

MP3 AUDIO SYSTEM

8610-22/8610-25/8610-26/8610-37/8630-10/8910-01/
8910-10/8930-26/

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MP3 AUDIO SYSTEM

8910-01

GENERAL INFORMATION

1. SPECIFICATIONS

1) MP3 Audio System

Category	Item	Specifications
Audio	Power supply	DC 14.4 V
	Speaker impedance	4 Ω
	Max. power	45 W x 4 ch
	Weight	1,810 g
	Size	310.4 mm (W) x 275.7 mm (H) x 209 mm (D)
Radio	Frequency	FM : 87.5 MHz to 108.0 MHz AM : 531 kHz to 1,602kHz
	Sensitivity	FM: 18 dBu AM: 35 dBu
	S/N ratio (Signal/noise ratio)	FM: 45 db AM: 40 db
	Stereo channel separation	FM: 20 db
MP3 [WMA]/USB	Frequency response	20 Hz to 20 kHz
	S/N ratio (Signal/noise ratio)	60 dB
	Channel separation	54 dB
MP3 [WMA]/AUX	Frequency response	20 Hz to 20 kHz (± 3 db)
	S/N ratio (Signal/noise ratio)	50 dB
	Channel separation	35 dB
Bluetooth	Frequency	2,402 to 2,480 MHz
	Item	Supports headset, hands-free, A2DP and AVRCP profile formats (Headset, hands-free: profile for calling) (A2DP, AVRCP: profile for listening music)

Modification basis	
Application basis	
Affected VIN	

3) USB and AUX Jack Assembly

Item	Specifications
Operating temperature	-30°C to +80°C

4) Micro Pole Antenna

Item	Specifications
Storage temperature	-40°C to +80°C
Operating temperature	-30°C to +75°C
Operating voltage	10.5 to 16.0 V
Operating current	12.0 V
Current consumption	Max. 150 mA
I/O impedance	75 Ω (FM)

5) Speaker

Item	Specifications	
Front/rear door speaker	Speaker size	5.25 inch
	Max. input	40 W
	Impedance	400 KHz of 4 Ω \pm 15%
Front tweeter speaker	Speaker size	1 inch
	Max. input	40 W
	Impedance	5 Hz of 4 Ω \pm 15%

6) Handsfree Microphone

Item	Specifications
Storage temperature	-40°C to +80°C
Operating temperature	-40°C to +80°C
Sensitivity	-36 ± 2 dB
Impedance	Up to 2.2 kΩ
S/N ratio*	65 dB or more

S/N ratio (signal to noise ratio): Describes noise level in relation to the signal level in dB

7) Steering Wheel Audio Remote Control Switch

Item	Specifications	
Rated voltage	5 V - 0.1 A	
Rated load	5 V - 0.1 A	
Operating temperature	-30°C to +85°C	
Item	Resistance	Operating voltage
Volume down	196 Ω ± 1%	0 to 0.4 V
Volume up	1.02 KΩ ± 1%	0.7 to 1.1 V
Mode	2.21 KΩ ± 1%	1.4 to 1.8 V
Power/Mute	34.8 KΩ ± 1%	4.2 to 4.6 V
SEEK up	4.02 KΩ ± 1%	2.1 to 2.5 V
SEEK down	6.98 kΩ ± 1%	2.8 to 3.2 V
Bluetooth (hands-free) - ON	13.3 KΩ ± 1%	3.5 to 3.9 V
Bluetooth (hands-free) - OFF	34.8 KΩ ± 1%	4.2 to 4.6 V

Modification basis	
Application basis	
Affected VIN	

2. CAUTIONS AND WARNINGS FOR SAFETY

WARNING

- This mark indicates situation which, if not observed, may result in an accident or system malfunction.
- Do not disassemble or modify this system.
Doing so may cause an accident, fire or electric shock.
- Do not use the system if it is malfunctioning (sound or video output problem).
Doing so may lead to an accident or electric shock.
Please contact a Ssangyong service dealer immediately.
- The system should be used only when the engine is started.
Using the system for an extended period of time with the engine off may discharge the battery.
Do not leave beverages or foreign materials around the system.
- If they enter the system, they may cause a fire.
The system may break down if a disc not supported by this system is inserted.
- Do not apply impact to or drop this system.
- It may cause malfunction.
Never leave the system in a hot or cold place for an extended period of time. Therefore, do not park the vehicle in a hot or cold place. The ambient temperature should be -30°C to $+80^{\circ}\text{C}$ for proper operation.

CAUTION

- This mark indicates potentially hazardous situation which, if not observed, may result in serious injury and material damage.
- Ssangyong is not liable for any personal injury and material damage, caused by violation of traffic regulations or neglect of observing actual traffic and driving situations.
- Colors on display figures in this manual may differ from actual display due to publication concerns.

Memo

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OVERVIEW AND OPERATING PROCESS

1. OVERVIEW

The MP3 audio system can play radio (FM1, FM2, AM) and other files stored in an external device, such as iPod, through the Bluetooth (handsfree) and USB and AUX ports. And, it has a micro pole antenna and its own integrated amplifier to improve the radio frequency reception rate and to provide the high-quality sound.

2. COMPONENTS

1 Bluetooth (hands-free) microphone



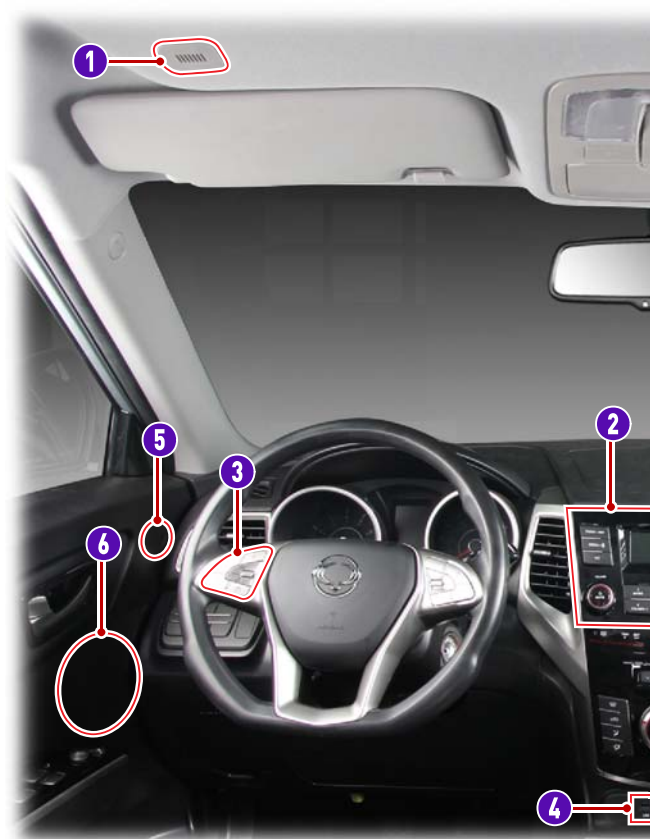
3 Audio remote control switch

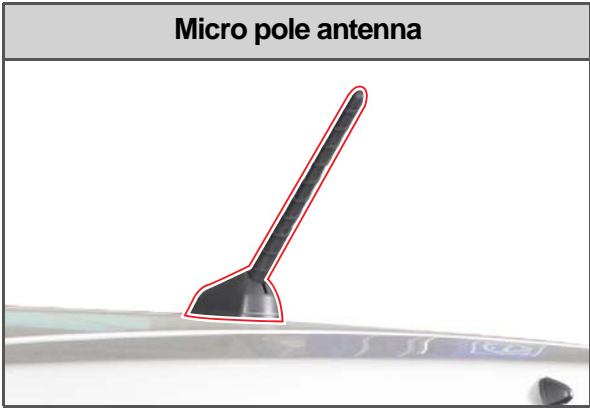
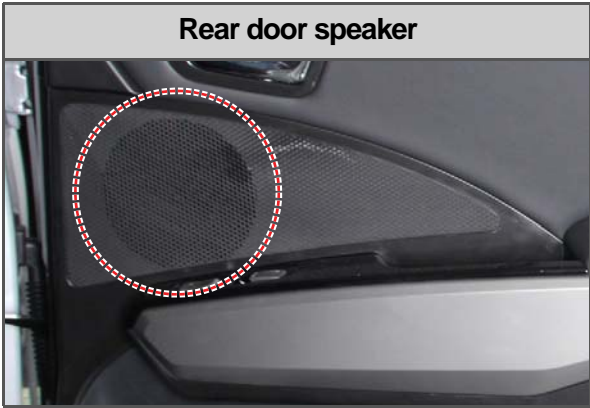
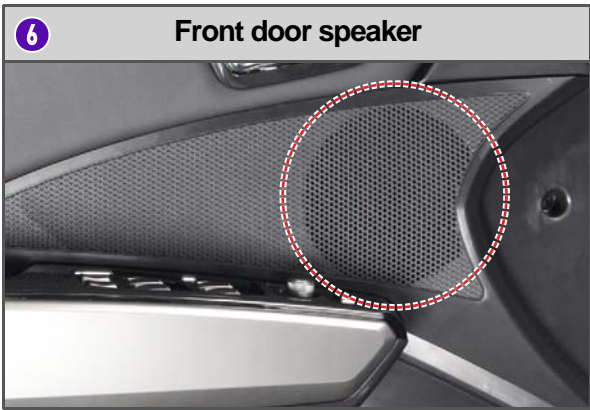
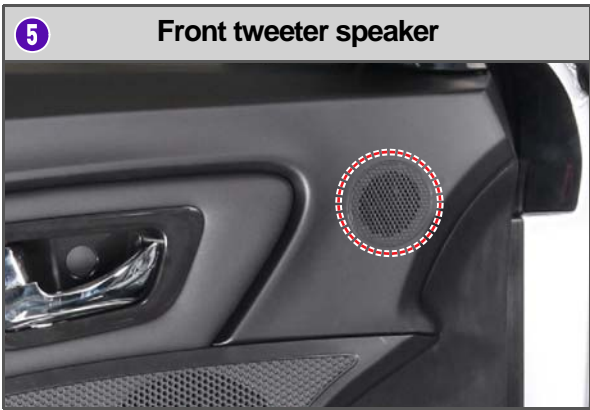


