

Overview

The DHR15M is a 2-way bi-amp powered loudspeaker with a 15-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 DHR15M offers best-in-class sound quality and durability.



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

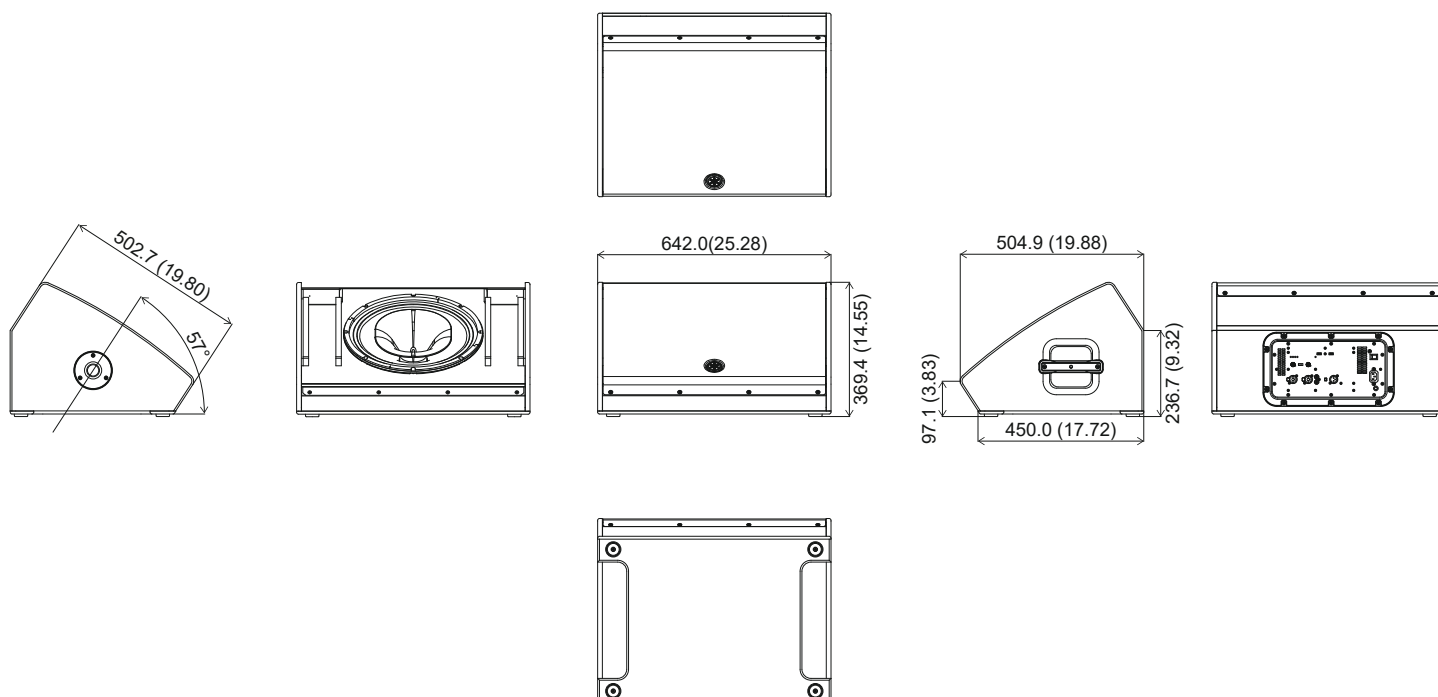
General Specifications

System Type		2-way, Bi-amped Powered Speaker, Bass-reflex
Components	LF	Diameter: 15" cone, Voice Coil: 3", Magnet: Ferrite
	HF	Diaphragm: 1.75", Type: 1" throat coaxial compression driver, Magnet: Ferrite
Frequency Range (-10dB)		50Hz – 20kHz
Crossover		1.8 kHz: FIR-X tuning™ (linear phase FIR filter)
Coverage Angle (Horizontal x Vertical)		H65° x V75°
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@1m)		131 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 (1/8 power), 18 W (Idle)
Power Requirements		100 V, 110-120 V, 220-240 V, 110/127/220V (Brazil), 50/60 Hz
Cabinet Material		Plywood
Finish		Durable Polyurea Painting, Black
Handle		Side x1
Pole Socket		Φ35 mm x1 (Bottom)
Rigging		–
Floor Monitor Angle		57°
Dimensions (W x H x D) (with rubber feet)		642 mm x 369 mm x 505 mm (25.3" x 14.5" x 18.9")
Net Weight		23.0 kg (50.7 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

