VT4887ADP-DA

Compact Powered Bi-Amplified Three-Way Line Array Element, Integrated Audio System

VERTEC® DP Series System with DPDA (Drive Pack Digital Audio Input Module)

Application:

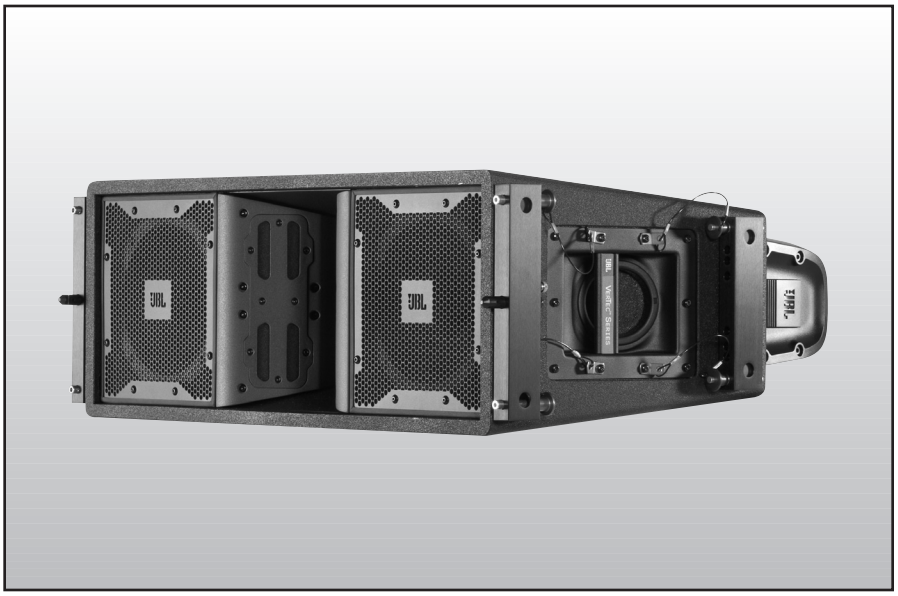
The VT4887ADP-DA Compact Powered Three-Way Line Array Element is designed to deliver high-quality reinforcement of music and speech in a variety of applications including concert audio, corporate A/V and theatrical presentations of all types for both portable users and performance venues.

Key Features:

- New 2268H-1 8" low frequency drivers offer improved performance and extended low frequency response.
- Advanced technology components: Differential Drive®, neodymium magnet, dual voice coil, Direct Cooled™ cone transducers for low weight and high output
- JBL DrivePack® technology delivers superb audio quality and robust high efficiency "Class-I" power, perfectly matched to the enclosure, with comprehensive onboard BSS Omnidrive HD digital signal processing
- Modular bay fitted with DPDA input module; accepts other optional versions
- World-wide AC line voltages are automatically selected for 50 or 60 Hz.
- Advanced construction techniques using PlyMax™ provide exceptionally rigid, lightweight enclosure construction.
- Rugged DuraFlex™ exterior finish; weatherized components
- Integrated S.A.F.E.™ suspension system: premium heat-treated alloys provide rigid, reliable hanging arrays
- For use in stand-alone arrays or in combination with other VERTEC system models

The VT4887ADP-DA is a compact, powered lightweight 3-Way Line Array Element housing two 8" woofers, four 4" midrange radiators, and two 1" exit high frequency drivers. Designed in cooperation with Harman Professional development partners, the JBL DP2 DrivePack features 2200 watts peak output power and comprehensive digital signal processing, including patented high efficiency "Class-I" power amplifier technology from Crown and onboard BSS Omnidrive HD DSP functionality that communicates readiness and operational status and monitors fault detection of components and electronics.

Advanced VERTEC-class component transducers provide a high power-to-weight ratio. Enclosure features foam-backed low frequency grilles, dense protective foam inserts for midrange apertures, and fine steel mesh grille to protect high-frequency apertures. Speaker cones are treated with weather-resistant compounds. The VT4887ADP-DA's suspension hardware relies on quick-release pins and end-mounted metal tubes to couple adjacent VT4887ADP-DA's together. Enclosure ships with integral front and rear hinge bar set.



