

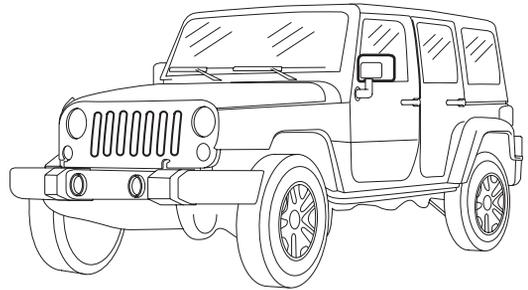
Jeep Wrangler

PSS-22WRA Sound System

Installation Manual

- Model: 4-Door Wrangler Unlimited JK
- Model Year: 2011 – 2018

***Not compatible with factory amplified systems**
****Not compatible with manual transmission models**



Model	Year
Jeep Wrangler Unlimited	2011 – 2018

* The specified vehicles have been tested and have met compatibility specs at the time of testing. Compatibility is not guaranteed if the manufacturer has made production changes to the listed vehicles above.

⚠ Warning: Before you begin, remove the ground wire from the NEGATIVE (-) terminal of the battery. Failing to do so can lead to electric shock, injury or damage to equipment.

Introduction

- Congratulations on purchasing the PSS-22WRA. This installation manual is designed to take you through the step-by-step installation of the PSS-22WRA into a 2011 - 2018 Jeep Wrangler Unlimited. Please familiarize yourself with the owner’s manual and if you still have additional questions please call 1-800-TECH-101.

Note

- Design and specifications are subject to change without notice for improvement.

To Ensure Safe Use Always Follow These Precautions

- The installation of this product requires specialized skills and experience. We recommend that you have the product installed by an Alpine authorized dealer.
- Before you use this product, be sure to carefully read this installation manual and the separate user's manual so that you can use the product correctly. Alpine Electronics bears no responsibility for problems that arise as a result of failure to follow the instructions in the manuals.
- This manual includes a number of symbols that are intended to help you use the product safely, to prevent harm to you and others, and to protect against damage to property. These symbols and their meanings are listed below. Make sure you fully understand these symbols before you begin reading the main text.

Explanations of Injury and Damage That May Result from Incorrect Use

 Warning	Ignoring the content marked by this indication and using the product incorrectly may lead to death or serious injury.
 Caution	Ignoring the content marked by this indication and using the product incorrectly may lead to injury or property damage.

Types of Precautions

 Forbidder	Indicates actions that are forbidden (must not be performed)
 Forbidder	Indicates that disassembly is forbidden.
 Mandatory	Indicates actions that are mandatory (must be performed)
	Marks content that should receive your full attention.

Warning

Do not disassemble or modify the product. Doing so could lead to an accident fire or electric shock.



Store screws and other small objects where small children cannot reach them. If one of these small objects is swallowed, consult with a doctor immediately.



When replacing fuses, be sure to use fuses with the specified current rating. Failing to do so could lead to an accident or fire.



Only connect the product to a 12 VDC negative ground car. Failing to do so could lead to an accident or fire.



Before you begin wiring, remove the ground wire from the negative terminal of the battery. Failing to do so could lead to electric shock or injury.



Do not cut the insulation on a cord and take power from another device. Doing so could lead to fire or electric shock.



Do not install the product in a location where it will obstruct the driver's forward view; interfere with the operation of the steering wheel, gearshift, or the like; or pose a threat to passengers. Doing so could lead to an accident or injury.



When making a hole in the vehicle body, be careful to avoid damaging pipes, the fuel tank, electrical wiring, and the like. This kind of damage could lead to an accident or fire.



When installing and grounding the product, do not use any of the bolts or nuts of the steering wheel, brakes, fuel tank, or the like. Doing so could make the brakes stop working or lead to fire.



Do not install the product near the passenger-side airbag. Doing so could interfere with the operation of the airbag and lead to an accident or injury.



Bundle cords so that they don't interfere with driving. Wrapping cords around the steering wheel, gearshift, brake pedal, or the like, could lead to an accident or damage equipment.



Caution

Connect the product properly according to the instructions. Failing to do so could lead to fire or an accident.



Do not sandwich cords between the seat railing or allow them to touch protrusions. Resulting breaks or shorts could lead to electric shock or fire.



Do not block vents or heat sinks. Doing so could lead to fire or damage equipment.



Use the accessories according to the instructions, and attach them securely. Failing to do so could lead to an accident or damage equipment.



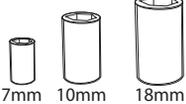
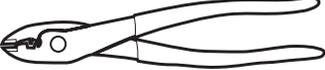
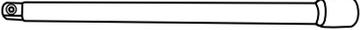
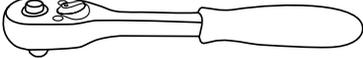
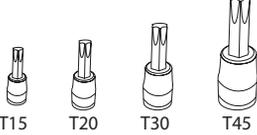
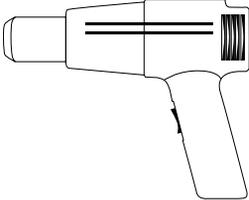
Do not install the product where it may be exposed to water or in a place with high levels of humidity or dust. Doing so could lead to fire or damage equipment.



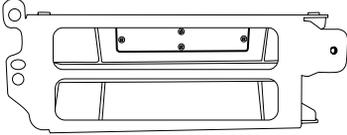
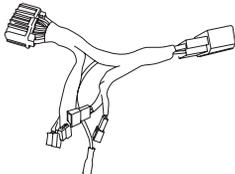
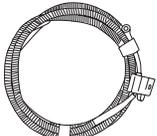
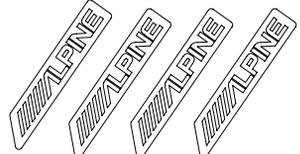
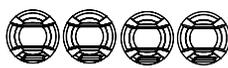
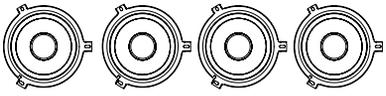
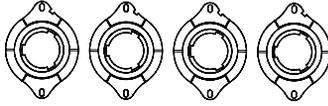
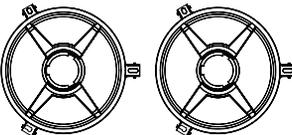
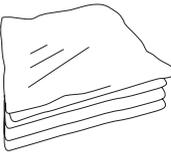
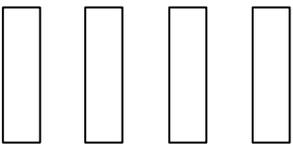
The installation and wiring of this product requires specialized skills and experience. Have the product installed by an Alpine authorized dealer.



Tools Required

<p>Panel Removal Tool</p>	<p>Sockets</p>	<p>Phillips Screwdriver</p>
	 <p>7mm 10mm 18mm</p>	
<p>Wire Cutters</p>	<p>Extension</p>	<p>Ratchet</p>
		
<p>Torx</p>	<p>Cordless Power Drill</p>	<p>Cordless Impact Gun</p>
 <p>T15 T20 T30 T45</p>		
<p>Heat Gun</p>	<p>9/32" Drill Bit</p>	
		

