

# The Waterproof Marine Audio System with the Concert Hall Sound™



37 Bulldes

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#### MRD-70 AM/FM/CD/MP3 Multi-Zone Component System

The MRD-70 AM/FM/CD Receiver and RD-44 Display are the base foundation for an expandable multi-zone system that offers independent control in up to 4 zones equipped with the RD-44 Remote Display and MZ-100 Amp in each zone. Easily connected through a single watertight DIN type cable, each remote has independent control over the audio input source. The many unique features include an intercom that will allow communication between stations. Two auxiliary inputs on the receiver accommodate direct audio input from other audio sources/media players. Just plug in your iPod®, TV or VCR and you have great audio throughout the system. The unique mounting system for the waterproof display accommodates Panel, Pod or bracket mounting.

for flush or bracket mounting

Features of MRD-70

STEREOS

- AM/FM, CD and MP3 compatible
- Supports XM (With IXM-10 Module)
- Waterproof design (Front panel IP65)
- 2 Auxiliary inputs
- 1 Auxiliary output Fixed Line output
- No-Skip CD/MP3 with 10 sec. delay

#### Features of RD-44 Remote Display

- Full control of audio functions and sources
- 32 character back lighted display
- Self dimming for night use
- Back lighted key pad
- Flush panel or gimbal bracket mount options
- Integral intercom with speaker
- Infrared remote control
- DIN cable connection for MRD-70 or MZ-100

#### See page 13 for configuration examples

### **Stereo Accessories**



#### RD-44 Remote Head

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 Intercom volume on the between the vessel's audio zones.



#### **RT-20 Router**

Connection module for expanding the MRD-70 or RD-44 to multi zones. The watertight DIN connectors are easy to connect. Just plug and play up to 3 additional zones. This Module also supports the Master zone.

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IP-100 Interface for iPod®

An all-in-one solution designed to interface an iPod with a PolyPlanar MRD-60 or MRD-70 Stereo. This unique device allows full track-up, track-down, FFWD and RRWD control of an iPod directly from the stereo or remote, just like a factory CD changer. (iPod not included).



Convenient front

panel CD loading.

Innovative Waterproof

"pull-thru" end connectors

Completely Waterproof

Extension Cables for MRD-70 Allows the remote installation

of RD-44 heads, up to 60' from the MRD-70 source. Features waterproof connectors with our exclusive "pull-thru" caps.

10' – ICC-10 20' – ICC-20 60' – ICC-60



#### MRD-60 AM/FM/CD Watertight Receiver

The MRD-60 AM/FM/CD is designed exclusively for the marine environment. From the watertight faceplate to the custom equalizer designed specifically for boats, this high power receiver is loaded with features to enhance your listening and boating experience. Convenient front panel controls, a large display that can be viewed even in direct sunlight. High-power, distortion-limiting amplifiers make this an outstanding Marine Audio System. A unique feature of the MRD-60 AM/FM/CD is the expansion port. It allows you to upgrade your system, without buying a whole new one. The Poly-Planar Expansion Port enables you to add additional features and future enhancements.

- Designed for the marine environment
- Includes Controller for CD changer • Waterproof flip down faceplate - no
- need for a splash cover
- Custom equalizer optimizes sound for boat acoustics
- Convenient front panel control
- Patented waterproof volume control knob
- Proprietary circuits prevent distortion at high volumes
- Dynamic loudness automatically adjusts bass level
- 18 FM and 12 AM Presets

- 180 Watts Total Power (4 x 45 Watts)
- Expansion Port supports custom systems and future enhancements
- All electronic circuits conformal coated for reliable performance in the marine environment
- Shock-resistant CD mechanism • US/Europe switchable tuner frequencies
- Hard wired and wireless remote available
- Fits standard DIN cutout

## MRR-2 Wireless Infrared Remote

The MRR-2, Wireless Infrared Remote gives you the freedom to control your Poly-Planar System from any area of your boat. This small, floating remote comes with an attached lanyard and a convenient storage hook (3"x4.5"x.75").



## MCD-6 CD Changer

The MCD-6 CD Changer holds six of your favorite CDs for your uninterrupted listening pleasure. And with the shock resistant CD mechanism you can still hear your favorite music even while crashing the big ones.









#### MRR-7 Volume Control and Remote Intercom The MRR-7 Wired Remote Keypad offers Multi-Zone

Volume Control combined with an intercom that enables you to communicate with people in other areas of the boat. Requires an IMR-2 interface shown below.



