

2012 - Mazda6 - Body and Accessories

NO.2 NO RADIO RECEPTION (SIRIUS SATELLITE RADIO) [RADIO]

2	No radio reception (SIRIUS satellite radio)
Possible DTC	—
POSSIBLE CAUSE	• Low battery voltage • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, external FM transmitter, etc.) • Antenna plug poor connection • Antenna feeder malfunction • SIRIUS satellite radio unit malfunction • Open or short circuit in wiring harness between SIRIUS satellite radio unit and audio unit/car-navigation unit • Communication error between SIRIUS satellite radio unit and audio unit/car-navigation unit • Audio unit malfunction • Car-navigation unit malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Verify that the AM radio and FM radio reception conditions. • Are AM radio and FM radio reception normally?	YesGo to the next step.
		No Perform symptom “No.1 no radio reception (AM/FM)/no or low volume” troubleshooting procedure.
2	• Is aftermarket electronic equipment (two-way radio, navigation system, mobile	YesGo to the next step.

	phone, external FM transmitter, etc.) installed? NOTE: TV antenna located closely to audio antenna can be cause of noise. Relocate TV antenna.	No	Go to Step 4.
3	- Remove aftermarket electronic equipment. - Turn audio unit/car-navigation unit ON and check reception condition. - Is reception improved?	Yes	The system is normal. (Explain to customers that aftermarket electronic equipment is cause of noise)
		No	Go to the next step.
4	- Inspect SIRIUS satellite radio antenna plug connection condition. - Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
5	- Switch the ignition to off. - Measure continuity between SIRIUS satellite radio antenna feeder axis and ground. - Is there any continuity?	Yes	Replace the SIRIUS satellite radio antenna feeder.
		No	Go to the next step.
6	- Inspect the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna feeder normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.)
7	- Inspect the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA REMOVAL/ INSTALLATION.)
8	- Inspect the following wiring harness for open or short circuit. With audio system : - Between SIRIUS satellite	Yes	Repair or replace malfunctioning part.
		No	Go to the next step.

radio unit harness side
connector terminal 2L and
audio unit terminal 1O

- Between SIRIUS satellite
radio unit harness side
connector terminal 2K and
audio unit terminal 1Q
- Between SIRIUS satellite
radio unit harness side
connector terminal 2C and
audio unit terminal 2C
- Between SIRIUS satellite
radio unit harness side
connector terminal 2E and
audio unit terminal 2E
- Between SIRIUS satellite
radio unit harness side
connector terminal 2G and
audio unit terminal 2D,2F
- Between SIRIUS satellite
radio unit harness side
connector terminal 2A and
audio unit terminal 2A

**With car-navigation
system :**

- Between SIRIUS satellite
radio unit harness side
connector terminal 2L and
car-navigation unit
terminal 1O
- Between SIRIUS satellite
radio unit harness side
connector terminal 2K and
car-navigation unit
terminal 1Q
- Between SIRIUS satellite
radio unit harness side
connector terminal 2C and
car-navigation unit
terminal 2C
- Between SIRIUS satellite
radio unit harness side
connector terminal 2E and
car-navigation unit
terminal 2E
- Between SIRIUS satellite
radio unit harness side
connector terminal 2G and

	car-navigation unit terminal 2G Between SIRIUS satellite radio unit harness side connector terminal 2A and car-navigation unit terminal 2A • Is there any open or short circuit detected?		
9	- Install all removed parts. - Compare reception with other audio unit/car-navigation unit on same model (model/unit) under same problem conditions. - Is reception equivalent between customer's unit and compared unit? NOTE: - Due to following differences, you may feel difference in reception efficiency. (Vehicle side factor) - Antenna installation location, height, feeder wiring routing, optional electrical equipment (Audio unit/ car-navigation unit factor) - Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous) - Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous)	Yes	The system is normal. (It is caused by electronic jamming from outside, or inferior broadcasting station signal condition.)
		No	Replace audio unit/car-navigation unit. (See AUDIO UNIT REMOVAL/ INSTALLATION.) (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)

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		No	Go to the next step.
4	- Inspect SIRIUS satellite radio antenna plug connection condition. - Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
5	- Switch the ignition to off. - Measure continuity between SIRIUS satellite radio antenna feeder axis and ground. - Is there any continuity?	Yes	Replace the SIRIUS satellite radio antenna feeder.
		No	Go to the next step.
6	- Inspect the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna feeder normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.)
7	- Inspect the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA REMOVAL/ INSTALLATION.)
8	- Inspect the following wiring harness for open or short circuit. With audio system : - Between SIRIUS satellite	Yes	Repair or replace malfunctioning part.
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radio unit harness side
connector terminal 2C and
audio unit terminal 2C
- Between SIRIUS satellite
radio unit harness side
connector terminal 2E and
audio unit terminal 2E
- Between SIRIUS satellite
radio unit harness side
connector terminal 2G and
audio unit terminal 2D,2F
- Between SIRIUS satellite
radio unit harness side
connector terminal 2A and
audio unit terminal 2A

**With car-navigation
system :**

- Between SIRIUS satellite
radio unit harness side
connector terminal 2L and
car-navigation unit
terminal 1O
- Between SIRIUS satellite
radio unit harness side
connector terminal 2K and
car-navigation unit
terminal 1Q
- Between SIRIUS satellite
radio unit harness side
connector terminal 2C and
car-navigation unit
terminal 2C
- Between SIRIUS satellite
radio unit harness side
connector terminal 2E and
car-navigation unit
terminal 2E
- Between SIRIUS satellite
radio unit harness side
connector terminal 2G and

	car-navigation unit terminal 2G Between SIRIUS satellite radio unit harness side connector terminal 2A and car-navigation unit terminal 2A • Is there any open or short circuit detected?		
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		No	Replace audio unit/car-navigation unit. (See AUDIO UNIT REMOVAL/ INSTALLATION.) (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)