



energetic sound
solutions

TW AUDiO is more than just a name of excellent sound systems.

TW AUDiO is a vision, it is a range of products and it is a promise.

Simply Great Sound - Make Great Sound Simple



The TW AUDiO Vision:

What abilities define the ultimate loudspeaker?
How does it need to be designed?

We believe that the ever-increasing demands made on today's professional sound systems mean our development processes for new products have to be cutting-edge innovative and future-oriented. We believe this is the only way for a speaker system bought today to survive the test of time successfully for many years to come.

Modern sound systems must offer a maximum of power and flexibility while being as small and light as possible. All TW AUDiO products fulfill this role.

The TW AUDiO Product Range:

What are the expectations of today's and tomorrow's discerning professional sound technology users?

This is the key question we ask when developing new TW AUDiO products. Our current product range contains both a number of excellent individual components and a series of complete PA systems with intelligent accessories, all linked by the TW AUDiO system concept.

With this product range we offer an optimal solution for a large group of users and tasks with packages tailor-made for many needs and demands.

If you are as yet unable to find the type of solution you're seeking on the following pages, please let us assure you we are constantly working on new innovative products of all sizes. We will strive to be "making all the right noises" for you very soon!

The TW AUDiO Promise:

What does our brand stand for?

We're driven by our passion for innovative technology and inspirational products. Like you, we are users, and develop our product accordingly, with a primary focus on everyday usability.

Our team applies personal experience from over 20 years in the rental and tour business to the benefit of our customers. We create sustained value. This is what all TW AUDiO products, every single employee and I as founder of the company stand for.

I hope you will find the following pages helpful in creating a more in-depth impression of our vision, our product range and our promise.



Tobias Wuestner - Founder, Owner
and Head of TW AUDiO



VERA10



VERA S15



VERA L24



VERA S30



BSX

TWAUDIO®



T24



B30



B15



POWERSOFT K3DSP



M15



M12



M8

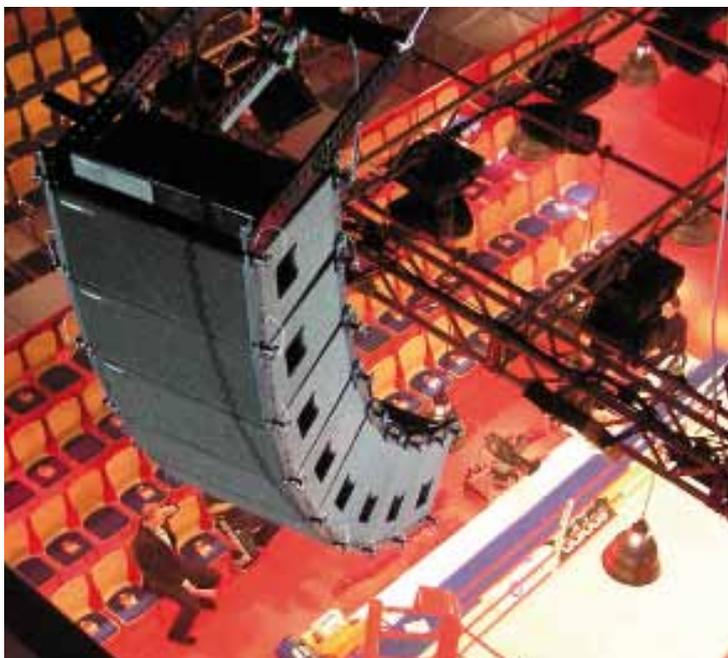


M6

Components and Systems with a lot of Excitement

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**Charmingly
powerful**



VERA 10

VERA10

To start with a disclaimer: this system's name was in no way inspired by a beautiful woman. Shame, really. Anyway, the name simply derives from its intended application as a Vertical Array.

So, now for the facts: VERA10 is a vertical line-array speaker system created specifically for events requiring the highest sound quality. The system's spectacularly high output together with its extremely compact dimensions and low weight means you can run just one speaker system for events with 10 or 10,000 visitors. We designed a new 10" neodymium speaker as the optimal combination of low- and mid-range driver just for VERA10. Combined with our compression-chamber-phaseplug-design it reaches an efficiency of more than 103 dB (1 W / 1 m). Our mid / high waveguide, which has undergone significant development, allows the also newly developed tweeters to form a coherent 10° vertical wavefront.

This endows VERA10 with the high range power reserves all vertical arrays need. Without those partial vibrations that usually rise dramatically at higher frequencies, distortion is minimal, even above 8 kHz.

The result: crystal-clear sounding highs, great definition and a depth more reminiscent of a high-end HiFi cabinet than a PA speaker.

By the way, the HF-Horn with a 80° horizontally coverage, which was developed with the Waveformer, can be easily exchanged against the 120° element.

Because of its low weight and easy to use flying hardware, you can build vertical arrays of up to 18 elements and still conform to German BGV-C1 regulations. All the necessary rigging parts except the RF300 flying frame are firmly attached to the cabinet to avoid them getting lost. Luckily we thought about it!

Thanks to its pronounced low frequency performance, VERA10 can also be used without additional subwoofers for many applications. VERA S15 and VERA S30 subwoofers are available where stronger bass output is required.

The S15 subwoofer in particular can easily be integrated into VERA10 rigging with its flying system, offering a visually subtle bass extension when flown above or stacked below the tops. Good cause.

Not forget to mention, the comprehensive and sophisticated range of accessories. They make transport as well as rigging and daily use very easy peasy. For example our VERA DL10 dolly let you store and transport up to 24 VERA10 modules but only takes up the space of an ordinary Euro pallet.

You were told line-arrays could only be flown, not stacked? Not ours! The RF300 rigging frame doubles up as a stacking frame.

But if you prefer there is also a GF10 ground frame with horizontally and vertically adjustable feet available. You want to use two or three elements as a sound system for smaller event on a tripod – not a problem at all - that's what our SF10 small frame is for. Inverted, the SF10 also allows you to hang up to 3 elements off a half-coupler.

Now that's what we call intelligent...



**Unbeatable
dynamic**



VERA L24

VERA L24

Certainly this speaker is not one of those that you will see in every corner. Indeed because of this our VERA L24 is an extraordinary product, and a further important component in the TW AUDiO building kit principle. Because the new VERA L24 is a low –mid extension specially developed for our VERA10 Line Array System. Fitted with two 12 inch speakers the hybrid construction of the casing combines once again the advantages of bass reflex and horn design. The acoustic pressure produced in this way is extensively coupled to the ambient air and supports our VERA10 in the low range between 60 and 300 Hz with enormous punch. So the VERA System is even more flexible and can be provided with the necessary final pressure in any situation. As expected our L24 has the same rigging material and is therefore as high as two VERA10 elements. Therefore this speaker can be integrated in any VERA system very easily. Whether it is flown or stacked it is always unconcerned, and always with the same hardware.

