

Jcpower Rmini-2400.1

Jcpower Rmini-2400.1 Mono Block Class D Amplifier User Manual

Model: Rmini-2400.1

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Jcpower Rmini-2400.1 Mono Block Class D Amplifier. Please read this manual thoroughly before attempting to install or operate the amplifier to ensure proper function and safety. This amplifier is designed to power subwoofers in a car audio system.

2. SAFETY INFORMATION

- **Professional Installation Recommended:** Installation of car audio equipment can be complex. If you are unsure about any aspect of the installation, consult a qualified professional.
- **Power Source:** Ensure the vehicle's battery is disconnected before beginning any wiring to prevent electrical shorts and damage.
- **Ventilation:** Install the amplifier in a location that allows for adequate airflow to prevent overheating. The built-in smart fan requires proper ventilation to function effectively.
- **Moisture Exposure:** This amplifier is **not waterproof**. Do not expose it to moisture or liquids.
- **Speaker Compatibility:** This is a mono block amplifier primarily designed for subwoofers. It is not suitable for use with full-range speakers that come with your car. Ensure your subwoofers are compatible with 1 or 2 ohm loads.
- **Physical Fitment:** Verify that the amplifier can physically fit in the intended installation space within your vehicle before proceeding with installation.
- **Wiring:** Use appropriate gauge wiring (4 gauge for power and ground) and ensure all connections are secure and properly insulated.

3. PRODUCT FEATURES

The Jcpower Rmini-2400.1 amplifier incorporates advanced technology and robust construction to deliver powerful and clear bass performance. Key features include:

- **High Power Output:** Delivers up to 2400 watts peak power, with nominal ratings of 800 watts RMS at 2 ohms and 500 watts RMS at 4 ohms.

- **Class D Technology:** Efficient and reliable performance with minimal heat generation.
- **Subwoofer Compatibility:** Designed to work with 1-ohm and 2-ohm subwoofers.
- **Adjustable Bass Boost:** Fine-tune your bass output from 0 to 18 dB.
- **Variable Low-Pass Crossover (LPF):** Adjustable from 40 Hz to 220 Hz for precise frequency control.
- **Variable Subsonic Filter:** Adjustable from 25 Hz to 50 Hz to protect subwoofers from damaging ultra-low frequencies.
- **Thermal Protection:** Built-in circuit protects the amplifier from overheating.
- **Smart Fan Cooling:** Maintains optimal operating temperature during demanding use.
- **Rugged Construction:** Features a heavy-duty metal enclosure and durable heat sink for long-lasting performance.
- **CEA-2006 Compliant:** Meets industry standards for power and efficiency.

4. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. Follow these steps carefully.

4.1 Unpacking and Inspection

Carefully remove the amplifier from its packaging and inspect it for any signs of damage. If any damage is found, contact your dealer immediately.



Figure 1: Top view of the Jcpower Rmini-2400.1 amplifier, showcasing its black finish and Jcpower Audio Systems branding.

4.2 Mounting Location

Choose a mounting location that:

- Provides adequate ventilation for the amplifier's cooling fan.
- Is protected from moisture and direct sunlight.
- Is secure and will not interfere with vehicle operation or safety features.
- Allows for short power and ground wire runs.

4.3 Wiring Connections

Refer to the diagram below for proper wiring connections. Ensure all connections are tight and insulated.



Figure 2: View of the power, remote, ground, and speaker output terminals on the Jcpower Rmini-2400.1 amplifier.

1. **Power (+12V):** Connect a 4-gauge power cable directly from the vehicle's positive battery terminal to the +12V terminal on the amplifier. Install an appropriate fuse (not included) within 18 inches of the battery.
2. **Ground (GND):** Connect a 4-gauge ground cable from the GND terminal on the amplifier to a clean, unpainted metal surface on the vehicle's chassis. Ensure a good electrical connection.
3. **Remote (REM):** Connect a remote turn-on wire from your head unit's remote output to the REM terminal on the amplifier. This wire turns the amplifier on and off with your head unit.
4. **Speaker Output:** Connect your subwoofer(s) to the speaker output terminals. Ensure correct polarity (+ to + and - to -). This amplifier supports 1-ohm and 2-ohm loads.
5. **RCA Input:** Connect RCA cables from your head unit's subwoofer output (or full-range output if using a crossover) to the RCA input jacks on the amplifier.

5. OPERATING INSTRUCTIONS

Once installed, adjust the amplifier settings for optimal audio performance.



