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Clarion CLARIONBDL230703-01

Clarion Marine Bass Bundle User Manual

Models: CM2513WL, XC2110

Introduction

This user manual provides detailed instructions for the installation, operation, and maintenance of your Clarion Marine Bass Bundle, which includes the CM2513WL 10-inch RGB LED Subwoofer and the XC2110 Compact Class-D Marine Mono Amplifier. Please read this manual thoroughly before use to ensure proper functionality and longevity of your product.



Image: The Clarion Marine Bass Bundle, featuring the CM2513WL 10-inch RGB LED Subwoofer with a silver grille and blue LED lighting, alongside the compact silver XC2110 Marine Mono Amplifier with its wiring harness.

Important Safety Information

Always observe the following safety precautions to prevent injury or damage to the product:

- Ensure all power connections are secure and properly insulated to prevent short circuits.
- Do not expose the amplifier to direct water spray or submersion, despite its marine rating.
- Disconnect power before performing any installation or maintenance.
- Consult a professional installer if you are unsure about any part of the installation process.

Product Overview

CM2513WL 10-inch Marine Subwoofer

The CM2513WL is a 10-inch marine-grade subwoofer designed for robust bass performance in harsh marine environments. It features built-in RGB LED illumination for customizable lighting effects.

- **Power Handling:** 250W RMS, 800W Peak
- **Voice Coils:** Dual 2 Ohm
- **Cone Material:** IMPP (Injection Molded Polypropylene)
- **Grilles:** Includes both Black and Silver grilles.
- **Environmental Protection:** Meets ASTM D4329 (UV Exposure) and ASTM B117 (Salt Fog Exposure), IP55 Water Ingress Protection.



Image: The Clarion CM2513WL 10-inch marine subwoofer shown with the black grille installed. The subwoofer features a carbon fiber pattern on the cone and a central Clarion logo.



Image: Top-down view of the Clarion CM2513WL 10-inch marine subwoofer with the black grille, showcasing the carbon fiber pattern on the cone and the central mesh with the Clarion logo.



Image: The Clarion CM2513WL 10-inch marine subwoofer shown with the silver grille installed. The subwoofer features a carbon fiber pattern on the cone and a central Clarion logo.



Image: Top-down view of the Clarion CM2513WL 10-inch marine subwoofer with the silver grille, showing the blue LED illumination active beneath the cone and the carbon fiber pattern.

XC2110 Compact Class-D Marine Mono Amplifier

The XC2110 is a compact, high-efficiency Class-D mono amplifier designed to power your subwoofer with clean, powerful audio. Its design minimizes magnetic noise and offers high-quality terminals for optimal performance.

- **Power Output:** 200W x 1 @ 4-Ohm, 300W x 1 @ 2-Ohm
- **Channels:** 1 (Mono)
- **Features:** MOS-FET Power Supply, 2-Ohm Stable, Selectable Bass Boost (0-12dB @ 50Hz), Adjustable Low Pass Crossover (35-250Hz).
- **Connectors:** Nickel Plated RCA/Speaker/Power.



Image: The Clarion XC2110 Compact Class-D Marine Mono Amplifier. It is a silver rectangular unit with wiring harnesses extending from one end, including RCA inputs and power/speaker connections.

