

2012 - Mazda6 - Body and Accessories

NO.6 NO VOICE NAVIGATION [CAR-NAVIGATION SYSTEM]

6	No voice navigation
POSSIBLE CAUSE	• Improper adjustment of the navigation voice volume • Poor connection of driver-side front door speaker connector, terminal damage • Poor connection of car-navigation unit connector, terminal damage • Poor connection of audio amplifier connector, terminal damage • Open or short circuit in wiring harness between car-navigation unit and driver-side front door speaker through audio amplifier. • Speaker malfunction • Audio amplifier malfunction • Car-navigation unit malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is the voice navigation mute?	Yes Turn on the voice navigation.
		No Go to the next step.
2	• Turn the audio power switch (CD, radio) to ON. • Does front door speaker work?	Yes Go to Step 6.
		No Go to the next step.
3	• Switch the ignition to off. • Remove the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.)	Yes Go to the next step.
		No Securely connect the front door speaker connector.
4	• Disconnect the front door speaker connector (4-pin).	Yes Go to the next step.

	- Inspect both the front door speaker and wiring harness-side connector for poor connection (such as damaged/pulled out pins, corrosion). - Are all the pins normal?	No	If the front door speaker connector is wrong: - Replace the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
5	- Inspect the front door speakers. (See FRONT DOOR SPEAKER INSPECTION.) - Are they normal?	Yes	Go to the next step.
		No	Replace the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.)
6	- Inspect the connection of car-navigation unit connector (24-pin). - Is the connector securely connected?	Yes	Go to the next step.
		No	Securely connect the car-navigation unit connector.
7	- Disconnect the car-navigation unit connector (24-pin). - Inspect both the car-navigation unit and wiring harness-side connector terminal for poor connection (such as damaged/pulled out pins, corrosion). - Are all pins normal?	Yes	Go to the next step.
		No	If the car-navigation unit connector is wrong: - Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
8	- Inspect the connection of audio amplifier connector. - Is the connector securely connected?	Yes	Go to the next step.
		No	Securely connect the audio amplifier connector.

9	• Disconnect the audio amplifier connector. • Inspect both the audio amplifier and wiring harness-side connector terminal 1C, 1D, 1E, 1F, 3C, 3D, 3E, and 3F for poor connection (such as damaged/pulled out pins, corrosion). • Are all pins normal?	Yes	Go to the next step.
		No	If the audio amplifier connector is wrong: • Replace the audio amplifier. (See AUDIO AMPLIFIER REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: • Repair or replace the pins and/or the connector.
10	• Inspect there continuity between following car-navigation unit and audio amplifier at harness-side connector. ▪ Car-navigation unit terminal 1A (24-pin, Fr SP LH+) and audio amplifier terminal 1D (FL IN +) ▪ Car-navigation unit terminal 1C (24-pin, Fr SP LH-) and audio amplifier terminal 1C (FL IN -) ▪ Car-navigation unit terminal 1D (24-pin, Fr SP RH+) and audio amplifier terminal 1F (FR IN +) ▪ Car-navigation unit terminal 1F (24-pin, Fr SP RH-) and audio amplifier terminal 1E (FR IN -) • Is there continuity?	Yes	Inspect for short circuit in wiring harness. • If there is a short circuit, repair or replace the suspect wiring harness. • If the wiring harness is okay, go to Step 12.
		No	Repair or replace wiring harness.
11	• Inspect there continuity between following audio amplifier and front door speaker at harness-side connector. ▪ Audio amplifier terminal 3D (FRONT DOOR L SP +) and	Yes	Inspect for short circuit in wiring harness. • If there is a short circuit, repair or replace the suspect wiring harness. • If the wiring harness is okay, go to the next step.

	left-side front door speaker terminal C (+) ▪ Audio amplifier terminal 3C (FRONT DOOR L SP -) and left-side front door speaker terminal B (-) ▪ Audio amplifier terminal 3F (FRONT DOOR R SP +) and right-side front door speaker terminal C (+) ▪ Audio amplifier terminal 3E (FRONT DOOR R SP -) and right-side front door speaker terminal B (-) • Is there continuity?		No Repair or replace wiring harness.
12	• Replace the audio amplifier. (See AUDIO AMPLIFIER REMOVAL/ INSTALLATION.) • Does the voice navigation operation properly?	Yes	Troubleshooting is completed.
		No	Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)

