



GM ONSTAR LAN DATA BUS INTERFACE

GMOS-12

INSTALLATION INSTRUCTIONS (FOR ONSTAR EQUIPPED VEHICLES)

The GMOS-12 is designed to retain Onstar in the Saturn applications listed below when replacing the OEM radio with an aftermarket one.

**** READ IMPORTANT WARNING ON PAGE 1
BEFORE ATTEMPTING ANY INSTALLATION***

APPLICATIONS

Saturn

- Ion 2004-2005
- Vue 2004-2005

INTERFACE COMPONENTS

- GMOS-12 Interface
- 10 pin harness with leads
- 12 pin to 12pin and and 24 pin Saturn harnesses

TOOLS REQUIRED FOR INSTALLATION

- Cutting Tool • Tape • Crimping Tool
- Connectors (ie: butt- connectors, bell caps, etc.)



1-800-221-0932



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*** READ IMPORTANT WARNING
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*** IMPORTANT WARNING**

THIS PRODUCT INCLUDES INSTRUCTIONS FOR INSTALLATION WHICH MUST BE CAREFULLY FOLLOWED. THE INSTRUCTIONS ARE WRITTEN IN SUCH A MANNER TO ASSUME THAT THE INSTALLER IS CAPABLE OF COMPLETING THESE TYPE OF ELECTRONIC INSTALLATIONS. IF YOU ARE UNCLEAR AS TO WHAT YOU ARE INSTRUCTED TO DO OR BELIEVE THAT YOU DO NOT UNDERSTAND THE INSTRUCTIONS SO AS TO PROPERLY AND SAFELY COMPLETE THE INSTALLATION YOU SHOULD CONSULT A TECHNICIAN WHO DOES HAVE THIS KNOWLEDGE AND UNDERSTANDING.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAREFULLY AND TO INSTALL THE INTERFACE AS DESCRIBED COULD CAUSE HARM TO THE VEHICLE OR TO SAFETY SYSTEMS ON THE VEHICLE. INTERFERENCE WITH CERTAIN SAFETY SYSTEMS COULD CAUSE HARM TO PERSONS AS WELL.

**IF YOU HAVE ANY QUESTIONS IN THIS REGARD PLEASE CALL THE HELP LINE OR THE METRA
AT: 1-800-221-0932 FOR ASSISTANCE.**



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WIRING CONNECTIONS

** Important: Before beginning any of the following, disconnect the negative battery terminal to prevent accidental short circuit.*

FOR AFTERMARKET RADIO ONLY:

CONNECTIONS TO BE MADE ON THE 10 PIN HARNESS:

1. Connect the **red** wire to the ignition/accessory wire of the aftermarket radio.
2. Connect the **blue/white** wire to the amp turn on wire of the aftermarket radio.
3. Connect the **white** wire to the left front positive (+) speaker wire of the aftermarket radio.
4. Connect the **white/black** wire to the left front negative (-) speaker wire of the aftermarket radio.
5. Connect the **gray** wire to the right front positive (+) speaker wire of the aftermarket radio.
6. Connect the **gray/black** wire to the right front negative (-) speaker wire of the aftermarket radio.
7. Connect the **brown** wire to the mute wire of the aftermarket radio. If the radio has no mute wire, tape up the **brown** wire.

CONNECTIONS TO BE MADE ON THE 12 PIN HARNESS:

1. The **black/yellow** wire is for Onstar volume adjustment and it will be discussed later in this manual.

CONNECTIONS TO BE MADE ON THE 24 PIN HARNESS:

1. Connect the **yellow** wire to the 12 volt constant /battery wire of the aftermarket radio.
2. Connect the **black** wire to the ground wire of the aftermarket radio.
3. Connect the **orange** wire to the illumination wire of the aftermarket radio. If no illumination wire is present, tape up the **orange** wire.
4. Connect the **orange/white** wire to the dimmer wire of the aftermarket radio. If no dimmer wire is present, tape up the **orange/white** wire.
5. Connect the **green** wire to the left rear positive (+) speaker wire of the aftermarket radio.
6. Connect the **green/black** wire to the left rear negative (-) speaker wire of the aftermarket radio.
7. Connect the **purple** wire to the right rear positive (+) speaker wire of the aftermarket radio.
8. Connect the **purple/black** wire to the right rear negative (-) speaker wire of the aftermarket radio.



FOR AFTERMARKET RADIO AND AMPLIFIER

(See wiring diagram on page 6)

CONNECTIONS TO BE MADE ON THE 14 PIN HARNESS:

1. Connect the **red** wire to the ignition/accessory wire of the aftermarket radio.
2. Connect the **orange/white** wire to the illumination wire of the aftermarket radio. If the aftermarket radio has no illumination wire just tape off the **orange** wire.
3. Connect the **blue/white** wire to the amp turn on wire of the aftermarket radio and to the **blue/white** wire in the 24 pin harness.
4. **White NOT USED**
5. **White/black NOT USED**
6. **Gray NOT USED**
7. **Gray/black NOT USED**
8. Connect the **brown** wire to the mute wire of the aftermarket radio. If the after market radio does not have a Mute wire, tape up the **brown** wire.

