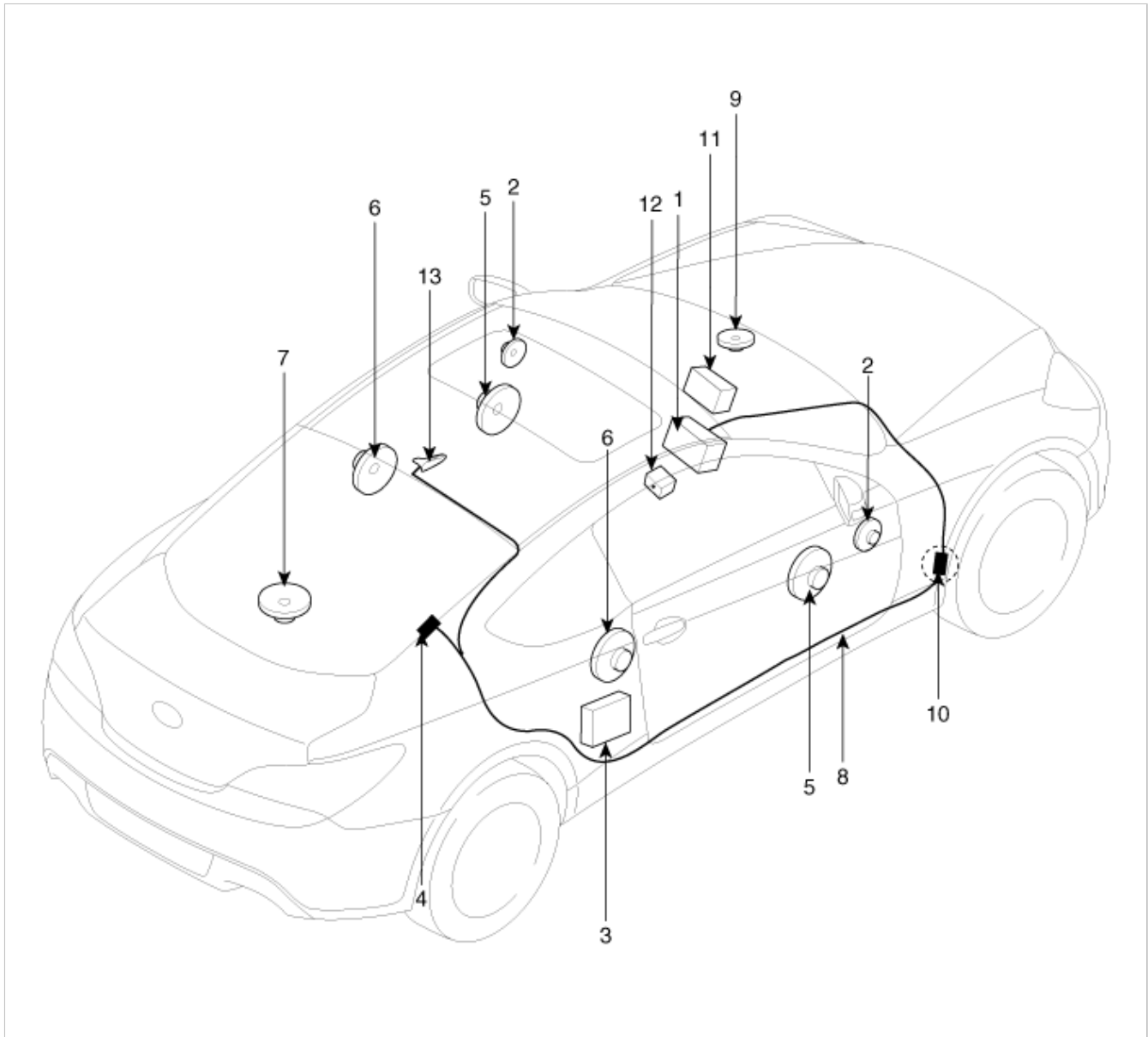


## Component Location



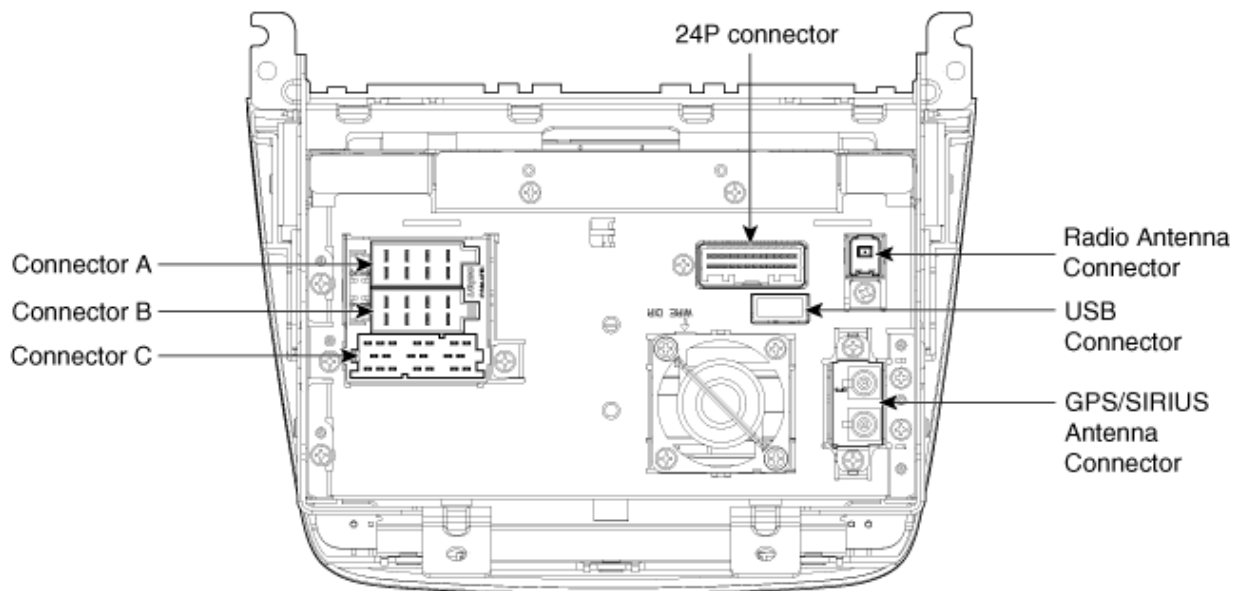
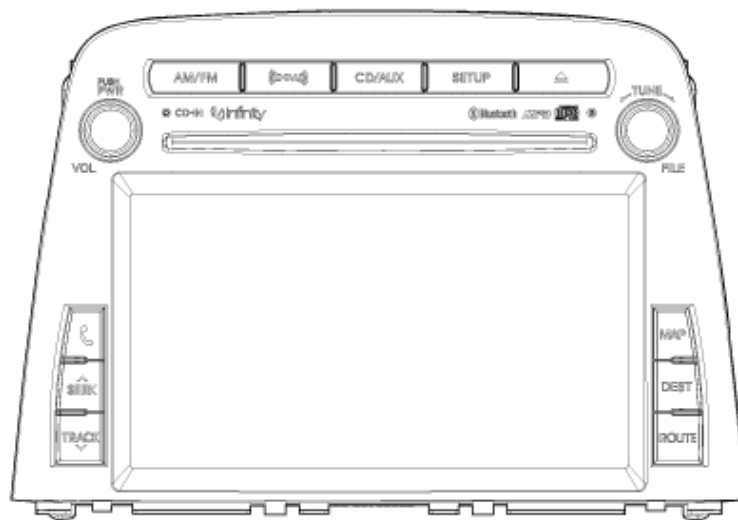
1. AVN (A/V & Navigation) head unit
2. Tweeter speaker
3. External Amplifier
4. Glass antenna (Radio)
5. Front door speaker
6. Rear door speaker
7. Woofer speaker




8. Antenna feeder cable
9. Crash pad center speaker
10. Feeder cable joint connector
11. Multi display
12. Aux jack
13. Roof antenna (GPS + SDARS)

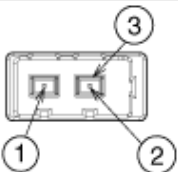
※ SDARS : Satellite Digital Audio Radio Service


