VC LINE VALTEC™

- *KS AUDIO VALTEC™*
  Variable Acoustic Lens Technology
- *0° - 7.5° adjustable vertical coverage*
- *120° horizontal coverage*
- *Two 8" neodymium Cone woofers*
- *1.75" ring diaphragm compression driver*
- *2000W power handling*
- *140dB max SPL*

Listening to the VC LINE array, I noticed that the comb filter effect was completely absent, no phasing could be heard. The sound in the nearfield and farfield was exactly the same. The sound was completely neutral, transparent and clear.

Howard Heckers

Former FOH technician; Liza Minnelli, James Taylor, Roger Hodgson, Art Garfunkel, Cristopher Cross and many more!

KS AUDIO has established a reputation as a producer of excellent line array systems for professional users. With the C LINE, KS AUDIO sets the benchmark in compact Line Array systems, a system that meets the highest requirements for high sound quality.

Completely new and revolutionary is the variable vertical beam steering. This latest version of the C LINE is named VC LINE with the V of VALTEC™, Variable Acoustic Lens Technology.

With the VALTEC™ waveguide, KS AUDIO ensures that even long arrays with many different angles between the elements can be realised without harmful interference. This means that the dreaded comb filter effect does not occur, even in the far field. Also, below and close to the array, where the array is more curved, there are even frequency levels without peaks and dips at high frequencies.

The system comprises two 8" neodymium speakers with fiber-reinforced membrane and a driver with 1.75" mylar ring diaphragm. The 1.75" diaphragm radiates via two rotating acoustic lenses in KS AUDIO own highly accurate waveguide. The angle of these lenses determine the vertical projection angle of the HF sound waves. This angle is variable from 0°-15° in 1.25° increments.

VC LINE VALTEC™

The **VC LINE** is because of its flexibility and ease of use the perfect tool for rental companies and finds application from small to medium size venues.

Because of its unprecedented sound quality, the **VC LINE** is also the choice for use in Theatres and other spacious venues where no compromise is made. In addition, it is compact so that it doesn't detract from the stage image. In addition to the typically flown version, the **VC LINE** can also be easily used as a ground stack in combination with KS AUDIO subwoofers.

The combination of the individual elements into a line array and the dispersion behaviour versus frequency response at different splay angles were fundamentally researched by KS AUDIO during the development of the **VC LINE**. This results in exact presets that make it very easy for the user to configure the Array. These presets are available to the user in the KS F MOD module. The flyware requires no external components and is easily and securely locked in position by ball lock pins.

NO CERTIFIED TRAINING is required to align and adjust the VC LINE

The VC LINE Array is uniquely easy to use. The precisely calculated presets of KS AUDIO in combination with the easy to operate VALTEC™ system makes it possible for personnel without special "Line Array" training to work very successfully with the VC LINE. KS AUDIO made the use of VC LINE Array self-explanatory.

Watch the VALTEC™ explanation video at our YouTube channel:

https://youtu.be/**QEGm9pWsqJI**

> *Measurements and listening sessions have proven that the VALTEC™ principle results in a huge improvement in Line Array performance.*

Precision amplification

Anyone familiar with Line Arrays knows that the frequency characteristics of the array change with different lengths, especially at low frequencies. Changing the Splay affects the frequency response at high frequencies. With the latter phenomenon, the change already takes place at minimal changes in the angle of two elements to each other.

This was the reason for KS AUDIO to carry out very extensive measurements and for each change in the array. Even the minute differences that arise from a small change in the Splay between two elements were measured. The resulting data was converted into accurate presets for our DSP software.

If adjacent elements are at the same angle, they can be driven by one bi-amp channel, and up to 4 elements can be driven this way. So one amplifier is two bi-amp channels are a maximum of 8 VC LINE elements.

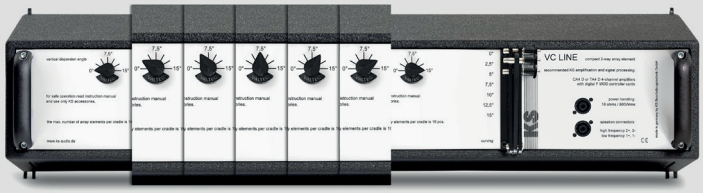
However, since line arrays rarely, if ever, hang at a 0° angle, KS AUDIO recommends using one amplifier bi-amp channel for each differently set splay angle to achieve the best result.

Incidentally, the differences in the adjustment of the equalisation become smaller with larger opening angles. Therefore, with larger opening angles - usually at the bottom of the array - the need for separation between channels is less significant.

In practice, this means that a line array with approximately 8 to 10 elements can be driven by two CA 4D or TA 4D, i.e. four bi-amp channels, perfectly well. The TA 4D of the two has more power, which results in an increase of approx. 3dB SPLmax.

VC LINE VALTEC™

On the back of the VC LINE there is a rotatable knob with which the vertical beam angle can be easily adjusted. The only thing the user has to do is to set the VALTEC™ setting equal to the mechanical curvature of the element. Adjusting the mechanical angle is done by the guide rail mounted in the middle of the back of the VC LINE element.

