

**Part Number: PT296-00140, PT296-00142 or
PT296-00151
(Extension Box w/AHA)**

Kit Contents

Item #	Quantity Req.	Description
1	1	Extension Module w/BT cable
2	1	DA/Ext Harness
3	1	GPS Antenna kit
4	4	Screws (M5x8)

Hardware Bag Contents

Item #	Quantity Req.	Description
1	1	GPS Antenna
2	3	Wire clips
3	1	GPS Plate
4	5	Wire ties
5	1	Foam pad w/ Adhesive

Additional Items Required For Installation

Item #	Quantity Req.	Description
1	1	Clamp bracket P/N: PT591-00140
2	1	Base Audio DA P/N: PT546-00140-BU P/N: PT546-00140
3	1	Conversion Harness Kit: PT546-00142 or PT546-00143

Conflicts

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Recommended Tools

Personal & Vehicle Protection	Notes
Vehicle protection	Blankets
Special Tools	Notes
USB Flash Drive Media	Must contain MP3 songs
Installation Tools	Notes
Panel Clip Removal Tool	e.g. Toyota SST P/N:- 00002-06002-01
Socket Wrench	
Socket	10 mm
Socket extension	6"
Screwdriver	Phillips, #2
Torque Wrench	5.4 N·m (48 lbf·in)
Masking tape	
Electrical Tape	
Scissors	
Diagonal cutter	
Special Chemicals	Notes
VDC approved cleaner	

General Applicability

All Scion xB models, including 10 Year Anniversary Edition.

Recommended Sequence of Application

Item #	Accessory
1	Premium Audio Upgrade (Extension Box)
2	Base Audio

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req.	Description

Legend

STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.



OPERATOR SAFETY: Use caution to avoid risk of injury.



CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.



TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.

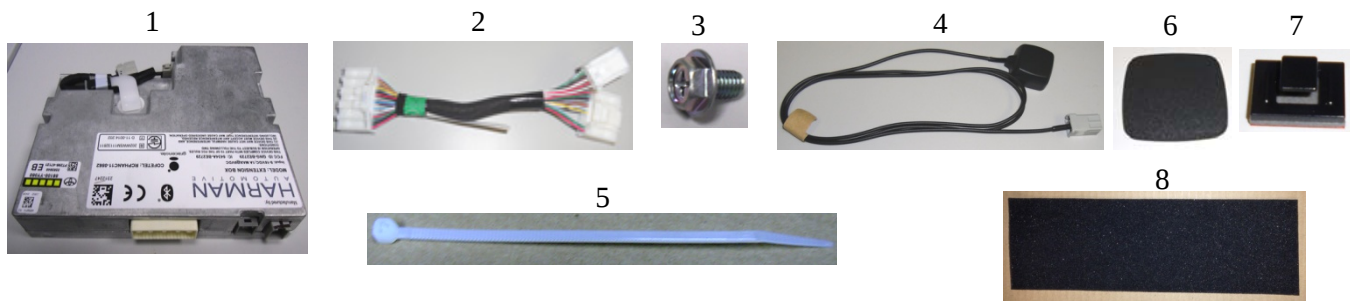


REVISION MARK: This mark highlights a change in installation with respect to previous issue.



SAFETY TORQUE: This mark indicates that torque is related to safety.

Parts Description of Extension Module Kit (PT296-00140, PT296-00142 or PT296-00151)



Item #	Parts Name	Part No.	Qty
1	Extension Module	PT296-00140-AA, PT296-00142-AA or PT296-00152-AA	1
2	Harness	PT296-47120-AB	1
3	Screw (M5 x 8)	90153-W0001	4
4	GPS Antenna	PT296-00141-AA	1
5	Cable Ties		5
6	GPS Plate		1
7	Wire Clip		3
8	Foam Adhesive Pad (25cm x 8cm)		1

Not included in kit but REQUIRED for installation:

Receiver Assembly Radio Unit (PT546-00140 or PT546-00140-BU)

1



2



Item #	Parts Name	Part No.	Qty
1	Receiver Assembly Radio Unit	PT546-00140 or PT546-00140-BU	1
2	Screw (M5x8)		8

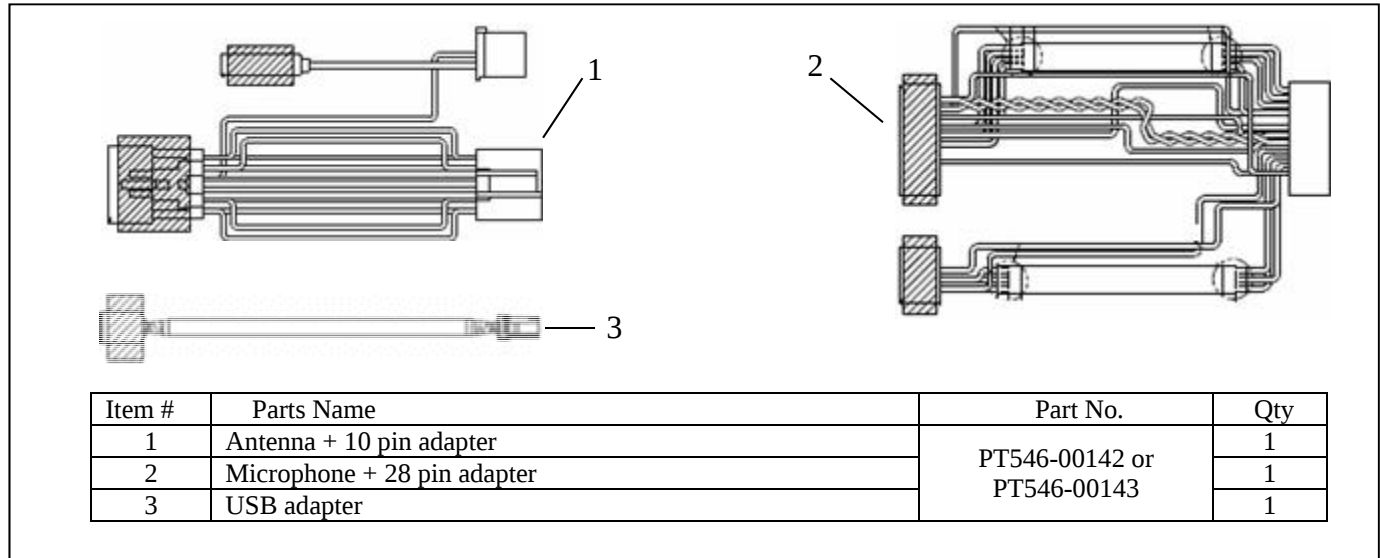
Not included in kit but REQUIRED for installation. Clamp Brackets (PT591-00140)

1



Item #	Parts Name	Part No.	Qty
1	Clamp Brackets	PT591-00140	1 Set

Not included in kit but REQUIRED for installation: Conversion Harness Kit (PT546-00142)



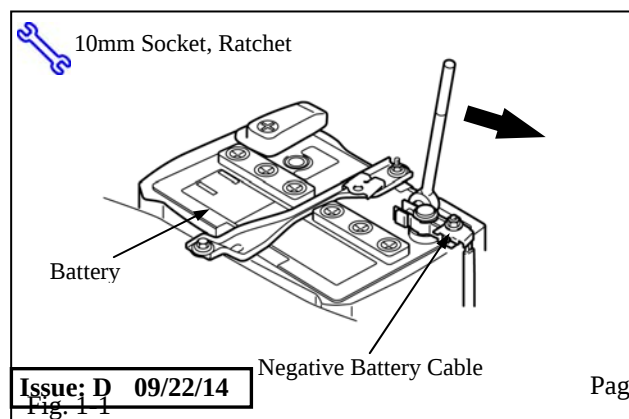
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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

This document covers such items as:-

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

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



1. Vehicle Protection.



(a) Protect the fender before starting.



(b) Remove the negative battery cable (Fig. 1-1).

(1) Do not touch the positive terminal with any tool when removing cable.

(c) Check kit contents.

2. Disassembly of the Vehicle.



NOTE: Place all removed parts on a protected Surface.



