

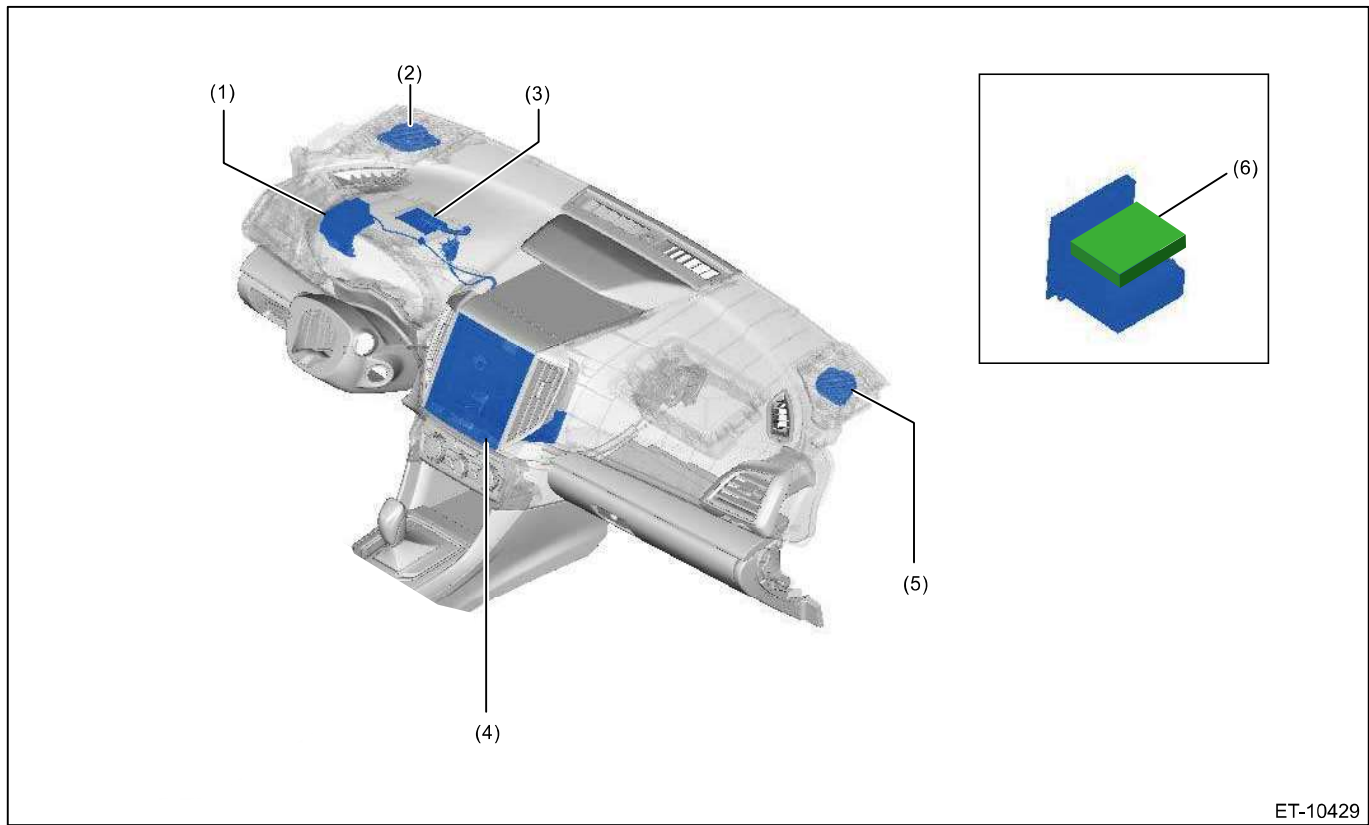
# ENTERTAINMENT & MONITORING

***ETM***

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1. General Description
  2. Relay and Fuse
  3. Audio System
  4. Audio
  5. Front Speaker
  6. Rear Speaker
  7. Antenna
  8. Switches and Harness
  9. Microphone
  10. Navigation System
  11. Navigation Body
  12. Telematics System
  13. Data Communication Module
  14. Camera
  15. Accessory Power Supply Socket
  16. External Connection Terminal
  17. Diagnostics with Phenomenon
  18. Service Diagnostics Mode

LOCATION

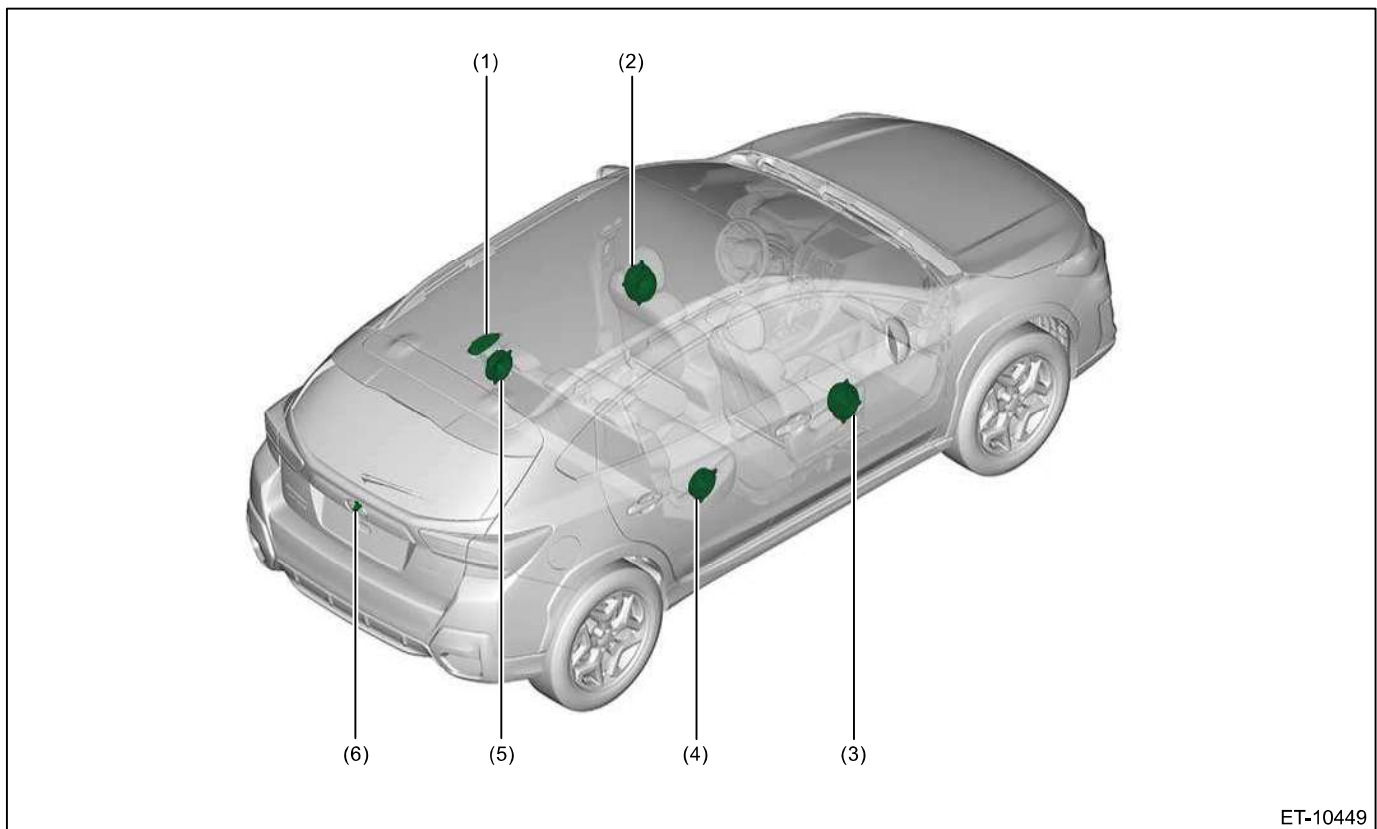
1. AUDIO AND NAVIGATION SYSTEM



ET-10429

- |                               |  |                                 |
|-------------------------------|--|---------------------------------|
| (1) Telematics antenna*1      | (3) GPS antenna ASSY or GNSS antenna*1 | (5) Speaker ASSY - tweeter RH   |
| (2) Speaker ASSY - tweeter LH | (4) Audio ASSY or navigation ASSY      | (6) Data communication module*1 |

\*1: Model with telematics




ET-10449

- |                             |                             |                            |
|-----------------------------|-----------------------------|----------------------------|
| (1) Antenna ASSY - roof     | (3) Speaker ASSY - front RH | (5) Speaker ASSY - rear LH |
| (2) Speaker ASSY - front LH | (4) Speaker ASSY - rear RH  | (6) Rearview camera ASSY   |

**Note:**

- The figure shows the LHD model. For RHD model, refer to the figure of LHD model.
- For the 4 door model, the component is installed at the same location as the 5 door model.

