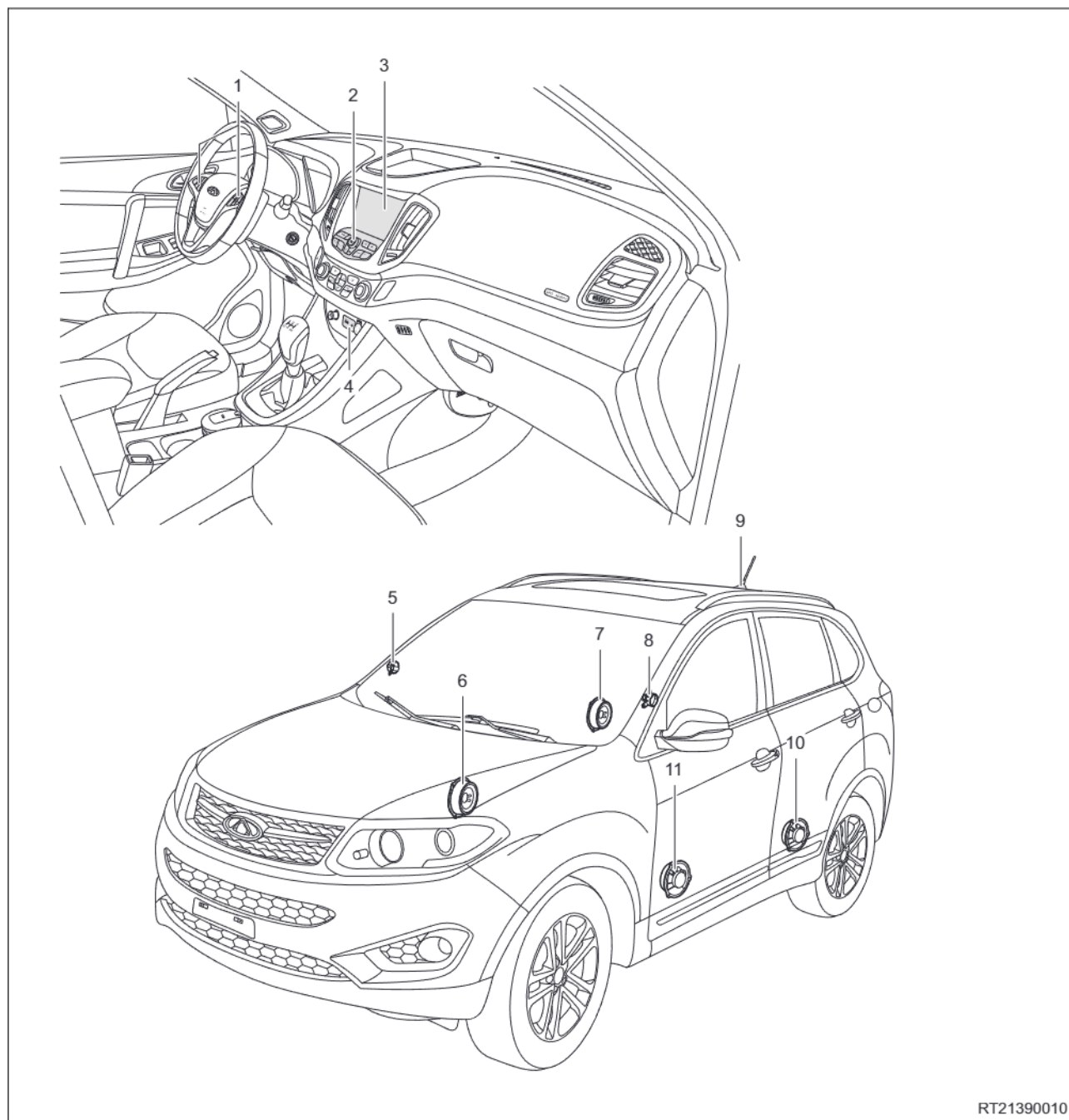


AUDIO SYSTEM

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GENERAL INFORMATION

Description



RT21390010

39

1 - Steering Wheel Quick Button (if equipped)	2 - No Disc DVD Control Panel
3 - No Disc DVD Assembly	4 - Multi-function Interface
5 - Right Tweeter Assembly	6 - Front Right Woofer Assembly
7 - Rear Right Woofer Assembly	8 - Left Tweeter Assembly
9 - Antenna Assembly (w/ Antenna Amplifier)	10 - Rear Left Woofer Assembly
11 - Front Left Woofer Assembly	

Audio system mainly indicates radio receiver assembly. Primary function of radio receiver assembly is to receive frequency modulation and amplitude modulation broadcast signals sent from broadcast stations, and convert these signals into audio signal.

Radio receiver assembly consists of amplitude modulation tuner (AM) that receives the amplitude modulation broadcast signal and frequency modulation tuner (FM) that receives the frequency modulation broadcast signal.

Radio receiver assembly configuration in this model: no disc DVD assembly.

This vehicle is equipped with 6 speakers, which includes 2 tweeter assemblies and 4 woofer assemblies.

Operation

Essentially, radio receiver is a tuner. Radio receiver demodulates the radio frequency signal received from antenna, and outputs the low power audio signal, which is amplified by inner amplifier circuit and converted into original sound.

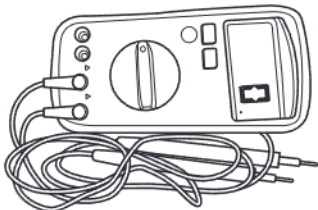
Specifications

Torque Specifications

Description	Torque (N·m)
No Disc DVD Assembly Fixing Screw	2 ± 0.5
Tweeter Assembly Fixing Screw	3 ± 0.5
Front Woofer Assembly Fixing Screw	2.5 ± 0.5
Rear Woofer Assembly Fixing Screw	2.5 ± 0.5
Antenna Assembly Fixing Nut	5 ± 1
No Disc DVD Control Panel Fixing Screw	2 ± 0.5
Wire Harness Fixing Screw	0.7 ± 0.2
Steering Wheel Quick Button Trim Cover Fixing Screw	0.7 ± 0.2
Steering Wheel Quick Button Fixing Screw	0.7 ± 0.2

