

Monitor Series

■ Careful acoustic design and the use of advanced materials contribute to the exceptional music fidelity and speech intelligibility exhibited by the Mackie Industrial MR4/4T (black) and MR4W/4WT (white) two-way speaker systems.

■ The low-frequency driver's carbon fiber diaphragm remains extremely rigid at high power levels, producing a more linear response and lower distortion. The cone is fitted with a durable foam surround and treated to resist moisture. The high-frequency section features a constant directivity horn with a built-in mechanical phase equalizer. The horn is driven by a Ferrofluid® cooled, 0.5" Mylar® dome tweeter.

■ The system is nominally crossed over at 4kHz by a 12 dB/octave network, which uses markedly lower (than conventional) inductance values in series with the woofer. This design reduces sound delays associated with high inductance values and provides excellent low frequency transient response. The high-pass section is corrected for optimum performance of the CD horn and is protected with a circuit based on a low-value/low-mass filament resistor that smoothly limits the power sent to the tweeter driver.

■ All components are housed in a vented enclosure formed from semi-expanded polystyrene foam that is extremely strong, lightweight and weather resistant. Threaded metal sockets are molded into the cabinet to facilitate quick, safe deployment of the MR4/4T, as a single unit or in arrays, using specially designed accessory mounting hardware.

■ The MR4/4T is a part of Mackie Industrial's Monitor Series, which includes two-way constant directivity, compact speakers in easily installed enclosures.

■ This Mackie Industrial product is covered by an exclusive, one-time, NO FAULT repair policy in addition to a five year limited warranty.

Compact Two-Way Speaker



Features

- 5" high-efficiency carbon fiber woofer CD horn loaded, 0.5" dome tweeter
- Built-in, multi-tap constant voltage transformer
- Built-in, LICC low inductance passive crossover with high frequency dynamic protection
- Lightweight, UV/weather resistant, high density polystyrene, trapezoidal shaped enclosure for multiple applications and minimum visual intrusion
- Articulated surface mount hardware (MA3-5, black, or MA3-5W, white) included
- Integrated mounting points for use with optional mounting hardware
- Exclusive Mackie Industrial — one-time, NO FAULT repair policy
- Five year limited warranty

- Foreground/Background Music
- Distributed Speech Reinforcement
- AV Production/Playback
- Near-field Monitoring

MR4/4T Compact Two-Way Speaker

Specifications

System

Freq. Range (-10 dB):	75Hz-21kHz
Freq. Response (-3 dB):	160Hz-18kHz
Horz. Coverage Angle (-6 dB):	120° averaged 800Hz to 16kHz
Vert. Coverage Angle (-6 dB):	100° averaged 800Hz to 16kHz
Directivity Factor; Q (DI):	5.6 (7.5) averaged 800Hz to 16kHz
System Sensitivity ¹ :	88 dB, 1W @ 1m
Rated Maximum SPL:	109 dB, @ 1m
System Input Power Rating ² :	60W IEC, 240W Peak
System Nominal Impedance:	4Ω (bypassed)
Recommended Amplifier ³ :	250W
Constant Voltage:	25V, 50V, 70V, 100V
Power Taps:	1W, 5W, 10W, 20W, 30W
Crossover:	4kHz

Transducers

Low-Frequency:	5" (130mm) carbon fiber woofer
High-Frequency:	Horn loaded 0.5" (12.7mm) dome tweeter, ferrofluid cooled

Physical

Enclosure:	45° back angles, high density polystyrene
Attachment Inserts:	2 points M6 threaded on back 2 points 3/8" threaded on top and bottom
Color:	Matte black, white (MR4WT), scratch resistant paint
Grille:	Matching perforated steel grille
Input Connectors:	Push connector plate
Dimensions (HxWxD):	10.32" x 7.17" x 6.57" (262mm x 182mm x 167mm)
Net Weight:	6.6 lb. (3 kg)

Options

MA 5-6	Plate for suspending 4 clustered speakers, black
MA 5-7	Speaker tilt bracket for MA 5-6, black
MA 5-9, MA 5-9W	U-bracket, black (W-white)
MA-7B, MA-7W	Wall-mount support bracket (B-black, W-white)

