

Overview

The DHR12M is a 2-way bi-amp powered loudspeaker with a 12-inch woofer and a 1.75-inch HF driver in a space saving coaxial configuration, perfect for use as a floor monitor. Combining a 1000W amplifier and high performance DSP with the same plywood construction found on Yamaha's high-end DZR Series, the DHR12M offers best-in-class sound quality and durability.



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Features

- The coaxial driver delivers precise, smooth phase and frequency response characteristics ideal for use in monitoring applications
- Featuring a plywood cabinet that delivers a clear sound with minimal vibration
- Compact, low profile, plywood enclosure with a polyurea coating for a robust, scratch-resistant surface
- A pole socket for use on a stand
- Proprietary FIR-X™ tuning, provides FIR filtering and corrective EQ, minimizing phase distortion

Specifications

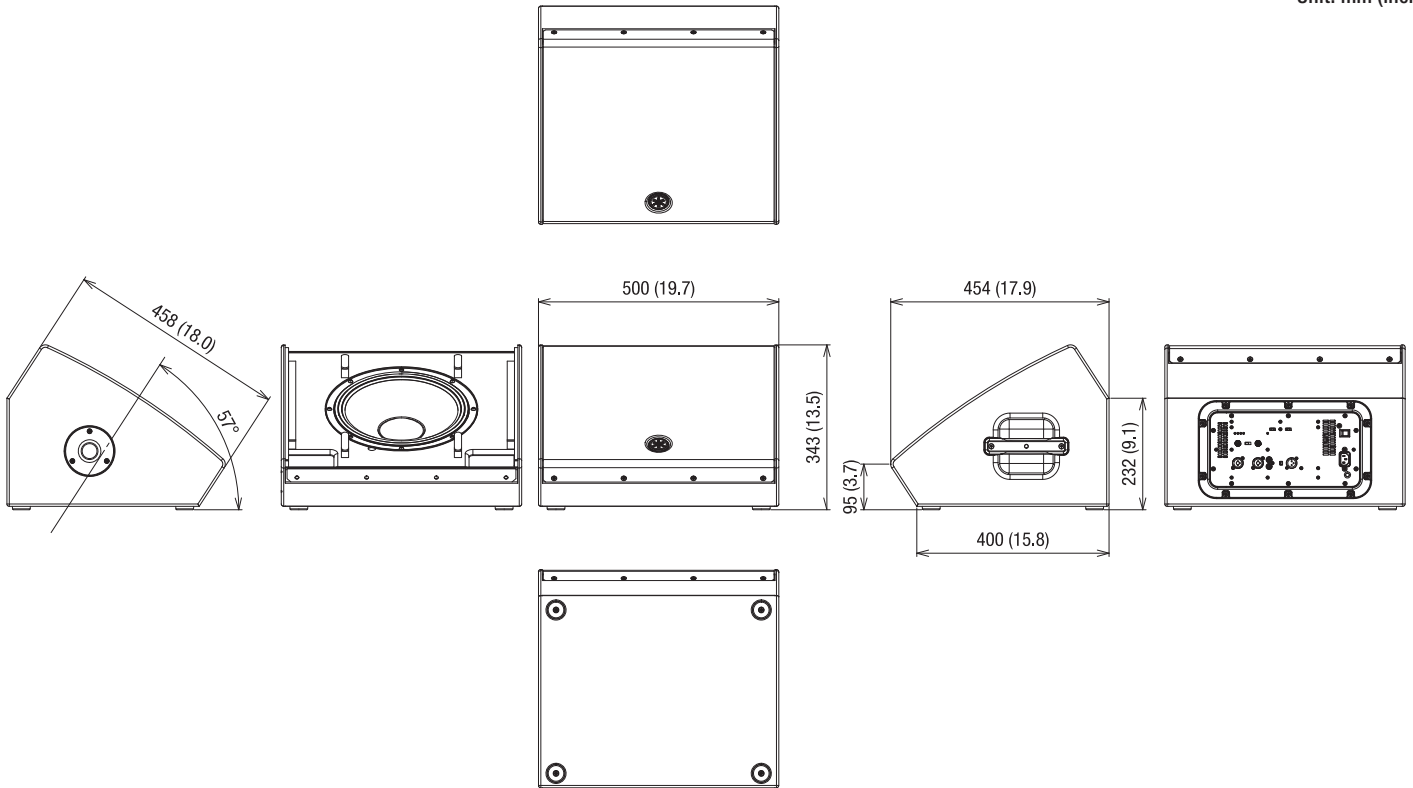
General Specifications

System Type	2-way, Bi-amped Powered Speaker, Bass-reflex	
Components	LF	Diameter: 12" cone, Voice Coil: 2.5", Magnet: Ferrite
	HF	Diaphragm: 1.75", Type: 1" throat coaxial compression driver, Magnet: Ferrite
Frequency Range (-10 dB)	55 Hz - 20 kHz	
Crossover	1.8 kHz: FIR-X tuning™ (linear phase FIR filter)	
Coverage Angle (Horizontal x Vertical)	H90° x V90°	
Amplifier Type	Class-D	
Power Rating	Dynamic	1,000 W (LF: 800 W, HF: 200 W) *1
	Continuous	465 W (LF: 400 W, HF: 65 W)
Maximum Output Level (Measured peak, IEC noise @1 m)	129 dB SPL	
Cooling	Fan cooling, 4 speeds	
A/D D/A Converters	24 bit 48 kHz Sampling	
Processors	HPF: OFF, 100 Hz, 120 Hz, 24 dB/Oct.; D-CONTOUR: FOH/MAIN, MONITOR, OFF	