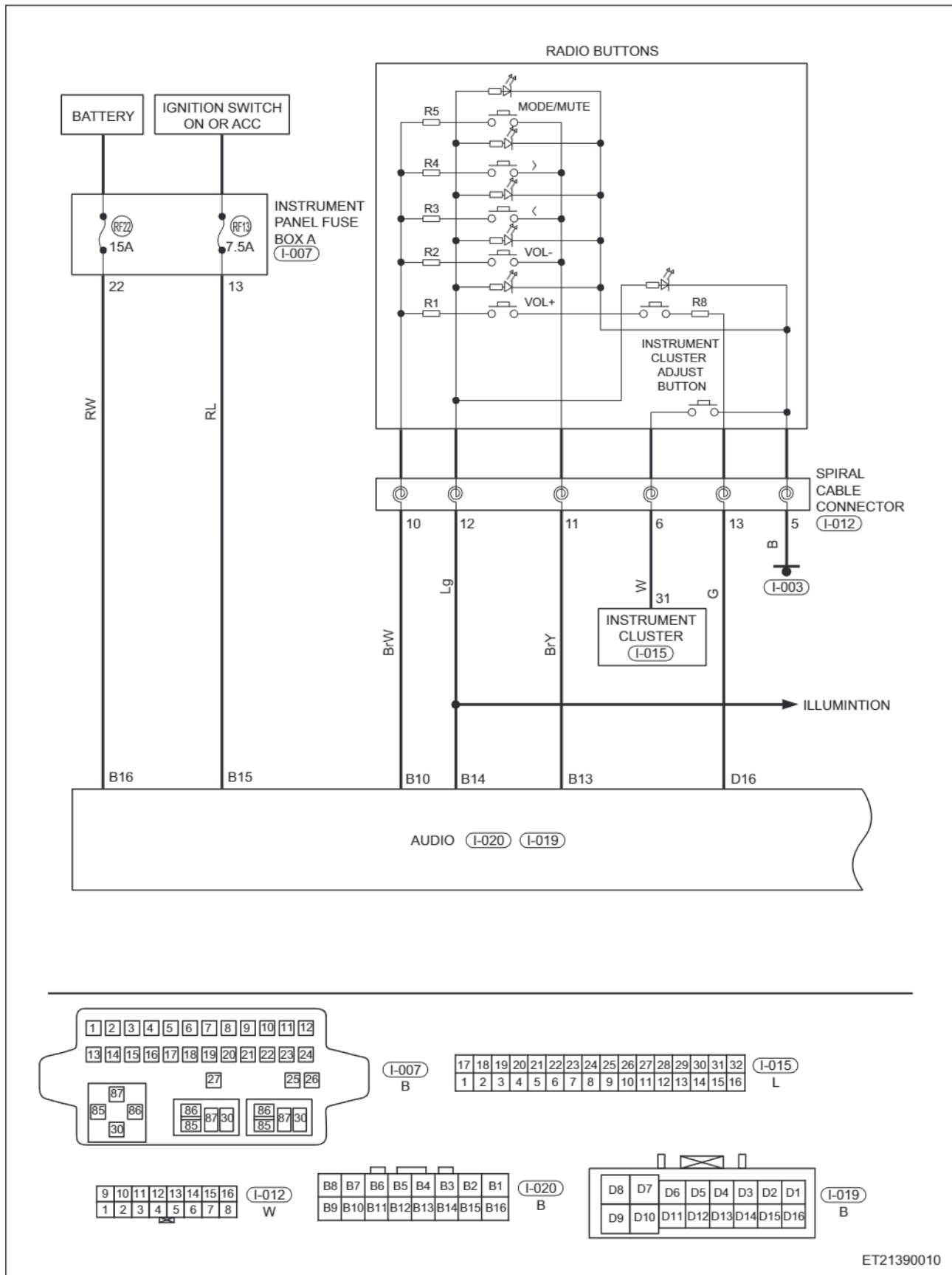
Tool

General Tool

Digital Multimeter	 RCH0000002
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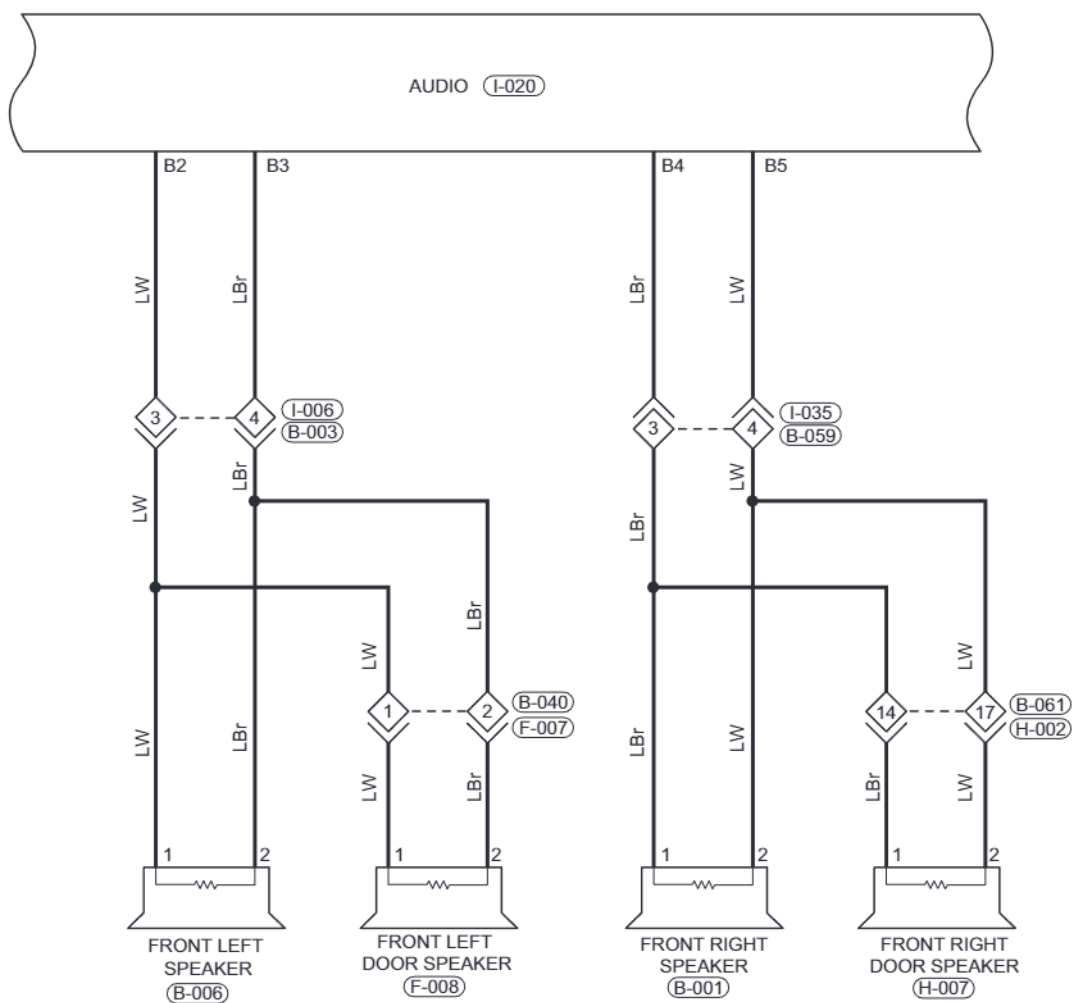
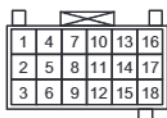
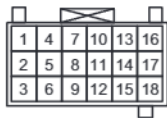
Circuit Diagram