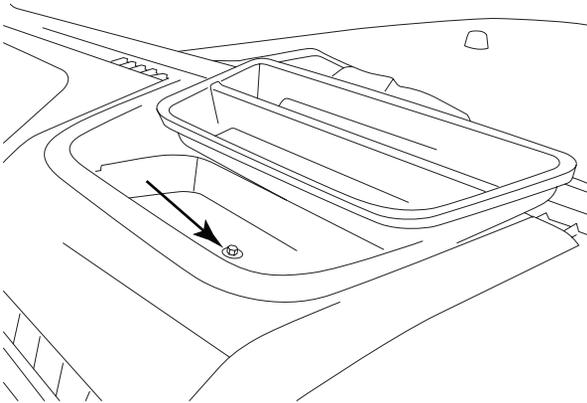
Accessory List

<p>Amplifier Assembly</p> 	<p>Subwoofer Enclosure</p> 	<p>Main Harness</p> 
<p>T-Harness</p> 	<p>RCA Adapter</p> 	<p>Power Cable</p> 
<p>(3) 10-24 3/4" Hex Washer Head Screws</p> 	<p>(10) Cable Ties</p> 	<p>(4) Alpine Logo Badges</p> 
<p>(4) Tweeters</p> 	<p>(4) Tweeter Crossovers</p> 	<p>(4) 6.5" Woofers</p> 
<p>(4) Tweeter Adapter Plates (for 2015 – 2017 models only)</p> 	<p>(2) Tweeter Bridge Grille Adapter (for 2007–2014 models only)</p> 	<p>(4) Polyfill sheets</p> 
<p>(4) Foam Strips</p> 		

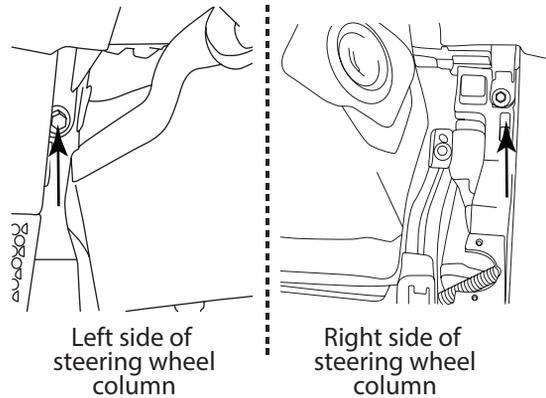
Factory Equipment Removal Process 2011 – 2018 Models

Radio

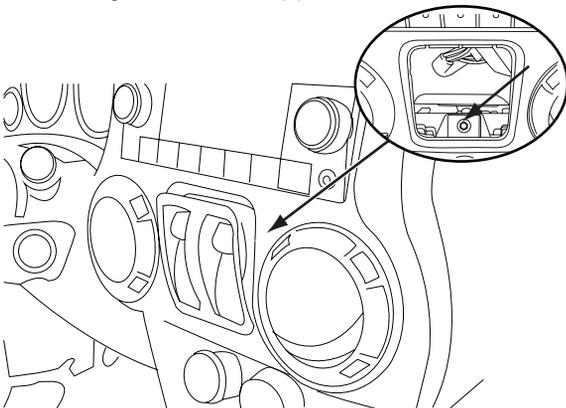
- 1 Remove the rubber cover from the top storage area and extract (1) 7mm screw.



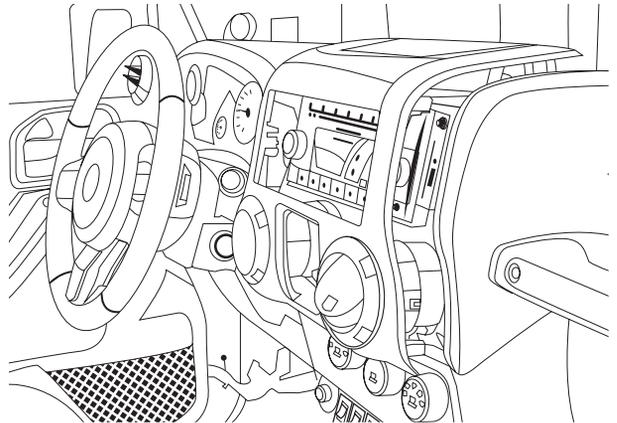
- 2 Remove the knee cover panel and extract (2) 7mm screws located to the right and left sides of the steering wheel column.



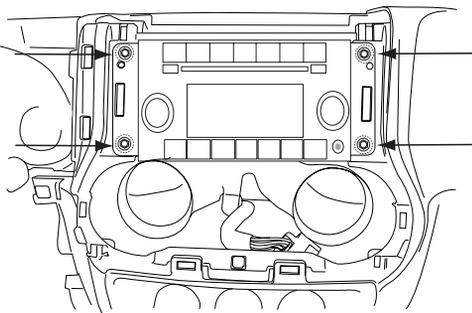
- 3 Remove the window switch pod using a panel removing tool and extract (1) 7mm screw.



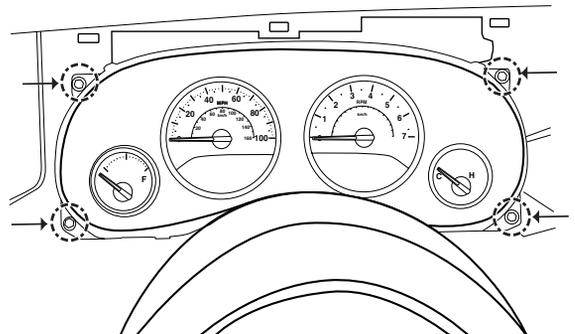
- 4 Remove the dash panel.



- 5 Extract (4) 7mm screws and remove the factory radio.



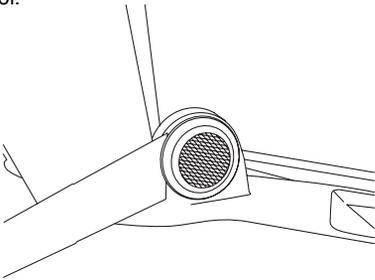
- 6 Extract (4) 7mm screws and remove the instrument cluster.



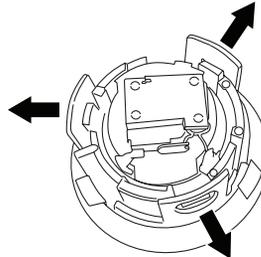
Factory Equipment Removal Process 2011 – 2014 Models

Tweeters

- 1** Remove the top dash tweeter using a panel removal tool.



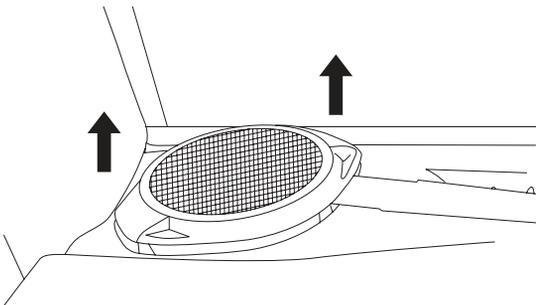
- 2** Gently open the (3) lock tabs to release the factory tweeter.



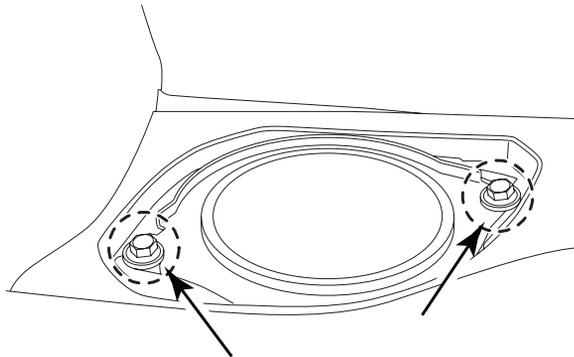
Factory Equipment Removal Process 2015 – 2018 Models

Top Dash Speakers

- 1** Remove the top dash tweeter using a panel removal tool.

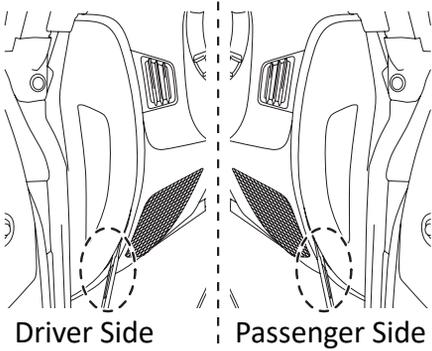


- 2** Using a 7mm socket remove (2) screws, disconnect and remove the factory speakers.

