



Introduction & Features

The OS-5 interface allows the replacement of a factory radio in select General Motors vehicles with 29-bit LAN radios. Using this interface will retain factory features such as OnStar, warning chimes, Rear Seat Controls (RSC), factory XM Radio and the BOSE amplifier when the original radio is removed. The OS-5 also provides data bus driven outputs such as retained accessory power (RAP), vehicle speed sensor (VSS), illumination, reverse trigger and parking brake.

Important Notes

1. The OS-5 will retain the use of the factory XM receiver. Factory SWC or RSE controls must be present for use of this feature.
2. SWI interface must be used in conjunction for SWC retention.
3. RSC buttons that are identical to the SWC will mimic the SWC function for function.

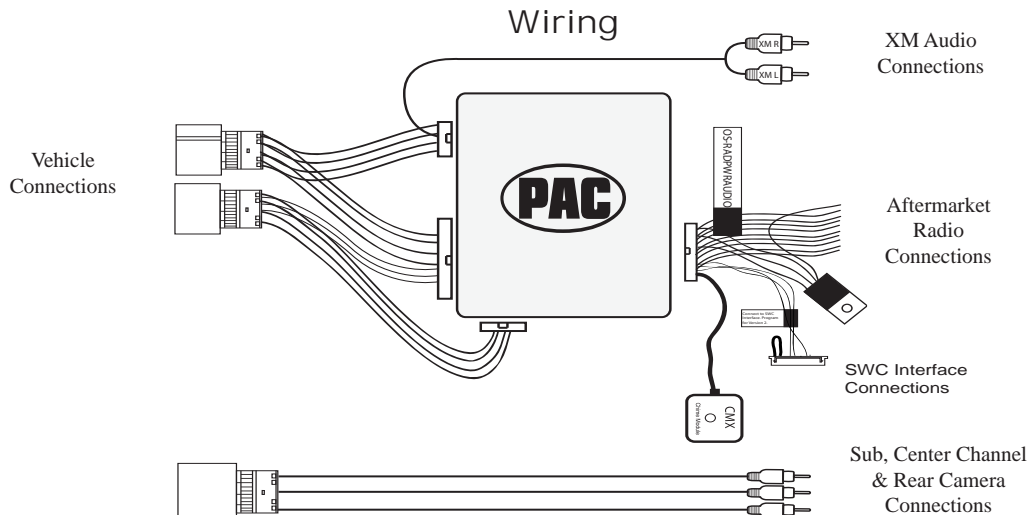
Wiring Connection Chart

Aftermarket Radio Connections

Yellow	Battery +12v
Black	Ground
Red	Accessory Output
White	Front L + input
White / Black	Front L - input
Grey	Front R + input
Grey / Black	Front R - input
Green	Rear L + input
Green / Black	Rear L - input
Purple	Rear R + input
Purple / Black	Rear R - input

Red / White	Parking Brake Output (-)
Purple / White	Vehicle Speed Output
Blue	OnStar® Volume Adjust
Blue / White	Amp Turn On Input
Orange / White	Illumination Output (+)
Green	Reverse Output (+)
Brown Loop	Mute Loop - See installation note 7.

