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# Kia Optima In-Dash Navigation DIY Installation Guide


[Standard Radio Use Only]



**MODEL: Kia Optima 2011+  
(Professional Use)**



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## **DISCLAIMER:**

This 'Do-It-Yourself Installation Guide' is intended for informational and reference purposes only. We do not recommend implicitly or explicitly, to anyone, performing any of the procedures described in this guide. We are also not responsible for any property damage, personal injury and/or death, or any other loss or damage that may result from following this informational guide.

Proceed with caution and care when performing modifications to your vehicle.

Be advised that making modification to your vehicle may void your manufacturer's warranty.

Hyundai is a registered trademark of Hyundai Motor America.  
Kia is a registered trademark of Kia Motors America, Inc.

iPod is a registered trademark of Apple, Inc.  
Bluetooth is registered trademark of Bluetooth SIG, Inc.

## **NOTE**

- Take care not to scratch the center fascia panel, dash trim, shift knob, etc.
- Eject disc before removing the audio unit to prevent damaging the CD player's load mechanism.
- Disconnecting the negative (-) battery terminal is recommended prior to installation.
- Do not touch the circuit board and the terminal connector of the flat cable with your bare hands.
- Make sure all connectors and cables are plugged in properly.
- All ground wires provided must be connected to chassis ground.

## **MAIN COMPONENTS**

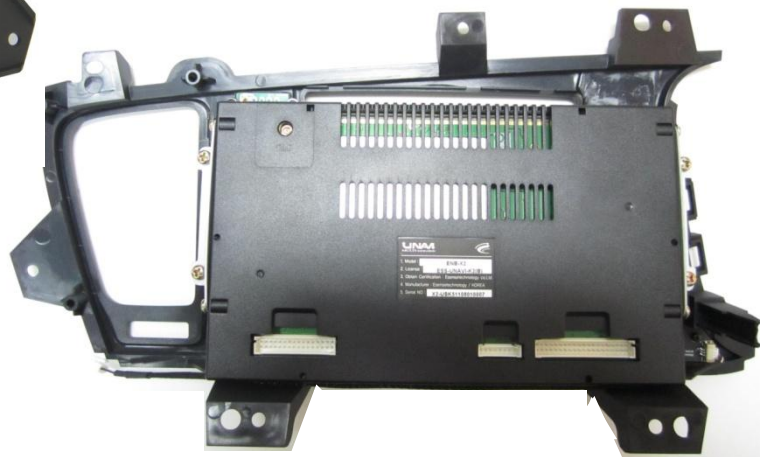
(Not actual size, Items shown may vary)




Optima fascia kit:

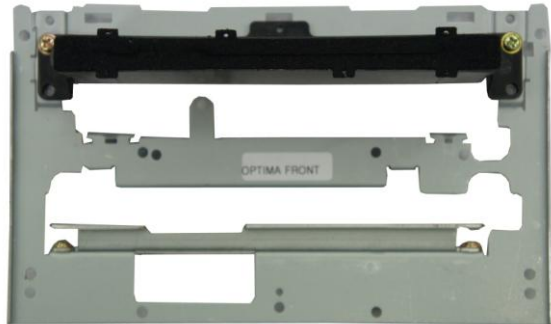
- Fascia
- Bluetooth Antenna Port
- Touch Sensor PCB
- Main LCD Panel w/Mounting Bracket

Rear View



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(Continued)



Front replacement bracket



Mounting brackets (Top & Bottom)



Control box + SD Card



Trip interface board



SD + USB interface cables




External speaker



GPS antenna + Magnetic plate



SMART cable

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## TOOLS REQUIRED:

- Masking Tape
- Double-sided Tape \*
- Electrical Tape
- Velcro
- Dash Trim Removal Tool \*
- Zip/Cable Ties
- Scissor \*
- Plastic/Tin Snips \*
- Pliers \*
- Screwdriver (Phillips-head, Magnetized) \*
- Magnetic Screw & Bolt Tray
- Power Drill
- Unibit\*
- Electrical Connectors & Tools -  
(Wire stripper, Crimper, T-Tap, etc.)

*\*Required Tools*

**Pre-installation picture of non-navigation equipped models**  
*(Trim levels may vary)*



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## TPMS (TIRE PRESSURE MONITORING SYSTEM) WARNING LAMP – ELECTROMAGNETIC INTERFERENCE

### SYMPTOM/CONDITION

The TPMS malfunction indicator lamp may be illuminated if the vehicle is moving around electric power supply cables or radio transmitters at police stations, government and public offices, broadcasting stations, military installations, airports, transmitting towers, etc. External electronic devices connected to the vehicle's power outlets (notebook computer, seat warmer, massager, coolers, GPS navigation, mobile phone charger, etc.) may also cause this condition. The TPMS malfunction indicator lamp generally turns off after the vehicle is removed from such interferences.

### DIAGNOSIS:

If the TPMS indicator lamp is ON, and all four wheel sensors are checked and are working correctly, external electronic devices connected to the vehicle's power outlets (notebook computer, seat warmer, massager, coolers, etc.) may be the cause of this condition. Car manufacturers are aware that any aftermarket device operating especially on the CAN-Bus system can trigger random warning lamps.

### ACTION:

1. Please inspect if there are any other electronic devices inside the vehicle that may cause electromagnetic interferences with the TPMS.
2. Drive the vehicle out of the strong electric field for about 5 minutes to verify that the condition is corrected.
3. Relocate the Control Box and its related cables away from the TPMS sensor (typically located behind the glove compartment).
4. If the above doesn't work, use a metallic shield wrap or a similar material to wrap around the Control Box and its cables with both ends of the shield connected to chassis ground at the point of entry.

## GPS ANTENNA INSTALLATION

The delay when the GPS receiver is first switched on is due to the latest ephemeris data being downloaded, which is essential for the GPS receiver. The data is valid for around 4 hours and takes approximately 20 seconds with a clear line of site to a satellite. It takes longer if using multiple satellites, for instance if the GPS receiver is moving during first acquisition.

The antenna needs to be facing the sky through a non-metallic enclosure. A metallic enclosure (including window tints) will prevent the RF signal being received by the antenna and cause a Faraday cage effect. Likewise, positioning the antenna near to obstructions such as laptop screen or where hands will be over the antenna should also be avoided, as the shielded will have a negative performance.


The GPS Antenna base is magnetic. On metal vehicles, position the antenna in the center of the vehicle at the highest point.

For vehicles with non-metallic mounting surfaces, a metal plate with adhesive strips has been included in the kit for easy mounting and installation. It is **STRONGLY** recommended to use this metal plate underneath the antenna as it will improve signal acquisition.

Once the antenna has been positioned, route the antenna cable carefully to avoid damage.

Position the GPS antenna in the center of the vehicle at the highest point with a clear view of the sky.



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**> INSTALLATION STARTS HERE <**




Gently remove the side panel cover on the driver side.

*(Apply protective tapes and take care not to damage and scratch the interior dash and its related parts)*



Remove the screws (2EA) once the panel cover is removed.

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Remove the screws (2EA) located on the bottom of the driver side panel assembly.



