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› DD Audio MCA-106B 6.5" Amplified Marine Tower Speakers User Manual

DD Audio MCA-106b

DD Audio MCA-106B 6.5" Amplified Marine Tower Speakers User Manual

Model: MCA-106b

1. INTRODUCTION

The DD Audio MCA-106B is an active (powered) 6.5-inch marine tower speaker system designed for outdoor use in harsh environments such as boats and UTVs. It features a built-in amplifier with Digital Signal Processing (DSP) control, allowing for sound customization through various presets. The speakers are constructed with durable, water-resistant materials and include remote-controlled RGB LED lighting. This manual provides essential information for the proper installation, operation, and maintenance of your MCA-106B speakers.

2. SAFETY INFORMATION

- Always disconnect the power source before attempting any installation or maintenance.
- Ensure all wiring connections are secure and properly insulated to prevent short circuits and electrical hazards.
- Do not expose the speakers to extreme temperatures or direct flame.
- Avoid using harsh chemicals or abrasive cleaners on the speaker surfaces. Use a soft, damp cloth for cleaning.
- Mount the speakers securely to prevent them from dislodging during vehicle operation, which could cause injury or damage.
- Operating audio systems at excessively high volumes can cause permanent hearing damage. Adjust volume to a safe level.
- This product is rated IPX6 water-resistant, meaning it can withstand powerful water jets. It is not designed for submersion.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- DD Audio MCA-106B 6.5" Amplified Marine Tower Speakers (2 units)

- RF Remote Controller for DSP and RGB LED control
- Mounting Hardware (metal clamps)



Figure 3.1: Included RF Remote Controller and wiring harness.

4. FEATURES

- **Integrated Amplifier with DSP Control:** Built-in amplifier with Digital Signal Processing for sound optimization. Includes remote-controlled DSP presets (Normal, Pop, Rock, Jazz, Classic, Country).
- **Premium Audio Components:** Features a 6.5-inch injected molded poly composite midwoofer with a high-efficiency motor design and a 25mm high-output dome tweeter.
- **Durable Construction:** Reinforced ABS injected cabinet provides lightweight strength and an IPX6 water-resistance rating.
- **Versatile Mounting:** Integrated metal clamp with 45-degree locking tilt, compatible with mounting openings from 1 3/4 inches to 3 1/4 inches.
- **Enhanced Lighting:** Remote-controlled multifunction RGB LEDs in the grill and rear logo panels.

- **Optimized Sound:** Tuned for full, rich sound with high efficiency for high output on modest amplifier power.

5. SETUP AND INSTALLATION

5.1 Mounting the Speakers

The MCA-106B speakers come with integrated metal clamps designed for secure mounting on various bar sizes. Ensure the mounting surface is strong enough to support the weight of the speakers and withstand vibrations during operation.

1. Select a suitable mounting location that provides optimal sound dispersion and does not obstruct visibility or movement.
2. Adjust the metal clamp to fit the diameter of your mounting bar (compatible with 1 3/4" to 3 1/4" openings).
3. Securely tighten the mounting bolts to prevent any movement. The clamp features a 45-degree locking tilt for angle adjustment.



Figure 5.1: Side view illustrating the integrated mounting clamp.



Figure 5.2: Front view of the MCA-106B speakers.

5.2 Wiring Connections

The MCA-106B speakers are amplified, requiring power and signal input. Refer to the wiring harness provided for correct connections.

- **Power Connection:** Connect the main power wire (typically red) to a fused 12V DC power source. Connect the ground wire (typically black) to a solid chassis ground.
- **Remote Turn-On:** Connect the remote turn-on wire (if applicable, often blue or yellow) to your head unit's remote output to automatically power on/off the speakers with your audio system.
- **Audio Input:** Connect the audio input wires (RCA or speaker level, depending on your source unit) to the corresponding outputs from your audio source.
- **RGB LED Control:** The RGB LED wiring is integrated with the main harness and controlled via the RF remote.
- Ensure all connections are tight and protected from moisture and corrosion.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

The speakers will power on automatically when a remote turn-on signal is received from your audio source. If no remote turn-on is used, a separate switch may be required for the main power supply.

