DTC: 28:Er01 [AUDIO]

## Note

• "iPod" is a registered trademark of Apple Inc. in the United States and other countries.

## Audio unit (with color LCD)

Description	Poor connection with auxiliary jack/USB port, or read error		
	When USB device/iPod connected, connection error detected		
<b>Detection condition</b> • When USB device/iPod connected, audio unit internal malfunction detected			
	When USB device connected, read error detected		
Fail-safe function	_		
Possible cause	<ul> <li>USB device/iPod malfunction</li> <li>Incompatible USB device (format) used</li> <li>Audio unit connector or terminal malfunction</li> <li>Auxiliary jack/USB port connector or terminal malfunction</li> <li>Open circuit in wiring harness between the following terminals:  <ul> <li>Audio unit terminal 4A and auxiliary jack/USB port terminal UD</li> <li>Audio unit terminal 4B and auxiliary jack/USB port terminal UC</li> <li>Audio unit terminal 4C and auxiliary jack/USB port terminal UB</li> </ul> </li> <li>Short to ground in wiring harness between the following terminals:  <ul> <li>Audio unit terminal 4A and auxiliary jack/USB port terminal UD</li> <li>Audio unit terminal 4B and auxiliary jack/USB port terminal UC</li> <li>Audio unit terminal 4C and auxiliary jack/USB port terminal UA</li> <li>Audio unit terminal 4D and auxiliary jack/USB port terminal UB</li> </ul> </li> <li>Auxiliary jack/USB port malfunction</li> <li>Audio unit malfunction</li> </ul>		
AU	AUDIO UNIT  AUXILIARY JACK/USB PORT   4A  4B  4C  4D  AUXILIARY JACK/USB PORT WIRING  AUXILIARY JACK/USB PORT WIRING		
AU	HARNESS-SIDE CONNECTOR  HARNESS-SIDE CONNECTOR  UD UC UB UA  E D C B A		

**Diagnostic Procedure** 

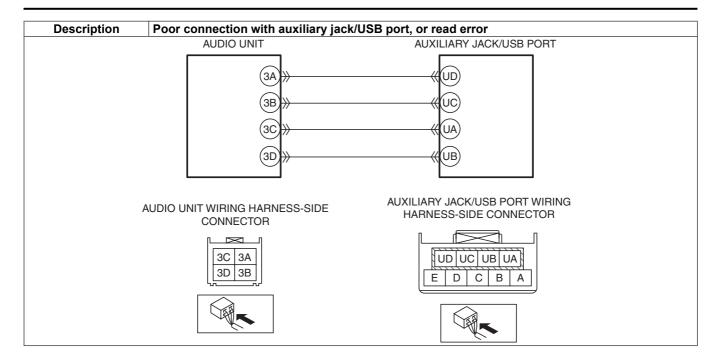
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Step	Inspection		Action	
1	INSPECT USB DEVICE/iPod	Yes	Go to the next step.	
	<ul> <li>Connect the USB device/iPod to a same-model vehicle (model/unit).</li> <li>Is the USB device/iPod connection detected/ unit plays back.</li> </ul>	No	System is normal. (USB device/iPod malfunction or incompatible USB device.) Go to Step 7.	

