



***DVA.***  
***Think vertical.***





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*Think vertical.*



Since the 90's the Line-Array technology has changed soundreinforcement drastically. The vertical arrangement of speakers in an enclosure offers a high influence to soundspreading and reduces in comparison to ordinary soundsystems the loss of signal in relation to distance combined with a slim structure and broad sound distribution.

DVA makes this technology, which up to recently was only provided in high profile projects and installations, available for a broad range of budget orientated applications. All relevant criteria like weight, acoustic handling including purchase price and additional costs in form of transport and flying accessories have been well considered.

Despite above mentioned features, the DVA is not limited in terms of curving and maximum amount of possible Array-Elements, like products of competitors in recent history in this segment. Specially the individual curving, optimised to the demands of the event, enables the acoustic advantages and shows the flexibility of DVA.

**dB**Technologies designed a Line Array which sets new standards in handling, flexibility and profitability by using most modern technology and materials, with a vast amount of knowledge and experience in building active loudspeaker systems

The DVA T4 Line-Array element has a sensational weight of only 13,2kg. The obvious advantage for handling and transport also makes flying possible where under normal circumstances the trussing is not strong enough to support also flying of the audio devices - an Array of six T4 Tops therefore weighs less than 120 kg.

### ***DVA. Digital Vertical Array.***



***DVA. Easy setup and handling.***  
(13,2 kg – no problem even for Lara)

## **DVA.** *Premium components.*

Most competitors are forced to buy the heart of a loudspeaker system, the speakers itself, from an outside manufacturer. **dB**Technologies produces its own components mostly specially designed for the appropriate project. The company follows therefore a long tradition to use components which are custom tailored from the start rather than using material which has to be costly acoustically bended. The result is an outstanding performance and the typically faithful and natural sound reproduction which **dB**Technologies is known for.

Together with the renowned sister company RCF, custom tailored components have been developed, which are outstanding for this product segment. The finest materials like Neodymium and Mylar have been used to give this system an incredible performance with high SPL, low distortion and an even lower weight.



### ***Constant Directivity.***

The DVA T4 Top is equipped with a constant directivity horn for the High and Mid section and offers a nominal coverage angle of  $100^{\circ} \times 15^{\circ}$ . The CD-Horn provides high flexibility and a good natured attitude if for instance the Array is not aligned correctly. The DVA uses apart from the formation of cylindrical waves (very much depending on the number of T4 elements) the vector summing of the individual horns. This means that with growing distance to the source (if set up correctly) the listener perceives more and more vector sums of the single elements. However it has to be considered, that the fewer elements are used to spread the sound to a specific area, the stronger must be the curving of them. That's how the effect of optimised SPL distribution is managed.



### ***State-of-the-Art Drivers.***

The build in 1" Neodymium- Drivers are equipped with a 1.4" Mylar-Membrane which allow a very quick response and provide a linear frequency range at a surprisingly low weight. This driver was specially designed for the use with Line-Arrays. Its compact measurements allow very close proximity which is a main factor for minimum interference.



### ***High Efficiency.***

The 6.5" Neodymium-Midrange speaker has a sealed basket to provide an optimized volume capacity including high sensitivity and superb sound reproduction. It also has a horn exit including phase plug for defined and linear sound emission.



### ***Reliability.***

The 8" Neodymium-Woofer is equipped with a high power 2.5" voice coil to provide superior sound pressure level in a very compact size. The band-pass construction increases the efficiency of this component.





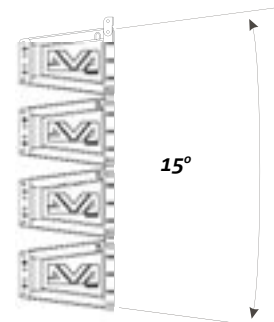
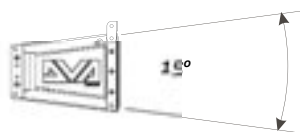
## **DVA.** *Advanced amplification.*

**dB**Technologies is known for its active loudspeaker systems at an exceptional price/value relation. The DVA-System underlines this philosophy more than ever. Especially with a 3-way Line-Array element the advantages of integrated processor controlled amping and active crossover circuitry are expressed to the maximum.



