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 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.

**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) | 23.4 in x 17.2 in x 2.2 in<br>596 mm x 437 mm x 56 mm |
| Weight | 17 lbs / 7.72 kg |
| Shipping dimensions | 37 in x 27 in x 8 in<br>800 mm x 650 mm x 250 mm |
| Shipping weight | 23 lbs / 10.45 kg |

FlatPanel AUDIO™

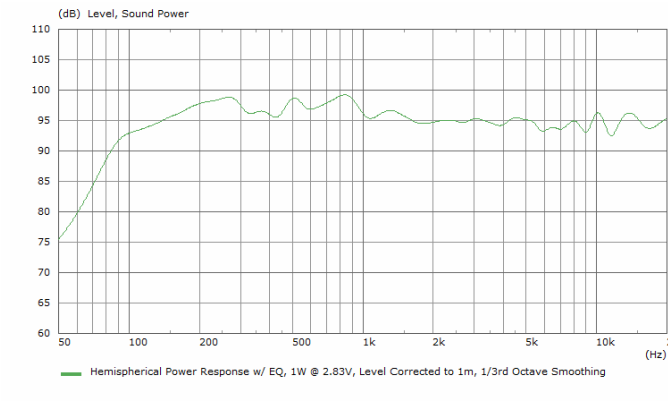
FlatPanel Audio

# DML500A

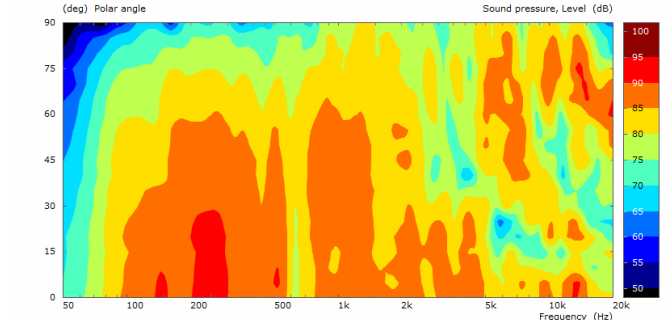
## High output Distributed Mode Loudspeaker (DML) for architectural applications

### Hemispherical power response

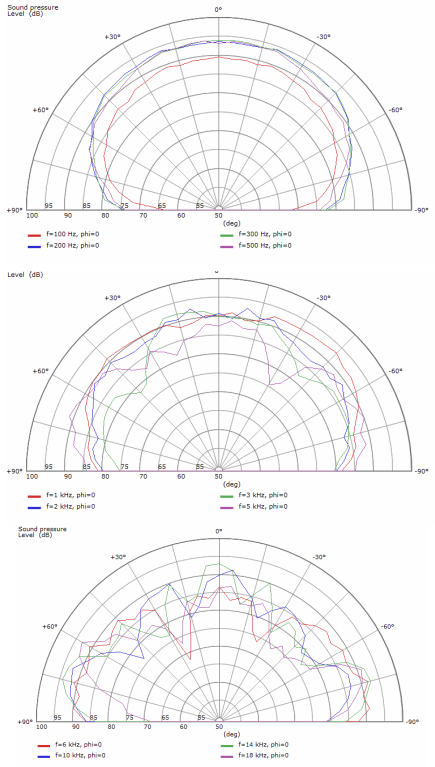
Due to the modal nature of DML loudspeakers, the best way to represent their acoustic characteristics is to measure their power response. Measurements are made at 5° intervals in both the vertical and horizontal axes, and averaging a total of 1349 measurements.

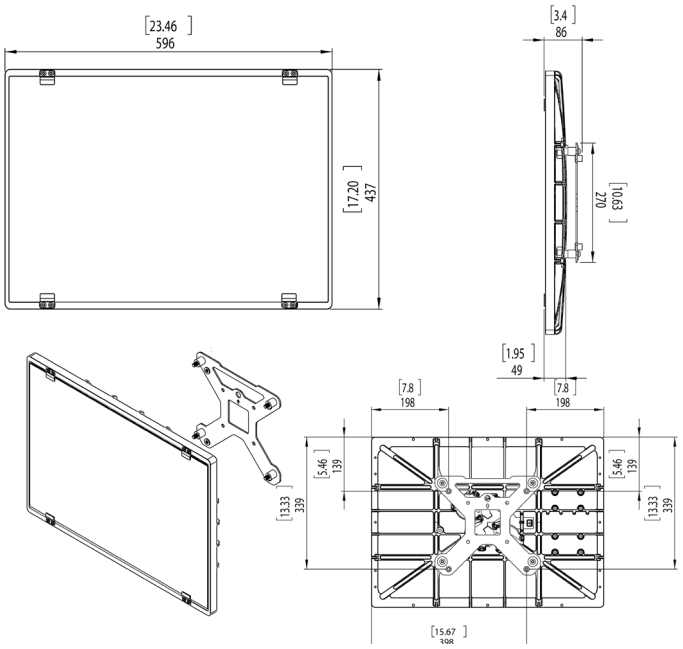



### Hemispherical contour plot




### Polar plots




### Accessories

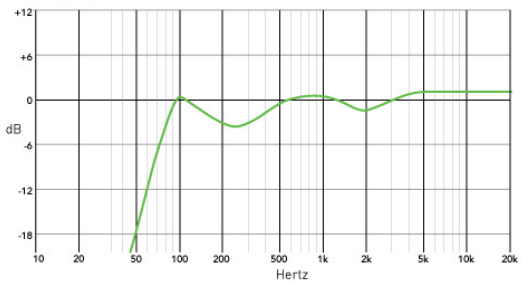
The DML500A includes an integrated VESA mount with a 200 x200 mounting pattern suitable for M8 bolts. More information about mounting accessories and hardware is provided in the installation documentation.

### Recommended filtering/crossover

The following are the initial recommended acoustic filters as implemented in all DML 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






FlatPanel Audio, LLC
350 West Main Street, Unit C
Los Gatos, CA 95030 USA
408.457.4371
www.FlatPanelAudio.com

FPA-DS-DML500A 20240923