

Features:

- High output distributed mode loudspeaker
- Large format carbon fiber acoustic panel
- Four high power exciter motor structures
- Operates on bending wave physics principles providing excellent diffuse acoustic performance and high intelligibility in challenging architectural environments
- Highly durable aluminum frame structure with multiple attachment points for ultimate flexibility and strength
- Integrated multi use hardware with VESA mounting pattern

Applications:

- Houses of Worship
- Performing Arts Centers
- Sports Facilities
- Airports
- Retail Spaces
- Educational and Conferencing Facilities
- Portable Audio Systems

The DML500 is a versatile sound reinforcement loudspeaker system housed in a unique, slim line aluminum enclosure.

The DML500 delivers highly intelligible and immersive audio performance in even the most challenging architectural environments. Bending wave technology provides diffuse loudspeaker behavior that generates 165° of wide band dispersion coverage and excellent results in the reverberant audio field.

The main acoustical element is constructed of a multilayer honeycomb carbon fiber panel. The panel is driven by four high power, neodymium motor structures with 32mm voice coils.

The resulting DML panel uses bending wave modal physics to radiate audio over almost eight octaves in a very wide audio band and with a very diffuse manner. These characteristics provide unparalleled audio performance when experienced in the reverberant audio field.

Additionally, the DML500 exhibits superb power response, which is the sum of the total radiated acoustic output of a loudspeaker as measured in a sphere around the speaker at incremental intervals on- and off-axis in the far (reverberant) field.

Excellent off-axis performance results in a loudspeaker that delivers excellent 165° coverage.

Rugged physical construction features a powder coated die cast aluminum enclosure with multiple mounting points with a flexible mounting bracket with standard VESA attachment points.



Specifications:

System

Frequency Range (-10dB)	75Hz-20kHz
Frequency Response (+/-6dB):	85Hz-20kHz
Horizontal/Vertical Coverage:	165 degrees
System Sensitivity:	91dB
Rated Maximum SPL:	120dB
System Nominal Impedance:	8 Ohms

Power Handling

(Continuous/program/Peak)	(200W/300W/400W)
Recommended High Pass Filter:	100Hz (Butterworth, 2nd Order)

Drivers

Flat Panel Transducer:	4 x DML Exciter
Voice Coil Diameter:	32mm
Voice Coil Winding Wire Material:	Copper Clad Aluminum
Suspension Design:	Standard spider

Diaphragm Design:

Design Principle :	Bending Wave Modal
Radiator Surface Area:	400 x 575mm
Material:	Carbon Fiber Honeycomb
Input Connectors:	Neutrik Speakon NL4 (+1/-1 Input) (+2/-2 Loop out)

Physical

Outer Dimensions (W x H x D):	800 x 550 x 90mm (31.5 x 21.6 x 3.5in)
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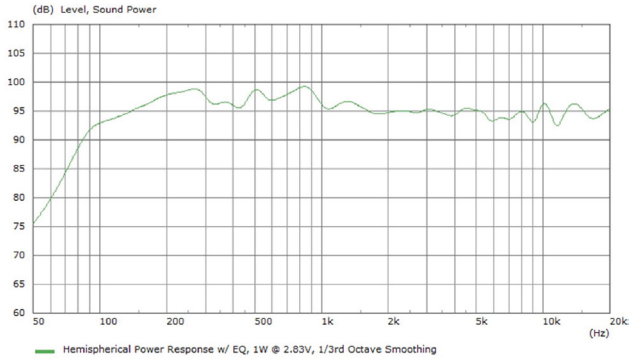
Suspension Attachment

Outer Frame:	4 x M8 (385 x 486mm) (15.15 x 19.13in)
Rear Grille :	4 x M8 (232 x 202mm) (9.13 x 7.95in)
Weight:	20.0kg (44lbs)
Shipping Dimensions:	940 x 686 x 203mm (37 x 27 x 8in)
Shipping Weight:	23.2 Kg (51lbs)

Tectonic Audio Labs continually engages in research related to product improvement. Specifications subject to change without notification

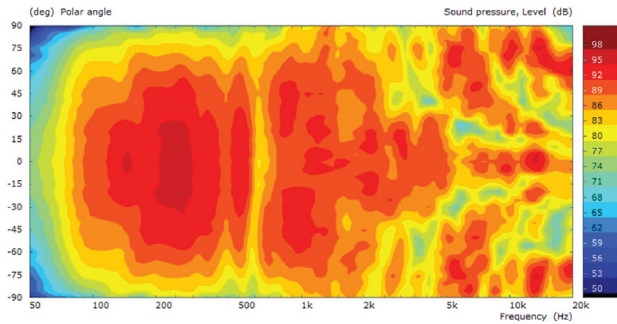
DML500 High Output Distributed Mode Loudspeaker