Audio System (Page 1 of 4)



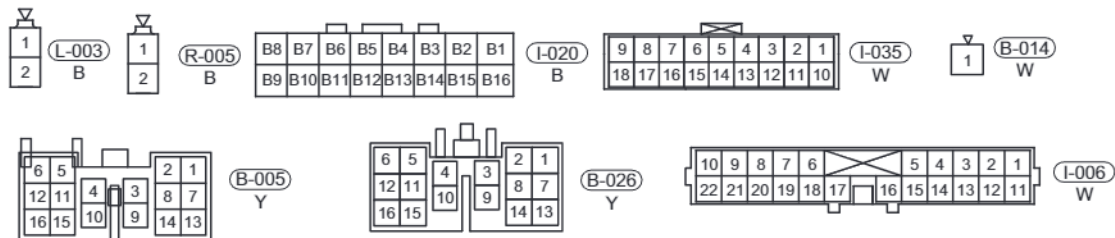
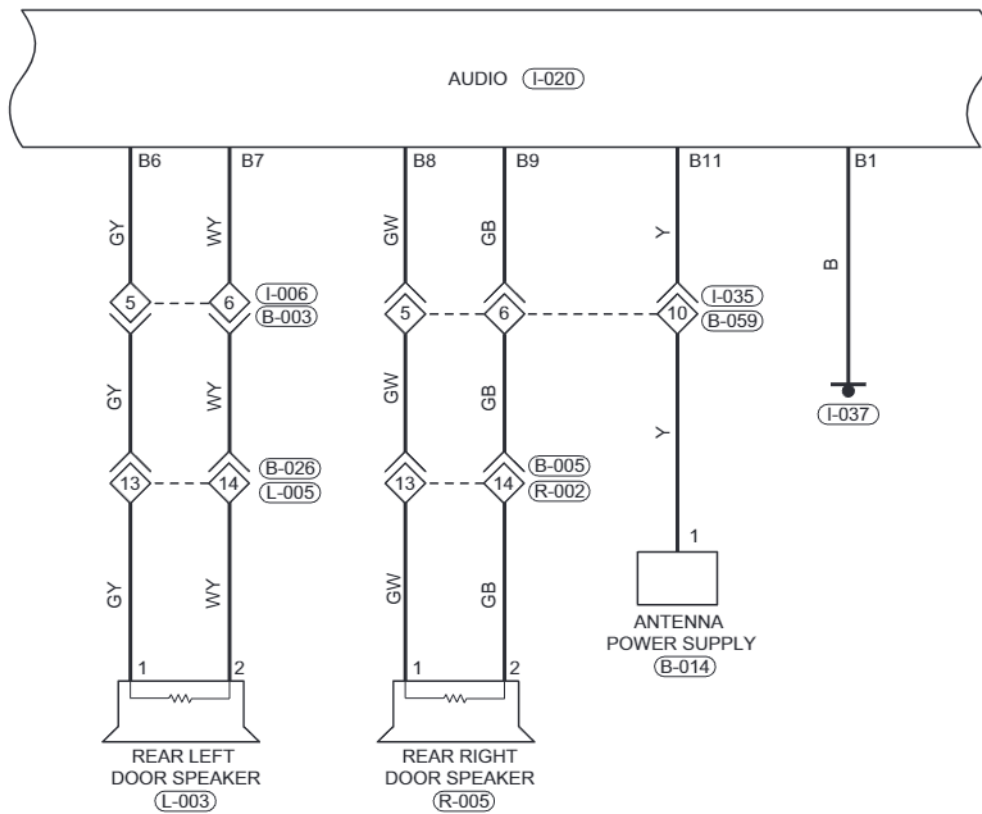
39

Audio System (Page 2 of 4)

I-035
WI-006
WI-020
BB-040
WB-061
WB-001
BB-006
BF-008
BH-007
B

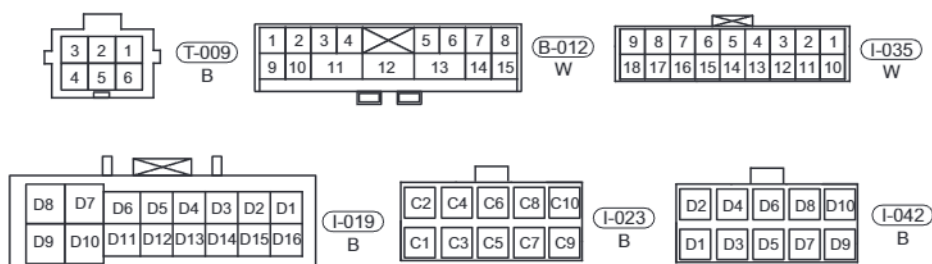
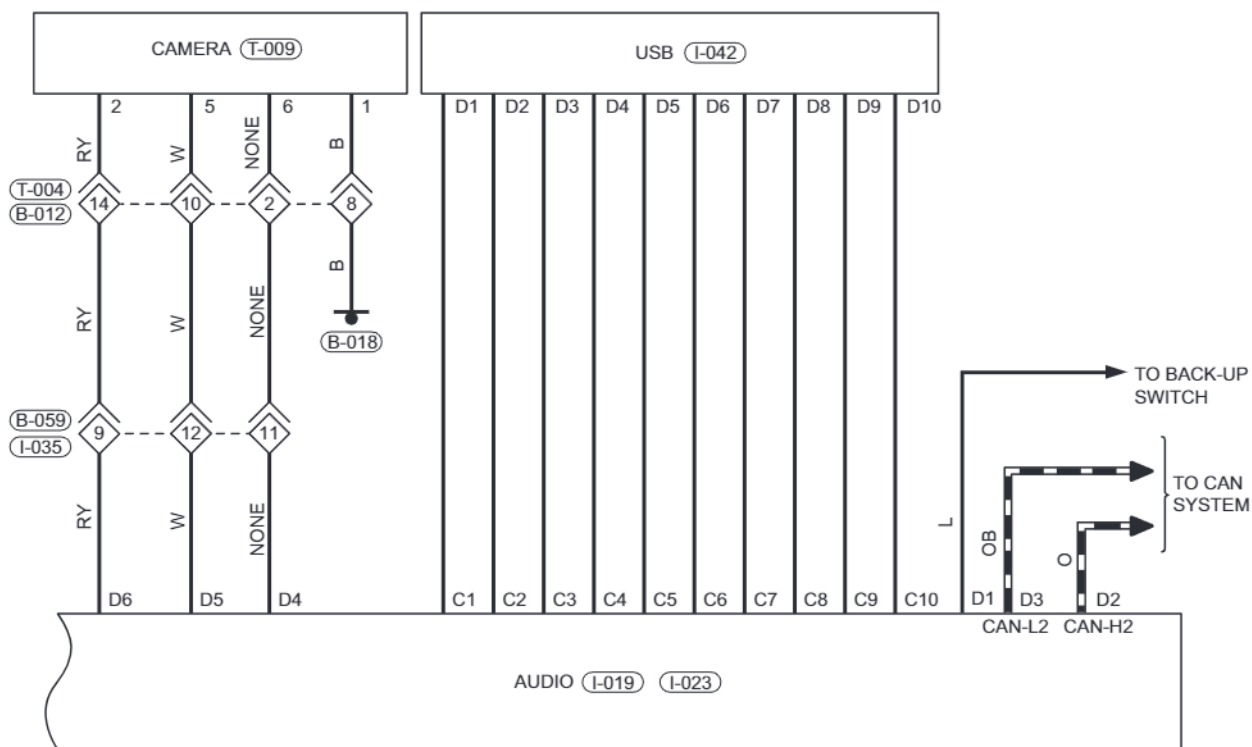
ET21390020

