



Introduction & Features

The OS-2X interface allows the replacement of a factory radio in select General Motors vehicles with Class II radios. Using this interface will retain factory features such as OnStar, warning chimes, Rear Seat Controls (RSC), Rear Seat Entertainment (RSE) and the BOSE amplifier when the original radio is removed. The OS-2X 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 aftermarket radio must have an auxiliary input in order for the factory RSE audio to be retained through the cabin speakers.
2. RSC buttons that are identical to the SWC will mimic the SWC function for function.
3. The interfaces accessory output is only rated at 10 amps. It is designed for the new aftermarket head unit ONLY.
4. For Bose systems, the recommended line level input is 2-4 volts from the aftermarket radio.
5. **To prevent over driven audio** when installing into a vehicle with a Bose system and the aftermarket radio does not have low level outputs then an LOC (part # LP3-2) is recommended to match the input voltage or you can create an audio attenuation circuit (**see diagram 2 below for audio attenuation wiring**).
6. **To prevent ground loop or engine noise** when installing aftermarket radios that use a common ground on the outer shield of the low level outputs will require a ground loop isolator (part # LPGL-2)

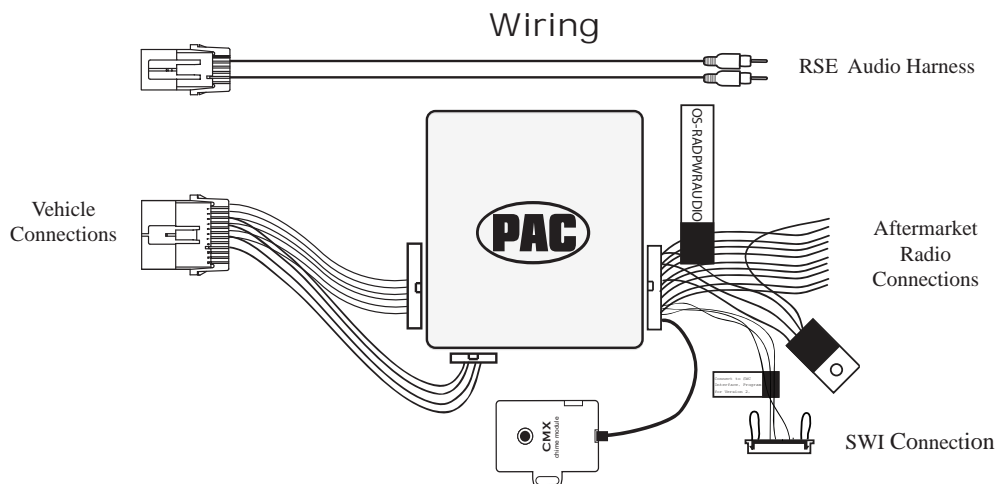
Wiring Connection Chart

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	Not Used
Blue / White	Amp Turn On Input
Orange / White	Illumination Output (+)
Green	Reverse Output (+)
Brown Loop	Mute Loop - See installation note 5.

Illustration / Schematic



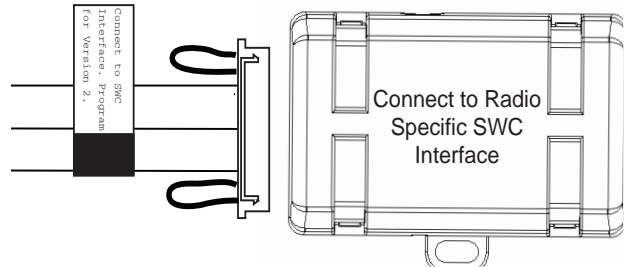


Installation Steps

1. Make all connections as described in the chart on page1.
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. 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.
5. 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.

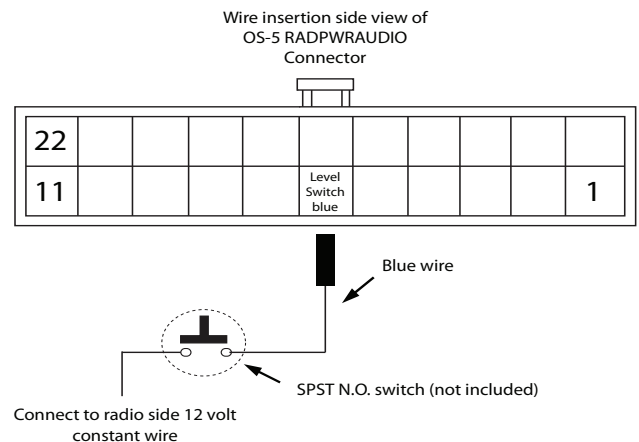
SWC Output Connector

- The OS-2X provides a SWC output connector attached to the OS-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).
- Both loops should also 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.



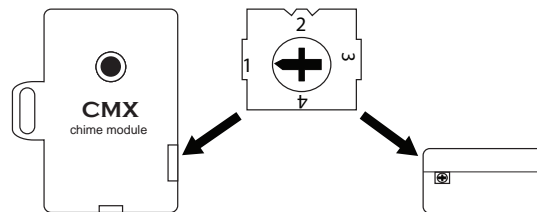


Rear Seat Entertainment (RSE); If equipped

The factory RSE system will function independantly from the aftermarket radio. The unit will power up and pass audio through the headphones as long as the vehicles ignition is on. If you wish to pass audio from the RSE to the aftermarket radio you must connect the RCAs from the 12-pin connector to the aftermarket radios auxiliary input. Select the aftermarket radios auxiliary input to hear RSE audio.

