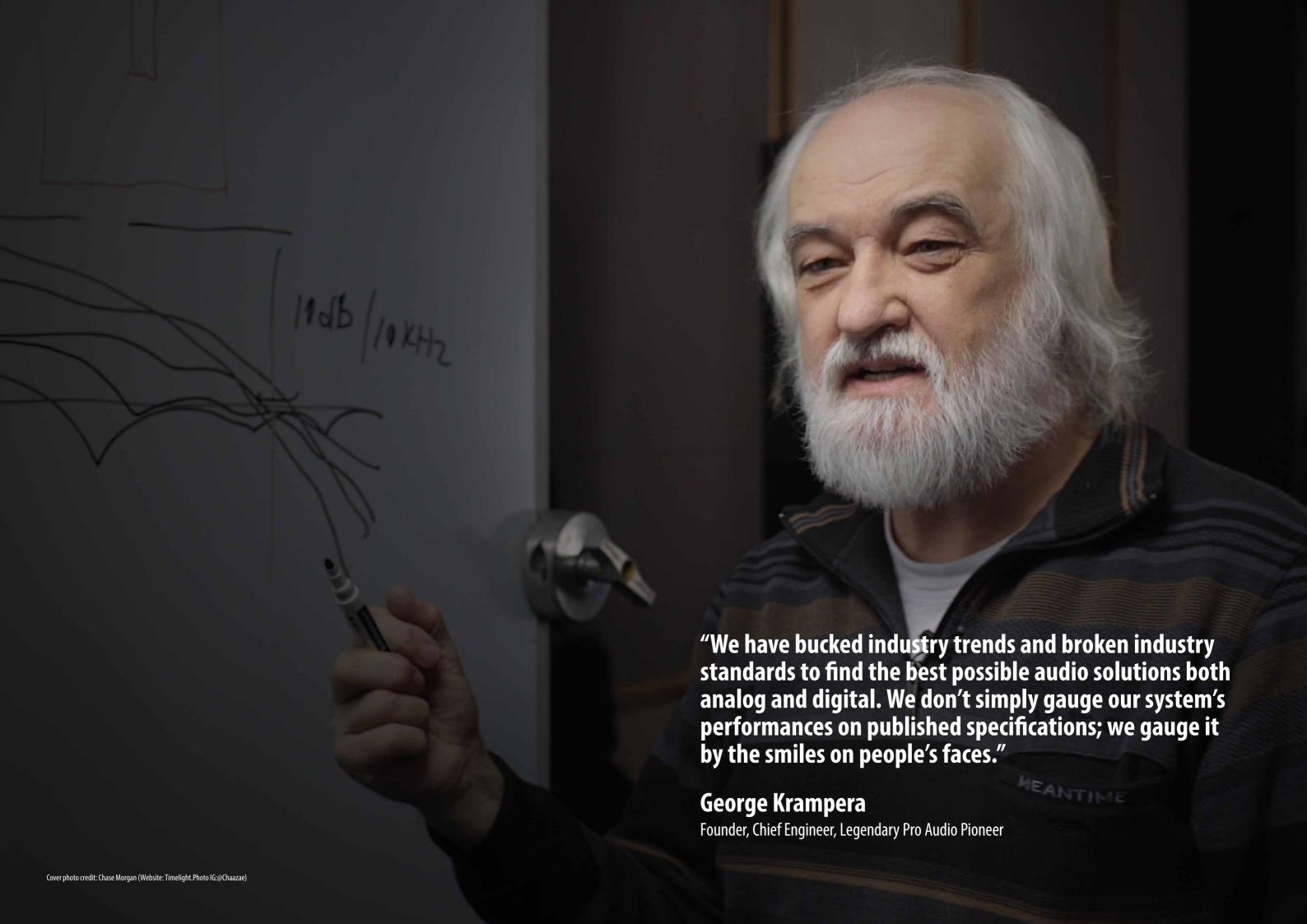


**Theaters Houses of Worship** Stadiums / Sport Arena **Live Events** Restaurants Hotels Clubs







## The Bregenz Festival, Bregenz, Austria

The Bregenz Festival (Bregenzer Festspiele) has been an icon on the European cultural landscape for over 75 years. Hosting a wide range of musical and theatrical events during July and August in the Austrian city of Bregenz, the jewel in the festival crown is undoubtedly the Seebühne in the spectacular setting of the waters of Lake Constance. The largest floating stage in the world, the Seebühne, with its 6658-seat open-air amphitheatre, is the star venue for the festival's musical and operatic productions, often with sets as stunning as the lacustrine backdrop. This year's production was Puccini's Madame Butterfly, staged on a vast 23m x 33m 300-ton set designed to represent a giant leaf of delicately creased Japanese paper.

