

# AUDIO AND ENTERTAINMENT SYSTEM

<b>GENERAL INFORMATION</b>	<b>34-3</b>	<b>B1840-4B</b>	<b>34-25</b>
<b>Overview</b>	<b>34-3</b>	<b>B1841-19</b>	<b>34-25</b>
Description	34-3	<b>B1842-19</b>	<b>34-25</b>
Inspection	34-4	<b>B1843-17</b>	<b>34-25</b>
Specifications	34-5	CAN Network DTC	34-27
Tools	34-5		
<b>DIAGNOSIS &amp; TESTING</b>	<b>34-6</b>	<b>ON-VEHICLE SERVICE</b>	<b>34-28</b>
<b>Diagnostic Content</b>	<b>34-6</b>	<b>Audio Head Unit Display</b>	<b>34-28</b>
Problem Symptoms Table	34-6	Removal	34-28
Diagnosis Tools	34-6	Installation	34-28
Audio/Visual System Controller		<b>No Disc DVD/Audio Head Unit</b>	<b>34-29</b>
Terminal List	34-8	Removal	34-29
Diagnosis Procedure	34-9	Inspection	34-29
Diagnostic Trouble Code (DTC) Chart	34-11	Installation	34-29
<b>B1800-16</b>	<b>34-12</b>	<b>Door Speaker</b>	<b>34-30</b>
<b>B1800-17</b>	<b>34-12</b>	Removal	34-30
<b>B1810-00</b>	<b>34-16</b>	Inspection	34-30
<b>B1811-00</b>	<b>34-18</b>	Installation	34-30
<b>B1814-00</b>	<b>34-22</b>	<b>Tweeter</b>	<b>34-31</b>
<b>B1830-04</b>	<b>34-25</b>	Removal	34-31
<b>B1831-04</b>	<b>34-25</b>	Installation	34-31
<b>B1832-04</b>	<b>34-25</b>	<b>Combined Antenna</b>	<b>34-32</b>
<b>B1833-04</b>	<b>34-25</b>	Removal	34-32
<b>B1834-04</b>	<b>34-25</b>	Installation	34-32
<b>B1835-04</b>	<b>34-25</b>	<b>Multi-function Button Assembly</b>	<b>34-33</b>
<b>B1836-04</b>	<b>34-25</b>	Removal	34-33

# دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

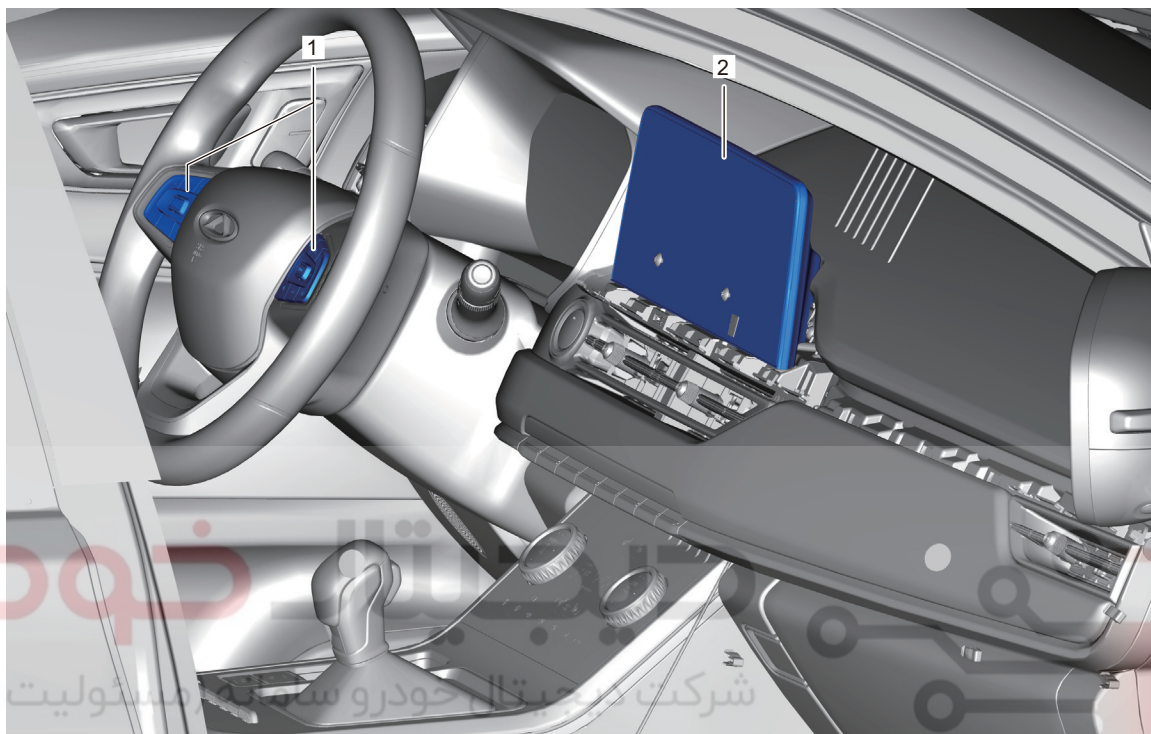
اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