But what is it like in practice? An example? Normally you use a VERA-SYS-ONE and use it to PA the majority of your events. For small jobs you could possibly place two VERA10's on an S30 on either side with the help of an SF10 and distance rods. For example larger PA's can be realised effortlessly with a second VERA-SYS-ONE from a colleague . But when to use L24? Simple: whenever you want to equip your system with significantly more low-mid power. Extend your line length in the low-mid area and therefore more low-mid energy can be transferred over larger distances. Our VERA10 is well known for having large power reserves in the high range area. And with the L24 these reserves can also be used in smaller arrays. In this way e.g. three VERA10 elements can be fitted with significantly noticeable root and punch up to 60Hz with the help of just one L24. Even four to five VERA10's will experience distinct growth using just one L24. But it is not only possible to integrate it into an array of VERA10's. For larger events for example an array of six L24's can be used directly next to an array of twelve VERA10's.

The upwardly slanted casing of the L24 even allows a curving which can be adjusted harmoniously to the VERA10 array. In this mode of operation the VERA10 array can also be filtered in higher and therefore further relived in the root. This creates even more headroom. If you also add our new BSX sub-woofer as a bass addition, you can get an idea of the expected performance of this fully active four way system. Of course some people will be asking themselves about the need for such a building kit principle. For those who just handle one type of event which never changes, it can be more sensible to buy one, large line array system. For everyone else, who are looking for the most possible flexibility, our VERA speakers offer fantastic combination possibilities. That is a system to PA 10 to 10,000 people. And to be honest: who doesn't need that kind of flexibility these days?



**Never uninvolved
but sometimes
passive**



VERA S15/S30

VERA S15 and S30

VERA S15

Our VERA S15 bass can be seen as our fun-loving child. Raising it was not always easy – but it was a matter of course that we had to develop a very compact and very light-weighted subwoofer extension for our VERA10. Even though the process of getting there occasionally made our eyes water, we're finally weeping tears of joy.

But the past is the past – let's focus on the here and now: the VERA S15 represents the most unobtrusive bass-extension of the system with the same frontal width and identical rigging to the VERA10 array. It weighs in at only 23.5 kg, meaning that it can be integrated without problems into VERA10 arrays even with weight-restricted flying points. A ground stack on the GF10 frame also has the S15 looking good. You crave more system-related thinking? No problem! Fitted with the PWS15 passive crossover the S15 can do even more: run sub-support

for an M15 as drumfill or for club PA applications; or work as a small passive PA with M8 connected to the highpass filtered output.

VERA S30

Assuming our B30 subwoofer was a 24,000 foot mountain, the new S30 subwoofer would have to be Mount Everest. When we realized during the development of the VERA10 that this line-array would not only be used in small and medium sized venues, but could also have a place in large events with audiences of several thousands of people, it became clear that this system would need its own powerful sub-bass support. Converting one of the best subwoofers on the market to meet these new demands was the obvious thing to do, especially since said woofer happened to come from our own range of products: the S30 does not only use the same hybrid construction as the B30. It also has the same dimensions as the B30 and is fully compatible in electronic and acoustic aspects with the B30, and so forth.

On top of all this, we have matched the S30 to the new demands with newly developed long-excursion speakers and an extremely sturdy and weather-resistant poly-coating. At a total weight of only 42 kg the integrated rigging system allows for the construction of flown bass-arrays – upright or horizontal, behind or to the side of the VERA10 system. And there's more: even arrays projecting to a specific direction with some subs firing to the rear can be arranged.

In addition it can also provide the foundation for a VERA10 ground stack: four S30s on top of each other, plus GF10 and up to 8 VERA10 elements on top of this. Lash it all together and done! So, it doesn't take a prophet to predict a future for the S30 that should be as bright as what we have seen with its brother the B30. Amen!



Expansive bass



BSX

BSX

We, being known for developing small, compact products, which can always be flexibly combined, have built a giant black box. A double 21 inch subwoofer in the format 140 - 60 - 90. The big subwoofer eXtension. The BSX. If you look closer you will see immediately that the box matches us and our customers just as well as any other TW AUDiO product. The BSX fits harmoniously into our product family. This starts with its dimensions. Because the 140cm width offers exactly the right amount of space to be able to position two B30's or S30's exactly next to each other. Therefore the BSX serves as a massive foundation. Literally. But also the construction is typical for us with the BSX using the same hybrid casing principle as our B30 and S30 models. Because only in this way is it at all possible to efficiently connect the immense air mass, which can be moved by this device, to the sound field.

Flow and friction loss are minimised as much as possible and the energy noticeably arrives even from a distance.

As always with a TW AUDiO development, here also the focus goes into fine detail. For example the stacking foot notches for all sensible combinations with other TW AUDiO loudspeakers. And there are the now legendary TW AUDiO handles. 12 in number, optimally placed. Therefore this subwoofer can be transported, laid down, positioned and tipped by one person.

Of course the BSX is primarily a real deep bass addition for those who want to set up their systems "upside down" with enormous boost. Because even one single BSX is completely able to stand by the side of a complete PA-SYS-ONE.

But the BSX would not be a real TW AUDiO product if it could only be used in one way. Therefore even in the development and construction, right from the beginning we placed

importance on being able to reproduce even frequencies up to 120Hz cleanly and impulse faithfully. So you can also combine our double 21 directly with the T24 top part or the VERA10 system. Practical. Precise. Problem free.

How is that possible? Due to the newly developed 21" drivers. They are completely unique. Fitted with a specially developed 5.3" aluminium moving coil. With an extremely stiff and yet light membrane. The whole thing is then combined with the powerful neodymium-magnetic system, with a membrane attachment that allows distances of more than +/- 30 mm. Peak performance potential of 10 kW per driver. Therefore our BSX is in a position to easily contend with extreme acoustic bass requirements. You will quickly see that the BSX is a dyed in the wool TW AUDiO product. Because with regard to the parameters of size, weight, performance and flexibility: it sings „kleinlaut“.



**Top power
focused**



T24



T24

The top T24 was our first product and already embodies everything that defines TW AUDiO today. There is a fundamental difference between just bringing a hornloaded high-power top to the market and having the ambition to build the lightest, smallest and most powerful 2x 12"/1.4" horn top worldwide. Without disregarding the claims of the audiophile upper class the T24 is exemplary for the TW AUDiO philosophy.