I/O Connectors	INPUT1: Combo x 1, INPUT2: Combo x 1 + RCA pin x 2 (Unbalanced), OUTPUT: XLR3-32 x 1 (CH1 Parallel Through or CH1+CH2 Mix)	
Power Consumption	74 W (1/8power), 18 W (Idle)	
Power Requirements	100 V, 100-120 V, 220-240 V, 110/127/220V (Brazil), 50/60 Hz	
Cabinet Material	Plywood	
Finish	Durable Polyurea Painting, Black	
Handle	Side x 1	
Pole Socket	Ø35 mm x 1 (Side)	
Rigging	-	
Floor Monitor Angle	57°	
Dimensions (W x H x D) (with rubber feet)	500 mm x 343 mm x 454 mm (19.7" x 13.5" x 17.9")	
Net Weight	16.5 kg (36.4 lbs)	

*1: Total peak power of individual outputs (AC 120V, 25°C). This value was measured at minimum load impedance, with protection released.

Dimensions

Unit: mm (inch)



Architectural and Engineering Specifications

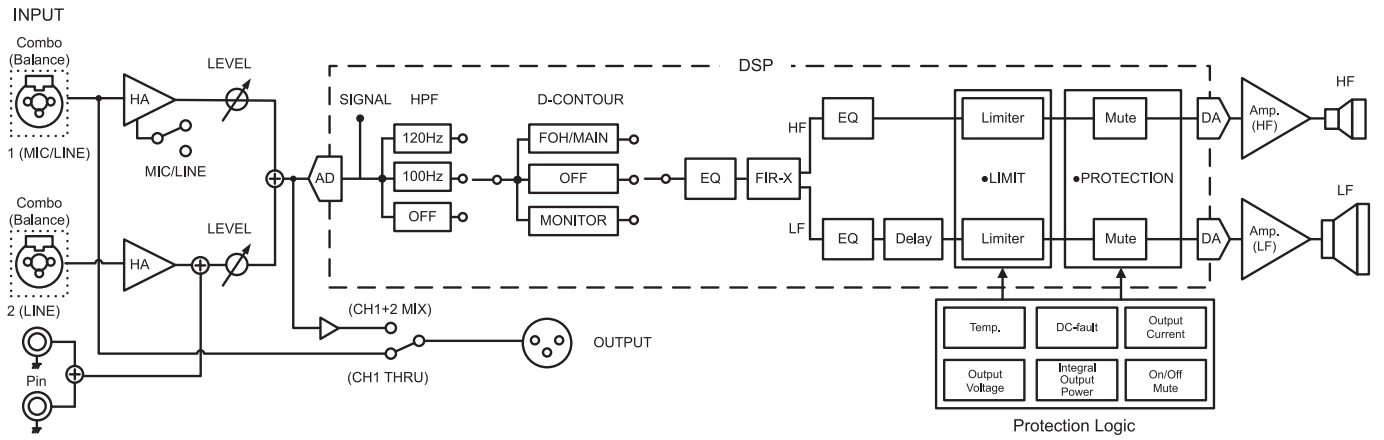
The Yamaha DHR12M Powered Loudspeaker shall be a two-way bass-reflex type full-range loudspeaker system having a single 12" cone driver with a 2.5" voice coil for the low frequencies and a 1.75" compression driver with a 1" throat for the high frequencies. The loudspeaker shall incorporate a class-D amplifier capable of delivering 1000 watts dynamic or 465 watts continuous power. The amplifier section shall include a 4-speed fan for cooling. The DHR12M Powered Loudspeaker shall meet the following performance criteria: Maximum SPL shall be 129 dB at 1 meter, frequency response shall be 55 Hz to 20 kHz at 10 dB below rated sensitivity, the frequency dividing network shall have a crossover frequency of 1.8 kHz, and the nominal coverage angle shall be 90° horizontal and 90° vertical via a constant directivity horn.