Illustration / Schematic



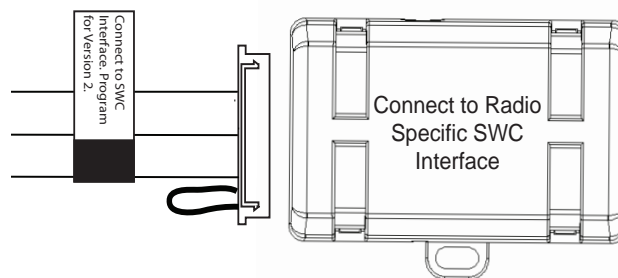


Installation Steps

1. Make all connections as described in the chart on page 1.
2. Factory installed amplifiers will determine the audio output connection. If the vehicle has a factory installed amplifier use the factory amplifier audio location. If a factory installed amplifier is not present use the non-amplified factory audio location.
3. If the vehicle is equipped with a Premium BOSE system, connect the subwoofer and center channel RCA inputs to the aftermarket radios. If the aftermarket radio to be installed does not have a dedicated center channel or sub output do not use this cable. To ensure best sound performance channel summing is not recommended. Use this cable according to the outputs that are available.
4. If the vehicle is equipped with a reverse camera and the aftermarket radio has a reverse camera input, connect the yellow RCA plug on the brown connector to the aftermarket radios reverse camera input.
5. If the aftermarket radio is equipped with an auxiliary input and you wish to retain the factory XM tuner, plug the RCA connectors from the interface into the radios auxiliary input.
6. Plug the CMX chime module in if necessary (If the vehicle chimes when the radio is removed the CMX is not necessary). PLEASE NOTE: In order to get the best possible sound out of the CMX please mount it in a place free and clear of any obstructions, preferably as close as possible to the bottom of the dash pointing down toward the floor of the vehicle.
7. The Mute loop (if not cut) will turn the accessory output off when an OnStar® or Bluetooth call is made or received. If the aftermarket radio has a mute input cut this loop and connect the inner brown wire (next to the blue/white wire) to the mute input.

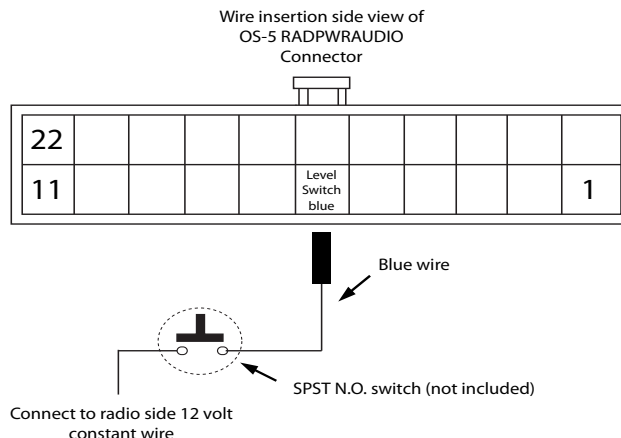
SWC Output Connector

- The OS-5 provides a SWC output connector attached to the OS5-RADPWRAUDIO harness. For ease of installation, all necessary connections for a SWI-X, ECL2, JACK, PS or RC have made for you.
- When using this SWC output connector the radio specific SWC interface must be programmed for version 2 (refer to SWC interface programming instructions for exact programming sequence).
- The brown loop should remain in tact.
- During steering wheel button assignment programming each button should be pressed and held for 1 second after the SWC interface LED goes out with the exception of the Speak button.
- The speak button should be pressed for less than 1 second and released.
- Pressing the Speak button for longer than 1.5 SEC will activate OnStar.



OnStar Volume Adjustment for Vehicles w/o SWC

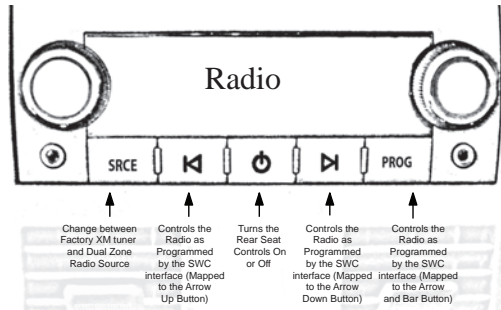
- If SWC buttons are not present a SPST switch (not included) can be used to control the OnStar® audio level during an OnStar® connection.
- Connect the Blue wire in pin 6 to one side of a SPST normally open momentary switch.
- The other side of the SPST switch will be connect to **12 volt constant**.
- When OnStar® is active pressing the switch will change the audio level 10 steps.