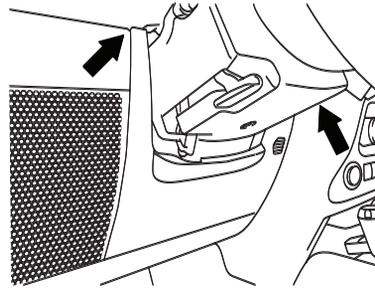


Front Lower Dash Speaker Removal

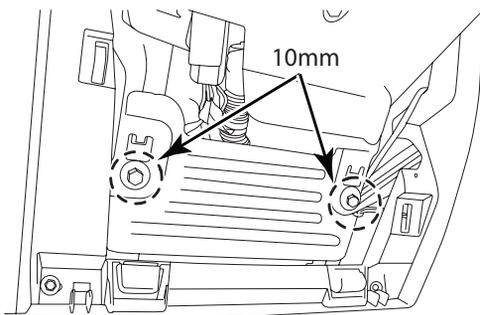
- 1** Using a panel removing tools, remove the dash side covers by each door.



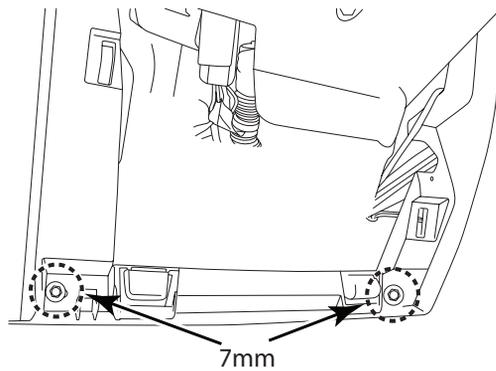
- 2** Remove the driver side knee cover by releasing the (2) top clips.



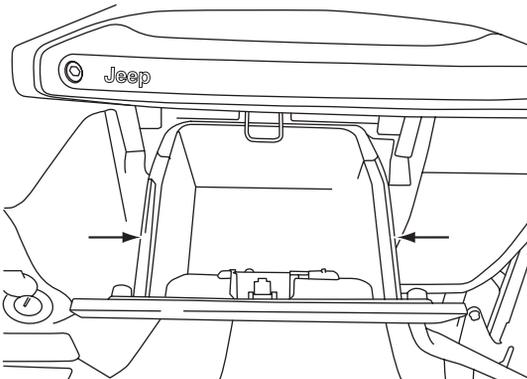
- 3** Extract (2) 10mm screws from the metal steering wheel column cover and remove it.



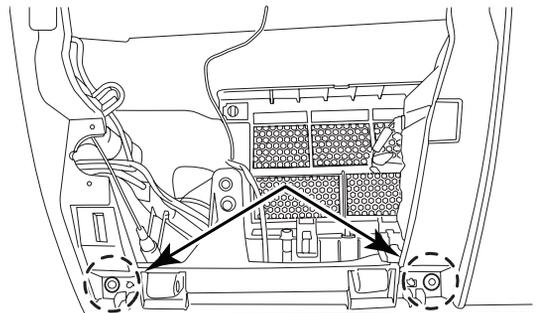
- 4** Extract (2) 7mm screws from the lower dash.



- 5** Remove glove box by pushing both left and right sides inwards.

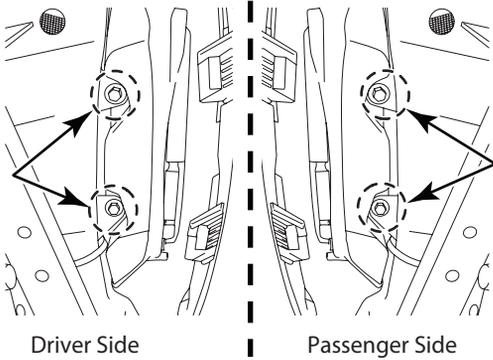


- 6** Extract (2) 7mm screws located on the lower dash section.

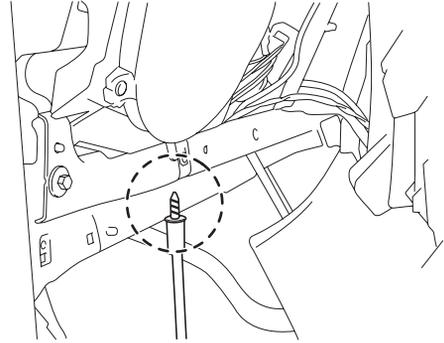


Front Lower Dash Speaker Removal (continued)

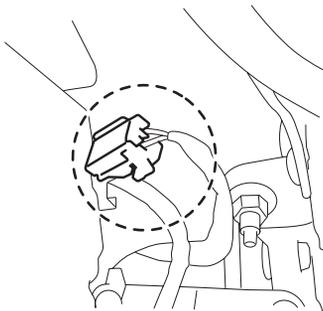
- 7 Extract (2) 7mm screws from the side of each respective dash enclosure.



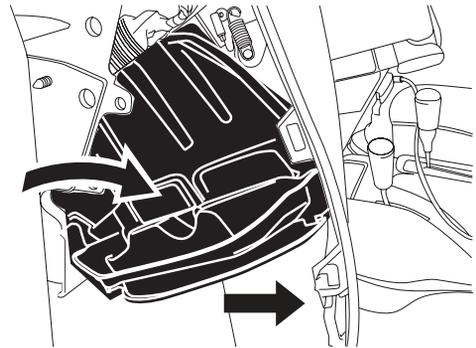
- 8 Remove (1) 10mm screws from under the each enclosure.



- 9 Disconnect the speaker enclosure (connector located on the back)

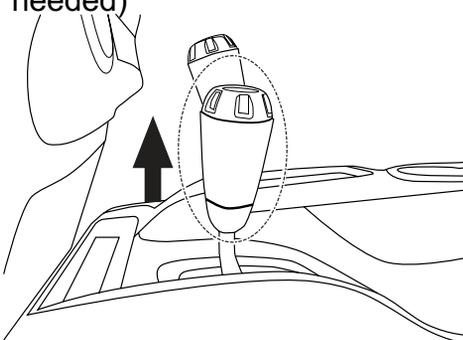


- 10 Pull the dash towards the back of the vehicle and remove the enclosure by turning towards the back.

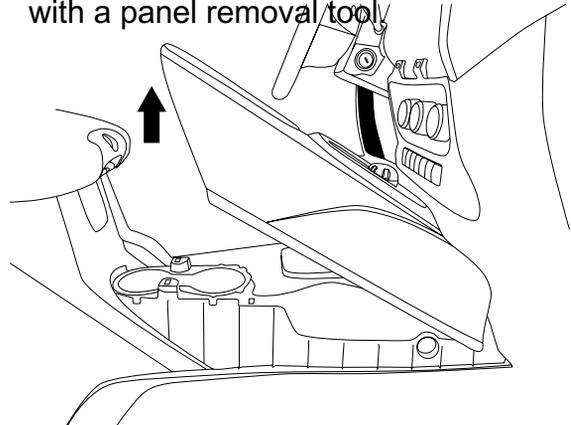


Center Console Shifter Panel Removal

- 1 Remove the transfer case shifter knob by pulling up. (some force may be needed)

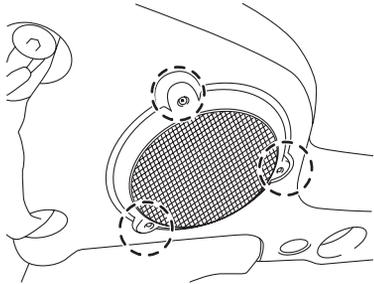


- 2 Remove the shifter panel by carefully pulling upward and releasing the clips with a panel removal tool.

