

# VS2110 Two-Way Loudspeaker System Utilizing Horn-Loaded Midrange

## Venue Series

### Key Features:

- ▶ Two-Way Mid-high Design, with horn-loaded midrange for nominal 60° x 40° pattern control
- ▶ Mid-high waveguide is rotatable allowing for horizontal enclosure orientation
- ▶ Internal tamper resistant selector enables Passive or Bi-amp operation
- ▶ Trapezoidal enclosure for easy cluster arrangements
- ▶ DuraFlex finish, tough, weather resistant and paintable
- ▶ 12 Suspension points (M10 Thread)

The model VS2110 is a mid-high boxed system that provides maximum SPL, all in a single compact package that can be configured with other Venue Series systems. With nominal 60° coverage pattern, systems can be splayed together for increased coverage and/or SPL requirements. A newly designed rotatable mid-high frequency waveguide, designed using the principles of Optimized Aperture™, coupled with a 8" mid-cone driver and the 2426H, deliver clear, controlled highs and extended mid-pattern control resulting in exceptional clarity and projection.

The VS2110 is equipped with a passive crossover. It can be switched to bi-amplified use via an easily accessible internal tamper resistant selector. Bi-amplified mode, utilizing the DSC260 digital controller for crossover, signal alignment and equalization functions, provides optimum system performance.

The VS2110 is part of the JBL Venue Series, a family of modular loudspeaker systems designed for fixed installation applications ranging from speech reinforcement to large scale music productions. All models are fitted with suspension points that accept M10 threads. The enclosures are coated with a hard wearing, weather resistant, textured finish DuraFlex. Premium 13 ply wood and an 18 gauge steel, foam backed grille enable the Venue Series system to comply with environmental test specifications.

### Components:

The VS2110 utilizes a newly designed Optimized Aperture mid-high waveguide. A high performance JBL 8" cone midrange driver rear loaded with Thermal Transfer chamber, and the 1" exit 2426H compression driver are coupled to a newly designed Optimized Aperture Mid/HF waveguide. The Optimized Aperture waveguide provides lower throat distortion and extended midrange pattern control and together with the transducers exhibit excellent projection and exceptional clarity. The cone transducer has been treated for weather resistance.



### Specifications:

#### System:

Freq. Range (-10 dB):	170 Hz - 18 kHz
Freq. Response (-3 dB):	220 Hz - 13 kHz
Horz. Coverage Angle (-6 dB):	65° averaged 500 Hz to 16 kHz
Vert. Coverage Angle (-6 dB):	50° averaged 500 Hz to 16 kHz
Directivity Factor (Q):	13.6 averaged 500 Hz to 16 kHz
Directivity Index (DI):	11.3 dB averaged 500 Hz to 16 kHz
System Sensitivity <sup>1</sup> :	105 dB, 1 W @ 1 m (3.3 ft)
Rated Maximum SPL:	133 dB, @ 1 m (3.3 ft)
System Nominal Impedance:	8 Ohms
System Input Power Rating <sup>2</sup> :	150 W, IEC; 600 W Peak
Recommended Amplifier <sup>3</sup> :	400 W
Recommended Controller:	DSC260
Passive Crossover:	1.6 kHz

#### Transducers:

<b>Mid-Frequency:</b>	M209-8A; 203 mm (8 in) dia., 50 mm (2 in) edgewound ribbon voice coil
Nominal Impedance:	8 Ohms
Input Power Rating:	150 W, AES; 600 W Peak
Sensitivity <sup>1</sup> :	105 dB, 1 W @ 1 m (3.3 ft)
Calculated Maximum SPL:	134 dB, @ 1 m (3.3 ft)
Recommended Amplifier <sup>3</sup> :	300 W
<b>High-Frequency:</b>	2426H; 44 mm (1.75") diaphragm and voice coil dia., 25 mm (1") throat dia.
Nominal Impedance:	8 Ohms
Input Power Rating:	50 W, AES; 200 W Peak
Sensitivity <sup>1</sup> :	111 dB, 1 W, @ 1m (3.3 ft)
Calculated Maximum SPL:	134 dB, @ 1 m (3.3 ft)
Recommended Amplifier <sup>3</sup> :	80 W

#### Physical:

<b>Enclosure:</b>	Trapezoidal, 22.5° side angles, birch plywood
Environmental Specifications:	Mil-Std 810, IPX4 per IEC 529
Suspension Attachment:	12 points; accepts M10 threaded hardware
Finish:	Black DuraFlex coating
Grille:	Black powder coated zinc treated 18 gauge perforated steel grille with foam backing
Input Connectors:	2 x NL8 Neutrik Speakon connectors
Dimensions:	533 mm x 572 mm x 572 mm (21.00 in x 22.50 in x 22.50 in)
Net Weight:	29.0 kg (64 lbs.)