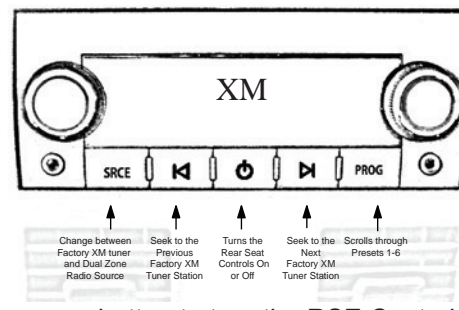
Using Rear Seat Audio Controls

Using the Radios Dual Zone Source



- Press the power button to turn the RSE Controls on. When Radio is displayed on the RSE Controls, the aftermarket radios rear speaker output will be heard through the headphone jacks. Putting the aftermarket radio into dual zone mode should change the output level of the rear speakers to a fixed level. This allows precise user adjustment from the level knobs on the RSE Controls (refer to aftermarket radio owners manual for model specific dual zone operation).
- The seek arrows and PROG button will control the radio as programmed by the SWC interface. These buttons are mapped to the SWC buttons as stated above.
- Pressing the SRCE button will toggle between the Factory XM tuner and the Radio as the RSE source. Pressing the power button will turn the RSE Controls off as well as turning the key off. The seek arrows and PROG button will continue to operate as stated (with the exception of SRCE which has no function) when the Rear Seat Controls are turned off.

Using the Factory XM Radio Tuner



- Press the power button to turn the RSE Controls on. If Radio is displayed press the SRCE button to select factory XM tuner mode. When XM followed by the channel number is displayed factory XM tuner audio will be heard through the headphone jacks.
- The Seek arrows will control the factory XM radio tuner and select the desired station.
- The PROG button will scroll through Presets 1-6
- Pressing the SRCE button will toggle between the Factory XM tuner and Radio as the RSE source. Pressing the power button or turning the key off will turn off the RSE Controls.
- The factory XM tuner must remain serviced to take advantage of this feature.
- In order for the RSE controls to properly work the XM tuner, the front XM controls must be set to off.

Rear Seat Entertainment (RSE); If equipped

1. Vehicles equipped with an overhead screen only:

In this application the **GMRVD** must be used in order to feed A/V into the factory screen from an aftermarket head unit (head unit must support A/V out). With the **GMRVD**, A/V will be passed from the aftermarket head unit to the rear screen and audio can be heard through the headphones. The **GMRVD** will also pass the Auxiliary inputs on the rear of the center console to the aftermarket head unit.

2. Vehicles equipped with an overhead screen AND headrest monitors:

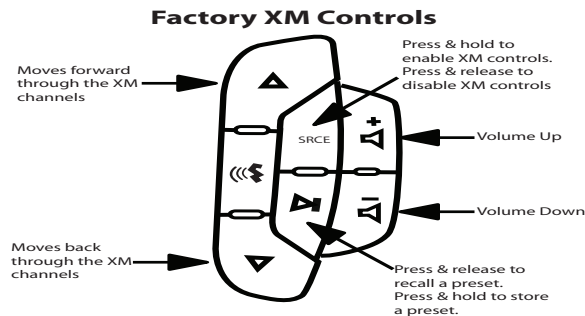
In this application the headrest monitors will function independently from the overhead monitor. Neither video or audio can be passed to or from the headrest monitors. The overhead monitor will function exactly as described in #1.





Using the Factory XM Tuner With the SWC

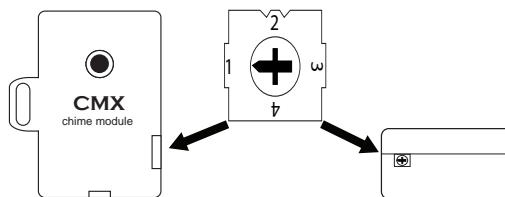
- To activate the XM controls press and hold the “Source” button until a chime is heard. The Driver Information Center (DIC) in the instrument cluster will display “XM Control On” or display XM text.
- Arrow up moves forward through the channels. The channel name and song name will be displayed on the DIC.
- Arrow down moves backwards through the channels. The channel name will be displayed on the DIC.
- To store a preset, first choose the preset location by pressing the “Play” button repeatedly. The DIC will display the XM preset locations. When the desired preset location is displayed, tune to the desired station, then press and hold the “Play” button until a chime is heard. “Preset Saved” will then be displayed on the DIC.
- To recall a preset simply press the “Play” button repeatedly until the desired preset is displayed.
- To de-activate the XM controls press and release the “Source” button. Do not hold the Source button to exit XM control.



