

DIAGNOSIS AND TESTING > POOR OR NO SATELLITE AUDIO RECEPTION

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > POOR OR NO SATELLITE AUDIO RECEPTION > POSSIBLE CAUSES

Possible Causes
SATELLITE ANTENNA
SATELLITE ANTENNA CONNECTION
OPEN OR SHORTED SATELLITE ANTENNA CABLE
RADIO

DIAGNOSIS AND TESTING > POOR OR NO SATELLITE AUDIO RECEPTION > DIAGNOSTIC TEST

1. CHECK THE ANTENNA CONNECTION

1. Turn the ignition off.
2. Disconnect the Satellite Antenna yellow connector at the Radio.
3. Inspect the Satellite Antenna connection.

Is the Antenna connection clean and secure?

Yes

1. Go To Step 2

No

1. Repair the Antenna connection as needed.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

2. CHECK THE RADIO

1. Connect the (special tool #9977-6-SAT, Antenna) to the antenna connection on the back of the Radio.
2. Turn the ignition on.
3. Turn the Radio on and set it to Satellite band.

4. Tune into several satellite stations.

Is the Satellite reception still poor or not available?

Yes

1. Replace the Radio in accordance to the service information. (Refer to RADIO).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 3

3. TEST THE ANTENNA CABLE AT THE GLOVE BOX OPENING

1. Turn the ignition off.
2. Disconnect the (special tool #9977-6-SAT, Antenna) from the Antenna cable at the Radio.
3. Connect the antenna cable back up to the Radio.
4. Remove the Glove Box Assembly. (Refer to GLOVE BOX, INSTRUMENT PANEL).
5. Disconnect the yellow SDAR antenna connector that is attached to the blower housing.
6. Connect the (special tool #9977-6-SAT, Antenna) with the 9977-6-5 adapter, to the SDAR antenna connector at the glove box opening.
7. Turn the ignition on.
8. Turn the Radio on and set it to Satellite band.
9. Tune into several satellite stations.

Is the Satellite reception now poor or not available?

Yes

1. Replace the antenna cable between the Radio and the in-line connector at the glove box opening.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Go To Step 4

4. TEST THE ANTENNA CABLE FROM THE GLOVE BOX OPENING TO THE ANTENNA CONNECTOR



NOTE:

To continue this test, it will require the necessity of two technicians.

 CAUTION:

Be extremely careful not to pull too hard on the headliner which could cause it to buckle. Support it if it starts to drop.

1. Turn the ignition off.
2. Re-connect the yellow SDAR connector at the glove box opening.
3. Lower the headliner.
4. Once the headliner is loose, move the front seats forward and lower the front seat backs and rest the headliner on top of the seats.
5. Disconnect the yellow SDAR antenna cable connector on the rear roof support at the antenna base.
6. Connect the (special tool #9977-6-SAT, Antenna) to the yellow SDAR Antenna cable connector near the antenna base.
7. Turn the ignition on.
8. Turn the Radio on and set it to Satellite band.
9. Tune into several Satellite stations.

Is the Satellite reception now poor or not available?

Yes

1. Replace the Antenna cable from the glove box opening to the Satellite Antenna. (Refer to ANTENNA, SATELLITE, AUDIO).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the Satellite Antenna base in accordance with the Service Information. (Refer to ANTENNA, SATELLITE, AUDIO).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > POOR OR NO AM/FM AUDIO RECEPTION

For a complete wiring diagram, **refer to SYSTEM WIRING DIAGRAMS article** .

DIAGNOSIS AND TESTING > POOR OR NO AM/FM AUDIO RECEPTION > POSSIBLE CAUSES

Possible Causes
BAD ANTENNA GRID
BAD ANTENNA CONNECTION
ANTENNA MODULE
OPEN OR SHORTED ANTENNA CABLE
RADIO (RRM)

DIAGNOSIS AND TESTING > POOR OR NO AM/FM AUDIO RECEPTION > DIAGNOSTIC TEST

1. CHECK THE ANTENNA CONNECTION

1. Turn the ignition off.
2. Disconnect the AM/FM Audio Antenna white connector at the rear of the Radio (RRM).
3. Inspect the Audio Antenna connection.

Is the Antenna connection clean and secure?

Yes

1. Go To Step 2

No

1. Repair the Antenna connection as needed.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

2. CHECK THE RADIO

1. Connect the (special tool #9977-6-FM, Antenna) to the antenna connection on the back of the Radio.
2. Place the magnetic test antenna on the roof of the vehicle.
3. Turn the ignition on.
4. Turn the Radio on and set it to AM or FM band.
5. Tune in to several AM and FM stations.

Is the audio reception still poor or not available?

Yes

1. Replace the Radio in accordance to the service information. (Refer to RADIO).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