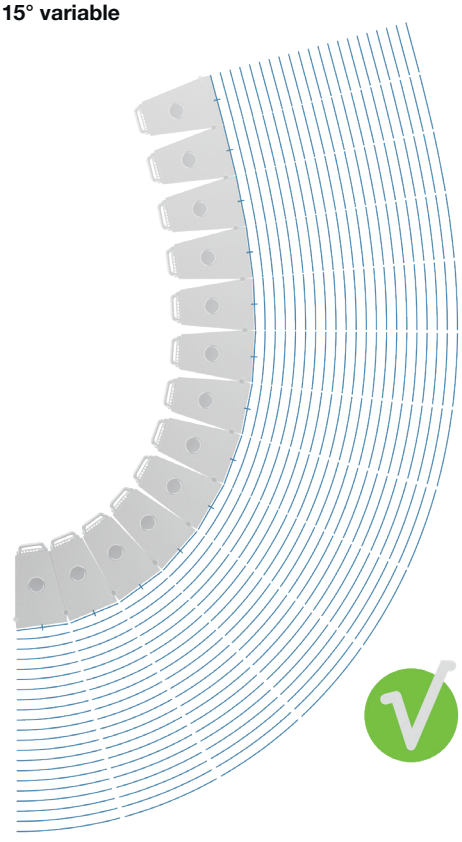


The picture above is for illustration purposes only. The VALTEC™ system can be stepless adjusted

VC LINE VALTEC™

Line array

V = 0° - 15° variable

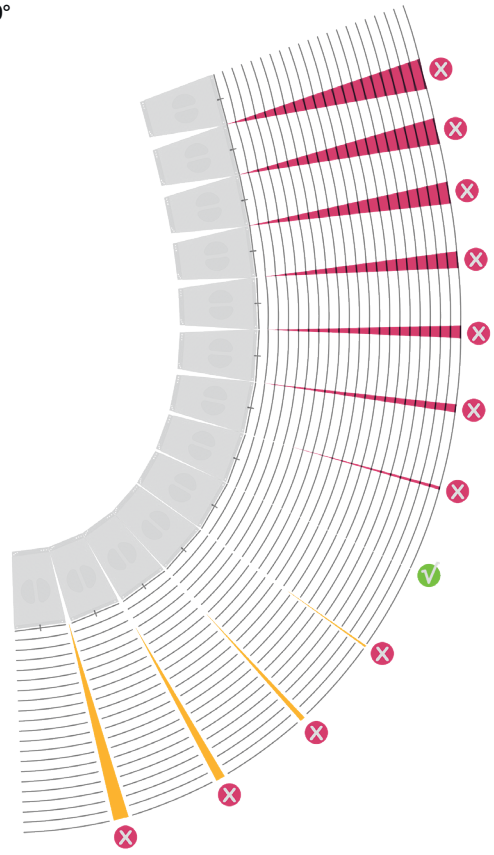


With the VC LINE, the vertical dispersion can be adjusted according to the splay angle between the individual elements, creating a seamless connection between the wavefronts of the elements. The result is a homogeneous wavefront and no comb filter effect.

EVERY OTHER

Line array

V = 10°



With conventional line arrays, the non-adjustable vertical dispersion leads to an overlap of the wavefront at all splay angles except the angle corresponding to the nominal vertical dispersion, in our example 10°. This leads to a phase shift within the wavefront, which in turn leads to the dreaded comb filter effect. If the splay angle exceeds the nominal angle (if the enclosure allows this), imperfections in the wavefront occur. This leads to dips in the frequency response.

VC LINE VALTEC™

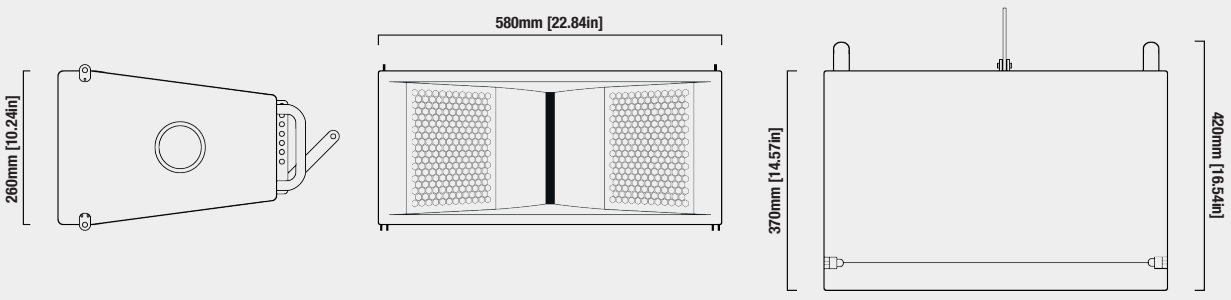
The cabinet is made of multi-layered, waterproof glued birch multiplex and has a structured polyurethane coating. A steel grille, covered with acoustic fleece, protects the high-quality components.

As an extra option, there is a Touring case in which 4 elements fit including the T shape flying frame RIG CP.

SPECIFICATIONS

Frequency response	60 - 20.000Hz ±3dB
F MOD / D MOD low cut modes	OFF / 70 / 100 / 120Hz
Max. SPL (1m, free field) with TA 4D	140dB - single element
Nominal horizontal dispersion	120°
Nominal vertical dispersion	VALTEC™ stepless adjustable between 0° and 15°
Transducers	LF: Two 8” neodymium Cone HF: One 1.75” ring diaphragm compression driver
Power handling AES RMS/peak	LF: 1000W / 2000W HF: 100W / 200W
Acoustic principle	LF: Bass-reflex HF: VALTEC™ Variable Acoustic Lens Technology waveguide
Nominal impedance	LF: 16 Ω HF: 16 Ω
Splay angle increments	0 - 15° in 1.25° increments
Connectors	Two speakON NL4

DIMENSIONS AND WEIGHTS



16.5kg | 36lb