#### IMR-2 Remote Interface Module

Connects up to two remote keypads (MRR-7) to your Marine Audio Center with Expansion Port.



#### IMR-4 Auxiliary Input/ Output Interface Module

Connects a TV, VCR, CD player , VHF radio, DVD or portable MP3 player to your Marine Audio Center with Expansion

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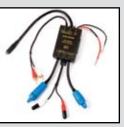
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Port. It provides output for an external subwoofer or loudspeakers, and a separate audio zone with independent volume (For use only with MRD-60 Stereo).



#### IXM-10 Interface

XM Radio Interface module for MRD-70 system. Controls your XM receiver from the RD-44 Display (Requires customer supplied XM Tuner and antenna)





#### WC-70 Weather Cover

Protect your Marine Audio Center from damage and exposure to the elements without overheating with a Weather Cover. This watertight gimbalmounted cover is designed to fit above your dash or under your electronics box . Available in black or white. (For use only with MRD-60 Stereo).

See page 12 for more accessories.



# Setting the standard for Marine Audio Systems

#### **Marine-Grade Amplifiers**

Poly-Planar Marine Amplifiers are waterproof (IP65) units designed for harsh marine environments. These amplifiers can be used as stand alone units or as part of an expansion system.

#### **ME-400** Amplifier

The ME-400 is a high power 4 channel (Bridgeable) marine amplifier designed to power the most demanding systems. Features include:

- MOSFET Switches and power supply for low noise and reliability
- Adjustable level input, high and low pass filters
- Variable bass boost circuit
- Integral protection for thermal overload, short and reverse polarity
- Gold plated connections for corrosion resistance

#### **MZ-100 DSP Amplifier**

The MZ-100 is a 4 channel 100 watt amp that uses digital signal processing. This unique feature allows multiple EQ settings as well as system integration with the RD-44 and MRD-70. Features include:

- 8 preset equalization settings for application configuration
- 4 channel output can power up to 4 speakers and 1 subwoofer
- DIN cable inputs for connection to RD44 direct or MRD-70 system
- Separate waterproof volume control.
- 1 Auxiliary input (RCA Type)

#### **ME-50 Expansion Amplifier**

ME-50 Expansion Amplifier The ME-50 is a compact 2-channel 50-watt audio amplifier with separate volume control. This unit is designed for adding additional speakers to an existing system or as a separate Zone amp.

Features include:

- Accepts line level or speaker level inputs
- Powers up to 4, 4 Ohm speakers.
- Separate waterproof Volume control (10 ft lead)

#### **MP3-KIT A**

A waterproof, entry level MP3 player based sound system kit for small craft & off road vehicles. Easily installed where space is a premium, this kit was designed for yacht tenders, flats boats, and other small craft. Also a perfect solution for Motorcycles, ATV's and Golf carts. Kit includes:

- ME-50 50 watt waterproof Amplifier with separate panel mount waterproof volume control
- IC3.5-PM Panel mount 3.5mm MP3 connector for IPod or other MP3 players
- MA-4055 5" coaxial waterproof speakers with speaker wires included.



#### MS-55 Compact Box Subwoofer

The MS-55 subwoofer is a compact, high efficiency bass enclosure optimized for marine applications. It's small size enables it to be easily mounted below seats, under the gunwale area, behind the instrument panel, or any convenient location. The MS-55 is a self contained bass unit requiring no cutting of panels or holes in the boat interior. It produces solid, deep bass extending down to 40Hz and is the perfect addition to any audio system.



MS-551 includes ME-51 Amplifier

#### MS-250 Panel Mount Subwoofer

The MS-250 is a powered 10" subwoofer capable of delivering a true 50 watts RMS of bass power to compliment any serious audio system. Easy to install, the amplifier may be conveniently mounted remotely or directly onto the back of the speaker. Since it has its own amp, it won't drain power from the primary system. (For Subwoofer without amplifier, order MS-150).

#### MA-3013 Speakers



- 3" Cone
- 60 watt, Flush Mount, Midrange Speaker
- White or Metallic Gray
- Low Magnetic Field
- Waterproof construction throughout.
- Powder coated aluminum grill.
- Mounting Hardware & Speaker Wire Included
- Quick Connect Terminals
- See pages 14-15 for specifications.