The technical challenges involved in a production of this nature are enormous, with sound being amongst the most critical. This year, KV2 systems made up the core of the highly complex main system serving the Seebühne and its auditorium. Head of sound for the festival, Clemens Wannemacher, takes up the story:

"We have been using a point-source based system for many years now as we found it was the most efficient way to handle the various constraints of working on an outdoor production with a live orchestra and a complex set. I'd had my eye on KV2 since 2019 when I was working on another lake stage in Mörbisch am See and was looking to upgrade the frontfills and main PA. Martin Lukesch, head of sound at the Volksoper Opera in Vienna mentioned that I should listen to KV2, so we organised a shoot-out amongst several brands. That's when I heard KV2's ESR212 and ESR215 for the first time. As luck would have it, Alwin Bösch, who has been working with Bregenz for over 28 years and is now my deputy head of sound, was also at the shootout. We were both impressed by what we heard that day.

"When I started with Bregenz in 2020 and was looking into upgrading our loudspeaker setup, both Alwin and I immediately settled on the ESR212. We loved the sound, even more than the ESR215, and we also loved the fact that you can rotate the horn in the 212. That comes in very handy as we have to hide the speakers in the set, and by rotating the horn we can use it horizontally which makes it very versatile."

The loudspeaker setup is highly complex with over 40 loudspeakers from four different brands being hidden in the stage alone including VHD1.21 and VHD2.16 subs from KV2 and three horizontally orientated ESR212s. They join a mix of other loudspeakers from Kling & Freitag, Adamson and JBL. "The stage has 'holes' with small platforms behind them that house the loudspeakers," describes Wannemacher. "The holes are covered with a metal grid, that is (partially) covered with plaster and then painted. There are no dedicated monitor-loudspeakers for the singers. They are effectively standing in front of the PA, so they pretty much hear what the audience hears."

As for the rest of the PA system, it is equally complex, with loudspeakers mounted on a series of poles surrounding the listening zone. Four large poles next to the set (two per side) house four levels of loudspeakers including two KV2 ESR212s in the middle – which are supplemented by Kling & Freitag Spectra 212s top and bottom. Smaller poles surround the rest of the listening area equipped with three levels of K&F Spectra 212 and CA1001CX (along each side) and two levels of Adamson P12 (across the rear). There are also several K&F LINUS loudspeakers placed beneath the seats in the middle of the audience zone as well as some JBL subs.

"When I started with Bregenz in 2020 and was looking into upgrading our loudspeaker setup, both Alwin and I immediately settled on the ESR212. We loved the sound, even more than the ESR215, and we also loved the fact that you can rotate the horn in the 212."

"We have been using a point-source based system for many years now as we found it was the most efficient way to handle the various constraints of working on an outdoor production with a live orchestra and a complex set. I'd had my eye on KV2 since 2019 when I was working on another lake stage in Mörbisch am See and was looking to upgrade the frontfills and main PA. Martin Lukesch, head of sound at the Volksoper Opera in Vienna mentioned that I should listen to KV2, so we organised a shoot-out amongst several brands. That's when I heard KV2's ESR212 and ESR215 for the first time. As luck would have it, Alwin Bösch, who has been working with Bregenz for over 28 years and is now my deputy head of sound, was also at the shootout. We were both impressed by what we heard that day.

### **Clemens Wannemacher**

Head of Sound, The Bregenz Festival, Austria

**KV2 Audio system setup** 

11x ESR212 2x VHD1.21 2x VHD2.16 6x ESR2800D 12x CS12





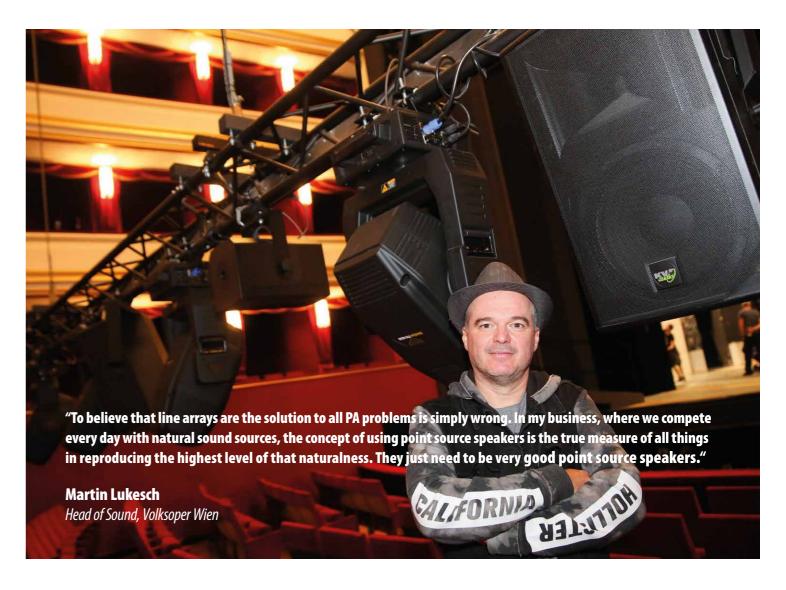


The Vienna Volksoper, or People's Opera, is Europe's leading operetta house and Vienna's largest theatre for opera, musicals, classical concerts and ballet. Indeed, Vienna Volksoper offers one of the most diverse musical programs in the country, ranging from Carmen to Kiss Me Kate, and Coppelia to Cabaret, as well as productions for schools, lots of local German operetta performances and much more besides. The venue is also the first in Vienna to open its doors to the public after the summer break, but more importantly in the wake of the COVID-19 crisis, with a performance of Strauss's Die Fledermaus on 1st September followed by a revival of Cole Porter's classic musical, Kiss Me Kate on 2nd September. Both will be benefitting from the pristine audio reproduction of a brand new, carefully designed KV2 audio system, which also happens to be the first ever to use KV2's new Control & Diagnostics Tool for remote system management and control.

