V-ELA Line array
Datasheet

V-ELA is a modular bi-amp line array designed for ground stack and flying. The small format and discreet look of the dual 8" make this product suitable for projects that require vocal reinforcement with low visual impact.

V-ELA is an active two-way, compact dual 8" line array system. Designed for medium size projects, with extended low frequency capabilities for its compact design. V-ELA integrates a 4-point rigging system, making a flexible solution for both install and touring alike.

The V-ELA is an active 2-way design with a nominal impedance of 32 ohms for both the high & low frequency section. Featuring 2 x 8" proprietary woofers in a reflex tuned enclosure with

dual 1" compression drivers give an SPL of 135dB (peak).

V-ELAs frequency response is from 54 Hz to 21 kHz. A discreet steel hex grill design provides a smooth linear response and dispersion free of lobes over the entire frequency range. The waveguide generates a symmetrical horizontal dispersion of 100° x 10° vertical. Made of high-grade Baltic birch plywood ensures mechanical and acoustical integrity. A fully integrated 4-point rigging system designed with various angles of up to 12° per cabinet, which ensure a perfect acoustic coupling between multiple cabinets forming an array.

V-ELA uses the same rigging system as KORA, this is a fully integrated 4-point rigging system designed with various angles of up to 12° per cabinet, which ensure perfect acoustic coupling between multiple cabinets forming an array. The K-AF array frame is a single and multi-point flying frame which is perfect for ground stacking or flying V-ELA. The same hardware can be used when ground-stacking V-ELA on TR-118/218.

The unique 32 ohm design of each cabinet provides the flexibility of adding up to 16 cabinets to one 4 channel amplifier. Up to 6 V-ELA can be ground stacked on 2 x TR-218 using the same amplification. Incorporating 2 x 8" drivers with 2 x 1" HF unit's give an impressive SPL of 135 dB per cabinet with a wide linear dispersion. Built in flying hardware allows easy configuration of up to 8 cabinets per string.

Each V-ELA is a lightweight 21.3 Kg reducing transportation and rigging weight. With a system hang of 8 V-ELA flying on a K-AF weighs 198 Kg. which is far below most maximum load points from small portable stages to theatres. Each array frame K-AF weighs 27 kg.

The robust enclosure has a discreet design front, hardwearing paint finish and two butterfly handles on each side.

The rear connection plate has two recessed 4 pin speakON® connectors fitted as standard, one input and one link. V-ELA is wired bi-amp with pins +1-1 for the Sub, and pins +2-2 high frequency.

Key features:

- Integrated flying hardware
- Discreet looks
- 32 Ohm design
- Flying or ground stack options
- Lightweight aluminium flying frame
- Secure wrap-around ground stack frame for TR-218

Technical Specifications

Design
2 x 8" Full Range, Phase plug controlled wave guide, reflex tuning line array

Impedance
32 Ohm LF / 32 Ohm HF

Power Handling (AES)
400 Watts LF / 100 Watts HF (continuous)

Max. Power Handling (AES)
800W LF / 200W HF (prog)
1600W LF / 400W HF (peak 10 ms)

Sensitivity 2.83V / 1m
95 dB LF / 109 dB HF

Max. SPL
118 dB cont. 124 dB peak LF
129 dB cont. 135 dB peak HF

Frequency Response (±3 dB)
54 Hz - 20 kHz

Dispersion
100° x 10° (V Dependant on array design)

SYSTEM OPERATION

Recommended Amplification
400-800 Watts

System Controller
Omega DSP Solutions

Speaker Cables
Min - 2 x 2.5 mm^2
Preferred - 2 x 4 mm^2

PRODUCT FEATURES

Components
2 x 8" Low Frequency Driver
2 x 1" CD on Planar Wave Manifold,

Crossover

Passive -	1.2 kHz
Active - *	LPF - 1.3 kHz HF HPF - 1.2 kHZ HF /55 Hz Full range / 100Hz MH

Connectors
2 x 4 pole speakON® connectors

Dimensions (H x W x D mm)
250 x 576 x 300

Weight (kg)
20

Shipping Weight (kg)
21.3 (1 cabinet per carton)

