

# CH1A-RSX

Radio Replacement and Steering Wheel Control Interface for Chrysler/Dodge/Jeep Vehicles

## Introduction and Features

The CH1A-RSX interface allows the replacement of a factory radio in select Chrysler / Dodge / Jeep vehicles with MSCAN or LSFT-CAN databus radios. Using this interface will retain factory features such as steering wheel controls (SWC) vehicle entertainment system (VES) and the factory audio amplifier when the original radio is removed. Use of this interface also allows you to program two radio functions to each SWC button by using short press long press dual command functionality. The CH1A-RSX also provides data bus driven outputs such as retained accessory power (RAP), vehicle speed sensor (VSS), illumination, reverse trigger and parking brake.

## Important Notes

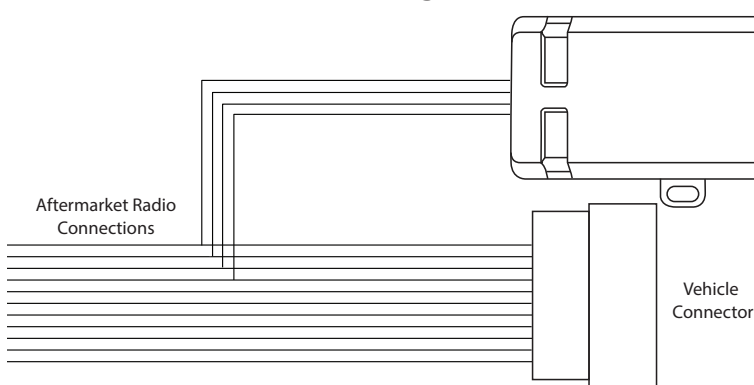
1. These instructions only apply to revision 1.5.4.5 of the product. The revision info can be found on a small white sticker on the interface and packaging.
2. The radio select rotary switch on the side of the interface must be adjusted to the proper radio setting before plugging the interface into the vehicle (see next page for setting chart).
3. 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 or utilize short press long press dual command functionality. 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 4 times.
4. The LED will flash whenever a SWC button is pressed.

## Wiring Connection Chart

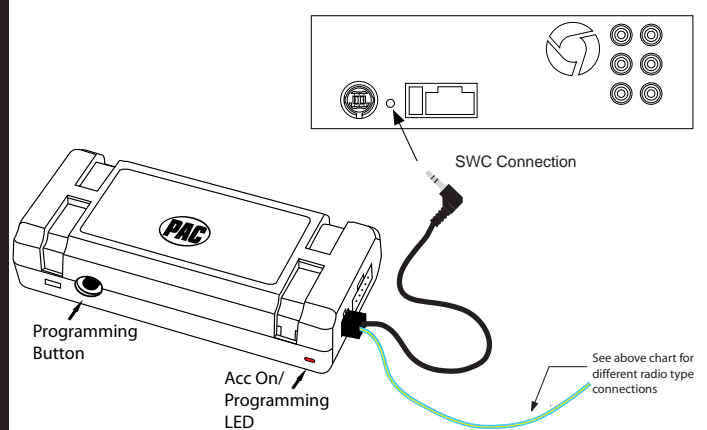
Interface Connector		Vehicle Connector		SWC Connector	
Red / White	Parking Brake Output (-)	Yellow	Battery +12v	Blue / Yellow	Kenwood, Newer JVC
Purple / White	Vehicle Speed Output (VSS)	Black	Ground	3.5mm Jack	Alpine, JVC, Clarion, Fusion, Pioneer, Sony, Dual, Axxera, Lightning Audio, Jensen, Rockford Fosgate
Blue / White	Amp Turn On Input	Blue	Antenna On Input		
Red	Accessory Output Output (10 amp)	White	Front L + input		
Orange / White	Illumination Output (+)	White / Black	Front L - input		
Green	Reverse Output (+)	Gray	Front R + input		
		Gray / Black	Front R - input		
		Green	Rear L + input		
		Green / Black	Rear L - input		
		Purple	Rear R + input		
		Purple / Black	Rear R - input		

## Illustration / Schematic

### Wiring



### SWC Connection



## Installation Steps



### SET RADIO SELECT SWITCH

Alpine	JVC	Kenwood / Lightning Audio	Clarion / Nakamichi	Pioneer / Other*	Sony	Fusion
1	2	3	4	7	8	9

\*Other - Dual / Axxera, Jensen, Rockford Fosgate

- 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.**
- Only one of the two provided radio harnesses will be used. Remove the factory installed radio to determine the correct harness for your particular vehicle.
- Make all connections as described in the connection chart on page 1. **Vehicles without a factory amplifier:** Connect the aftermarket radio's front and rear speaker wires to the vehicle connector. **Vehicles with a factory amplifier:** The factory amplifier only accepts two channels of audio input (left and right). Connect the front outputs of the aftermarket radio to the rear inputs of the vehicle connector. This will allow navigation voice prompts and Bluetooth calls to be heard. The rear speaker outputs of the aftermarket radio are not used. Fading is not supported in this application. The factory amplifier's fading is controlled by data communication from the factory radio. Neither the aftermarket radio, or the RP Advanced interface have the ability to control the amplifier's fader.
- 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 or utilize short press long press dual command functionality, follow the programming instructions on the next page.

