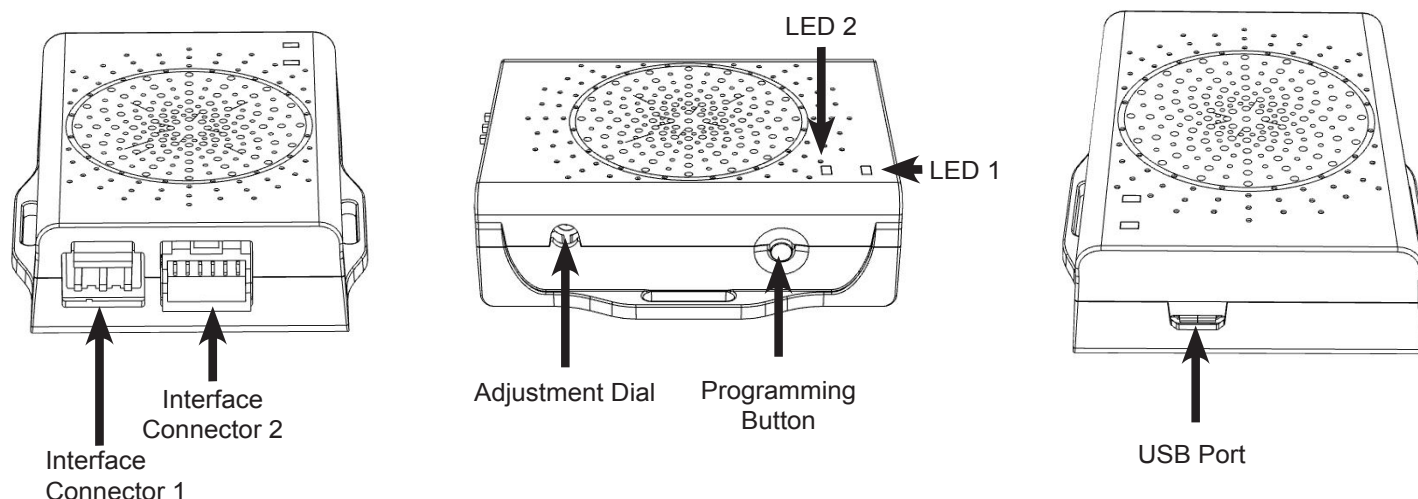# GM1A-R

Introduction and Features

The GM1A-R interface allows the replacement of a factory radio in select General Motors vehicles with the Class II Data-Bus. Using this interface will retain factory features such as warning chimes and the factory Bose amplifier when the original radio is removed. The GM1A-R provides data-bus driven outputs such as retained accessory power (RAP), vehicle speed signal (VSS), illumination, reverse trigger and parking brake. The GM1A-R also provides an SWI Direct output for adding an optional PAC Steering Wheel Control (SWC) retention interface (SWI-RC-1 or SWI-CP2). Rear Seat Controls (RSC) if equipped will also be retained with the SWI interface.
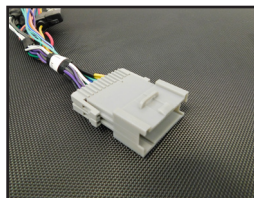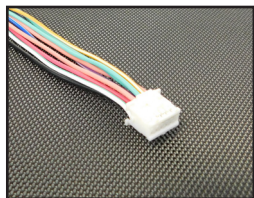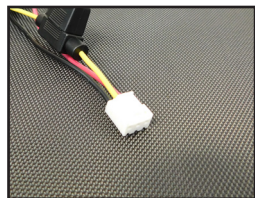
Important Notes

1. Does not retain OnStar.
2. Does not provide RSE audio to aftermarket radio.
3. Compatible in both Premium (Y91 / UQA) and Standard Bose systems.
4. In vehicles with Premium Bose (Y91 / UQA) the chime volume can only be adjusted on the module via the adjustment dial. Please refer to page 2 under adjustable settings for further details.

Module Layout

LED 2

LED 1

Adjustment Dial

Programming Button

Interface Connector 2

Interface Connector 1

USB Port

Installation Steps

1. Wire your aftermarket radio to the GM1A-R's harness according to the wiring connections chart. **In vehicles without a Bose system:** Cut the resistor packs wrapped in heat shrink off and connect the aftermarket radio's speaker outputs to the remaining wires according to the wiring connections chart. **In vehicles with a Bose system:** Wire the GM1A-R harness up as-is, with the resistor packs in the harness.
2. Plug Interface Connectors 1 and 2 into the appropriate port on the GM1A-R interface (using the illustrations above or the label on the bottom of the interface).
3. If you are also installing an optional SWC interface with the GM1A-R, connect the SWI Direct Connector to the SWC interface. (Please refer to the SWC interface instructions for configuration and programming instructions).
4. Remove the factory radio and plug in the GM1A-R's vehicle harness into the factory vehicle harness.
5. If necessary, program the SWC interface. Please see next section for more details.

