Product catalogue

The future of sound.
Made perfectly clear.

KV2 AUDIO'S HISTORY TIMELINE

2002

Marcello Vercelli and George Krampera unite to start KV2. Development of new driver technology with Eighteen Sound. Proto type of ES system developed.

ES System Series introduced at NAMM and MESSE.

The ES Series is released.

2004

EX Series released with first trans coil speakers used worldwide. EX10, 2.2 and EX2.5.

ES System installed at Key Club in Los Angeles. Revolutionary NVPD Driver Technology released in the EX12. Marcello Vercelli departs KV2. SD8 + LD4 released.

2006

VHD Large format point source concert system released. ES Upgrade via new EPAK2500R featuring 6MHz processing for time alignment and phase correction. VHD1.0 downfill released.

System used at winter Olympics in Torino Italy and Queens 80th Birthday Celebrations Balmoral.

2008

20,000th EX product manufactured.

ESD Passive Range with ESD6, ESD36, ESD10, ESD12 & ESP4000 released.

2010

SLA Super Live Audio introducing 20MHz processing in ES and VHD and the embodiment of KV2's technology developments. Release of SAC2 Super Analog Controller.

2012

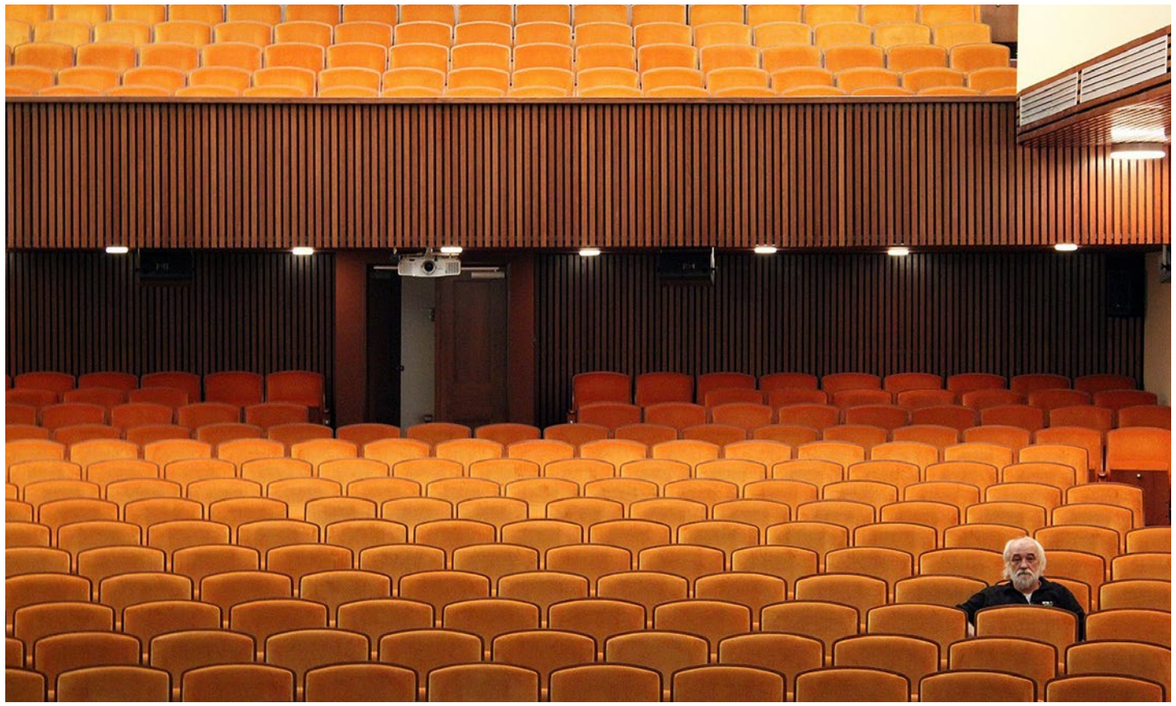
Ten Year Birthday of KV2. Release of ESM26 Stage Monitor, JK Series DI Audio Tools, ESP2000 Amp and SL Slimline speaker system.

2014

Major Theatrical installations in Germany (Stuttgart, Hamburg, Berlin)

2015

Release of VHD5.0 Constant Power Source Array



KV2 AUDIO – WHERE ART MEETS SCIENCE

Just for a few minutes, forget everything else you have read about speaker system design and think about what truly defines clear, quality sound.

Today we live in a world that has compromised audio quality. Technological advancements now try to bend the rules of physics, focus on slick user interfaces and create virtual equipment in an effort to save space and money.

Digital Sound Processing is everywhere, manufacturers strive to control every aspect of sound reproduction but all the while it moves us further and further from the original source, its timbre and dynamics.

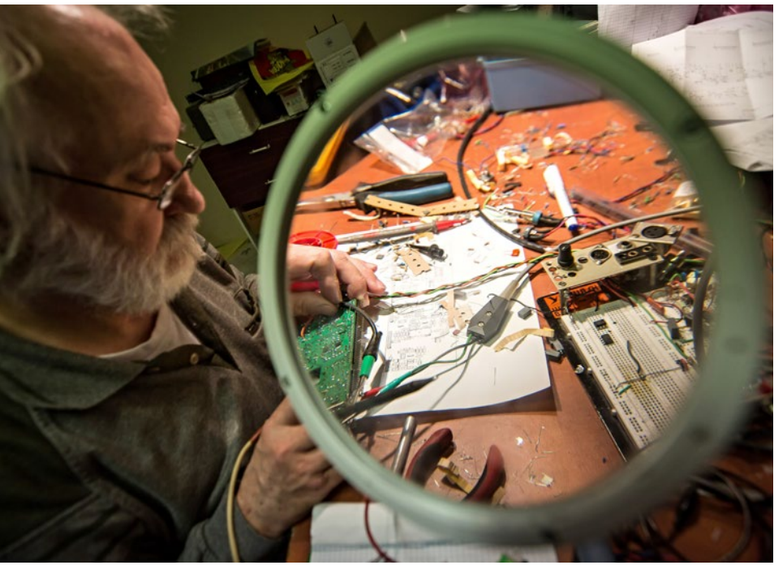
Capturing the emotion and ambience of a performance has become secondary. At KV2 the true reproduction of the original sound and its dynamics are the key elements in the development of our products. We have bucked industry trends and broken industry standards to find the best possible audio solutions both analog and digital. We don't simply gauge our system's performances on published specifications; we gauge it by the smiles on people's faces.

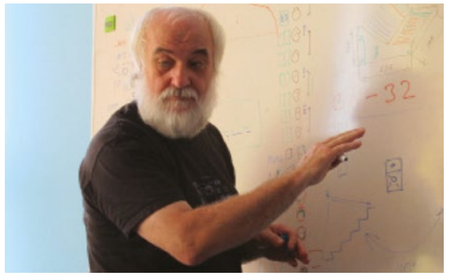
As we move through the digital evolution the limitations of our imaginations have expanded into the virtual but the laws of nature can't be denied. At KV2 we strive to bring art and science together, to reveal the true emotion in a performance.

Our products are designed not just to provide a solution for sound reproduction; they are built with the intention of providing the optimum listening experience and enjoyment for the audience. To deliver something special, something beyond expectation. KV2 builds plug and play systems that save you money, are fast and easy to set up, suitable for venues of all sizes and simply provide superior sound quality to any competing product.

With incredibly low distortion and extremely high definition, KV2's point source systems give you the capability to cover more people with less equipment delivering real value in quality sound reinforcement.

"We have bucked industry trends and broken industry standards to find the best possible audio solutions both analog and digital. We don't simply gauge our system's performances on published specifications; we gauge it by the smiles on people's faces."





KV2 TODAY IS THE CULMINATION OF ONE MAN'S LIFE LONG SEARCH FOR PERFECT SOUND.

George Krampera is truly one of the audio pioneers of modern times. He has been building audio equipment for nearly fifty years, millions of people have experienced sound produced from equipment he has designed. Through his long and successful career, George's vision has remained unchanged, to eliminate distortion and loss of information in the signal path, thus providing sound reproduction that has true dynamic range and representation of the source.

Growing up in the Czech Republic, his father a notable technician, as a child George played with valves and other components, building his first radio before he was ten. His interest in music and sound grew and by the age of fourteen, George was building power amps and other equipment for local bands in Prague. George continued his electronic training after leaving school and worked as a technician in Prague repairing various pieces of equipment while retaining a strong connection with the local music scene.

The Russian invasion of Czech in 1968 brought tough times for the country and as George built his career, he became increasingly concerned about the future of the country and the safety of his family. In August of 1983 George loaded his young family into their car and left everything they owned behind to escape to Austria. Once safely across the border George was granted asylum status and a few months later they departed for Canada.

It wasn't long before George found himself drawn back to the music industry taking a job with Yorkville Sound. There George designed many of their guitar and keyboard amplifiers and a complete range of processed speaker systems. After leaving Yorkville, George started his first company Rexx, which built high quality solid-state guitar amplifiers. In their first year of production Rexx out sold Marshall in Canada, testimony to the quality and value of the product. After a change in ownership Rexx fell on hard times and George decided to head back to Europe taking up a job offer with Italian speaker manufacturer, RCF.

George's goal at RCF was to work with and improve transducers. This was the final part of the chain he felt he needed to master to achieve perfect sound reproduction. Heading a team of young engineers, George made a number of break throughs at RCF including the development of the silicone spider. He also designed the complete ART active speaker series, which was a hugely successful line for the company. George left RCF when it was sold to Mackie and continued his work in transducer development at B&C.

By the late nineties George had relocated back to his homeland of Czech forming his own pro audio design company, Class A. Here using B&C components he worked on a large format active system that could cover big crowds and distances with optimum quality and clarity. In partnership with one of his old team from RCF, Marcelo Vercelli, the pair started Fusion and took their new speaker system to a large US trade show where Greg Mackie was suitably impressed by the products and made them an offer to join Mackie.

George found himself back at RCF, which was then owned by Mackie and in his role there apart from putting Fusion into production, he designed a range of speakers for Mackie. Sales of these new boxes skyrocketed but George's real passion was for designing high quality equipment. George and his old partner Marcelo left Mackie to form their second company, which was clearly represented by its name, K for Krampera, V for Vercelli and 2 being their second venture. A third integral link came about with another of George's old RCF colleagues, Andrea Manzini, who became involved with a new transducer manufacturer called Eighteen Sound.

Working closely with Andrea, George co-designed components to match the products he wanted to develop. This strategic alliance along with his expertise in cabinet design and electronics, built the perfect platform for George to follow his vision, a vision realized today in the products of exceptional performance and quality built by KV2. George has now established a group of brilliant young engineers, who he has mentored and directed to continue his legacy and ensure his vision will continue well into the future.

BUILT IN THE CZECH REPUBLIC WITH PASSION AND PRIDE.

Located in Southern Bohemia, KV2 represents many of the unique aspects that are seeing Eastern European manufacturers prosper in these difficult economic times. It's about the people, the place and strong traditions in education, the arts and industry.

Prior to World War II, Czechoslovakia was one of the most industrialised countries on earth. The subsequent invasions of the country bankrupted its economy. Today the country is again prospering thanks to the resilience and hard work of its people. Unique in its make up, KV2 draws on it's Czech heritage. KV2's employee's have a strong connection with what they do and a genuine interest in the company, with a desire to build equipment to the highest standard for end user's around the world.

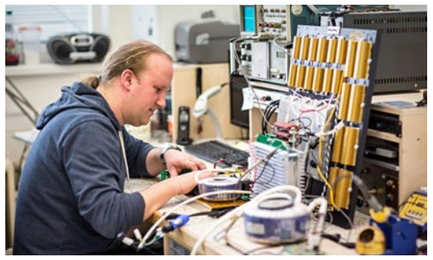
Just down the road from KV2's current location George's original R&D lab still stands. It was here George developed the original range of KV2 speakers and the journey began to create the best speaker solutions available. KV2's range of products grew and it was not long before manufacturing was moving from one building to the next to meet demand. KV2 recently purchased a factory that would handle their growth for many years to come.

This 100,000 sq foot facility was fully renovated to meet KV2's needs. We are implementing state of the art manufacturing lines and a high quality paint shop. Construction is underway on a huge anechoic chamber for testing and we are expanding the current R&D lab, along with new offices and warehousing. But despite all this, we are still located in the small town of Milevsko, where it all began, employing local people and building on those strong Czech traditions.

The new R&D team is made up of outstanding technology graduates, specialists in acoustics, electronics and digital technologies. George has passed on to them years of experience and understanding of all things audio. This legacy is leading to ground breaking, innovative product development.

KV2 is not simply a large corporate company pumping out products at the lowest possible price point to maximise profitability. It is a small hands on manufacturer, focused on quality and most importantly the sound of its products, something that many companies seem to have overlooked in the race to develop the latest so-called 'advancement' in technology.

KV2 celebrated its tenth birthday in 2012. It is still the same small vibrant company it was when it started. A company with a passion for building high quality pro audio products; products that deliver performance beyond expectation.



AT KV2 WE BELIEVE LESS IS MORE - BUT WE GIVE YOU MORE FOR LESS

Our Point Source Systems cover more people with clear detailed audio using considerably less equipment than our competitors. We embrace a 'less is more' philosophy while delivering you more for less, saving you time, money and increasing your return on investment. Transport costs and power requirements are also reduced making KV2 the green choice for today's carbon-conscious world.

Our systems are truly plug and play, no analysing software, external processors, or third party amplifiers required, making set up quick and simple, even for the inexperienced operator. Designed from the ground up and built with pride in the Czech Republic, KV2 Audio delivers unmatched quality and value for money.

Lower Transport Costs.

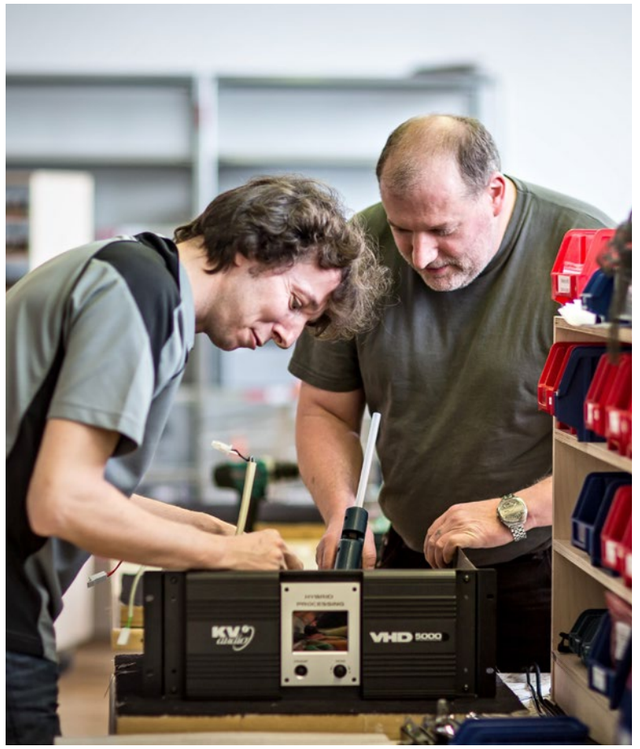
True Plug & Play – All processing and amplification in one package.

A Greener Alternative – Reduce your carbon footprint with smaller transport requirements and considerably lower power consumption.

High Quality European Built – Made with passion and pride in the Czech Republic.

THE KV2 DIFFERENCE

There is much more to creating high quality audio than simply building a good speaker system. Most manufacturers have access to the same components and acoustic designs so why is there such a disparity in the results achieved? The answer lies in taking a holistic approach to the whole audio chain. Let us explain the KV2 difference and why we developed our own standard.