Colour
Black

Options
Available in white or RAL colours on request

Rigging
2 x Flying Hardware sides for hanging or ground stacking

HARDWARE

Fitted as Standard
V-ELA Flying Hardware

Optional
K-AF KORA flying/groundstacking Array Frame

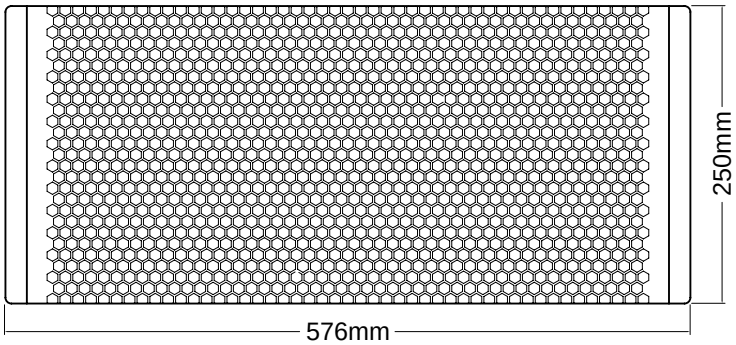
Additional Descriptive Data
Birch plywood construction, with durable scratch resistant black polyurea paint finish with Omega logo.

Recommended filter settings are available on the website omegaproaudio.co.uk/downloads

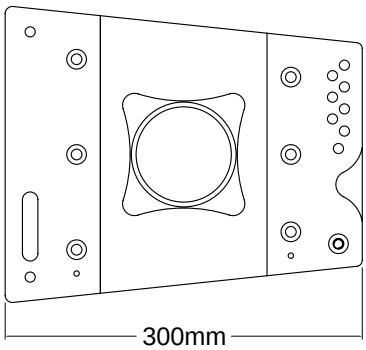
* All presets from the Omega library.

V-ELA Dimensions

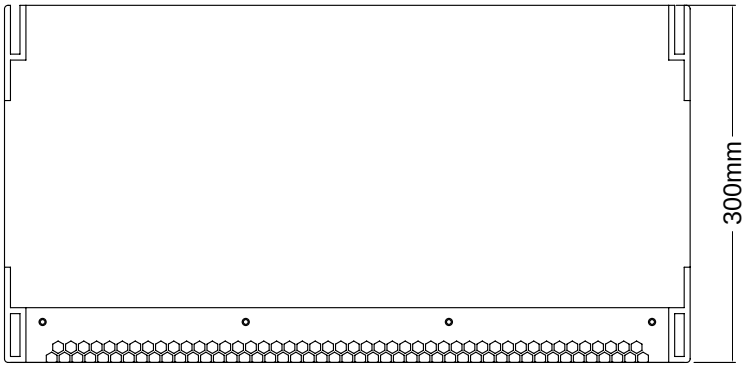
Front



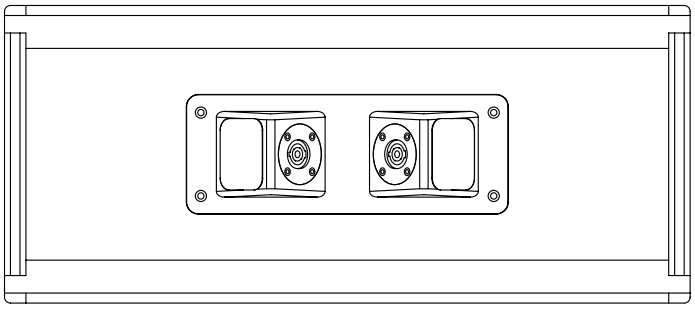
Right Side



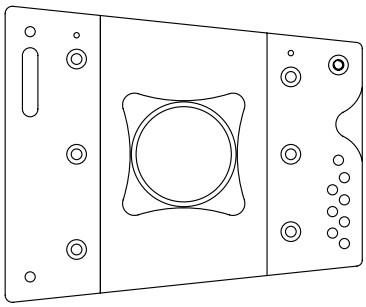
Top



Rear



Left Side



Further technical drawings for architectural requirements are available in DXF and DWG format for download on the website.