Built-in 24-bit 48-kHz AD/DA conversion and digital signal processing shall provide FIR-X Tuning (linear phase FIR filters) for smooth crossover and optimum time alignment, plus D-CONTOUR dynamic processing to achieve maximum SPL while maintaining optimum overall response. The D-CONTOUR feature shall include switchable FOH/MAIN and MONITOR modes. A switchable high-pass filter (OFF/100 Hz/120 Hz) shall also be provided.

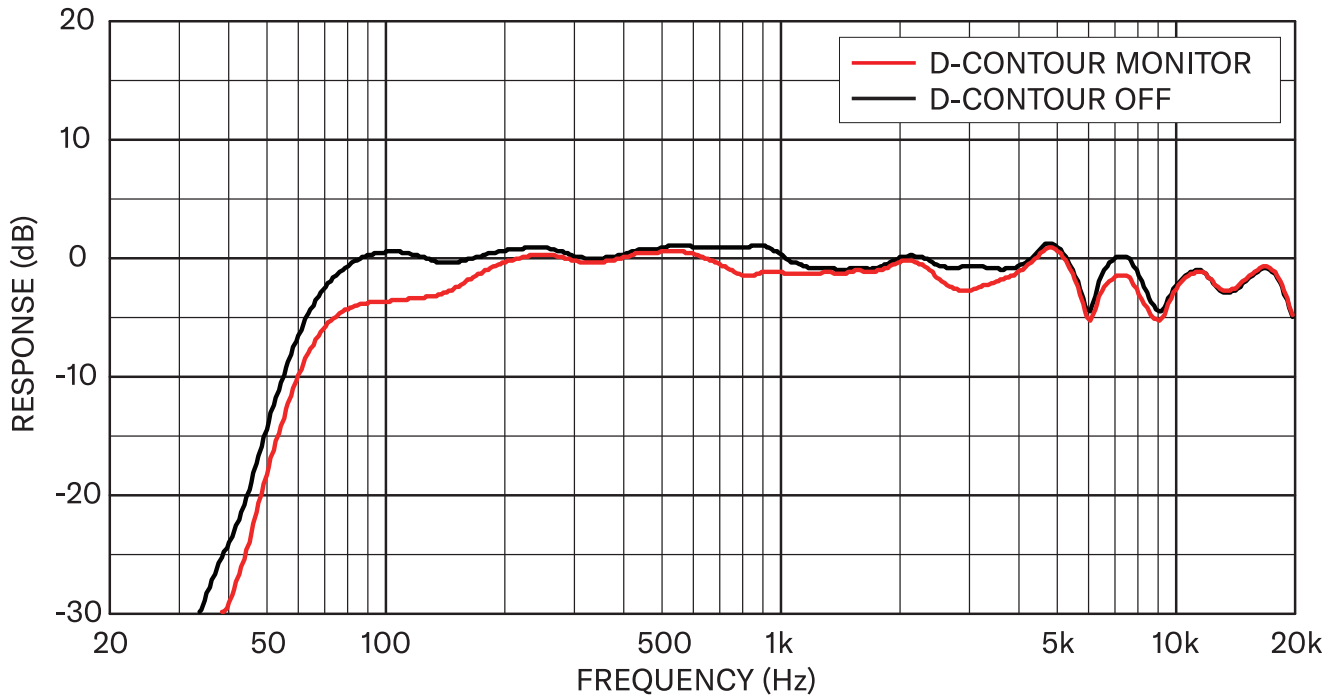
Clip limiting, integral power, and DC fault protection shall be provided for the speakers. Thermal and output overcurrent protection shall be provided for the amplifier. Thermal, output overvoltage, and output overcurrent protection shall be provided for the power supply. Power, protection, signal, and limit indicators shall be provided on the rear panel.

Two input channels shall be provided, each with a Combo connector that accepts balanced input via XLR or TRS phone type plugs. Channel 2 shall additionally provide two RCA pin connectors for unbalanced input. Channel 1 shall have a MIC/LINE input selector switch, and both channels shall have level controls that allow Channel 1 + Channel 2 mixing. One XLR3-32 connector that is switchable for CH1 THRU operation or CH1+CH2 Mix output shall also be provided. The cabinet shall be constructed of wood with a durable black Polyurea coating. The cabinet shall have one side handle, and it shall be designed for floor monitor use with a 57-degree monitor angle. One 35 mm pole socket shall be provided for convenient pole mounting. Dimensions shall be 500 (W) x 343 (H) x 454 (D) mm. Weight shall be 16.5 kg.

