

## RD-44 Audio Network Control Panel

### Introduction:

The RD-44 is designed to control the audio functions and sources of the MRD-70 marine radio and the MZ-100 DSP Zone Amplifier. With versatile mounting options, the RD-44 can be installed up to 60 feet away from the radio or amplifier in a variety of positions. In addition, the built-in intercom function allows communication between the vessel's audio zones.



### Features:

- Full control of audio functions and sources
- 32 character back-lit digital display
- Self-dimming for night time use
- Back-lit keypad
- Waterproof, corrosion resistant enclosure
- Dash or bracket mount options
- Built-in Intercom
- Infrared remote control

## Controls



- |    |                   |  |
|----|-------------------|--|
|    | 1 Microphone      | 9 Volume Control                       |
| 16 | 2 Intercom Switch | 10 Auto Station Set                    |
|    | 3 Presets         | 11 Audio Controls                      |
|    | 4 Set Display     | 12 Radio Source Select                 |
|    | 5 Tune/Track Up   | 13 Power On/Off                        |
|    | 6 Tune/Track Down | 14 Mute                                |
|    | 7 AM/FM Band      | 15 Amplifier Source Select             |
|    | 8 Scan Channels   | 16 Network Cable                       |
|    |                   | 17 Infrared Port, Ambient light sensor |

## Control Functions

- 1 Microphone:** Waterproof intercom microphone.
- 2 Intercom Switch:** Hold down to talk. Release to hear. The intercom will override the music in the other zones. It will also disable a muted RD-44 in another zone while the switch is pressed.

The volume for each zone with an RD-44 is adjustable. While holding the “Mic” button (# 2) down, use the Volume knob (9) to toggle the intercom volume up or down. **(See Volume, # 9)**. The Master zone intercom volume is set using a potentiometer on the RT-20 Router **(See RT-20 Instructions)**

- 3 Presets:** Tune to a desired AM, FM 1, FM2 or XM (optional) station and hold the desired preset button for at least 2 seconds. The display will change to show which preset was programmed.
- 4 Display:** Allows setting of display modes. Times out after 2 seconds. Displays available information from WMA, MP3 or XM formats. Pressing the button advances the display functions.

**In CD Mode:** x1 = Artist x2 = Album x3 = Folder x4 Track /Time

**In XM Mode:** x1 = Artist x2 = Song x3 = Category

- 5 Up:** Tunes Radio frequencies or changes tracks higher.
- 6 Down:** Tunes Radio frequencies and changes tracks lower.
- 7 Band Select:** Choose between AM 1, AM 2 and FM 1, FM2, FM 3 station banks.
- 8 Scan:** AM/FM mode. Tunes and stops at available stations for a few seconds. Press scan a second time or one of the tune buttons to stop scanning.
- 9 Volume:** Adjusts volume by toggling the knob right or left. Turn to the left and hold to decrease volume or right and hold to increase volume. This knob is self-centering.
- 10 Auto Station Set:** Scans for strong stations and stops. Pressing the button again will select the next station up. The receiver will scroll up the frequency scale and begin again at the bottom.

**11 Audio Controls:** Pressing this button will cycle through the audio functions of the radio. Use the Volume knob (9) to adjust the function up, down or “C” center. The functions vary slightly between the MRD-70 and MZ100. After waiting 3 seconds, the radio will exit the menu.

**MRD-70:**

- **Bass:** Bass can be adjusted up to +/- 12.
- **Treble:** Treble can be adjusted up to +/- 12.
- **Balance:** (Left and Right) Adjustable up to +/- 15.
- **Fader:** (Front and Back) Adjustable up to +/- 15.
- **Loud:** Dynamically adjusts bass level to Volume when ON

**MZ-100 Amplifier:**

- **Bass:** Bass can be adjusted up to +/- 12.
- **Treble:** Treble can be adjusted up to +/- 12.
- **Space:** Adjust to 0, 1, or 2. This unique feature adds a function in the audio that simulates wider spacing on the speakers. Press 3 times to exit function
- **Loud:** Turns on /off dynamic loudness (Bass enhancement)
- **EQ:** Turns on/off Selected EQ (See MZ100 instructions)

**12 Source:** Selects a source from those available on the MRD-70 radio such as AM 1-2 FM 1-2-3 CD/MP3, AUX1, AUX2 and XM, if installed.

