

Overview

The DHR15 is a 2-way bi-amp powered loudspeaker equipped with a 15-inch woofer and a 1.4-inch HF driver, perfect for use as a main speaker. Combining a 1000W amplifier and high-performance DSP with the same plywood construction found on Yamaha's high-end DZR Series, the DHR15 offers best-in-class sound quality and durability.



REAR

Features

- Featuring a plywood cabinet that delivers a clear sound with minimal vibration
- Plywood enclosure with a polyurea coating for a robust, scratch resistant surface
- Compact size despite the 15-inch LF driver that provides excellent low frequency response
- Dual-angle pole sockets offer both 0° or a -7° down tilt
- Rigging points for use with eye bolts
- Proprietary FIR-X™ tuning, provides FIR filtering and corrective EQ, minimizing phase distortion

Specifications

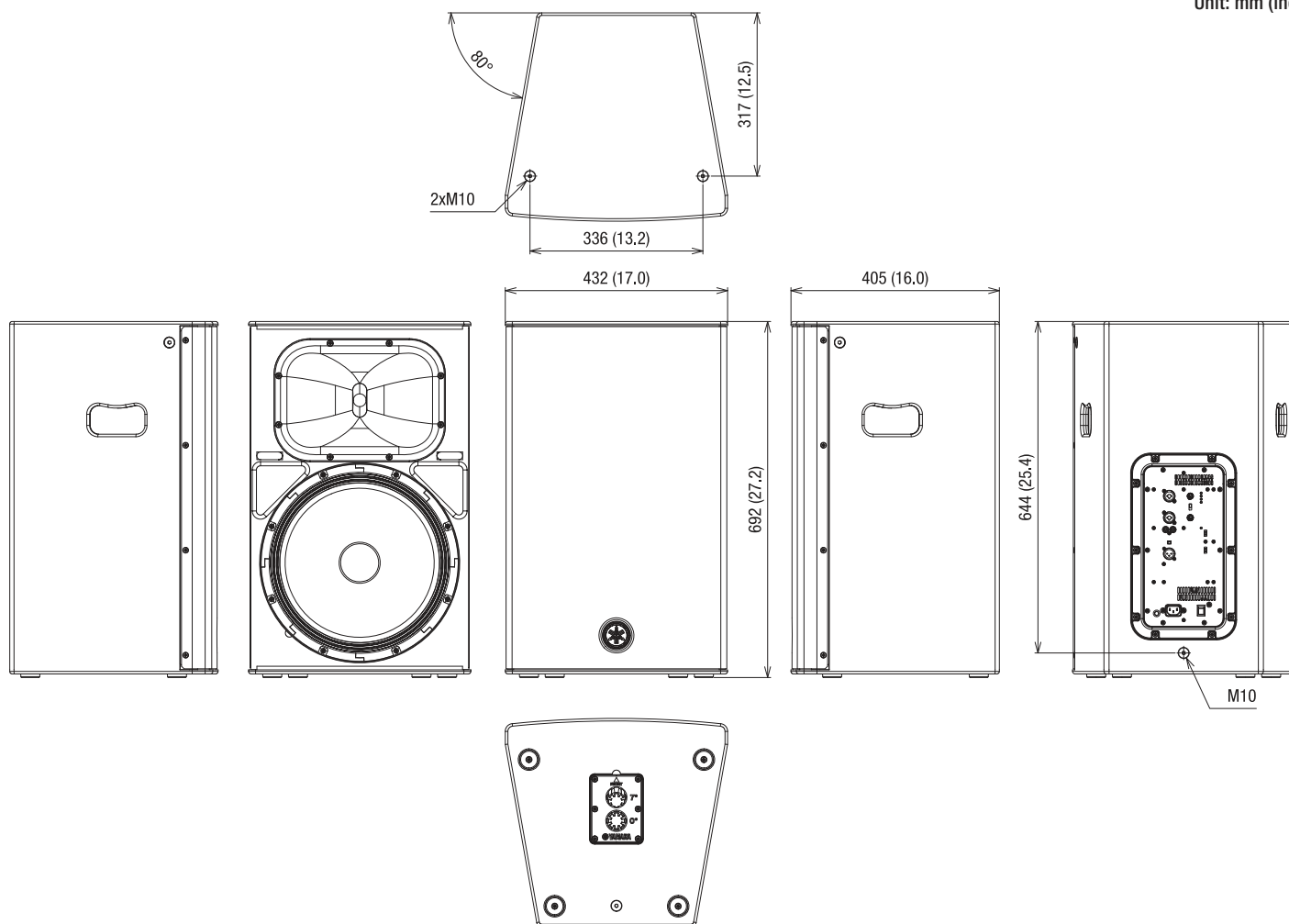
General Specifications

System Type		2-way, Bi-amped Powered Speaker, Bass-reflex
Components	LF	Diameter: 15" cone, Voice Coil: 2.5", Magnet: Ferrite
	HF	Diaphragm: 1.4", Type: 1" throat compression driver, Magnet: Ferrite
Frequency Range (-10 dB)		44 Hz - 20 kHz
Crossover		1.8 kHz: FIR-X tuning™ (linear phase FIR filter)
Coverage Angle (Horizontal x Vertical)		H90° x V60°