<sup>1</sup>Measured on-axis in the far field with 1 watt (2.83 V RMS @ 8 ohms or 4.0 V RMS @ 16 ohms) input and referenced to 1 meter distance using the inverse square law. Listed sound pressure represents an average from 300 Hz to 16 kHz.

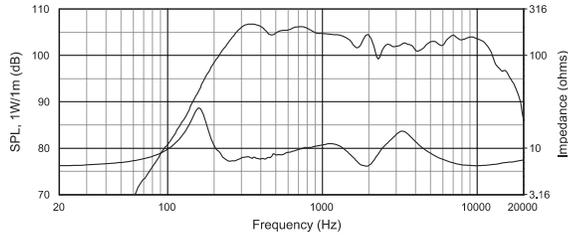
<sup>2</sup>IEC Spectrum for 2 hours with +6 dB crest factor.

<sup>3</sup>Recommended Amplifier is a power capability value that should be taken as a guide.

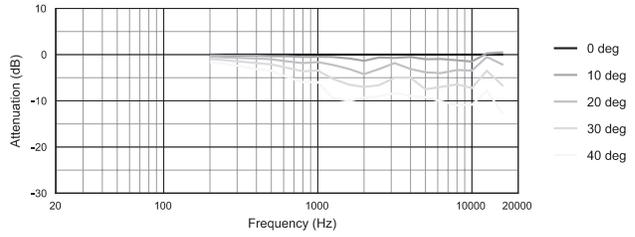
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# VS2110 2 way System

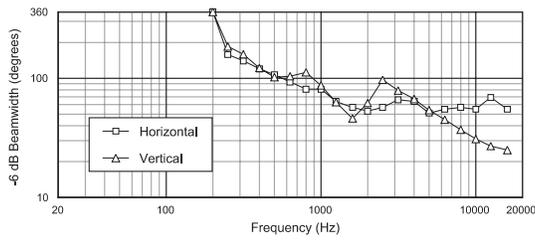
Frequency response is measured on-axis at a distance referenced to 1 meter at 1-watt using a recommended controller, shown as a half-space ( $2\pi$ ) environment.



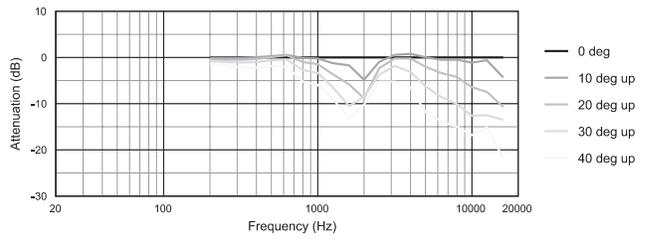
### Horizontal Off-Axis Frequency Response



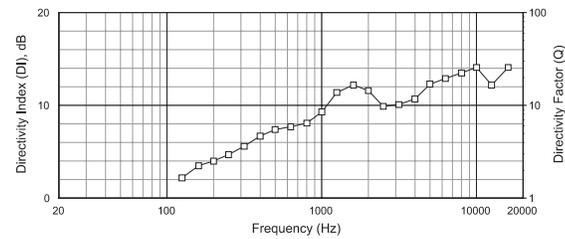
### Beamwidth vs. Frequency



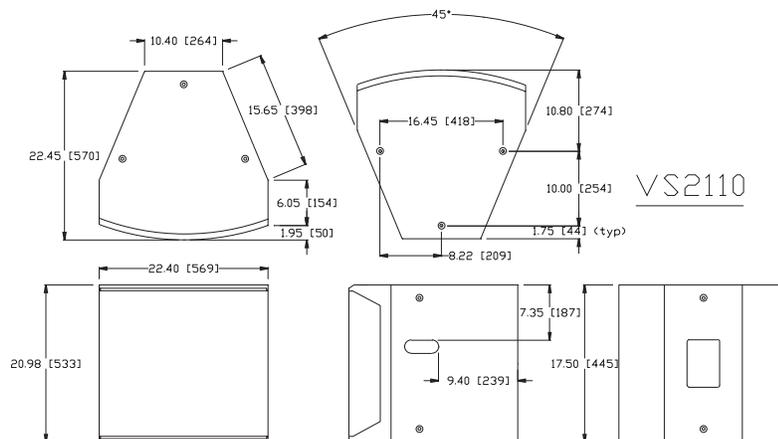
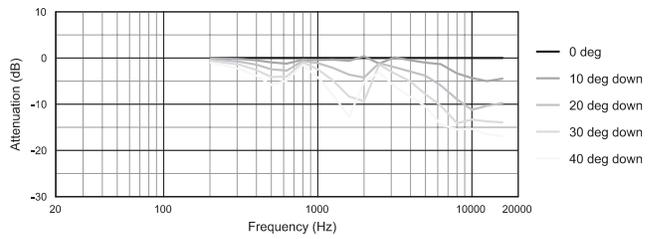
### Vertical Off-Axis Frequency Response (up)



