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› RECOIL RED1200-1 Class-D Mono-Block Subwoofer Amplifier User Manual

## RECOIL RED1200-1

# RECOIL RED1200-1 Class-D Mono-Block Subwoofer Amplifier User Manual

Model: RED1200-1

## 1. INTRODUCTION

Thank you for choosing the RECOIL RED1200-1 Class-D Mono-Block Subwoofer Amplifier. This amplifier is engineered to deliver powerful and clear bass performance for your car audio system. This manual provides essential information for proper installation, operation, and maintenance to ensure optimal performance and longevity of your amplifier.



*Image 1: The RECOIL RED1200-1 Class-D Mono-Block Subwoofer Amplifier shown with its included remote bass knob.*

## 2. SAFETY INFORMATION

Please read all instructions carefully before installing and operating your amplifier. Failure to follow these guidelines may result in damage to the amplifier, vehicle, or personal injury.

- **Professional Installation Recommended:** Installation of car audio components requires experience with electrical wiring and car audio systems. If you are unsure about any part of the installation process, consult a qualified professional.
- **Electrical Safety:** Always disconnect the vehicle's battery negative terminal before starting any electrical work. Ensure all wiring is properly insulated and secured to prevent short circuits.
- **Ventilation:** Mount the amplifier in a location that allows for adequate airflow to prevent overheating. Do not cover the amplifier or block its cooling fins.
- **Proper Fusing:** Ensure the power wire is properly fused close to the battery to protect against electrical shorts.

### 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- RECOIL RED1200-1 Class-D Mono-Block Subwoofer Amplifier
- Remote Bass Knob with Cable
- Mounting Hardware (Screws)
- User Manual

### 4. FEATURES

The RECOIL RED1200-1 amplifier is designed with advanced features for robust performance:

- **Class-D Mono-Block Design:** Efficient power delivery for subwoofer applications.
- **1 Ohm Stable:** Capable of operating at 1 Ohm impedance, allowing for flexible subwoofer configurations.
- **High Power Output:** RMS 1250 Watts x 1 @ 1 Ohm; RMS 900 Watts x 1 @ 2 Ohm; RMS 550 Watts x 1 @ 4 Ohm. Max Power: 2500 Watts.
- **Strappable (Bridgeable):** Features a slave/master switch for connecting two RED1200-1 amplifiers to double the power output into a single load.
- **Advanced Protection Circuitry:** Incorporates 4-way protection against thermal overload, voltage fluctuations, speaker short circuits, and DC offset.
- **High-Speed MOSFET Power Supply:** Ensures stable and efficient power delivery.
- **Remote Bass Control:** Included remote knob allows for convenient bass level adjustment from the driver's seat.
- **Integrated User Control Panel:** Features adjustable Gain, Subsonic Filter, Bass Boost, and Low-Pass Filter for precise audio tuning.



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*Image 2: Side view of the amplifier, highlighting the heatsink fins designed for efficient cooling.*

*Video 1: An overview of the RECOIL RED1200-1 amplifier, highlighting its features and power capabilities. This video demonstrates the amplifier's design and key specifications.*

## 5. INSTALLATION

### 5.1. Wiring Connections

Proper wiring is crucial for amplifier performance and safety. Ensure all connections are secure and correctly polarized.

- **Power (+12V):** Connect a heavy-gauge power cable (4-gauge recommended) from the amplifier's +12V terminal directly to the positive terminal of the vehicle's battery. Install an appropriate fuse (not included) within 18 inches of the battery.
- **Ground (GND):** Connect a heavy-gauge ground cable (4-gauge recommended) from the amplifier's GND terminal to a clean, unpainted metal surface on the vehicle's chassis. Ensure a solid, low-resistance connection.
- **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the amplifier's REM terminal. This wire signals the amplifier to turn on and off with your head unit.

- **RCA Input:** Connect RCA cables from your head unit's subwoofer pre-out to the amplifier's RCA INPUT terminals.
- **RCA Output:** If chaining multiple amplifiers, connect RCA cables from the amplifier's RCA OUTPUT terminals to the input of the next amplifier.
- **Speaker Outputs:** Connect your subwoofer(s) to the amplifier's SPEAKER OUTPUT terminals. Pay close attention to polarity (+ and -) and ensure the total impedance matches the amplifier's stable operating range (1 Ohm minimum).

