

Overview

The DZR315/DZR315W is 3-way bi-amped powered loudspeaker and is the most powerful model in the DZR Series producing a maximum 143dB SPL with supreme clarity. Best-in-class SPL performance, sophisticated DSP processing, unrivaled low-frequency sound reproduction—the DZR315/DZR315W delivers on all fronts realizing a truly professional sound delivered with a level of power that belies its compact, lightweight design. Ideal for use in a front of house main PA, it also includes integrated M10 rigging points for suspended applications.



DZR315



DZR315W

Features

- 3-way powered loudspeaker with a 2" HF, an 8" MF and a 15" LF
- Maximum 143dB SPL and 31Hz-20kHz frequency range is ideal for FOH main PA
- High power 2000W Class-D amplifier module
- 96kHz DSP and FIR filter for true high-resolution sound with super low latency
- Features Advanced FIR-X tuning, the combination of FIR filtering and correct EQ for minimizing phase distortion
- Access a variety of DSP functions and load presets, or make precise adjustments to PEQ, delay and routing etc. via the intuitive LCD display
- D-Contour and highly reliable protection circuits
- Lightweight yet very durable plywood cabinet with premium grade Polyurea coating
- Optional speaker cover (SPCVR-DZR315)
- Durable black or white finish

Specifications

General Specifications

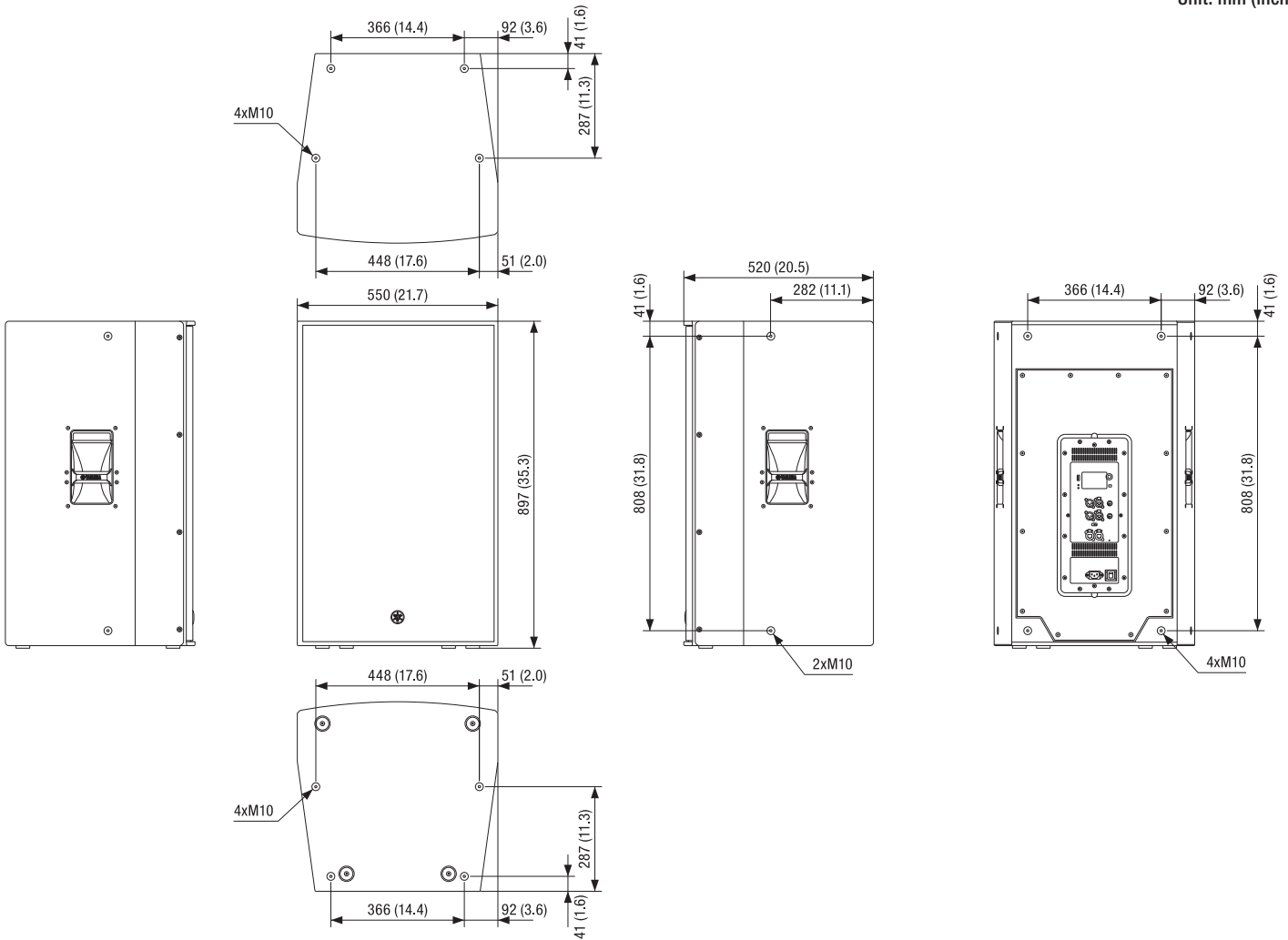
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|------------------------------------|--|--|
| Speaker Type | 3-way, Bi-amplified Powered Speaker, Bass-reflex | |