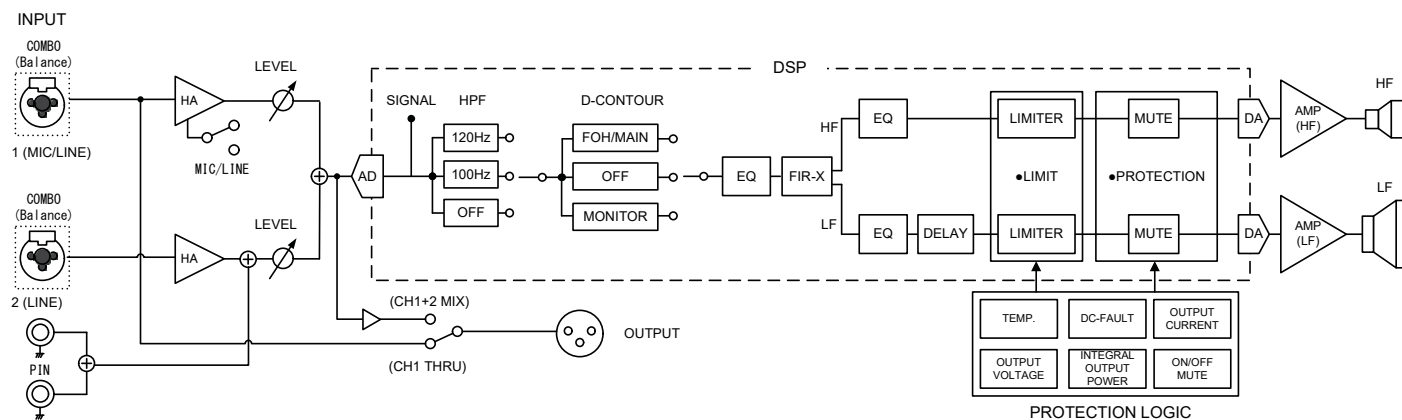
The Yamaha DHR15M Powered Loudspeaker shall be a two-way bass-reflex type full-range loudspeaker system having a single 15" cone driver with a 3" voice coil for the low frequencies and a 1.75" compression driver with a 1" throat for the high frequencies. The drivers shall be mounted in a coaxial configuration. 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 DHR15M Powered Loudspeaker shall meet the following performance criteria: Maximum SPL shall be 131dB at 1 meter, frequency response shall be 50Hz to 20kHz at 10dB below rated sensitivity, the frequency dividing network shall have a crossover frequency of 1.8kHz, and the nominal coverage angle shall be 65° horizontal and 75° vertical.

Built-in 24-bit 48kHz 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/100Hz/120Hz) shall also be provided.

