

AUDIO AND ENTERTAINMENT SYSTEM

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دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

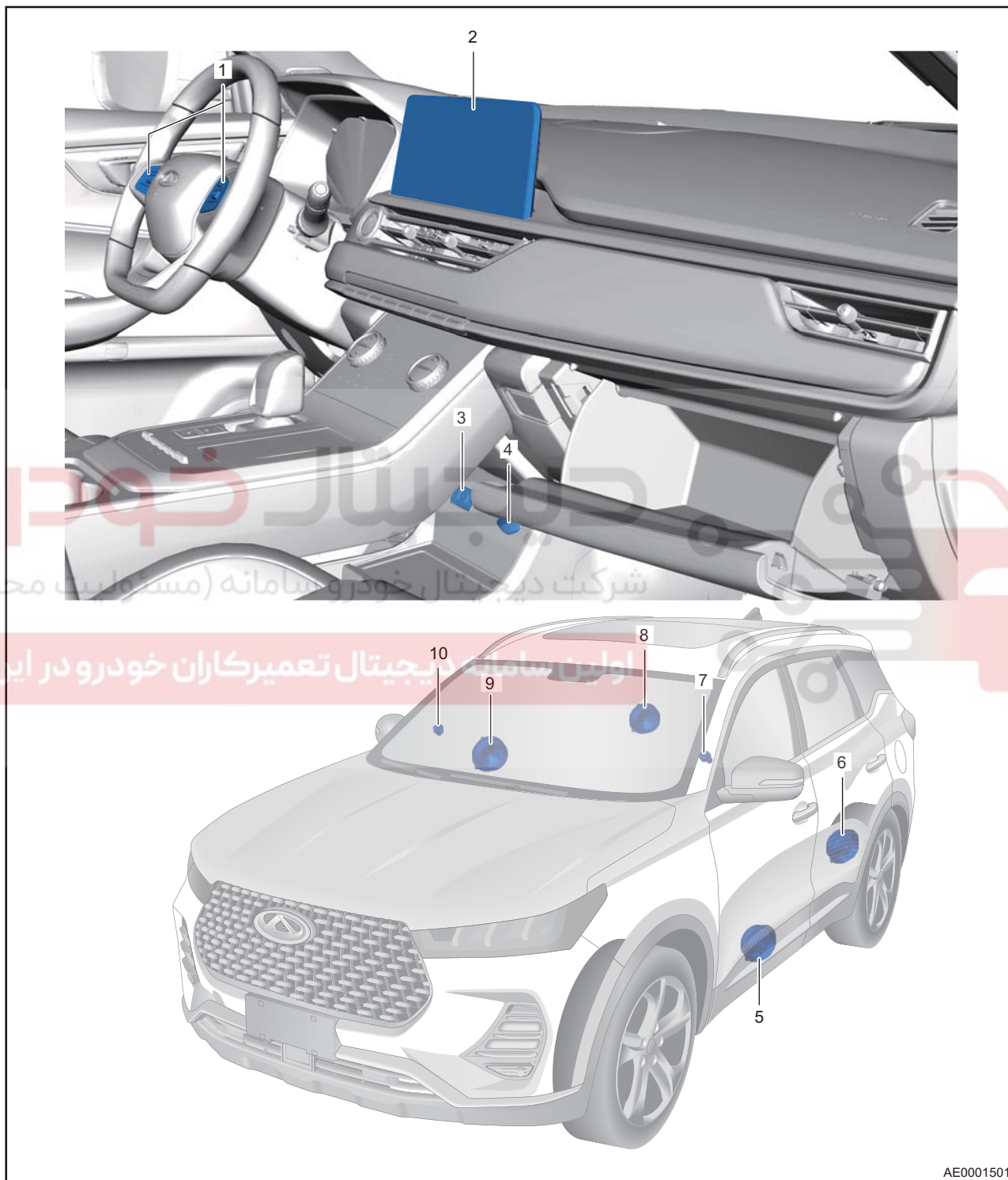
اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



GENERAL INFORMATION

Overview

Description



AE0001501

1 - Multi-function Button Assembly	2 - Audio Head Unit Display
3 - Multi-function Interface	4 - Backup Power Supply
5 - Front Left Woofer Assembly	6 - Rear Left Woofer Assembly
7 - Left Tweeter Assembly	8 - Rear Right Woofer Assembly

9 - Front Right Woofer Assembly

10 - Front Right Tweeter Assembly

Audio system mainly consists of no disc DVD/audio head unit (if equipped), speakers and antenna.
No disc DVD mainly consists of no disc DVD head unit, center control panel, multi-function interface.

Inspection

Hint:

If some functions of system are found failure before repairing, please read the instruction carefully, and then check the table below, which will help you to clear DTC.

Current Status	Symptom	Possible Cause and Solution
General condition	Head unit operates, but has no sound or sound is very low.	Turn up the volume. Check setting of front and rear, left and right balance for horn.
	Navigation volume can not be adjusted	Stop vehicle, and adjust volume on navigation screen or volume setting screen.
	Head unit screen can not be operated	In some states, operations of screen are not available. End current state, long press the Power button for 10S to restart the system and try to operate the screen again. Or click the [SET] button to restore factory setting in the system setting.
	Some functions in air conditioning and setting are not available.	Some functions related to the vehicle are available only when ENGINE START STOP switch is in ON.
Radio playback	Poor reception	Check if antenna is fully deployed, connection is correct (whether negative is grounded). The required radio signal is too weak, please use manual search.
	Automatic search can not search a available station	When there are several available stations in current range and favorite station is 0, only 40 stations with the strongest signal can be searched. If you have other favorite ones, please manually search and store them.
USB file playback	There are unplayable files	The system can not support all formats files. There are many audio and video formats nowadays. Even file formats supported by audio video descriptions may not be supported due to the different encoding formats. Please refer to audio video descriptions, download supported formats and try.
	Volume fluctuates up and down during playback	Because there is no uniform standard, the volume can not be handled uniformly, please adjust the volume knob by yourself.
	Knocking / noise	It may be caused when the original file is being recorded or caused by noise. Please confirm if it is a native problem with other players.
Music playback	USB audio, video, pictures can not be played normally and no prompt is given	Due to large number of USB manufacturers, the file system, supported protocols, etc. are very different, the system can not support all of them. Please try another USB. USB device types supported by the system are defined in [music] section, please use it as a reference.
	Bluetooth music name is showed as unknown	The model shows name in accordance with Bluetooth standard, if phone does not comply with the standard, it will be shown as unknown. Please change your phone and try again.
Speech recognition	Inaccurate speech recognition	Say out voice command words provided by voice recognition system as much as possible and use Mandarin; Try to keep the vehicle quiet, and use voice recognition function in low noise surroundings; Microphone is in dome light position, so if noise is unavoidable, say command out as close to the microphone as possible.