## Class-D Mono Amplifier 10Ohm Stable

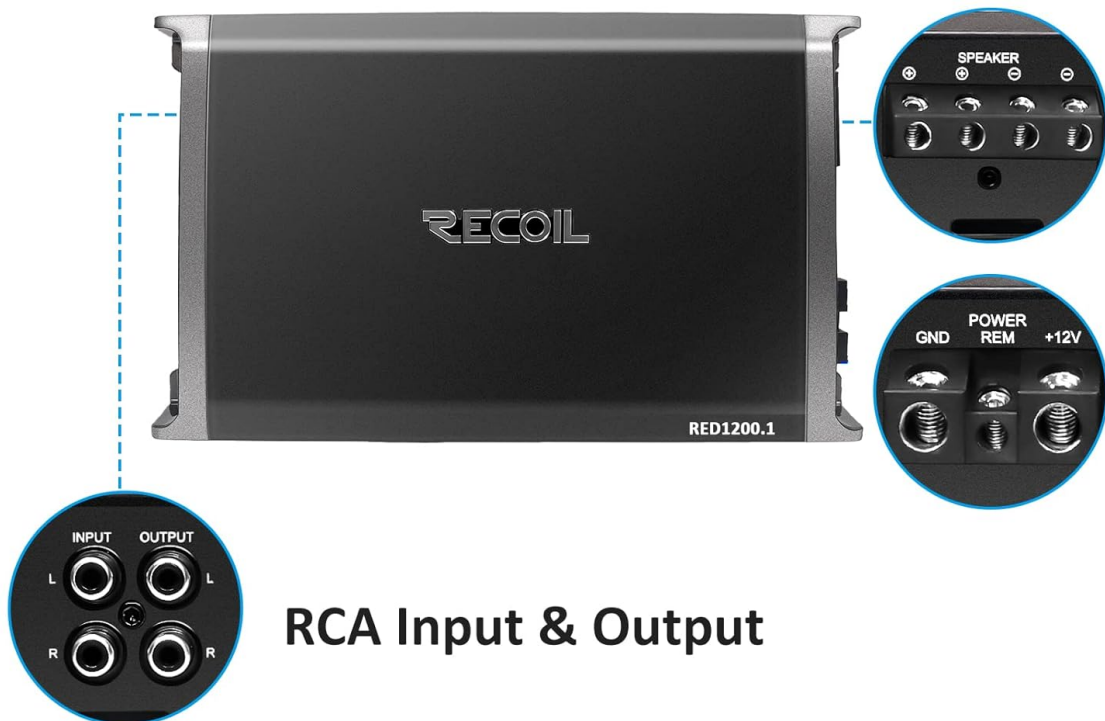
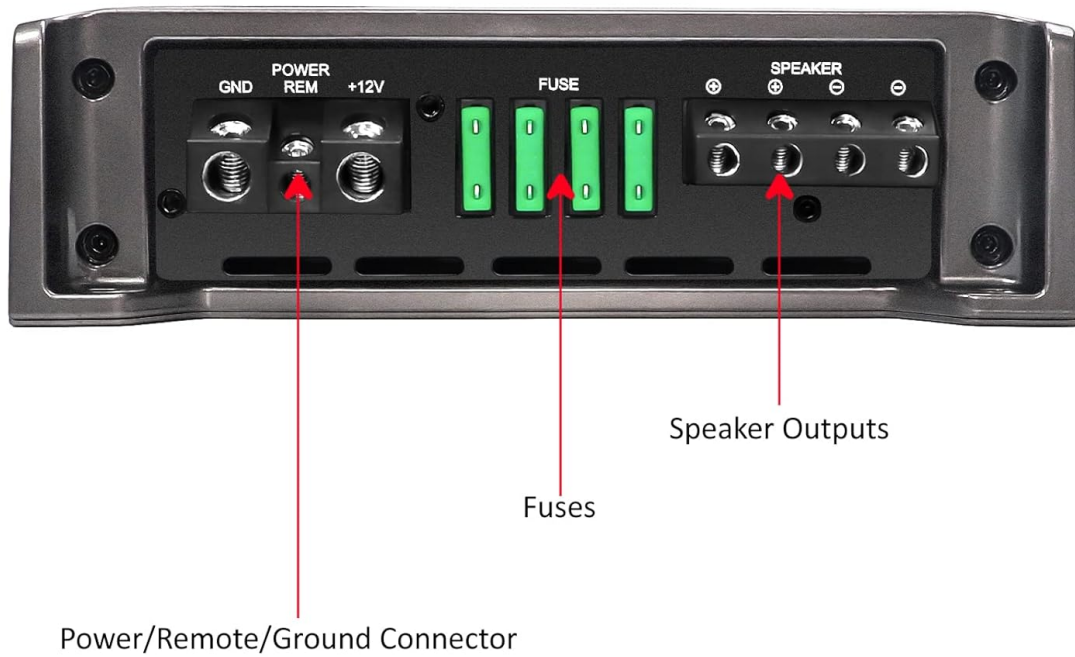


