

JBL MA6004

JBL MA6004 4-Channel Full-Range Marine Amplifier User Manual

Model: MA6004 | Brand: JBL

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your JBL MA6004 4-Channel Full-Range Marine Amplifier. Please read this manual thoroughly before attempting installation or operation to ensure optimal performance and safety.

SAFETY INFORMATION

Always disconnect the vehicle's battery negative terminal before installing or servicing the amplifier. Ensure all wiring is properly routed and secured to prevent damage. Avoid mounting the amplifier in areas exposed to extreme heat, direct sunlight, or excessive moisture, despite its marinized design. Use appropriate gauge wiring for power and ground connections as specified in the installation section. Failure to follow these safety guidelines may result in damage to the amplifier, vehicle, or personal injury.

PACKAGE CONTENTS

- JBL MA6004 4-Channel Full-Range Marine Amplifier
- Owner's Manual
- Mounting Hardware (screws, zip ties)
- High-level input connectors

PRODUCT OVERVIEW

The JBL MA6004 is a 4-channel full-range marine amplifier designed for harsh marine environments. It features a fully marinized circuit board and stainless-steel hardware for corrosion resistance. The amplifier includes built-in variable electronic crossovers and variable bass boost for precise audio tuning.



Image: Top view of the JBL MA6004 amplifier, showcasing the JBL Marine logo and heat sink fins.



Image: Close-up of the amplifier's input and control panel, showing input level, bass boost, X-OVER (HP/FLAT/LP) switches, and RCA inputs for Front and Rear channels.



Image: Close-up of the amplifier's power, ground, remote, fuse, and speaker output terminals for Front and Rear channels, including bridging options.

SETUP

1. Mounting the Amplifier

Select a mounting location that is dry, well-ventilated, and protected from direct exposure to water. Ensure sufficient space around the amplifier for proper heat dissipation. Use the provided mounting hardware to securely fasten the amplifier to a solid surface.

2. Wiring Connections

1. **Power Connection:** Connect the +12V terminal to the positive terminal of your battery using an appropriate gauge power cable (refer to specifications for recommended gauge). Install an in-line fuse within 18 inches of the battery.
2. **Ground Connection:** Connect the GND terminal to a clean, unpainted metal surface on the vehicle's chassis or directly to the battery's negative terminal. Ensure a solid, low-resistance connection.
3. **Remote Turn-On:** Connect the REM terminal to the remote turn-on output of your head unit. If your head unit does not have a remote output, you may use the DC offset turn-on mode (refer to Operating section).
4. **Audio Input:** Connect your head unit's RCA outputs to the amplifier's FRONT INPUT and REAR INPUT RCA jacks. If using high-level inputs, connect the speaker outputs of your head unit to the provided high-level input connectors.
5. **Speaker Output:** Connect your speakers to the CH1/CH2 (Front) and CH3/CH4 (Rear) speaker terminals. Observe correct polarity (+ to + and - to -). For bridged operation, refer to the diagram on the amplifier or in the detailed wiring instructions.

OPERATING

1. Gain Adjustment

Set the INPUT LEVEL (Gain) controls for each channel to the minimum position. Play a dynamic music track 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. This ensures maximum clean output.

2. Crossover Settings

The MA6004 features 12dB variable electronic crossovers. Use the X-OVER switches to select between High-Pass (HP), Flat (FULL), or Low-Pass (LP) filtering. Adjust the FREQ (Frequency) knob to set the desired crossover point for your speakers. For full-range speakers, select FULL. For tweeters, use HP. For subwoofers, use LP.

3. Bass Boost

The BASS BOOST control allows you to enhance low-frequency output. Start with the control at 0dB and gradually increase it to your preference. Excessive bass boost can cause distortion and potentially damage speakers.

4. Turn-On Mode

The amplifier supports two turn-on modes: **REM** (Remote) and **DC** (DC Offset). If your head unit provides a remote turn-on wire, use the REM mode. If not, the DC mode detects a DC offset from the head unit's speaker outputs to automatically turn the amplifier on and off.

MAINTENANCE

Regularly inspect all wiring connections for corrosion or damage, especially in marine environments. Keep the amplifier clean and free of dust and debris. Use a soft, dry cloth for cleaning. Avoid using harsh chemicals or

abrasive cleaners. Ensure the amplifier's heat sink fins are not obstructed to maintain proper cooling.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No audio output	No power, incorrect wiring, head unit not sending signal, amplifier in protect mode.	Check power and ground connections. Verify remote turn-on. Ensure RCA cables are connected. Check fuses. Reduce gain if protect light is on.
Distorted sound	Gain set too high, incorrect crossover settings, speaker impedance mismatch, damaged speakers.	Reduce gain. Adjust crossover frequencies. Verify speaker impedance. Inspect speakers for damage.
Amplifier overheats	Insufficient ventilation, impedance too low, prolonged high-volume operation.	Ensure proper airflow around the amplifier. Check speaker impedance. Reduce volume or allow cooling time.
Noise or hum	Poor ground connection, RCA cables too close to power cables, ground loop.	Verify ground connection. Reroute RCA cables away from power cables. Install a ground loop isolator if necessary.

SPECIFICATIONS

- **Model:** MA6004
- **Channels:** 4-Channel
- **RMS Power Output (4 ohms):** 60W RMS x 4 channels ($\leq 1\%$ THD + N)
- **RMS Power Output (2 ohms):** 145W RMS x 4 channels
- **Crossover:** 12dB variable electronic crossover (HP/LP/FULL)
- **Bass Boost:** Variable
- **Features:** Marinized circuit board, stainless-steel hardware
- **Item Weight:** 7.62 pounds
- **Product Dimensions:** 12 x 8 x 10 inches

WARRANTY

The JBL MA6004 amplifier comes with a 1-year limited warranty from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, accident, abuse, neglect, unauthorized repair, or modification. Please retain your proof of purchase for warranty claims.

SUPPORT

For technical assistance, troubleshooting, or warranty inquiries, please visit the official JBL website or contact JBL customer support. You can find contact information and additional resources on the JBL website.

Official Product Videos

JBL Marine Amplifier Overview

Video: An official overview of JBL Marine Amplifiers, highlighting features such as weather-resistant controls, conformal coated PCBs for water ingress protection, and various input/output panel controls. This video provides a visual guide to the amplifier's design and functionality.

Paul McCartney for JBL

Video: A short promotional video featuring Paul McCartney, emphasizing the quality and clarity of JBL audio products. While not a direct instruction video, it showcases the brand's commitment to sound fidelity.