With a complex horn-in-horn design it generates sound pressure above 143 dB peakSPL. We tweaked efficiency, impulse response and dispersion to the highest levels. Size and weight were reduced to the minimum. And therefore this extremely compact top inspires with high power handling capacity, excellent dynamics and long reach as well as an optimum in vocal and speech intelligibility, even or especially when things have to get a bit louder

Accessories? Of course: the CBT24 cradlebar or SBT24 bracket can be fixed to the flying tracks on the sides with a simple latch. Without tools! Using the HSF adapter the T24 with bracket can even be mounted to a speaker tripod. Precision landing! The FDB30 front dolly with 100 mm wheels can be mounted to the front of the T24 for protection and transport. Easily cover it with the Cover T24. More? No problem – look at the complete range of T24 accessories and the technical data from page 34 on. There you go.



**Successful high
performance**



B30

Success makes us proud. The sensational hybrid construction of our B30 subwoofer unites all the advantages of bass-reflex and horn systems: high efficiency, long throw and an extremely low cutoff frequency distinguish this design by TW AUDiO. Coupling of the soundfield is done through the full frontal plane and therefore reduces the usual friction and flow disturbances to an absolute minimum.

The results are efficient energy conversion with low losses, controlled impulse reproduction and excellent dynamics even under full load. With the twin 15" neodymium drivers the B30 subwoofer can even project frequencies around 40 Hz powerfully at a light weight of 39 kg. Therefore it can deliver more than 2 octaves without restrictions, making it usable without additional infra-bass units.

The cabinet depth of 80 cm enables loading in Euro-truck standard sizes: up to 4 units stacked on the QDB30 quad-dolly and three of the dollies next to each other - a perfect fit. Reliable and always inspiring the B30 does its job. No wonder that it is so successful and that we are proud



**Compact
multi-talent**



B15

Our subwoofer B15 is a real multi-talent. The bass-reflex system equipped with 1x 15" driver is especially suited as a passive bass extension for all our M-series speakers. Due to the speaker chassis specifically developed and optimised for this application we achieve outstanding bass response in spite of the compact design. The fall-off in efficiency of the LF-driver to the higher frequencies causes a soft filtering of mid-high frequencies with the lowest possible phase-shift when combined with the optional passive crossover PWB15.

Because of this the subwoofer can be connected in parallel with full-range speakers without additional amplifiers or system controllers without problems. The fullrange system is strongly supported in the low frequency range while staying almost unchanged in the midrange.

The highpass output of the passive crossover PWB15, tuned specifically to the M8, relieves the satellite speaker and lets the combination sound extremely homogenous. Well done!

Another advantage: caused by the speaker impedances of a passive combination of the B15 with one M12 or M15 fullrange speaker, the amplifier power is divided into two thirds to the subwoofer and one third to the top. This does not only relieve the fullrange system but also promotes balanced playback of music. Again and again and again...



Tough



M6 and M8

M6

Our smallest of the bunch. But don't underestimate it! Don't we already know this text from the M8?

Correct. There is an offspring!

And as is often the case it provides powerful acoustics.

With the M6 we are extending the product range of the M series downwards. Everywhere that the M8 is too big, the M6 is sure to find a place. You can simply hide it effortlessly. Although you don't have to. Because with the same imposing high range unit as the M8 and an extremely high performance 6.5" driver, the small speaker plays big! Grandiose and powerful it can be placed anywhere that you need a particularly discreet look. Therefore the excellently assembled box is stunning in its homogeneity and naturalness. Even at full steam. This was important to us, because that way you can do more than just have the 6.5" box. There is much more you can do. Of course the small M6 can also be combined with all its larger brothers and sisters without a problem. Even outside of the M-series. That is a given.

And who would have expected anything else. The M6 also has an extensive passive audio crossover. A horn tweeter optimised using the boundary elements method (BEM) which has a precise radiation. As usual there are left and right casing variants. There are always four speak-on connectors and extensive accessories.

Therefore in the future we can expect this small device to be a big hit. The M6 always has the right stuff for this.

M8

Now it is no longer the smallest in the bunch. But it still continues to be one of the most popular TW AUDiO speakers of all time. Because the M8 is also an uncompromisingly developed multifunctional speaker for small PA tasks – combined with the B15 for example. Or even with the B30, also flexible enough for larger uses like the next party. The passive combination of M8 and B15 with the PWB15 operated on just one amplifier channel is particularly fun.

It is not only extremely economical, but also extremely compact and plays like a high end HiFi combo. Just a little bit louder. Of course... In this way the M8 lends itself to a whole range of uses. From the small, inconspicuous voice amplification, to use as a stage monitor, right up to a small live and party PA. Of course your high range driver combination is developed and optimised using BEM and if necessary can be turned 90°. Therefore the M8 also emits right into the high range with low distortion factor and a constant directivity of 90 x 60°. The 8" speaker also has it in it and lends this small beauty the appropriate root and mid range. The result of these efforts: powerful and colourful play back right up to the highest notes. Incidentally: the M8 is also available in left and right casing variants and can be combined with any other TW AUDiO speaker.



**Highly
multi-functional**



M12 and M15

M12 / M15

M12

When building PA speakers unfortunately you often have to make compromises. But if you do this you should think carefully about which ones to make. This includes first of all the thought of where the relevant product would be used. So in the development of the M12 we have foregone extended bass response and instead focussed on the mid and high range performance. A high overall level of efficiency in an extremely compact casing and an exact emitting and boom behaviour with the lowest possible distortion. Primarily the M12 is used anywhere where these characteristics are required. As a stage monitor, as a high performance front or near fill, as a compact delay line speaker, and especially as the top part of a two way active operation with our subwoofers. Combined with the B30, as a PA-SYS-TWO, the M12 acts as a very attractive top part for small and medium PA tasks. Discreet space requirements. Astonishing performance. Like all M-series speakers the M12 also has an extensive passive audio crossover with phases and frequency response correction for

optimum speech intelligibility and neutral music playback with a large dynamic range. Low distortion, even with high input power, even on standard amplifiers and without a controller.

It should also be pointed out: The M12 is, like the M15 and T24, fitted with air cargo flight rails as standard, using which an optional swivel handle can be mounted without tools. Simply click into place. Cleverly placed handles facilitate carrying in every situation. And with a weight of just 20.5kg this box gives real lightness.

M15

The M15 is a real all-rounder. It is certainly our best all-round box. Use as a stand-alone in full range operation for a party, or as a delay line, for voice amplification, as a monitor on the stage, or combined with our basses. Passive as M-SYS- ONE with the B15 or actively separate with the B30, and there are lots more... – the multitude of areas of use of the M15 are impressive.

