

JL AUDIO JX500/1

JL Audio JX 500/1 Monoblock Amplifier

USER MANUAL

Introduction

The JL Audio JX 500/1 is a high-quality monoblock amplifier designed to deliver robust and clean power for your car audio system, specifically optimized for subwoofer applications. This amplifier focuses on pure performance, featuring oversized output transistors and robust MOSFET power supplies to ensure ample power and thermal capacity. Its design prioritizes stable performance and reliability, providing solid bass definition and powerful high-frequency output.

Key features include a switchable 12 dB/octave low-pass filter, high-performance inputs, and low-level RCA inputs. An optional RBC-1 bass remote control is available for convenient bass level adjustment.



This image shows the JL Audio JX500/1 monoblock amplifier from a front-top perspective, highlighting its sleek silver finish and compact design. The JL Audio logo and JX500/1 model name are visible on the top surface.

Setup and Installation

Proper installation is crucial for optimal performance and longevity of your JL Audio JX 500/1 amplifier. Always disconnect the vehicle's battery before beginning any installation work.

Mounting Location

Choose a mounting location that provides adequate ventilation for the amplifier. Avoid enclosed spaces that can trap heat. Ensure the amplifier is securely fastened to a solid surface to prevent movement during vehicle operation.

Power Connections

- **Power (12V):** Connect a high-quality power cable directly from the positive terminal of the vehicle's battery to the amplifier's 12V input terminal. Use a fuse holder with an appropriate fuse (not supplied) as close to the battery as possible.
- **Ground (GND):** Connect a high-quality ground cable from the amplifier's GND terminal to a clean, unpainted metal surface of 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.



An angled rear view of the JL Audio JX500/1 amplifier, displaying the robust power input terminals (12V, GND, Remote) and the mono subwoofer output terminals. This view emphasizes the sturdy construction designed for secure electrical connections.

Audio Input Connections

- **Low-Level Inputs (RCA):** For head units with RCA pre-outs, connect RCA cables from the head unit's subwoofer or full-range outputs to the amplifier's "Low-Level Inputs".
- **High-Level Inputs:** If your head unit does not have RCA pre-outs, use the "Hi-Level Inputs" by connecting speaker wires directly from your head unit's speaker outputs to these terminals.

Speaker Output Connections

Connect your subwoofer(s) to the "Mono Subwoofer Output" terminals. Ensure correct polarity (+ to + and - to -) for

optimal sound performance. Refer to your subwoofer's specifications for impedance matching.



A close-up view of the output side of the JL Audio JX500/1 amplifier, showing the mono subwoofer output terminals. This section is where the amplifier connects to the subwoofer, ensuring a secure and high-current connection.

Operating the Amplifier

Once installed, the JL Audio JX 500/1 amplifier offers several adjustments to fine-tune your audio system.

Controls and Indicators



This image focuses on the control panel of the JL Audio JX500/1 amplifier. It displays the Power/Protect indicators, Filter Freq. knob, Input Sens. knob, High-Level Inputs, Low-Level Inputs (RCA), Remote Level Control port, and Bass Boost knob, providing a clear view of all user-adjustable settings.

- **Power/Protect Indicator:** A light indicator that shows the amplifier's operational status. Typically, green for power on, red for protection mode (e.g., overheating, short circuit).
- **Filter Freq. (Hz):** This knob adjusts the low-pass filter frequency, typically from 50 Hz to 200 Hz. This filter allows only frequencies below the set point to pass through to the subwoofer, preventing higher frequencies from distorting the bass.
- **Input Sens.:** Adjusts the input sensitivity (gain) of the amplifier to match the output voltage of your head unit. Start with the knob at minimum and slowly increase until desired volume is achieved without distortion.
- **Bass Boost:** Provides an adjustable bass boost from 0 to +12 dB at 45 Hz. Use this feature sparingly to enhance bass response without overdriving your subwoofer.
- **Remote Level Control:** Port for connecting the optional RBC-1 bass remote, allowing convenient adjustment of the subwoofer level from the driver's seat.

Maintenance

To ensure the longevity and optimal performance of your JL Audio JX 500/1 amplifier, follow these maintenance guidelines:

- **Keep Clean:** Regularly wipe the amplifier's exterior with a soft, dry cloth to remove dust and debris. Avoid using harsh chemicals or abrasive cleaners.
- **Ensure Ventilation:** Periodically check that the amplifier's cooling fins are free from obstructions. Proper airflow is essential to prevent overheating, especially during extended use or in hot climates.
- **Check Connections:** Occasionally inspect all power, ground, remote, and speaker connections to ensure they are secure and free from corrosion. Loose connections can lead to poor performance or damage.
- **Avoid Overloading:** Do not operate the amplifier beyond its specified power ratings or with speaker impedances lower than recommended. This can cause excessive heat and potential damage.