Hemispherical Power Response

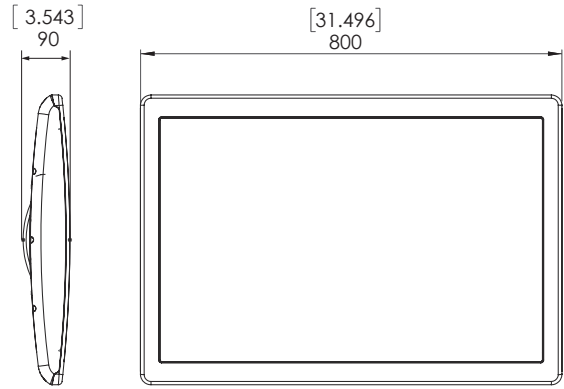
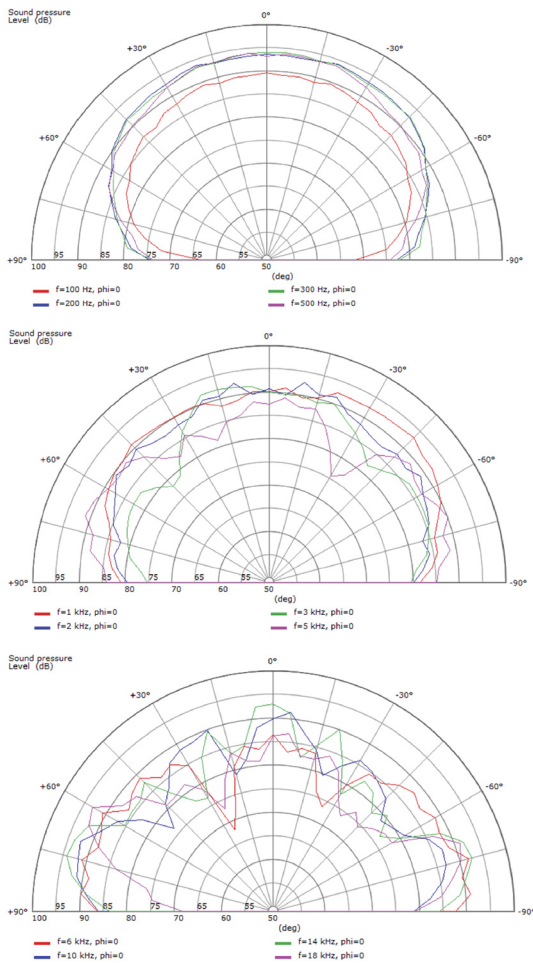


Due to the modal nature of DML loudspeakers, the best way to represent their acoustic characteristics is to measure their power response. Measurements are made at 5° intervals in both the vertical and horizontal axis and averaging a total of 1349 measurements. Please refer to our "Sound Power Response" application notes for further information.

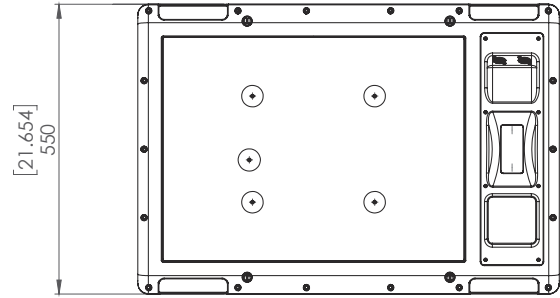
Hemispherical Contour Plot



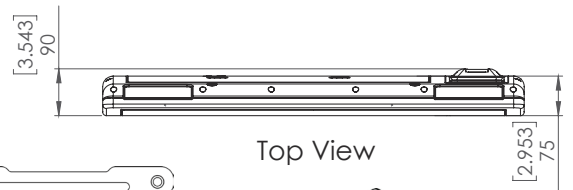
Polar Plots



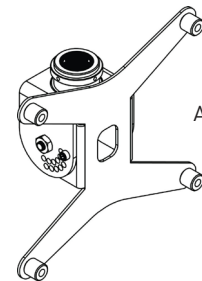
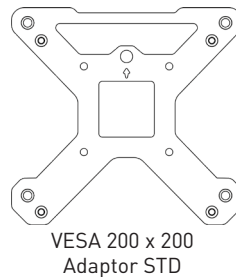
Front View



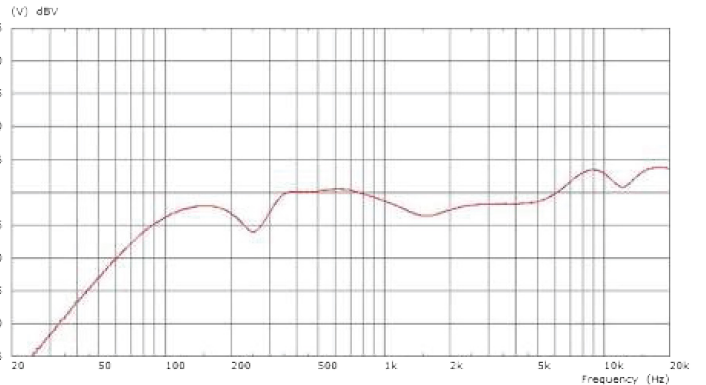
Back View



Top View



Recommended Filtering/Crossover: The following are the initial recommended acoustic filters to be implemented in all DML acoustic measurements. They also represent an EQ starting point for all field applications.



High Pass - Butterworth 2nd Order @ 100Hz
 Peaking Filter - Q:2.3 - 255Hz -6dB
 Peaking Filter - Q:2.5 - 350Hz +2dB

Peaking Filter - Q:1.41 - 640Hz +1.5dB
 Peaking Filter - Q:1.41 - 1,530Hz -3dB
 Peaking Filter - Q:1.5 - 12,000Hz -5dB
 High Shelf - Q:2 - 7,000Hz +7dB



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