Audio System (Page 3 of 4)



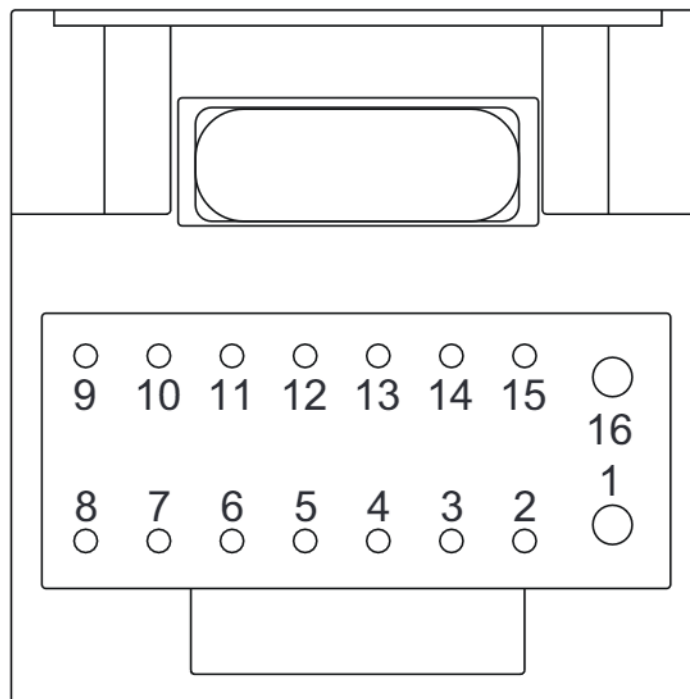
ET21390030

Audio System (Page 4 of 4)



ET21390040

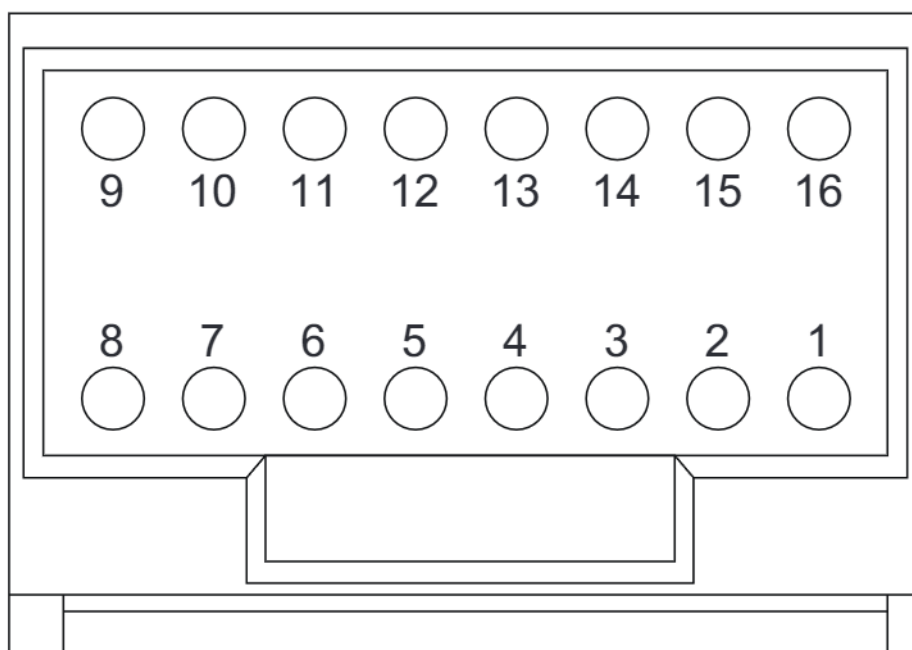
Audio System Control Module Terminal List



RT21390260

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Terminal No.	Terminal Name	Terminal Definition
1	GND	Power Ground
2	FL+	Front Left Speaker Audio Signal+
3	FL-	Front Left Speaker Audio Signal-
4	FR+	Front Right Speaker Audio Signal+
5	FR-	Front Right Speaker Audio Signal-
6	RL+	Rear Left Speaker Audio Signal+
7	RL-	Rear Left Speaker Audio Signal-
8	RR+	Rear Right Speaker Audio Signal+
9	RR-	Rear Right Speaker Audio Signal-
10	Steer button power	Steering Wheel Quick Button Operation Power
11	AMP	Antenna Operation Power
12	-	-
13	Steer button signal	Steering Wheel Quick Button Signal
14	ILL	Backlight Adjustment Signal
15	ACC	Ignition Switch Power Supply
16	BATT	Battery Power Supply



Terminal No.	Terminal Name	Terminal Definition
1	Reverse	Reverse Signal (DC High is effective)
2	CAN_H	CAN High Signal
3	CAN_L	CAN Low Signal
4	RVC_CVBS-	Camera Video-
5	RVC_CVBS+	Camera Video+
6	RVC_VCC	Camera Power Supply
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	Steer button power	Steering Wheel Bluetooth Button Power Supply

DIAGNOSIS & TESTING

Problem Symptoms Table

HINT:

Use the table below to help determine the cause of problem symptoms. Check each suspected area in sequence. Repair or replace the faulty components, or adjust as necessary.

