



Large Format Point Source System

—
VHD

KV²
audio[™]

VHD Large Format Point Source System

The VHD High Performance Touring and Installation system from KV2 Audio has been designed to revolutionize the concert sound market by offering unparalleled quality, power and coverage, with huge cost savings in terms of size, weight, transportation, storage and set up time.

Challenging the popular trend of line array technology, VHD builds on the KV2 Audio philosophy of point source theory, offering drastically reduced distortion levels and a hugely increased dynamic range that takes us to a new level of sound reproduction previously unheard in large-scale audio systems. VHD reduces the amount of elements needed to cover a particular area for large-scale sound reinforcement, thus removing the interference problems created by multiple sources in modern line array systems. Time alignment and phase correction is done via KV2's new 20MHz digital delay line. Boasting the highest sampling rate of any digital speaker processor available, KV2's on board hybrid signal processing uses the best in analog and digital technology to provide incredible definition and resolution with true dynamic range.

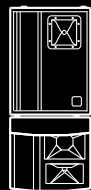
At KV2 we define true dynamic range by the systems ability to produce the low level signals associated with the ambience and timbre of the sound as well as the main higher level signals. The end result is clearer more dynamic sound that will travel considerably further providing high quality audio that is far less effected by air disturbances through crowds, heat and wind. The VHD1.0 and VHD2.0 Mid High cabinets, driven by a VHD2000 amplifier are at the heart of this solution forming the core of our VHD system. Reinforcing this are the VHD2.16, VHD4.18, VHD1.21 and VHD2.21, four very different active driven subwoofer systems powered by the VHD3200 amplifier. All speakers (except the VHD2.21) are based on identical footprints for easy stacking and proprietary flying system provides quick and easy rigging of VHD for suspended use.



The VHD2.21 Double 21 inch subwoofer has been designed in response to the call for a high output, ultra low frequency subwoofer solution. It is voiced for both live music but also excels in the field of club and dance music. In this situation it works very effectively, operating down to 25Hz, alongside other VHD products, the SL series, the smaller ES range, or as an incredible stand-alone subwoofer that can complement any other manufacturers systems.

The VHD system represents KV2's embodiment of the very best available technology in both the analog and digital worlds. Through industry leading engineering, we have managed to optimise the amplifier and speaker relationship to achieve outstanding output with relatively few components. The result is something special, something not just different, but better. VHD will change your thinking towards current large format system trends. VHD - very high definition audio, the pinnacle of KV2 Audio technology.

KV2 AUDIO'S VHD SYSTEM



Rigging Weight

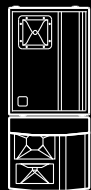
350 lbs./side

No. of Amps

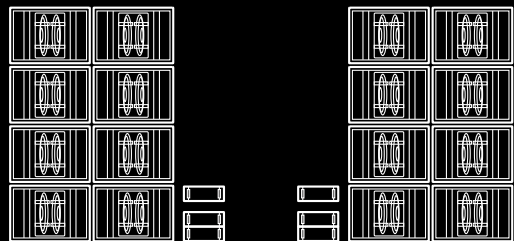
6 total

Crew Required

2 Maximum



VS.



LEADING LINE ARRAY SYSTEM



Rigging Weight

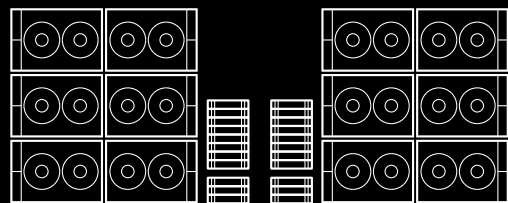
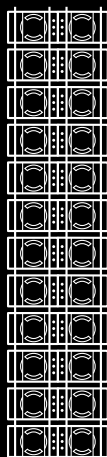
2000 lbs./side

No. of Amps

22 total

Crew Required

4 - 6



VHD can be flown in minutes

VHD can be flown in minutes with its simple proprietary fly system which locks into the handles on each cabinet. Various hang points and a easily adjusted chain provides tilt as required.

All VHD speakers have optional custom wheel carts and covers for protection and easy handling. Easily stacked for transporting, VHD saves on truck space which saves you money.



