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> Recoil RED1800.1 Class-D Mono-Block Subwoofer Amplifier Instruction Manual

RECOIL RED1800.1

Recoil RED1800.1 Class-D Mono-Block Subwoofer Amplifier

Instruction Manual

Model: RED1800.1 | Brand: RECOIL

INTRODUCTION

Thank you for choosing the Recoil RED1800.1 Class-D Mono-Block Subwoofer Amplifier. This amplifier is engineered to deliver powerful and reliable audio performance for your car audio system. This manual provides detailed instructions for proper installation, operation, and maintenance to ensure optimal performance and longevity of your amplifier.

SAFETY INFORMATION

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

- **Professional Installation Recommended:** Installation of car audio equipment can be complex. If you are unsure about any part of the installation process, seek assistance from a qualified professional.
- **Disconnect Battery:** Always disconnect the vehicle's negative battery terminal before beginning any electrical work to prevent short circuits.
- **Proper Wiring:** Ensure all wiring is correctly sized and securely connected. Use appropriate fuses and circuit breakers as specified.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Do not block cooling fins or vents.
- **Avoid Moisture:** Do not expose the amplifier to moisture or water.
- **Secure Mounting:** Securely mount the amplifier to prevent it from coming loose during vehicle operation, which could cause injury or damage.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust volume to a safe and comfortable level.

PACKAGE CONTENTS

Verify that all items are present in the package:

- Recoil RED1800.1 Class-D Mono-Block Subwoofer Amplifier
- Remote Bass Knob
- Remote Bass Knob Wire
- Mounting Hardware (screws)
- User Manual (this document)

PRODUCT OVERVIEW

The Recoil RED1800.1 amplifier is designed for high-performance subwoofer applications, featuring a Class-D topology for efficiency and powerful output. It is 1-Ohm stable and can be strapped with an identical amplifier for increased power output.



Image: The Recoil RED1800.1 amplifier shown with its included remote bass knob.

Class-D Mono Amplifier



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Image: Top view of the Recoil RED1800.1 Class-D Mono Amplifier, showcasing its sleek design.

1-Ohm Stable & Strappable



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Image: This amplifier is designed to be 1-Ohm stable and features strappable capabilities for linking two amplifiers.

Control Panel

The control panel provides access to various settings for fine-tuning your audio output.

Control Panel



RCA Inputs & Outputs

Power LED Indicator
Strap Mode Selector
Remote
Bass Boost
Gain

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Image: Detailed view of the amplifier's control panel, showing RCA inputs & outputs, Gain, Subsonic Filter, Bass Boost, Low Pass Filter (LPF), Remote port, Strap Mode Selector, Power LED, and Protect LED.

- **RCA Inputs & Outputs:** For connecting audio signal from your head unit or other audio sources, and for passing signal to another amplifier in a strapped configuration.
- **Gain:** Adjusts the input sensitivity of the amplifier to match the output of your head unit.
- **Subsonic Filter:** Filters out ultra-low frequencies that are below the audible range and can damage subwoofers. Adjustable from 10Hz to 50Hz.
- **Bass Boost:** Provides an adjustable bass equalization from 0 to 9dB.
- **Low Pass Filter (LPF):** Filters out high frequencies, allowing only low frequencies to pass to the subwoofer. Adjustable from 35Hz to 250Hz.
- **Remote:** Port for connecting the included remote bass knob.
- **Strap Mode Selector:** Used when strapping two identical amplifiers together.
- **Power LED:** Illuminates when the amplifier is powered on.
- **Protect LED:** Illuminates when the amplifier enters protection mode due to overheating, short circuit, or other issues.

Power & Speaker Connectors

These terminals are for connecting power, ground, remote turn-on, and speaker outputs.

Power & Speaker Connectors



Power/Remote/Ground Connector

Speaker Outputs

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Image: Detailed view of the amplifier's power, remote, ground, and speaker output terminals. Note the oversized 1/0 gauge power and ground terminals.