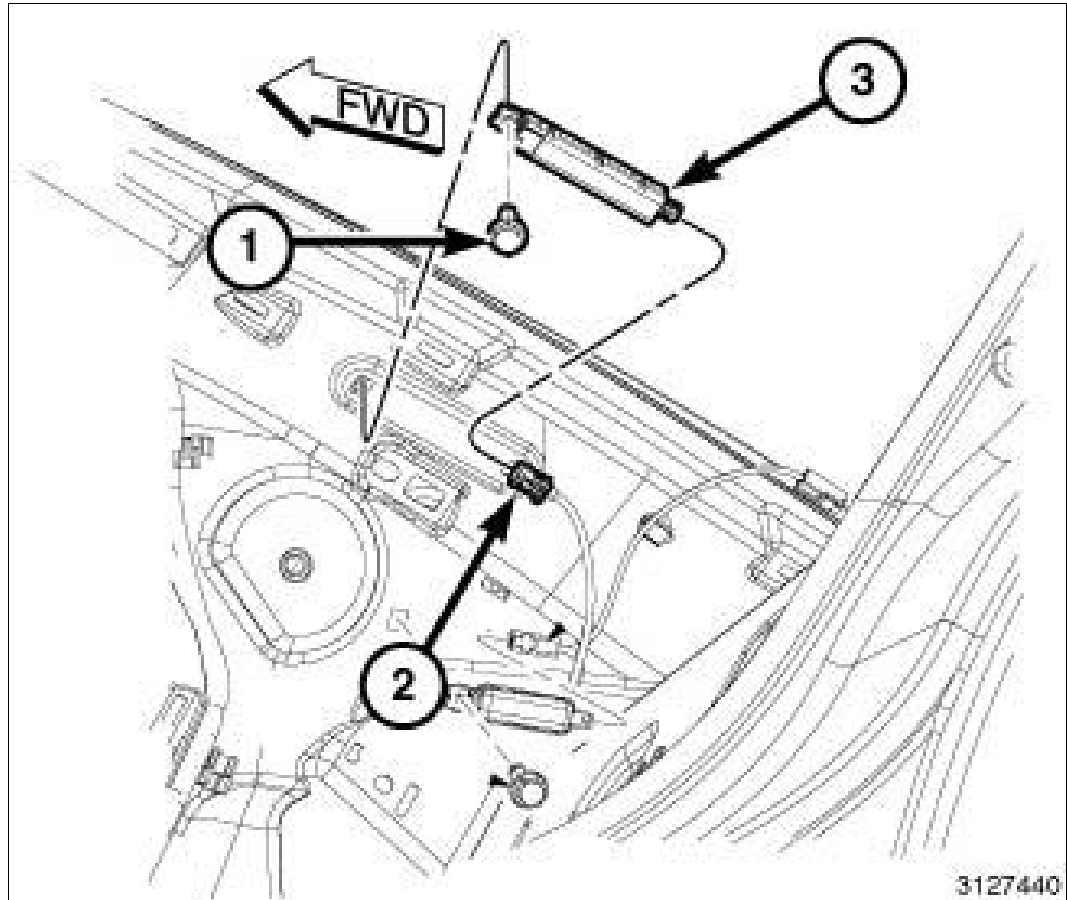
No

1. Go To Step 3

3. TEST THE ANTENNA MODULE AND GRID

1. Turn the ignition off.
2. Disconnect the test antenna and connect the harness connector to the Radio.

Fig 1: Antenna Cable, Mounting Fasteners & Antenna Module



Courtesy of CHRYSLER GROUP, LLC

3. Remove the right C-Pillar trim to gain access to the Antenna Module (3). (Refer to INTERIOR). Remove the mounting bolt holding the Antenna Module (1).
4. Disconnect the white AM/FM antenna cable connector (2) from the antenna module.
5. Connect the (special tool #9977-6-FM, Antenna) to the white AM/FM antenna cable harness connector.
6. Turn the ignition on.
7. Turn the Radio on and set it to AM or FM band.
8. Tune in to several AM and FM stations.

Is the audio reception still poor or not available?

Yes

1. Go To Step 4

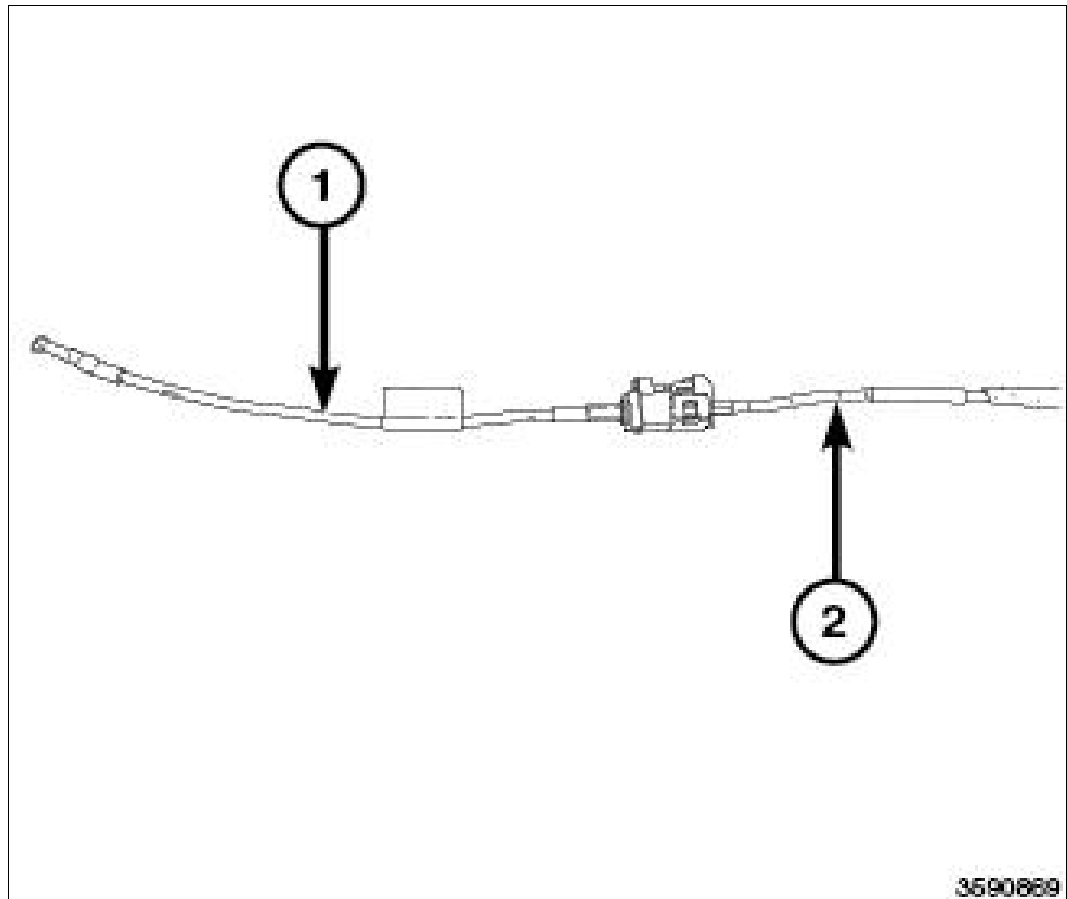
No

1. Check the antenna grid and repair if necessary. (Refer to DIAGNOSIS AND TESTING). If the grid checks good, replace the Antenna Module in accordance with the Service Information.