NOTE: When disconnecting wiring connectors do NOT pull on the wiring, pull on the connector only.

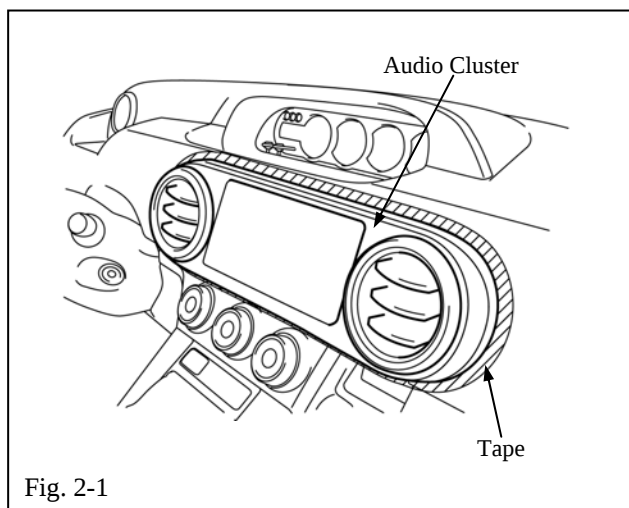


NOTE: Engage the parking brake while working.

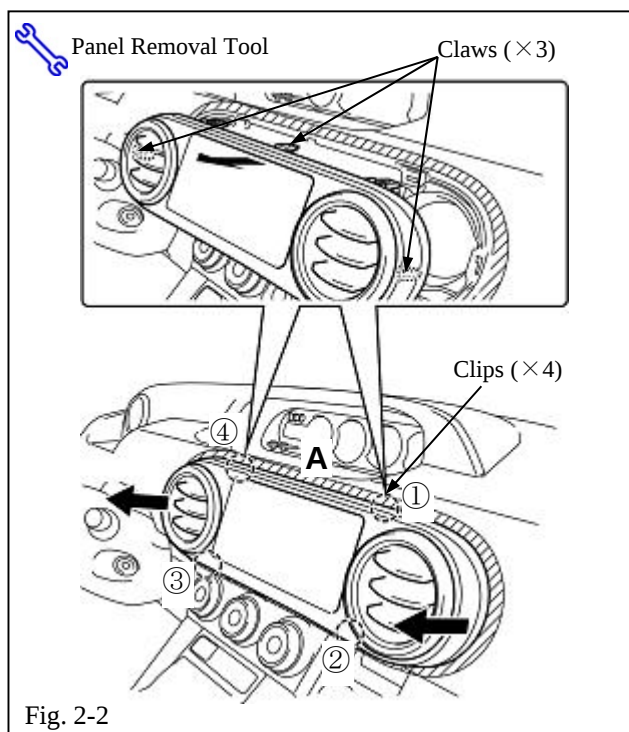
(a) Remove the audio cluster.

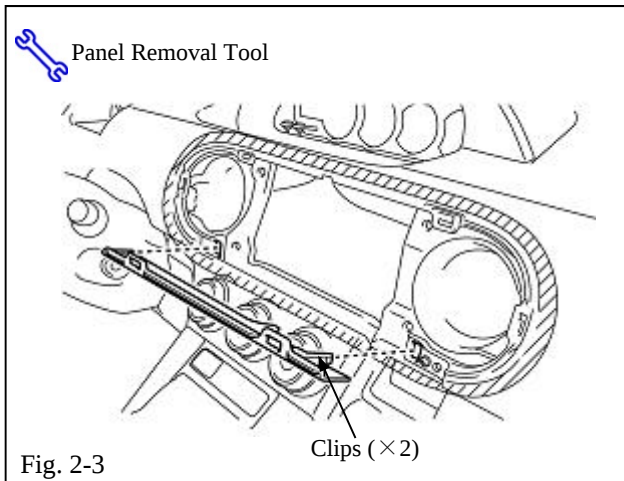


- (1) In order to prevent scratches, apply tape around the audio cluster (shaded areas in the figure) before removing the audio cluster (Fig. 2-1).

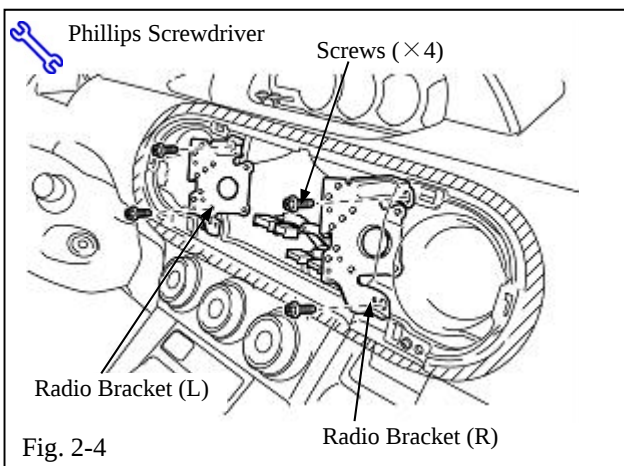


- (2) Insert a removal tool to the section marked "A", and disengage the claws and clips (①) through (④), then remove the audio cluster (Fig. 2-2).

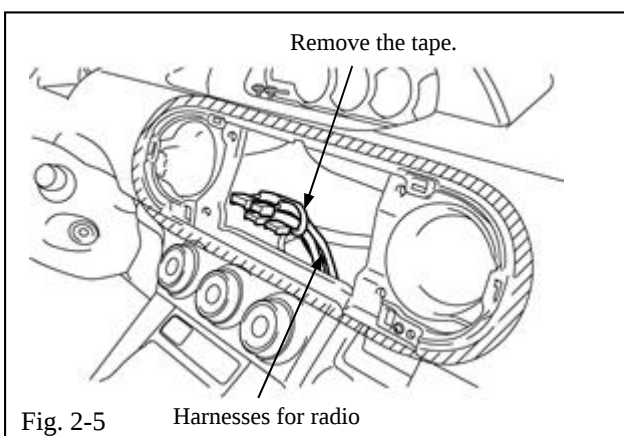




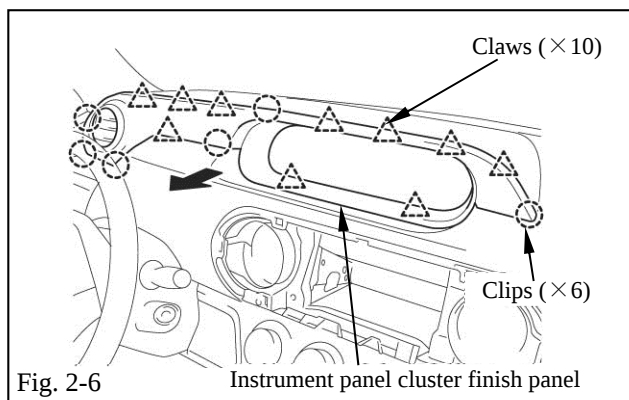
(3) Disengage the clips (x2) and remove the audio cluster under plate (Fig. 2-3).



(b) Remove and save the 4 bolts and remove the radio brackets (R) and (L) from the interior panel (Fig. 2-4).

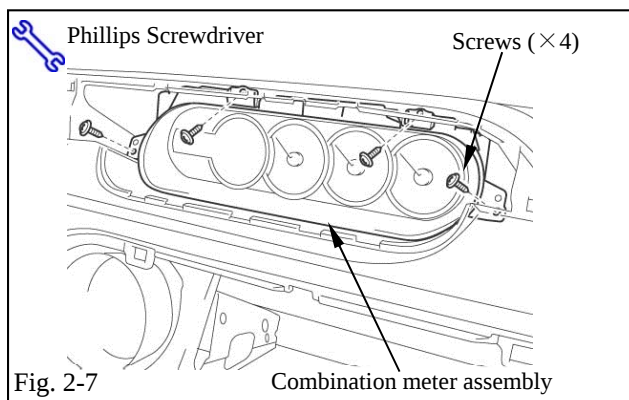


(c) Remove the tape securing the audio harnesses (Fig. 2-5).