A NEW STANDARD IN LIVE AUDIO

After years of research and development, KV2 Audio is pleased to announce a new standard in live sound reinforcement. Super Live Audio or as we refer to it 'SLA' has been developed through KV2's efforts to achieve the highest possible dynamic range and the lowest possible losses, caused through distortion or the altering of signal as it passes through the audio chain. Further to this, rather than develop technologies that try to compensate or fix problems in a system's design, KV2 focuses on building systems that are inherently superior from the start. Our SLA standard reproduces high sound pressure levels in large spaces whilst delivering true dynamic range and source representation. There are a number of factors that KV2 have identified that make up SLA and the resulting benefits it provides to the listener. These factors include electronic integrity (settling time), digital sampling rates, pulse response, dynamic range and acoustic system design.

SLA
Super Live Audio

SUPER DIGITAL

- 20MHz Sampling - Extreme Resolution
- Greater Than 120dB Dynamic Range
- Very Low Non-Harmonic Distortion

SUPER DIGITAL

- Super Fast Circuitry (1µs Settling Time)
- Ultimate Headroom - 200kHz Capability

SUPER DIGITAL

- True Point Source
- Active Impedance Control - Zero Inductance
- Ultra Low Distortion - True Piston Motion Drivers

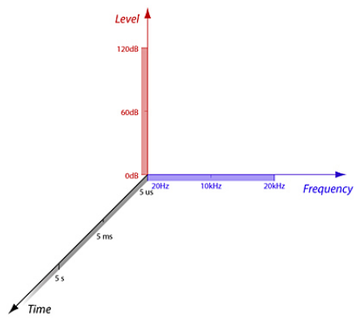
THREE KEY ELEMENTS OF SOUND

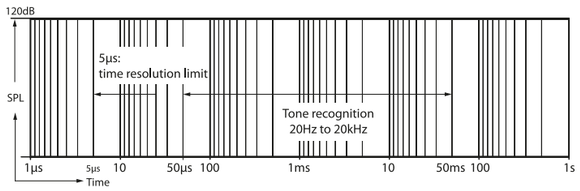
To understand how the principles of SLA provide superior audio performance, we first need to look at the three main parameters that make up sound - frequency, level and time. While this may be common knowledge to most, we are often surprised how people focus on certain specifications like frequency response or sound pressure level, without truly understanding their relevance in respect to a system's overall performance. All three sound elements need to be properly replicated to achieve the optimum in sound reproduction and reinforcement.

By looking at the limitations of human hearing, we have a specification that if met by the systems performance will provide natural, uncolored sound to the audience. As shown in Figure A below, normal human hearing is from 0 to 120 dB+ of signal level and 20Hz to 20kHz in frequency range. What is often neglected is the importance of resolution in time.

Human hearing is able to recognise time definition, (the difference in incoming sounds), down to 10 microseconds and latest research has found that it may be as low as 5 microseconds. Much of a sound's spatial and directional information is directly related to the time component of the signal. For these reasons, extremely fast circuitry and high sampling rates are required to ensure total reproduction of the soundwaves arriving at micro second intervals to the microphone.

Figure A





DEFINITION AND DISTANCE

Fundamentally, the effect of a poor quality system comprising of inferior electronics, transducers and acoustic design is a lack of definition and detail, but equally important in a live audio situation is the distance in which a system can project clear defined audio. To maintain high-quality sound, especially at a long distance, it is vitally important that each part of the audio chain is of the utmost integrity. The quality of each component in the signal path will determine the amount of information loss.

The system must be capable of transferring an unchanged sound, including the ambience of a performance over distance at the required level to provide the greatest possible experience for the listener. As the area of coverage increases, the demand grows for system resolution and dynamic range. These factors will be determined by the quality and speed of the attached electronics, digital sampling rates, transducers and acoustic design, all of which are key elements of SLA.

Dynamic range is a system's ability to reproduce the softest signals to the very loudest. In this context, the different signals captured from multiple sources on stage may vary from the threshold of hearing to over 120dB and they should all be replicated accurately by the system relative to the engineers mix of those sources. It is therefore a requirement that when the system is operating at high SPL it has the ability to clearly transmit the low level intricate detail of the performance. For example, we should be able to hear the breath noise of a flute player through the volume of a drum kit.

Dynamic Range is not a pre-requisite of a system's SPL capability, high SPL does not directly equate to high dynamic range. In fact many systems are delivering high amounts of non-harmonic distortion when operating at high levels. While this may exhibit the system has high SPL capability, this distortion becomes apparent in the high frequency range significantly masking the weaker parts of the signal. This masking has the effect of erasing a large proportion of the detailed information thus causing a significant reduction in clarity. The artificially changed signal makes it impossible to transmit the ambience or real atmosphere of the original sound to the listener, particularly over distance.

Most discussions relating to sound system design revolve around level and frequency response but fail to consider one of the most important factors – time; the speed at which the electronics and digital converters can process audio signals without loss or distortion.

SUPER LIVE AUDIO

DYNAMIC RANGE AND RESOLUTION IN THE DIGITAL DOMAIN

As previously stated, live music has the capability of producing a dynamic range in excess of 120dB. To reproduce this through an audio system with a suitable degree of headroom, a dynamic range capability of around 130dB is required. It is impossible for most digital AD and DA converters running industry standard PCM (Pulse Code Modulation) digital conversion of 24Bit/96kHz to replicate this level of dynamic range.

Secondly, while a 96kHz sampling rate has been deemed adequate when professionally converting an audio signal consisting solely of harmonic signal components, analog audio signals have complex harmonics and overtones and therefore should be regarded as random signals. The spectrum of random signals is infinitely wide, so when converting analog signals to digital, the sampling rate must be as high as possible in order to maintain quality of the transferred signal in full resolution.

At KV2 we undertook a different approach to digital to overcome the inherent problems in existing systems. We looked at an alternate conversion process developed by Sony™ and Philips™ called Direct Stream Digital or DSD. The Super Audio CD (SACD) is based on this digital format and unlike PCM conversion, DSD technology is based on a 1 Bit Sigma-Delta converter that produces a stream of pulses. The amplitude of the analog waveform is represented by the density of pulses and is called Pulse Density Modulation (PDM). The resulting digital bit stream is encoded at an enormous 2,822,400 samples per second! (2.8224MHz)

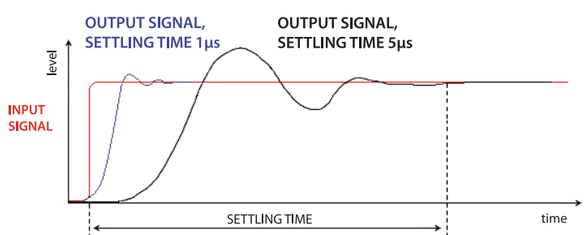
Practical listening tests were undertaken by our engineers to determine the minimal sampling frequency required to eliminate any audible information loss. The result saw KV2 design a circuit based around DSD with a sampling frequency of an incredible 20MHz using a 1 Bit Sigma-Delta PDM converter. KV2s new digital converter delivers resolution seven times higher than the pro audio industry 24bit/96KHz standard. A special step compander circuit adds a further 20dB of dynamic range to utilise the maximum range of the converter at low levels.

KV2 Audio's hybrid signal processing uses the best of analog and digital technology to provide all necessary filtering, equalization and time alignment to our speaker systems. This best of both worlds approach provides unmatched dynamic range and audio reproduction.

Pulse response and the ability to capture and reproduce a sound's time component is the key to clarity, definition, spatial image and depth.

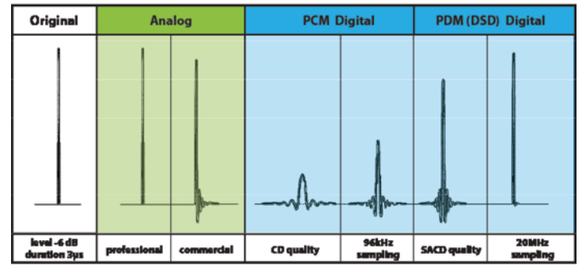
IMPULSE RESPONSE – ELECTRONIC INTEGRITY

To maintain a high-resolution audio signal, it is also important for the system to maintain the shortest possible impulse response time. Impulse response time is affected by the settling time and circuit design in analog electronics. The settling time of common electronics systems used in most commercial sound systems is around 10µs, ten times longer than it should be. The distortion, created by slow settling times is not commonly discussed by many manufacturers as they fail to understand its significance, often overlooking it in providing the technical specifications of products. Moreover the noise this distortion adds is very often mistaken for original high frequency, especially in digital technologies where it can exhibit itself as a bright, "fizzy" high end.



Sampling frequency is the major determining factor of impulse response in the digital domain. In Figure B (below) it is evident that commonly used commercial systems, particularly digital, cannot pass the full resolution of the original signal. Impulse response time is affected in the digital domain by the sampling rate and in the analog signal path by the speed of the electronics (settling time) and control of the acoustic component motion (speaker movement). The change in the original signal caused through poor impulse response creates distortion. Systems with a long impulse response time are unable to transfer high dynamics and high definition signals. SLA systems incorporate hybrid signal processing at an industry leading sample rate of 20MHz and electronic settling time of 1 microsecond (1µs), to ensure audio reproduction with the highest possible resolution and definition.

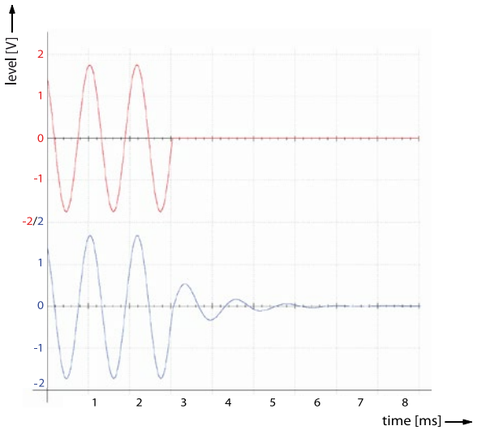
Figure B: Pulse response of an audio signal after transfer through various analog and digital systems.



TRANSDUCER DESIGN

One of the most important parameters in transducer design for Super Live Audio Systems, is the removal of unwanted resonances. These resonances are usually caused by the mechanical design of the speaker and its failure to control the diaphragm motions. Resonances reduce overall definition by masking smaller signals and producing tones not related to the original signal. Figure C below shows an original sine signal (red, top) with its sharply defined end and the same reproduced signal (blue, bottom), still oscillating after the signal stops due to poor control of speaker mass. Poor pulse response has a very negative effect on the ability of a speaker to reject feedback.

Figure C



Every loudspeaker used in a KV2 Audio system is specifically designed. This leads to the development of components that become the ultimate solution for their given application, not just an off the shelf driver. One of the most challenging projects undertaken by the team was the development of our new NVPD range of compression drivers. The idea came during an Italian lunch, where we discussed a new nitrate coating used in Formula One racing, offering extreme strength and rigidity. Extremely light, it is great for cars but had never been tried in pro audio.

By treating the diaphragm with a Nitrate Vapour Particle Deposition (NVPD) process, the dome's resonance and dampening characteristics are dramatically improved, lowering distortion even further and extending frequency response. By adding some of the largest Neodymium motors available today and our advanced phase plug design the result was a range of world beating high frequency units that produce distortion of less than 0.03% and measure flat up to 22kHz.

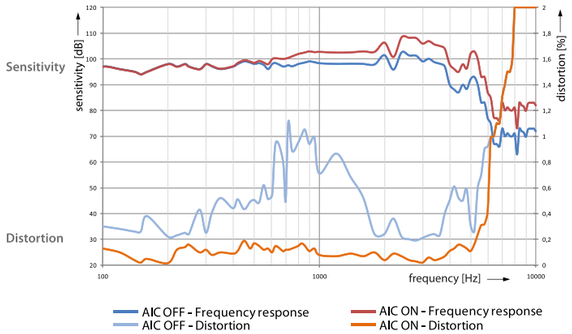
Many audio manufacturers globally have tried to utilise KV2's trans-coil components with little success. They fail to realise that it is a combination of both transducer and electronics design that produce KV2's sound quality.

ACTIVE IMPEDANCE CONTROL

SLA systems feature exceptional feedback rejection and this in part is due to their excellent pulse response. Additionally, control over the speaker mass can be very positively impacted by using an active impedance control, (trans-coil) speaker system. This system utilizes a secondary stationary coil, which reduces inductance close to zero and dramatically improves pulse response. Inductance is the main reason for odd harmonic distortion. Odd harmonic distortion is far more audible than even harmonic distortion. Figure D below shows the effects of AIC

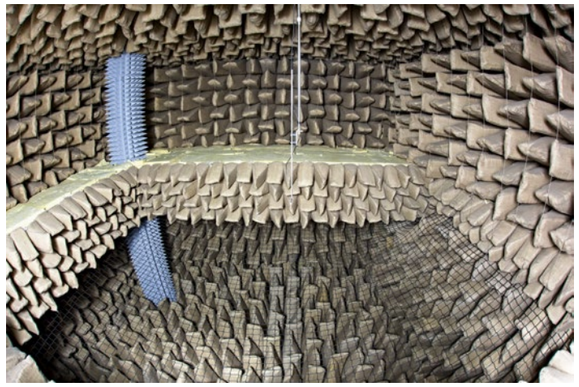
Low Inductance = Low Odd Harmonic Distortion

Figure D



The Active Impedance Control or AIC is an additional fixed, multi turn coil, positioned in the loudspeaker magnetic circuit gap. This coil is almost as long as the gap height and is wound around the pole piece to be very close to the primary voice coil. A current flowing into this coil generates a magnetic field that is in opposition to the field generated by the moving coil. This cancels out most of the voice coil inductance and reduces the flux modulation and inductance modulation. The AIC device can be seen as an "active" shorted ring in the gap. The two AIC terminals allow driving the additional coil in many different ways according to specific application needs.

We have built one of the largest anechoic chambers in the world to meet our R&D requirements.



AMPLIFICATION

KV2 Audio design amplifiers from the ground up for specific applications. This approach allows us to employ and refine the perfect types of power required for accurately reproducing highs, mids and bass frequencies. Low frequency devices have a unique set of requirements. Woofers are large, heavy and difficult to keep under control. On one hand you need lots of power, but besides cone size and weight, the single most important trait is the woofer's phase shift characteristics.

Simply put, phase shift is when current does not follow voltage as power flows through a voice coil. If you are sending 1,000 watts (100 volts and 10 amps coming out of the amplifier) under phase shift conditions, you may be required to produce double the amps at half the voltage in order to keep the woofer under control. A standard amplifier cannot accommodate this so we developed a new amplifier topology focused on developing high current but achieving over 90% efficiency to minimize cooling requirements and increase reliability.

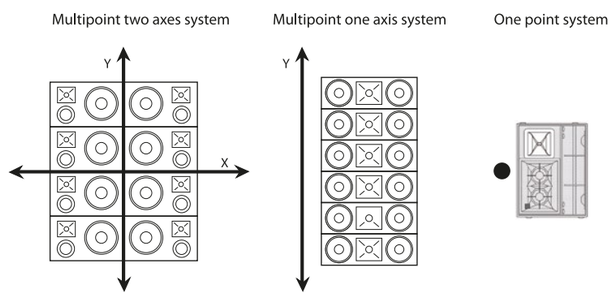
The design features a switching voltage power supply that keeps the voltage across the output devices low, but capable of providing much higher current and better damping characteristics than standard Class H designs. For sound quality reasons in mid range and high frequency reproduction we use amplifier topologies based on Class A or Class AB. The warmth and clarity provided by this type of amplifier is ideal. Our design uses Mosfet output devices in a push-pull, transformer balanced amplifier featuring a fast recovery time. The amplifier's output transformer provides a vital technique for controlling the output signal of the amplifier under clipping by reducing the intermodulation distortion.

SOUND SYSTEM DESIGNS - MULTI POINT VS POINT SOURCE

There are two main types of sound system designs that have been prominent in the market, consisting of single point source or multiple point source concepts. Multi point source arose from the requirements for very high output power. The idea satisfied that criteria, but with the increasing number of sound sources came an overall reduction in the quality of the sound. The two big disadvantages of multipoint source systems were the suppression of the high frequency output and the physically time-shifted outputs from the individual speakers. Adding a number of time-shifted outputs from individual speakers together causes poor system impulse response. The first types of multipoint sources were simply a large pile of cabinets, stacked together like building blocks and intended to array on all axis. A major improvement in the next generation of systems was the introduction of multipoint, one-axis systems that provided better frequency response and increased definition than previous multi axes systems. Unfortunately, whilst a step forward, the frequency response and impulse responses were still not ideal and the coverage was often inconsistent.