## Components

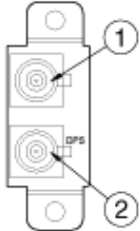
### AVN (A/V & Navigation) Head Unit

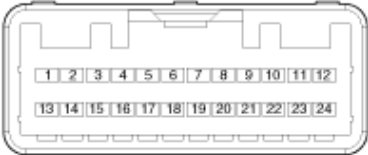


Connector A	NO	Description	NO	Description
	1	Speed	5	R Inhibit
	2	Illumination (+)	6	ACC
	3	Remote antenna	7	Illumination (-)
	4	Battery (+)	8	Power GND
Connector B	NO	Description	NO	Description
	1	Speaker RR (+)	5	Speaker RR (-)
	2	Speaker FR (+)	6	Speaker FR (-)
	3	Speaker FL (+)	7	Speaker FL (-)
	4	Speaker RL (+)	8	Speaker RL (-)
Connector C	NO	Description	NO	Description
	1	Mic (+)	11	Aux Input DET
	2	Miic (-)	12	-
	3	Aux input right	13	-
	4	Aux input left	14	-
	5	Aux V GND	15	Door unlock
	6	-	16	Remote control
	7	-	17	Remote control GND
	8	ALT L	18	Aux video input
	9	Auto light input	19	-
	10	Aux GND	20	Remote external AMP

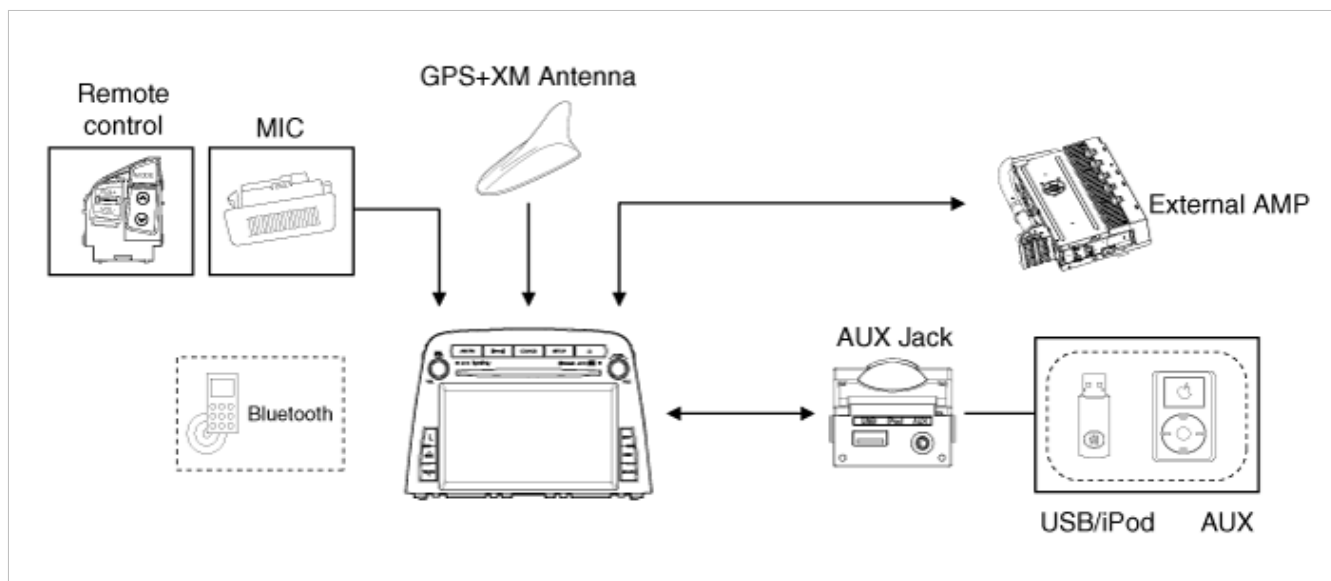
Radio antenna	NO	Description	NO	Description
	1	Signal 1	3	GND
	2	Signal 1		

USB connector	NO	Description	NO	Description
	1	USB VCC	3	USB D (-)
	2	USB D (+)	4	USB GND

GPS/XM connector	NO	Description	NO	Description
	1	XM signal	2	GPS signal

24P connector	NO	Description	NO	Description
	1	CAN low	13	CAN high
	2	-	14	-
	3	-	15	-
	4	-	16	-
	5	-	17	Equalizer select
	6	-	18	-
	7	-	19	-
	8	-	20	-
	9	-	21	-
	10	-	22	-
	11	-	23	-
	12	-	24	-

### System Block Diagram



## Limitations Of The Navigation system

### GPS Signal Reception State

As the GPS satellite frequency is received/transmitted in straight lines, reception may not work if hiding devices are placed on or near the GPS antenna or when traveling through the following locations.



