FlatPanel Audio

DML500A

High output Distributed Mode Loudspeaker (DML) for architectural applications

Designed for architects, the thin design of the DML500A affords flush mounting in walls and ceilings.

System integrators are specifying this radically different technology to solve room problems old-school loudspeakers worsen.

How different? The DML500A eschews pumping focused air pressure waves traditional 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.

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 DML500A the top choice for immersive audio. Superb power handling plus 165° conical coverage allowed an American airport to replace 104 traditional speakers with six DML500A loudspeakers.

Unmatched placement flexibility also optimizes aesthetic choices and quicker installations. Rugged construction includes a powder coated die cast aluminum frame with multiple mounting points. 200x200 VESA adapter is available for purchase separately.

DML500A is designed for custom integration into existing structures or architecture. If the desired mounting location is where it might easily be impacted by foreign objects, the carbon-fiber/Nomex panel of the DML could be damaged. In these cases, consider adding a rigid grille to the DML500A or using the DML500 instead.

A is for Architect

Airports and transit
Restaurants
Luxury home theaters
High end retail
Immersive venues
Museums

DML500A 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	Pigtail 14 AWG
Physical	
Outer dimensions (H x W x D)	17.2 in x 23.4 in x 2.2 in 437 mm x 596 mm x 56 mm
Weight	17 lbs / 7.72 kg
Shipping dimensions	37 in x 27 in x 8 in 650 mm x 800 mm x 250 mm
Shipping weight	23 lbs / 10.45 kg

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

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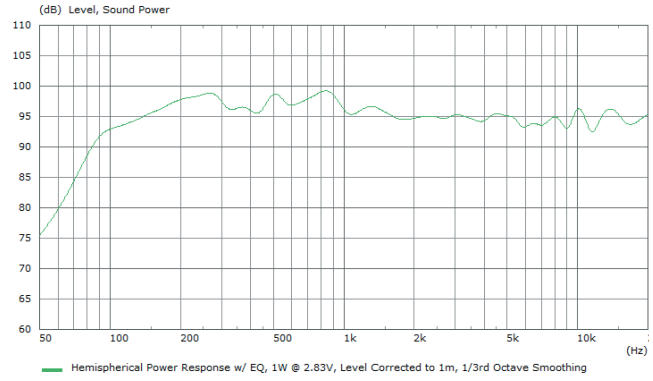
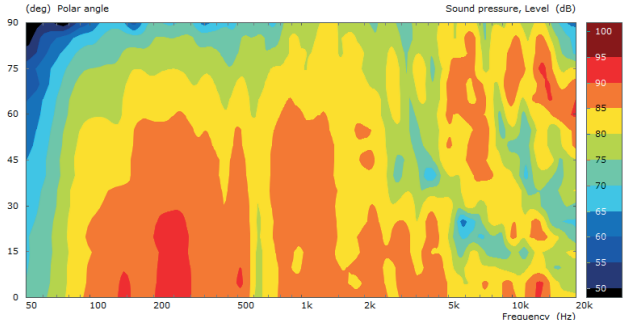
Hemispherical power response

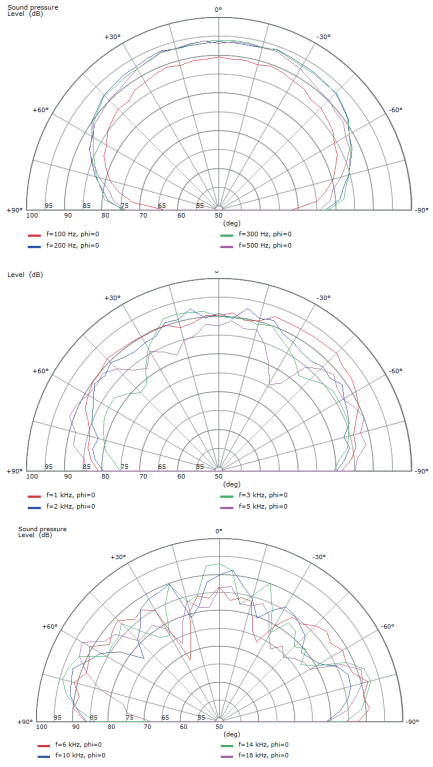
Due to the modal nature of DML loudspeakers, the best way to represent their acoustic characteristics is to measure their power response. Measurements are made at 5° intervals in both the vertical and horizontal axes, and averaging a total of 1349 measurements.

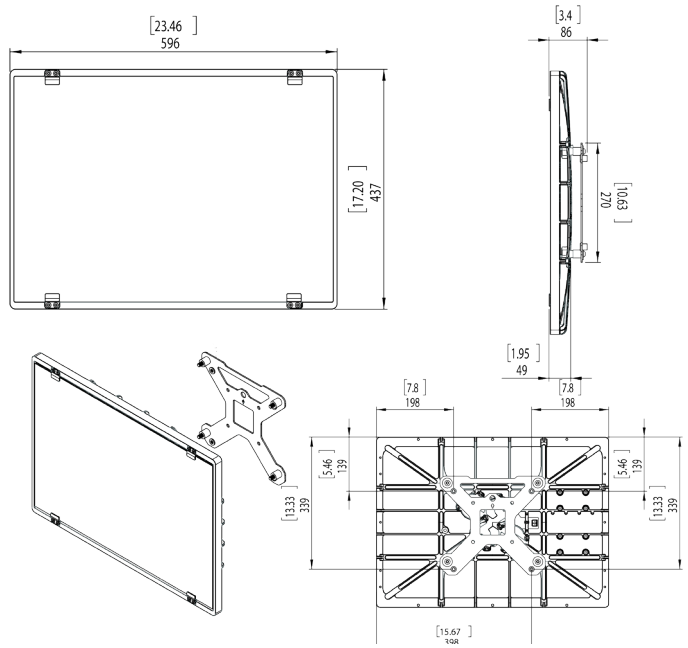


Hemispherical contour plot



Polar plots





Accessories

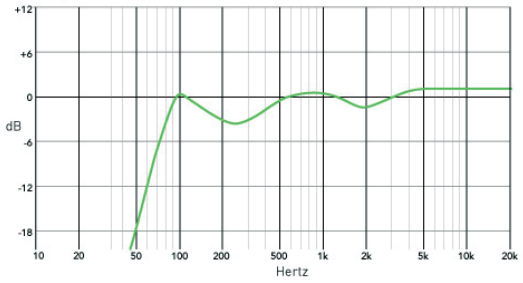
If attachment to a VESA mount accessory with specific 200mm x 200mm pattern is required, we offer a VESA adapter (sold separately). Other mounting options are described in our Rigging Guide.

Recommended filtering/crossover

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

High Pass - Butterworth 4th order (24 dB) @ 100Hz
Peaking Filter - 95Hz / Q of 3 /Gain of 3 dB
Peaking Filter - 265Hz / Q of 0.7 / Gain of -4 dB
Peaking Filter - 500Hz / Q of 0.7 / Gain of 2 dB
HF Shelving Filter - 4000Hz / Q of 1.0 / Gain of 2 dB

Frequency response



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