Gently pull off the panel assembly as shown.  
(See next picture)



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Carefully disconnect all connectors from the back of the panel.  
(Picture shown may vary based on vehicle trim levels)



Image of driver side panel assembly removed. (Installation is the reverse of removal)




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Use a panel remover to pull out the garnish surrounding the center fascia.  
Start from the top right-hand corner as shown and gently pull up.



Image of center garnish removed.

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Remove the screws (4EA) to pull out the climate control assembly.  
Disconnect all connectors from the back.



Remove the screw on top of the driver side right air vent.



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Pull out the driver side air vent panel as shown.  
 Remove the mounting screws (6EA) to marked in white circles.



Gently pull out the center fascia panel as shown.  
 (Installation is the reverse of removal)




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Carefully remove the air vent and white clips from the factory fascia panel...

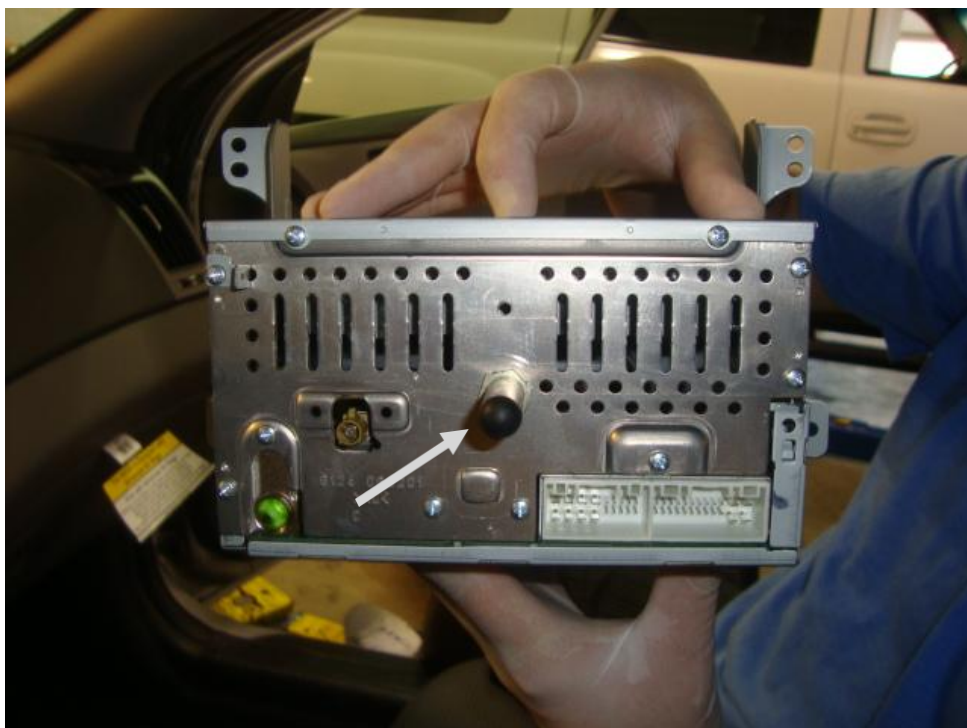


...and relocate it to the UNAVI fascia kit as shown.


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Remove the audio assembly after loosening the mounting screws (4EA).  
As the audio assembly is being pulled out, carefully disconnect all cables behind the unit.



Rear view of the audio head unit after removing connectors and cables.  
If applicable, remove the rear frame stabilizer. (Picture shown may vary)

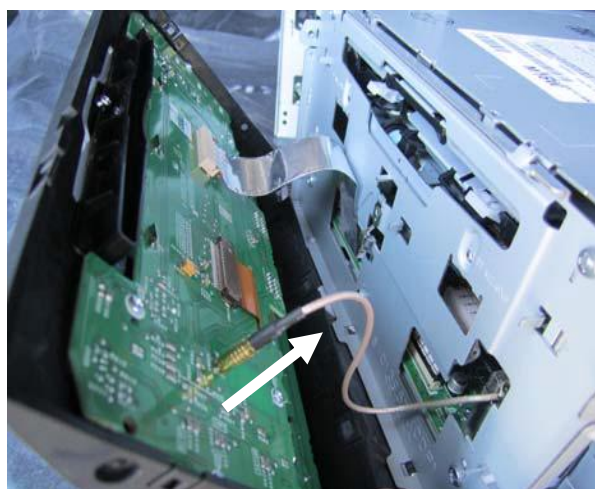
	<b>CLASSIFICATION</b> <b>Installation Manual</b>	<b>MODEL</b> <b>ENB-X2</b>	<b>DOCUMENT NO.</b> <b>BU No. 8</b>	
	<b>Kia Optima In-Dash Navigation DIY Installation Guide</b>		<b>VERSION</b> <b>1.4</b>	<b>PAGE</b> <b>14</b>



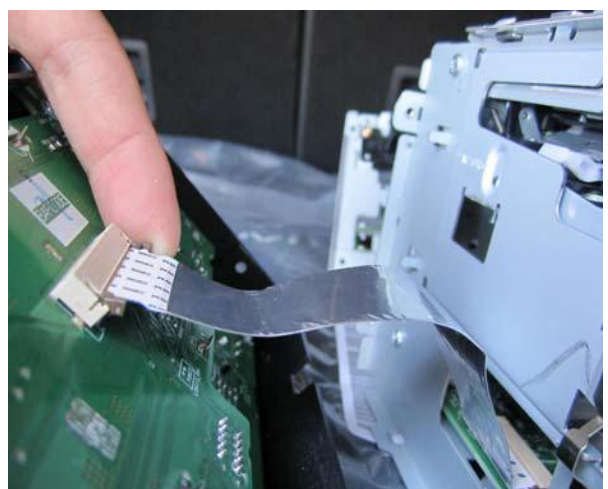
Loosen the screws (Top 4EA, Bottom 4EA) and remove the mounting brackets.



As shown, remove all screws securing the audio faceplate.  
Use a flathead screwdriver to loosen the tabs and gently pull out the audio faceplate.




Gently pull back the sleeve of the Bluetooth antenna cable to disconnect it.

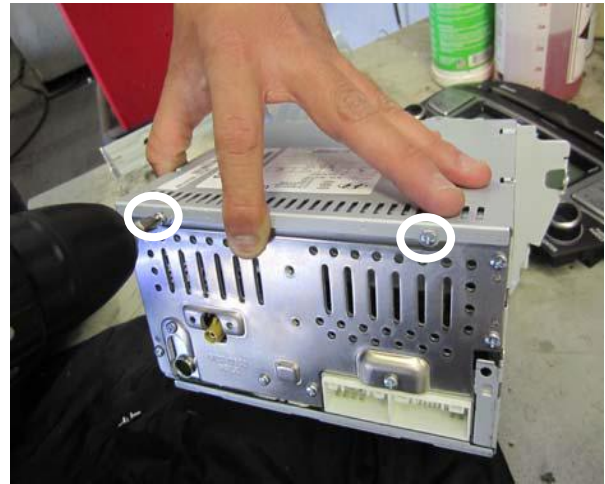


Disconnect the ribbon cable (FCC) from the back of the audio faceplate ONLY.