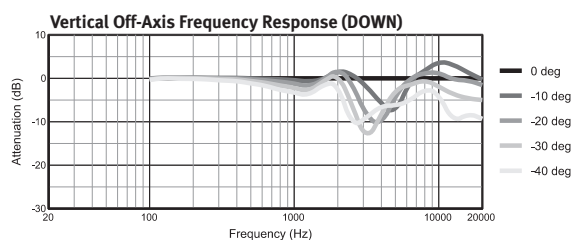
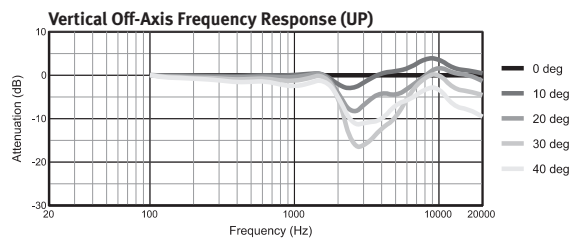
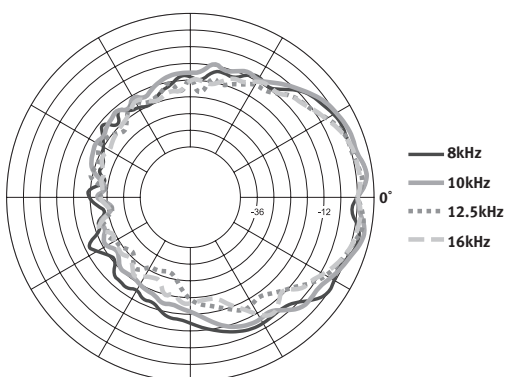
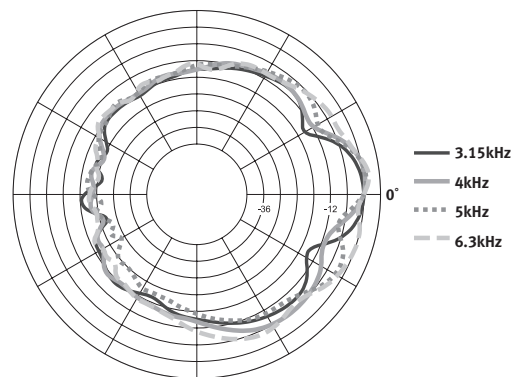
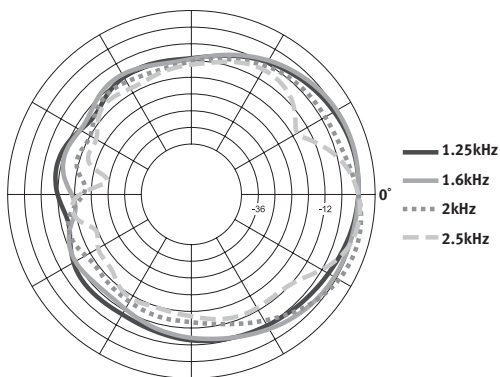
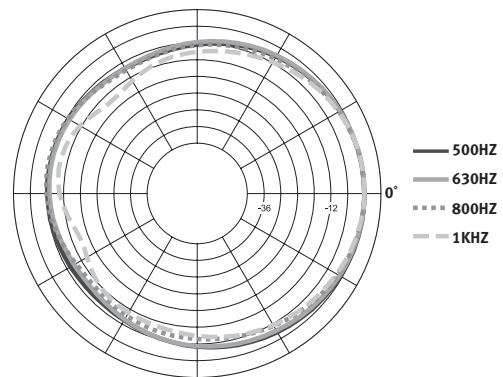
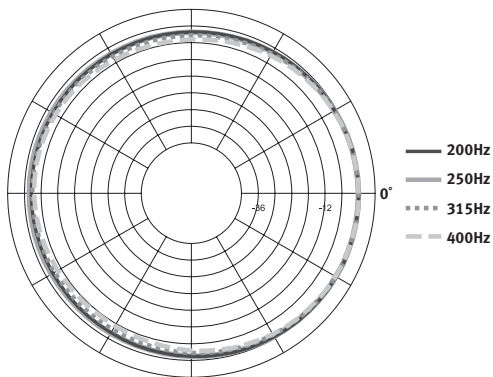
¹ Measured on axis in the far field with 1 watt (2.00 V RMS, 4) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300Hz to 3 kHz.