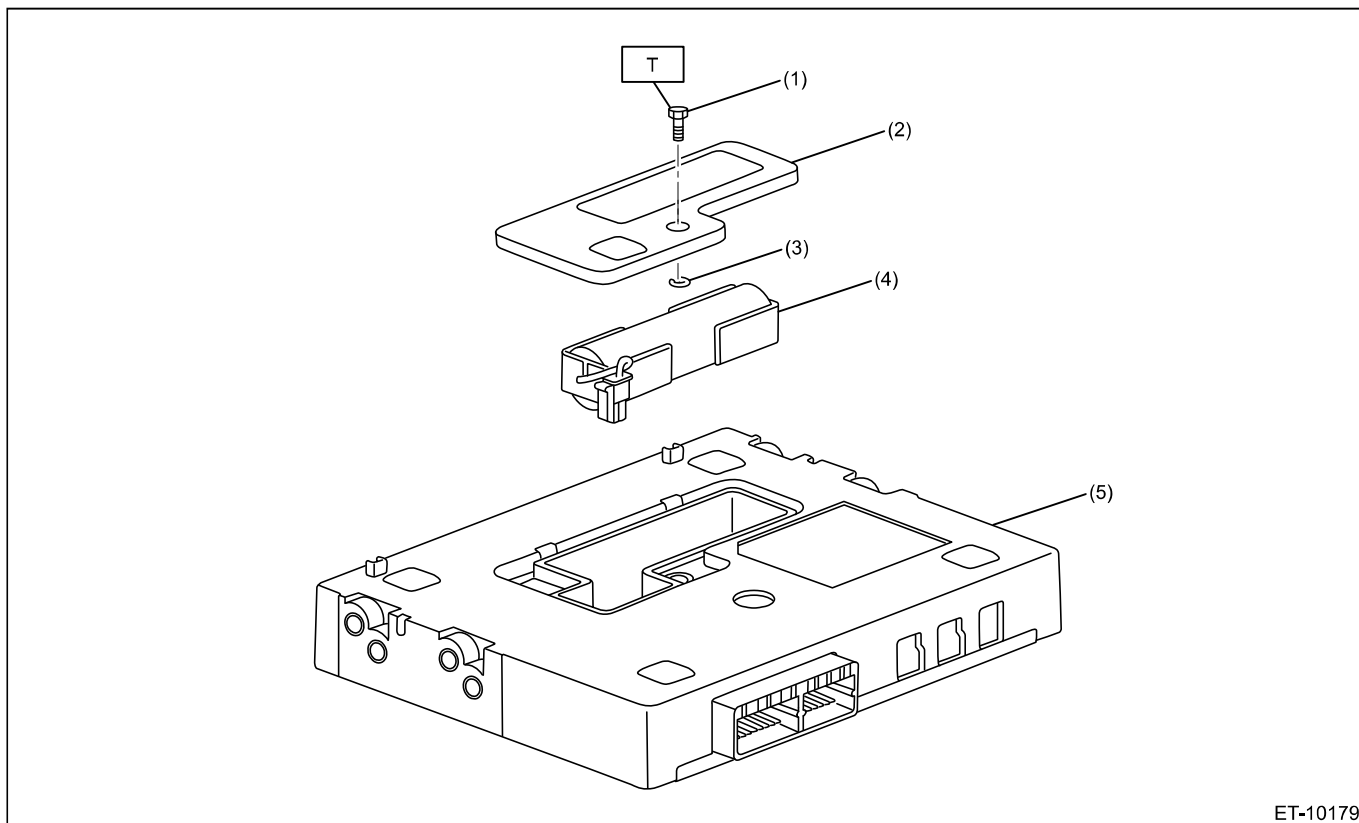
## 2. TELEMATICS SYSTEM

For locations, refer to "LOCATION" of "TELEMATICS SYSTEM (DIAGNOSTICS)" section.  [Ref. to TELEMATICS SYSTEM \(DIAGNOSTICS\)>Electrical Component Location>LOCATION.](#)

ENTERTAINMENT & MONITORING > General Description

### COMPONENT

## 1. DATA COMMUNICATION MODULE



ET-10179

(1) Cap screw

(4) Backup battery

**Tightening torque: N·m (kgf-m, ft-lb)**

(2) Battery cover

(5) Data communication module body

**T: 0.3 (0.03, 0.2)**

(3) Circlip

## ENTERTAINMENT & MONITORING > General Description

### CAUTION


- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery. When replacing the audio and MFD parts provided with memory functions, record the memory contents before disconnecting the battery ground cable.
- Be careful of the following items. Failing to do so may cause the airbag system malfunction.
  - Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. When using a tester on these circuits, follow the cautions of "AIRBAG SYSTEM". [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)
  - Be careful not to damage the airbag system wiring harness when servicing the electrical parts around the steering column.
- When removing, installing or replacing the VDCCM&H/U, VDCCM&H/U bracket, steering wheel or steering angle sensor (steering roll connector), perform "VSC(VDC) Centering Mode" of the VDC. [Ref. to VEHICLE DYNAMICS CONTROL \(VDC\)>VDC Control Module and Hydraulic Control Unit \(VDCCM&H/U\)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.](#)

## ENTERTAINMENT & MONITORING > General Description

### PREPARATION TOOL

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## 1. SPECIAL TOOL

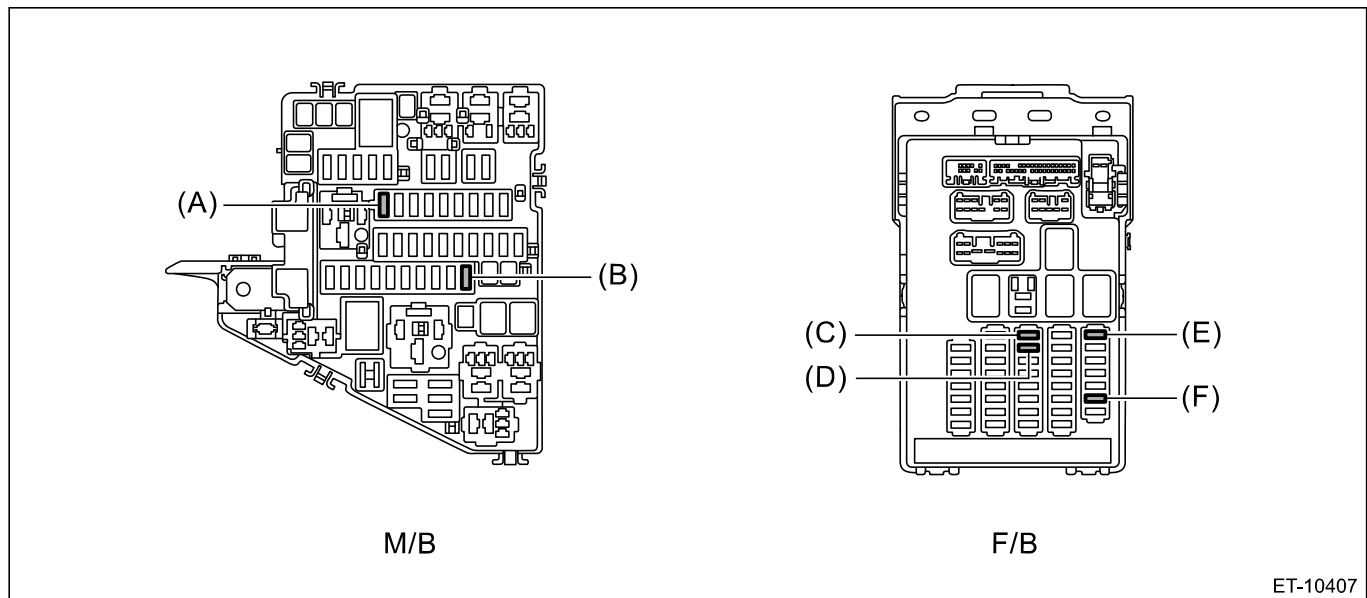
| ILLUSTRATION  | TOOL NUMBER | DESCRIPTION             | REMARKS   |
|---|-------------|-------------------------|---|
| <br>STSSM4 | —           | SUBARU SELECT MONITOR 4 | Used for setting of each function and troubleshooting for electrical system.<br><b>Note:</b><br><b>For detailed operation procedures of Subaru Select Monitor 4, refer to “Application help”.</b> |

## 2. GENERAL TOOL

| DESCRIPTION    | REMARKS   |
|----------------|---|
| Circuit tester | Used for measuring resistance, voltage and current. |
| DST-i          | Used together with Subaru Select Monitor 4.         |
| Clip remover   | Used for removing clips.                            |

ENTERTAINMENT & MONITORING > Relay and Fuse

LOCATION





|                     |  |     |
|---------------------|--|-----|
| Main fuse box (M/B) | Fuse 10 A (data communication module*1)  | (A) |
|                     | Fuse 30 A (audio, navigation unit, navigation connector)   | (B) |
| Fuse box (F/B)      | Fuse 20 A (front accessory power supply socket)  | (C) |
|                     | Fuse 15 A (rear accessory power supply socket (console))   | (D) |
|                     | Fuse 15 A (audio, navigation unit, navigation connector, external connection terminal (instrument panel / console), data communication module*1) | (E) |
|                     | Fuse 7.5 A (audio, navigation unit, navigation connector)  | (F) |

\*1: Model with telematics

Note:

For other related fuses, refer to the wiring diagram.

- **Impreza model:**  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Power Supply Circuit>WIRING DIAGRAM.](#)
- **XV model:**  [Ref. to WIRING SYSTEM\(XV MODEL\)>Power Supply Circuit>WIRING DIAGRAM.](#)

ENTERTAINMENT & MONITORING > Relay and Fuse

INSPECTION

## **1. CHECK FUSE**

- 1.** Remove the fuse and inspect visually.
- 2.** If the fuse is blown out, replace the fuse.

### **Note:**



**If the fuse is blown again, check the system wiring harness.**

## ENTERTAINMENT & MONITORING > Audio System

### WIRING DIAGRAM

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Refer to "Audio System" in the wiring diagram.

- Impreza model:  [Ref. to WIRING SYSTEM\(IMPENZA MODEL\)>Audio System>WIRING DIAGRAM.](#)
- XV model:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Audio System>WIRING DIAGRAM.](#)

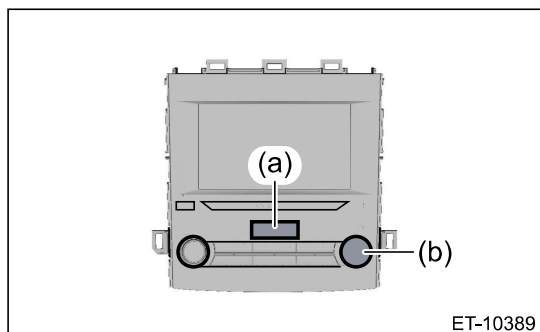
## ENTERTAINMENT & MONITORING > Audio System

### OPERATION

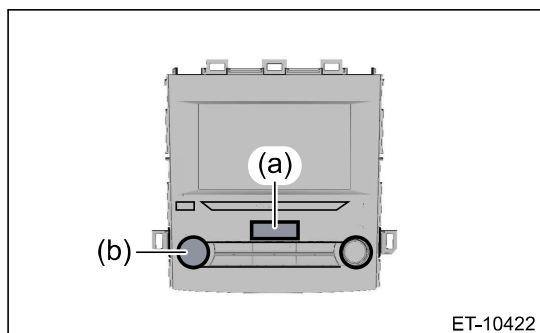
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#### 1. CHECK CONNECTIONS WITH LINE DIAG MODE

1. Turn the ignition switch to ACC.
2. Press the button (b) twice with the button (a) pressed.
  - LHD model



- RHD model

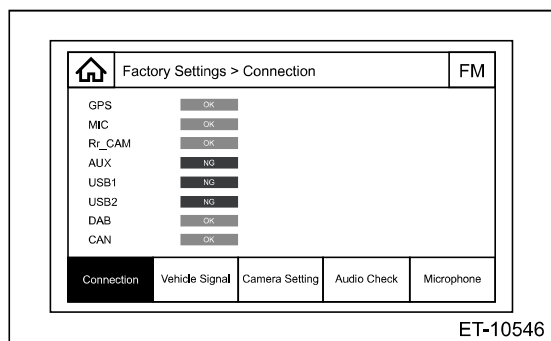


#### Note:

**Pressing the button (a) for 3 seconds or more, or turning the ignition switch from the OFF to ACC position can exit the diagnostic mode.**

3. {Line Diag} screen is displayed.
4. Check the connection status with the {Connection} in the {Line Diag} screen.