Hint:

When checking general malfunctions of audio system, perform inspection at spacious area without obstacle nearby.

Specifications

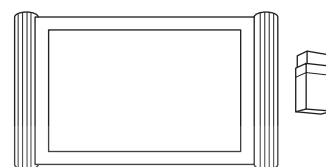
Torque Specifications

Description	Torque (N·m)
No Disc DVD/Audio Head Unit Fixing Screw	5 ± 1
Audio Head Unit Display Fixing Screw	1.5 ± 0.5
Front Speaker Fixing Screw	2 ± 0.5
Rear Speaker Fixing Screw	2 ± 0.5
Front Speaker Fixing Screw	2 ± 0.5
Combined Antenna Fixing Nut	5 ± 1

Tools

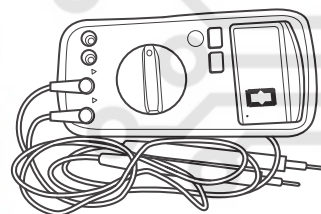
General Tools

Diagnostic Tester



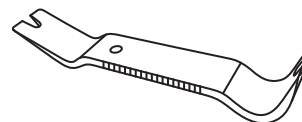
RCH000106

Digital Multimeter



RCH0002006

Interior Crow Plate



RCH002506

DIAGNOSIS & TESTING

Diagnostic Content

Problem Symptoms Table

Hint:

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

Symptom	Suspected Area
Noise occurs	Noise source (interference)
	Tweeter assembly
	Instrument cluster
No disc DVD/audio head unit assembly does not operate	Center control panel (malfunction)
	No disc DVD/audio head unit fuse (blown)
	No disc DVD/audio head unit (malfunction)
	Wire harness and connector (malfunction)
No sound can be heard from speakers	System setting (incorrect)
	Speaker assembly
	Center control panel
	Wire harness and connector
Radio broadcast signal cannot be received (poor reception)	Center control panel (malfunction)
	No disc DVD/audio head unit (malfunction)
	Options (interference)
	Combined antenna (malfunction)
	Wire harness and connector

Hint:

When checking general malfunctions of audio system, perform inspection at spacious area without obstacle nearby.

Diagnosis Tools

Diagnostic Tester

When connecting the diagnostic tester:

- Connect diagnostic tester (the latest software) to diagnostic interface for communication with vehicle.
- Diagnostic interface is located on instrument panel lower left protector.
- Diagnostic interface uses a trapezoidal design which can hold 16 terminals.

Digital Multimeter

When using digital multimeter:

- Troubleshoot electrical malfunctions and wire harness system.
- Look for basic malfunction.
- Measure voltage, current and resistance.

Diagnostic Help

When using digital multimeter:

1. Connect diagnostic tester (the latest software) to diagnostic interface, and make it communicate with vehicle electronic module through data network.
2. Confirm that malfunction is current, and carry out diagnostic test and repair procedures.
3. If Diagnostic Trouble Code (DTC) cannot be cleared, it indicates that there is a current malfunction.
4. Only use a digital multimeter to measure voltage of electronic system.
5. Refer to any Technical Bulletin that may apply to this malfunction.
6. Visually check related wire harness and connector.
7. Check and clean all audio entertainment system grounds related to the latest DTC.

8. If multiple trouble codes were set, use circuit diagrams and look for any common ground circuit or power supply circuit applied to DTC.

Intermittent DTC Troubleshooting

Intermittent DTC Troubleshooting

- If malfunction is intermittent, perform the followings:
- Check if connector is loose.
- Check if wire harness is worn, pierced, pinched or partially broken.
- Wiggle related wire harness and connector and observe if signal in related circuit is interrupted.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for data that has changed or DTC to reset during wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect the mounting areas of audio system, wire harness or wire harness connector and so on for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and ground parts related to DTC.
- Remove the no disc DVD/audio head unit from the malfunctioning vehicle and install it to a new vehicle and perform a test. If this DTC cannot be cleared, no disc DVD/audio head unit is malfunctioning. If DTC can be cleared, reinstall no disc DVD/audio head unit to original vehicle.
- If multiple trouble codes were set, refer to circuit diagrams to look for any common ground circuit or power supply circuit applied to DTC.
- Refer to any Technical Bulletin that may apply to this malfunction.