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)		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 (1/8power), 18 W (Idle)
Power Requirements		100 V, 100-120 V, 220-240 V, 110/127/220 V (Brazil), 50/60 Hz
Cabinet Material		Plywood
Finish		Durable Polyurea Painting, Black
Handle		Side x 2
Pole Socket		Ø35 mm x 2 (Bottom, 0° or -7°)
Rigging		Top x 2, Rear x 1 (Fit for M10 x 30 - 50 mm Eyebolts)
Floor Monitor Angle		-
Dimensions (W x H x D) (with rubber feet)		432 mm x 692 mm x 405 mm (17.0" x 27.2" x 15.9")
Net Weight		24.0 kg (52.9 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

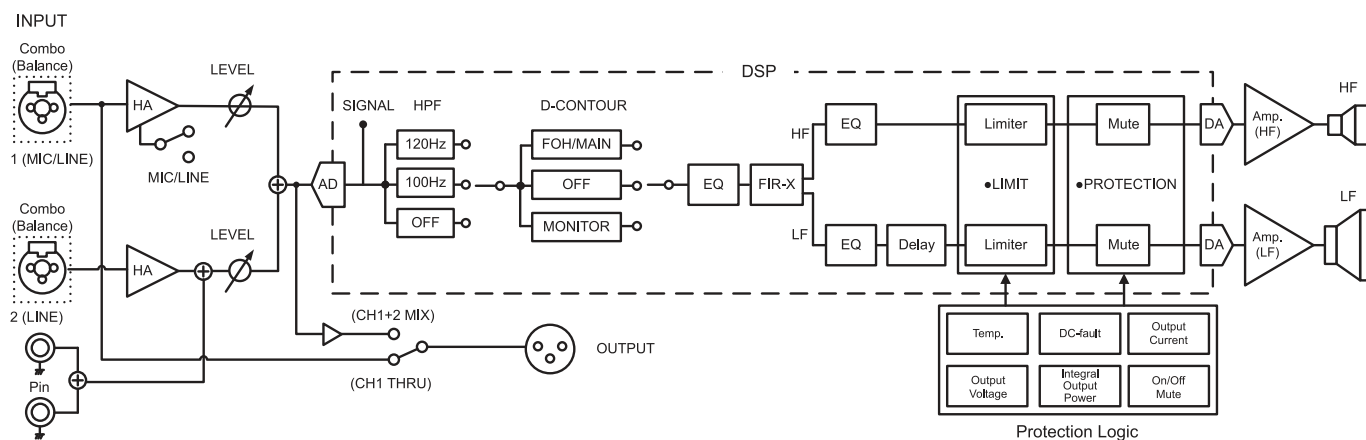
The Yamaha DHR15 Powered Loudspeaker shall be a two-way bass-reflex type full-range loudspeaker system having a single 15" cone driver with a 2.5" voice coil for the low frequencies and a 1.4" compression driver with a 1" throat for the high frequencies. The loudspeaker shall incorporate a class-D amplifier capable of delivering 1000 watts dynamic or 465 watts continuous power. The amplifier section shall include a 4-speed fan for cooling. The DHR15 Powered Loudspeaker shall meet the following performance criteria: Maximum SPL shall be 131 dB at 1 meter, frequency response shall be 44 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 60° 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.