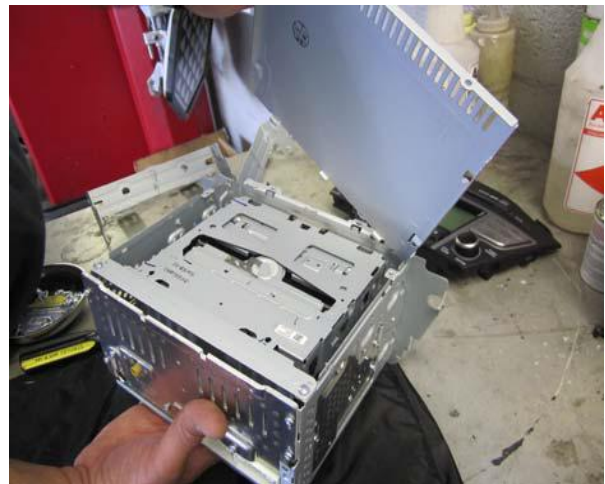
**\*\*Use Caution\*\***



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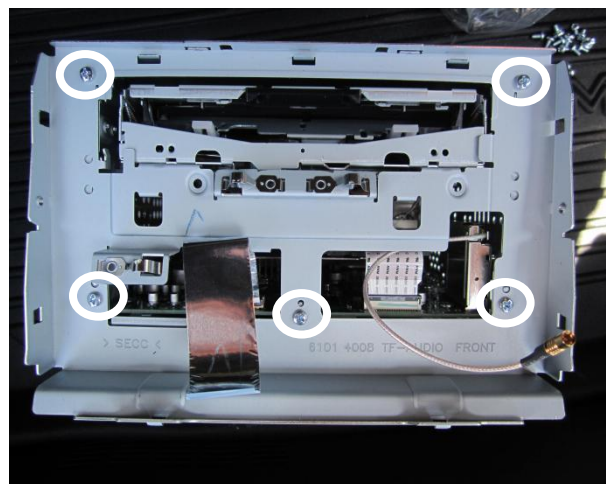
Loosen the screws (4EA) from the audio head unit top cover.




Remove the top cover after loosening the screws as shown.

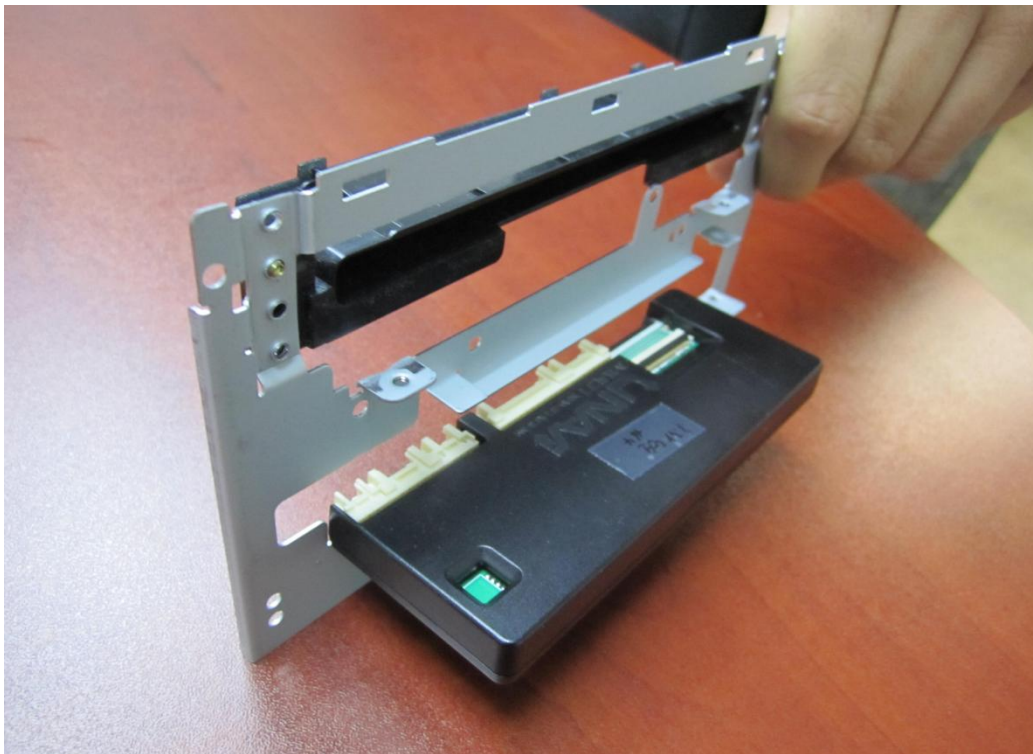


Remove the screws hidden underneath the two openings marked above.



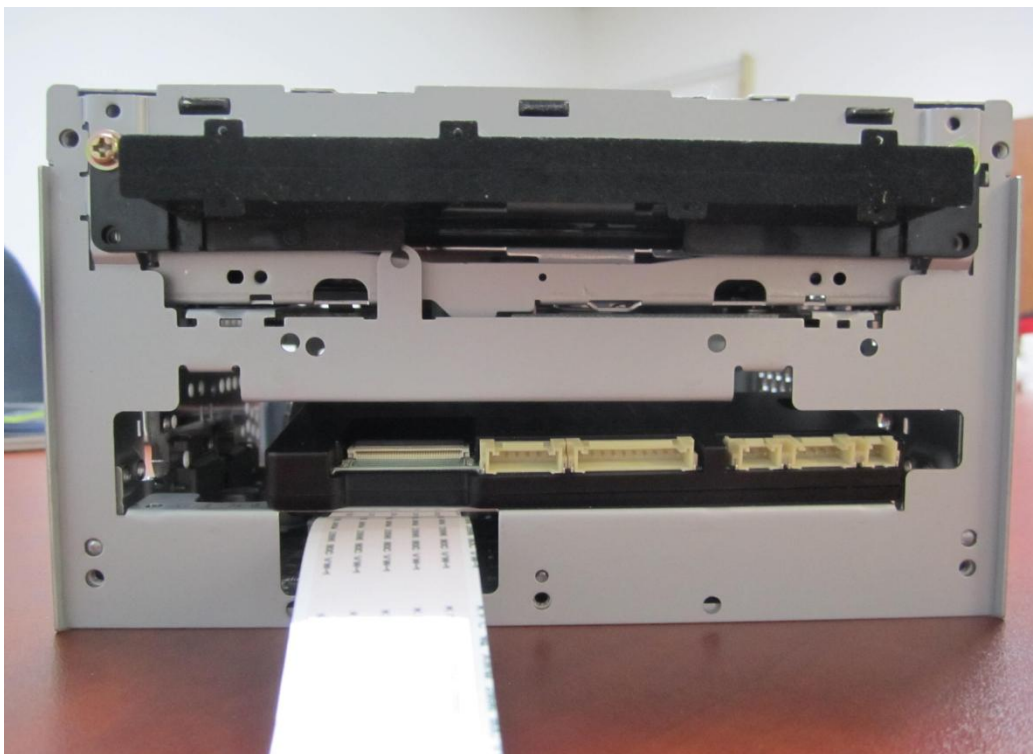
Remove the screws securing the front bracket.  
(These screws will be reused)

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Assemble the Trip Interface board onto the front replacement bracket piece as shown.  
*(Use screws provided in the kit to mount the Trip Interface board).*