Step	Inspection		Action
2	INSPECT AUDIO UNIT CONNECTOR	Yes	Repair or replace the connector, then go to Step 7.
-	CONDITION	No	Go to the next step.
	Switch the ignition off (LOCK).	110	Go to the next step.
	Disconnect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Disconnect the audio unit connector.		
	Inspect the connector engagement and		
	connection condition and inspect the terminals		
	for damage, deformation, corrosion, or		
	disconnection.		
	Is there any malfunctioning part?		
3	INSPECT AUXILIARY JACK/USB PORT	Yes	Repair or replace the connector, then go to Step 7.
	CONNECTOR CONDITION	No	Go to the next step.
	Disconnect the auxiliary jack/USB port	110	Ou to the next step.
	connector.		
	Inspect the connector engagement and		
	connection condition and inspect the terminals		
	for damage, deformation, corrosion, or		
	disconnection.		
	Is there any malfunctioning part?		
4	INSPECT WIRING HARNESS FOR OPEN	Yes	Go to the next step.
	CIRCUIT BETWEEN AUDIO UNIT AND	No	Repair or replace the wiring harness, then go to Step 7.
	AUXILIARY JACK/USB PORT		Tropan or replace and maning harmose, and in go to etep in
	Verify that the connectors for the audio unit and		
	the auxiliary jack/USB port are not		
	disconnected.		
	Inspect for continuity between the following		
	terminals (vehicle wiring harness).		
	<ul> <li>Audio unit terminal 4A and auxiliary jack/</li> </ul>		
	USB port terminal UD		
	<ul> <li>Audio unit terminal 4B and auxiliary jack/</li> </ul>		
	USB port terminal UC		
	Audio unit terminal 4C and auxiliary jack/		
	USB port terminal UA		
	<ul> <li>Audio unit terminal 4D and auxiliary jack/</li> </ul>		
	USB port terminal UB		
	Is there continuity?		
5	INSPECT WIRING HARNESS FOR SHORT TO	Yes	Repair or replace the wiring harness, then go to Step 7.
	GROUND BETWEEN AUDIO UNIT AND	No	Go to the next step.
	AUXILIARY JACK/USB PORT		
	Inspect for continuity between the following		
	wiring harness terminals (vehicle wiring harness		
	side) and body ground.		
	<ul> <li>Auxiliary jack/USB port terminal UD</li> </ul>		
	<ul> <li>Auxiliary jack/USB port terminal UC</li> </ul>		
	<ul> <li>Auxiliary jack/USB port terminal UA</li> </ul>		
	<ul> <li>Auxiliary jack/USB port terminal UB</li> </ul>		
	Is there continuity?		
6	INSPECT AUXILIARY JACK/USB PORT	Yes	Replace the auxiliary jack/USB port, then go to Step 7.
	Inspect the auxiliary jack/USB port.		(See AUXILIARY JACK/USB PORT REMOVAL/
	(See AUXILIARY JACK/USB PORT		INSTALLATION.)
	INSPECTION.)	No	Go to the next step.
	Is there any malfunctioning part?		

Step	Inspection		Action
7	VERIFY THAT REPAIRS HAVE BEEN	Yes	Return to Step 1 and inspect for other possible causes.
	COMPLETED		If the malfunction recurs, replace the audio unit, then go to
	Reconnect all the disconnected connectors.		the next step.
	Connect the negative battery cable.		(See DTC TABLE [AUDIO].)
	(See NEGATIVE BATTERY CABLE	No	Go to the next step.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	Clear the audio unit DTCs.		
	(See CLEARING DTC [AUDIO].)		
	Perform the audio unit DTC inspection.		
	(See DTC INSPECTION [AUDIO].)		
	Is the same DTC displayed?		
8	VERIFY IF OTHER DTCs DISPLAYED	Yes	Repair the malfunctioning part according to the applicable
	Are any other DTCs displayed?		DTC troubleshooting.
			(See DTC TABLE [AUDIO].)
		No	DTC troubleshooting completed.

## Audio unit (without color LCD)

	<u>,                                      </u>				
Description	Poor connection with auxiliary jack/USB port, or read error				
	When USB device/iPod connected, connection error detected				
<b>Detection condition</b>	When USB device/iPod connected, audio unit internal malfunction detected				
	When USB device connected, read error detected				
Fail-safe function	_				
Possible cause	<ul> <li>USB device/iPod malfunction</li> <li>Incompatible USB device (format) used</li> <li>Audio unit connector or terminal malfunction</li> <li>Auxiliary jack/USB port connector or terminal malfunction</li> <li>Open circuit in wiring harness between the following terminals: <ul> <li>Audio unit terminal 3A and auxiliary jack/USB port terminal UD</li> <li>Audio unit terminal 3B and auxiliary jack/USB port terminal UC</li> <li>Audio unit terminal 3C and auxiliary jack/USB port terminal UA</li> <li>Audio unit terminal 3D and auxiliary jack/USB port terminal UB</li> </ul> </li> <li>Short to ground in wiring harness between the following terminals: <ul> <li>Audio unit terminal 3A and auxiliary jack/USB port terminal UD</li> </ul> </li> </ul>				
	<ul> <li>Audio unit terminal 3B and auxiliary jack/USB port terminal UC</li> <li>Audio unit terminal 3C and auxiliary jack/USB port terminal UA</li> <li>Audio unit terminal 3D and auxiliary jack/USB port terminal UB</li> <li>Auxiliary jack/USB port malfunction</li> <li>Audio unit malfunction</li> </ul>				