4. TEST THE ANTENNA CABLE

1. Turn the ignition off.
2. Disconnect the (special tool #9977-6-FM, Antenna) from the Antenna cable.

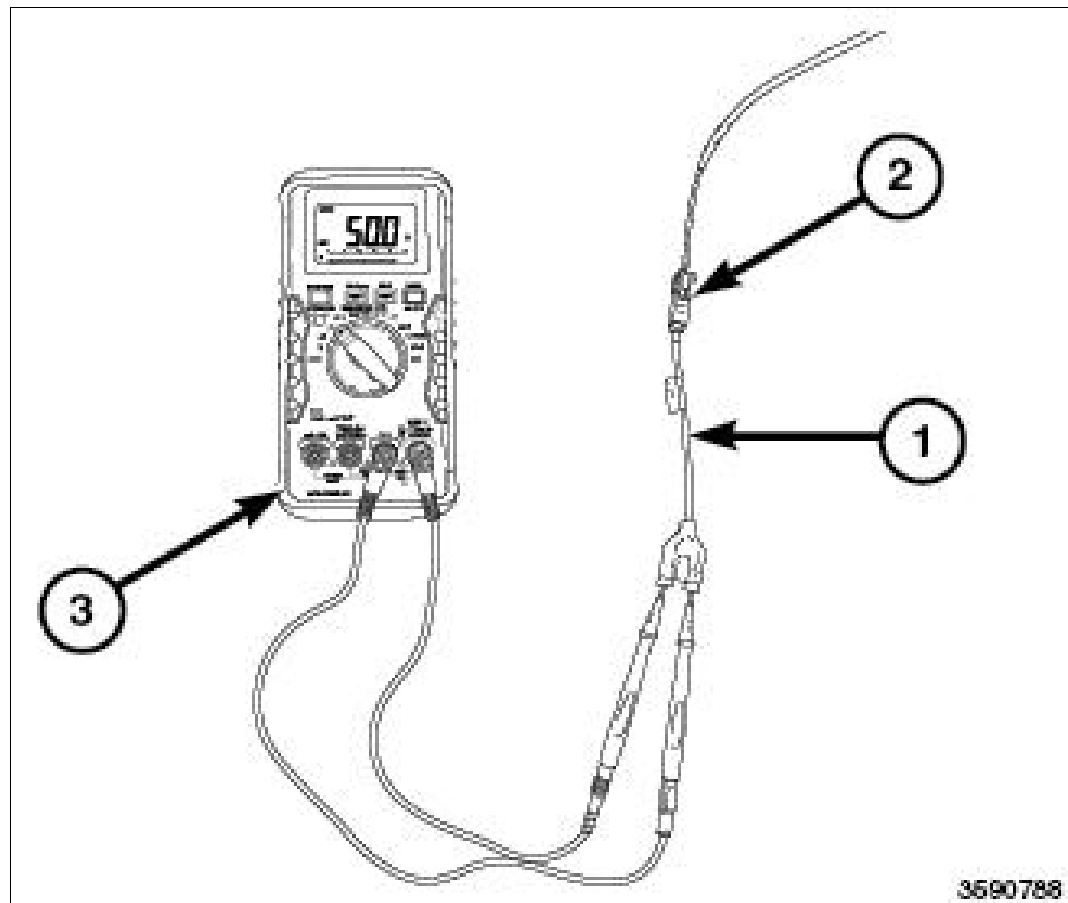
Fig 2: Special Tool Jumper & Antenna Harness Connector



Courtesy of CHRYSLER GROUP, LLC

3. Connect the appropriate 50 Ohm test (special tool #9977-6-4, Jumper) (1) or (special tool #9977-6-2, Jumper) (1) to the Antenna cable (2) at the Antenna Module harness connector.
4. Disconnect the AM/FM Audio Antenna white connector at the rear of the Radio.
5. Connect the appropriate (special tool #9977-6-1, Adapter) (1) or (special tool #9977-6-3, Adapter) (1) to the antenna cable (2) at the back of the Radio.

Fig 3: Special Tool, Antenna Harness Connector & DVOM



Courtesy of CHRYSLER GROUP, LLC

6. Measure the Resistance across the tool terminals.

Is the resistance above 52.5 or below 47.5 Ohms?

Yes

1. Go To Step 5

No

1. The source of the poor reception is not caused by the Radio or the Antenna cable. Re-check the antenna grid and repair if necessary. (Refer to DIAGNOSIS AND TESTING). If the grid checks good, replace the Antenna Module in accordance with the Service Information.

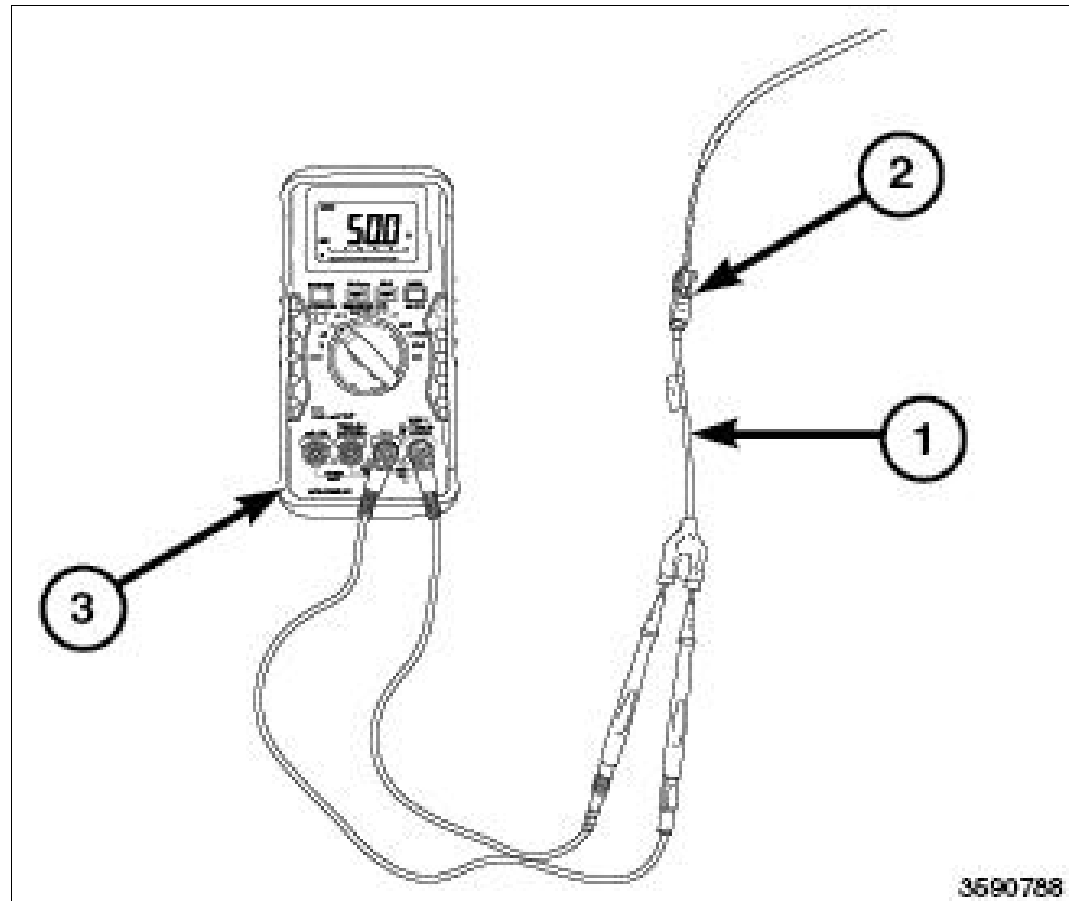
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

5. TEST THE ANTENNA CABLE FROM THE RADIO TO INLINE CONNECTOR

1. Disconnect the appropriate (special tool #9977-6-4, Jumper) or (special tool #9977-6-2, Jumper) from the antenna cable at the Antenna Module connector.
2. Remove the Glove Box Assembly. (Refer to GLOVE BOX, INSTRUMENT PANEL).
3. Disconnect the white AM/FM antenna connector mounted on the blower housing.

