# VT4880ADP-DA

Full-Size Powered Ultra Long Excursion Dual 18" Arrayable Subwoofer, Integrated Audio System

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

## Application:

The VT4880ADP-DA Full Size Powered Dual 18" Arrayable Subwoofer is designed to deliver high-quality reinforcement of VLF (Very Low Frequency) musical information for a variety of applications including concert audio, corporate A/V and theatrical presentations of all types for both portable users and performance-venue applications. Ideal companion to VT4889ADP-DA full size powered three-way systems.

## Key Features:

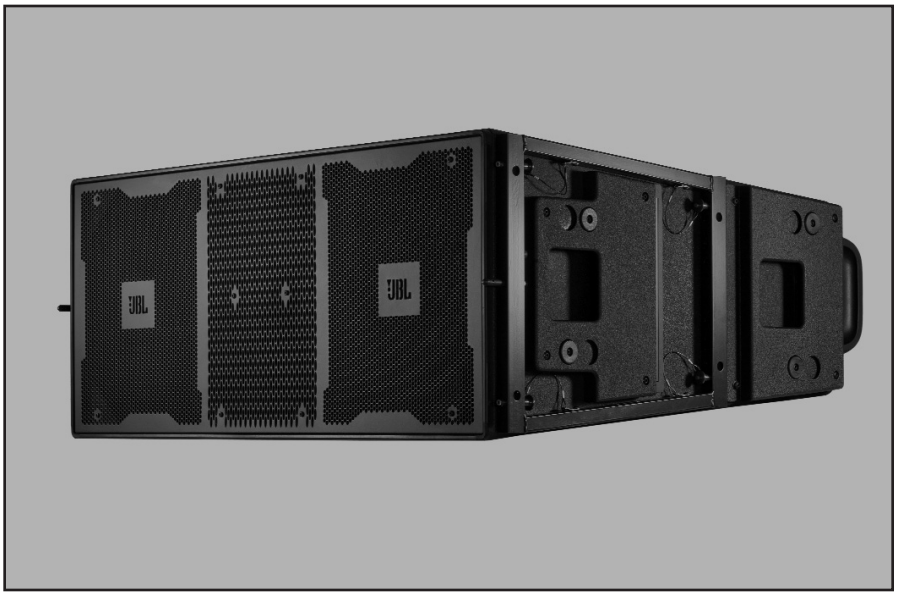
- JBL DrivePack® DP3-electronics package with robust high efficiency Class-I power
- Modular bay fitted with DPDA input module; accepts other optional versions
- World-wide AC line voltages automatically selected for 50 or 60 Hz
- New 2269G Advanced Technology Components: Differential Drive® Neodymium Magnet, Dual Voice Coil, Direct Cooled™ cone transducers with Ultra-Long Excursion capabilities
- JBL PlyMax® engineered wood materials provide rigid, yet lightweight enclosure
- Rugged DuraFlex™ exterior finish; weatherized loudspeaker cones
- Patented, integrated S.A.F.E. suspension system with premium heat-treated alloys
- For use in stand alone arrays or in combination with other VERTEC system models

The VT4880ADP-DA is a versatile, powered integrated audio system with a centrally-vented enclosure housing two 2269G Ultra Long Excursion 18" woofers. JBL DrivePack DP-3 power and DSP electronics package, designed in cooperation with Harman Professional development partners, includes patented high efficiency Class-I power amplifier technology and onboard BSS OmnidriveHD digital signal processing that communicates readiness and operational status to the user, while monitoring fault detection of components and electronics. New UItra Long Excursion 18" VLF (Very Low Frequency) components, fitted with dual voice coils and robust composite cones, provide high output capabilities and a high power-to-weight ratio.

The PlyMax® enclosure features foam-backed perforated steel grille, rugged DuraFlex™ exterior finish, and weather resistant speaker cones. Protective end-caps safeguard the suspension hardware while allowing vertical stacking of multiple enclosures on end using integral end-mounted, scuff-resistant pads, keyed for aligning surfaces and preventing slippage.