Symptom	Suspected Area	See page
Noise occurs	Noise source (interference)	-
	Tweeter assembly (loose installation)	39-14
	Front woofer assembly (loose installation)	39-15
	Rear woofer assembly (loose installation)	39-17
	No disc DVD assembly (malfunction)	39-12
No disc DVD assembly does not operate	Fuse (blown)	51-36
	No disc DVD control panel	39-22
	No disc DVD assembly (malfunction)	39-12
	Wire harness and connector (malfunction)	-
No sound can be heard from speakers	Fuse (blown)	51-36
	Tweeter assembly (loose installation)	39-14
	Front woofer assembly (loose installation)	39-15
	Rear woofer assembly (loose installation)	39-17
	No disc DVD control panel	39-22
	No disc DVD assembly (malfunction)	39-12
	Wire harness and connector (malfunction)	-
Radio broadcast signal cannot be received (poor reception)	No disc DVD control panel	39-22
	Optional equipment (interference)	-
	No disc DVD assembly (malfunction)	39-12
	Antenna assembly (w/ antenna amplifier) (malfunction)	39-19
	Antenna wire harness and connector (malfunction)	-

HINT:

When checking general malfunctions of audio system, perform inspection at spacious area nearby free of obstacles.

ON-VEHICLE SERVICE

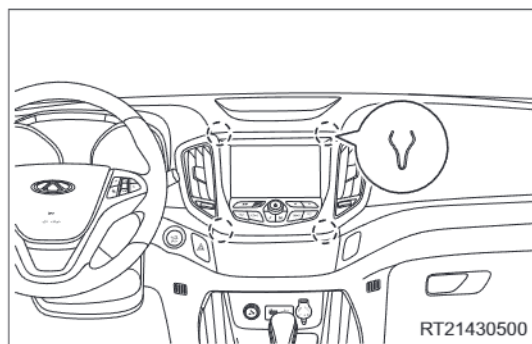
No Disc DVD Assembly

Removal

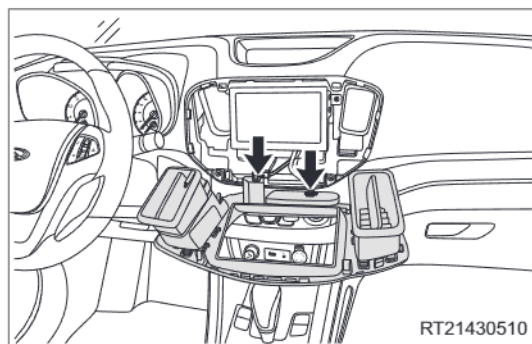
CAUTION

- Be sure to wear safety equipment to prevent accidents when removing no disc DVD assembly.
- Appropriate force should be applied when removing no disc DVD assembly. Be careful not to operate roughly.
- DO NOT scratch interior when removing no disc DVD assembly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the DVD panel assembly.
 - a. Using a screwdriver wrapped with protective tape, pry the clips on DVD panel assembly.



- b. Disconnect the DVD panel assembly connectors (arrow) and remove the DVD panel assembly.

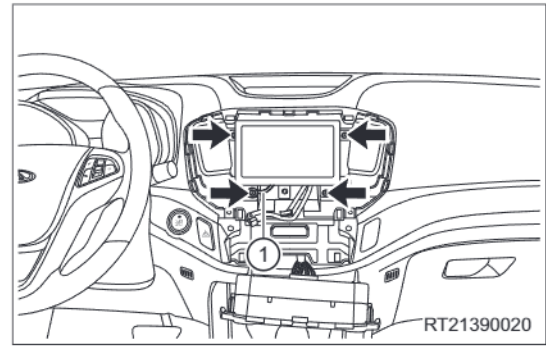


4. Remove the no disc DVD assembly.

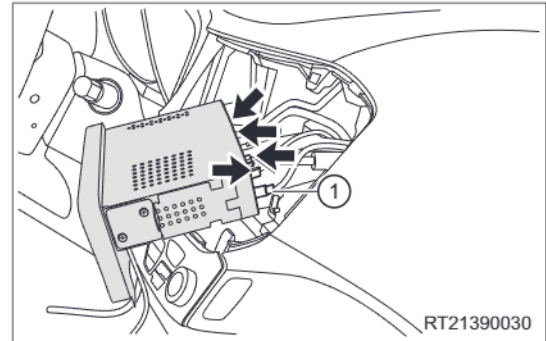
CAUTION

- Handle and operate carefully to prevent components from being scratched or damaged when removing no disc DVD assembly.

- a. Remove 4 fixing screws (arrow) and ground (1) from the no disc DVD assembly.
(Tightening torque: 2 ± 0.5 N·m)



- b. Disconnect the no disc DVD assembly connectors (arrow) and antenna (1) and remove the no disc DVD assembly.



Inspection

1. Check no disc DVD assembly connectors and terminals for deformation or damage. Replace if necessary.
2. Check antenna and connectors for damage. Replace if necessary.
3. Check no disc DVD assembly house for deformation or damage. Replace if necessary.

39

Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing no disc DVD assembly.
- Be sure to tighten fixing screws to the specified torque when installing no disc DVD assembly.
- Install each connector in place when installing no disc DVD assembly.
- Check no disc DVD assembly for proper operation after installation.

Tweeter Assembly

Removal

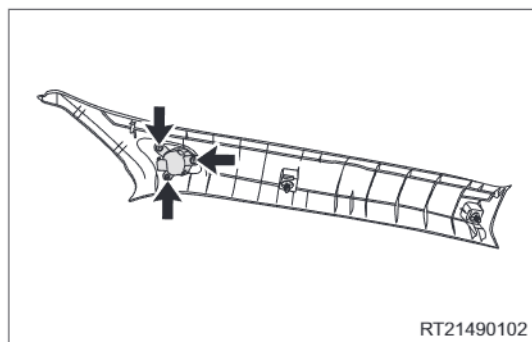
HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

CAUTION

- Be sure to wear safety equipment to prevent accidents when removing tweeter assembly.
- Appropriate force should be applied when removing tweeter assembly. Be careful not to operate roughly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the A-pillar upper protector assembly ([See page 49-17](#)).
4. Remove the left tweeter assembly.
 - a. Remove 3 fixing screws (arrow) from tweeter assembly.
(Tightening torque: $3 \pm 0.5 \text{ N}\cdot\text{m}$)
 - b. Remove the left tweeter assembly.



Inspection

1. Check tweeter connector for damage and terminals for bend or poor connection. Replace if necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing tweeter assembly.
- Be sure to tighten fixing screws to the specified torque when installing tweeter assembly.
- Install connector in place when installing tweeter assembly.
- Check tweeter assembly for proper operation after installation.