## Default Steering Wheel Control Programming

**IMPORTANT!** 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 or utilize \*short press long press dual command functionality. 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 4 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</b>	Source	Source	Source	Source	Source	Source
<b>Track +</b>	Track +	Track +	Track +	Search +	Track +	Track +
<b>Track -</b>	Track -	Track -	Track -	Search -	Track -	Track -
<b>Preset +</b>	Preset +	Preset	Disc/Radio +	Band	Preset +	Audio
<b>Voice</b>	Voice	Voice	Voice	Voice	Voice	Mute
<b>Phone</b>	Receive	Receive	Answer	Send/End	Answer	Power

### Short Press Long Press Dual Command Functionality

This feature allows you to assign two aftermarket radio functions to each of the vehicles SWC buttons. It can be used with as many of the buttons as the user likes or none at all. When this functionality is implemented, quickly pressing and releasing a SWC button will initiate the short press command, while pressing and holding a SWC button for longer than two seconds will initiate the long press command. Please note that no long press commands are programmed by default. If you wish to assign dual command functionality to the SWC please follow the programming steps on the next page.

## Optional Steering Wheel Control Programming

If you wish to re-assign the SWC functions or utilize short press long press dual command functionality, 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 program 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.



**SET RADIO SELECT SWITCH**

Alpine	JVC	Kenwood / Lightning Audio	Clarion / Nakamichi	Pioneer / Other*	Sony	Fusion
1	2	3	4	7	8	9

\*Other - Dual / Axxera, Jensen, Rockford Fosgate

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.  
**At this point you have two options:**
  - A. **For short press functionality:** Release the button within 1.5 seconds. The LED will turn back on.
  - B. **For long press functionality:** Hold the button until the LED starts blinking. Release the button and the LED will go back to solid.
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 / End Call	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	Power / End Call	
11	Band / Program	Phone Receive	Voice	Voice	End **	Answer Call	Voice / Answer / End Call	
12	Receive	Phone Reject	On Hook		PTT **	End Call	Voice (Android Auto & Car Play) Answer / End Call***	
13	End	Voice	Off Hook			Voice		
14	Voice	Power	Mute					
15			Preset +					

\* Dual / Axxera, Jensen, Rockford Fosgate    \*\* Jensen ONLY    \*\*\* XAV-AX100 / 200 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: **Factory amplified Systems** will not fade as neither the aftermarket radio, or the RP Advanced 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.
5. Turn off vehicle and remove key. RAP will be active and keep the radio on for 10 minutes or until the driver's door is opened.
6. The LED and radio will turn off when RAP turns off or the driver's door is opened.

**PLEASE NOTE: If after installation, the text on the driver information center has changed to German, you will need to visit a dealer and change the vehicle's country code to U.S.A.**

## Vehicle Entertainment System (VES; If equipped)

1. **Vehicles equipped with a DVD player built into the rear screen assembly:** The CH1A-RSX will allow the VES DVD player and rear screen to function as if the factory radio were present. A/V will be passed from the factory DVD player to the rear screen and audio can be heard through the headphones. A/V cannot be passed from the factory DVD player to the aftermarket head unit.
2. **Vehicles equipped with a stand alone VES DVD Player:** The CH1A-RSX will allow the VES DVD player and rear screen(s) to function as if the factory radio were present. A/V will be passed from the factory DVD player to the rear screen(s) and audio can be heard through the headphones. A/V can also be fed from the VES DVD player into an aftermarket head unit (head unit must support A / V in) with the use of the **CHYRVD (please check vehicle compatibility)**. **It is VERY IMPORTANT that the CH1A-RSX Blue/White remote input wire be connected for this feature to function properly!**
3. **Vehicles not equipped with a VES DVD Player (rear screen(s) only):** In this application the **CHYRVD (please check vehicle compatibility)** must be used in order to feed A/V into the factory screen(s) from an aftermarket head unit (head unit must support A/V out). With the **CHYRVD**, A/V will be passed from the aftermarket head unit to the rear screen(s) and audio can be heard through the headphones. If you wish to retain the Auxiliary inputs on the rear of the console you must disconnect the factory wires from the auxiliary input then connect and run your own RCAs into the aftermarket head unit.
4. **Vehicles equipped with a Reverse Camera:** In order to retain the factory reverse camera the **CHYRVD (please check vehicle compatibility)** must be used to feed video into the aftermarket head unit (head unit must support reverse camera input).

## Product Updates (Firmware)

The CH1A-RSX can be updated with new firmware as it becomes available using the PAC-UP interface updater (sold separately).