A typical representation of the one axis multipoint source sound system used commonly today is a line array system. Line array does reduce the effect of multipoint sources interfering with each other like the systems of twenty-five years ago, but it is still a long way from the superior results achievable with single point sources. A single point source sound system offers the highest possible definition and dynamic range available today. High intelligibility is a by-product of this, but is only guaranteed by maintaining this high definition and high dynamics through the use of fast and accurate electronics, with low distortion transducers.

A line array's natural frequency response before processing shows a continual roll off of high frequencies from 2 kHz upwards due to cancellation caused by the proximity of the numerous high frequency drivers. This requires large amounts of equalisation to be added to the top end to correct this phenomena. This huge boost in gain on the highs, lowers the system's overall headroom, on average a line array requires ten times the power to drive the top end compared to a single point source cabinet. Hence high power is not necessarily a requirement for large-scale coverage but quite often a result of a system's inefficiencies.



Further to this when using multiple speaker cabinets in a line array the listener receives multiples of the original sound at slightly different times, smearing the time based information contained within. To maintain a high-resolution audio signal, it is vital that the system is able to exhibit a short impulse response time. The impulse response from a line array is damaged due to time shifts in the sound arriving to the listener.

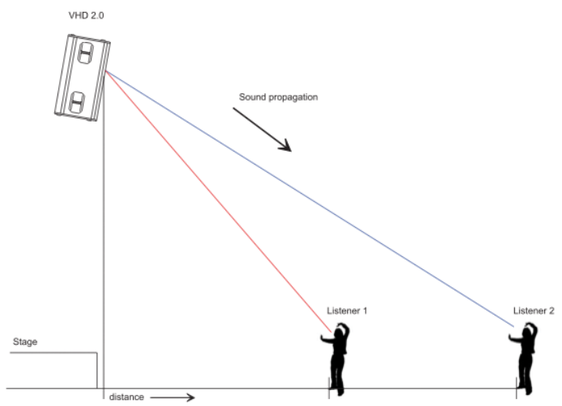
The diagrams below show that the pulse response of a line array will vary with the location of each individual listener. Time shifts for listener 1 are different to those for listener 2. Many manufacturers claim that these time shifts can be corrected using digital delays, however this does not provide a solution because time shifts will infinitely vary with each new listener position.

Another myth relating to line arrays is the idea that all of the elements couple, to produce a controlled, directed, long throw soundfield.

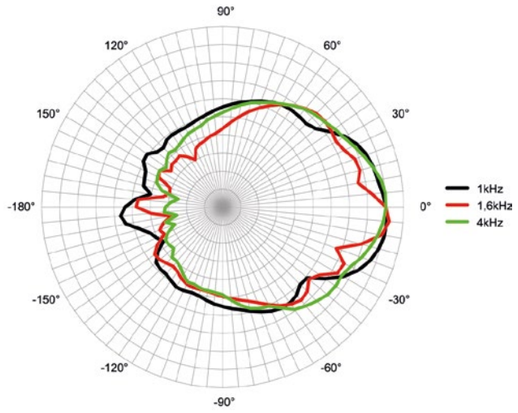
As we can see by the polar patterns below this is far from the case. The top pattern shows the smooth dispersion of a point source system compared to the erratic dispersion of a line array. As we can see from this polar pattern what actually occurs with a line array is a range of peaks and troughs, caused by destructive and constructive interference between the elements.

Even more critically, one factor overlooked by system engineers or line array prediction software, is the random movement of the air in the listening area. This causes huge changes in the transmission properties of multipoint systems. It occurs when an audience arrives, after the system engineer has spent the whole day aligning the system to an empty but theoretically perfect environment – an environment that in a real concert situation will never exist.

Time-Shifts, Properties of Single Point source



When using one point sound source, the listener in any location gets only a pure (not blurred) sound



Time-Shifts, Properties of Multi Point source

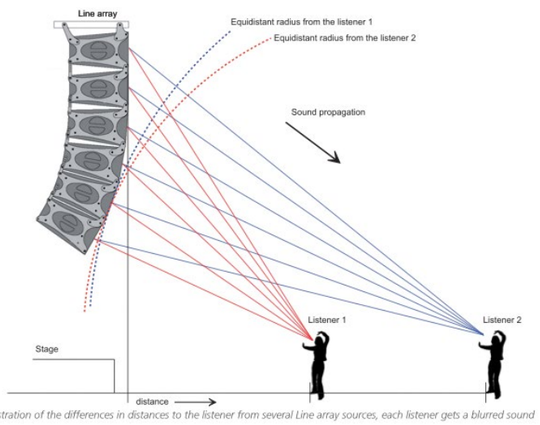
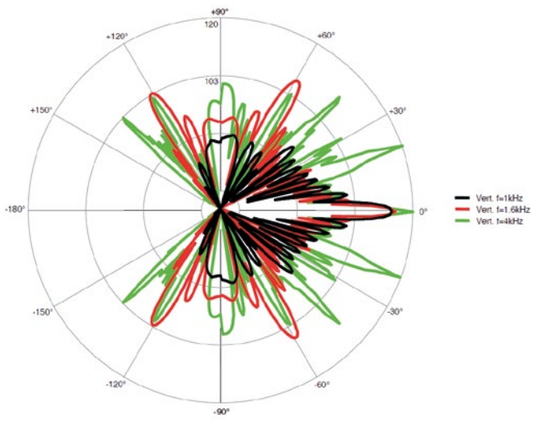


Illustration of the differences in distances to the listener from several Line array sources, each listener gets a blurred sound



ESD Passive Speaker Range

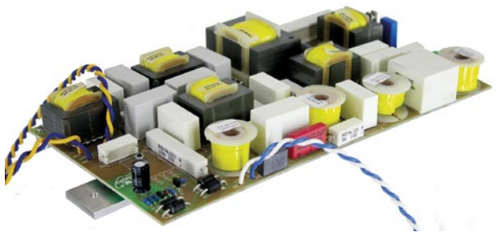
ESM Foldback Monitors

ESP High Definition Amplifiers

EX Active Speaker Systems

ESD TIME ALIGNED PASSIVE SPEAKER RANGE

The world is full of passive speakers using basic and often inefficient passive networks with the simple aim of offering an affordable easy to install solution when attached to any amplifier available. The results however are often far from acceptable due to poor phase coherency through a minimal crossover circuit and time misalignment between components. Add to this high distortion from low cost amplifier designs and you have a speaker highly susceptible to feedback with very poor fidelity. The growth of active speaker technology has provided suitable advances in resolving some of these issues, however there are economical advantages in installing passive speakers that can still provide high quality reproduction if done properly.



KV2's unique passive crossover network incorporates an extensive analog delay line (ADL) circuit to correct time alignment between components providing perfect phase coherency and clarity unheard from a passive speaker system before.

ESD12s Installed in Cirque De Soir - Dubai

When KV2 Audio decided to add a passive line to our growing range of speakers we looked at how we could improve the design of a passive crossover network to achieve the best possible sound quality. Drawing on our deep experience in active technology we developed an analog delay line circuit that would provide time alignment and phase correction passively, substantially improving clarity and definition. Comibined with our Active Impedance Control, the results are simply stunning.

Secondly we know that one size does not fit all applications so we had to ensure that a variety of models installed into a venue would not require multiple processors to try and achieve an even sound balance across the venue. We carefully tailored the frequency response and sensitivity of each model so that they would simply compliment each other when installed in a venue with little or no outboard control. While matching frequency response and sensitivity, we also provided varied impedances for the different sized cabinets to suit a vairety of applications.

Enclosed within Baltic Birch cabinets, the conservative aesthetic presentation and tactile feel create an atmosphere of quality that matches the audio performance. All in all, true to our philosophy of achieving the best sound quality possible, we have created in the ESD range, a speaker range that incorporates all of the economical and easy installation aspects of passive speakers without the need for expensive external processors.

ESD Speakers have multiple M10 fly-points and a wide range of brackets for easy installation.

CASE STUDY

Lake View Sports and Entertainment Center, Constanta, Romania.

Lake View covers 4500 sqm providing entertainment at its best, professional pool tables, bowling lanes, electronic games, fitness and wellness center, bar and Italian restaurant. This massive sports and entertainment center opened recently in Constanta and Romanian KV2 Distributor, AudioVision was on hand to deliver an audio system that truly matched the quality of this impressive venue. AudioVision's challenge was to meet the owners brief of high quality even coverage throughout the massive complex. They equipped the facility with a total of fifty ESD6 passive enclosures and four ESD1.15 subs. The owners were impressed with the clarity, coverage and high output delivered by the tiny ESD6. The system provides smooth detailed high fidelity audio through out the venue without the hotspots and directionality problems that occur with other small passive enclosures.

ESD5 - LATEST ADDITION TO ESD SERIES

The ESD5 is a very high quality 2-way full-range compact low profile passive loudspeaker with performance that defies its size. Delivering exceptional clarity for speech and program reproduction, the ESD5 is perfect for discreet installations and audio visual presentations where sound quality is paramount, but aesthetic dimensions are of equal importance. The ESD5's high impedance capability means that up to sixteen units can be run from a single suitable quality stereo amplifier, to provide a high fidelity background program throughout a venue.

Application

Specifically designed as a super- discreet passive loudspeaker for reproduction of recorded music and speech

- Suitable in fixed installations as a full range speaker or as a system with accompanying subwoofers
- Excellent peripheral reinforcement for main KV2 systems
- Fill-in speaker
- Monitoring

Frequenzy Response 130Hz - 22kHz (-3dB)
Max SPL 114dB Cont. 117dB Peak
Dispersion 90° H x 90° V
Dimensions H/W/D 150mm (5.9") / 316mm (12.4") / 224,7mm (8.84")
Net Weight 7kg (15.4lbs)

Wallmount Bracket

ESD6

The ESD6 is a high quality 2-way full-range compact passive loudspeaker with output that defies its size. Delivering amazing clarity for speech and program reproduction, the ESD6 is perfect for discreet installations and audio visual presentations where sound quality is paramount but size also matters. The ESD6's high impedance capability means that up to sixteen units can be run from a single suitable quality stereo amplifier to provide a high fidelity background program throughout a venue.

Frequency Response 68Hz - 20kHz (-3dB)
SPL 117dB Cont, 120dB Peak
Dispersion 100° H x 100° V
Dimensions
H/W/D 390mm (15.35") x 220mm (8.66") x 240mm (9.45")
Net Weight 9.5kg (20.9lbs)

ESD36

One of the more unique loudspeakers offered by KV2 Audio the ESD36 is a passive, full-range 3-way speaker system for speech and music reproduction. The ESD36 features a 6" driver dedicated to high-quality mid-range reproduction and a further two low frequency 6" drivers for enhanced bass extension. Alongside the same compression driver as featured in the popular EX6, the ESD36 offers comparable performance to many 12" cabinets with an enhanced vocal performance from this 3-way design.

Frequency Response 65Hz - 25kHz (-3dB)
SPL 122dB Cont, 125dB Peak
Dispersion 100° H x 100°V
Dimensions
H/W/D 730.5mm (28.76") x 220mm (8.66") x 240mm (9.45")
Net Weight 19kg (41.9lbs)

ESD10

The ESD10 is a compact passive 2-way, high output, full-range loudspeaker incorporating a 10" trans-coil woofer and a wide dispersion rotatable horn. The ESD10 provides a smooth hi fidelity response and delivers sound quality and level that is superior to many larger competing products. Ideal as a main system speaker or as and adjunct to a larger FOH cabinet to cover those hard to reach areas. The ESD10 is an all round affordable passive solution that simply exudes quality.

Frequency Response 65Hz - 20kHz (-3dB)
SPL 125dB Cont, 128dB Peak
Dispersion 100° H x 80° V Rotatable
Dimensions
H/W/D 514mm (20.23") x 310mm (12.20") x 325mm (12.79")
Net Weight 16.5kg (36.38lbs)

ESD12

The ESD12 is a high quality 2-way, passive full range loudspeaker that provides unmatched clarity and definition in a simple elegant package. The ESD12 utilizes a 12" trans coil woofer and the same 3" NVPD large format compression driver found in our flagship VHD products, which has one of the lowest distortion ratings on the planet. Combined with our unique delay line technology the ESD12 delivers a beautifully balanced, phase coherent and accurate compact, 2-way passive solution that is adaptable to a wide range of applications.

Frequency Response 55Hz - 22kHz (-3dB)
SPL 127dB Cont, 130dB Peak
Dispersion 80° H x 40° V Rotatable
Dimensions
H/W/D 606mm (23.86") x 368mm (14.48") x 368mm (14.48")
Net Weight 23kg (50.7lbs)

ESD15

The new ESD15 incorporates a unique coaxial 15" transducer with a 1.75" Nitride Titanium Neo Compression Driver on a wide dispersion 80 X 60 degree horn. While most coaxial speakers will cover the full frequency response, the ESD15's coaxial driver only covers bass and highs leaving the all important mid range to a 6" neo speaker mounted on a large 80 x 60 degree horn. This resolves the issue of the 15" driver trying to reproduce the all important mid range, a common problem with conventional coaxial designs. The ESD15's unique design provides extremely flat, full range reproduction from a compact yet powerful package that out performs speakers twice its size, weight and price.

Frequency Response 48Hz - 18kHz (-3dB)
SPL 126dB Cont, 129dB Peak
Dispersion 80° H x 60° V
Dimensions
H/W/D 700mm (27.55") x 450mm (17.71") x 450mm (17.71")
Net Weight 35kg (77.2lbs)

ESD1.12

The ESD1.12 is a passive version of the active EX1.2 12" subwoofer and features the same high quality neodymium woofer. This subwoofer's low profile and size makes it ideal for discreet applications. With power handling of 600 watts the ESD1.12 is capable of delivering tight, fast, controlled bass response at high output levels from a compact cabinet.

Frequency Response 38Hz - 150Hz (-3dB)
SPL 124dB Cont, 127dB Peak
Dimensions
H/W/D 370mm (14.57") x 800mm (31.49") x 400mm (15.75")
Net Weight 28kg (61.7lbs)

ESD1.15

The ESD1.15 is a passive subwoofer system featuring a single 15" neodymium woofer with a 600 watt power handling capability. Offering peak SPL of 130dB the ESD1.15 produces considerable output yet in true KV2 style retains a compact footprint. Multiple units of ESD1.15's can be stacked together to create a powerful and scalable subwoofer system.

Frequency Response 38Hz - 150Hz (-3dB)
SPL 127dB Cont, 130dB Peak
Dimensions
H/W/D 510mm (20.08") x 550mm (21.65") x 570mm (22.44")
Net Weight 33kg (72.8lbs)

ESD1.18

The ESD1.18 is the passive version of the incredible active EX 1.8. The ESD1.18 features a revolutionary VHD technology neodymium woofer. With power handling capabilities of 1000 watts it makes a firm foundation from which to build an incredibly powerful ESD system, or as a stand alone subwoofer to enhance any existing passive or active system.

Frequency Response 30Hz - 150Hz (-3dB)
SPL 131dB Cont. 134dB Peak
Dimensions
H/W/D 602mm (23.72") x 700mm (27.56") x 750mm (29.5")
Net Weight 59kg (130lbs)

ESM TIME ALIGNED FOLDBACK MONITORS

For years people have been asking KV2 to produce foldback monitors that had the same sound characteristics as EX and ESD ranges. Many foldback wedges utilise on board active technology or bi-amping and external processing to achieve optimum output. At KV2 we opted for a full passive design utilising our revolutionary onboard analog delay for perfect phase coherency. This meant that single speaker leads only need to be run to each monitor, not power cables for active designs and no expensive external processing was required.