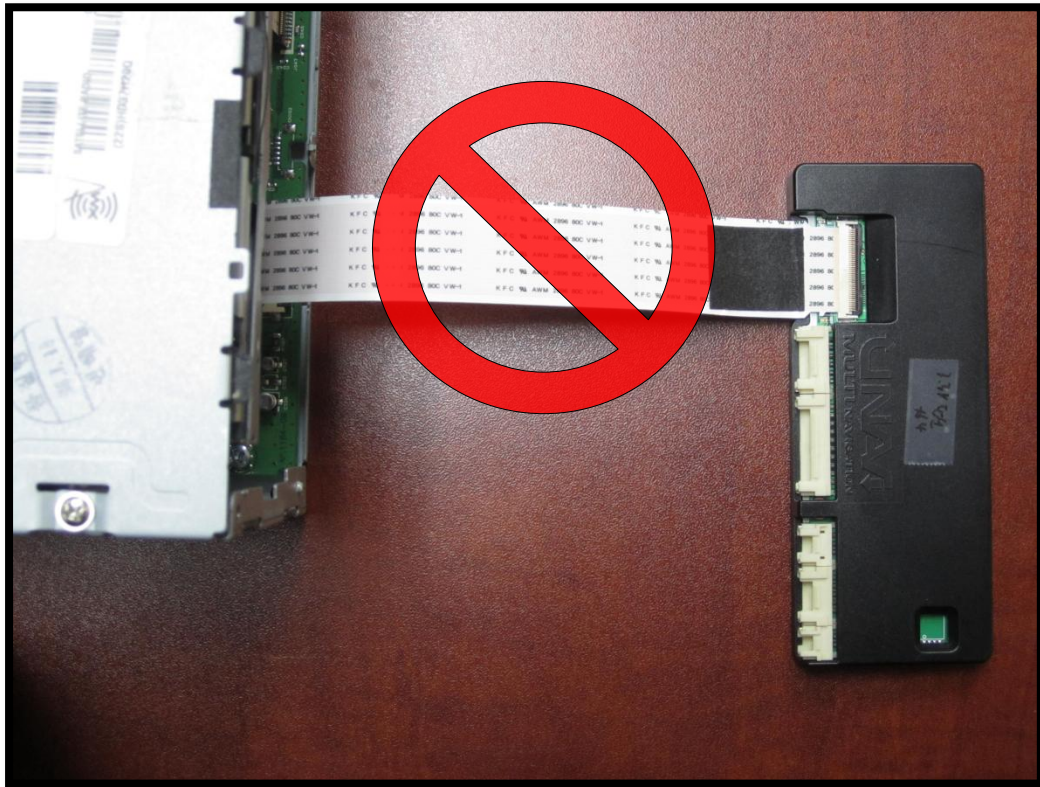
**[WARNING] This TRIP MODULE is designed for specific models. Improper use such as failure to follow instructions and use with incompatible radio will damage this module and the radio unit!**



Slide in the ribbon connector through the bottom opening of the front replacement bracket.




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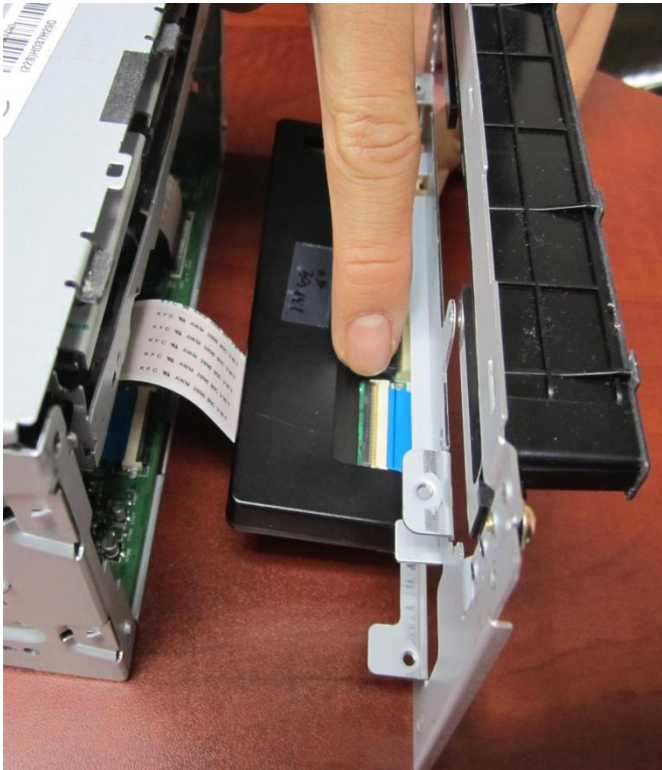


**NEVER** attempt to connect the ribbon cable to the Trip Interface Board like the picture shown above as it may cause permanent damage to the audio unit!





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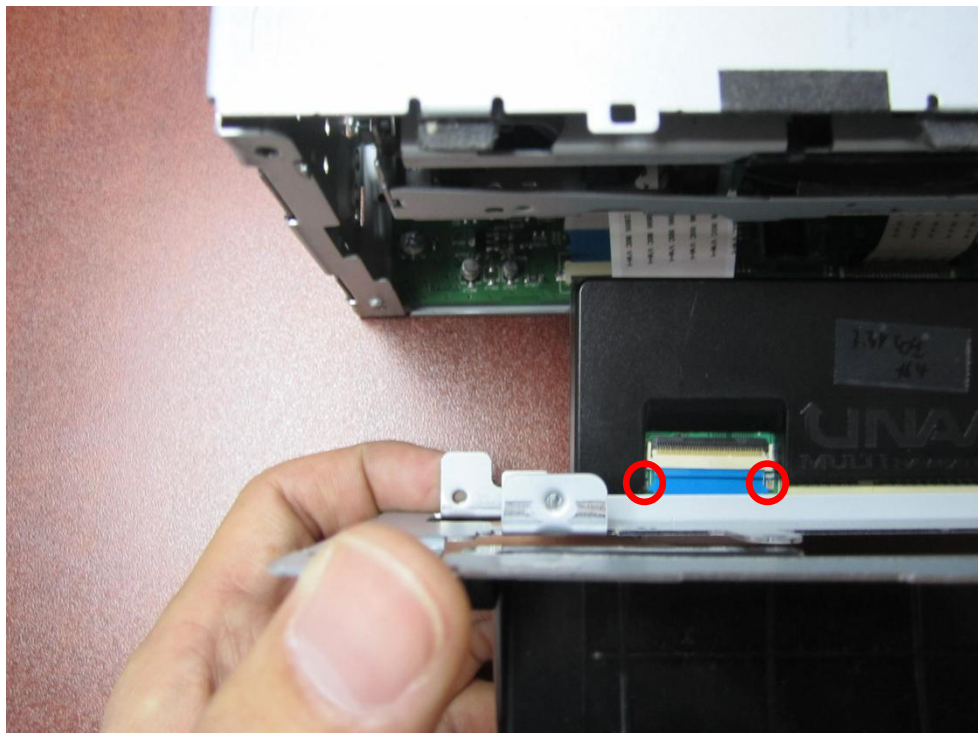
Please proceed with **CAUTION** when inserting the ribbon cable into the Trip Interface Board.

