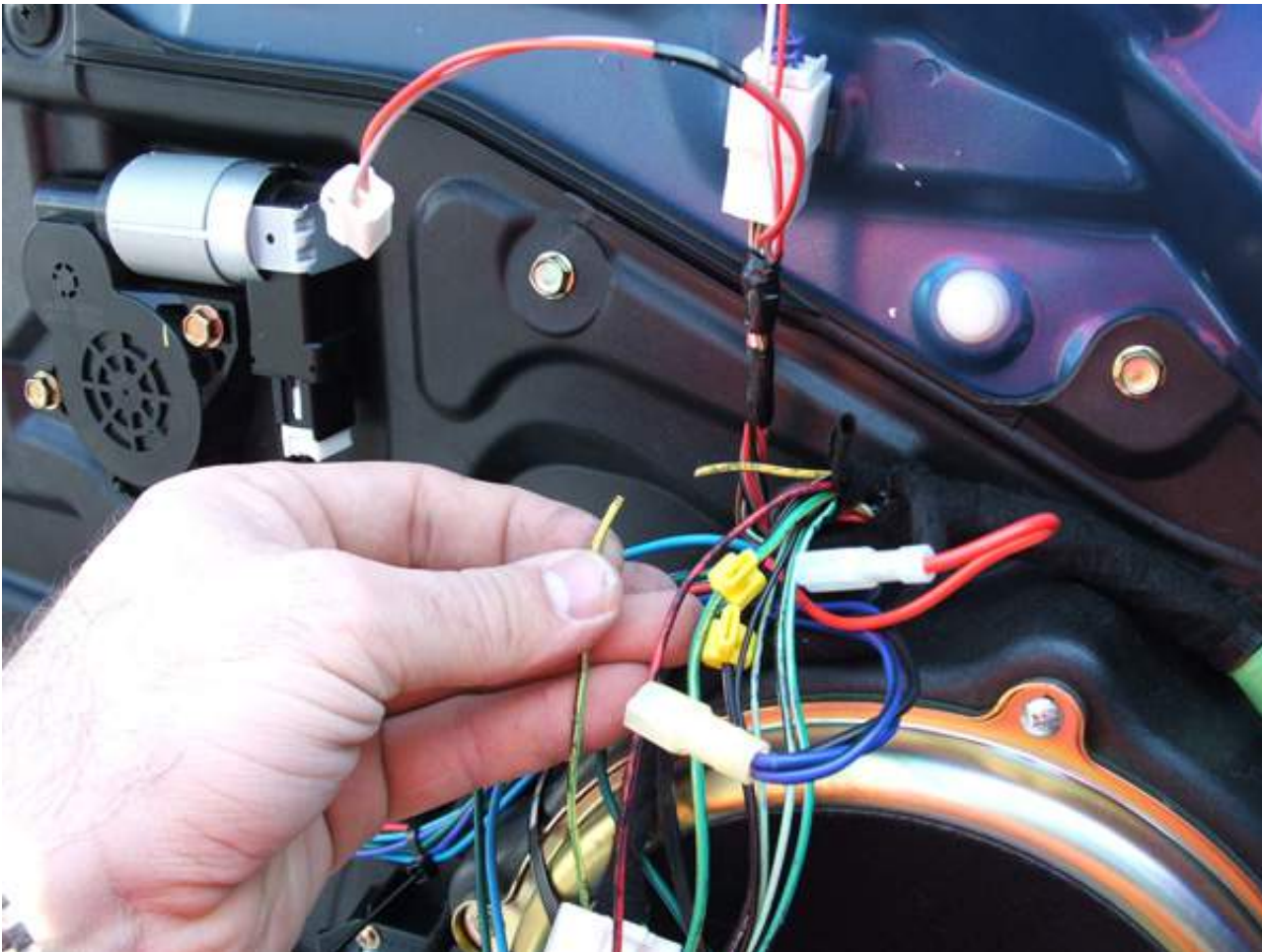


Do the same for the red power wire from the 530t, then plug them into the appropriate t-taps in the power window harness.

Now we need to identify the actual power window wires in the harness. Again, to verify that we have the correct wires, use your multimeter set to DC volts.

