

Kid Charles' Guide to Replacing the Front Speakers in a Gen II Prius

This is a guide to replacing the front speakers with aftermarket component speakers in a Gen II Prius with a non-JBL sound system. You should also refer to the venerable Sparky's guide to replacing the rear speakers, much of which is relevant to the fronts.

1. Pull the tweeter housing out, straight away from the door. The housing is held in place with two clips, one is part of the black plastic housing itself (with a metal clip attached) and the other is a white push-type retaining clip (see Figure 1). In this instance the clip has remained in the door and has pulled out of the clip holder on the tweeter housing. You will see many of these white clips in the door panel and about 50% of them will stay in the door. The metal part of the top clip fell off and got lost from my driver's side tweeter housing but it still goes back into place well enough.

The tweeter is wired such that two wires come from the amplifier to the combination tweeter/crossover circuit, and two other wires head down to the woofer. You could in principle cut off the header that terminates these wires but I left it in place in case I want to easily reinstall the factory components. More on wiring later.

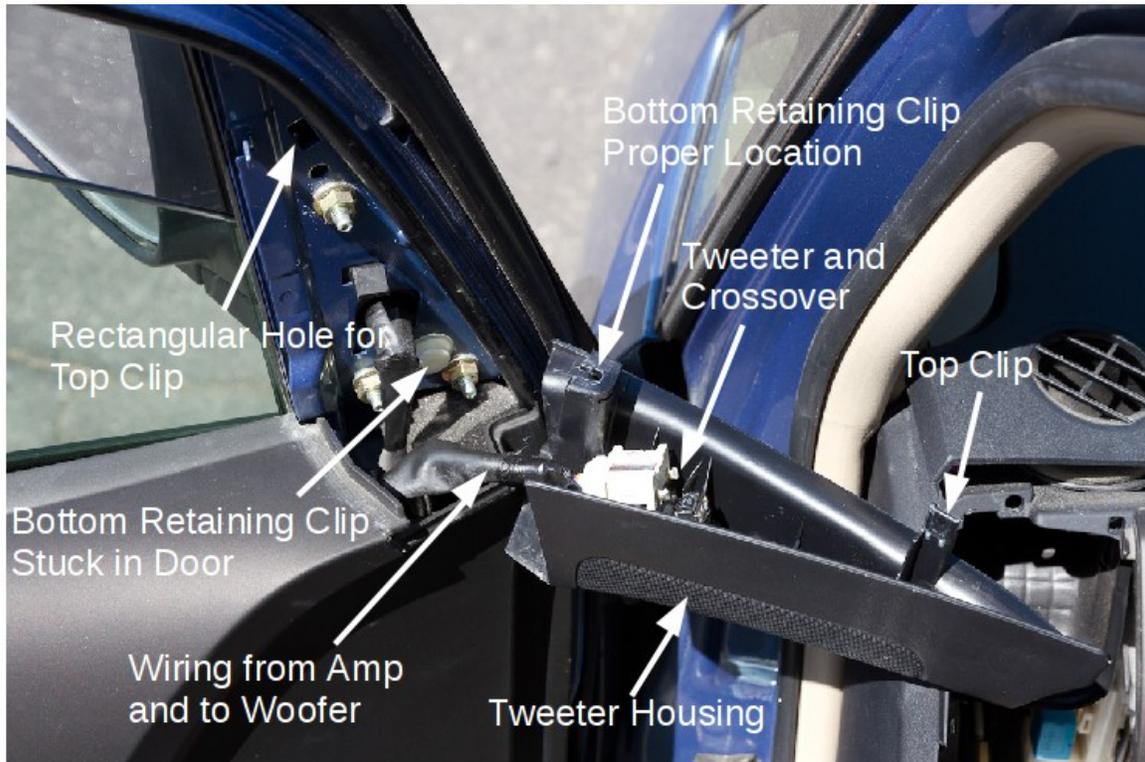


Figure 1: Tweeter housing pulled away from door.

