

**SAE**



**VP** SERIES

Active compact line array system

V2208P | V1212P | V1218P



**We've got the power, we are active!**



SAE Audio has a great experience developing professional audio products for over 15 years. Being the leading Chinese power amplifier and loudspeaker manufacturer, SAE Audio pursues a constant improvement of its products. Through a high investment in research and development, the most advanced manufacturing processes, and extremely strict quality control systems, SAE Audio reach the target of providing high-end professional audio equipment its users can fully rely on.

The VP series is a compact and lightweight yet extremely powerful 4-way active line array system. The overall clever design, along with the European Class D power modules and drivers used in it, has resulted in an outstanding performance system with a surprisingly natural and powerful sound. The VP is a fully integrated line array system that will excel in any fixed or touring mid-sized sound reinforcement applications.



# V2208P LINE ARRAY UNIT

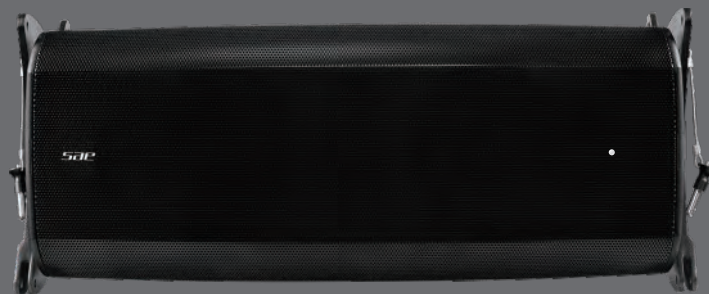
Compact yet powerful

Every single aspect of the V2208P has been carefully calculated in order to get the most from such a compact and lightweight active speaker: a smart-design enclosure developed to increase the speaker sensitivity, a 100°x3° constant directivity horn to enhance the high frequencies dispersion, and a high efficiency Class D module to supply the power required for its European superior-quality drivers.

The mid-frequency section of the V2208P uses two 8" (2" coil) direct radiation drivers producing a maximum SPL of 120dB [ @1m]. For the high-frequency it mounts a horn loaded 1" throat (1.73" coil) compression driver producing 121dB [ @1m].



V2208P Left Side



V2208P Front

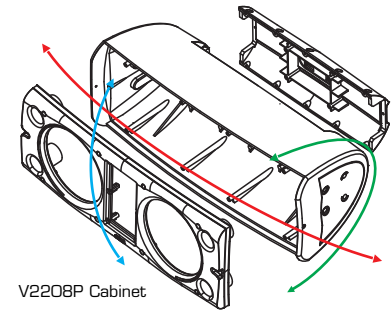


V2208P Back panel

The V2208P mounts a circuit breaker switch for over-current protection, LED indicators for power, signal and clipping and only use Neutrik® powerCON connectors. The mid and high frequency sections use separate XLR signal input and signal link connectors.

## Efficiency and performance ahead

The V2208P cabinet design is a key factor on the overall line array system efficiency. Free of flat inner surfaces the V2208P avoids any internal wave resonance thus projecting forward all energy and greatly increasing the speaker sensitivity. To ensure its capability of withstanding the hardest tour conditions, without scarifying on weight, the V2208P is made of an impact resistant HiPS polymer with sound characteristics as those of wooden enclosures.



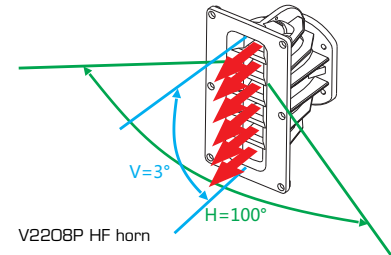
V2208P Cabinet



V2208P  
Power module + heatsink

The V2208P integrates a 2 channel Class D European power amplifier, delivering 250W for the high frequency section and 500W RMS for the mid frequency section. Its high efficiency allows the use of a fan-less cooling system, consisting of an aluminum heat-sink panel, capable to keep the power modules temperature below the overheat limit even on the hottest environments. This cooling system avoids the risk of module damage in case of fan failure and prevents dust, water, or excess moisture of getting into the amplifier.

Using a custom-made high frequency horn the V2208P provides a true constant dispersion angle of  $100^\circ$  [-6dB] on the horizontal plane to ensure the full bandwidth reaches all the audience even on off-axis positions relative to the speaker. On the vertical plane it provides a narrow  $3^\circ$  dispersion angle thus emitting almost-flat sound waves. As flat waves can travel longer distances without loosing much sound pressure the V2208P achieves a high SPL even on distant locations from the system.