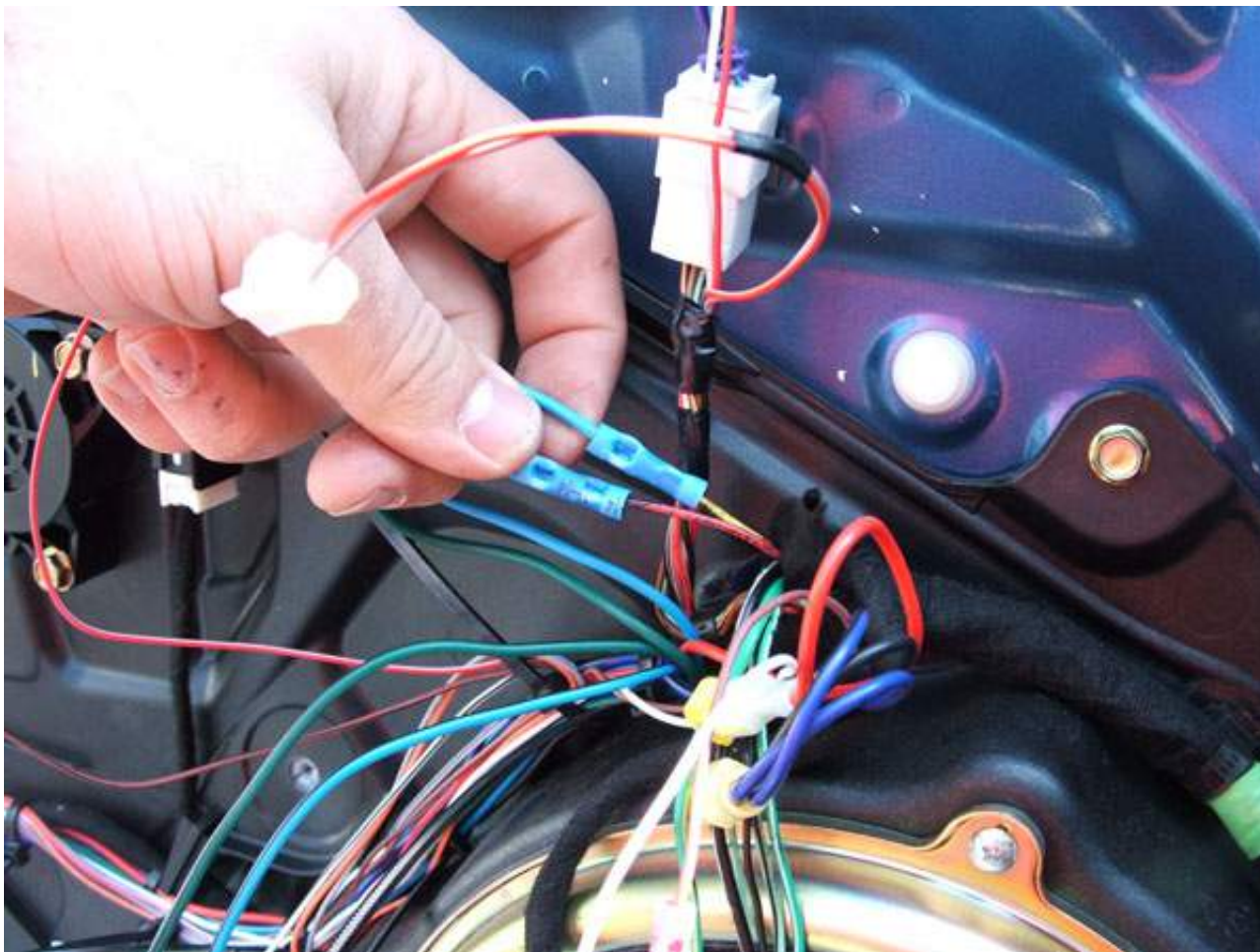
For the drivers side window, red/black is down, and yellow/green is up.

Once we have identified the correct wires, we will need to cut them.