Specifications:

Line Array Element	
Frequency Response (±3 dB):	67 Hz – 20 kHz
Frequency Range (-10 dB):	55 Hz – 22 kHz
Horizontal Coverage Angle (-6 dB):	100 deg. nominal (500 Hz – 16 kHz)
Vertical Coverage Angle (-6 dB):	Varies with array size and configuration
Maximum Peak Output[1]:	136 dB SPL, 1m
Transducer Sections	
Low Frequency:	Two 2168H-1, 203 mm (8 in) dia., 76 mm (3 in) Dual Coil, Differential Drive®, Direct Cooled
Bandpass Nominal Impedance:	4 ohms (LF woofers wired in parallel)
Mid & High Frequency:	MID: Four 2104H 101 mm (4 in) with 25.4 mm (1 in) dia. voice coil HF: Two JBL 2408H 25 mm (1 in) exit compression drive, 38 mm (1.5 in) voice coil
Bandpass Nominal Impedance:	8 ohms (drivers wired in series-parallel)
System	
DP2 Internal Amplification Output (at load):	2200W Peak, 1100W Continuous
DP2 Output Topology:	2-Channel, Class-I
Signal Processing:	BSS OmniDrive HD processing provides precision bandpass filters, limiting, pre-equalization filters and automatic self-test functions.
System Management:	LevelMax™ multi-state limiters provide electrical, mechanical and thermal protection
Signal Input:	Analog F-XLR Active 20k Ohms Balanced AES F-XLR, 110 ohms
Signal Loop-Through:	M-XLR (analog pass-through) M-XLR (buffered AES)
Controls:	Via Harman HiQnet System Architect software
AC Power Operating Range:	Auto Select 90-132/VAC 50/60 Hz
AC Line Voltage:	50/60 Hz, Auto-Detect; 120V/240V (±10%)
AC Input Connector: AC Power Loop-thru:	Neutrik Powercon Neutrik PowerCon
AC Current Requirement:	4A per system at 120V, 3A per system at 240V
Enclosure	
Box Construction:	Wedge frustum 5 degree side angle enclosure. PlyMax™ engineered composite structure, DuraFlex finish, 2 handles
Suspension System:	S.A.F.E. hardware, integral hinge bars nest in rigging tubes on box ends. Quick release pins with restraining lanyards
Grille:	Black perforated steel, foam backed
Dimensions (W x H x D):	787 mm X 279 mm X 563 mm (31 in X 11 in X 22.1 in)
Net Weight:	39.7 kg (87.5 lb)

[1]Measured maximum SPL in Free Field conditions with IEC shaped noise.

INPUT MODULE CHARACTERISTICS AND OPTIONS

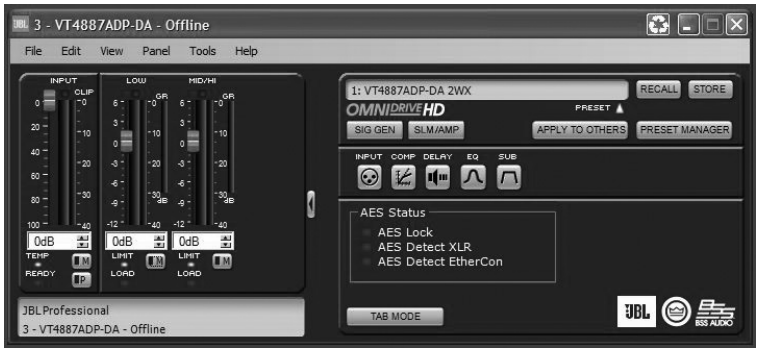
Features

Description	DPDA
	(DrivePack Digital Audio)
HiQNet Compliant	Yes
Network Communication	100MB Ethernet
Internal Switch	Embedded 2 port switch
Network Connections	Ethercon/RJ-45, CAT5/6
Supported Audio format	AES3 Digital, Analog balanced
Level Controls	Network Controllable
Remote Load Monitoring	Yes
User Accessible Delays	Yes
Noise Generator	Pink, White, Sine
Sine Wave Generator	Continuous, Burst
Error Reporting	Yes, via software
Digital Speaker Setting Presets	50, user assignable
Polarity Reverse	Yes, via software
Firmware upgrades via network	Yes
Mute	Remote via Network

Specifications

Analog Audio Input Connectors	XLR, Female
Input Type	Electronically Balanced, RF Filtered
Signal Loop-through	XLR, male, passive pass-through
Input Impedance	20k Ohms Balanced
AES/EBU Audio Input Connectors	XLR, female & Ethercon/RJ45 for CAT5 UTP Structured Wiring
Input Type	Digitally Balanced
Signal Loop-through	XLR, Male, 110 ohm, buffered Ethercon/RJ45 (labeled as output)
Input Impedance	110 ohms, balanced
Sampling Frequency	Auto sensing, 48 KHz, 96 Khz.
Polarity	(+) voltage on XLR pin 2 yields (+) LF pressure
Max Analog Input Level	+26 dBu RMS / +29 dBu Peak
Max AES/EBU digital Input Level	10 V pk-pk
Frequency Response	20 Hz – 20k Hz ± 0.5 dB
DSP Processing	24 Bit conversion, 32 bit FPP BSS Omnidrive HD with FIR filters, LevelMax Limiting
Latency	Analog 675us AES 48kHz 1.92ms AES 96kHz 1.75ms
Dynamic Range (20-20 KHz)	> 103 dB (A Weighted)
THD+N (20-20 KHz), rated power	< 0.05%
User Programmable Signal Delay	> 2 seconds
Input Module Controls	Enable ALT Preset – Mechanical Encoder for array ID and box position
Rear Panel Indicators	Cross-patch, AES Lock, Fault, Clip, Signal, Thermal, Ready, Data, Alt Preset Select, Network link: In/Out

JBL DrivePack® Software Device Panel



With HiQnet-compatible input modules installed, JBL DrivePack systems can be remotely controlled and monitored using HiQnet System Architect™ software. A Windows-based application, it provides an intuitive, unified platform for system configuration and operation of JBL DrivePack-equipped systems, and other HiQnet compliant audio devices in the signal chain.