Accessories and Spare Parts

- V-ELA Flying Hardware
- V-FF V-ELA Flying Array Frame
- K-AF flying/groundstacking Array Frame
- V-ELA steel grill assembly
- V-ELA Crossover & backplate
- 2 x 8" Low Frequency Driver
- 2 x 1" CD on Planar Wave Manifold
- Steel Omega logo

Architects' & Engineers' specifications:

2 way dynamic line array cabinet incorporating a phase-plug controlled waveguide. Housing 2 x 8" proprietary drivers, internally and externally ventilated double sided high temperature voice coil, 1 x 1" planar wave drivers mounted to a 100° x 10° waveguide integrated LF & HF drivers for a fully coherent phase response. Homogeneous radiating behaviour and linear response from 200 Hz. External active crossovers control the cabinet giving active phase optimization for perfectly controlled dispersion. different multi-laminated wood, eco friendly scratch resistant polyurea paint. Integrated Flying hardware for hanging or ground stacking. Ergonomic butterfly carry handles and recessed Omega logo.

Technical Data:

Frequency Response: 54 Hz - 20 kHz (±3 dB), Continuous SPL: 118/129 dB/1m, Program SPL 121/132 dB/1m. Peak SPL 124/135 dB/1 m, Power Handling: 400 LF/100 HF Watt cont. IEC268 AES, Maximum Power Handling: 800 LF/200 HF Watt prog. / 1600 LF/400 HF Watt peak, Impedance Nominal: 32 ohm, Dispersion Nominal: 100° x 10° (hor. x vert.) Vertical dispersion in array is dependant on the array. Connectors: 2 x speakON® connectors NL4MP (1+/1- Sub, 2+/2- HF). Dimensions (H x W x D): 250 mm x 576 mm x 300 mm, Weight: 20 kg. Options: Durable scratch resistant black Polyurea textured paint finish. RAL colours available to order.

Safety Instructions

Professional speaker systems are able to produce sound pressure levels that could harm your health.

Never stand directly in front of loudspeakers for long periods. Whilst not immediately apparent to the listener, sound pressure levels in excess of 90dB@1m can be hazardous to the hearing.

Please refer to the following advice when setting up or dismantling OMEGA speaker systems.

1. Be sure to leave adequate distance between speakers and the public. Refer to your local authority for Health and Safety guidance when using loudspeaker systems.

2. Be sure to have safe and stable ground for your speakers, particularly when using speaker stands.

3. When stacking speaker systems, ensure they are secured to prevent individual speakers from falling down or moving around.

4. Only use OMEGA mounting hardware, as this has been specified and approved by KHZ LTD, for use with OMEGA speakers.

5. When flying speakers, appropriate materials and techniques must be employed in order

Safety Instructions Cont.

to safely suspend enclosures, taking care to allow for specified enclosure weight.

6. Please observe any special instructions that appear on specific loudspeaker data-sheets.

7. Check your speaker hardware and flying material regularly for any visual or mechanical failure. Replace damaged or suspect items when necessary.

8. Only use OMEGA DSP Solutions. Only technicians authorised by KHZ LTD are qualified to program digital controllers. Take note of recommended controllers as specified on the datasheets. Do not use OMEGA loudspeaker systems without the correct controller. If a system fails due to incorrect controller use, warranty is void.

9. Protect your speakers and electronics from freezing and do not expose them to humidity, water or rain without protection.

OMEGA loudspeakers and electronics are covered against defects in workmanship or materials for a period of two (2) years from original date of purchase. At the discretion of KHZ LTD, the defective item will be repaired/replaced with no charge for materials or labour. The item is to be adequately packed and dispatched, pre-paid, to an OMEGA authorised distributor/service centre. Unauthorised repair shall void the warranty. The OMEGA warranty does not cover cosmetics or finish and does not apply to any item which in OMEGA's opinion has failed due to user abuse, accident, modifications or any type of misuse.

Disclaimer

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