RP4-FD11

RP4-FD11
Radio Replacement & Steering Wheel Control Interface
for Ford/Lincoln/Mercury Vehicles

Introduction & Features

The RP4-FD11 interface allows the replacement of a factory radio in select Ford/Lincoln/Mercury vehicles with MSCAN databus radios. Using this interface will retain factory features such as steering wheel controls (SWC), rear seat entertainment (RSE), rear seat controls (RSC) and the THX or Sony 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 RP4-FD11 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 modules equipped with the V2 harness.
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. 2005-07 Ford Freestyle, Mercury Montego and Ford Five Hundred - In order for SWC to function in these vehicles you must re-calibrate the SWC using the procedure outlined on page 4.
5. RSC buttons that are identical to the SWC will mimic the SWC one for one. All other buttons cannot be programmed.
6. The LED will flash whenever a SWC button is pressed.
7. When used in a vehicle equipped with an LCD screen, the screen will display the SWC functions as they are pressed on the steering wheel. It will also display “Programming Mode” whenever the programming button on the side of the interface is pressed.
8. The RSC must be in AM mode for track +/- to function. RSC must be set to AUX mode to pass audio to aftermarket radio.
9. Vehicles equipped with a factory amplified system must disconnect SYNC if they wish to use the voice button. Not disconnecting SYNC will result in the rear speakers muting every time the voice button is pressed.
10. Feeding too strong of an audio signal into the headrest monitors will cause the audio output to shut down. If this happens you must turn the tv off and on and lower the audio signal.

Wiring Connection Chart

Interface Connector

Green	Parking Brake Output (-)
Pink	Vehicle Speed Signal Output
Blue / White	Amp Turn On Input
Red	Accessory Output (1 amp)
Orange / White	Illumination Output (+)
Purple / White	Reverse Output (+)

Vehicle Connector

Yellow	Battery +12v
Black	Ground
Blue	Antenna On Input
White	Front L + input
White / Black	Front L - input
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

SWC Connector

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

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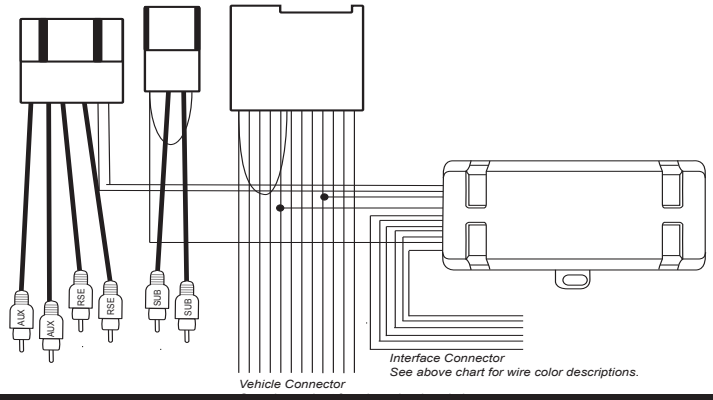
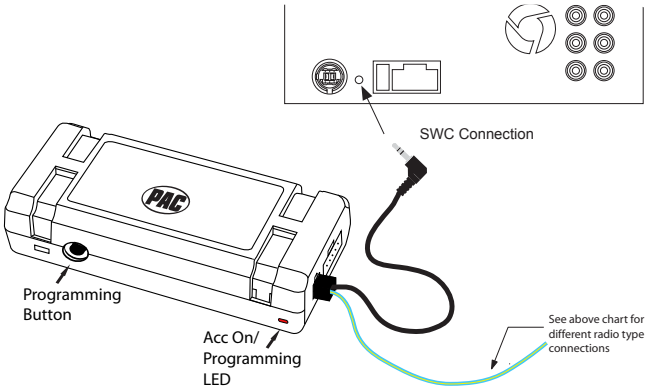
Illustration / Schematic

Wiring



SWC Connection



Installation Steps

SET RADIO SELECT SWITCH

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

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

IMPORTANT! If you wish to use the Voice, OK or Phone button in vehicles equipped with analog steering wheel controls you MUST hardwire them into the RP4-FD11. If these 3 buttons function with NO modifications this is not required. The wires you need can be found by removing plastic panels surrounding the steering wheel column and accessing the connector which houses the wire. Once you have located the connector you must cut the wires located in pins 4 & 6 or 5 & 15 (depending on the vehicle) The connector in which you will find pins 4 & 6 in is shown in Fig. 1 & 2 (Wire colors are normally White/Violet - and Blue/Orange + but may vary by vehicle). Finally you must connect the steering wheel side of the two wires to the RP4-FD11 interface connector as shown in Fig. 3. If your vehicle has the wires in pins 5 & 15 you will want to connect the White/Violet wire to Pin 11 of the RP Interface and the Blue/Orange to Pin 4.

