

REFER to: Information and Entertainment System - System Operation and Component Description . See Audio Input Jack Mode, Bluetooth Mode, SD Card Mode, SYNC ® System, USB Mode, ACM, APIM, and Media Hub.

Possible Sources

- Customer's device
- Wiring, terminals, or connectors
- APIM
- ACM

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R1 VERIFY THE OPERATION OF THE SYNC ® SYSTEM AUDIO SOURCES

Connect: MIT 105-00120.

Using the MIT 105-00120, test the audio output for the SYNC ® audio sources (Bluetooth, USB ports, and audio input jack).

Is there poor quality, distorted, or no sound from all SYNC ® audio sources?

Yes	GO to R2
No	* If there is a concern with one or more, but not all SYNC ® audio sources, REFER to: Information and Entertainment System . See Symptom Chart: SYNC ® System.* If all SYNC ® audio sources operate correctly with the MIT 105-00120, the concern is with the customer's device.

R2 CHECK FOR AN AC (ALTERNATING CURRENT) VOLTAGE SIGNAL ON THE APIM (SYNC MODULE) STEREO OUTPUT CIRCUITS TO THE ACM (AUDIO FRONT CONTROL MODULE)

 **NOTE:** This pinpoint test step directs testing circuits using a back-probe method. Use the special back-probe tool POM6411. Do not force test leads or other probes into connectors. Adequate care must be exercised to avoid connector terminal damage, while ensuring that good electrical contact is made with the circuit or terminal. Failure to follow these instructions may cause damage to wiring, terminals, or connectors, and may cause subsequent electrical faults.

Play an audio file through the audio system using a SYNC ® audio source (Bluetooth, USB

ports, audio input jack).

While back-probing ACM C240B , measure the AC voltage.

Positive Lead	Measurement / Action	Negative Lead
C240B-12		C240B-25
C240B-13		C240B-26

Is a fluctuating AC voltage present?

Yes	GO to R8
No	GO to R3

R3 CHECK THE APIM (SYNC MODULE) STEREO OUTPUT CIRCUITS TO THE ACM (AUDIO FRONT CONTROL MODULE) FOR A SHORT TO VOLTAGE

Ignition OFF.

Disconnect: ACM C240B .

Disconnect: APIM C2383 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C240B-12		Ground
C240B-13		Ground
C240B-25		Ground
C240B-26		Ground

Is any voltage present?

Yes	REPAIR the circuit in question.
No	GO to R4

R4 CHECK THE APIM (SYNC MODULE) STEREO OUTPUT CIRCUITS TO THE ACM (AUDIO FRONT CONTROL MODULE) FOR A SHORT TO GROUND

Ignition OFF.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C240B-12	Ω	Ground
C240B-13	Ω	Ground
C240B-25	Ω	Ground
C240B-26	Ω	Ground

Are the resistances greater than 10, 000 ohms?

Yes	GO to R5
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No	REPAIR the circuit in question.
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R5 CHECK THE APIM (SYNC MODULE) STEREO OUTPUT CIRCUITS TO THE ACM (AUDIO FRONT CONTROL MODULE) FOR AN OPEN

Measure:

Positive Lead	Measurement / Action	Negative Lead
C240B-12	Ω	C2383-23
C240B-13	Ω	C2383-25
C240B-25	Ω	C2383-24
C240B-26	Ω	C2383-26

Are the resistances less than 3 ohms?

Yes	GO to R6
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No	REPAIR the circuit in question.
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R6 CHECK THE APIM (SYNC MODULE) STEREO OUTPUT CIRCUITS TO THE ACM (AUDIO FRONT CONTROL MODULE) FOR A SHORT TOGETHER

Measure:

Positive Lead	Measurement / Action	Negative Lead
C240B-12	Ω	C240B-13
C240B-12	Ω	C240B-25
C240B-12	Ω	C240B-26

C240B-13	Ω	C240B-25
C240B-13	Ω	C240B-26
C240B-25	Ω	C240B-26

Are the resistances greater than 10, 000 ohms?

Yes	GO to R7
No	REPAIR the circuit in question.

R7 CHECK FOR CORRECT APIM (SYNC MODULE) OPERATION

Ignition OFF.

Disconnect and inspect the APIM connector.

Repair:

Corrosion (clean module pins or install new connectors or terminals)

Damaged or bent pins (install new terminals or pins)

Pushed-out pins (install new pins as necessary)

Reconnect the APIM connector. Make sure it seats and latches correctly.

Wait at least 2 minutes for the APIM to re-initialize.

Operate the system and determine if the concern is still present.

Is the concern still present?

Yes	CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW the TSB instructions. If no Technical Service Bulletins (TSBs) address this concern, PERFORM the APIM Hardware Test. Refer to APIM HARDWARE TESTING .
No	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

R8 CHECK FOR CORRECT ACM (AUDIO FRONT CONTROL MODULE) OPERATION

Ignition OFF.

Disconnect and inspect all the ACM connectors.

Repair:

Corrosion (clean module pins or install new connectors or terminals)