We also knew they had to be durable to handle the rigours of touring and the on stage environment of heavy feet and various liquids. A sturdy mesh grill was engineered for the range and a special acoustically neutral liquid resistant cover placed over the horn, along with specially coated water resistant woofers. The resulting ESM range of monitors makes performing a pleasure, delivering clarity and detail at high SPL from a robust and durable package.

ESM26

The ESM26 is a purpose built stage monitor with incredible clarity and presence, especially in the all important vocal range. Incorporating two high quality 6" drivers and a 1.75" compression driver on a 100x100 degree horn flare. The ESM26 utilises KV2's revolutionary delay line technology for optimum output and feedback rejection. A full width bass port along the bottom of the cabinet couples with the floor to deliver bass response comparable to monitors twice its size. Under 400mm wide this small monitor takes up minimal room on stage and is ideal for visually critical applications like TV and theatre.

Frequency Response 70Hz - 16kHz (-3dB)
SPL 124dB Cont, 127dB Peak
Dispersion 100° H x 100° V
Dimensions
H/W/D 340mm (13.6") x 374mm (14.96") x 455mm (18.2")
Net Weight 15kg (34lbs)

ESM12

The ESM12 is a full-range low profile 2-way, passive monitoring solution with a 12" trans-coil neo woofer and the same 3" NVPD large format compression driver found in our flagship VHD products. The ESM12 also features our revolutionary passive delay line, which dramatically reduces feedback. Housed in a professional Baltic Birch cabinet, with a protective Polymer coating and heavy-duty grill, the ESM12 can be utilized for FOH applications with the inclusion of a pole mount. Truly one of the most impressive monitoring solutions on the market today, the ESM12 is available in left and right configurations.

Frequency Response 55Hz - 20kHz (-3dB)
SPL 127dB Cont, 130dB Peak
Dispersion 40° H x 80° V Rotatable
Dimensions
H/W/D 362mm (14.25") x 669.5mm (26.35") x 368mm (14.48")
Net Weight 25kg (55lbs)

ESP HIGH DEFINITION AMPLIFIERS

As speakers can only reproduce the quality of the signal they are fed the quality of the amplifier driving them is paramount to the resolution of the reproduction achieved. After we developed the ESD range, we knew it was important to design amplifiers that would provide the best possible results from these speakers. Our acclaimed amplifier topologies used in our active speakers were refined into two dedicated amplifiers, the ESP2000 and ESP4000. These amplifiers incorporate KV2 SLA design principles with exceptionally fast settling times and high quality toroidal transformers that create a dynamic, super-fast response resulting in extremely clean and smooth sound characteristics at all levels as well as providing very high feedback rejection. The ESP range of amplifiers will breathe new life into your speakers but its reproduction capabilities when combined with KV2's ESD range of speakers is truly remarkable. If you want uncompromised quality through a variety of different speaker solutions that integrate and combine seamlessly, then try the ESD/ESP combination from KV2.

ESP2000

The new KV2 ESP2000 two channel power amplifier incorporates KV2's SLA design principles, delivering very low distortion characteristics, even under extreme operation. Equally at home as a reference amplifier in a high-end recording studio or driving a large-scale live audio system, the ESP2000 is a sonically superb unit. Improving on the common Class A design, this superb Class H amplifier is built like a tank with an easy to clean filter system. The ESP2000 incorporates the same cooling system as other KV2 amplifiers where only the heat sinks are exposed protecting the internal electronics. Robust enough for the harshest touring or installation environments the ESP2000 will provide years of trouble-free performance, delivering absolutely pristine audio.

Input Sensitivity 1.55V balanced
Frequency Response 3Hz - 40kHz
Total Harmonic Distortion
20Hz - 20kHz for 1W <0.005%
Total Harmonic Distortion
at 1kHz and 1dB below clipping <0.01%
Signal to Noise Ratio >115dB
Max. Output Power
8 Ohm (per channel) 340W - 4 Ohm (per channel) 600W - 2 Ohm (per channel) 1000W - 8 Ohm (bridged) 1100W - 4 Ohm (bridged) 1800W
H/W/D
89mm (3.5") 2RU x 483mm (19.0") x 495mm (19.5")
Weight 16kg (35.2 lbs)

ESP4000

The ESP 4000 is an ultra high definition 4-channel rack mountable power Amplifier. All the ESP4000 electronic circuit boards are first mounted on individual aluminum heat sinks, then on a secondary, internally sealed chassis that leaves only the heat sink fins exposed. Two shock mounted fans move air across the fins but never directly across the electronic components. This minimises maintenance cycles and improve reliability. Two separate power supplies ensure continuous delivery of full power. The ESP 4000 is housed in a professional 4U road rugged steel metal case with aluminum handles and evenly distributed weight.

Input Sensitivity 1.55V balanced
Frequency Response 3Hz - 40kHz
Total Harmonic Distortion
20Hz - 20kHz for 1W <0.005%
Total Harmonic Distortion
at 1kHz and 1dB below clipping <0.01%
Signal to Noise Ratio >115dB
Max. Output Power
8 Ohm (per channel) 340W - 4 Ohm (per channel) 600W - 2 Ohm (per channel) 1000W - 8 Ohm (bridged) 1100W - 4 Ohm (bridged) 1800W
H/W/D
178mm (7.0") 4RU x 483mm (19.0") x 495mm (19.5")
Weight 40kg (88.2 lbs)

EX ACTIVE SPEAKER SYSTEMS

There are lots of powered speakers in the world, but at KV2 Audio, building an active speaker goes beyond bolting a Class D amplifier to the back of a box. We work towards creating the best technology in each distinct discipline, then integrate each step into a powerful package within the context of a truly remarkable audio system.

The EX range represents the pinnacle in small format active technology available in the world today. The market has been flooded with active speakers since their popularity flourished in the late nineties. It was indeed KV2's founder, George Krampera who led this revolution with the development of the ART range at RCF. George however soon realized the true secret to active loudspeaker design was not just building powered speakers, but developing amplifiers that are perfectly matched to the transducers so every component is optimized.

Precisely selected amplifier topologies have been designed to deliver power through a unique LF amplifier for perfect control of the woofer, working alongside an HF amplifier implementing a discreet, classic class AB push-pull topology. An Intermodulation Distortion (IMD) restricting transformer reduces non-harmonic distortion on the amplifier output.

The primary challenge in building a two-way speaker system is that the crossover point is usually in the middle of critical vocal frequencies. Getting the woofer to operate seamlessly up to and slightly beyond the crossover frequency is the reason why most two-way systems simply lack resolution and depth.

KV2 Audio has implemented a Trans-Coil technology that eliminates voice coil inductance, resulting in a flat impedance response above the resonance point. This technology linearises acoustic and electrical phase response, reduces harmonic distortion and increases power transfer and transducer speed. The speaker now behaves like a woofer at lower frequencies and like a mid-range at higher frequencies allowing a seamless transition at the crossover frequency.

For the high frequencies our nitride titanium compression drivers, using technology developed for Formula One racing, provide the lowest distortion in their class with an exceptionally smooth, accurate, open and extended high frequency response. Complete on-board signal management is provided including equalization, phase adjustment, crossover filters, thermal and overdrive protection. The EX6, EX26, EX10 and EX12 can be used as full range solutions or with the EX1.2, EX1.8 and EX2.5 Active Subwoofers.

Our EX Subwoofers each use a version of our proprietary high efficiency, high current switching amplifiers delivering efficiency of over 90%. Both provide incredibly high quality bass performance and total flexibility from a standalone, small footprint cabinet. The perfect match with any of our full range cabinets or integrate perfectly into any third party passive or active speaker system.

A compact, punchy combination with incredible clarity and output. The EX12 with EX1.8 Subwoofer.

EX ACTIVE SPEAKERS

Durable nylon covers are available to protect all EX speakers.

For mobile applications where boxes are exposed to the rigours of the road, the EX10 and EX12 are now available with high strength metal grille.

CASE STUDY

Cee Lo Green's EX Mobile System

Grammy Award winning American singer-songwriter, rapper, record producer and actor, Cee Lo Green, travels everywhere with his KV2 Audio EX System. The EX10/EX2.2 system is used for writing, playback and recording. The system travels with Cee Lo in custom cases so he can remain prolific on the road.

"Cee Lo likes to listen LOUD!," explained Graham Marsh, Cee Lo's Music Director. "I am also using the KV2s to reference my low end when mixing. If I am recording some players in the control room, I will use the KV's for playback as well. Not super loud, but they tend to like to hear themselves big. As a musician myself, that is my preference as well. We have a completely mobile/modular writing/recording/ production/mixing rig."

EX6

The EX6 is a very high quality compact speaker system producing a 2-way full range solution, which defies its size. With amazing clarity for speech and musical reproduction, the EX6 is perfect for discreet installations or audio visual presentations where sound quality is paramount but size also matters. The EX6 features state of the art components including NVPD compression driver, 6" woofer and complete on-board control with electronic crossovers, phase alignment, equalization and speaker protection integrated into the EX6's amplifier module.

Frequency Response 68Hz - 20kHz (-3dB)
SPL 117dB Cont, 120dB Peak
Dispersion 100° H x 100° V
HF Amp - 20 Watts
LF Amp - 180 Watts
Dimensions
H/W/D 390mm (15.35") x 220mm (8.66") x 270mm (10.63")
Net Weight 12kg (26.4 lbs)

EX26

The EX26 is a unique cabinet that provides superb vocal intelligibility and high quality musical reproduction. Its 100 x 100 degree horn provides for wide, even coverage making it ideal for audio visual presentations, churches, meeting rooms and various other applications where high quality speech reproduction is required. The EX26 makes an ideal under balcony fill speaker when used in a horizontal position.

Frequency Response 87Hz - 20kHz (-3dB)
SPL 124dB Cont, 127dB Peak
Dispersion 100° H x 100° V
HF Amp - 20 Watts
LF Amp - 350 Watts
Dimensions
H/W/D 570mm (22.4") x 220mm (8.66") x 270mm(10.63")
Weight 16kg (35.2lbs)

EX10

The EX10 is a very compact 2-way, high-output, full-range active speaker system. Despite its 10" woofer and remarkably small footprint it successfully takes on many larger 12"models and is favored by audio visual and rental companies all over the world for its sheer quality and tremendous output. On-board electronics ensure fast, easy set up and complete control with electronic crossovers, phase alignment, equalization and speaker protection integrated into the EX10's amplifier module.

Frequency Response 65Hz - 20kHz (-3dB)
SPL 126dB Cont, 129dB Peak
Dispersion 100° H x 80° V
HF Amp - 50 Watts
LF Amp - 450 Watts
Dimensions
H/W/D 514mm (20.23") x 310mm (12.20") x 325mm (12.79")
Net Weight 22kg (48.4 lbs)

EX12

The EX12 further builds on the success of the EX6 and EX10 by implementing the revolutionary 3" NVPD large format compression driver found in our flagship VHD range of products. This makes for one of the most perfectly balanced and accurate, compact, 2-way active boxes available on the market today. Complete on-board control courtesy of electronic crossovers, phase alignment, equalization and speaker protection are all integrated into the EX12's amplifier module.

Frequency Response 55Hz - 22kHz (-3dB)
SPL 127dB Cont, 130dB Peak
Dispersion 80° H x 40° V
HF Amp - 50 Watts
LF Amp - 450 Watts
Dimensions
H/W/D 596mm (23.46") x 368mm (14.48") x 368mm (14.48")
Net Weight 29kg (63.8 lbs)

All EX speakers have multiple M10 fly-points for flexible bracket, rigging, and installation options.

EX ACTIVE SPEAKERS

EX1.2

The EX1.2 is an incredibly compact single 12" active subwoofer system. As with all KV2 Audio products, the EX1.2 boasts output that belies its compact, low profile cabinet size. This low profile design makes it ideal for discreet installations as it can be installed both horizontally or vertically. Featuring KV2 Audio's switching amplifier technology, the EX1.2 delivers tight, fast, controlled bass response at very high output levels from an impressively small cabinet footprint.

Frequency Response 38Hz - 125Hz (-3dB)
SPL 124dB Cont, 127dB Peak
Power Rating 500 Watts
Dimensions
H/W/D 370mm (14.57") x 800mm (31.49") x 400mm (15.75")
Net Weight 32kg (70.5 lbs)

EX2.2

The EX2.2 is a double 12", compact, active subwoofer system. On-board electronics include a stereo crossover with high bass outputs and full overdrive protection. Featuring KV2 Audio's switching amplifier technology, precision manufactured woofer designs and a high efficiency, twin chamber acoustic design, the EX2.2 delivers tight, fast, controlled bass response at very high output levels from a small cabinet footprint.

Frequency Response 45Hz - 125Hz (-3dB)
SPL 130dB Cont, 133dB Peak
Power Rating 1,000 Watts
Dimensions
H/W/D 471mm (18.54") x 594mm (23.38") x 615mm (24.21")
Net Weight 49kg (107.8lbs)

EX1.8

The EX1.8 is a high output single 18" subwoofer housing a revolutionary VHD technology neodymium woofer. The EX1.8 features an impressive 1000 watts of power courtesy of KV2 Audio's switching amplifier technology and provides a very firm foundation on which to build a powerful EX system or as a stand alone subwoofer for any existing system.

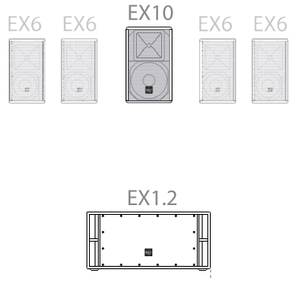
Frequency Response 30Hz - 125Hz (-3dB)
SPL 131dB Cont, 134dB Peak
Power Rating 1,000 Watts
Dimensions
H/W/D 602mm (23.72") x 700mm (27.56") x 750mm (29.5")
Net Weight 65kg (143.3 lbs)

EX2.5MkII

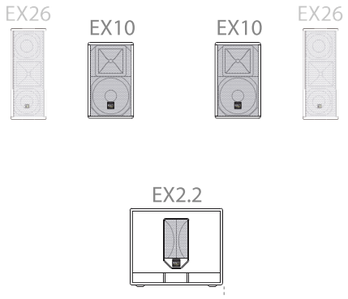
The EX2.5MkII is a double 15" subwoofer and the 'active' brother of the ES2.6 passive bass module. It provides real depth and power where high bass output is required. The product uses the same low frequency amplifier found inside the EPAK 2500/2500R and features in-built stereo crossovers, high pass outputs, and full overdrive protection. It also features a new speaker level output on an EP4 connector to drive one additional passive ES2.6 subwoofer from its own internal amplifier. (Not to be used with a passive ES2.5)

Frequency Response 38Hz - 125Hz (-3dB)
SPL 134dB Cont, 137dB Peak
Power Rating 1,600 Watts
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 750mm (29.52")
Net Weight 90kg (198lbs)

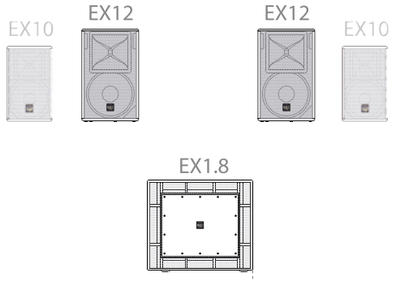
EX1.2 + 1x EX10 or 4x EX6



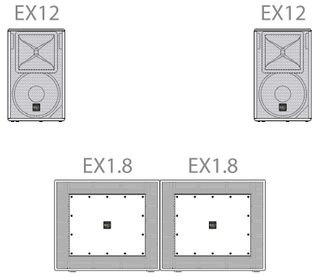
EX2.2 + 2x EX10 or 2x EX26



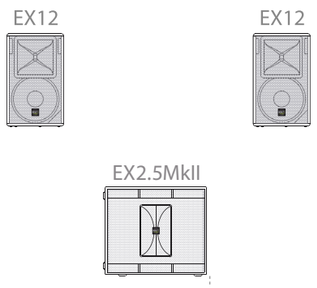
EX1.8 + 2x EX10 or 2x EX12



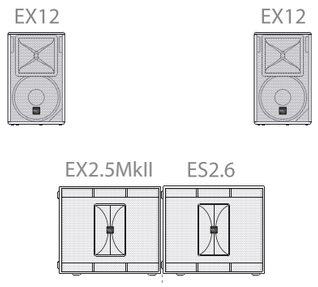
2x EX1.8 + 2x EX12



1x EX2.5MkII + 2x EX12



1x EX2.5MkII with ES2.6 + 2x EX12



ES Active Driven Speaker Systems

ESR Full Range Speaker Systems

SL Slimline Speaker Series

THE ES SYSTEM

As the first product developed by KV2 and continually refined over the last decade, the ES Series has become renowned for its unique and versatile capabilities. Its performance has amazed audio professionals around the globe, staggered by the output and clarity of such a compact yet powerful system. The ES Series is an embodiment of KV2 Audio's design philosophies.