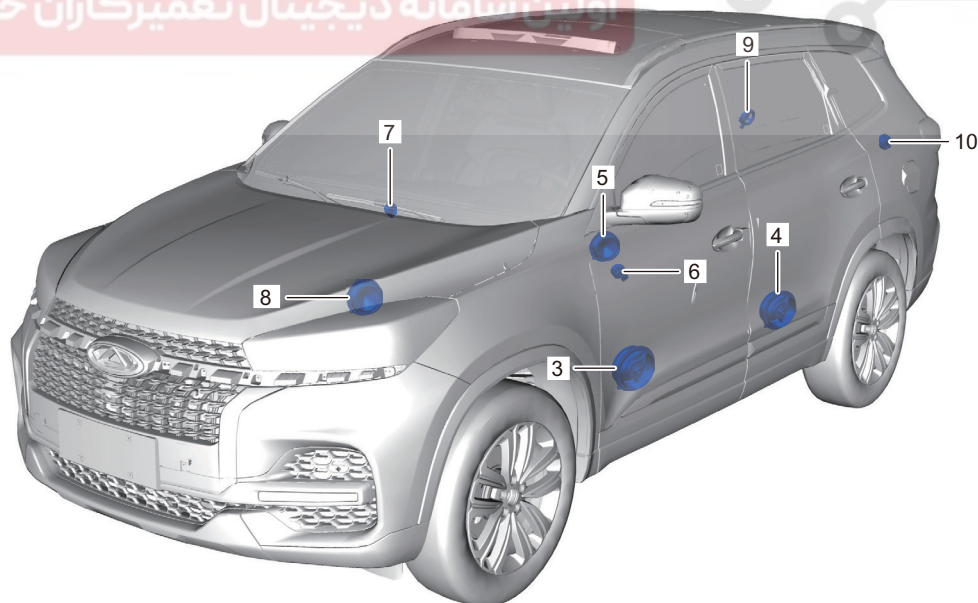
## GENERAL INFORMATION

### Overview

### Description



34



AE0001501

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

9 - Right Full-range Speaker Assembly

10 - Left Full-range Speaker Assembly

Audio system mainly consists of no disc DVD/wireless communication head unit (if equipped), speakers and antenna.

No disc DVD mainly consists of no disc DVD head unit, center control panel, multi-function interface.

The vehicle is equipped with standard 4-speaker, comfort 6-speaker, luxury 8-speaker.

## 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 ignition 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.
	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.
USB file playback	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.
	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.
Music playback	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.

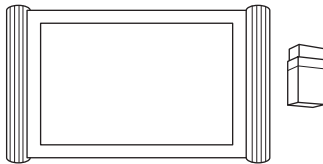
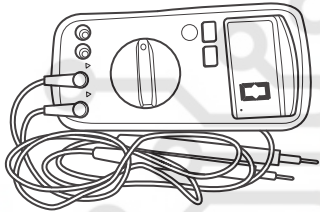
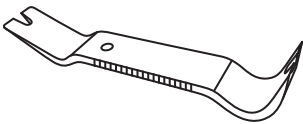
## Specifications

### Torque Specifications

Description	Torque (N·m)
No Disc DVD/Wireless Communication Head Unit Fixing Screw	$1.5 \pm 0.5$
Front Speaker Fixing Screw	$2 \pm 0.5$
Rear Speaker Fixing Screw	$2 \pm 0.5$
Combined Antenna Fixing Nut	$5 \pm 1$

## Tools

### General Tools

Diagnostic Tester	 001
Digital Multimeter	 002
Interior Crow Plate	 025



## 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 or adjust faulty components, or replace as necessary.

Symptom	Suspected Area
Noise occurs	Noise source (interference)
	Tweeter assembly
	Instrument cluster
No disc DVD/wireless communication head unit assembly does not operate	Center control panel (malfunction)
	No disc DVD/wireless communication head unit fuse (blown)
	No disc DVD/wireless communication 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/wireless communication 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 DTC cannot be deleted, malfunction is current.
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**

- 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/wireless communication 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/wireless communication head unit is malfunctioning. If DTC can be cleared, reinstall no disc DVD/wireless communication 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**

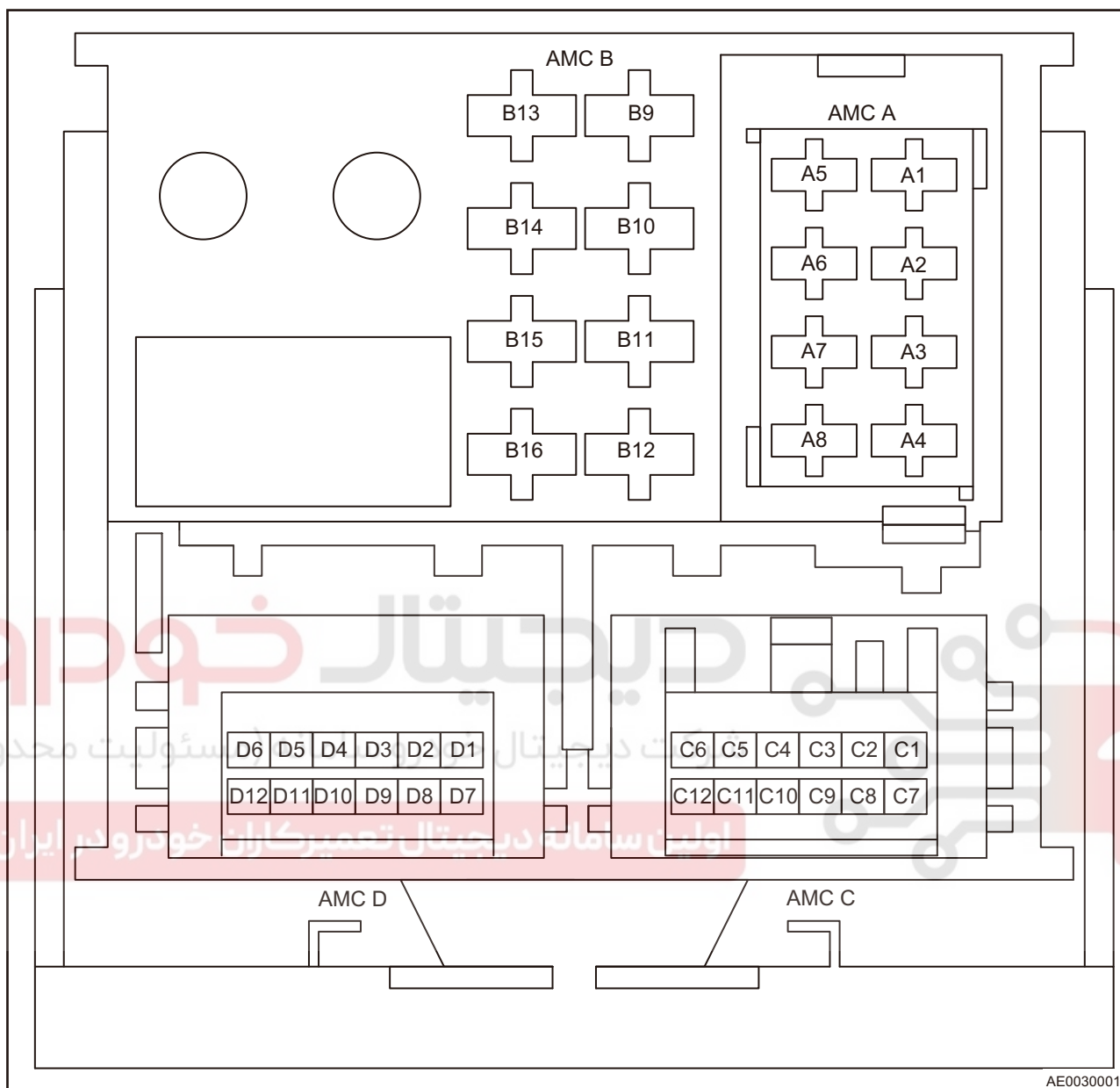
Groundings are very important to entire circuit system, which are normal or not can seriously affect the entire circuit system. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) and oxidation may increase load resistance. This case will seriously affect 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 contacting 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/Visual System Controller Terminal List