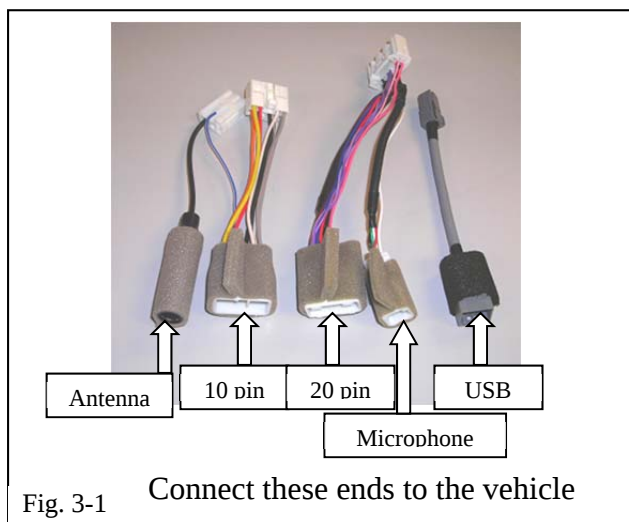
(d) Remove the instrument panel cluster finish panel

- (1) Disengage the 6 clips and 10 claws and remove the instrument panel cluster finish panel (Fig. 2-6).



(e) Remove the combination meter assembly.

- (1) Remove the 4 screw and remove the combination meter assembly (Fig. 2-7).
- (2) Disconnect the connectors (Fig. 2-5).

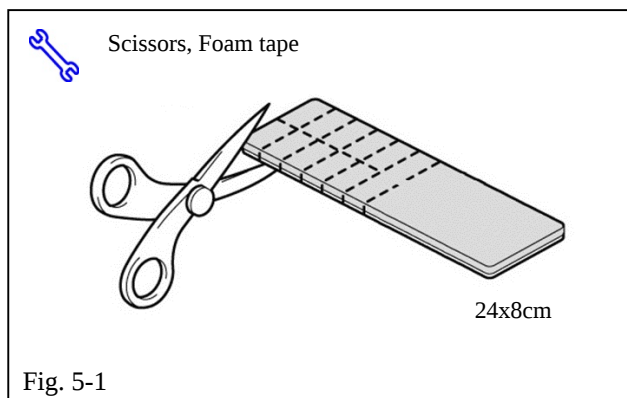


3. Connect the Conversion Wire harness adapters (P/N: PT546-00142 or PT546-00143).

(a) Connect each conversion harness (Fig. 3-1) to the vehicle harness, located in the radio mounting opening.

-  (b) For later installation purposes, leave the 10 pin connector disconnected from the vehicle harness for now (Fig. 3-1).

NOTE: The vehicle harnesses connect to the connectors on the conversion harness side with the foam around them.



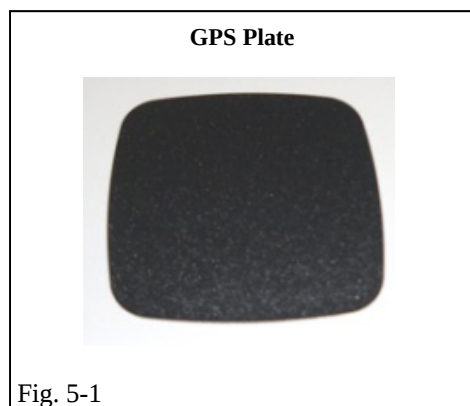
4. Preparation before installation.

- (a) Cut the foam tape in half. Cut one of the halves into 10 small pieces (2x4cm) and one large piece (2x8cm) as shown (Fig. 5-1). You may not need all of the pieces for the installation.

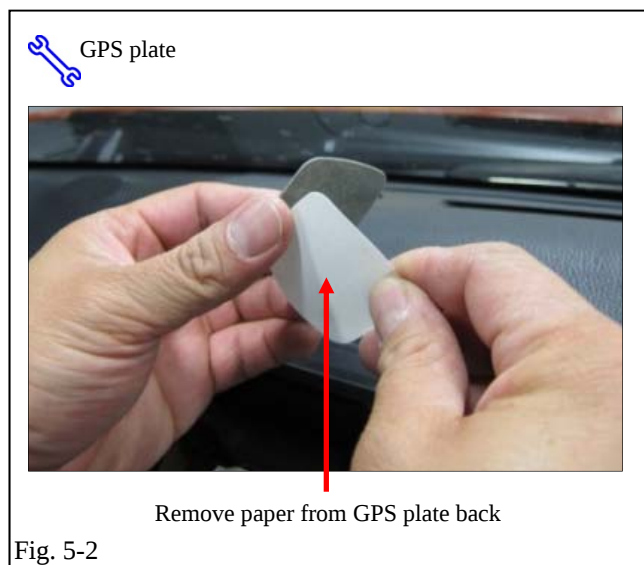
5. GPS Antenna Installation.

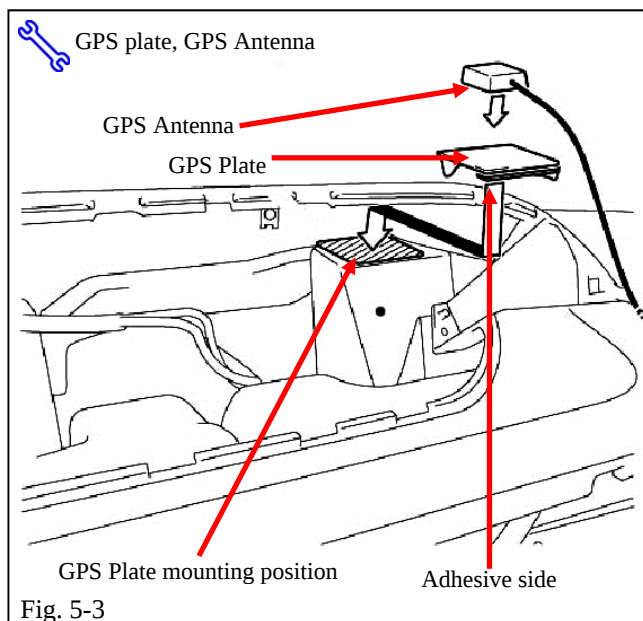
NOTE: Before attaching the GPS plate, clean the mounting surface with VDC approved cleaner.

- (a) Remove the GPS plate (Fig. 5-1) from the parts bag kit.

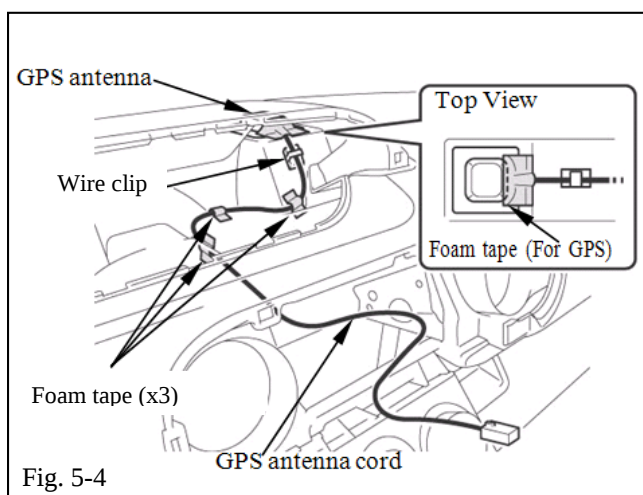


- (b) Remove the paper from the back of the GPS plate to expose the adhesive backing (Fig.5-2).





- (c) Secure the GPS plate into the mounting position shown (Fig. 5-3).
- (d) Remove the GPS Antenna from the kit bag. Place the GPS antenna on top of the GPS plate. The antenna will magnetically attach to the plate (Fig. 5-3).