Front Woofer Assembly

Removal

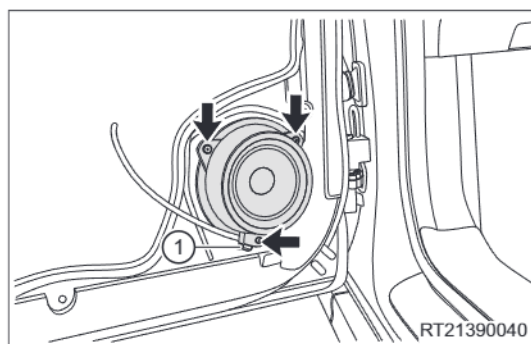
HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

CAUTION

- Be sure to wear safety equipment to prevent accidents when removing front woofer assembly.
- Appropriate force should be applied when removing front woofer assembly. Be careful not to operate roughly.
- Never touch the cone paper and other components of front woofer assembly during removal; otherwise it will affect sound effect or damage front woofer assembly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front left door protector assembly (See page 47-23).
4. Remove the front left woofer assembly.
 - a. Disconnect the front woofer connector (1).
 - b. Remove 3 fixing screws (arrow) from front woofer assembly, and then remove the front left woofer assembly.
(Tightening torque: $2.5 \pm 0.5 \text{ N}\cdot\text{m}$)



39

Inspection

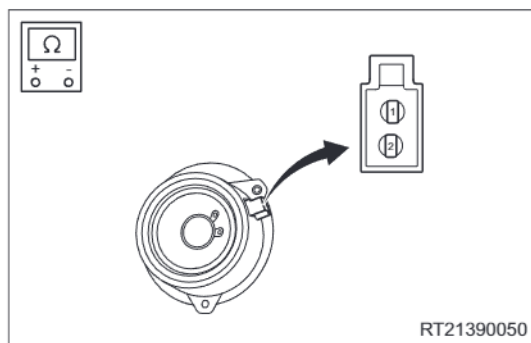
1. Check front woofer assembly.
 - a. Using a digital multimeter, measure resistance of front woofer assembly according to the table below.

Standard Resistance

Multimeter Connection	Condition	Specified Condition
Terminal 1 - Terminal 2	Always	Approximately 3.6Ω

If result is not as specified, replace the front woofer assembly.

2. Check cone paper of front woofer assembly for damage or deformation. Replace if necessary.
3. Check front woofer connector for damage and terminals for bend or poor connection. Replace if necessary.



Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing front woofer assembly.
- Be sure to tighten fixing screws to the specified torque when installing front woofer assembly.
- Install connector in place when installing front woofer assembly.
- Check front woofer for proper operation after installing front woofer assembly.

Rear Woofer Assembly

Removal

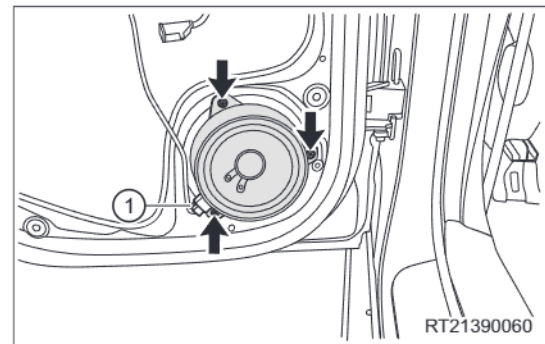
HINT:

- Use the same procedures for the right side and left side.
- Procedures listed below are for the left side.

CAUTION

- Be sure to wear safety equipment to prevent accidents when removing rear woofer assembly.
- Appropriate force should be applied when removing rear woofer assembly. Be careful not to operate roughly.
- Never touch the cone paper and other components of rear woofer assembly during removal; otherwise it will affect sound effect or damage rear woofer assembly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the rear left door protector assembly (See page 47-36).
4. Remove the rear left woofer assembly.
 - a. Disconnect the rear woofer connector (1).
 - b. Remove 3 fixing screws (arrow) from rear woofer assembly, and then remove the rear woofer assembly. (Tightening torque: $2.5 \pm 0.5 \text{ N}\cdot\text{m}$)



39

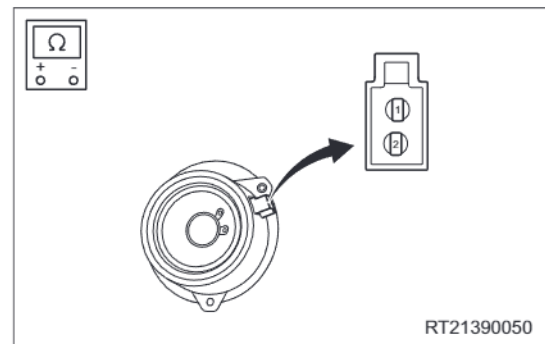
Inspection

1. Check rear woofer assembly.
 - a. Using a digital multimeter, measure resistance of rear woofer assembly according to the table below.

Standard Resistance

Multimeter Connection	Condition	Specified Condition
Terminal 1 - Terminal 2	Always	Approximately 3.6Ω

If result is not as specified, replace the rear woofer assembly.



2. Check cone paper of rear woofer assembly for damage or deformation. Replace if necessary.
3. Check rear woofer connector for damage and terminals for bend or poor connection. Replace if necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing rear woofer assembly.
- Be sure to tighten fixing screws to specified torque when installing rear woofer assembly.
- Install connector in place when installing rear woofer assembly.
- Check rear woofer for proper operation after installing rear woofer assembly.

Antenna Assembly (w/ Antenna Amplifier)

Removal

CAUTION

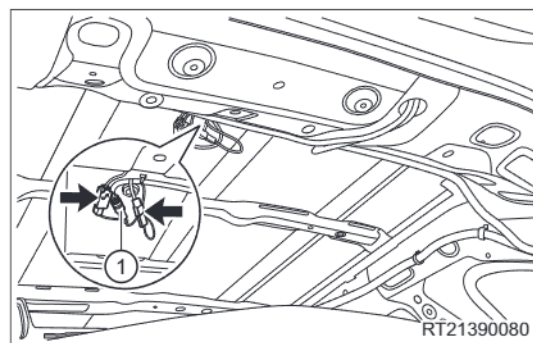
- Be sure to wear safety equipment to prevent accidents when removing antenna assembly.
- Appropriate force should be applied when removing antenna assembly. Be careful not to operate roughly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the roof assembly (See page 49-30).

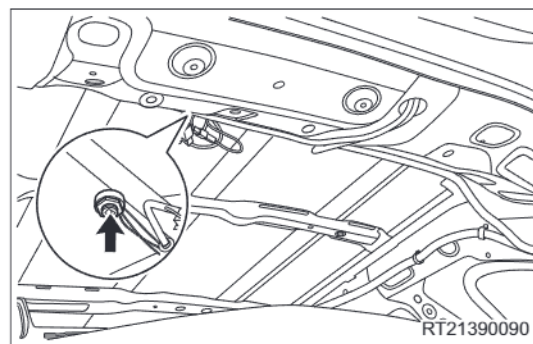
HINT:

It is not necessary to completely remove the roof assembly during removal, but it is necessary to lower the rear part of roof assembly so that antenna can be removed.