Troubleshooting

If you experience issues with your JL Audio JX 500/1 amplifier, consult the following common troubleshooting steps:

Problem	Possible Cause	Solution
No Power / Amplifier does not turn on	Blown fuse Loose power or ground connection No remote turn-on signal	Check and replace fuse (if necessary) Verify all power, ground, and remote connections are secure Check remote wire connection at head unit and amplifier
No Sound Output	Input sensitivity too low RCA cables disconnected or faulty Speaker wires disconnected or shorted Amplifier in protection mode	Increase Input Sens. knob gradually Check RCA cable connections and integrity Inspect speaker wiring for shorts or disconnections Refer to "Amplifier goes into Protection Mode"
Distorted Sound	Input sensitivity set too high Incorrect filter settings Speaker impedance mismatch	Decrease Input Sens. knob Adjust Filter Freq. for optimal subwoofer performance Verify speaker impedance matches amplifier's capabilities
Amplifier goes into Protection Mode (Red Light)	Overheating Speaker short circuit Low voltage or high voltage input	Allow amplifier to cool down; ensure proper ventilation Check speaker wiring for shorts Verify vehicle's electrical system voltage

Specifications

Model	JX500/1
Amplifier Type	Monoblock, Class A/B

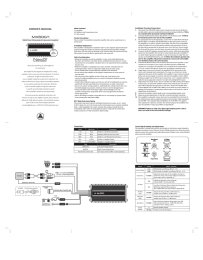

RMS Power Output	1 x 500 W RMS @ 2 ohms 1 x 420 W RMS @ 3 ohms 1 x 340 W RMS @ 4 ohms
Frequency Response	Not explicitly stated, but optimized for bass frequencies.
Low-Pass Filter	50-200 Hz, 12 dB/octave, switchable
Bass Boost	0-12 dB @ 45 Hz
Input Type	High-Level, Low-Level (RCA)
Dimensions (L x W x H)	348 x 195 x 53 mm (13.7 x 7.7 x 2.1 inches)
Weight	4.04 kg (8.9 lbs)
Power Supply	MOSFET





Warranty and Support

JL Audio products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official JL Audio website.

- **Return Policy:** This product typically comes with a 30-day return policy for refund or replacement, subject to retailer terms.
- **Spare Parts:** Information regarding the availability of spare parts for this specific model is currently unavailable.
- **Technical Support:** For technical assistance, installation questions, or troubleshooting beyond this manual, please contact JL Audio customer support or an authorized JL Audio dealer.

Related Documents - JX500/1

	<p>JL Audio MX500/1 500W Class D Monoblock Subwoofer Amplifier - Owner's Manual</p> <p>Comprehensive owner's manual for the JL Audio MX500/1 500W Class D Monoblock Subwoofer Amplifier. Includes installation instructions, safety guidelines, specifications, troubleshooting, and warranty information.</p>
	<p>JL Audio JD Series Class D Monoblock Subwoofer Amplifiers Owner's Manual</p> <p>Comprehensive owner's manual for JL Audio JD Series Class D Monoblock Subwoofer Amplifiers (JD250/1, JD500/1, JD1000/1), covering installation, operation, specifications, and troubleshooting for automotive sound systems.</p>

	<p>JL Audio MHD750/1 Monoblock Wide-Range Marine Amplifier Owner's Manual</p> <p>This owner's manual provides detailed installation, setup, and operation instructions for the JL Audio MHD750/1 monoblock wide-range marine amplifier, including specifications and troubleshooting.</p>
	<p>JL Audio HD750/1 Benutzerhandbuch: Monoblock Vollbereichs-Verstärker</p> <p>Umfassendes Benutzerhandbuch für den JL Audio HD750/1 Monoblock Vollbereichs-Verstärker. Enthält Installationsanleitungen, Produktbeschreibung, technische Daten und Fehlerbehebung für Ihr Fahrzeug-Audiosystem.</p>
	<p>JL Audio MV1000/1: 1000W Monoblock Class D Marine Subwoofer Amplifier - Connection Guide</p> <p>Detailed connection guide and specifications for the JL Audio MV1000/1, a 1000W Class D marine subwoofer amplifier featuring NexD2™ technology. Includes installation, safety, and technical details for marine audio systems.</p>
	<p>JL Audio MV600/1 Monoblock Class D Marine Subwoofer Amplifier: Installation & Features</p> <p>Comprehensive guide to the JL Audio MV600/1 600W Monoblock Class D Marine Subwoofer Amplifier. Covers installation, safety, connections, TüN™ software, specifications, and warranty for marine audio systems.</p>