In stand-alone operation you don't necessarily need a controller or an active equalisation.

Simply plug in – play and be impressed. The clean reproduction and distinguishability of the most diverse music materials, as well as high feedback insensitivity are just some facts which will make you happy, again and again. The asymmetrical speaker available once again in left and right casing layout, can be used professionally as a monitor. Lots of people call the M15: „the best wedge ever“, but you have to hear it combined with a passively separated B15, as a drum fill or a small club PA.

So it is worth testing it out. It should also be pointed out: like all M series speakers the M15 also has a passive audio crossover for optimum speech intelligibility and neutral music playback – even when operating on standard amplifiers without system controllers.

And, for completeness, we will repeat once again the last passage about the M12 – text in modified form: the M15 is also fitted with air cargo flight bars as standard. The same applies to the handles. In every life situation. For life.



Maximum energy



POWERSOFT

POWERSOFT K3DSP

Everyone knows that the demands on professional high-power amplifiers are increasing from year to year. Not only tonal neutrality, high power output and load stability are in demand. Small overall size, minimum weight, internal digital signal processing, digital audio inputs as well as extensive remote-control and monitoring options are desired. To crown it all, topmost flexibility is also expected ...

We have done a great deal of testing and comparing, and have come to the following conclusion:

The Powersoft K3DSP is the system amplifier we use and recommend as drive unit for our loudspeakers. Why?

Because of that:

The K3DSP amplifier can provide more than 150 volt peak to peak to its outputs. Hence this amplifier is able to deliver 1400 W into 8 ohm or 2600 W into 4 ohm loads.

And at low impedance rates the K3DSP also doesn't lose strength so fast either, thanks to its power supply capability of over 50 amperes per channel. The whole unit is packed in a 19" enclosure with only one height unit and 340 mm installed depth. With a weight of merely 9 kg. It can be operated on worldwide mains. 400 volt overvoltage protection included, 24 Bit / 96 kHz Digital loudspeaker management in high-end audio quality, included, remote-control capability via RS485 included...

And it goes on:

50 internal preset memories, 150 possible preset locations on a preset card, the possibility of implementing firmware updates by the user, AES3 digital input, upgradeable Ethernet capability with audio transmission ... The Powersoft K3DSP platform offers it all.

And it gets even better:

With the new Armonia-Software, up to 99 amplifiers can be completely monitored and remote-controlled via RS485 network with the PC. Free configurability of all DSP parameters such as filter, limiter, gain, delay, and routing functions are a matter of course, whereby system-specific parameters are blocked in TW AUDiO presets and remain unaffected.

A low-weight power package, equipped for the future – that's the Powersoft K3DSP system amplifier described in only a few words.

If you don't understand it, feel free to ask us. If you don't believe it, test and experience it yourself.



**Forceful entry
with backup**



VERA-SYS-ONE

VERA-SYS-ONE

Some people would probably ask themselves: „A pre-configured complete line-array system? Who needs that?“ The question is not totally invalid, since our VERA system offers almost limitless versatility. And the applications for such versatile line-array systems like ours are of course quite diverse. This leaves the question why? Well, to put it simply: a lot of people can assemble some speakers somehow. But a real system can only be assembled by a chosen few. Did you guess? Right! Our VERA-SYS-ONE is – like all our SYS combinations – a real system. Every part tuned to the others. Extremely compact and powerful. Highly versatile and always expandable. Again and again.

Consisting of twelve VERA10 elements, eight VERA S30 subwoofers, two RF300 riggingframes, the belonging transport dollies as well as two system ampracks and complete cabling, VERA-SYS-ONE offers the perfect base for a systematic and versatile start into the line-array age. It's a set that can hide behind others with its compact size, but never has to hide! Promise.

With the exhaustive VERA accessory range the combination can constantly be expanded and matched to special demands. Even the smallest jobs with two VERA10 per side, on SF10 small-frames on tripods for discrete sound reinforcement are possible.

But even large events with up to two further VERA-SYS-ONE loaned from colleagues can be coped with. And with 36 VERA10 plus 24 VERA S30 Subs powered by more than 60 kW from just 6 system ampracks a lot can get done, believe us! You see, it actually makes sense to offer a pre-configured line array system. Well, at least if it is made by us and has a future of course. Understood? Anyhow: the necessary support and the know-how of the physical functions of a line-array, of construction and operation is of course also supplied to you. Our support team does have the right answers to your questions and backs you up during planning and use. Whenever needed.



Fantastic upgrade capabilities



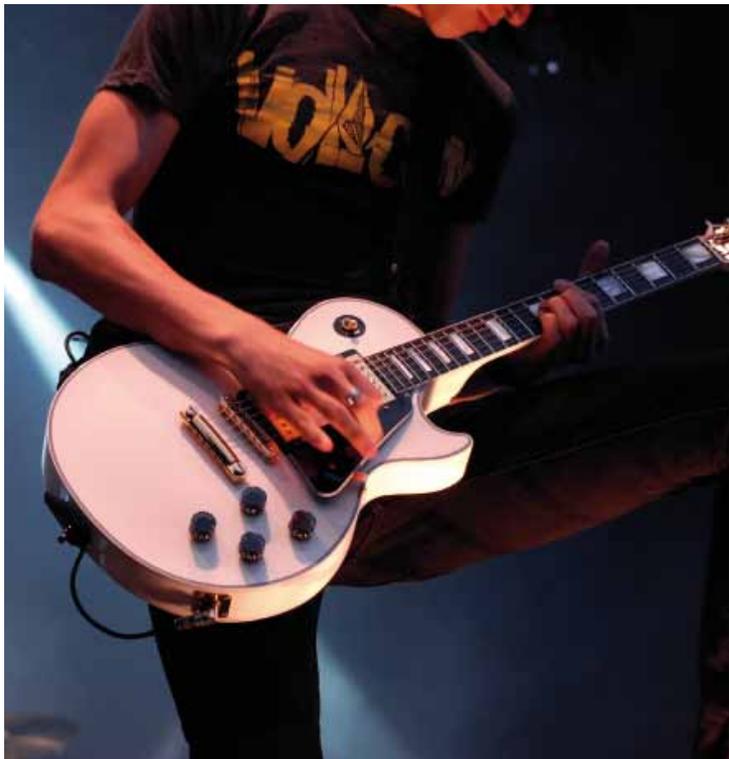
VERA-SYS-TWO

VERA-SYS-TWO

Another line array complete system? Correct! And once again it is abundantly clear how flexible our VERA System is. But first of all we would like to present the components: four VERA10 modules, fitted with passive crossover in the VERA DL10 Dolly. Two SF10 frames with HSF and two distance rods. Add two VERA S30 Subs on a QDB30 Dolly. Two Powersoft K3DSP system amplifiers in the rack including patch panel. And the necessary Speak-on cabling of course. That's it – our VERA-SYS-TWO. It is intended for those who want to lay the foundations for an expandable line array, but with real substance and all the phenomenal combination and expansion possibilities which our VERA10 system offers.