| Frequency Range (-10dB) | 31Hz - 20kHz | |
| Coverage Area | H75° x V50° | |
| Components | LF | 15" Cone, 3" Voice Coil, Neodymium magnet |
| | MF | 8" Cone, 1.5" Voice Coil, Ferrite magnet |
| | HF | 2" Voice Coil, 1" Throat Compression Driver, Titanium diaphragm, Neodymium magnet |
| Crossover | 700Hz (FIR-X), 2.5kHz (Passive) | |
| Sampling Frequency Rate | Internal | 96kHz and FIR Filter |
| A/D D/A Converters | 96kHz AD/DA | |
| Maximum Output Level (1m; on axis) | 143dB SPL *1 | |
| Power Rating | Dynamic | 2000W (LF: 1000W, MF/HF: 1000W) *2 |
| | Burst (20ms) | 1100W (LF: 1000W, MF/HF: 100W) |
| | Continuous | 950W (LF: 850W, MF/HF: 100W) |
| I/O Connectors | Analog I/O | Analog IN: Combo x 2, Line level (Maximum +24dBu), Input impedance 20kΩ, Analog OUT: XLR3-32 x 2, CH1: THRU (fix), CH2: THRU or DSP OUT |
| | Others | USB2.0 Host 5V 500mA for USB memory DATA storage/load |
| | AC | IEC AC inlet x 1 (V-Lock) |
| Amplifier Class | Class-D | |
| Cooling | Fan cooling, Variable speeds | |
| Power Consumption | 45W (Idle), 150W (1/8) | |
| Handle | Aluminium die-cast, Side x 2 | |
| Rigging | M10 x 16 | |
| Dimensions (W x H x D) | 550mm x 897mm (with rubber feet) x 520mm (21.6" x 35.3" x 20.5") | |
| Net Weight | 41.6kg (91.7lbs) | |
| Options | Cover: SPCVR-DZR315 | |
| Others | Enclosure Material, Finish, Color: Plywood, Durable Polyurea Painting, Black/White | |
| Floor Monitor Angle | - | |
| Pole Socket | - | |

*1 Measured peak SPL with pink noise @1m.