### Instrument Panel Wire Harness I-007 Connector Terminal List

34



AE0030001

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
A1	Rear Right +	C5	Camera Power Supply Ground
A2	Front Right +	C6	Camera Video -
A3	Front Left +	C7	ICAN-L
A4	Rear Left +	C8	Power Switch (Including Reset)
A5	Rear Right -	C9	MIC+ Signal
A6	Front Right -	C10	Control Panel Signal Ground
A7	Front Left -	C11	Camera Power Supply
A8	Rear Left -	C12	Camera Video +
B9	Steering Wheel Button Signal 1	D1	-
B10	Steering Wheel Button Ground	D2	-
B11	Steering Wheel Button Signal 2	D3	-
B12	Power supply ground	D4	-



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

## Diagnosis Procedure

### Hint:

Use following procedures to troubleshoot the audio system.

### 1 Vehicle brought to workshop

34

#### Result

Proceed to
Next

Next

### 2 Check battery voltage

Check if battery voltage is normal.

#### Normal

Standard voltage: not less than 12V.

#### Result

Proceed to
OK
NG

NG

Check and repair battery

OK

### 3 Customer problem analysis

#### Result

Proceed to
Next

Next

**4 Check for DTCs (current DTC and history DTC)****Result**

Proceed to
No DTC
Current DTC
History DTC

History DTC

**5 Problem repair (no DTC), then go to step 8****Result**

Proceed to
Next

Next

Go to step 7

**6 Troubleshoot according to Diagnostic Trouble Code (DTC) chart, then go to step 8****Result**

Proceed to
Next

Next

Go to step 7

**7 Troubleshoot according to Problem Symptoms Table, then go to step 8****Result**

Proceed to
Next

Next

**8 Conduct test and confirm malfunction has been repaired****Result**

Proceed to
Next

Next

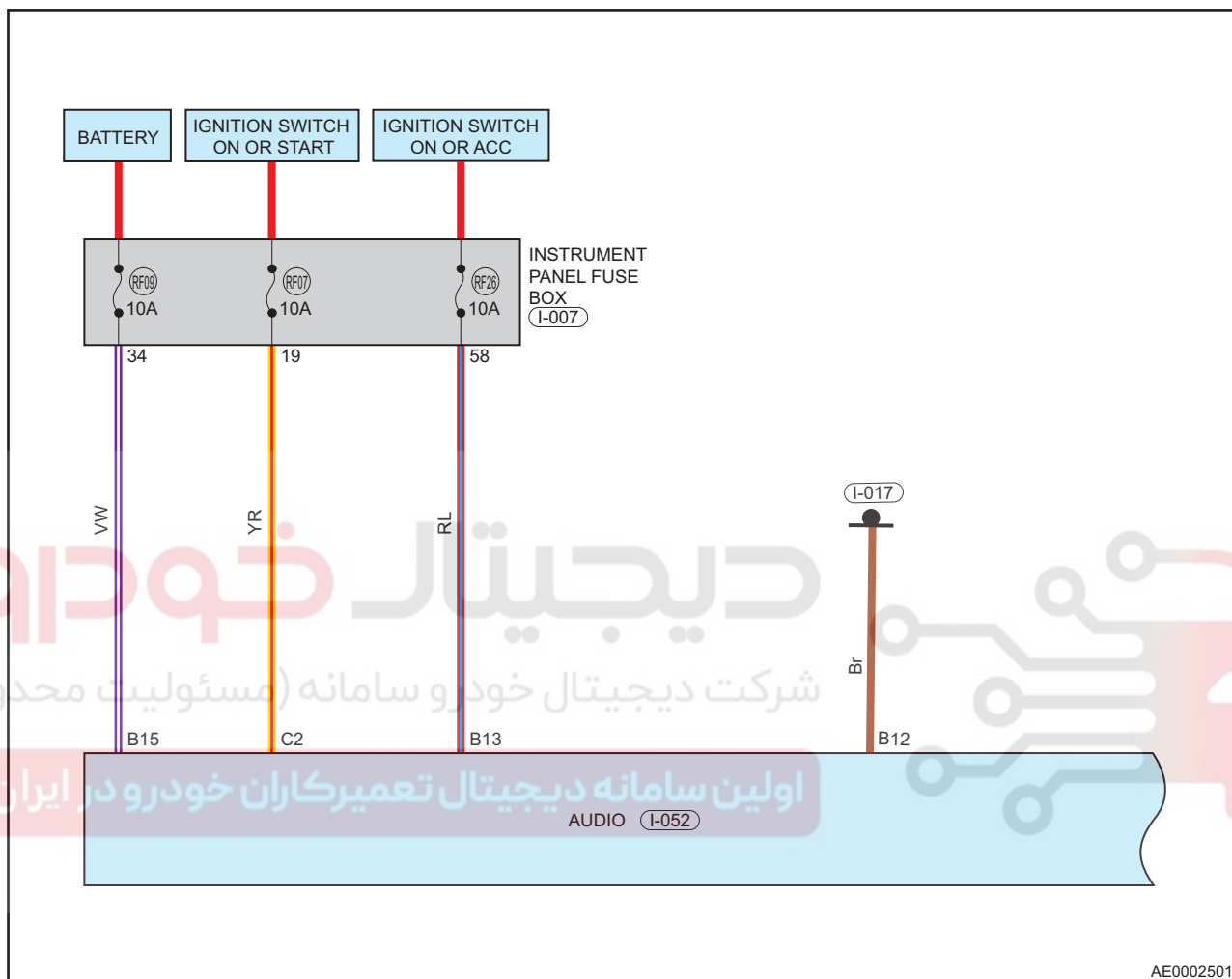
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## Diagnostic Trouble Code (DTC) Chart