PLEASE NOTE: You MUST be installing an aftermarket radio that is equipped with an auxiliary input to be able to retain the factory XM audio. If the vehicle is equipped with steering wheel controls other than the ones pictured here, you will not be able to control the factory XM tuner as the required buttons are not present.

Testing & Verification

1. Turn the ignition on. The LED on the interface will turn on & the +12v accessory wire will turn on.
2. Turn on the radio & check balance & fade. Note: **Premium factory amplified systems** will not fade as neither the aftermarket radio or the RP interface have the ability to control the amplifier’s fader.
3. Verify that the factory subwoofer (if present) is playing
4. Verify that all SWC are functioning properly for both the aftermarket radio and OnStar®. To adjust OnStar® volume, press the OnStar® button on the mirror then use the volume buttons on the SWC to adjust the level. The volume will raise a total of 10 times before returning to the original level.
5. Verify that the factory XM tuner is functioning properly.
6. Pressing the OnStar® button on the rearview mirror will turn off the rear speakers and allow the OnStar® audio to be heard in the two front speakers. The OnStar® active LED will also turn on. When OnStar® disconnects, the radio will un-mute or turn back on and the OnStar® LED will turn off. Pressing the Mute/OnStar® button on the steering wheel for 1.5 seconds will also activate OnStar®.
7. Turn off vehicle & remove key. RAP will be active & keep the radio on for 10 minutes or until the drivers door is opened.
8. The LED & radio will turn off when RAP turns off or the drivers door is opened.
9. Use the 4 position selector switch located on the side of the CMX module to select the best chime output volume for your specific installation. Setting 1 being loudest and 4 softest.



Product Updates (Firmware)

The OS-5 can be updated with new firmware as it becomes available using the PAC-UP interface updater (sold separately).



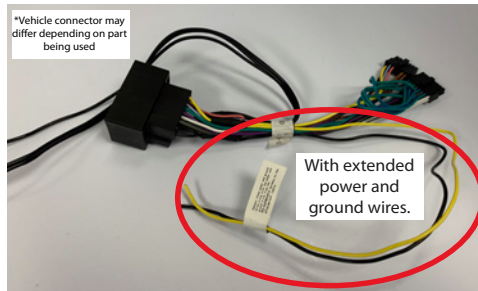
Issue:

Accessory output drops at high volume.

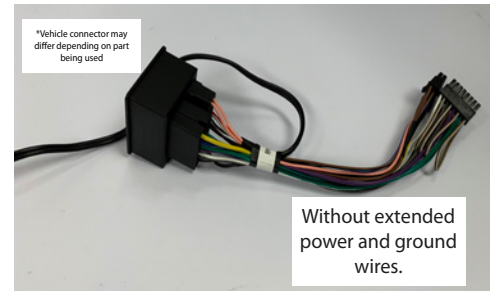
Solution:

By cutting the constant and ground wires at the interface connector of the "Radio Connections" harness, the power path to the accessory relay and the aftermarket radio is altered. The power is then sourced from the vehicle side of the wiring harness and prevents any current from being pulled through the interface.

If your harness looks like this, skip to page 2.

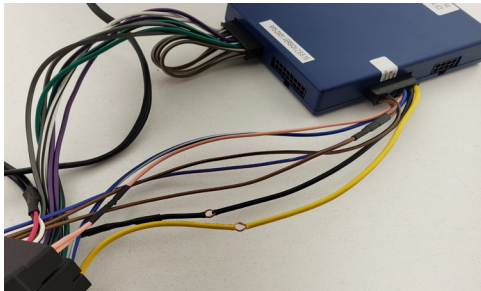


If your harness looks like this, follow steps below then proceed with page 2.