HiQnet System Architect enables the unified layout of on-screen product control surfaces, and simple preset configuration of an entire system made up of HiQnet-compliant products across multiple brands and product classes. Advanced remote control and diagnostic capabilities, custom control panel creation, unified event logging and error reporting for the entire system, and the recall of presets on all connected HiQnet devices are included. In addition, the application enables a user to copy / paste like parameter values from, and to, multiple products across the HiQnet network. Use with current version of HiQnet System Architect network configuration and control software, available for download at www.harmanpro.com.

JBL DrivePack® enclosures are equipped with a modular input bay that accepts either DPDA, DPIP, DPAN or DPCN input modules. Speaker-dependent processing such as crossover filtering and component equalization, time alignment and protection are not user-configurable. Options are available for connectivity, audio signal path and control functionality.

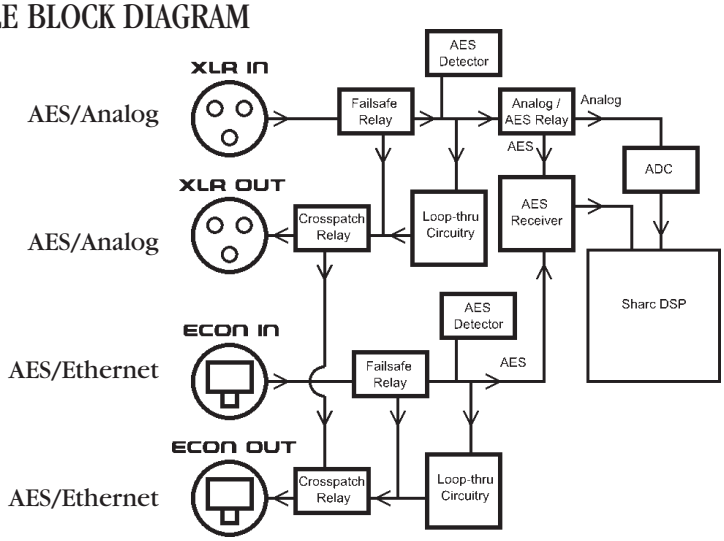
DPDA (HiQnet Network Input Module with AES Digital Audio)

The DPDA module adds AES/EBU digital audio input capability with analog audio backup, BSS Omnidrive HD digital signal processing and LevelMax multi-stage limiting. Its 100 Mb Ethernet networking (with daisy-chain capability), allows for Remote Control and Monitoring via HiQnet System Architect™ software. A rotary mechanical encoder allows for array identification and box positioning.

Available monitoring functions include: audio input type, AES lock, input signal level, clip and gain reduction; ready / temp status; individual channel load status, signal level, clip and gain reduction; event logging and user alert messaging. Available remote control functions include: input type (analog or AES), input connector (XLR or Ethercon), input level, input polarity and mute; input compressor attack/release, ratio and makeup gain; individual channel gain and mute. Twenty, type-selectable input filters (10 System and 10 Guest filters) are available for system equalization along with user-adjustable input delay of up to 2 seconds and sub filter access (user-adjustable low pass filter for subwoofer systems; high pass filter for full-range systems). Signal generator functions (sine wave, swept tone, pink or white noise) are available to facilitate system testing and up to fifty presets can be stored internally. In addition, Master Control Panels and Master Monitor Panels allow for convenient grouping of control and monitoring functions for multiple DPDA equipped DrivePack enclosures, providing a powerful control/monitoring interface for large format line array or subwoofer systems. See JBL DPDA specification sheet for more information on DPDA input modules.