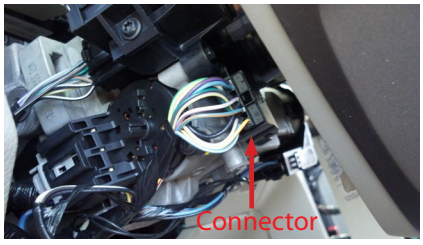


Fig. 1

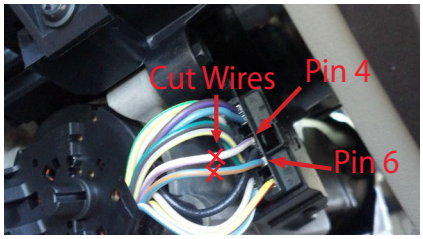


Fig. 2

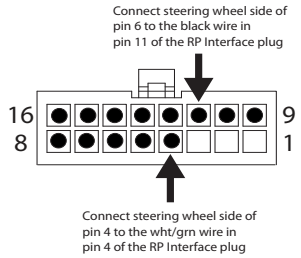


Fig. 3

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.**
2. Make all connections as described in the connection chart on page 1.
3. If the vehicle is equipped with RSE plug the RCA cables labeled “RSE” into the aftermarket radios AUX input. The RSE RCA cables are necessary to allow the headunit to play the RSE media audio through the cabin.
4. If the vehicle is equipped with a factory subwoofer plug the RCA cables connected to the 8 pin plug into the Subwoofer or Non-Fading output of the aftermarket radio.
5. Connect the SWC wire according to the chart on page 1 (aftermarket radio MUST support a wired remote input).
6. 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 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.

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.

Default SWC Button Assignments

	Alpine	JVC	Kenwood	Clarion	Sony/Pioneer	Fusion
Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
Media	Source	Source	Source	Source	Source	Source
Track +	Track +	Track +	Track +	Search +	Track +	Track +
Track -	Track -	Track -	Track -	Search -	Track -	Track -
Voice	Mute	Attenuation	Mute	Mute	Mute	Mute
Phone	Receive	Receive	Answer	Send/End	Answer Call	Audio
OK	Enter/Play	Select	Play	Band	Phone Menu	Power

Optional Steering Wheel Control Programming

If you wish to re-assign the SWC functions, the interface must be programmed in the specific order shown in the chart on the next page. 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	Clarion	Pioneer/Other	Sony	Fusion
1	2	3	4	7	8	9

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

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 Steering Wheel Control Programming (cont.)

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	N/A	Phone Menu	Reject Call/Source (Bluetooth equipped radios only)	
11	Band/Program	Phone Receive	Voice Dial			Answer Call	Answer/End Call	
12	Receive	Phone Reject	On Hook			End Call		
13	End	Voice Dial	Off Hook			VR		
14	VR	Power	Mute (Multimedia units only)					
15			Preset +					
*Other = Advent, Boyo, Dual, Lightning Audio, Rockford Fosgate, & Visteon								

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: **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.
5. Turn off vehicle & remove key. RAP will be active & keep the radio on for 10 minutes or until the drivers door is opened.
6. The LED & radio will turn off when RAP turns off or the drivers door is opened.

SWC Re-calibration

SWC re-calibration is necessary when the SWC operation is erratic or non-existent. This process re-calibrates the SWC values to the RP4 interface so it will know what they can be set to for button function assignment. The interface must be programmed in the specific order shown in the chart below. If you come across a function in the chart that your steering wheel does not have you must 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.

The SWC and radio command assignments can always be restored to default values by entering re-calibration mode (Steps 1-2) and not pressing any buttons. After 7 seconds the re-calibration mode will time out and all default values will be restored.

1. Turn the key to the ignition position.
2. Press and hold the programming button for 7 seconds until the LED begins blinking. When the LED begins blinking, release the programming button.
3. Within 7 seconds, press and release the button that is to be learned on the steering wheel. The LED will turn off when the button is pressed and come back on when it is released.
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, press and release the program button on the side of the interface to skip that function.
6. Once programming is completed, wait 7 seconds and 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.
8. After you have re-calibrated the SWC buttons, the default SWC button assignments will be the same as what is listed in the chart on page 3. If you wish to re-assign button functions you must also go through the programming process on page 3.

