

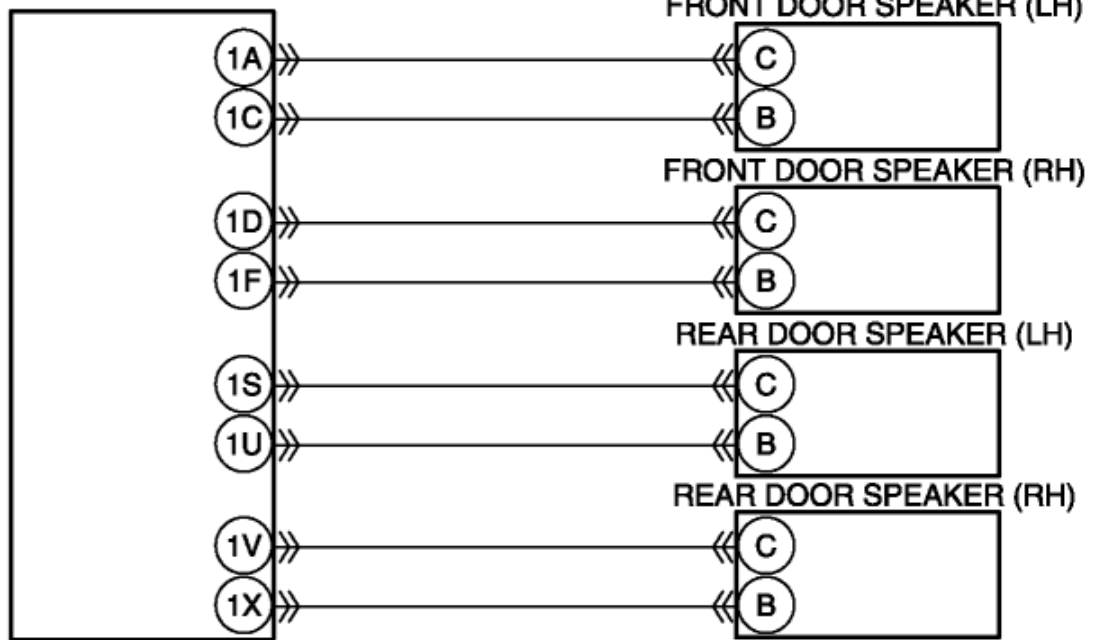
2012 - Mazda6 - Body and Accessories

DTC: 09:Er21, DEVICE CORD 09/ ERROR CORD 21 [AUDIO]

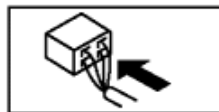
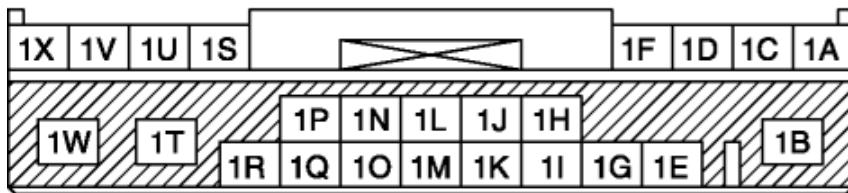
Without Bose®

DESCRIPTION	Audio unit internal malfunction or audio unit protection function operates
DETECTION CONDITION	• Audio unit internal ECU (Power amplifier peripheral circuit) is faulted. • Audio unit protection function operates due to short to ground in speaker wiring harness and speaker lead wire
POSSIBLE CAUSE	• Audio unit connector or terminals malfunction • Speaker connector or terminals malfunction • Open circuit in wiring harness between the following terminals: ▪ Audio unit terminal 1A—Front door speaker (LH) terminal C ▪ Audio unit terminal 1C—Front door speaker (LH) terminal B ▪ Audio unit terminal 1D—Front door speaker (RH) terminal C ▪ Audio unit terminal 1F—Front door speaker (RH) terminal B ▪ Audio unit terminal 1S—Rear door speaker (LH) terminal C ▪ Audio unit terminal 1U—Rear door speaker (LH) terminal B ▪ Audio unit terminal 1V—Rear door speaker (RH) terminal C ▪ Audio unit terminal 1X—Rear door speaker (RH) terminal B • Short to ground in wiring harness between the following terminals: ▪ Audio unit terminal 1A—Front door speaker (LH) terminal C ▪ Audio unit terminal 1C—Front door speaker (LH) terminal B ▪ Audio unit terminal 1D—Front door speaker (RH) terminal C ▪ Audio unit terminal 1F—Front door speaker (RH) terminal B ▪ Audio unit terminal 1S—Rear door speaker (LH) terminal C ▪ Audio unit terminal 1U—Rear door speaker (LH) terminal B ▪ Audio unit terminal 1V—Rear door speaker (RH) terminal C ▪ Audio unit terminal 1X—Rear door speaker (RH) terminal B • Speaker malfunction • Audio unit malfunction

