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Rockville DBM50

Rockville DBM50 5-Channel Marine Amplifier Instruction Manual

INTRODUCTION

The Rockville DBM50 is a high-performance 5-channel marine amplifier designed for robust sound in marine environments. It delivers 4000W peak and 980W RMS across its channels, featuring four full-range channels (120W x 4 at 2 Ohm) and one mono subwoofer channel (500W at 2 Ohm).

Engineered for harsh conditions, the DBM50 boasts an IPX6 waterproof rating, a rustproof aluminum heat sink, stainless steel hardware, and a conformal-coated PCB to ensure durability in both saltwater and freshwater. The amplifier incorporates Class AB technology for channels 1-4 and Class D technology for channel 5, providing efficient power delivery while maximizing audio output.

This manual provides essential information for the proper installation, operation, and maintenance of your Rockville DBM50 marine amplifier.



Figure 1: Top view of the Rockville DBM50 Marine Amplifier, showcasing its sleek design and illuminated Rockville logo.

SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of your DBM50 amplifier. Ensure all connections are secure and waterproofed where necessary.

Power and Speaker Connections

The amplifier features dedicated terminals for power, ground, remote turn-on, and speaker outputs. These terminals are designed for secure wiring and are protected by waterproof silicone covers.



Figure 2: Detailed view of the power, ground, remote, and speaker output terminals on the Rockville DBM50 amplifier. Note the three 40A fuses for protection.

- **Power (+12V):** Connect to the positive terminal of your boat's battery via an appropriate gauge power cable and an inline fuse.
- **Ground (GND):** Connect to a solid, rust-free metal point on the boat's chassis or directly to the battery's negative terminal using a cable of the same gauge as the power cable.

- **Remote (REM):** Connect to the remote turn-on output of your marine head unit.
- **Speaker Outputs (CH1-CH5):** Connect your marine speakers and subwoofer to the corresponding terminals. Channels 1-4 can be bridged for 4-ohm loads, and Channel 5 is a dedicated 2-ohm mono subwoofer output.

Input Connections and Mode Selection

The DBM50 offers versatile input options to integrate with various marine audio systems.



Figure 3: Close-up of the control panel, showing RCA inputs, level controls, crossover settings, and the input mode switch.

- **RCA Inputs:** Connect RCA cables from your head unit's pre-amp outputs to the amplifier's CH1/CH2, CH3/CH4, and CH5 inputs.
- **Input Mode Switch:** Select between 2CH, 4CH, or 5CH input modes depending on the number of RCA pre-amp outputs available from your head unit. This allows the amplifier to distribute the signal to all channels even with fewer inputs.
- **PA Microphone Input:** A dedicated input for the included PA microphone.
- **Remote Bass Knob Input:** Connect the remote bass knob for convenient subwoofer level adjustment.

Video 1: Official product overview and feature demonstration for the Rockville DBM50 5-Channel Marine Amplifier, including details on its marine-grade construction, power output, and various control settings.

OPERATING THE AMPLIFIER

The DBM50 offers comprehensive controls for precise audio tuning.

Crossover and Level Controls (Channels 1-4)

- **Level:** Adjusts the input sensitivity to match the output of your head unit.
- **HPF (High Pass Filter):** Filters out low frequencies, allowing only frequencies above the set point to pass. Adjustable from 15Hz to 4KHz.
- **X-OVER Switch:** Selects between HPF (High Pass Filter), FULL (Full Range), or LPF (Low Pass Filter) / BP (Band Pass) for channels 3-4.
- **LPF (Low Pass Filter) (Channels 3-4 only):** Filters out high frequencies, allowing only frequencies below the set point to pass. Adjustable from 40Hz to 4KHz. This can be used in conjunction with the HPF to create a bandpass filter for midrange speakers.

Subwoofer Channel Controls (Channel 5)

- **LPF (Low Pass Filter):** Filters out higher frequencies for the subwoofer channel. Adjustable from 50Hz to 250Hz.
- **Subsonic Filter:** Filters out extremely low frequencies (15Hz to 50Hz) that are inaudible and can cause damage to subwoofers, especially in vented enclosures.
- **Level:** Adjusts the input sensitivity for the subwoofer channel.

- **Bass Equalizer:** Provides a bass boost of up to +12dB at 50Hz.

PA Microphone and Remote Bass Knob

The DBM50 includes a PA microphone for onboard announcements and a remote bass knob for convenient subwoofer control.



Figure 4: The included PA microphone, which connects directly to the amplifier for public address functionality.



Figure 5: The remote bass knob, allowing for easy adjustment of the subwoofer level from a convenient location.

MAINTENANCE

The Rockville DBM50 is built with marine-grade components to withstand harsh environments. To ensure optimal performance and longevity:

- Regularly inspect all wiring connections for corrosion or damage.
- Keep the amplifier clean and free of debris. Wipe down the exterior with a damp cloth.
- Ensure the silicone terminal covers are properly seated to maintain the IPX6 waterproof rating.
- The conformal-coated PCB and rustproof aluminum heat sink are designed for protection, but avoid direct exposure to excessive moisture or submersion beyond its IPX6 rating.

TROUBLESHOOTING

If you encounter issues with your DBM50 amplifier, consider the following basic troubleshooting steps:

- **No Power:** Check the main power fuse, ground connection, and remote turn-on wire. Ensure the battery has sufficient charge.
- **No Sound:** Verify all RCA input connections, speaker wire connections, and the input mode switch setting. Check the head unit's output.
- **Distorted Sound:** Adjust the amplifier's level controls to match the head unit's output. Check speaker impedance and ensure it's within the amplifier's supported range.
- **Protection Light On:** This indicates an internal fault or an issue with speaker wiring (e.g., short circuit, incorrect impedance). Disconnect speakers and re-test. If the light persists, consult a professional.

For persistent issues, it is recommended to consult a qualified marine audio technician.

SPECIFICATIONS

Feature	Specification
Manufacturer	ROCKVILLE
Model Number	DBM50
Number of Channels	5
Output Power (RMS)	980 Watts
Peak Power	4000 Watts
Channel 1-4 Output (2 Ohm)	120W x 4
Channel 5 Output (2 Ohm Mono)	500W x 1
Waterproof Rating	IPX6
Crossover Type	Adjustable 12dB/octave (LPF, HPF, Bandpass, Subsonic)
Amplifier Class	Class AB (Ch 1-4), Class D (Ch 5)
Minimum Supply Voltage	10 Volts
Maximum Supply Voltage	10 Volts
Mounting Type	Surface Mount
Item Weight	12.82 pounds
Package Dimensions	24 x 11.75 x 5.25 inches
UPC / GTIN	819216028476

WARRANTY AND SUPPORT

This product is covered by a standard manufacturer's warranty. Please refer to the product packaging or the official Rockville website for detailed warranty terms and conditions.

For technical assistance, product inquiries, or support, please visit the official Rockville website or contact their customer service department. Keep your purchase receipt for warranty claims.