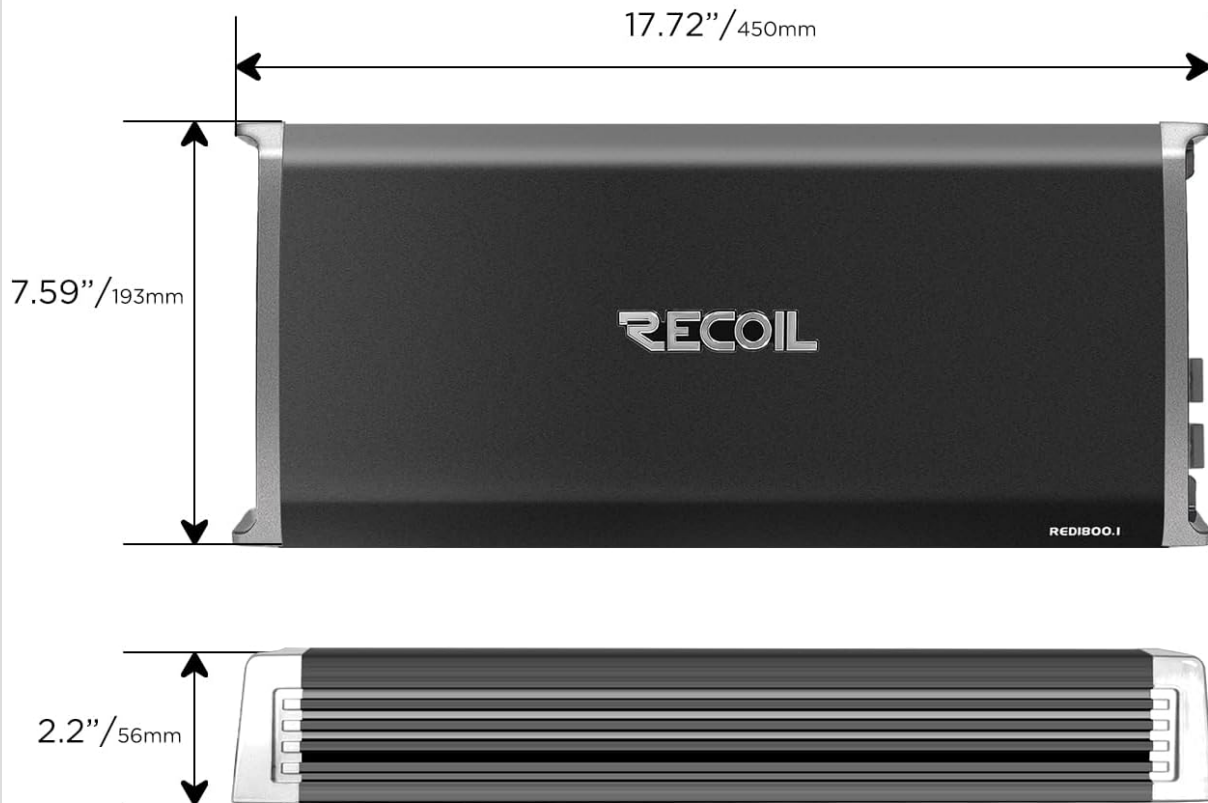
- **GND (Ground):** Connect to a solid chassis ground point in the vehicle.
- **REM (Remote):** Connect to the remote turn-on output of your head unit.
- **+12V (Power):** Connect directly to the positive terminal of the vehicle's battery via an appropriate fuse/circuit breaker.
- **Speaker Outputs:** Connect to your subwoofer(s). The amplifier features dual speaker output terminals for convenience.

SPECIFICATIONS

Key technical specifications for the Recoil RED1800.1 amplifier:

Feature	Specification
Amplifier Type	Class-D Monoblock Subwoofer Amplifier
RMS Power at 1 Ohm (14.4v)	1,800 Watts x 1 Channel
RMS Power at 2 Ohms (14.4v)	1,200 Watts x 1 Channel
RMS Power at 4 Ohms (14.4v)	650 Watts x 1 Channel
LINKED RMS Power at 2 Ohm (14.4v)	3,600 Watts x 1 Channel
LINKED RMS Power at 4 Ohm (14.4v)	2,400 Watts x 1 Channel
Stability	1-Ohm Stable
Protection Circuitry	4 Way (Thermal, Voltage, Speaker, DC)
Power Supply	High Speed MOSFET
Frequency Response	10Hz - 250Hz
Input Sensitivity	12V - 0.2V
Signal to Noise Ratio	97dB
Bass Boost	0 - 9dB
Low Pass Filter (Variable)	35Hz - 250Hz
Subsonic Filter	10Hz - 50Hz
Fuse Rating	130 Amp
Dimensions (L x W x H)	17.7" x 7.6" x 2.2" (450mm x 193mm x 56mm)
Item Weight	10.93 pounds

Dimensions



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Image: Dimensional diagram of the Recoil RED1800.1 amplifier, showing its length, width, and height.

SETUP AND INSTALLATION

Proper installation is crucial for the performance and safety of your amplifier. Always ensure the vehicle's battery is disconnected before starting.

Mounting Location

- Choose a location that provides adequate ventilation and is protected from moisture and direct sunlight.
- Ensure the mounting surface is solid and can support the amplifier's weight.
- Avoid mounting on carpeted surfaces that may restrict airflow.
- Use the provided mounting hardware to securely fasten the amplifier.

Wiring Connections

Use high-quality wiring of appropriate gauge for all connections. The RED1800.1 features oversized 1/0 gauge power and ground

terminals for maximum current flow.