Image 3: Rear panel of the amplifier, illustrating the RCA input/output, power, remote, ground, and speaker terminals.



*Image 4: A detailed view of the power, remote, ground, and speaker output terminals, along with the fuse slots.*

## 5.2. Mounting

Choose a mounting location that is dry, well-ventilated, and secure. Avoid mounting the amplifier directly to carpet if it restricts airflow to the cooling fins. Ensure the amplifier is firmly attached to prevent movement during vehicle operation.

## 6. SETUP AND CONTROLS

The amplifier features several controls to fine-tune your audio output:

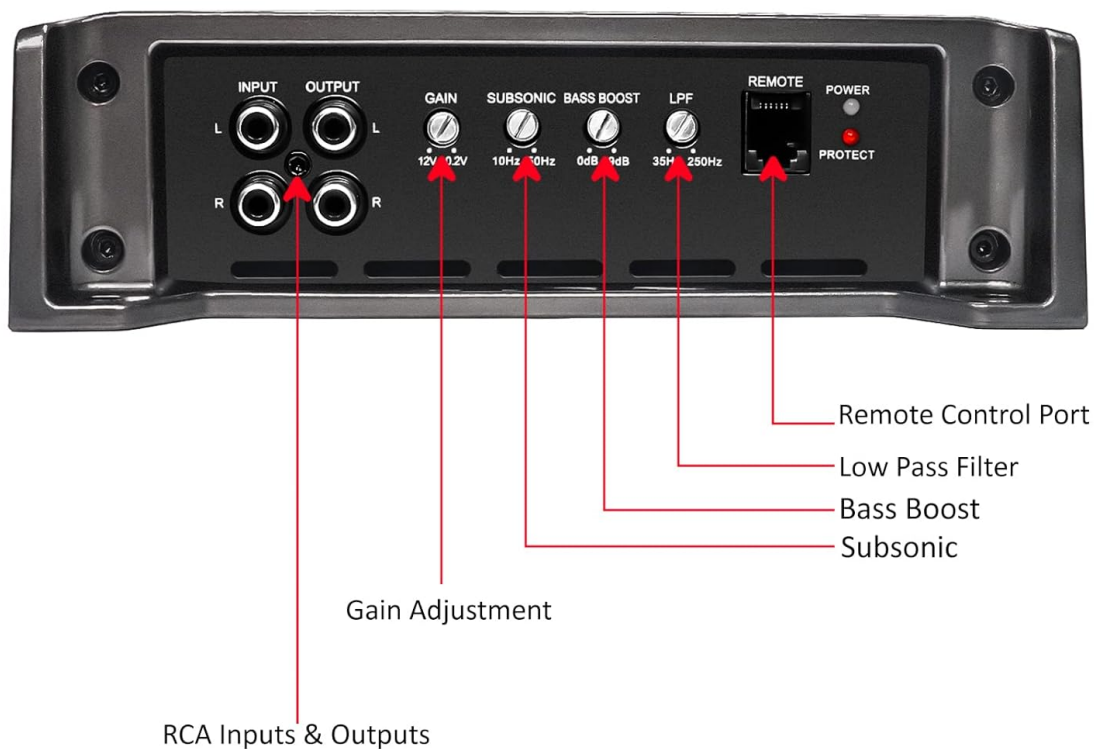


Image 5: The amplifier's control panel, indicating the adjustable settings for optimal sound customization.