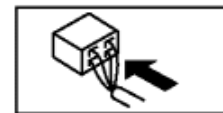
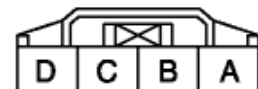
AUDIO UNIT



AUDIO UNIT WIRING HARNESS-SIDE CONNECTOR



SPEAKER WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT AUDIO UNIT CONNECTOR AND TERMINALS - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the audio unit connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 6.
		No Go to the next step.
2	INSPECT SPEAKER CONNECTOR AND TERMINALS Disconnect the speaker connector.	Yes Repair or replace the connector or terminals, then go to Step 6.
		No Go to the next step.

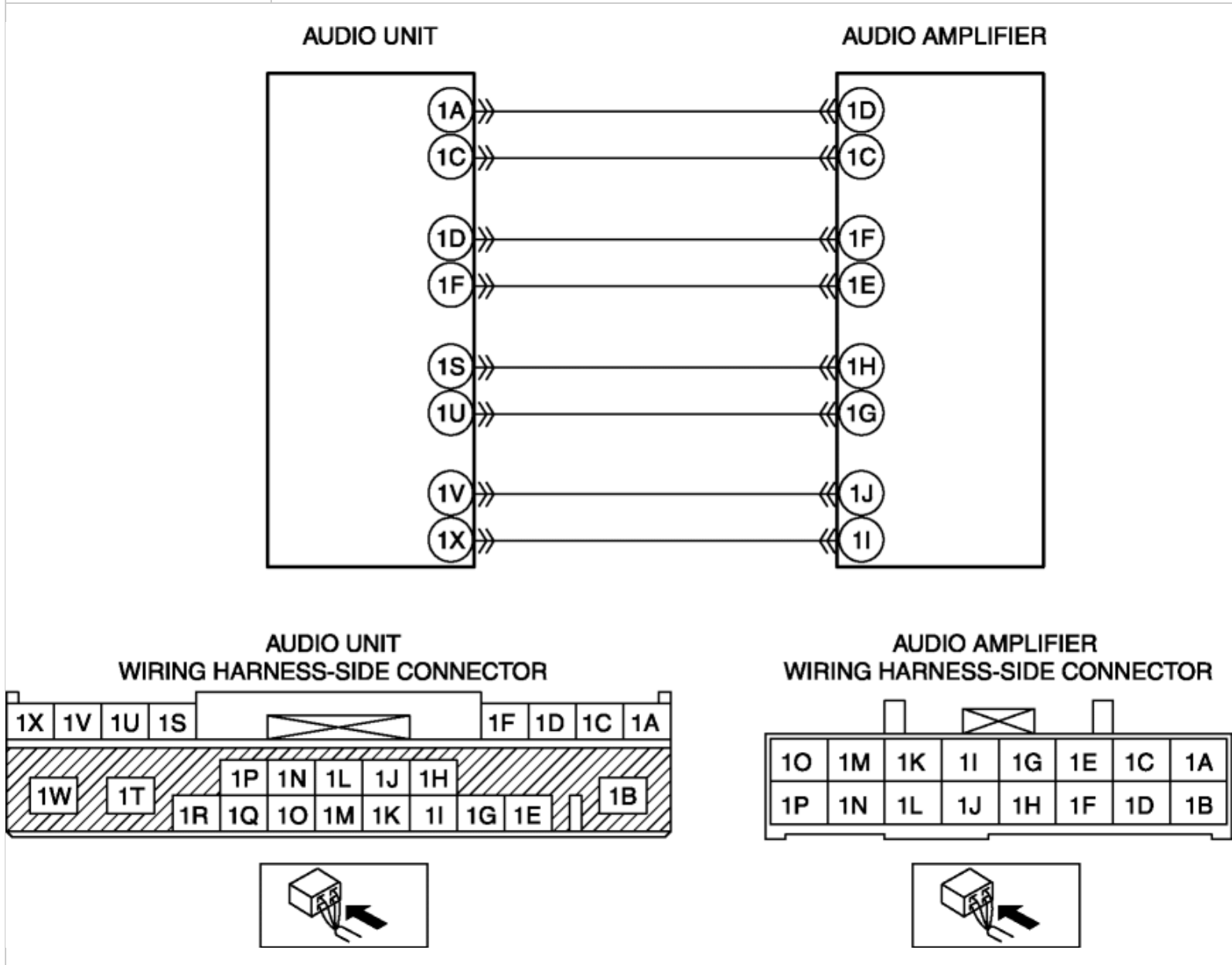
	Inspect the connector and terminals (corrosion, damage, pin disconnection). Is there any malfunction?		
3	INSPECT SPEAKER CIRCUIT FOR OPEN CIRCUIT - Audio unit and speaker connector is disconnected. - Inspect for continuity between the following terminals (wiring harness-side): - Audio unit terminal 1A—Front door speaker (LH) terminal C - Audio unit terminal 1C—Front door speaker (LH) terminal B - Audio unit terminal 1D—Front door speaker (RH) terminal C - Audio unit terminal 1F—Front door speaker (RH) terminal B - Audio unit terminal 1S—Rear door speaker (LH) terminal C - Audio unit terminal 1U—Rear door speaker (LH) terminal B - Audio unit terminal 1V—Rear door speaker (RH) terminal C - Audio unit terminal 1X—Rear door speaker (RH) terminal B - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	INSPECT SPEAKER CIRCUIT FOR SHORT TO GROUND - Inspect for continuity between the following terminals (wiring harness-side) and body ground: - Speaker terminal C - Speaker terminal B - Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 6.
		No	Go to the next step.
5	INSPECT SPEAKER - Switch the ignition to off. - Inspect the speaker. (See FRONT DOOR SPEAKER INSPECTION.) (See REAR DOOR SPEAKER INSPECTION.) - Is there any malfunction?	Yes	Replace the speaker, then go to the next step. (See FRONT DOOR SPEAKER REMOVAL/INSTALLATION.) (See REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
		No	Go to the next step.
6	CONFIRM AUDIO UNIT DTC	Yes	Replace the audio unit, then go to the next

	• Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?		step. (See AUDIO UNIT REMOVAL/ INSTALLATION.)
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.

With Bose®

DESCRIPTION	Audio unit internal malfunction or audio unit protection function operates
DETECTION CONDITION	• Audio unit internal ECU (Power amplifier peripheral circuit) is faulted. • Audio unit protection function operates due to short to ground in speaker circuit
POSSIBLE CAUSE	• Audio unit connector or terminals malfunction • Audio amplifier connector or terminals malfunction • Open circuit in wiring harness between the following terminals: ▪ Audio unit terminal 1A—Audio amplifier terminal 1D ▪ Audio unit terminal 1C—Audio amplifier terminal 1C ▪ Audio unit terminal 1D—Audio amplifier terminal 1F ▪ Audio unit terminal 1F—Audio amplifier terminal 1E ▪ Audio unit terminal 1S—Audio amplifier terminal 1H ▪ Audio unit terminal 1U—Audio amplifier terminal 1G ▪ Audio unit terminal 1V—Audio amplifier terminal 1J ▪ Audio unit terminal 1X—Audio amplifier terminal 1I • Short to ground in wiring harness between the following terminals: ▪ Audio unit terminal 1A—Audio amplifier terminal 1D ▪ Audio unit terminal 1C—Audio amplifier terminal 1C ▪ Audio unit terminal 1D—Audio amplifier terminal 1F ▪ Audio unit terminal 1F—Audio amplifier terminal 1E ▪ Audio unit terminal 1S—Audio amplifier terminal 1H ▪ Audio unit terminal 1U—Audio amplifier terminal 1G

- Audio unit terminal 1V—Audio amplifier terminal 1J
- Audio unit terminal 1X—Audio amplifier terminal 1I
- Audio unit malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT AUDIO UNIT CONNECTOR AND TERMINALS • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the audio unit connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection).	Yes Repair or replace the connector or terminals, then go to Step 5.
		No Go to the next step.