4. Connect the appropriate 50 Ohm test (special tool #9977-6-4, Jumper) (1) or (special tool #9977-6-2, Jumper) (2) to the side of the Antenna cable (2) that leads to the Radio.

Fig 4: Special Tool, Antenna Harness Connector & DVOM



Courtesy of CHRYSLER GROUP, LLC

5. Measure the Resistance across the tool terminals.

Is the resistance above 52.5 or below 47.5 Ohms?

Yes

1. Replace the section of antenna cable from the Radio to inline connector.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

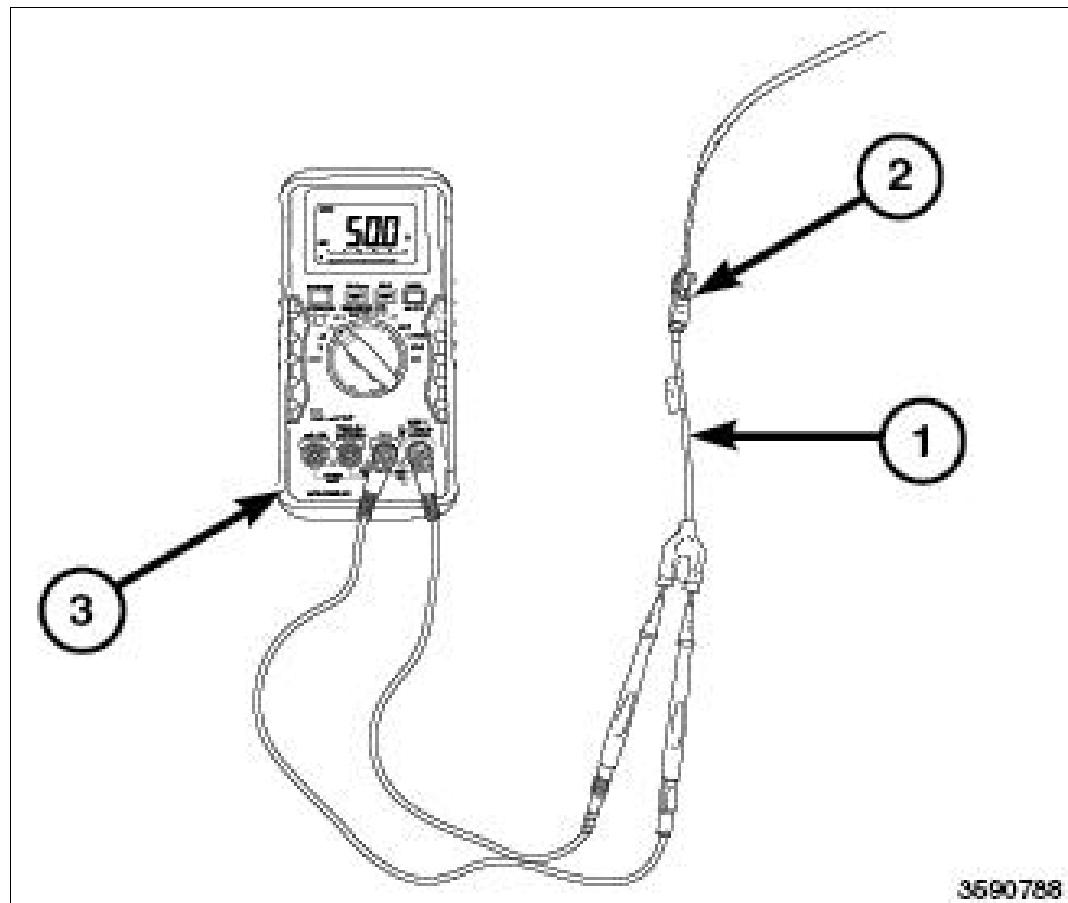
No

1. Go To Step 6

6. TEST THE ANTENNA CABLE FROM THE INLINE CONNECTOR TO THE ANTENNA MODULE

1. Disconnect the appropriate (special tool #9977-6-1, Adapter) or (special tool #9977-6-3, Adapter) from the rear of the Radio.
2. Connect the appropriate (special tool #9977-6-1, Adapter) (1) or (special tool #9977-6-3, Adapter) (1) to the Antenna cable (2) at the Antenna Module connector.

Fig 5: Special Tool, Antenna Harness Connector & DVOM



Courtesy of CHRYSLER GROUP, LLC

3. Measure the resistance across the tool terminals.

Is the resistance above 52.5 or below 47.5 Ohms?