- Tunnels



- Basement parking structures



- Underneath an overpass



- Roads within forested areas



- Areas near high rise buildings



- Roads within canyons

## Vehicle Position Display

1. If multipass errors occur due to reflections from buildings or related causes, the current position mark on the navigation may differ from the actual position of the vehicle.
2. The position of the vehicle on the navigation may be different from the actual position if the vehicle is under the occur, driving for a short period of time will vehicle through map matching or GPS information (several minutes may be necessary in certain cases).
  - A. When driving on a Y-shaped road with a narrow angle, the current position may be displayed in the opposite direction.
  - B. If the vehicle is loaded onto a car transport vehicle, the current position mark may be stalled on the last position prior to loading.
  - C. When driving on a spiral-shaped road.
  - D. When driving in mountain regions with sharp turns or sudden brakes.
  - E. When entering a road after having been in an underground parking structure, building parking structure, or turnable with many rotations.
  - F. When the tires have recently been replaced (Especially upon use of spare or studless tires)
  - G. If the battery terminal is removed.
  - H. When driving in city streets, the current position may be displayed on the opposite side or on an off-road position.
  - I. When changing the zoom level from the maximum zoom in level to a different zoom level, the current position mark may be displayed on a different road.
  - J. When driving in heavy traffic with frequent go · stops in traffic or intersections.
  - K. When driving under slippery conditions, such as heavy sand, snow, etc.
  - L. When driving with the tire chain in place.
  - M. When using a tire with an incorrect size specification.
  - N. When the tire pressure for the 4 tires are different.
  - O. When the replacement tire is a worn or used tire (Especially studless tires having passed a 2nd seasons, etc.)
  - P. When driving near high-rise buildings
  - Q. If a roof carrier has been installed
  - R. When driving under high speeds or having calculated a long-distance route.

## Route Guidance

Suitable route guidance may not occur caused by search conditions or the driving position.

- Guidance to go straight may be given while driving on a straight road.
- Guidance may not be given even when having turned at an intersection.
- There are certain intersections in which guidance may not occur.
- A route guidance signaling entrance into a no enter zone may occur (No enter zone, road under construction, etc.)
- Guidance may be given to a position removed from the actual destination if roads to reach the actual destination do not exist or are too narrow.
- Faulty voice guidance may be given if the vehicle breaks from the designated route (ex : if a turn is made at an intersection while the navigation provided guidance to go straight).
- Map Data may be missing or incorrect causing route guidance to not be given.

## **Route Re-calculation**

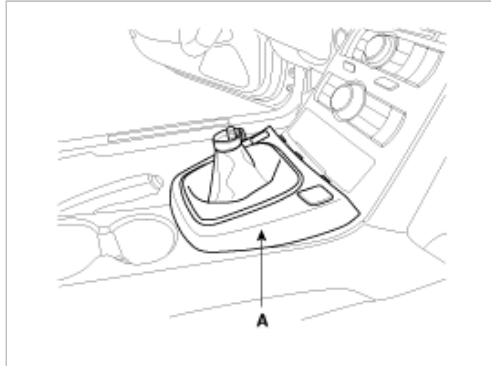
The following phenomena may occur after conducting route recalculation.

- Guidance may be given to a position differing from the current position when turning at an intersection.
- Route recalculation may take a longer period of time when driving under high speeds.
- A route guidance signaling for a U-Turn in a No U-Turn location may occur.
- A route guidance signaling entrance into a no enter zone may occur (No enter zone, road under construction, etc).
- Guidance may be given to a position removed from the actual destination do not exist or are too narrow.
- Faulty voice guidance may be given if the vehicle breaks from the designated route (ex : if a turn is made at an intersection while the navigation provided guidance to go straight)