V2208P HF horn

# V1212P LF SPEAKER

Punch for the masses

The low frequency section of the VP active line array is conducted on the V1212P active speaker. Two 12" (3" coil) drivers, producing a maximum sound pressure level of 129dB (1W, @1m), can provide a surprisingly powerful punch that can't be achieved on other compact line array systems integrating the low section in the mid and high frequency speakers. Having the low section on a separate speaker allows using a bigger diameter driver thus obtaining a higher sound pressure and lower effective frequency reproduction (40Hz~5kHz).

The VP active line array recommended configuration consists of 1x V1212P speaker for every 4x V2208P line array units, with a maximum of 2x V1212P speakers on the biggest arrangement of 8x V2208P line array units. The V1212P cabinet is made of 15mm birch plywood and it can be placed either under the V2208P units (when installing the system on a stack) or atop/behind the V2208P units (when rigging the system with its custom flyware accessories).

The V1212P also features a circuit breaker switch for over-current protection, LED indicators for power, signal and clipping and solely mounts Neutrik® powerCON connectors.



V1218P  
power module

The V1212P and V1218P use high-efficiency 2-channel European Class D amplifier modules to ensure the sound quality is not compromised due to long speaker cables or distortion coming from inadequate power stages.



V1212P rear panel

The power modules adopt a cooling system design consisting of a 6mm full-aluminum heat-sink panel. This design extends the power module lifespan as it avoids the risk of module damage preventing dust, water or excess moisture of getting into the amplifier.

# V1218P SUBWOOFER

Feel the meaning of sound pressure

The V1218P active speaker is the perfect subwoofer reinforcement for the VP series line array. Using two 18" (4" coil) European superior-quality drivers it achieves an effective frequency reproduction of 30Hz~500Hz (-10dB) and provides a maximum SPL of 133dB (1W, @ 1m).

The V1218P is made of 18mm birch plywood and the recommended configuration consists on 1x to 2x V1218P subwoofers for 4x V2208P line array units, or 2x to 4x V1218P subwoofers for 8x V2208P line array units.

The V1218P also features a circuit breaker switch for over-current protection, LED indicators for power, signal and clipping and solely mounts Neutrik® powerCON connectors.



V1218P driver

A superior quality 18" European driver has been specifically selected to drive the V1218P in order to provide an extremely deep and powerful sub frequencies reinforcement.



## XP24 LOUDSPEAKER PROCESSOR



XP24 Rear Panel

The XP24 is a 2-in 4-out digital audio processor specifically designed for the VP line array system. Along with an outstanding sound quality thanks to its 24bit/96kHz sampling capacity it features a collection of permanent processing presets to completely match any VP system configuration and provide the best sound performance with only the press of a button. The XP24 can be remotely controlled by computer with its custom software or adjusted with the front panel multifunction knob.

# PowerRack-824

## Providing a fully integrated system

Ease of installation has never gone that far before. In order to provide a fully integrated system, the PowerRack-824 has been specifically designed to match the VP series speakers and the XP24 loudspeaker processor. Having these two devices installed together into a flight case will conveniently simplify system connection and wiring turning the VP line array installation into a completely hassle free job.

The PowerRack-824 features both a power sequencer and an analog signal distributor, all within a 3 rack-units device, and it can support any recommended VP series configuration, from a Basic VP system up to a Full VP system.

### Power sequency

The power sequencer will supply the required power to all the speakers on the system, powering them on or off in sequence in order to avoid annoying electric-current peaks. It includes an 80-Ampere mains circuit-breaker switch and a 3-digit display to continuously inform of voltage and amperage on the supply. Each channel on the PowerRack-824 use two-tier EMI/EMC filters to effectively reduce DC noise and ensure the system sound quality.

### Signal distribution

With the analog signal distributor the signal input impedance will be perfectly matched to any configuration of VP series line array thanks to the high-gain wide-bandwidth MC4560 OP-AMPs it mounts. Properly labeled XLR connectors on the front panel will release you from the job of decipher where to connect each signal cable and avoid the risk of wrong speaker connections.