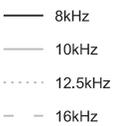
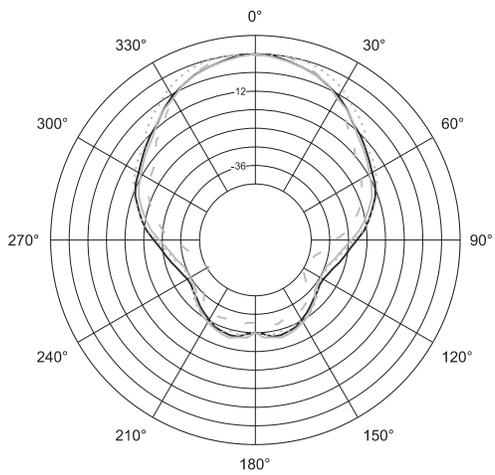
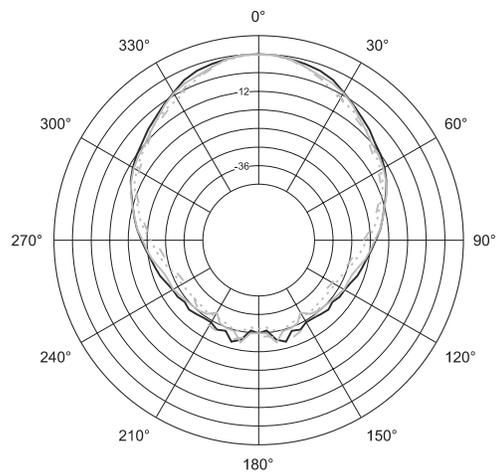
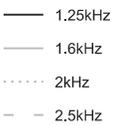
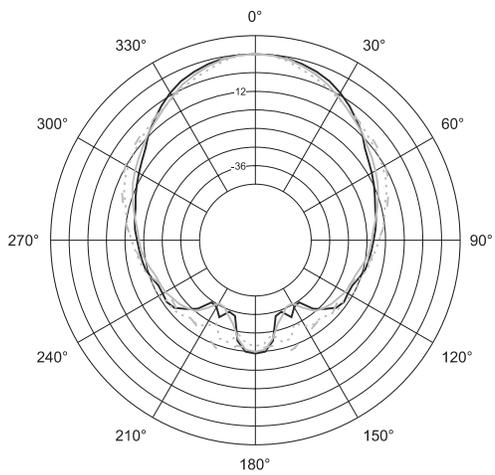
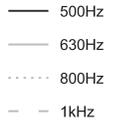
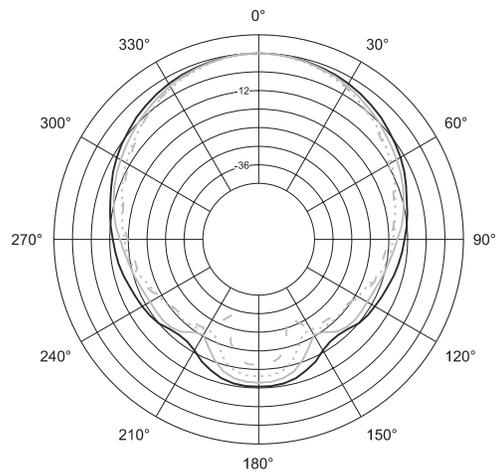
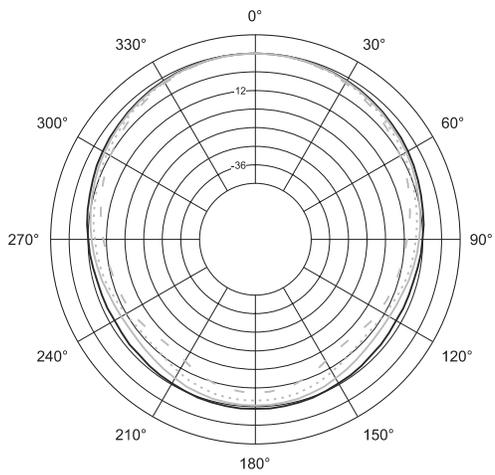
### Directivity vs. Frequency



