

# RP4.2-MB11

Radio Replacement and Steering Wheel Control Interface  
for Select Mercedes Sprinter and Metris Vehicles  
Equipped with a Factory Radio

## Introduction and Features

The RP4.2-MB11 interface allows the replacement of a factory radio in a 2014 - 2018 Mercedes Sprinter and 2016 - 2018 Mercedes Metris vehicles equipped with a factory radio. Using this interface will retain the factory steering wheel controls (SWC) and reverse camera. 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 RP4.2-MB11 also provides data bus driven outputs, such as retained accessory power (RAP), vehicle speed signal (VSS), illumination, reverse and parking brake.

## Important Notes

1. These instructions apply to R.2.1.1.9 or later revisions. The revision info can be found on a small white sticker on the interface and packaging.
2. The RP4.2-MB11 is ONLY compatible with the 2014 - 2018 Mercedes Sprinter and 2016 - 2018 Mercedes Metris vehicles, when the vehicle is equipped with a factory radio. **Vehicles equipped with the radio delete package, will need to use the RP4.2-MB21.**
3. The VS41 can be connected to the RP4.2-MB11 to add left, right and front camera inputs. When the VS41 is connected, the RP4.2-MB11 will send the proper signals to the VS41 so that the left and right cameras are triggered when the turn signals are active. The front camera can be triggered by using the supplied 3-way toggle switch.
4. The front camera, when triggered via the supplied 3-way toggle switch, will only be active at speeds below 6 mph.
5. **Mercedes Metris only** - the reverse image cannot be force activated using the 3 way switch when using the OEM reverse camera. This note does not apply when using an aftermarket reverse camera.

## Wiring Connection Chart

Interface Connector 1

Red	Accessory Output (10 amp)
Yellow	12v+ Constant
Black	Ground

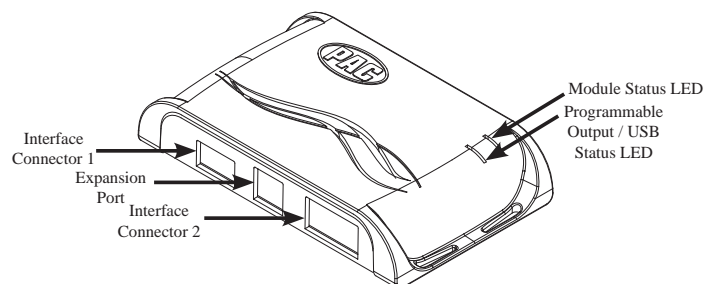
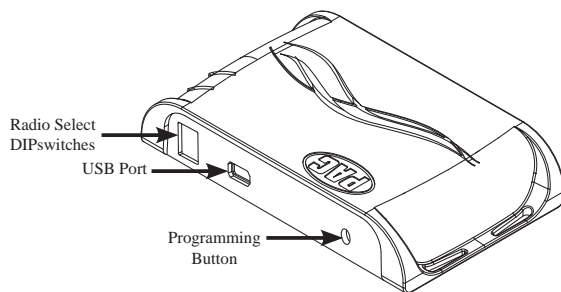
Interface Connector 2

3.5mm Jack	Steering Wheel Control Output
Pink	MS-CAN + Input
Pink / Black	MS-CAN - Input
Blue / Yellow	Steering Wheel Control Output
Orange / White	Illumination Output
Pink	Vehicle Speed Signal Output
Violet / White	Reverse Output
Light Green	Parking Brake Output (-)

Vehicle Connector

Yellow	+12v Constant
Black	Ground
Blue	Powered Antenna Turn On
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