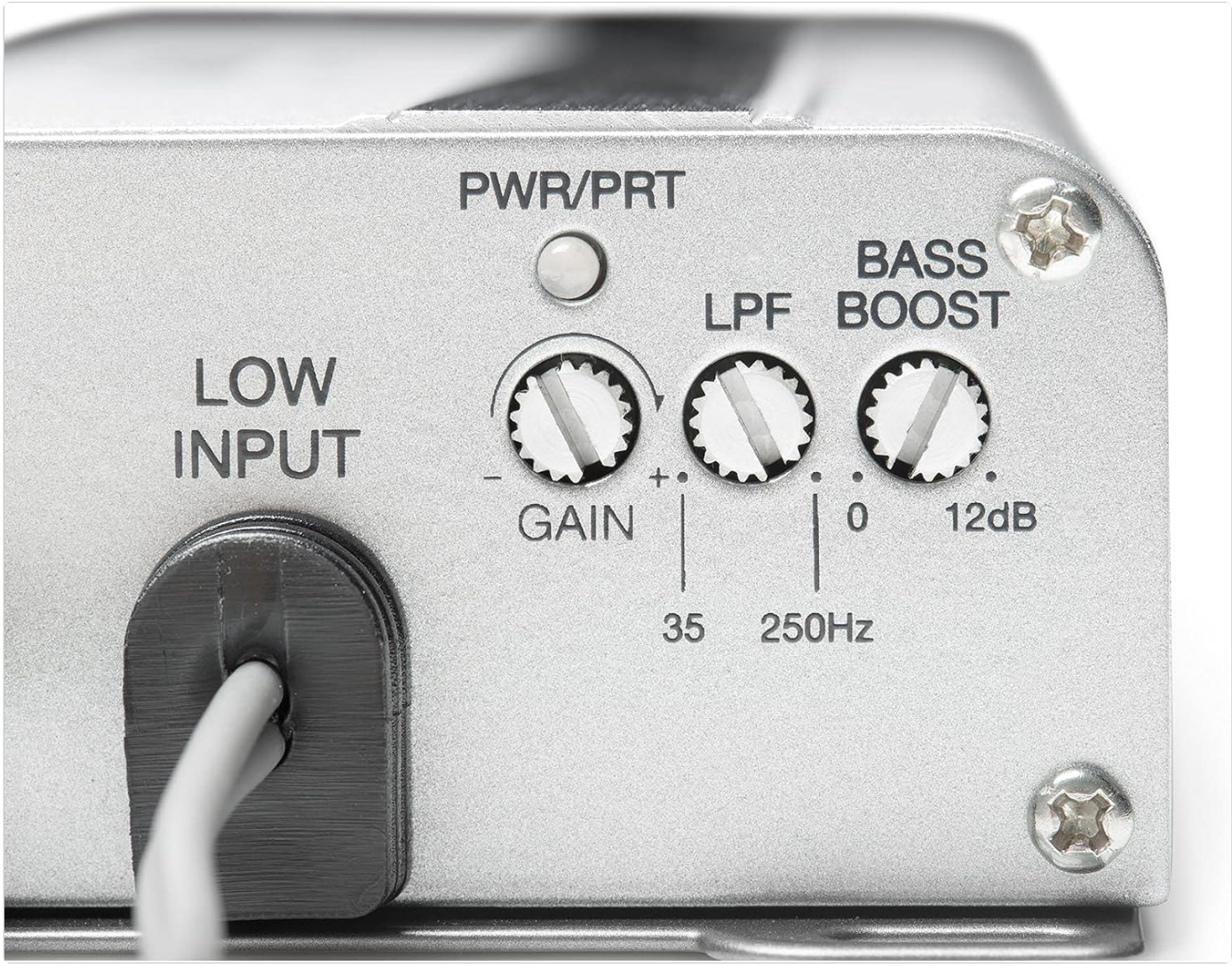


Image: A close-up view of the control panel on the Clarion XC2110 amplifier, showing the "LOW INPUT" gain control, "LPF" (Low Pass Filter) adjustment from 35-250Hz, and "BASS BOOST" adjustment from 0-12dB.

Setup and Installation

Proper installation is crucial for optimal performance and product longevity. It is recommended to have this system installed by a qualified marine audio technician.

Subwoofer Installation (CM2513WL)

1. **Mounting Location:** Choose a secure, dry location that allows for proper air circulation around the subwoofer. Ensure the mounting surface is sturdy enough to support the subwoofer's weight and vibrations.
2. **Cutout:** Create a circular cutout with a diameter of 8.66 inches (220 mm). Ensure there is a mounting depth clearance of 5.04 inches (128 mm).
3. **Wiring:** Connect the subwoofer's dual 2-ohm voice coils to the amplifier. Refer to the wiring diagram for series or parallel configurations to achieve the desired impedance (e.g., 1 ohm or 4 ohms). Use the provided waterproof connectors for both audio and RGB LED lighting.
4. **Grille Installation:** Choose either the black or silver grille and securely fasten it to the subwoofer using the provided screws.

Amplifier Installation (XC2110)

1. **Mounting Location:** Select a location that is dry, well-ventilated, and protected from direct sunlight and excessive heat. The amplifier dimensions are 7.85"W x 1.54"H x 3.23"D.

2. **Power Connection:**
    - Connect the main power wire (B+) to the positive terminal of the vehicle's battery, ensuring an inline fuse is installed close to the battery.
    - Connect the ground wire (GND) to a clean, unpainted metal surface on the vehicle's chassis.
    - Connect the remote turn-on wire (REM) to the remote output of your head unit.
3. **Audio Input:** Connect the RCA cables from your head unit's subwoofer output to the "LOW INPUT" RCA jacks on the XC2110 amplifier.
4. **Speaker Output:** Connect the subwoofer's speaker wires to the speaker output terminals on the amplifier. Ensure correct polarity.