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AMPLIFIERS

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3-1/2"

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Features:

- Dual Voicecoil, high-excursion, 5.25" woofer
- High density, UV stable enclosure
- Water resistant
- Bass-reflex, high-efficiency acoustic design
- Side vented output ports
- Compact size and molded-in mounts provide for convenient installation nearly anywhere.
- Acoustically matched for use with Poly-Planar ME-51, MZ-100 and ME-400 amplifiers or can be used with any amplifier 25 - 100 watts.
- Specifications:
- • Speaker Impedance . . . . . 4 ohm x 2 inputs • Frequency Range . . . . . . . 40 Hz - 300 Hz Length - 11.8" (300mm)
  - Height 4.75" (120mm)



Compact Box Speakers - MA-3030



- Completely Waterproof
- Powder coated stainless bracket
- Gold-plated Binding Posts
- Powder coated aluminum grill.
- Mounting hardware and speaker wire included.
- 3" 60 watt, 2-way box speaker
- Available in White or Metallic Gray



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# Platinumeries

### HIGH POWER, HIGH PERFORMANCE MARINE SPEAKERS

Platinum Series speakers are high-powered performers that offer superior sound for discriminating listeners who demand the very best quality audio. They are the first truly waterproof, full-range marine speakers to offer the performance of a home stereo system.

Constructed to withstand the most severe effects of sun and saltwater, Platinum speakers are ideal replacement or upgrade speakers for those who want increased audio power, smooth response and minimum distortion.

With a sleek, contemporary style that is beautifully proportioned and meticulously finished, Platinum Series speakers complement any salon, stateroom or above-deck mounting. Aluminum grills, coated internal wires, polypropylene cones and mylar tweeters assure you of long-lasting performance and good looks.

These speakers are guaranteed to provide the bestsounding marine audio in their class.

#### Platinum Oval - MA-6900

Performance Advantage The MA-6900 three-way speaker is designed to deliver your favorite music with a peak power capability of 400 watts/pair.

#### Platinum Panel - MA-5500

Low Magnetic Field

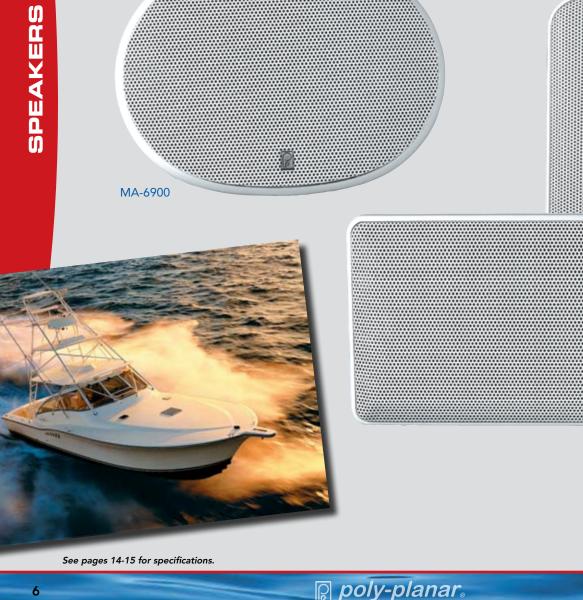
These low magnetic field three-way speakers have a unique dual woofer design that handles up to 240 watts/pair. The perfect upgrade for the popular Slim Line Speakers.

#### Platinum Panel - MA-905

Big Sound from Small Speakers The MA-905 panel speakers feature a shallow 1" mounting depth for those tight places. The two-way speakers handle peak power of 400 watts/pair. Available in black and white.

# **Platinum Round**





Rugged and reliable speakers for the world's most demanding environment!



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#### **Premium Round** MA-5104, MA-5106, MA-5107

Low Magnetic Field, Three Sizes Available

These two way mid power speakers are ideal for high power stereos or mid power amplifiers. They feature powder coated aluminum grills and a power handling capability of 140 watts/pair. Available in 5-1/2", 7" or 8-1/2".



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## Premium Oval - MA-5950

Low Magnetic field Medium powered three-way speakers designed for full range sound capability. Maximum peak power 160 watts/pair. Fits most 6" x 9" speaker cutouts.

#### Premium Panel - MA-7060

**Contemporary Design** These easy-to-mount two-way, panel speakers have a low mounting profile of only 3/4 inch with clean, contemporary styling. Power handling capability is 280 watts/pair.



The Titanium Series are waterproof, ultra low magnetic field 200 watt/pr. speaker is available in white or black color to compliment the exterior or interior of any yacht. These three way speakers are perfect for replacement or upgrade of existing speakers and the magnets will not interfere with navigation equipment.