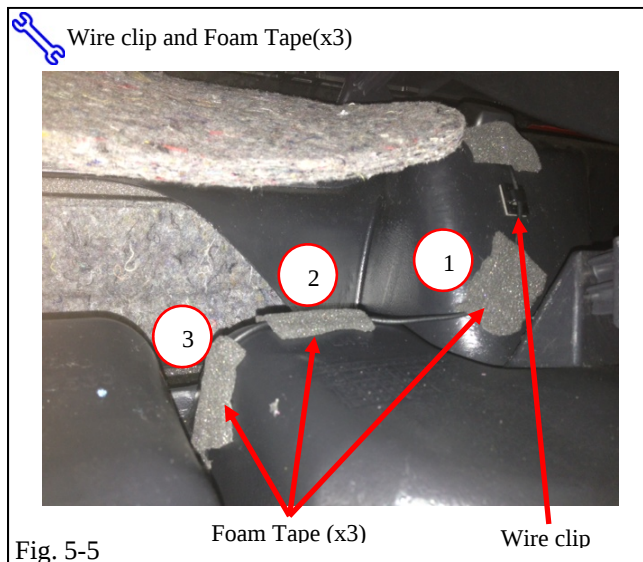


- (e) Route the GPS antenna wire from the mounting location to the audio unit opening (Fig. 5-4).



NOTE: Before attaching the wire clip and foam tape, clean the mounting surface with VDC approved cleaner.

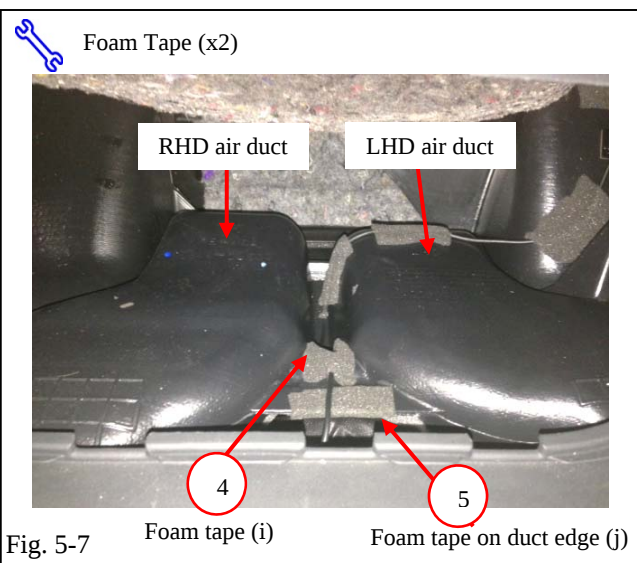
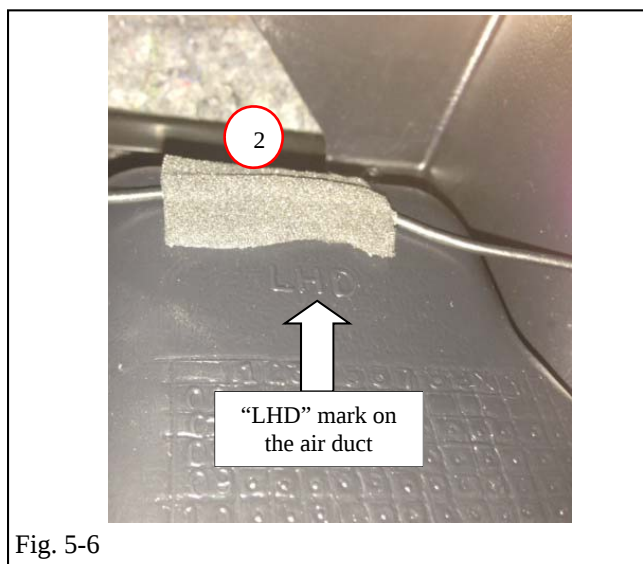
- (f) Remove the paper from a piece of foam tape and secure the back of the GPS antenna as shown. (Fig. 5-4).



(g) Remove the paper from the back of the wire clip and mount in the location shown. Secure the GPS wire to the wire clip (Fig. 5-5).

(h) Remove the paper from the back of the foam tape (x3) to expose the adhesive backing and secure the GPS wire in place in the sequence shown (Fig. 5-5).

 **NOTE:** The foam tape #2 (Fig. 5-5) should be car-forward from the “LHD” mark on the air duct. This avoids contact from the meter cluster after installation (Fig. 5-6).



(i) Secure the GPS wire between the RHD and LHD air ducts with a piece of foam tape (#4) in the location shown (Fig. 5-7).

(j) Place a piece of large foam tape (#5) underneath the GPS wire on the edge of the duct to alleviate contact to the GPS wire (Fig. 5-7).

Electrical Tape, Foam tape

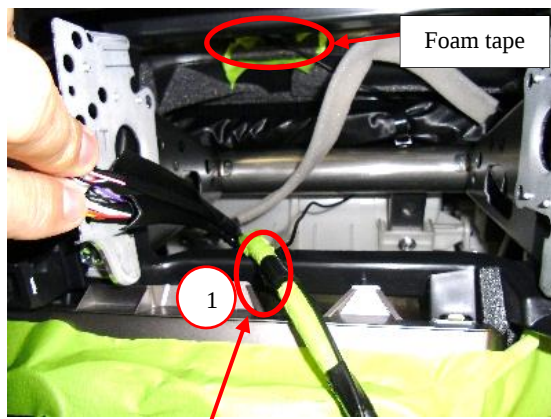


Fig. 5-8 Electrical tape

Electrical tape

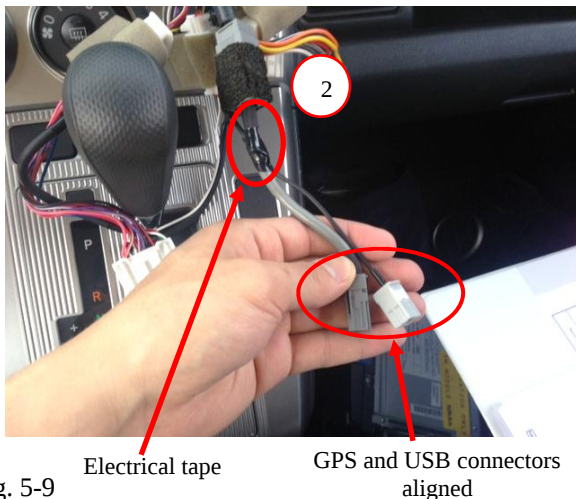


Fig. 5-9

Extension Module

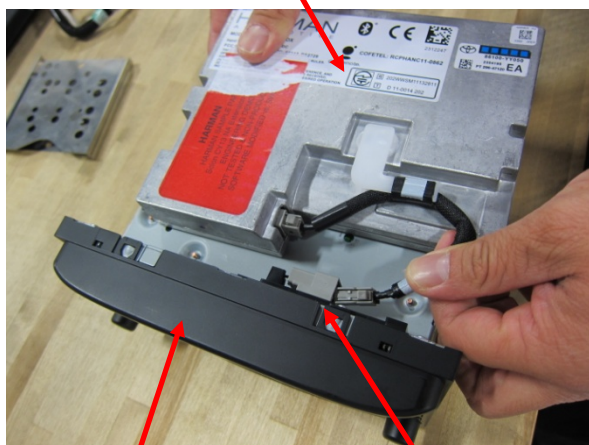


Fig. 6-1 DA Radio BT wire harness connector

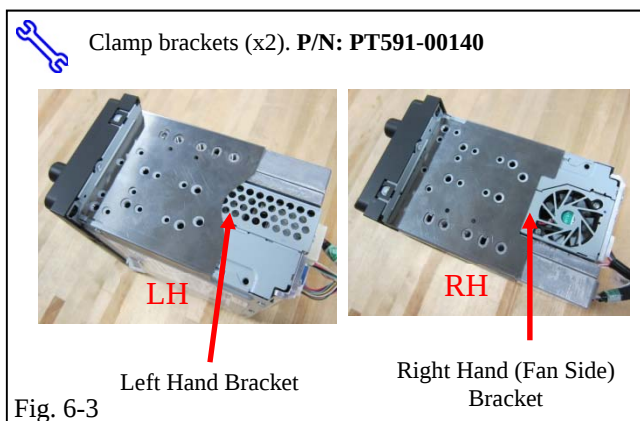
- (k) Secure the GPS antenna wire onto the horizontal vehicle main harness bundle with foam tape. Route the GPS wire behind the harness bundle (Fig. 5-8).
- (l) Route the GPS wire along the USB cable so the USB cable and GPS antenna connectors align. Secure the GPS wire to the USB Cable with electrical tape at locations "1" (Fig. 5-8) and "2" (Fig. 5-9).

