CDD-LIVE 12
Compact Coaxial Differential Dispersion System – Powered

Features

• Compact, self-powered two-way system
• Coaxial Differential Dispersion™ technology
• Onboard Class D amplification and DSP
• Dante™ Digital Audio networking
• Global mains operation with Power Factor Correction
• User-rotatable CDD™ driver
• Vertical and horizontal mounting options
• Tour-grade, multi-angle plywood enclosure
• IP24 rating option with rain cowl
• Comprehensive mounting accessories

Applications

• Live sound reinforcement
• Theatre sound
• Corporate AV events
• Fixed installations in concert halls, ballrooms and HoW
• Stage monitor and infill
• Bars and clubs

The CDD-LIVE 12 is a high-performance, self-powered system designed for professional applications that require high output levels and exceptional fidelity from a very compact enclosure. With a peak output capability of 128dB at 1 metre, it is the ideal solution for a multitude of premium stand-alone and distributed sound reinforcement requirements — from touring, theatre and portable live sound, to concert hall and HoW installations, AV events and stage monitor use.

Featuring a high-specification 12" (300mm) LF/1" (25mm) exit HF Coaxial Differential Dispersion driver, it delivers more consistent audience coverage than a conventional system with a fixed X° x Y° coverage pattern and has wide 110° horizontal coverage close-up. The innovative CDD technology also achieves ‘point source’ summation of the LF and HF sections — eliminating off-axis variations in frequency response associated with non-coaxial designs.

A self-powered system, the CDD-LIVE 12 incorporates a two-channel Class D amplifier, DSP and Dante™ digital audio networking — simplifying set-up, enhancing control and eliminating amplifier racks. The onboard amplifier delivers 2000W LF + 500W HF peak output to the drivers, and its switched-mode power supply auto-ranges to global mains voltages from 100 to 240V 50/60Hz.

DSP functions — including parametric EQ, delay, muting, gain and preset selection — can be controlled over Ethernet from a PC or Windows® tablet via intuitive VU-NET™ proprietary software.

For simple set-ups, ‘plug-and-play’ presets — as well as a user-defined preset — can be selected on the rear panel, instead of using computer control. As an alternative to its analogue inputs, the CDD-LIVE 12 is Dante enabled for digital audio distribution and control over a single CAT5 cable to maintain audio quality however long the cable run.

The CDD-LIVE 12 is incredibly versatile. Its multi-angle enclosure can be used in either horizontal or vertical orientation, with rotation of the driver easily accomplished by removing the screw-free, protective grille. The tour-grade enclosure is constructed from multi-laminate plywood and finished in a hard-wearing polyurea coating. Integral fittings include a top-hat for pole mounting and multiple M8 inserts for attachment to a wall-bracket, yoke or universal bracket with a wide range of up and down tilt angles.
Technical Specifications

Acoustics
- **TYPE**: Compact, Coaxial Differential Dispersion powered two-way system
- **FREQUENCY RESPONSE (1)**: 62Hz – 20kHz ±3dB, -10dB @ 10kHz
- **DRIVER**: LF: 12” (300mm)/2.5” (63.5mm) voice coil, tangential radiation, ferrite motor system with HF
  - HF: 1” (25mm) exit/1.7” (44mm) voice coil, polyimide dome compression driver
- **INPUT SENSITIVITY**: -18dBu for 100dB SPL
- **MAXIMUM SPL**: (2) 122dB continuous / 128dB peak
- **Dispersion**: 110°-60˚ horizontal, 60˚ vertical (user-rotatable)
- **CROSSOVER**: 1kHz Active LPF with low latency HF FFR equalisation
- **FREQUENCY RESPONSE (1)**: 62Hz – 20kHz ±3dB, -10dB @ 50Hz
- **Notes**:
  - (1) Measured on-axis free space (40 space) at 1 metre, then referred to 1 metre
  - (2) Measured in free space at 1 metre with a tone burst signal
  - (3) Measured on-axis on ground plane (2π space) at 2 metres, then referred to 1 metre
  - (4) Measured in half-space at 1 metre with a tone burst signal