**DO NOT** twist the cable as this may result in a damaged board and/or the audio unit!

The Trip Interface Board is designed to communicate with either side of the pins.


*Connecting the ribbon connector between the trip interface board and the audio head unit:*

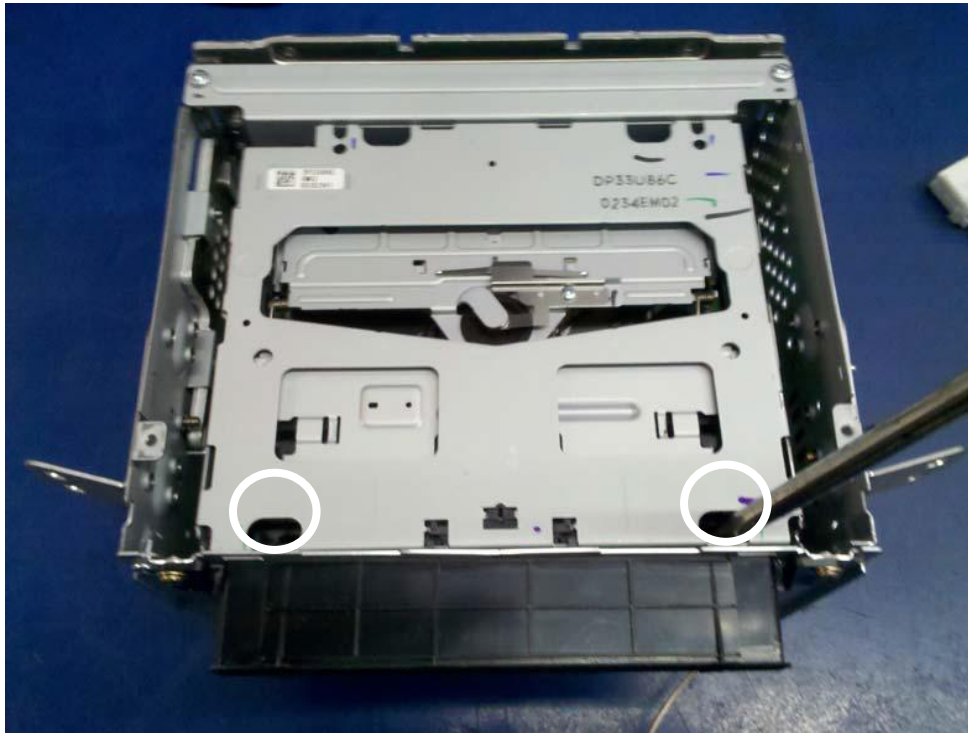
- Lift up the lock on the Trip Interface Board
- Gently slide in the ribbon cable (typically blue end facing up) until it can't slide in any further
- Push the lock down to secure the cable



\*Please check after installation when the radio unit is powered on\*

Red LED lights on the circuit board will flash intermittently indicating data communication.


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Screw under the two openings as shown using the screws removed from an earlier step and install the top cover back on.



Screw on the replacement mounting brackets (Top and Bottom).

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Open the glove box and turn the dampers to disconnect it.



Disconnect the glove box lift to completely release the compartment.



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Route the SD/USB interface cables around from behind the glove box and out through the center dash panel opening.

*(Images shown on this page may vary)*



If necessary, use Unibit to drill a hole on the back of the glove box (about 3/4-inch) just wide enough for the SD/USB interface cables to slide through. **\*\*Proceed with Caution\*\***

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*(Images shown on this page may vary)*




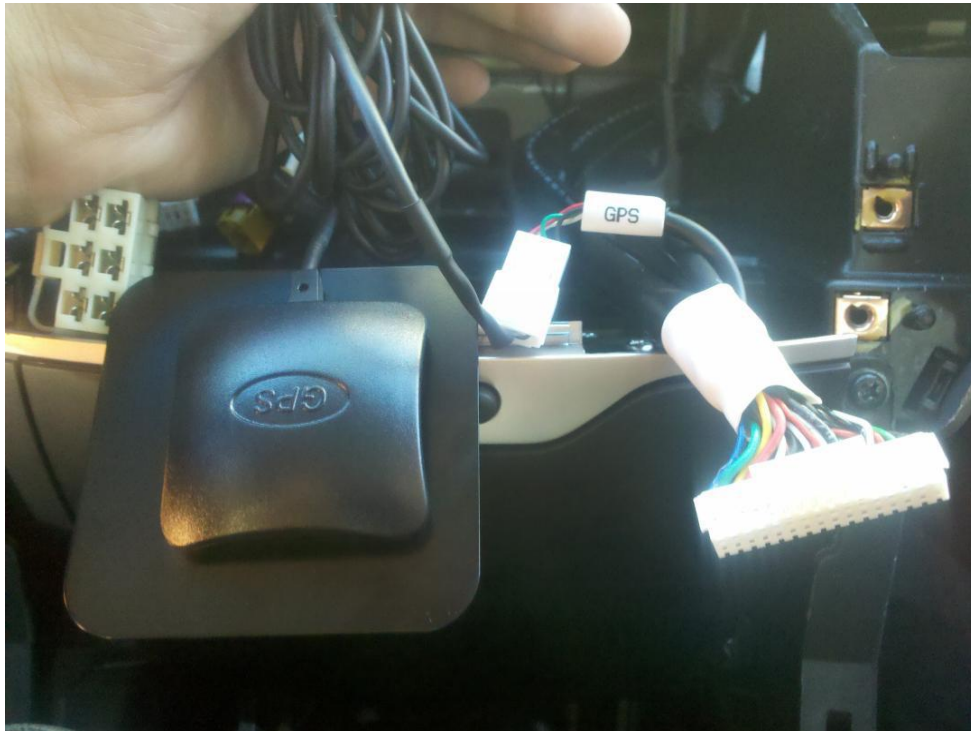
Run the interface cables through the drilled hole.  
Mount the control box inside the glove box as shown.



Bend the audio support bracket downwards.