The following wires on the 14 pin harness are for the aftermarket radios that have navigation built in:

1. Connect the **green** wire to the parking brake wire of the aftermarket navigation radio.
2. Connect the **blue/pink** wire to the VSS or speed sense wire of the aftermarket navigation radio.
3. Connect the **green/purple** wire to the reverse wire of the aftermarket navigation radio.

When completed, plug the 14 pin harness into the GMOS-12.

CONNECTIONS TO BE MADE ON THE 24 PIN GM HARNESS:

1. Connect the **yellow** wire to the radio's 12 volt battery or memory wire.
2. Connect the **black** wire to the radio's ground wire.
3. Connect the **blue/white** wire to the amp turn on wire of the aftermarket radio and to the **blue/white** wire of the 14 pin harness.
4. Connect the **green** wire to the amplifier's left rear positive speaker output.
5. Connect the the **green/black** wire to the amplifier's left rear negative speaker output.
6. Connect the **purple** wire to the amplifier's right rear positive speaker output.
7. Connect the **purple/black** wire to the amplifier's right rear negative speaker output.
8. The **Orange** and **Orange/White** wires are not used. Please tape up wires to avoid a short circuit output.
9. Cut the **white** wire about half way between the two plugs. Connect the **white** wire from the 24 pin plug to amplifier's left front positive speaker output wire. Connect the **white** wire from the 12 pin plug to the positive speaker wire of the Metra SP-2003 or equivalent.



10. Cut the **white/black** wire about half way between the two plugs. Connect the **white/black** wire from the 24 pin plug to amplifier's left front negative speaker output wire. Connect the **white/black** wire from the 12 pin plug to the negative speaker wire of the Metra SP-2003 or equivalent.
11. Cut the **gray** wire about half way between the two plugs. Connect the **gray** wire from the 24 pin plug to amplifier's right front positive speaker output wire. Connect the **gray** wire from the 12 pin plug to the positive speakerwire of the Metra SP-2003 or equivalent.
12. Cut the **gray/black** wire about half way between the two plugs. Connect the **gray/black** wire from the 24 pin plug to amplifier's right front negative speaker output wire. Connect the **gray/black** wire from the 12 pin plug to the negative speaker wire of the Metra SP-2003 or equivalent.

Note: If only one SP-2003 is used tape up the gray wires that would normally connect to the second SP-2003 to avoid a short circuit.

CONNECTIONS TO BE MADE ON THE 12 PIN HARNESS:

1. The **black/yellow** wire is for **Onstar** volume adjustment. This will be discussed in the **Onstar** Level Adjustment section of this instruction.

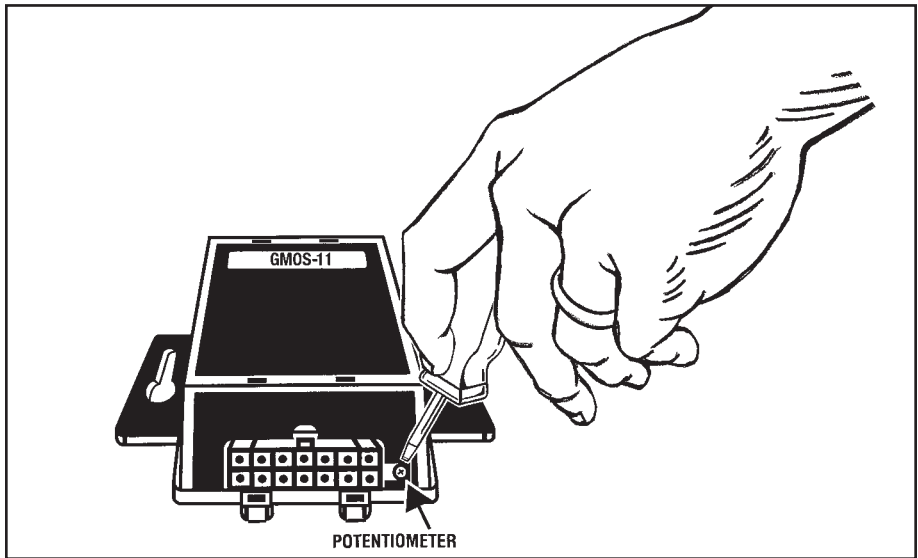
When completed, plug the 12 pin harness into the GMOS-12.

INSTALLING THE GMOS-12

1. With all connections completed, plug the 10 and 12 pin harnesses into the GMOS-12.
2. Reconnect the negative battery terminal.
3. Plug the 12 and 24 pin Saturn harnesses into the vehicle side harnesses, and plug the aftermarket radio harness into the aftermarket radio.
4. Cycle the key by turning the ignition on then back off, then back on again to test the radio.

