

Kit Contents: OEM Audio Plus Reference/System Series



\*Item applies to Reference 450Q ONLY

Hardware Content		
Item	Quantity	Description
1	2	1" Soft Dome Tweeter with Neodymium Magnet
2*	2	6"x9" Carbon Fiber Woofer
3*	2	6.5" Carbon Fiber Coaxial Rear Speaker
4	1	8" Carbon Fiber Subwoofer in Custom Fit Sealed Enclosure
5	1	DSP Amplifier
6	1	Quick-Sync Wiring Harness
7	1	Fuse Holder Assembly
8	1	30A Fuse
9	1	Corrugated Loom
10	10	Cable Ties (Not pictured)

Recommended Tools	
<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
Safety Goggles	
Protective Blanket	
Safety Gloves	
<b>Special Tools</b>	<b>Notes</b>
Panel Clip Removal	SST # 00002-06001-01
Socket Wrench	
Sockets	10mm, 14mm
Socket Extension	6"
Screwdriver	#2 Phillips
Side Cutters	
Wire Strippers	Needed for 12g butt Sealed-Crimp-Solder Connectors
Heat Gun	Needed for 12g
<b>Installation Tools</b>	<b>Notes</b>
Masking Tape	
Foam Tape	
Cable Ties	10 piece bundle included
<b>Special Chemicals</b>	<b>Notes</b>
Lubricant	For Pulling Wire Through Grommet
Silicone Sealant	For Sealing Grommet

Legend	
	STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.
	TOOLS & EQUIPMENT: Used in Figures to call out the specific tools and equipment recommended for the process.

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### Accessory Installation Practice (read before installation)

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document cover such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.)
- Safety (eye protection, checking torque procedure, etc.)
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.)
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.)

Please see your Toyota/Scion/Lexus dealer for a copy of this document.

### Revisions and other installation assets

OEM Audio Plus is committed to providing components and instructions designed for seamless integration. Please visit [oemaudioplus.com](http://oemaudioplus.com) for the most up to date installation related documents and media.

### Important Warranty Information

Failure to completely and properly Warranty Registration may result in possible reduction or complete denial of future warranty claims. Complete yours today at [oemaudioplus.com/registration](http://oemaudioplus.com/registration) or call: 855 OEM ODIO for more details and alternative methods of system registration.

## 1. Vehicle Preparation



- a. Apply parking brake.
- b. Open hood of the vehicle.
- c. Disconnect the negative (-) battery cable.
- d. Prepare a protective surface to place all vehicle components on.

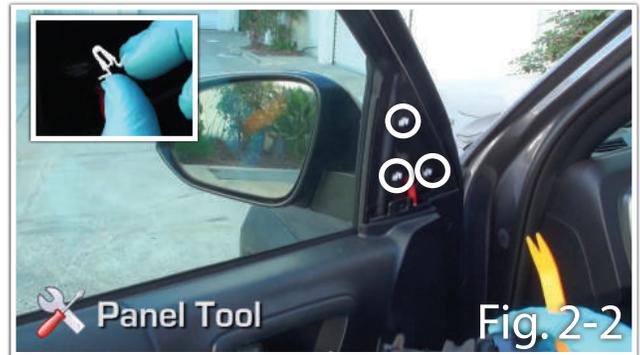


**\*\*Section 2 is for Reference 450Q Only\*\***

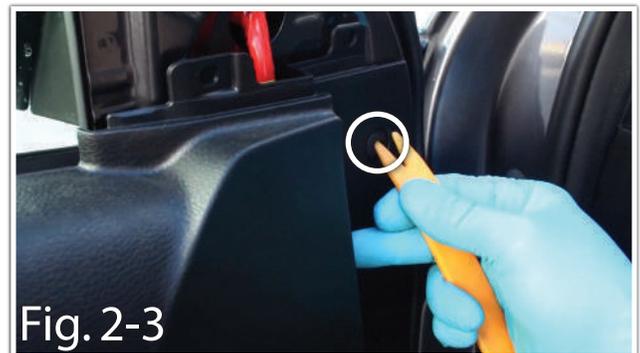
## 2. Front Door Woofer Installation

### a. Remove Door Panels

1. Remove A Pillar by pulling straight and away from door (Fig. 2-1). Disengage any clips that remain in the door and return to the A Pillar panel. (Fig. 2-2)



2. Disengage door locking tab. (Fig. 2-3)



3. Use a panel tool to remove the window/door lock control panel. Note: Insert tool between the front edge of the panel of the trim to remove. (Fig. 2-4)



4. Disconnect window/door lock control connectors from the panel. Use of a pick tool or precision screwdriver is needed to release connector. (Fig. 2-5)