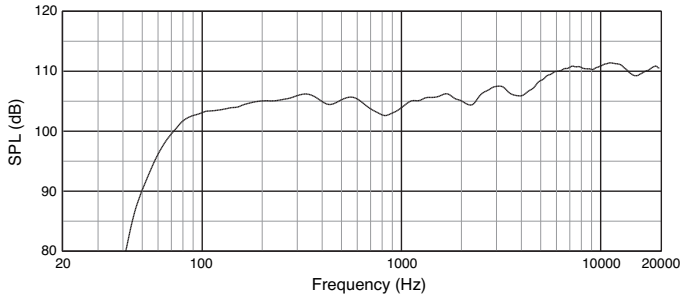
HiQnet™

DPDA INPUT MODULE BLOCK DIAGRAM

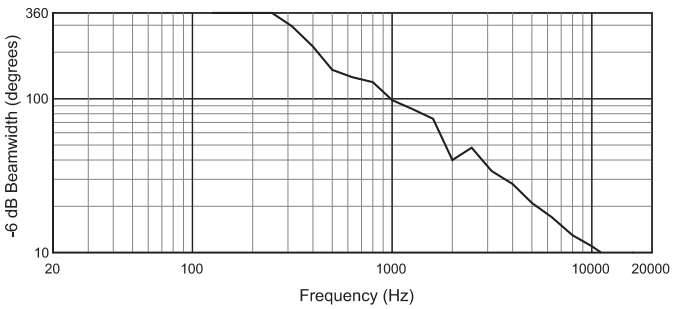


DPIP (Optional non-networked dbx Input Module with basic functionality)

The standard DPIP input module features analog audio inputs and sophisticated onboard digital signal processing technology. Precision bandpass filtering, limiting, time alignment, component equalization and automatic self-test functions ensure optimized performance. Rear panel controls include a 32-position detented rotary attenuator calibrated in 0.5 dB steps, providing a 16 dB range of control. The “Enable Subwoofer Filter” button is a momentary-contact switch that enables or disables an 80 Hz filter. For subwoofer systems, the low-pass frequency is set to 80 Hz when selected or 100 Hz when deselected. For full-range systems, the high-pass frequency is raised to 80 Hz when the “Enable Subwoofer Filter” button is selected.



Frequency Response, On-Axis, Single Line Array Element



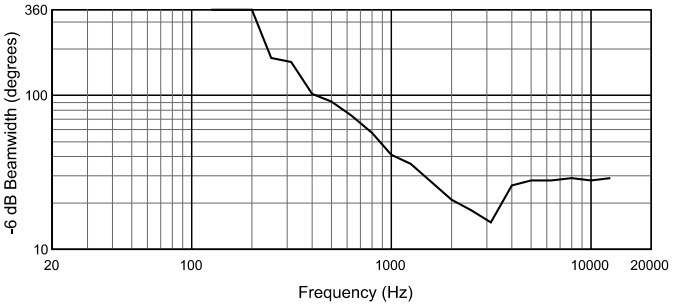
Vertical Beamwidth, Single Line Array Element

VT4887ADP-DA Acoustical Measurements

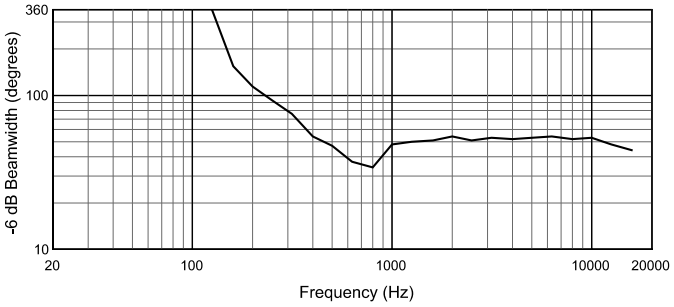
The frequency response measurement shows individual bandpass responses with composite response overlay. The Vertical Beamwidth results range from a single box up to an 8-box array with 10° splay angles between adjacent array elements.

All measurements provided herewith are derived from data gathered with a calibrated measurement microphone centered on-axis of the box or array, with polar data points taken symmetrically around the measurement axis.

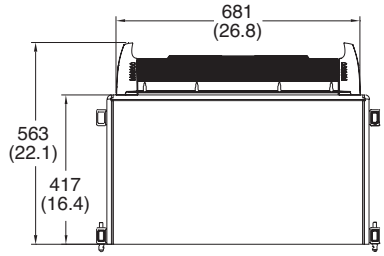
All polars were taken as groundplane measurements at a distance of 10 meters, with data gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.



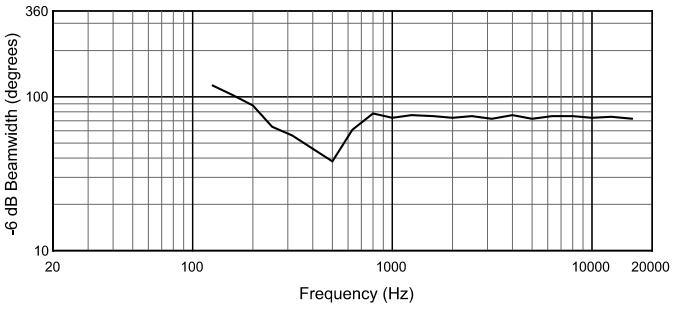
Vertical Beamwidth, Two Element Array
(10° splay between cabinets)