2 MP3 audio head unit

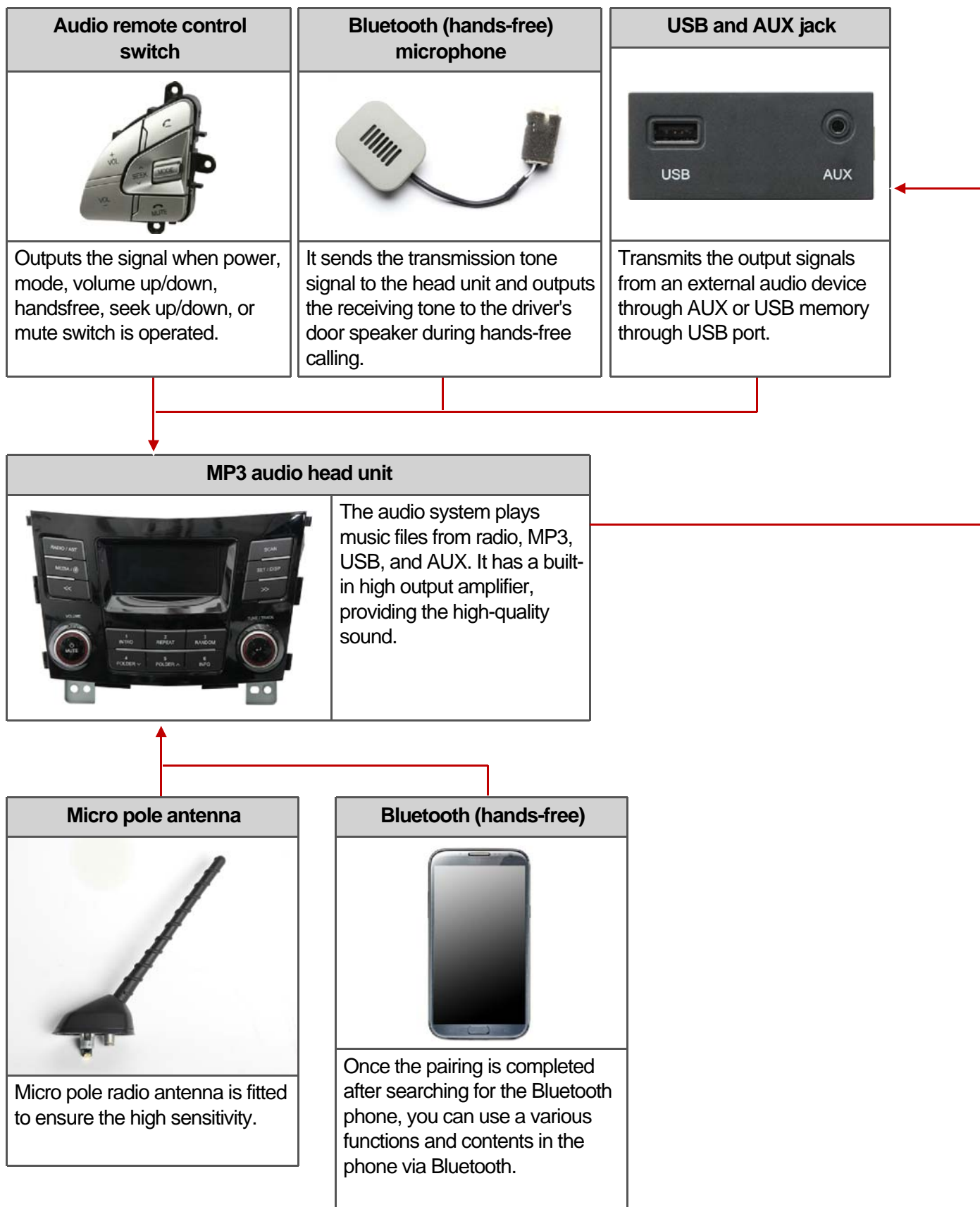


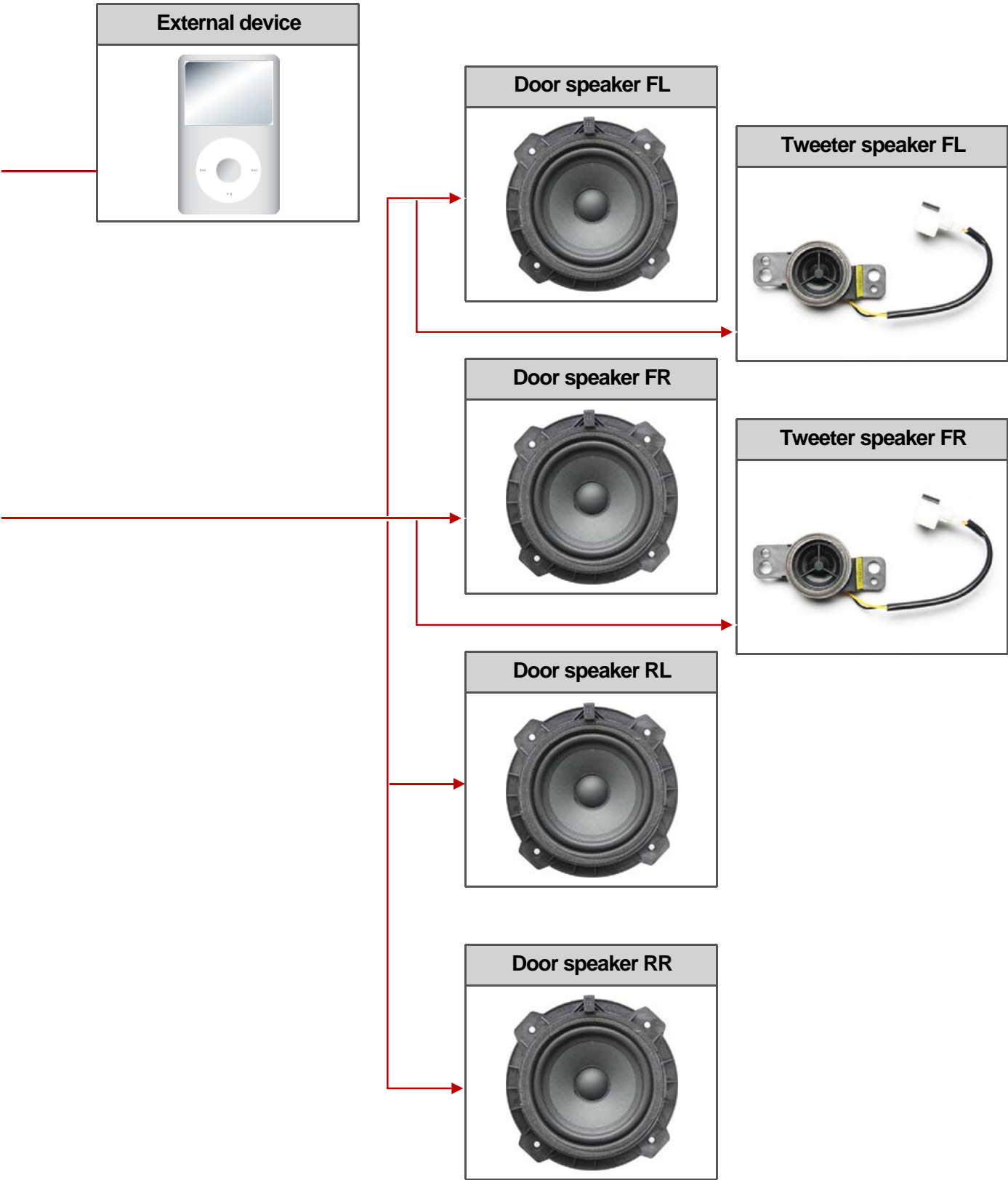
4 USB and AUX jack





Modification basis	
Application basis	
Affected VIN	





FUSE
BCM
SKM
INSTRUMENT
SWITCH
LAMP
WIPER AND
AVN
MP3 AUDIO
LCD AUDIO
ISG SYSTEM

Modification basis	
Application basis	
Affected VIN	

3. FEATURES

1) Audio Head Unit




No.	Name	Description
1	Display window	- Displays operation status and various information
2	Radio/AST	- Pressing briefly: Switches between AM and FM radio. - Pressing and holding: Automatically registers and stores radio stations with good reception.
3	Scan	- Pressing briefly: Scans receivable stations. - Pressing and holding: Scans stored stations (1 to 6).
4	Media/Bluetooth	- Selects an external device which is connected via USB, Bluetooth, or AUX.
5	SET/DISP	- Pressing briefly: Starts Setting mode. - Pressing and holding: Closes the Display window.
6	<< ADJ >> button	- Radio mode Pressing briefly: Searches for receivable radio stations. Pressing and holding: Moves up or down the radio stations while the button is pressed. And searches for receivable radio stations at the time of the button release. - MP3/USB/iPod mode Pressing briefly: Moves to previous/next song Pressing and holding: Fast forward/reward

No.	Name	Description
7	Station memory [1 INTRO] to [6 INFO]	<ul style="list-style-type: none"> - Pressing briefly: Plays or selects one of the stored stations. Or moves up or down folders. - Pressing and holding: Stores the station currently listening to. <p>1 Intro: Plays songs for the first several seconds set by the user. 2 Repeat: Plays repeatedly. 3 Random: Plays randomly. 4 Folder \wedge / 5 Folder \vee: Moves through the folders. 6 Info: Displays information about the song currently played.</p>
8	Power/Mute Volume adjuster	<ul style="list-style-type: none"> - Pressing briefly: Switches the system on, activates/deactivates mute. Turns pause function ON/OFF. - Pressing and holding: switches power off. - Turning dial: Adjusts volume.
9	Menu selection: Enter Adjuster: Tuner/File selector	<ul style="list-style-type: none"> - Turning dial: Moves through the frequencies, songs, or menu items. - Pressing dial: Modifies or selects items or setting values.

Modification basis	
Application basis	
Affected VIN	

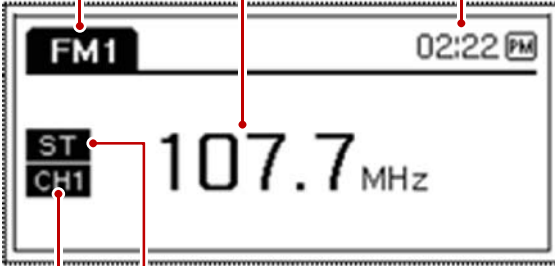
2) Display window

Clock




1. Clock display: Displays time.

Radio




1. Radio/Device: FM1, FM2, AM, USB, Bluetooth, AUX
 2. FM stereo reception display
 3. Dedicated numbers for stored stations: CH1 to CH6
 4. Digital clock
 5. Station frequency currently being received

USB



1. EQ : ROCK / POP / JAZZ / CLASSIC / EQ OFF
 2. Play mode display:
 RPR (Repeat): Repeats a song or all songs in a folder.
 INT (Intro): Plays songs in current folder or songs of all folders for the first several seconds set by the user.
 RDM (Random): Plays songs in current folder or songs of all folders in random order.
 3. Name of the current song that is playing.
 4. Name of the current folder.
 5. USB connection
 6. Other information of current song: Play time.

BT (Bluetooth music)



1. Bluetooth connection.
 2. Information of current song.

3) Audio Setting

(1) Sound setting

► **Set the Bass/Middle/Treble, Balance and EQ (sound effect) for the sound of the output speaker.**

1. When pressing the [SET] button, [Setup List] is displayed.
 - [Setup List] screen is displayed only for 5 seconds.
2. Turn the [TUNE] dial to select [Sound] and press the [ENTER] button.
3. Turn the [TUNE] dial to select a desired setup item and press the [ENTER] button.
 - Select one of Bass, Middle, Treble, Left and Right, Front and Rear, Vehicle speed sensitive volume.
4. Turn the [TUNE] dial or press the [ENTER] button to select the desired setting value.
 - Bass: Sets the bass level (-10 to +10).
 - Middle: Sets the middle level (-10 to +10).
 - Treble: Sets the treble level (-10 to +10).
 - Balance: Sets the LH/RH speaker balance (LEFT 15 to RIGHT 15)
 - Fader: Sets the Front/Rear speaker balance (-10 to +10)
 - AVC (auto volume control): Controls volume automatically in relation to vehicle speed (On ↔ Off)

(2) Clock display, Time setting, Language

► **Turn the power off and set the displayed current time and date.**

1. When pressing the [SET] button, [Setup List] is displayed.
 - Setup list screen is displayed only for 5 seconds.
2. Turn the [TUNE] dial to select [System] and press the [ENTER] button.
3. Turn the [TUNE] dial to select a desired setup item and press the [ENTER] button.
 - Select one of Language, Clock display, Time setting, Scroll, Version.
4. Turn the [TUNE] dial or press the [ENTER] button to select the desired setting value. Repeat these steps if several items need to be set. (e.g. YY/MMDD in date setting)
 - Language: English, Korean
 - Clock display: Off, ON
 - Time setting: Sets the current time.(hour/minute/AM/PM)

Modification basis	
Application basis	
Affected VIN	

(3) Radio setting

► Listening to a radio station

1. Press the [RADIO/AST] button repeatedly to select the desired radio mode.
 - Select one of FM1, FM2 or AM.
 - The system plays the radio station which is selected previously for that mode.

▷ Searching for radio stations manually

2. Turn the [TUNE] dial to select the desired ratio station.

▷ Searching for radio stations automatically

3. Press and hold <<ADJ>> button or press it more than 2 seconds and release it so that the system searches for one broadcasting frequency with good reception and receives it automatically.

▷ Selecting radio stations with automatic search

4. When pressing the [SCAN] button, the system searches for the radio stations with good reception within the receivable frequency range and plays each radio station for about 5 seconds.
If you want to listen to a radio station during automatic search, press the [SCAN] button briefly to keep listening to that radio station.

► Registering radio stations manually

1. Select a radio station to register.
2. Press one of the [1 INTRO] to [6 INFO] buttons to register the radio station for more than 2 seconds.
A beep sounds to indicate the registration is completed.
Repeat the steps 1 and 2 using one of the [1 INTRO] to [6 INFO] buttons for registering other radio stations.
Using the button previously selected for registering a radio station registers a newly selected radio station for that button.

► Registering radio stations automatically

1. Press the [RADIO/AST] button repeatedly to select the desired radio mode.
 - Select one of FM1, FM2 or AM.
 - The system shows the frequency of the previously selected radio station for that radio mode and plays it.
2. Press the [RADIO/AST] button for more than 2 seconds.
 - [AST Scanning] is displayed, and the system searches for 6 radio stations with good reception and registers them one by one to the [1 INTRO] to [6 INFO] buttons (one station for each button).
Repeat the steps 1 and 2 for registering radio stations for other radio mode.

► Listening to registered radio stations

1. Press the [RADIO/AST] button repeatedly to select the desired radio mode.
 - Select one of FM1, FM2 or AM.
 - The system shows the frequency of the previously selected radio station for that radio mode and plays it.
2. Press one of the [1 INTRO] to [6 INFO] buttons to listen to the radio station registered to that button.

(4) Setting the region

1. Press SET button to enter the Setup List. Setup List screen will be displayed for five seconds.
2. Rotate TUNE dial to select the "REGION" then press ENTER button
3. Rotate TUNE dial to select the "General" or "Latin America" then press ENTER button.
 - General : 9kHz step for AM
 - Latin America : 10kHz step for AM
4. Turn your car's ignition key to OFF position. Or turn your car's ignition off by pressing the smart ignition button. Make sure the radio turns off for more than 1 mins.
5. Turn your car's ignition key to ACC or IGN(ON) position. Or turn your car's ignition on by pressing the smart ignition button. To make the Region change apply to this unit.