5. Use a pick tool to remove the carpet cover in the door grab handle. (Fig. 2-6)

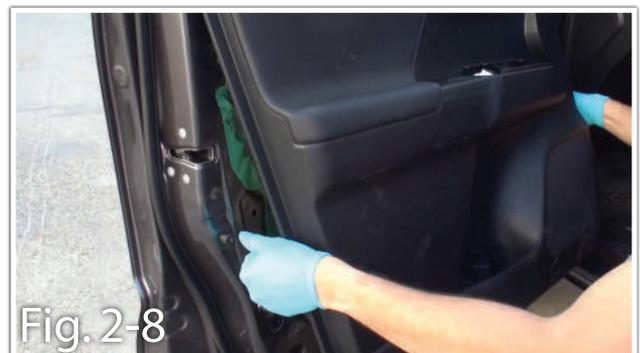


6. Remove #2 Phillips screw behind the door latch.

7. Use a panel tool to remove the cover behind the interior door latch and remove the #2 Phillips screw. (Fig. 2-7)



8. Use panel tool to disengage the clips behind the door panel one at a time. Start at the bottom, then the sides, and finish at the top. Use gentle force to remove door panel. (Fig. 2-8)



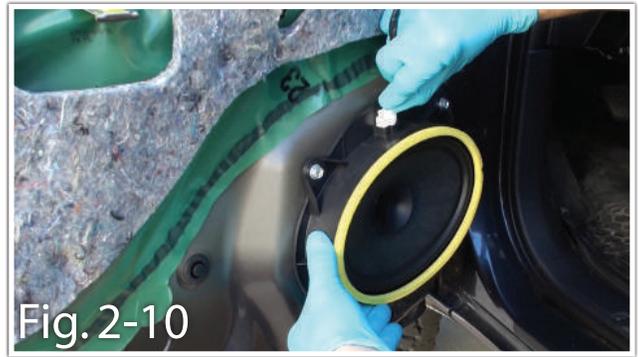
9. Remove door latch assembly from the door panel by unsnapping and lifting the door latch connectors. Note: Connectors need to be reassembled in the same orientation – white on top, green on bottom. (Fig. 2-9)



10. Set door panel aside.

b. Install 6x9 speaker

1. Disconnect the 6x9 speaker connector.  
(Fig. 2-10)



2. Remove the four (4) 10mm bolts holding the factory 6x9 speaker in place and remove speaker. (Fig. 2-11)



3. Mount the 6x9 OEM Audio Plus speaker by using the four (4) 10mm bolts and re-install 6x9 speaker connector. (Fig. 2-12)



4. Reassemble the door in reverse order, taking time to ensure all clips are engaged.

5. Repeat this process for the other side of the vehicle.

\*\*Section 3 is for Reference 450Q Only\*\*

### 3. Rear Door Speaker Installation

#### a. Remove door panels

1. Disengage door locking tab by pushing release in and removing. (Fig. 3-1)



2. Use a panel or pick tool to remove the cover behind the interior door latch. (Fig. 3-2)



3. Use a T25 Torx to remove the door latch cover. (Fig. 3-3)



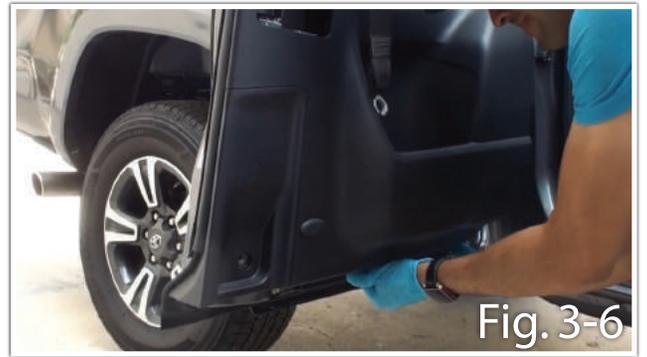
4. Remove the lower seat belt mounting bolt cover and mounting bolt. (Fig. 3-4)



5. Remove the grab handle. (Fig. 3-5)



6. Use gentle force to remove door panel. Start at the bottom then the sides and finish at the top. (Fig. 3-6) Note: You need to pull the seat belt through the seat belt opening to remove the door panel completely



7. Disconnect the factory 6.5" speaker connector. (Fig. 3-7)



8. Remove the three 10mm bolts holding the factory speaker in place and remove speaker. (Fig. 3-8)

9. Mount the 6.5" OEM Audio Plus coaxial speaker by using the three factory 10mm bolts and reinstall speaker connector. (Fig. 3-9)



10. Reinstall door in reverse order taking time to ensure all clips are engaged. Failure to securely reinstall door panel may result in rattles.

11. Make sure that the seatbelt is installed properly ensuring no binding occurs on the seatbelt strap.



#### 4. Front Dash Tweeter Installation

a. Remove the A Pillar Interior Trim Panel

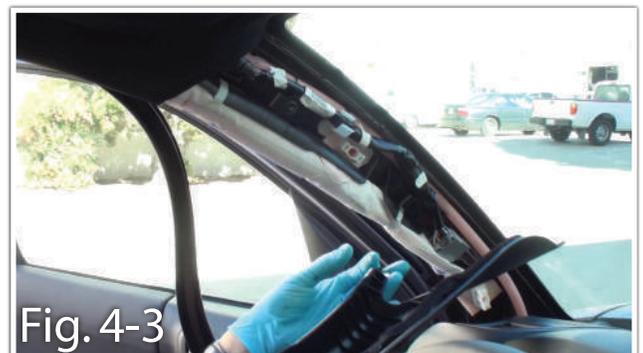
1. Open the plastic cover. (Fig. 4-1)