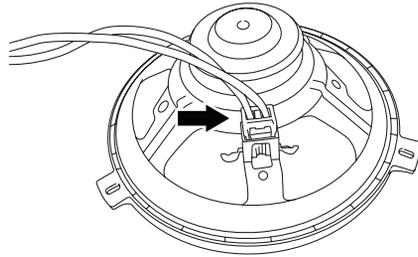


Sound Bar Speaker Removal 2011 - 2014

1. Remove (3) T15 Torx screws from the speaker grills.

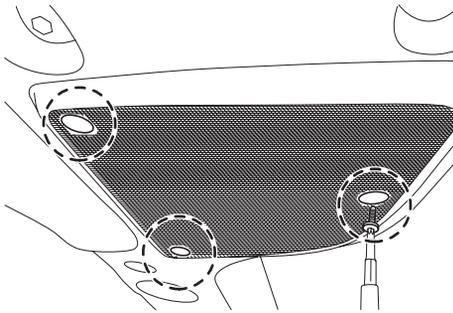


2. Disconnect and remove the factory speaker.

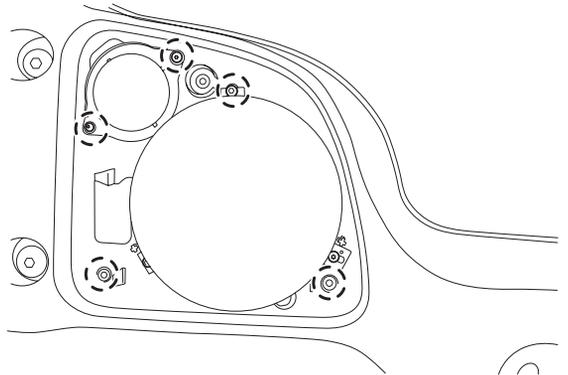


Sound Bar Speaker Removal 2015 - 2018

1. Remove (3) T20 Torx screws from the speaker grill.

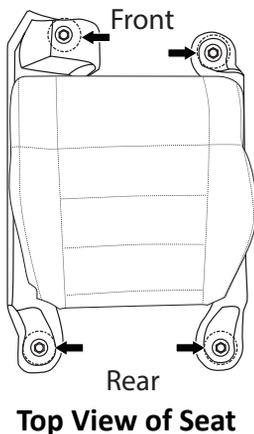


2. Remove (5) T20 Torx screws, disconnect and remove both speakers.

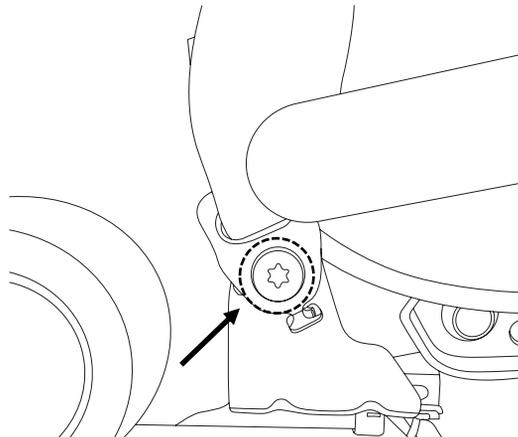


Passenger Side Seat Removal All Models

1 Using a 18mm socket, extract the (4) seat bolts from the passenger side seat.

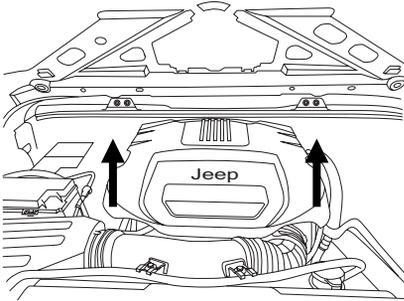


2 Using a T45 Torx extract (1) bolt from the seat belt anchor.

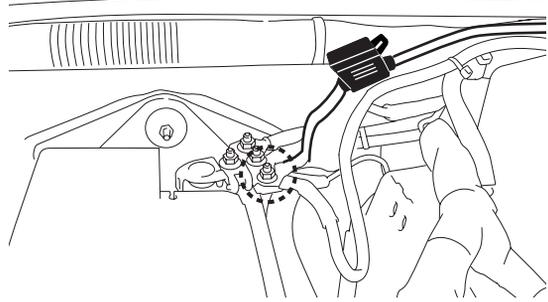


Amplifier Installation

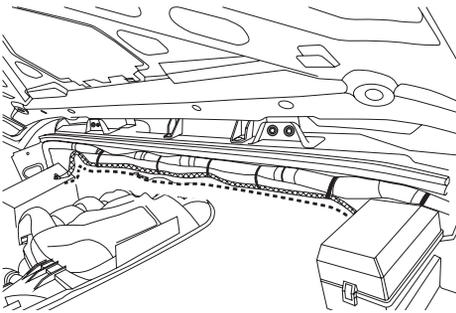
- 1 Lift the engine cover and pull towards the front of the vehicle to remove it.



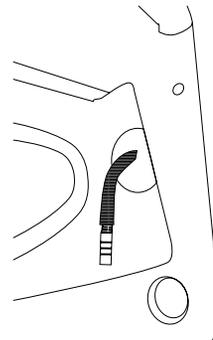
- 2 Use a 10mm socket to connect the power cable to the POSITIVE (+) battery terminal. **Note: The NEGATIVE terminal should remain disconnected until the installation is completed.**



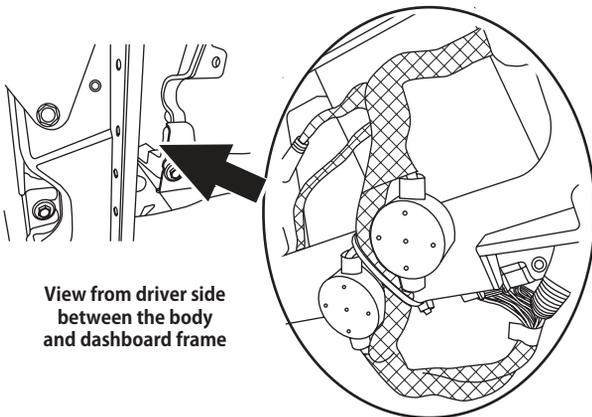
- 3 Route the power cable following the OEM harness and secure it with the cable ties provided as shown below.



- 4 Route the power cable through the blank grommet on the firewall on the drivers side.

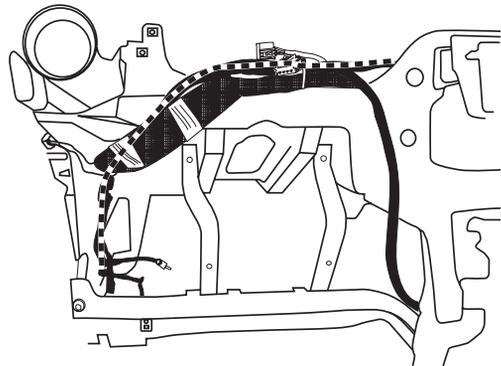


- 5 Use the supplied cable ties to secure the main harness to the dashboard frame with the inductors between the vehicle's body and dash board frame.



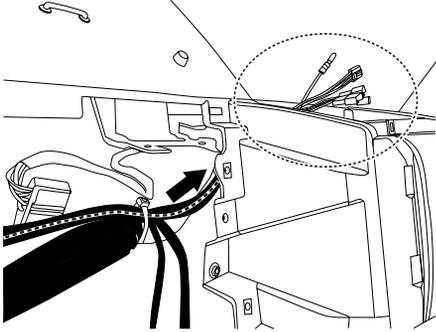
View from driver side
between the body
and dashboard frame

- 6 Route the amplifier main harness up to the cluster area following the OEM harness. (Shown in dashed line)

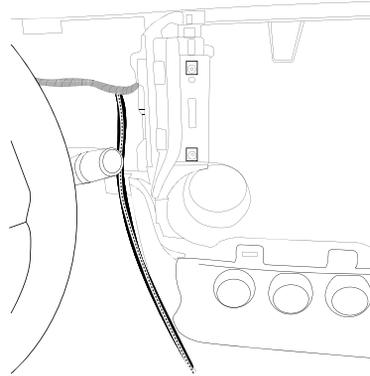


Amplifier Installation (continued)

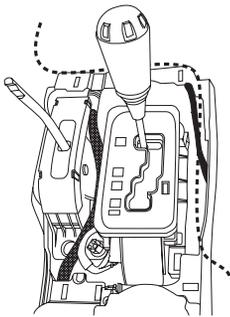
- 7** Route the In/Out audio connections behind the dash frame to the radio location. Make all the necessary connections based on your system configuration see pages 17, 18 or 19.