NOTE

The region setting will change the AM frequency band range and step for your region.

Modification basis	
Application basis	
Affected VIN	

(5) MP3 [WMA, OGG] player

► Moving to other song

1. Press the << ADJ >> button repeatedly while playing a song to return to the beginning of the current selection or move to the previous or next song.
2. Press and hold the << ADJ >> button to fast forward or fast rewind until the button is release.
 - The speed of fast forwarding or fast rewinding may not be constant. The volume is low while the button is pressed.
3. Press the [4 FOLDER] or [5 FOLDER] button while playing a MP3/WMA/OGG file to move to other folder.

► Changing play mode

1. Press the [1 INTRO] button repeatedly until intro play mode is selected.
 - INT. A: Plays the songs in all folders for the first 10 seconds in sequence.
 - INT. F: Plays the songs in the current folder for the first 10 seconds in sequence.
 - Off: Deactivates intro play.
2. Press the [2 REPEAT] button repeatedly to deactivate repeat mode.
 - RPT.F: Repeats the songs in the current folder in sequence.
 - RPT.S: Repeats the song that is playing continuously.
 - Off: Deactivates repeat mode.
3. Press the [3 RANDOM] button repeatedly until the desired random play mode is selected.
 - RDM.F: Plays the songs in the current folder in random order.
 - RDM.A: Plays the songs of all folders in random order.
 - Off: Deactivates random mode.

► Searching for a certain song to play

1. Turn the [TUNE] dial to select a song number or name to play and press the [MENU] button to play that song.

► Checking MP3 [WMA] song information

1. Press the [6 INFO] button while playing a song to display information regarding that song including name of the song, artist, album for 5 seconds.

► Setting scroll function for info. display

1. Press [SET/DISP] button to display the [Setup List].
The screen is displayed for 5 seconds.
2. Turn the [TUNE] dial to select [System] and press the [ENTER] button.
3. Turn the [TUNE] dial to select [Scroll] and press the [ENTER] button to select [On] or [Off].
 - Scroll On: Turns on scroll function.
 - Scroll Off: Turns off scroll function.

(6) Bluetooth

Check the following before using Bluetooth function.

1. Pairing

You have to pair the Bluetooth device to the audio system to use it on the audio system of the vehicle by entering the pass code or SSP authentication. You will not need to repeat this procedure after the initial pairing process. (For some devices, entering the pass code may be required for automatic connection.)

2. Connecting

If the distance between the Bluetooth device and the audio system is within the specified range and other conditions are met, the device will be connected to the audio system automatically. Connecting the device to the system manually is also possible.

3. Handsfree/music streaming

Once the device is connected to the system, you can use the call features and music playback functions of the device through the audio system. Some devices may not support certain features of this system.

► Pairing your phone and car audio system

First, register("pair") a Bluetooth device (mobile phone, etc.) and this unit with each other. You can pair up to five devices. Once pairing is established, there is no need to pair again.

Place the Bluetooth device with 3m(9ft) of this unit.

1. Press and hold Media/BT button for more than 1.5 seconds. The unit enters pairing standby mode.

The unit information, pass key and standby time will appears on the display.

2. Set the Bluetooth device to search for this unit. A list of detected devices appears in the display of the connecting device. This unit is displayed as "SSANGYONG" on the connecting device. Confirm this by press "YES", "OK" or "Pairing" on your mobile device.
3. If Pass key input is required, input the "1234"(4 digit) number which is displayed on the unit. If the pairing is successes the "Pair success" will be displayed then the Paired device name will be showed. Pairing is required only once for one device. Multiple device can be paired and only one device can be connected for use. If the mobile device support SSP(Simple Secure Pairing) profile then the system will automatically accept the pairing authentication once the mobile device confirm the SSP pairing.
4. Set the Bluetooth device to connect to this unit.

Modification basis	
Application basis	
Affected VIN	


► Connecting Bluetooth devices

- Devices are registered once paired and connected with this unit. You can select the registered device and connect it.
 - If pairing has already been archived, start operating from here.
 - Depending on the device, connection may start automatically after pairing.
1. Connect to this unit using your mobile phone or press Media/BT button 1.5 second or longer to show BT setting where you can select the desired device.

► Making a phone call using recent call list

1. When you press the [Call] button for more than 3 seconds, the system displays [REDIAL] and redials the number of the most recent call.

► Answering an incoming call

- When a call is received, the bell rings, the "Incoming Call" message is displayed with the number of the caller.
1. Press the [] button to accept the call.
 - "Calling" is displayed on the screen during a call and you can have conversations through the microphone and speaker connected to this system. If you don't want to receive a call, press the [End] button to reject it.

► Hanging up the call

1. Turn the [TUNE] dial to select the [End call] and press the [ENTER] button.
 - Or, press the [END] button.
 - The call is ended and system returns to the previous screen. - However, the connection between the audio system and the phone remains the same.

► Adjusting volume

1. Turn the [VOLUME] dial to adjust the volume.
 - Adjusting range: 06 to 45

► Mute function

1. Turn the [TUNE] dial to select the [MIC Off] and press the [ENTER] button.
 - Then, [MIC Off] is changed to [MIC On].
 - To disable the mute function, press the [ENTER] button again. Then, [MIC On] is changed to [MIC Off].

► Private mode

You can switch to private call mode, which only uses a cellular phone, during handsfree talking. (The other party's voice is coming through only the cellular phone, not the speaker of the audio system.)

1. Turn the [TUNE] dial to select the [Private call] during handsfree talking and press the [ENTER] button. Then [Private call] is changed to [Handsfree].
Turn the [TUNE] dial to select the [Handsfree] while talking on the phone and press the [ENTER] button to return to the handsfree mode.

► Playing music on a paired portable device

The audio can be streamed from a Bluetooth phone which supports the audio distribution profile (A2DP) to this audio system.

Prepare music playback function of the mobile phone paired/connected with this audio system.

1. Turn the [VOLUME] dial to decrease the volume.
2. Press the [MEDIA/Bluetooth] button repeatedly to select "Bluetooth Audio".
3. After playing the music using a music playback function of the paired mobile phone, turn the [VOL] dial to adjust the volume.
4. To stop playing the music on a mobile device, press the [RADIO/AST] or [MEDIA/Bluetooth] button to select other function.

► Setting Bluetooth mode


1. When the [MEDIA/Bluetooth] button is pressed for 3 seconds or more, the [Bluetooth Setup List] is displayed.
 - The screen is displayed for 5 seconds.
2. Turn the [TUNE] dial to select a desired Bluetooth setup item and press the [ENTER] button.
Select one of the Bluetooth ON/OFF, Automatic connect ON/OFF, Add new device, Phone priority, Paired device list, Clear paired device list, Ring tone.
 - Bluetooth ON/OFF: Enables Bluetooth function.
 - Automatic connect ON/OFF: Connects Bluetooth devices when the ignition is turned on.
 - Add new device: Refer to "Pairing Bluetooth device".
 - Phone priority: Sets the priority of the Bluetooth devices for automatic connection.
 - Paired device list: Connects the device automatically or connects HFP/A2DP.
 - Clear paired device list: Removes the paired device from the list.
 - Ring tone: Sets the ring tone to be used for the audio system.

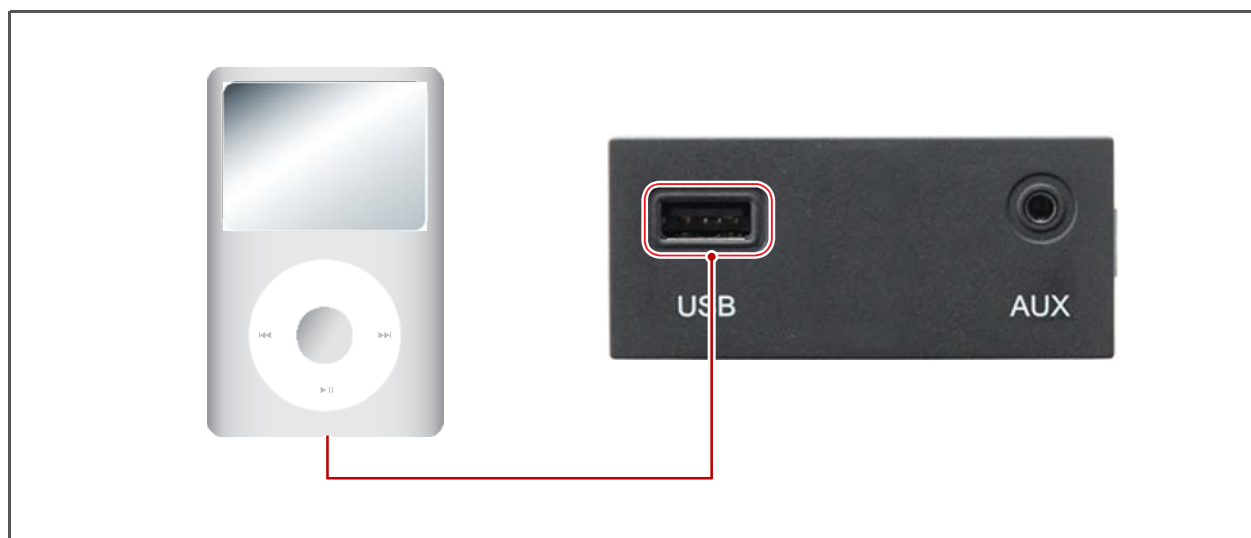
Modification basis	
Application basis	
Affected VIN	

(7) Connecting external devices (USB/AUX)

► Playing the contents in USB device

The MP3 audio system can play the music files stored in the USB device which is connected to this system through the USB port.

1. Press and hold the power [] button to turn the audio system off.
2. Connect an external USB device with MP3/WMA/OGG files to the USB port.
When the audio system is turned on, "USB" message is displayed on the screen and the contents in the USB device are played automatically.
3. Press the [MEDIA/Bluetooth] button repeatedly while the USB device is connected to select the USB function. "USB" message is displayed on the screen and the music files in the USB device are played automatically.
4. The MP3 audio system is compatible with iPod through the USB port.



- This audio system supports iPod products including: iPod Nano /iPod/iPod Touch/ iPhone.
- This audio system may not support some of the iPod/iPhone products. Always use the connecting cable provided with the iPod product when connecting it to the audio system. Other cables may not be compatible and cause the audio system to fail.
- The iPod product can't be charged using an iPod connecting cable.

► Using AUX jack

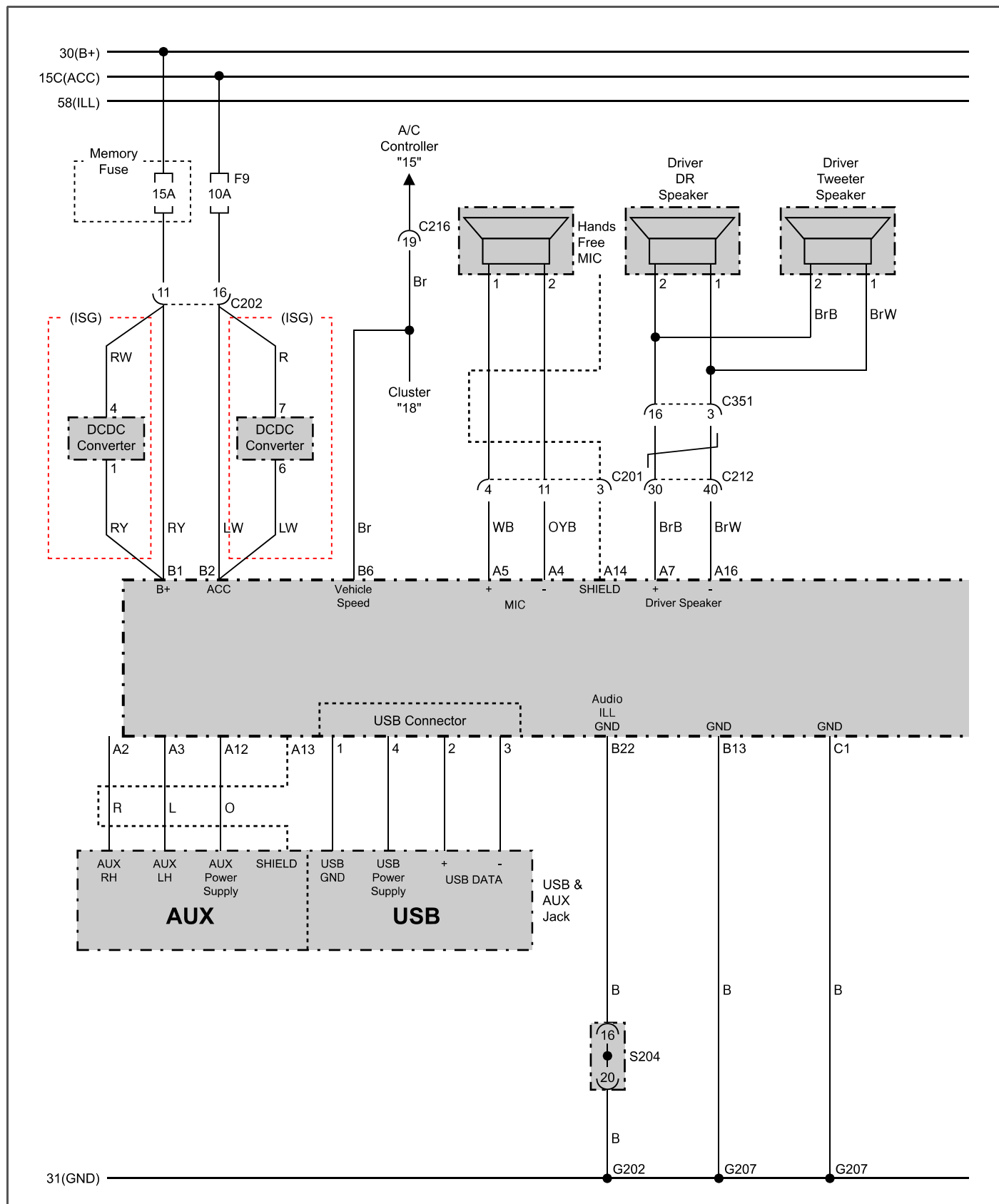
The system also can play the music in an external audio device connected through the AUX jack (3.5 mm stereo mini jack).