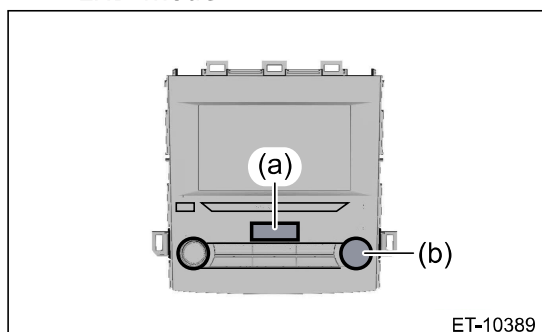




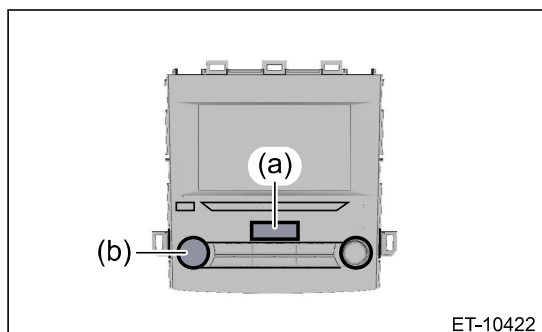
| Item   | Content                | Inspection   |
|--------|------------------------|--|
| GPS    | GPS antenna connection | Check that the display shows OK. (Models with GPS antenna only)                            |
| MIC    | MIC connection         | Check that the display shows OK.   |
| Rr_CAM | Rr CAM Video signal    | Check that the display shows OK.   |
| AUX    | AUX connection         | Connect the pin jack for check into the AUX terminal, and check that the display shows OK. |
| USB1   | USB connection         | Connect the memory for check into the USB terminal, and check that the display shows OK.   |
| USB2   |                        |  |
| DAB    | DAB connection         | Check that the display shows OK. (With DAB only)   |
| CAN    | CAN connection         | Check that the display shows OK.   |

## 2. CHECK VEHICLE SIGNALS WITH LINE DIAG MODE

1. Turn the ignition switch to ACC.
2. Press the button (b) twice with the button (a) pressed.
  - LHD model



- RHD model

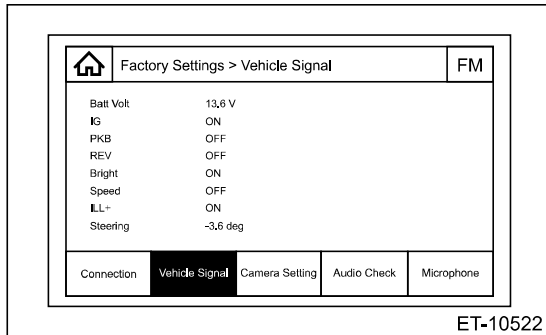


**Note:**

Pressing the button (a) for 3 seconds or more, or turning the ignition switch from the OFF to ACC position can exit the diagnostic mode.

3. {Line Diag} screen is displayed.

4. Check the signal status with the {Vehicle Signal} in the {Line Diag} screen.



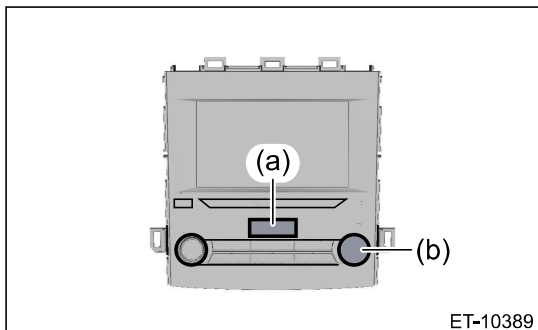
| Item      | Content              | Inspection  |
|-----------|----------------------|---|
| ILL+      | Illumination signal  | Turn the lighting switch to ON, and check that the display shows ON.    |
| SPEED     | Speed pulse signal   | Input the vehicle speed and check that the vehicle speed is displayed.  |
| PKB       | Parking brake signal | Pull the parking brake switch, and check that the display shows ON.     |
| REV       | Reverse signal       | Place the select lever in reverse, and check that the display shows ON. |
| IG        | IGN signal           | Check that the display shows ON.  |
| Batt Volt | Battery voltage      | Check that the battery voltage is displayed.                            |
| Steering  | Steering angle       | Check that the steering operation is reflected on the display.          |
| Bright    | Bright signal        | Turn the bright switch to ON, and check that the display shows ON.      |

### 3. CHECK SPEAKER OUTPUT WITH LINE DIAG MODE AND ANTENNA CONNECTION

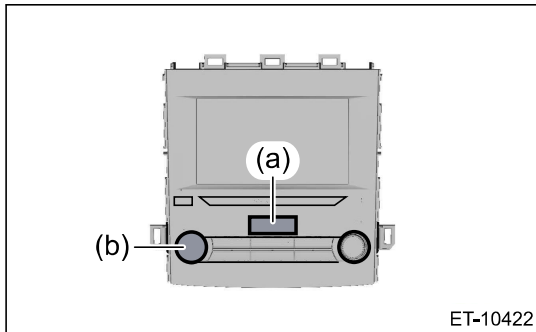
1. Turn the ignition switch to ACC.

2. Press the button (b) twice with the button (a) pressed.

- LHD model



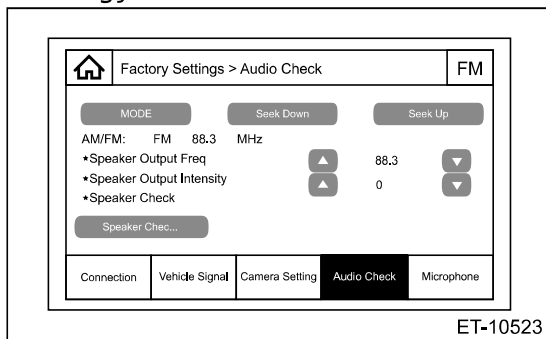
- RHD model



**Note:**

**Pressing the button (a) for 3 seconds or more, or turning the ignition switch from the OFF to ACC position can exit the diagnostic mode.**

3. {Line Diag} screen is displayed.
4. Perform the speaker output check and antenna connection check with the {Audio Check} in the {Line Diag} screen.



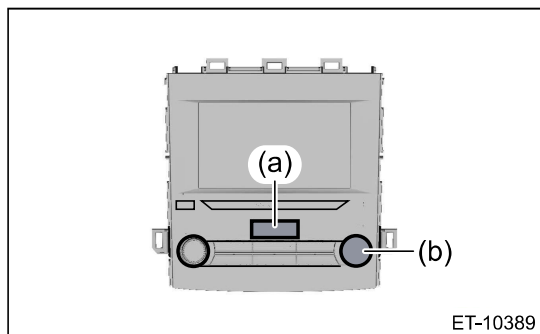
| Item          | Content                 | Inspection  |
|---------------|-------------------------|---|
| MODE          | Radio band switching    | Check that the radio band (AM/FM) can be switched.  |
| Seek UP/DOWN  | Seek UP/DOWN operation  | Check that the Seek UP/DOWN operation allows radio reception.   |
| Speaker Check | Speaker check operation | <ul style="list-style-type: none"> <li>• 4 speakers: Front left → rear left → rear right → front right speakers will sound in this order for 0.5 seconds each.</li> <li>• 6 speakers: Tweeter left → front left → rear left → rear right → front right → tweeter right speakers will sound in this order for 0.5 seconds each.</li> </ul> |

**Note:**

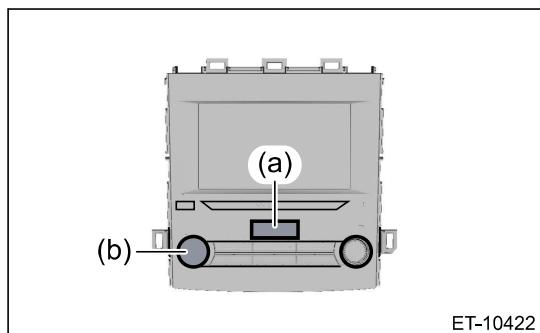
**The speaker sounds at the maximum volume during speaker check.**

## 4. CHECK MICROPHONE WITH LINE DIAG MODE

1. Turn the ignition switch to ACC.
2. Press the button (b) twice with the button (a) pressed.
  - LHD model



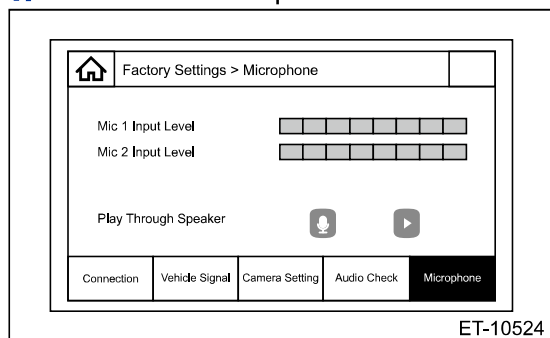
- RHD model



#### Note:

**Pressing the button (a) for 3 seconds or more, or turning the ignition switch from the OFF to ACC position can exit the diagnostic mode.**

3. {Line Diag} screen is displayed.
4. Check the microphone level with the {Microphone} in the {Line Diag} screen.



Check that the microphone input level varies depending on the sound and voice.