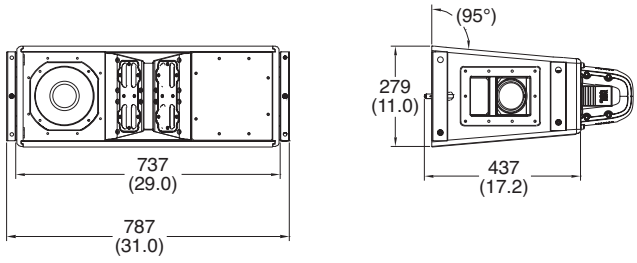
Vertical Beamwidth, Four Element Array
(10° splay between cabinets)



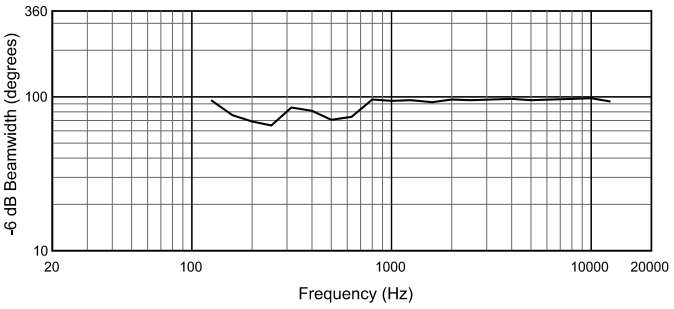
Dimensions in mm (in)



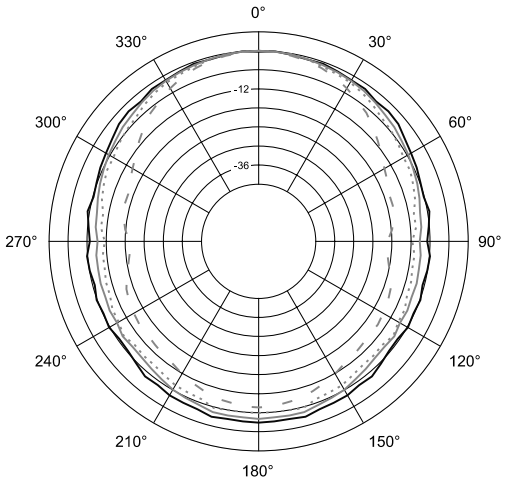
Vertical Beamwidth, Six Element Array
(10° splay between cabinets)

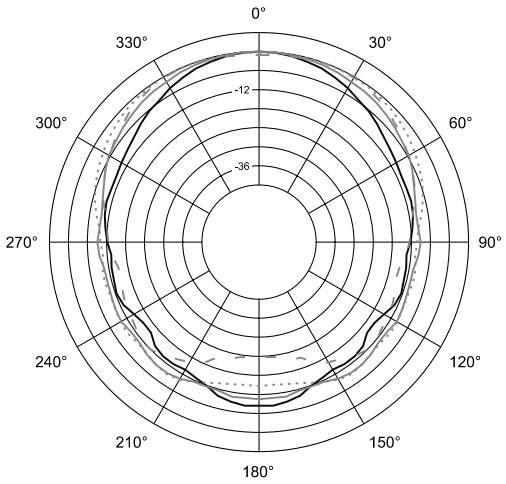


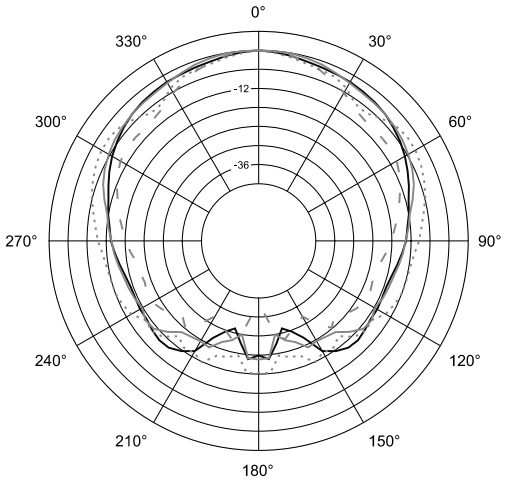
System Dimensions (WxHxD):
787 mm x 279 mm x 563 mm including attached suspension hardware