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 8 times before returning to the original level.
5. 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®.
6. Turn off vehicle & remove key. RAP will be active & keep the radio on for 10 minutes or until the drivers door is opened.
7. The LED & radio will turn off when RAP turns off or the drivers door is opened.
8. 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-2X can be updated with new firmware as it becomes available using the PAC-UP interface updater (sold seperately).



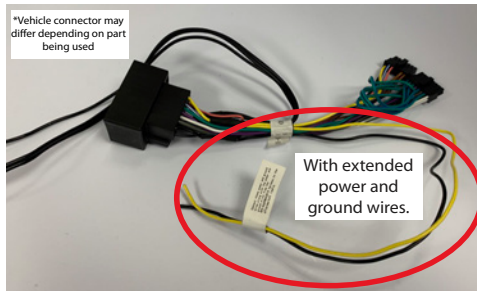
Issue:

Accessory output drops at high volume.

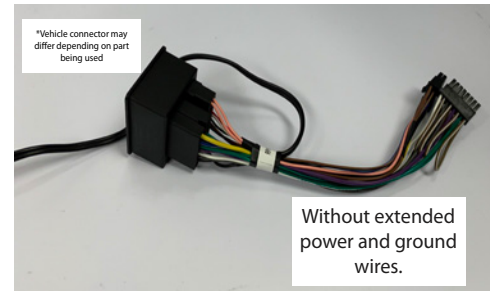
Solution:

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.

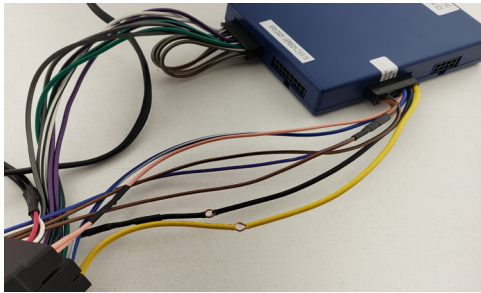


If your harness looks like this, follow steps below then proceed with page 2.

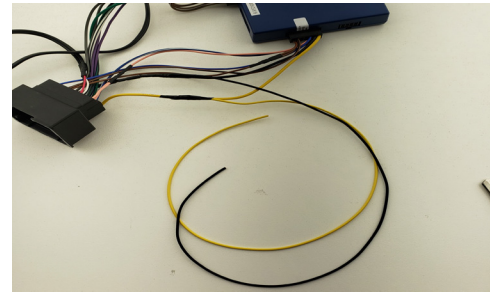


Connect wires from vehicle-side to radio-side of interface harness.

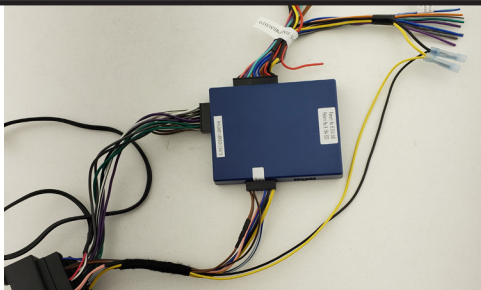
STEP 1 Isolate Yellow (B+) and Black (GND) on vehicle-side wiring harness and prepare them to be spliced



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



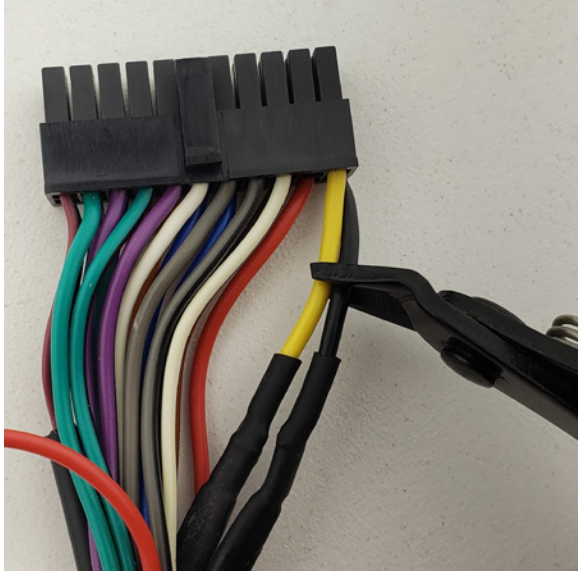
STEP 3 Connect newly extended wires to the Yellow (B+) and Black (GND) wires on the radio-side harness as well as the Yellow (B+) and Black (GND) wires from the aftermarket radio.



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.



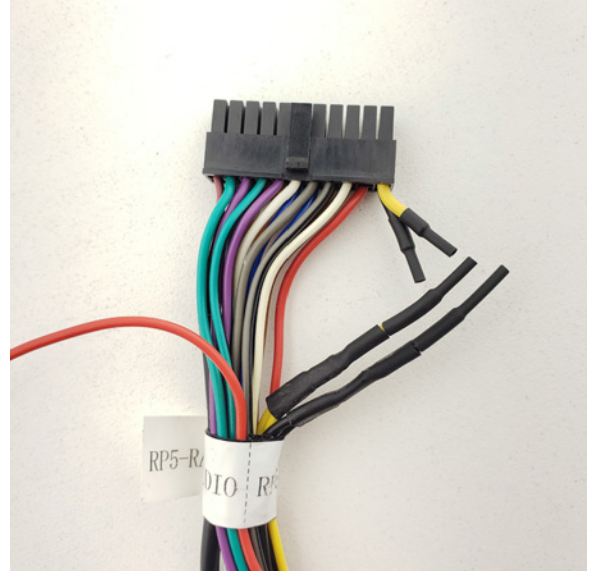
STEP 3

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.