DTC	DTC Definition
B1800-16	Power Supply Voltage Failure
B1800-17	Power Supply Voltage Failure
B1810-00	Front Panel Button Failure
B1811-00	Steering Button Failure
B1812-00	Speed Signal Abnormal
B1813-00	Speakers Connected to Amplifier Failure
B1814-00	Tuner Antenna Abnormal
B1830-04	Amplifier R/W Failure
B1831-04	EEPROM R/W Failure
B1832-04	Tuner IC R/W Failure
B1833-04	PMIC of Main Processor R/W Failure
B1834-04	Voice Recognition IC R/W Failure
B1835-04	Communication Failure between MCU and Main Processor
B1836-04	TBOX Connection Fault
U0140-87	Lost Communication With BCM
U0155-87	Lost Communication With ICM
U0164-87	Lost Communication With CLM
U0100-87	Lost Communication With EMS
U0129-87	Lost Communication With BSM
U0126-87	Lost Communication With SAM
U0142-87	Lost Communication With Around View Monitor Module
U1157-87	Lost Communication With Blind Spot Detection
U0214-87	Lost Communication With Passive Entry Passive Start Unit
U0230-87	Lost Communication With EMS
U1163-87	Lost Communication With FRM
U1162-87	Lost Communication With ICM
U0131-87	Lost Communication With EMS
U0073-88	CAN bus line malfunction
U1300-55	Software configuration error
B1840-4B	MMI Over Temperature
B1841-19	USB1 Current-Over Occur
B1842-19	USB2 Current-Over Occur
B1843-17	Display Voltage High

DTC	B1800-16	Power Supply Voltage Failure
DTC	B1800-17	Power Supply Voltage Failure

# 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 Failure	Ignition switch is in ON and engine is running.	<ul style="list-style-type: none"> <li>Charging system</li> <li>Poor no disc DVD/wireless communication head unit ground</li> <li>Fuse malfunctions</li> <li>No disc DVD/wireless communication head unit assembly damages</li> </ul>
B1800-17	Power Supply Voltage Failure		

**DTC Confirmation Procedure**

Confirm that battery voltage is no less than 12 V before performing following procedures.

- Turn ignition switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ignition switch to ON.
- Use diagnostic tester to record and clear DTCs stored in DVD system.
- Turn ignition switch to OFF and wait several seconds.
- Turn ignition 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.

34

**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**

Proceed to
OK
NG

NG

Recharge or replace battery

OK

**2 Check battery terminal**

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

**Result**

Proceed to
OK
NG

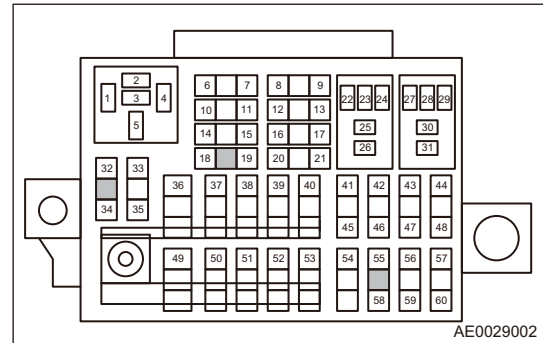
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Tighten or replace battery terminal.

OK

### 3 Check fuse

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



AE0029002

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

#### Result

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Proceed to
OK
NG

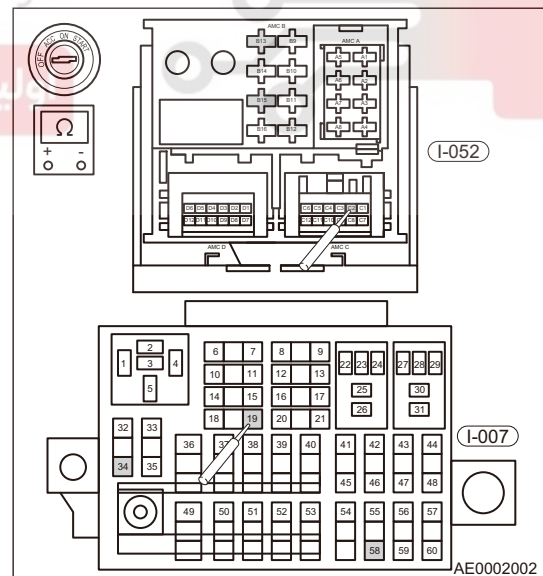
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Replace fuse

OK

### 4 Check instrument panel wire harness

- (a) Turn ignition switch to OFF.



AE0002002

- (b) Disconnect the negative battery cable.  
(c) Disconnect the connectors I-052 from the no disc DVD.  
(d) Connect the negative battery cable.  
(e) Turn ignition switch to ON.