All too often we are asked how many speakers you need for your line array to function. The answer is simple: It works from the first box! It is always a question of the area to be filled with sound and the level required. Anywhere an M12 would otherwise be used, two VERA10 modules can quickly show their advantages. The integrated switchable passive crossover enables the very economical operation of these VERA10 elements on just one amplifier channel. And for use in a “large” array? Simply switch to the loss free biamp operation. The passive crossover can do even more: set the high register level, to 0, -3 or -6 dB, both in passive and active operation. In this way you can expand the VERA-SYS-TWO at any time. Whether permanently for the VERA-SYS-ONE or just with borrowed additional equipment for uses where you can no longer manage with your own material. You always have one advantage: you can integrate your speaker.

The system only needs to be set up in such a way that it is suitable for the current PA task. So your own speakers are not for the birds just because the current job is a little too big. And precisely this is fun and creates the necessary financial leeway to expand. Again and again. And something else: don't be scared of the line array theory and the array curving to be set up! Because with the EASE focus simulation software and the TW AUDiO plug-in you can calculate and evaluate your sound situation even beforehand. And we are also there, actively supporting you. So with the VERA-SYS-TWO it is now even easier to dare to join the line array age. And who knows, perhaps it is exactly this step that will make you stand out from other people.



**Outstandingly
expandable**

PA-SYS-ONE and PA-SYS-TWO

PA-SYS-ONE / TWO

PA-SYS-ONE

It is generally known that the individual components of our PA-SYS-ONE are compact, powerful and extremely audiophile. So what makes the combination so special? Many things. But most important is that this is a real system solution! Everything is matched together in all aspects. Always and everywhere the same. Always and everywhere easily done. Just carefree.

The combination of two T24 tops, four B30 subwoofers, an amprack, patch panel and cables is the all-round carefree package to start with. Join the upper league with plug & play. With the PA-SYS-ONE you lay the foundation of your banner allround modular sound system. How? Example:

Today you work a gala show with two B30s and two T24s on tripods. Tomorrow you loan a second PA-SYS-ONE from a colleague and deliver Rock'n Roll to an audience of 1,500. Of course everything is perfectly matched. The day after tomorrow you place two stacks as a

drumfill and four stacks as sidefills on the stage of an open-air festival with an audience of 20,000 people. By the way: a complete PA-SYS-ONE can easily be transported in a van. When push comes to shove: loading and assembly can even be done alone. Hook up to mains and XLR connectors, two Speakon outs, speakers connected in line – ready! No matter whether it's Jazz, Rock, Techno, Soul or Classics. Life can be so easy.

Always: A system amprack with two digital Powersoft K3DSP amplifiers inside is always the heart of each PA-SYS-ONE. With internal 24 Bit/96 kHz DSPs it handles the complete speaker management.

And more than 11,000 Watts of output power from four equal and independently channels drive all the speakers convincingly - always and everywhere.

There is more to it than that! Do you need more bass? No worries! Just connect more B30 parallel. One system amprack can power up to eight B30 and four T24!

PA-SYS-TWO

Driven by current events we hereby refer to the text regarding the PA-SYS-ONE. We'd just like to introduce the new players: two M12 fullrange speakers. Two B30 subwoofers. One system amprack. One cable set.

The attentive reader will have noticed that our PA-SYS-TWO can be extended easily: the connection of up to six additional M12 as well as six further B30 is possible without problems.

Yes, this is something you like!

And upgrading to the larger brother PA-SYS-ONE is always possible. Change the presets, speakers connected – ready!



**Strikingly
passive**



M-SYS-ONE / TWO

M-SYS-ONE and M-SYS-TWO

M-SYS-ONE

„Compact and passive mini-PA for FOH and monitor use Made in Germany“, wrote a well-known magazine when testing the M15 / B15. This actually says it all. How easy a product description can be. Thank you. All that is left for us to do is writing up a few marketing lines as a reminder and these fortunately apply to all our M-SYS combinations: universal and passive. Can be used with standard amps and power-mixers. Extended bass-response. Drumfill. Sidefill. Switchable passive filtering. Plug & Play. Compact and powerful. Well thought out and enormously audiophile. And. So. On. The complete test and additional info about the system can be found at:
www.twaudio.com

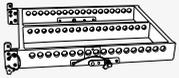
M-SYS-TWO

This must be the most compact possibility to combine TW AUDiO systems with our system solution thinking. The M8 speakers deliver crystal clear treble to above 18 kHz through the CD-horn with an opening of 90 x 60 degrees as well as impressively direct mids. The pair of B15 subwoofers with PWB15 passive crossover offer three operating modes via switchable high- and lowpass-filters. This way the M-SYS-TWO components can always be combined with other TW AUDiO speakers.

Two dollies for B15, a carrying bag for two M8 and the suitable set of cables turn the M-SYS-TWO into a complete system offering a quality so far restricted to active systems even when driven with standard amplifiers or power-mixers. A high-end sound system in mini-format. The maximum.
If you know what we mean.

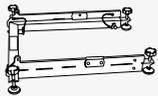
Accessories

VERA10 / S15 / L24



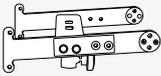
VERA RF300

Rigging frame for VERA10 / VERA S15, to hang up to eighteen VERA10 based on BGVC1, can also be used as ground stacking frame, dimensions 690 x 580 x 110 mm, weight 19 kg



VERA GF10

Ground frame for VERA10 / VERA S15, with extendable and adjustable spindle feet for tilt resistant setup and height compensation, dimensions 690 x 620 x 150 mm, weight 13.5 kg



VERA SF10

Small frame for up to three VERA10 to place on tripod with HSF or to hang with DHST, dimensions 500 x 380 x 110 mm, weight 5.5 kg



PWVERA10

Passive option, internal passive crossover to either operate VERA10 top in passive mode at one amplifier channel (12 ohm nominal impedance) or to operate in standard active mode (biamped)



CaseVERA10

Flightcase for four VERA10 and one RF300, professional version made of black PVC laminated 9 mm birch plywood, high quality interior fittings, four 100 mm swivel castors, with brakes, six recessed sprung handles, dimensions 800 x 670 x 910 mm, weight 43 kg