2. Unplug the header from the tweeter/crossover. To do this use a very small screwdriver and insert into the slot to depress the clip inside (see Figure 2). The header will slide right out of the receptacle if you have successfully depressed this clip, otherwise you will have an extremely difficult time unplugging it. Once you have done this pull the tweeter out from the housing. It is held in place by three clips (see Figure 3).

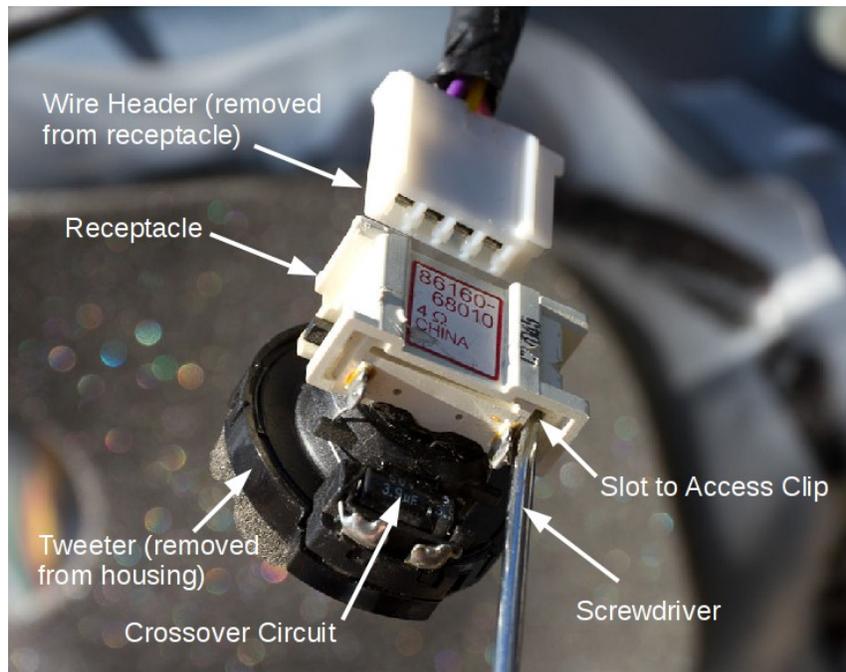


Figure 2: Tweeter/Crossover, Receptacle, and Wire Header (removed from housing)

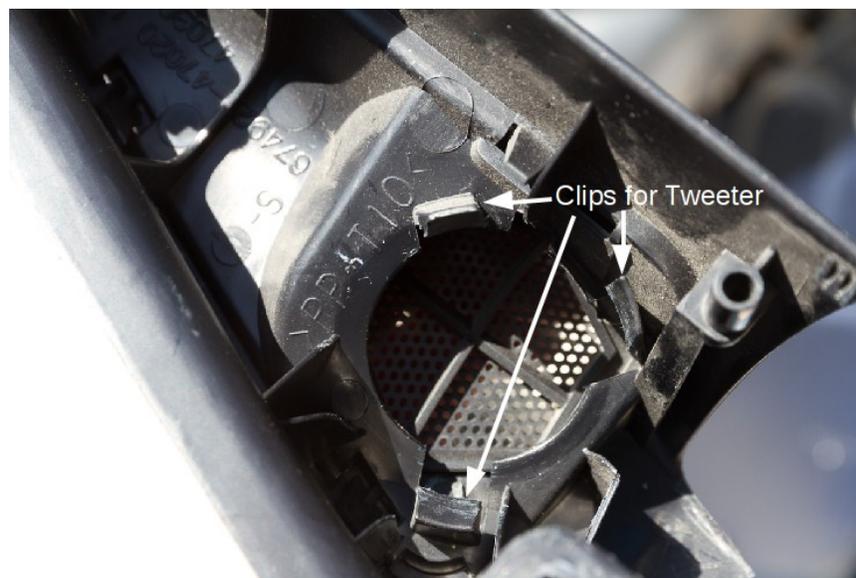


Figure 3: Rear of Tweeter Housing with Tweeter Removed

3. Remove the door panel as described in Sparky's guide for the rear doors. Remove small cover inside the door handle and both screws, and pull up and remove the window/mirror control panel. Then pull the panel away at the bottom and sides and then lift the entire panel up out of the window slot. Again, expect half or more of the white retaining clips to remain in the door (see Figure 5). You should pop these out using a screwdriver (or two in combination, they can be tricky) and put them back in the door panel before pressing the panel back on when you are done. An important difference with the front doors is that there are footlights that need to be unplugged along with the door and mirror controls (see Figure 4).