## ENTERTAINMENT & MONITORING > Audio System

### INSPECTION

#### 1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" in "INFOTAINMENT SYSTEM (DIAGNOSTICS)".


 [Ref. to INFOTAINMENT\(DIAGNOSTICS\) > Basic Diagnostic Procedure.](#)

#### 2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "INFOTAINMENT SYSTEM (DIAGNOSTICS)".

 [Ref. to INFOTAINMENT\(DIAGNOSTICS\) > General Description > SYSTEM BLOCK DIAGRAM.](#)

### 3. MODULE I/O SIGNAL








For the specification (electrical component), refer to "Control Module I/O Signal" of "INFOTAINMENT SYSTEM (DIAGNOSTICS)".  [Ref. to INFOTAINMENT\(DIAGNOSTICS\) >Control Module I/O Signal>ELECTRICAL SPECIFICATION.](#)

#### ENTERTAINMENT & MONITORING > Audio System

##### NOTE



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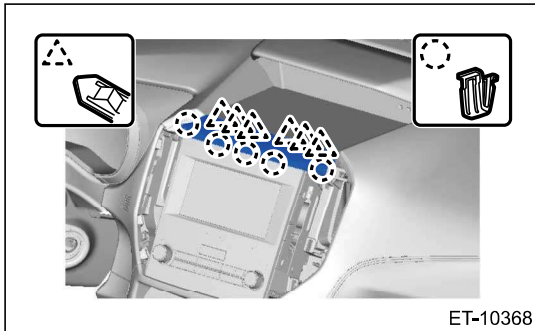
For procedure of each component in the audio system, refer to the respective sections.

- Audio unit:  [Ref. to ENTERTAINMENT & MONITORING>Audio.](#)
- Front speaker
  - Tweeter (instrument panel):  [Ref. to ENTERTAINMENT & MONITORING>Front Speaker>REMOVAL > TWEETER.](#)
  - Door speaker:  [Ref. to ENTERTAINMENT & MONITORING>Front Speaker>REMOVAL > DOOR SPEAKER.](#)
- Rear speaker:  [Ref. to ENTERTAINMENT & MONITORING>Rear Speaker.](#)
- Antenna:  [Ref. to ENTERTAINMENT & MONITORING>Antenna.](#)
- Satellite switch assembly:  [Ref. to ENTERTAINMENT & MONITORING>Switches and Harness.](#)
- External connection terminal:  [Ref. to ENTERTAINMENT & MONITORING>External Connection Terminal.](#)

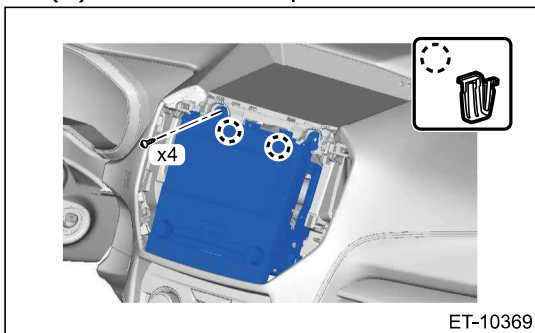
## ENTERTAINMENT & MONITORING > Audio

### REMOVAL

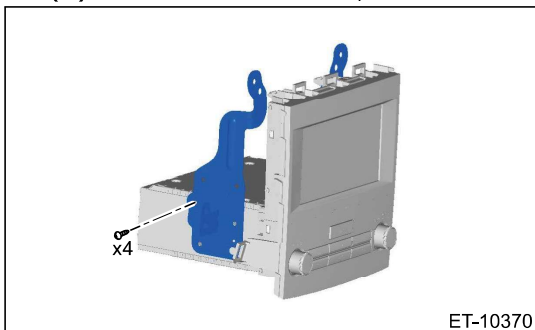
1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the panel center UPR.  
(1) Release the clips and claws, then detach the panel center UPR.



4. Remove the audio assembly.  
(1) Remove the screws.  
(2) Release the clips and disconnect the connector, and then remove the audio assembly.



5. Remove the audio bracket.  
(1) Remove the screws, and then remove the audio bracket.



#### Note:

- Remove the screws on RH side in the same procedure as on the LH side.
- For models with telematics, the data communication module is attached on the upper side of the audio assembly.


## ENTERTAINMENT & MONITORING > Audio

### INSTALLATION

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**Caution:**

**Do not allow harness and cables to interfere with or get caught by other parts.**



- 1.** Install the audio bracket.
- 2.** Install the audio assembly.
- 3.** Install the panel center UPR.
- 4.** Install the grille assembly - CTR ventilation.
- 5.** Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

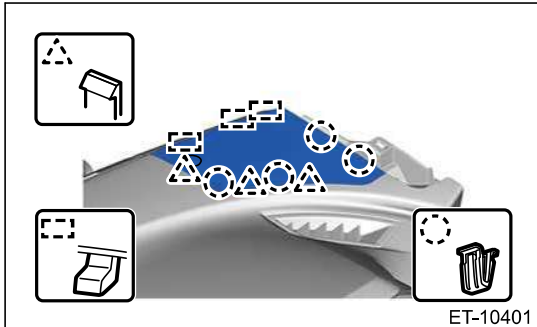
## ENTERTAINMENT & MONITORING > Front Speaker

### REMOVAL

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#### 1. TWEETER

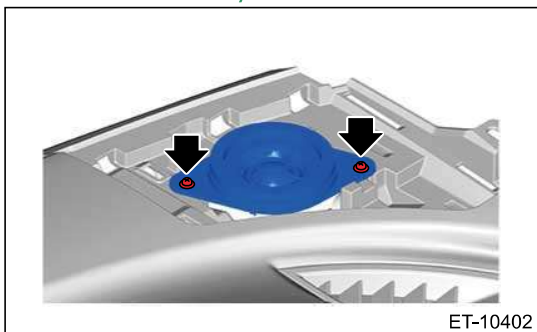
1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the trim panel - front pillar UPR.  [Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>REMOVAL.](#)
3. Remove the grille speaker side.  
(1) Release the clips, hooks and claws, then detach the grille speaker side.



4. Remove the speaker assembly - tweeter.  
(1) Remove the screws.



#### Preparation tool:

Stubby screwdriver

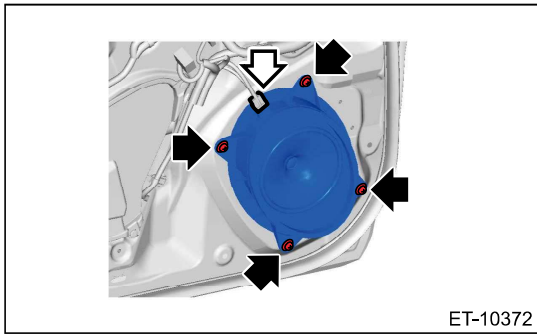


- (2) Disconnect the connector and remove the speaker assembly - tweeter.

#### 2. DOOR SPEAKER

1. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the trim panel - front door.  [Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.](#)
3. Remove the speaker assembly - front.  
(1) Disconnect the connector.  
(2) Remove the screws and remove the speaker assembly - front.





## ENTERTAINMENT & MONITORING > Front Speaker

### INSTALLATION

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#### 1. TWEETER

1. Install the speaker assembly - tweeter.
2. Install the grille speaker side.
3. Install the trim panel - front pillar UPR. [🔗 Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>INSTALLATION.](#)
4. Connect the battery ground terminal. [🔗 Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)



#### 2. DOOR SPEAKER

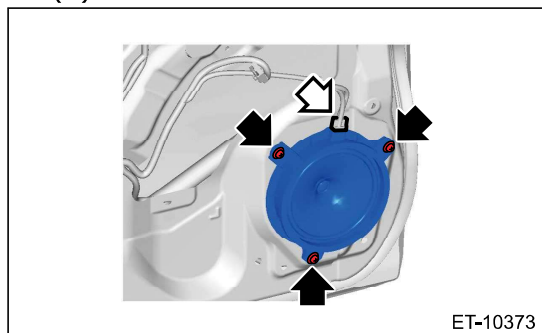
1. Install the speaker assembly - front.
2. Install the trim panel - front door.
3. Connect the battery ground terminal. [🔗 Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## ENTERTAINMENT & MONITORING > Rear Speaker

### REMOVAL

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- 1.** Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
- 2.** Remove the trim panel - rear door.  [Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.](#)
- 3.** Remove the speaker assembly - rear.
  - (1) Disconnect the connector.
  - (2) Remove the screws and remove the speaker assembly - rear.



## ENTERTAINMENT & MONITORING > Rear Speaker

### INSTALLATION



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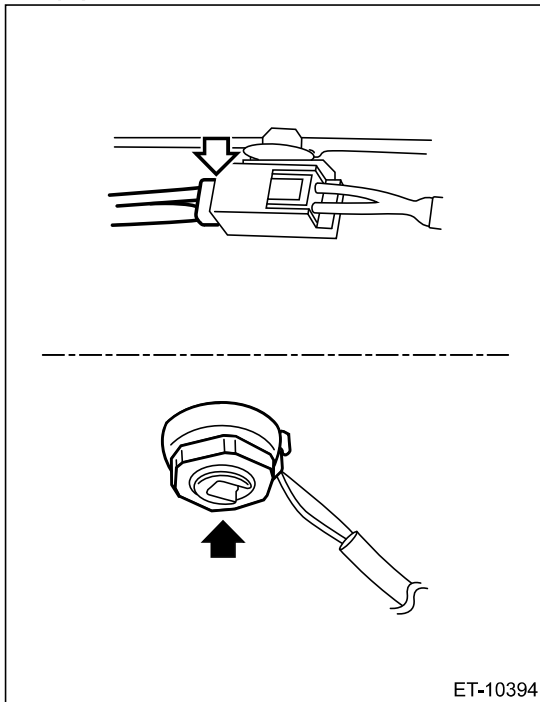
- 1.** Install the speaker assembly - rear.
- 2.** Install the trim panel - rear door.
- 3.** Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## REMOVAL








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### 1. ROOF ANTENNA

1. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.   
[Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Lower the trim panel - roof assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>REMOVAL.](#)  
**Note:**  
**Procedures for the trim panel - roof assembly is performed inside the vehicle.**
3. Remove the antenna assembly - radio.
  - (1) Disconnect the connector.
  - (2) Remove the nut, and remove the antenna assembly - radio.









