Power Acoustik RE1-1500D

Power Acoustik RE1-1500D 1500 Watt Mono Amplifier

User Manual

1. Introduction

Thank you for choosing the Power Acoustik RE1-1500D 1500 Watt Mono Amplifier. This amplifier is designed to deliver powerful and clear audio performance for your car audio system. To ensure optimal performance and longevity, please read this manual thoroughly before installation and operation. Keep this manual for future reference.

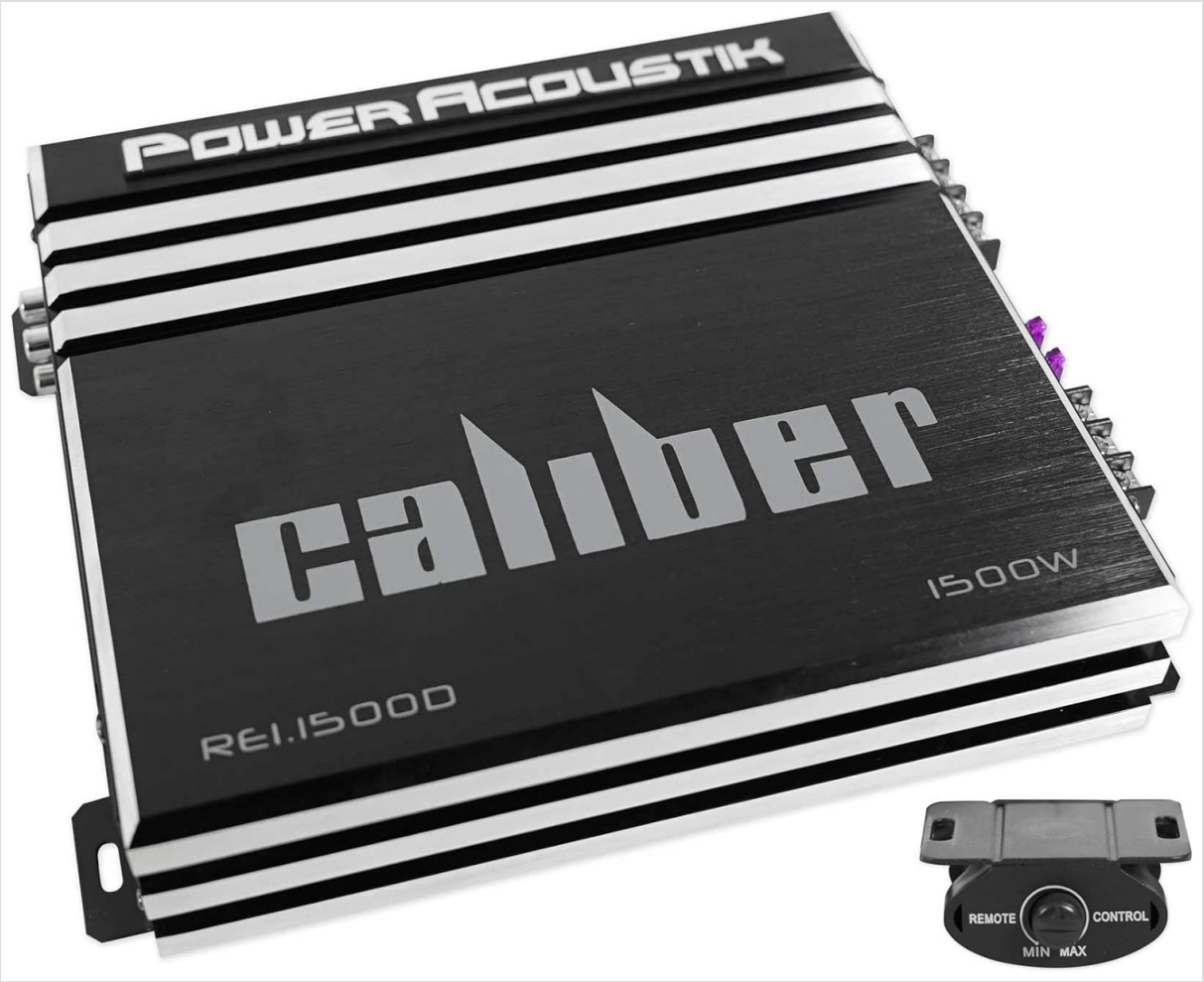

Image 1.1: The Power Acoustik RE1-1500D 1500 Watt Mono Amplifier, shown with its included remote gain control unit.