*2 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)



Options

- Speaker Cover SPCVR-DZR315

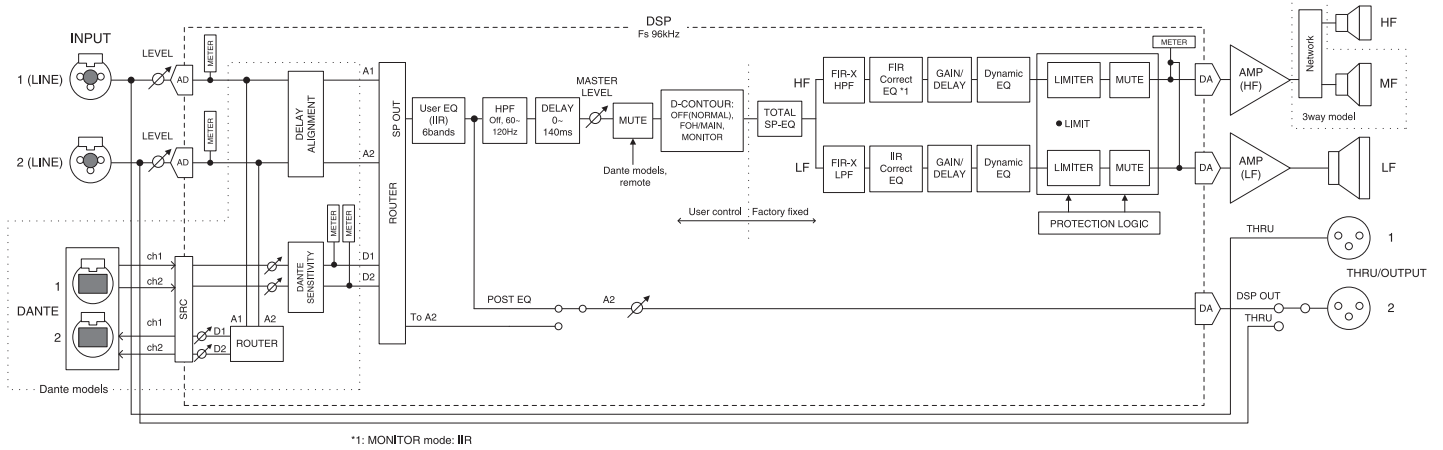
Architectural and Engineering Specifications

The Yamaha DZR315 shall be a powered loudspeaker for sound reinforcement applications. The loudspeaker shall be a full-range, three-way, bi-amplified, bass-reflex type with configurable built-in digital signal processing. The loudspeaker shall have one 15" cone low-frequency transducer with a 3" voice coil, one 8" cone midrange transducer with a 1.5" voice coil, and one 1" throat high-frequency compression driver with a 2" voice coil and titanium diaphragm. The total continuous power rating shall be 950 watts (bi-amplified, with 850 watts delivered to the LF transducer and 100 watts delivered to the MF and HF transducers). Crossover frequencies shall be 700 Hz (FIR-X filter) and 2.5 kHz (passive filter). The loudspeaker shall be capable of meeting the following performance criteria: reproduction frequency range shall be 31 Hz to 20 kHz (-10 dB), and maximum output SPL shall be 143 dB (peak, pink noise @ 1m). The loudspeaker's amplifiers shall be efficient class-D types. Coverage angles shall be 75° horizontal and 50° vertical. Two XLR/TRS combo connectors shall be provided for line-level analog audio input. Two XLR connectors shall be provided for analog audio THRU output, one of which shall be switchable for DSP output.