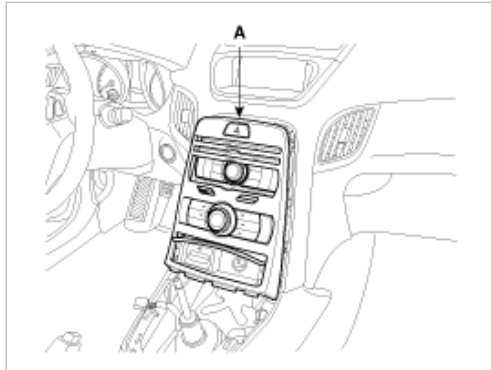


## Removal

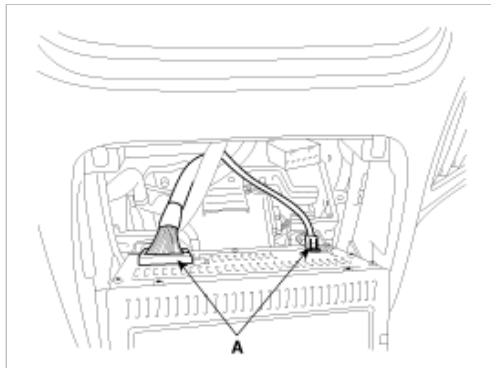
1. Disconnect the negative (-) battery terminal.
2. Remove the console upper cover(A).



3. Remove the crash pad center fascia lower panel(A). (Refer to the BD group - "Crash pad")



4. Remove the mounting screws.
5. Remove the connectors and cable(A) then remove the AVN head unit.



## Installation

1. Connect the AVN head unit connectors and cables.
2. Install the AVN head unit.
3. Install the crash pad center fascia lower panel.
4. Install the console upper cover.
5. Check the AVN system.

### NOTE

Make sure the AVN head unit connectors are plugged in properly and the antenna cable is connected properly.

## Troubleshooting Guide

### Before Thinking The Product Has Malfunctioned

1. Errors which occur during the operation or installation of the device may be mistaken as a malfunction of the actual device.
2. If you are having problems with the device, try the suggestions listed below.
3. If the problems persist, contact your point of purchase or the nearest service center.

Problem	Function
There are small red, blue, or green dots on the screen	Because the LCD is manufactured with technology requiring high point density, a pixel deficiency or lighting may occur within 0.01% of total pixels.
The sound or image is not working	<ul style="list-style-type: none"> <li>• Has the switch for the vehicle been turned to [ACC] or [ON]?</li> <li>• Has the SYSTEM been turned OFF?</li> </ul>
The video is being displayed but sound is not working	<ul style="list-style-type: none"> <li>• Has the volume been set to a low level?</li> <li>• Has the volume been set on mute?</li> </ul>
When the power is turned on, the corners of the screen are dark	<ul style="list-style-type: none"> <li>• The display looking somewhat darker after prolonged periods of use is a normal phenomenon with LCD panels. It is not a malfunction.</li> <li>• If the screen is very dark, contact your point of purchase or the nearest service center.</li> </ul>
Sound is working from only one speaker	<ul style="list-style-type: none"> <li>• Is the position of FAL/BAL sound controls or volume adjusted to only one side?</li> </ul>
Sound and video does not work in AUX mode	Is the audio and video connector jacks fully inserted into the AUX terminal?
The external device is not working	Is the external device connected with a standard connector cable?
The road is missing	Some map data may be missing or incorrect.
The road name is spoken incorrectly	<p>The TTS(Text To Speech) engine speaks the street name based off of the phonetic spelling.</p> <p>This will continuously be update with the map database.</p>