1. Turn the [VOLUME] dial to minimize the volume.
2. Turn off the external device and connect its sound output to the AUX jack.
3. Turn on the external device and activates the playback function.
4. Press the [MEDIA/Bluetooth] button repeatedly and select the [AUX] function.
5. Turn the [VOLUME] dial to adjust the volume.

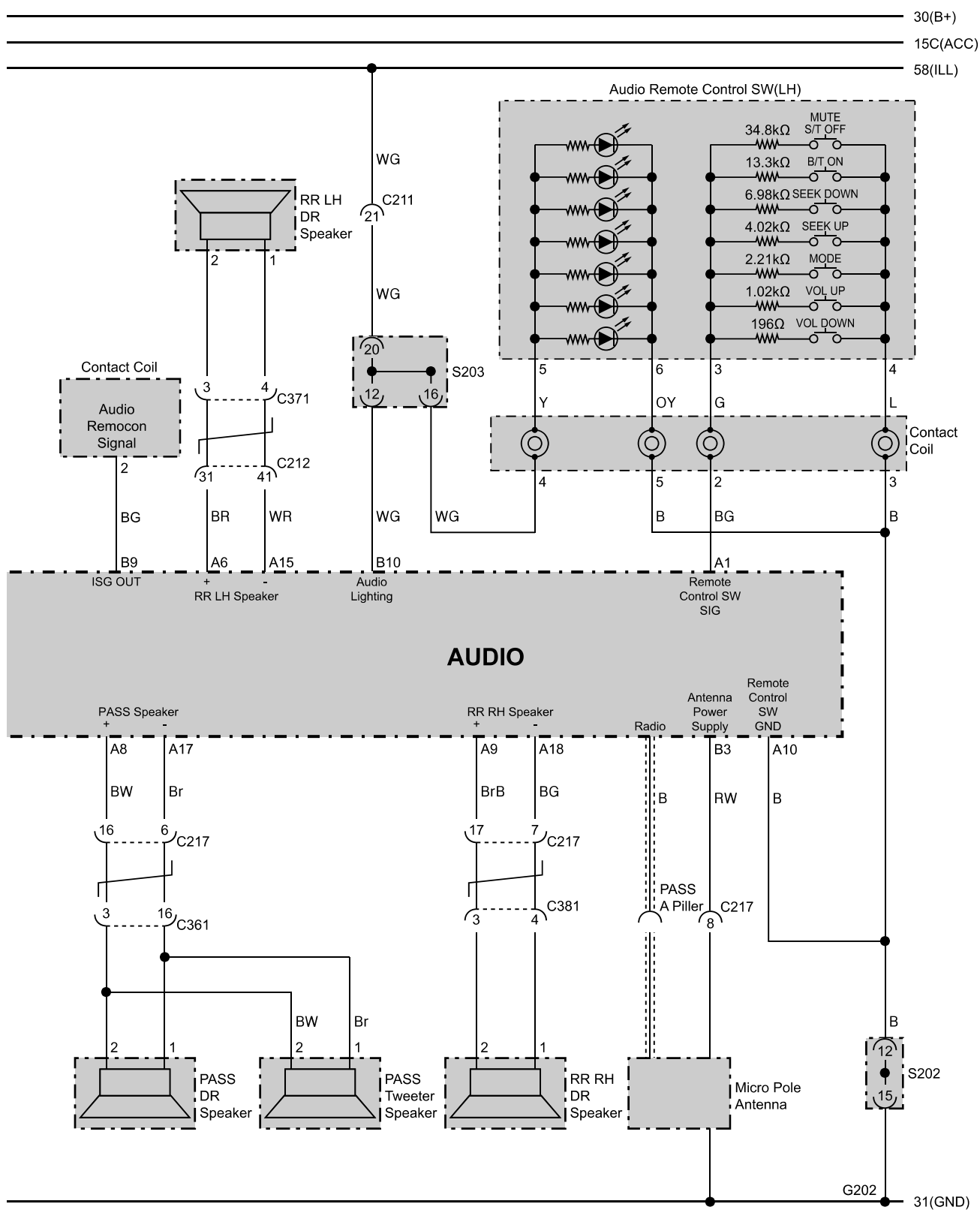
Memo

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4. CIRCUIT DIAGRAM



Modification basis	
Application basis	
Affected VIN	



Modification basis	
Application basis	
Affected VIN	

CONFIGURATION AND FUNCTIONS

S.G.N. 8910-01 MP3 AUDIO HEAD UNIT

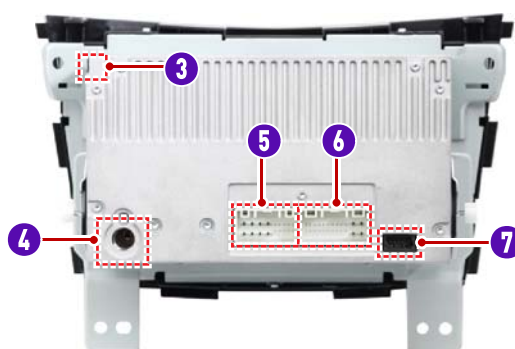
1) Overview

For the MP3 audio head unit is fitted to the center of the instrument panel. It plays radio (AM/FM), MP3 files, contents in an external device connected through USB, AUX, and Bluetooth (handsfree).

2) Mounting Location



MP3 audio head unit



1. Display window
2. Audio head unit hard key
3. Ground
4. Radio antenna

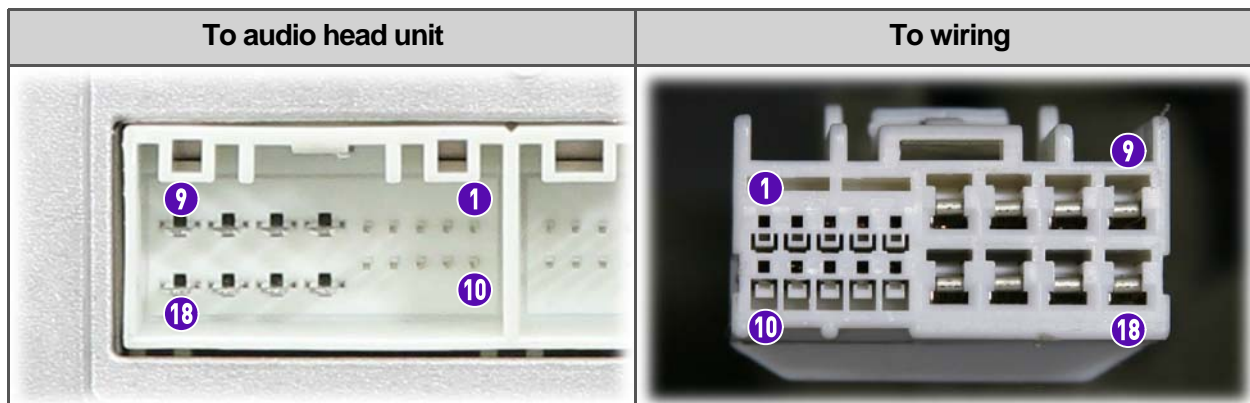
5. Audio A connector
6. Audio B connector
7. USB connector

Modification basis	
Application basis	
Affected VIN	

3) Connector

(1) Audio head unit

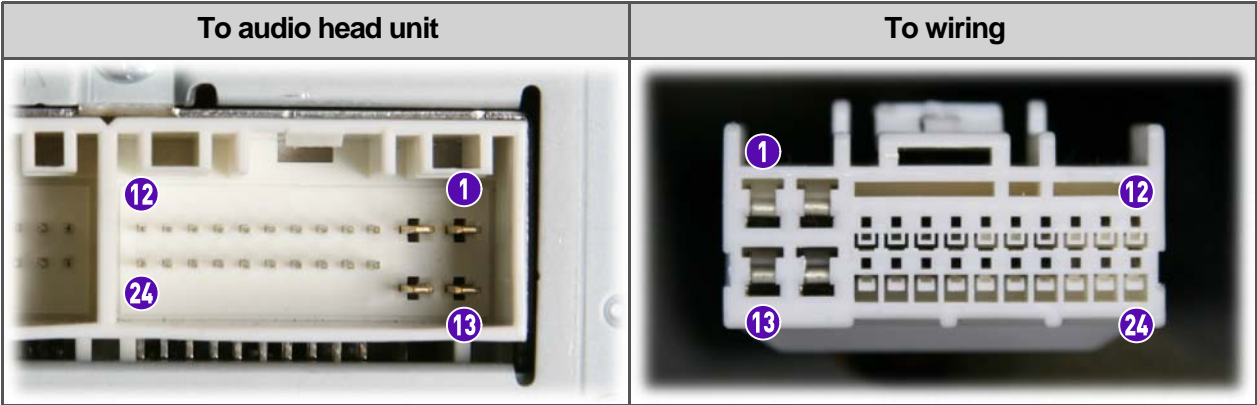
► Audio A connector



Pin No.	Function	Pin No.	Function
1	Remote control switch signal	10	Remote control switch ground
2	AUX RH	11	AUX detection
3	AUX LH	12	AUX LR GND
4	Microphone -	13	SHIELD
5	Microphone +	14	SHIELD
6	Rear left speaker +	15	Rear left speaker -
7	Driver side speaker +	16	Driver side speaker -
8	Passenger side speaker +	17	Passenger side speaker -
9	Rear right speaker +	18	Rear right speaker -

Modification basis	
Application basis	
Affected VIN	

► Audio B connector



Pin No.	Function	Pin No.	Function
1	B+	13	Ground
2	ACC	14	-
3	Antenna output	15	-
4	-	16	-
5	-	17	-
6	Vehicle speed	18	-
7	-	19	-
8	-	20	-
9	-	21	-
10	Audio lighting	22	Audio lighting ground
11	-	23	-
12	-	24	-

Modification basis	
Application basis	
Affected VIN	

► USB connector

To USB		To wiring	
Pin No.	Function	Pin No.	Function
1	USB ground	3	USB data (-)
2	USB data (+)	4	USB power supply

► Radio antenna connector

To radio antenna		To wiring	
Pin No.	Function	Pin No.	Function
1	FM/AM	2	Ground

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8910-10 USB AND AUX JACK ASSEMBLY**1) Overview**

The USB and HDMI jack assembly is an external input port assembly which enables users to enjoy media files stored in an external device played on the audio head unit. The assembly consists of the USB port and AUX port. The system is compatible with iPod through the USB port.

2) Mounting Location**USB and AUX jack assembly**

1. USB port
2. AUX port



Modification basis	
Application basis	
Affected VIN	

S.G.N.

8930-26 MICRO POLE ANTENNA ASSEMBLY**1) Overview**



Micro pole antenna is fitted on the roof panel to ensure the high sensitivity.