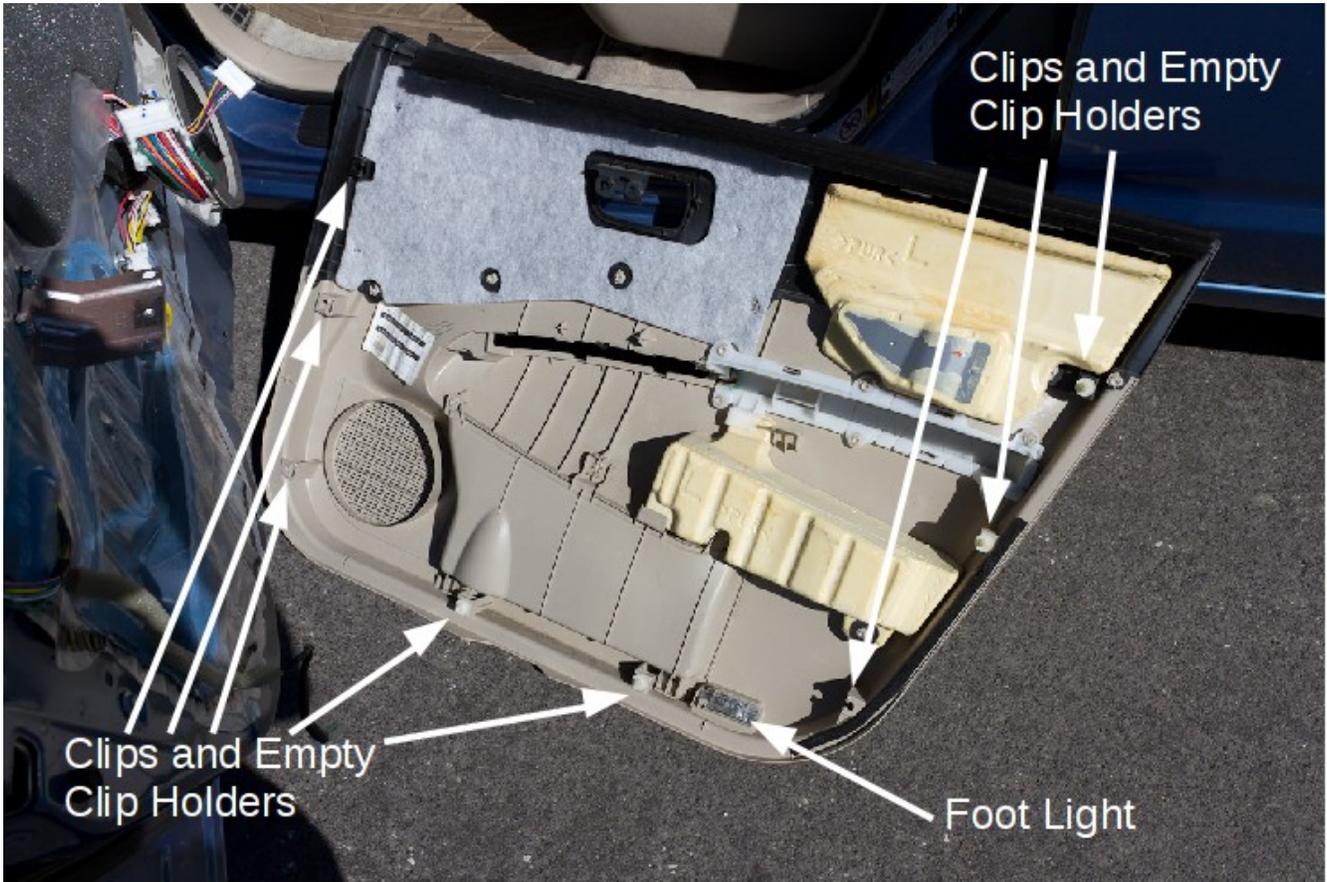


Figure 4: Inner Part of Removed Door Panel



Figure 5: White retaining clip still in door panel as it should be

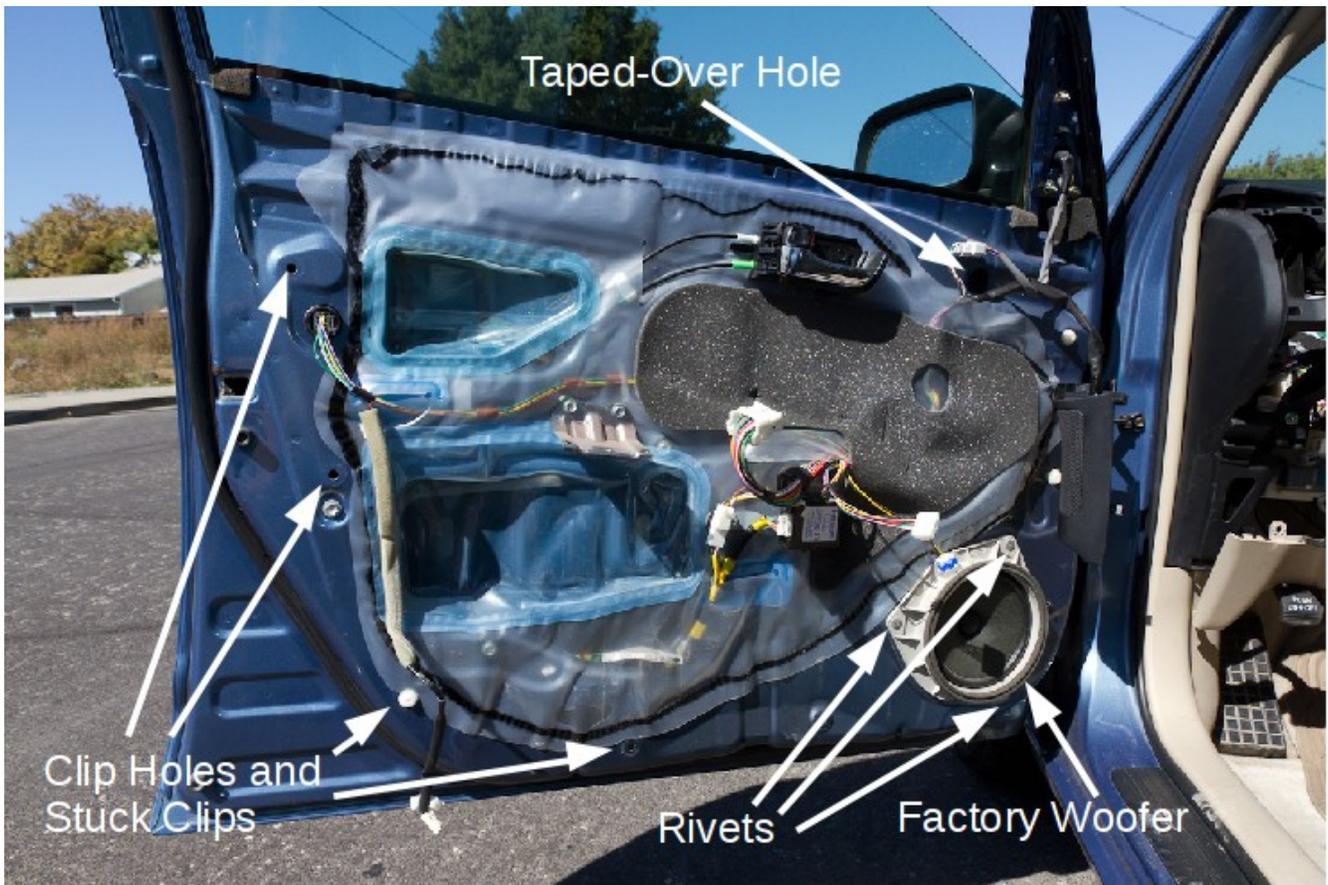


Figure 6: Uncovered Driver's Side Door

4. Remove factory woofer by drilling out rivets as per Sparky's guide. They can tend to catch on the 1/8" drill bit and spin around. You may need to hold it in place with a pair of pliers while drilling. Be careful if you do this. A photo of one of the destroyed rivets is below.