VERTEC suspension systems are engineered for maximum support strength and flexibility. The VT4880ADP-DA'S suspension hardware (same as used in the powered full-range VT4889ADP-DA) relies on quick-release pins and end-mounted metal frames to couple adjacent units together in rigid arrays. Suspension frames are made from premium-grade chromoly alloy steel, with plated surfaces; hinge pins are plated and quick-release pin restraining lanyards are stainless steel to resist corrosion. Enclosure ships with integral front and rear hinge bar set (VT4889-RIG).

Available protective grille cover/wheel board and padded soft cover to ensure handy transport for rough road conditions, purchased separately as VT4880ADP-ACC.



## Subwoofer Line Arrays:

The low-frequency capabilities of the multi-enclosure VT4880ADP-DA array will be determined by the total number of units coupled. The directivity of a subwoofer line array at any given frequency is proportional to the product of frequency and length of the array. The beamwidth will be inversely proportional to the product of the array's length and the frequency of interest, typically 20-80 Hz for subwoofer applications.

In summary, the more subwoofer elements that are used in the array, the greater directivity will be at lower frequencies, enabling better pattern control. Medium to large arrays can generate extreme amounts of sub-low frequency energy.

## Specifications:

| | |
|---|---|
| Frequency Range (-10 dB): | 25 Hz – 160 Hz |
| Frequency Response (±3 dB): | 29 Hz – 120 Hz |
| Maximum Peak Output[1]: | 143 dB SPL, 1m (2π, half-space ground-based application)<br>137 dB SPL, 1m (4π, free-field, suspended application) |
| **Transducer Sections** | |
| Low Frequency: | Two 2269G, 457 mm (18 in) dia., 100 mm (4 in) Dual Coil, Differential Drive®, Direct Cooled™ |
| Bandpass Nominal Impedance: | 4 ohms (each driver) |
| **System** | |
| DP3 Internal Amplification Output (at load): | 6900 W Peak, 3500 W Continuous |
| DP3 Output Topology: | 2-Channel, Class-I |
| Signal Processing: | BSS OmniDrive HD processing provides 3-Way 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<br>AES F-XLR, 110 ohms |
| Signal Loop-Through: | M-XLR (analog pass-through)<br>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 (-15%, +10%) |
| AC Input Connector:<br>AC Power Loop-thru: | Neutrik PowerCon (NAC3MPA)<br>Neutrik PowerCon (NAC3MPB) |
| AC Current Requirement: | 15A per system at 120V, 7.5A per system at 240V |
| **Enclosure** | |
| Box Construction: | Wedge frustum 5 degree side angle enclosure. PlyMax™ engineered wood composite structure, DuraFlex finish, 8 handles |
| Suspension System: | Patented S.A.F.E.™ hardware, integral hinge bars nest in suspension frames on enclosure sides (ends). Quick release pins with restraining lanyards. Set of 4 hinge bars included. Suspend with VT4889-AF or VT4889-SF Array Frame. |
| Grille: | Black perforated steel, foam backed |
| Dimensions (W x H x D): | 1229 mm X 493 mm X 1011 mm<br>(48.4 in x 19.4 in x 39.8 in) |
| Net Weight: | 99.4 kg (219 lb) |
| Shipping Weight: | 116.7 kg (257 lb) |

[1]Maximum SPL measured in Free-Field (4π) and half-space (2π) conditions with pink 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 |

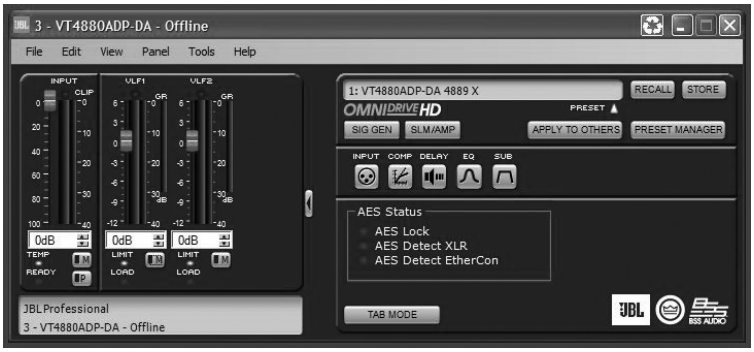
## Specifications

| | |
|---|---|
| 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<br>BSS Omnidrive HD with FIR filters, LevelMax Limiting |
| Latency | Analog 675us<br>AES 48kHz 1.92ms<br>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.