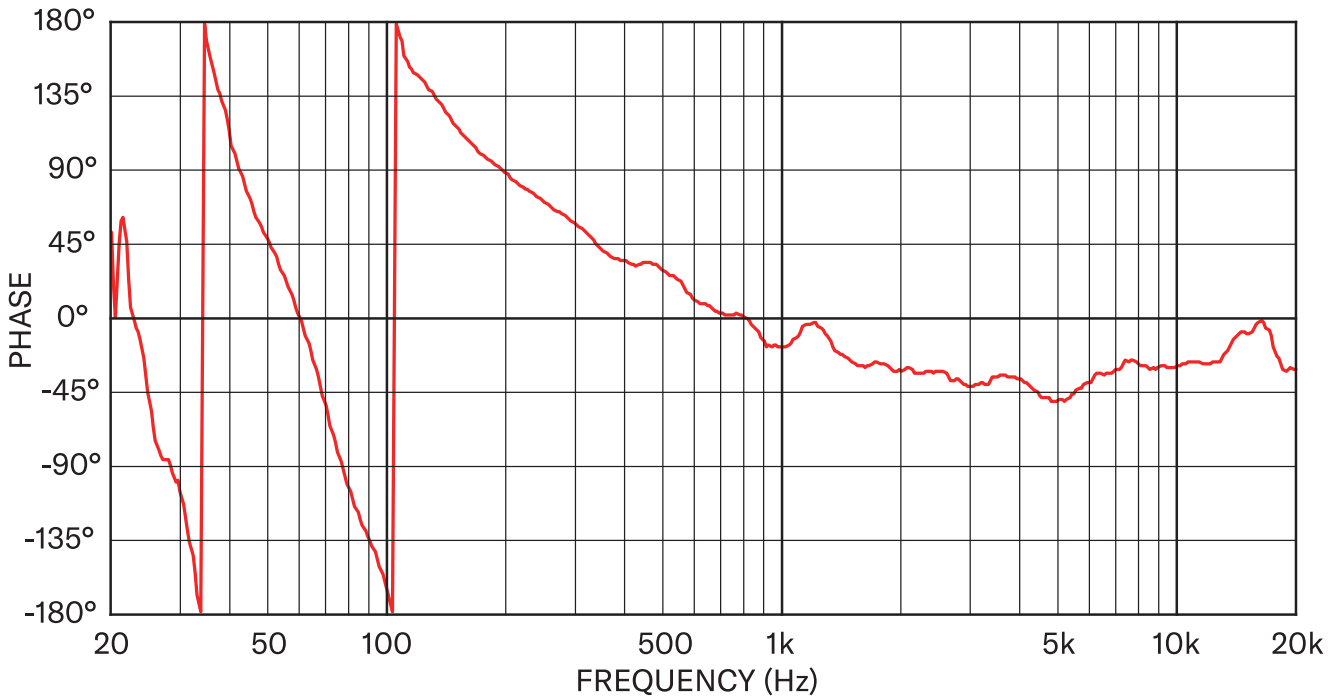
Block Diagrams



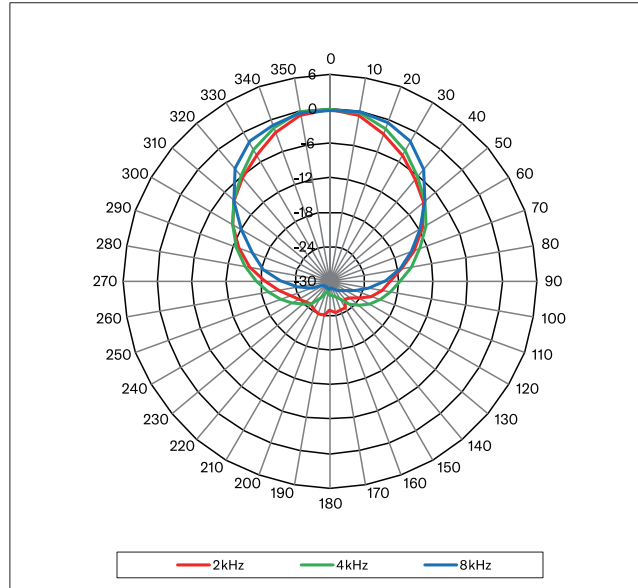
Frequency Response



Phase Response



Polar Plots



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