VHD2.0

Powerful long throw system for audiences of up to 20,000 people without additional delay systems. A three-way design featuring a 3" compression driver with NVPD treated dome assembly, two horn loaded 8" speakers featuring AIC technology and two horn loaded 12" mid-bass speakers. All speakers employ neodymium magnets to increase force, improve control and lower weight. The VHD2.0 has an 80° horizontal and 40° vertical dispersion and left and right versions of the speaker are offered in order to create larger format vertical arrays of the mid high system.

VHD1.0

This mid high enclosure features a single 12" low mid, trans coil woofer, an 8" mid range and the same compression driver as the VHD2.0 on a wide angle 110° horizontal by 40° vertical horn. The rear of the box has been angled for use as a downfill with the VHD2.0. Alternatively as a stand-alone box up to three VHD1.0s can be powered from a single VHD2000 amplifier. Like the VHD2.0, VHD1.0 is available in left and right versions for downfill applications. Designed to be powered as a slave from the VHD2.0 cabinet or directly from the VHD2000 amplifier, all equalization, set up and level are preset providing a plug and play solution for large scale touring and high quality installation.



		VHD2.0	VHD1.0
System Acoustic Performance	Max SPL Long-term	139dB	134dB
	Max SPL Peak	142dB	137dB
	-3dB Response	100Hz to 22kHz	100Hz to 22kHz
	-10dB Response	85Hz to 30kHz	85Hz to 30kHz
	Crossover Point	100Hz, 450Hz, 2.2kHz	100Hz, 450Hz, 2.2kHz
	Dimensions H/W/D	933 mm (36.72") x 700 mm (27.55") x 495 mm (19.48")	660 mm (25.98") x 700 mm (27.55") x 495 mm (19.48")
Weight	70 kg (154.0lbs)	45 kg (99lbs)	

VHD2.16

The VHD2.16 double 15" subwoofer is a development of KV2 Audio's ES2.5 design that has become a standard for compact, high output subwoofer devices. Acoustical design is based on extreme loading of asymmetrical chambers delivering extreme output and control. The cabinet is built to the same robust standards as the VHD4.18 and delivers output in excess of 140dB when configured in a pair. It also functions as a very effective upper bass cabinet when used alongside the ultra low frequency VHD1.21 or 2.21 subwoofers as part of a five way active system.

VHD4.18

The VHD4.18 is a quad 18" subwoofer system comprising of four individual loudspeaker cabinets. The objective is to make the system easy to transport and setup. When assembled, the VHD4.18 system becomes a high efficiency neodymium subwoofer system with immense output. The system was designed with very high sensitivity in mind; it provides 110 dB at 1W/1m and a tremendous output of 149dB when running at full power Each cabinet incorporates a large port area that becomes an optimized horn aperture when all four cabinets are stacked together. The quad 18" subwoofer system delivers extreme output, controlled low frequency resolution.



	VHD2.16	VHD4.18	
System Acoustic Performance	Max SPL Long-term	143dB (4x VHD2.16)	146dB (4x VHD4.18)
	Max SPL Peak	147dB (4x VHD2.16)	149dB (4x VHD4.18)
	-3dB Response	37Hz to 100Hz	36Hz to 100Hz
	-10dB Response	32Hz to 130Hz	31Hz to 100Hz
	Crossover Point	100 to 130Hz	100Hz
	Dimensions H/W/D	600 mm (23.62") x 700 mm (27.55") x 750 mm (29.52")	600 mm (23.62") x 700 mm (27.55") x 750 mm (29.52")
	Weight	65 kg (143lbs)	52 kg (114.4lbs)

VHD1.21

Single 21", Low Q band-pass subwoofer system that adds extension and weight for applications where you want to feel, as well as hear, very high definition audio Working down to 23Hz with an efficiency for two boxes of 102dB, it shares the same footprint as the other VHD subwoofers in a compact lightweight easily transported package. Alongside the VHD2.16 it forms part of a remarkable five way active system.

NEW VHD2.18J

The VHD2.18J is a direct radiating bass-reflex speaker containing two 18" high performance transducers. These 18" transducers are designed to withstand very high power levels. The optimised, high efficiency, bass-reflex design of the VHD2.18J produces considerably more output than other similar double 18" enclosures. Constructed of Baltic Plywood, intergrated proprietary Flyware allows for fast rigging of multiple cabinets when they are needed to be flown. An ideal subwoofer for any application where direct radiating bass speaker reproduction is required.