1. **Ground (GND) Connection:** Connect the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle's chassis. Ensure a strong, low-resistance connection. The ground wire should be as short as possible, ideally less than 3 feet (1 meter).
2. **Power (+12V) Connection:** Run a power cable directly from the vehicle's positive battery terminal to the amplifier's +12V terminal. Install an appropriate fuse holder (130 Amp) within 18 inches (45 cm) of the battery.
3. **Remote (REM) Turn-On Connection:** Connect the amplifier's REM terminal to the remote turn-on output of your head unit. This wire signals the amplifier to turn on when the head unit is active.
4. **RCA Input Connection:** Connect RCA cables from your head unit's subwoofer or full-range pre-outs to the amplifier's RCA inputs.
5. **Speaker Output Connection:** Connect your subwoofer(s) to the amplifier's speaker output terminals. Pay close attention to polarity (+ and -) to ensure proper phase. For 1-Ohm stable operation, ensure your subwoofer configuration results in a 1-Ohm load.
6. **Remote Bass Knob:** Connect the remote bass knob to the designated 'Remote' port on the amplifier's control panel. Mount the knob in a convenient location for easy access.

Strapping Two Amplifiers (Optional)

The RED1800.1 amplifier is strappable, allowing you to link two identical amplifiers for double the power output at double the impedance load. Refer to the detailed strapping instructions provided with your amplifier or consult a professional for this advanced setup.

OPERATING INSTRUCTIONS

Once installed, follow these steps to configure and operate your amplifier.

1. **Initial Power On:** After all connections are made and checked, reconnect the vehicle's negative battery terminal. Turn on your head unit. The amplifier's Power LED should illuminate. If the Protect LED illuminates, refer to the Troubleshooting section.
2. **Gain Adjustment:** Set the amplifier's Gain control to its minimum (fully counter-clockwise) position. Play a familiar piece of music with a strong bass presence at about 75% of your head unit's maximum volume. Slowly increase the amplifier's Gain control until you hear distortion, then back it off slightly until the sound is clean. This sets the amplifier's input sensitivity correctly.
3. **Low Pass Filter (LPF) Adjustment:** Adjust the LPF to filter out frequencies above your desired subwoofer range. A common starting point is between 80Hz and 120Hz, depending on your subwoofers and other speakers.
4. **Subsonic Filter Adjustment:** Set the Subsonic Filter to protect your subwoofer from playing frequencies below its resonant frequency. A common setting is 5-10Hz below your subwoofer's tuning frequency (for ported enclosures) or around 20-25Hz for sealed enclosures.
5. **Bass Boost Adjustment:** Use the Bass Boost sparingly. Start at 0dB and increase gradually if more bass emphasis is desired. Excessive bass boost can lead to distortion and potential damage to your subwoofer.
6. **Remote Bass Knob:** The remote bass knob provides convenient control over the subwoofer output level from your listening position. It acts as a master volume for the subwoofer channel.

MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your amplifier.

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure that the amplifier's cooling fins and surrounding area remain free of dust and debris to maintain proper airflow.

- **Connections:** Occasionally check all wiring connections to ensure they are secure and free from corrosion.

TROUBLESHOOTING

If you encounter issues with your amplifier, refer to the table below for common problems and solutions.

Problem	Possible Cause & Solution
No Power / Power LED Off	<ul style="list-style-type: none"> • Blown Fuse: Check the in-line fuse near the battery and the amplifier's internal fuse (if applicable). Replace with a fuse of the correct rating. • Poor Power/Ground Connection: Verify all power, ground, and remote turn-on connections are secure and free of corrosion. • No Remote Signal: Check the remote turn-on wire from the head unit.
Protect LED On	<ul style="list-style-type: none"> • Overheating: Ensure adequate ventilation around the amplifier. Allow it to cool down. • Short Circuit: Check speaker wires for shorts to ground or to each other. Verify speaker impedance is within the amplifier's supported range (1 Ohm minimum). • Low/High Voltage: Check vehicle's battery voltage. Ensure stable power supply.
No Sound Output	<ul style="list-style-type: none"> • Gain Setting: Ensure gain is set appropriately. • RCA Cables: Check RCA connections at both the head unit and amplifier. • Speaker Wires: Verify speaker wire connections and polarity. • Head Unit Settings: Ensure head unit's subwoofer output is enabled and volume is up.
Distorted Sound	<ul style="list-style-type: none"> • Gain Too High: Reduce the amplifier's gain setting. • Clipping: Reduce head unit volume. • Improper Filter Settings: Adjust LPF and Subsonic Filter settings. • Speaker Impedance Mismatch: Ensure subwoofers are correctly wired for the amplifier's stable impedance.
Excessive Noise (Hiss, Whine)	<ul style="list-style-type: none"> • Poor Grounding: Ensure amplifier and head unit have solid, clean ground connections. • RCA Cable Routing: Reroute RCA cables away from power cables to prevent interference. • Ground Loop: Install a ground loop isolator if necessary.

WARRANTY INFORMATION

Recoil products are designed and manufactured to the highest quality standards. This product is covered by a limited warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the warranty card included with your product or visit the official Recoil website.

CUSTOMER SUPPORT

If you have any questions, require technical assistance, or need to report an issue that is not covered in this manual, please contact Recoil customer support. You can typically find contact information on the official Recoil website or through your product retailer.

For more information, visit the [RECOIL Store on Amazon](#).