² IEC Spectrum, Peak for 2 hours with +4.5 dB crest factor.

³ Recommended Amplifier is a power capability value that should be taken as a guide.

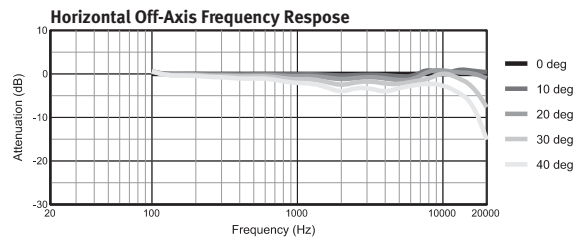
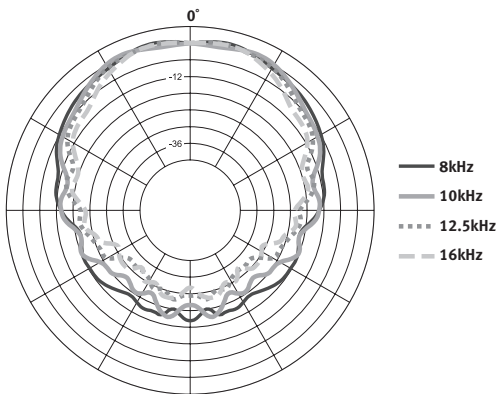
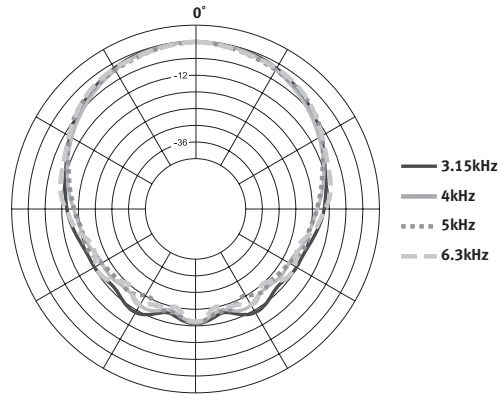
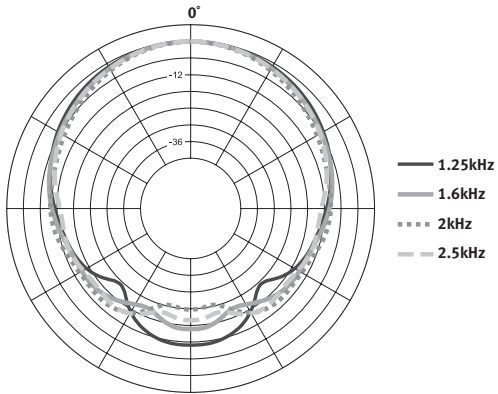
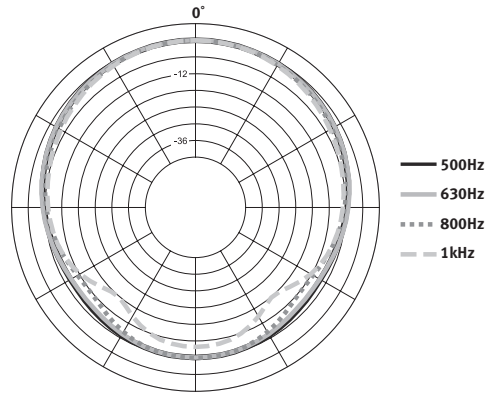
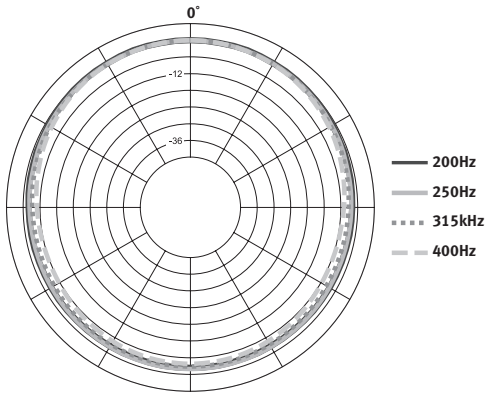
MR4/4T Compact Two-Way Speaker