Figure 3: Control panel of the Jcpower Rmini-2400.1 amplifier, showing the gain, LPF, subsonic filter, and bass boost adjustment

- 1. **Gain Control (INPUT):** This control matches the amplifier's input sensitivity to the output level 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 amplifier's gain until you hear distortion, then back it off slightly.
- 2. **Low-Pass Filter (LPF):** This filter allows only frequencies below the set point to pass through to the subwoofer. Adjust the LPF from 40 Hz to 220 Hz to blend the subwoofer's output seamlessly with your main speakers. A common starting point is 80-100 Hz.
- 3. **Subsonic Filter (SUBSONIC):** This filter removes ultra-low frequencies (below 25-50 Hz) that are inaudible but can cause subwoofers to over-excurt and waste power. Adjust this setting to protect your subwoofer, typically set slightly below your subwoofer's port tuning frequency (if ported) or around 25-30 Hz for sealed enclosures.
- 4. **Bass Boost (BASS):** This control provides an adjustable boost to bass frequencies (0-18 dB). Use sparingly to avoid distortion and potential damage to your subwoofer.
- 5. **LED Indicators:**
 - **POWER (Green):** Indicates the amplifier is powered on and operating normally.
 - **PRT (Red):** Indicates the amplifier is in protection mode due to overheating, low impedance, or a short circuit.

6. MAINTENANCE

To ensure the longevity and optimal performance of your amplifier, follow these maintenance guidelines:

- **Keep Dry:** As the amplifier is not waterproof, ensure it remains in a dry environment. Avoid spills or exposure to rain.
- **Cleanliness:** Periodically clean the amplifier's exterior with a soft, dry cloth. Do not use harsh chemicals or abrasive cleaners. Ensure the cooling fins and fan are free from dust and debris to maintain proper airflow.
- **Connection Checks:** Regularly inspect all wiring connections (power, ground, remote, speaker, RCA) to ensure they are secure and free from corrosion. Loose connections can lead to poor performance or damage.
- **Ventilation:** Ensure that the amplifier's mounting location continues to provide adequate ventilation. Do not block the cooling fan or heat sink.

7. TROUBLESHOOTING

If you experience issues with your amplifier, consult the following troubleshooting guide:

Problem	Possible Cause	Solution
No Power (POWER LED Off)	<ul style="list-style-type: none">◦ Blown fuse (in-line or amplifier).◦ Loose power or ground connection.◦ No remote turn-on signal.	<ul style="list-style-type: none">◦ Check and replace fuses if necessary (use correct rating).◦ Verify all power, ground, and remote connections are secure.◦ Check remote wire connection at head unit and amplifier.
Amplifier in Protection Mode (PRT LED On)	<ul style="list-style-type: none">◦ Overheating.◦ Speaker short circuit.◦ Speaker impedance too low.◦ DC offset.	<ul style="list-style-type: none">◦ Allow amplifier to cool down. Ensure proper ventilation.◦ Check speaker wiring for shorts (bare wires touching).◦ Verify subwoofer impedance is 1 or 2 ohms.◦ Disconnect RCA inputs; if PRT light goes off, issue is with source unit.

Problem	Possible Cause	Solution
No Sound Output	<ul style="list-style-type: none">◦ RCA input cables disconnected or faulty.◦ Speaker wires disconnected or faulty.◦ Gain set too low.◦ Head unit output issue.	<ul style="list-style-type: none">◦ Check RCA connections at both head unit and amplifier.◦ Verify speaker wire connections at amplifier and subwoofer.◦ Adjust gain control (refer to Operating Instructions).◦ Test head unit with another amplifier or speakers.
Distorted Sound	<ul style="list-style-type: none">◦ Gain set too high.◦ Bass boost set too high.◦ Poor ground connection.◦ Damaged speaker.	<ul style="list-style-type: none">◦ Reduce gain setting.◦ Reduce bass boost level.◦ Ensure ground connection is clean and secure.◦ Inspect subwoofer for damage.

8. SPECIFICATIONS

Parameter	Value
Model	Rmini-2400.1
Amplifier Type	Mono Block, Class D
Peak Power Output	2400 Watts
RMS Power @ 2 Ohms	800 Watts
RMS Power @ 4 Ohms	500 Watts
Subwoofer Compatibility	1 Ohm and 2 Ohm loads
Bass Boost	0 - 18 dB
Low-Pass Crossover (LPF)	40 - 220 Hz (Variable)
Subsonic Filter	25 - 50 Hz (Variable)
Power/Ground Input Gauge	4 Gauge
Cooling	Smart Fan, Heat Sink
Protection	Thermal Protection Circuit
Compliance	CEA-2006 Compliant
Manufacturer	Jcpower
ASIN	B0CH437NPW
Date First Available	September 5, 2023


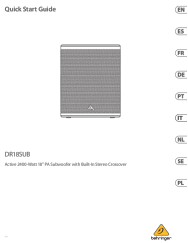


9. WARRANTY AND SUPPORT





For warranty information or technical support, please contact Jcpower Audio Systems USA, the seller of this product. Keep your purchase receipt as proof of purchase for any warranty claims.