2. Remove the 10mm bolt. (Fig. 4-2)



3. Pull panel out of position and away. (Fig. 4-3)



b. Remove Factory Speaker and Install OEM Audio Plus 1" Soft Dome Tweeter

1. Using a pick or panel tool, carefully lift the dash speaker grill up and out of position. (Fig. 4-4)



2. Remove the two (2) 10mm holding the factory speaker in place and remove the speaker. (Fig. 4-5)



3. Disconnect the factory dash speaker. (Fig. 4-6)



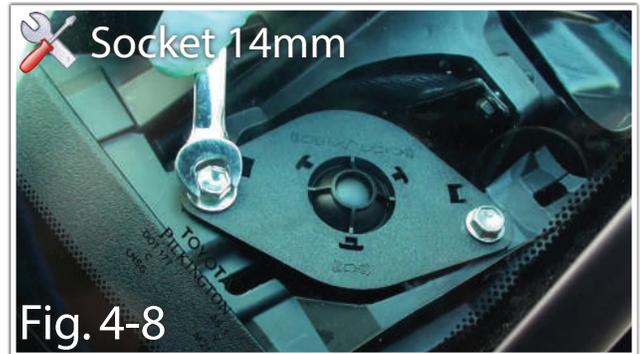
4. Position the OEM Audio Plus 1" Soft Dome Tweeter in position and reinstall the dash speaker connector. (Fig. 4-7)



5. Mount using the original 10mm bolts.  
(Fig. 4-8)

6. Reinstall the dash speaker grill, A Pillar  
Interior Trim Panel, and the 10mm bolt.

7. Repeat process for the other side of the  
vehicle.



## 5. Amplifier Installation

### a. Remove seats

1. Loosen the drivers seats. Slide the seats  
forward and remove the trim panels  
covering the seat bolts on the rear side of  
the seats. Locate the slots in the trim covers  
and pry them off using the forked end of  
your trim tool. (Fig. 5-1)



2. Using a 14mm socket with a 6" extension,  
remove the two (2) rear 14mm seat bolts.  
(Fig. 5-2)



3. Slide seats to the rear and remove the  
two (2) front 14mm seat bolts. (Fig. 5-3)

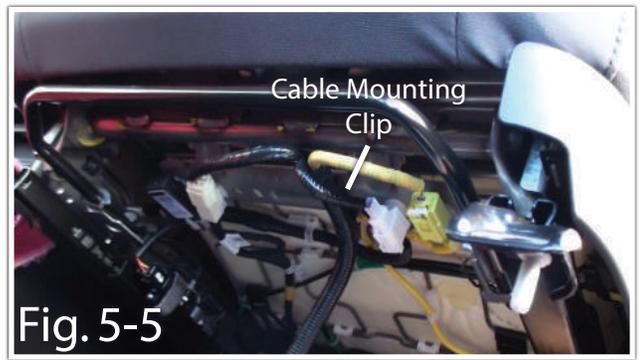


b. Mount amplifier

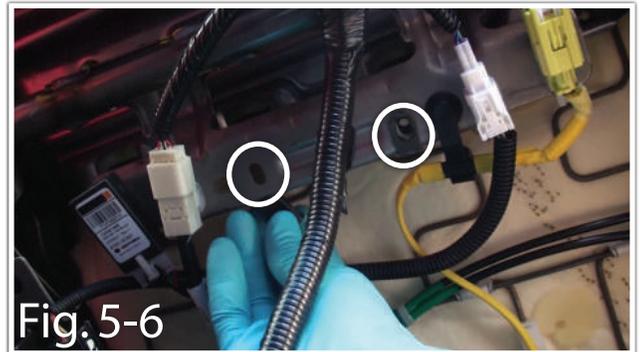
1. Tilt the seats towards the rear of the car.  
(Fig. 5-4)



2. Remove the center cable mounting clip. This bundle will be repositioned and housed on the OEM Audio Plus Amplifier Assembly once mounted. (Fig. 5-5)



3. Install and position the two (2) 1.0x19.5mm speed clips so that it aligns with the two inner center holes of the underseat frame. (Fig. 5-6)



4. Position amplifier assembly so that the rear bracket hooks on rear most spring and front bracket arm rests on the under seat front frame. The amplifier connector receptacles will face the passenger side of the vehicle. (Fig. 5-7)



5. Use the provided 10mm bolts to secure the amplifier bracket assembly to the underseat frame. (Fig. 5-8)



6. Attach the cable mounting clip to the open slot on the amplifier bracket assembly. (Fig. 5-9)



6. Quick-Sync Wiring Harness Installation (Vehicle Disassembly)

a. Remove the drivers side front threshold. (Fig. 6-1)



b. Remove the driver's side kick panel by unscrewing the black locking tab and gently pulling the panel away. (Fig. 6-2)



c. Remove the drivers side rear threshold by pulling in an upward motion. (Fig. 6-3)



d. Lift the rear seat cushion assembly. (Fig. 6-4)