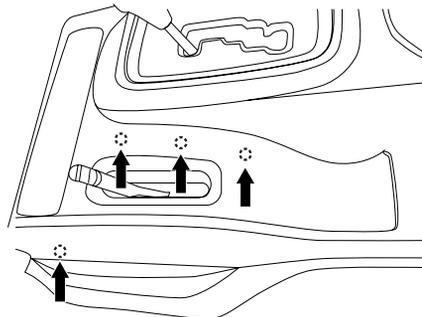
- 8** Route the subwoofer cable and bass level knob down to the center console.



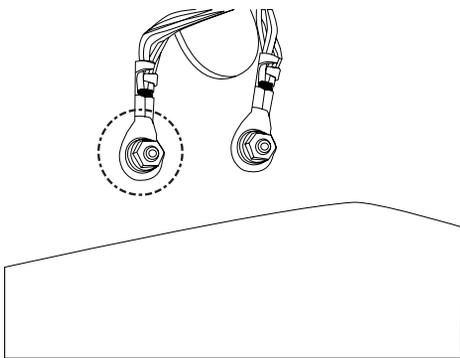
- 9** Route the subwoofer cable across the center console over to the passenger side seat.



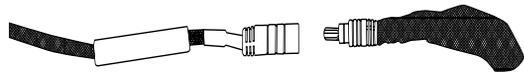
- 10** Mount the bass level knob in one of the suggested locations. Use a drill bit size 9/32".



- 11** Use a 10mm socket to mount main harness ground terminal to the OEM chassis ground above the kick panel.

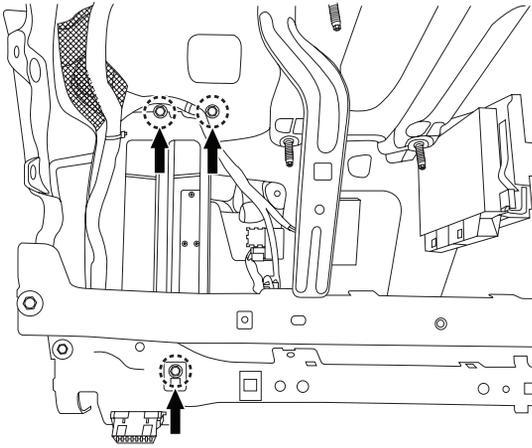


- 12** Insert the supplied water proof shrink tube into the Power cable. Connect the female connector on the power cable to the male connector on the main harness and shrink the tube using a heat gun.

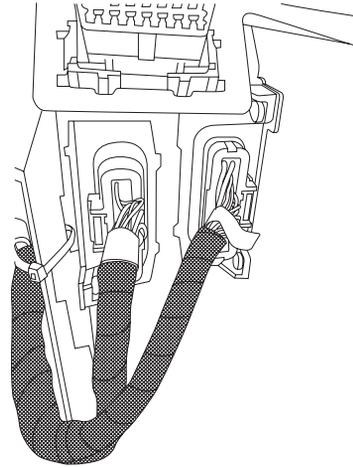


Amplifier Installation (continued)

- 13** Use an impact gun to mount the amplifier assembly with the supplied (3) Hex head screws.

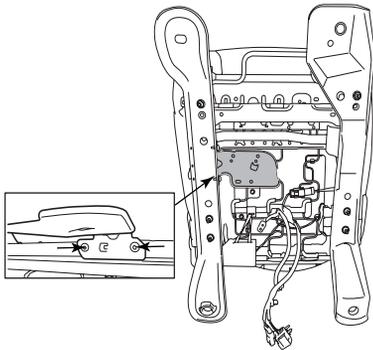


- 14** Connect both amplifiers **Note: Be sure to insert the corresponding connector into each amplifier.**

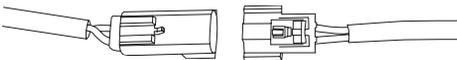


Subwoofer Installation

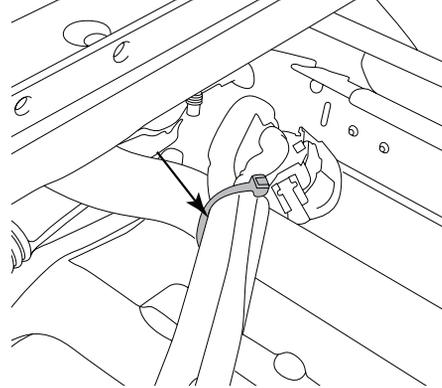
- 1** Using a T30 Torx, remove the OEM harness mounting plate as shown below. Use a panel removing tool to remove the two plugs from the mounting plate.



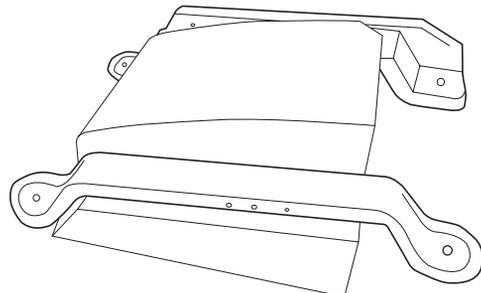
- 3** Connect the subwoofer to the main harness.



- 2** Secure the connector plugs using cable ties to the left side of the seat as shown below.

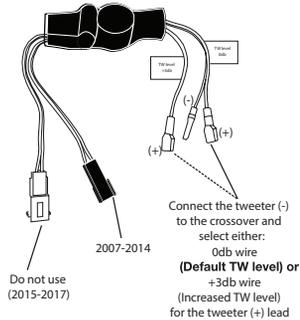


- 4** Place the passenger seat over the enclosure while carefully aligning the enclosure in between the seat rails. Mount using (4) 18mm seat bolts.

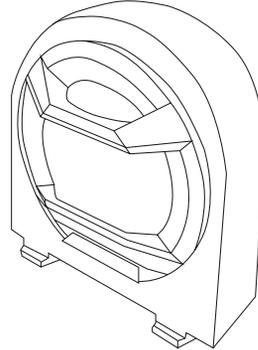


Front Speaker (Tweeters) Installation 2011 – 2014 Models

- 1 Select the (2011-2014) crossover input wires and connect to the vehicle plug. Connect tweeter connectors. Secure the crossover.
Note: 2015-2017 input plug is not used.

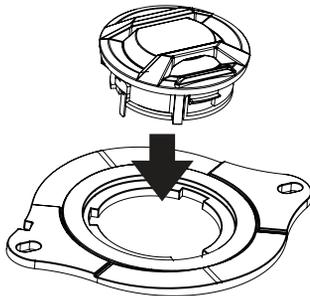


- 2 Guide the tweeter in the opening and press into place.

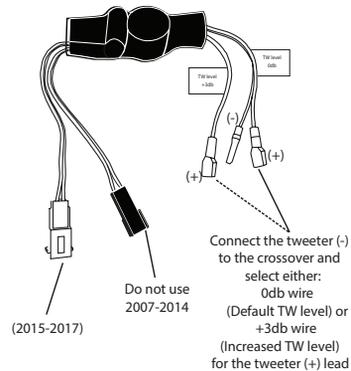


Front Speaker (Tweeters) Installation 2015 – 2018 Models

- 1 Press the tweeter into the 3.5" tweeter adapter.