Wiring Connections

Yellow	12v+
Red	Accessory Output (10 amp)
Black	Ground
Blue / White	Remote On Input
Orange	Not Used
Orange / White	Illumination Output
Purple / White	Reverse Output (+)
Light Green	Parking Brake Output (-)
Pink	Vehicle Speed Signal Output (VSS)
Purple	Rear R + input
Purple / Black	Rear R - input
Green	Rear L + input
Green / Black	Rear L - input
Gray	Front R + input
Gray / Black	Front R - input
White	Front L + input
White / Black	Front L - input

Interface Connector 1

Interface Connector 2

Vehicle Connector

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SWI-DIRECT Steering Wheel Control Output Connector

If you are using the SWI-RC-1 or SWI-CP2 Please follow the steps below.
Refer to the figure to the right to set the bank of eight Dip-Switches.
Refer to the guide below for setting the bank of four Dip-Switches based on your radios manufacture.

DIPSWITCH ON = DOWN

Set DIP switches that correspond with your radio to the ON position.
Set all other DIP switches to the OFF position.

Alpine	JVC	Kenwood / Lightning Audio	Stinger	Clarion / Nakamichi	All Other Brands	Pioneer	Sony	Fusion
1	2	1 & 2	3	3	1, 2, & 3	1, 2, & 3	4	1 & 4

If your brand is not listed above, please use "ALL OTHER BRANDS."

Adjustable Settings

These products have settings that are adjustable through our RadioPRO PC app or through the push-button on the module. Some settings are only adjustable through the PC app. Some of these settings require the module to be connected to the vehicle. Below is a breakdown of these settings.

SETTING	AVAILABLE ON PC APP		AVAILABLE ON MODULE
	CONNECTED TO CAR	NOT CONNECTED TO CAR	
Chime volume (excluding Premium Bose Y91/UQA)	YES	NO	YES
Factory amplifier settings: Bass, Mid, Treble, Gain, and Fade (Premium Bose Y91/UQA only)	YES	NO	GAIN ONLY
OnStar volume (RST or RT products only)	YES	NO	YES
Read product version	YES	YES	N/A
Update firmware	YES	YES	N/A
Camera settings (VS41 required)	YES	YES	NO

Related Downloads
  • **RadioPRO PC App - https://pac-audio.com/app-downloads/**
  • **Latest instruction manuals - search part number on pac-audio.com, and look on "Downloads" tab**

Programming Button and Adjustment Dial Functions

You can press and hold the programming button on the side of the interface to access different programming modes. Once the LED is lit to the mode you desire (see below for modes), immediately release the programming button to access that mode.

PLEASE NOTE:

  • **This process must be done with the interface in the vehicle and the key in the ignition position.**
  • **If there is a Premium Bose system (Y91 / UQA), and you are also installing an amplifier on the cabin speakers, make sure that the chime speaker is connected before proceeding. See the RadioPRO app section on Page 3 for more details.**

  A. **2 Chimes and LED1 flash amber: <u>SWC re-calibration</u>** (this mode is available in the **Corvette only**). This allows you to re-calibrate the analog SWC in the event they fall out of the expected range and do not function properly. If data control SWC are detected by the interface, this mode will be automatically skipped.

  B. **3 Chimes and both LEDs flash green: <u>Chime volume adjustment</u>** This allows you to adjust the volume of the chimes generated by the interface using the adjustment dial on the side. Vehicles with Premium Bose (Y91 / UQA) will one have two chime level selections (Low / High).

  C. **4 Chimes and LED 1 flash red: <u>Master reset.</u> LED 1 will flash red** and you will hear four chimes. This does a master reset of the interface and restores the following settings to factory defaults:

   • SWC Calibration

   • Infotainment Setting

   • Interface User Options

Testing and Verification

1. Turn the ignition on. LED 1 will illuminate red and the +12v accessory output will turn on.
2. Turn on the radio and check chimes, volume, and balance. **Note: Premium Bose Systems (Y91 / UQA)** will not fade from the aftermarket radio. If you want to adjust the fader you must use the RadioPRO app**,** available for download at http://aampglobal.com/RadioProApp. Please see the RadioPRO app section on the next page for more details.
3. **In vehicles equipped with Premium Bose (Y91 / UQA):** If the overall volume is too low, use the adjustment dial on the side of the interface to set it to the desired level. The best way to do this is to turn the volume on the radio to 3/4 volume, then turn the adjustment dial on the GM1A-R clockwise until some distortion is heard, then counter-clockwise a little.
4. **Chime Volume:** If the chime volume is too low, adjust it using either the procedure outlined in the previous section, or by using the RadioPRO app. Please see the RadioPRO app section on the next page for more details.
5. If an SWI interface was also installed, verify that all SWC buttons are functioning properly. If you are installing the GM1A-R into a Corvette, and are experiencing erratic SWC behavior, you may need to follow the SWC re-calibration procedure in the next section.
6. Turn off vehicle and remove key. RAP will keep the accessory output on for 10 minutes or until any door is opened.
7. LED 1 and the accessory output will turn off when RAP turns off.

SWC Re-calibration Procedure (Corvette Only)

Please Note: This is only necessary if after installation, the SWC are acting erratic or unresponsive in the Corvette.