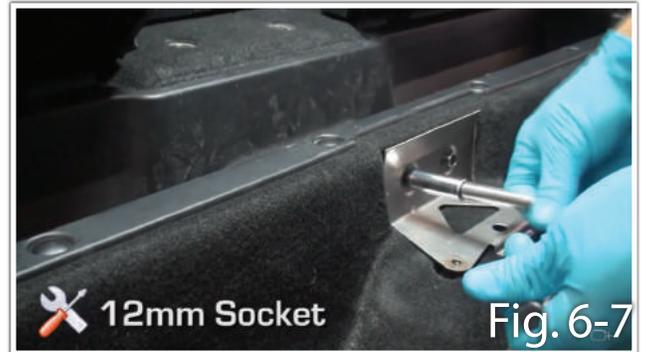
e. Remove the front and rear center console mats. Remove the four 10mm bolts. Remove the driver's side and passenger side rear seat belt assemblies. (Fig. 6-5)



f. Release the lock and fasten the floorboard to the seat bottom. Disengage the two guides and remove the lower console box. (Fig. 6-6)



g. Remove the console plate by removing two 12mm bolts and the six #2 screws attached to the lower console box. (Fig. 6-7)



h. Using the utility knife cut the carpet along the rear under seat storage panel and seatbelt assemblies. Extend the existing factory slits to your cut completing the right angle. This will allow the subwoofer mounting bracket to sit flush underneath the carpet once installed. (Fig. 6-8)



i. Remove under seat storage panel. Disengage floorboard. Using a plastic panel tool remove the twelve pushing snaps securing the under seat storage panel in place. (Fig. 6-9)



j. Remove the rear seat cushion assemblies by loosening the three 12mm bolts. (Fig. 6-10)

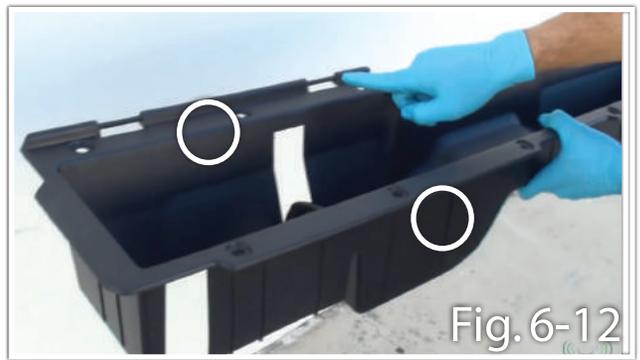


k. Disengage the under seat storage panel from its rest position by lifting up and removing from vehicle. (Fig. 6-11)

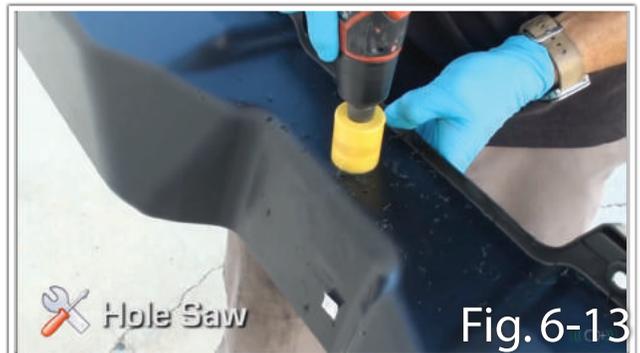


#### I. Panel Modification

1. Identify the rear center of the panel. This will be the same side of the storage floorboard hinges. (Fig. 6-12)



2. Locate the center of this panel beneath where the lower console box rested. A one inch hole saw can be used for a large enough opening to allow the subwoofer connectors to pass through without altering the exterior appearance of the panel. (Fig. 6-13)



3. Remove the rear passenger side lower seat belt mounting bolt. (Fig. 6-14)



## 7. Quick-Sync Wiring Harness Installation (Ground and Amplifier Connection)

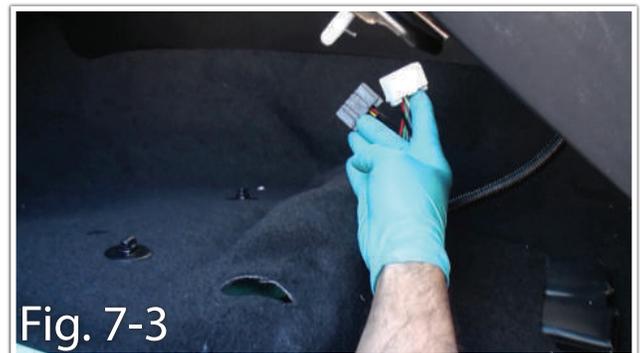
a. Unfasten white plastic carpet clips along the threshold area and lift carpet edge to expose cable route. (Fig. 7-1)



b. Run the Quick-Sync Harness amplifier connectors and ground underneath the carpet opening from the front driver's side threshold to the opening used by the factory wiring that connects under the seat. (Fig. 7-2)



c. Leave about 6-10 inches of slack for the white and grey connectors from the carpet opening. (Fig. 7-3)



d. Locate the factory ground underneath the carpet and remove the 10mm ground bolt. (Fig. 7-4)



e. Install the harness ground together with the factory ground and reinstall the 10mm bolt. Make sure the harness ground rests on top of the factory ground bolt.

g. You will be left with the remote cable, the 20-pin connector of the Quick-Sync Wiring Harness and the 8-pin connector of the Subwoofer Umbilical underneath the driver's side seat. **(Fig. 8-7)**



h. Plug the remote cable and 20-pin from the Quick-Sync Harness into their designated receptacles on the DSP Amplifier. The 20-p connector inserts into the receptacle towards the front of the vehicle.