Yes

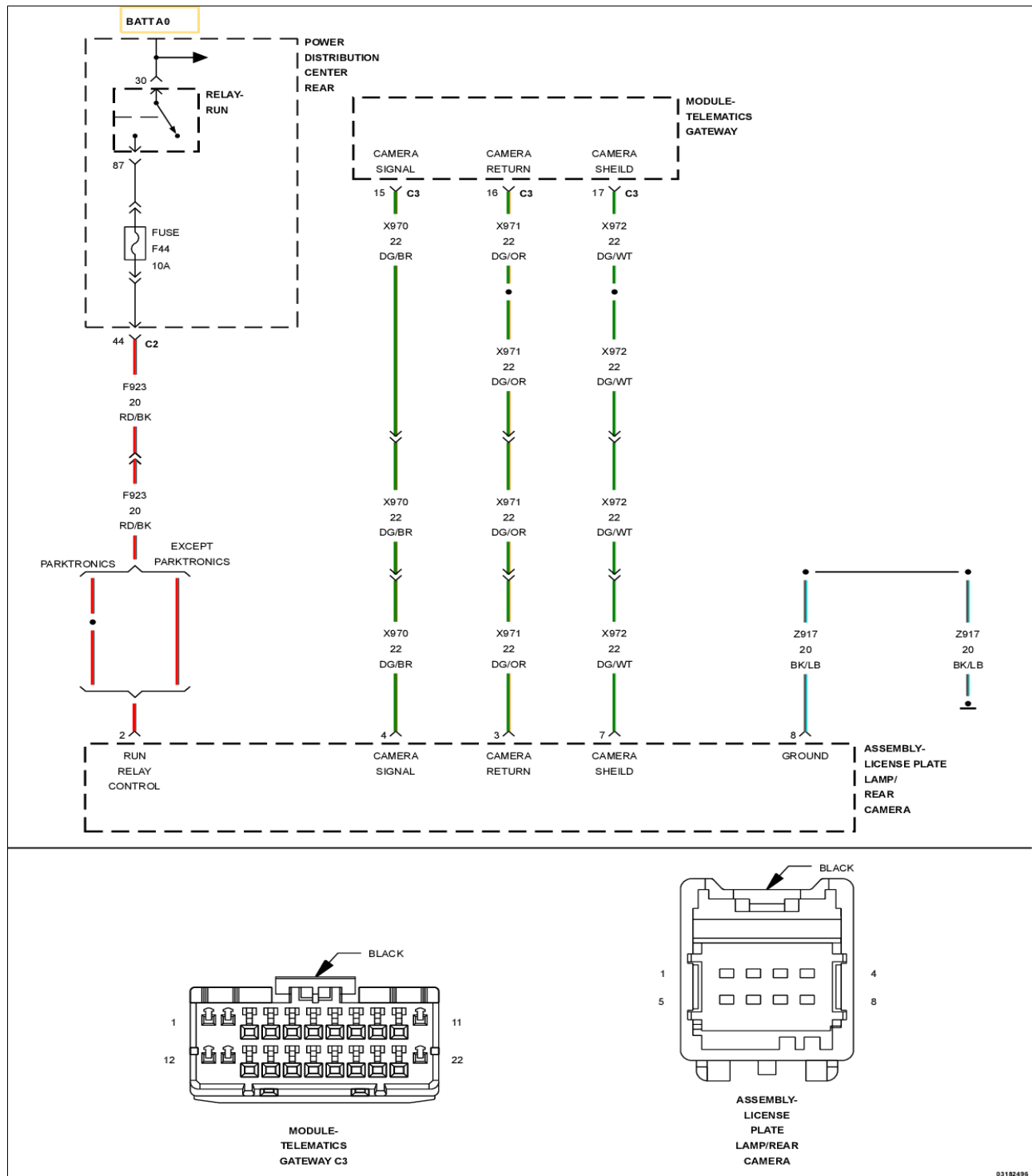
1. Replace the section of antenna cable from the inline connector to the Antenna Module.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. The source of the poor reception is not caused by the Radio or the Antenna cable. Re-check the antenna grid and repair if necessary. (Refer to DIAGNOSIS AND TESTING). If the grid checks good, replace the antenna module in accordance with the Service Information.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

**DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA
INOPERATIVE**

Fig 1: Rear Camera Module Circuit Diagram & Connector End View



Courtesy of CHRYSLER GROUP, LLC

For a complete wiring diagram, refer to **SYSTEM WIRING DIAGRAMS** article .

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA INOPERATIVE > THEORY OF OPERATION

The Camera is activated when the ignition switch is in the RUN position. The (F923) circuit supplies power to the camera. The camera sends a video signal (std. NTSC i.e. TV) to the Radio (RRM), using circuits (X970) camera signal, (X971) signal return and (X972) camera shield, which displays on the Radio screen. The screen toggles functions displaying only one kind of image at a time. And in reverse, the rear camera has priority. The (Z917) circuit is ground for the system.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA INOPERATIVE > WHEN MONITORED

Ignition on, vehicle in reverse.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA INOPERATIVE > SET CONDITION

No rear picture is displayed on Radio display screen with the vehicle in reverse.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA INOPERATIVE > POSSIBLE CAUSES

Possible Causes
(F923) FUSED RUN RELAY OUTPUT CIRCUIT
(Z913) GROUND CIRCUIT
(X970) CAMERA SIGNAL CIRCUIT
(X971) CAMERA RETURN CIRCUIT
(X972) CAMERA SHIELD
REAR CAMERA ASSEMBLY

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - REAR CAMERA INOPERATIVE > DIAGNOSTIC TEST

1. VERIFY OPERATION OF THE RADIO AND BACKUP LAMPS

1. Verify the operation of the Radio and Backup Lamps.

Does the Radio and Backup Lamps operate correctly?

Yes

1. Go To Step 2

No

1. Diagnose any problems with the Radio and Backup Lamps.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

2. CHECK THE (F923) FUSED RUN RELAY OUTPUT CIRCUIT

1. Turn the ignition off.
2. Apply the parking brake.
3. Disconnect the License Plate Lamp/Rear Camera Assembly harness connector.
4. Turn the ignition on.
5. With a 12-volt test light connected to ground, check the (F923) circuit at the Rear Camera connector.



NOTE:

The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery. (

Does the test light illuminate brightly?

Yes

1. Go To Step 3

No

1. Repair the (F923) circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

3. CHECK THE (Z917) GROUND CIRCUIT

1. Turn the ignition off.
2. With a 12-volt test light connected to 12 volts, check the (Z917) Ground circuit at the Rear Camera harness connector.

Does the test light illuminate brightly?

Yes

1. Go To Step 4

No

1. Repair the (Z917) Ground circuit for an open or high resistance.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

4. CHECK THE (X970) CAMERA SIGNAL, THE (X971) RETURN, AND THE (X972) SHIELD CIRCUITS FOR AN OPEN CIRCUIT

1. Disconnect the Radio harness connector.
2. Measure the resistance of the (X970) (X971) and (X972) circuits between the Rear Camera harness connector and Radio harness connectors.

Is the resistance below 3.0 Ohms on the (X970) (X971) or (X972) circuits?

Yes

1. Go To Step 5

No

1. Repair the appropriate circuit for an open.
2. Perform the BODY VERIFICATION TEST. (Refer to STANDARD PROCEDURE).

5. CHECK THE (X970) CAMERA SIGNAL, THE (X971) RETURN, AND THE (X972) SHIELD CIRCUITS SHORTED TO GROUND

1. Check for continuity between ground between ground and the (X970) (X971) and (X972) circuits at the Radio harness connector.