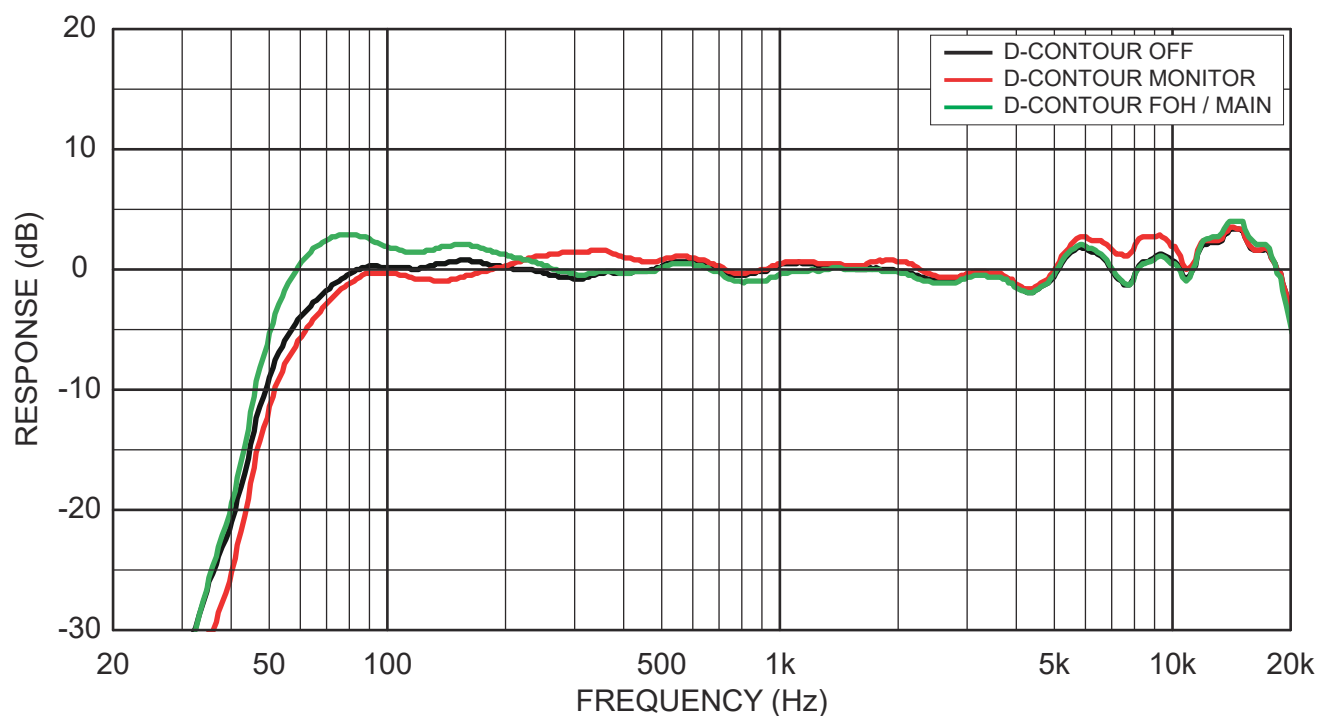
Clip limiting, integral power, and DC fault protection shall be provided for the speakers. Thermal and output overcurrent protection shall be provided for the amplifier. Thermal, output overvoltage, and output overcurrent protection shall be provided for the power supply. Power, protection, signal, and 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 1 shall have a MIC/LINE input selector switch. Channel 2 shall provide an additional pair of RCA pin connectors for unbalanced inputs. 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 shall be designed for floor monitor use with a 57-degree monitor angle. One 35mm pole socket shall be provided. Dimensions shall be 642 (W) x 369 (H) x 505 (D) mm. Weight shall be 23kg.

