

ECT SPOOFER GEN3 INSTALLATION

A. CONNECTING THE SPOOFER TO THE PRIUS

In addition to these instructions, you may wish to read this thread for information:

<http://priuschat.com/threads/ect-adjuster-on-gen3-prius.96087/>

1. Locate the ECM ECU connector under the hood on the driver's side adjacent to the inverter coolant tank. The ECU is the large silver box with the connectors on top.



Photo 1

2. Using a pair of pliers, grip the knuckle of the wire tie at the rear end of the connector closest to the firewall and twist until the wire tie breaks away. Discard the tie.
3. Making sure the car is turned off, lift the grey connector release handle on the left hand side (as viewed from the front). Rotate the handle up and back toward the firewall. The connector will lift up out of the

socket and slide back a little. You *do not* have to remove the connector completely. You are just loosening it to free the rear of the cover, which is locked in place by the handle.

4. Once the handle has been rotated completely to its upright position, lift up on the rear end of the cover (nearest the firewall) and the cover should come off. Set the cover aside for replacement later. Rotate the handle back down into its locked position, which should reinsert the connector into the socket and lock it in place with all of the wires exposed.
5. Locate and isolate the three wires to which the Spoofer cable will be attached.

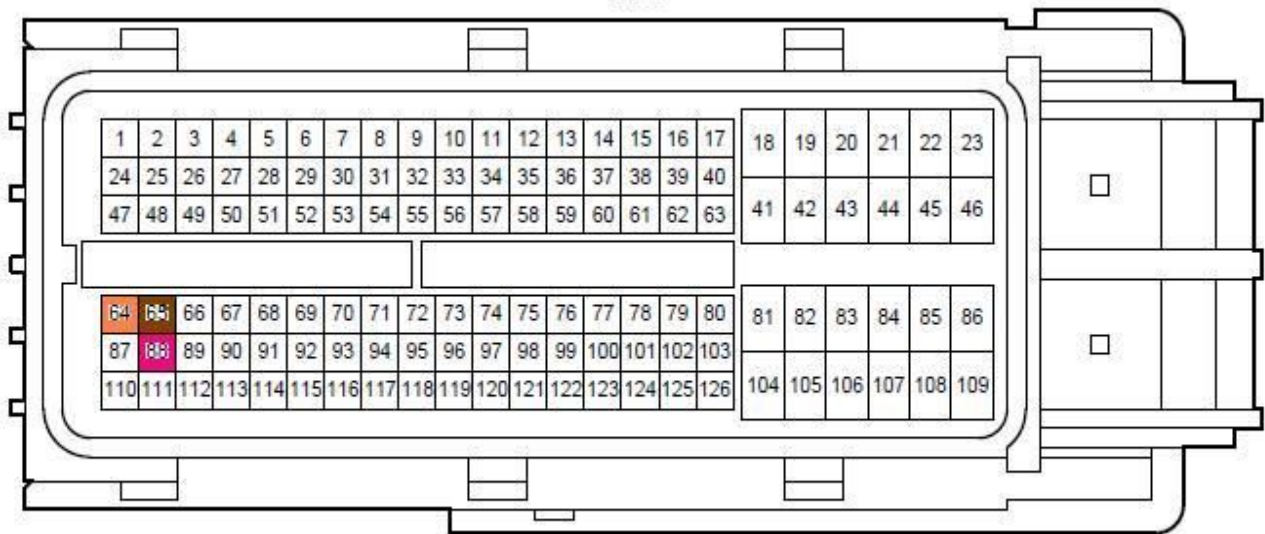
The three wires enter the connector adjacent to one another in an “L”-shaped pattern at end of the connector nearest the front of the vehicle:

The THW wire is pink, located at pin 64 of the connector, right in the front row.

The ETHW wire is brown, located at pin 65 of the connector, in the same row as the pink wire and right behind it.

The +5V VCTA wire is red, located at pin 88 of the connector, just left of the brown wire when viewed from the front.

Here is a view of the underside of connector with the front on the left... note the positions are reversed from what you see looking down at the top of the connector.