2. Safety Information

Always observe the following safety precautions when installing and operating your amplifier:

- **Professional Installation Recommended:** Installation of car audio components requires experience with electrical wiring and audio systems. If you are unsure, consult a qualified professional.
- **Power Source:** Connect the amplifier only to a 12-volt DC negative ground electrical system.
- **Wiring:** Ensure all wiring is properly routed and secured to prevent pinching or damage. Use appropriate gauge wiring for power and speaker connections.
- **Fuses:** Always use the correct fuse rating. Never replace a fuse with one of a higher amperage.
- **Ventilation:** Mount the amplifier in a location that allows for adequate air circulation to prevent overheating. Do not cover the amplifier's cooling fins.
- **Volume Levels:** Prolonged exposure to high volume levels can cause hearing damage. Adjust volume to a safe level.
- **Moisture:** Keep the amplifier away from moisture and water.

3. Key Features

The Power Acoustik RE1-1500D amplifier boasts the following features:

- Monoblock (1 Channel) Full Range Operation
- 2-Ohm Stable Class A/B Amplifier

- MAX Power: 1500 Watts
- 4 Ohm RMS: 375 Watts
- 2 Ohm RMS: 750 Watts
- Direct Short, Thermal, & Overload Circuits Protection
- 200mV-6V High Level or Low Level RCA Input
- Variable 12dB High, Low, & Subsonic Crossovers
- 12dB Bass Boost Increases Low Octave Harmonics
- Direct Wire 4ga. Power & 12ga Speaker Terminals
- Dash Mounted Remote Gain Control
- Compact Product Dimensions (L x W x H): 9" x 8.5" x 2.2" inches

4. Setup and Installation

Proper installation is crucial for the performance and safety of your amplifier. Follow these steps carefully:

4.1. Unpacking and Inspection

Carefully remove the amplifier and all accessories from the packaging. Inspect for any signs of damage. The package should include the amplifier, remote gain control, mounting screws, and fuses.

Image 4.1: Typical contents of the Power Acoustik RE1-1500D amplifier package.

4.2. Mounting Location

Choose a mounting location that is dry, well-ventilated, and secure. Avoid mounting the amplifier directly on carpet or in enclosed spaces that restrict airflow. Common locations include under a seat, in the trunk, or behind a panel.

4.3. Wiring Connections

Before making any connections, disconnect the vehicle's negative battery terminal to prevent electrical shorts.

4.3.1. Power Connections

- **Ground (GND):** Connect a short (less than 3 feet) 4-gauge wire from the amplifier's GND terminal to a clean, unpainted metal surface of the vehicle's chassis. Ensure a good electrical connection.
- **Remote (REM):** Connect a 18-gauge wire from the amplifier's REM terminal to the remote turn-on output of your head unit. This wire turns the amplifier on and off with your stereo.
- **+12V:** Connect a 4-gauge power wire from the amplifier's +12V terminal directly to the positive terminal of the vehicle's battery. Install an in-line fuse holder (with the correct amperage fuse) within 18 inches of the battery.

Image 4.2: Power input (GND, REM, +12V) and speaker output terminals on the amplifier.

4.3.2. Audio Input Connections

The RE1-1500D supports both low-level (RCA) and high-level inputs.

- **Low-Level Input (RCA):** Connect RCA cables from your head unit's pre-amp outputs to the amplifier's RCA INPUT terminals (L and R).
- **High-Level Input:** If your head unit does not have RCA outputs, use a high-level input converter (not included) to connect to the amplifier's RCA inputs.

Image 4.3: Audio input (RCA) and various control knobs on the amplifier.

4.3.3. Speaker Output Connections

Connect your subwoofer(s) to the SPEAKER OUTPUT terminals. Ensure correct polarity (+ to + and - to -). The RE1-1500D is a monoblock amplifier, designed for a single channel output, typically for a subwoofer. It is 2-ohm stable.

4.3.4. Remote Gain Control Connection

Connect the included remote gain control cable to the "REMOTE" port on the amplifier. Route the cable to a convenient location near the driver's seat for easy access.

Image 4.4: The dash-mounted remote gain control unit.

5. Operating the Amplifier

Once all connections are made and verified, reconnect the vehicle's negative battery terminal. Turn on your head unit. The amplifier should power on, indicated by the "POWER" LED.