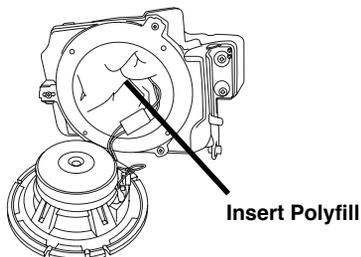


- 2 Select the (2015-2018) crossover input wires and connect to the vehicle plug. Connect tweeter connectors. Secure the crossover.
Note: 2011-2014 input plug is not used.

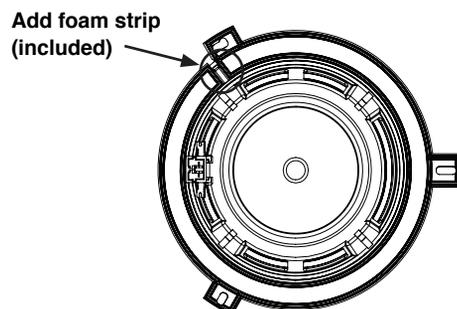


Front Speaker (Woofers) Installation 2011 – 2018 Models

- 1 Remove the speaker by extracting the (3) factory screws. (Save screws for later). Cut a slit in the center of the polyfill, and pull the vehicle plug through. Insert the excess polyfill into the enclosure. **Note: Installation of polyfill is needed for optimum sound.**

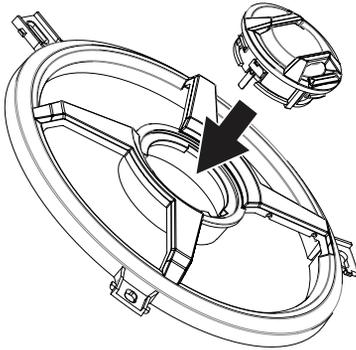


- 2 Add the foam strip, connect the vehicle plug to the speaker.
1. Install using the reverse procedure
2. Repeat for the opposite side

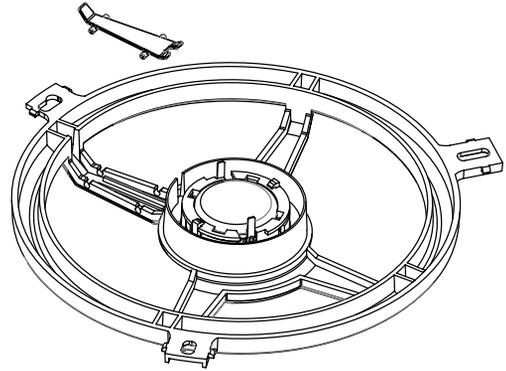


Rear Sound Bar Speaker Installation 2011 – 2014 Models

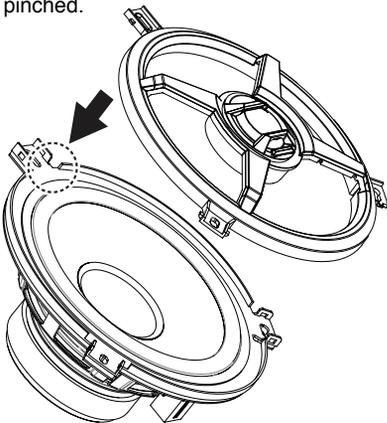
- 1** Press the tweeter into the tweeter bridge grille adapter. Observe the tab orientation.



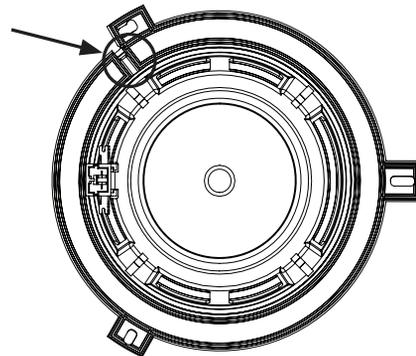
- 2** Route the tweeter wires through the grille by removing the wire cover. Ensure the wires do not get pinched when reinstalling the wire cover.



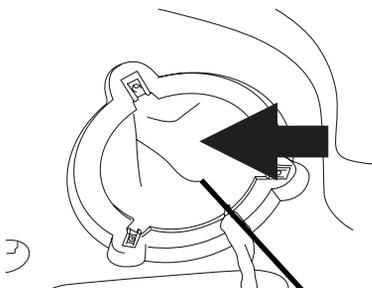
- 3** Route the wire through the notch on the basket, then press the grille into place. Ensure the wires do not get pinched.



- 4** Add foam strip on top of wires in channel.

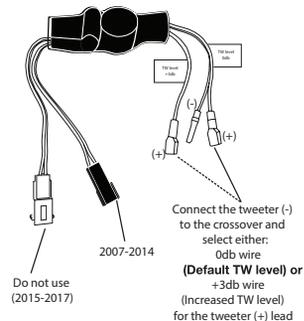


- 5** Cut a slit in the center of the polyfill, and pull the vehicle plug through. then insert the excess polyfill into the sound bar enclosure. **Note: Installation of polyfill is needed for optimum sound.**



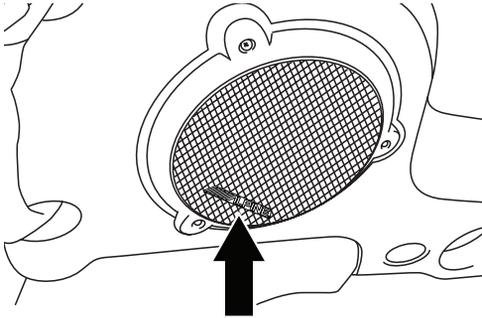
Insert Polyfill

- 6** Select the (2011-2014) crossover input wires and connect to the vehicle plug. Connect tweeter connectors. Secure the crossover. **Note: 2015-2017 input plug is not used.**

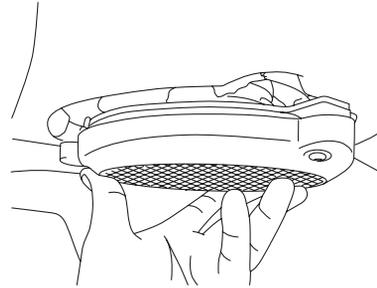


Rear Sound Bar Speaker Installation 2011 – 2014 Models (continued)

- 7** Clean the factory grille surface and apply the Alpine Badges.

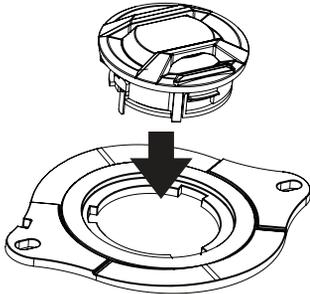


- 8** Align the factory speaker grille over the tweeter bridge grille adapter tabs, connect the vehicle plug to the speaker and mount to the sound bar using the (3) T15 Torx screws.

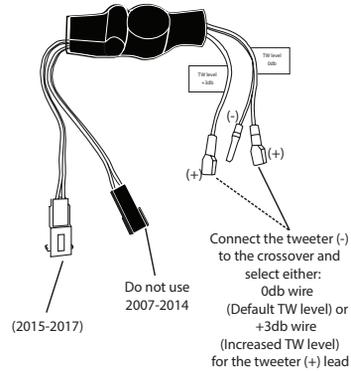


Rear Sound Bar Speaker Installation 2015 – 2018 Models

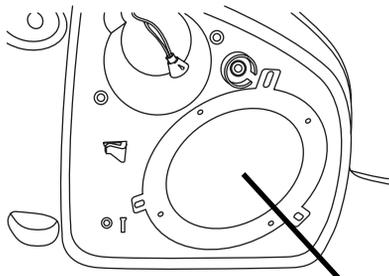
- 1** Press the tweeter into the 3.5" tweeter adapter.



- 2** Select the (2015-2018) crossover input wires and connect to the vehicle plug. Connect tweeter connectors. Secure the crossover.
Note: 2011-2014 input plug is not used.