6.2 Audio Playback

Once powered on and connected to an audio source, the speakers will reproduce sound. Adjust the volume from your audio source. The integrated amplifier and DSP will process the audio signal.

6.3 DSP Presets

The MCA-106B features a built-in DSP with several equalization presets to optimize sound for different music genres. Use the provided RF remote controller to switch between these modes:

- **Normal:** Provides neutral equalization with a smooth overall frequency response. Recommended for a clean, even sound.
- **Pop:** Enhanced equalization for pop music.
- **Rock:** Enhanced equalization for rock music.
- **Jazz:** Enhanced equalization for jazz music.
- **Classic:** Enhanced equalization for classical music.
- **Country:** Enhanced equalization for country music.

Press the corresponding button on the RF remote to activate the desired DSP preset.

6.4 RGB LED Lighting Control

The integrated RGB LEDs in the speaker grill and rear logo panels can be controlled using the RF remote. The remote allows you to:

- Turn the LEDs ON/OFF.
- Select various static colors (Red, Green, Blue, White, and other mixed colors).
- Choose dynamic lighting modes such as Flash, Strobe, Fade, and Smooth.



Figure 6.1: Speakers with white LED lighting.



Figure 6.2: Speakers with red LED lighting.

7. MAINTENANCE

- **Cleaning:** Regularly clean the speaker enclosures with a soft, damp cloth. For stubborn dirt, a mild soap solution can be used, followed by rinsing with fresh water and drying. Avoid high-pressure washers directly on the speakers.
- **Inspection:** Periodically inspect all mounting hardware and wiring connections for tightness and signs of corrosion or wear. Tighten any loose fasteners.
- **Protection:** While IPX6 rated, prolonged exposure to direct sunlight and harsh marine environments can affect the lifespan. Consider using covers when the speakers are not in use for extended periods.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No sound from speakers.	No power to speakers; loose wiring; audio source issue; amplifier protection mode.	Check power and ground connections. Ensure remote turn-on is active. Verify audio source is playing and connected correctly. Check for blown fuses.
Distorted sound.	Input signal too high (clipping); speaker damaged; incorrect DSP preset.	Reduce volume from audio source. Check speaker for physical damage. Try switching DSP presets to "Normal".
RGB LEDs not working.	Remote control battery dead; wiring issue; remote out of range.	Replace remote battery. Check RGB wiring connections. Ensure remote is used within close proximity to the speakers.
Speakers turn off intermittently.	Overheating; loose power connection; low voltage.	Ensure adequate ventilation around speakers. Check power and ground connections for tightness. Verify stable 12V power supply.

9. SPECIFICATIONS

Speaker Size	6.5 Inches
Tweeter Size	1 Inch
Impedance	4 Ohms
Continuous Wattage @1ohm	60 Watts
Dynamic Wattage (Peak)	100 Watts
Frequency Response	100 Hz - 20 kHz
Sensitivity (dBSPL)	95 dB
Xmax	8 MM
Suspension Travel	16 MM
Mounting Diameter	197 MM (7.75 Inches)
Mounting Depth	222 MM (8.75 Inches)
Water Resistance Rating	IPX6
Enclosure Material	Injected ABS
Control Method	Remote
Item Weight (per speaker)	Approximately 7 Pounds (14 Pounds for 2 units)

10. WARRANTY AND SUPPORT

The DD Audio MCA-106B speakers come with a **1-Year Warranty** from the date of purchase, covering manufacturing defects. This warranty does not cover damage caused by improper installation, accident, misuse, abuse, negligence, or

normal wear and tear.

For technical support, warranty claims, or service inquiries, please contact your authorized DD Audio dealer or visit the official DD Audio website for contact information.