

2010 Prius

Dash Speaker (squawker) Upgrade

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Use this document and its contents at your own risk.

Forward

I want to thank all those members on [PriusChat](#) that forged ahead and upgraded their dash speakers and those that provided technical information that made this modification possible.

The model II (two) is really lacking in the high frequencies, which is why this modification was needed in my opinion. I suspect this is also the case with the JBL models, as their dash speaker looks essentially the same.

By using a 2-way replacement I not only increased the high frequency range up also the volume in the front. In my case that helped to balance the volume from my sub-woofer installed in the trunk. It also goes a long way in overcoming the road noise.

Before you begin

Since you will be working around air bags, it is **HIGHLY** recommended that you disconnect the negative (-) terminal of your 12-volt battery during this process. Refer to the owner's manual for more information. Keep in mind that all your Fuel Economy statistics and trip information in the MFD will be lost when the battery is disconnected.

The dash materials are very soft and easy to scratch. Using some painters-tape around the seams of the parts may help to reduce scratches.

Overall it took a weekend to complete this modification. Much of the time was spent contemplating my next move and gathering information. With these instructions I would say it would take a person about four to five hours.

Parts

1. Speakers. I used the 3 ½ ", 2-way Pioneer model TS-A878. These speakers are rated at 15W / 60W, 100-28,000Hz with 88db sensitivity. These were the only speakers I search up with the frequency and power handling that I wanted. They are very well built. During the writing of this document, it was pointed out that these speakers are no longer

in production. Hopefully Pioneer will produce a similar speaker in the future.



2. I used a small length of bell-wire in my installation (optional).

Tools

1. Soldering iron.
2. Electrical tape.
3. Rotary Tool (Dremel).
4. X-acto knife.

Upgrading

The first step is to remove the A-Pillar trim pieces (WARNING: airbags present behind these pieces). This is described pretty well in the Toyota Technical documents available on-line. There is also a vent piece (below the little triangular window) and finally the speaker grill. All

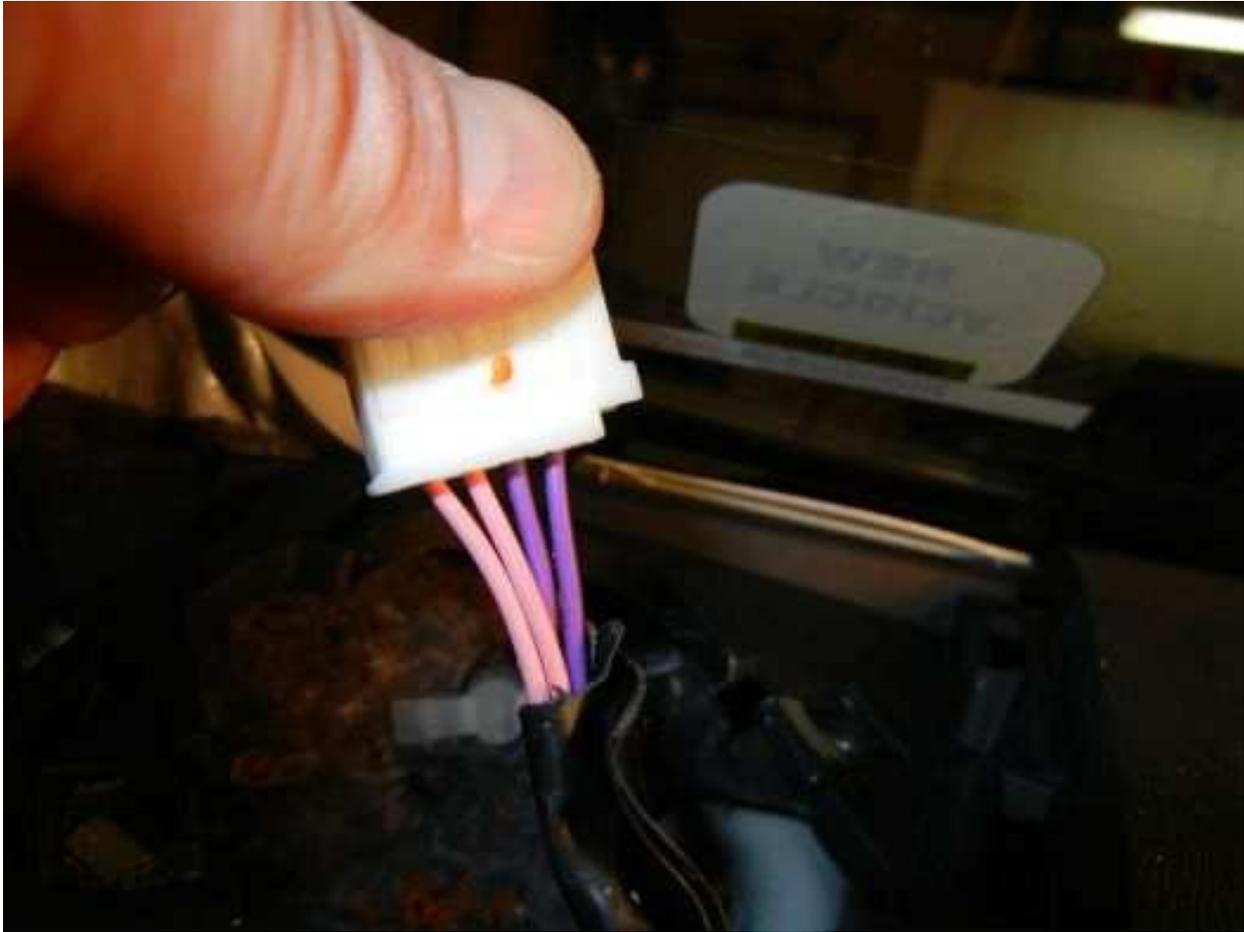
these pieces were fastened securely and took quite a firm tug to remove them.