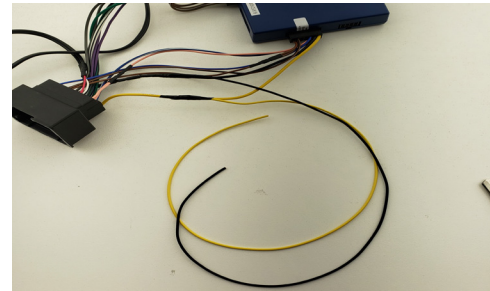


Connect wires from vehicle-side to radio-side of interface harness.

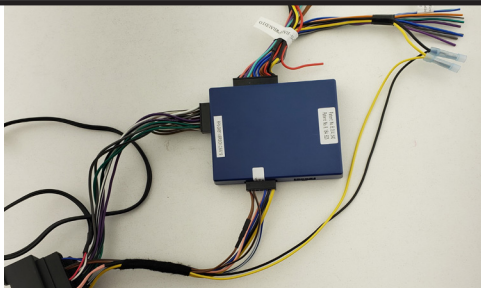
STEP 1 Isolate Yellow (B+) and Black (GND) on vehicle-side wiring harness and prepare them to be spliced



STEP 2 Use spare wire to splice into the Yellow (B+) and Black (GND) wires in the vehicle-side harness.



STEP 3 Connect newly extended wires to the Yellow (B+) and Black (GND) wires on the radio-side harness as well as the Yellow (B+) and Black (GND) wires from the aftermarket radio.



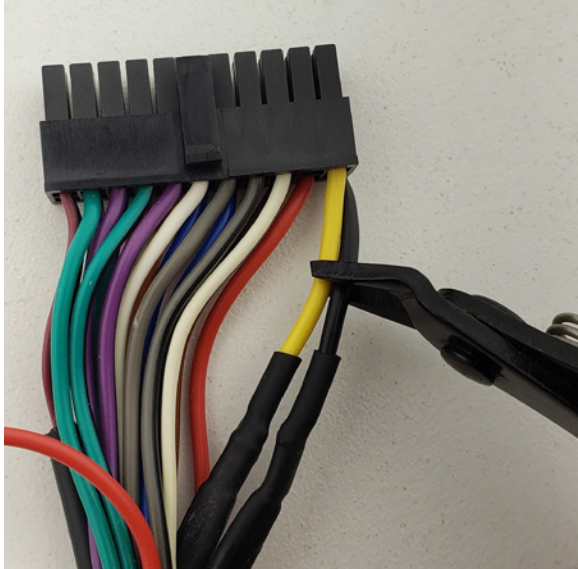
Proceed with page 2



Disconnect the Yellow (B+) and Black (GND) wires from the interface connector on the "Radio Connections" Harness.

STEP 1

Isolate and cut Yellow (B+) and Black (GND) at interface connector of radio connections harness.



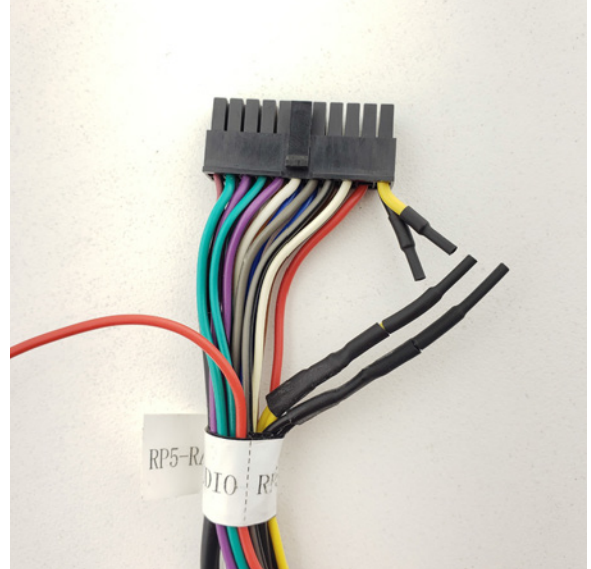
STEP 3

Tape loose ended wires to bundle of harness.



STEP 2

Cover ends of exposed wires with heat shrink to insulate and prevent potential shorts.



STEP 4

Wire up and connect everything else as you normally would and install into the vehicle.