6. Display Audio and Extension Module assembly.

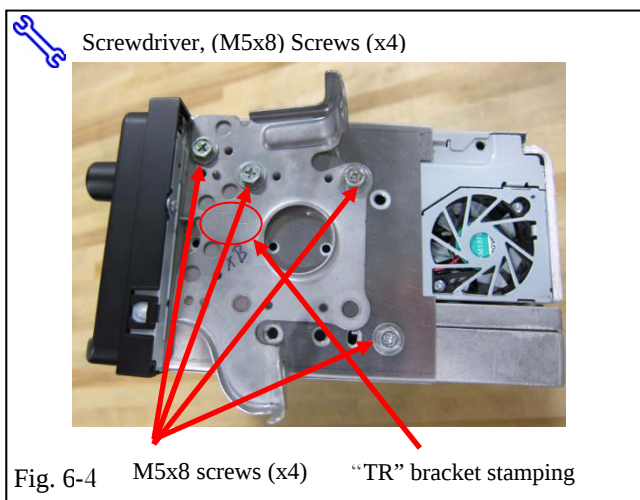
- (a) Lay the Display Audio (DA) radio on a flat surface with the bottom facing upward (Fig. 6-1).
- (b) Place the extension module on the bottom of the DA radio as shown (Fig. 6-1).
- (c) Remove the break-away tape from the Bluetooth cable harness. Plug the Bluetooth antenna wire harness into the connector on the DA radio (Fig. 6-1). Make sure both ends of the harness are securely seated between the extension module and the DA radio.



- (d) For the next step you will need the clamp brackets (P/N: PT591-00140). Note the differences between the Right Hand (RH) and Left Hand (LH) bracket shapes (Fig. 6-2).



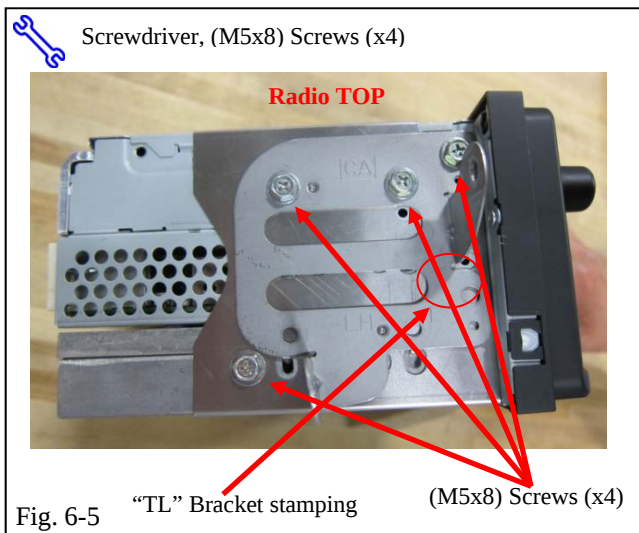
- (e) Fit the LH and RH clamp brackets into the positions shown (Fig. 6-3) to hold the DA radio and extension module together.



- (f) Set the DA radio and extension module on their side so that the radio fan is facing upward. Align the RH clamp bracket with the mounting screw holes, ensuring it holds the radio and extension module together (Fig. 6-4).
- (g) Place the TR radio mounting bracket on top of the clamp bracket ensuring the mounting screw holes are aligned (Fig. 6-4).
- (h) Fasten the TR mounting bracket to the radio with the screws (x4) (Fig. 6-4).



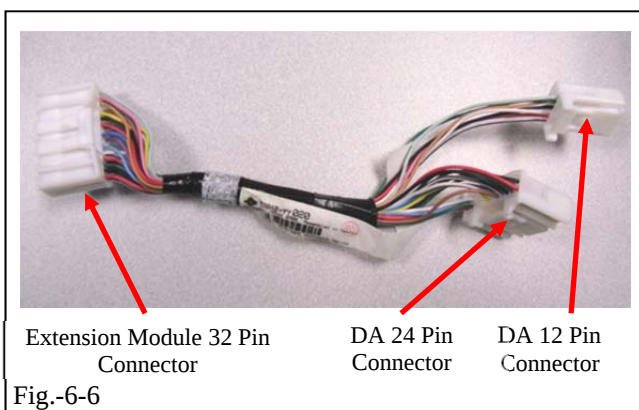
NOTE: Make sure the mounting bracket is flat against the clamp bracket before tightening the screws.



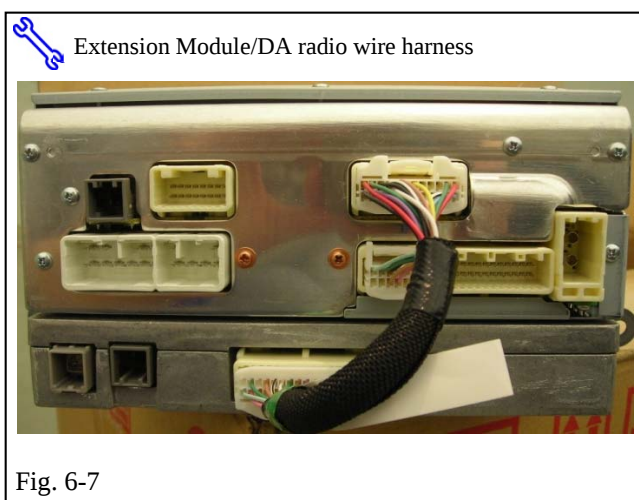
- (i) Set the DA radio and extension module on their side so the radio fan is facing down. Align the LH clamp bracket with the mounting screw holes, ensuring it holds the radio and extension module together (Fig. 6-5).
- (j) Place the TL radio mounting bracket on top of the clamp bracket ensuring the mounting screw holes are aligned. (Fig. 6-5).
- (k) Fasten the TL mounting bracket to the radio with the screws (x4) (Fig. 6-5).



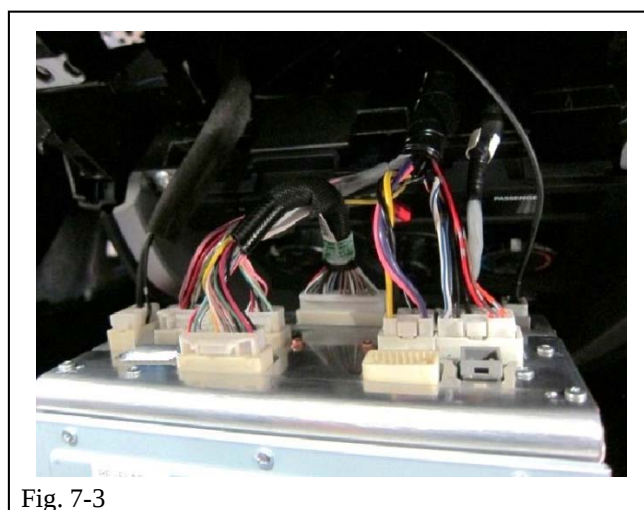
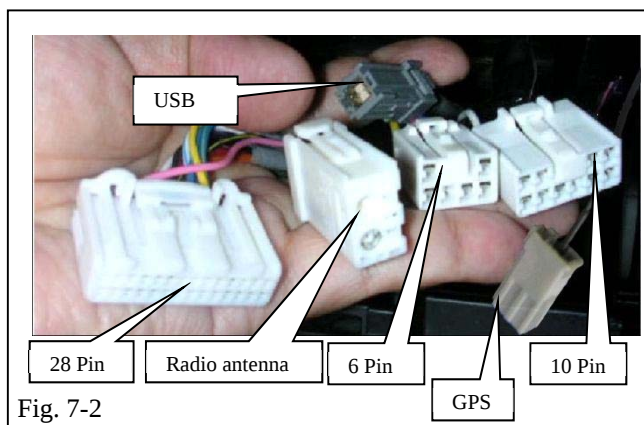
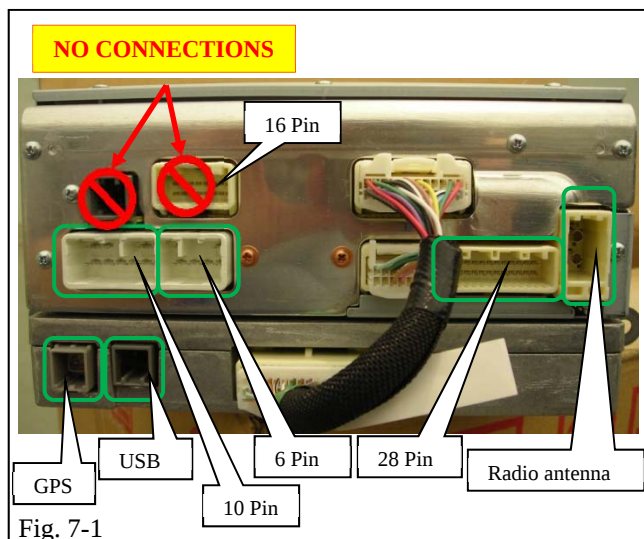
NOTE: Make sure the mounting bracket is flat against the clamp bracket before tightening the screws.



