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PAC C2RFRD1

PAC C2R-FRD1 Radio Replacement Interface User Manual

For Select 2005-up CAN-bus Ford, Lincoln, and Mercury Vehicles

1. Introduction

The PAC C2R-FRD1 Radio Replacement Interface is designed to facilitate the installation of an aftermarket radio in compatible Ford, Lincoln, and Mercury vehicles equipped with a CAN-bus system. This interface ensures the retention of essential factory features and provides necessary outputs for the new head unit.

This manual provides detailed instructions for the proper installation and operation of your C2R-FRD1 interface. Please read it thoroughly before beginning the installation process.

2. Product Overview

The C2R-FRD1 interface allows for seamless integration of an aftermarket radio while maintaining critical vehicle functions. Key features include:

- **Factory Amplifier Retention:** Maintains the functionality of the factory-installed amplified audio system.
- **Rear Seat Entertainment (RSE) Retention:** Preserves the factory rear seat entertainment system, if equipped.
- **Factory Subwoofer and Auxiliary Jack Retention:** Ensures continued use of the factory subwoofer and auxiliary input.
- **Navigation Output Signals:** Provides Vehicle Speed Sense (VSS), Parking Brake, Illumination, and Reverse output signals for aftermarket navigation systems.
- **12V Accessory Output:** Generates a Retained Accessory Power (RAP) 12V accessory output.
- **VC Output:** Includes a VC output for simplified installation.

Image 1: PAC C2R-FRD1 Radio Replacement Interface module. This image shows the compact blue interface module with various wiring harnesses attached.

3. Compatibility

The PAC C2R-FRD1 is compatible with select 2005-up CAN-bus Ford, Lincoln, and Mercury vehicles. This includes, but is not limited to, models such as:

- Ford vehicles (2005-2009)
- Ford Mustang (2008) with Shaker 500 system
- Ford F-250 XLT (2012)
- Ford Explorer (2008, 2006 Eddie Bauer)
- Ford F-150 (2009) with Sync and Sony Sound System
- Ford F-250 Super Duty XL (2012)

It supports factory sound systems including THX, SONY, Shaker, and Audiophile systems (requires v1.1.4 or higher firmware for some systems).

4. Package Contents

Your PAC C2R-FRD1 package should contain the following item:

- PAC C2R-FRD1 Audio Radio Replacement Interface Module

Note: Additional wiring harnesses or connectors may be included depending on the specific kit version. Always verify contents against the packaging.

5. Installation (Setup)

Before beginning installation, ensure the vehicle's battery is disconnected to prevent electrical damage. It is recommended to perform wiring connections outside the vehicle in a well-lit area.

5.1 Wiring Connections

Refer to the detailed wiring diagram included with your C2R-FRD1 interface for specific connections. The interface will connect to your aftermarket radio's wiring harness and the vehicle's factory wiring harness.

Key connections typically include:

- **Power and Ground:** Connect the interface's power and ground wires to the aftermarket radio's corresponding wires.
- **Speaker Wires:** Connect the speaker output wires from the aftermarket radio to the interface's speaker input wires.
- **Accessory Output (Red Wire):** Connect this to the aftermarket radio's accessory wire. This provides switched 12V power.
- **Illumination Output (Orange Wire):** Connect to the aftermarket radio's illumination input for dimming functionality.
- **Parking Brake Output (Light Green Wire):** Connect to the aftermarket radio's parking brake input, essential for navigation and video features.
- **Reverse Output (Purple/White Wire):** Connect to the aftermarket radio's reverse input for backup camera activation.
- **Vehicle Speed Sense (VSS) Output (Pink Wire):** Connect to the aftermarket radio's VSS input for navigation accuracy.
- **Factory Amplifier Remote Turn-On:** The interface will manage the turn-on for the factory amplifier.

Ensure all connections are secure using solder and heat shrink tubing, or high-quality crimp connectors. Loose connections can lead to intermittent issues.

5.2 Module Placement

Once wired, secure the C2R-FRD1 module in a location behind the dashboard that is free from obstructions and excessive heat. Ensure wiring is not pinched or strained.

6. Operation

After successful installation, the PAC C2R-FRD1 operates automatically to retain factory features. When the vehicle is turned on, the interface will provide the necessary signals to the aftermarket radio and manage the factory amplifier and other retained components.

Note on Rear Seat Entertainment: In some vehicle applications, the factory rear seat entertainment system may activate automatically upon vehicle startup when using this interface. This differs from factory operation where RSE might only activate when specifically selected on the factory radio.

7. Troubleshooting

- **No Audio from Aftermarket Radio:**
  - Verify all power and ground connections to the interface and aftermarket radio.
  - Ensure the factory amplifier remote turn-on signal is correctly managed by the interface.
  - Check speaker wire connections for continuity and correct polarity.
- **No Accessory Power (Radio Does Not Turn On):**
  - Confirm the 12V accessory output wire from the interface is connected to the aftermarket radio.
  - Check vehicle fuses.
- **Navigation Features (e.g., Parking Brake, VSS, Reverse) Not Functioning:**
  - Ensure the corresponding output wires from the interface are correctly connected to the aftermarket navigation unit.

    - Verify the aftermarket radio's settings for these inputs.
- **Factory Subwoofer Popping Sound at Startup:**
    - This can sometimes occur due to voltage differences. Consult a professional installer or PAC support for potential solutions, such as adding a voltage regulator to the remote lead if applicable.
- **Rear Seat Entertainment Not Working:**
    - Confirm all RSE connections are secure.
    - Ensure the aftermarket radio is configured to output audio to the RSE system if required.
- **General Malfunction:**
    - Double-check all wiring connections against the provided diagram.
    - Ensure the C2R-FRD1 module is receiving proper power and ground.
    - If issues persist, contact PAC technical support.

8. Specifications

Brand	PAC
Model Number	C2RFRD1
Material	Copper, Polyvinyl Chloride (PVC)
Dimensions (L x W x H)	8.5 x 1.5 x 4 inches
Item Weight	0.5 Pounds (approx. 8 ounces)
Connector Type	3.5mm Jack (for specific connections, e.g., SWC if used with an additional module)
Manufacturer	Scosche (as listed in specifications)

9. Warranty and Support

The PAC C2R-FRD1 Radio Replacement Interface comes with a**one-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For technical assistance, troubleshooting, or warranty claims, please contact PAC customer support through their official website or the retailer where the product was purchased. Please have your product model number (C2RFRD1) and proof of purchase available.

10. Safety Information

Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

Always ensure proper ventilation when working with electrical components. Disconnect the vehicle's battery before installation. If you are unsure about any part of the installation process, seek assistance from a qualified professional installer.