Module
- **Audio input**: Female XLR input, male XLR link output, Dante Audio Neutrik® Ethercon
- **ANALOGUE INPUT IMPEDANCE**: 20kΩ balanced to ground
- **MAXIMUM ANALOGUE INPUT LEVEL**: 24.5Vpp (+21dBu), over voltage protected
- **Internal Processing**: Multi-channel DSP, programmable via TCP/IP using VU-Net software
  - PEQ/shelving filters
  - Up to 48dB/Oct HF
  - Low latency HF FFR filters
  - Up to 200ms input delay
  - Pin-set selection via rear panel switch

Network
- **CONNECTORS**: Female XLR input, male XLR link output, Dante Audio Neutrik® Ethercon
- **PROTOCOL**: TCP/IP and UDP/IP
- **Amplifier Module**:
  - **TYPE**: 2 channel switch-mode, class D
  - **PEAK OUTPUT POWER**: 2500W
  - **CONTINUOUS OUTPUT POWER**: 1250W
  - **AVERAGE EFFICIENCY**: 89%
  - **COOLING**: External convection cooled, with internal fan
  - **MAXIMUM AMBIENT TEMPERATURE**: 40°C (104°F) for full output
- **Power Supply**: Switch mode, fixed frequency with PFC
  - **AC INPUT OPERATING RANGE**: 85 – 265V – AC, 50 - 60Hz
  - **POWER FACTOR**: > 0.98
  - **NORMAL POWER CONSUMPTION**: 550W
  - **MAIN CONNECTOR**: Neutrik® Powercon True1

Mechanical
- **ENCLOSURE**: Extensively braced multi-laminate plywood
- **FINISH**: Textured black PU coating
- **PROTECTIVE GRILLE**: HEX perforated metal with protective zinc plating and black powder coat finish. Stacked with black grille cloth
- **FITTINGS**: Top hat for pole mounting
  - 15 x M8 mounting points
  - Two side pocket handles
- **IP RATING**: IP24 factory option available
- **DIMENSIONS**:
  - (W) 359mm x (H) 580mm x (D) 373mm
  - (W) 14.13in x (H) 22.83in x (D) 14.7in
- **WEIGHT**: 28kg (61.6lbs)
- **ACCESSORIES**: Transit Cover
  - Optional wall, yoke and universal brackets

Notes:
- (1) Measured on-axis in free space (40 space) at 2 metres, then referred to 1 metre
- (2) Measured in free space at 1 metre with a tone burst signal
- (3) Measured on-axis on ground plane (2π space) at 2 metres, then referred to 1 metre
- (4) Measured in half-space at 1 metre with a tone burst signal

Architectural Specifications

The loudspeaker shall be a self-powered two-way system utilising Coaxial Differential Dispersion technology. Its transducers shall consist of a reflex-loaded 12” low frequency driver and a coaxially-mounted 1” exit high frequency compression driver loaded by a static waveguide that merges with moving waveguides added to the cone of the low frequency driver to define the HF horn geometry.

The coaxial driver shall be user-rotatable to enable vertical or horizontal operation as required by the application. Horizontal dispersion shall vary from 110° to 60° and vertical dispersion shall be 60°. The on-axis frequency response shall be 62Hz-20kHz +/- 3dB and the loudspeaker shall produce a maximum SPL of 128dB peak at 1 metre.

The loudspeaker shall incorporate a two-channel Class D amplifier module which shall deliver a total of 2500W peak output to the transducers and include onboard DSP and networking capabilities for remote control and monitoring. The loudspeaker shall be Dante™ enabled for Audio over IP. Its power supply shall employ Power Factor Correction and operate from 100-240V, 50-60Hz AC.

Audio connectors shall be male and female XLR type and the AC power connector shall be a Neutrik® Powercon True1. Network connectors shall be Neutrik® Ethercon RJ45 type.

The loudspeaker enclosure shall be constructed from multi-laminate plywood with a textured polyurea coating. The drivers shall be protected by a perforated steel grille with scrim cloth backing and the enclosure shall be fitted with a pole-mount socket and threaded inserts for mounting accessories.

An IP24 rating version with a rain cowl shall be available as a factory option.

Dimensions (W x H x D) shall be 359mm x 580mm x 373mm (14.1in x 22.8in x 14.7in). Weight shall be 28kg (61.6lbs).

The loudspeaker shall be the Martin Audio CDD-LIVE 12.