- (l) For the next procedure you will need the Extension module/DA interface wire harness, which is included in the Extension module kit (Fig. 6-6).



- (m) Connect the wire harness between the extension module and DA radio as shown (Fig. 6-7).



7. Install the Receiver Assembly Radio Unit (Wire harness connections).

- Connect the radio antenna cable, 28 Pin, 6 Pin and 10 pin harness connector cables to the DA radio (Fig. 7-1 and Fig. 7-2).
- Connect the USB cable and GPS antenna cable to the extension module (Fig. 7-1 and 7-2).



Do not connect the USB cable to the DA radio. The USB cable must be connected to the extension module (Fig. 7-1).

No harness connection should be made to the 16 pin connector (Fig. 7-1).

- Confirm all harness connections are completed as shown (Fig. 7-3).



Fig. 7-4

- ⚠ (d) Connect the vehicle harness to the 10 pin connector of the adapter harness last and on top as shown. It helps to bundle the rest of the harness behind the radio (Fig. 7-4).

8. Install the Receiver Assembly Radio Unit (Vehicle mounting).

- (a) Insert the radio into the dash (Fig. 8-1).



Fig. 8-1



Ratchet, Extension, Socket 10mm, Bolts (x4)

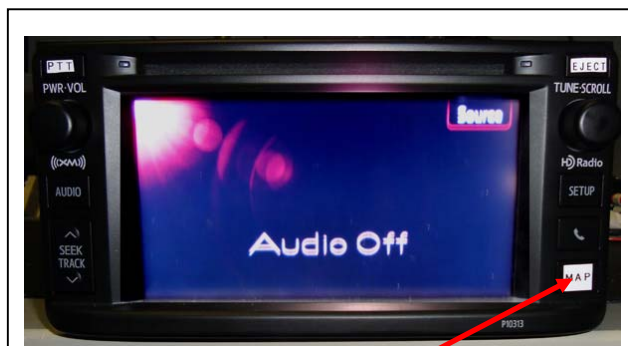


Fig. 8-2

- (b) In the sequence shown (1 to 4, Fig. 8-2), insert each bolt and hand start. Use the bolts removed in Section 2 “Disassembly of the vehicle.”
- (c) Fasten the receiver assembly radio unit with 4 bolts, using a 10mm socket wrench.

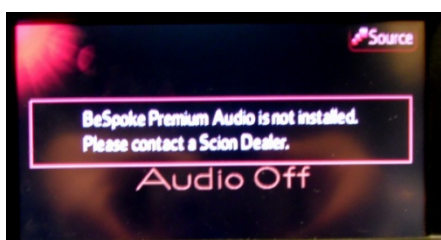
In Process Function Tests.

- (a) Temporarily reconnect the negative battery cable.
- (b) If required, install the short pin,
- (c) Turn ACC ON.



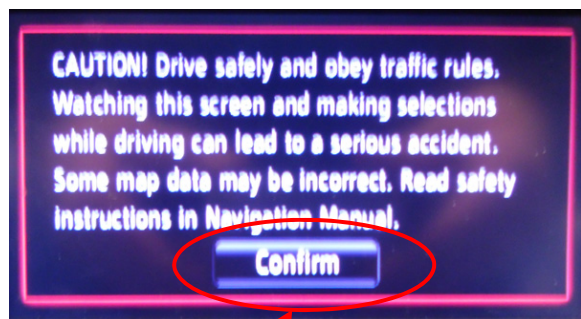
Press "Map" H/K

Fig. 9-1



BeSpoke Premium Audio is not installed

Fig. 9-2



Press "Confirm" button.

Fig. 9-3



Map Screen

Fig. 9-4

9. Map Function Test.

(a) Press the "Map" hard key (H/K) (Fig. 9-1).



WARNING: If you are presented with the screen in Fig. 9-2, proceed to "**Map trouble shooting**" on the next page.

(b) Press the "Confirm" button on the DA touch screen (Fig. 9-3).

NOTE: This screen automatically goes away after 5 seconds if the "Confirm" button is not pressed and will then take you to the Map Screen (Fig. 9-4).

(c) Confirm the Map screen is displayed (Fig. 9-4).

Proceed to "**USB Function Test.**"

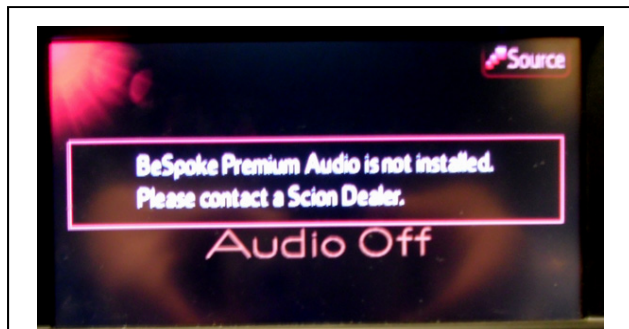


Fig. 9-5 **BeSpoke Premium Audio is not installed**

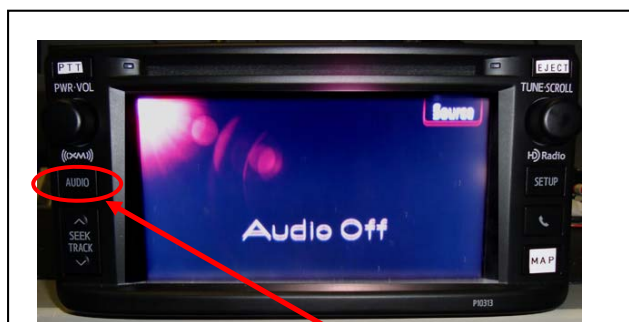


Fig. 9-6 Press and Hold "Audio" H/K

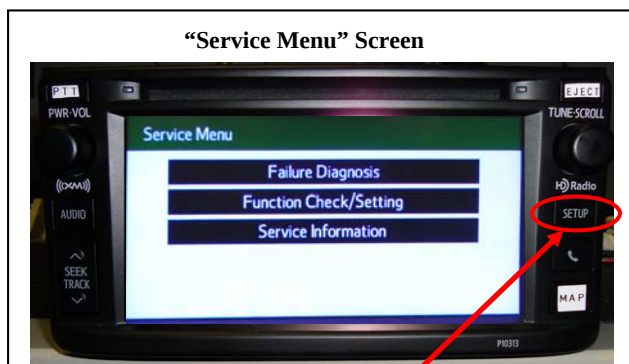


Fig. 9-7 Press and Hold "Setup" H/K

Map trouble shooting

If you are presented with the screen shown in Fig. 9-5, and the extension module has been properly installed, then perform the following procedure.

- (1) While pressing and holding the "Audio" H/K (Fig. 9-6), switch the headlights ON and OFF three consecutive times in quick succession.