### Troubleshooting

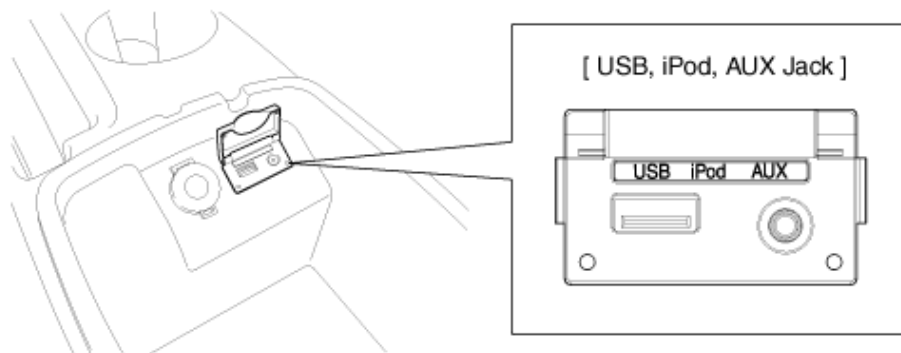
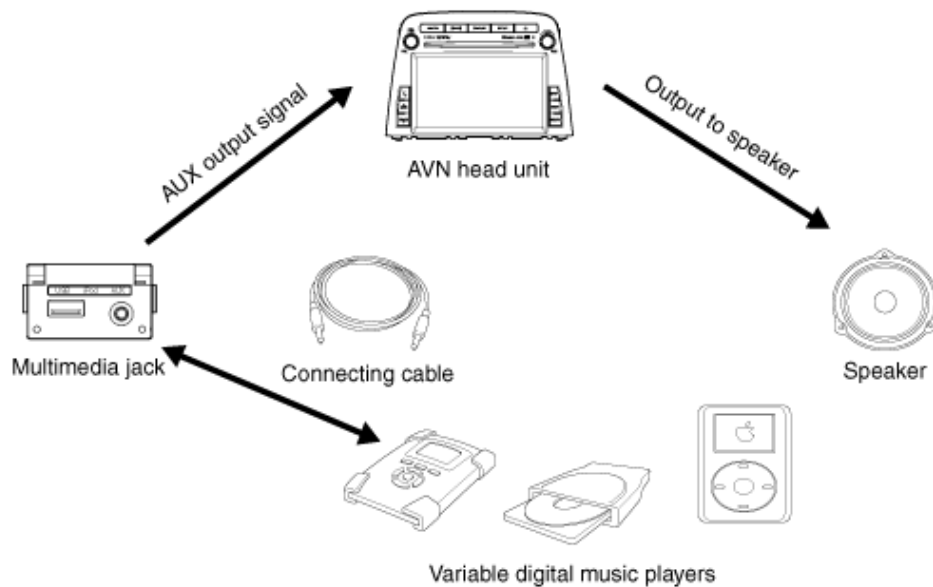
Problem	Possible Cause	Solution
The power does not turn on.	The fuse is disconnected.	Replace with a suitable fuse. If the fuse is disconnected again, please contact your point of purchase or service center.
	Device is not properly connected.	Check to see that the device has been properly connected.
XM only goes through one category	The XM mode is in category.	Press the mode button to change to channel mode.
The CD does not play.	The DISC has not been inserted or has been inserted upside down.	Insert the disc properly so that the sides are facing the correct direction.
	The DISC has been contaminated.	Wipe dirt and other foreign substances from the DISC.

	The vehicle battery is low.	Charge the battery. If the problem persists, please contact your point of purchase or service center.
	A disc which is not supported by the device has been inserted.	Insert a disc which is supported for play by the device.
The sound does not work.	<ul style="list-style-type: none"> <li>• The volume level is set the lowest level.</li> <li>• The connector is not properly connected.</li> <li>• The device is currently fast-forwarding, rewinding, scanning, or playing in slow mode.</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust the volume level.</li> <li>• Check the connection state.</li> <li>• The sound will not work when the device is fast-forwarding, rewinding, scanning, or playing in slow mode.</li> </ul>
The sound or video quality is low.	<ul style="list-style-type: none"> <li>• The DISC is dirty or scratched.</li> <li>• Vibration is occurring from the position in which the conversion switch has been installed.</li> <li>• The color and tone quality of the image is low.</li> </ul>	<ul style="list-style-type: none"> <li>• Wipe off water or dirt from the DISC. Do not use a disc which has been scratched.</li> <li>• The sound may be short-circuited and the image distorted if the device begins to vibrate. The device will return to normal operation once the vibration has stopped.</li> <li>• Aging of the video display and deterioration in performance may cause certain quality degradations.</li> </ul>
The USB does not work.	<ul style="list-style-type: none"> <li>• USB memory is damaged.</li> <li>• USB memory has been contaminated.</li> <li>• A separately purchased USB HUB is being used.</li> <li>• A USB extension cable is being used.</li> <li>• A USB which is not a Metal Cover Type USB Memory is being used.</li> <li>• A HDD type, CF, SD Memory is being used.</li> <li>• There are no music files which can be played.</li> </ul>	<ul style="list-style-type: none"> <li>• Please use after formatting the USB into FAT 12/16/32 format.</li> <li>• Remove any foreign substances on the contact surface of the USB memory and multimedia terminal.</li> <li>• Directly connect the USB memory with the multimedia terminal on the vehicle.</li> <li>• Directly connect the USB memory with the multimedia terminal on the vehicle.</li> <li>• Use a standard USB memory.</li> <li>• Use a standard USB memory.</li> <li>• Only MP3, WMA file formats are supported. Please use only the supported music file formats.</li> </ul>
The iPod is not recognized even though it has been connected.	<ul style="list-style-type: none"> <li>• There are no titles which can be played.</li> <li>• The iPod firmware version has not been properly updated.</li> <li>• The iPod device does not recognize downloads.</li> </ul>	<ul style="list-style-type: none"> <li>• Use iTunes to download and save MP3 files into the iPod.</li> <li>• Use iTunes to update the firmware version and reconnect the iPod with the device.</li> <li>• Reset the iPod and reconnect with the device.</li> </ul>

