Clarion CMM-20

Clarion CMM-20 Marine Source Unit User Manual

Model: CMM-20
Brand: Clarion

1. Introduction

The Clarion CMM-20 Marine Source Unit is engineered to provide exceptional audio quality and versatile connectivity in harsh marine environments. This manual provides detailed instructions for installation, operation, maintenance, and troubleshooting to ensure optimal performance and longevity of your device.

2. Safety Information

Please read all safety instructions carefully before installing and operating the CMM-20. Failure to follow these guidelines may result in injury or damage to the unit or vessel.

- Always disconnect the battery's negative terminal before beginning any electrical work.
- Ensure proper wiring and fuse protection to prevent electrical shorts and fire hazards.
- Do not operate the unit if it is damaged or malfunctioning.
- This unit is IP66 rated for water and dust ingress; however, avoid direct high-pressure water jets.
- Consult a qualified marine electronics technician for installation if you are unsure about any steps.

3. Package Contents

Verify that all items are present in the package:

- Clarion CMM-20 Marine Source Unit
- Wiring Harness
- Mounting Hardware (screws, U-bracket)
- Trim Bezel
- Owner's Manual (this document)



Figure 3.1: CMM-20 unit with included wiring harness and mounting hardware.

4. Product Overview

The CMM-20 features a single-chassis design with built-in power and flexible audio features, optimized for marine applications.



Figure 4.1: Front view of the CMM-20 Marine Source Unit, showing the large rotary knob and backlit buttons.

4.1 Front Panel Controls

- **Rotary Knob:** Controls volume, navigates menus, and selects options. Features a blue LED accent.
- **SOURCE Button:** Toggles between available audio sources (AM, FM, Weather Band, Bluetooth, USB, AUX).
- **SETTINGS Button:** Accesses audio and system settings.
- **BACK/MENU Button:** Navigates back in menus or accesses the main menu.
- **FAVORITES Button:** Saves and recalls favorite radio stations or settings.
- **Playback Controls:** Skip back, Play/Pause, Skip forward for media playback.

4.2 Key Features

- **Marine-Ready Audio Excellence:** High-performance, dual-zone source unit engineered for marine environments.
- **Versatile Audio Sources:** Bluetooth audio streaming, global AM/FM tuner with NOAA weather radio (US only), USB 2.0 input, and analog auxiliary input.
- **Durability Meets Design:** Rugged, IP66-rated weatherproof chassis with a user-friendly 2.37-inch LCD display and dimmable controls.
- **Powerful Sound Control:** Built-in 100 watts (25W RMS x 4 @ 4 ohms) amplifier for two main zones, with tone controls (Bass & Treble) and four equalizer presets.



Figure 4.2: The CMM-20 is IP66 rated and supports various audio sources including AM, FM, Weather Band, Bluetooth, USB, and Auxiliary input.

4.3 Remote Controller Options (Sold Separately)

The CMM-20 supports external wired remote controllers for convenient operation from other locations on your vessel. Up to three controllers can be connected to a single source unit.

- **CMR-10:** Round, marine wired remote with no display.
- **CMR-20:** Full-function, marine wired remote with LCD display.