With the grills removed, use a 10mm socket to loosen the bolts holding the speakers in the dash.



Pull the speakers and disconnect the wiring. The connector has a keeper (on one side) that you depress to release.



Test fit your speakers. If yours are like mine, you will need to trim the holes in the dash to accommodate the new speakers. A sharp X-acto knife worked great for trimming, as the eco-plastic is very soft. There was a tab on the driver's side that had to be completely removed. Also I completely trimmed the underside lip completely around the hole. You want to make sure that the speaker is centered in the hole and you can do this by placing the grill over the speaker (do not completely install) and shine a light through the windshield to see where the speaker is positioned.



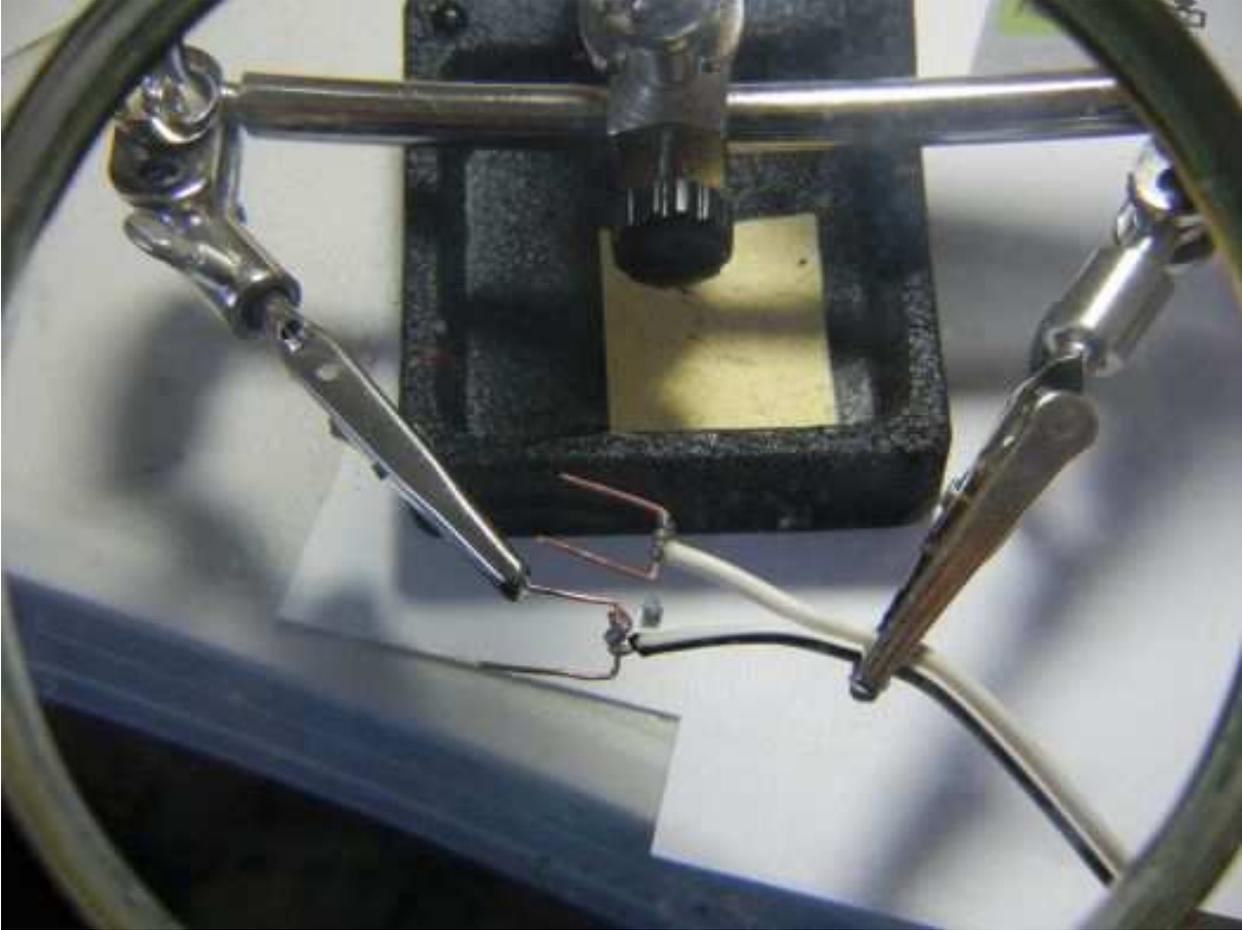
With the speaker is in position, drill hole(s) if necessary. I was able to use one existing hole but had to drill a new one at the top. Drill in the sense I had to use a stubby screwdriver and a self-tapping screw because the windshield obstructs access. * Be sure not to obstruct the slots where the grill attaches.



The speaker grills had to be modified. There is a lip that comes down from the bottom side that contacted the new speakers. I used a Dremel to trim this plastic off flush with the grill. In the picture below the grill at the right has been trimmed, the left not.



Since the existing speaker was wired in parallel with the woofer you will notice the connector has four wires. The new speakers contain their own crossover, I simply bridged the two sets of wires and tapped into that for the dash speakers. Mainly I wanted to keep from modifying the car's wiring harness, but you