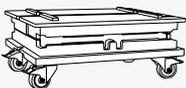
VERA DL10

2-part dolly with top and base part to transport up to twelve VERA10 plus RF300, four 100 mm swivel castors with brakes, dimensions 800 x 600 x 325 mm, weight 26.5 kg



VERA DL15

2-parts dolly with top and base part to transport up to six VERA S15, four 100 mm swivel castors with brakes, dimensions 1200 x 600 x 320 mm, weight 29 kg



VERA DL24

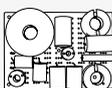
2-parts dolly with top and base part to transport up to six VERA L24 plus RF300, four 100 mm swivel castors with brakes, dimensions 1200 x 600 x 320 mm, weight 29 kg



PWS15

Passive option for S15, internal passive crossover with switchable high- and low-pass filters to operate S15 with M8 / M12 / M15 at one amplifier channel, when operated with M8 at high-pass output nominal impedance is 2.5 Ohm, weight 1.6 kg

T24 / S30



PWT24

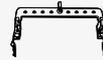
Passive option, internal passive crossover enables passive operation of T24 top at one amplifier channel (4 Ohm nominal impedance)

T24 / S30



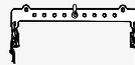
SBT24

Swivel bracket to mount T24 system on stand / distance pole or with DHST directly on truss, installation at T24 with grid mechanism without tools, weight 6 kg



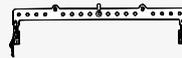
CBT24

Cradlebar with two doublestuds and locking splints to fly T24 loudspeaker, incl. safety SS08-100 and shackle SK10, dimensions 405 x 80 x 8 mm, weight 1.8 kg



CBH30

Cradlebar with two doublestuds and locking splints for flying of S30 subwoofer in upright direction, incl. one shackle SK10, dimensions 495 x 93 x 8 mm, weight 2.1 kg



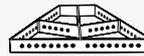
CBQ30

Cradlebar with two doublestuds and locking splints for flying of S30 subwoofer in crosswise direction, incl. one shackle SK10, dimensions 755 x 93 x 8 mm, weight 2.8 kg



BLT24

Boxlink connection steel with doublestuds and locking splints to install T24 / S30 below each other, steel capacity 130 kg based on BGV-C1 with safety factor 10



MCT24

Maincradleframe, side-by-side mounting at 45° angle, for flying of two T24 cradlebars next to each other, incl. M12 screw set, dimensions 590 x 480 x 60 mm, weight 10 kg



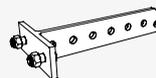
BBT24

Bracket on the rear side for hanging several T24s below one other, connection through a locking mechanism and ball lock pin, dimensions: 732 x 100 x 105 mm, weight: 2.2 kg.



BAT24

Adapter for connecting the BBT24 with the MCT24, connection through bolt and split pins, dimensions: 124 x 46 x 40 mm, weight: 0.9 kg



BCT24

Adapter for connecting the BBT24 with the CBT24, connection through ball lock pin and screw, incl. two M12 x 30 screws and two M12 locking nuts, dimensions: 260 x 126 x 48 mm, weight: 1 kg



ASK4

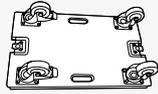
Quad-chain stop chain, for hanging of a MCT24 from an attachment point, incl. 1 x SK20 and 4 x SK10 shackles, can carry 1.12 t WLL, dimensions: 510 x 80 x 80 mm, weight: 2.7 kg



CaseT24

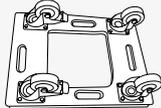
Flightcase for two T24, professional version made of black PVC laminated 9 mm birch plywood, four 100 mm swivel castors with brakes, recessed sprung handles, dimensions 980 x 480 x 920 mm, weight 40 kg

T24 / B30 / S30 / B15 / BSX



FDB30

Dolly to mount on B30, S30 and T24 front, four 100 mm swivel castors, thereof two with brakes, two butterfly catches, four carrying handles, dimensions 700 x 440 x 170 mm, weight 9 kg



QDB30

Dolly to transport up to four B30 / S30 subwoofer stacked on top of each other, four swivel castors with brakes, four carrying handles, weight 9.6 kg



CoverB30

Protective cover professional version made of black polyester with inner foam to cover B30 / S30 when transported on FDB30



CoverT24

Protective cover professional version made of black polyester with inner foam to cover T24 when transported on FDB30



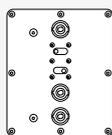
FDB15

Dolly to mount on B15 front, four 100 mm Swivel castors, thereof two with brakes, two butterfly-catches, two carrying handles, dimensions 500 x 440 x 138 mm, weight 5.5



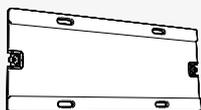
CoverB15

Protective cover professional version made of black polyester with inner foam to cover B15 when transported on FDB15



PWB15

Passive option for B15, internal passive crossover with switchable high- and low-pass filters to operate B15 with M8 / M12 / M15 in passive mode at one amplifier channel, when operated with M8 at high-pass output nominal impedance is 2.5 Ohm, weight 1.6 kg



FDBSX

Front cover mountable on the front of the BSX, four recessed gripping handles, dimensions: 1400 x 600 x 30 mm, weight: 12 kg

M6



SBM6

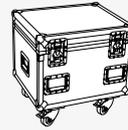
Swivel bracket with adaptor plate for rotatable upright or crosswise installation of M6 loudspeaker with HSF on stand / distance pole or with DHST directly on truss / pipe, dimensions 272 x 230 x 45 mm weight 1.0 kg



BagM6

Carrying bag for two M6, professional version made of black polyester with inner foam, additional bag for accessories, carrying straps

M6 / M8 / M12 / M15



CaseM6

Flightcase for four M6, professional version made of black PVC laminated 9 mm birch plywood, four 100 mm swivel castors, thereof two with brakes, six recessed sprung handles, dimensions 600 x 480 x 700 mm, weight 29 kg



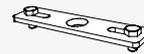
SBM8

Swivel bracket with adaptor plate for rotatable upright or crosswise installation of M8 loudspeaker with HSF on stand / distance pole or with DHST directly on truss / pipe, weight 1.5 kg



WHM8

Wall holder for installation of M8 loudspeaker, mounting with two M6 threads at the enclosure, weight 0.9 kg



CBL

Cluster plate for the mounting of 2 x M6 or M8 to DHST or HSF, incl. two M10 x 20 bolts, dimensions: 180 x 42 x 6 mm, weight: 0.3 kg