	Is there any malfunction?		
2	INSPECT AUDIO AMPLIFIER CONNECTOR AND TERMINALS - Disconnect the audio amplifier connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	Go to the next step.
3	INSPECT AUDIO AMPLIFIER CIRCUIT FOR OPEN CIRCUIT - Audio unit and audio amplifier connector is disconnected. - Inspect for continuity between the following terminals (wiring harness-side): - Audio unit terminal 1A— Audio amplifier terminal 1D - Audio unit terminal 1C— Audio amplifier terminal 1C - Audio unit terminal 1D— Audio amplifier terminal 1F - Audio unit terminal 1F— Audio amplifier terminal 1E - Audio unit terminal 1S— Audio amplifier terminal 1H - Audio unit terminal 1U— Audio amplifier terminal 1G - Audio unit terminal 1V— Audio amplifier terminal 1J - Audio unit terminal 1X— Audio amplifier terminal 1I - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	INSPECT AUDIO AMPLIFIER CIRCUIT FOR SHORT TO GROUND - Inspect for continuity between the following terminals (wiring harness-side) and body ground: - Audio amplifier terminal 1D - Audio amplifier terminal 1C - Audio amplifier terminal 1F - Audio amplifier terminal 1E - Audio amplifier terminal 1H - Audio amplifier terminal 1G - Audio amplifier terminal 1J	Yes	Repair or replace the wiring harness for a possible short to ground, then go to the next step.
		No	Go to the next step.

	▪ Audio amplifier terminal 1I • Is there continuity?		
5	CONFIRM AUDIO UNIT DTC • Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?	Yes	Replace the audio unit, then go to the next step. (See AUDIO UNIT REMOVAL/ INSTALLATION .)
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.

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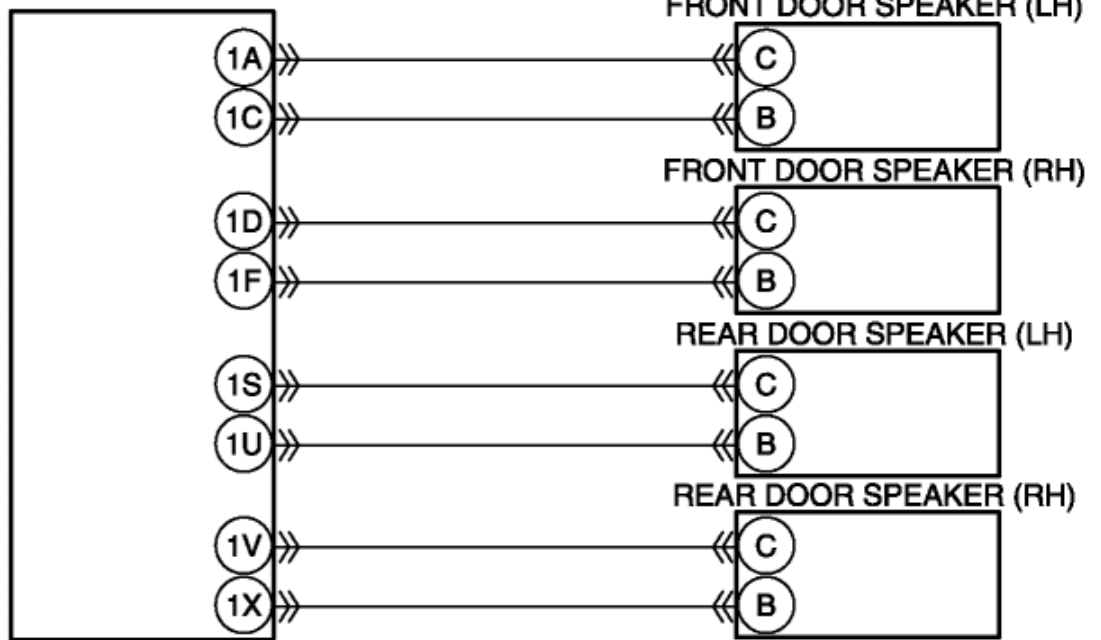
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DTC: 09:Er21, DEVICE CORD 09/ ERROR CORD 21 [AUDIO]

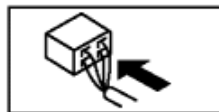
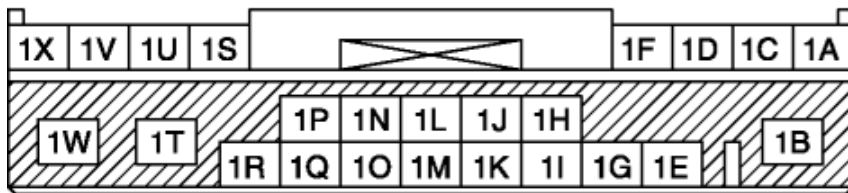
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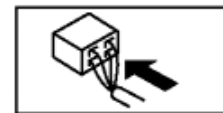
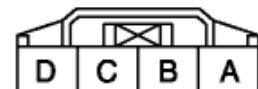
AUDIO UNIT



AUDIO UNIT WIRING HARNESS-SIDE CONNECTOR



SPEAKER WIRING HARNESS-SIDE CONNECTOR



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT AUDIO UNIT CONNECTOR AND TERMINALS - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the audio unit connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 6.
		No Go to the next step.
2	INSPECT SPEAKER CONNECTOR AND TERMINALS Disconnect the speaker connector.	Yes Repair or replace the connector or terminals, then go to Step 6.
		No Go to the next step.