See Photo 2, taken from the front of the car, looking down at the top front of the connector.

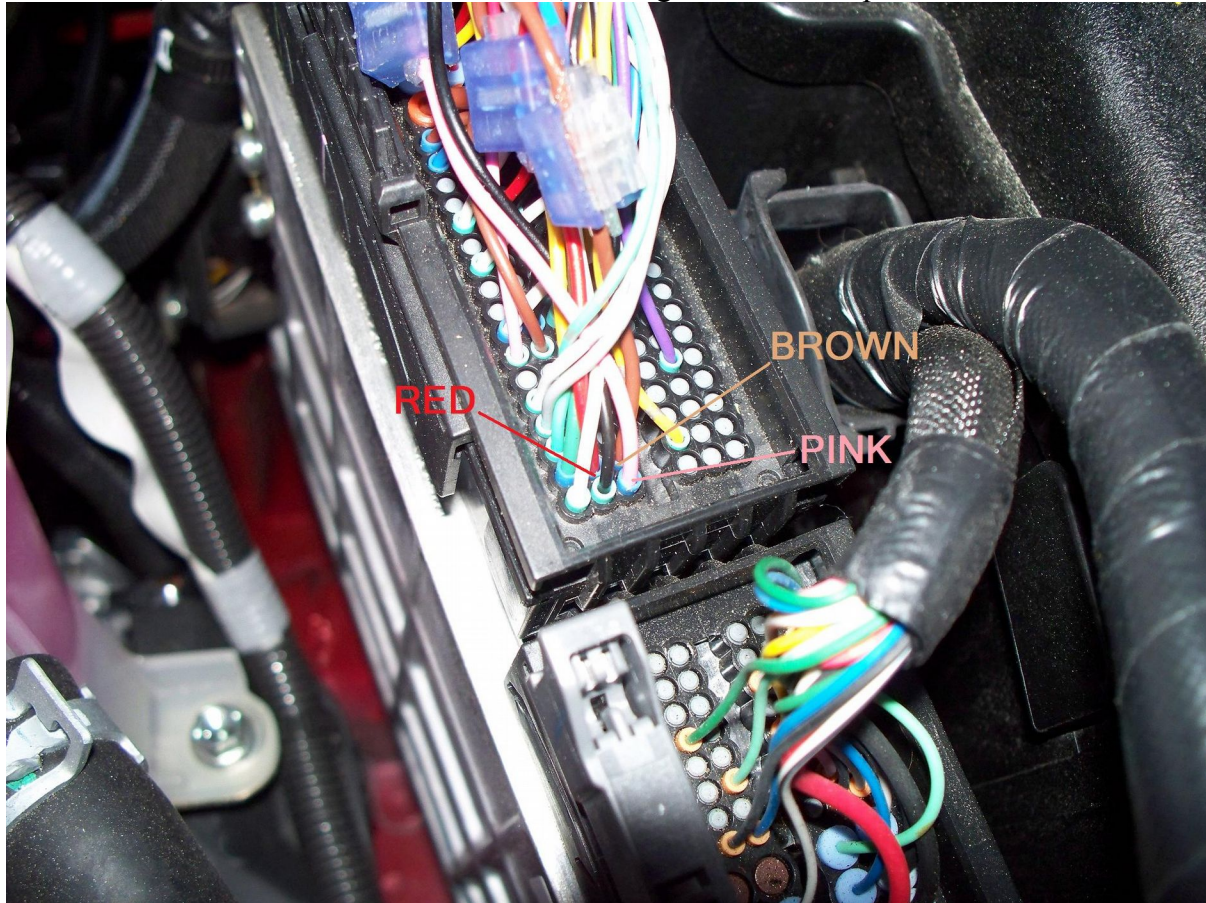


Photo 2

Trace the three wires from the front of the connector back to the rear of the connector to allow some space to use the supplied wire taps and separate them from the bundle as much as you can to facilitate tapping into them.