Figure 7: A vanquished rivet.

5. At this point the destruction stops and the construction begins. The tweeter that came with my Alpine SPR-60C fit perfectly into the tweeter housing just clipping into place. You may or may not have the same luck with a different model.

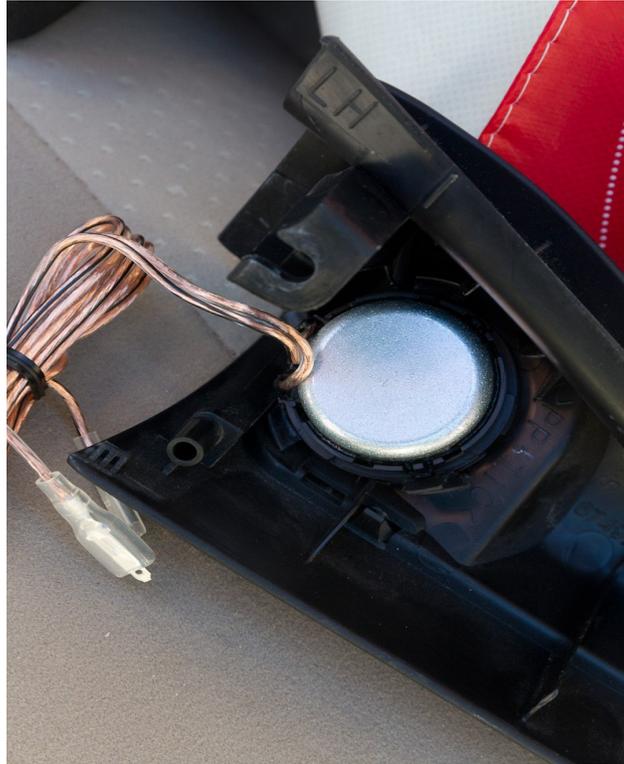


Figure 8: Back of Alpine tweeter snapped into place in tweeter housing.

6. The woofer was more of a problem. While two of the existing holes worked well for the bracket, I had to drill an extra third hole. Additionally, the bracket that came with the Alpine speakers didn't quite cover the entire hole. I probably should have just ignored this but I cut some thin plastic pieces off of a plastic box to cover these crescent shaped holes. There's some risk of resonant rattling but I haven't noticed anything yet. I used #10 machine screws with locking washers to secure the bracket.



Figure 9: Woofer hole showing three mounting holes. I was only able to use 2 of these and had to drill a third hole. Notice the bottom of the rolled-down window inside (with a curved cut). I did not have a problem with the speakers extending too deeply inside, so the window does not hit the speaker magnet.