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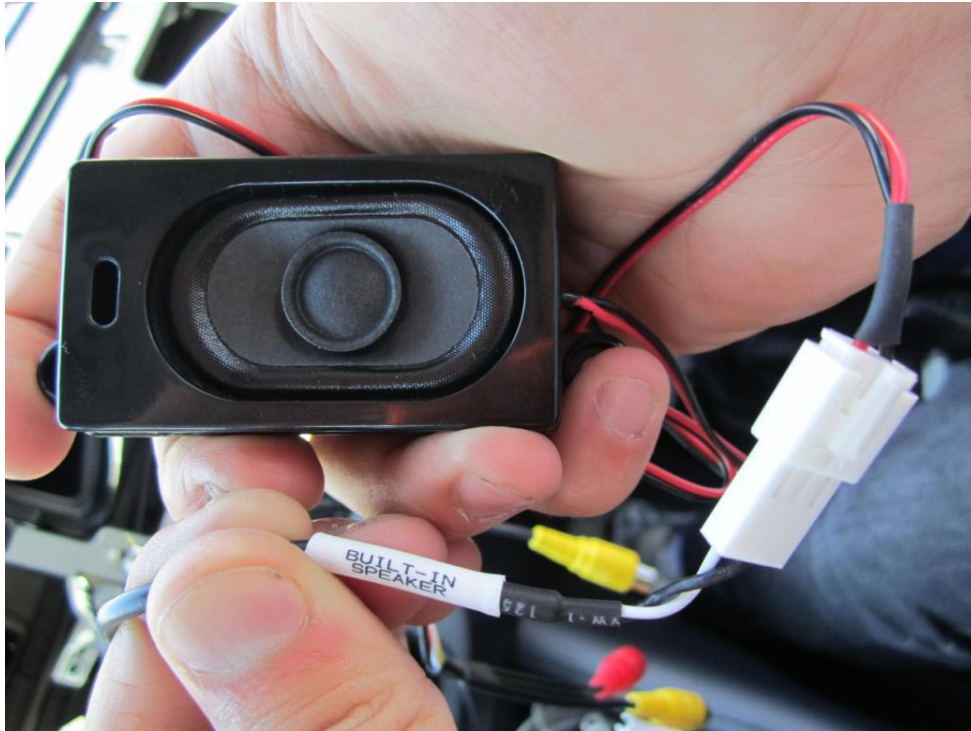
Connect the GPS antenna to the female connector labeled “GPS”



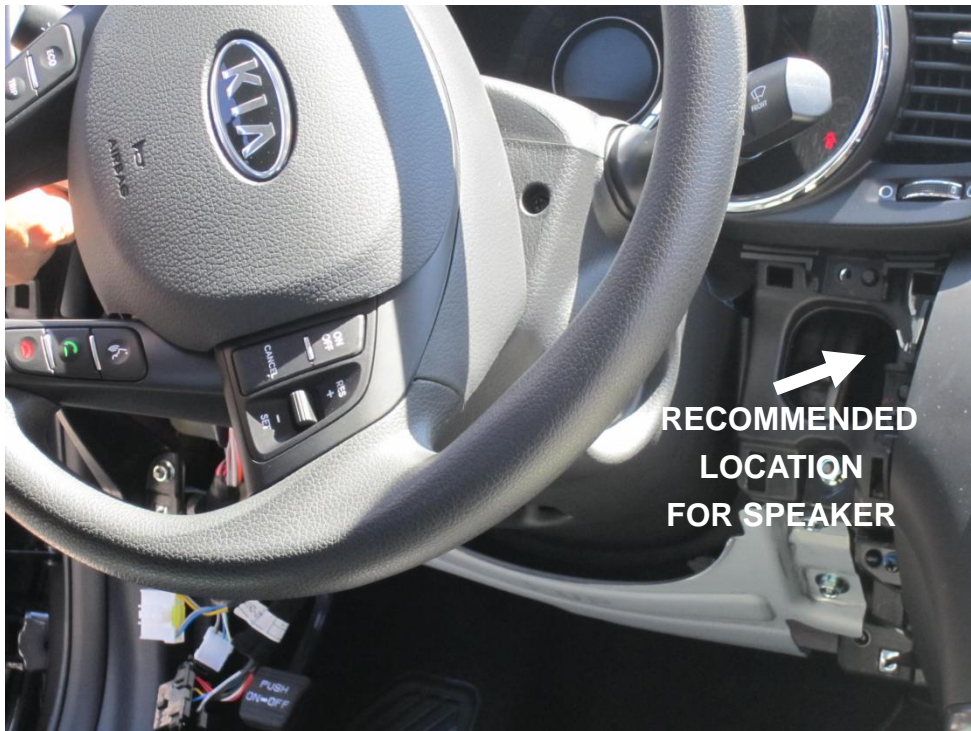
Make sure the GPS receiver is mounted (rounded side up facing the sky) to a non-metallic panel or on front windshield glass. Route the antenna cable carefully to avoid damage.




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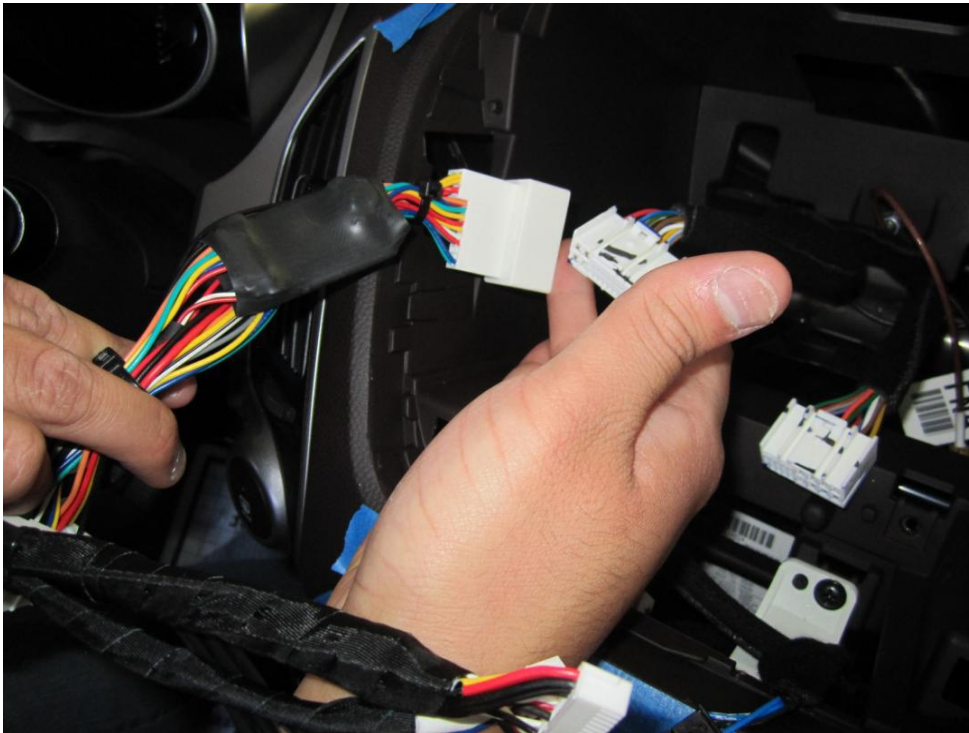


Connect the external speaker to the female connector labeled “BUILT-IN SPEAKER”.  
This speaker will allow sound output from the UNAVI system when the audio is in XM/Radio/CD/MP3/Bluetooth mode.  
Sound output from the system will use the factory speakers under “AUX” mode only.