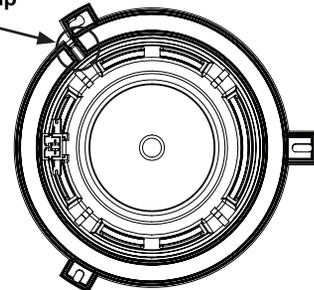
- 3** Cut a slit in the center of the polyfill, and pull the vehicle plug through. then insert the excess polyfill into the sound bar enclosure. **Note: Installation of polyfill is needed for optimum sound.**



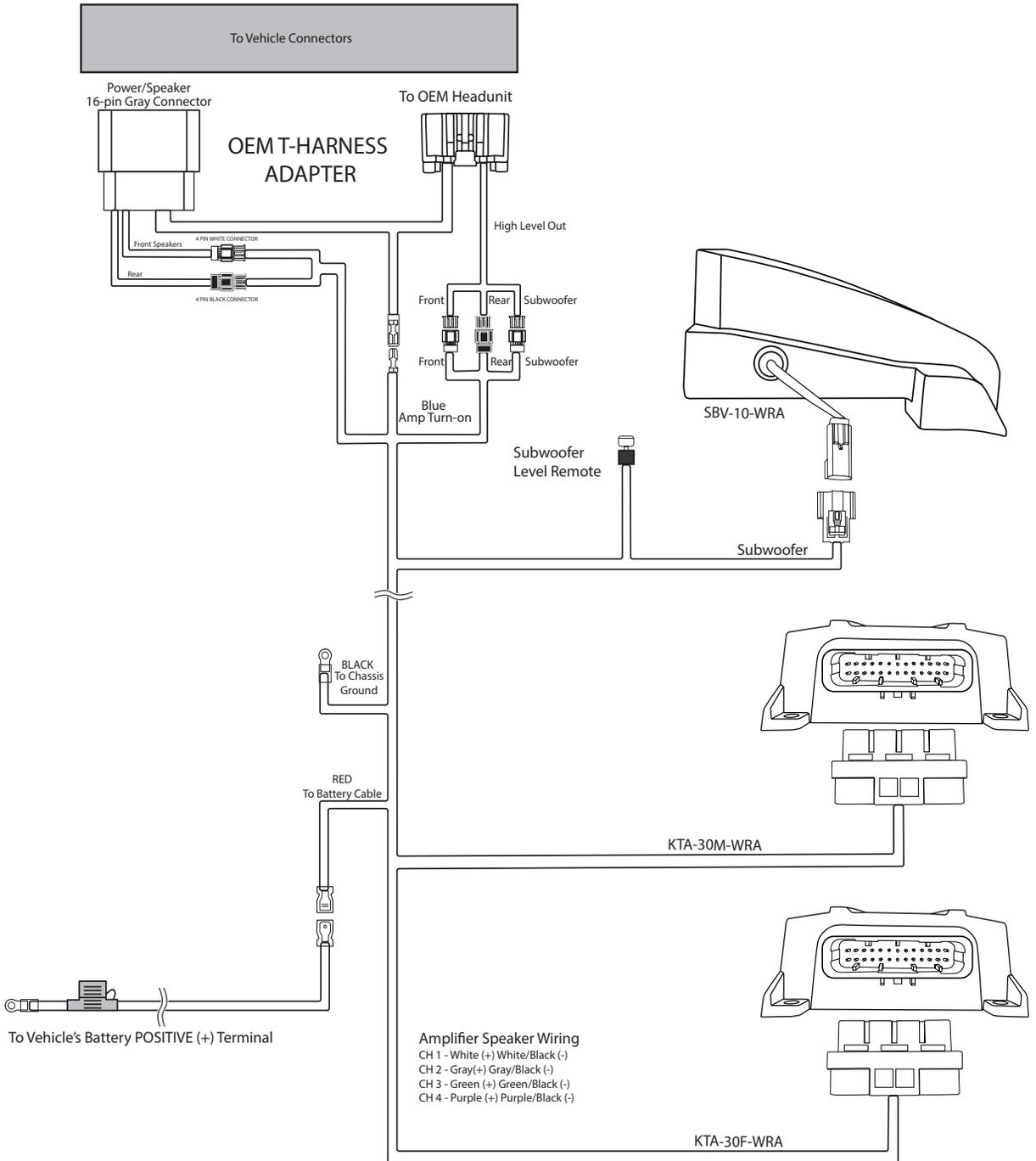
Insert Polyfill

- 4** Add the foam strip, connect the vehicle plug to the speaker.
1. Install using the reverse procedure
2. Repeat for the opposite side

Add foam strip (included)

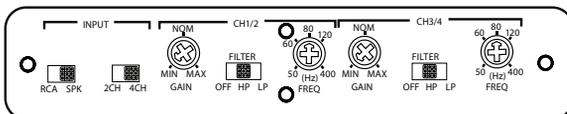


PSS-22WRA WIRING DIAGRAM FOR FACTORY HEADUNIT

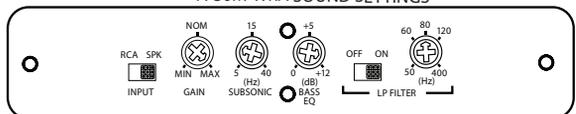


Amplifier Speaker Wiring
 CH 1 - White (+) White/Black (-)
 CH 2 - Gray(+) Gray/Black (-)
 CH 3 - Green (+) Green/Black (-)
 CH 4 - Purple (+) Purple/Black (-)