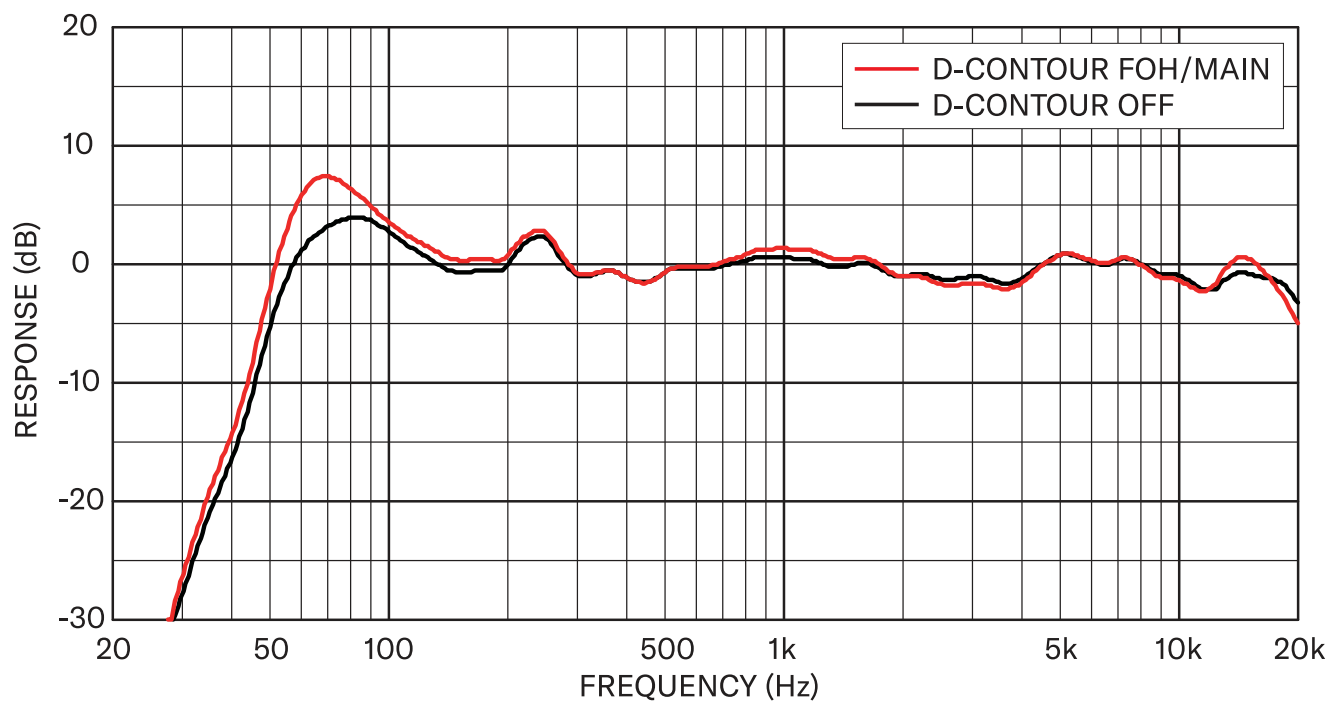
Clip limiting, integral power, and DC fault protection shall be provided for the speakers. Thermal and output overcurrent protection shall be provided for the amplifier. Thermal, output overvoltage, and output overcurrent protection shall be provided for the power supply. Power, protection, signal, and 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 two side handles and threaded mounting points for M10 eyebolts (top x 2, rear x 1). Two 35 mm pole sockets shall be provided, one for normal vertical mounting and one that allows the speaker to be angled downward by 7 degrees. Dimensions shall be 432 (W) x 692 (H) x 405 (D) mm. Weight shall be 24 kg.