## Description

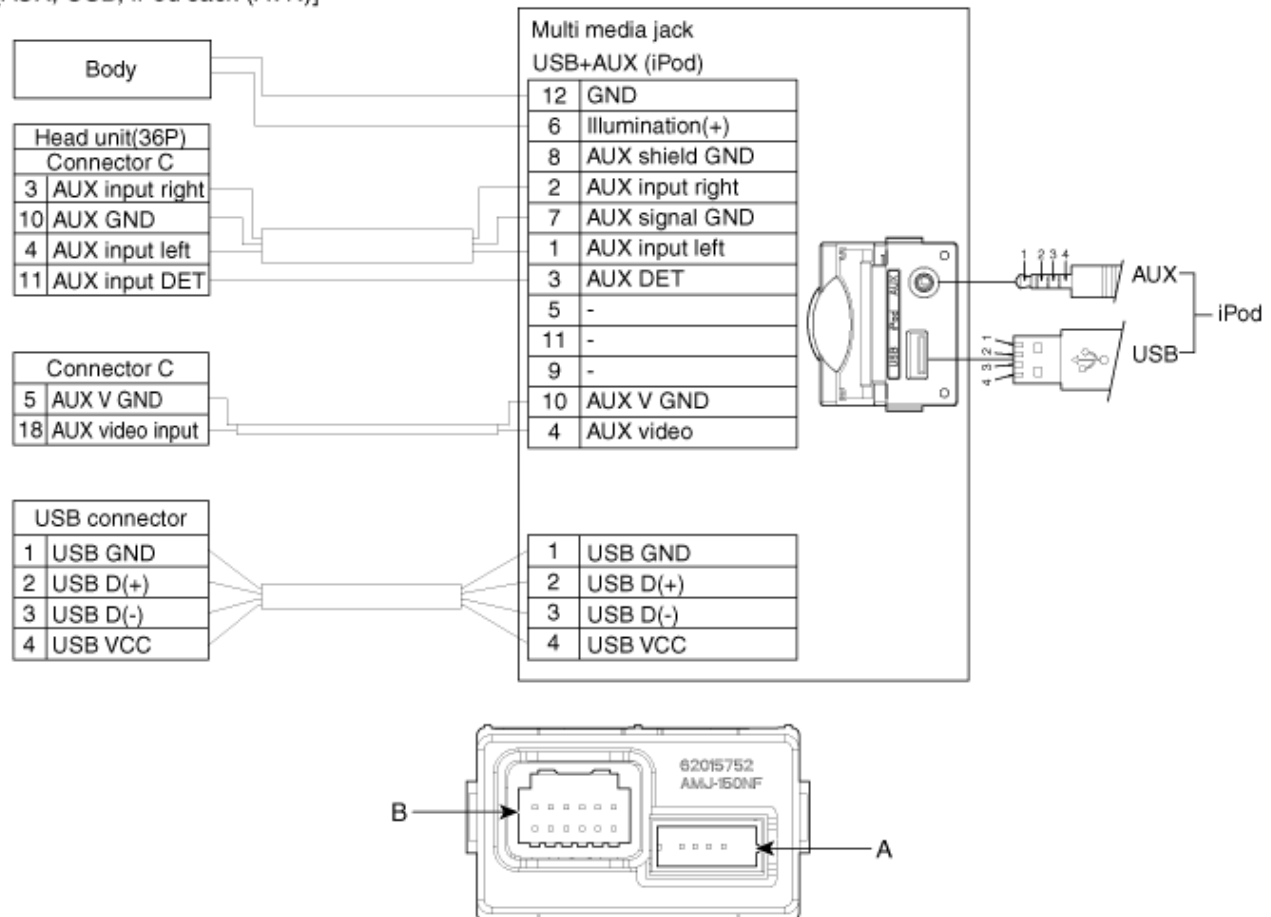
The multimedia jack on the console upper cover is for customers who like to listen to external portable music players like the MP3, iPod and etc., through the vehicle's sound system when it is linked to this jack. The customer has this added option.


