

DML500

High output Distributed Mode Loudspeaker (DML)

Years of R&D birthed a new loudspeaker technology system integrators are now using to solve room problems old-school loudspeakers worsen.

The resulting DML500 eschews pumping focused air pressure waves that point-source cone loudspeakers employ to create ear-fatiguing sound.

Instead, non-destructive waves emerge wide and diffuse to more gently bathe the ear in pleasing, super-intelligible sound over almost eight octaves.

Even kinder on the ears: the DML500 measures 6dB lower despite perceived loudness equal to point-source.

Especially noticeable in highly reverberant spaces, DML sound waves provide non-destructive room interactions, so free of room echo and comb filtering that one customer referred to the intelligibility improvement over their old church system as “mind boggling.”

Floor-to-balcony, stereo-stable imaging in every seat is another performance “wow,” making the DML500 the top choice for immersive audio.

Superb power handling plus 165° conical coverage allowed an American airport to replace 104 traditional speakers with six DML flat panels.

Unmatched placement flexibility also optimizes aesthetic choices and quicker installations.

Rugged construction includes a powder coated die cast aluminum enclosure with multiple VESA mounting points.

Applications

- Churches
- Educational facilities
- Gymnasiums
- Airports and transit
- Performing arts centers
- Government facilities
- Portable audio systems
- Immersive venues



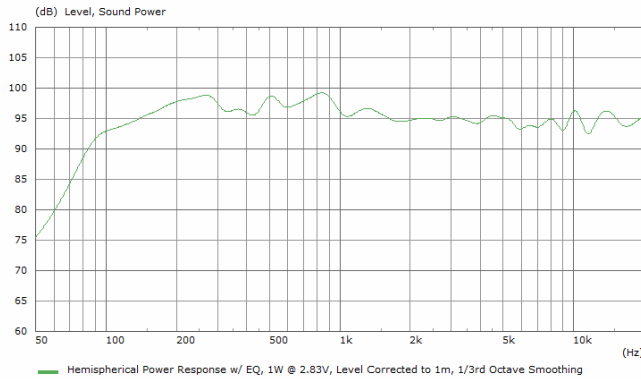
DML500 specifications	
Frequency range (–10dB)	75Hz-20kHz
Frequency response (±6dB)	85Hz-20kHz
Horizontal/vertical coverage	165°
System sensitivity	92 dB
Rated maximum SPL	SPL 123 dB
System nominal impedance	8 ohms
Power handling	
Continuous / program / peak	200W/300W/600W
Suggested high pass filter	90Hz Butterworth 2nd order
Drivers	
FlatPanel transducer	4 x DML exciter
Voice coil diameter	32 mm
Voice coil winding wire	Copper-clad aluminum
Suspension design	Standard spider
Diaphragm design	
Design principle	Bending wave modal
Radiator surface area	400 x 575 mm
Material	Carbon fiber honeycomb
Input connection	Neutrik Speakon® NL4 +1 /–1 Input, +2 /–2 Loop out
Physical	
Outer dimensions (H x W x D)	21.6 in x 31.5 in x 3.5 in 550 mm x 800 mm x 90 mm
Outer frame	4 x MB 15.5 in x 19.13 in 395 mm x 486.5 mm
Rear grill	4 x MB 9.13 in x 7.95 in 292 mm x 202 mm
Weight	44 lbs / 20.3 kg
Shipping dimensions	27 in x 37 in x 8 in 650 mm x 800 mm x 250 mm
Shipping weight	51 lbs / 23.2 kg

FlatPanel Audio continually engages in research related to product improvement. Specifications are subject to change without notification.

