VTX V20

High Performance Dual 10" Line Array Element

Application

The VTX V20 is a compact, high-output line array element designed to deliver high fidelity sound reinforcement in a wide variety of applications. Patented D2 Dual Diaphragm Dual Voice Coil and Differential Drive® LF transducer technologies employed in VTX V25 and the JBL M2 Master Reference Monitor along with BSS® Audio OmniDrive HD V5 processing provide uncompromised sound quality, while VTX V20's flexible suspension system ensures efficient transport, fast setup and precise configuration.

Key Features

- D2415K D2 Dual Diaphragm Dual Voice Coil Compression Driver
- Integral mid/high waveguide provides precise vertical wavefront coupling and optimal 110 degree horizontal coverage
- Variable curvature line source array (0-12.5 degrees) with enhanced long throw resolution
- Versatile, highly-ergonomic suspension system allowing tension or compression suspension
- Switchable Quad- or Bi-Amplified 3-Way system operation
- BSS Audio OmniDriveHD V5 Processing for use with Crown Audio ITechHD or VRack
- JBL HiQnet Performance Manager Control™

VTX V20 features the advanced technology and extraordinary performance of the groundbreaking VTX V25 in a compact, high power density 3-way system. A small format version of the patented D2 Dual Diaphragm Dual Voice Coil High Frequency (HF) compression driver delivers a dramatic increase in high frequency extension and output combined with significantly lower distortion. VTX V20 has the highest power density in its class with three D2 drivers, four ultra-linear 4" Mid Frequency (MF) and two 10" Differential Drive™ Low Frequency (LF) transducers comprising the 3-way system design (2x LF, 4x MF, 3x HF) that can be either bi- or quad-amplified.

JBL Professional's proprietary Radiation Boundary Integrator® waveguide seamlessly integrates MF and HF section output, providing stable 110 degree horizontal coverage and efficient vertical line source array coupling from 0 to 12.5 degrees with enhanced long throw resolution.

VTX V20's new Angle Stop Mechanism (ASM) suspension system was specifically designed for ease of transport/handling, speed of installation and versatile re-configurability. Fully captive, flip hingebars work in conjunction with a rotary cam ASM to select inter-enclosure angles quickly and efficiently while the array is being deployed. The dual mode ASM suspension system can be operated in either compression mode (using a rear pullback motor or lever hoist to set inter-enclosure angles) or tension suspension mode (using quick release pins to secure angles between enclosures).

The companion dual 15", cardioid-arrayable S25 subwoofer provides industry-leading LF extension and output and can be integrated with V20 with tremendous versatility, either ground-stacked, suspended in mixed arrays or standalone.

VTX V20 and S25 models fully integrate with JBL Professional's comprehensive processing, amplification and intelligent control, including BSS® Audio OmniDriveHD Linear Phase FIR processing, Crown® ITech HD or VRACK amplification and JBL HiQnet® Performance Manager™ control software. Dedicated OEM factory presets and advanced software modeling and control make the complex simple, providing convenient plug-and-play operation.

Specifications:

System:	Frequency Range (-10 dB):	60 Hz - 20 kHz (short throw mode, free field)
	Frequency Response (+/- 3 dB):	80 Hz - 19 kHz (short throw mode, free field)
	Horizontal Coverage Angle (-6 dB):	105 degrees nominal (315 Hz - 16 kHz)
	Vertical Coverage Angle (-6 dB):	Varies with array size and configuration (0-12.5 degree inter-enclosure angles)
	System Input Power Rating	
	Active Mode:	LF: 1200 W Continuous, 4800 W Peak (AES / 2 hour) MF: 550 W Continuous, 2200 W Peak (AES / 2 hour) HF: 315 W Continuous, 1260 W Peak (AES / 2 hour)
	Passive 2W Mode:	LF: 1180 W Continuous, 4720 W Peak (AES / 2 hour) MF/HF: 550 W Continuous, 2200 W Peak (AES / 2 hour)
	Maximum Peak Output[1]	
	Active Mode:	130 dB SPL (LF), 133 dB SPL (MF), 142 dB SPL (HF) free field
	Passive 2W Mode:	129.5 dB SPL (LF), 141 dB SPL (MF/HF) free field
	Recommended Amplification	
	Active Mode:	Crown I-T4x3500HD : 3x VTX V20 (nominal); 2x VTX V20 (high performance) 2x Crown I-T9000HD: 3x VTX V20 (nominal); 2x VTX V20 (high performance)
	Passive 2W Mode:	Crown I-T4x3500HD : 2+2 VTX V20 (nominal); 1+1 VTX V20 (high performance) Crown I-T9000HD: 2x VTX V20 (nominal); 1x VTX V20 (high performance)
	Recommended Signal Processing:	Crown® I-TechHD or VRack power amplification JBL HiQnet Performance Manager system control
Transducers	Low Frequency:	Two 2261H, 254 mm (10 in) dia., 76 mm (3 in) dual coil, Neodymium Differential Drive®, Direct Cooled™
	Mid Frequency:	Four 2164H, 130 mm (5 in) dia., 51 mm (2 in) single coil, Ultra Linear Motor
	High Frequency:	Three 2415K D2 Dual Diaphragm Dual Voice Coil Compression Driver; two 38 mm (1.5 in) diameter voice coils; 21 mm (0.8 in) exit
Bandpasses - Active Mode	Low Frequency:	
	Bandpass Nominal Impedance:	2 x 8 ohms (LF Transducers wired individually)
	Input Power Rating[2]:	2 x 600 W Continuous, 2400 W Peak (AES / 2 hour) 2 x 485W Continuous, 1940 W Peak (100 hour)
	Bandpass Sensitivity:	93 dB, 1W / 1m (2.0 Vrms at 3.3 ft) free field
	Mid Frequency:	
	Bandpass Nominal Impedance:	8 ohms (MF Transducers wired in series parallel)
	Input Power Rating[2]:	550 W Continuous, 2200 W Peak (AES / 2 hour) 420 W Continuous, 1680 W Peak (100 hour)
	Bandpass Sensitivity:	100 dB, 1W / 1m (2.83 Vrms at 3.3 ft)
	High Frequency:	
	Bandpass Nominal Impedance:	8 ohms (HF Drivers wired in parallel)
	Input Power Rating[2]:	315 W Continuous, 1260 W Peak (AES / 2 hour)
	Bandpass Sensitivity:	111 dB, 1W / 1m (2.83 Vrms at 3.3 ft)
Bandpasses - 2W Passive Mode	Low Frequency:	
	Bandpass Nominal Impedance:	16 ohms (LF Transducers wired in series)
	Input Power Rating[2]:	1180 W Continuous, 4720 W Peak (AES / 2 hour) 1020 W Continuous, 4080 W Peak (100 hour)
	Bandpass Sensitivity:	93 dB, 1W / 1m (4.0 Vrms at 3.3 ft) free field
	Mid/High Frequency:	
	Bandpass Nominal Impedance:	8 ohms (MF/HF passive network)
	Input Power Rating[2]:	550 W Continuous, 2200 W Peak (AES / 2 hour) 420 W Continuous, 1680 W Peak (100 hour)
	Bandpass Sensitivity:	108 dB, 1W / 1m (2.83 Vrms at 3.3 ft)
Enclosure	Construction:	Cast aluminum front baffles and HF waveguide; 18 mm, 11-ply Finnish birch plywood; black DuraFlex™ finish; integral recessed handles
	Suspension:	Captive hinge bars and Quick Release Pins with Cam-wheel Angle Stop Mechanism. System can be deployed in tension (fixed angle) or compression mode.
	Grille:	Powder coated 14 gauge hex-perforation steel with acoustically-transparent black cloth backing
	Input Connectors	
	Active Mode:	Neutrik® Speakon® NL-8 (2x) : Pins 1+/- LF1, Pins 2+/- LF2, Pins 3+/- MF, Pins 4+/- HF
	Passive Mode:	Neutrik® Speakon® NL-4 (2x) : Pins 1+/- LF1+LF2, Pins 2+/- MH Neutrik® Speakon® NL-8 (2x) : Pins 1+/- Thru, Pins 2+/- Thru, Pins 3+/- LF1+LF2, Pin 4+/- MH
	Dimensions (H x W x D):	279.9 x 911.4 x 402.2mm (11.0 x 35.9 x 15.8 in)
	Net Weight:	40.0 kg (88.0 lb)
	Shipping Weight:	44.5 kg (98.0 lb)
Optional Accessories	VVTX-V20-AF	Array Frame for suspending or ground stacking VTX V20 or VTX S25 arrays
	VTX-V20-AF-EB	Extension bar for use with VTX-V20-AF, front- or rear-mounted. Single (central) or dual (side-mounted) extension bars can be used for added stability and tilt adjustment of ground stacked systems
	VTX-V20-LH	Manual lever hoist for rear compression of VTX V20 arrays
	VTX-V20-PB	Pull Back adapter for attachment to bottom VTX V20 enclosure to facilitate rear pull back (compression) suspension
	VTX-V20-VT	Vertical transporter for 3 or 4 VTX V20 loudspeakers
	VTX-V20-VT-CVR	Padded protective cover for use with VTX-V20-VT vertical transporter

[1]Calculated maximum SPL based on rated peak power and measured sensitivity
[2]AES Standard, one decade pink noise with 6 dB crest factor within device's operational band, free air. Standard AES 2 hr rating plus long term 100 hr rating.