	VHD1.21	VHD2.18J	
System Acoustic Performance	Max SPL Long-term	135dB (2x VHD1.21)	135dB
	Max SPL Peak	137dB (2x VHD1.21)	138dB
	-3dB Response	29Hz to 60Hz	32Hz to 200Hz
	-10dB Response	23Hz to 60Hz	28Hz to 250Hz
	Crossover Point	60Hz	70Hz to 150Hz
	Dimensions H/W/D	700 mm (27.55") x 700 mm (27.55") x 750 mm (29.52")	570 mm (22.44") x 1080 mm (42.52") x 800 mm (31.5")
	Weight	60 kg (132.0lbs)	92 kg (202.83lbs)

VHD2.21

Originally designed for Super Live Audio as part of a VHD system, the VHD2.21 is voiced for both Live Music but also excels in the field of Club and Dance Music. In this situation it works very effectively, operating down to 25Hz, alongside other VHD products, the smaller ES range, or as an incredible stand-alone subwoofer that can complement any other manufacturers systems. Unlike traditional 21" subwoofers that are typically designed as more of an effect subwoofer, the VHD2.21 boasts tight, fast delivery and extreme dynamics, even at higher bass frequencies – qualities rarely found in such a large unit. Two 2.21s can be driven by a single VHD3200.



		VHD2.21
System Acoustic Performance	Max SPL Long-term	143dB (2x VHD2.21)
	Max SPL Peak	146dB (2x VHD2.21)
	-3dB Response	34Hz to 180Hz
	-10dB Response	28Hz to 240Hz
	Crossover Point	60Hz to 120Hz
	Dimensions H/W/D	700 mm (27.56") x 1080 mm (42.52") x 1200 mm (47.24")
	Weight	155 kg (341.7lbs)



VHD4.21 Active Bass Module

The VHD4.21 Active Bass Module consists of two purpose designed Very High Definition enclosures, one active and one passive, each containing two custom designed 21" woofers. A Low Q design has been applied to attain the optimum speaker loading, enabling a high sensitivity of 109dB 1w/1 m. Running at close to 100% efficiency on any voltage from 160 to 270 Volts, the amplifier for the VHD4.21 is a revolution in electronic engineering, utilising a huge bank of capacitors as a power store.

This unique and innovative new power management system enables the onboard amplifier to deliver peak output levels of 14 kW, whilst operating at a modest constant power consumption of 3.5 kW from a 16 A circuit. The VHD4.21 Active Module represents proven KV2 Subwoofer Amplifier technology that has been consistently improved over the last decade to provide maximum control over the movement of large mass speakers. The end result is a fast, dynamic, Very High Definition subwoofer, truly capable of reproducing the articulation in a bass guitar, whilst also extending down to 28Hz.



VHD2000

The VHD2000 is the control and amplification unit for the VHD2.0. It is a three-way, rack-mounted unit containing high frequency, mid frequency and mid-bass amplifiers. It also houses all processing and control electronics for the subwoofer system. Our own hybrid signal processing utilises the very best technology available from both the analogue and digital worlds, to offer complete audio system control, equalisation, overdrive protection, thermal protection and user adjustable set up parameters. Time alignment and phase correction is done via KV2's new 20MHz digital delay line, boasting the highest sampling rate of any digital speaker processor available. Once the set-up process is completed, the VHD2000 manages all system functions and assures optimal performance.