KTA-30F-WRA SOUND SETTINGS

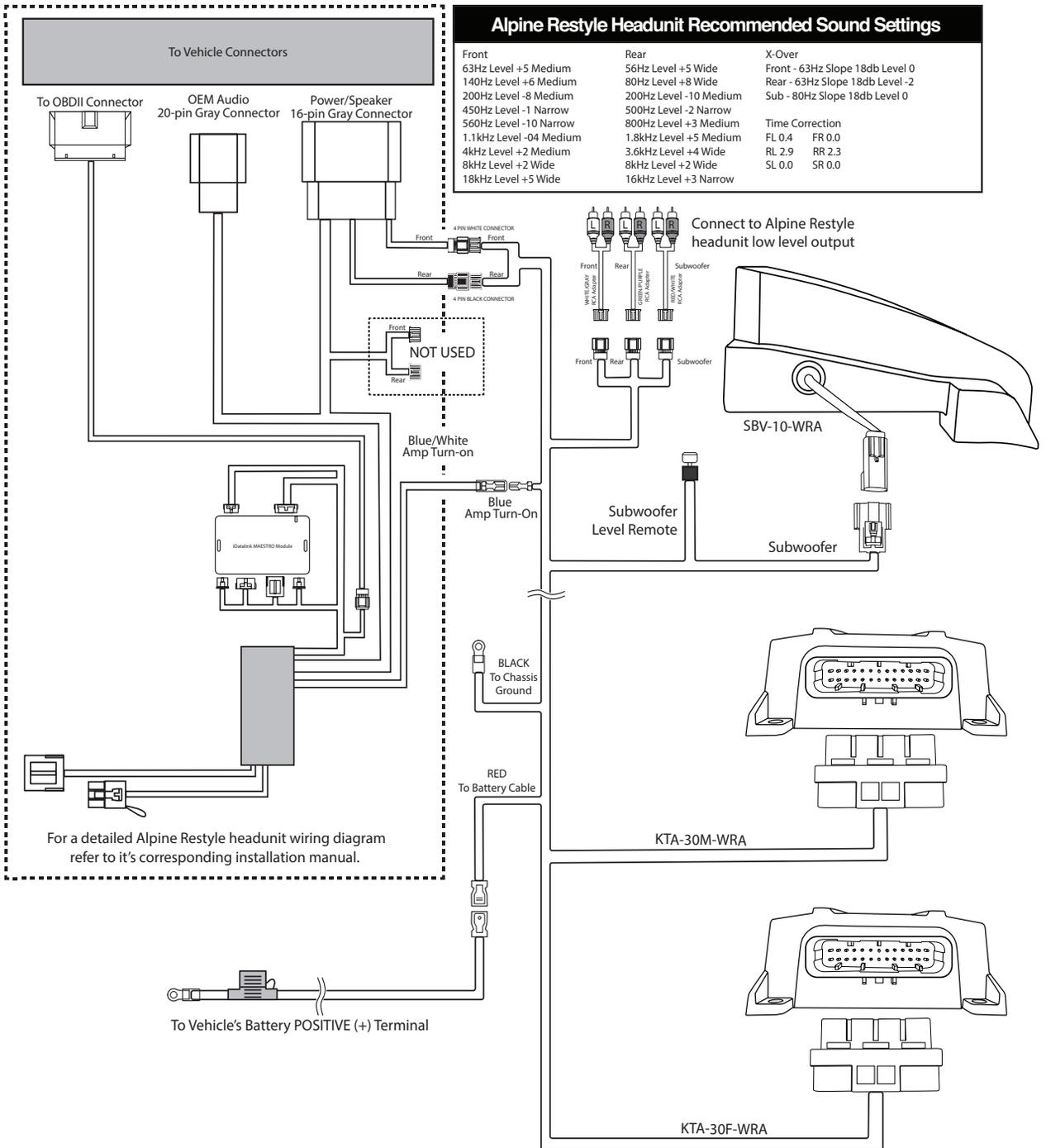


KTA-30M-WRA SOUND SETTINGS

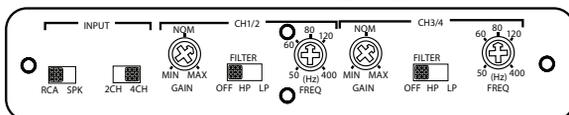


NOTE: FOR BEST PERFORMANCE SET AMPLIFIER AND SUBWOOFER TO RECOMMENDED SETTINGS AS SHOWN ABOVE

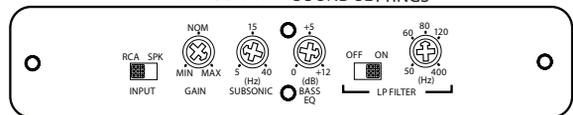
PSS-22WRA WIRING DIAGRAM FOR ALPINE RESTYLE HEADUNIT



KTA-30F-WRA SOUND SETTINGS

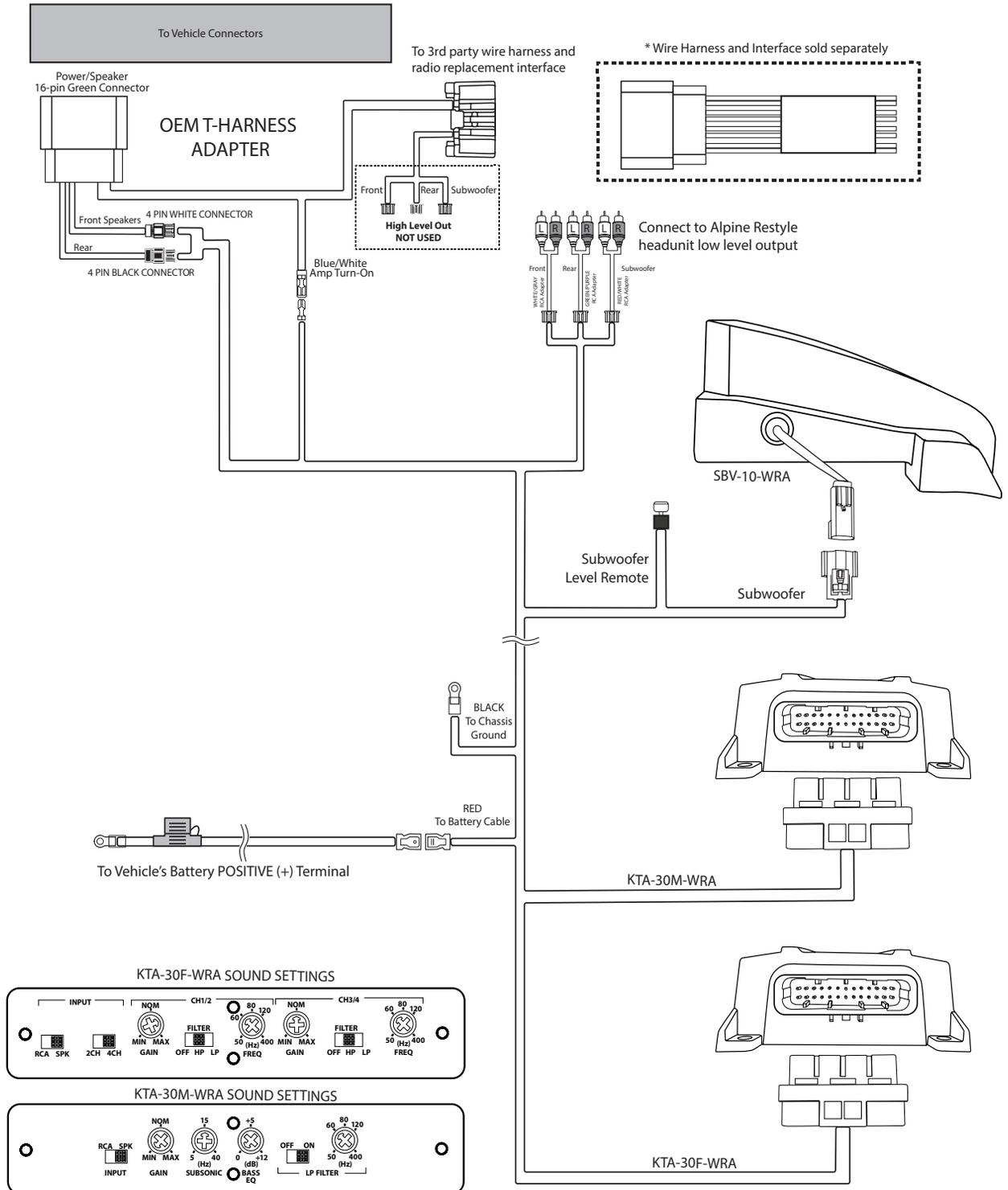


KTA-30M-WRA SOUND SETTINGS



NOTE: FOR BEST PERFORMANCE SET AMPLIFIER AND SUBWOOFER TO RECOMMENDED SETTINGS AS SHOWN ABOVE

PSS-22WRA WIRING DIAGRAM FOR AFTER MARKET HEADUNIT



NOTE: FOR BEST PERFORMANCE SET AMPLIFIER AND SUBWOOFER TO RECOMMENDED SETTINGS AS SHOWN ABOVE

Troubleshooting Guide

Symptom		Possible Cause	Remedy
1	System will not turn on	Missing or blown fuse at the battery	Insert or replace fuse
		Radio's Remote Turn-On wire may be disconnected.	Verify that Remote Turn-On wire is connected.
2	Volume is too loud with aftermarket headunit.	Speaker level out is connected at the T-Harness.	Ensure that the low level RCA adapters are use in aftermarket headunit system (refer to the corresponding wiring diagram).
		Amplifiers gain control has not been properly adjusted.	Refer to the corresponding system diagram.
4	Subwoofer sounds very low.	Gain level may be down to the lowest setting.	Adjust level to recommended setting (refer to the corresponding wiring diagram).
		Audio Phase may be reversed.	Ensure that the PHASE is set to 0°.
5	One of the speakers has no sound.	Disconnected pin or loose connection.	Check all connections to the speaker, loose pins, disconnected terminals etc..
6	Airbag light is on	Failed to disconnect the battery while working on the vehicle.	Disconnect the battery and re-connect after 5 minutes. If problem is not solved, the vehicle will have to be taken to a Jeep dealer.
7	System turns on only on radio source	Aftermarket Power Antenna wire is connected to amp	Connect the Remote Turn-On wire (Blue/White) to the Blue wire on the amplifier harness.