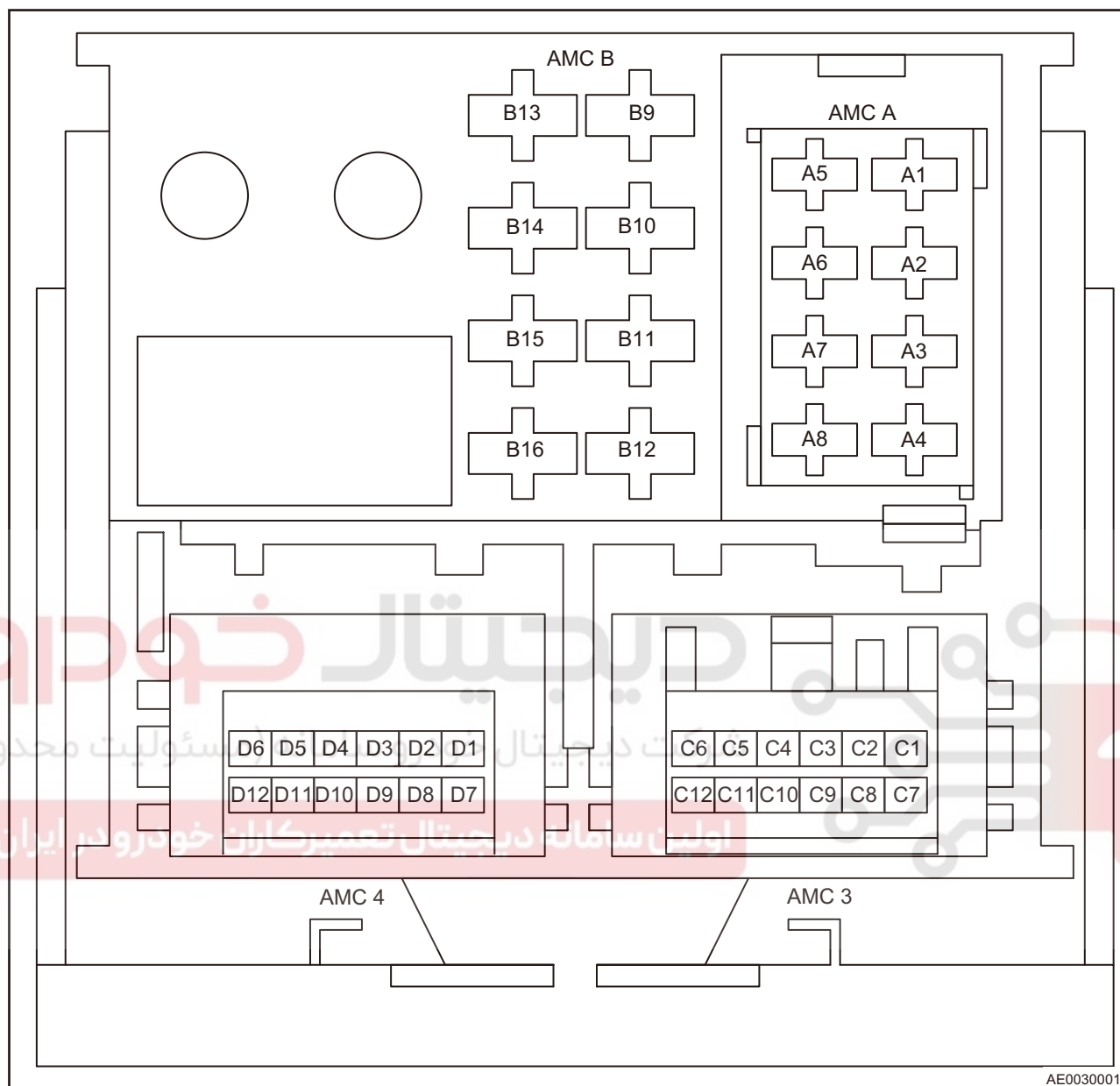
Ground Inspection

Groundings are very important to entire circuit system, which are normal or not can seriously affect the entire circuit system. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) and oxidation may increase load resistance. This case will seriously affect normal operation of circuit. Check the ground points as follows:

1. Remove ground bolt or nut.
2. Check all contact surfaces for tarnish, dirt and rust, etc.
3. Clean as necessary to ensure that contact is in good condition.
4. Reinstall ground bolt or nut securely.
5. Check if add-on accessories interfere with ground circuit.
6. If several wire harnesses are crimped into one ground terminal, check for proper crimps. Make sure that all wire harnesses are clean and securely fastened while providing a good ground path.

Audio and Entertainment System Controller Terminal List

Instrument Panel Wire Harness Connector Terminal List



AE0030001

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
A1	Rear Right Woofer +	C5	Camera Power Supply Ground
A2	Front Right Woofer +	C6	Video Signal -
A3	Front Left Woofer +	C7	CAN Low Signal
A4	Rear Left Woofer +	C8	Power Supply Switch (With Reset)
A5	Rear Right Woofer -	C9	MIC+ Signal
A6	Front Right Woofer -	C10	Control Panel Signal Ground
A7	Front Left Woofer -	C11	Camera Power Supply
A8	Rear Left Woofer -	C12	Video Signal +
B9	Steering Wheel Button Signal 1	D1	Audio Signal Output Positive
B10	Steering Wheel Button Ground	D2	Audio Signal Output Negative
B11	Steering Wheel Button Signal 2	D3	Mute
B12	Power Supply Ground	D4	-

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
B13	Trigger Power Supply Signal	D5	-
B14	-	D6	Volume -
B15	Operation/Memory Power Supply	D7	-
B16	Night Light Power Supply	D8	MIC+
C1	CAN High Signal	D9	MIC-
C2	Starting Signal	D10	-
C3	MIC Signal	D11	-
C4	Control Panel Signal	D12	Volume +

Diagnosis Procedure

HINT

Use following procedures to troubleshoot the audio system.

1 Vehicle brought to workshop

Result

Go to
NEXT

NEXT

2 Check battery voltage

Check if battery voltage is normal.

OK

Standard voltage: Not less than 12 V.

Result

Go to
OK
NG

NG

Replace battery

OK

3 Customer problem analysis

Result

Go to
NEXT

NEXT

4 Read DTCs

Result

Go to
DTC output
No DTC is output

No DTC is output

Repair according to Problem Symptoms Table

DTC output

5 Read DTCs (current DTC and history DTC)

Result

Go to
Current DTC
History DTC

History DTC

Troubleshooting according to intermittent DTC troubleshooting flow

Current DTC

6 Repair according to Diagnostic Trouble Code (DTC) Chart

Result

Go to
NEXT

NEXT

7 Adjust, repair or replace

Result

Go to
NEXT

NEXT

8 Conduct test and confirm malfunction has been repaired

Result

Go to
NEXT

NEXT

End

Diagnostic Trouble Code (DTC) Chart

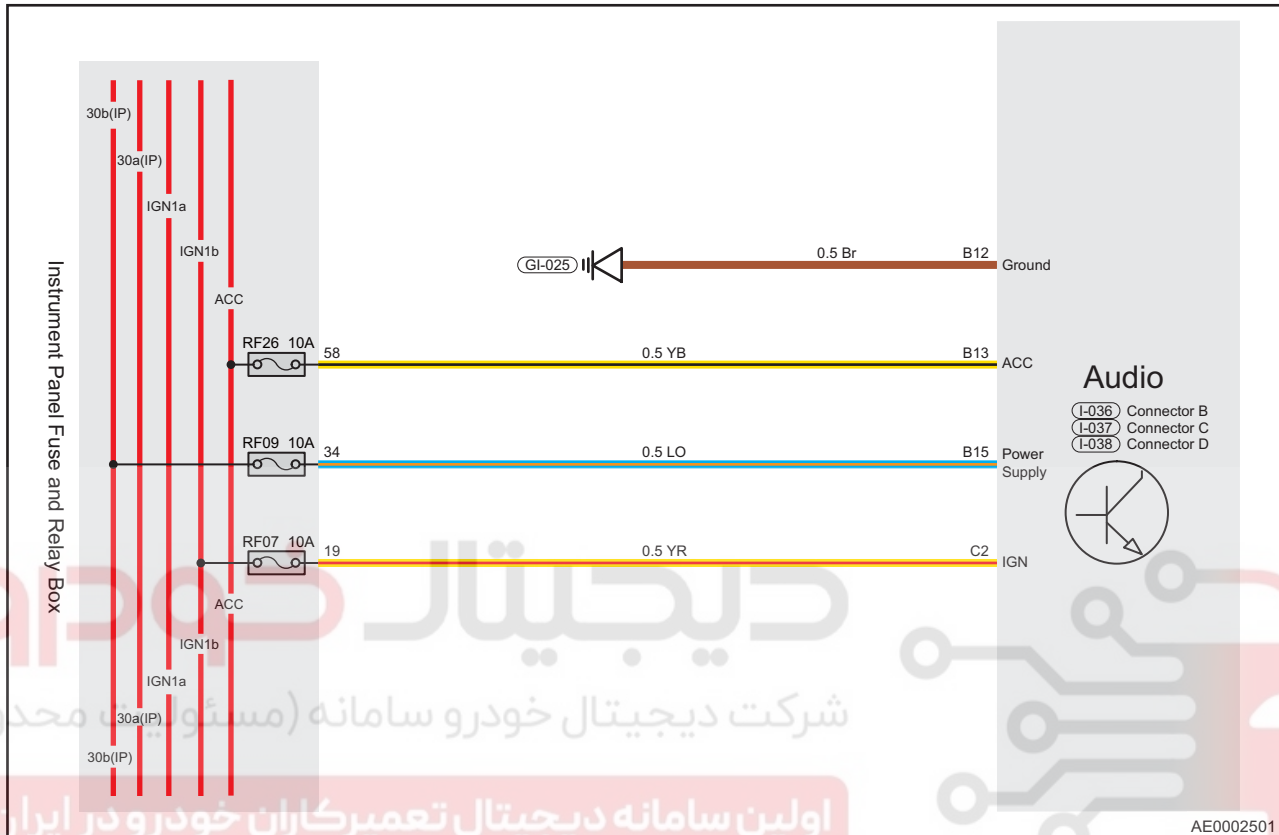
DTC	DTC Definition
B1800-16	Power Supply Voltage Below Threshold
B1800-17	Power Supply Voltage Above Threshold
B1810-00	Front Switch Error
B1811-00	Steering Switch Error
B1812-00	Speed Signal Abnormal
B1813-00	Speakers Connected Amplifier Failure
B1814-00	Tuner Antenna Abnormal
B1830-04	Amplifier Failure
B1832-04	Tuner IC R/W Failure
B1834-04	Voice Recognition IC R/W Failure
B1846-04	DSP IC R/W Failure
B1835-04	Communication Failure Between MCU and Main Processor
B1840-4B	MMI Over Temperature
B1841-19	USB1 Current Above Threshold
B1842-19	USB2 Current Above Threshold
B1844-04	SOC Communication Error With DESerializer
B1845-04	SOC Communication Error With TFTMCU