VHD3200

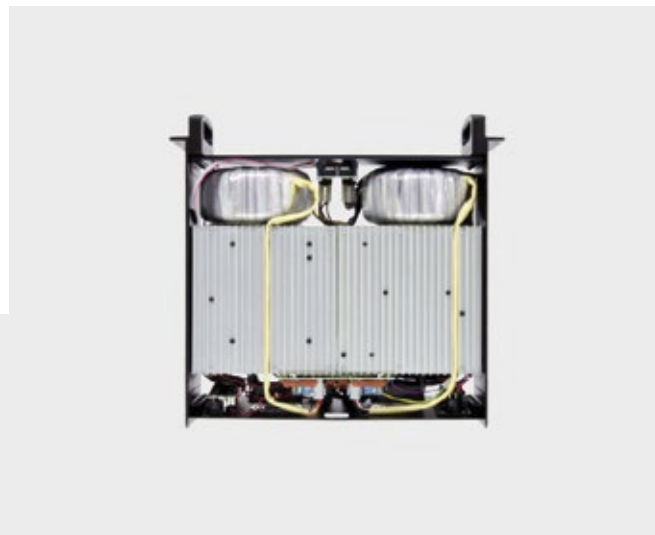
Power for the VHD subwoofers is provided by the VHD3200 rack mounted subwoofer amplifier. The unit contains two separate 1600W amplifiers with individual power supplies, signal paths and I/O within a single four rack space chassis. The unit acts as a slave for the VHD2000, which provides audio and control signal, and also functions in the same way for expansion of an ES series system, taking its feed from the external subwoofer output on an EPAK2500R or an ESR/SL3000 amplifier. The 3200 amplifier can also run in bridge mode for maximum bass output driving a single VHD2.21 sub.



		VHD2000	VHD3200
System Acoustic Performance	High Frequency Amplifier		
	Type	Class AB Push-Pull low IM Mosfet design, transformer balanced output	
	Rated Continuous Power	300W	
	Distortion	<0.05%	
	Operating Bandwidth	2.2kHz to 30kHz	
	Mid Frequency Amplifier		
	Type	High Efficiency, High power bandwidth	
	Rated Continuous Power	1000W	
	Distortion	<0.05%	
	Operating Bandwidth	450Hz to 2.2kHz	
	Low Frequency Amplifier		
	Type		High efficiency, Low frequency, Current-enhancing switch mode
	Distortion		<0.05%
	Operating Bandwidth		20Hz to 100Hz
	Dimensions H/W/D	177 mm (6.97"), 4RU x 481.4 mm (18.95") x 455.3 mm (17.93")	177.4 mm (7.0") x 481.4 mm (18.9") x 455.3 mm (17.9")
	Weight	30 kg (66lbs)	35 kg (88lbs)

All KV2 amplifiers

All KV2 amplifiers utilise top and bottom heatsinks which seal and protect the electronics from dust and other contaminants