2) Mounting Location


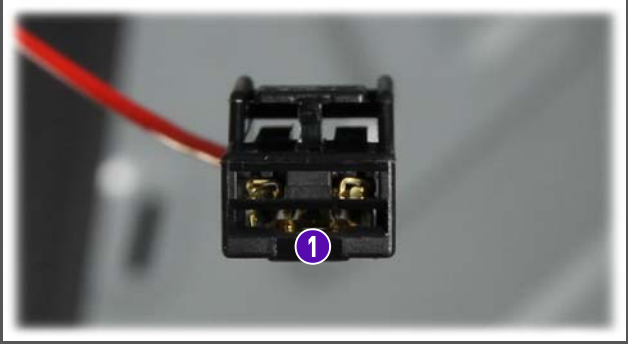
Modification basis	
Application basis	
Affected VIN	

3) Connector

► Antenna connector

To micro pole antenna	To wiring				
					
<table><tr><th>Pin No.</th><th>Function</th></tr><tr><td>1</td><td>Radio</td></tr></table>	Pin No.	Function	1	Radio	
Pin No.	Function				
1	Radio				

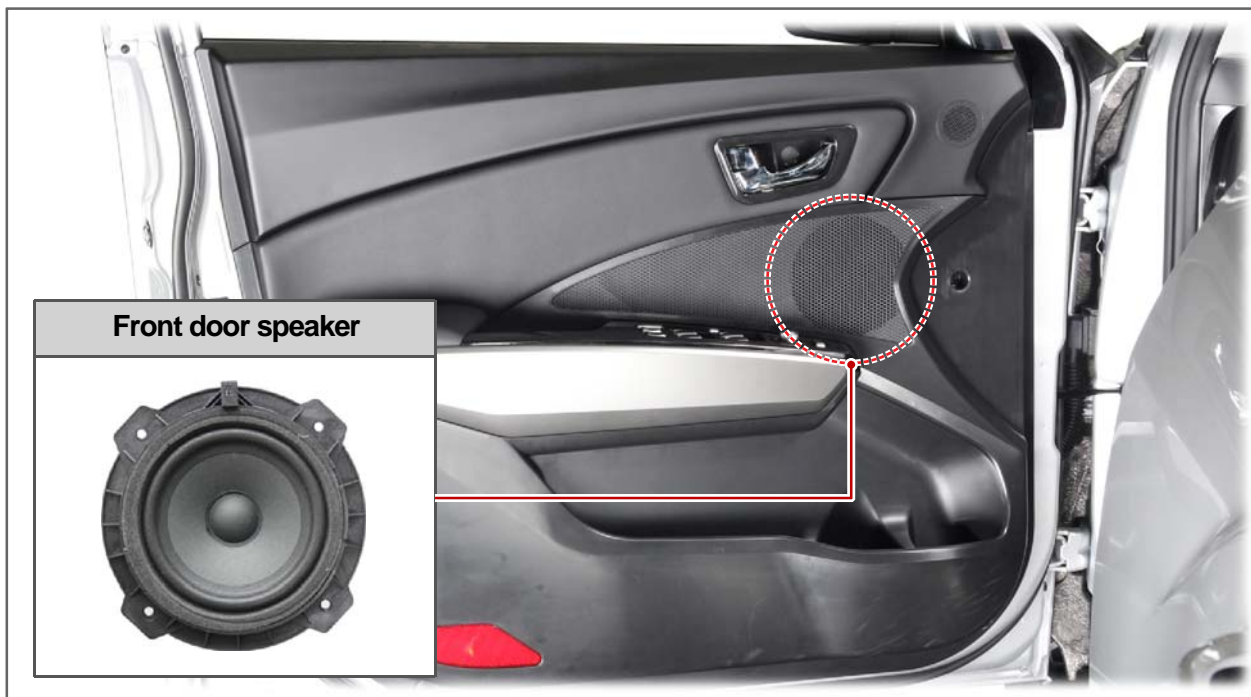
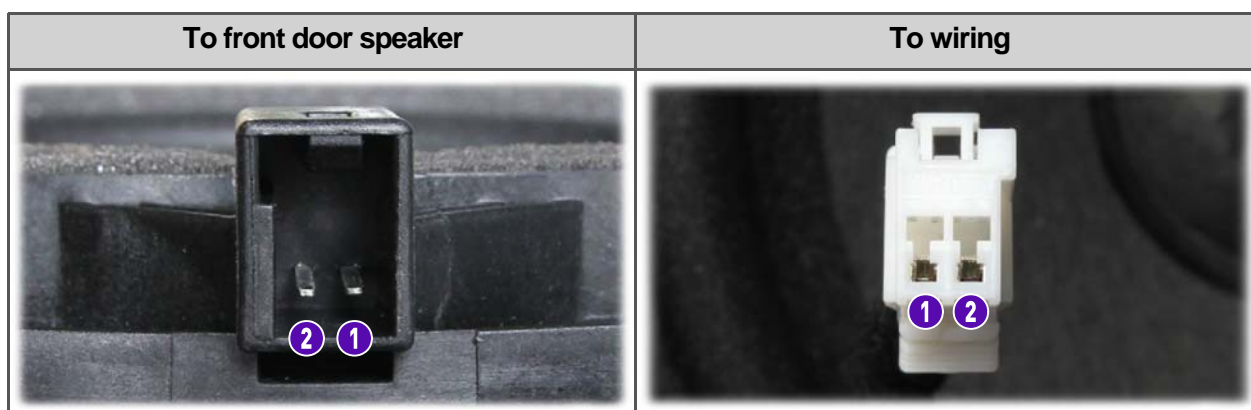
► Power connector

To micro pole antenna	To wiring				
					
<table><tr><th>Pin No.</th><th>Function</th></tr><tr><td>1</td><td>Power supply</td></tr></table>	Pin No.	Function	1	Power supply	
Pin No.	Function				
1	Power supply				

S.G.N.

8610-22 FRONT DOOR SPEAKER ASSEMBLY**1) Overview**

The front door speakers are built-in AMP type and mounted on the inside surface of the driver's and passenger's door trims.

2) Mounting Location**3) Connector**

Pin No.	Function	Pin No.	Function
1	Ground	2	Power supply

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8610-22

REAR DOOR SPEAKER ASSEMBLY

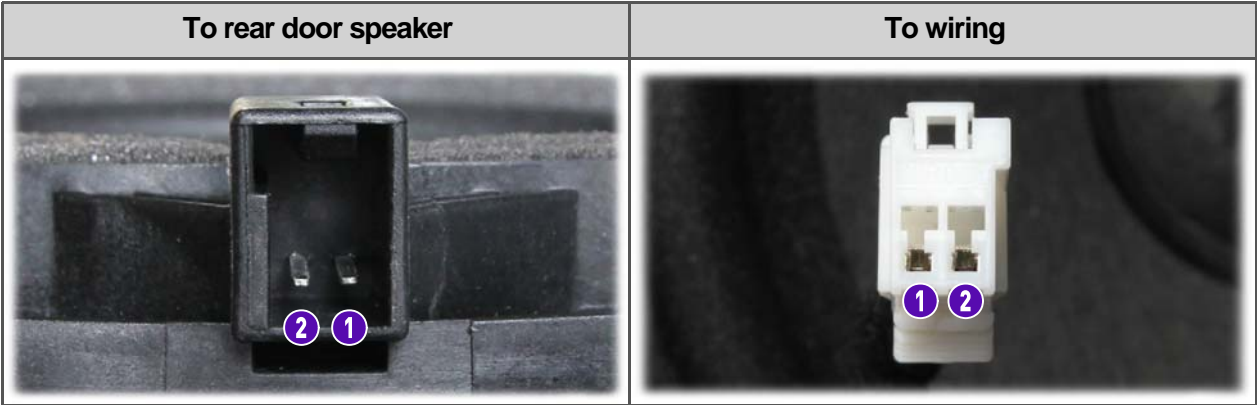
1) Overview

The rear door speakers are built-in AMP type and mounted on the inside surface of the rear left and right door trims.

2) Mounting Location



3) Connector



Pin No.	Function	Pin No.	Function
1	Ground	2	Power supply

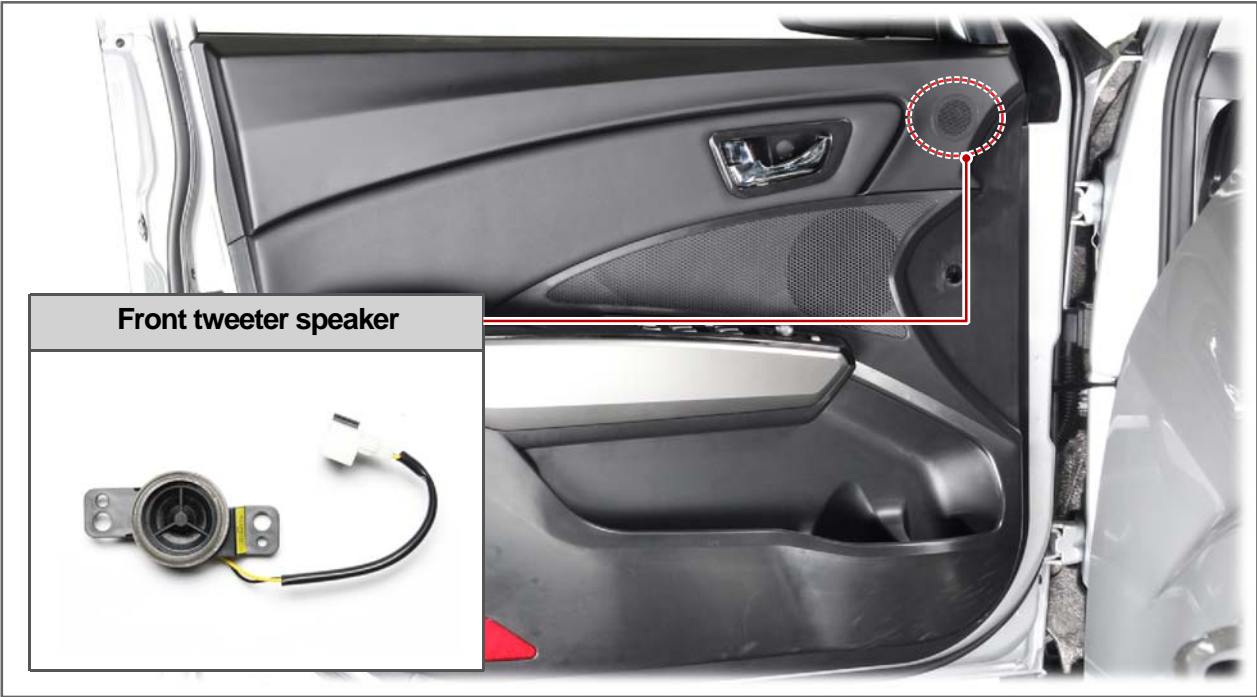
S.G.N.

8610-26 FRONT TWEETER SPEAKER ASSEMBLY

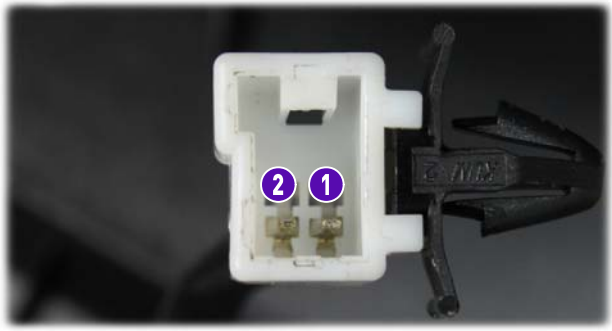
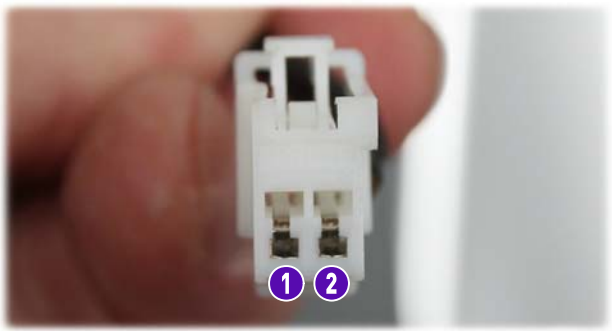
1) Overview

The front tweeter speakers are mounted on the inside surface of the driver's and passenger's door trims.