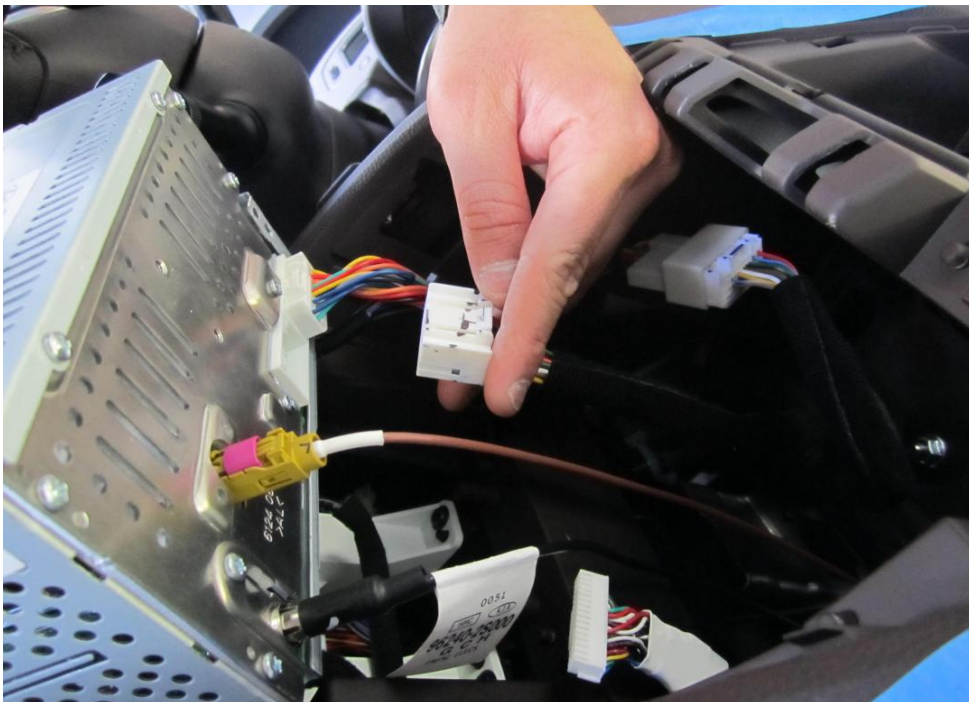


If you choose to install the external speaker, choose a location closest to the Driver (exposed or hidden) and where it can be mounted from causing any obstructions to other components.

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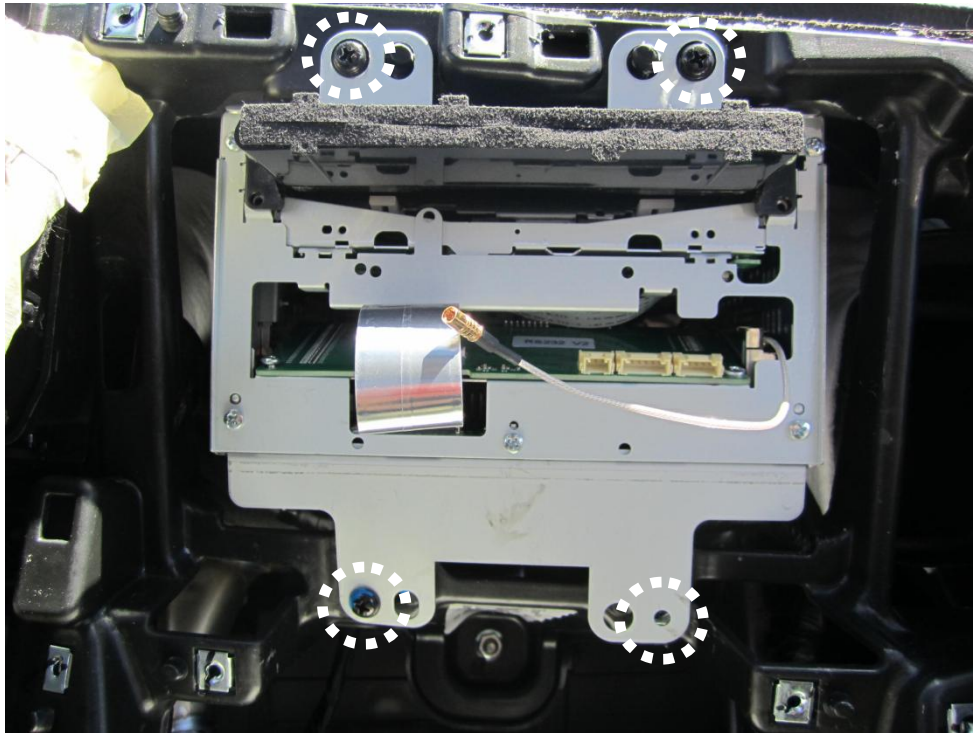
Connect the main factory audio cable (24-pin) to the SMART cable harness



Reconnect the remaining audio unit connectors and cable as shown.

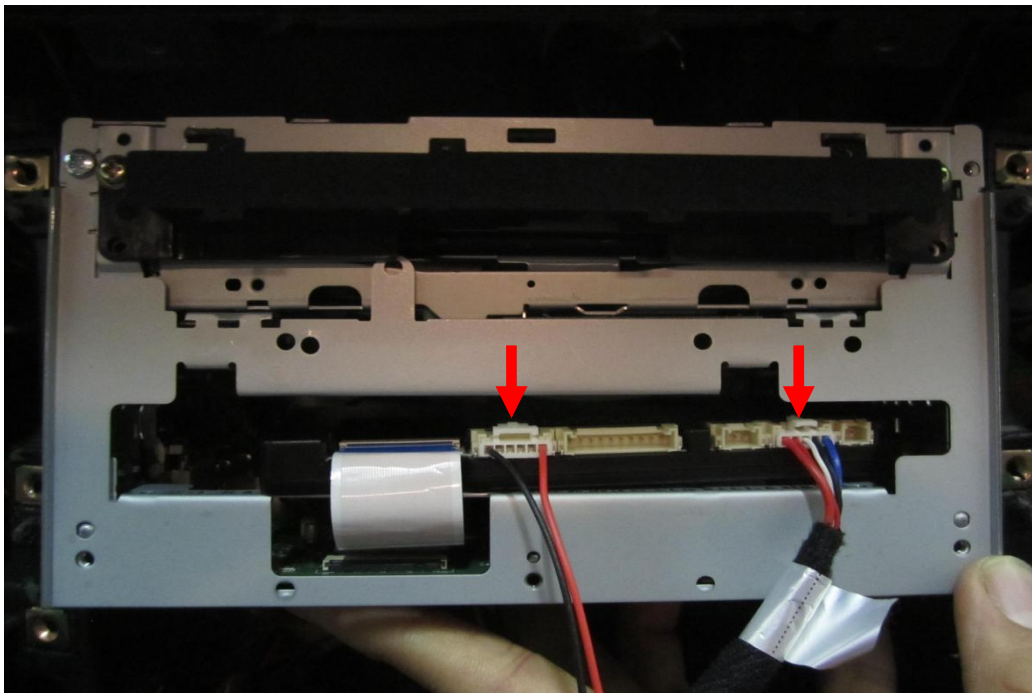


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Clear of any obstructing cables and mount the audio unit back into the dash panel.  
Check the cables are not being too tightly squeezed in the back of the audio unit.