- **GAIN:** Adjusts the input sensitivity of the amplifier to match the output voltage of your head unit. Start with the gain at minimum and slowly increase until desired volume is reached without distortion.
- **SUBSONIC:** A high-pass filter for very low frequencies (10Hz-50Hz). This helps protect your subwoofer from playing frequencies below its usable range, which can cause damage.
- **BASS BOOST:** Provides an adjustable bass equalization (0dB-12dB) at 45Hz to enhance low-frequency output. Use sparingly to avoid distortion.
- **LPF (Low Pass Filter):** A low-pass filter (50Hz-250Hz) that allows only frequencies below the set point to pass through to the subwoofer. This is essential for proper subwoofer integration.
- **REMOTE CONTROL PORT:** Connects the included remote bass knob for convenient level adjustment.

## 7. OPERATING INSTRUCTIONS

Once installed and configured, operating your RECOIL RED1200-1 amplifier is straightforward:

1. Ensure all connections are secure and the vehicle's battery is reconnected.
2. Turn on your vehicle's ignition and head unit. The amplifier should power on automatically via the

- remote turn-on wire.
- 3. Play audio at a moderate volume.
- 4. Adjust the GAIN control on the amplifier (and the remote bass knob) to achieve the desired bass level without audible distortion.
- 5. Fine-tune the SUBSONIC, BASS BOOST, and LPF settings to blend the subwoofer output seamlessly with your main speakers.

## 8. STRAPPING (BRIDGING) MULTIPLE AMPLIFIERS

The RED1200-1 amplifier is designed to be strappable, allowing you to connect two identical amplifiers to a single subwoofer load for increased power output. This feature utilizes a slave/master switch.

- **Master Amplifier:** One amplifier is designated as the 'Master' and receives the audio signal from the head unit.
- **Slave Amplifier:** The second amplifier is designated as the 'Slave' and receives its audio signal from the Master amplifier via the RCA output.
- **Wiring:** Consult a professional installer or detailed wiring diagrams for proper strapping connections to ensure correct impedance matching and prevent damage.

## 9. TROUBLESHOOTING

If you experience issues with your amplifier, refer to the following table for common problems and solutions:

Problem	Possible Cause	Solution
No Power	Blown fuse, loose power/ground/remote wire, no remote signal.	Check fuses, verify all power connections, ensure head unit is sending a remote signal.
No Sound	Loose RCA cables, incorrect gain setting, speaker wiring issues, amplifier in protection mode.	Check RCA connections, adjust gain, verify speaker wiring polarity and impedance, check protection light.
Distorted Sound	Gain set too high, incorrect filter settings, damaged speaker.	Reduce gain, adjust LPF/Subsonic/Bass Boost, inspect speakers for damage.
Amplifier Overheating	Insufficient ventilation, impedance too low, prolonged high output.	Ensure proper airflow around amplifier, verify speaker impedance, reduce volume or allow cooling time.
Protection Mode (Red LED)	Short circuit, overheating, voltage issues.	Turn off amplifier, check all wiring for shorts, allow to cool, verify vehicle voltage.

## 10. SPECIFICATIONS

Detailed technical specifications for the RECOIL RED1200-1 amplifier:

- **Model:** RED1200-1
- **Type:** Class-D Mono-Block Subwoofer Amplifier
- **Max Power:** 2500 Watts
- **RMS Power (1 Ohm):** 1250 Watts x 1 Channel
- **RMS Power (2 Ohm):** 900 Watts x 1 Channel
- **RMS Power (4 Ohm):** 550 Watts x 1 Channel
- **Number of Channels:** 1
- **Voltage:** 12 Volts (DC)
- **Mounting Type:** Surface Mount
- **Dimensions (L x W x H):** 13.78" x 7.6" x 2.2" (350mm x 193mm x 56mm)
- **Weight:** Approximately 8.25 Pounds



Image 6: Technical drawing showing the length, width, and height dimensions of the RECOIL RED1200-1 amplifier.

## **11. WARRANTY AND SUPPORT**

### **11.1. Warranty Information**

RECOIL products are designed and manufactured to the highest quality standards. This product is covered by a manufacturer's warranty against defects in materials and workmanship. Please refer to the warranty card included with your product or visit the official RECOIL website for specific warranty terms and conditions.

### **11.2. Customer Support**

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact RECOIL customer support. Contact information can typically be found on the RECOIL website or on the product packaging.