1. Turn the key to the ignition position.
2. Press and hold the programming button until LED 1 turns **amber** and you hear two chimes. When this happens, release the programming button.
3. Within 7 seconds, press and hold the button that is to be learned on the steering wheel. The LED will turn off when the button is pressed and begin blinking when the value has been learned. Once the LED begins blinking, release the button.
4. Repeat step 3 for each additional function on the steering wheel.
5. If you come to a button in the list that your vehicle does not have, skip it by pressing the programming button on the interface. Any buttons not learned during this process will not function.
6. Once programming is completed, the LED will flash indicating end of programming.
7. Test the interface for proper functionality. Whenever a SWC is pressed LED 1 on the interface should blink green. If any function does not work, repeat the programming steps.

Button Programming Order
Volume Up
Volume Down
Seek Up
Seek Down
Preset
Answer / Voice
Hang Up
Preset Up

Rear Seat Entertainment (RSE); If equipped

The factory RSE system will function independently from the aftermarket radio. The unit will power up and pass audio through the headphones as long as the vehicle's ignition is on. Audio from the RSE cannot be passed to the aftermarket radio when using the GM1A-R. If you wish to pass audio to the aftermarket radio you must use the GM1A-RT or GM1A-RST.

RadioPRO App

Download the RadioPRO PC App at https://pac-audio.com/app-downloads/

Use of the RadioPRO App allows you to do the following:

- Configure User Interface Options such as:
  - Factory amplifier settings (Bass, Mid, Treble, Gain, Fader and Balance)
  - Chime Volume
- Update Product Firmware
- Read Firmware/Hardware Versions

PLEASE NOTE:
The interface must be connected to the vehicle when using the following features of the RadioPRO App:
  - **Factory Amplifier Settings**
  - **Chime Volume**

The interface does not need to be connected to the vehicle when using the following features of the RadioPRO App:
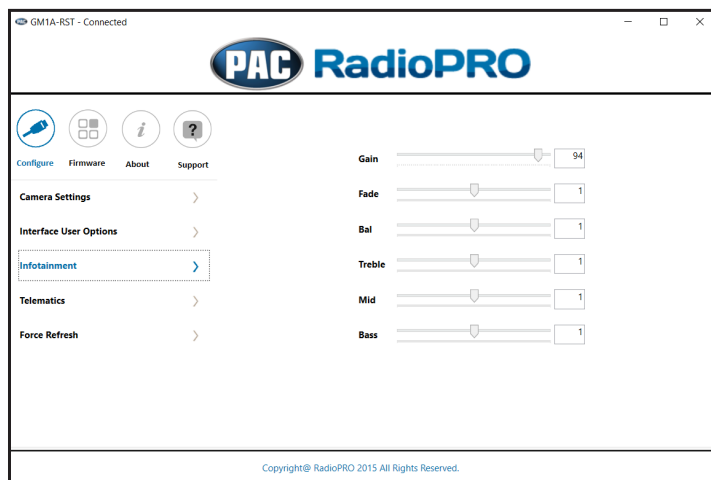 - **Interface User Options**
  - **Firmware Updates**
  - **Reading firmware/hardware versions**

Infotainment/Factory Amplifier Adjustments

The RadioPRO app will allow you to adjust the settings of the factory amplifier (Y91 / UQA Premium systems only). You can adjust Amp Gain, Fader, Balance, Bass, Mid and Treble. Restoring factory settings on the module will default all values back to default.

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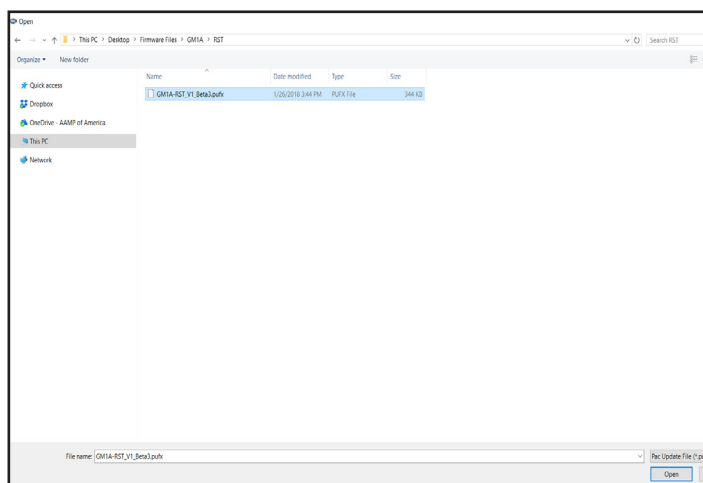
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RadioPRO App (cont.)

Product Updates (Firmware)

Firmware Updates

The RadioPRO app will allow you to update the interface with new firmware as it becomes available. Please visit   www.PAC-audio.com/firmware for available updates.

Connect the interface to your PC and select "Firmware", then "Update Firmware". Now select "Select File". Finally, browse to the place where you saved the file and select it. This will begin the updating process. Once finished, disconnect the interface from the PC and test operation.

Technical Support

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Standard / International: 727-592-5991