Is the resistance below 3.0 Ohms on the (X970) (X971) or (X972) circuits?

Yes

1. Repair the appropriate circuit for a short to ground.
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

No

1. Replace the License Plate Lamp/Rear Camera Assembly in accordance with the Service Information. (Refer to CAMERA, REAR).
2. Perform the BODY VERIFICATION TEST. Refer to STANDARD PROCEDURE .

DIAGNOSIS AND TESTING > MIT019 MULTI-MEDIA TESTER



A multimedia supplement to the instructions contained in this article is available.

To view the multimedia example of the condition described go to;

<http://www.youtube.com/user/Mitchell1Tips>
then type "A00603038.vid1" into the "Search Channel" box.

DIAGNOSIS AND TESTING > MIT019 MULTI-MEDIA TESTER > MIT019 MULTI-MEDIA TEST KIT

The MIT019 Multi-Media Test kit includes the tester, power outlet adaptor and a set of test tip cards. The MIT019 can be updated by connecting to any computer using the USB connector on the tester. The updates are supported through DealerConnect tech support. If the test cards are lost, a new set can be downloaded from the tool by connecting to any supporting computer. The test card information in the tool can be downloaded in one of 3 languages: English, Spanish or French.

TO DOWNLOAD THE TEST CARD INFORMATION:

1. Connect the MIT019 to a USB port on a computer (which will power the tool and display the current software version).
2. Press the USB button on the MIT019.
3. Once the computer recognizes the MIT019, it will display 3 files available.
4. Select the file named "MANUAL".
5. Download the section required to create the test cards needed.

FOR UPDATES:

1. While holding down the zero button on the MIT019, connect the MIT019 to a USB port on a computer (which will power the tool and display the current software version).
2. If you are a Chrysler Group LLC Dealership, visit: <https://dealerconnect.chrysler.com>.
3. If you are a Non-Chrysler Group LLC Dealership, visit: www.techauthority.com.
4. Locate the MIT019 software update page (verify that a newer software version is available).
5. Download the update file and run the .exe file.
6. Follow the on-screen instructions to install the update.
7. Disconnect the MIT019 USB connection from the computer and the tool is ready to use.

DIAGNOSIS AND TESTING > MIT019 MULTI-MEDIA TESTER > MIT019 MULTI-MEDIA TESTER FUNCTIONALITY

The MIT019 Multi-Media Test kit was developed to help diagnose customer concerns with features of the Multi-Media systems in their vehicles. The purpose of this tool is to simulate the following:

- A known good cell phone
- A known good media source (Ipad®, Ipad®, or MP3 players)

Using this tester will determine if the cause of concern is related to a vehicle system concern or the customer's device being used.

The MIT019 can be used to perform 7 different tests of specific operations:

1. Operation of the AUX port
2. Operation of the USB port for both power and Audio input concerns

3. Bluetooth phone pairing
4. Bluetooth hands free calling (send & receive) phone book push test
5. Bluetooth streaming audio
6. Bluetooth SMS messaging - send
7. Bluetooth SMS messaging - receive



NOTE:

When testing functions of the audio/media system, it is important to verify whether or not the vehicle is equipped with an internal or external Hands Free Module. In some cases the external Hands Free Module controls the operation of the external AUX and USB ports along with the Uconnect functions.

It is important to determine what system features are supported by the audio system in the customer's vehicle and device. For information on the operation and supported features of the vehicle's media system, refer to the following websites:

Vehicle websites available to customers and dealership personnel:

- <http://www.dodge.com/en/uconnect>
- <http://www.chrysler.com/en/uconnect>
- <http://www.jeep.com/en/uconnect>
- <http://www.ramtrucks.com/en/uconnect>
- <http://www.fiatusa.com/en/BlueAndMe>
- <http://www.driveuconnect.com>

Vehicle information support websites for dealership personnel only:

- DealerConnect
- STAR cases
- Technical Service Bulletins
- wiTECH for radio updates

The MIT019 was designed to test the following Radio/Multi-Media systems:

- 2010 - present NTG4 Radio/Multi-Media systems
- 2011 - present PowerNet Radio/Multi-Media systems
- 2013 - present RRM Radio/Multi-Media systems

DIAGNOSIS AND TESTING > MIT019 MULTI-MEDIA TESTER > MIT019 FUNCTIONALITY TESTS

1. BELOW ARE THE 7 FUNCTIONALITY TESTS AVAILABLE USING THE MIT019 MULTI-MEDIA TESTER:

1. AUXILIARY INPUT JACK TEST

1. Go To Step 2

2. USB INPUT/OUTPUT TEST

1. Go To Step 3

3. BLUETOOTH PAIRING

1. Go To Step 4

4. BLUETOOTH HANDS FREE CALLING/PHONEBOOK PUSH TEST

1. Go To Step 5

5. BLUETOOTH STREAMING AUDIO TEST

1. Go To Step 6

6. BLUETOOTH SMS MESSAGING - SEND

1. Go To Step 7

7. BLUETOOTH SMS MESSAGING - RECEIVE

1. Go To Step 8

2. AUXILIARY INPUT JACK TEST



NOTE:

This test is designed to validate the ability of the Audio/Media system to play audio from a customer's device that has been connected to the AUX port on the radio or externally through a UCI (Universal Customer Interface / Multi-Media) port.



NOTE:

The AUX port cannot supply power to a connected device.

1. Connect the USB and Auxiliary Cable into the vehicle's audio ports.
2. Verify the MIT019 is in AUX Mode.
3. Using the vehicle controls, place the audio system into AUX (Line In) Mode. (Audio system may automatically enter into AUX Mode.)

Does the Radio play audio from the MIT019?

Yes

1. **Audio playback confirms that the Auxiliary Input is working correctly, no system repairs are needed at this time.**
2. Check the condition of the customer's cords and device being used.
3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check the customer's device for output and volume setting concerns.
5. Check for updates for the customer's device relating to the customer's concern.

No

1. **If Audio playback does not occur, refer to the appropriate Service Information.**
2. Check the Multi-Media ports for damaged connection points or debris in the ports.
3. Check wiring circuits and connections to the AUX port for concerns.
4. Check for vehicle related system updates, STAR cases and TSBs related to the customer's concern.
5. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.

3. USB INPUT/OUTPUT TEST



NOTE:

This test is designed to validate the ability of the Audio/Media system to play audio from a customer's device that has been connected to the USB port on the radio or the external USB port (Universal Customer Interface (UCI) / Multi-Media port). By connecting the MIT019 to the USB ports it will also determine if the USB port can provide power to a connected device.