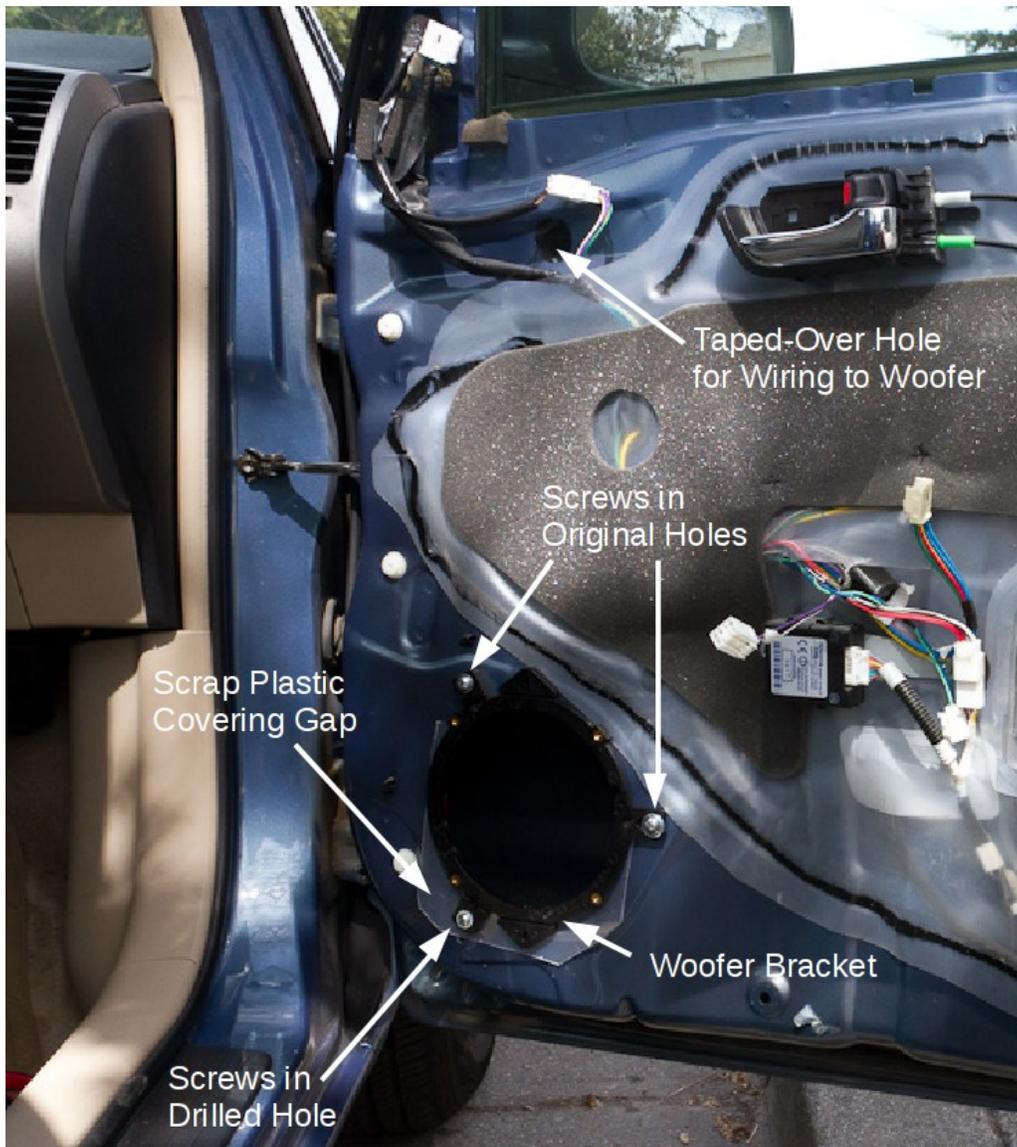


Figure 10: Passenger door showing woofer bracket in place

7. Now for the wiring. The speaker wire receptacle (see Figure 2) has 2 leads that run directly to the amplifier, and 2 leads that head down to the woofer. The amplifier lead colors are in the table below. Note that inexplicably on the front right wiring both these pairs of wires are green and blue, but the ones that lead down to the woofer have little hard-to-see gold paint dots on them. Refer to Figure 10 to see which is which.

Wire	Color
Front Left +	Pink
Front Left -	Purple
Front Right +	Green (no gold dot)
Front Right -	Blue (no gold dot)

Table 1: Speaker wiring colors for front channels

The wiring for the component speakers is as shown here:

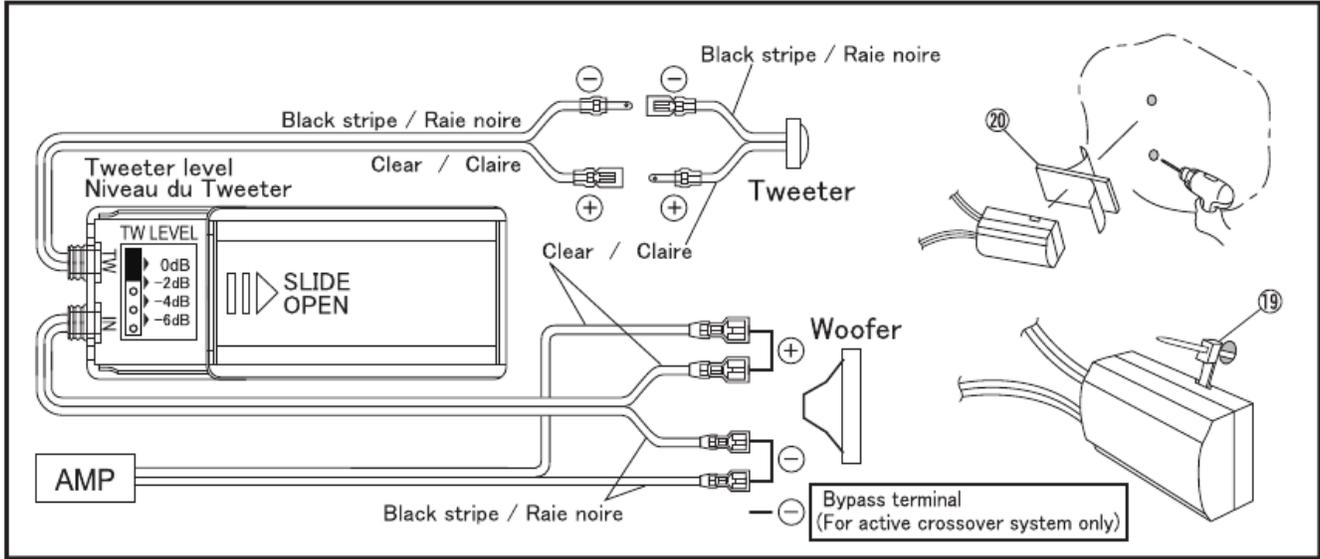


Figure 11: Alpine SPR-60C Wiring Diagram

In order to leave the wire header in place without cutting anything, I used some crimp-style flat pin connectors to insert into the correct slots in the header to wire the woofer to the amplifier. I found some at Radio Shack (Flat-Pin Connectors SKU: 278-317) that fit brilliantly. I attached these to some 18-gauge speaker wire and put crimp-style blade receptacles on the other end to attach to the woofer.

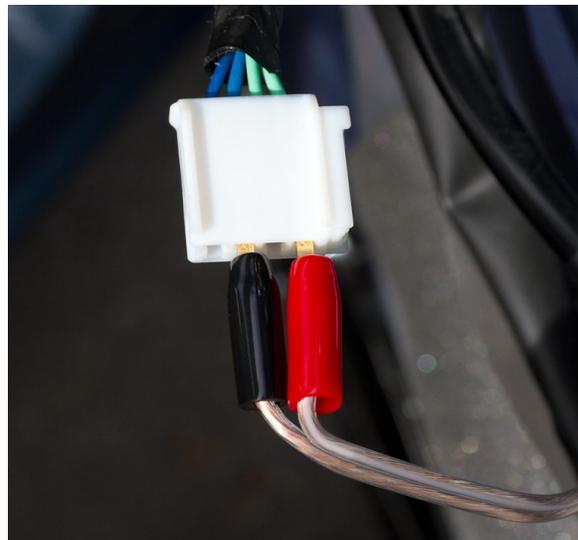


Figure 12: Left: Flat pin connectors to insert into factory wire header receptacle. Right: Pins inserted into passenger side receptacle.

I discovered a hole up by the tweeter that was perfect for sending wires to and from the woofer covered with a black circular bit of tape (see Figures 6 and 10). The wires from the amplifier to the woofer, and the wires from the woofer to the crossover went through this hole. I made sure not to really leave any slack because otherwise it could interfere with the window operation. Once the woofer was fully wired I screwed it into the speaker bracket and zipped/taped up the wiring.