### Vertical Off-Axis Frequency Response (down)

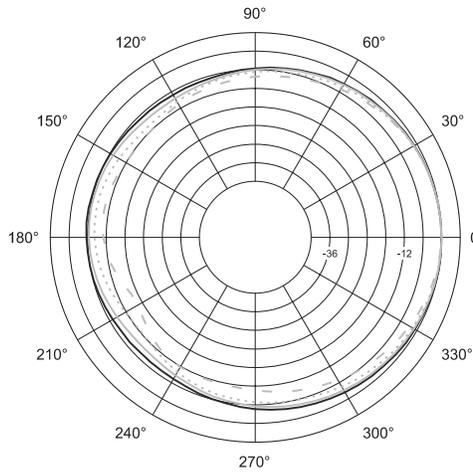


## Horizontal 1/3 Octave Polars

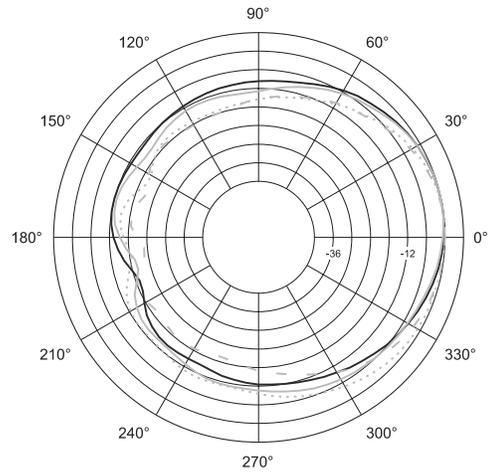


# ► VS2110 2 way System

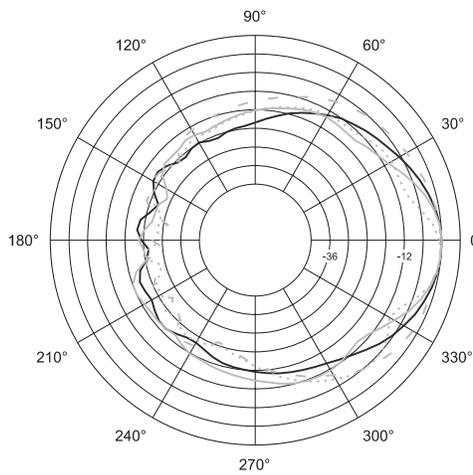
## Vertical 1/3 Octave Polars



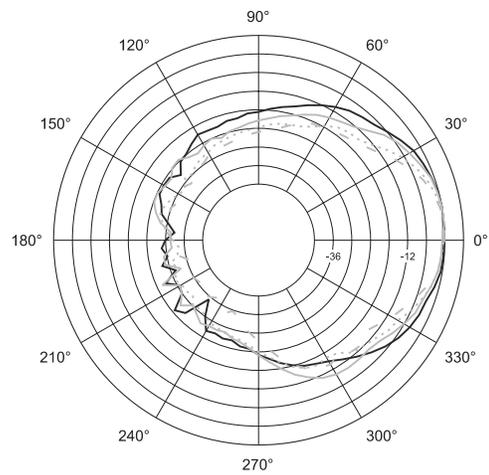
- 200Hz
- 250Hz
- 315Hz
- - - 400Hz



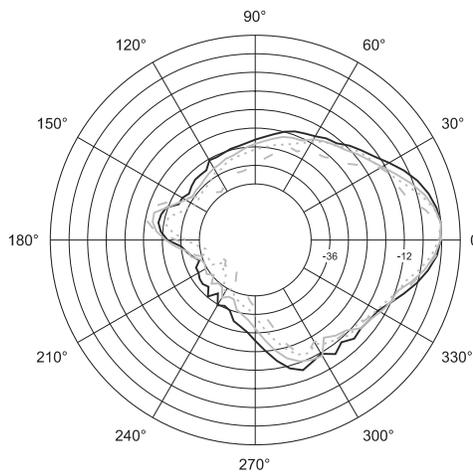
- 500Hz
- 630Hz
- 800Hz
- - - 1kHz



- 1.25kHz
- 1.6kHz
- 2kHz
- - - 2.5kHz



- 3.15kHz
- 4kHz
- 5kHz
- - - 6.3kHz



- 8kHz
- 10kHz
- 12.5kHz
- - - 16kHz



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