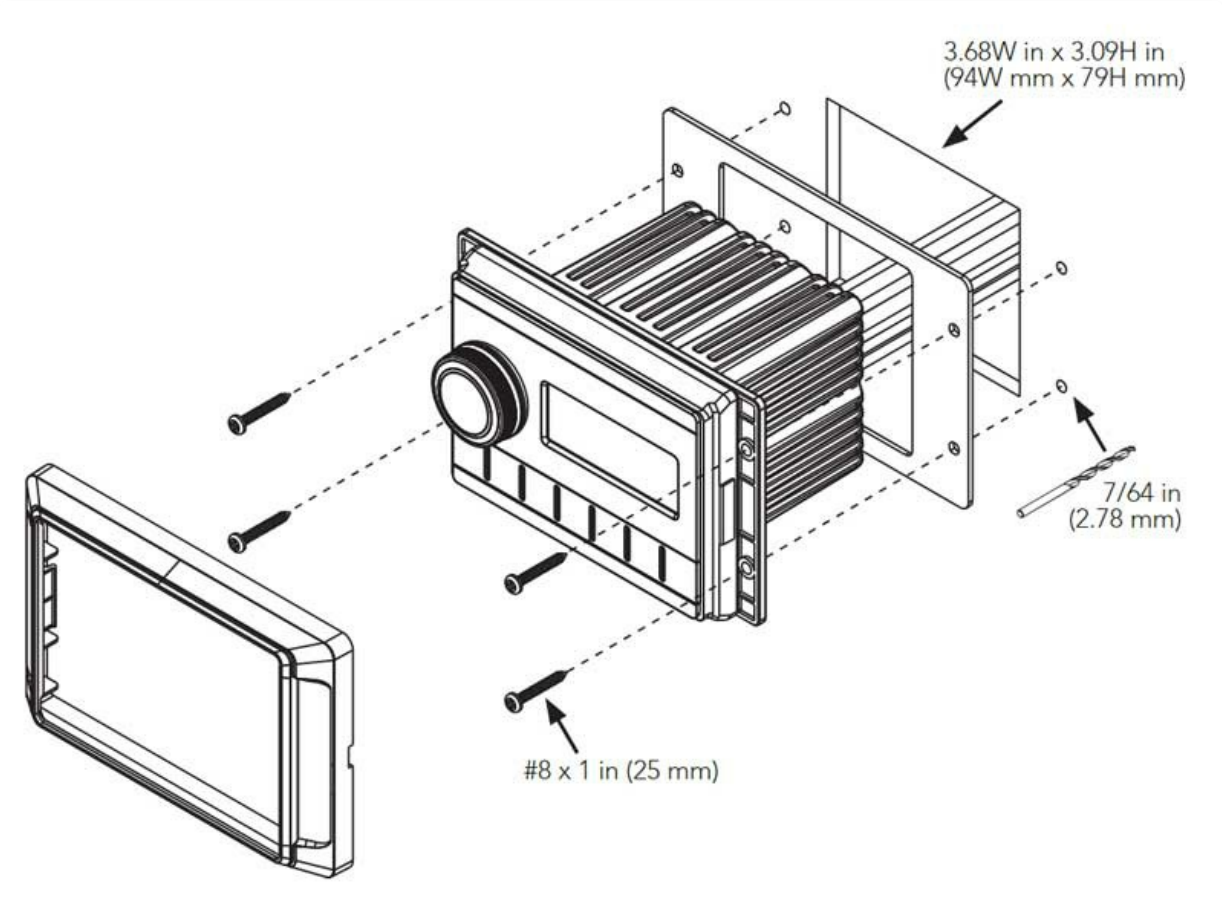


Figure 4.3: Optional remote controllers: CMR-10 (left) and CMR-20 (right).

5. Setup and Installation

Proper installation is crucial for the performance and longevity of your CMM-20. Ensure you have the necessary tools and a clear understanding of marine electrical systems.

5.1 Mounting Considerations

The CMM-20 is designed for flush mounting. Choose a location that is easily accessible, provides adequate ventilation, and is protected from direct exposure to extreme elements beyond its IP66 rating.



Figure 5.1: Mounting diagram with dimensions and screw locations.

5.2 Wiring Diagram

Connect the wiring harness according to the diagram provided with your unit. Ensure all connections are secure and properly insulated to prevent corrosion and electrical issues.

- **Power:** Connect the yellow wire to a constant 12V power source, the red wire to a switched 12V accessory source, and the black wire to a reliable ground point.
- **Speakers:** Connect speaker wires to the corresponding outputs, observing polarity. The CMM-20 supports two zones.
- **Auxiliary Input:** Use the RCA inputs for external audio devices.
- **USB:** Connect USB storage devices to the USB input for media playback.

