

Subject: NOISE FROM SPEAKERS WHEN USING AUX JACK AND 12V ACCESSORY SOCKET	Bulletin No: 09-031/08
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APPLICABLE MODEL(S)/VINS

2009 CX-7
2007-2008 CX-9
2007-2009 Mazda3
2008-2009 Mazda5
2009 RX-8

DESCRIPTION

Some customers may complain about noise from the speakers when using a portable audio device (such as an MP3 player) connected to the vehicle's audio system via the auxiliary (AUX) jack while powering the device (through the device's charger) using the vehicle's 12V accessory socket.

The symptom may occur when the engine is running and/or off (with ignition in ACC position). The symptom does not occur when the audio device's is not connected to the 12V accessory socket through the charger.

The noise may be caused by one or more of the following:

- **Ground Loop Noise** - A ground loop occurs when there is more than one ground connection path between two pieces of equipment. The duplicate ground paths form the equivalent of a loop antenna which very efficiently picks up interference that is transmitted as noise from the audio system. Additionally, any slight potential (voltage) differences between the grounds will cause current to flow from one to the other and add to the noise.
- **Charger Noise** - The device's charger creates noise interference when connected to the 12V accessory socket and the device.
- **Vehicle Noise** - Alternator and ignition noise may come into the audio line through the vehicles 12V power source.

Customers having this concern should have their vehicle repaired using the following repair procedure.

REPAIR PROCEDURE

1. Verify customer concern.
2. Explain to the customer to disconnect the audio device's charger from the 12V accessory socket. Direct the customer to the CAUTION and NOTE under Auxiliary Input (AUX mode) located in AUDIO SYSTEM (Section 6) of the vehicle owners manual (duplicated below):

CAUTION:

- *Noise may occur during playback if the accessory socket equipped on the vehicle is used. (If noise occurs, do not use the accessory socket.)*

NOTE:

- *Noise may occur depending on the product connected to the auxiliary jack.*
- *With regard to connecting a portable audio or similar device to a power source, use the battery for the device, not the accessory socket.*

3. If the audio device and the vehicle are compatible, recommend to install the IPOD Integration Module for that vehicle at customer's expense.

NOTE:

- If the IPOD Integration Module is installed, to maintain operation of the AUX jack, installation of the Switching Box may also be required (at customer expense).
- If vehicle is equipped with PhatNoise or SIRIUS Satellite Radio, there may be a conflict in installing the IPOD Integration Module where it cannot be installed unless one of the current audio accessories is removed.
- For the latest IPOD Integration Module and Switching Box application information, refer to the IPOD Integration Model Application Guide available on MXConnect under Parts & Accessories / Accessories / Accessory Service Parts and Installation Instructions.

4. If vehicle or audio device is not compatible with the IPOD Integration Module, recommend to customer to purchase and install a "Ground Loop Isolator" such as 270-054 available at RadioShack (at customer expense). A second 1/8" jack adapter will be required to be purchased (at customer expense) to properly install the ground loop isolator.

NOTE:

- Installation of the IPOD Integration Module, Switching Box or ground loop isolator are not warrantable repairs.