A truly scalable system, it is compact and modular with all the electronics and amplification housed in separate, portable units – the EPAK 2500 and 2500R. Placing the active electronics package outboard results in a lighter, easier to handle system with much more flexibility. Its compact size reduces transport costs and either ground stacked or flown, it is quick and easy to setup, cutting labour costs dramatically. The EPAK 2500/R control unit incorporates four amplifiers. Electronic crossover filters, time alignment, equalization, system protection, and level controls are all done onboard, utilizing industry leading 20MHz digital conversion where required.

The ES 1.0 Mid/High speaker and the EPAK 2500/R make up the core of the ES system. Each ES 1.0 requires an EPAK 2500/R to power it and the three way cabinet includes a 12" horn loaded mid bass driver, 6" horn loaded mid speaker, and 1.75 inch Titanium compression driver. You can rotate the ES 1.0 horn assembly in order to run the system in a vertical or horizontal configuration, or couple two ES 1.0 cabinets together horizontally to create a very powerful, long throw ES solution.

As well as driving the three way ES 1.0 cabinet, a fourth amplifier channel in the EPAK 2500/R control unit is dedicated to powering a choice of ES series subwoofers. The ES 1.5 is a lightweight single 15" enclosure, the ES 1.8 a horn reflex, single 18" subwoofer and the ES 2.5 / 2.6 a double 15", twin asymmetrical design, available in either four ohm (ES2.5) or eight ohm (ES2.6) versions.

Simple to set up and use, the ES System has been designed for plug and play operation. It would take a dozen or more outboard components, sophisticated measuring equipment and a degree in acoustic engineering to achieve the optimization we've built into the EPAK 2500/R. A multi position switch allows you to select from various subwoofer combinations, you decide which plug and play bass modules you want to use, select and go.

The meticulously designed control electronics inside the EPAK 2500/R constantly monitor and preserve the relationship between each amplifier and component, delivering exactly the right amount and type of power throughout the system. When you're able to perfectly match an amplifier with a transducer, you start to unlock incredible performance that is impossible to achieve with passive systems. Total system reliability increases dramatically as does sound quality. With this kind of precision and efficiency built in, you'll be amazed at the quality, depth, level and resolution produced by an ES system.

CASE STUDY

Glad Tidings Church, Victoria, Canada

Glad Tidings Church in beautiful Victoria, British Columbia installed a double ES system, the ideal choice for congregations up to 3,000 people. Technical Director at Glad Tidings, Graham Caesar said the choice of a KV2 system was conclusive.

"When comparing KV2 to any other system, the difference in performance is immediately apparent and is not subtle," claimed Graham. "We are getting more than enough crystal-clear SPL for our 1200 seat sanctuary from a pair of ES1.0 mid- high cabinets and a pair of subwoofers (ES2.5 and ES1.8) per side. It's the best decision we could have made.".

Easy to Fly - The ES System can be quickly flown in a variety of different configurations to suit a wide range of applications. Simply clip the pins into place through the fly bars on each side of the cabinets and lift away, fast, easy and safe.

The ES System takes up far less space both in the venue and the back of the truck. Easily installed magnetic wheel boards can be attached to all subwoofers, along with durable custom made covers.

ES1.0

The ES1.0 is a 3-way, very high output, active-driven, mid/high/mid-bass module designed as part of a complete ES system driven by the EPAK 2500/R control and amplification unit. The ES1.0 is compact, lightweight and can be combined with a variety of ES series subwoofers. As a single system it offers one of the highest quality portable sound reinforcement solutions on the market today. When coupled with another ES1.0 (running two horizontally per side) it becomes an even more powerful tool, providing peak SPL of 139dB and a throw of up to 40 metres for applications of up to 3000 people.

Frequency Response 130Hz - 20kHz (-3dB)
Crossover Points 130Hz, 500Hz, 2.5kHz
SPL 131dB Cont, 134dB Peak
Dispersion 90° H x 40° V
Dimensions
H/W/D 700mm (27.55") x 450mm (17.71") x 450mm (17.71")
Net Weight 34kg (74lbs)

ES1.5

The ES1.5 is a single 15", extremely compact, high output subwoofer weighing just 28kg (61.6lbs) designed as part of the ES Series speaker system. Used singularly or in multiples of up to three, alongside a single ES1.0 mid high cabinet, the system is powered by the EPAK2500/R Amplifier ensuring fast, easy set up with perfect balance and complete control. The EPAK 2500/R also allows up to two ES1.5's to be used alongside an ES1.8, where the ES1.5 can either be flown alongside an ES1.0 or ground stacked with the ES1.8.

Frequency Response 40Hz - 130Hz (-3dB)
Crossover Points 130Hz
SPL 127dB Cont, 130dB Peak
Dimensions
H/W/D 700mm (27.55") x 450mm (17.71") x 450mm (17.71")
Net Weight 28kg (61.6lbs)

ES1.8

The ES1.8 is a high-output, reflex horn loaded, single 18" subwoofer designed as a part of the ES Series sound reinforcement system. It provides tight, up front, low frequency extension with authority, attack and definition. Designed to be used in pairs, or with an ES1.5, the ES1.8 can achieve high output levels consistently and safely. Alongside the ES1.0 and EPAK 2500/R, ES1.8 offers a very firm foundation on which to build a powerful ES system.

Frequency Response 37Hz - 130Hz (-3dB)
Crossover Points 130Hz
SPL 131dB Cont, 134dB Peak
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 750mm (29.52")
Net Weight 52kg (114.4lbs)

ES2.5/ES2.6

The ES2.5 (4 ohms) and ES2.6 (8 ohms) are double 15", high output subwoofers designed for the ES Series speaker system. Using new concepts in twin asymmetrical acoustic chambers they deliver very high speaker loading and intense output from a relatively small cabinet footprint. Reproducing low frequencies with very high transient content they are ideal for use in live applications or as part of a five way ES system utilising VHD1.21 and 2.21 subwoofers. Together with the ES1.0 and EPAK 2500/R, the ES2.5/2.6 delivers the highest dynamic range of any other comparable system providing new levels of clarity, depth and resolution.

Frequency Response
38Hz - 130Hz (-3dB)
Crossover Points 130Hz
SPL
134dB Cont (per ES 2.5 unit) 137dB peak 137dB Cont 140dB peak (when using 2 units of ES 2.6).
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 750mm (29.52")
Net Weight 69kg (151.8lbs)

EPAK2500

The EPAK 2500 is a four-way, active control and amplification unit specifically designed for the ES Series modular loudspeaker system. It not only houses all signal processing and four individual amplifiers but also controls the allocation of power depending on the number of bass modules employed. The EPAK 2500 is enclosed in a road-rugged case with side handles and a built in cable storage compartment. Easily transported on a trolley this unique amplification system has its electronics mounted on an independent suspension system that isolates it from the shocks and impacts typically encountered on the road. A large aluminum heat sink provides passive cooling along with two demand-sensitive fans for added reliability.

Frequency Response 20Hz - 30kHz (-3dB)
HF Amp 100W Distortion <0.05%
MF Amp 200W Distortion <0.05%
MBF Amp 600W Distortion <0.05%
BF Amp 1600W Distortion <0.05%
Internal Crossover Points 130Hz, 500Hz, 2.5kHz
Input sensitivity 1.0 Volt RMS
Speaker Outs EP6 (ES1.0) EP4 (Sub)
Rec Amperage 20A 115V - 10A 230V 10A 250V
Dimensions
H/W/D 700mm (27.55") x 450mm (17.71") x 290mm (11.41")
Net Weight 32kg (70.4lbs)

EPAK 2500 is perfect for extreme conditions where heat, dust and vibration are common. With its massive heatsink, shock-mounts and ready made roadcase it is easily transported on a hand trolley.

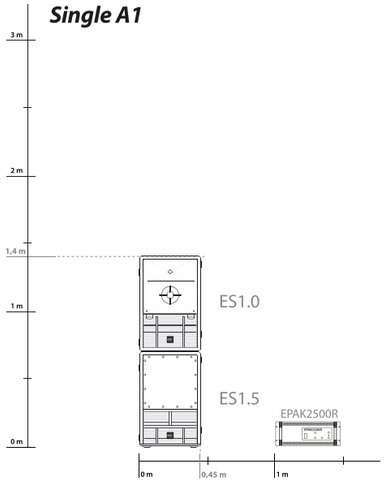
EPAK2500R

Rack mount version of our popular EPAK2500 four-way, active control and amplification unit specifically designed for the ES Series modular loudspeaker system. Two shock mounted fans move air across the heatsinks which seal and protect the electronic components. This minimizes maintenance cycles and improves the components lifespan and reliability. Both the EPAK2500 and EPAK2500R utilize KV2's industry leading 20 MHz sampling for on board time alignment and phase correction of all components in the ES system.

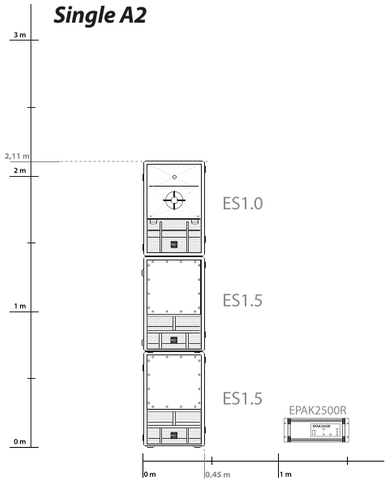
Frequency Response 20Hz - 30kHz (-3dB)
HF Amp 100W Distortion <0.05%
MF Amp 200W Distortion <0.05%
MBF Amp 600W Distortion <0.05%
BF Amp 1600W Distortion <0.05%
Internal Crossover Points 130Hz, 500Hz, 2.5kHz
Input sensitivity 1.0 Volt RMS
Speaker Outs EP6 (ES1.0) EP4 (Sub)
Rec Amperage 20A 115V - 10A 230V 10A 250V
Dimensions
H/W/D 117.8mm (7") x 483mm (19") x 495mm (19.5")
Net Weight 30kg (66lbs)

ES SERIES

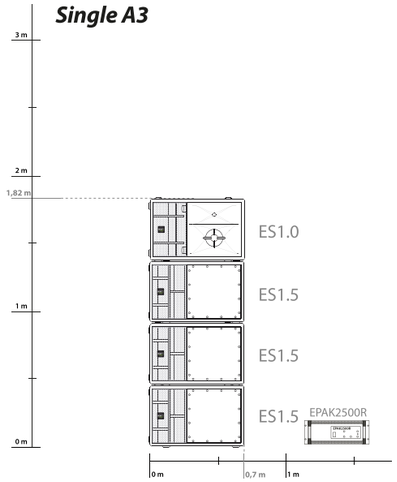
Single A1



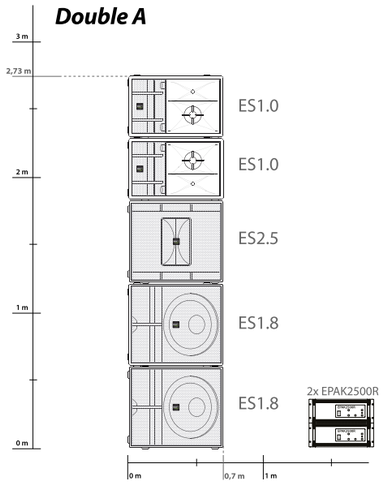
Single A2



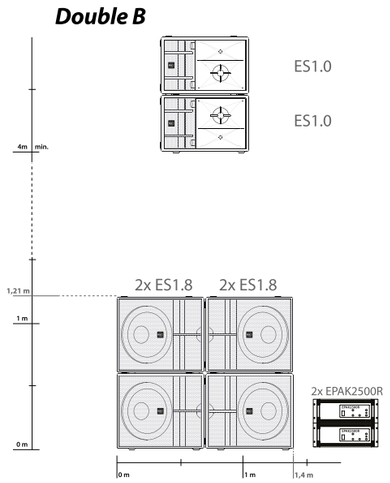
Single A3



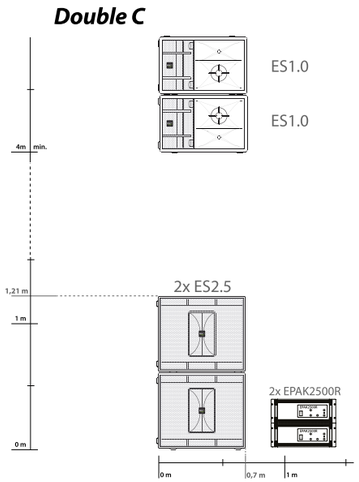
Double A



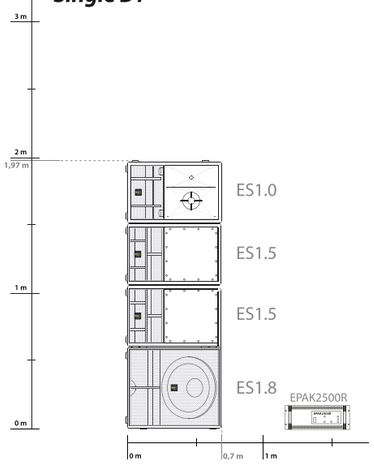
Double B



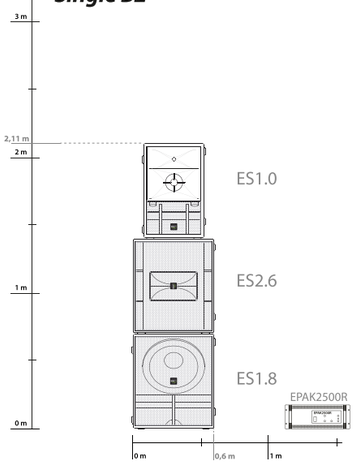
Double C



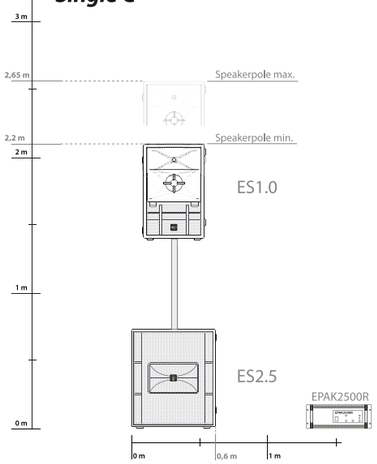
Single B1



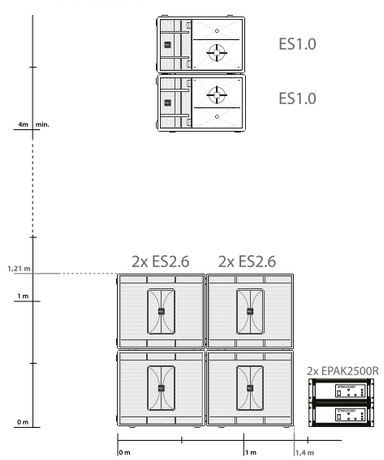
Single B2



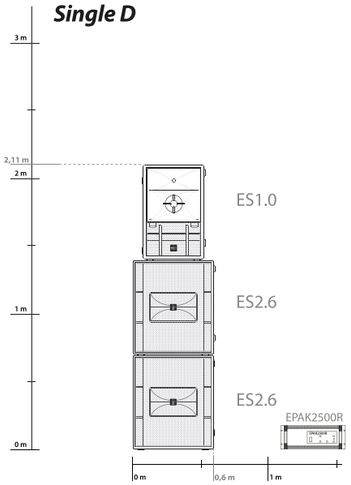
Single C



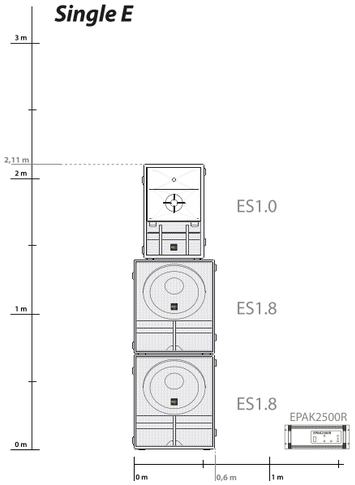
Double D



Single D



Single E



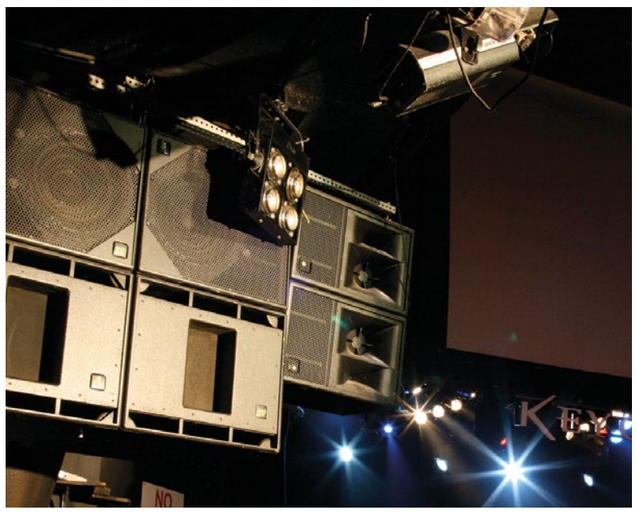
Each diagram shows the right hand side of a stereo system.