BagM8

Carrying bag for two M8, professional version made of black polyester with inner foam, additional bag for accessories, carrying straps



CaseM8

Flightcase for four M8, professional version made of black PVC laminated 9 mm birch plywood, four 100 mm swivel castors, thereof two with brakes, six recessed sprung handles, dimensions 600 x 710 x 640 mm, weight 34.5 kg



SBM12

Swivel bracket with grid mechanism for rotatable upright installation of M12 loudspeaker with HSF on stand / distance pole or with DHST directly on truss, weight 4.9 kg



CoverM12

Protective cover professional version made of black polyester with inner foam to cover M12



CaseM12

Flightcase for two M12, professional version made of black PVC laminated 9 mm birch plywood, four 100 mm swivel castors, thereof two with brakes, six recessed sprung handles, dimensions 800 x 410 x 700 mm, weight 29.2 kg



SBM15

Swivel bracket with grid mechanism for rotatable upright installation of M15 loudspeaker with HSF on stand / distance pole or with DHST directly on truss, weight 5.6 kg

Accessories

M15



CoverM15

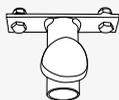
Protective cover professional version made of black polyester with inner foam to cover M15



CaseM15

Flightcase for two M15, professional version made of black PVC laminated 9 mm birch plywood, four 100 mm swivel castors, thereof two with brakes, six recessed sprung handles, dimensions 830 x 480 x 920 mm, weight 36.5 kg

Miscellaneous



HSF

Flange to mount swivel brackets on standard speaker stand or distance pole (36 mm pipe), incl. two M10 screws and nuts



DHST

Doughty halfcoupler slimline with M12 screw and stop Nut, maximum load 240 kg, for single point installation at circular tubes with diameter 45 - 48 mm



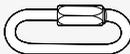
DHRT

Doughty halfcoupler slimline with M12 ring nut, maximum load 240 kg, for single point installation at circular tubes with diameter 45 - 48 mm



DSF

Aircargo doublestud fitting for for M12 / M15 / T24 / S30 loudspeakers, latchable in flying track



KSV06-035

chain fastener hardened, tempered and galvanized, CE certified, 0.35 t WLL, enables direct connection of two DSF or connection of DSF with DHRT



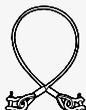
SD06-100

6mm rigging cable, length: 1m, one end DSF, other end KSV06-035, both ends with thimble eyes, cable can carry 195 kg in accordance with BGI-810 with a safety factor of 10



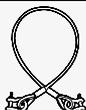
SS06-100

Safty steel, diameter 6 mm, length 1 m, incl. two shackles SK05, for saving loads up to 195 kg based on BGI-810



SS08-100

Safty steel, diameter 8 mm, length 1 m, incl. two shackles SK10, for saving loads up to 350 kg based on BGI-810



SS10-100

Safty steel, diameter 10 mm, length 1 m, incl. two shackles SK20, for saving loads up to 500 kg based on BGI-810



SS12-100

Safty steel, diameter 12 mm, length 1 m, incl. two shackles SK32, for saving loads up to 750 kg based on BGI-810

Miscellaneous



RSM6

Eyeboldt M6, DIN 580, galvanized, WLL 0.14 t



RSM10

Eyebolt M10, DIN 580, galvanized, WLL 0.23 t



RSM12

Eyeboldt M12, DIN 580, galvanized, WLL 0.34 t



SK05X10

Package with 10 pcs. shackles with 0.5 t WLL



SK10X10

Package with 10 pcs. shackles with 1 t WLL



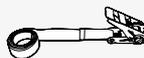
SK20X10

Package with 10 pcs. shackles with 2 t WLL



SK32X10

Package with 10 pcs. Shackles with WLL 3.25 t



ZG25-1

Lashing strap black one-piece, 25 mm width, length 1 m, 400 kg nominal load capacity



ZG25-2

Lashing strap black one-piece, 25 mm width, length 2 m, 400 kg nominal load capacity



ZG25-5

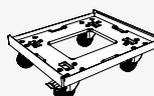
Lashing strap black one-piece, 25 mm width, length 5 m, 400 kg nominal load capacity

POWERSOFT K3DSP



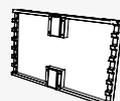
Rack3M

Modular 19" / 3 HE stackable rack, flexible front and rear steel rack rails, front and rear cover with quick-lock, high-resistant PUR coating, two collapsible handles, dimensions: 560 x 505 x 186 mm, weight: 10.5 kg



DLRM

Lower transport dolly for Rack3M, Polyurea coating, four 100 mm castors with wheel stops, four recessed gripping handles, dimensions: 594 x 538 x 180 mm, weight: 7.6 kg



KD7

7 units combi-cover, for connection of two Rack3Ms stacked on top of one another, wiring the racks among themselves is possible with a closed cover, dimensions: 330 x 550 x 60 mm, weight: 2.1 kg

Technical Data

Model	VERA10	VERA S15	VERA L24
			
Drivers	1 x 10" LF / 2 x 1" HF	1 x 15"	2 x 12"
Frequency range	60 - 15000 Hz	40 - 1500 Hz	63 - 400 Hz
Power capacity program / peak	500/1000 W (biamped LF) 600/1200 W (passive) 200 / 400 W (biamped HF)	1200 / 2000 W	1300 / 2600 W
Impedance	16 Ohm (biamped LF) 12 Ohm (passive) 16 Ohm (biamped HF)	4 Ohm (2,5 Ohm in passive mode with M8 at highpass output)	8 Ohm
Coverage range (h x v)	80 ° oder 120° x 10°		
Sensitivity 1 W / 1 m	103 dB (biamped LF) 104 dB (passive) 112 dB (biamped HF)	94 dB	102 dB
SPLmax / 1 m	133 dB	127 dB	135 dB
Connectors	2 Speakon NL4	2 Speakon NL4	2 Speakon NL4, Pin2
Dimensions (h x w x d)	275 x 500 x 355 mm	500 x 446 x 560 mm	550 x 500 x 560 mm
Weight	16,9 kg / 18 kg with passive crossover	23 kg / 24 kg with passive crossover	30,7 kg
Finish	Polyurea coating	Polyurea coating	Polyurea coating
Accessories	H120, CaseV10, DL10, RF300, GF10, SF10	DL15, RF300, GF10	DL24, RF300, GF10
Options	PWVERA10 internal passive crossover switchable between active and passive mode, RAL colours	PWS15 internal passive crossover, switchable between active and passive mode, switchable highpass-output for 8 Ohm satellite speaker, RAL colours	RAL colours

