PAC CH1A-RSX

PAC CH1A-RSX Radio Installation Adapter User Manual

Model: CH1A-RSX

1. INTRODUCTION

The PAC CH1A-RSX Radio Installation Adapter is designed to facilitate the installation of an aftermarket radio in select Chrysler, Dodge, Jeep, and RAM vehicles equipped with CAN-Bus systems. This adapter retains essential factory features such as steering wheel controls and provides data-controlled accessory and navigation outputs, including 12V ACC, illumination, reverse, and parking brake signals. This manual provides comprehensive instructions for proper installation, operation, and troubleshooting to ensure optimal performance of your new audio system.

2. SAFETY INFORMATION

Always disconnect the vehicle's negative battery terminal before beginning any electrical installation to prevent short circuits and damage to the vehicle's electrical system. Ensure all connections are secure and properly insulated. Consult a professional installer if you are unsure about any part of the installation process. Do not modify the adapter or its wiring, as this may void the warranty and cause damage.

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- PAC CH1A-RSX Interface Module
- Vehicle-specific wiring harnesses (main power/speaker harness, secondary data harness)
- Steering Wheel Control (SWC) interface cable
- USB programming cable (if applicable)
- Antenna adapter (if applicable, not explicitly shown but common)

Figure 3.1: Contents of the PAC CH1A-RSX package. This image displays the central PAC interface module, two distinct multi-pin wiring harnesses for vehicle integration, a USB cable for potential firmware updates or configuration, and two additional smaller adapter cables, likely for specific audio or data connections.

4. VEHICLE COMPATIBILITY

The CH1A-RSX adapter is compatible with a wide range of Chrysler, Dodge, Jeep, RAM, and select Mitsubishi and Volkswagen vehicles. Please refer to the detailed compatibility list below to confirm your vehicle's eligibility. Compatibility may vary based on specific trim levels and factory options.

Year(s)	Make	Model	Trim Level	Additional Info
2011-2014	CHRYSLER	200	ALL TRIM LEVELS	—
2005-2010	CHRYSLER	300	ALL TRIM LEVELS	—
2007-2009	CHRYSLER	ASPEN	ALL TRIM LEVELS	—
2007-2010	CHRYSLER	PT CRUISER	ALL TRIM LEVELS	—
2007-2010	CHRYSLER	SEBRING	ALL TRIM LEVELS	—
2008-2016	CHRYSLER	TOWN & COUNTRY	ALL TRIM LEVELS	—
2007-2014	DODGE	AVENGER	ALL TRIM LEVELS	—
2006-2012	DODGE	CALIBER	ALL TRIM LEVELS	—
2008-2014	DODGE	CHALLENGER	ALL TRIM LEVELS	—
2006-2010	DODGE	CHARGER	ALL TRIM LEVELS	—
2010-2011	DODGE	DAKOTA	ALL TRIM LEVELS	—
2004-2013	DODGE	DURANGO	ALL TRIM LEVELS	—
2009-2016	DODGE	GRAND CARAVAN	ALL TRIM LEVELS	—
2009-2010	DODGE	JOURNEY	ALL TRIM LEVELS	—
2005-2008	DODGE	MAGNUM	ALL TRIM LEVELS	—
2007-2010	DODGE	NITRO	ALL TRIM LEVELS	—
2006-2008	DODGE	RAIDER	ALL TRIM LEVELS	—
2006-2012	DODGE	RAM TRUCK	ALL TRIM LEVELS	—
2007-2016	JEEP	COMPASS	ALL TRIM LEVELS	—
2005-2013	JEEP	GRAND CHEROKEE	ALL TRIM LEVELS	—
2008-2013	JEEP	LIBERTY	ALL TRIM LEVELS	—
2007-2016	JEEP	PATRIOT	ALL TRIM LEVELS	—
2007-2017	JEEP	WRANGLER	ALL TRIM LEVELS	—

Figure 4.1: Partial compatibility chart for the PAC CH1A-RSX, showing various Chrysler and Dodge models from 2004 to 2016, including specific years, models like 200, 300, Aspen, PT Cruiser, Sebring, Town & Country, Avenger, Caliber, Challenger, Charger, Durango, Grand Caravan, Journey, Magnum, Nitro, and Raider. Most entries indicate "ALL TRIM LEVELS".

Year(s)	Make	Model	Trim Level	Additional Info
2007-2017	JEEP	WRANGLER	ALL TRIM LEVELS	—
2018	JEEP	WRANGLER	JK	—
2007-2017	JEEP	WRANGLER UNLIMITED	ALL TRIM LEVELS	—
2018	JEEP	WRANGLER UNLIMITED	JK	—
2009	MITSUBISHI	RAIDER	ALL TRIM LEVELS	—
2010-2012	RAM	RAM TRUCK	ALL TRIM LEVELS	—
2009-2013	VOLKSWAGEN	ROUTAN	ALL TRIM LEVELS	—

Figure 4.2: Continuation of the compatibility chart for the PAC CH1A-RSX, detailing Jeep models (Compass, Grand Cherokee, Liberty, Patriot, Wrangler, Wrangler Unlimited) from 2005 to 2018, Mitsubishi Raider (2009), RAM Truck (2010-2012), and Volkswagen Routan (2009-2013). Specific Jeep Wrangler models are noted with "JK" trim levels.