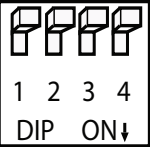
## Module Layout



# RP4.2-MB11

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## Installation Steps



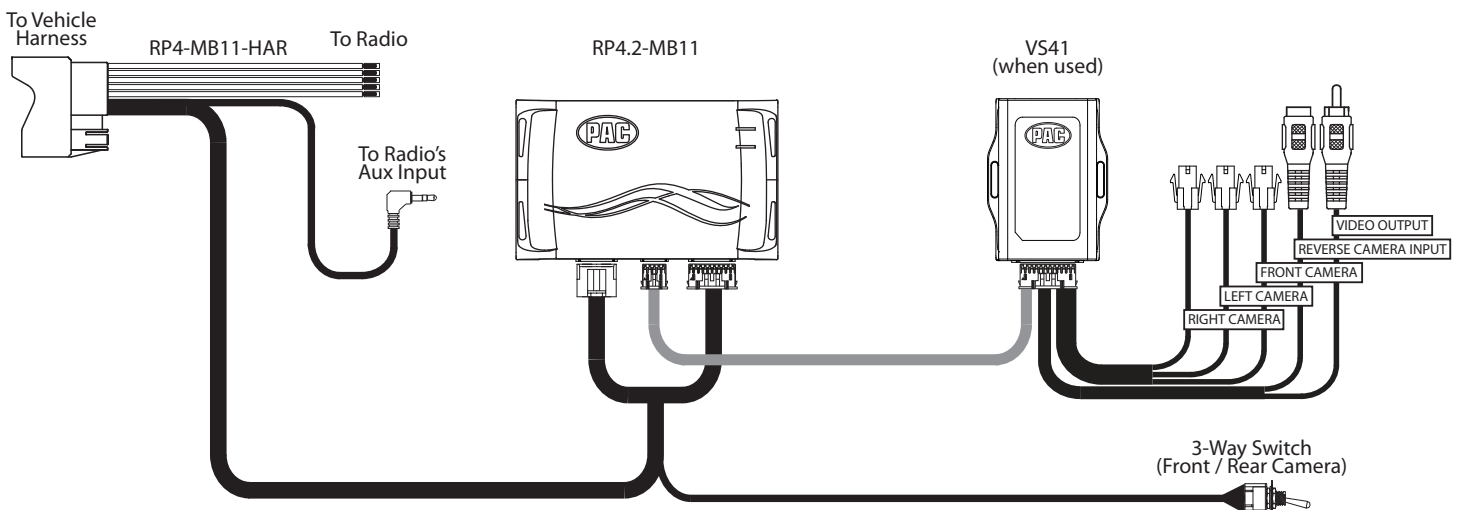
### SET RADIO DIPSWITCHES (ON = DOWN)

Alpine	JVC	Kenwood	Clarion	Pioneer / Other	Sony	Fusion
None	1	2	1 & 2	3	1 & 3	2 & 3

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

- The radio select DIP switches 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 connection chart on the previous page.
- Connect the SWC wire or 3.5mm jack labeled "Steering Wheel Control Output" to the aftermarket radio (aftermarket radio must support a wired remote input).
- Connect the unlabeled 3.5mm jack to the aftermarket radio's AUX input to retain the factory 3.5mm AUX input jack.
- If using the VS41, connect the 10-pin connector from the VS41-HAR to the RP4.2-MB11 expansion port.
- If using the VS41, connect the cameras to the proper inputs on the VS41-HAR.
- Mount the supplied 3-way switch, which will force both the front camera (when using the VS41) and rear camera, where it is easily accessible.
- The blind spot cameras will be activated with the use of the turn signal stalk. The passenger side camera will be active when the right turn signal is active. The driver side camera will be active when the left turn signal is active. If more control is needed to activate the side cameras, simply flip DIP Switch 4 down (ON). With DIP Switch 4 on it will require a double tap of the turn signal within 2 seconds to activate either the right or left camera. The turn signal will need to remain in the on position for the camera to remain active.
- Once the DIP Switches have been set, and all connections have been made, plug the interface into the vehicle.
- If you wish to reassign functions to the SWC, or utilize short press, long press dual command functionality, follow the optional programming instructions on the next page.

## Module Wiring Overview



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## Steering Wheel Controls

### Default Steering Wheel Control Programming

**IMPORTANT!** The interface comes pre-programmed for all of the vehicle's 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, then wait 7 seconds for the LED to flash 3 times.

### Default SWC Button Assignments

	Alpine	JVC	Kenwood	Clarion	Pioneer	Sony	Fusion
Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
Arrow Up	Track +	Track +	Track +	Track +	Track +	Track +	Track +
Arrow Down	Track -	Track -	Track -	Track -	Track -	Track -	Track -
Answer	Receive	Receive	Off Hook	Send	Answer	Answer	Power
End	End	Reject	On Hook	End	End	Reject/Source	No Function
Voice	Voice	Voice	Voice	Voice	Voice	Voice	Mute
Mute	Mute	Mute	Attenuate	Mute	Mute	Mute	No Function



### 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 in the Optional Programming Chart on page 4. 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.