#### Premium Enclosed Flush - MA-1610

Low Magnetic Field

These 5-1/4" two-way speakers can be conveniently used as freestanding enclosed speakers or simply remove the back covers and mount flush. Peak power 140 watts/pair.



photo courtesy Hatteras Yacht



MA-8505 - 5" Speakers MA-8506 - 6" Speakers

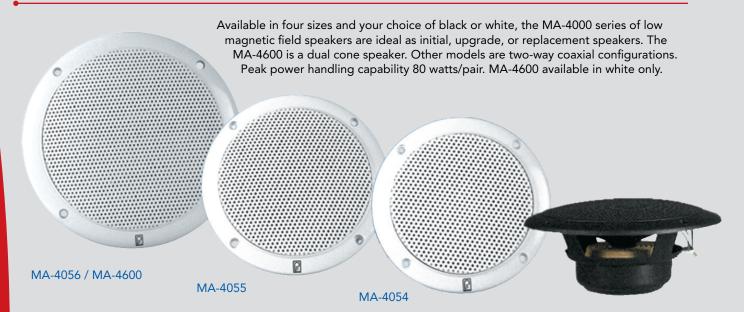
#### Features:

- 5" or 6"
- Colorfast plastic frame withstands UV rays.
- Anti-magnetic design
- Waterproof construction throughout.
- Rugged powder coated aluminum grill.
- 3-way design with mylar tweeter & midrange.
- Available in Black & White.

# **Performance**Series

### MID-POWER BASIC DESIGN MARINE SPEAKERS

#### Integral Grill Speakers - MA-4600, MA-4055, MA-4056



#### **Infrared Remote Speakers**

Poly-Planar's Integral Grill Speakers are also available in Infrared Remote models that lets you control the volume, the source, the station—even the power—of your audio center by pointing a handheld remote control directly at the speaker. Control the sound from the cockpit or another cabin, while your audio center remains protected below deck. No need to go below to change the station, mute the sound so you can take a call on your VHF, or cue up your favorite CDs. You can even power down from the dock as you leave the boat. Specify 'RC' after above part #s for remote versions (available in white only).





Gunwale Mount Speaker - MA-9020

Low Magnetic Field Mount these full-sized speakers out of the way under the gunwale, where they're protected from the elements, yet close enough to deliver rich, full sound. The molded, one-piece plastic grill protects the speaker components from splash and spray. The two-way vented port design offers full range response. Peak power 200 watts /pair.

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photo courtesy Hatteras Yacht

### Rugged and reliable speakers for the world's most demanding environment!

#### Box Speakers - MA-9060

Low magnetic field, full range, bass reflex box speakers offer top quality sound. Will handle 200 watts/pair. Gimbal mounting bracket included. Available in black and white.

#### Compact Box Speakers - MA-7500

Contemporary design, low magnetic field, 100 watts/pair. The MA-7500 offers good sound in those locations where the MA-9060 will not fit. Bracket included. Available in black and white.



#### Compact Box Speakers - MA-800

Low Magnetic Field

Two-way bass reflex box speakers. Will handle 100 watts/pair. Stainless steel gimble bracket included. Available in black and white.

#### Subcompact Box Speakers - MA-840

Ideal for locations where other speakers won't fit. Only 4" x 4". Speakers feature low magnetic field and will handle 80 watts/pair. Stainless steel grill and bracket. Available in black and white.

See pages 14-15 for specifications.



SPEAKERS



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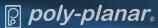


photo courtesy Southport Boatwo

#### Stereo Enclosures

Protect your stereo from the harsh marine environment. These gasketed covers are designed to keep moisture away from your stereo. All accommodate dual post, removable and DIN-style stereos. The WC-700 Housing includes two 3" integrated waterproof speakers. (Stereos not included).











WC-400W



#### Pivot Mount - M-1

Conveniently changes the angle of your stereo speaker. Fits Poly-Planar box speakers - MA-9060, MA-800, MA-7500 and MA-1610. Also convenient for marina, dock and home installations.



IC-3.5PM MP3 Adapter

The IC-3.5PM allows you to connect your MP3 player, iPod® or satellite radio to any audio device with RCA inputs. It features a waterproof panel/dash mount with rubber cover and a 4' extension cable. Also included is a 4' patch cord for connecting MP3 player to adapter plug.





#### VHF Extension Speakers

No more missed calls! These waterproof communication speakers can be mounted where you can hear your VHF radiotelephone. Available in surface or flush mount and in black or white.



Surface Mount - MB-41 See pages 14-15 for specifications.