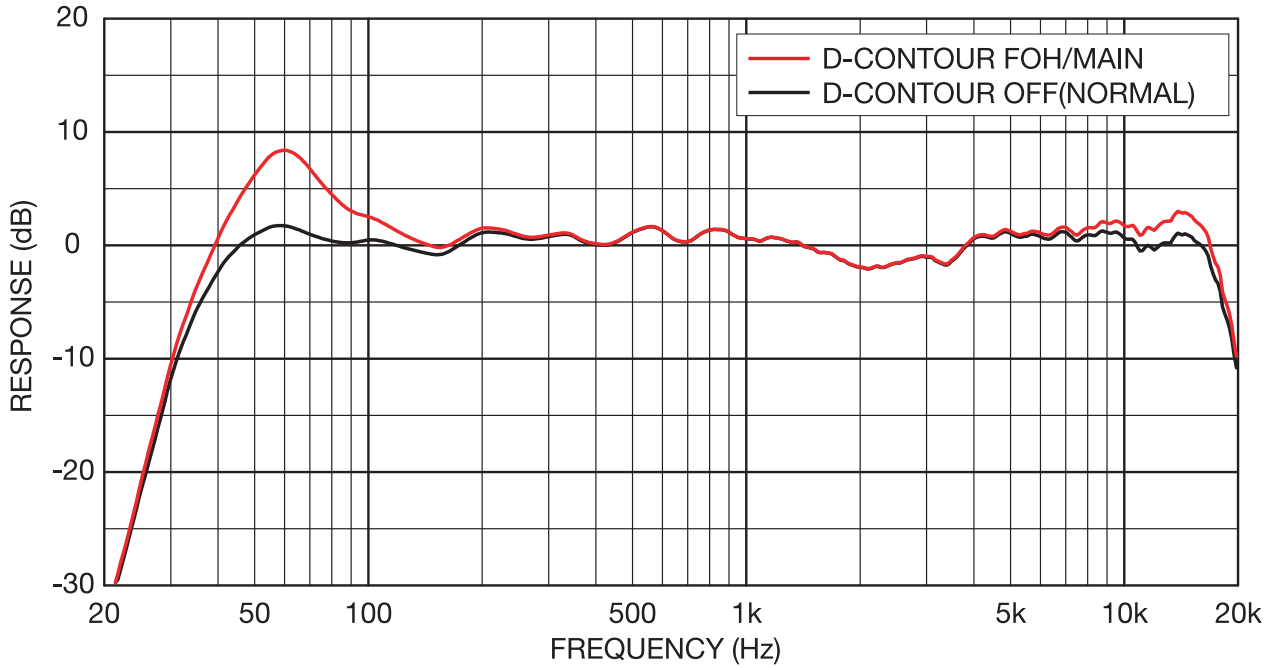
The loudspeaker shall provide built-in digital signal processing at a sample rate of 96 kHz, using 96 kHz analog-to-digital/digital-to-analog converters and FIR filters. Digital signal processing shall provide Advanced FIR-X tuning, which shall combine FIR filtering and Correct EQ for optimum crossover characteristics and overall response with minimal phase distortion. User configurable DSP functions shall be accessible via an LCD display panel and include routing, mute, HPF, 6-band EQ, delay, panel setup, panel lock, and others. D-CONTOUR intelligent multiband compression shall also be provided to maximize clarity at all power levels. Digital signal processing shall further be used to provide system-wide protection. Preset setups shall be provided, and on-board memory shall be provided for internal user setting storage. A USB port shall allow user settings to be saved to USB flash memory for external storage or transfer to other DZR series loudspeakers.

The loudspeaker enclosure shall be constructed of high-grade 15 mm plywood and finished with a durable polyurea coating. Rigging points shall be provided for use with standard eyebolts. The dimensions of the loudspeaker shall be 550 x 897 x 520 mm (W x H x D, including rubber feet). The weight shall be 41.6 kg.