### Short Press, Long Press Dual Command Functionality

This feature allows you to assign two aftermarket radio functions to each of the vehicle's 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.

## Steering Wheel Controls (cont.)

### Optional SWC Programming Procedure

1. Turn the key to the ignition position.
2. Put the Driver Information Center (DIC) in the vehicle's instrument cluster into the Audio or Telephone mode using the Page Up or Page Down buttons on the steering wheel. Failure to do this will not allow the Arrow Up and Arrow Down buttons to be programmed.
3. Press and release programming button on the side of the interface. The Status LED will turn green.
4. Within 7 seconds, press the button that is to be learned on the steering wheel. The LED will turn red 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 green.

5. If you need to program more buttons, repeat step 3 for each additional audio function on the steering wheel.
6. 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.
7. Once programming is completed, wait seven seconds. The LED will flash three times to indicate the end of programming.
8. Test the interface for proper functionality. Whenever a SWC button 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	ATT	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 Dial	Off Hook			Voice		
14	Voice	Power	Mute					
15			Preset +					

\* Advent, Boyo, Dual, Lightning Audio, Jensen, Rockford Fosgate & Visteon \*\* Jensen & Advent ONLY \*\*\* XAV-AX100 Only

### Testing and Verification

1. Turn the key to the ignition position. The LED on the interface will turn on & the +12v accessory wire will turn on.
2. Turn on the radio and check balance and fade.
3. Verify that all SWCs are functioning properly. The LED will flash whenever a SWC button is pressed, even if a function is not assigned to the button.
4. Verify that all data driven navigation outputs are functioning properly.
5. When using the VS41 to add left, right, front and rear cameras, be sure to trigger them with either the turn signals or the supplied switch and ensure proper operation.
6. The LED and radio will turn off when the ignition is turned off.

# RP4.2-MB11

Radio Replacement & Steering Wheel Control Interface  
for 2014 - 2016 Mercedes Sprinter Vehicles  
Equipped with a Factory Radio

## Introduction & Features

The RP4.2-MB11 interface allows the replacement of a factory radio in a 2014 - 2016 Mercedes Sprinter vehicle equipped with a factory radio. Using this interface will retain the factory steering wheel controls (SWC) and reverse camera. 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 RP4.2-MB11 also provides data bus driven outputs such as retained accessory power (RAP), vehicle speed signal (VSS), illumination, reverse and parking brake.

## Important Notes

1. The RP4.2-MB11 is ONLY compatible with the 2014 - 2016 Mercedes Sprinter vehicle when the vehicle is equipped with a factory radio. Vehicles equipped with the radio delete package will need to use the RP4.2-MB21.
2. The VS41 can be connected to the RP4.2-MB11 to add left, right and front camera inputs. When the VS41 is connected, the RP4.2-MB11 will send the proper signals to the VS41 so that the left and right cameras are triggered when the turn signals are active. The front camera can be triggered by using the supplied 3-way toggle switch.
3. The front camera, when triggered via the supplied 3-way toggle switch, will only be active at speeds below 6 mph.

## Wiring Connection Chart

Interface Connector 1

Red	Accessory Output (10 amp)
Yellow	12v+ Constant
Black	Ground

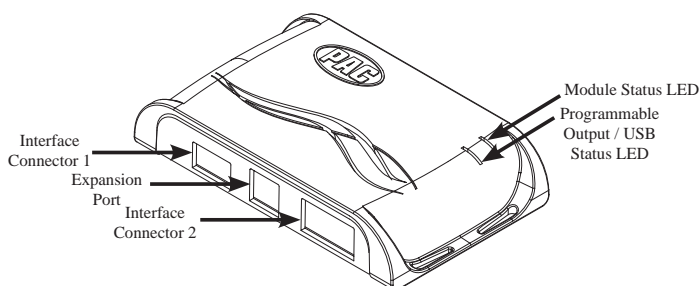
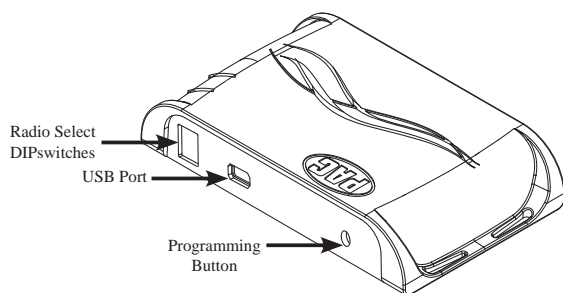
Interface Connector 2