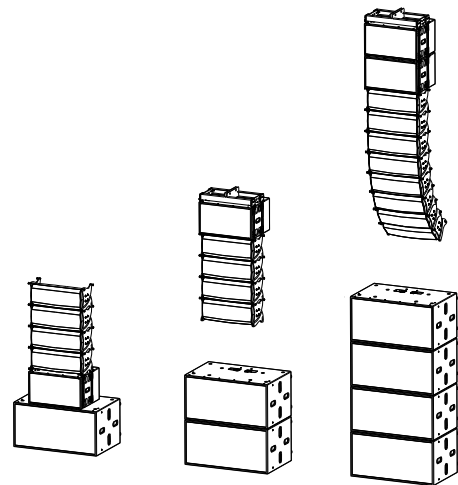
PowerRack-824 Rear Panel

MODEL	PowerRack-824
Total max output	80A (AC220V)
Max output current per channel	32A/60s or 16Arms
S/N rate (A weight)	>100dB
Frequency response	20Hz-20kHz ±0.5dB
THD%	<0.03%
Dynamic range	118dB

Remark :  
Data is tested under Q/SAE 1-2005 standard.

# FEATURES

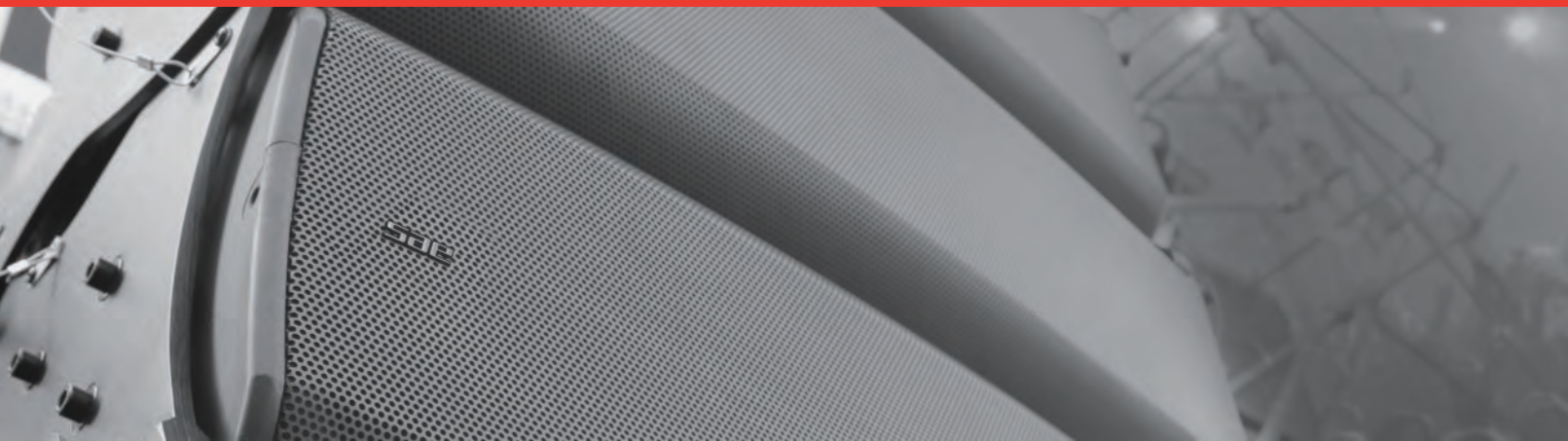
- 4-way fully integrated line array system.
- Extremely compact and lightweight system design.
- High-efficiency smart-enclosure V2208P design, 121dB maximum HF SPL (@1m), 120dB maximum MF SPL (@1m).
- 100° (-6dB) horizontal and 3° (-6dB) vertical constant directivity V2208P horn.
- Low frequencies reinforcement with V1212P, 129 dB maximum SPL (@1m).
- Subwoofer reinforcement with V1218P, 133dB maximum SPL (@1m).
- European Class D power modules.
- Power module fan-less cooling system.
- Circuit breaker power switches for over-current protection.
- European superior quality drivers.
- Impact resistant HIPS V2208P enclosure with aluminum accessories and grille.
- Flying installation (up to 8x V1218P + 2x V1212P) or stack installation (up to 4xV2208P + 1x V1212P + 1x V1218P).
- Custom rigging accessories and flight cases available.
- Available in black and white colors to completely match any type of venue style.



