

# DD12

## Compact Powered Differential Dispersion™ System

### Features

- Multi-purpose, bi-amplified, powered two-way system
- Compact, multi-angle, polyurethane-coated plywood enclosure with screw-free perforated steel grille
- User-rotatable Differential Dispersion™ horn optimises coverage footprint across the audience plane
- 12" (300mm) LF drive unit plus 1" (25mm) exit HF driver complement
- 131dB peak output capability
- Onboard DSP, networking and Class D amplification (1400W LF, 700W HF)
- Switched-mode power supply with Power Factor Correction and global mains operation
- Wide range of vertical and horizontal deployment options
- Integral pole mount and M8 rigging inserts
- Rain cowl option for outdoor use

### Applications

- Live sound reinforcement
- Theatre sound reinforcement
- Fixed installations in concert halls
- and HoW
- Corporate AV events
- High-power stage monitoring
- Frontfill/infill for large-scale systems

The multi-purpose DD12 defines the ultimate in performance and versatility for powered, two-way loudspeaker systems. It combines onboard networking, DSP and Class D amplification with state-of-the-art transducers and Differential Dispersion™ horn technology to achieve best-in-class performance in terms of fidelity, output capability and coverage consistency across the audience.

Versatility is a key attribute of the DD12. It is the solution to a multitude of premium stand-alone and distributed sound reinforcement requirements — from touring, theatre and portable live sound applications, to concert hall and HoW installations, AV events and stage monitor use. Ideal as the main PA in small-to-medium size rooms, it can also be used as an infill loudspeaker in large-scale systems.

The DD12 features a high-specification 12" (300mm) LF drive unit and a class-leading 1" (25mm) exit compression driver on a user-rotatable, Differential Dispersion horn.

Differential Dispersion technology delivers more consistent audience coverage than systems with conventional X° x Y° horns — providing more throw to the rear to distribute sound



evenly front-to-back, while having wider close-up horizontal coverage for the front rows.

The compact, multi-angle enclosure can be used in either vertical or horizontal orientation. Comprehensive brackets support a wide variety of mounting options — including surface, ceiling and pole mount. Integral M8 inserts for eyebolt suspension increase the mounting options even further.

Every design effort has been focused on maximising the output of the drive units — giving the DD12 a maximum SPL capability of 131dB peak @ 1m. The 12" (300mm) LF driver has a lightweight 3" (75mm) voice coil and utilises a neodymium magnet assembly with high gap flux for maximum sensitivity, while the cone is made of a new pulp formulation with an epoxy treatment to ensure smooth mechanical breakup and a high strength-to-weight ratio. Flux demodulating rings reduce distortion at high excursions, and advanced cooling reduces power compression to negligible levels. The 1" (25mm) exit compression driver has a 1.7" (44mm) polyimide dome and ultra-high flux neodymium motor system for maximum efficiency, plus a copper cap to extend the HF response.

The DD12's tour-grade plywood enclosure is coated in hard-wearing polyurethane and its Declon® backed steel grille is pre-curved to resist deformation in the field. The grille is a spring-fit into the sides of the enclosure and requires no retention screws, allowing for easy removal to access the HF horn for rotation. The grille arrangement also means that the baffle and long sides of the enclosure form a continuous surface into which the LF driver and HF horn are flush-mounted to reduce diffraction effects.

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## Compact Powered Differential Dispersion™ System

### Technical Specifications

#### Acoustical

TYPE	Compact, Differential Dispersion™, powered two-way system
FREQUENCY RESPONSE (1)	65Hz-18kHz ± 3dB, -10dB @ 55Hz
MAXIMUM SPL (3)	125dB continuous, 131dB peak

#### Drivers

LF	12" (300mm)/3" (75mm) voice coil, long-excursion, neodymium magnet driver
HF	1" (25mm) exit/1.7" (44mm) voice coil, polyimide dome, neodymium magnet compression driver

<b>Rated Power (2)</b>	LF: 400W AES, 1600W peak HF: 50W AES, 200W peak
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<b>Dispersion</b>	Differential Dispersion: 110-60° horizontal, 60° vertical
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#### Audio input