3.5mm Jack	Steering Wheel Control Output
Pink	MS-CAN + Input
Pink / Black	MS-CAN - Input
Blue / Yellow	Steering Wheel Control Output
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Pink	Vehicle Speed Signal Output
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White	Front Left + input
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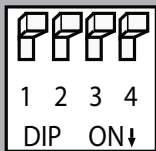
## Module Layout



# RP4.2-MB11

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## Installation Steps



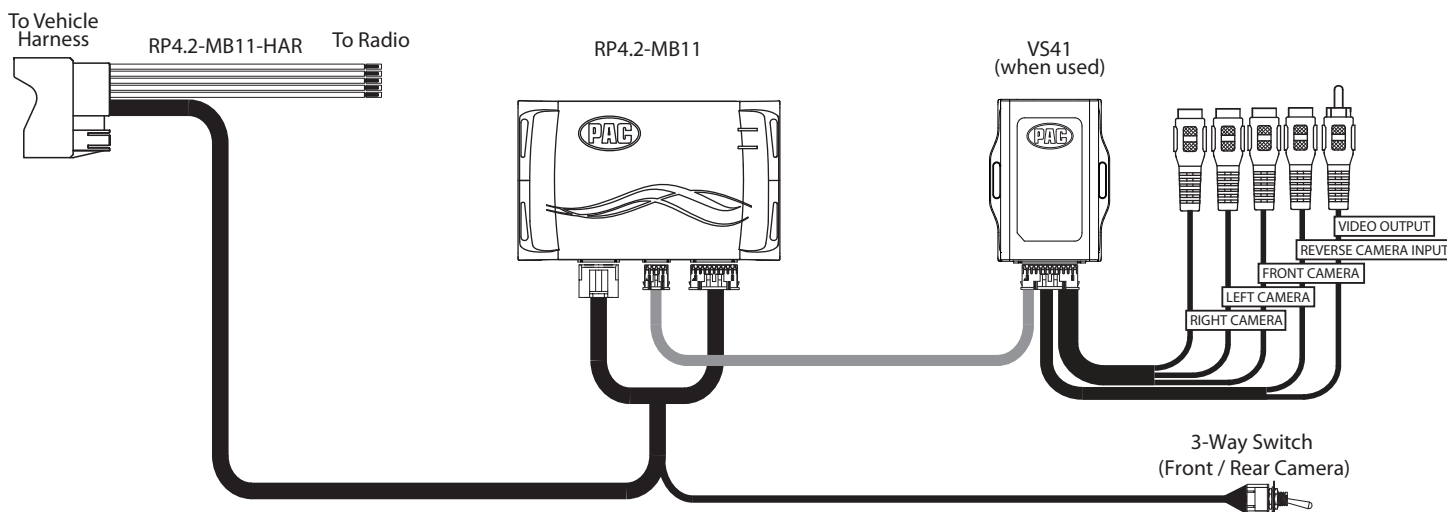
### SET RADIO DIPSWITCHES (ON = DOWN)

Alpine	JVC	Kenwood	Clarion	Pioneer / Other	Sony	Fusion
None	1	2	1 & 2	3	1 & 3	2 & 3

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

- The radio select DIP switches 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 connection chart on the previous page.
- Connect the SWC wire or 3.5mm jack to the aftermarket radio (aftermarket radio must support a wired remote input).
- If using the VS41, connect the 10-pin connector from the VS41-HAR to the RP4.2-MB11's expansion port.
- If using the VS41, connect the cameras to the proper inputs on the VS41-HAR.
- Mount the supplied 3-way switch, which will force both the front camera (when using the VS41) and rear camera, where it is easily accessible.
- The blind spot cameras will be activated with the use of the turn signal stalk. The passenger side camera will be active when the right turn signal is active. The driver side camera will be active when the left turn signal is active. If more control is needed to activate the side cameras, simply flip DIP Switch 4 down (ON). With DIP Switch 4 on it will require a double tap of the turn signal within 2 seconds to activate either the right or left camera. The turn signal will need to remain in the on position for the camera to remain active.
- Once the DIP Switches have been set and all connections have been made, plug the interface into the vehicle.
- If you wish to reassign functions to the SWC, or utilize short press long press dual command functionality follow the optional programming instructions on the next page.