Monitor 4/4T Vertical Polars



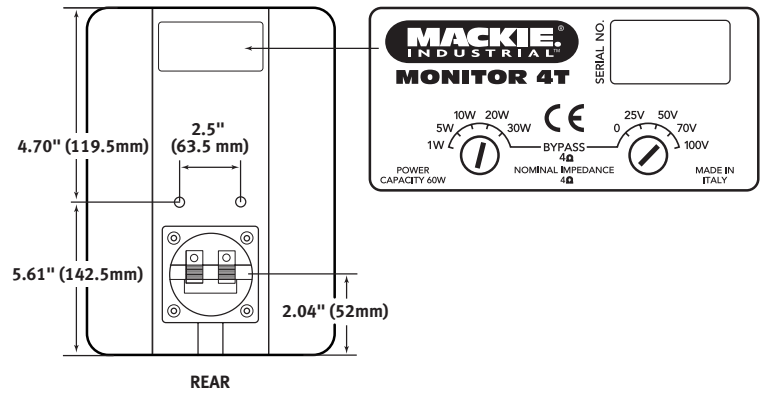
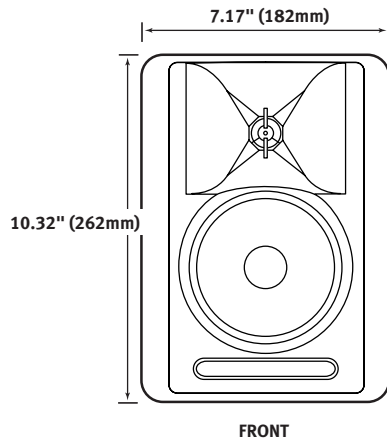
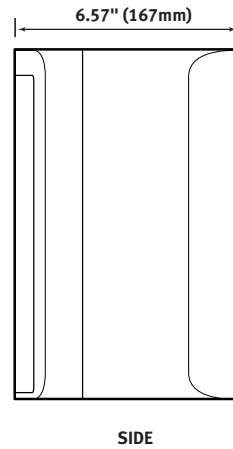
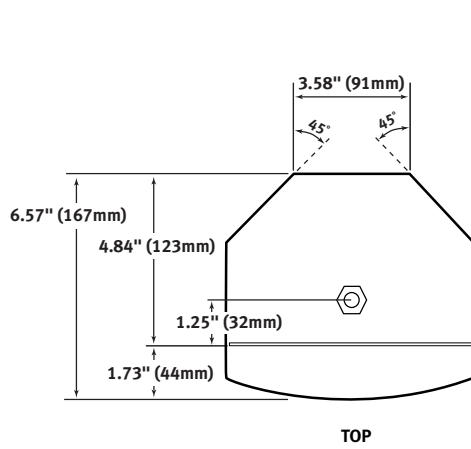
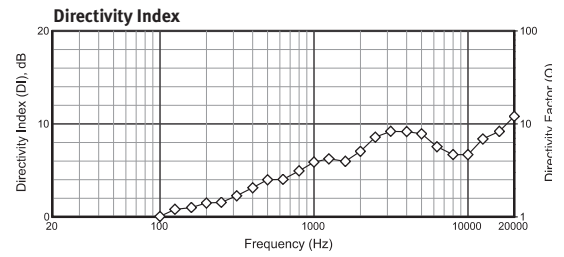
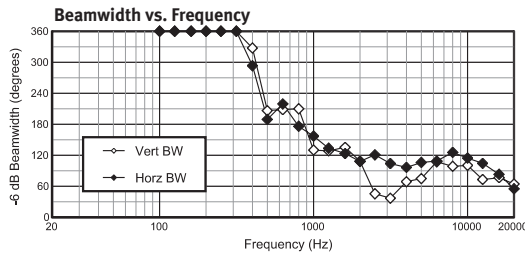
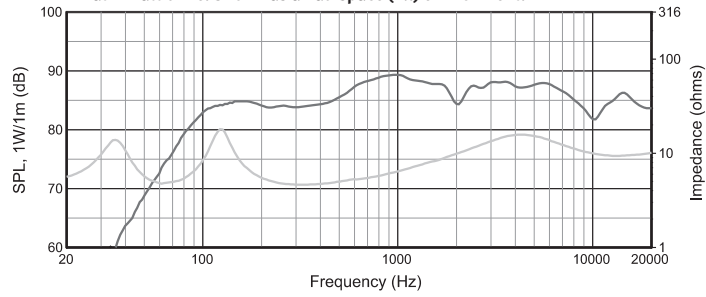
MR4/4T Compact Two-Way Speaker

Monitor 4/4T
Horizontal Polars



MR4/4T Compact Two-Way Speaker

Frequency response is measured on-axis at a distance referenced back to 1m at 1-watt drive. Shown as a half space (2π) environment.