Specific Compatible Vehicles (as per product features):

- **Chrysler:** 2011-2014 200, 2005-2010 300, 2007-2009 Aspen, 2007-2010 PT Cruiser, 2007-2010 Sebring, 2008-2016 Town & Country
- **Dodge:** 2007-2014 Avenger, 2006-2012 Caliber, 2008-2014 Challenger, 2006-2010 Charger, 2004-2013 Durango, 2009-2016 Grand Caravan, 2009-2010 Journey, 2005-2008 Magnum, 2007-2010 Nitro, 2006-2008 Raider
- **Jeep:** 2007-2016 Compass, 2005-2013 Grand Cherokee, 2008-2013 Liberty, 2007-2016 Patriot, 2007-2017 Wrangler, 2018 Wrangler, 2007-2017 Wrangler Unlimited, 2018 Wrangler Unlimited
- **Mitsubishi:** 2009 Raider
- **RAM:** 2010-2012 RAM Truck
- **Volkswagen:** 2009-2013 Routan

5. SETUP AND INSTALLATION

This section outlines the general steps for installing the PAC CH1A-RSX adapter. Refer to the detailed wiring diagram included with your product for specific wire color codes and connections. Professional installation is recommended.

1. **Preparation:** Disconnect the vehicle's negative battery terminal. Remove the factory radio from the dashboard.

2. **Wiring Connections:**

   - Connect the aftermarket radio's wiring harness to the PAC CH1A-RSX main harness. Match wire functions (e.g., constant 12V, accessory 12V, ground, speaker wires).
   - Connect the steering wheel control wires from your aftermarket radio to the designated SWC wires on the PAC harness. Refer to your radio's manual for specific SWC input connections.
   - Connect any additional data outputs from the PAC module (illumination, reverse, parking brake) to the corresponding inputs on your aftermarket radio, if your radio supports these features.

3. **Vehicle Connection:** Plug the vehicle-specific connectors from the PAC harness into the factory wiring harnesses in the vehicle's dashboard.

4. **Module Placement:** Secure the PAC CH1A-RSX module in a safe location behind the dashboard, ensuring it will not interfere with other components or be damaged.

5. **Testing:** Reconnect the vehicle's negative battery terminal. Turn on the vehicle and test the aftermarket radio's functionality, including power, audio, and all retained features like steering wheel controls and navigation outputs.

6. **Reassembly:** Carefully reassemble the dashboard components.

6. OPERATING INSTRUCTIONS

The PAC CH1A-RSX adapter operates passively, translating vehicle data signals for your aftermarket radio. Once installed correctly, it enables the following functionalities:

- **Steering Wheel Control Retention:** Your factory steering wheel audio controls (volume, track, mode, etc.) will function with your new aftermarket radio. Specific button mapping may be configurable through your aftermarket radio's settings.
- **Data Controlled Accessory Output (12V ACC):** Provides a reliable 12V accessory output that turns on and off with the vehicle's ignition, eliminating the need to find a separate ignition wire.
- **Navigation Outputs:** Supplies essential signals for aftermarket navigation systems, including illumination (headlight status), reverse gear engagement, and parking brake status. These signals are crucial for proper navigation unit operation and safety features.

No direct user interaction with the PAC module is typically required after installation, as its operation is automatic based on vehicle data.

7. MAINTENANCE

The PAC CH1A-RSX adapter is designed for long-term, maintenance-free operation. To ensure its longevity and reliable performance:

- Keep the module and its connections dry and free from moisture.
- Ensure all wiring connections remain secure and free from corrosion.
- Avoid exposing the module to extreme temperatures or direct physical impact.
- Do not attempt to open or repair the module yourself, as this will void the warranty.

8. TROUBLESHOOTING

If you encounter issues with your PAC CH1A-RSX adapter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Aftermarket radio does not power on.	Incorrect wiring for 12V constant or accessory power; blown fuse; faulty PAC module.	Verify all power and ground connections. Check vehicle and radio fuses. Ensure the PAC module is receiving power from the vehicle harness. If the yellow wire (constant 12V) is hot but the accessory wire to the radio is not, the module may be faulty or not properly initialized.
Steering wheel controls do not function.	Incorrect SWC wiring; aftermarket radio not configured for SWC; incompatible radio.	Ensure the SWC wire from the PAC harness is correctly connected to the aftermarket radio's SWC input. Consult your radio's manual for SWC programming/learning procedures. Confirm your radio supports external SWC interfaces.
Navigation outputs (reverse, parking brake, illumination) are not working.	Incorrect wiring to navigation unit; navigation unit not configured.	Verify connections from the PAC module's output wires to the navigation unit's corresponding inputs. Check the navigation unit's settings for proper input recognition.
Adapter does not fit or connect to vehicle wiring.	Incorrect adapter model for vehicle; vehicle has a non-standard factory system (e.g., premium audio).	Double-check the vehicle compatibility list (Section 4) against your specific vehicle year, make, model, and factory options. Some premium sound systems may require different adapters.

If problems persist after following these steps, contact PAC technical support or consult a certified car audio installer.

9. SPECIFICATIONS

Feature	Detail
Model Number	CH1A-RSX
Brand	PAC
Product Dimensions (L x W x H)	9 x 9 x 2 inches
Item Weight	10.56 ounces
Material	Acrylonitrile Butadiene Styrene
Connector Type	USB (for programming/updates)
First Available Date	January 24, 2019
Manufacturer	PAC Audio

10. WARRANTY AND SUPPORT

For detailed warranty information regarding your PAC CH1A-RSX adapter, please refer to the documentation provided with your purchase or visit the official PAC Audio website. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase.

For technical support, installation assistance, or to inquire about product updates, please contact PAC Audio customer service

directly. Contact information can usually be found on the manufacturer's website or in the product packaging.