Surface Mount - MB-21



**Extension Speaker MA-1000R** 

#### Stereo Installation Considerations

Give your stereo some air. Properly installed, your stereo will be well ventilated so the heat sink can dissipate heat into the surrounding air. Make sure the unit is properly sealed to the dash so water cannot leak into the chassis or the connectors behind the dash. Pay particular attention if your unit is mounted below instrument gauges, as they are a common source of leaks. Always keep the front panel firmly closed. Use only UL-approved power connections and fuses with the proper ratings. The yellow memory B+ requires a 1A fuse (supplied); the red ACC line requires a 10A fuse (supplied).

The built-in audio Expansion Port on the MRD-60 is designed to allow you to easily upgrade your Marine Audio Center. To increase the functionality of your system, you can add interface cards (IMR-4 or IMR-2) to allow the addition of optional accessories, such as remote controls, MP3, CD disc changers, iPod adapters, subwoofer amplifiers, boosters, zone expansion amplifiers, etc.

#### Speaker Installation Considerations

Speakers are directional—point them at your ears. When mounting, consider where your ears will be when listening, and point the speakers' central axis in that direction.

Don't choke your sound. Flush-mount speakers need air behind them. More air is better. Allow at least one cubic foot of air behind your speakers so as not to compromise the bass response.

Separate the air in front of the speaker from the air behind it. If there is no baffle (wall) separating the front of the speaker from the back, the positive air pressure at the front of the cone will rush around to fill in the vacuum behind the cone, instead of reaching your ears, which dramatically reduces bass response. This "free air response" explains why unmounted speakers may sound "tinny."

Don't blow your speakers. Make sure your speakers can handle more power than your stereo can produce. The power specification on a stereo is the maximum amount of power the stereo will produce. The power specification on a speaker is the maximum amount of power the speaker can handle. If the stereo can produce more power than the speakers can handle, you may blow your speakers at high volume. Use RMS power for comparison purposes. Compare the per channel power of the stereo with the per speaker power of the speakers. You cannot gain sound quality by increasing the maximum power handling of your speakers. A one-watt signal will not sound any better on 100-watt speakers than it will on 10-watt speakers. Use proper wiring. Use 18-gauge wire to connect your stereo to your speakers. Doorbell wire works well, it's inexpensive, comes in pairs, and isn't stranded, so there's less surface area to corrode. Seal all wires between the insulation and soldered area. Make sure positive terminals on speakers are matched with the positive side of the stereo output.

#### **MRD-70 Stereo Installation Configuration Examples**

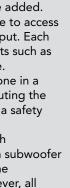
#### Basic MRD-70 System, Single Zone



The MRD-70 can be configured as a single zone or up to 3 additional zones can be added. This will allow each cabin or bridge zone to access the master receiver or use local zone input. Each zone has separate volume control. Inputs such as iPod®, PC, and TV/DVD are all possible.

The innovative intercom allows anyone in a zone to call all the other zones while muting the stereo. This is both a convenience and a safety feature.

With an MZ-100 as the base for each expansion zone, up to 4 speakers and a subwoofer can be installed in each zone. Each zone must be supplied with 12v power, however, all communication between zones is accomplished using a single cable through the RT-20 Router.