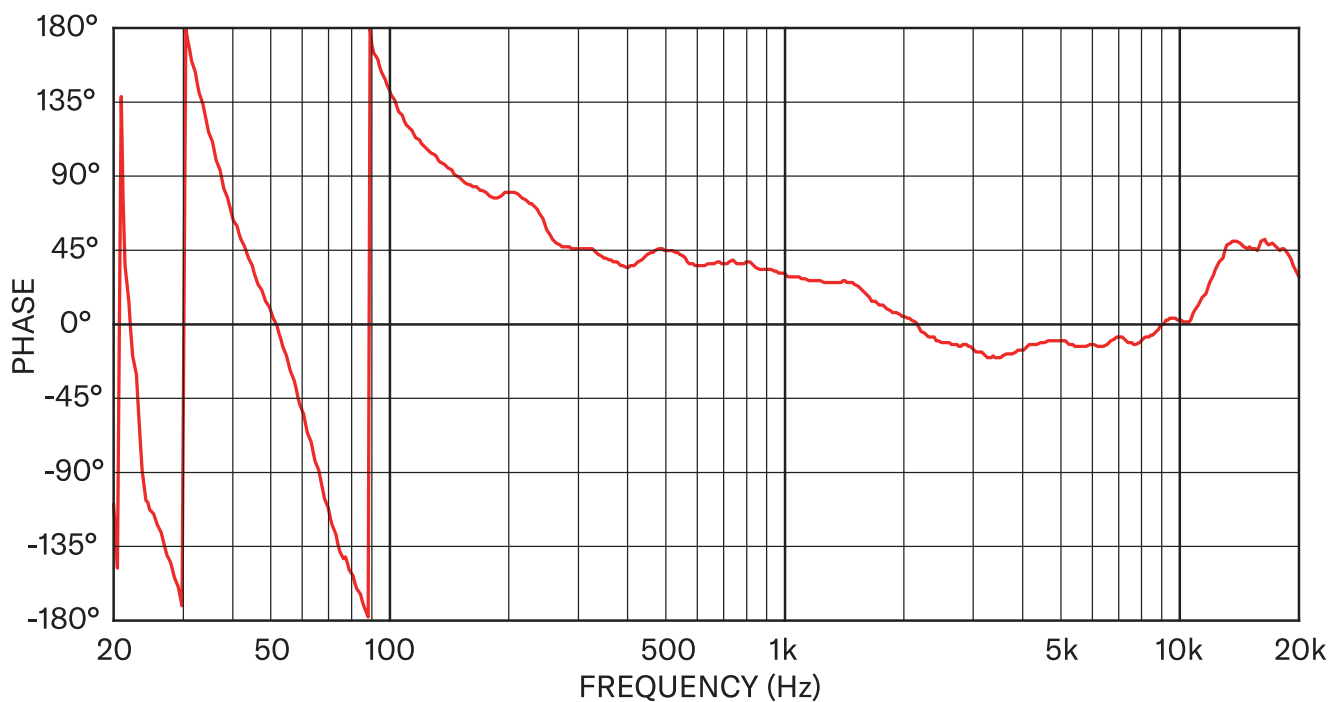
Block Diagrams



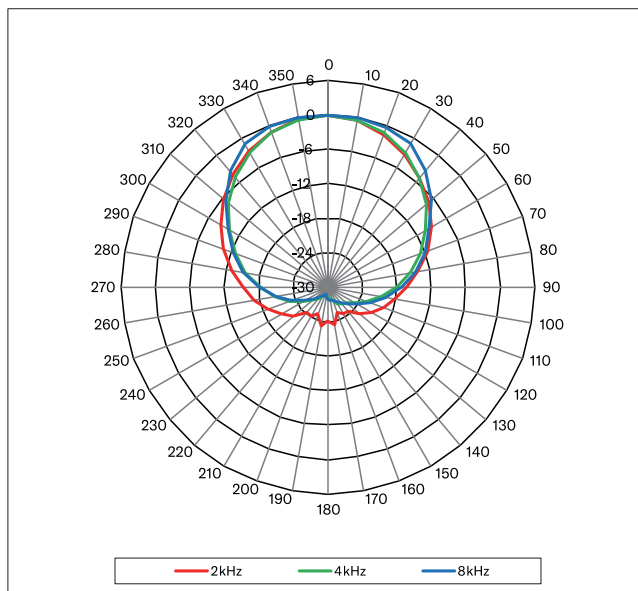
Frequency Response



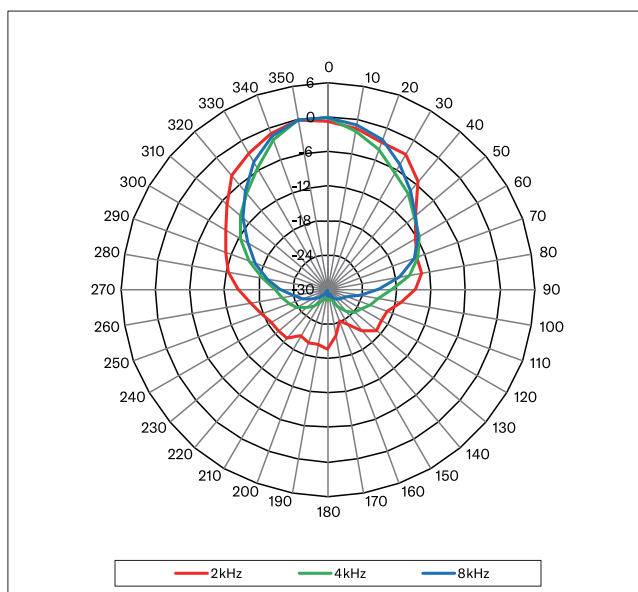
Phase Response



Horizontal Polar Plots



Vertical Polar Plots



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