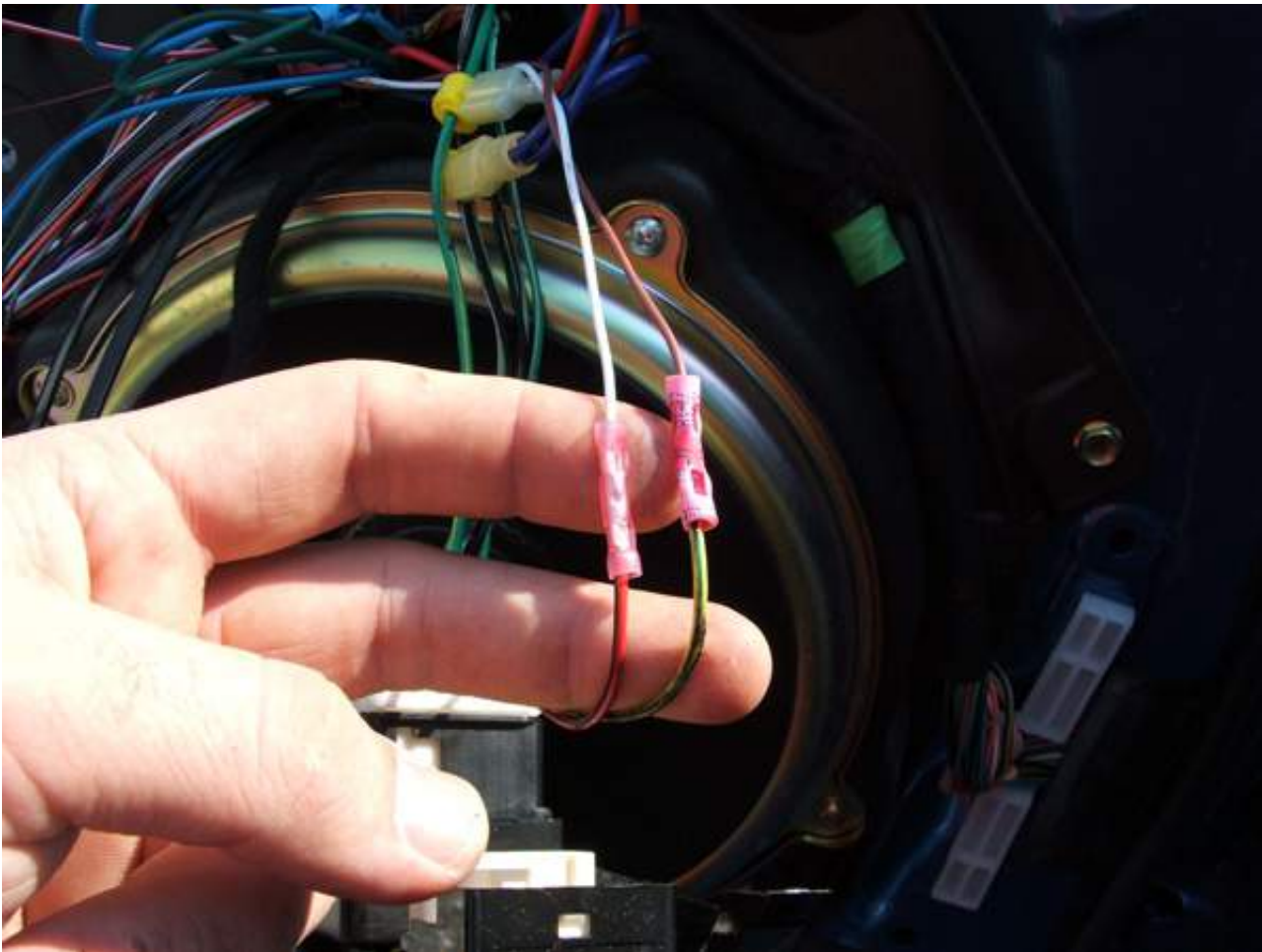


Connect the blue wire from the 530t to the motor side of the cut yellow/green wire, and the green wire to the motor side of the red/black wire. (the side not attached to the connector for the switch panel)

(don't mind the colors here, I got it backwards on the first try)



Then connect the brown from the 530t to the switch side of the yellow/green, and the white to the switch side of the red/black.



We will do the same thing for the passenger side window.

For the passenger side, green/white is down, green/black is up.

Again, once the proper wires have been determined, cut them. Attach the blue/black from the 530t to the motor side of the green/black wire, and the green/black from the 530t to the motor side of the green/white.

Now, connect the brown/black from the 530t to the switch side of the green/black wire, and the white/black from the 530t to the switch side of the green/white.

One last step before testing. On the side of the 530t module, there is 5 dip switches. Flip the first 4 switches to the down setting. This will allow 530t to operate correctly. Otherwise, the windows will most likely start down then stop.

Ok, if you got through all that, its now time to plug in the window harness to the control panel, put the key in the ignition, turn it on, and test. If everything is hooked up correctly, your windows should now be auto up and down.

If everything works correctly, zip tie everything neatly, and reassemble the door.