6. Operating Instructions

This section details the basic operation of your CMM-20 Marine Source Unit.

6.1 Power On/Off

Press the **SOURCE** button to turn the unit on. Press and hold the**SOURCE** button to turn the unit off.

6.2 Source Selection

Press the **SOURCE** button repeatedly to cycle through available audio sources: AM, FM, Weather Band (US only), Bluetooth, USB, and Auxiliary Input.



Figure 6.1: The CMM-20 display showing available source options.

6.3 Volume Control

Rotate the large rotary knob clockwise to increase volume and counter-clockwise to decrease volume.

6.4 Bluetooth Pairing

1. Select Bluetooth as the source.
2. On your mobile device, search for Bluetooth devices and select "Clarion CMM-20".
3. Confirm pairing on your device if prompted.

6.5 Radio Operation (AM/FM/Weather Band)

Select AM, FM, or WB as the source. Use the playback control buttons to tune to stations or seek for strong signals. Press the **FAVORITES** button to save or recall preset stations.

6.6 USB Playback

Insert a USB storage device into the USB port. The unit will automatically switch to USB source and begin playback. Use the playback control buttons to navigate tracks.

6.7 Auxiliary Input

Connect an external audio device to the auxiliary input using an appropriate cable. Select AUX as the source to listen to audio from the connected device.

6.8 Audio Settings

Press the **SETTINGS** button to access audio adjustments. You can modify Bass, Treble, and select from four equalizer presets to customize your listening experience.

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Video 6.1: An overview of the Clarion CMM-20 Marine Source Unit, highlighting its features and capabilities.

7. Maintenance

Regular maintenance will help prolong the life of your CMM-20.

- **Cleaning:** Use a soft, damp cloth with mild soap to clean the unit's exterior. Avoid abrasive cleaners or solvents.
- **Weather Protection:** While IP66 rated, it is recommended to cover the unit when not in use for extended periods, especially in direct sunlight or harsh weather conditions.
- **Connections:** Periodically check all wiring connections for corrosion or looseness and secure them as needed.

8. Troubleshooting

If you encounter issues with your CMM-20, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
No Power	Blown fuse; Incorrect wiring; Loose power connection.	Check and replace fuse; Verify wiring connections; Secure power cables.
No Sound	Volume too low; Mute activated; Incorrect source selected; Loose speaker connections.	Increase volume; Deactivate mute; Select correct source; Check speaker wiring.
Bluetooth Not Connecting	Device not in pairing mode; Unit not in Bluetooth source; Interference.	Ensure device is discoverable; Select Bluetooth source on CMM-20; Move closer to unit.
Radio Static/Poor Reception	Poor antenna connection; Weak signal area; Electrical interference.	Check antenna cable; Move to an area with better signal; Identify and reduce interference sources.

9. Specifications

Detailed technical specifications for the Clarion CMM-20 Marine Source Unit:

- **Package Dimensions:** 10.63 x 8.66 x 5.12 inches
- **Item Weight:** 3.43 pounds
- **Item Model Number:** CMM-20
- **Brand:** Clarion
- **Connectivity Technology:** Bluetooth, Auxiliary, USB
- **Special Features:** RDS, Pandora, Equalizer
- **Compatible Devices:** Smartphone, Speaker
- **Connector Type:** 3.5mm Jack (Auxiliary)
- **Audio Output Mode:** Stereo
- **Surround Sound Channel Configuration:** 2 Channel
- **Output Power:** 100 Watts (Peak)
- **Output Wattage:** 25 Watts (RMS per channel)
- **Number of Channels:** 2

- **Weatherproof Rating:** IP66

10. Warranty and Support

For warranty information and technical support, please refer to the official Clarion website or contact their customer service department. Keep your purchase receipt as proof of purchase for warranty claims.
Clarion Official Website: www.clarion.com

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