The supplied wire taps have two connection channels, a “trench” open on both ends and a “tunnel” open on one end. An internal metal cutter bridges these two channels and slices through the insulation of the wires when the tap is squeezed shut.

The open “trench” is for the Prius wire. Start by laying the red Prius wire in the open “trench” of one of the taps and press down until the wire is held against the metal cutter by the sides of the “trench”. Insert the loose red wire from the Spoofer cable into the “tunnel” of the tap until the wire reaches the closed end.

Squeeze the tap shut with your fingers, then clamp down harder on the tap with a pair of pliers or vice grips until the blue cap is all the way down and the cutter has pierced the insulation of both the Prius wire and the Spoofer wire.

Staggering the taps at slightly different locations on each of the remaining wires, as shown in the top of Photo 2, repeat the tapping process for the brown and pink wires. Putting the taps at slightly different spots helps provide space for fitting them back in under the cover.

When you are done, connections will be:

Prius Red -> Red Spoofer Wire;
Prius Brown -> Black Spoofer Wire;
Prius Pink -> Green Spoofer wire.

6. Test your taps. Plug the Spoofer printed circuit board into the black connector at the other end of the cable and place the circuit board in a safe location under the hood. If your Spoofer circuit board includes a switch, the switch should be “on” (toward the LED’s).

Power up your Prius, leaving it in park, and return to examine the LED’s on the printed circuit board. One LED should show a bright flickering “heartbeat” and the other should be bright and steady. If not, power down the Prius and gently squeeze each of your taps with pliers. Power back on and watch for changes on the LED’s until they appear to be functioning properly. If necessary, you can disassemble the taps by prying them open and re-tap. Once the LED’s are working properly, shut down the Prius.

If you do not wish to replace your connector cover or run a longer cable into the Prius cabin, your installation is complete!

B. REPLACING THE CONNECTOR COVER

7. If you wish to replace the connector cover (recommended), rotate the grey connector release handle until it is fully back. As before, the connector will lift out of the socket and slide back. Again, there is no need to completely remove the connector and attached cable... just loosen it. Place the two small pins at the front of the cover into their receivers at the front of the socket and rotate the back of the cover down into its original position, gently easing wires and the wire taps underneath.

If you have a switched Spoofer and a long cable which allows you to place the circuit board in the Prius cabin, the Spoofer cable should exit the rear of the cover as shown in photo 1. If you wish, you can use black cloth electrical tape to cover the Spoofer cable and mimic the original wire bundle leaving the connector.

If you have a short cable and will leave your Spoofer circuit board under the hood, you may be able to place the Spoofer printed circuit board under the cover. If you cannot make it fit, the cable should also exit the rear of the cover, with the Spoofer circuit board positioned nearby.

8. Holding the rear of the connector cover down, rotate the grey connector release handle back into its closed position... the connector will once again slide forward and down into the socket. The rear part of the connector cover will be captured by the handle and locked into place. There is no need to replace the original wire tie, though you may install a new one if you wish.
9. If you do not wish to run your Spoofer cable into the cabin, your installation is complete!

C. RUNNING THE CABLE TO THE CABIN (NO HOLES DRILLED)

10. If you have a “switched” Spoofer and wish to place the Spoofer printed circuit board in the Prius cabin, unplug the circuit board from the Spoofer cable and store it in the anti-static bag. The following process is a no-holes option. You may find other routes for the cable at your own risk.
11. Run take a “snake” made from about three feet of wire (speaker wire, phone wire, etc.; something fairly stiff) down into the driver’s side front fender using the opening just in front of the hood hinge, as shown in Photo 3.