Model	VERA S30	BSX	T24
			
Drivers	2 x 15"	2 x 21"	2 x 12" LF / 1 x 1,4" HF
Frequency range	32 - 200 Hz	27 - 120 Hz	100 - 18000 Hz
Power capacity program / peak	2000 / 4000 W	7200 / 20000 W	1000/2000 W (biamped LF) 1200/2000 W (passive) 150 / 300 W (biamped HF)
Impedance	8 Ohm	2 x 4 Ohm	4 Ohm (biamped LF) 4 Ohm (passive) 8 Ohm (biamped HF)
Coverage range (h x v)			60° x 40° HF-horn rotatable
Sensitivity 1 W / 1 m	98 dB	99 dB	107 dB (biamped LF) 110 dB (passive) 112 dB (biamped HF)
SPLmax / 1 m	135 dB	142 dB	143 dB
Connectors	2 Speakon NL4	2 Speakon NL4, Pin1=LS1, Pin2=LS2	2 Speakon NL4
Dimensions (h x w x d)	706 x 446 x 800 mm	606 x 1406 x (without castors)	706 x 440 / 224 x 440 mm
Weight	42 kg	109 kg	45 kg / 46 kg with passive crossover
Finish	Polyurea coating	Polyurea coating	Warnex structure paint
Accessories	FDB30, QDB30, CBH30, CBQ30, BLT24, CoverB30	FDBSX	CaseT24, FDB30, SBT24, CBT24, BLT24, MCT24 CoverT24
Options	RAL colours	RAL colours, Warnex structure paint	PWT24 internal passive crossover, RAL colours

Model	B30	B15	M6
			
Drivers	2 x 15" LF	1 x 15" LF	1x 6,5" LF / 1 x 1" HF
Frequency range	35 - 200 Hz	40 - 1500 Hz	80 - 20000 Hz
Power capacity program / peak	2000 / 4000 W	1200 / 2000 W	250 / 500 W
Impedance	8 Ohm	4 Ohm (2,5 Ohm in passive mode with M8 at highpass output)	16 Ohm
Coverage range (h x v)			90° x 60° HF-Horn, rotatable
Sensitivity 1 W / 1 m	97 dB	94 dB	92 dB
SPLmax / 1 m	132 dB	127 dB	119 dB
Connectors	2 Speakon NL4	2 Speakon NL4	4 Speakon NL4, Pin1
Dimensions (h x w x d)	706 x 446 x 800 mm	506 x 440 x 560 mm	360 x 192 x 200 mm
Weight	39 kg	23 kg / 24 kg with passive crossover	6 kg
Finish	Warnex structure paint	Warnex structure paint	Warnex structure paint
Accessories	FDB30, QDB30, CoverB30	FDB15, CoverB15	SBM6, WHM8, CBL, BagM6, CaseM6
Options	IMPS impedance switchable between 8 and 2 Ohm, RAL colours	PWB15 internal passive crossover, switchable between active and passive mode, switchable highpass-output for 8 Ohm satellite speaker, RAL colours	left and right enclosures, RAL colours

Model	M8	M12	M15
			
Drivers	1 x 8" LF / 1 x 1" HF	1 x 12" LF / 1 x 1,4" HF	1 x 15" LF / 1 x 1,4" HF
Frequency range	70 - 20000 Hz	60 - 19000 Hz	50 - 19000 Hz
Power capacity program / peak	400 / 800 W	700 / 1400 W	800 / 1600 W
Impedance	8 Ohm	8 Ohm	8 Ohm
Coverage range (h x v)	90° x 60° HF-horn, rotatable	75° x 50° HF-horn, rotatable	75° x 50° HF-horn, rotatable
Sensitivity 1 W / 1 m	95 dB	101 dB	99 dB
SPLmax / 1 m	124 dB	133 dB	131 dB
Connectors	4 Speakon NL4	2 Speakon NL4	2 Speakon NL4
Dimensions (h x w x d)	440 x 240 x 240 mm	604 x 360 x 314 mm	706 x 440 x 374 mm
Weight	10,5 kg	20,5 kg	26 kg
Finish	Warnex structure paint	Warnex structure paint	Warnex structure paint
Accessories	SBM8, WHM8, BagM8, CaseM8	SBM12, CoverM12, CaseM12	SBM15, CoverM15, CaseM15
Options	left and right enclosures, RAL colours	left and right enclosures, RAL colours	left and right enclosures, RAL colours

POWERSOFT K3DSP



Design	Class-D technologie with zero-latency, switching power supply with active powerfactorcorrection	A/D-converter	Dual 24 Bit / 96 kHz, 127 dBA of dynamic range, THD < 0,005 %
Operating modes	two channel or bridge - mode	D/A-converter	Dual 24 Bit / 96 kHz, 122 dBA of dynamic range, THD < 0,003 %
Power specifications EIAJ 1kHz / 1% THD	2 x 1400 W into 8 Ohm 2 x 2600 W into 4 Ohm 2 x 2800 W into 2 Ohm	Memory	8 MB RAM, 2 MB flash for presets
Gain	26, 29, 32 or 35 dB selectable	Digital input	AES3 selectable from XLR input Ch2
Frequency response	20 – 20000 Hz +/- 0,2 dB @ 1 W into 8 Ohm	Delay	2 ms latency (DSP-on), delays up to 4 sec on the inputs, up to 2 sec for each output
S/N ratio	> 112 dBA (20 – 20000 Hz)	EQ-filters	16 per channel user definable as highpass, lowpass, peaking, hishelf, loshelf, allpass, bandpass, bandstop
Crosstalk	> 72 dB @ 1 kHz	Crossover-filters	highpass and lowpass per channel, definable slopes 6 – 48 dB / octave , Butterworth, Bessel, Linkwitz-Riley, FIR-linear-phase, FIR-IIR-hybrid
THD+N	< 0,5 % from 1 W up to full power typically < 0,05 %	Limiter	definable peak- and power-limiter per channel
Slew rate	50 V / us @ 8 Ohm load	Cable compensation	definable up to +/- 2 Ohm
Mains voltage	95 – 265 V, 50 / 60 Hz 400 V tolerant	Operation / remote	with display on the device or via RS485 network and Powersoft Armonia Software with a PC
Mains current	max. 8 – 16 A RMS adjustable	All information without guarantee	
Mains connector	IEC 20 A		
Input connectors	XLR NC3 symmetrical Pin2+		
Output connectors	Speakon NL4 Pin1/2 paralleled		
Dimensions (h x w x d)	19" / 1 unit high / 360 mm depth		
Weight	8,8 kg		

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