ON>OFF>ON>OFF>ON>OFF

- (2) The Service Menu screen will appear (Fig. 9-7).
- (3) If the Service Menu screen does not appear, repeat Steps 1 and 2.
- (4) With the Service Menu screen shown, press and hold the "SETUP" H/K (Fig. 9-7). Wait for the radio to restart, then release the "SETUP" H/K.
- (5) Turn ACC OFF.
- (6) Turn ACC ON.
- (7) Go back and repeat the "Map Function Test" in the "In Process Function Tests" section.



Fig. 10-1

10. USB Function Test.

- (a) Connect a USB flash drive media to the vehicle's USB/AUX connector (Fig. 10-1).



Fig. 10-2

- (b) Press the "Source" button on the touch display screen (Fig. 10-2).

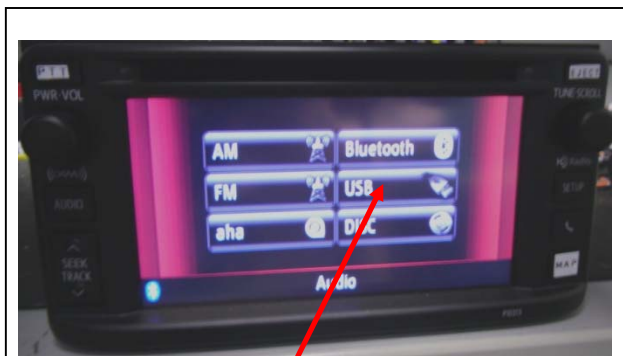


Fig. 10-3

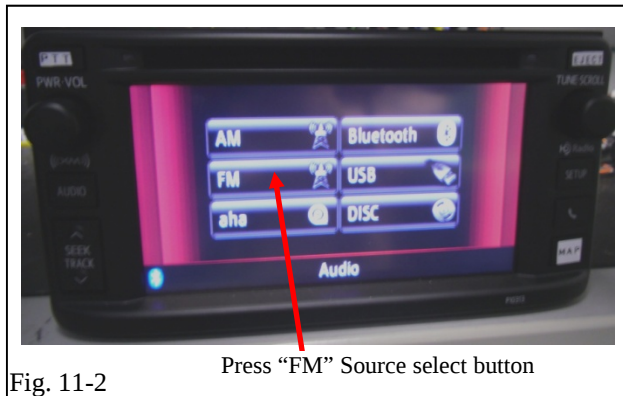
- (c) Select the USB mode button (Fig. 10-3).
- (d) Confirm a song plays.
- (e) Remove the flash drive from the USB port.

11. Radio antenna check.

(a) Press the “Source” button (Fig. 11-1).



(b) Press the FM source select button (Fig. 11-2).



(c) Press the SEEK/TRACK Up H/K button (Fig. 11-3). Confirm that the radio tunes to a FM radio station and sound is heard.



NOTE: To perform the following function tests, you will need to enter the DA Service Menu (Fig. 11-5).

To access the Service Menu, do the following:

- (1) Turn ACC ON.
- (2) Once the DA radio is powered on, press and hold the “Audio” hard key (Fig. 11-4).
- (3) While holding the Audio H/K, switch ON and OFF the headlights three consecutive times in quick succession.
ON>OFF>ON>OFF>ON>OFF
- (4) The Service Menu screen will appear (Fig. 11-5).
- (5) If the Service Menu screen does not appear, repeat Steps 2 and 3.

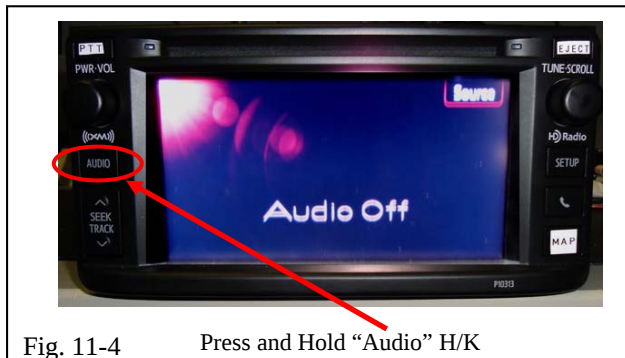


Fig. 11-4 Press and Hold “Audio” H/K

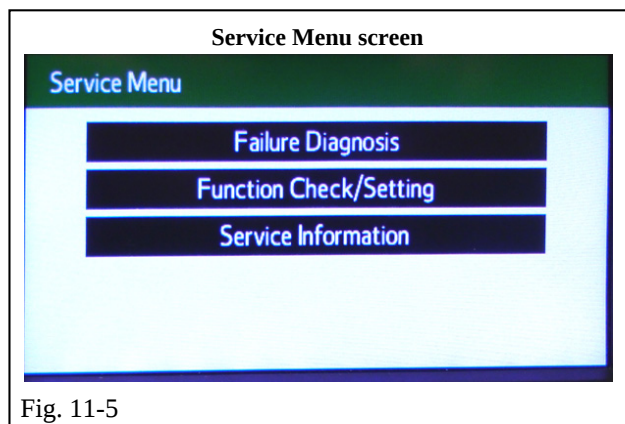


Fig. 11-5

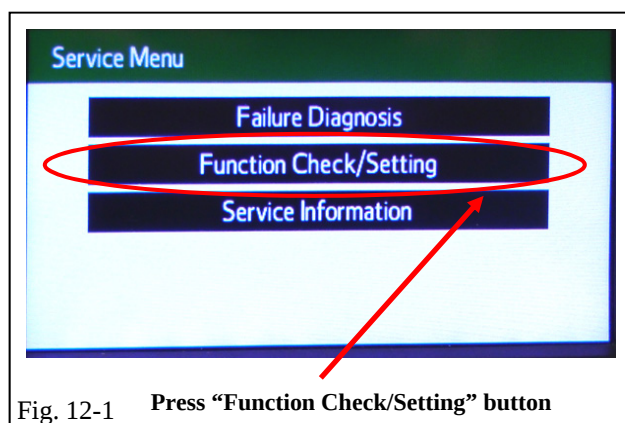


Fig. 12-1 Press “Function Check/Setting” button

12. GPS Antenna and Bluetooth Antenna check.

- (a) Press the “Function Check/Setting” button (Fig. 12-1).

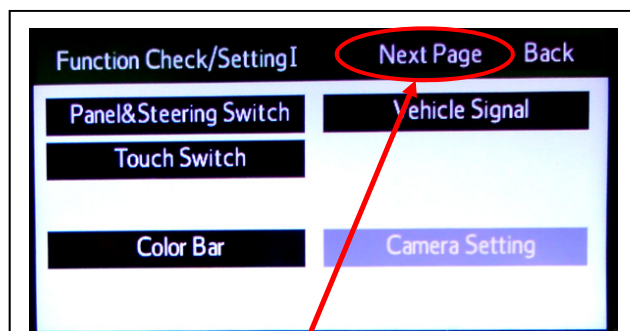


Fig. 12-2 Press "Next Page" button

(b) Press the "Next Page" button (Fig. 12-2).

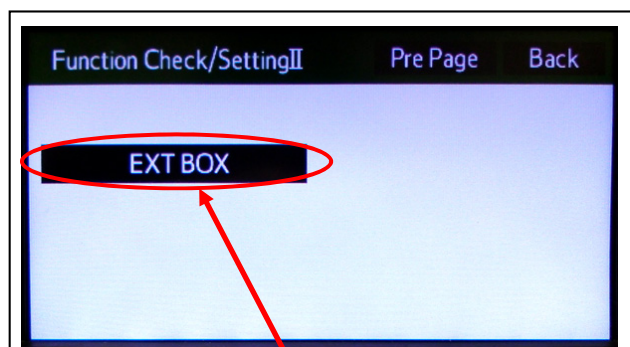


Fig. 12-3 Press "EXT BOX" button

(c) Press the "EXT BOX" button (Fig. 12-3).