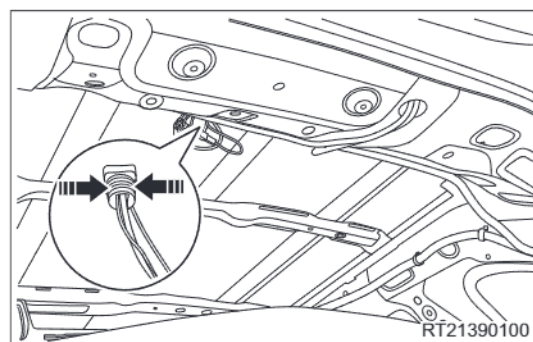
4. Remove the antenna assembly (w/ antenna amplifier).
 - a. Disconnect the antenna (1) and connectors (arrow) from antenna assembly.



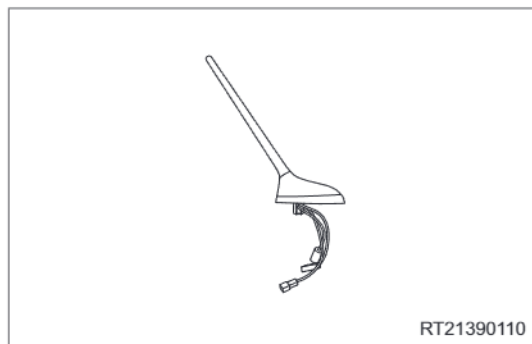
- b. Remove the fixing nut (arrow) from antenna assembly. (Tightening torque: 5 ± 1 N·m)



- c. Detach the attachment part between antenna assembly and body in the direction of arrow as shown in the illustration.



- d. Remove the antenna assembly from roof.



Inspection

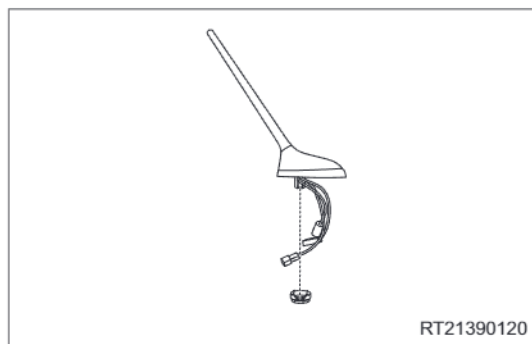
1. Check antenna assembly.
 - a. Check antenna assembly for wear, cracks, deformation or damage. Replace if necessary.
 - b. Check antenna assembly for looseness or disengagement. Replace if necessary.
 - c. Check terminals on antenna connector for deformation or bend. Replace if necessary.

Installation

Installation is in the reverse order of removal.

HINT:

When installing antenna assembly, align the boss at end of antenna assembly with the groove on fixing nut as shown in the illustration, and then firmly install the antenna assembly.



CAUTION

- Operate carefully to prevent components from being damaged when installing antenna assembly.
- Always insert dowel pin into body positioning hole and set it in place when installing antenna assembly.
- Be sure to tighten fixing nuts to the specified torque when installing antenna assembly.
- Install each connector and antenna in place when installing antenna assembly.
- Check audio system for proper operation after installing antenna assembly.

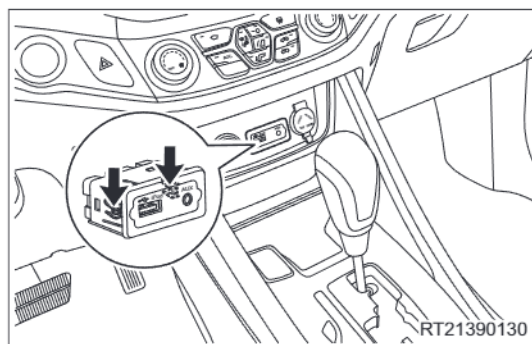
Multi-function Interface

Removal

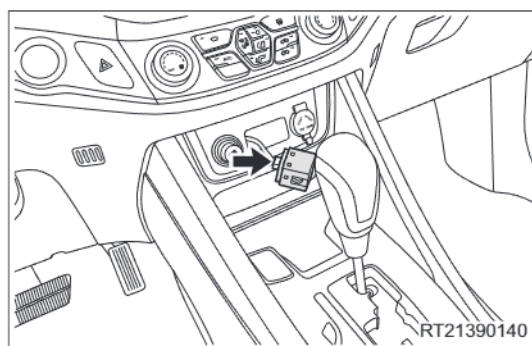
CAUTION

- Be sure to wear safety equipment to prevent accidents when removing multi-function interface.
- Appropriate force should be applied when removing multi-function interface. Be careful not to operate roughly.

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the multi-function interface
 - a. Using a screwdriver wrapped with protective tape, pry up the claws (arrow) on multi-function interface.



- b. Disconnect the multi-function interface connector (arrow), and remove the multi-function interface.



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Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing multi-function interface.
- Install connector in place when installing multi-function interface.
- Check multi-function interface for proper operation after installation.

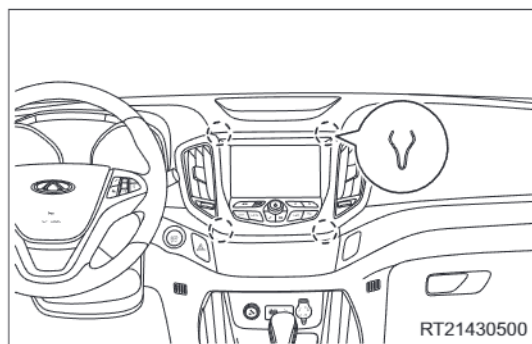
No Disc DVD Control Panel

Removal

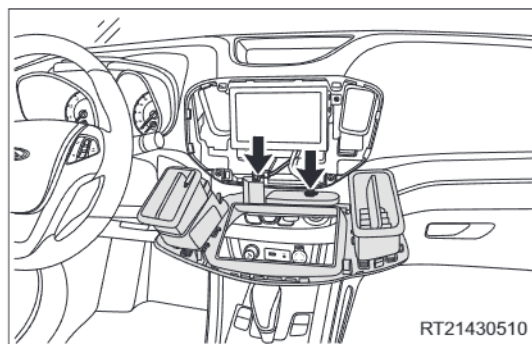
CAUTION

- Be sure to wear safety equipment to prevent accidents when removing no disc DVD control panel.
- Appropriate force should be applied when removing no disc DVD control panel. Be careful not to operate roughly.