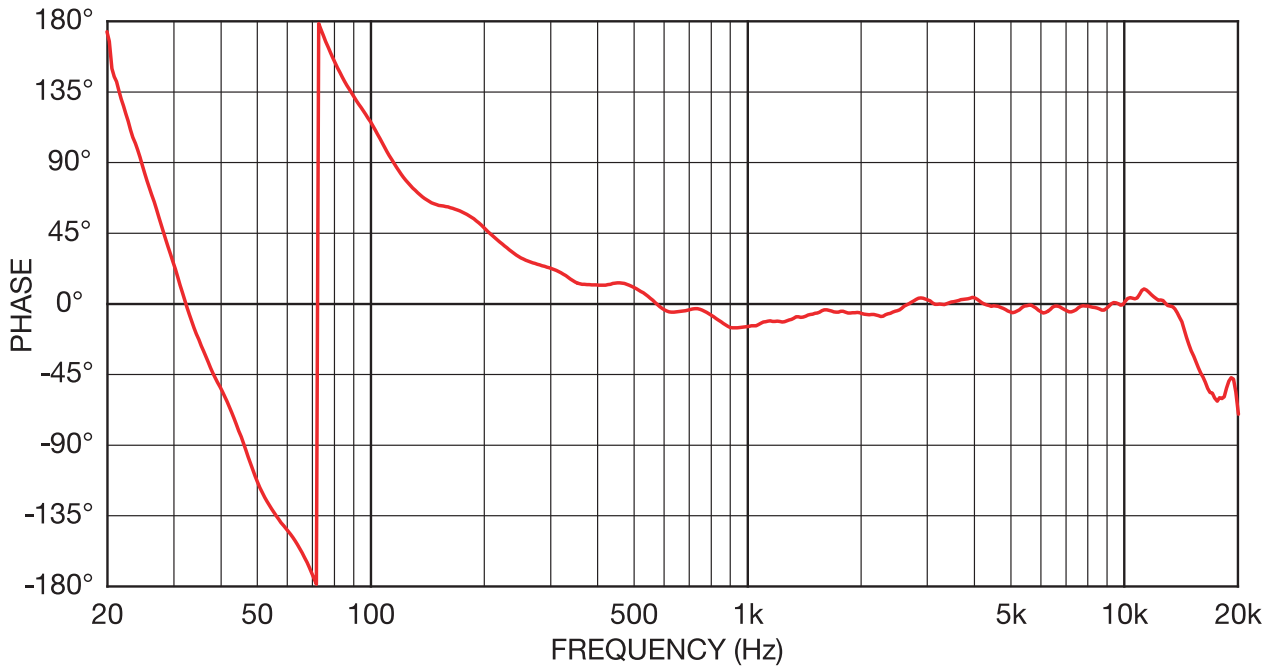
Block Diagrams



Frequency Response

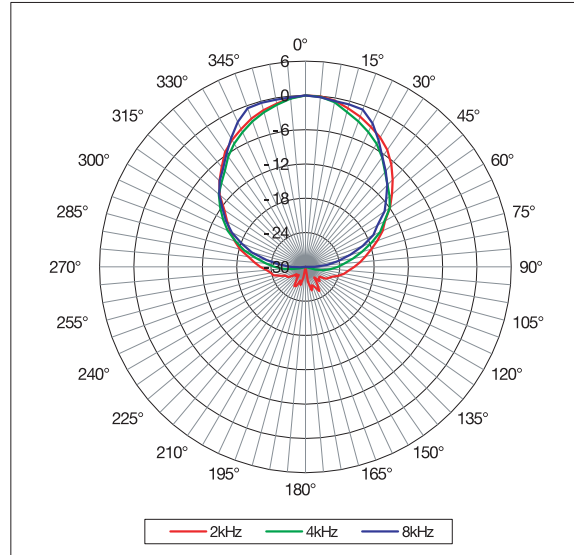


Phase Response



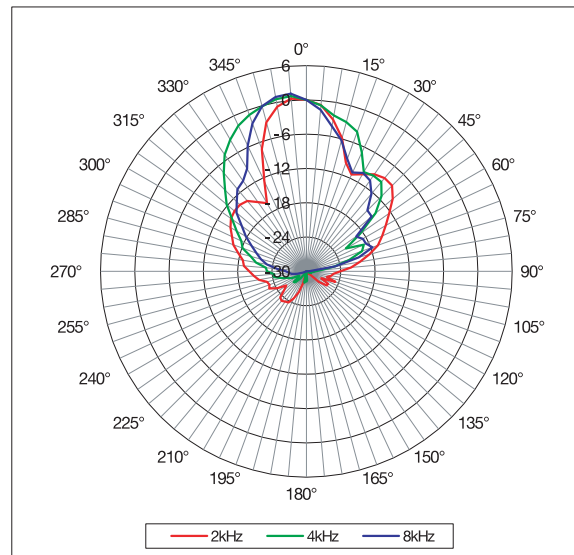
Horizontal Polar Plots

Horizontal



Vertical Polar Plots

Vertical



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