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Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is the voice navigation mute?	Yes Turn on the voice navigation.
		No Go to the next step.
2	• Turn the audio power switch (CD, radio) to ON. • Does front door speaker work?	Yes Go to Step 6.
		No Go to the next step.
3	• Switch the ignition to off. • Remove the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.)	Yes Go to the next step.
		No Securely connect the front door speaker connector.
4	• Disconnect the front door speaker connector (4-pin).	Yes Go to the next step.

	- Inspect both the front door speaker and wiring harness-side connector for poor connection (such as damaged/pulled out pins, corrosion). - Are all the pins normal?	No	If the front door speaker connector is wrong: - Replace the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
5	- Inspect the front door speakers. (See FRONT DOOR SPEAKER INSPECTION.) - Are they normal?	Yes	Go to the next step.
		No	Replace the front door speaker. (See FRONT DOOR SPEAKER REMOVAL/ INSTALLATION.)
6	- Inspect the connection of car-navigation unit connector (24-pin). - Is the connector securely connected?	Yes	Go to the next step.
		No	Securely connect the car-navigation unit connector.
7	- Disconnect the car-navigation unit connector (24-pin). - Inspect both the car-navigation unit and wiring harness-side connector terminal for poor connection (such as damaged/pulled out pins, corrosion). - Are all pins normal?	Yes	Go to the next step.
		No	If the car-navigation unit connector is wrong: - Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
8	- Inspect the connection of audio amplifier connector. - Is the connector securely connected?	Yes	Go to the next step.
		No	Securely connect the audio amplifier connector.

9	• Disconnect the audio amplifier connector. • Inspect both the audio amplifier and wiring harness-side connector terminal 1C, 1D, 1E, 1F, 3C, 3D, 3E, and 3F for poor connection (such as damaged/pulled out pins, corrosion). • Are all pins normal?	Yes	Go to the next step.
		No	If the audio amplifier connector is wrong: • Replace the audio amplifier. (See AUDIO AMPLIFIER REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: • Repair or replace the pins and/or the connector.
10	• Inspect there continuity between following car-navigation unit and audio amplifier at harness-side connector. ▪ Car-navigation unit terminal 1A (24-pin, Fr SP LH+) and audio amplifier terminal 1D (FL IN +) ▪ Car-navigation unit terminal 1C (24-pin, Fr SP LH-) and audio amplifier terminal 1C (FL IN -) ▪ Car-navigation unit terminal 1D (24-pin, Fr SP RH+) and audio amplifier terminal 1F (FR IN +) ▪ Car-navigation unit terminal 1F (24-pin, Fr SP RH-) and audio amplifier terminal 1E (FR IN -) • Is there continuity?	Yes	Inspect for short circuit in wiring harness. • If there is a short circuit, repair or replace the suspect wiring harness. • If the wiring harness is okay, go to Step 12.
		No	Repair or replace wiring harness.
11	• Inspect there continuity between following audio amplifier and front door speaker at harness-side connector. ▪ Audio amplifier terminal 3D (FRONT DOOR L SP +) and	Yes	Inspect for short circuit in wiring harness. • If there is a short circuit, repair or replace the suspect wiring harness. • If the wiring harness is okay, go to the next step.

	left-side front door speaker terminal C (+) ▪ Audio amplifier terminal 3C (FRONT DOOR L SP -) and left-side front door speaker terminal B (-) ▪ Audio amplifier terminal 3F (FRONT DOOR R SP +) and right-side front door speaker terminal C (+) ▪ Audio amplifier terminal 3E (FRONT DOOR R SP -) and right-side front door speaker terminal B (-) • Is there continuity?		No Repair or replace wiring harness.
12	• Replace the audio amplifier. (See AUDIO AMPLIFIER REMOVAL/ INSTALLATION.) • Does the voice navigation operation properly?	Yes	Troubleshooting is completed.
		No	Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)