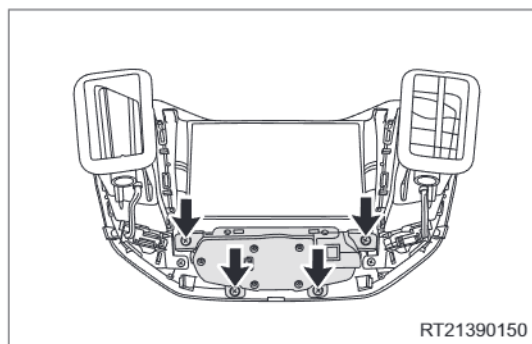
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the DVD panel assembly.
 - a. Using a screwdriver wrapped with protective tape, pry up the clips on DVD panel assembly.



- b. Disconnect the DVD panel assembly connectors (arrow) and remove the DVD panel assembly.



4. Remove the no disc DVD control panel.
 - a. Remove 4 fixing screws (arrow) from no disc DVD control panel.
(Tightening torque: $2 \pm 0.5 \text{ N}\cdot\text{m}$)
 - b. Remove the no disc DVD control panel from DVD panel assembly.



Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing no disc DVD control panel.
- Check no disc DVD for proper operation after installing no disc DVD control panel.

Steering Wheel Quick Button (if equipped)

Removal

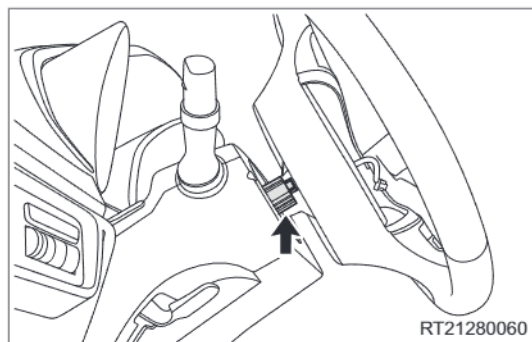
⚠ WARNING

- Be sure to read precautions for SRS airbag before removing steering wheel quick button ([See page 32-4](#)).

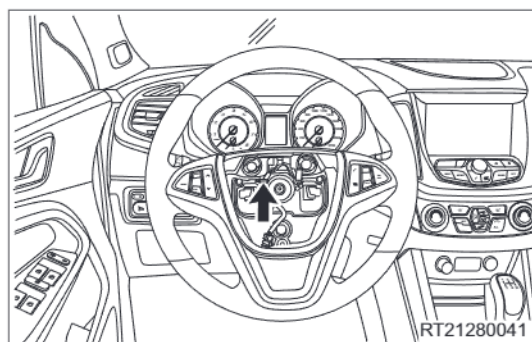
👁 CAUTION

- Be sure to wear safety equipment to prevent accidents when removing steering wheel quick button.
- Operate carefully to prevent claws on steering wheel quick button from being damaged when removing steering wheel quick button.

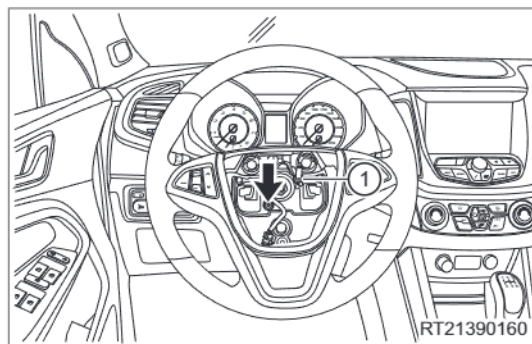
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the driver airbag ([See page 32-64](#)).
4. Remove the steering wheel quick button trim cover.
 - a. Disconnect the steering wheel quick button connector (arrow).



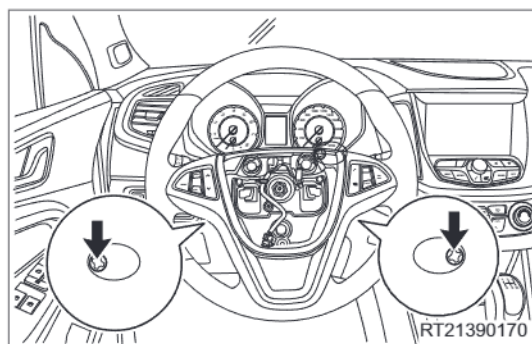
- b. Cut the wire harness band (arrow).



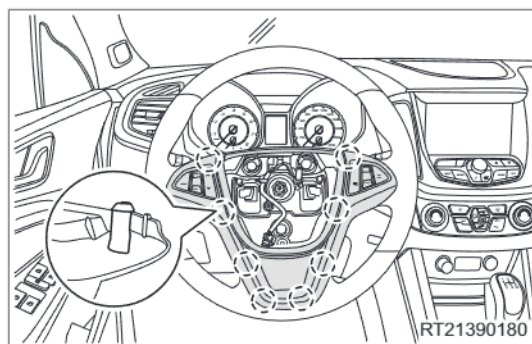
- c. Remove the fixing screw (arrow) from ground wire harness.
- d. Remove the wire harness fixing screw (1).
(Tightening torque: 0.7 ± 0.2 N·m)



- e. Remove 2 fixing screws (arrow) from steering wheel quick button trim cover.
(Tightening torque: 0.7 ± 0.2 N·m)

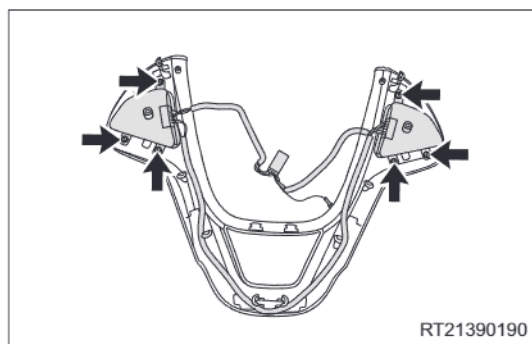


- f. Using a screwdriver wrapped with protective tape, pry up the claws on steering wheel quick button trim cover, and remove the steering wheel quick button trim cover.



39

- 5. Remove the steering wheel quick button.
 - a. Remove 6 fixing screws (arrow) from steering wheel quick button, and remove the steering wheel quick button.
(Tightening torque: 0.7 ± 0.2 N·m)



Inspection

1. Check steering wheel quick button.
 - a. Check steering wheel quick button for damage. Replace if necessary.
 - b. Check steering wheel quick button connector for damage or poor terminal connection. Replace if necessary.
 - c. Check for continuity of wire harness between steering wheel quick button connector and audio unit (no disc DVD assembly). Replace if necessary.

Installation

Installation is in the reverse order of removal.

CAUTION

- Operate carefully to prevent components from being damaged when installing steering wheel quick button.
- Install each connector in place when installing steering wheel quick button.
- Tighten fixing screws to the specified torque when installing steering wheel quick button.