**13 Power:** Powers on and off the RD44 display, MRD-70, MZ amplifiers and its peripherals.

**14 Mute:** Mutes the audio in the local zone.

**15 Zone Amplifier Source:** Source select for the MZ series amplifiers. Not used with the MRD-70.

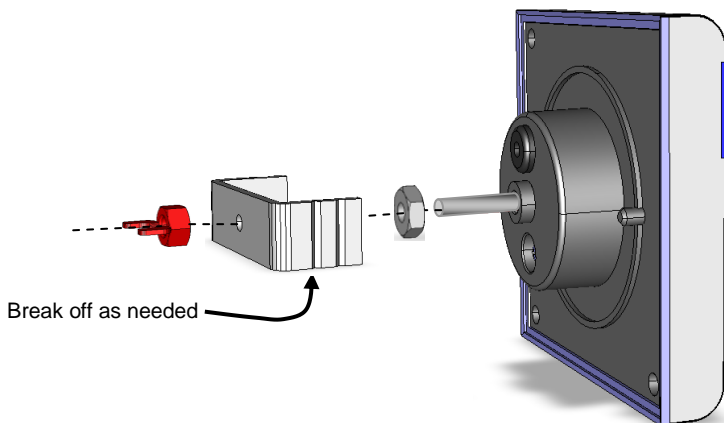
**16 Network Cable:** Connects RD44, RT20, and MZ100 components

**17 Infrared Port & Light Sensor:** Receiver for MRR2 Remote and senses ambient light and automatically adjusts backlighting.

## Panel Mounting



(Network connection cable not shown for clarity)



The RD44 can be mounted in a panel using the supplied “U” bracket and stainless steel stud assembly.

Insert the supplied stud into the threaded rear housing. Use one of the 5mm nuts to lock the stud in place.

Find a suitable location with enough depth and access for the DIN network connecting cable and hand access to tighten the nut.

Use the template provided to drill 2 holes: 2 $\frac{1}{8}$  (54mm) for the main body and 3/16 (5mm) for the locating pin. Insert the RD44 and use the bracket and nut to secure the Display. **Do not over tighten the nut.**

The “U” bracket has break off sections that can be removed for thick panels.

### Bracket Mount

The RD-44 can also be mounted using the supplied back cover and bracket. The bracket can be installed for dash or overhead mount.

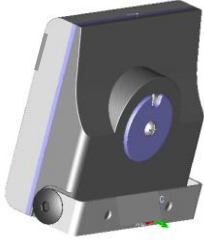
Make sure that there is adequate clearance and a good viewing angle for the display. Also, consider the routing of the network cable.

Use the bracket to mark the position of the fastener holes.

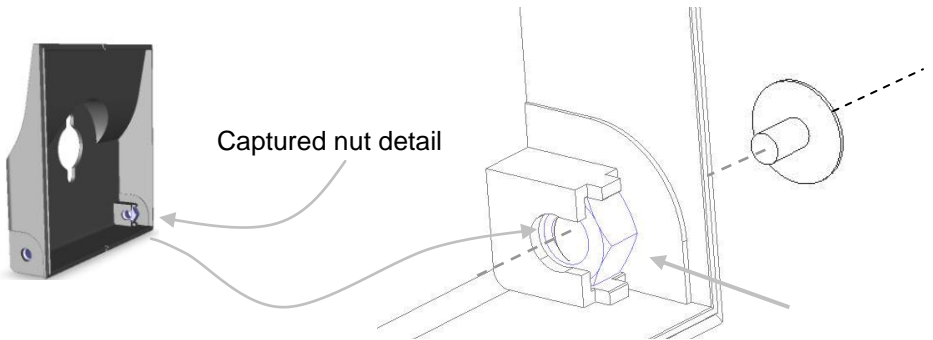
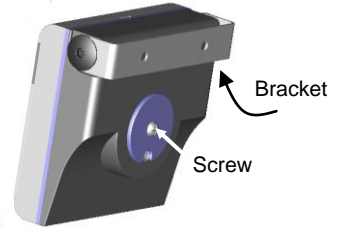
# Bracket Mounting cont.



Dash Mount



Overhead mount



## Installing the Back Cover

A short (10mm) M5 screw holds the back panel assembly to the body of the RD-44. Remove the back panel and insert the 8mm hex nuts supplied into the retaining slots as shown above in the detail. .

Use the 8mm screws and the cover plate provided to attach the bracket to the rear housing. The rear housing can be rotated 180° for dash or overhead mounting.

Use the 5mm short screw to attach the rear housing to the RD-44 body.

## Connecting the System DIN Cable



The RD-44 connects to the system using a single cable with watertight ends available in 10ft (3m), 20Ft (6m) and 60ft (18m) lengths. These cables can be used in any combination to provide the needed connection length.



The DIN cable is “Keyed” to prevent misalignment and all connections are gender specific

Leave the end caps on when routing to prevent damage or contamination to the leads. The cap is designed for pulling through wire conduits.

(Connector cap ends removed)

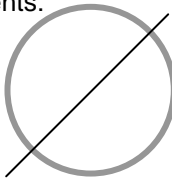


The blue connector cap ends can be discarded if a smaller diameter is required such as a Pod mount. Use shrink tube to seal the connections.

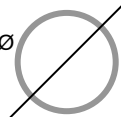
**Before drilling holes for cable runs be sure there is sufficient room behind the area. Always disconnect power before drilling around electrical connections.**

The hole diameter requirements:

With ends = 7/8" (22mm) Ø



Without = 1/2" (13mm) Ø



Be sure to use Grommets or other types of chafe protection when routing cables through fiberglass or metal bulkheads or instrument pods.