**Note:** You want to make sure the Quick-Sync Wiring Harness has enough slack so that the cable is in a rested position even when the driver's seat is pushed all the way back. **(Fig. 8-8)**



i. Connecting the Subwoofer :

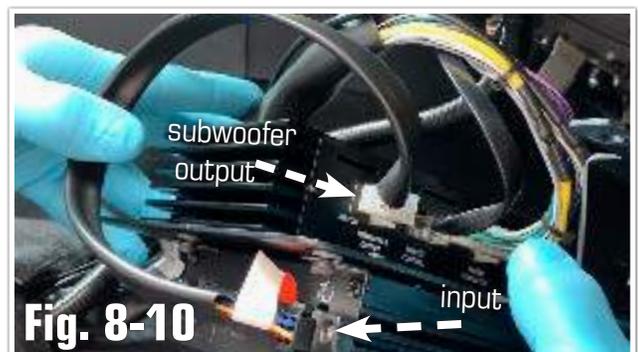
1. **(For SINGLE Subwoofer)**

Connect the 8-pin connector of the Subwoofer Umbilical (C09) into the SUBWOOFER OUTPUT receptacle on the Amplifier. **(Fig 8-9)**



1. **(For DUAL Subwoofer)**

Connect the SPU-Input Connector (C12) from the SUBWOOFER OUTPUT receptical on the DSP Amplifier, to the INPUT receptical on the SUB Amplifier. **(Fig. 8-10)**



2. Connect the Subwoofer Umbilical (C09) with the SPU-Output Connector (C13), to the SPEAKER receptical on the SUB Amplifier.

**(Fig. 8-11)**



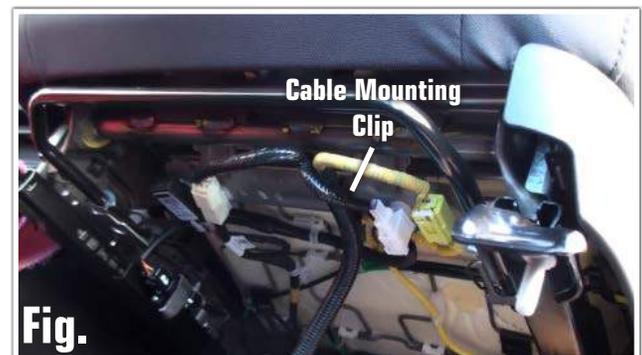
3. Connect Power & Ground (Green Connector) to the designated Green receptacle on the SUB Amplifier.

**(Fig. 8-12)**

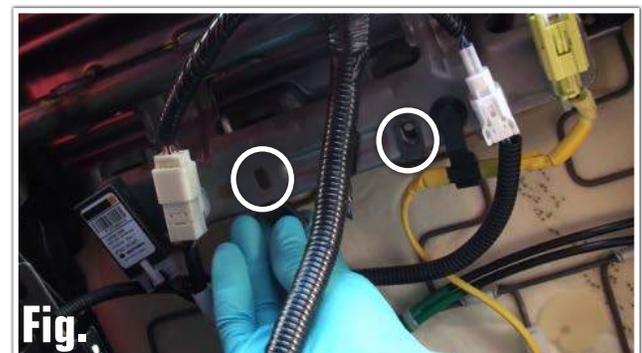


j. Mount amplifier

2. Remove the center cable mounting clip. This bundle will be repositioned and housed on the OEM Audio Plus Amplifier Assembly once mounted. **(Fig. 8-13)**



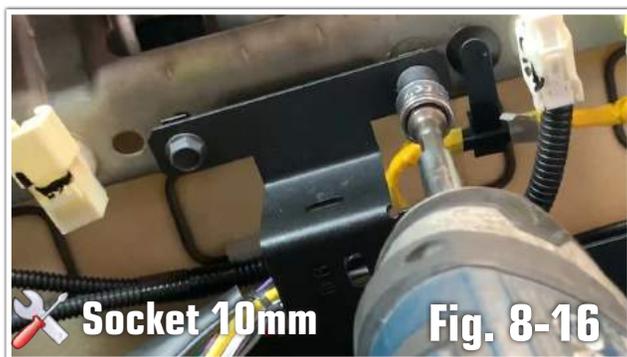
3. Install and position the two (2) 1.0x19.5mm speed clips so that it aligns with the two inner center holes of the underseat frame. **(Fig. 8-14)**