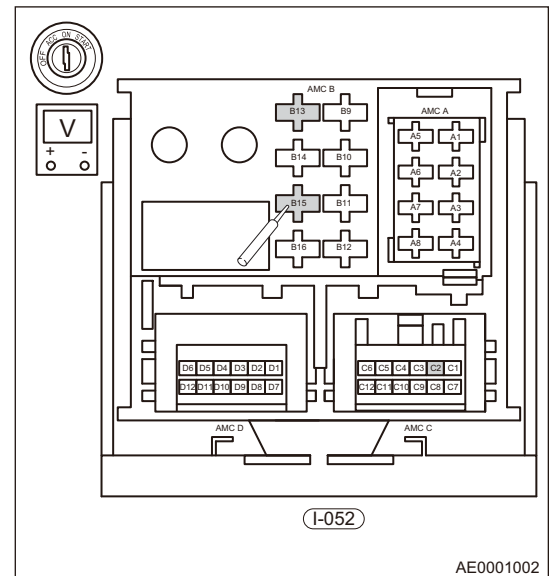
- (f) Using a digital multimeter, measure voltage between no disc DVD connector I-052 and body, and detect it with a 21 W test lamp according to table below.

**Normal**

Multimeter Connection	Condition	Specified Condition
I-052 (B15) - Ground	Always	Not less than 12 V
I-052 (B13) - Ground	Always	Not less than 12 V
I-052 (C2) - Ground	Always	Not less than 12 V

**Result**

Proceed to
OK
NG



AE0001002

34

- (g) Using a digital multimeter, check for continuity between instrument panel fuse and relay box I-007 and no disc DVD connector I-007 according to the table below.

**Normal**

Multimeter Connection	Condition	Specified Condition
I-007 (19) - I-052 (C2)	Always	$\leq 1 \Omega$
I-007 (34) - I-052 (B15)	Always	$\leq 1 \Omega$
I-007 (58) - I-052 (B13)	Always	$\leq 1 \Omega$

**Next****Repair or replace body wire harness and connector****Next****5****Reconfirm DTCs**

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

**Result**

Proceed to
OK
NG

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

**DTC****B1810-00****Front Panel Button Failure****Description**

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

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1810-00	Front Panel Button Failure	Ignition switch is in ON	• Center control panel

**DTC Confirmation Procedure**

Confirm that battery voltage is no less than 12 V before performing following procedures.

- Turn ignition switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ignition switch to ON.
- Use diagnostic tester to record and clear DTCs stored in DVD system.
- Turn ignition switch to OFF and wait several seconds.
- Turn ignition 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:**

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 ignition switch to ON.
- Check center control panel status.

**Result**

Proceed to
OK
NG

**NG****Replace center control panel****OK****2 Reconfirm DTCs**

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

**Result**

Proceed to
OK
NG

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

# دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

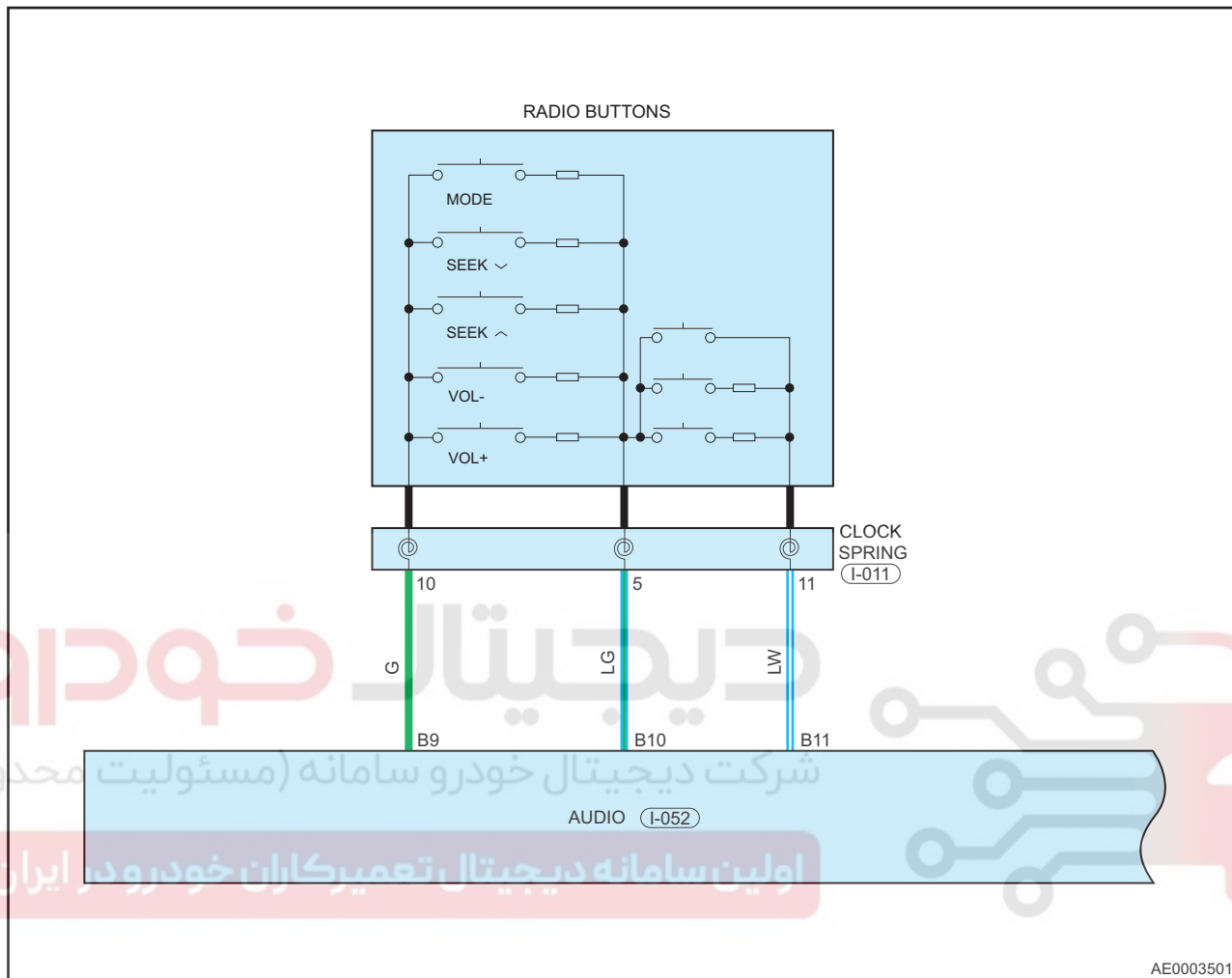


DTC

B1811-00

Steering Button Failure

## Circuit Diagram



AE0003501

## 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 Button Failure	Ignition switch is in ON	Steering wheel quick button

## DTC Confirmation Procedure

Confirm that battery voltage is over 12V before performing following procedures.