### ***Digital amping with analog sound.***

A peculiarity are the digital amp modules of the T4. They are Class-T™ build technology which compared to ordinary digital amps have a much smoother reproduction of high frequencies. The result is an accurate and natural sound reproduction with almost no difference to an analog drive also in the high frequency range.



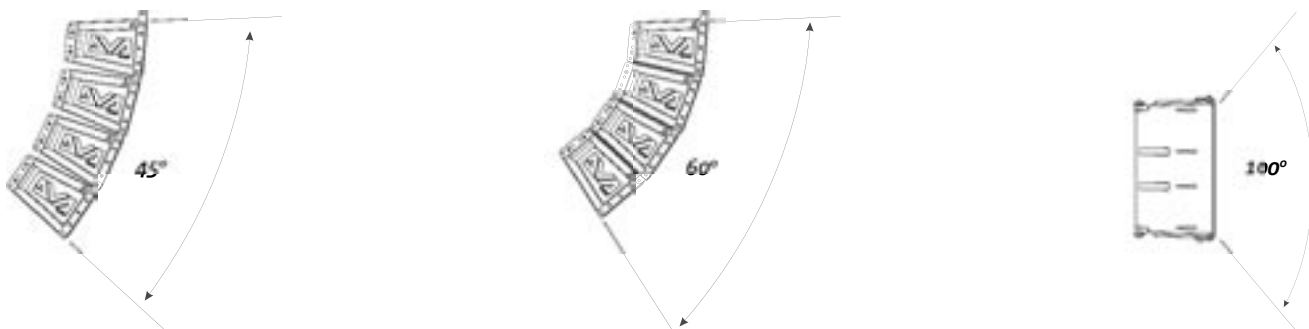
### ***Innovative Amping.***

The built-in digital amp with a weight of just 3kg delivers terrific 420W/ RMS. The T4 is 3-Way active driven which makes costly passive crossovers redundant. Another advantage of digital amping is the high efficiency of over 90% using no cooling fan to reduce disturbing noise.



### ***Precise acoustics.***

The integrated powerful Analog Devices 24-Bit DSP controls for example the active crossovers of the three ways with a rolloff of up to 48dB per octave. The time-alignment facilitates for precise phase behaviour and coherent sound distribution.





## **DVA.** *Advanced amplification.*

### ***Highest Security.***

In addition to the integrated multiband compressor/limiter, the analog input stage of the T4 provides analog limiters per signal path for a maximum of signal and operational safety. The build in DSP monitors, besides the acoustic management, also the complete power amp section. Any fault within the 3-Way amp circuitry can be detected and only the faulty channel will be muted to avoid unwanted noise. Also the temperature of the power amps is controlled by the DSP. In case pre-set temperature limits are reached the amp does not switch of. The inputs will be regulated down by 3,6 or 9dB depending how hot the amp gets. The system will stay operational in most cases.



### ***Latest Technology.***

The DVA T4 has an integrated active PFC-Switchmode supply. It is very light-weight and has an efficiency of almost 90%, which enables up to 8 DVA T4 to be driven safely on only one 230V/16A wire. The supply works on voltages from 85-260V, so it will accept all different mains worldwide, even under the worse conditions.



### Easy Setup.

Different sound setups for ideal audio results within the Array are build into the DVA T4. To compensate the HF absorption of the air, the setups are mainly adjusting the high frequencies to Near/Mid or Farfield.



DVA T4 PRESET EQUALIZATIONS			
NUMBER OF BOXES	SHAPE	ANGLES	EQU SET
FROM 1 TO 2	STRAIGHT	from 0° to 2.5°	0
	CURVED	from 5° to 15°	1
FROM 3 TO 5	STRAIGHT	from 0° to 2.5°	2
	CURVED	from 5° to 15°	3
FROM 6 TO 8	STRAIGHT	from 0° to 2.5°	4
	CURVED	from 5° to 15°	5
FROM 9 TO 12	STRAIGHT	from 0° to 2.5°	6
	MID CURVED	from 5° to 7.5°	7
	CURVED	from 10° to 15°	8
SERVICE USE ONLY			9

### Incredible Dynamics.

The digital amp of the DVA T4 offers DPP™ Digital Power Processing and a Multiband Compressor/Limiter with individual characteristics per signal path. It has got a wide range of dynamic reserves with headroom for the Mid/High section of up to 22dB. In addition to the wide dynamics this innovative circuitry makes sure that the signal stays acceptable even if the system is pushed to the limit.