## Module Wiring Overview



# RP4.2-MB11

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## Steering Wheel Controls

### Default Steering Wheel Control Programming

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### Default SWC Button Assignments

	Alpine	JVC	Kenwood	Clarion	Pioneer / Other	Sony	Fusion
Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
Arrow Up	Track +	Track +	Track +	Track +	Track +	Track +	Track +
Arrow Down	Track -	Track -	Track -	Track -	Track -	Track -	Track -
Answer	Receive	Receive	Off Hook	Send	Answer	Answer	Power
End	End	Reject	On Hook	End	End	Reject/Source	N/P



### 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 in the chart on page 3. 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.

### Short Press Long Press Dual Command Functionality

This feature allows you to assign two aftermarket radio functions to each of the vehicle's 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.









## Steering Wheel Controls (cont.)

### Optional SWC Programming Procedure

1. Turn the key to the ignition position.
2. Put the Driver Information Center (DIC) in the vehicle's instrument cluster into the Audio or Telephone mode using the Page Up or Page Down buttons on the steering wheel. Failure to do this will not allow the Arrow Up and Arrow Down buttons to be programmed.
3. Press and release programming button on the side of the interface. The Status LED will turn green.
4. Within 7 seconds, press the button that is to be learned on the steering wheel. The LED will turn red 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 green.
5. If you need to program more buttons, repeat step 3 for each additional audio function on the steering wheel.
6. 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.
7. Once programming is completed, wait seven seconds. The LED will flash three times indicating end of programming.
8. Test the interface for proper functionality. Whenever a SWC button 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		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 key to the ignition position. The LED on the interface will turn on & the +12v accessory wire will turn on.
2. Turn on the radio and check balance and fade.
3. Verify that all SWCs are functioning properly. The LED will flash whenever a SWC button is pressed, even if a function is not assigned to the button.
4. Verify that all data driven navigation outputs are functioning properly.
5. When using the VS41 to add left, right, front and rear cameras, be sure to trigger them with either the turn signals or the supplied switch and ensure proper operation.
6. The LED and radio will turn off when the ignition is turned off.





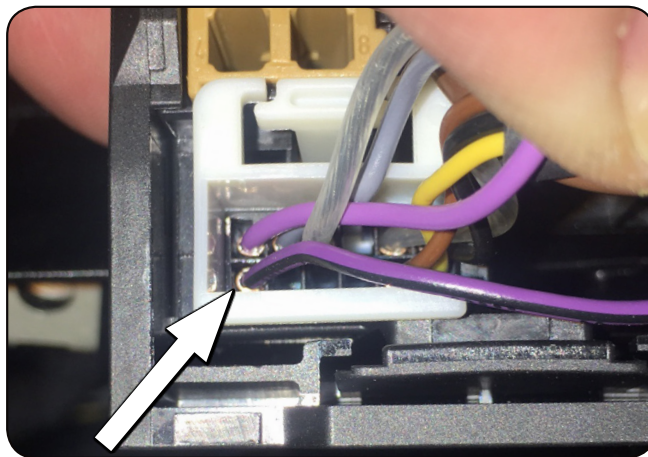
Issue:

Version 1 of the RP4.2-MB11 harness is missing the corresponding wire to power up the vehicle's powered antenna wire. This issue has been fixed with version 2 of the harness which will be labeled RP4.2-MB11-HAR V2.

Fix for modifying RP4.2-MB11-HAR v1:

Connect the aftermarket radio's power antenna or remote wire (normally Blue or Blue with a White stripe) to the vehicle's factory powered antenna wire. The vehicle's powered antenna wire is located in Pin 7 of the White sub harness located within the radio's Black dock-n-lock connector. The wire color should be Purple with a Black stripe in vehicles from 2014 - 2016 (FIG. 1) and Black with a White stripe in 2017 and newer vehicles. Once the wires have been connected please be sure to insulate all connections to avoid any damage to the radio or vehicle's electrical system.

FIG 1.



*Picture of wire in 2014 - 2016 vehicle*