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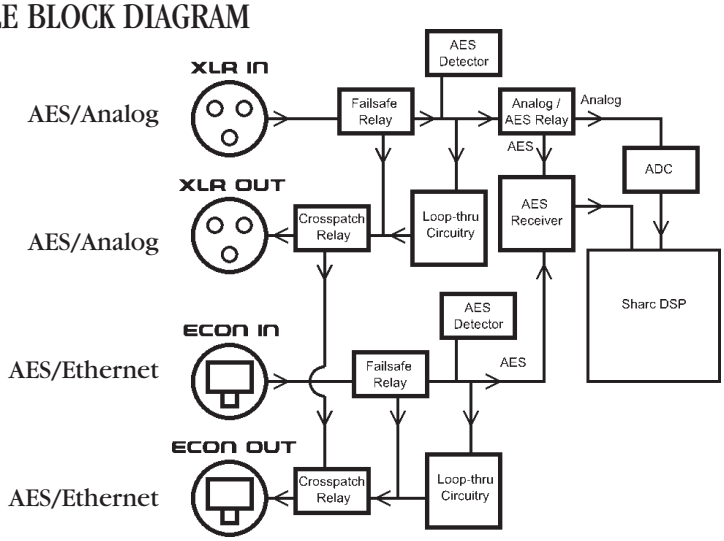
### DPDA INPUT MODULE BLOCK DIAGRAM




## 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.

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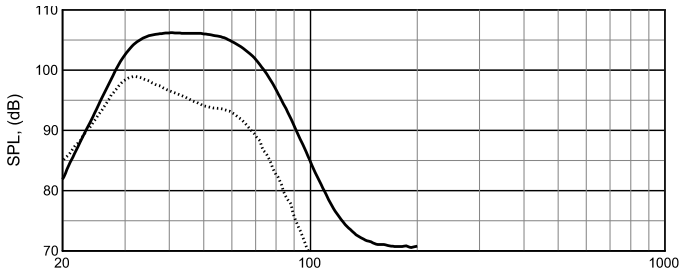
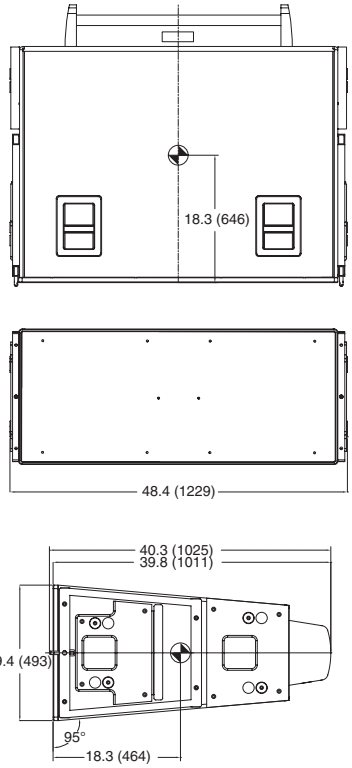



Frequency Response (solid line) of a single VT4880ADP-DA with 80 Hz Subwoofer Filter Enabled (dashed line). Additional presets available for DP-AN, DP-CN models.

The JBL DrivePack® DP-3 with DPDA input module is attached to the back panel of a modified VT4880A, creating the model VT4880ADP-DA. Robust Crown amplification and onboard BSS digital signal processing are combined to create a compact, powerful, integrated audio system.

**2269G Ultra Long Excursion 460 mm (18") Transducer**




**(W x H x D): 1229 mm x 493 mm x 1011 mm (48.4 in x 19.4 in x 39.8 in)**

**VT4880ADP-ACC**

The VT4880ADP-ACC Accessory kit includes items necessary for proper transport of the VT4880ADP-DA. The accessory kit includes: (1) VT4880-DOLLY, & (1) VT4880ADP-COVER with rigid foam blocks and protective metal plates for DrivePack. *Important note:* the VT4880ADP-ACC is sold as a separate item. One VT4880ADP-ACC should be ordered with each VT4880ADP-DA or VT4880ADP to ensure safe, reliable transport of each system in portable use.

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