In case of distortions from media connected to the AUX source, the audio unit may not be defect but the output level of the used media does not match the specification of the AUX input.

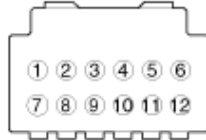


## Circuit Diagram

[AUX, USB, iPod Jack (AVN)]

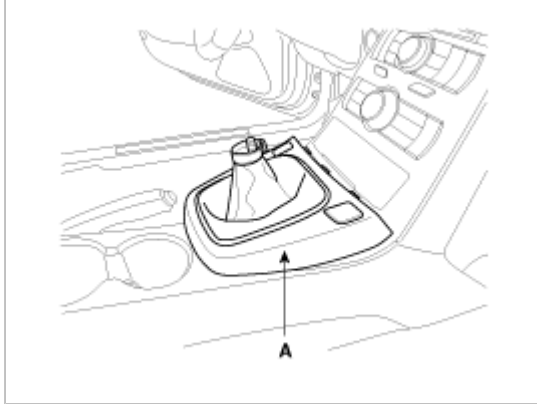


Connector A	No.	USB Connector
	1	USB 접지
	2	USB D (+)
	3	USB D (-)
	4	USB VCC

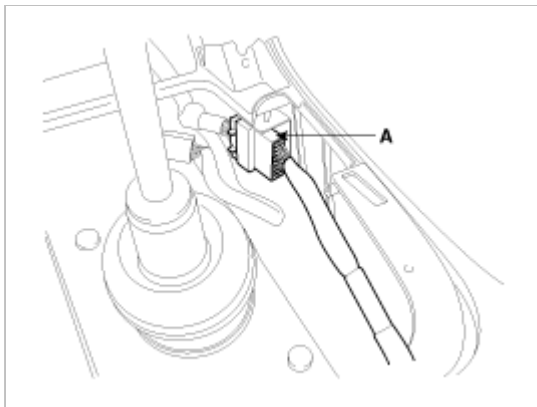
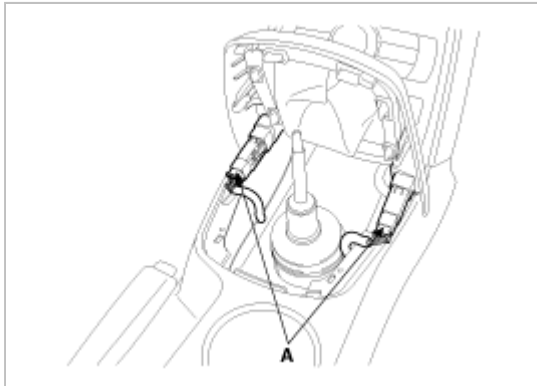
Connector B	No.	AUX(iPod) Connector
	1	AUX input left
	2	AUX input right
	3	AUX DET
	4	AUX video
	5	-
	6	Illumination(+)
	7	AUX signal GND
	8	AUX shield GND
	9	-
	10	AUX V GND
	11	-
	12	GND

## Removal

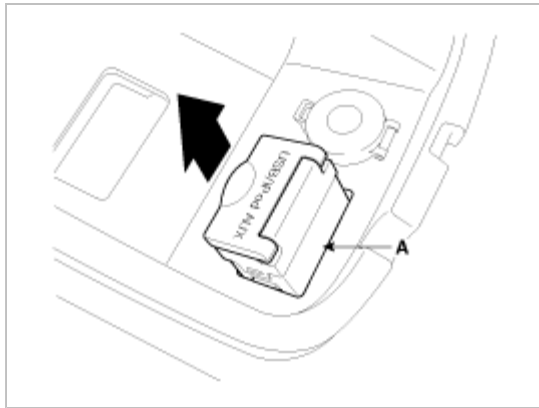
1. Remove the shift lever knob.  
(Refer to BD group - "Console")
2. Remove the console upper cover(A).



3. Disconnect the connector(A) from the console upper cover and console.



4. Remove the console.  
(Refer to BD group - "Console")
5. Remove the multimedia jack(A) from the console under cover after loosening the mounting screws.



## Installation

1. Install the multimedia jack.
2. Connect the AUX jack connector.
3. Install the center console.
4. Install the console upper cover.
5. Install the shift lever knob.

### NOTE

Make sure the Aux connector and the console connectors are plugged in properly.