All the above mentioned features stand for an extremely powerful loudspeaker system. Not only the audio performance but the low weight of only 13,2kg per DVA T4 Line-Array element is a big advantage of the modern concept and technology. It is easy to handle and allows quick setup even in difficult environments.



## **DVA.** *Flying, Stacking, Handling.*

### ***Precise Mechanics.***

The DVA T4 comes with precisely engineered flying hardware. The hardware in combination with the extremely low weight of a T4 top allows easy and fast setup of the whole system. The curving can be adjusted in steps of 2.5° within a range of 0° and 15°. For an optimum of performance the system should be principally flown. The DRK-10 flying frame holds up to 10 T4. For professional handling the frame is well balanced and the angle of inclination can be corrected with the upper rear flying rails.



### ***Groundstacking.***

In case there are no possibilities to fly the system or the ceiling of the venue is not high enough, the DRK-10 can be used for groundstacking too. A special bracket provides an inclination up to 7.5°. The DRK-10 fits exactly onto the surface of an upright positioned DVA S20 subwoofer and can be mounted by two M10 threads on top of the sub.



### ***Transport.***

For an easy transport of 3-4 DVA T4 elements, the DTF-4 dolly is optionally available. In this case, the Array is directly fixed by the flypins onto the dolly. A separate fixture for the flybar is integrated. The DWK-4 is fitted with four Bluewheels and can be equipped either with a protection cover or, after dismantling the wheels, mounted onto the bottom of a flight case. This frame can also be used for groundstacking for 1 to 4 DVA modules, for example for upward sound distribution to the stand of a football stadium or as a nearfill at front stage.



### ***Rigging-Tower.***

For Arrays of a maximum of 8DVA T4 tops, **dB**Technologies offers with the DRL-45 an optional, compact and cost effective rigging tower. The tower takes up to 300kg and offers a maximum height of 4.50m. A flight case for the DRL-45 is included.



**DRL-45**



## **DVA.** *S20 Subwoofer.*

With a frequency range from 80Hz to 19KHz the T4 modules are perfectly possible to be used as a fullrange system for speech or background music. For live or music applications in general, the active S20 subwoofer is the ideal companion for the DVA T4 top units.



### ***RCF Precision Woofer.***

The DVA S20 subwoofer is equipped with two powerful RCF Precision woofers with neodymium magnets and a 4" voice coil for extremely high sound pressures. Double ventilation provides an optimum of cooling, a minimum of power compression at high reliability. The woofers are fibreglass reinforced and have a triple-roll coil embedded in a perfect edging with constant geometry. This combination makes an extreme peak-to-peak steering of up to 48mm possible.



### ***Incredible Power.***

The S20 Subwoofer is fitted with a 2000W digital amplifier which drives both 18" woofers. This extremely high power output is delivered by a comparatively low weight Class-D switch mode power amp. Thanks to the high power level, 138dB SPL are not a problem. Despite this incredible power, this amplifier does not need a cooling fan, which allows the S20 also to be working in an installation environment.

### ***Easy to setup.***

Further features of the S20 are a switchable active crossover with crossover points of 90Hz and 120Hz and a phase reverse switch. Optionally available is the delay module DSD-1 to adjust time alignment of a flown T4 Array or to correct the signal if the subwoofer is put in front of stage, but the Array is in line with the ground support of the stage. A PowerCon with slave out connects the S20 to the mains. The X-Over output provides the signal for the T4 tops.



### ***Made for Touring.***

The housing is made out of rigid birch multiplex wood and is covered with black paint. Four integrated handles cater for an easy transport of the unit, 16 nuts at the back of the S20 are ready to take on a set of four Blue Wheels. For stacking purposes, two wooden rails have been fitted to the bottom of the sub.