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DTC	B1800-16	Power Supply Voltage Below Threshold
DTC	B1800-17	Power Supply Voltage Above Threshold

Circuit Diagram



Description

DTC is stored when stopping high voltage DC output is detected.

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1800-16	Power Supply Voltage Below Threshold	ENGINE START STOP switch is in ON and engine is running	Charging system
B1800-17	Power Supply Voltage Above Threshold		Poor connection of no disc DVD/audio head unit ground wire Fuse malfunctions No disc DVD/audio head unit assembly damaged

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in DVD system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON, select "Read DTC".
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

CAUTION

Caution:

When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Diagnosis Procedure

1 Check the battery

- (a) Check if battery voltage is normal.

Result

Go to
OK
NG

NG

Recharge or replace battery

OK

2 Check battery terminal

- (a) Check if battery terminals are loose or corroded.

Result

Go to
OK
NG

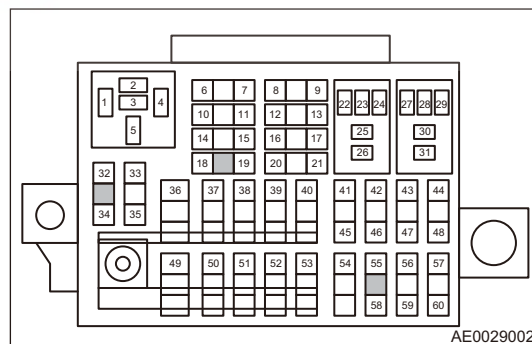
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Tighten or replace battery terminal.

OK

3 Check fuse

- (a) Unplug the fuses RF09 (10A), RF26 (10A) and RF07 (10A) from instrument panel fuse and relay box.



- (b) Inspect resistance of fuses RF09 (10A), RF26 (10A) and RF07 (10A).

Result

Go to
OK
NG

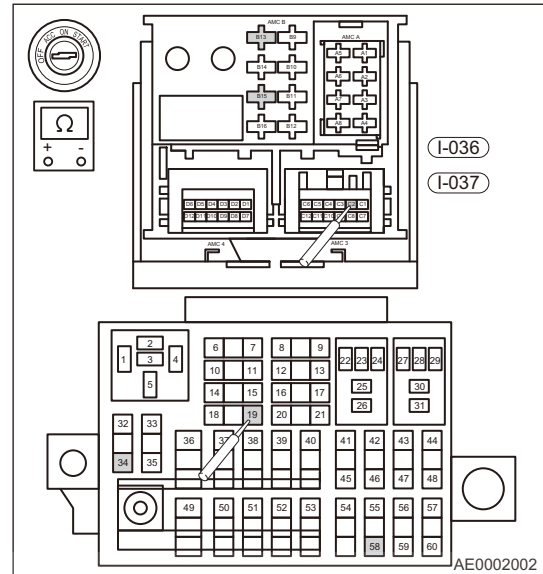
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Replace fuse

OK

4 Check instrument panel wire harness

(a) Turn ENGINE START STOP switch to OFF.



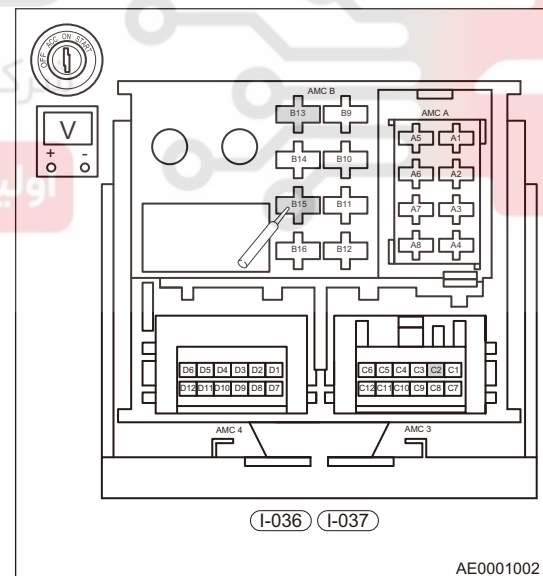
- (b) Disconnect the negative battery cable.
(c) Disconnect the connector I-052 from the no disc DVD.
(d) Connect the negative battery cable.
(e) Turn ENGINE START STOP switch to ON.
(f) Using a digital multimeter, measure voltage between no disc DVD connector I-036, I-037 and body, and detect it with a 21 W test lamp according to table below.

OK

Multimeter Connection	Condition	Specified Condition
I-036 (B15) - Ground	Always	Not less than 12 V
I-036 (B13) - Ground	Always	Not less than 12 V
I-037 (C2) - Ground	Always	Not less than 12 V

Result

Go to
OK
NG



48

(g) Using a digital multimeter, check for continuity between instrument panel fuse and relay box and no disc DVD connectors I-036, I-037 according to the table below.