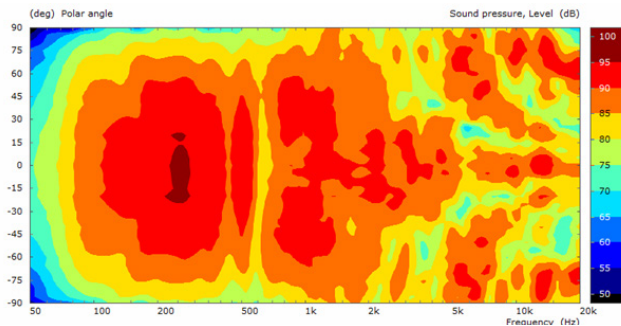
DML500

Hemispherical power response

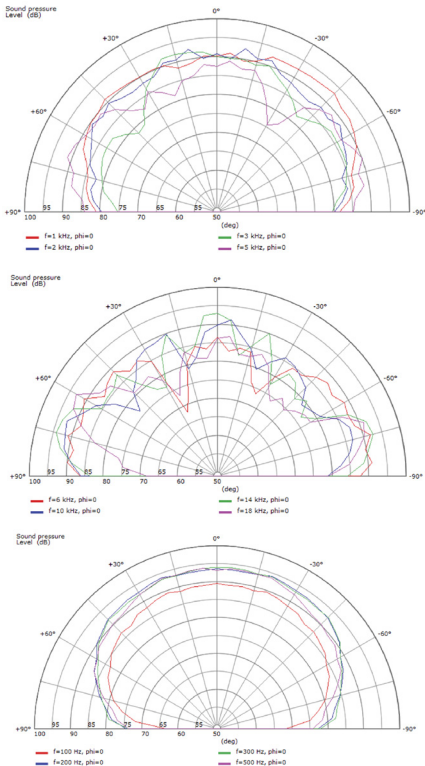
Due to the modal nature of DML loudspeakers, the best way to represent their acoustic characteristics is to measure their power response. Measurements are made at 5° intervals in both the vertical and horizontal axes, and averaging a total of 1349 measurements.



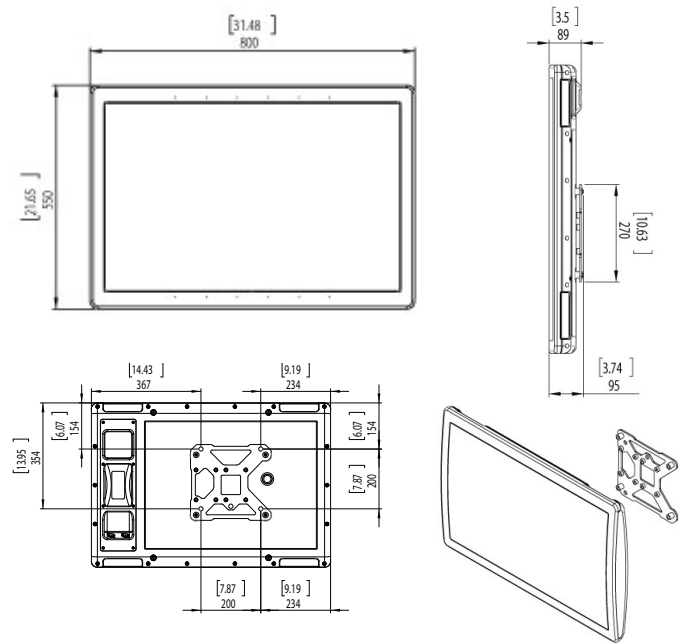
Hemispherical contour plot



Polar plots



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Accessories

The DML500 includes an integrated VESA mount with a 200 x 200 mounting pattern suitable for M8 bolts. More information about mounting accessories and hardware is provided in the installation documentation.

Recommended filtering/crossover

The following are the initial recommended acoustic filters as implemented in all DML acoustic measurements. They also represent an EQ starting point for all field applications.

High Pass - Butterworth 4th order (24 dB) @ 90Hz

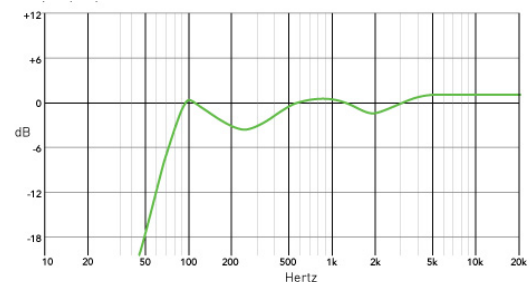
Peaking Filter - 95Hz / Q of 3 / Gain of 3 dB

Peaking Filter - 265Hz / Q of 0.7 / Gain of -4 dB

High Shelving Filter - 400Hz / Q of 0.5 / Gain of 2 dB

Peaking Filter - 2800Hz / Q of 0.9 / Gain of -3 dB

Frequency response



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