2) Mounting Location



3) Connector

To front tweeter speaker		To wiring	
			
Pin No.	Function	Pin No.	Function
1	Ground	2	Power supply

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8610-37

BLUETOOTH (HANDS-FREE) MICROPHONE ASSEMBLY

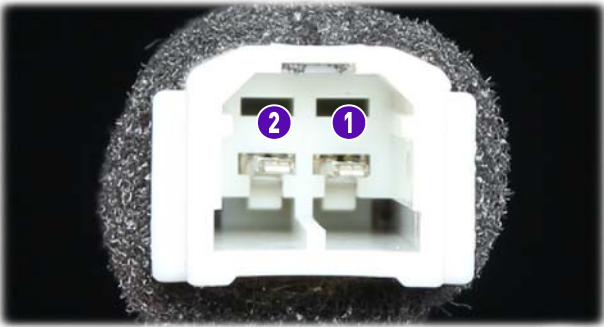
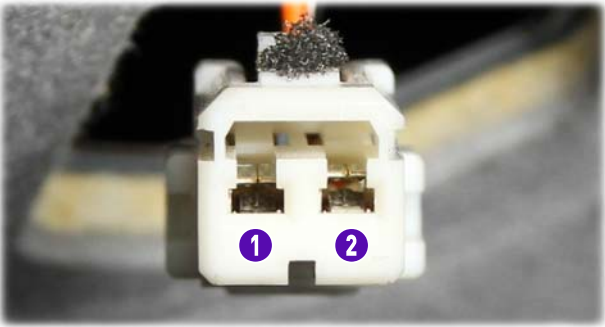
1) Overview

This enables the driver to talk on the phone comfortably and safely by putting the cellular phone at the designated place or on holder without having to hold it during driving.

2) Mounting Location

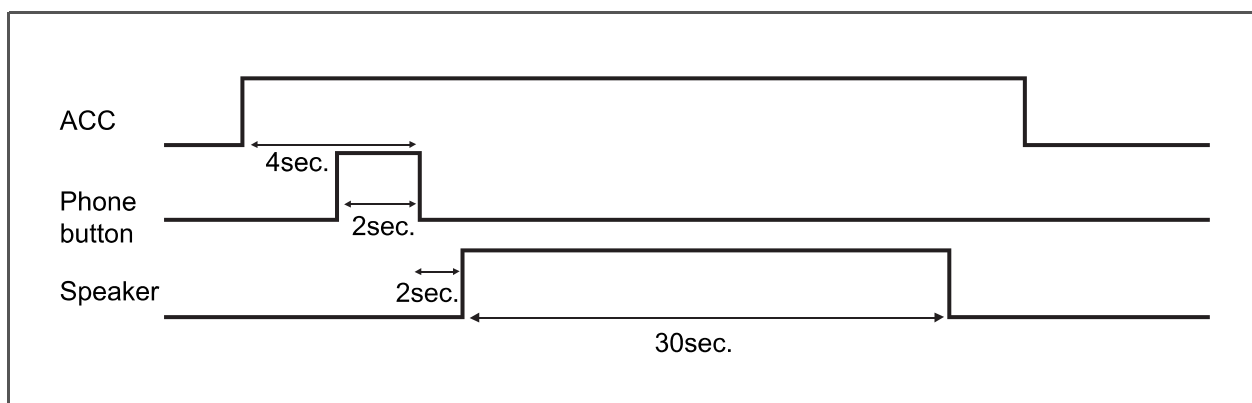


3) Connector

To Bluetooth (hands-free) microphone		To wiring	
			
Pin No.	Function	Pin No.	Function
1	Power supply	2	Ground

4) Self Diagnosis for Bluetooth

1. When the phone button of the audio remote control switch assembly is pressed for 2 seconds or more with 4 seconds after the ACC is turned ON from OFF, a beep sounds and then a howling sound is heard through the front tweeter speaker for 30 seconds.
2. Pressing the phone button again or turning ACC to OFF stops the self diagnosis immediately.
Do not operate other buttons or keys other than the ones needed for the self diagnosis. There is a risk of malfunctioning.



NOTE

Procedures when no howling sound is heard or the howling time does not meet the specification

1. Initialize the Bluetooth.(Refer to Initialization of the Bluetooth)
2. Reconnect the device by Bluetooth pairing.
3. If the same symptom appears again, connect other device.
4. If other device is connected normally, the Bluetooth function of the first device may be malfunctioning.
5. If other device shows the same problem, the head unit may have internal problems. Check the Bluetooth microphone or hands-free phone switch installed on the steering wheel for electrical circuit.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

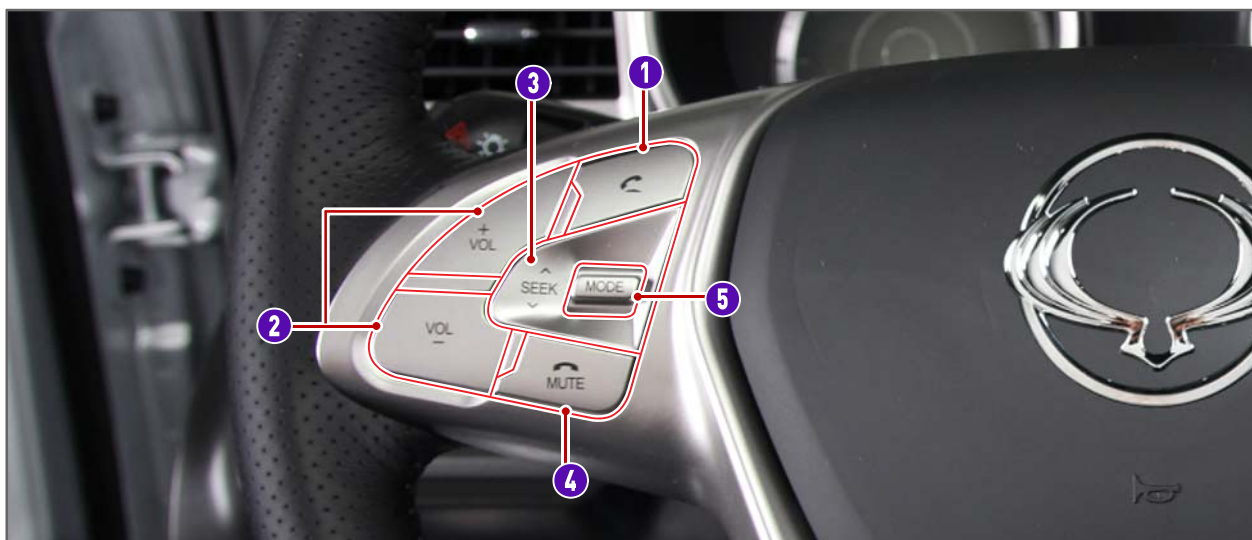
8630-10

AUDIO REMOTE CONTROL SWITCH ASSEMBLY

1) Overview

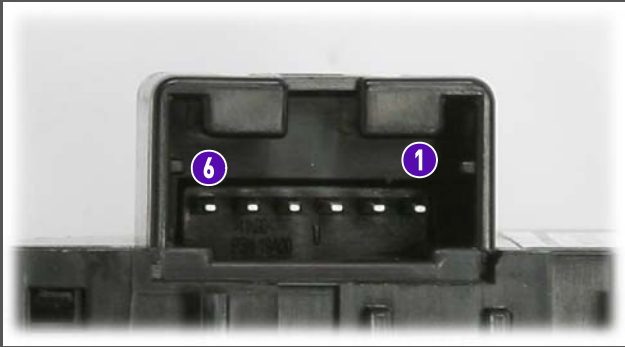
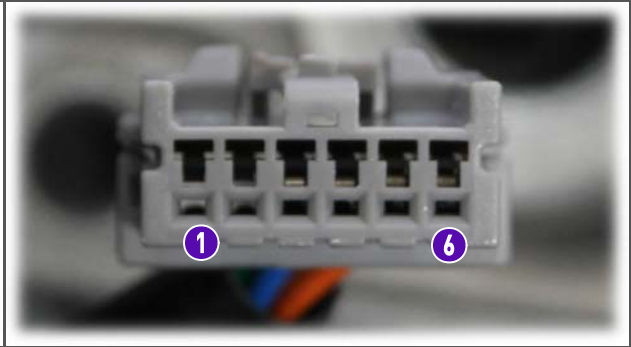
The audio control switch assembly installed on the left side of the steering wheel controls the audio system. The audio remote control switch assembly consists of the Bluetooth handsfree switch, SEEK UP/DOWN switch, volume UP/DOWN switch, audio power switch, and audio operation mode switch.

2) Mounting Location



No.	Name	Description
1	Bluetooth (handsfree) switch	Phone switch which is used for Bluetooth handsfree call with a mobile phone.
2	Volume up/down switch	- Increases/decreases volume
3	SEEK up/down switch	In file play mode - Pressing SEEK up/down switch: Moves to previous/next file while a MP3 file is playing. In radio mode - Pressing SEEK up/down switch: Searches for radio stations manually, moves to channel stored. - Pressing and holding SEEK up/down switch: Searches for radio stations automatically.
4	Power/mute switch	With audio power ON - Press and hold to switch it off - Press the switch briefly to mute and press it again to unmute
5	Mode switch	Press and hold the switch to change the audio mode (AM, FM1, FM2).

3) Connector

To power window main switch	To wiring
	

Pin No.	Function	Pin No.	Function
1	-	4	Audio remote control switch signal ground
2	-	5	Illumination power supply
3	Audio remote control switch signal	6	Illumination ground

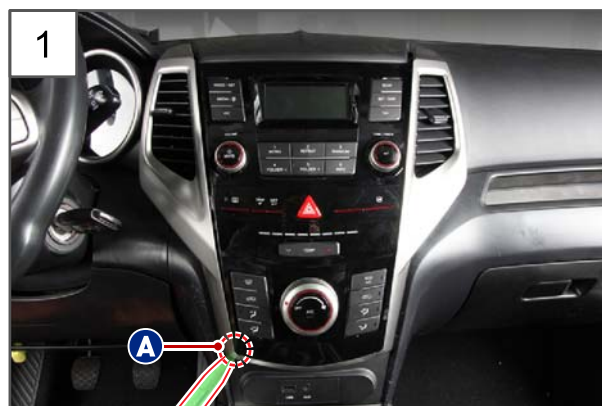
Modification basis	
Application basis	
Affected VIN	

REMOVAL AND INSTALLATION

S.G.N.

8910-01 MP3 AUDIO HEAD UNIT

Preceding work - Disconnect the negative battery cable.

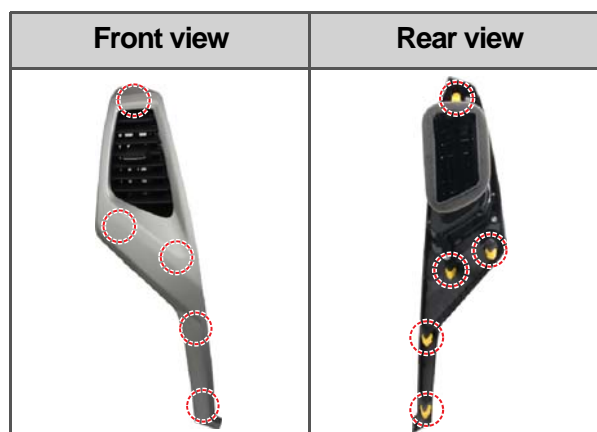


1. Remove the center fascia LH panel by prying off the bottom (A) using a hand remover. (The same method applies to the RH panel.)



CAUTION

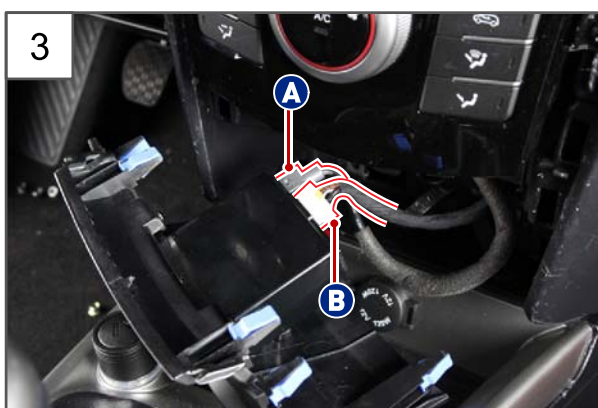
Take care not to damage the fixing clips (5 off) when removing the center fascia LH panel.



Modification basis	
Application basis	
Affected VIN	



2. Prise apart the center fascia front seat heater switch assembly panel with a hand remover.



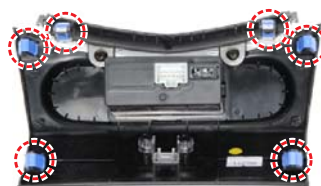
3. Disconnect the connectors at the rear side of the front seat heater switch assembly panel.

A. USB connector
B. AUX connector



4. Remove the front seat heater switch assembly panel completely.

Retaining clip (6 off)



5. Unscrew the 4 mounting screws for the heater and A/C control assembly.

Modification basis	
Application basis	
Affected VIN	



6. Disconnect the heater and A/C control assembly connector (A) at the rear side of the heat and A/C control assembly by prising the assembly off.