OK

Multimeter Connection	Condition	Specified Condition
I-007 (19) - I-037 (C2)	Always	$\leq 1 \Omega$
I-007 (34) - I-036 (B15)	Always	$\leq 1 \Omega$
I-007 (58) - I-036 (B13)	Always	$\leq 1 \Omega$

NEXT

Repair or replace body wire harness and connector

NEXT

5 Reconfirm DTCs

- (a) Connect all connectors.
- (b) Connect the negative battery cable.
- (c) Turn ENGINE START STOP switch to ON.
- (d) Use diagnostic tester (the latest software) to record and clear DTCs stored in audio entertainment system.
- (e) Turn ENGINE START STOP switch to OFF and wait several seconds.
- (f) Turn ENGINE START STOP switch to ON.
- (g) Use diagnostic tester (the latest software) to read DTCs stored in audio entertainment system again.

Result

Go to
OK
NG

OK

System operates normally

NG

Replace no disc DVD



DTC	B1810-00	Front Switch Error
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Description

Detect that any front panel button is pressed for more than 30s

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1810-00	Front Switch Error	ENGINE START STOP switch is in ON	Center control panel

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in DVD system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON, select "Read DTC".
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

CAUTION

Caution:

When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Diagnosis Procedure

1	Check center control panel operation
----------	---

- Remove center control panel from malfunctioning vehicle. then install it to a new vehicle and perform a test.
- Connect all connectors.
- Connect negative battery cable, and turn ENGINE START STOP switch to ON.
- Check center control panel status.

Result

Go to
OK
NG

NG	Replace center control panel
-----------	-------------------------------------

OK

2	Reconfirm DTCs
----------	-----------------------

- Connect all connectors.
- Connect the negative cable to negative battery cable.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester (the latest software) to record and clear DTCs stored in audio entertainment system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester (the latest software) to read DTCs stored in audio entertainment system again.

Result

Go to
OK
NG

OK**System operates normally****NG****Replace no disc DVD**

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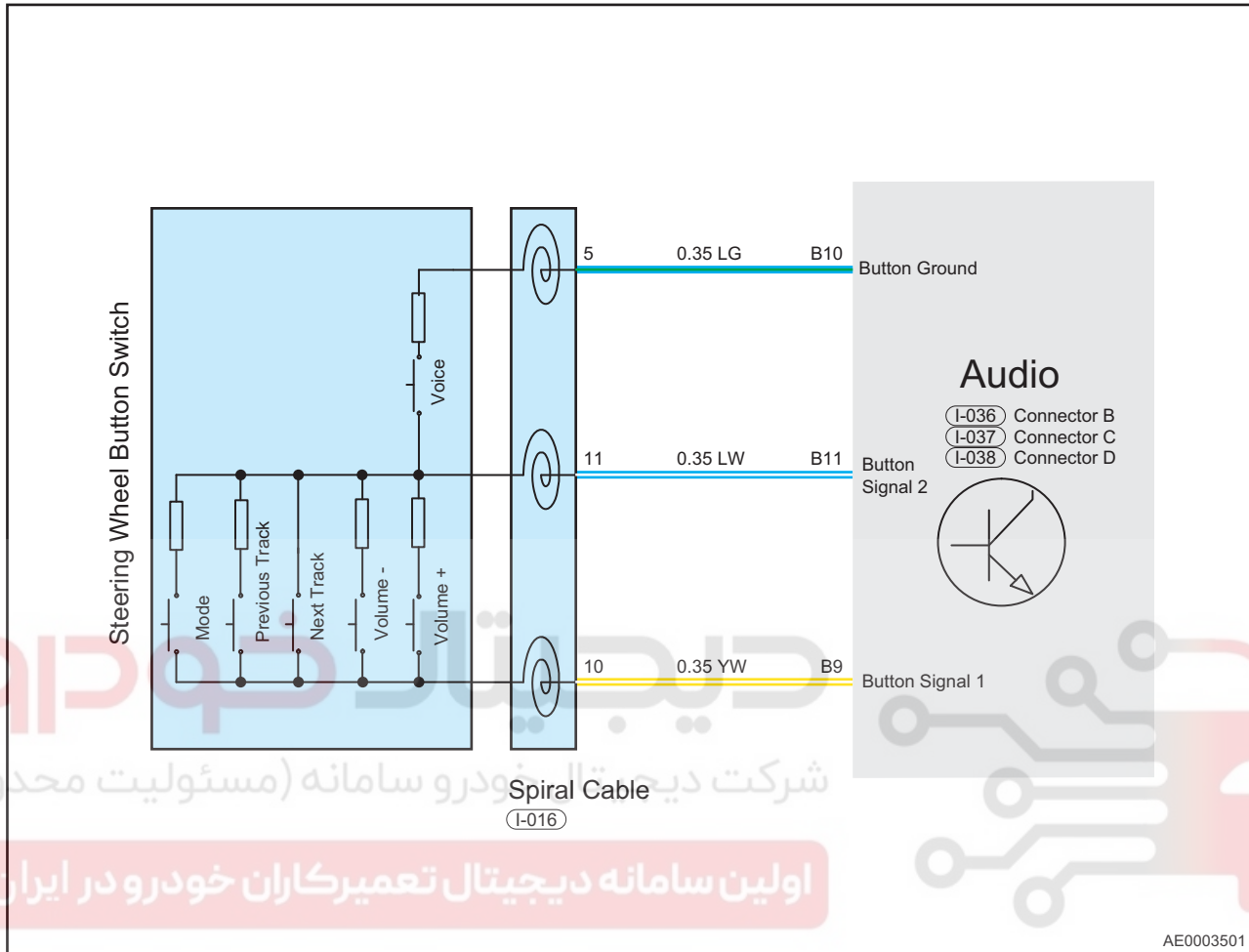


DTC

B1811-00

Steering Switch Error

Circuit Diagram



Description

Detect that any steering wheel line control button is pressed for more than 30s

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1811-00	Steering Switch Error	ENGINE START STOP switch is in ON	Steering wheel quick button

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12V before performing following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON, select "Read DTC".
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

Caution

Caution:

When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Diagnosis Procedure

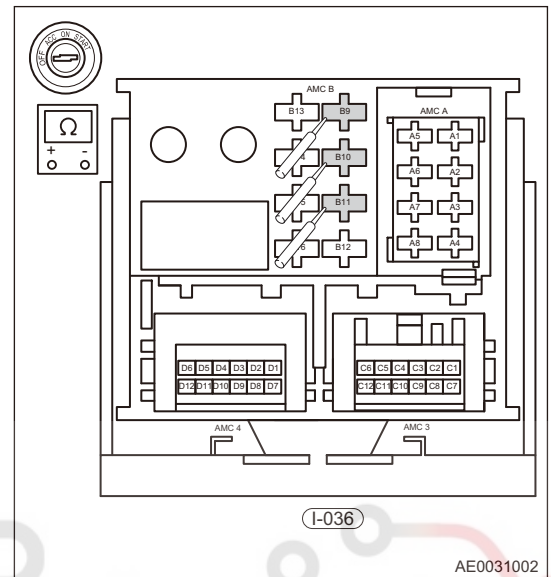
1 Check connector wire harness between multi-function button assembly and no disc DVD/audio head unit

- (a) Turn ENGINE START STOP switch to OFF.
 (b) Remove the No Disc DVD/audio head unit.
 (c) Check connector wire harness between multi-function button assembly and no disc DVD/audio head unit.
 Using a digital multimeter, check for continuity between connector wire harness of multi-function button assembly and no disc DVD/audio head unit according to the table.