<b>CONNECTORS</b>	Female XLR input, male XLR link output
<b>ANALOGUE INPUT IMPEDANCE</b>	20kΩ balanced to ground
<b>MAXIMUM ANALOGUE INPUT LEVEL</b>	6.15Vrms (+18dBu), over voltage protected
<b>AES/EBU IMPEDANCE</b>	110 ohms balanced, receive and transmit termination

#### Internal Processing

	Multi-channel DSP, programmable via network
	8 PEQ/shelving filters
	Up to 48dB/Oct HPF
	Vanishing Point™ FIR crossover filters
	Up to 1 second of delay
	Preset selection via rear panel switch

#### Network

<b>CONNECTORS</b>	IP68 rated 8-way, quick-release type
<b>PROTOCOL</b>	U-NET
<b>PC CONNECTION</b>	Micro USB or via U-NET and U-Hub/DX4.0 controller

#### Amplifier Module

TYPE	2 channel switch-mode, class D
PEAK OUTPUT POWER	2100W total 1400W LF, 700W HF
AVERAGE EFFICIENCY	85%
COOLING	Internal fan

	Temperature controlled external fan
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<b>MAXIMUM AMBIENT TEMPERATURE</b>	45°C (113°F) for full output
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#### Power Supply

TYPE	Switch mode, fixed frequency with PFC
AC INPUT OPERATING RANGE	100 – 240V ~ AC, 50 - 60Hz

POWER FACTOR	> 0.95
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NOMINAL POWER CONSUMPTION	200W
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MAINS CONNECTOR	Neutrik® Powercon True1
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#### General

<b>ENCLOSURE</b>	Extensively braced multi-laminate birch ply
<b>FINISH</b>	Textured black PU coating
<b>PROTECTIVE GRILLE</b>	Black HEX perforated steel, Declon® backed
<b>FITTINGS</b>	Top hat for pole mounting 15 x M8 threaded inserts Two side pocket handles Optional weather protection cowl

<b>IP Rating</b>	IP 25 (with weather protection cowl)
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<b>DIMENSIONS</b>	(W) 360mm x (H) 571mm x (D) 384mm (503mm with cowl) (W) 14.2in x (H) 22.5in x (D) 15.1in (19.8in with cowl)
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<b>WEIGHT</b>	26kg (57.2 lbs)
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#### Accessories

	Transit cover
	Flight case for 2 x DD12 and accessories
	Tour-grade network interconnects
	U-Hub/DX4.0 Controller/U-NET Hub

#### Notes

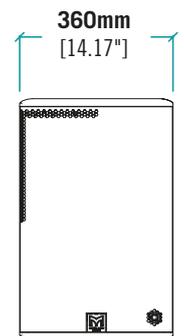
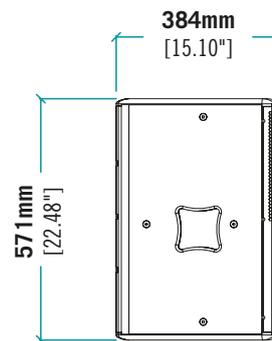
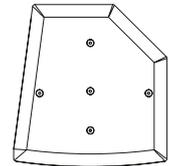
(1) Measured on-axis in free space (4π space) at 2 metres, then referred to 1 metre.

(2) AES Standard ANSI S4.26 -1984.

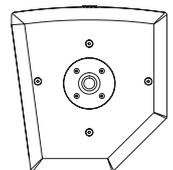
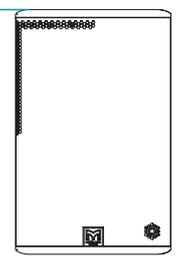
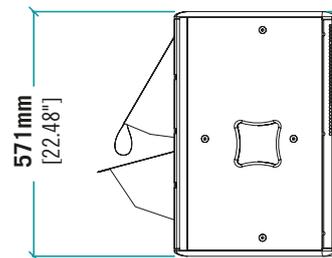
(3) Measured in free space at 1 metre with a tone burst signal.

#### Trade Descriptions Act

Due to Martin Audio's policy of continuing improvement, we reserve the right to alter these specifications without prior notice. Martin Audio is committed to refining state of the art sound reinforcement, combining in-depth product and field applications research with advanced manufacturing techniques. Every Martin Audio product is built to the highest manufacturing standards and rigorously tested to ensure that it meets the performance criteria specified in the design.



#### With Rain Cowl



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