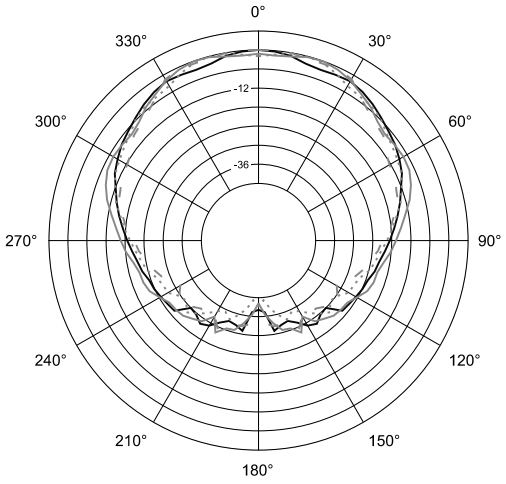


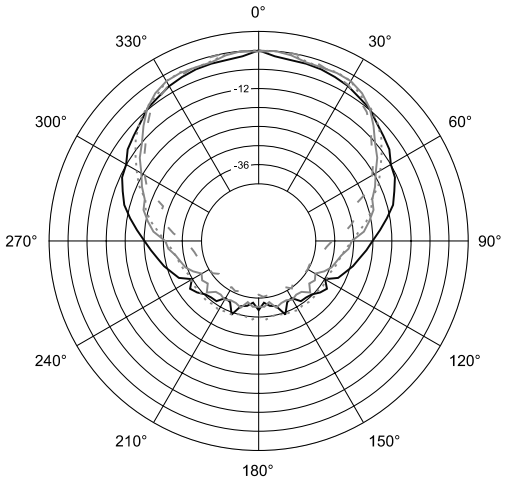
Vertical Beamwidth, Eight Element Array
(10° splay between cabinets)





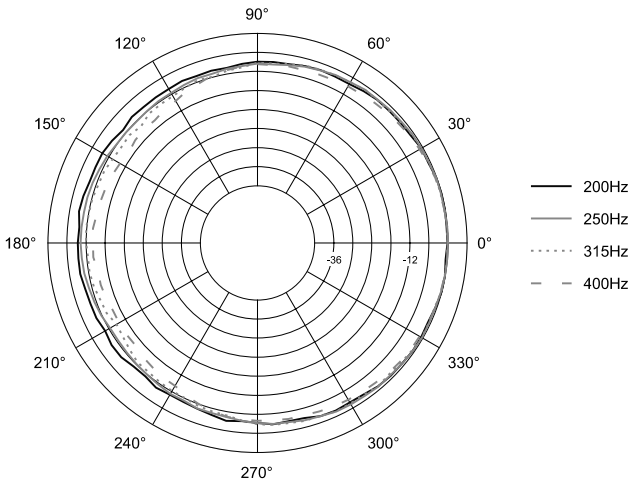


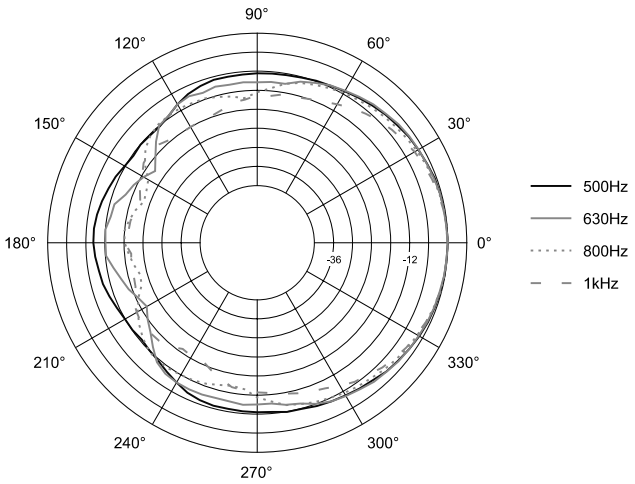


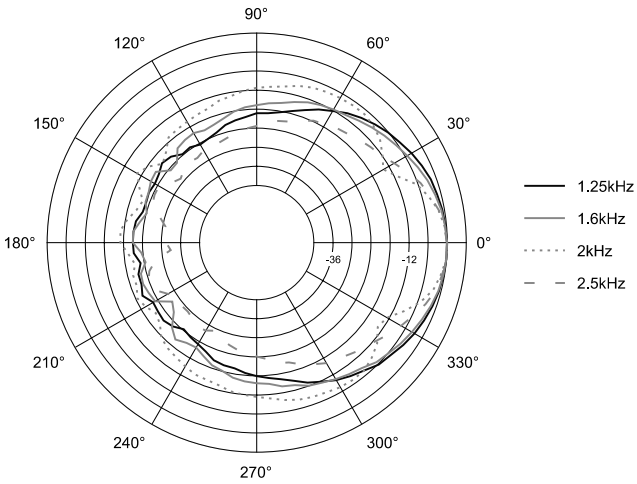


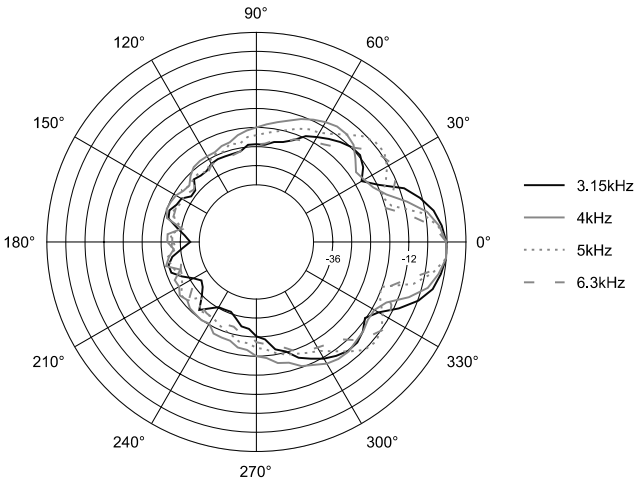
Horizontal 1/3 Octave Polars (Single VT4887ADP-DA Array Element)