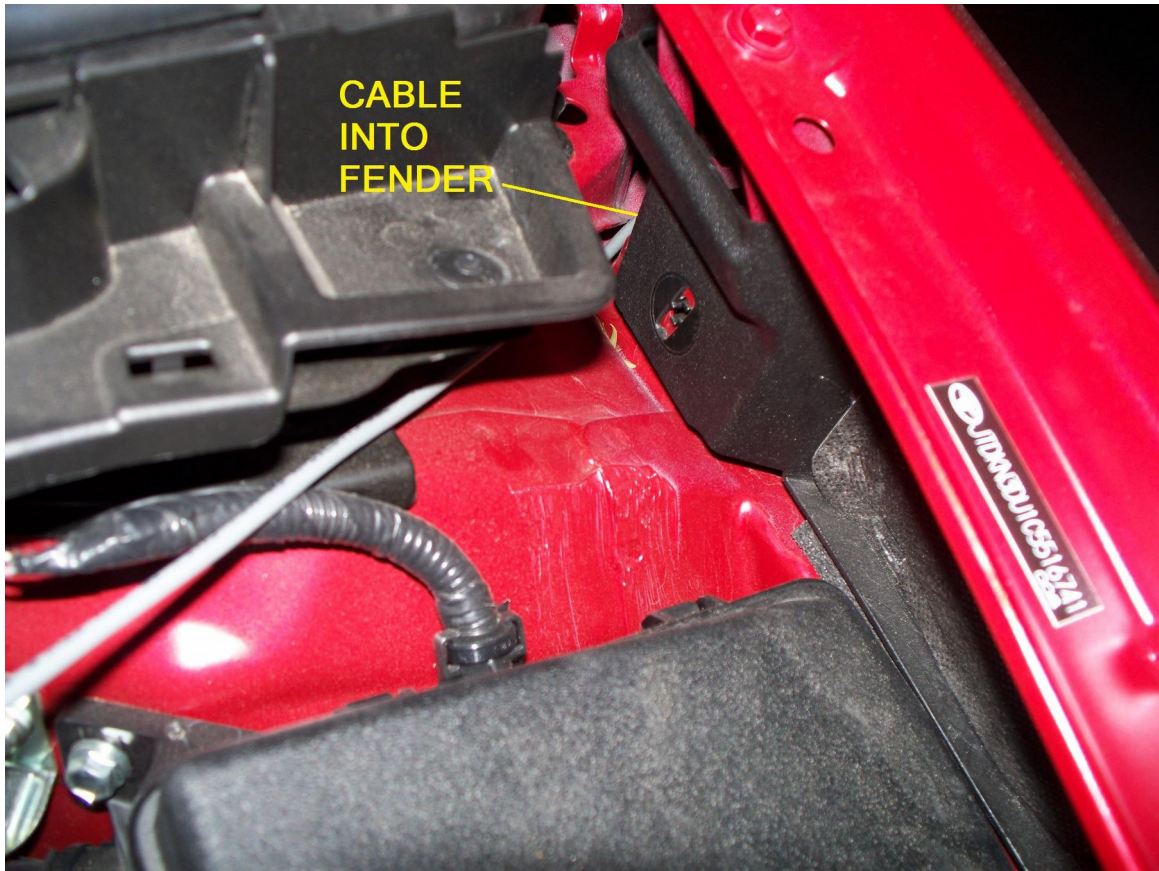


Photo 3

12. Starting at the rear of the driver's wheel well, remove 4 press-in fasteners that hold the black plastic wheel well liner in place by pulling the center pin out until the fastener is loose and can be removed. Grasp the stiff black plastic liner at the edge and pull down until you can reach in and up, finding your "snake." Pull the snake out so that you have one end as shown in Photo 4 and one end under the hood near the ECU connector as shown in Photo 3.



Photo 4.

13. Using a piece of masking or other easily removed tape, connect your snake to the black connector on the end of the Spoofer cable. Slip the connector down into the fender, then gently pull on the outer end of the snake until you can reach up into the fender and pull the black connector out of the wheel well. Disconnect the snake by cutting the tape loose.
14. Opening the driver's door, locate the channel above the top door hinge that leads into the fender. Slide your snake into this opening, as shown in Photo 5. ("Wire into Channel") Push the snake *down* into the fender, not forward. You should be able to return to the wheel well, reach under the stiff plastic liner, and pull the snake out of the fender.
15. Reattach the snake to the black Spoofer connector with tape as before and gently pull the snake from the driver's door end until the connector comes out of the channel under the front right window. Disconnect the snake and discard.
16. Gently pull the Spoofer cable until you have as much cable as possible. Look under the hood to make sure there is still a little slack. Ease the cable under the seal below the left front window, as shown in Photo 5. Gently grasp the fat rubber door seal and pull it toward you until it comes loose. Slip the Spoofer cable under the seal and gently press the seal back into place. The wire should cross the door sill as shown in Photo 5. Slip the Spoofer cable into the gap immediately inside the sill so it goes behind the dash.