1. Connect the USB Cable into the vehicle's USB port.
2. Place the MIT019 into USB Mode.
3. Using the vehicle controls, place the audio system into USB Mode. (Audio system may automatically enter into USB Mode.)

Does the Radio play audio from the MIT019?

Yes

1. **Audio playback confirms that the USB Input is working correctly, no**

system repairs are needed at this time.

2. Check the condition of the customer's cords and device being used.
3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check the customer's device for output and volume setting concerns.
5. Check for updates for the customer device relating to the customer's concern.

No

1. **If Audio playback does not occur, refer to the appropriate Service Information.**
2. Check the Multi-Media ports for damaged connection points or debris in the ports.
3. Check wiring circuits and connections to the USB port for concerns.
4. Check for vehicle related system updates, Star on-line cases and TSBs related to the customers concern.
5. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.



NOTE:

The radio and external USB ports can only supply 5 volts at 500 mAs. Check to see what the customer's device requires for operation or charging. Some vehicles are equipped with a standalone USB charging port that can supply 5 volts at 1.5 amps. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the <http://www.driveuconnect.com>.

4. BLUETOOTH PAIRING



NOTE:

This test is designed to validate the pairing ability of the vehicles Audio/Media system. Pairing the MIT019 to the vehicle system will simulate the use of a known good compatible phone to test the system operation.



NOTE:

Before testing it is important to check the total number of devices paired to the vehicles system. Each system has a limit to the number of items that can be paired to the system. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website

at <http://www.driveuconnect.com>.



NOTE:

If the customer's concern is the vehicle system was working with their device but then stopped working correctly, verify and perform the following:

- 1. Check to see if the device was recently updated.*
- 2. Clear the device pairing from the system.*
- 3. Reboot the customer's device.*
- 4. Re-pair the device to the vehicle system.*
- 5. Check the operation.*

At times, cell providers will update the software or firmware in the customer's device (without the customer knowing) causing it to become out of sync with the vehicle's system.



NOTE:

During this test, use the power outlet adaptor supplied with the MIT019 Multi-Media Test kit to supply the power and ground to the tester. This will confirm and demonstrate the Bluetooth connection without anything connected to the Audio/Media system ports.



NOTE:

In order for the tool to function correctly, first plug the MIT019 power supply adapter into the 12 volt power outlet receptacle and confirm adapter power LED illuminates. Then connect the MIT019 to the power supply adapter.

1. Connect the power outlet power adapter into the 12 volt receptacle.
2. Connect the USB Cable into the Power Outlet Power Adapter. (This assists in showing the customer that the tool is utilizing a Bluetooth connection.)
3. Place the MIT019 into Bluetooth Mode.
4. Use the vehicle audio controls to place the audio system into ready to PAIR Mode. (Audio system may automatically enter into Bluetooth Mode.)
5. Press the PAIR button on the MIT019 the unit will identify the Vehicle Audio System.
6. When prompted, enter the Pairing Pin number on the MIT019 then press enter. The

MIT019 will Pair and Connect to the vehicle audio system.

Does the MIT019 pair to the Audio/Media system?

Yes

1. **If the MIT019 pairs to the system, the Hands Free connection is working correctly, no part replacement is needed .**
2. Check the total number of devices paired to the customer`s device.
3. Check to make sure the customer`s device and cables are compatible with the vehicle system.
4. Check to see if the customer`s device supports the vehicle feature being tested.
5. Check the customer`s device for concerns related to password locks, phone book transfer settings and data transfer locks/settings.
6. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

No

1. **If Pairing does not occur, refer to the appropriate Service Information.**
Refer to DIAGNOSIS AND TESTING .
2. Check for vehicle related system updates, STAR cases and TSBs related to the customers concern.
3. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.

5. BLUETOOTH HANDS FREE CALLING / PHONE BOOK PUSH TEST

 NOTE:

*This test is designed to validate the ability of the Audio/Media system to place and receive phone calls. The MIT019 will change the radio display to show "MULTI-MEDIA TESTER" to confirm the **phone-book-push** was successful.*

 NOTE:

Before testing it is important to check the total number of devices paired to the vehicles system. Each system has a limit to the number of items that can be paired to the system. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

 NOTE:

If the customer's concern is the vehicle system was working with their device but then stopped working correctly, verify and perform the following:

- 1. Check to see if the device was recently updated.*
- 2. Clear the device pairing from the system.*
- 3. Reboot the customer's device.*
- 4. Re-pair the device to the vehicle system.*
- 5. Check the operation.*

At times, cell providers will update the software or firmware in the customer's device (without the customer knowing) causing it to become out of sync with the vehicle's system.

 NOTE:

During this test use the Power outlet adaptor supplied with the MIT019 Multi-Media Test kit to supply the power and ground to the tester. This will confirm and demonstrate the Bluetooth connection without anything connected to the Audio/Media system ports.

 NOTE:

In order for the tool to function correctly, first plug the MIT019 power supply adapter into the 12 volt power outlet receptacle and confirm adapter power LED illuminates. Then connect the MIT019 to the power supply adapter.

1. Be sure the MIT019 is properly paired.
2. From MIT019 in Bluetooth Mode, press the CALL button.
3. The vehicle should announce an incoming call.
4. The media system will display "MULTI-MEDIA TESTER", confirming successful push of the phone book.
5. Using the vehicle controls, answer the call.
6. Audio playback will confirm the Hands Free connection is working correctly, no system part replacement is needed.
7. Using the vehicle controls, end the call.

Does the Media system playback the incoming audio and display "MULTI-MEDIA

TESTER"?

Yes

1. **If Audio playback occurs and the system displays "MULTI-MEDIA TESTER", the system is working correctly; no part replacement is needed.**
2. Check the total number of devices paired to the customer's device.
3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check to see if the customer's device supports the feature that the customer is trying to use.
5. Check the customer's device for concerns related to password locks, phone book transfer settings and data transfer locks/settings.
6. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

No

1. **If Audio playback does not occur, reference appropriate Service Information.** Refer to DIAGNOSIS AND TESTING .
2. Check for vehicle related system updates, STAR cases and TSBs related to the customers concern.
3. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.

6. BLUETOOTH STREAMING AUDIO TEST

 **NOTE:**

This test is designed to validate the ability of the Audio/Media system to play streamed audio by a Bluetooth connected device.