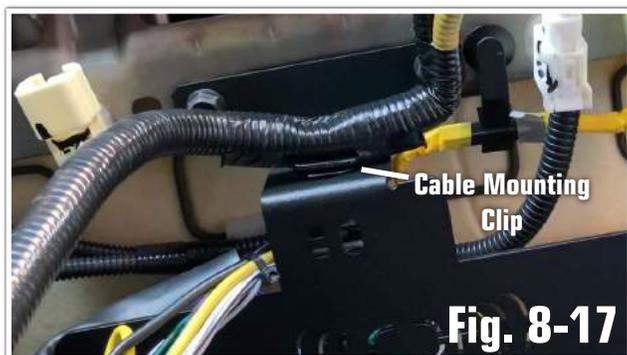
4. Position amplifier assembly so that the rear bracket hooks on rear most spring and front bracket arm rests on the under seat front frame. The amplifier connector receptacles will face the passenger side of the vehicle. **(Fig. 8-15)**



5. Use the provided 10mm bolts to secure the amplifier bracket assembly to the underseat frame. **(Fig. 8-16)**



6. Attach the cable mounting clip to the open slot on the amplifier bracket assembly. **(Fig. 8-17)**



k. Route the Quick-Sync Wiring Harness radio connectors and power wire towards the driver's side kick panel area. Leave the wires in the kick panel floor area for the time being. **(Fig. 8-18)**



## 8. Quick-Sync Wiring Harness Installation (Running Subwoofer Umbilicals)

a. Run the length of the subwoofer umbilical cable alongside the driver's side threshold towards the rear of the truck. Disengage the white plastic clips along the route. Use cable ties as necessary. (Fig. 8-1)



b. Remove the weather stripping on the driver side to access the side rear panel (Fig. 8-2)



c. Apply pressure to the panel pushing towards the passenger side to disengage the locking tabs. Only the lower portion of this panel needs to be loosened to clear a pathway to run the subwoofer umbilical through the cavity where the under seat storage panel installs. (Fig. 8-3)



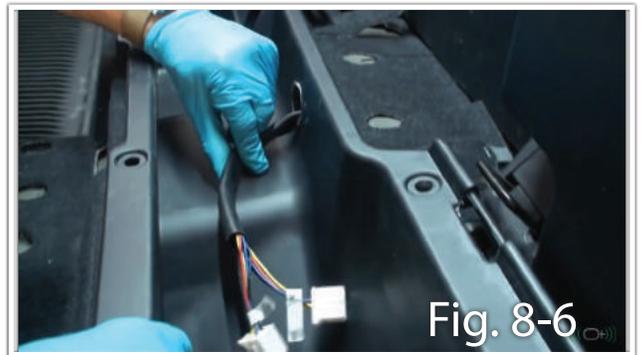
d. Run the length of the subwoofer umbilical alongside the driver's side threshold and through the available path to this area. (Fig. 8-4)



e. Reinstall the side rear panel, weatherstripping, lower seat belt mounting bolt, rear and front driver side thresholds. (Fig. 8-5)



f. Leave the cable in the center of the rear area for the time being. Position the under seat storage panel back into the vehicle running the sub connector through with six or twelve inches of slack once the panel is in a rested position. (Fig. 8-6)



g. Reinstall rear seat cushion assemblies and all 12 of the under seat storage panel push and snaps. (Fig. 8-7)

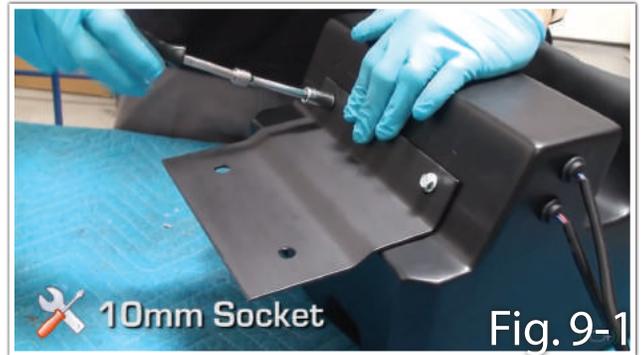


h. Apply the provided velcro strip on the underseat panel between the driver and the passenger side floor boards. (Fig. 8-8)



## 9. Subwoofer Installation

a. Using two 10mm bolts install the rear storage mounting bracket to the sub enclosure. (Fig 9-1)



b. Install the Access Cab subwoofer between the driver and passenger side cushion assemblies with the bracket facing the rear of the vehicle. Lift the modified carpet flap and rest the rear mounting bracket on the bare metal. Make sure that the enclosure is nestled in place and the holes of the brackets are lined up with the seatbelt boltholes. (Fig.9-2)



c. Reinstall the rear seat belt mounting bolts and assemblies. Seat belt buckles are held in position by the built-in magnets on the OEM Audio Plus Access Cab enclosure. (Fig. 9-3)



d. Connect subwoofer embilical cables to the OEM Audio Plus subwoofer. These connectors are ambidextrous and can be plugged in any order. (Fig. 9-4)



e. Reinstall floor panels to under seat storage panel and reinstall seat cushions to rest positions. (Fig. 9-5)



f. Return driver's seat back into place and confirm that the seat bolt holes are lining up. Tighten the seat bolts by hand at first to ensure proper alignment. If there is too much resistnace start over and double check the alignment. Finish tightening all four seat bolts using your 14mm socket and ratchet. (Fig. 9-6)



## 10. Radio removal

a. Remove radio trim panel by inserting plastic trim tool to loosen the bottom edge and carefully pry away by hand. (Fig. 10-1)



b. Using a 10mm socket wrench, remove the four (4) bolts holding the radio in place. (Fig. 10-2)



c. Lay down protective blanket over transmission area. (Fig. 10-3)