- Turn ignition switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ignition switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ignition switch to OFF and wait several seconds.
- Turn ignition 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:

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

## Diagnosis Procedure

# 1 Check connection wire harness between multi-function button assembly and no disc DVD/wireless communication head unit

- Turn ignition switch to OFF.
- Remove no disc DVD/wireless communication head unit.
- Check connection wire harness between multi-function button assembly and no disc DVD/wireless communication head unit.  
Using a digital multimeter, check for continuity between of multi-function button assembly to no disc DVD/wireless communication head unit according to the table.

Multimeter Connection	Condition	Operation Resistance ( $\Omega$ )
I-052 (B11) - I-052 (B10)	Press voice	$\leq 1 \Omega$
I-052 (B10) - I-052 (B9)	Press volume +	1.4 K $\Omega$
I-052 (B10) - I-052 (B9)	Press volume -	3.6 K $\Omega$
I-052 (B10) - I-052 (B9)	Press previous song/answer	$\leq 1 \Omega$
I-052 (B10) - I-052 (B9)	Press next song/hang up	470 $\Omega$
I-052 (B10) - I-052 (B9)	Press mode	10K $\Omega$

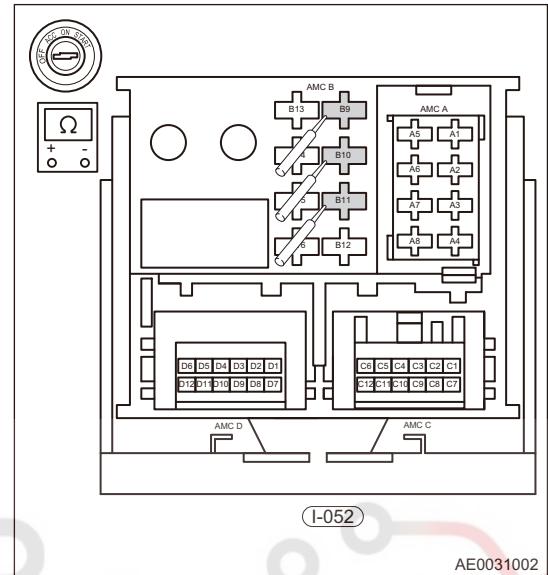
## Result

Proceed to
NG
OK

OK

Reconfirm DTCs

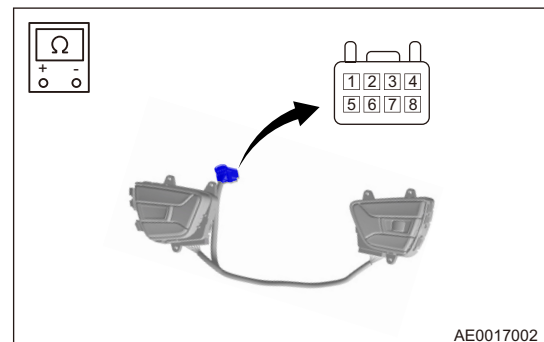
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# 2 Check multi-function button assembly

- Turn ignition switch to OFF.
- Remove the driver airbag.
- Check multi-function button assembly.  
Using a digital multimeter, check for continuity between of multi-function button assembly according to the table.

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



**Result**

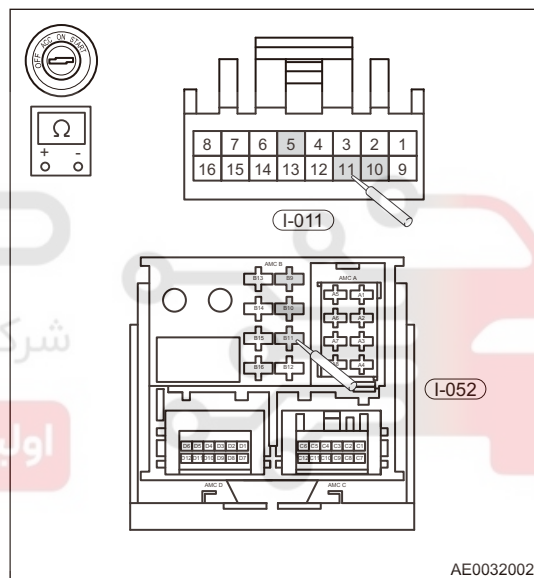
Proceed to
OK
NG

**NG****Replace multi-function button assembly****OK****3****Check instrument panel wire harness no disc DVD/wireless communication head unit to clock spring**

- (a) Turn ignition switch to OFF.  
 (b) Disconnect the negative battery cable.  
 (c) Disconnect no disc DVD/wireless communication head unit connector I-052 and clock spring connector I-004.  
 (d) Using a digital multimeter, measure resistance between no disc DVD/wireless communication head unit connector I-052 and clock spring connector I-011 for open according to table below.

**Standard Condition**

Multimeter Connection	Condition	Specified Condition
I-011 (11) - I-052 (B11)	Always	$\leq 1 \Omega$
I-011 (5) - I-052 (B10)	Always	$\leq 1 \Omega$
I-011 (10) - I-052 (B9)	Always	$\leq 1 \Omega$



AE0032002

**Result**

Proceed to
OK
NG

**NG****Repair or replace instrument panel wire harness and connector****OK****4****Check the clock spring and reconfirm DTCs**

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



(f) Turn ignition switch to ON.

(g) Use diagnostic tester (the latest software) to read DTCs stored in audio entertainment system again.

**Result**

Proceed to
OK
NG

**OK****System operates normally****NG****Replace no disc DVD/wireless  
communication head unit**

# دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



**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	Ignition switch is in ON	<ul style="list-style-type: none"> <li>Antenna assembly (w/amplifier)</li> <li>No Disc DVD/Wireless Communication Head Unit</li> <li>Wire harness and connector</li> </ul>

**DTC Confirmation Procedure**

Confirm that battery voltage is no less than 12V before performing following procedures.