### 2. ANTENNA FEEDER CORD

1. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.   
[Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.  [Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the cover assembly - instrument panel LWR driver. (LHD model)  [Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.](#)
5. Remove the pocket assembly and the back panel - pocket. (RHD model)  [Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>REMOVAL.](#)
6. Remove the panel center LWR LH.  [Ref. to EXTERIOR/INTERIOR TRIM>Center Console.](#)
7. Remove the cover side sill - front LH and the cover side sill - front INN LH.  [Ref. to EXTERIOR/INTERIOR TRIM>Lower Inner Trim>REMOVAL.](#)

8. Turn over the floor mat.  [Ref. to EXTERIOR/INTERIOR TRIM>Floor Mat>REMOVAL.](#)
9. Lower the trim panel - roof assembly in the same manner as the removal procedure of the antenna assembly - radio.  [Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>REMOVAL.](#)
10. Remove the cord assembly - antenna feeder.

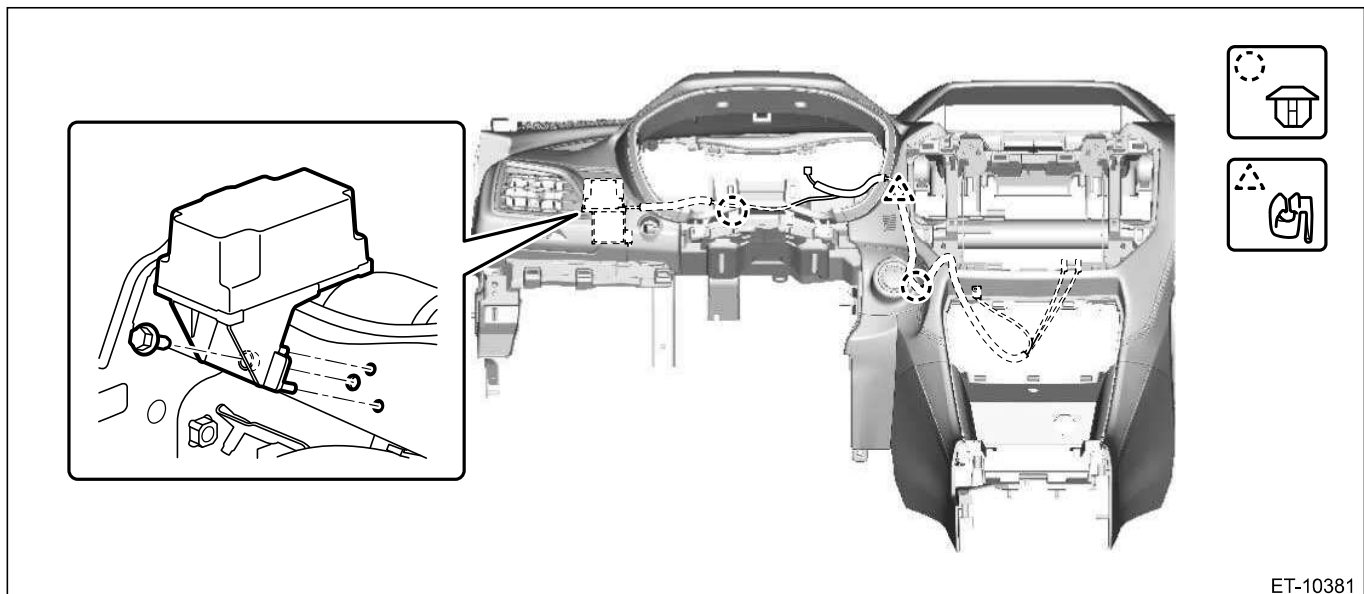
### 3. TELEMATICS ANTENNA

1. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.  [Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the cover assembly - instrument panel LWR driver.  [Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.](#)
5. Remove the combination meter assembly.  [Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REMOVAL.](#)
6. Remove the GNSS antenna assembly.  [Ref. to ENTERTAINMENT & MONITORING>Antenna>REMOVAL > GNSS ANTENNA.](#)

#### Note:

**Remove the antenna only. Do not pull the cord.**

7. Remove the telematics antenna.
  - (1) Attach strings to the telematics antenna connector and the GNSS antenna assembly connector on the main body side.  
**Note:**
    - **A string makes operation easier during installation.**
    - **The telematics antenna is integrated into the GNSS antenna assembly cord.**
  - (2) Remove the bolts, cord clips and clamps, and pull out the telematics antenna from the combination meter side.



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- (3) After the telematics antenna has been pulled out, remove the string attached to the connector in step (1).






**Note:**

Leave the attached string inside the instrument panel, and use it during installation.

## 4. GPS ANTENNA

**Note:**

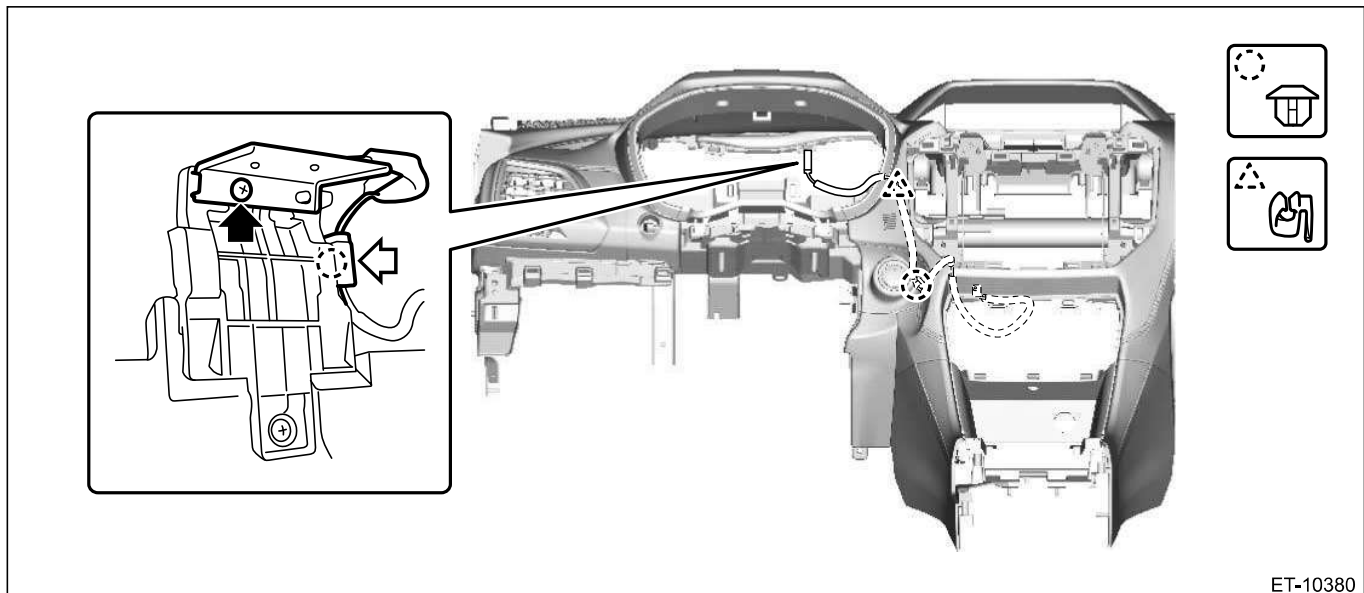
This procedure shows the LHD model. For the RHD model, perform the procedure by referring to the LHD model.

1. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.   
[Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.   
[Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.   
[Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the cover assembly - instrument panel LWR driver.   
[Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.](#)
5. Remove the combination meter assembly.   
[Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REMOVAL.](#)
6. Remove the GPS antenna assembly.
  - (1) Disconnect the connector.
  - (2) Remove screws and remove the GPS antenna assembly.
  - (3) Tie a string to the GPS antenna assembly connector on the main body side.

**Note:**

A string makes operation easier during installation.

- (4) Remove the cord clip and clamp, and pull out the GPS antenna assembly cord from the combination meter side.




- (5) When the GPS antenna assembly cord is pulled out, remove the string attached to the connector in step (3).

**Note:**

Leave the attached string inside the instrument panel, and use it during installation.



## 5. GNSS ANTENNA

For operation procedures of GNSS antenna, refer to "GPS Antenna".  [Ref. to ENTERTAINMENT & MONITORING>Antenna>REMOVAL > GPS ANTENNA.](#)




### ENTERTAINMENT & MONITORING > Antenna INSTALLATION

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#### 1. ROOF ANTENNA

1. Install the antenna assembly - radio.  
**Tightening torque:**  
4.5 N·m (0.5 kgf-m, 3.3 ft-lb)
2. Install the trim panel - roof assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>INSTALLATION.](#)
3. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

#### 2. ANTENNA FEEDER CORD

1. Install the cord assembly - antenna feeder and the trim panel - roof assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>INSTALLATION.](#)
2. Install the floor mat.  [Ref. to EXTERIOR/INTERIOR TRIM>Floor Mat>INSTALLATION.](#)
3. Install the cover side sill - front INN and cover side sill - front.
4. Install the panel center LWR LH.
5. Install the cover assembly - instrument panel LWR driver. (LHD model)
6. Install the pocket assembly and the back panel - pocket. (RHD model)
7. Install the audio assembly or navigation assembly.
8. Install the grille assembly - CTR ventilation.
9. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

#### 3. TELEMATICS ANTENNA


1. Install the telematics antenna.  
**Tightening torque:**  
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)  
**Note:**  
**Install the telematics antenna by using the sting left inside the parts to pull the part into the instrument panel.**
2. Install the GNSS antenna assembly.
3. Install the combination meter assembly.
4. Install the cover assembly - instrument panel LWR driver.
5. Install the audio assembly or navigation assembly.
6. Install the grille assembly - CTR ventilation.
7. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

#### 4. GPS ANTENNA


1. Install the GPS antenna assembly and GPS antenna assembly cord.

**Note:**

**Install the GPS antenna assembly cord by using the sting left inside the parts to pull the part into the instrument panel.**

- 2.** Install the combination meter assembly.
- 3.** Install the cover assembly - instrument panel LWR driver.
- 4.** Install the audio assembly or navigation assembly.
- 5.** Install the grille assembly - CTR ventilation.
- 6.** Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)


## **5. GNSS ANTENNA**





For operation procedures of GNSS antenna, refer to "GPS Antenna".  [Ref. to ENTERTAINMENT & MONITORING>Antenna>INSTALLATION > GPS ANTENNA.](#)

## REMOVAL

### 1. SATELLITE SWITCH ASSEMBLY

**Caution:**

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)

1. Set the tire to the straight-ahead position.
2. Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
3. Remove the driver's airbag module.  [Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.](#)
4. Remove the steering wheel.  [Ref. to POWER ASSISTED SYSTEM \(POWER STEERING\)>Steering Wheel>REMOVAL.](#)
5. Remove the satellite switch assembly.  [Ref. to POWER ASSISTED SYSTEM \(POWER STEERING\)>Steering Wheel>DISASSEMBLY.](#)

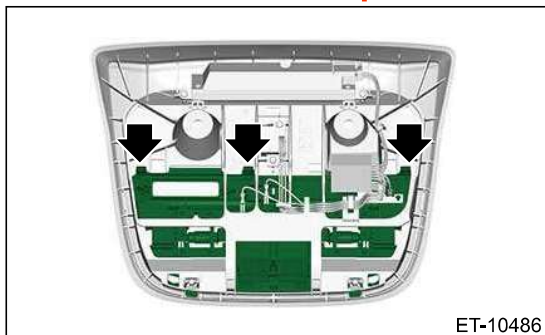
### 2. TELEMATICS BUTTON

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the light assembly - map.  [Ref. to LIGHTING SYSTEM>Spot Map Light>REMOVAL.](#)
3. Remove the telematics button.