 **NOTE:**

Before testing it is important to check the total number of devices paired to the vehicles system. Each system has a limit to the number of items that can be paired to the system. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

 **NOTE:**

If the customer's concern is the vehicle system was working with their device but then stopped working correctly, verify and perform the following:

- 1. Check to see if the device was recently updated.*
- 2. Clear the device pairing from the system.*
- 3. Reboot the customer's device.*
- 4. Re-pair the device to the vehicle system.*
- 5. Check the operation.*

At times, cell providers will update the software or firmware in the customer's device (without the customer knowing) causing it to become out of sync with the vehicle's system.



NOTE:

During this test use the Power outlet adaptor supplied with the MIT019 Multi-Media Test kit to supply the power and ground to the tester. This will confirm and demonstrate the Bluetooth connection without anything connected to the Audio/Media system ports.



NOTE:

In order for the tool to function correctly, first plug the MIT019 power supply adapter into the 12 volt power outlet receptacle and confirm adapter power LED illuminates. Then connect the MIT019 to the power supply adapter.

1. Connect the power outlet power adapter into the 12 volt receptacle.
2. Connect the USB Cable into the Power Outlet Power Adapter. (This assists in showing the customer that the tool is utilizing a Bluetooth connection.)
3. Be sure the MIT019 is properly paired.
4. Leave the MIT019 in Bluetooth Audio Mode after pairing is complete.
5. Using the vehicle controls, place the audio system into Bluetooth Audio.

Does the Radio play audio from the MIT019?

Yes

- 1. Audio playback will confirm that the Bluetooth Streaming Audio is working correctly, no system part replacement is needed.**
2. Check the total number of devices paired to the customer's device.

3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check to see if the customer's device supports the vehicle feature being tested.
5. Check the customer's device for concerns related to password locks, phone book transfer settings and data transfer locks/settings.
6. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

No

1. **If Audio playback does not occur, refer to the appropriate Service Information.** Refer to DIAGNOSIS AND TESTING .
2. Check for vehicle related system updates, STAR cases and TSBs related to the customers concern.
3. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.

7. BLUETOOTH SMS MESSAGING- RECEIVE

NOTE:

This test is designed to validate the ability of the Audio/Media system to receive a SMS message.

NOTE:

Before testing it is important to check the total number of devices paired to the vehicles system. Each system has a limit to the number of items that can be paired to the system. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

NOTE:

If the customer's concern is the vehicle system was working with their device but then stopped working correctly, verify and perform the following:

1. *Check to see if the device was recently updated.*
2. *Clear the device pairing from the system.*
3. *Reboot the customer's device.*

4. Re-pair the device to the vehicle system.

5. Check the operation.

At times, cell providers will update the software or firmware in the customer's device (without the customer knowing) causing it to become out of sync with the vehicle's system.

 NOTE:

During this test use the Power outlet adaptor supplied with the MIT019 Multi-Media Test kit to supply the power and ground to the tester. This will confirm and demonstrate the Bluetooth connection without anything connected to the Audio/Media system ports.

 NOTE:

In order for the tool to function correctly, first plug the MIT019 power supply adapter into the 12 volt power outlet receptacle and confirm adapter power LED illuminates. Then connect the MIT019 to the power supply adapter.

1. Connect the Power outlet Power Adapter into the 12 volt receptacle.
2. Connect the USB Cable into the Power Outlet Power Adapter. (This assists in showing the customer that the tool is utilizing a Bluetooth connection.)
3. Be sure the MIT019 is properly paired.
4. From Bluetooth Mode, press the SMS button.
5. MIT019 will send a new message to the vehicle audio system.
6. The vehicle audio system will confirm the receipt of a new message.
7. Using the vehicle controls, retrieve the message to verify proper functionality.

Does the Radio display the message "MULTI-MEDIA TESTER" from the MIT019?

Yes

1. **If functioning correctly, no system part replacement is needed.**
2. Check the total number of devices paired to the customer's device.
3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check to see if the customer's device supports the vehicle feature being tested.

5. Check the customer's device for concerns related to password locks, phone book transfer settings and data transfer locks/settings.
6. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

No

1. **If the Audio system does not display the new message, reference the appropriate Service Information on system operation and supported features. See the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.**
2. Check for vehicle related system updates, STAR cases and TSBs related to the customers concern.
3. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.

8. BLUETOOTH SMS MESSAGING-SEND

NOTE:

This test is designed to validate the ability of the Audio/Media system to send a SMS message from the list of preset messages.

NOTE:

Before testing it is important to check the total number of devices paired to the vehicles system. Each system has a limit to the number of items that can be paired to the system. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

NOTE:

If the customer's concern is the vehicle system was working with their device but then stopped working correctly, verify the following:

1. Check to see if the device was recently updated.
2. Clear the device pairing from the system.
3. Reboot the customer's device.
4. Re-pair the device to the vehicle system.
5. Check the operation.

At times, cell providers will update the software or firmware in the customer's device (without the customer knowing) causing it to become out of sync with the vehicle's system.

 NOTE:

During this test use the Power outlet adaptor supplied with the MIT019 Multi-Media Test kit to supply the power and ground to the tester. This will confirm and demonstrate the Bluetooth connection without anything connected to the Audio/Media system ports.

 NOTE:

In order for the tool to function correctly, first plug the MIT019 power supply adapter into the 12 volt power outlet receptacle and confirm adapter power LED illuminates. Then connect the MIT019 to the power supply adapter.

1. Connect the power outlet power adapter into the 12 volt receptacle.
2. Connect the USB Cable into the Power Outlet Power Adapter. (This assists in showing the customer that the tool is utilizing a Bluetooth connection.)
3. Be sure the MIT019 is properly paired.
4. Using the vehicle controls, send a text message.
5. The MIT019 will display the chosen message.

Does the MIT019 Multi-Media Tester display on the tool the message sent by the Multi-Media system?

Yes

1. **If functioning correctly, no system part replacement is needed.**
2. Check the total number of devices paired to the customer's device.
3. Check to make sure the customer's device and cables are compatible with the vehicle system.
4. Check to see if the customer's device supports the vehicle feature being tested.
5. Check the customer's device for concerns related to password locks, phone book transfer settings and data transfer locks/settings.
6. For more information on system operation and supported features see the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.

No

1. **If the MIT019 does not display the new message, reference the appropriate Service Information on system operation and supported features. See the vehicle supporting website "For Owners Page" or the Driveuconnect website at <http://www.driveuconnect.com>.**
2. Check for vehicle related system updates, STAR cases and TSBs related to the customers concern.
3. If no updates are available for the concern, replace the Radio or Hands Free Module in accordance with the Service Information.