Basic VP System

Basic VP System  
SUB Reinforcement

Full VP System

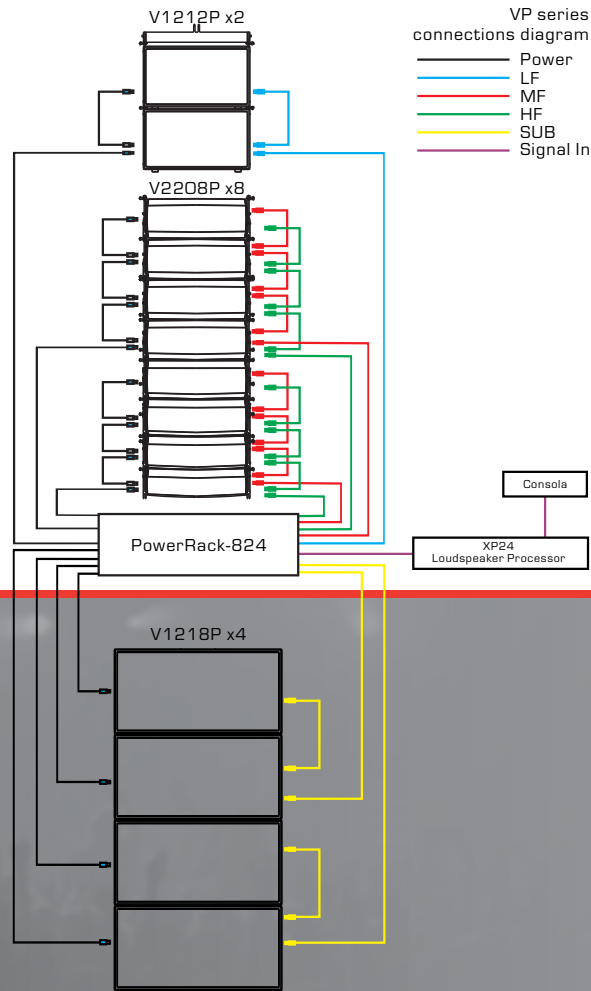


## BENEFITS

- Perfectly matched sound reinforcement system.
- Hassle-free installation and setup of the whole system in a record time.
- Reduced flying weight and installation/transport costs.
- Convenient for space constrained venues.
- High sound pressure from a compact system.
- Avoid the negative effect of too long speaker cables.
- Forget about heavy power amplifier flight cases.
- Best cost-performance ratio.

## SYSTEM APPLICATIONS

- Sound reinforcement for mid-sized venues.
- A Full VP System configuration can cover the sound reinforcement demand of an audience of 5000 persons indoor or 3000 persons outdoor.
- Fixed installations in concert halls, dance halls or Houses of Worship.
- Live touring system for mid-sized audience bands.
- Side / delay towers on big-sized events.



# RIGGING THE VP ACTIVE LINE ARRAY

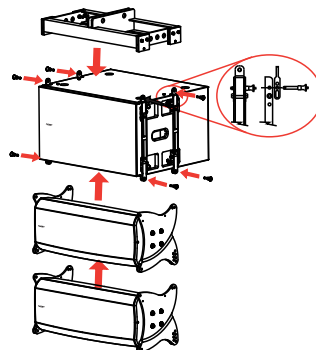
Installing a VP series line array system is an extremely fast and easy job thanks to its lightweight and convenient aluminum built-in rigging accessories. The line array splay angle can be easily adjusted to optimize the vertical dispersion coverage. Every V2208P speaker allows an angle variation from 0° up to 12° on 2° steps, and its scalability of up to 8x V2208P units per array allows sizing the system according to each sound reinforcement.

## Multiple configuration options

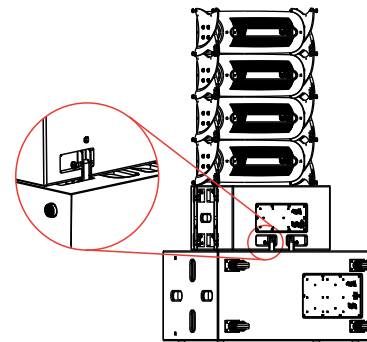
Scalability is the key to adapt the VP line array on multiple sound reinforcement applications. From a Basic VP system (4xV2208P + 1xV1212P + 1xV1218P) per side, to cover small sized venues, up to the largest Full VP system (8xV2208P + 2xV1212P + 4xV1218P) per side, to cover mid to high sized applications.

## Stacking or Flying

The aluminum accessories and steel flyware had been meticulously designed to reduce installation time and effort without compromise on the highest safety requirements. The VP line array can be installed as a stack or flying system to adapt to any installation requirement.