(1) Release the claws and remove the front side of the frame.

**Caution:**

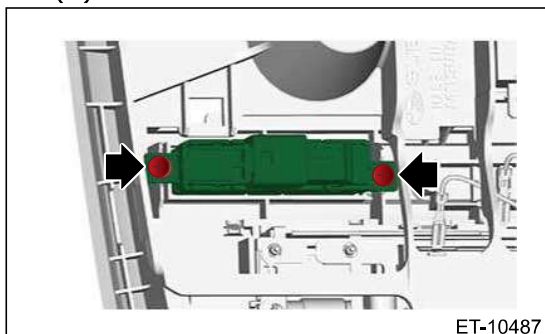
**Be careful not to pull the harness.**



**Note:**

**The frame cannot be removed.**

(2) Remove the screws from the frame clearance, and remove the telematics button.











## INSTALLATION



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### 1. SATELLITE SWITCH ASSEMBLY

**Caution:**

- Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM".  [Ref. to AIRBAG SYSTEM>General Description>CAUTION.](#)
  - Do not allow harness and connectors to interfere or get tangled up with other parts.
  - If the steering wheel has been removed, make sure that the steering roll connector is not turned from the original position.
  - If the steering wheel and steering angle sensor (steering roll connector) are removed, perform "VSC(VDC) Centering Mode" of the VDC.  [Ref. to VEHICLE DYNAMICS CONTROL \(VDC\)>VDC Control Module and Hydraulic Control Unit \(VDCCM&H/U\)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.](#)
  - Securely install the switch. Improper insertion of the pin or claw of the switch may cause improper installation.
1. Install the satellite switch assembly.  [Ref. to POWER ASSISTED SYSTEM \(POWER STEERING\)>Steering Wheel>DISASSEMBLY.](#)
  2. Align the center position of the steering roll connector.  [Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.](#)
  3. Install the steering wheel.  
**Tightening torque:**  
39 N·m (4 kgf-m, 28.8 ft-lb)  
**Clearance:**  
Between cover assembly - column and steering wheel: 4 — 6 mm (0.16 — 0.24 in)
  4. Install the driver's airbag module.  [Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.](#)
  5. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

### 2. TELEMATICS BUTTON

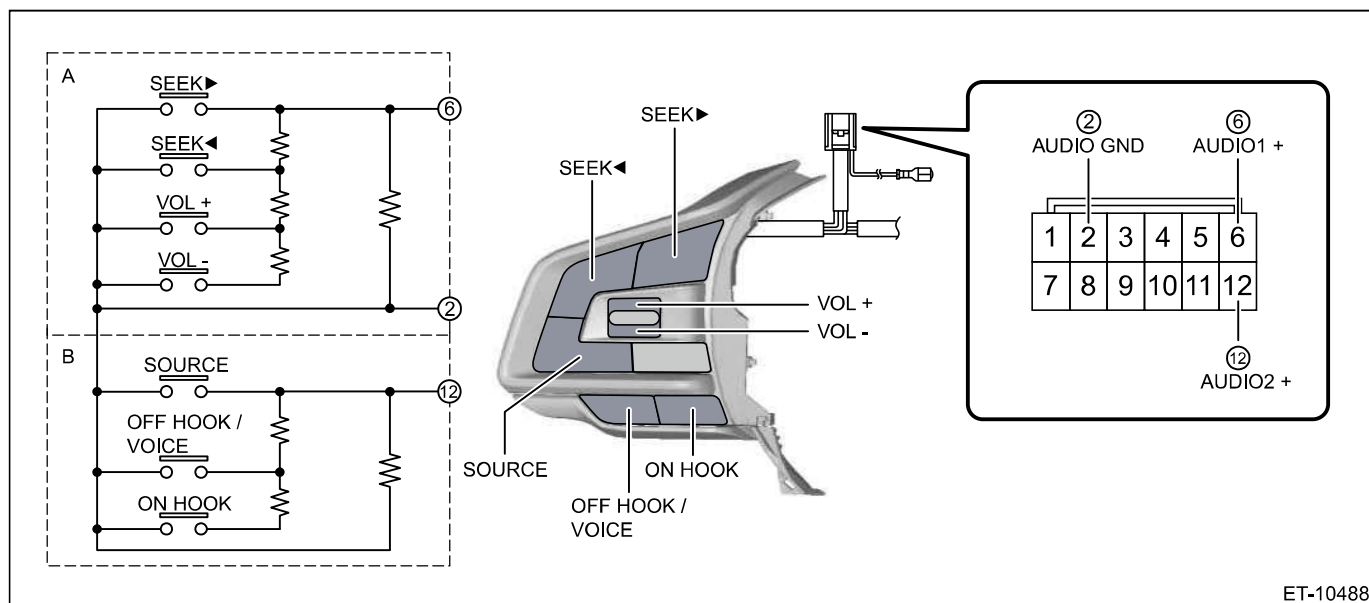
1. Install the telematics button.
2. Install the light assembly - map.  [Ref. to LIGHTING SYSTEM>Spot Map Light>INSTALLATION.](#)
3. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## INSPECTION

---

### 1. SATELLITE SWITCH ASSEMBLY

1. Measure the resistance between connector terminals.  
**Preparation tool:**  
Circuit tester



| Terminal No. | Inspection conditions                      |                       | Standard        |
|--------------|--|-----------------------|-----------------|
| 6 – 2        | SEEK (>)<br>SEEK (<)<br>VOL (+)<br>VOL (-) | A circuit is all OFF. | Approx. 100 kΩ  |
|              | SEEK (>)                                   | ON                    | Less than 1 Ω   |
|              | SEEK (<)                                   | ON                    | Approx. 330 Ω   |
|              | VOL (+)                                    | ON                    | Approx. 1,000 Ω |
|              | VOL (-)                                    | ON                    | Approx. 3,110 Ω |
| 12 – 2       | SOURCE<br>OFF HOOK/VOICE<br>ON HOOK        | B circuit is all OFF. | Approx. 100 kΩ  |
|              | SOURCE                                     | ON                    | Less than 1 Ω   |
|              | OFF HOOK/VOICE                             | ON                    | Approx. 330 Ω   |
|              | ON HOOK                                    | ON                    | Approx. 1,000 Ω |

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

| Terminal No.    | Inspection conditions  | Specification |
|-----------------|------------------------|---------------|
| 10 (+) – 11 (-) | Apply battery voltage. | Light ON      |

3. If it is found to be defective as a result of the measurement, replace the satellite switch assembly.

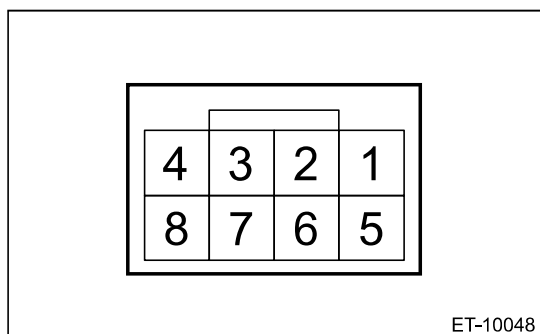
## 2. TELEMATICS BUTTON

1. Check the button.

(1) Measure the resistance between connector terminals.

**Preparation tool:**

Circuit tester



- SOS button

| Terminal No. | Inspection conditions | Standard       |
|--------------|-----------------------|----------------|
| 6 — 1        | OFF                   | Approx. 1.6 kΩ |
|              | ON                    | Less than 1 Ω  |

(2) Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

| Terminal No.  | Inspection conditions  | Specification |
|---------------|------------------------|---------------|
| 8 (+) — 2 (—) | Apply battery voltage. | Light ON      |

## 2. Check the indicator.

(1) Apply battery voltage between the connector terminals to check the lighting condition of the indicator.

| Terminal No.  | Inspection conditions  | Specification         |
|---------------|------------------------|-----------------------|
| 4 (+) — 1 (—) | Apply battery voltage. | Illuminating in green |
| 7 (+) — 1 (—) |                        | Illuminating in red   |


## 3. Replace the telematics button if it is found defective.

## ENTERTAINMENT & MONITORING > Microphone

### NOTE

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The microphone is integrated in the spot map light or stereo camera cover assembly.



For operation procedures, refer to "LIGHTING SYSTEM" section.  [Ref. to LIGHTING SYSTEM>Spot Map Light.](#)

## ENTERTAINMENT & MONITORING > Navigation System

### WIRING DIAGRAM

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Refer to "Navigation System" in the wiring diagram.

- Impreza model:  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Navigation System>WIRING DIAGRAM.](#)
- XV model:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Navigation System>WIRING DIAGRAM.](#)

## ENTERTAINMENT & MONITORING > Navigation System

### OPERATION

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For operation, refer to "Audio System".  [Ref. to ENTERTAINMENT & MONITORING>Audio System>OPERATION.](#)

## ENTERTAINMENT & MONITORING > Navigation System

### INSPECTION

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For inspection, refer to "Audio System".  [Ref. to ENTERTAINMENT & MONITORING>Audio System>INSPECTION.](#)

## ENTERTAINMENT & MONITORING > Navigation System

### NOTE

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For procedure of each component in the navigation system, refer to the respective section.