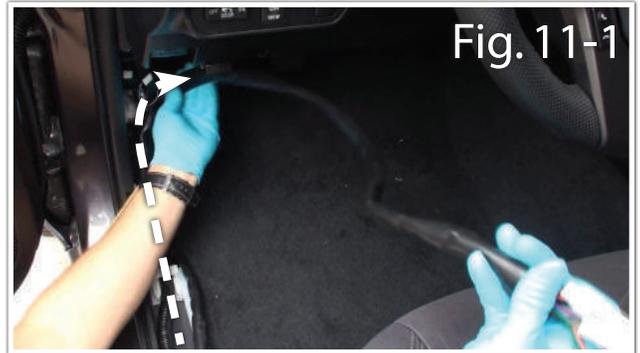
d. Disconnect connectors and antenna lead. (Fig. 10-4)



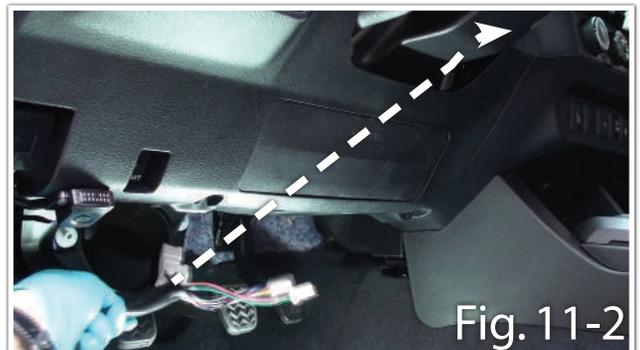
e. Remove radio and store.

## 11. Quick-Sync Wiring Harness Continued

a. Route the Quick-Sync Wiring Harness radio connectors and power wire towards the driver's side kick panel area. Use cable ties as necessary. (Fig. 11-1)



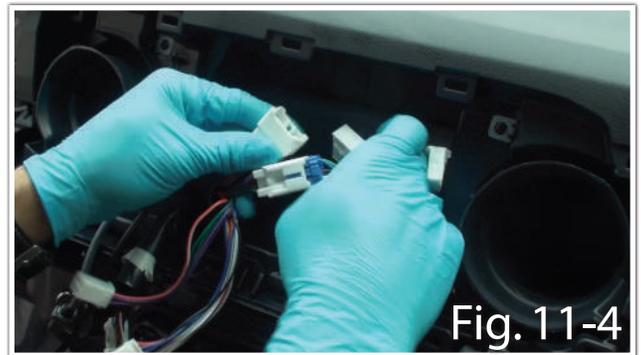
b. Run radio side of harness above the accelerator pedal and steering column towards radio cavity. Run neatly and out of the way. Use cable ties as necessary. (Fig. 11-2)



c. Route the harness towards the radio cavity until connectors are visible. (Fig. 11-3)



d. Connect the factory 6-pin male and 10-pin male connectors into the designated receptacles on the Quick-Sync Harness. (Fig. 11-4)



e. Pull power wire through the radio cavity and run toward the passenger side kick panel area. (Fig. 11-5)

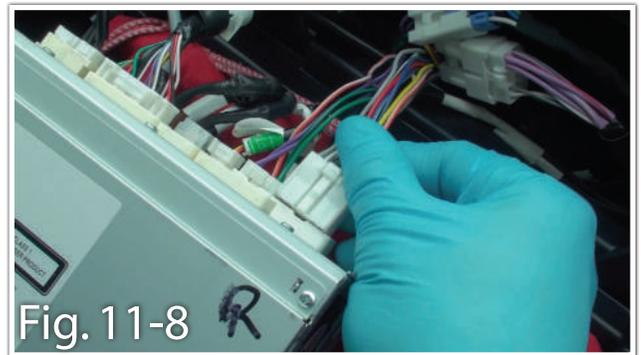


f. Fish above the air conditioning unit to the factory grommet location. (Fig. 11-6, 11-7)





g. Reinstall all connectors that were originally plugged into the back of your radio, and your Quick-Sync Harness 6-pin and 10-pin connectors directly into your radio. (Fig. 11-8)

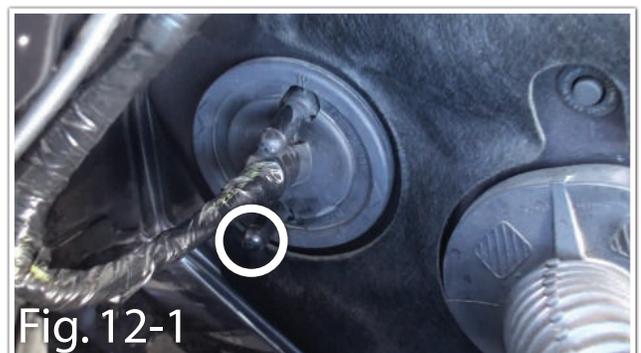


h. Re-install radio and trim panel. (Fig. 11-9)



## 12. Power wire installation

a. Under the hood on the passenger side of the vehicle, locate the grommet for the main factory wiring harness on the driver side of the firewall directly below factory wiring. (Fig. 12-1)