- Turn ignition switch to OFF.
- Connect diagnostic tester to Data Link Connector (diagnostic interface).
- Turn ignition switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ignition switch to OFF and wait several seconds.
- Turn ignition 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:**

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**

Proceed to
OK
NG

**NG****Recharge or replace battery****OK****2 Check battery terminal**

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

**Result**

Proceed 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**

Proceed to
OK
NG

**NG****Replace combined antenna****OK****4 Check wire harness and connector of radio and combined antenna****34**

- (a) Turn ignition switch to OFF.
- (b) Disconnect the negative battery cable.
- (c) Disconnect no disc DVD/wireless communication 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**

Proceed to
OK
NG

**NG****Repair or replace faulty circuit****OK****5 Reconfirm DTCs**

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

**Result**

Proceed to
OK
NG

OK

System operates normally

NG

Replace no disc DVD/wireless  
communication head unit

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DTC	B1830-04	Amplifier R/W Failure
DTC	B1831-04	EEPROM R/W Failure
DTC	B1832-04	Tuner IC R/W Failure
DTC	B1833-04	PMIC of Main Processor R/W Failure
DTC	B1834-04	Voice Recognition IC R/W Failure
DTC	B1835-04	Communication Failure between MCU and Main Processor
DTC	B1836-04	TBOX Connection Fault
DTC	B1840-4B	MMI Over Temperature
DTC	B1841-19	USB1 Current-Over Occur
DTC	B1842-19	USB2 Current-Over Occur
DTC	B1843-17	Display Voltage High

34

**Description**

DTC	DTC Definition	DTC Detection Condition	Possible Cause
B1830-04	Amplifier R/W Failure	Ignition switch is in ON	<ul style="list-style-type: none"> <li>No Disc DVD/Wireless Communication Head Unit</li> </ul>
B1831-04	EEPROM R/W Failure		
B1832-04	Tuner IC R/W Failure		
B1833-04	PMIC of Main Processor R/W Failure		
B1834-04	Voice Recognition IC R/W Failure		
B1835-04	Communication Failure between MCU and Main Processor		
B1836-04	TBOX Connection Fault		
B1840-4B	MMI Over Temperature		
B1841-19	USB1 Current-Over Occur		
B1842-19	USB2 Current-Over Occur		
B1843-17	Display Voltage High		

**DTC Confirmation Procedure**

Confirm that battery voltage is no less than 12 V before performing following procedures.

- Turn ignition switch to OFF.
- Connect diagnostic tester (the latest software) to diagnostic interface.
- Turn ignition switch to ON.
- Use diagnostic tester to record and clear DTCs stored in audio entertainment system.
- Turn ignition switch to OFF and wait several seconds.

- Turn ignition 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:**

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/wireless communication head unit**

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

**Result**

Proceed to
OK
NG

OK

System operates normally

NG

Replace no disc DVD/wireless  
communication head unit



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اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



**CAN Network DTC**

DTC	DTC Definition
U0140-87	Lost Communication With BCM
U0155-87	Lost Communication With ICM
U0164-87	Lost Communication With CLM
U0100-87	Lost Communication With EMS
U0129-87	Lost Communication With BSM
U0126-87	Lost Communication With SAM
U0142-87	Lost Communication With Around View Monitor Module
U1157-87	Lost Communication With Blind Spot Detection
U0214-87	Lost Communication With Passive Entry Passive Start Unit
U0230-87	Lost Communication With EMS
U1163-87	Lost Communication With FRM
U1162-87	Lost Communication With ICM
U0131-87	Lost Communication With EMS
U0073-88	CAN bus line malfunction
U1300-55	Software configuration error

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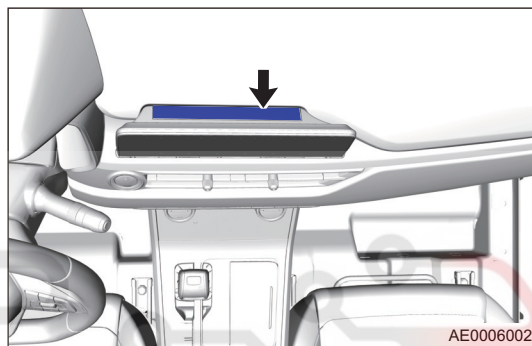
## ON-VEHICLE SERVICE

### 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.
  - DO NOT scratch interior when removing audio head unit display.
1. Turn off all electrical equipment and the ENGINE START STOP switch.
  2. Disconnect the negative battery cable.
  3. Remove the audio head unit display.
    - (a) Pry off cover plate (arrow) on audio head unit display with interior crow plate.



- (b) Remove 4 fixing screws from audio head unit display and disconnect audio head unit display connector.

#### Tightening torque

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

#### 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 screw to specified torque, when installing audio head unit display.
- Install each connector in place, when installing audio head unit display.
- Check no disc DVD for proper operation, when installing audio head unit display.

## No Disc DVD/Audio Head Unit

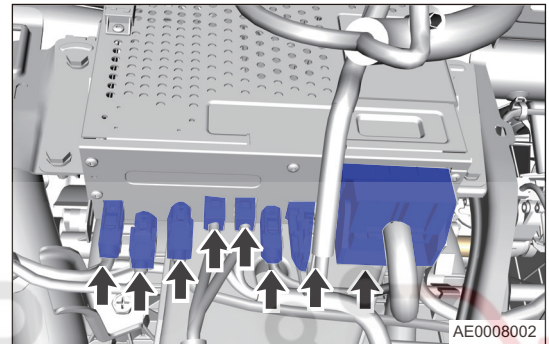
### Removal

#### Warning:

- Perform software configuration code written after replacing no disc DVD/audio head unit transfer.
- 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 the 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.