- Navigation unit:  [Ref. to ENTERTAINMENT & MONITORING>Navigation Body.](#)
- GPS antenna:  [Ref. to ENTERTAINMENT & MONITORING>Antenna.](#)

## ENTERTAINMENT & MONITORING > Navigation Body

### NOTE

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For the operation procedures for navigation assembly, refer to "Audio".  [Ref. to ENTERTAINMENT & MONITORING>Audio.](#)

## ENTERTAINMENT & MONITORING > Telematics System

### WIRING DIAGRAM

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Refer to "Telematics System" in the wiring diagram.

- Impreza model:  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Telematics System>WIRING DIAGRAM.](#)
- XV model:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Telematics System>WIRING DIAGRAM.](#)

## ENTERTAINMENT & MONITORING > Telematics System

### INSPECTION

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For inspection, refer to "Basic Diagnostic Procedure" in "TELEMATICS SYSTEM (DIAGNOSTICS)".  [Ref. to TELEMATICS SYSTEM \(DIAGNOSTICS\)>Basic Diagnostic Procedure.](#)

## ENTERTAINMENT & MONITORING > Telematics System

### NOTE




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For procedure of each component in the telematics system, refer to the respective section.

- Data communication module:  [Ref. to ENTERTAINMENT & MONITORING>Data Communication Module.](#)
- Antenna:  [Ref. to ENTERTAINMENT & MONITORING>Antenna.](#)
- Telematics button:  [Ref. to ENTERTAINMENT & MONITORING>Switches and Harness.](#)

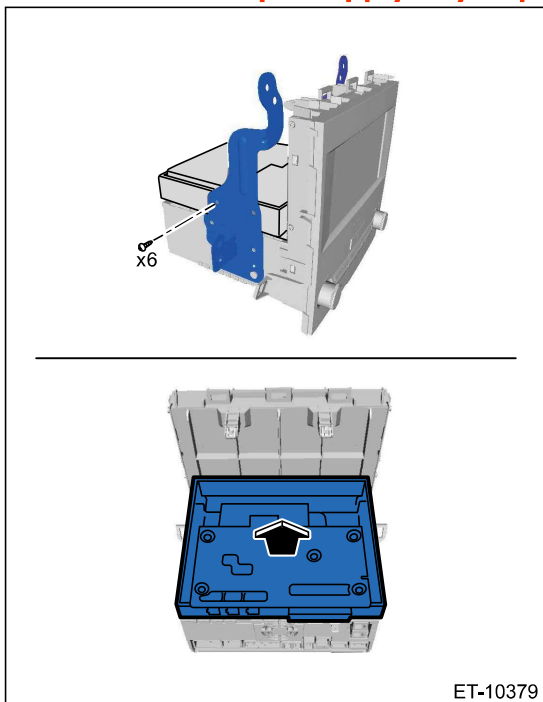
## REMOVAL

### 1. DATA COMMUNICATION MODULE

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.  [Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the data communication module.
  - (1) Remove the screws.
  - (2) Remove the audio bracket or navigation bracket, and then remove the data communication module.

**Caution:**



**Do not drop or apply any impact to the data communication module.**



**Note:**

**Remove the screws on RH side in the same procedure as on the LH side.**

### 2. BACKUP BATTERY

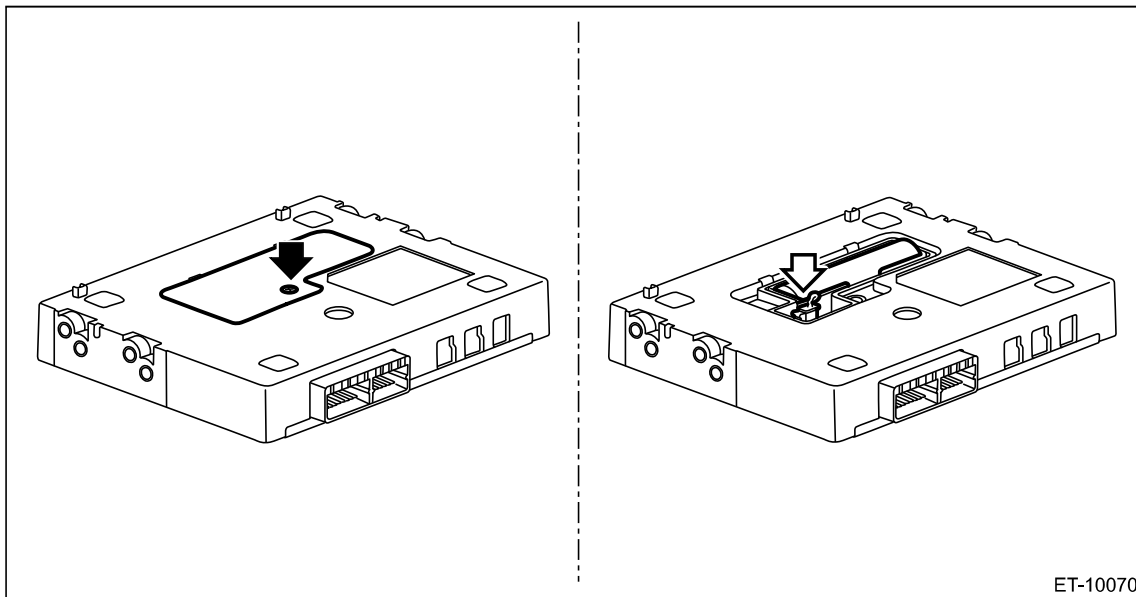
1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the data communication module.  [Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>REMOVAL > DATA COMMUNICATION MODULE.](#)
3. Remove the backup battery.
  - (1) Remove the screws, and then remove the battery cover.

**Preparation tool:**

**TORX® T10**

- (2) Disconnect the connector and remove the backup battery.





## ENTERTAINMENT & MONITORING > Data Communication Module

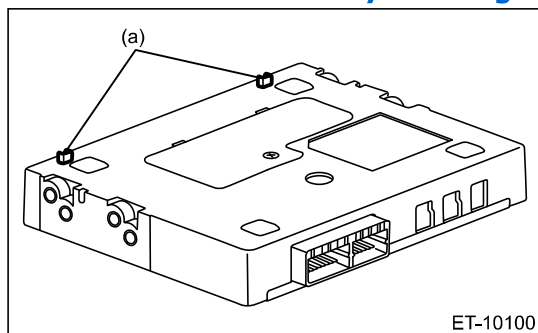
### INSTALLATION



#### 1. DATA COMMUNICATION MODULE

1. Install the data communication module.

**Note:**

**Align the positioning pin (a) of the data communication module with the positioning hole of the audio assembly or navigation assembly.**





2. Install the audio assembly or navigation assembly.
3. Install the grille assembly - CTR ventilation.
4. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
5. If the data communication module is replaced with a new part, make sure that the green LED blinks, and then press and hold the SOS button for two seconds to enter normal mode.
6. Check the LED illumination status of the telematics button.  [Ref. to TELEMATICS SYSTEM \(DIAGNOSTICS\)>Check List for Interview>CHECK > LED ILLUMINATION STATUS LIST.](#)

#### 2. BACKUP BATTERY

1. Install the backup battery.
2. Install the battery cover.

**Tightening torque:**

0.3 N·m (0.03 kgf-m, 0.2 ft-lb)

3. Install the data communication module.  [Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>INSTALLATION > DATA COMMUNICATION MODULE.](#)
4. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## ENTERTAINMENT & MONITORING > Data Communication Module

### INSPECTION

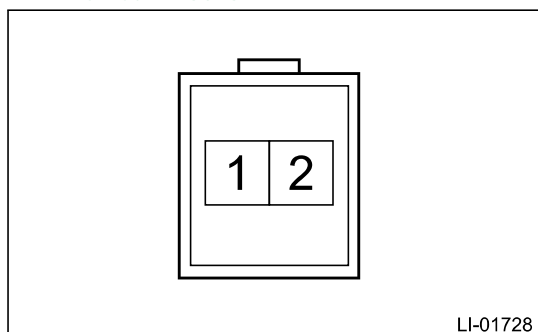
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#### 1. BACKUP BATTERY

1. Measure the voltage between connector terminals.

##### Preparation tool:

Circuit tester



| Terminal No.  | Standard    |
|---------------|-------------|
| 1 (+) — 2 (—) | 2 V or more |



2. Replace the backup battery if the inspection result is not within the standard value.

## ENTERTAINMENT & MONITORING > Camera

### WIRING DIAGRAM

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For wiring diagrams related to the camera, refer to the following items.

- Impreza model:  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Rearview Camera System>WIRING DIAGRAM.](#)
- XV model:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Rearview Camera System>WIRING DIAGRAM.](#)



## ENTERTAINMENT & MONITORING > Camera

### REMOVAL

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#### 1. 4 DOOR MODEL

##### • REAR

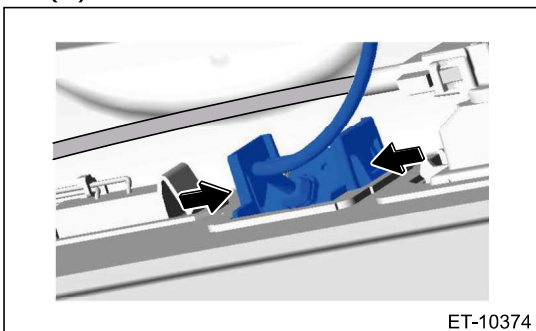
1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the trim panel - trunk lid.  [Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.](#)
3. Remove the rearview camera assembly.

##### **Caution:**

**Do not drop or apply any impact to the rearview camera because it is a precision equipment.**




(1) Disconnect the connector.

(2) Disconnect the claws and then remove the rearview camera assembly.



#### 2. 5 DOOR MODEL

##### • REAR

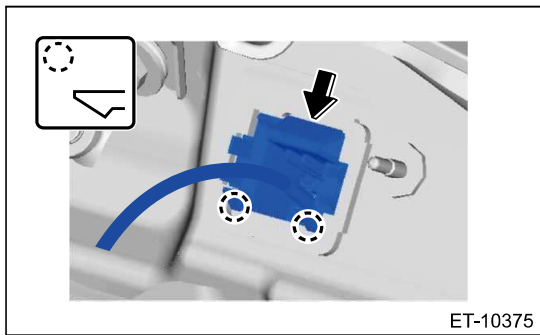
1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the trim panel - rear gate.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Gate Trim>REMOVAL.](#)
3. Remove the garnish assembly - rear gate.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Gate Garnish>REMOVAL.](#)
4. Remove the rearview camera assembly.