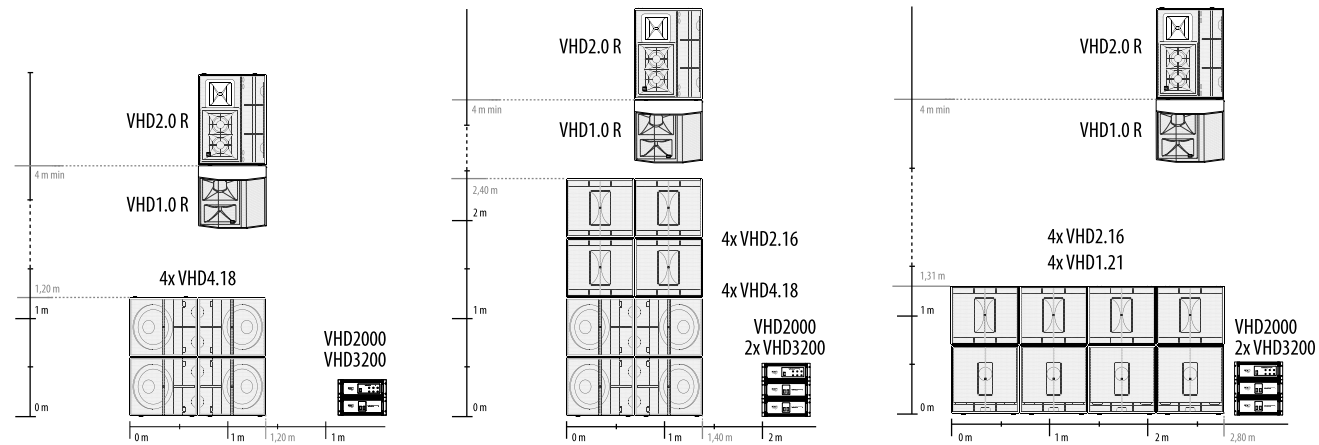


The VHD3200 and VHD2000

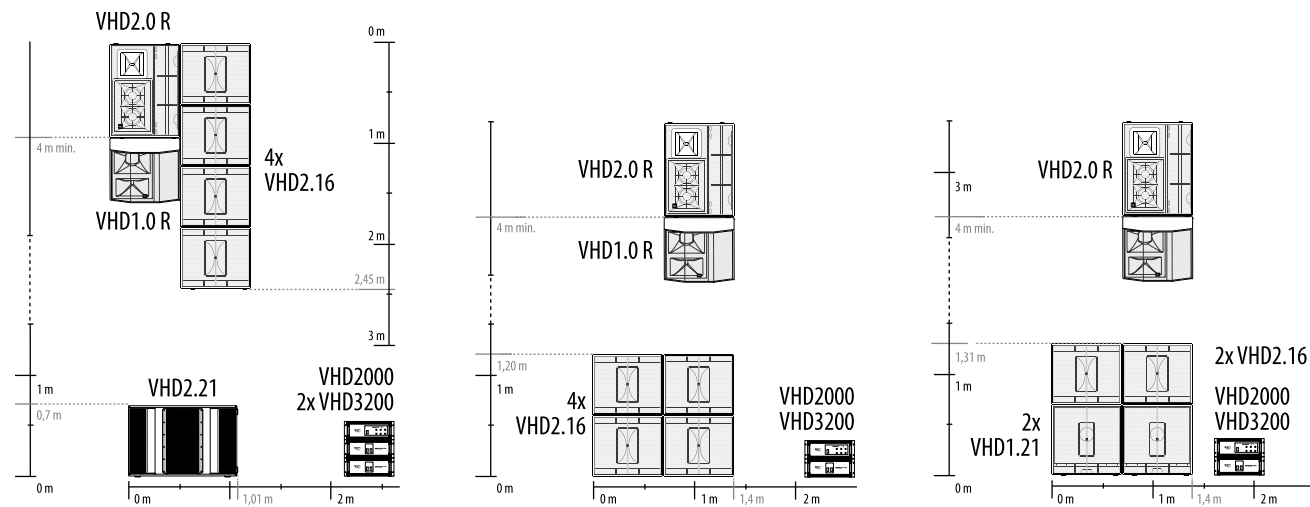
The VHD3200 and 2000 provide plug and play operation for the VHD system. No external software analysis or speaker processors required!



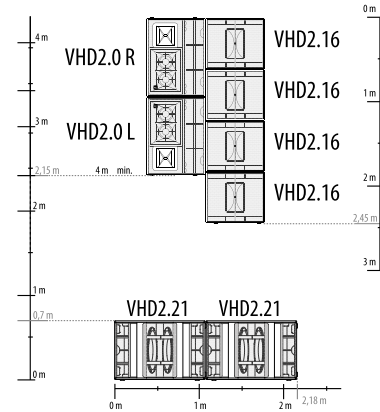
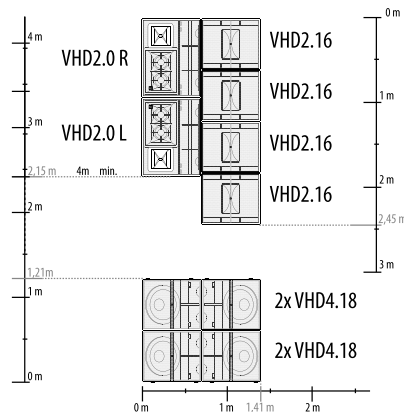
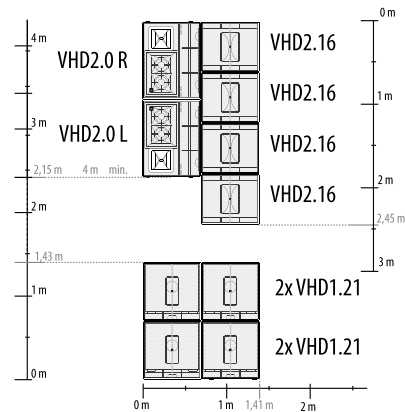
Configurations



Singles



Singles



Each diagram shows the right hand side of a stereo system. These configurations would be suitable for crowds of 5,000 to 10,000 people depending on the type of program and venue.

The type of sub-bass system used is relative to the program material and venue. Most configurations shown can be flown or stacked.

For more information on flying see the relevant document under downloads in the product section of our website.

These configurations would be suitable for crowds of 15,000 to 20,000 people depending on the type of program and venue.



Watch our product videos on **You Tube** .
www.youtube.com/c/KV2Audiocom