These configurations would be suitable for crowds of up to 1,000 people depending on the type of program and venue.

The type of sub bass system used is relative to the program material and venue. Most configurations shown can be flown or stacked.

For more information on flying see the relevant document under downloads in the product section of our website.

These configurations would be suitable for crowds of up to 3,000 people depending on the type of program and venue.



CASE STUDY

Key Club, Los Angeles

Way back in 2005, as KV2 was just starting to really become noticed around the world, the iconic Key Club off Sunset Boulevard installed a double ES System. This historic venue formally known as Gazzarri's has featured the cream of US talent over the last 40 years, so it was an honour for us to have a KV2 system installed at the venue.

This system is still going strong today after enduring night after night of hard work, paying testament to the reliability and build quality of KV2 equipment. Of course the system's reliability is only matched by it's sound quality as described in this quote from LA Nightlife.com

"The sound system is phenomenal, one of the best in Los Angeles, and it's clear everyone at The Key Club, from the owner to the manager to the sound guys to the bartenders, just loves music. The Key Club keeps it real like no other club in LA".

ESR FULL RANGE WIDE DISPERSION ACTIVE SPEAKER SYSTEM

The ESR range has been developed for a particular niche in the market where an all in one box is needed to give clear detailed reproduction over a wide area. The ESR212 and 215 are three way full range enclosures with wide dispersion characteristics. They can be used vertically for theatre, church or cultural centre type installations or horizontally mounted to give excellent coverage over a tiered seating area for stadium or grandstand type applications.

Similar to our popular ES range, the ESR cabinets are fully active and driven by a proprietary amplifier, which delivers equalized, and time aligned accurate signal to each of the components. Two ESR cabinets can be driven by a single ESR3000 High Definition Stereo Amplifier, which houses all signal processing and amplification, as well as providing control for two different external subwoofer cabinet configurations if required.

In situations where extended bass response is not needed but full range high definition audio reproduction with extremely good coverage is required, the ESR Range offers an ideal solution. Economies of scale are achieved by the requirement of only one ESR amplifier to run a three way active stereo system where other systems would require processors and multiple amplifiers to achieve a similar configuration.

CASE STUDY

SI Centrum Palladium, Stuttgart, Germany

As word began to spread about KV2 installations in the theatre market and the outstanding results being achieved, Andreas Hammerich and Michel Weber, Theatrical Sound coordinators for large German Production Company Stage Entertainment, were very impressed by the KV2 demos they heard at the Pro Light and Sound tradeshow in Frankfurt. Andreas and Michel immediately began discussions with renowned UK Theatre Sound designer Rick Clarke and award wining US Sound designers, John Shivers and David Patridge, about the possibility of implementing KV2 Audio products into their forthcoming shows.

Nestled firmly in the modern SI Centrum complex, the Palladium, an 1800 plus seat venue, sits opposite the equally grand Apollo Andreas and Michel had been really astounded by the ability of KV2 products to capture and deliver the stage presence, atmosphere and mood of the show directly into the auditorium. Andy Austin-Brown, KV2 Audio's technical projects director, helped them to design a system that would achieve exactly that.

Utilizing KV2 Audio's ESR215 full range theatre solution, enhanced by ES2.6 subwoofers and EX12 center and stage infills, Andy also implemented multiple EX6 enclosures for stage monitoring and front fills.

"The results of our cooperation are impressive", says Andreas Hammerich. "We have been receiving just positive feedback from the official opening night and I'd like to thank all concerned".

ESR212

The ESR212 is a full-range 3-way loudspeaker system designed for use with the ESR3000 tri-amplified stereo electronic control pack. The ESR212 loudspeaker system features state of the art transducer design. Comprising of two 12" woofers, a 6" midrange driver and a 1" compression driver, the ESR212 delivers full range high definition audio over large spaces. It has a dispersion of 90 degrees by 40 degrees and can be installed either vertically or horizontally. The ESR212 has various M10 fly points as well as custom designed fly ware and brackets.

Frequency Response 38Hz - 22kHz (-3dB)
Crossover Points 500Hz, 2.5kHz
SPL 128dB Cont, 131dB Peak
Dispersion 90° H x 40° V
Dimensions
H/W/D 1126mm (44.33") x 447mm (17.6") x 444mm (17.48")
Net Weight 42kg (92.6lbs)

ESR215

The ESR215 is a large scale full-range 3-way loudspeaker system with a wide horizontal dispersion of 110 degrees. Designed for use with the ESR3000 tri-amplified stereo electronic control pack, the ESR 215 loudspeaker system features two 15" woofers, an 8" mid-range driver and the same large scale NPVD 3" compression driver found in KV2 Audio's VHD top boxes. With a wide and smooth frequency response the ESR215 is ideal for theatre or stadium applications. Like the ESR212 it incorporates a number of M10 fly points and various brackets and fly ware are also available.

Frequency Response 35Hz - 22kHz (-3dB)
Crossover Points 500Hz, 2.5kHz
SPL 132dB Cont, 135dB Peak
Dispersion 110° H x 40° V
Dimensions
H/W/D 1515mm (59.65") x 470mm (18.5") x 500mm (19.69")
Net Weight 68kg (149.91lbs)

ESR3000 & ESR2800

The ESR3000 and ESR2800 Amplifiers are three-way, active control and amplification systems specially designed for the KV2 Audio ESR full range series loudspeaker systems. It houses all signal processing and amplification as well as providing control for two different external subwoofer cabinet configurations to run subs if needed utilizing an external amplifier. The ESR3000 powers the ESR215 and the ESR2800 the ESR212. Each unit incorporates six amplifiers represented by two 100-watt, Class AB, push pull, low intermodulation amplifier for high frequencies, two 200-watt, Class AB, push pull, low intermodulation design for Mids and two a 1000-watt, high-efficiency, current-enhancing switch mode technology amplifier for bass. The ESR3000 and ESR2800 stereo configuration powers two ESR cabinets accordingly.

Frequency Response 20Hz - 30kHz (-3dB)
HF Amp 100W Distortion <0.02%
MF Amp 200W Distortion <0.02%
BF Amp 1000W Distortion <0.02%
Internal Crossover Points 500Hz, 2.5kHz
Input sensitivity 1.0 Volt RMS
Speaker Outs EP6
Rec Amperage 2 x 20A 115V - 10A
2 x 230V - 10A 2x 250V - 10A
Dimensions
H/W/D 117.8mm (7") x 483mm (19") x 495mm (19.5")
Net Weight 30kg (66lbs)

SL SLIMLINE WIDE DISPERSION SPEAKER SYSTEM

The new SL412 and SL2.15 speakers incorporate an eye catching slim stylish cabinet design. Designed to integrate either externally through simple wall mounting, suspension, ground stacking, or internal wall fixing, these units can be designed and supplied with custom colors, grill templates and logos, offering a flexible and true designer integrated product.
A single yoke assembly with multiple fixed angle and fixing locations, provides a quick and cost effective solution for simple suspension options.

Using KV2 VHD technology, the SL412 loudspeaker utilizes 4 x 12" low mid-range components and the proven and highly respected horn assembly from the VHD1.0, with a single 8" mid-range and 3" large format NPVD compression driver. This mid-high horn has an extremely coherent-wide horizontal dispersion of over 110 degrees while the purpose designed 4 x 12" configuration dramatically reduces the most common problem of immediate reflections within the 300 - 800Hz range usually associated with wide dispersion loudspeakers.

The end result is full and wide sound propagation exactly where it is required. While the SL412 can be utilized with any of KV2's wide range of sub woofer systems depending on the actual application, the accompanying SL2.15 utilizes the same slim line design to allow for an aesthetically pleasing and acoustically punchy system that can virtually disappear against a wall. The SL2.15 is a 2 x 15" specially designed to output maximum bass response from a it's shallow cabinet design. To achieve deep low bass extension it is recommended to use the SL 2.15 with KV2 18" or 21" subwoofers.

Less than 300mm deep, the SL Series can be installed against a wall (or in it) dramatically reducing the venue floorspace required.

The Ultimate Club System.

SL412

The SL412 is a slim, discreetly profiled cabinet with wide dispersion at high frequencies. The four twelve inch speaker configuration provides controlled low-mid focus to reduce indoor reflection. Its slim design allows for simple wall mounting, suspension, ground stacking, or internal wall fixing. The 412 can be designed and supplied with custom colours, grille templates and logos, offering a flexible and true designer integration product. A single horizontal yoke assembly with multiple fixed angle and fixing locations, provides a quick and cost effective solution for simple suspension options.

Frequency Response 70Hz - 22kHz (-3dB)
Crossover Points 100Hz, 400Hz, 2.2kHz
SPL 134dB Cont, 137dB Peak
Dispersion 110° H x 40° V
Dimensions
H/W/D 670mm (26.37") x 1080mm (42.52") x 300mm (11.81")
Net Weight 60kg (132.28lbs)

SL2.15

The SL2.15 is a double15" subwoofer based on direct radiation system with augmented bass reflex. Built to integrate aesthetically with the SL412 the SL2.15 produces deep bass from its slim cabinet design. Bass response is enhanced by coupling when the SL2.15 is used against or in a wall, providing optimum output for it's small footprint. It also combines beautifully with the Ultra Low Frequency VHD1.21 and 2.21 subwoofers as part of a five way active system.

Frequency Response 40Hz - 400Hz (-3dB)
Crossover Points 130Hz
SPL 129dB Cont, 132dB Peak
Dimensions
H/W/D 960mm (37.8") x 1080mm (42.52") x 350mm (13.78")
Net Weight 61kg (134.5lbs)

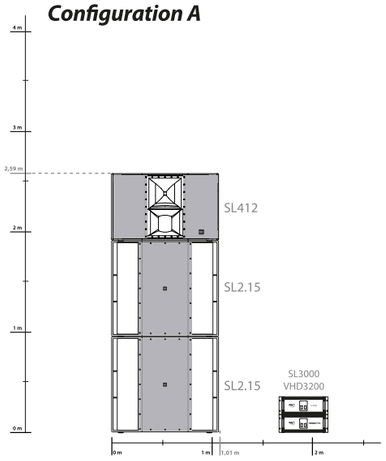
SL3000

The SL3000 Stereo Amplifier drives and controls one SL412 per channel and follows the typical KV2 holistic approach of matching components with high quality electronics for true direct performance. The SL3000 utilises a 1000-watt high efficiency – current enhancing, switch – mode technology, with linear active filter design for the low mid-section, a 200-watt class AB push pull low intermodulation design amplifier for the mid-range and a similar 100-watt design for the high frequencies. All time alignment, phase correction and equalisation is provided onboard.

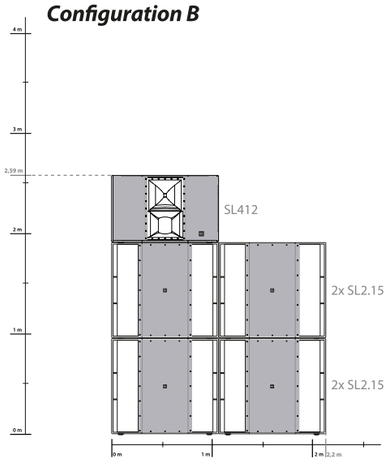
Frequency Response 20Hz - 30kHz (-3dB)
HF Amp 100W Distortion <0.02%
MF Amp 200W Distortion <0.02%
BF Amp 1000W Distortion <0.02%
Internal Crossover Points 400Hz, 2.5kHz
Input sensitivity 1.0 Volt RMS
Speaker Outs EP6
Rec Amperage 2 x 20A 115V 2 x 10A 230V 2 x 10A 250V
Dimensions
H/W/D 177.8mm (7.0") x 483mm (19.0") x 495mm (19.5")
Net Weight 39.2kg (86.62lbs)

Recommended SL Series Configurations

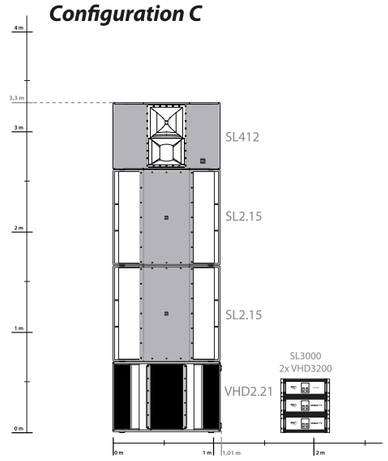
Configuration A



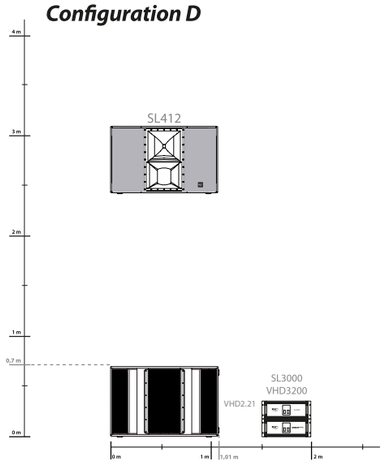
Configuration B



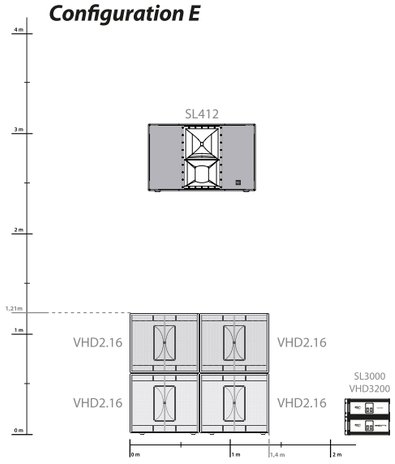
Configuration C



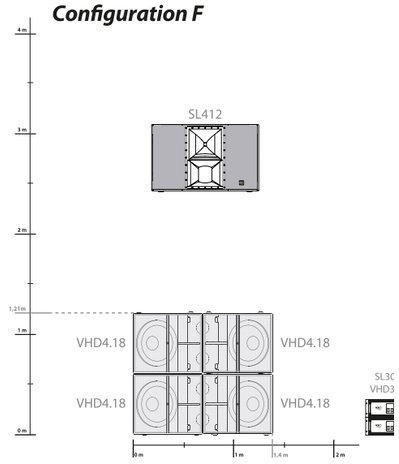
Configuration D



Configuration E



Configuration F

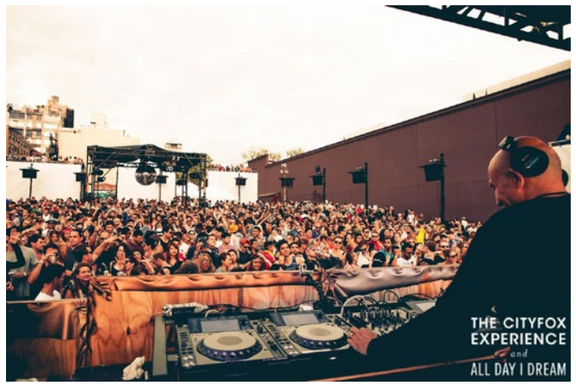


CASE STUDY

The Cityfox Experience, New York City, USA

New York based Reynard Productions have been supplying a 20 POINT SL412 System supplemented with VHD2.21 subwoofers for events produced by CITYFOX which have been playing in custom created venues both indoors and outdoors around New York.