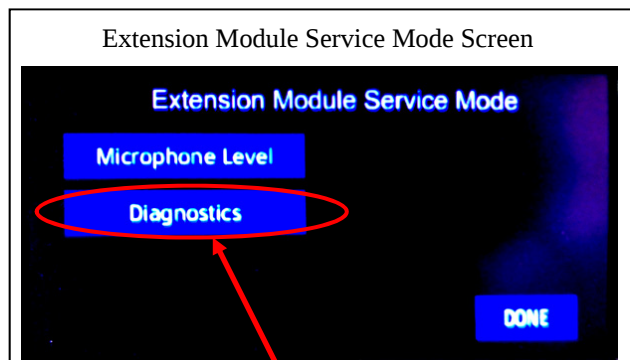


Fig. 12-4 Press "Diagnostics" button

(d) Press the "Diagnostics" button on the "Extension Module Service Mode" screen (Fig. 12-4).

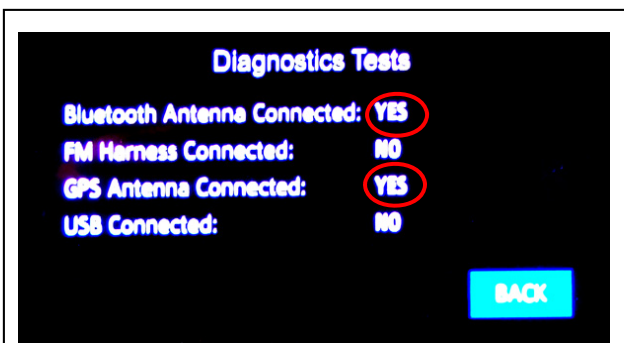


Fig. 12-5

- (e) Confirm the following connections are displayed (Fig. 12-5).

Bluetooth Antenna Connection: "YES"

GPS Antenna Connected: "YES"

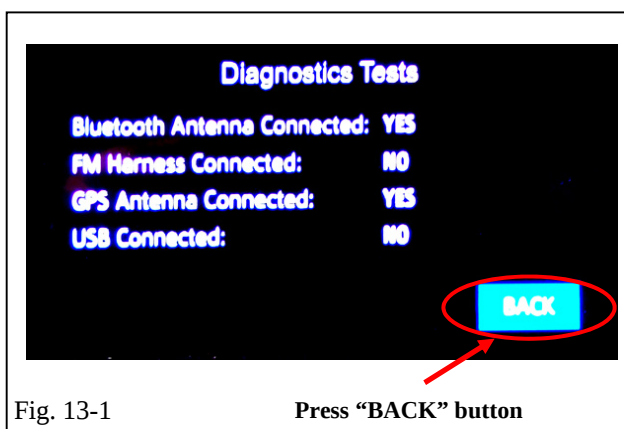


Fig. 13-1

Press "BACK" button

13. Hands Free Microphone check.

- (a) Press the "BACK" button (Fig. 13-1).

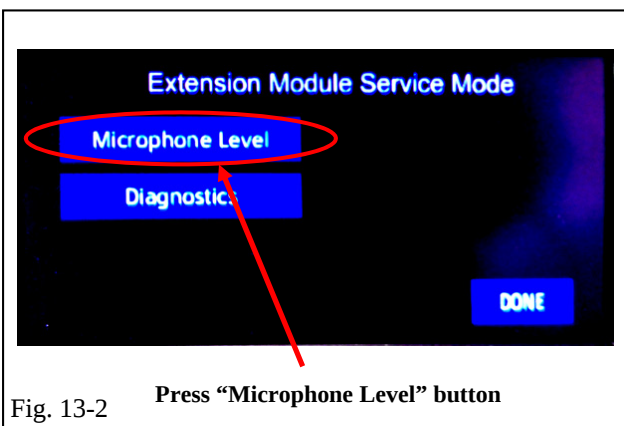
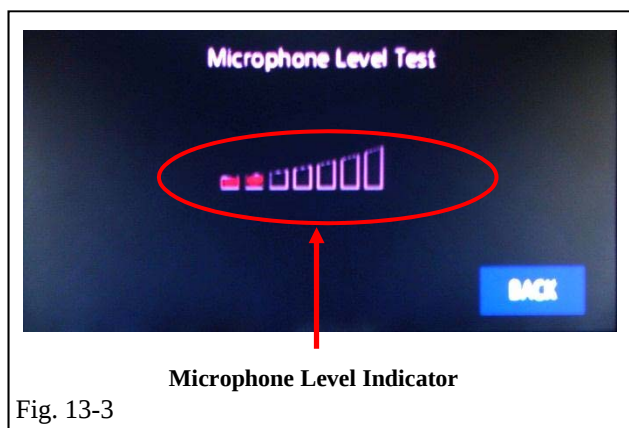


Fig. 13-2

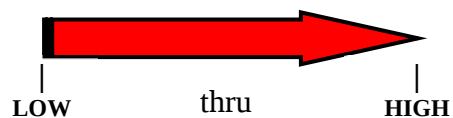
Press "Microphone Level" button

- (b) Press the "Microphone Level" button (Fig.13-2).



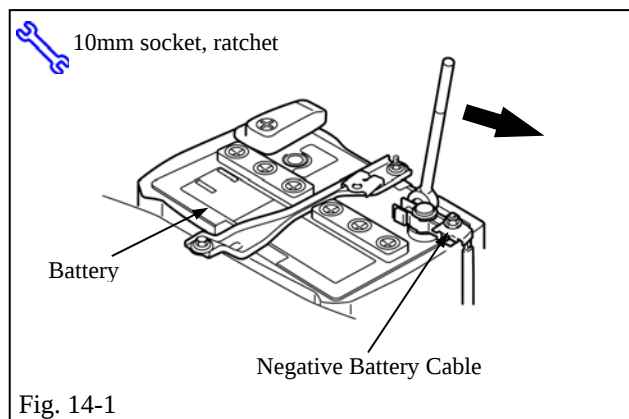
- (c) While sitting in the driver's seat, speak loud and clearly, preferably looking in the direction of the microphone location in the vehicle. Say, "**Check! Check! Test! Test!**" Watch the Microphone Level Indicator and confirm the level indicator is responding with your voice (Fig. 13-3).

Microphone Level Indicator response



14. Complete the installation.

-  (a) Turn the vehicle ignition OFF.
- (b) Reconnect the electrical connector to the instrument cluster and reinstall the instrument cluster with the 2 screws.
- (c) Reconnect the electrical connector to the surrounding bezel of the instrument cluster and clip it back into place with 2 clips. Fasten it with a screw.
- (d) Reinstall the audio cluster.
- (e) Verify the panels fit together properly with no uneven gaps between them.
- (f) Clean up and remove any trash.
- (g) Reconnect the vehicle's negative battery cable (Fig. 14-1).
- (1) Position the negative cable at the original factory position.
 - (2) Tighten the nut to 5.4 N•m (48 lbf•in).
-  **Torque: 5.4 N•m. (48 lbf•in)**
-  (3) Do not touch the positive terminal with any tool when replacing the cable.



- (h) Perform functional checks.
- (i) If required, replace the short pin in its original position.
- (j) Remove the sticker from the front of the radio (Fig. 14-2).



Fig. 14-2

Checklist - these points **MUST** be checked to ensure a quality installation.

Check:	Look For:
<u>Accessory Function Checks</u> ☐ Insert CD audio disc and confirm operation. ☐ Turn radio on and confirm operation. ☐ Antenna is functional. ☐ Fader ☐ Balance ☐ Illumination	Functioning CD player. Radio functions properly. Reception of AM/FM stations. Functioning balance to front and rear speakers. Functioning balance to left and right speakers. Illumination should function properly
<u>Vehicle Function Checks</u> ☐ Steering Wheel audio controls ☐ Rheostat/Dimmer ☐ Combination meter ☐ Electroluminescent panel (if equipped) ☐ Battery cable torque	Functioning audio controls. Functioning dimmer control. Proper operation of combination meter EL panel should function properly 5.4 N•m (48 in•lbf)
<u>Vehicle Appearance Checks</u> ☐ Visual Inspection (After accessory installation and removal of protective covers(s))	Ensure no damage (including scuffs and scratches) was caused during the installation process. Panels should fit and align properly. (For PPO installations, refer to TMS Accessory Quality Shipping Standard)