##### **Caution:**

**Do not drop or apply any impact to the rearview camera because it is a precision equipment.**

(1) Disconnect the connector.

(2) Release the claw and hook, and then remove the rearview camera assembly.



## ENTERTAINMENT & MONITORING > Camera

### INSTALLATION

#### 1. 4 DOOR MODEL

##### • REAR

1. Install the rearview camera assembly.

##### Note:

**Press-in the rearview camera assembly until a locking sound is heard.**

2. Install the trim panel - trunk lid.
3. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
4. Confirm the marker position.  [Ref. to ENTERTAINMENT & MONITORING>Camera>INSPECTION.](#)


#### 2. 5 DOOR MODEL

##### • REAR

1. Install the rearview camera assembly.

##### Note:

**Align the lower hook of the rearview camera assembly with the lower part of the panel, and then press-in the rearview camera assembly until a locking sound is heard.**

2. Install the garnish assembly - rear gate.  [Ref. to EXTERIOR/INTERIOR TRIM>Rear Gate Garnish>INSTALLATION.](#)
3. Install the trim panel - rear gate.
4. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
5. Confirm the marker position.  [Ref. to ENTERTAINMENT & MONITORING>Camera>INSPECTION.](#)

## ENTERTAINMENT & MONITORING > Camera

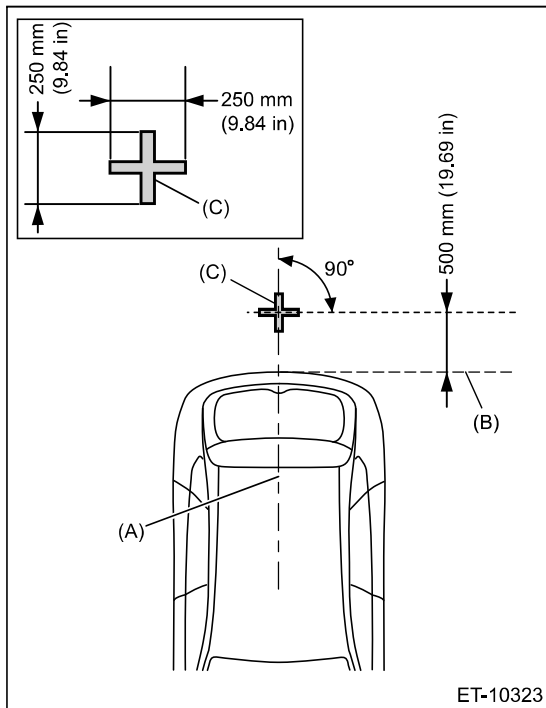
### INSPECTION

#### 1. REAR

1. Park the vehicle at the level place where there are enough area at the rear of the vehicle.
2. Attach the tape as the target point for standard at the floor rearward of the vehicle as shown in the figure below.

##### Note:

**Standard tape width is about 30 — 50 mm (1.18 — 1.97 in) and brilliant color shall be used.**



- (A) Vehicle body center line
- (B) Rear edge of bumper
- (C) Target point

**3.** Confirm the following before checking the corresponding items.





- (1) Rearview camera image is not displayed. (Everything except for the camera screen is displayed properly.)
  1. Check the reverse signal with the {Vehicle Signal} screen in the Line Diag mode. [Ref. to ENTERTAINMENT & MONITORING>Audio System>OPERATION > CHECK VEHICLE SIGNALS WITH LINE DIAG MODE.](#)
  2. Check the rear view camera connection status with the {Connection} screen in the Line Diag mode. [Ref. to ENTERTAINMENT & MONITORING>Audio System>OPERATION > CHECK CONNECTIONS WITH LINE DIAG MODE.](#)
- (2) The guide line is not displayed, or the guide line position is not aligned.  
 The rearview camera or its installation location on the vehicle may be deformed. Check the rearview camera and its installation location on the vehicle, and repair or replace if necessary.

## ENTERTAINMENT & MONITORING > Accessory Power Supply Socket

### WIRING DIAGRAM

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Refer to "Accessory Power Supply Socket System" in the wiring diagram.





- Impreza model
  - Front:  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Front Accessory Power Supply Socket System>WIRING DIAGRAM.](#)
  - Rear:  [Ref. to WIRING SYSTEM\(IMPREZA MODEL\)>Rear Accessory Power Supply Socket System>WIRING DIAGRAM.](#)
- XV model
  - Front:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Front Accessory Power Supply Socket System>WIRING DIAGRAM.](#)
  - Rear:  [Ref. to WIRING SYSTEM\(XV MODEL\)>Rear Accessory Power Supply Socket System>WIRING DIAGRAM.](#)

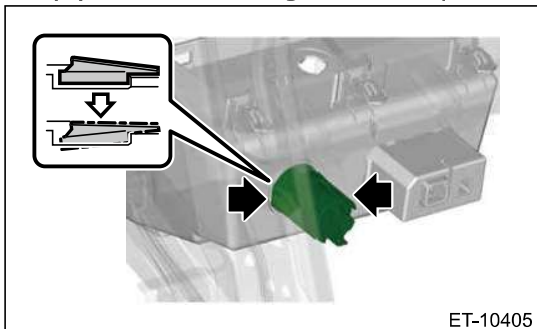
## ENTERTAINMENT & MONITORING > Accessory Power Supply Socket

### REMOVAL



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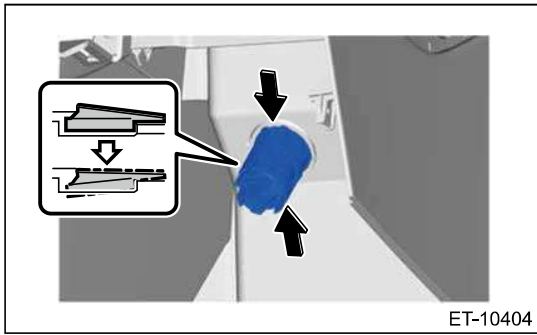
#### 1. FRONT

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.  [Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the heater control assembly.  [Ref. to AIR CONDITIONER>Control Panel>REMOVAL.](#)
5. Remove the socket assembly.  
(1) While releasing the claw, press it in from the rear to remove the socket assembly.



#### 2. REAR

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the cover assembly - front and the console box assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.](#)
3. Remove the socket assembly.  
(1) While releasing the claw, press it in from the rear to remove the socket assembly.



## ENTERTAINMENT & MONITORING > Accessory Power Supply Socket

### INSTALLATION



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#### 1. FRONT

1. Install the socket assembly.

**Note:**

**Align the groove of the tray - center UPR with the claw of the socket assembly.**



2. Install the heater control assembly.  [Ref. to AIR CONDITIONER>Control Panel>INSTALLATION.](#)
3. Install the audio assembly or navigation assembly.
4. Install the grille assembly - CTR ventilation.
5. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

#### 2. REAR

1. Install the socket assembly.

**Note:**

**Align the groove of the console box assembly with the claw of the socket assembly.**





2. Install the cover assembly - front and the console box assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.](#)
3. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

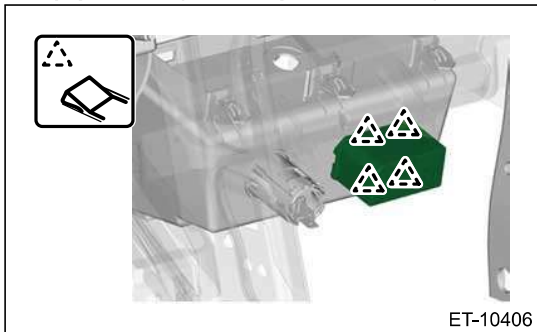
## ENTERTAINMENT & MONITORING > External Connection Terminal

### REMOVAL



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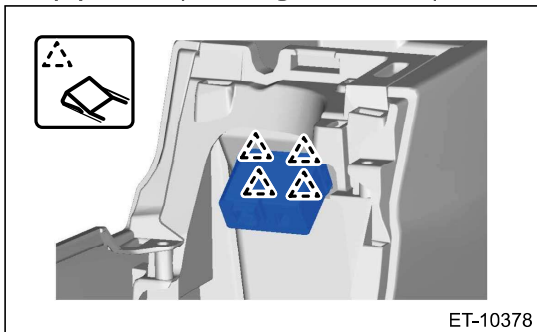
#### 1. FRONT

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the grille assembly - CTR ventilation.  [Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > CENTER GRILLE ASSEMBLY.](#)
3. Remove the audio assembly or navigation assembly.  [Ref. to ENTERTAINMENT & MONITORING>Audio>REMOVAL.](#)
4. Remove the heater control assembly.  [Ref. to AIR CONDITIONER>Control Panel>REMOVAL.](#)
5. Remove the unit assembly - AUX.  
(1) While pressing the claw, press it in from the rear to remove the unit assembly - AUX.



#### 2. REAR

1. Disconnect the ground cable from battery.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)
2. Remove the cover assembly - front and the console box assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.](#)
3. Remove the unit assembly - AUX.  
(1) While pressing the claw, press it in from the rear to remove the unit assembly - AUX.




## ENTERTAINMENT & MONITORING > External Connection Terminal

### INSTALLATION

---



#### 1. FRONT

1. Install the unit assembly - AUX.
2. Install the heater control assembly.  [Ref. to AIR CONDITIONER>Control Panel>INSTALLATION.](#)
3. Install the audio assembly or navigation assembly.



4. Install the grille assembly - CTR ventilation.
5. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## **2. REAR**

1. Install the unit assembly - AUX.
2. Install the cover assembly - front and the console box assembly.  [Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.](#)
3. Connect the battery ground terminal.  [Ref. to REPAIR CONTENTS>NOTE > BATTERY.](#)

## ENTERTAINMENT & MONITORING > Diagnostics with Phenomenon

### NOTE

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For the diagnostics with phenomenon, refer to the "INFOTAINMENT SYSTEM (DIAGNOSTICS)" section.

 [Ref. to INFOTAINMENT\(DIAGNOSTICS\) >Diagnostics with Phenomenon.](#)

## ENTERTAINMENT & MONITORING > Service Diagnostics Mode

### NOTE

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For the service diagnostic mode, refer to the "INFOTAINMENT SYSTEM (DIAGNOSTICS)" section.  [Ref. to INFOTAINMENT\(DIAGNOSTICS\) >Service Diagnostics Mode.](#)