**Diagnostic Procedure** 

Step	Inspection		Action
1	INSPECT USB DEVICE/iPod	Yes	Go to the next step.
	Connect the USB device/iPod to another	No	System is normal. (USB device/iPod malfunction or
	vehicle (model/unit).		incompatible USB device.)
	Is the USB device/iPod connection detected/		Go to Step 7.
	unit plays back.		·
2	INSPECT AUXILIARY JACK/USB PORT	Yes	Repair or replace the connector, then go to Step 7.
	CONNECTOR CONDITION	No	Go to the next step.
	Disconnect the auxiliary jack/USB port connector.		·
	Inspect the connector engagement and		
	connection condition and inspect the terminals		
	for damage, deformation, corrosion, or		
	disconnection.		
	Is there any malfunctioning part?		
3	INSPECT AUXILIARY JACK/USB PORT	Yes	Replace the auxiliary jack/USB port, then go to Step 7.
	Inspect the auxiliary jack/USB port.		(See AUXILIARY JACK/USB PORT REMOVAL/
	(See AUXILIARY JACK/USB PORT		INSTALLATION.)
	INSPECTION.)	No	Go to the next step.
	Is there any malfunctioning part?		·
4	INSPECT AUDIO UNIT CONNECTOR	Yes	Repair or replace the connector, then go to Step 7.
	CONDITION	No	Go to the next step.
	Switch the ignition off (LOCK).		
	Disconnect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)  • Disconnect the audio unit connector.		
	Inspect the connector engagement and		
	connection condition and inspect the terminals		
	for damage, deformation, corrosion, or		
	disconnection.		
	Is there any malfunctioning part?		
	is there any manuficuoring part!		

Step	Inspection		Action		
5 5	INSPECT WIRING HARNESS FOR OPEN	Yes	Go to the next step.		
	CIRCUIT BETWEEN AUDIO UNIT AND	No	Repair or replace the wiring harness, then go to Step 7.		
	AUXILIARY JACK/USB PORT	INO	Trepair of replace the willing harness, their go to step 7.		
	Verify that the connectors for the audio unit and				
	the auxiliary jack/USB port are disconnected.				
	Inspect for continuity between the following				
	terminals (vehicle wiring harness).				
	Audio unit terminal 3A and auxiliary jack/  LISB part terminal LIB				
	USB port terminal UD				
	Audio unit terminal 3B and auxiliary jack/				
	USB port terminal UC				
	Audio unit terminal 3C and auxiliary jack/				
	USB port terminal UA				
	Audio unit terminal 3D and auxiliary jack/				
	USB port terminal UB				
	• Is there continuity?	.,			
6	INSPECT WIRING HARNESS FOR SHORT TO	Yes	Repair or replace the wiring harness, then go to Step 7.		
	GROUND BETWEEN AUDIO UNIT AND	No	Go to the next step.		
	AUXILIARY JACK/USB PORT				
	Inspect for continuity between the following				
	wiring harness terminals (vehicle wiring harness				
	side) and body ground.				
	<ul> <li>Auxiliary jack/USB port terminal UD</li> </ul>				
	Auxiliary jack/USB port terminal UC				
	<ul> <li>Auxiliary jack/USB port terminal UA</li> </ul>				
	Auxiliary jack/USB port terminal UB				
	Is there continuity?				
7	VERIFY THAT REPAIRS HAVE BEEN	Yes	Return to Step 1 and inspect for other possible causes.		
	COMPLETED		If the malfunction recurs, replace the audio unit, then go to		
	Reconnect all the disconnected connectors.		the next step.		
	Connect the negative battery cable.		(See AUDIO UNIT REMOVAL/INSTALLATION.)		
	(See NEGATIVE BATTERY CABLE	No	Go to the next step.		
	DISCONNECTION/CONNECTION				
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)				
	(See NEGATIVE BATTERY CABLE				
	DISCONNECTION/CONNECTION				
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5				
	(WITHOUT i-stop)].)				
	(See NEGATIVE BATTERY CABLE				
	DISCONNECTION/CONNECTION				
	[SKYACTIV-D 2.2].)				
	Clear the audio unit DTCs.				
	(See CLEARING DTC [AUDIO].)				
	Perform the audio unit DTC inspection.				
	(See DTC INSPECTION [AUDIO].)				
	Is the same DTC displayed?				
8	VERIFY IF OTHER DTCs DISPLAYED	Yes	Repair the malfunctioning part according to the applicable		
	Are any other DTCs displayed?		DTC troubleshooting.		
			(See DTC TABLE [AUDIO].)		
		No	DTC troubleshooting completed.		
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