

# RP5-GM11

Radio Replacement & Steering Wheel Control Interface  
with OnStar Retention for General Motors Vehicles

## Introduction & Features

The RP5-GM11 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, steering wheel controls (SWC), warning chimes, Rear Seat Controls (RSC), Rear Seat Entertainment (RSE) and the BOSE amplifier when the original radio is removed. The RP5-GM11 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 radio select rotary switch on the side of the interface must be adjusted to the proper radio setting before plugging the interface into the vehicle (see next page for setting chart).
2. The interface comes pre-programmed for all of the vehicles factory SWC functions and does not require programming unless you wish to re-assign the SWC functions to different buttons. The SWC can always be restored to default settings by pressing and releasing the program button on the side of the interface once and waiting 7 seconds for the LED to flash 3 times. **PLEASE NOTE: Due to the many different possible OEM SWC configurations, some applications may need to be reprogrammed for the SWC assignments to make sense. Whatever you assign as aftermarket volume commands will also be the OnStar volume commands.**
3. The aftermarket radio must have an auxiliary input in order for the factory RSE audio to be retained through the cabin speakers.
4. RSC buttons that are identical to the SWC will mimic the SWC one for one.
5. The LED will flash whenever a SWC button is pressed.

## Wiring Connection Chart

### Aftermarket Radio Connections

Yellow	+12v
Black	Ground
Red	Acc. Output
White	Front Left + input
White / Black	Front Left - input
Grey	Front Right + input
Grey / Black	Front Right - input
Green	Rear Left + input
Green / Black	Rear Left - input
Purple	Rear Right + input
Purple / Black	Rear Right - input

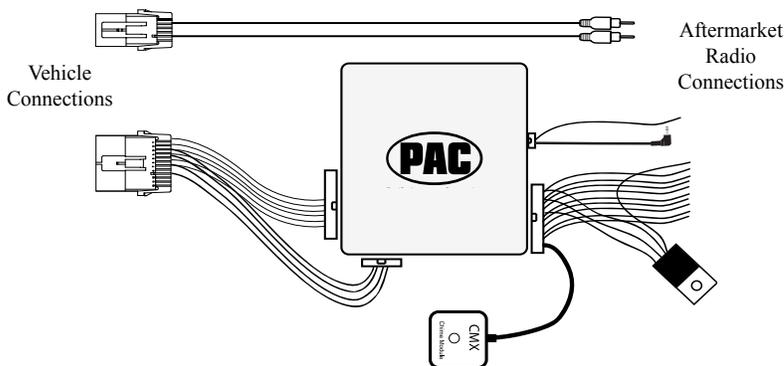
Light Green	Parking Brake Output (-)
Pink	Vehicle Speed Output
Blue	Not Used
Blue / White	Amp Turn On Input
Orange / White	Illumination Output (+)
Purple / White	Reverse Output (+)
Brown Loop	Mute Loop - See installation note 6.

### SWC Connector

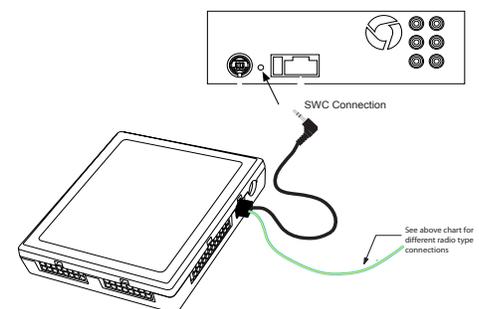
Blue/Yellow	Kenwood, Newer JVC
3.5mm Jack	Alpine, JVC, Clarion, Pioneer, Sony, Fusion, Boyo, Dual, Lightning Audio, Visteon or Advent

## Illustration / Schematic

### Wiring



### SWC Connection



## Installation Steps



### SET RADIO SELECT SWITCH

Alpine	JVC	Kenwood	Clarion	Pioneer / Sony / Other	Fusion
1	2	3	4	7	9

Other = Advent, BOYO, Dual, Lightning Audio, Rockford Fosgate, Visteon

- The radio select rotary switch on the side of the interface must be adjusted to the proper radio setting before plugging the interface into the vehicle.**
- Make all connections as described in the chart on page 1.
- 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.
- If the aftermarket radio is equipped with an auxiliary input and you wish to retain the factory RSE audio, plug the RCA connectors from the secondary harness into the radios auxiliary input.
- 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.
- 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 outer brown wire to the mute input.
- Connect the SWC wire according to the chart on page 1 (aftermarket radio **MUST** support a wired remote input).
- If you wish to reassign functions to the SWC follow the programming instructions on the next page.

## Default Steering Wheel Control Programming

**IMPORTANT!** The interface comes pre-programmed for the functions listed in the chart below and does not require programming unless you wish to re-assign the SWC functions to different buttons. The SWC can always be restored to default settings by pressing the program button on the side of the interface once and waiting seven seconds for the LED to flash three times.