Flying installation



Stack installation





# **ACCESSORIES**



40 cm signal and power link cables



Stainless steel quick-release pins



Large array flying frame



Small array flying frame and extension bar

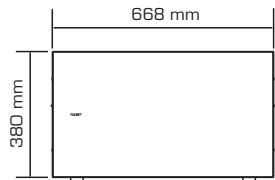


Flight case

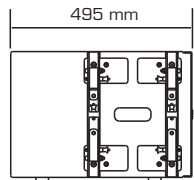


V1218P Soft Cover

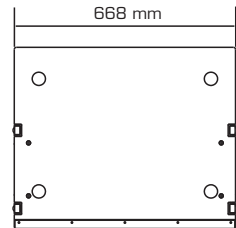
# SPEAKERS DIMENSIONS



V1212P Front



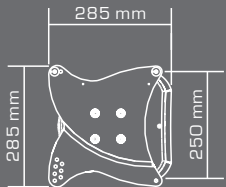
V1212P Left



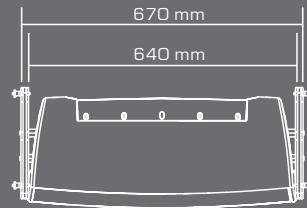
V1212P Top



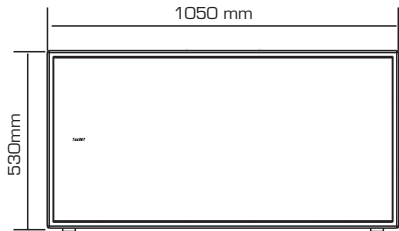
V2208P Front



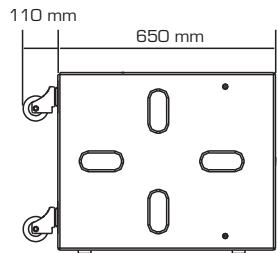
V2208P Left



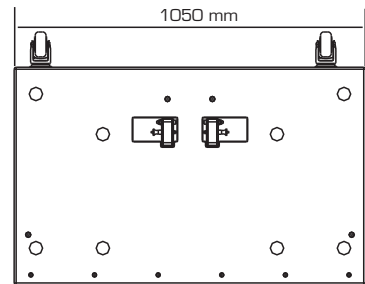
V2208P Top



V1218P Front



V1218P Left



V1218P Top

# SPECIFICATIONS

Model	V2208P	V1212P	V1218P
<b>Speaker types &amp; driving unit</b>			
Speaker type	2-way full-range speaker	Woofer	Sub-Woofer
Speaker Components	HF: 1x 1.73" voice coil, 1" throat LF: 2x 8" , 2" voice coil	2x 12" , 3" voice coil	2x 18" , 4" voice coil
<b>Acoustic specifications</b>			
Frequency response*	80Hz ~ 18kHz	55Hz ~ 3.5kHz	38Hz ~ 250Hz
Output Power	HF: 250W (Class D) LF: 500W (Class D)	750W x2 (Class D)	1500W x2 (Class D)
Max. SPL ( at 1 m )	HF: 121dB / MF: 120dB	129dB	133dB
Input Sensitivity	0.775v	0.775v	0.775v
Input Impedance	40kΩ (BAL)	40kΩ (BAL)	40kΩ (BAL)
Dispersion angel	H: 100° / V: 3°	---	---
Suggested crossover frequency	HF: HPF / 1.8kHz ~ 2.5kHz MF: HPF / 250Hz, LPF / 1.8kHz ~ 2.5kHz	LPF: 250Hz HPF: 100Hz	LPF: 100Hz HPF: 35Hz
AC input power (±10%)	100v ~ 240v (50 / 60Hz)	230v / 50Hz 115v / 60Hz	230v / 50Hz 115v / 60Hz
<b>Other specifications</b>			
Enclosure construction material	HiPS	15mm birch plywood	18mm birch plywood
Colors available	Black & white	Black & white	Black & white
Grille	Perforated Aluminum alloy	Perforated steel	Perforated steel
Connections	PowerCon / XLR Parallel	PowerCon / XLR Parallel	PowerCon / XLR Parallel
Adjustable angel	Adjustable from 0 ~ 12°, on 2°steps.	—	—
<b>Dimensions &amp; weight</b>			
Product Dimensions(W x D x H)	285x670x285mm	380x668x495mm	1050x530x650 mm
Packing Dimensions(W x D x H)	370x760x420mm	485x785x635mm	1090x570x675 mm
Net Weight	21kg	48kg	83kg
Shipping Weight	23.5kg	56kg	91kg

\* (-6dB Half Space, no EQ)

SAE Audio reserves the right to make any specification changes without prior notice.

[www.saeaudio.com](http://www.saeaudio.com)



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SAE reserves the right to make changes in specifications without prior notice. Final specifications are subjected to the user manual.