Provide strain relief by securing cables with proper cable ties



## System Connections

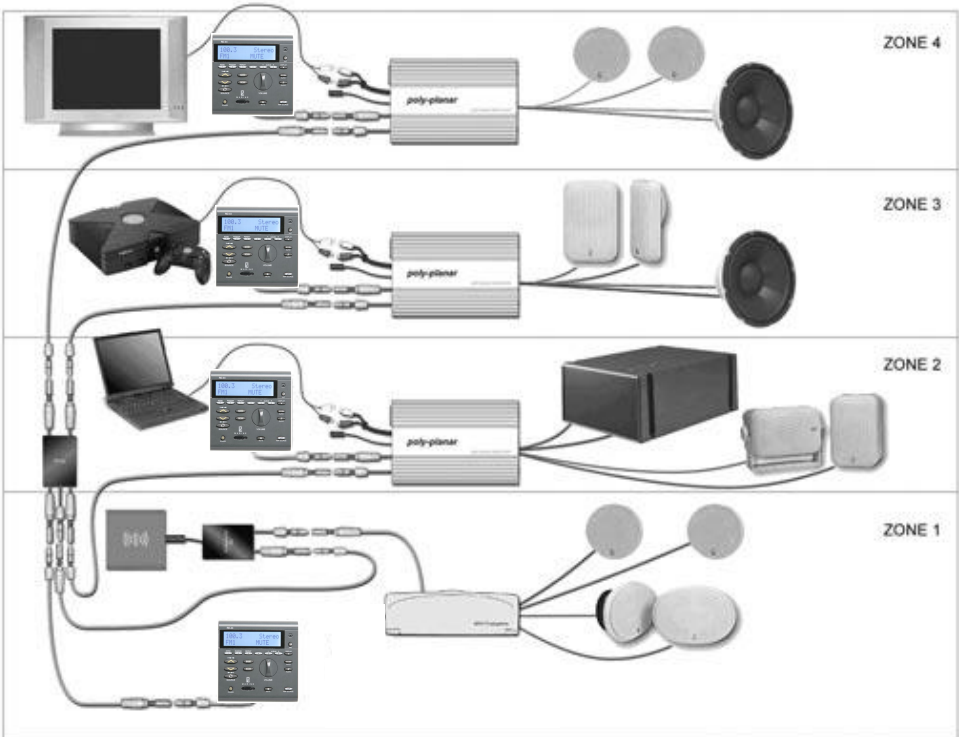
The RD44 can be used in several

**configurations:**

Basic MRD70 System, Single Zone



Multi Zone System using RT-20 Router (See RT-20, MRD70 Instruction Manual)



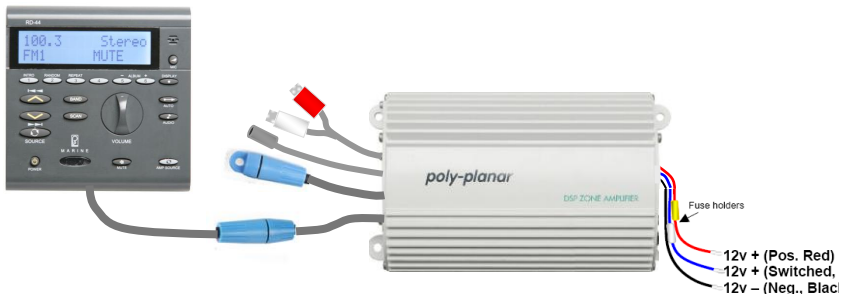


## System Connections (continued)



### Single Zone with MZ-100 DSP AMP

The MZ-100 can be controlled by the RD-44 control panel. Using an ICC 10, 20 or 60 DIN extension cable (not shown) the panel can be up to 60 feet away from the amplifier. Plug the RD-44 or its extension cable into the CONTROL PANEL plug on the MZ-100. Be sure to tighten the waterproof connectors.



The MZ-100 can support 1 Auxiliary input such as iPod dock or other media player. (See MZ-100 instruction Manual)

### MRR2 Wireless Remote Control

The Poly Planar MRR2 Wireless Remote can be used with the RD44 Display. Simply point the Remote at the Display and you can activate the primary functions. The MRR2 requires “Line of site” to the IR window of the Display and will operate up to 30 ft away.





**Specifications:**

Operating Voltage ..... 13.8V (10V – 16V) DC  
Dimensions ..... 4.409" x 4.409" x 1.443"  
(112mm x 112mm x 37mm )  
Immersion Protection.....Min. IP65  
Weight .....15 oz (.425 Kg)

**WARRANTY**

Poly-Planar marine audio systems are warranted to be free of defects in materials and workmanship for a period of two years. Warranty is subject to proper installation and operation within published specifications. Poly-Planar will repair or replace, at its discretion, any unit returned prepaid to its factory and determined to be defective. Poly-Planar Inc. is not liable for consequential damages.