Using a Sonic Emotion 3D Processor, Cityfox has been able to create a unique new dance music audio experience.. With the Sonic Wave 3D processor everyone perceives the perfect, spatial audio image regardless of their position in the room. The SL412s wide dispersion and speaker configuration has provided amazing results for this new EDM experience. The SL412 continues to turn heads in the night clubs and dance markets across the world.



VHD Large Format Point Source System

VHD LARGE FORMAT POINT SOURCE SYSTEM

The VHD High Performance Touring and Installation system from KV2 Audio has been designed to revolutionize the concert sound market by offering unparalleled quality, power and coverage, with huge cost savings in terms of size, weight, transportation, storage and set up time.

Challenging the popular trend of line array technology, VHD builds on the KV2 Audio philosophy of point source theory, offering drastically reduced distortion levels and a hugely increased dynamic range that takes us to a new level of sound reproduction previously unheard in large-scale audio systems. VHD reduces the amount of elements needed to cover a particular area for large-scale sound reinforcement, thus removing the interference problems created by multiple sources in modern line array systems.
Time alignment and phase correction is done via KV2's new 20MHz digital delay line. Boasting the highest sampling rate of any digital speaker processor available, KV2's on board hybrid signal processing uses the best in analog and digital technology to provide incredible definition and resolution with true dynamic range.

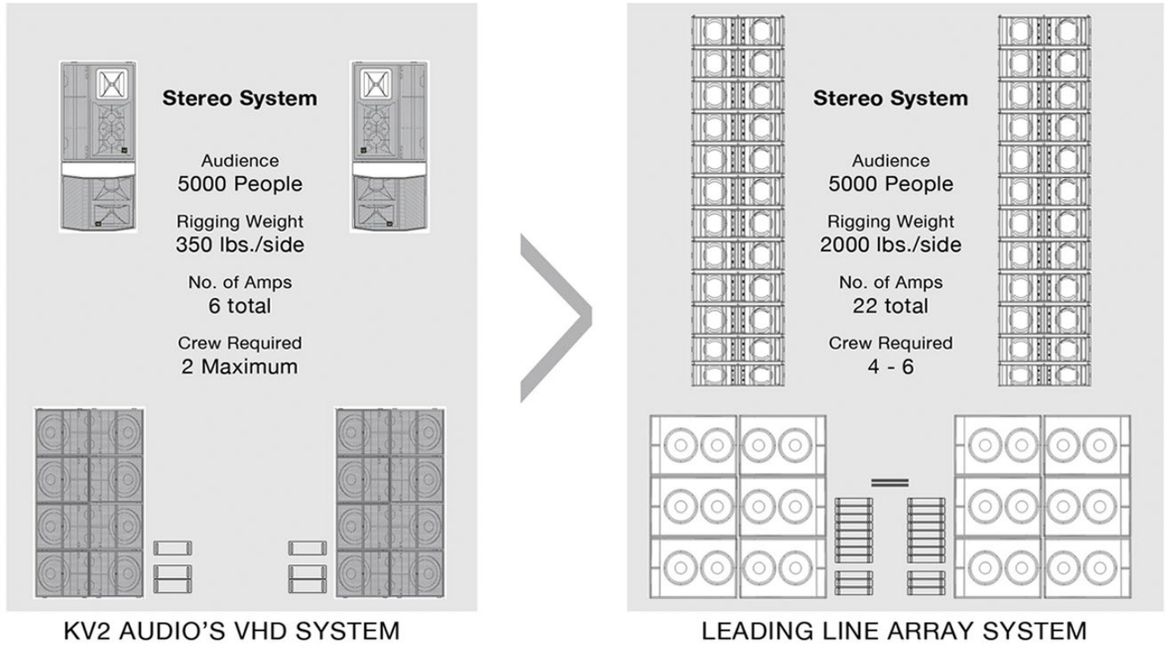
At KV2 we define true dynamic range by the systems ability to produce the low level signals associated with the ambience and timbre of the sound as well as the main higher level signals. The end result is clearer more dynamic sound that will travel considerably further providing high quality audio that is far less effected by air disturbances through crowds, heat and wind.

The VHD 1.0 and VHD 2.0 Mid High cabinets, driven by a VHD 2000 amplifier are at the heart of this solution forming the core of our VHD system. Reinforcing this are the VHD 2.16, VHD 4.18, VHD 1.21 and VHD 2.21, four very different active driven subwoofer systems powered by the VHD 3200 amplifier. All speakers (except the VHD2.21) are based on identical footprints for easy stacking and proprietary flying system provides quick and easy rigging of VHD for suspended use.

The VHD 2.21 Double 21 inch subwoofer has been designed in response to the call for a high output, ultra low frequency subwoofer solution. It is voiced for both live music but also excels in the field of club and dance music. In this situation it works very effectively, operating down to 25Hz, alongside other VHD products, the SL series, the smaller ES range, or as an incredible stand-alone subwoofer that can complement any other manufacturers systems.

The VHD system represents KV2's embodiment of the very best available technology in both the analog and digital worlds. Through industry leading engineering, we have managed to optimise the amplifier and speaker relationship to achieve outstanding output with relatively few components. The result is something special, something not just different, but better. VHD will change your thinking towards current large format system trends.

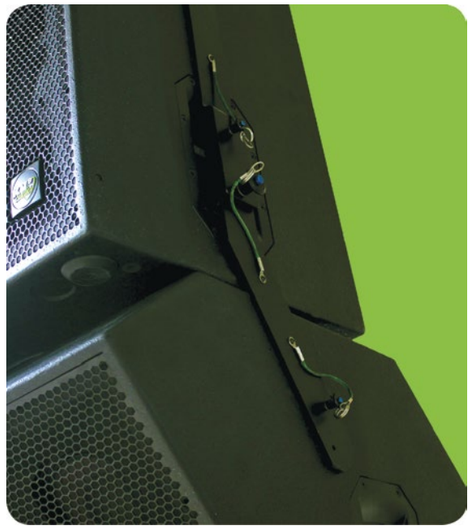
VHD - very high definition audio, the pinnacle of KV2 Audio technology.



KV2 AUDIO'S VHD SYSTEM

LEADING LINE ARRAY SYSTEM

VHD can be flown in minutes with its simple proprietary fly system which locks into the handles on each cabinet. Various hang points and a easily adjusted chain provides tilt as required.



All VHD speakers have optional custom wheel carts and covers for protection and easy handling. Easily stacked for transporting, VHD saves on truck space which saves you money.

VHD2.0

Powerful long throw system for audiences of up to 20,000 people without additional delay systems. A three-way design featuring a 3"compression driver with NVPD treated dome assembly, two horn loaded 8" speakers featuring AIC technology and two horn loaded 12"mid-bass speakers. All speakers employ neodymium magnets to increase force, improve control and lower weight. The VHD2.0 has an 80° horizontal and 40° vertical dispersion and left and right versions of the speaker are offered in order to create larger format vertical arrays of the mid high system.

Frequency Range 100Hz - 22kHz (-3dB)
Required Crossover Points 100Hz, 450Hz, 2.2kHz
SPL 139dB Cont, 142dB Peak
Dispersion 80° H x 40° V
Dimensions
H/W/D 933mm (36.73") x 700mm (27.55") x 495mm (19.48")
Net Weight 70kg (154lbs)

VHD1.0

This mid high enclosure features a single 12" low mid, trans coil woofer, an 8" mid range and the same compression driver as the VHD2.0 on a wide angle 110° horizontal by 40°vertical horn. The rear of the box has been angled for use as a downfill with the VHD2.0. Alternatively as a stand-alone box up to three VHD1.0s can be powered from a single VHD2000 amplifier. Like the VHD2.0, VHD1.0 is available in left and right versions for downfill applications. Designed to be powered as a slave from the VHD2.0 cabinet or directly from the VHD2000 amplifier, all equalization, set up and level are preset providing a plug and play solution for large scale touring and high quality installation.

Frequency Range 100Hz - 22kHz (-3dB)
Required Crossover Points 100Hz, 450Hz, 2.2kHz
SPL 134dB Cont, 137dB Peak
Dispersion 110° H x 40° V
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 495mm (19.48")
Net Weight 45kg (99lbs)

VHD4.18

The VHD4.18 is a quad 18"subwoofer system comprising of four individual loudspeaker cabinets. The objective is to make the system easy to transport and setup. When assembled, the VHD4.18 system becomes a high efficiency neodymium subwoofer system with immense output. The system was designed with very high sensitivity in mind; it provides 110 dB at 1W/1m and a tremendous output of 149dB when running at full power Each cabinet incorporates a large port area that becomes an optimized horn aperture when all four cabinets are stacked together. The quad 18" subwoofer system delivers extreme output, controlled low frequency resolution.

Frequency Range 36Hz - 100Hz (-3dB)
Required Crossover Point 100Hz
SPL 146dB Cont, 149dB Peak (four units working together)
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 750mm (29.52")
Net Weight 52kg (114.4lbs)

VHD2.16

The VHD2.16 double 15" subwoofer is a development of KV2 Audio's ES2.5 design that has become a standard for compact, high output subwoofer devices. Acoustical design is based on extreme loading of asymmetrical chambers delivering extreme output and control. The cabinet is built to the same robust standards as the VHD4.18 and delivers output in excess of 140dB when configured in a pair. It also functions as a very effective upper bass cabinet when used alongside the ultra low frequency VHD1.21 or 2.21 subwoofers as part of a five way active system

Frequency Range 37Hz - 100Hz (-3dB)
Required Crossover Point 100Hz
SPL 140dB Cont, 143dB Peak (two units working together)
Dimensions
H/W/D 600mm (23.62") x 700mm (27.55") x 750mm (29.52")
Net Weight 65kg (143lbs)

VHD1.21

Single 21", Low Q band-pass subwoofer system that adds extension and weight for applications where you want to feel, as well as hear, very high definition audio Working down to 23Hz with an efficiency for two boxes of 102dB, it shares the same footprint as the other VHD subwoofers in a compact lightweight easily transported package. Alongside the VHD2.16 it forms part of a remarkable five way active system.

Frequency Range 29Hz - 60Hz (-3dB)
Required Crossover Point 60Hz
SPL 135dB Cont, 137dB Peak (two units working together)
Dimensions H/W/D 710mm (27.95") x 700mm (27.55") x 750mm (29.52")
Net Weight 60kg (132 lbs)

VHD2.21

Originally designed for Super Live Audio as part of a VHD system, the VHD2.21 is voiced for both Live Music but also excels in the field of Club and Dance Music. In this situation it works very effectively, operating down to 25Hz, alongside other VHD products, the smaller ES range, or as an incredible stand-alone subwoofer that can complement any other manufacturers systems. Unlike traditional 21" subwoofers that are typically designed as more of an effect subwoofer, the VHD2.21 boasts tight, fast delivery and extreme dynamics, even at higher bass frequencies – qualities rarely found in such a large unit. Two 2.21s can be driven by a single VHD3200.

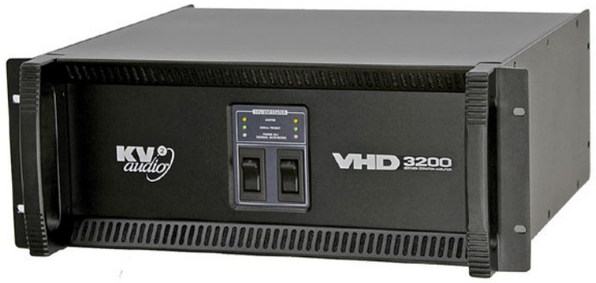
Frequency Response 34Hz - 180Hz (-3dB)
Crossover Point 60Hz - 120Hz (System dependant)
SPL 143dB Cont, 146dB Peak (two units working together)
Dimensions H/W/D 700mm (27.56") x 1080mm (42.52") x 1200mm (47.24")
Net Weight 145kg (319.7lbs)

VHD at the Queen's 80th birthday celebrations, Balmoral Castle

VHD2000

The VHD 2000 is the control and amplification unit for the VHD 2.0. It is a three-way, rack-mounted unit containing high frequency, mid frequency and mid-bass amplifiers. It also houses all processing and control electronics for the subwoofer system. Our own hybrid signal processing utilises the very best technology available from both the analogue and digital worlds, to offer complete audio system control, equalisation, overdrive protection, thermal protection and user adjustable set up parameters. Time alignment and phase correction is done via KV2's new 20MHz digital delay line, boasting the highest sampling rate of any digital speaker processor available. Once the set-up process is completed, the VHD 2000 manages all system functions and assures optimal performance.

Frequency Response 20Hz - 30kHz (-3dB)
HF Amp 300W Distortion <0.05%
MF Amp 1000W Distortion <0.05%
MBF Amp 1600W Distortion <0.05%
Internal Crossover Points 450Hz, 2.2kHz, 100Hz
Input sensitivity 1.0 Volt RMS
Speaker Outs EP6
Rec Amperage 20A 115V - 10A 230V 10A 250V
Dimensions
H/W/D 177.8mm (7.0") x 483mm (19.0") x 495mm (19.5")
Net Weight 30kg (66lbs)

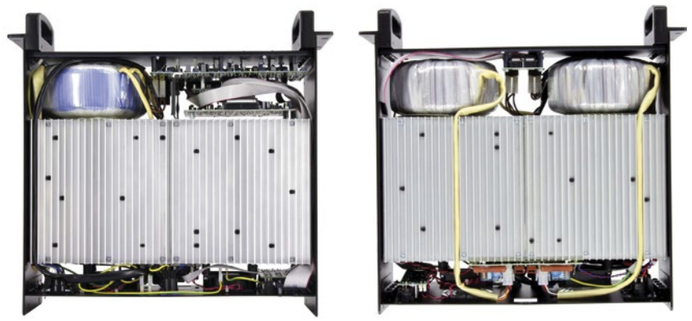


VHD3200

Power for the VHD subwoofers is provided by the VHD 3200 rack mounted subwoofer amplifier. The unit contains two separate 1600W amplifiers with individual power supplies, signal paths and I/O within a single four rack space chassis. The unit acts as a slave for the VHD 2000, which provides audio and control signal, and also functions in the same way for expansion of an ES series system, taking its feed from the external subwoofer output on an EPAK 2500R or an ESR/SL3000 amplifier. The 3200 amplifier can also run in bridge mode for maximum bass output driving a single VHD2.21 sub.

Frequency Response 20Hz - 130Hz (-3dB)
Output Power 3200W across two independent amplifiers
Input sensitivity 1.0 Volt RMS
Speaker Outs EP4
Rec Amperage 2 x 20A 115V 2 x 10A 230V 2 x 10A 250V
Dimensions
H/W/D 177.8mm (7.0") x 483mm (19.0") x 495mm (19.5")
Net Weight 35kg (88.0lbs)

All KV2 amplifiers utilise top and bottom heatsinks which seal and protect the electronics from dust and other contaminants.



The VHD 3200 and 2000 provide plug and play operation for the VHD system. No external software analysis or speaker processors required!