MR4/4T Compact Two-Way Speaker

Architects' and Engineers' Specifications

The two-way loudspeaker system shall be self-contained and consist of the following components: (1) a low-frequency driver; (2) a constant directivity horn driven by a dome tweeter driver; (3) a two-way crossover network; (4) a constant voltage transformer; (5) a vented enclosure.

The low-frequency transducer shall be a cone type loudspeaker having a carbon fiber cone with a diameter of at least 5 inches (130mm). It shall present a nominal load impedance of 8 ohms to the crossover network.

The high-frequency section shall consist of a constant directivity horn driven by a Mylar[®] dome tweeter having a diameter of at least 0.5 inches (12.7mm). Its voice coil shall be treated with Ferrofluid[®] to aid in cooling. It shall present a nominal load impedance of 8 ohms to the crossover network.

The system shall be crossed over by an internal, high-level, passive network having a response of 12 dB/octave and equalization for the constant directivity horn. The nominal crossover frequency shall be 4kHz. The low-pass section of the network shall have minimum inductance in series with the low-frequency driver. A dynamic high-frequency protection circuit based on a low value, low mass filament resistor shall limit the current available to the high-frequency driver. The crossover network shall present a nominal 4-ohm load impedance to the power amplifier or built-in constant voltage transformer.

The constant voltage transformer shall have multiple power taps at 1, 5, 10, 20 and 30 Watts. It shall also have voltage taps at 25, 50, 70 and 100V. Two detented rotary switches shall be provided on the input panel to adjust the power and voltage taps of the transformer. The voltage tap switch shall have a position to bypass the transformer and allow the loudspeaker to present a 4-ohm load to a directly coupled power amplifier.

The enclosure shall be a vented design. It shall be constructed using high density polystyrene and finished with black (or white), scratch resistant paint. It shall be trapezoidal in shape with 45° angled sides. A full size, detachable, perforated steel grille, finished in black (or white) scratch resistant paint shall be provided. At least 4 reinforced threaded metal sockets (3/8" and M6) for attaching optional mounting hardware shall be provided. The overall dimensions of the enclosure shall not exceed (HxWxD) 10.32" x 7.17" x 6.57" (262mm x 182mm x 167mm). The total weight of the loudspeaker shall not exceed 6.6 lbs. (3 kg). Connections to the loudspeaker shall be two color-coded, spring-loaded push connectors.



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(continued Architects' & Engineers' Specs)

The loudspeaker system shall have an overall frequency response of at least 75Hz–21kHz when measured to –10 dB and at least 160Hz–18kHz when measured to –3 dB. It shall have a nominal average coverage pattern of at least 120° horizontal by 100° vertical to –6 dB when measured between 800Hz and 16kHz. Calculated 1W/1m sensitivity shall be at least 88 dB when measured in the far field between 300Hz and 3kHz. Maximum SPL shall be at least 109 dB at 1m. The loudspeaker shall be rated for continuous operation at 60W IEC with 240W peaks.

The two-way loudspeaker system shall be a model MR4T (MR4WT - white) manufactured by Mackie Industrial.

Electronic files for this product available at:
www.mackieindustrial.com

This Specification Sheet

MR4T.PDF

Quick-Start Manual

MR4TQS.PDF

Mackie Designs continually engages in research related to product improvement. New material, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current Mackie Industrial product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated. ©1999-2002 Mackie Designs Inc. All rights Reserved. Mackie and the "Running Man" symbol are registered trademarks of Mackie Designs Inc. Mackie Industrial is a trademark of Mackie Designs Inc.

part no. 910-192-10 Rev.C