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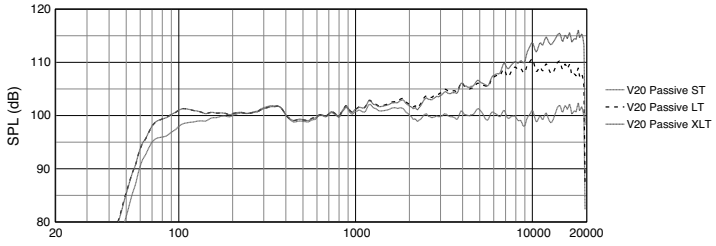
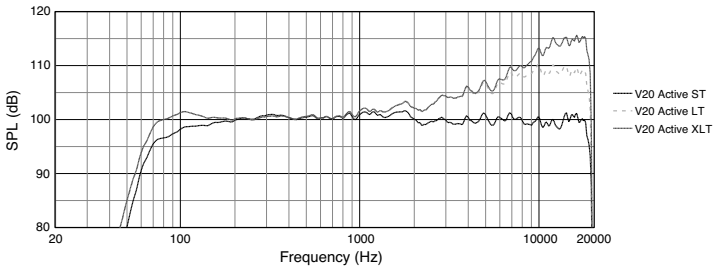
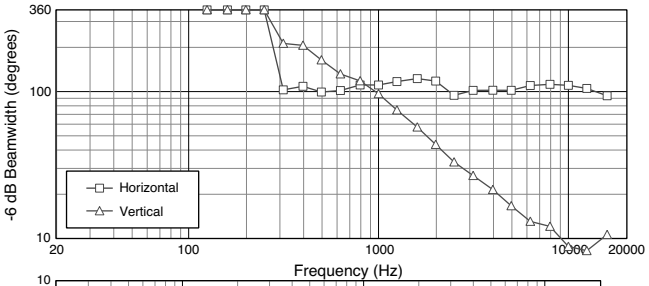
Acoustical Measurements

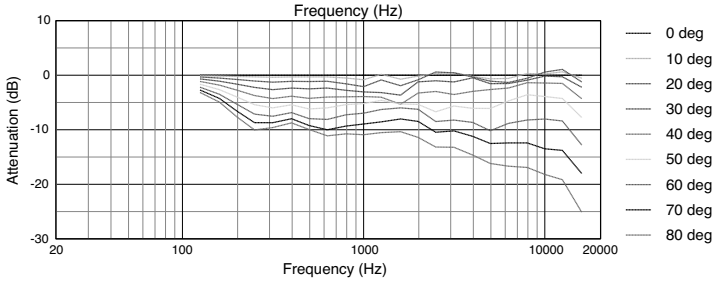
Frequency Response with
Recommended Digital Signal Processing



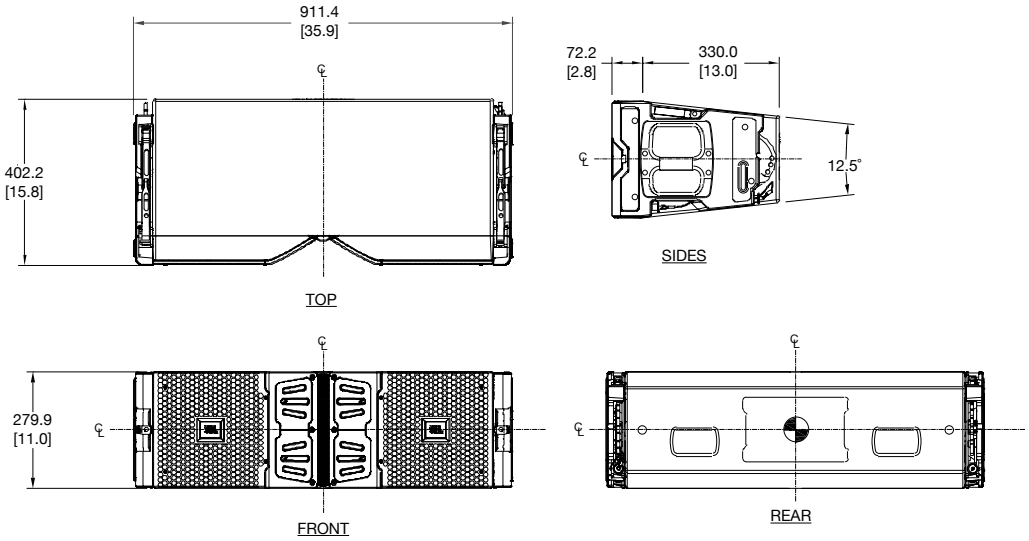


Beamwidth and Normalized Off-Axis Response

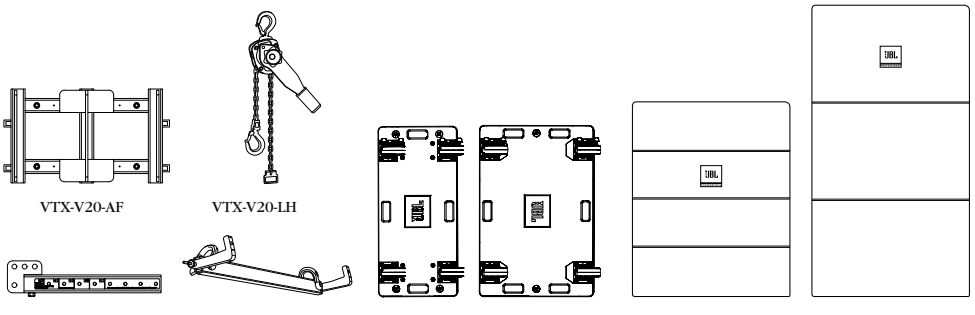




Dimensions



Accessories



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