Button Programming Order
VolumeUp
VolumeDown
TrackUp
TrackDown
Mode
Mute
Voice
Phone
OK

Page 4

Rear Seat Entertainment (RSE); If equipped

If you would like the RSE system's audio to play through the aftermarket radio:
First set the aftermarket radio to Aux input. Press the Power button on the RSE & insert a DVD. You should now hear the RSE audio on the aftermarket radio. If the RSE audio is only playing on the front speakers the RSE is set to dual play mode. Press the Dual Play button on the RSE controls until "Single Play" is displayed across the top of the RSE screen.

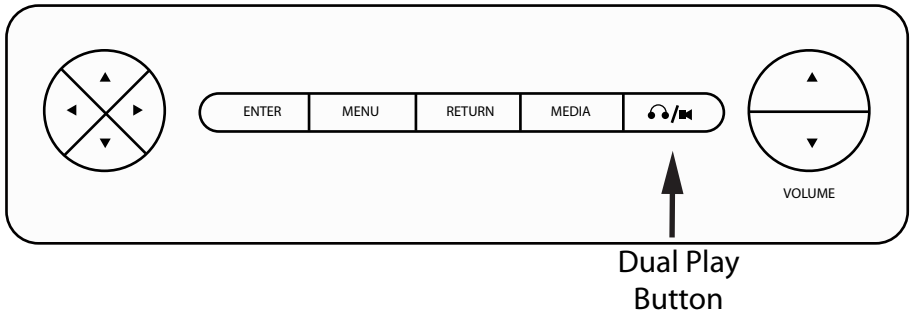
RSE Audio Modes - There are 2 different modes for the RSE audio, they are Single Play & Dual Play.

1. **Single Play -** Press the Dual Play button on the RSE controls until "Single Play" is displayed across the top of the RSE screen. In this mode the RSE audio is played throughout all speakers in the cabin.
2. **Dual Play -** Press the Dual Play button on the RSE controls until "Dual Play" is displayed across the top of the RSE screen. In this mode the rear speakers will be muted & the RSE audio is transmitted through the factory IR headphones while the front passengers can now listen to whatever source they like.

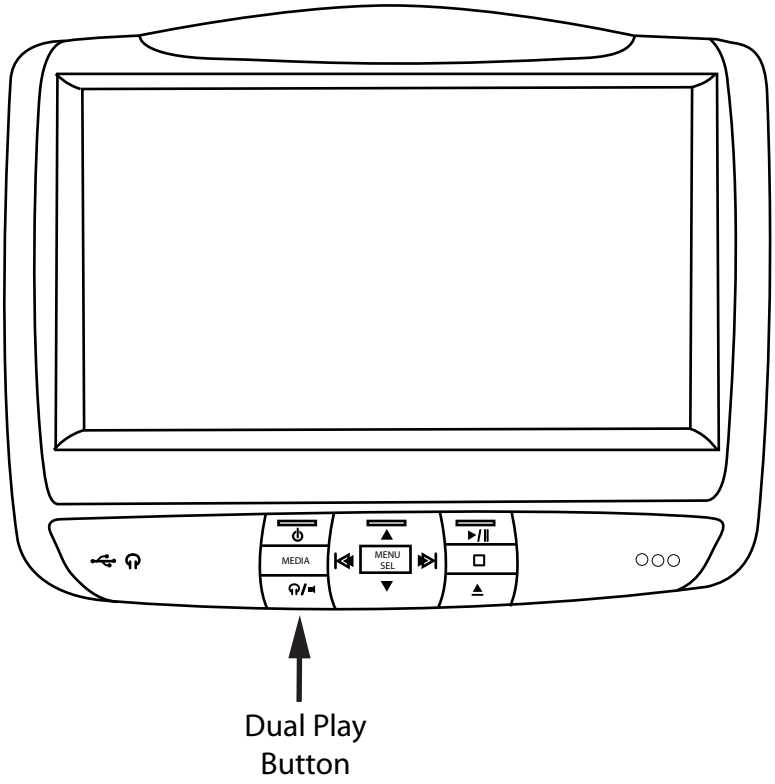
RSE Operation Notes:

1. If the vehicle is equipped with RSE with single play/dual play button on the monitor in the headrests, the driver side monitor is the master source unit. The source on the passenger headrest cannot be viewed on the driver side.
2. Both monitors must turn headphones off in order to hear RSE audio through radio.
3. Monitors without single play/dual play button on monitor operate independently and audio can never be passed to the new radio. In these vehicles RSE audio comes from aux in on back of center console.
4. In 2011+ vehicles the car must be in ignition mode for the RSE to operate properly. Being in accessory mode will cause erratic behavior.

Vehicles With Overhead Monitor



Vehicles With Headrest Monitor



Product Updates (Firmware)

The RP4-FD11 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 for available updates.