7. Remove the heater and A/C control assembly.



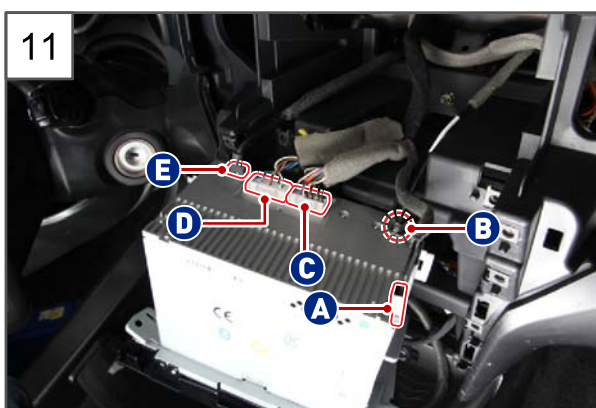
8. Unscrew the 2 mounting screws (A) for the center fascia switch assembly.



9. Disengage the center fascia switch assembly and pull it down.



10. Unscrew the 4 mounting screws for the audio head unit and pull it down.



11. Disconnect the head unit connector.

- A. Ground
- B. Radio antenna connector
- C. Audio head unit A connector
- D. Audio head unit B connector
- E. USB connector



12. Remove the audio head unit.



13. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8910-10 USB AND AUX JACK ASSEMBLY

Preceding work

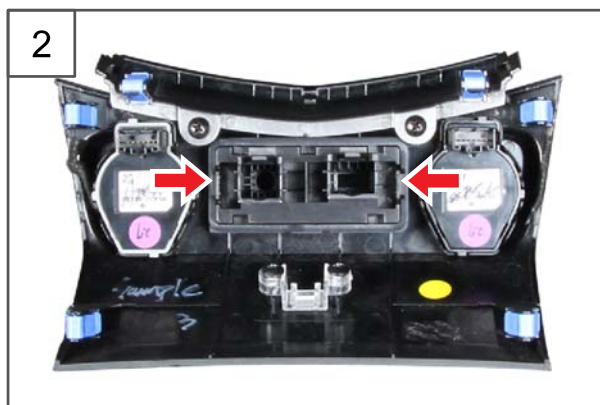
- Disconnect the negative battery cable.



1. Remove the front seat heater switch assembly.

NOTE

Refer to "FRONT SEAT HEATER AND VENTILATION SWITCH ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "SWITCH" section in "ELECTRIC" chapter.



2. Disengage the USB and AUX jack assembly mountings at the rear side of the center fascia front seat heater switch assembly panel.

Modification basis	
Application basis	
Affected VIN	



3. Remove the USB and AUX jack assembly.



4. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8930-26

MICRO POLE ANTENNA

Preceding work

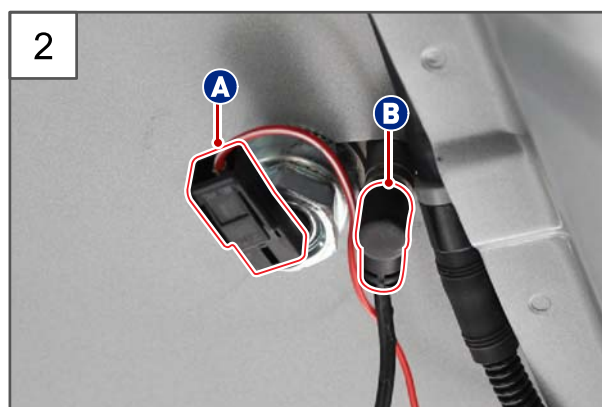
- Disconnect the negative battery cable.



1. Remove the headlining.

**NOTE**

Refer to "HEADLINING ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.

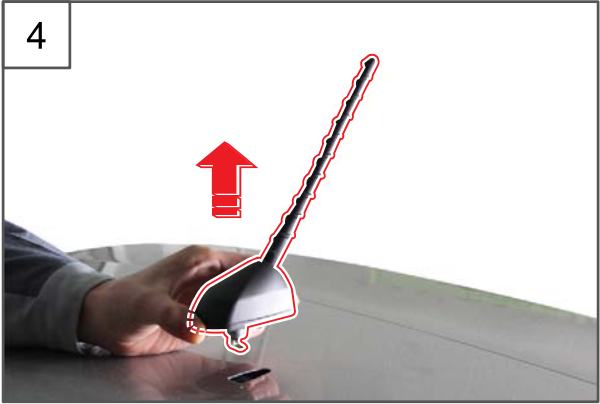


2. Disconnect the power connector (A), radio (AM, FM) connector (B).

Modification basis	
Application basis	
Affected VIN	



3. Unscrew the mounting nut (19 mm) for the micro pole antenna.



4. Remove the micro pole antenna assembly.



5. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8610-22 FRONT DOOR SPEAKER

Preceding work

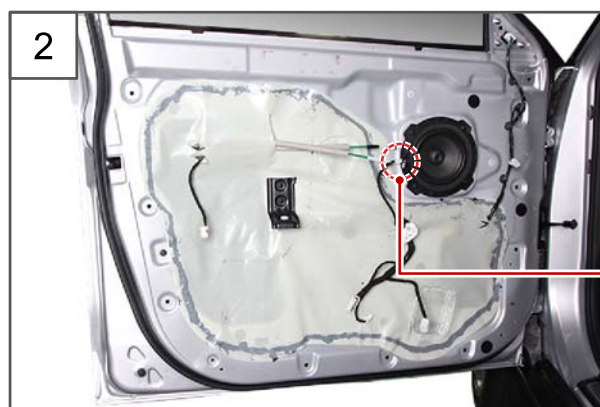
- Disconnect the negative battery cable.



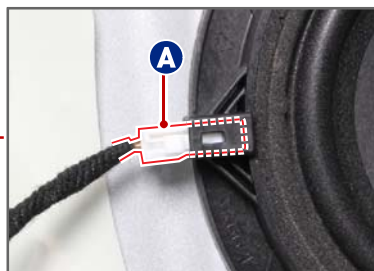
1. Remove the front door trim.

**NOTE**

Refer to "FRONT DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



2. Disconnect the front door speaker connector (A).



Modification basis	
Application basis	
Affected VIN	



3. Unscrew the 4 mounting screws on the front door speaker.



4. Remove the front door speaker.



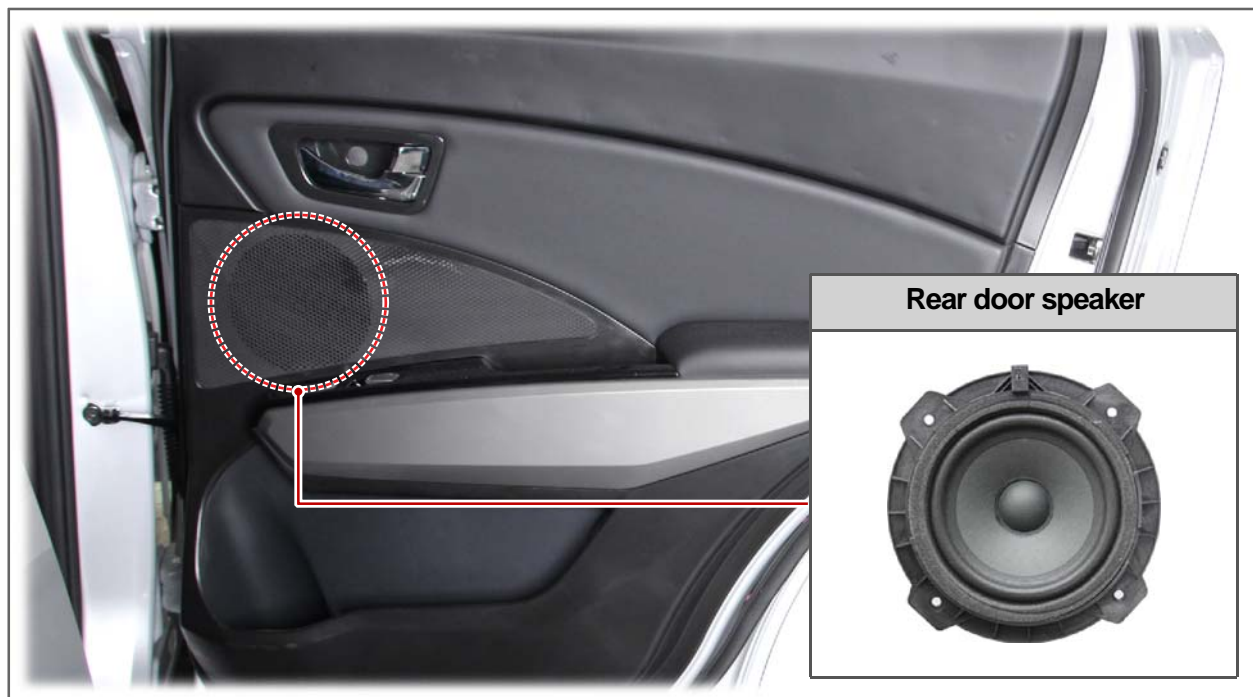
5. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8610-22 REAR DOOR SPEAKER**Preceding work**

- Disconnect the negative battery cable.



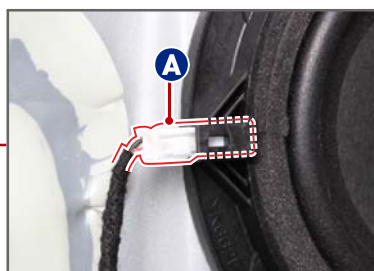
1. Remove the rear door trim.

**NOTE**

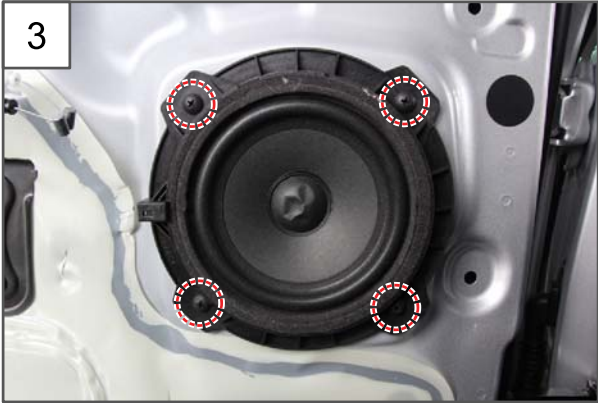
Refer to "REAR DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



2. Disconnect the rear door speaker connector (A).



Modification basis	
Application basis	
Affected VIN	



3. Unscrew the 4 mounting screws on the rear door speaker.



4. Remove the rear door speaker.



5. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

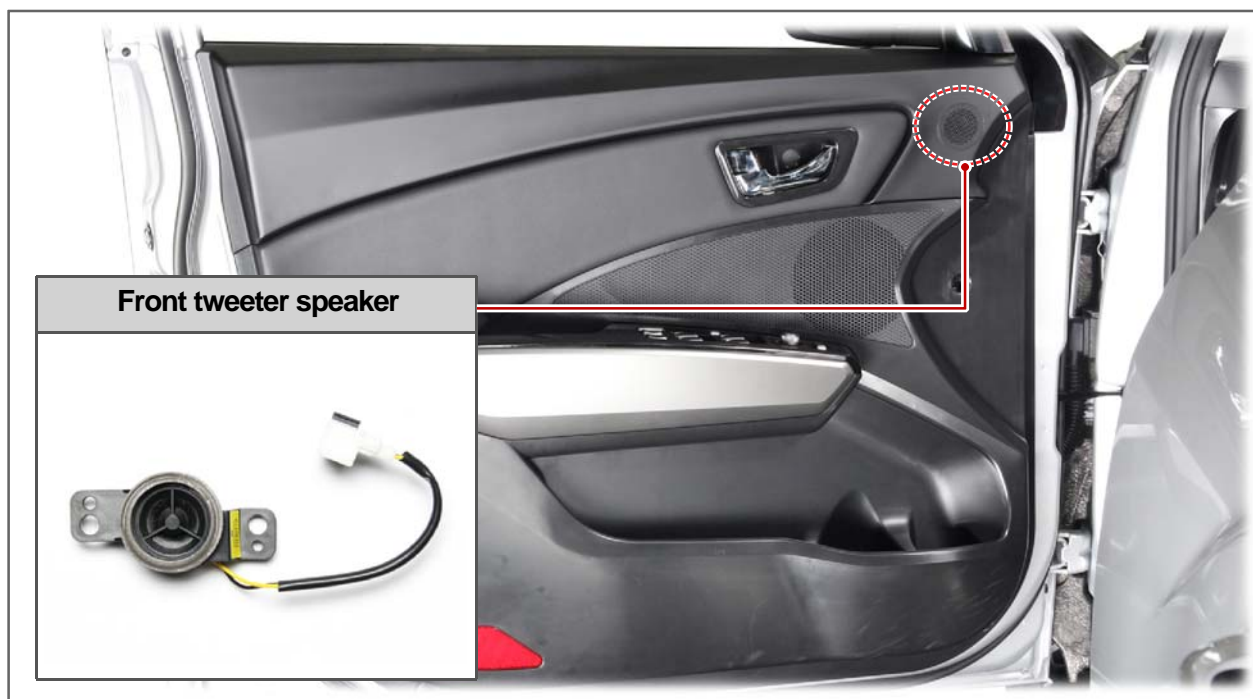
S.G.N.

