

2019 Toyota Rav4 12VDC Power and Antenna Access for Mobile Transceivers

The Toyota 2019 Rav4 is a terrific automobile. However, the usual place for mounting an HF antenna such as the rear deck will not work. The surfaces are either too rounded or there is no lip. The only location I could make work is the front passenger side just above the headlight. There is a non-curved section of the hood that will accept a mount. Figures 1, 2, and 3 illustrate the mount. Figure 3 shows a self-tapping machine screw used for the ground connection.

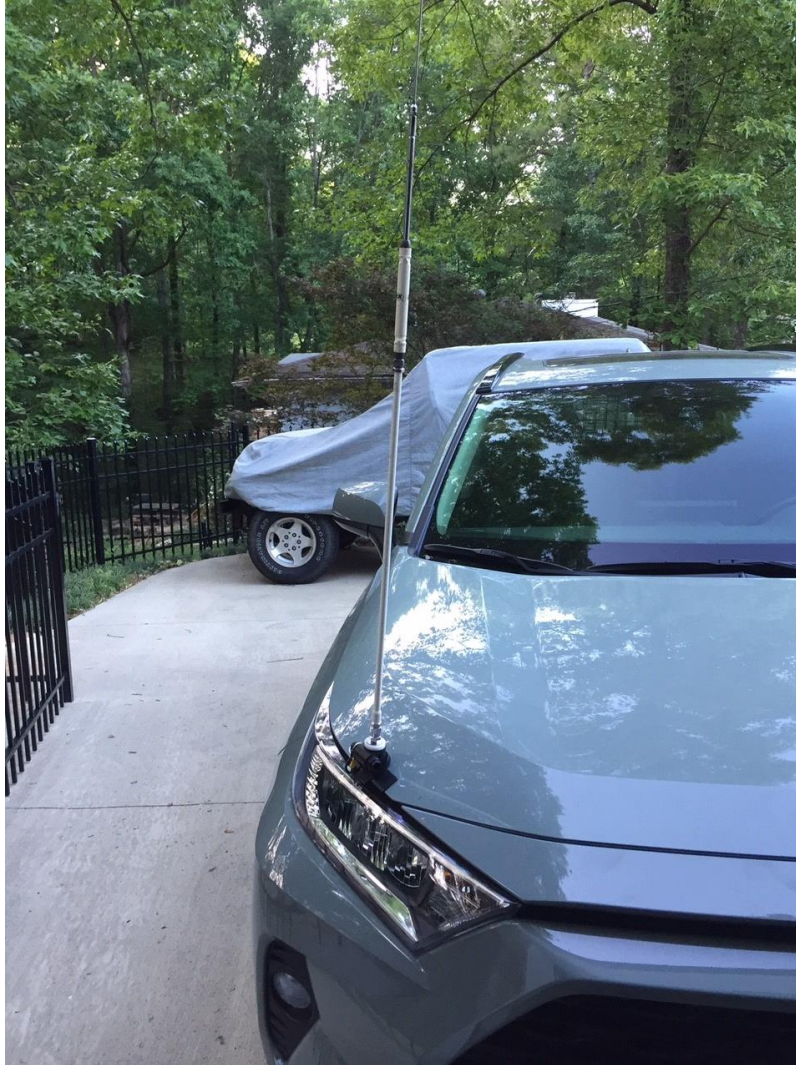


Figure 1. 20-meter Hustler



Figure 2. Detail of mount on the non-curved section of the hood



Figure 3. Underside of the hood showing the ground connection

The next chore was getting the antenna cable and the 12VDC line into the cabin. Only the 12VDC positive lead is run. The negative terminal of the transceiver will be tied directly to ground. Fortunately, there is a nice, large grommet on the passenger side. From inside the cabin, remove the glove box and the panel underneath it. The glove box is removed by pressing the points marked “Press” on each side with your thumbs. Then use pliers and squeeze the end of the plastic stud attached to the glove box pivot lever. The panel is easily removed by pressing the plastic tabs on the bottom.

After removing these items, you will see the grommet in the firewall. Push a sharp object such as a three-foot metal rod sharpened on one end through the grommet until it emerges in the engine compartment. Then, and this part is a bit tricky, with much electrical tape, connect the power cable and the antenna coax cable to the point of the rod that you pushed into the engine compartment. Then, ever so carefully, hold the grommet with one hand while you slowly pull the rod with its attachments until you can grab the power line and coax and pull them into the cabin. You hold the grommet with one hand to prevent it from being pulled out of the firewall by the pressure of your other hand. Figures

4 and 5 show the grommet from the engine compartment after the coax and power lines have been pulled through.