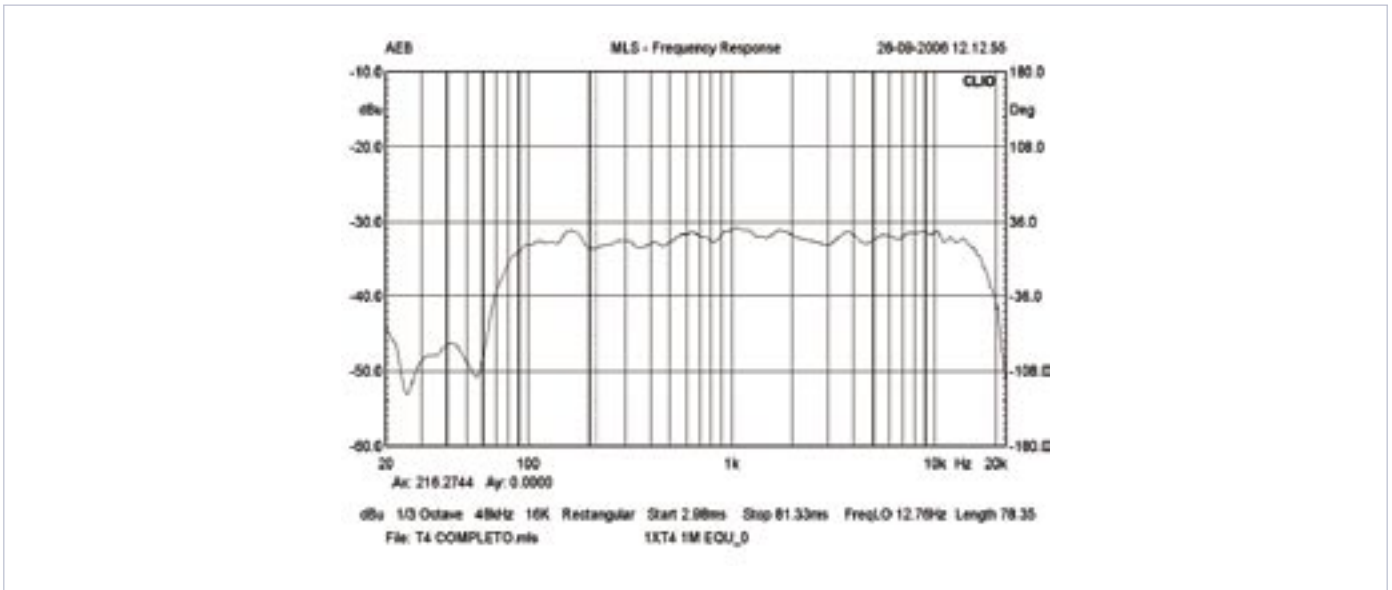
### ***DVA Setup Software.***

For easy setup on site or to plan a system in advance, a setup software for the DVA is included free of charge. Just by putting in the basic parameters of the venue and the height of the Array, the software calculates a suggestion for the ideal curving. It further calculates SPL coverage and the total weight of one Array and which security factor will be reached. Clues of how many S20 Subwoofers are needed and possible delay times for those are given.



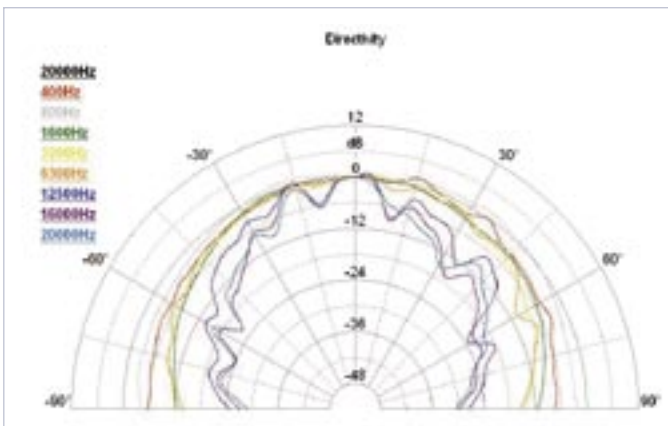
# DVA. Diagrams.