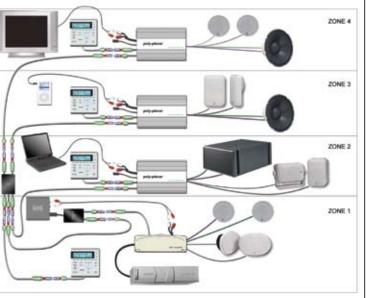


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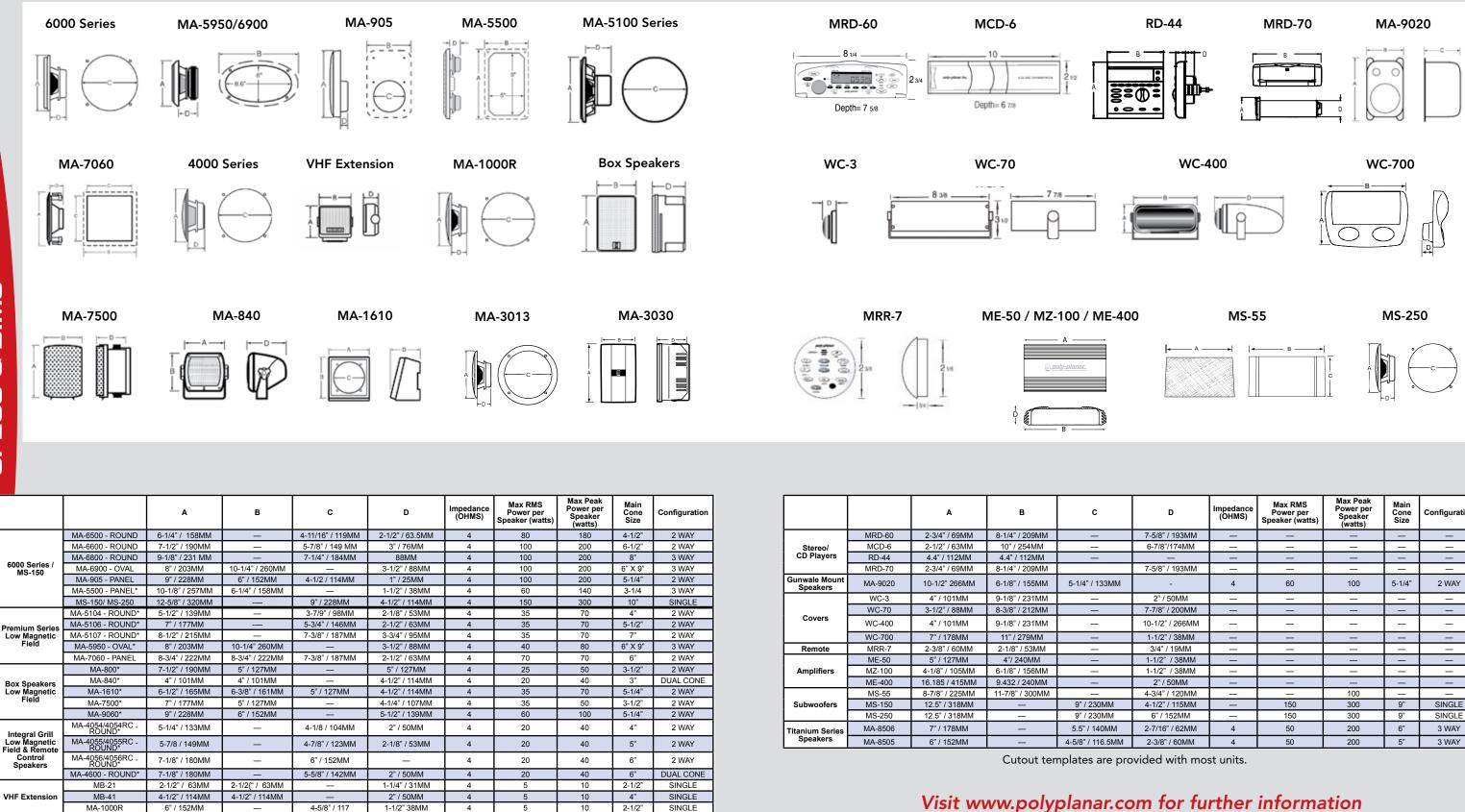
Multi-Zone System using RT-20 Router







## **Specifications and Installation Dimensions**



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Componen Speakers

MA-3013

MA-3030

3-1/2" / 90MM

6-1/4" / 160MM

3-7/8" / 98MM

3" / 75MM

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40

4

4

4-3/4" / 120MM

60

60

3"

1"

2 WAY

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	D	Impedance (OHMS)	Max RMS Power per Speaker (watts)	Max Peak Power per Speaker (watts)	Main Cone Size	Configuration
	7-5/8" / 193MM		_	_	_	_
	6-7/8"/174MM		_	_	_	_
	_	_	—	_	—	_
	7-5/8" / 193MM	_	—	_	_	_
1M	-	4	60	100	5-1/4"	2 WAY
	2" / 50MM	_	—	—	-	_
	7-7/8" / 200MM	_	_	_	_	_
	10-1/2" / 266MM	_	—	_	_	-
	1-1/2" / 38MM	—	—	—	—	_
	3/4" / 19MM	_	_	_	_	_
	1-1/2" / 38MM	_	_	_	—	_
	1-1/2" / 38MM	-	—	_		—
	2" / 50MM	_	_	_	_	_
	4-3/4" / 120MM	_	_	100	_	_
1	4-1/2" / 115MM	-	150	300	9"	SINGLE
1	6" / 152MM	-	150	300	9"	SINGLE
N	2-7/16" / 62MM	4	50	200	6"	3 WAY
MM	2-3/8" / 60MM	4	50	200	5"	3 WAY







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