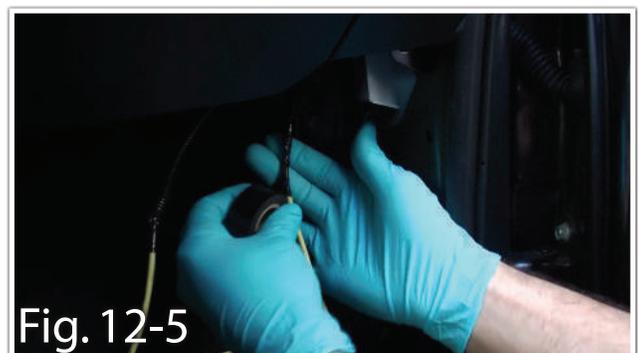
b. Identify unused nipple and slice the tip off to create an opening for the power wire. (Fig. 12-2)



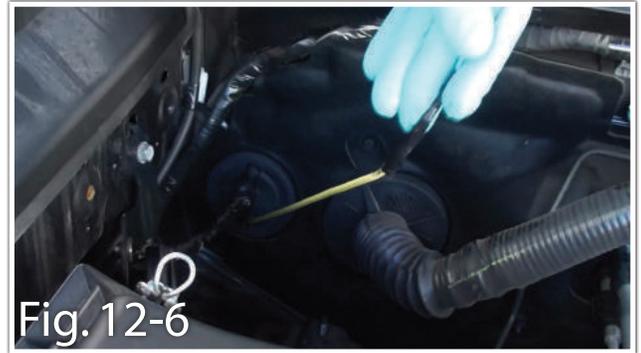
c. For best results, insert a 10 inch wire or cable tie through the grommet from under the hood and attach power wire from the kick panel area. (Fig. 12-3, 12-4)



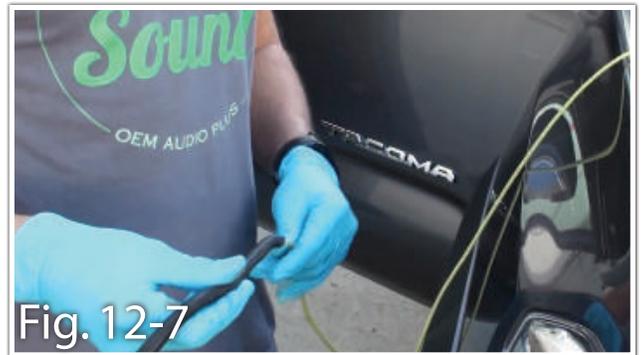
d. Attach power wire from the to the wire or cable tie from the kick panel area. (Fig. 12-5)



d. Run the length of the wire through the grommet. You'll want just enough length to reach your battery. Cut any additional slack. (Fig. 12-6)



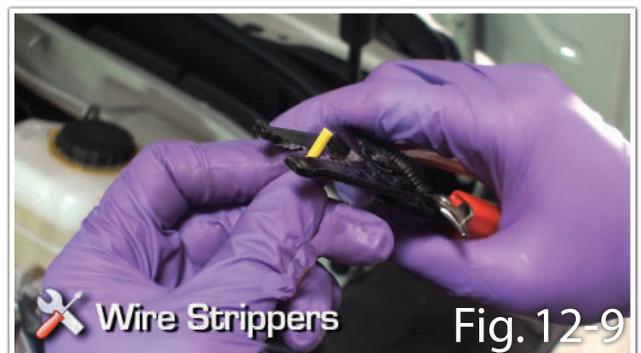
e. Install supplied high-temp corrugated split loom to cover the power wires and insulate against extreme temperature under the hood. (Fig. 12-7)



f. Run loomed power wire toward the battery. Secure using cable ties as necessary. (Fig. 12-8)



h. Use a wire stripper to strip 3/8" off the end of each power wire. (Fig. 12-9)



i. Connect the power wire to the fuse holder by inserting the 10-gauge stripped power wire into the yellow butt connector and crimp. **(Fig. 12-10)**

\*If you're performing our single Multi-Channel DSP Power Amplifier, you will be using the power wire labeled "A".

The "B" power wire is for our Dedicated Subwoofer Amplifier option (SP). Our recommendation is to run both power wires all the way to the battery, but only connect the power wire labeled "A" if the SP Option was not selected when ordering.

j. Crimp the yellow butt connector. (Fig. 12-11)

k. Apply heat to activate the solder and heat shrink insulator for the best connection possible. **(Fig. 12-12)**

a. Remove the 12mm bolt from the battery's positive terminal. **(Fig. 12-13)**



- b. Install the ring terminal of the fuse holder lead. **(Fig. 12-14)**



- c. Re-install the 12mm bolt and tighten. **Note:**  
Do not install fuse at this time. **(Fig. 12-15)**



- d. Install the fuse. **(Fig. 12-16)**  
20A Fuse = "A" Wire  
30A Fuse = "B" Wire

- e. Reconnect the battery and close the hood.



### 13. This concludes the OEM Audio Plus REFERENCE 500

- Start your engine.
- Turn on your radio.
- Enjoy!