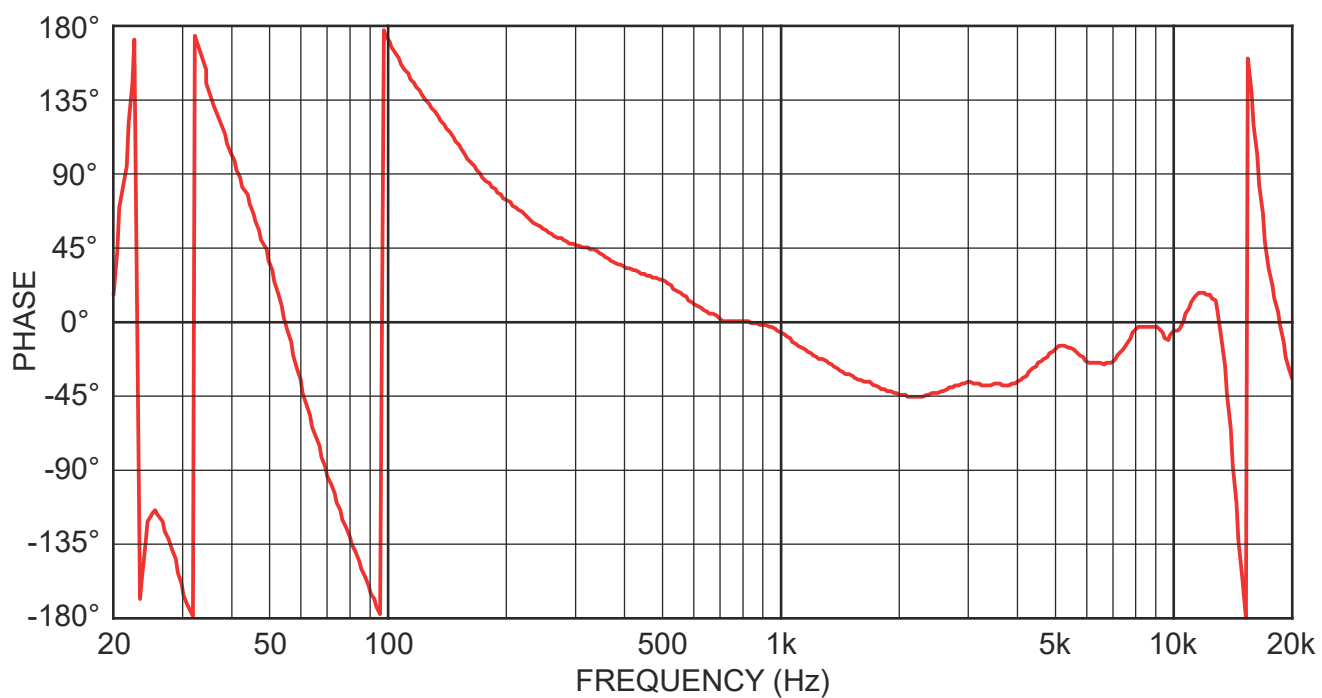
Block Diagram



Frequency Response

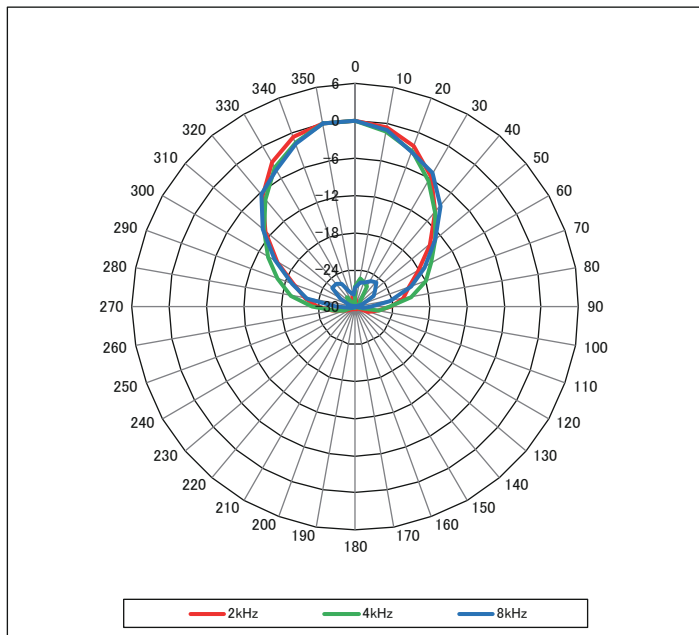


Phase Response

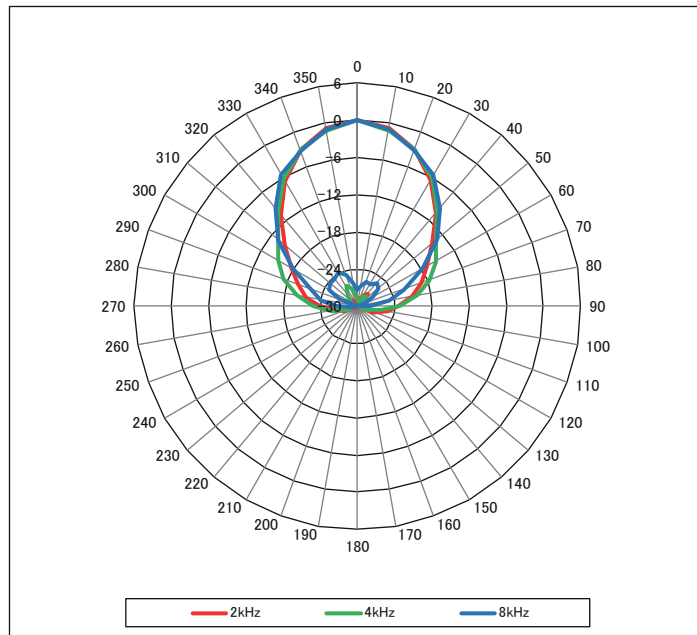


Polar Plots

Horizontal



Vertical



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