Photo 5

17. Gently grasp the upper corners of the switch panel to the left of the steering wheel and pull towards you. The panel will pop off, exposing the switches and blank switch plates within. Reach inside and pull the Spoofer cable connector out through the top of the panel. Reattach the circuit board to connector. See Photo 6.



Photo 6

18. Gently replace the switch panel to its original position and press into place, making sure that only the thin wires extending from the end of the Spoofers cable are in the gap between the dash and the switch panel.

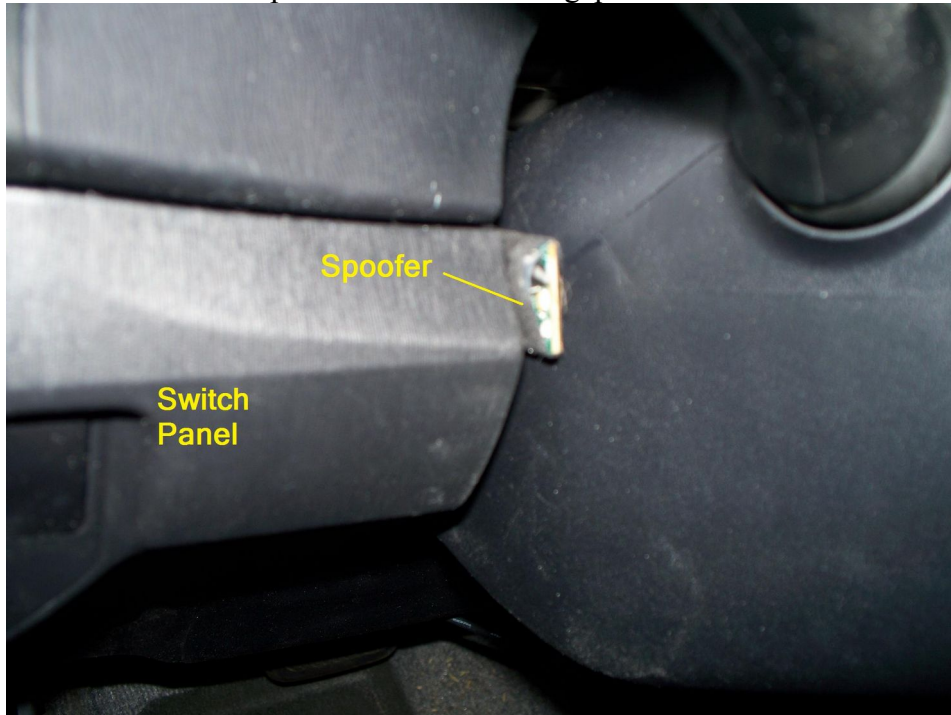


Photo 7

Photo 7 shows a piece of black cloth tape around the Spoofers board to give it some bulk and extra protection, temporarily wedged it into the space between the steering column and the switch panel.

You may wish to mount the Spoofer behind one of the switch blanks, drilling small holes to permit viewing of the LED's and operation of the switch. An example in a GEN2 Prius is shown here:

<http://priuschat.com/threads/a-prius-ect-spoofers-mcu-controlled.88694/page-4>

19. Return to the wheel well. Press the stiff plastic liner back into its original position, insert each of the fasteners and press in their pins to lock them in place.
Your installation is complete!

Installation Videos

Videos were generated by Marv to assist with the installation and are located at:

http://www.youtube.com/watch?v=qTOP-uprdK_g

<http://www.youtube.com/watch?v=SRQ7R6I33mk>