Multimeter Connection	Condition	Operation Resistance (Ω)
I-036 (B11) - I-036 (B10)	Press voice	$\leq 1 \Omega$
I-036 (B10) - I-036 (B9)	Press volume +	1.4 KΩ
I-036 (B10) - I-036 (B9)	Press volume -	3.6 KΩ
I-036 (B10) - I-036 (B9)	Press previous song/answer	$\leq 1 \Omega$
I-036 (B10) - I-036 (B9)	Press next song/hang up	470Ω
I-036 (B10) - I-036 (B9)	Press mode	10KΩ

Result

Go to
NG
OK

OK**Reconfirm DTCs****NG****2 Check multi-function button assembly**

- (a) Turn ENGINE START STOP switch to OFF.
 (b) Remove the driver airbag.
 (c) Check multi-function button assembly.
 Using a digital multimeter, check for continuity between multi-function button assembly according to the table.

Multimeter Connection	Condition	Operation Resistance (Ω)
Terminal 3 - Terminal 6	Press voice	$\leq 1 \Omega$
Terminal 3 - Terminal 5	Press volume +	1.4 KΩ
Terminal 3 - Terminal 5	Press volume -	3.6 KΩ
Terminal 3 - Terminal 5	Press previous song/answer	$\leq 1 \Omega$
Terminal 3 - Terminal 5	Press next song/hang up	470Ω
Terminal 3 - Terminal 5	Press mode	10KΩ



Result

Go to
OK
NG

NG

Replace multi-function button assembly

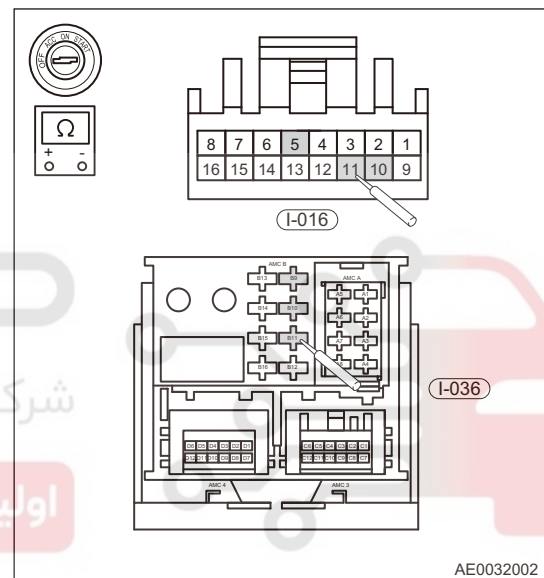
OK

3 Check instrument panel wire harness no disc DVD/audio head unit to clock spring

- Turn ENGINE START STOP switch to OFF.
- Disconnect the negative battery cable.
- Disconnect no disc DVD/audio head unit connector I-036 and spiral cable connector I-016.
- Using a digital multimeter, measure resistance between no disc DVD/ audio head unit connector I-052 and spiral cable connector I-016 and check for open according to table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-016 (11) - I-036 (B11)	Always	$\leq 1 \Omega$
I-016 (5) - I-036 (B10)	Always	$\leq 1 \Omega$
I-016 (10) - I-036 (B9)	Always	$\leq 1 \Omega$



AE0032002

Result

Go to
OK
NG

Repair or replace instrument panel wire harness and connector

4	Repair the clock spring and reconfirm DTCs
----------	---

- (a) Connect all connectors.
- (b) Connect the negative cable to negative battery cable.
- (c) Turn ENGINE START STOP switch to ON.
- (d) Use diagnostic tester (the latest software) to record and clear DTCs stored in audio entertainment system.
- (e) Turn ENGINE START STOP switch to OFF and wait several seconds.
- (f) Turn ENGINE START STOP switch to ON.
- (g) Use diagnostic tester (the latest software) to read DTCs stored in audio entertainment system again.

Result

Go to
OK
NG

System operates normally

Replace no disc DVD/audio head unit

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DTC	B1814-00	Tuner Antenna Abnormal
DTC	B1814-00	Tuner Antenna Abnormal

Description

When it detects the tuner antenna is abnormal, current DTC will be stored.

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1814-00	Tuner Antenna Abnormal	ENGINE START STOP switch is in ON	<ul style="list-style-type: none"> Antenna assembly (w/ amplifier) No disc DVD/audio head unit Wire harness and connector

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12V before performing following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect diagnostic tester to Data Link Connector (diagnostic interface).
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON, select "Read DTC".
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

CAUTION

Caution:

When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Diagnosis Procedure

1	Check the battery
----------	--------------------------

- (a) Check if battery voltage is normal.

Result

Go to
OK
NG

NG	Recharge or replace battery
-----------	------------------------------------

OK

48

2	Check battery terminal
----------	-------------------------------

- (a) Check if battery terminals are loose or corroded.

Result

Go to
OK
NG

NG	Tighten or replace battery terminal.
-----------	---

OK

3 Check combined antenna

- (a) Remove combined antenna from malfunctioning vehicle, then install it to a new vehicle and perform a test.
- (b) Check the radio operation.

Result

Go to
OK
NG

NG

Replace combined antenna

OK

4 Check wire harness and connector of radio and combined antenna

- (a) Turn ENGINE START STOP switch to OFF.
- (b) Disconnect the negative battery cable.
- (c) Disconnect no disc DVD/audio head unit connector of instrument panel wire harness.
- (d) Disconnect the combined antenna wire harness connector.
- (e) Using a digital multimeter, check for continuity of antenna connecting cable.

Result

Go to
OK
NG

Repair or replace faulty circuit

5 Reconfirm DTCs

- (a) Connect all connectors.
- (b) Connect the negative battery cable.
- (c) Turn ENGINE START STOP switch to ON.
- (d) Use diagnostic tester (the latest software) to record and clear DTCs stored in audio entertainment system.
- (e) Turn ENGINE START STOP switch to OFF and wait several seconds.
- (f) Turn ENGINE START STOP switch to ON.
- (g) Use diagnostic tester (the latest software) to read DTCs stored in audio entertainment system again.