Frequency range - 1 x DVA T4

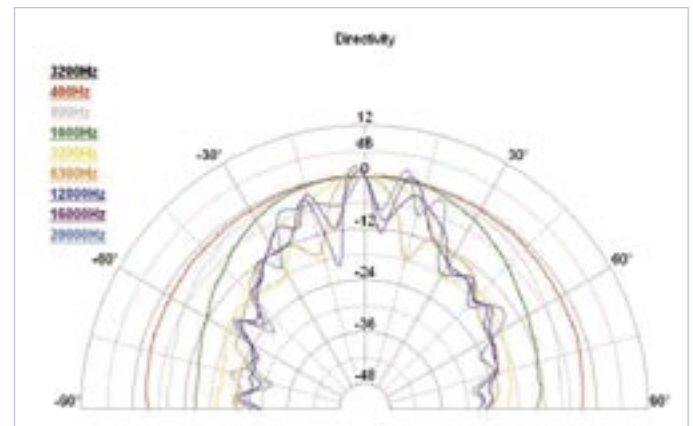


On Axis, 1 meter, EQ-Setup 0

Polardiagram - 1 x DVA T4



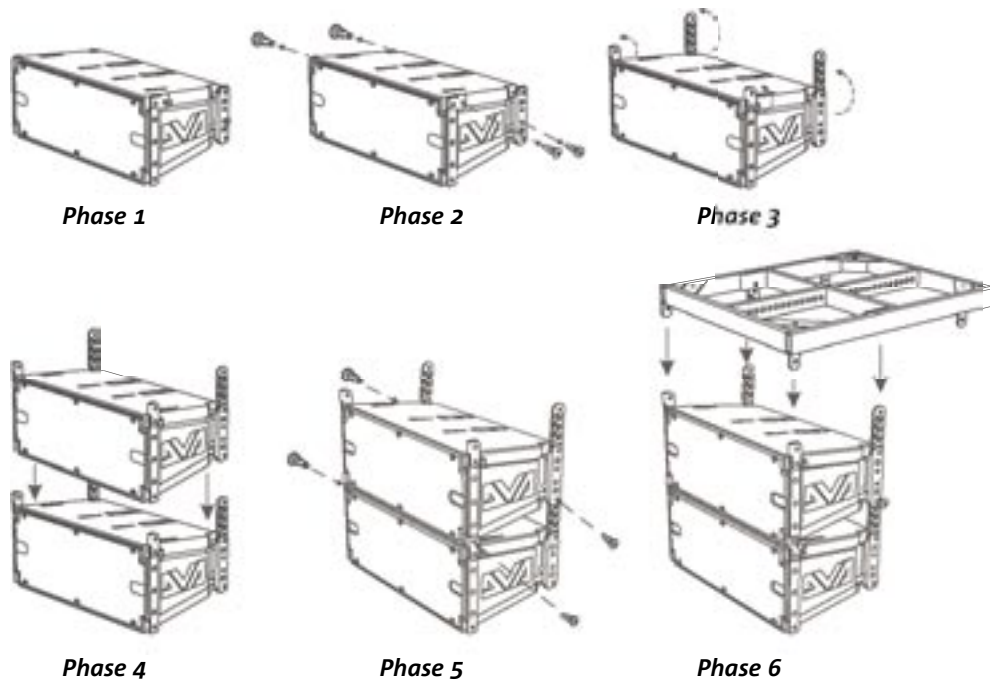
Horizontal



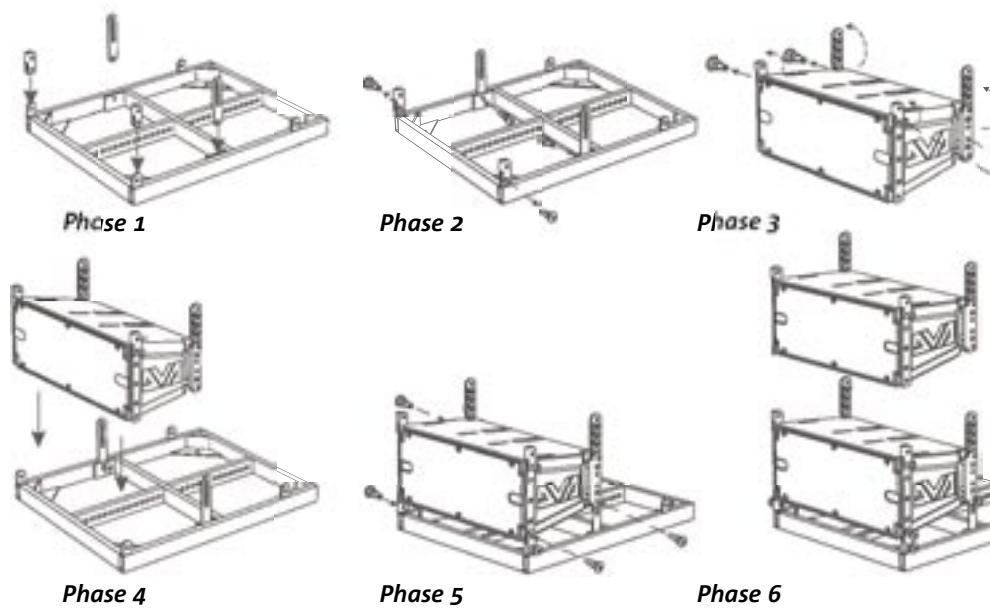
Vertical

# DVA. Assembly.

## Assembly Flyware



## Assembly Groundstacking

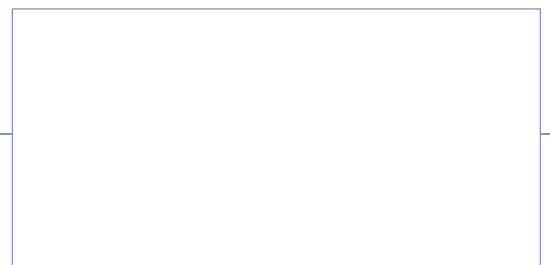




## DVA. Technical specifications.

Model	DVA T4	DVA S20
<b>Acoustic Data</b>		
Frequency Range (+3dB)	80 – 19.000 Hz	25Hz–90Hz or 120 Hz
SPL peak	128 dB	138 dB
Horizontal Dispersion nom.	100°	-
Vertical Dispersion nom.	15°	-
High	2 x RCF 1“ Neodym with 1,4“ voice coil	-
Mid	1 x RCF 6,5“ Neodym with 1,5“ voice coil with hornexit and phaseplug	-
Woofer	1 x RCF 8“ Neodym with 2,5“ voice coil	2 x RCF 18“ Neodym with 4“ voice coil
<b>Input Section</b>		
Input	XLR fem. sym.	XLR fem. Sym.
Parallel Output	XLR male	XLR male
X-Over Output	-	XLR male
Input Sens.	-50 – 0dB	+4dBu – -2dBu
<b>Soundprocessing</b>		
Type	Analog devices 24-Bit, 48 KHz	analog
X-Over frequency	400Hz, 1800 Hz	90Hz or 120Hz
Time Alignment	yes	Optional
Protection Circuitry	single channel switch off at fault powerreduction at overheating	RFI, thermal
Limiters	Digital multibandcompressor-/Limiters and analog Limiter	analog Limiter
Phasereverse Switch	-	yes
Sound Setups	9 setups, HF/Low-Mid correction	-
<b>Amplification</b>		
Type	Digital Class-T™ with variable clock freq.	Class-D
PSU	PFC switchmode supply	switchmode supply
Power	220 Watts/RMS LOW 100 Watts/RMS MID 100 Watts/RMS HIGH	2000 Watts/RMS LOW - -
Cooling	convection	convection
Mains	PowerCon In/Out 85V – 265 V automatic	PowerCon In/Out 110V/230V switchable
<b>Weight &amp; Dimensions</b>		
Depth	327mm	700mm
Height	240mm	580mm
Width	580mm	1100mm
Weight	13,2kg	69kg
Housing	Polypropylen	birch multiplex
Flying	integrated flyware	-
Handles	2	8
Wheels	optional wheel kit	prepared for 4 wheels
Grill	metal grill with acoustic foam	metal grill
Colour	black	black

Your dealer



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