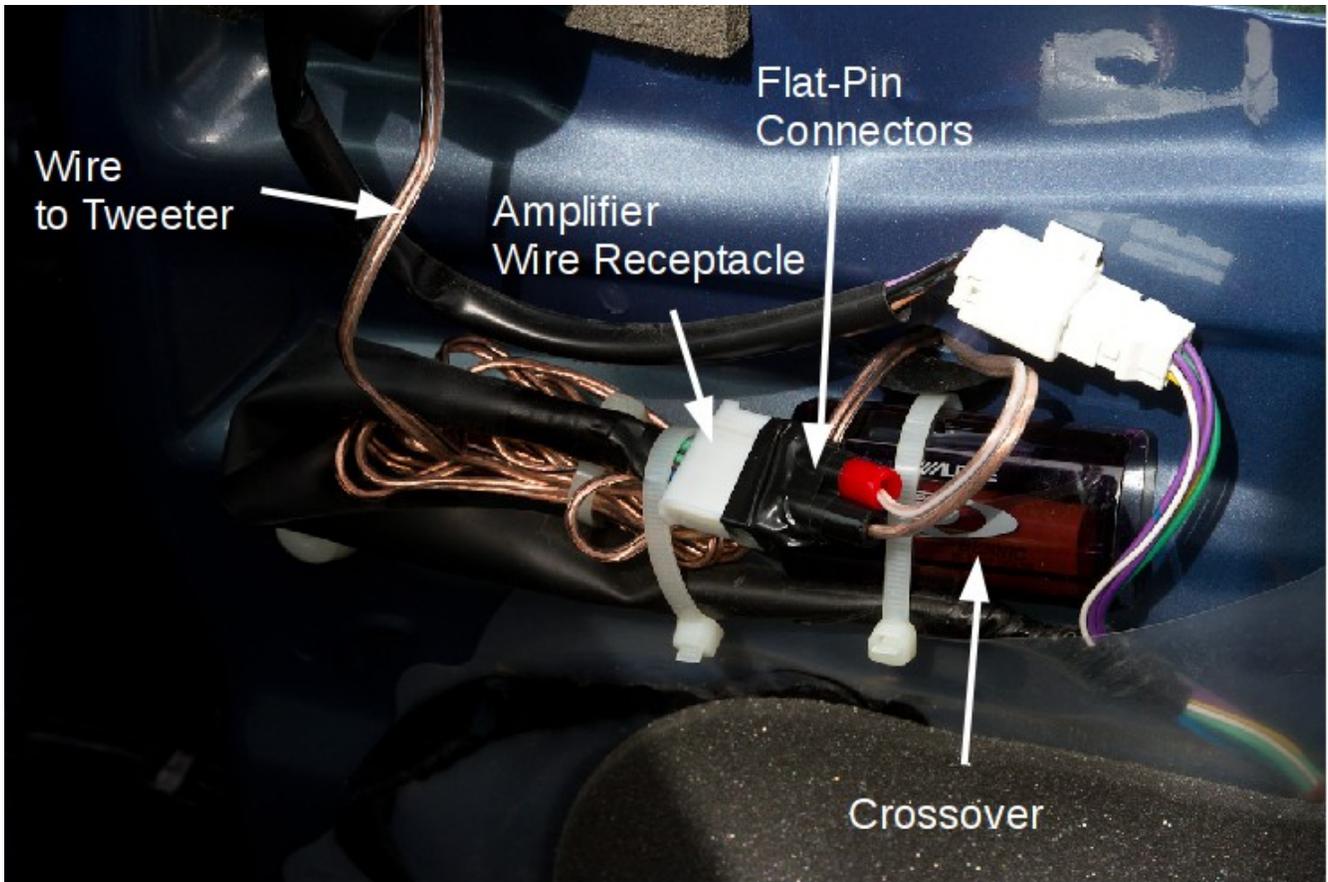


Figure 13: Final bundle of wires up near the tweeter location

8. Once everything is wired up, test it out. If everything sounds good, press the door panel back on (after putting any white retaining clips back into the door panel). Don't forget to wire the footlights back up before doing this. Then reconnect the door/mirror controls and press the panels back into place, and replace screws and plastic pieces into door. Then press tweeter housing back in and you should be all set.