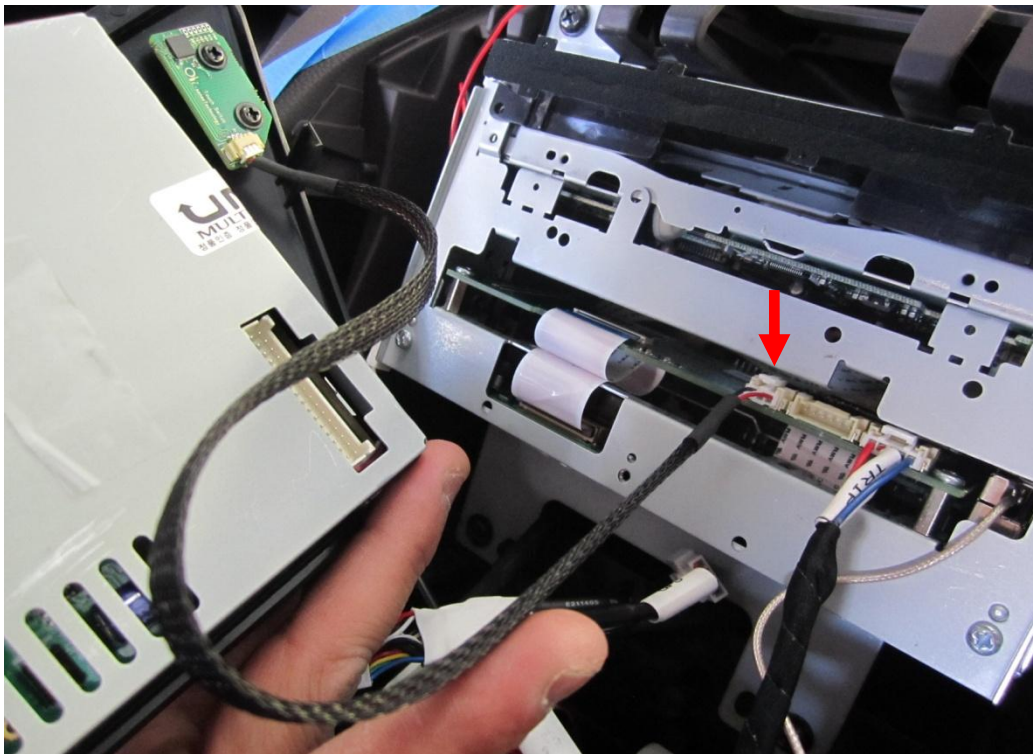
*(Images shown on this page may vary)*



Plug in the 6-pin “TRIP POWER” connector to the Trip Interface board as shown.  
Plug in the 5-pin “TRIP PCB” connector to the Trip Interface board as shown.

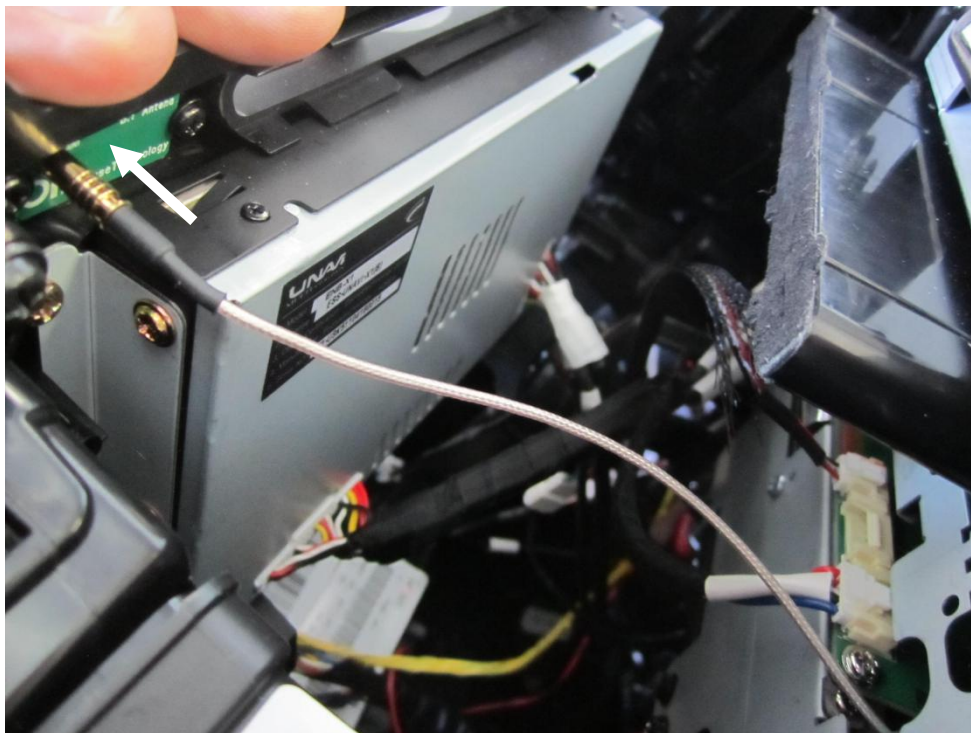


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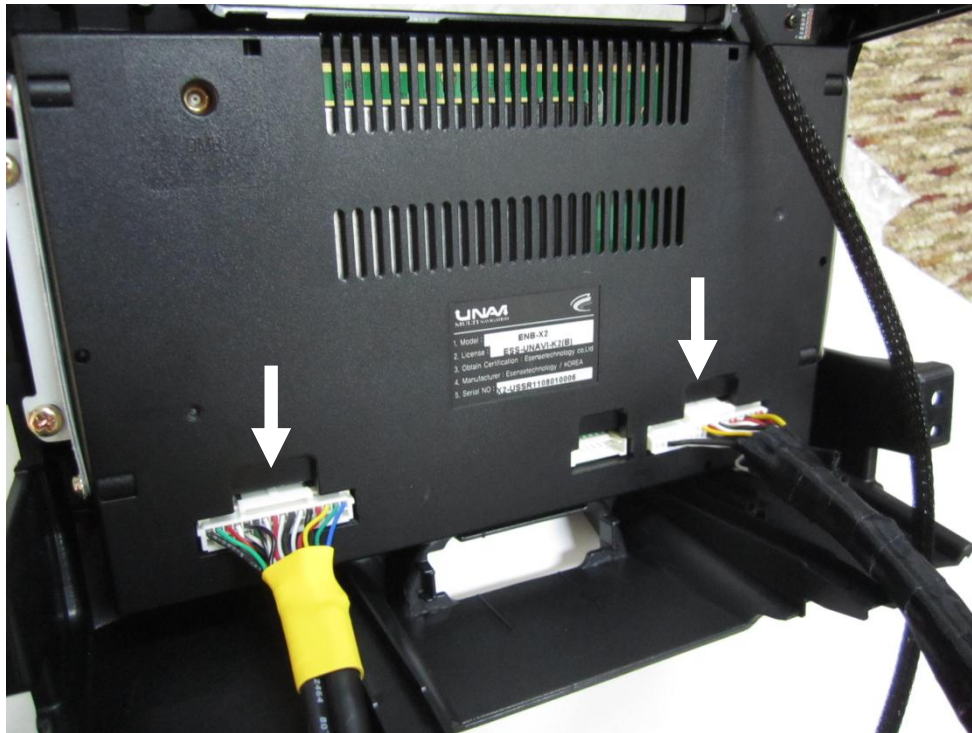
If applicable, plug in the 3-pin Touch Sensor cable to the Trip Interface board.

*(Images shown on this page may vary)*



Gently pull back the Bluetooth antenna cable sleeve and connect to the Bluetooth antenna port located behind the fascia panel as shown.

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Plug in the remaining cables to the back of the LCD panel as shown.

### [INSTALLATION COMPLETE]



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Thank you for choosing UNAVI!