Seller: Jcpower Audio Systems USA

Refer to your purchase documentation or the seller's contact information for specific warranty terms and support channels.

Related Documents - Rmini-2400.1

	<p>JL Audio XDM1000/1 1000W Mono Class D Subwoofer Amplifier Owner's Manual</p> <p>Discover the JL Audio XDM1000/1, a powerful 1000W Mono Class D Subwoofer Amplifier. This owner's manual provides essential information on installation, safety, controls, and technical specifications for optimal car audio system performance.</p>
	<p>Behringer DR18SUB Quick Start Guide: Active PA Subwoofer</p> <p>Comprehensive quick start guide for the Behringer DR18SUB active 2400-Watt 18-inch PA subwoofer, covering safety instructions, controls, setup, specifications, and FCC compliance.</p>
	<p>JL Audio XDM600/1 600W Mono Class D Subwoofer Amplifier Owner's Manual</p> <p>Comprehensive owner's manual for the JL Audio XDM600/1 600W Mono Class D Subwoofer Amplifier, covering installation, safety, connections, controls, specifications, and warranty information.</p>
	<p>JL Audio XDM300/1 300W Mono Class D Subwoofer Amplifier Owner's Manual</p> <p>This owner's manual provides detailed information on the installation, operation, and specifications of the JL Audio XDM300/1 300W Mono Class D Subwoofer Amplifier, including safety precautions, connection diagrams, control descriptions, and input sensitivity setup.</p>

<div><div>Quick Start Guide</div><div></div><div>DR18SUB Active 2400-Watt 18" PA Subwoofer with Built-In Stereo Crossover</div><div></div></div> <div><div>EN</div><div>ES</div><div>FR</div><div>DE</div><div>IT</div><div>PT</div><div>RU</div><div>PL</div><div>JP</div><div>CH</div></div>	<p>Behringer DR18SUB Active PA Subwoofer Quick Start Guide</p> <p>Get started quickly with the Behringer DR18SUB, an active 2400-Watt 18-inch PA subwoofer featuring a built-in stereo crossover. This guide provides essential setup and operational information.</p>																														
<div><div></div><div>MC1D10A DUAL 10-INCH PORTED SUBWOOFER ENCLOSURE</div><div><table><tr><td colspan="2">SPECIFICATIONS</td></tr><tr><td>Model</td><td>MC1D10A</td></tr><tr><td>Power Handling (RMS)</td><td>2000W</td></tr><tr><td>Power Handling (Peak)</td><td>4000W</td></tr><tr><td>Frequency Response</td><td>20-200Hz</td></tr><tr><td>Impedance</td><td>4Ω</td></tr><tr><td>Dimensions (H x W x D)</td><td>10.5" x 10.5" x 10.5"</td></tr><tr><td>Weight</td><td>15.5 lbs</td></tr><tr><td>Material</td><td>Black Powder Coated Steel</td></tr><tr><td>Port Type</td><td>Flared Port</td></tr><tr><td>Port Diameter</td><td>4"</td></tr><tr><td>Port Length</td><td>10"</td></tr><tr><td>Internal Bracing</td><td>Yes</td></tr><tr><td>Finish</td><td>Black</td></tr><tr><td>Warranty</td><td>3 Years</td></tr></table></div><div><p>SEE US AT THE SHOW</p><p>Stinger Audio is proud to announce the MC1D10A, a powerful dual 10-inch ported subwoofer enclosure. This enclosure is designed to provide the most accurate and powerful bass reproduction possible. The MC1D10A is built with a heavy-duty black powder coated steel frame and features a flared port for increased airflow. The enclosure is also equipped with internal bracing to prevent resonance and distortion. The MC1D10A is the perfect addition to any car audio system.</p></div></div>	SPECIFICATIONS		Model	MC1D10A	Power Handling (RMS)	2000W	Power Handling (Peak)	4000W	Frequency Response	20-200Hz	Impedance	4Ω	Dimensions (H x W x D)	10.5" x 10.5" x 10.5"	Weight	15.5 lbs	Material	Black Powder Coated Steel	Port Type	Flared Port	Port Diameter	4"	Port Length	10"	Internal Bracing	Yes	Finish	Black	Warranty	3 Years	<p>Stinger MC1D10A Dual 10-Inch Ported Subwoofer Enclosure - Specs & Installation</p> <p>Explore the Stinger MC1D10A, a powerful dual 10-inch ported subwoofer enclosure. Get detailed specifications, installation tips, and warranty information for your car audio system.</p>
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