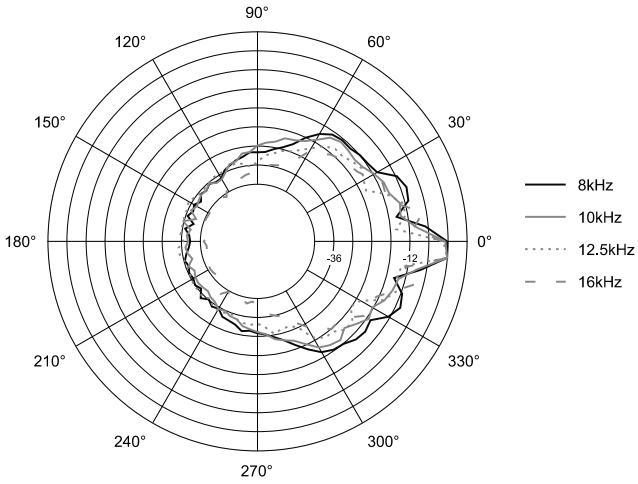
Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.





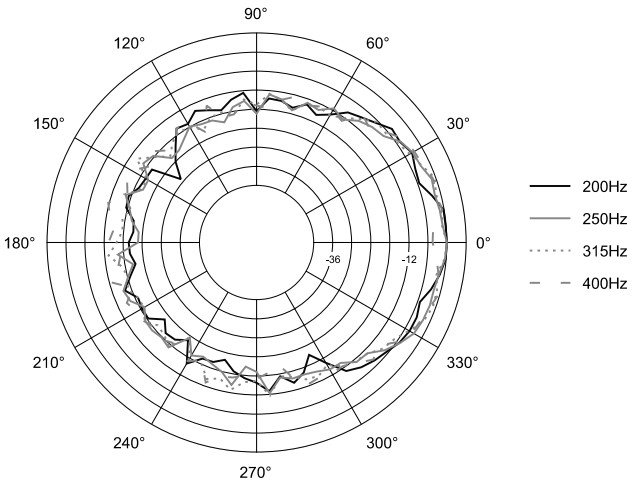


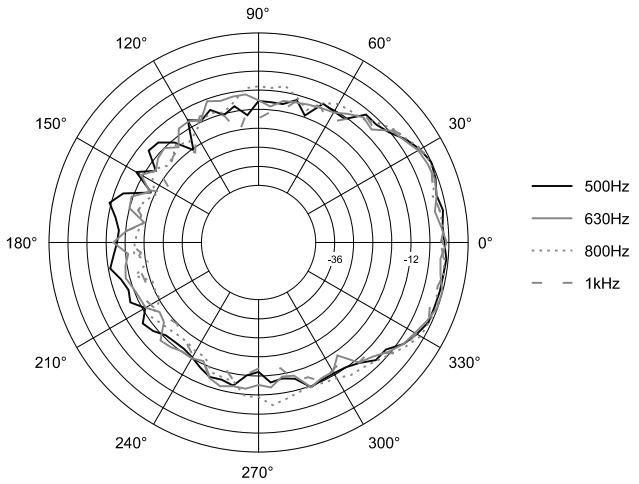


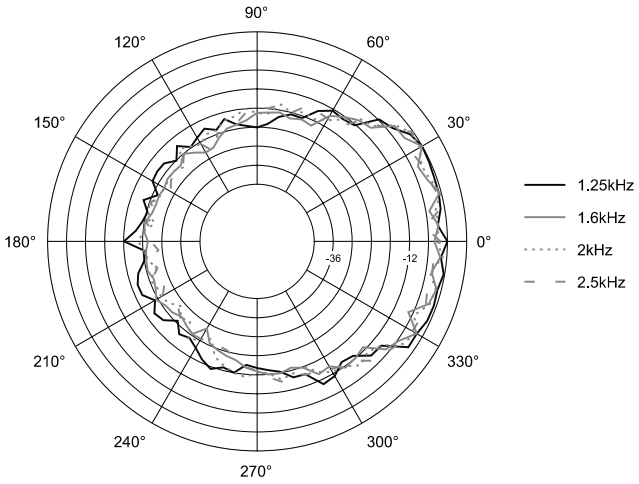


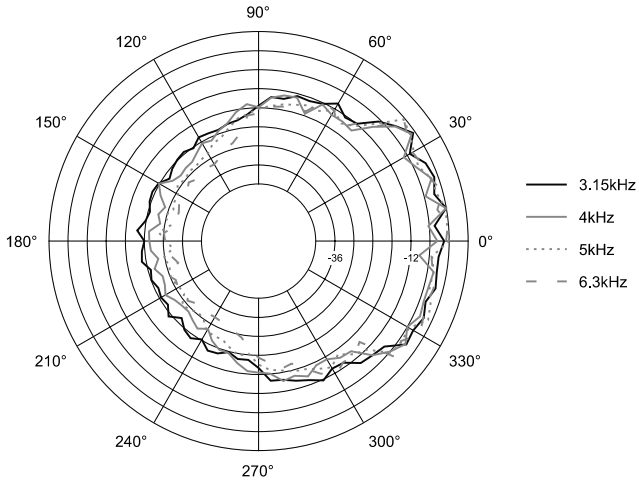
Vertical 1/3 Octave Polars (Single VT4887ADP-DA Array Element)

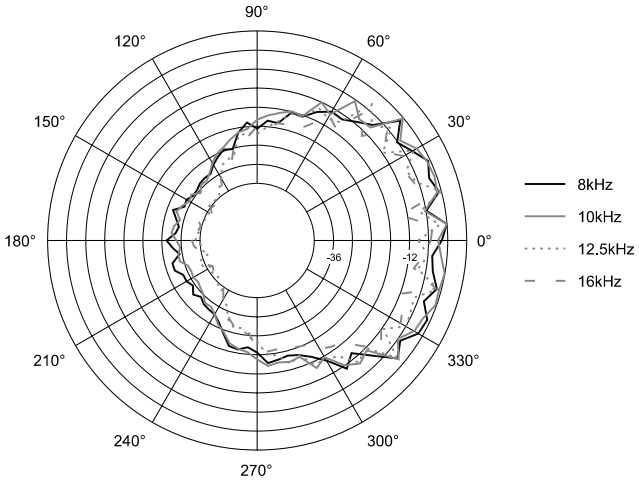
Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.











Vertical 1/3 Octave Polars (8-Box Array of VT4887ADP-DA Array Elements)

Data taken as groundplane measurements at a distance of 10 meters, gathered on 5-degree intervals from 0-355° using the MLSSA measurement system.

▶ VT4887ADP-DA Compact Powered Bi-Amplified Three-Way Line Array Element, Integrated Audio System

VERTEC System Arrays

The VT4887ADP-DA is an articulating line array element designed for use in vertically oriented, multi-box systems. A nominal horizontal coverage pattern of 100° is maintained, while setting the individual box angles allows the creation of arrays with varying vertical coverage angles. Vertical coverage of an array is a function of the number of boxes used and the splay angles chosen.

VT4887ADP-DA enclosures can be suspended from available VT4887-AF or VT4887-SF array frames. Due to the use of JBL's S.A.F.E. suspension hardware system, rigid arrays can be constructed that can be tilted either upwards or downwards at radical angles. Front hinge bars are tightly coupled, while rear hinge bars are used to set angles from zero to ten degrees for adjacent enclosures.