TESTING THE GMOS-12

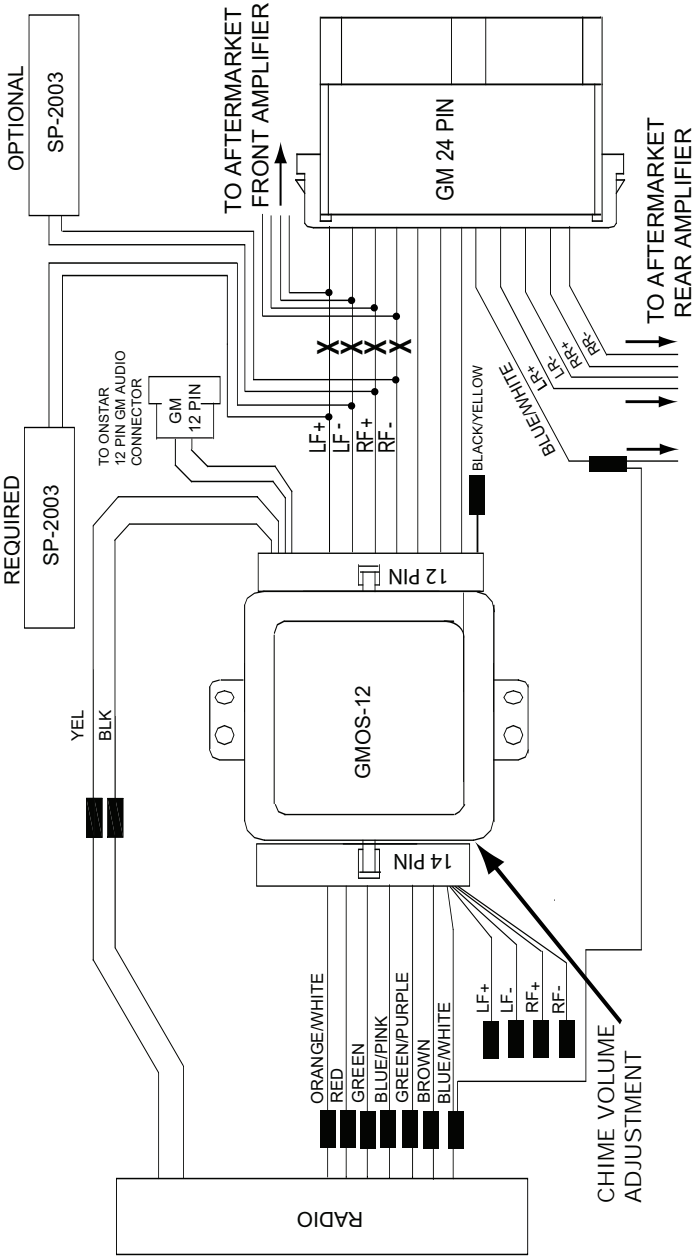
Turn the ignition on, and then turn the aftermarket radio on. Push the Onstar button, the radio should turn off and you should hear Onstar. Push the Onstar cancel button and the radio should come back on.



ONSTAR LEVEL ADJUSTMENT

To adjust the **Onstar volume** level find the **Black/Yellow** wire on the 12 pin harness. Push the **blue Onstar button**, while the voice is speaking tap the **Black/Yellow** wire to ground. There are 4 volume settings for **Onstar**; once the 4th setting is reached and the **Black/Yellow** wire is tapped to ground it will automatically go back to the first volume setting. Once the volume is set it will stay at that volume until the **Black/Yellow** wire is tapped to ground again.

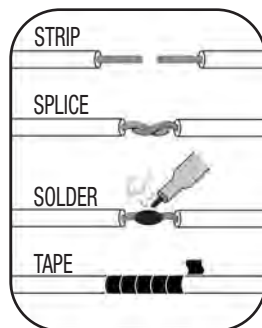
AFTERMARKET RADIO AND AMPLIFIER WIRING



GMOS-12 INSTRUCTIONS

FINAL WIRING CONNECTIONS

Make wiring connections using the EIA color code chart shown below and the instructions included with the head unit. Metra recommends making connections as shown below; Strip, Splice, Solder, Tape. Isolate and individually tape off ends of any unused wires to prevent electrical short circuit.



METRA/EIA WIRING CODE

12V Ignition / Acc.	Red
12V Batt / Memory.	Yellow
Ground.	Black*
Power Antenna.	Blue
Amp Turn-On	Blue / White
Amp Ground.	Black / White
Illumination	Orange
Dimmer	Orange / White
Right Front (+)	Gray
Right Front (-).	Gray / Black
Left Front (+)	White
Left Front (-).	White / Black
Right Rear (+)	Violet
Right Rear (-).	Violet / Black
Left Rear (+)	Green
Left Rear (-)	Green / Black



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