could also tap the wires before the connector, either way. For the left side, bridge the Pink (+) to each other and Violet (-) to each other. The right side, bridge the Light Green (+) to each other and the Blue (-) to each other. I used electrical tape to cover the bridge wiring: one piece through the middle (over the top of the connector) and one strip around the middle of the connector. * It maybe possible to reuse the male connector on the OEM speaker for this connection.





With the speakers connected and fastened in place I tested by reconnecting the power. If you are using the same speakers I did, be careful not to screw them down too hard as the speaker housing is a plastic composite and subject to cracking under pressure.



* At this point I might suggest adding a gasket between the speaker and the grill that will be covering it. The original speakers had this. I didn't really think of this until afterwards but it might help prevent cross-contamination from the other speaker as they share the same air space. Since these are drivers, it might also be prudent to isolate the air space under the speakers as well.

If the speakers are working properly (this includes the front woofers in the door), refit the grills. Make sure the grills are not obstructing or contacting the speakers.

Replace the remaining air duct and the A-Pillar trim pieces.

Final word

For a total of \$42 and about 6 hours of my time this was a worthwhile modification to me. It greatly enhanced the frequency range of the music and helped balance the sub woofer.

Blessing if you proceed with the upgrade!

Please let me know if you find any errors in this document and also let me know what you think of modification (either way). Thanks!