The JBL DrivePack® DP2 with DPDA input module attaches to the back panel of the enclosure, creating the model VT4887ADP-DA. Robust Crown amplification and onboard BSS digital signal processing are combined to create a compact powerful, integrated audio system.

VT4887-AF (Array Frame)

This array suspension frame is crafted of 6061 heat-treated aluminum. It includes 11 (eleven) attachment holes for shackles, each fitted with bronze bushings for long life. These holes are set on approx. 4" centers. Each hole has an I.D. (inner diameter) of 25.4 mm (1 in). Array frames are fitted with SAE Grade 8 bolts, 7075 Grade aluminum receiver blocks and steel quick release pins with stainless steel restraining lanyards. Weight: 36 kg (80 lb).

VT4887-SF (Short Frame)

This array suspension frame is crafted in similar fashion to the VT4887-AF. The VT4887-SF is primarily intended for use with smaller clusters in tight spaces or distributed satellite arrays. Optional anchor for use on bottom of large arrays. Weight: 18 kg (40 lb).

VT4887ADP-ACC

The VT4887ADP-ACC includes items necessary for the proper transport and protection of the VT4887ADP-DA. This accessory kit includes: (1) VT4887-DOLLY & (1) VT4887ADP-COVER.

Important Note: The VT4887ADP-ACC is sold as a separate item. One kit should be ordered with each VT4887ADP-DA or VT4887ADP to ensure safe and reliable transport of each system in portable use.

VERTEC® DP Series

DP DRIVEPACK®

HiQnet™

JBL® by HARMAN

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