Figure 4. Cables routed through the grommet



Figure 5. Close up of the grommet

A pleasant surprise is just inside the cabin on the firewall is a stud and a nut. This stud connects to the frame and there is just enough thread to attach a wingnut. This feature is a convenient place to pick up ground. Figure 6 shows this stud. Both the transceiver chassis and the transceiver 12VDC negative connection are tied to this stud using lugs and a wingnut.

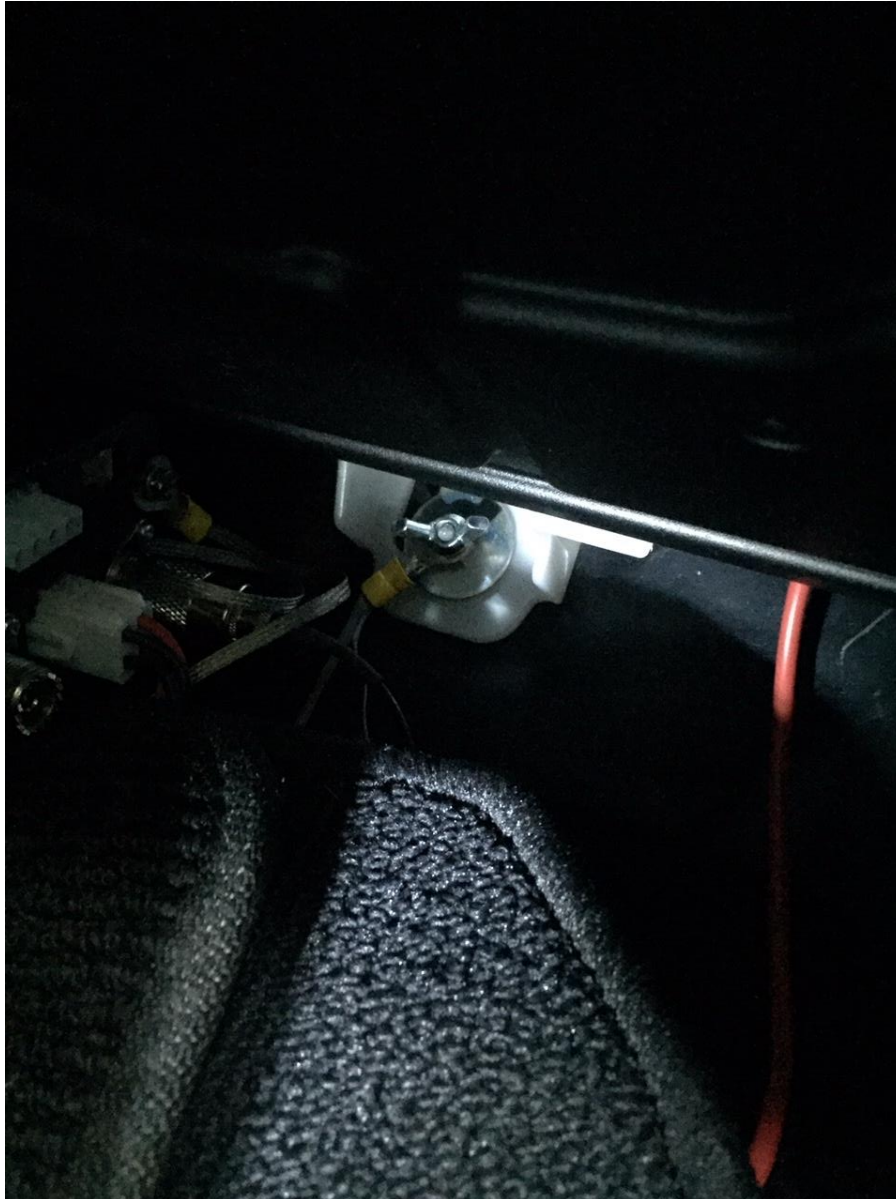


Figure 6. Convenient ground connection under the glove box

All of this will take a couple of hours if everything goes well. The hardest part is pulling the wires through the grommet. Use lots of tape to connect them to the rod and don't even think of pulling the coax through with a connector on it. If your coax has a connector, cut it off and solder it back on once you have the coax in the cabin.

Good luck and 73,

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