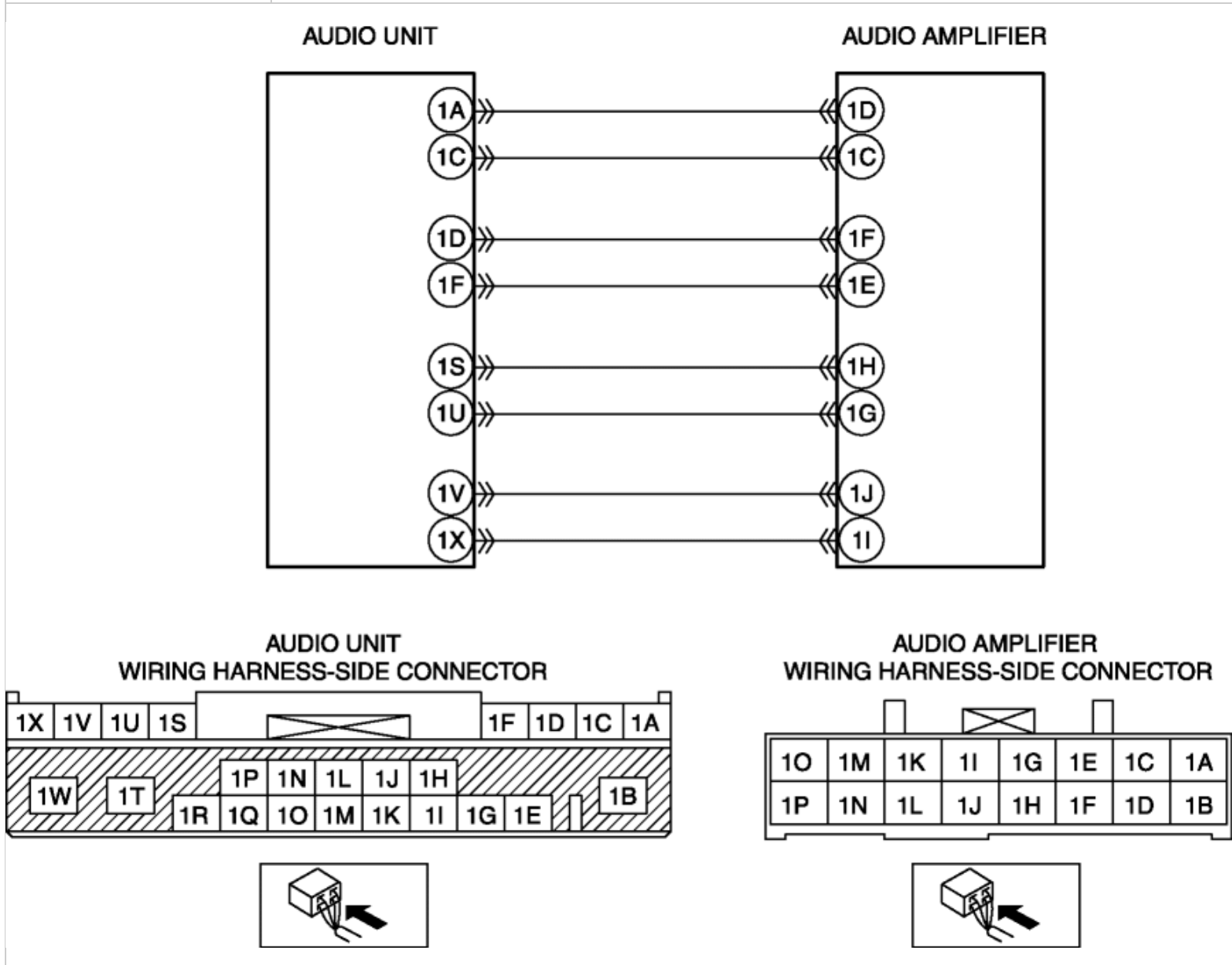
	Inspect the connector and terminals (corrosion, damage, pin disconnection). Is there any malfunction?		
3	INSPECT SPEAKER CIRCUIT FOR OPEN CIRCUIT - Audio unit and speaker connector is disconnected. - Inspect for continuity between the following terminals (wiring harness-side): - Audio unit terminal 1A—Front door speaker (LH) terminal C - Audio unit terminal 1C—Front door speaker (LH) terminal B - Audio unit terminal 1D—Front door speaker (RH) terminal C - Audio unit terminal 1F—Front door speaker (RH) terminal B - Audio unit terminal 1S—Rear door speaker (LH) terminal C - Audio unit terminal 1U—Rear door speaker (LH) terminal B - Audio unit terminal 1V—Rear door speaker (RH) terminal C - Audio unit terminal 1X—Rear door speaker (RH) terminal B - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 6.
4	INSPECT SPEAKER CIRCUIT FOR SHORT TO GROUND - Inspect for continuity between the following terminals (wiring harness-side) and body ground: - Speaker terminal C - Speaker terminal B - Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to ground, then go to Step 6.
		No	Go to the next step.
5	INSPECT SPEAKER - Switch the ignition to off. - Inspect the speaker. (See FRONT DOOR SPEAKER INSPECTION.) (See REAR DOOR SPEAKER INSPECTION.) - Is there any malfunction?	Yes	Replace the speaker, then go to the next step. (See FRONT DOOR SPEAKER REMOVAL/INSTALLATION.) (See REAR DOOR SPEAKER REMOVAL/INSTALLATION.)
		No	Go to the next step.
6	CONFIRM AUDIO UNIT DTC	Yes	Replace the audio unit, then go to the next

	• Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?		step. (See AUDIO UNIT REMOVAL/ INSTALLATION.)
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.

With Bose®

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- Audio unit terminal 1V—Audio amplifier terminal 1J
- Audio unit terminal 1X—Audio amplifier terminal 1I
- Audio unit malfunction



Diagnostic Procedure

Step	Inspection	Action
1	INSPECT AUDIO UNIT CONNECTOR AND TERMINALS • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the audio unit connector. • Inspect the connector and terminals (corrosion, damage, pin disconnection).	Yes Repair or replace the connector or terminals, then go to Step 5.
		No Go to the next step.

	Is there any malfunction?		
2	INSPECT AUDIO AMPLIFIER CONNECTOR AND TERMINALS - Disconnect the audio amplifier connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 5.
		No	Go to the next step.
3	INSPECT AUDIO AMPLIFIER CIRCUIT FOR OPEN CIRCUIT - Audio unit and audio amplifier connector is disconnected. - Inspect for continuity between the following terminals (wiring harness-side): - Audio unit terminal 1A— Audio amplifier terminal 1D - Audio unit terminal 1C— Audio amplifier terminal 1C - Audio unit terminal 1D— Audio amplifier terminal 1F - Audio unit terminal 1F— Audio amplifier terminal 1E - Audio unit terminal 1S— Audio amplifier terminal 1H - Audio unit terminal 1U— Audio amplifier terminal 1G - Audio unit terminal 1V— Audio amplifier terminal 1J - Audio unit terminal 1X— Audio amplifier terminal 1I - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 5.
4	INSPECT AUDIO AMPLIFIER CIRCUIT FOR SHORT TO GROUND - Inspect for continuity between the following terminals (wiring harness-side) and body ground: - Audio amplifier terminal 1D - Audio amplifier terminal 1C - Audio amplifier terminal 1F - Audio amplifier terminal 1E - Audio amplifier terminal 1H - Audio amplifier terminal 1G - Audio amplifier terminal 1J	Yes	Repair or replace the wiring harness for a possible short to ground, then go to the next step.
		No	Go to the next step.

	▪ Audio amplifier terminal 1I • Is there continuity?		
5	CONFIRM AUDIO UNIT DTC • Clear the DTC from the audio unit memory. (See CLEARING DTC [AUDIO].) • Perform the audio unit DTC inspection. (See DTC INSPECTION [AUDIO].) • Is the same DTC present?	Yes	Replace the audio unit, then go to the next step. (See AUDIO UNIT REMOVAL/ INSTALLATION .)
		No	Go to the next step.
6	VERIFY THAT NO OTHER DTCs ARE RECORDED • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [AUDIO] .)
		No	DTC troubleshooting completed.

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