Result

Go to
OK
NG

System operates normally

Replace no disc DVD/audio head unit

DTC	B1830-04	Amplifier Failure
DTC	B1832-04	Tuner IC R/W Failure
DTC	B1835-04	Communication Failure Between MCU and Main Processor
DTC	B1840-4B	MMI Over Temperature
DTC	B1841-19	USB1 Current Above Threshold
DTC	B1842-19	USB2 Current Above Threshold
DTC	B1844-04	SOC Communication Error With DESerializer
DTC	B1845-04	SOC Communication Error With TFTMCU
DTC	B1845-04	SOC Communication Error With TFTMCU

Description

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1830-04	Amplifier Failure	ENGINE START STOP switch is in ON	<ul style="list-style-type: none"> No disc DVD/audio head unit
B1832-04	Tuner IC R/W Failure		
B1835-04	Communication Failure Between MCU and Main Processor		
B1845-04	SOC Communication Error With TFTMCU		
B1840-4B	MMI Over Temperature		
B1841-19	USB1 Current Above Threshold		
B1842-19	USB2 Current Above Threshold		
B1844-04	SOC Communication Error With DESerializer		

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ENGINE START STOP switch to OFF and wait several seconds.
- Turn ENGINE START STOP switch to ON, select "Read DTC".
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If DTC is not detected, malfunction indicated by DTC is intermittent.

CAUTION**Caution:**

When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Diagnosis Procedure**1 Check no disc DVD/audio head unit**

- Remove no disc DVD/audio head unit from malfunctioning vehicle, then install it to a new vehicle and perform a test.
- Connect all connectors.
- Turn ENGINE START STOP switch to ON.
- Check if no disc DVD/audio head unit operates normally.

Result

Go to
OK
NG

OK

System operates normally

NG

Replace no disc DVD/audio head unit

ON-VEHICLE SERVICE

Audio Head Unit Display

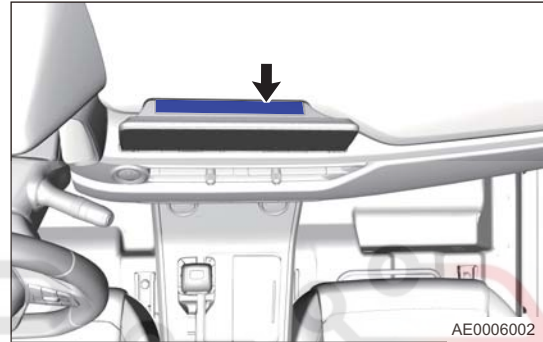
Removal

WARNING:

- Be sure to wear necessary safety equipment to prevent accidents, when removing audio head unit display.
- Appropriate force should be applied, when removing audio head unit display. Be careful not to operate roughly.
- Try to prevent interior from being scratched, when removing audio head unit display.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the audio head unit display.

- (a) Using an interior crow plate, pry up the cover (arrow) of audio head unit display.



- (b) Remove 2 fixing screws from audio head unit display and disconnect audio head unit display connector.

Tightening torque

$1.5 \pm 0.5 \text{ N}\cdot\text{m}$

Installation

1. Installation is in the reverse order of removal.

Caution:

- Operate carefully to prevent other components from being damaged, when installing audio head unit display.
- Make sure to tighten fixing screws to specified torque, when installing audio head unit display.
- Install each connector into place when installing audio head unit display.
- When installing audio head unit display, check no disc DVD for proper operation.

No Disc DVD/Audio Head Unit

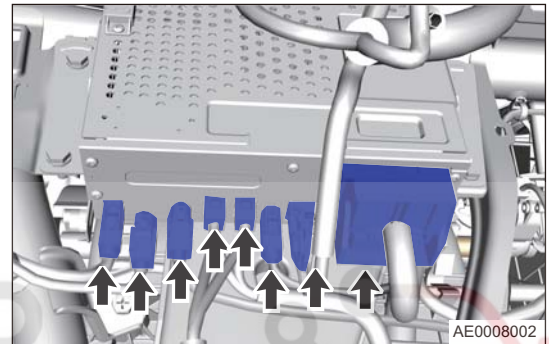
Removal

WARNING:

- After replacing No Disc DVD/Audio Head Unit, it is necessary to write software configuration code.
- Be sure to wear safety equipment to prevent accidents, when removing no disc DVD/audio head unit.
- Appropriate force should be applied, when removing no disc DVD/audio head unit. Be careful not to operate roughly.
- DO NOT scratch interior when removing no disc DVD/audio head unit.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the instrument panel assembly.
4. Remove the No Disc DVD/audio head unit.

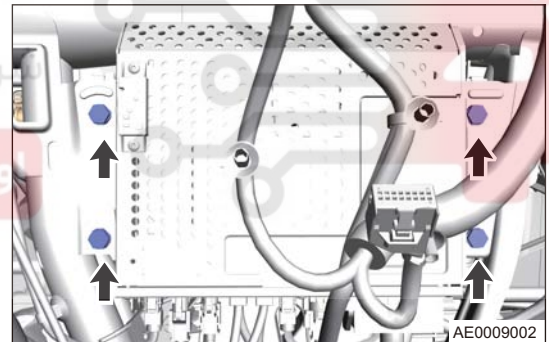
- (a) Disconnect no disc DVD/audio head unit connector (arrow).



- (b) Remove 4 fixing bolts (arrow) from no disc DVD/audio head unit.

Tightening torque

$5 \pm 1 \text{ N}\cdot\text{m}$



Inspection

1. Check if no disc DVD/audio head unit connector and terminal is deformed or damaged. Replace them if necessary.
2. Check if connectors are damaged. Replace them if necessary.
3. Check if no disc DVD/audio head unit housing is deformed or damaged. Replace it if necessary.

Installation

1. Installation is in the reverse order of removal.

Caution:

- Operate carefully to prevent other components from being damaged, when installing no disc DVD/audio head unit.
- Be sure to tighten fixing screws to the specified torque, when installing no disc DVD/audio head unit.
- Install each connector in place, when installing no disc DVD/audio head unit.
- When installing no disc DVD/audio head unit, check no disc DVD for proper operation.

Door Speaker

Removal

Hint:

- The 4-door procedure is the same as the left.
- Procedures listed below are for left side.

Caution:

Caution:

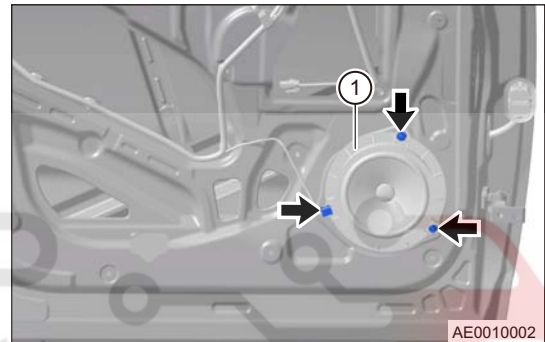
- Be sure to wear safety equipment to prevent accidents, when removing door speaker.
- Appropriate force should be applied when removing door speaker. Be careful not to operate roughly.
- DO NOT scratch front door inner protector assembly, when removing door speaker.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the front left door protector assembly.
4. Remove front left door woofer.