5.1. Initial Setup and Adjustments

The RE1-1500D features several adjustable controls to fine-tune your audio output:

- **GAIN (Input Level):** This control matches the amplifier's input sensitivity to the output of your head unit. Start with the GAIN set to minimum (MIN). Play a familiar track at about 75% of your head unit's maximum volume. Slowly increase the GAIN until you hear distortion, then back off slightly. The remote gain control only adjusts the output level, not the gain setting.
- **PHASE SHIFT (0° - 180°):** Adjust this to match the phase of the subwoofer output with the rest of your audio system for optimal bass response. Experiment with both settings to find the best sound.
- **SUB SONIC (10Hz - 50Hz):** This is a high-pass filter for subwoofers, designed to filter out extremely low frequencies that are inaudible and can damage the subwoofer. Set it just below the lowest frequency your subwoofer can reproduce effectively.
- **L.P.F (Low Pass Filter) (32Hz - 300Hz):** This filter allows only frequencies below the set point to pass through to the subwoofer. Adjust this to blend the subwoofer's output seamlessly with your main speakers. A common starting point is 80Hz-100Hz.
- **BASS BOOST (0dB - 12dB):** This control provides an adjustable bass boost at a specific frequency. Use sparingly to avoid distortion and potential speaker damage.

Note: Make small adjustments and listen carefully to the changes in sound quality. It is recommended to

make adjustments with the vehicle stationary and the engine off to minimize background noise.

6. Maintenance

The Power Acoustik RE1-1500D amplifier requires minimal maintenance:

- **Cleaning:** Periodically wipe the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners.
- **Ventilation:** Ensure the cooling fins remain free of dust and debris to maintain proper heat dissipation.
- **Connections:** Occasionally check all wiring connections to ensure they are secure and free from corrosion.
- **Fuses:** If the amplifier does not power on, check the in-line fuse near the battery and the fuses on the amplifier itself. Replace blown fuses only with the same type and amperage rating.

7. Troubleshooting

If you experience issues with your amplifier, consult the following table before seeking professional service:

Problem	Possible Cause	Solution
Amplifier does not turn on (POWER LED off)	No +12V power No ground connection No remote turn-on signal Blown fuse	Check +12V wire and in-line fuse. Verify ground connection is secure and clean. Check remote wire connection to head unit. Replace blown fuses with correct rating.
Amplifier turns on (POWER LED on) but no sound	RCA cables disconnected or faulty Speaker wires disconnected or shorted Gain set too low Head unit volume too low	Check RCA connections and cables. Verify speaker wire connections and check for shorts. Increase GAIN setting. Increase head unit volume.
Distorted sound	GAIN set too high Speaker impedance mismatch Poor ground connection	Reduce GAIN setting. Ensure speaker impedance is 2 ohms or higher. Improve ground connection.
Amplifier overheats (PROTECTION LED on)	Insufficient ventilation Speaker impedance too low Sustained high volume	Relocate amplifier for better airflow. Check speaker impedance. Reduce volume. Allow amplifier to cool.

8. Specifications

Feature	Specification
Brand	Power Acoustik
Model Number	RE1-1500D
Type	Mono Amplifier (1 Channel)
Amplifier Class	Class A/B
Maximum Power Output	1500 Watts
RMS Power (4 Ohm)	375 Watts
RMS Power (2 Ohm)	750 Watts
Input Voltage	6 Volts (Min), 12 Volts DC (Max Supply)
Input Sensitivity	200mV-6V (High/Low Level RCA)
Crossovers	Variable 12dB High, Low, & Subsonic
Bass Boost	12dB Adjustable
Protection Circuits	Direct Short, Thermal, Overload
Power Terminals	4ga. Direct Wire
Speaker Terminals	12ga. Direct Wire
Dimensions (L x W x H)	9" x 8.5" x 2.2" inches (22.86 x 21.59 x 5.59 cm)
Item Weight	6.36 pounds (2.88 kg)
Material	Plastic, metal, circuit board materials
UPC	709483053908

9. Warranty and Support

Power Acoustik products are designed for reliability and performance. For specific warranty information, please refer to the warranty card included with your product or visit the official Power Acoustik website. Keep your purchase receipt as proof of purchase for any warranty claims.
For technical support or service inquiries, please contact Power Acoustik customer service through their official channels. Do not attempt to repair the amplifier yourself, as this may void the warranty and could result in electric shock or damage to the unit.