8610-25

FRONT TWEETER SPEAKER

Preceding work

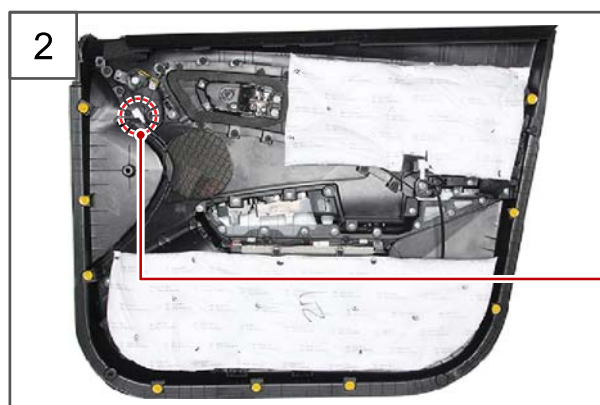
- Disconnect the negative battery cable.



1. Remove the front door trim.

**NOTE**

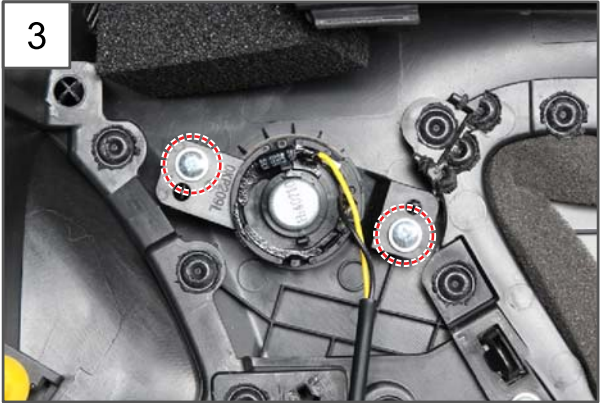
Refer to "FRONT DOOR TRIM ASSEMBLY" under "REMOVAL AND INSTALLATION" subsection of "BODY INTERIOR" section in "BODY" chapter.



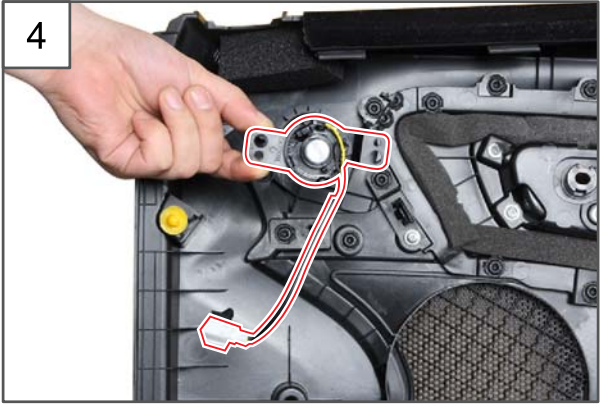
2. Disengage the mounting for the front tweeter speaker.



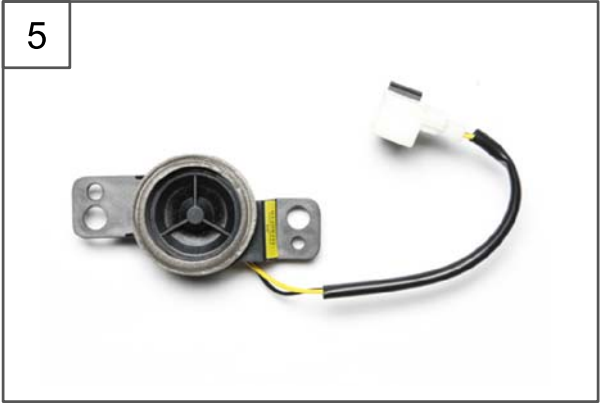
Modification basis	
Application basis	
Affected VIN	



3. Unscrew the 2 mounting screws on the front tweeter speaker.



4. Remove the front tweeter speaker.



5. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

S.G.N.

8610-37 BLUETOOTHE (HANDS-FREE) MICROPHONE

Preceding work - Disconnect the negative battery cable.



1. Prise apart the mounting for the Bluetooth (hands-free) microphone with a hand remover.



2. Disconnect the Bluetooth (hands-free) microphone connector (A).

Modification basis	
Application basis	
Affected VIN	



3. Remove the Bluetooth (hands-free) microphone.



4. Install in the reverse order of removal.

FUSE
BCM
SKM
INSTRUMENT
SWITCH
LAMP
WIPER AND
AVN
MP3 AUDIO
LCD AUDIO
ISG SYSTEM

Modification basis	
Application basis	
Affected VIN	

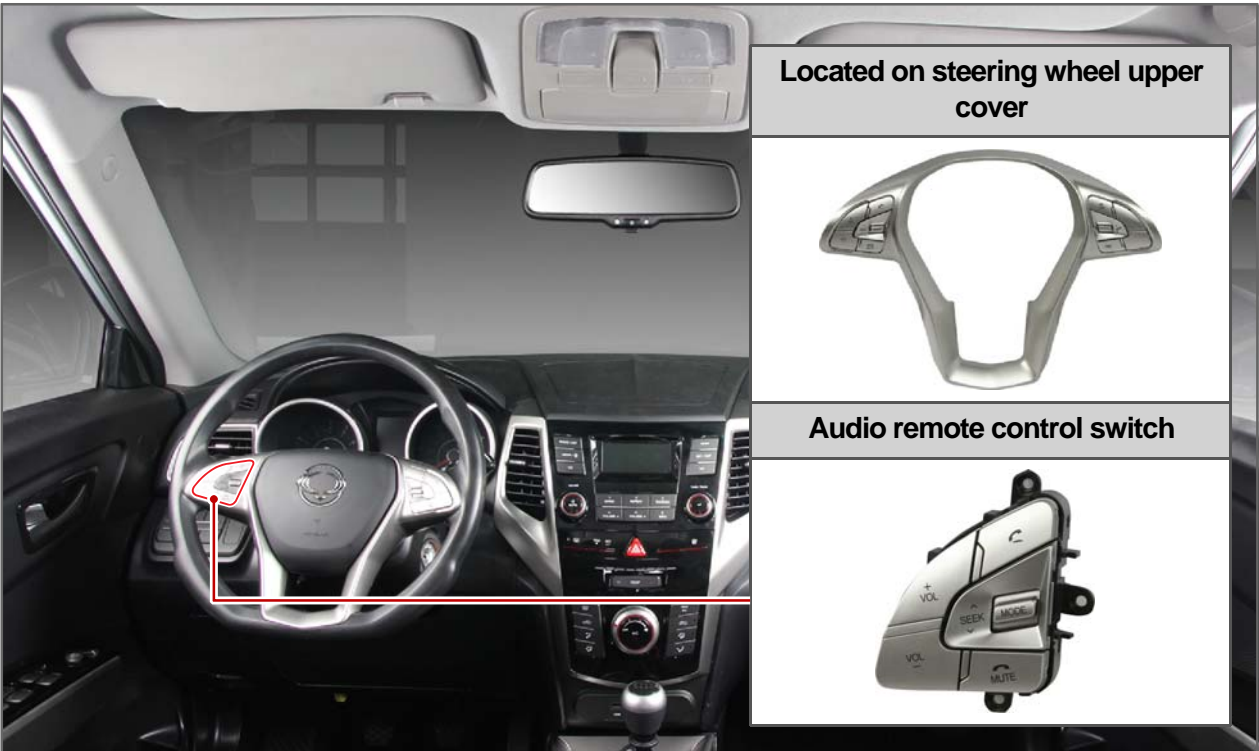
S.G.N.

8630-10

AUDIO REMOTE CONTROL SWITCH

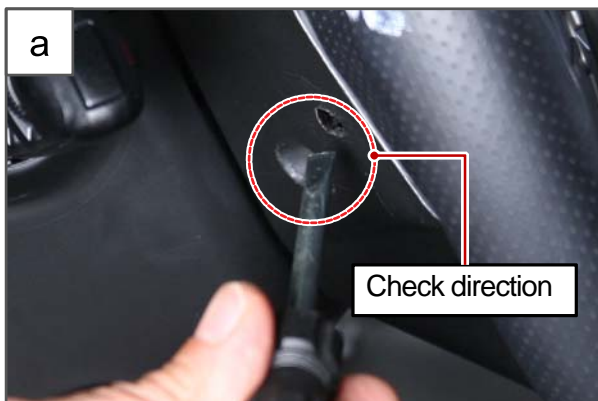
Preceding work

- Disconnect the negative battery cable.



1. Remove the driver air bag module from the steering wheel by following the procedures below:

Modification basis	
Application basis	
Affected VIN	

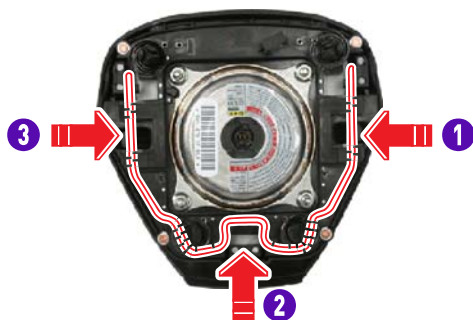


- a. Insert a flat bladed screw driver to the 3 holes on the rear side of the steering wheel to press out the snap rings securing the air bag module.

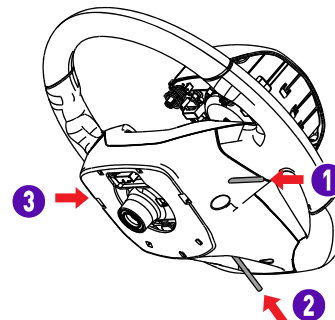
CAUTION

Insert a screwdriver by paying close attention to the short circuit due to wirings in the driver air bag module.

Inside of driver air bag module



Outside of driver air bag module

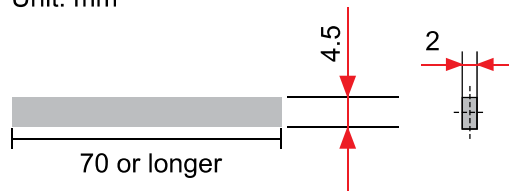


Prying off snap rings

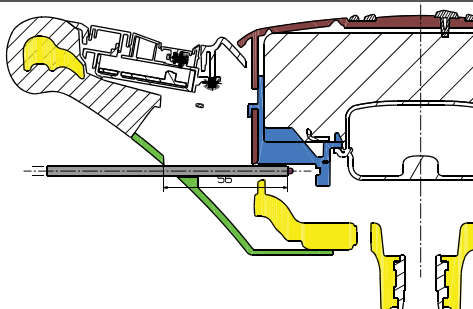


Tool dimensions

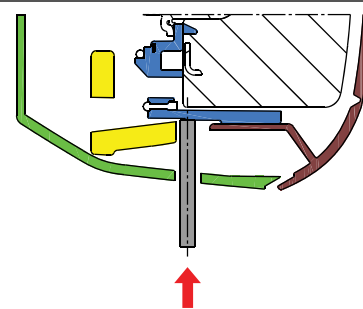
Unit: mm



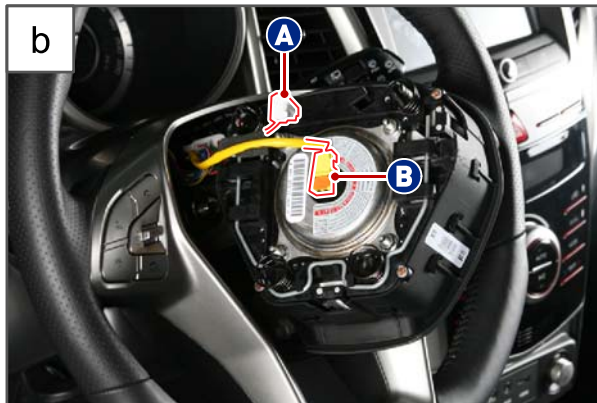
Sectional view of directions 1 and 3 with a tool inserted



Sectional view of direction 2 with a tool inserted



Modification basis	
Application basis	
Affected VIN	



b. Lift out the driver's air bag module and disconnect the connectors (A) and (B).

(A) Horn connector

(B) Driver's air bag module connector



c. Remove the driver's air bag module.



2. Remove the 4 mounting screws for steering wheel upper cover at the back side of the steering wheel.

Steering wheel upper cover mounting screws





3. Remove the steering wheel upper cover and disconnect the connectors (A) and (B).

(A) Audio remote control switch connector
(B) Cruise control switch connector



4. Remove the steering wheel upper cover.

Steering wheel upper cover



5. Remove the 3 mounting screws for audio remote control switches at the back side of the steering wheel upper cover.



6. Remove the audio remote control switch.



Modification basis	
Application basis	
Affected VIN	



7. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	