### Default SWC Button Assignments

	Alpine	JVC	Kenwood	Clarion	Sony / Pioneer	Fusion
<b>Volume +</b>	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
<b>Volume -</b>	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
<b>Source Up</b>	Source	Source	Disc/FM+	Source	Source	Source
<b>Source Down</b>	Band	Preset +	Disc/AM	N/P	Band	Off
<b>Seek Up</b>	Track +	Track +	Track +	Search +	Track +	Track +
<b>Seek Down</b>	Track -	Track -	Track -	Search -	Track -	Track -
<b>Voice</b>	Mute	Mute	Mute	Mute	Mute	Mute
<b>Prog</b>	Preset Up	Preset -	Source	Band	Preset +	Audio

### Default SWC Button Assignments (Corvette)

	Alpine	JVC	Kenwood	Clarion	Sony / Pioneer	Fusion
<b>Volume +</b>	Volume +	Volume +				
<b>Volume -</b>	Volume -	Volume -				
<b>Seek Up</b>	Track +	Track +	Track +	Search +	Track +	Track +
<b>Seek Down</b>	Track -	Track -	Track -	Search -	Track -	Track -
<b>Voice</b>	Mute	Mute	Mute	Mute	Mute	Mute
<b>End</b>	Source	Source	Source	Source	Source	Source



### Optional Steering Wheel Control Programming

If you wish to re-assign the SWC functions the interface must be programmed in the specific order shown on the chart below. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the programming button on the side of the interface to skip that function. The LED will flash off and on confirming that you have successfully skipped that function and are ready to proceed to the next one.

#### Programming

1. Turn the key to the ignition position.
2. Press and release programming button on the side of the interface.
3. Within 7 seconds, press the button that is to be learned on the steering wheel. The LED will turn off when the button is pressed.
4. If you need to program more buttons, repeat step 3 for each additional audio function on the steering wheel.
5. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the program button on the side of the interface to skip that function.
6. Once programming is completed, wait seven seconds. The LED will flash three times indicating end of programming.
7. Test the interface for proper functionality. Whenever a SWC is pressed the LED on the interface should blink. If any function does not work, repeat the programming steps

#### Optional Programming Order

	Alpine	JVC	Kenwood	Clarion	Other 	Pioneer	Sony	Fusion
1	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
2	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
3	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute
4	Preset +	Source	Source	Source	Preset +	Preset +	Preset +	Source
5	Preset -	Track +	Play	Search +	Preset -	Preset -	Preset -	Track +
6	Source	Track -	Track +	Search -	Source	Source	Source	Track -
7	Track +	Band / Disc +	Track -	Band	Track +	Track +	Track +	Audio
8	Track -	Preset / Disc -	Disc / FM +	Send / End	Track -	Track -	Track -	Power
9	Power	Select	Disc / AM -	Send	Band	Band	Band	
10	Enter/Play	Attenuation	Answer	End	Answer 	Phone Menu	Reject Call / Source (Bluetooth equipped radios only)	
11	Band / Program	Phone Receive	Voice Dial	VR	End 	Answer Call	Answer / End Call	
12	Receive	Phone Reject	On Hook		PTT 	End Call		
13	End	Voice Dial	Off Hook			VR		
14	VR	Power	Mute (Multimedia units only)					
15			Preset +					

 - Advent, Boyo, Dual, Lightning Audio, Jensen, Rockford Fosgate & Visteon  - Jensen & Advent ONLY

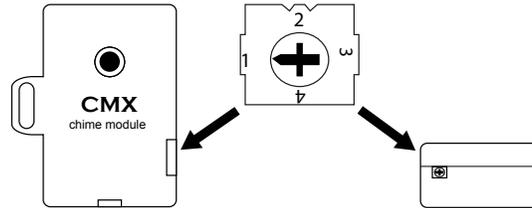
### Testing and Verification

1. Turn the ignition on. The LED on the interface will turn on and the +12v accessory wire will turn on.
2. Turn on the radio and check balance and 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 and remove key. RAP will be active and keep the radio on for 10 minutes or until the drivers door is opened.



### Testing and Verification (cont.)

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.

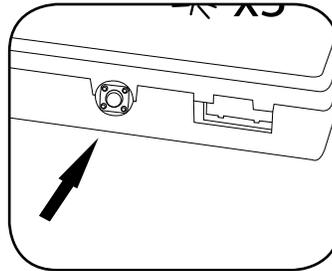


### Rear Seat Entertainment (RSE); If equipped

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 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.

### OnStar Volume Adjustment for Vehicles w/o SWC

1. If SWC buttons are not present you must use the programming button on the interface to control the OnStar audio level during an OnStar connection.
2. When OnStar is active pressing the programming button will raise the audio level 8 times before returning to the original level. Every time the button is pressed a confirmation beep will be heard.



Press the programming button on the side of the interface while OnStar is active to adjust the OnStar volume

### Technical Support and Product Updates (Firmware)

The RP5-GM11 can be updated with new firmware as it becomes available using the PAC-UP interface updater (sold separately). Please visit [www.PAC-audio.com/firmware](http://www.PAC-audio.com/firmware) for available updates.

Technical Support  
support@PAC-audio.com  
866-931-8021