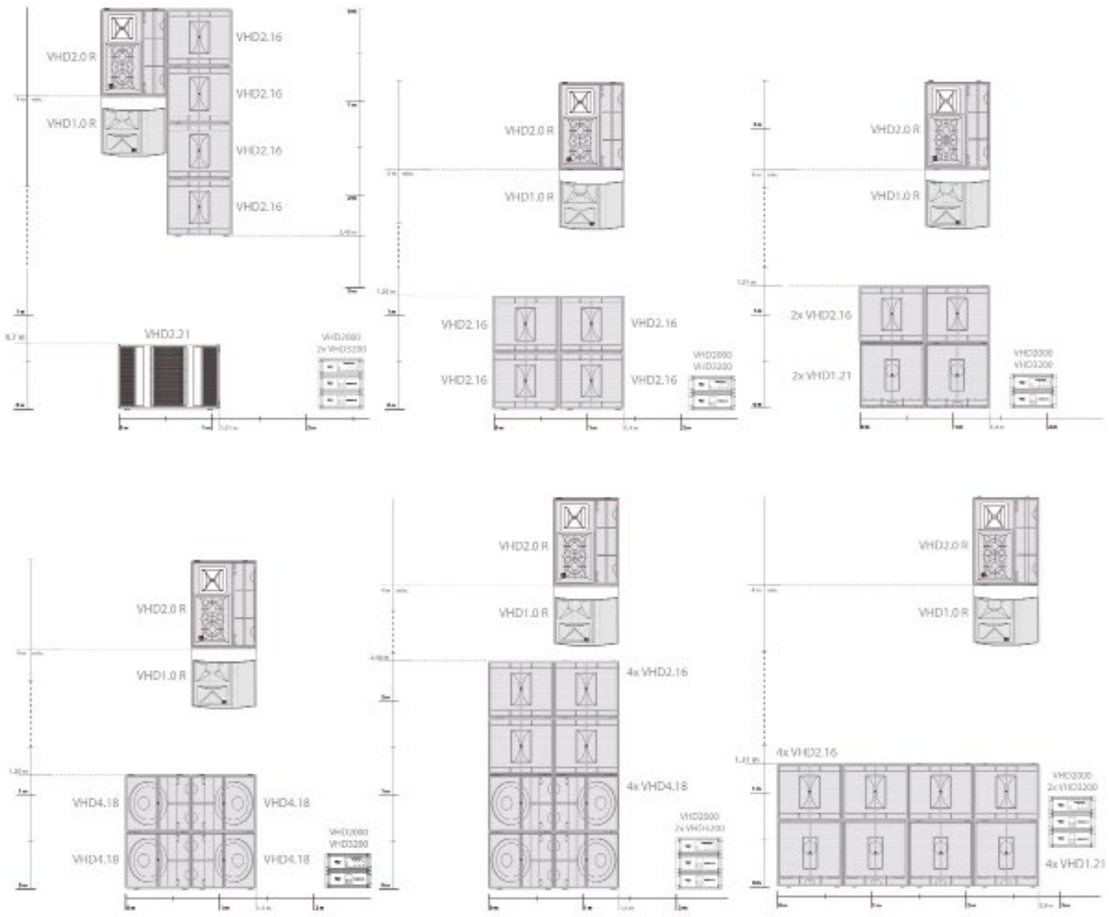
CASE STUDY

SystemLink Productions, Perth Western Australia

Western Australian production company SystemLink has grown substantially since investing in their first KV2 ES system nearly a decade ago. The company now boast a large inventory of KV2 equipment including a double VHD2.0 system complimented with a large inventory of subwoofers including 8 VHD4.18s, 6 VHD2.21s and 4 VHD1.21s. Systemlink regularly covers crowds in excess of 10,000 people with their VHD System. SystemLink owner and longtime KV2 devotee, Kane Poutney has been very happy with VHD.

"The system has performed faultlessly on numerous events covering large crowds with heaps of headroom. It does not seem to matter how many subs we use the mid highs keep up. Even in windy conditions the throw or intelligibility of the system over distance is very impressive. I am yet to hear a line array that can produce similar results in coverage and clarity".

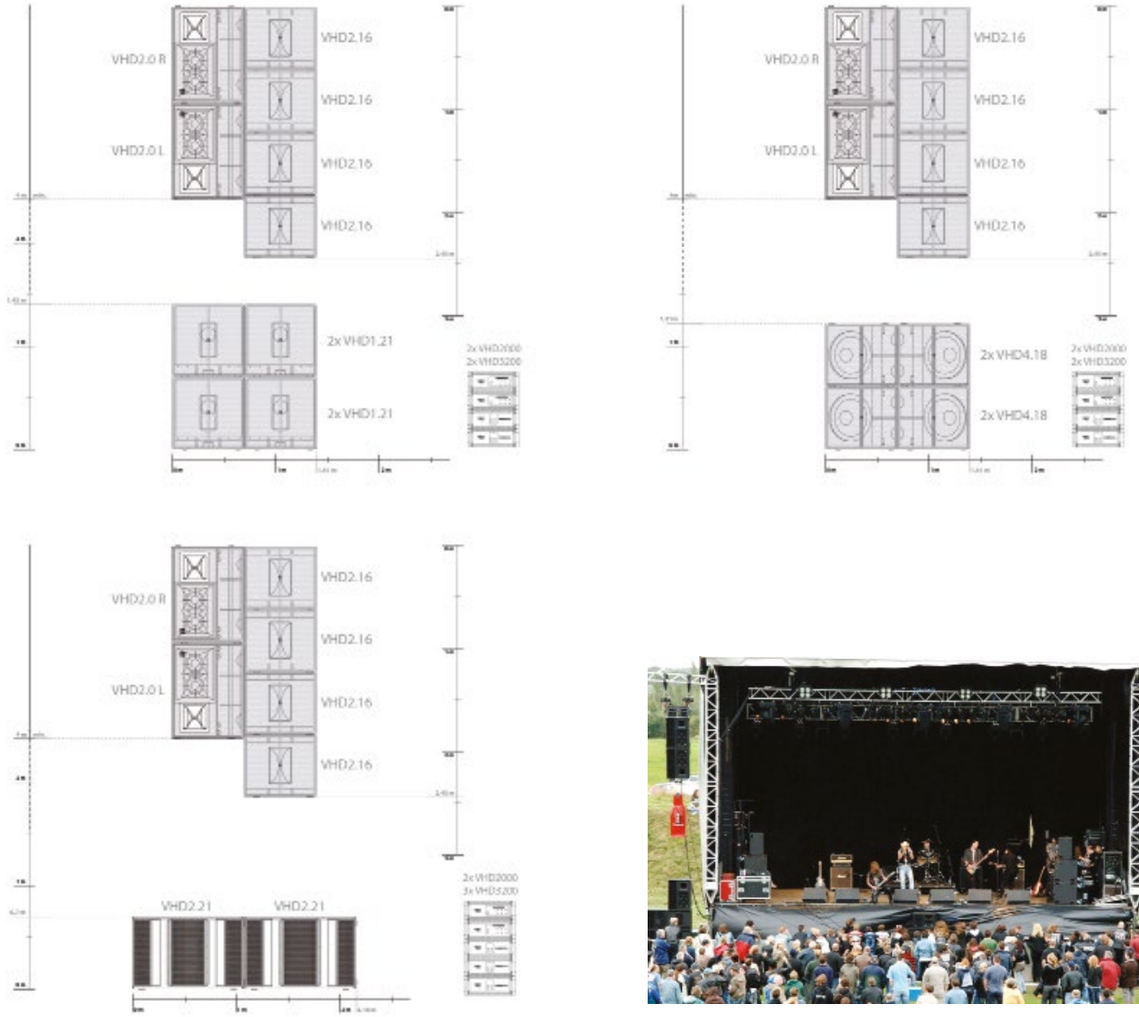
Singles



Each diagram shows the right hand side of a stereo system. These configurations would be suitable for crowds of 5,000 to 10,000 people depending on the type of program and venue. The type of sub-bass system used is relative to the program material and venue. Most configurations shown can be flown or stacked.

For more information on flying see the relevant document under downloads in the product section of our website.

Doubles



These configurations would be suitable for crowds of 15,000 to 20,000 people depending on the type of program and venue.

SDD3 SUPER DIGITAL DELAY

The SDD3 is a true technology statement by KV2. It utilises our ground breaking 20MHz PDM digital conversion process developed for time alignment applications in our speaker range. The SDD3 incorporates high quality line driver outputs to allow users to deliver pristine audio signal to delay speakers or under balcony fills over 100m from the source. The ultimate choice for the distribution of time corrected audio signal, the SDD3 has two super digital channels that will deliver up to 400 milliseconds of delay. Each of these channels has an adjustable HPF and is easily programmed through the front panel menu where all settings can be stored and recalled for varying situations. It also has a third channel with up to 10 milliseconds of delay for configuring cardoid sub woofer setups. Ideal for large stadiums, theatres,concert hall or any application where time correction is required to achieve optimum audio quality.

Frequency Response 2Hz - 40kHz (-1dB)
Sampling Frequency 20MHz PDM
Dynamic Range >105dB
Total Harmonic Distortion <0.005%
Signal to Noise Ratio >105dB
Dimensions
H/W/D 44.5mm (1.75") 1RU x 483mm (19.0") x 201mm (7.9")
Weight 3.6kg (7.94 lbs)

SAC2 SUPER ANALOG CONTROLLER

The ultimate advantage of using the SAC2 anywhere within the signal chain is the immediate improvement in definition, resolution and dynamic range. A musical four-band equaliser, allows for quickly shaping the sound, exactly as required without affecting the overall linear response. The two notch filters per output offer immediate control of dominant room resonances. The fixed crossover filter points of either 70Hz or 120Hz can be independently switched for Hi and Low outputs allowing either a standard 2 X 2 way configuration or an overlap to be created. Alternatively the crossovers can be bypassed allowing simple 2 in 4 out program control. The transparent limiter feature can be used to maintain level without affecting the quality or dynamic performance of the system. A security cover is also available for fixed installations.

Frequency Response 20Hz - 40kHz (-1dB)
Dynamic Range >115dB
Total Harmonic Distortion
<0.005% 20kHz
Channel Crosstalk >60dB
Signal to Noise Ratio >115dB
Dimensions
H/W/D 44.5mm (1.75") 1RU x 483mm (19.0") x 201mm (7.9")
Weight 3.2kg (7.05 lbs)

LD4

The VHD LD4 is a four channel line driver designed to maintain audio signal integrity over long cable lengths. As cable lengths between mixers and amplifiers increase, the length of the cable creates a high capacitance load that many mixers have difficulty in driving. The LD4 eliminates standing waves and signal impurities resulting in the delivery of a high quality audio signal no matter what the cable length. The VHD LD4 was built as a part of KV2 Audio's VHD product philosophy focused on delivering very high definition audio. Each channel features an individual transformer based power supply with insulated grounding. Circuitry is designed to provide excellent resolution of signal with very high dynamic content as found in live sound applications.

Frequency Response 6Hz - 500kHz (-1dB)
Distortion 0.0005%
Dimensions
H/W/D 44.5mm (1.75") x 483mm (19.0") x 177.8mm (7.0")
Net Weight 2.9kg (6.5lbs)

SD8

The VHD SD8 is an eight-channel stage preamp designed with individual line drivers that maintain audio signal integrity over long cable lengths. As cable lengths increase, the length of the cable creates a high capacitance load that most microphones have difficulty in driving. The SD8 features eight independent mic inputs with gain control adjustment, -20 dB pad and 48V phantom power. Each input has two outputs allowing signal routing to two separate locations such as front of house and monitoring consoles. A five bar LED display provides signal level information and a rotary knob provides 0db to +30 dB of gain control.

Frequency Range 6Hz - 500kHz (-1dB)
Distortion 0.0005%
Dimensions
H/W/D 89.0mm (3.5") x 483mm (19.0") x 177.8mm (7.0")
Net Weight 5.5kg (12.1lbs)

COMPEX

The COMPEX is a stereo (2 input x 2 output) Analog Dynamic Harmonics Control unit. COMPEX is a pure analog signal processor which provides adjustment of the audio signal from low quality signal sources. The COMPEX features an optical audio compressor, with level dependent filters for reduction of unpleasant high frequency distorted signals from bad signal sources and recordings (compressed audio, Mp3, bad CD, laptops etc.). The COMPEX also features a very high quality harmonics expander, which adds harmonic content to the depleted high freqencies on these recordings. The amount of harmonics added or changed is set by an individual potentiometer.

Frequency Range 6Hz - 500kHz (-1dB)
Distortion 0.0005%
Dimensions
H/W/D 89.0mm (3.5") x 483mm (19.0") x 177.8mm (7.0")
Net Weight 5.5kg (12.1lbs)

JK SERIES DI UNITS

Named after company founder and chief engineer, George 'Jiri' Krampera, the JK Series utilizes low noise, high-quality discrete circuitry, European transformers and fully sealed military spec switches. KV2's new JK series represents the pinnacle in DI technology by offering higher headroom and lower output impedance than any other DI on the market.

KV2 has optimized phantom power use with a special switching power supply on the JK Series to enable 20 volts of peak power on the internal rails. This allows the JK Series to deliver 50 Ohms on the XLR output giving true line driver capability delivering greater audio integrity and the ability to send high quality signal four times the distance of its nearest competitor.

JK1 SINGLE CHANNEL DI

The JK1 features two 1/4" jack inputs with mix or parallel function with a variable low cut later and 15dB pad. Phase Shift and Ground Lift switches are also available. The JK1 is ideal for connection of single keyboards, Guitars or instrument amplifier output conditioning or combining two inputs via the mix function.

Frequency Response 20Hz - 100kHz +/- 1dB
Dynamic Range >130dB
THD <0.002%
Input Impedance 1MΩ/5KΩ
Max. Input Voltage 5V/20V Peak
Output Impedance 50Ω

JK2 STEREO DI

The JK2 features two 1/4" jack inputs with parallel monitor outputs as well as RCA inputs. The JK2 has two completely separate channels and can be used with two different instruments or stereo keyboards and other two-channel sources. The JK2 features a variable Pad, Phase Shift and ground lift.

Frequency Response 20Hz - 100kHz +/- 1dB
Dynamic Range >130dB
THD <0.005%
Input Impedance 1MΩ/5KΩ
Max. Input Voltage 5V/20V Peak
Output Impedance 50Ω

JKA ACOUSTIC DI

The JKA is a dedicated DI for acoustic instruments. The JKA features a high-impedance 1/4" jack input capable of receiving signal from all types of pick-ups. A +10dB gain boost is available for low-level instruments. The JKA also features a tuneable notch filter for eliminating the resonant frequency in an acoustic instrument, reducing feedback issues.

Frequency Response 20Hz - 100kHz +/- 1dB
Dynamic Range >130dB
THD <0.03%
Input Impedance 1MΩ
Max. Input Voltage 2.5V/7V Peak
Output Impedance 50Ω

JKP PASSIVE DI

Serves as a universal passive DI box with low output impedance. The JKP features one XLR input and two 1/4" jack inputs in parallel. The JKP is dedicated for multiple instruments connection such as keyboards, guitars or instrument amplifiers output conditioning. The JKP also features phantom power supply transmission for condenser microphone connection and output signal conditioning.

Frequency Response 20Hz - 100kHz +/- 1dB
Dynamic Range >130dB
THD <0.0005%
Input Impedance 1MΩ
Output Impedance 100Ω

JKT TONE GENERATOR

The JKT is the perfect tool for checking and tuning PA systems along with various pieces of equipment. Phantom powered it has two XLR Outputs and 1/4" Jack Out. The JKT delivers a full range of tones from 20Hz through to 30kHz, as well as both White and Pink noise.

Output Impedance 50Ω line/600Ω Monitor
Output Channels 1/4" Jack / 2 x XLR

KV2 Audio International spol s.r.o.
Nádražní 936
Milevsko 399 01
Czech Republic
For more information and Distributor contact details

info@kv2audio.com / www.kv2audio.com