- (a) Disconnect front left door woofer connector (1), and remove 3 fixing screws (arrow) from front left door.

Tightening torque

$2 \pm 0.5 \text{ N}\cdot\text{m}$



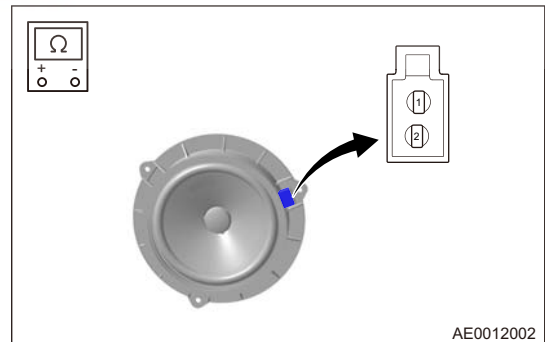
- (b) Remove front left door woofer.

Inspection

1. Check front left door woofer.

- (a) Using a digital multimeter, measure resistance of rear left speaker according to table below.

Multimeter Connection	Condition	Specified Condition
Terminal 1 - Terminal 2	At normal temperature	Approximately 4.5Ω



- (b) Check cone paper of rear left speaker for damage or deformation. Replace it if necessary.
- (c) Check rear left speaker connector for damage and terminals for bend or poor connection. Replace them if necessary.

Installation

1. Installation is in the reverse order of removal.

Tweeter

Removal

HINT:

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

Caution:

Caution:

- Be sure to wear safety equipment to prevent accidents, when removing tweeter.
 - Appropriate force should be applied when removing tweeter. Be careful not to operate roughly.
 - DO NOT scratch A-pillar upper protector assembly, when removing door speaker.
1. Turn off all electrical equipment and ENGINE START STOP switch.
 2. Disconnect the negative battery cable.
 3. Remove the A-pillar upper protector assembly.
 4. Remove the left tweeter.
 - (a) Detach 3 fixing clips (arrow) from left tweeter, remove front left door tweeter.



- (b) Remove left tweeter.

Installation

1. Installation is in the reverse order of removal.

Combined Antenna

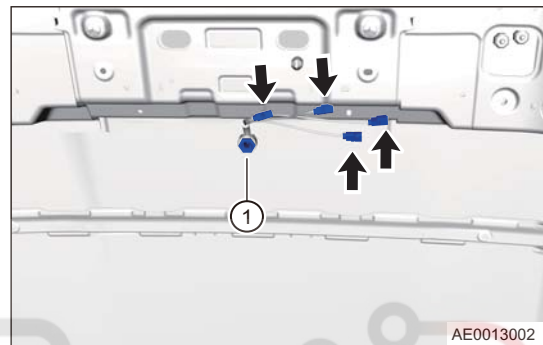
Removal

Caution:

- Be sure to wear safety equipment to prevent accidents, when removing combined antenna.
- Appropriate force should be applied when removing combined antenna. Be careful not to operate roughly.
- DO NOT scratch interior removing combined antenna.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the roof.
4. Remove the combined antenna.

- (a) Disconnect the combined antenna connector (arrow).



- (b) Remove the combined antenna fixing nut (1).

Tightening torque

$5 \pm 1 \text{ N}\cdot\text{m}$

- (c) Remove the combined antenna assembly.

Caution:

Hold the antenna by hand when tightening the nut, pay attention to the gap between antenna base and metal plate hole, try to keep the gap even, and ensure that there is no obvious deflection after installation.

Installation

1. Installation is in the reverse order of removal.

Multi-function Interface

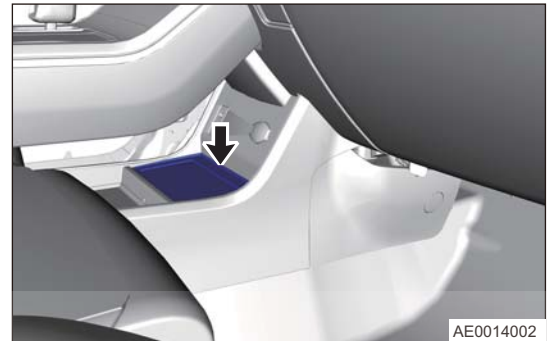
Removal

CAUTION:

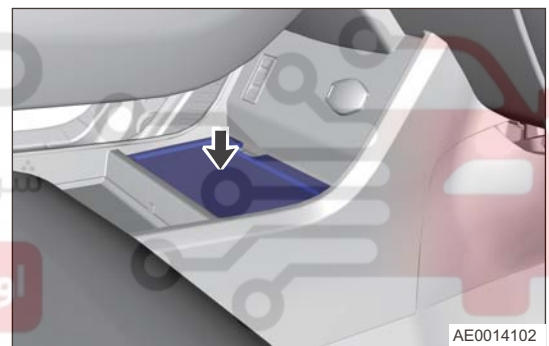
- Be sure to wear safety equipment to prevent accidents, when removing multi-function interface.
- Appropriate force should be applied when removing multi-function interface. Be careful not to operate roughly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the front storage box cover plate.

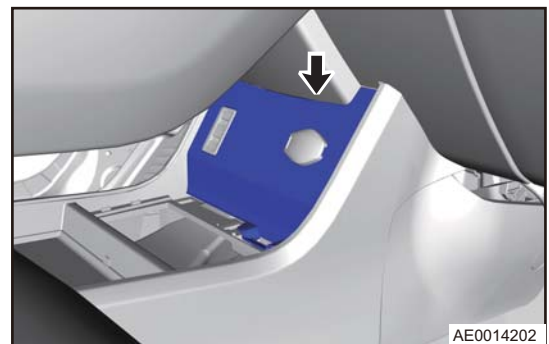
- (a) Remove the rubber pad (1) from the front storage box of auxiliary fascia console panel.



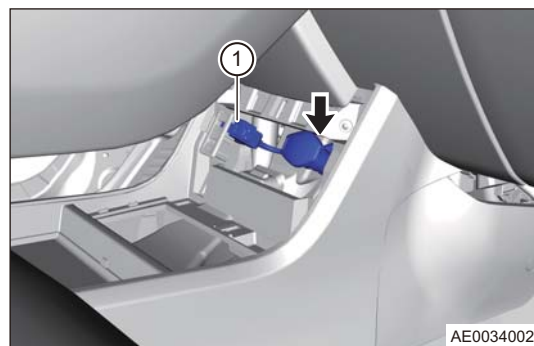
- (b) Pry off the front storage box cover plate assembly (1) with interior crow plate.



4. Remove the multi-function interface.
 - (a) Remove USB Panel Assembly.



- (b) Disconnect the backup power supply connector (arrow) and 2 USB connectors (1).



Installation

1. Installation is in the reverse order of removal.

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