Operating Instructions

Amplifier Settings (XC2110)

Adjust the following settings on the XC2110 amplifier for optimal sound performance:

- **GAIN Control:** This adjusts the input sensitivity of the amplifier. Start with the gain set to minimum and slowly increase it until the desired volume is achieved without distortion. Avoid setting the gain too high, as this can lead to clipping and damage to the subwoofer.
- **LPF (Low Pass Filter):** This filter allows only frequencies below the set point to pass through to the subwoofer. Adjust the LPF between 35 Hz and 250 Hz to blend the subwoofer's output seamlessly with your main speakers. A common starting point is 80 Hz.
- **BASS BOOST:** This feature provides an adjustable bass enhancement at 50 Hz, ranging from 0 to 12 dB. Use this sparingly to add impact to your bass, as excessive boost can cause distortion.

RGB LED Lighting (CM2513WL)

The CM2513WL subwoofer features integrated RGB LED lighting. The lighting is controlled via a separate connection. Connect the RGB wiring to a compatible LED controller (not included) to customize colors and effects.

Maintenance

Regular maintenance ensures the longevity and performance of your Clarion Marine Bass Bundle.

- **Cleaning:** Use a soft, damp cloth to wipe down the subwoofer and amplifier. Avoid abrasive cleaners or solvents. For marine environments, rinse with fresh water after exposure to saltwater.
- **Connections:** Periodically check all wiring connections for corrosion or looseness, especially in marine applications. Ensure waterproof connectors are sealed properly.
- **Environmental Protection:** While designed for marine use, prolonged exposure to extreme conditions should be minimized. When not in use, consider covering the equipment.

Troubleshooting

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No Sound from Subwoofer	No power to amplifier. Loose or incorrect audio input/output connections. Amplifier in protection mode. Gain set too low.	Check power, ground, and remote wires. Verify fuse. Ensure RCA and speaker wires are securely connected and correct. Check for short circuits in speaker wiring or excessive heat. Allow amplifier to cool. Increase GAIN control slowly.
Distorted Sound	GAIN set too high. Bass Boost set too high. Incorrect LPF setting. Damaged speaker or wiring.	Reduce GAIN control. Reduce BASS BOOST. Adjust LPF to blend with main speakers. Inspect speaker cone and wiring for damage.
LED Lights Not Working	Incorrect or loose RGB wiring. Faulty LED controller (if used).	Check all RGB connections. Test with a known good LED controller.

Specifications

Clarion CM2513WL 10-inch Marine Subwoofer

- **Maximum Power Handling:** 800 Watts
- **Continuous Power Handling:** 250 Watts
- **Woofer Cone:** 10" (250 mm) IMPP
- **Voice Coil:** Dual 2 Ohm
- **Basket Material:** High Impact ASA Plastic
- **LED Lighting:** Multi-Color RGB
- **Water Protection:** IP55
- **UV Exposure Standard:** Meets ASTM D4329
- **Salt Fog Exposure Standard:** Meets ASTM B117
- **Mounting Hole Diameter:** 8.66" (220 mm)
- **Mounting Depth:** 5.04" (128 mm)
- **Included Components:** Subwoofer, Black Grille, Silver Grille, Waterproof Connectors (Speaker & RGB)

Clarion XC2110 Compact Class-D Marine Mono Amplifier

- **Power Output (4-Ohm):** 200W x 1
- **Power Output (2-Ohm):** 300W x 1
- **Number of Channels:** 1 (Mono)
- **Power Supply:** MOS-FET
- **Stability:** 2-Ohm Stable
- **Bass Boost:** 0-12dB @ 50Hz (Selectable)
- **Low Pass Crossover:** Variable 35 - 250Hz (12dB/Oct.)
- **Connectors:** Nickel Plated RCA/Speaker/Power
- **Dimensions (W x H x D):** 7.85" x 1.54" x 3.23"
- **Item Weight:** Approximately 13 pounds (for the bundle)

Warranty Information

This Clarion product comes with a Limited Warranty. For specific terms and conditions, please refer to the warranty card included with your product or visit the official Clarion website. Keep your proof of purchase for warranty claims.

Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Clarion customer support. Visit the official Clarion website for contact information and additional resources.
Online Resources: www.clarion.com

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