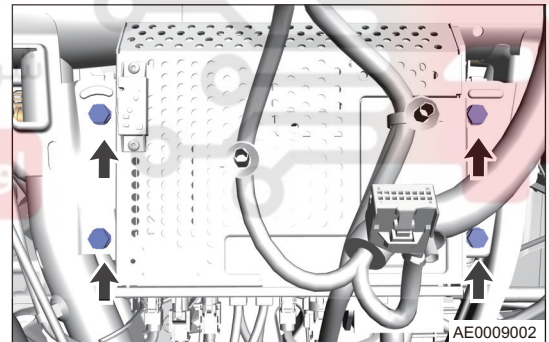
- (a) Disconnect connectors (arrow) from no disc DVD/audio head unit.



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

#### Tightening torque

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



### 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 them 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:

- Use same procedures for 4 doors and left sides.
- Procedures listed below are for left side.

#### Caution:

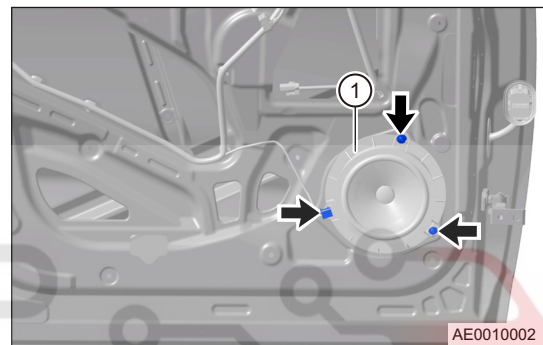
- Be sure to wear safety equipment to prevent accidents, when removing door speaker.
- Appropriate force should be applied when removing door speaker. Be careful not to operate roughly.
- DO NOT scratch front door inner protector assembly, when removing door speaker.

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

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

#### Tightening torque

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

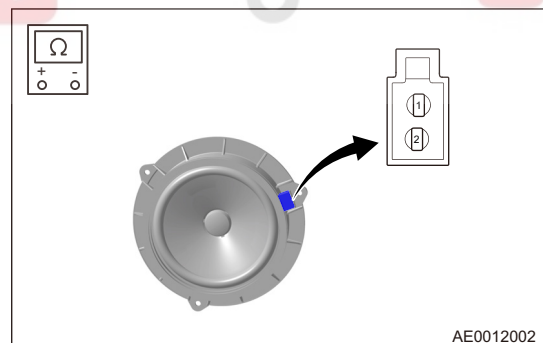


- (b) Remove the front left door woofer.

### Inspection

1. Check the 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	Under normal temperature	Approximately $4.5 \Omega$



- (b) Check cone paper of rear left speaker for damage or deformation. Replace them 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

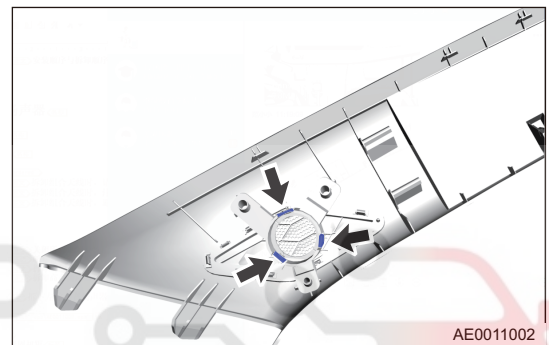
### Removal

#### Hint:

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

#### Caution:

- 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 tweeter.
1. Turn off all electrical equipment and the 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.



34

- (b) Remove the left tweeter.

### Installation

1. Installation is in the reverse order of removal

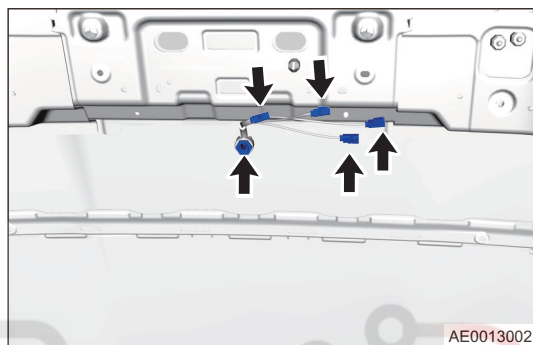
## Combined Antenna

### Removal

#### Caution:

- Be sure to wear safety equipment to prevent accidents, when removing low combined antenna.
  - Appropriate force should be applied when removing combined antenna. Be careful not to operate roughly.
  - DO NOT scratch interior when removing combined antenna.
1. Turn off all electrical equipment and the ignition switch.
  2. Disconnect the negative battery cable.
  3. Remove the roof (See page 46-24).
  4. Remove the combined antenna.

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



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

#### Tightening torque

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

- (c) Remove the combined antenna assembly.

#### Caution:

When tightening the nut, hold antenna with your hand and pay attention to the gap between antenna base and sheet metal hole. Make sure the gap is uniform and there is no obvious deflection after antenna is assembled.

### Installation

1. Installation is in the reverse order of removal.

## Multi-function Button Assembly

### Removal

#### Warning:

- Be sure to read precautions for SRS airbag before removing multi-function interface assembly (See [page 26-4](#)).

#### Caution:

- Be sure to wear safety equipment to prevent accidents, when removing multi-function button assembly.
- Prevent damage to claws on multi-function button assembly trim cover, when removing multi-function button assembly.

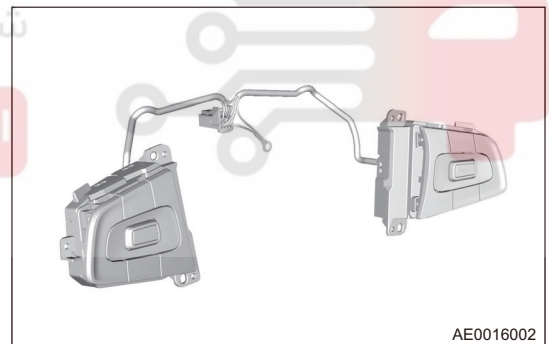
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.
3. Remove the driver airbag (See [page 26-53](#)).
4. Remove the multi-function button assembly.

- (a) Remove the fixing screw of steering wheel quick button with screwdriver (arrow).

#### Tightening torque

$0.7 \pm 0.2 \text{ N}\cdot\text{m}$

- (b) Remove the steering wheel quick button.





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