The new sound system for the 1339-capacity venue was designed by Martin Lukesch, director of sound and media technology at Vienna Volksoper, which is part of the largest theatre organisation in the world. "Here, it's all about the music!" explains Lukesch. "As a repertory theatre with a hugely varied performance range – we can be staging a rock musical one night and a classical ballet the next - the demands on the sound system are enormous. Our season starts on 1st September and we have rehearsals every morning and performances every evening, non-stop, until 30th June. This was my starting point when it came to designing a new system. It had to be able to fulfil the needs of all the different types of show we stage and deliver the best possible audio experience for our audiences."

Lukesch had been a fan of point source technology even before coming across KV2, convinced that it was the solution for Volksoper, but he took a while to find what he was looking for. However, once he'd found KV2 – he particularly recalls the first time that he heard the VHD system demo'd at an outdoor stage at the Frankfurt Musik Messe – there was no going back. "I need point source loudspeakers for my designs, and KV2 makes excellent point source loudspeakers. Better still, they have a huge variety of sizes and formats. Whatever it is you need, KV2 has the right speaker for the job. So yes, when we decided to renew the sound system at Volksoper, for me it was an easy choice!" For the main system Lukesch selected three active, full-range ESR215S per side for the stalls, circle and upper circle. "I wanted a real full-range system with the -3dB point below 40 Hz," he says. "The ESR215 is ideal with its wide 110-degree horizontal dispersion and smooth frequency response across the range. We chose the S slimline version to minimise visual impact. The centre cluster comprises two SL412 active, wide dispersion loudspeakers flanked by an ESD10 and an ESD12 per side. Frequency and phase response are matched to the side system."

"There is also a second proscenium system of 12 smaller, wide dispersion boxes (ESD10s), mainly for sound effects. We have another effects system, known as 'The voice of God' located in the dome of the auditorium, which is two of the big ESR212s plus a full surround system throughout the theatre – there are at least 60 speakers, mainly ESD5s which are used for 'room simulation' to create ambience, or for special sound effects that require high diffusion. Finally, we have six more big point sources – ESR212s again – for the stage; if you



need thunder or explosions on or behind the stage, then you need powerful speakers on or behind the stage.
The ESR212s are perfect, just as they are for the voice of God! There are also delays, frontfills, outfills and other speakers for effects or monitoring throughout the auditorium."

"The vast majority of our equipment is permanently installed," he continues. "We effectively have several systems in one, and it's much easier and faster for us to switch between shows when 90% of what you need is already in place. However, there are times when you still need to supplement with mobile systems, so we also have a large stock of additional point sources that we can use as required; we have ESDs in every size, from the tiny ESD Cube up to the ESD15, plus a number of ESM stage monitors."

When it comes to subwoofers, Lukesch hasn't stinted either. "You can never have enough subs!" he declares. "There will always be a show where you need more low end – sometimes you have to feel the bass and the seats need to shake! If your subwoofers are placed correctly, you can achieve that quite easily." Volksoper Vienna offers the ideal placement for subwoofers that can literally move the earth. Like many old buildings, heating and cooling is achieved via a double floor system; in the case of Volksoper, this means there is an entire room under the auditorium which is the perfect place to house earth-moving subs. Lukesch has opted for four of KV2s most powerful and dynamic subwoofer solution, the VHD4.21 active/passive system, for under the stalls, plus eight single 18-inch woofers under the balconies and two flown VHD2.18J dual 18-inch systems in the dome for the boxes. "With these solutions, we can really make audiences feel completely involved the performance, especially as we have wooden floors that react to the vibrations. If we wanted to make people believe they were experiencing an earthquake, we could. In fact, with the amount of power we've got, we could probably even create one!"

When it comes to amplifiers, Volksoper Vienna is the first installation to utilise KV2's brand new diagnostic, monitoring and control tool, which adds an essential level of comfort and security when managing a large, complex system. "In 2020, large installations like ours – we have 56 amplifiers in use full-time and five spare – have to be accurately controlled and monitored, or we simply can't operate efficiently," says Lukesch. "Our previous system used network-controlled amplifiers, which was perfectly reliable, but old technology. KV2's solution is most definitely next generation and offers us much more flexibility. All amplifiers, drivers and speakers are monitored in real time, so any anomalies are instantly located and reported. It also enables me to configure and switch between systems in no time. For example, for one show I'll be using small speakers, and for the next I'll have a completely different system with all of the subs involved. This enables me to load all of the amp settings for a particular show in just one click – it's virtually plug and play which makes my life much easier!"

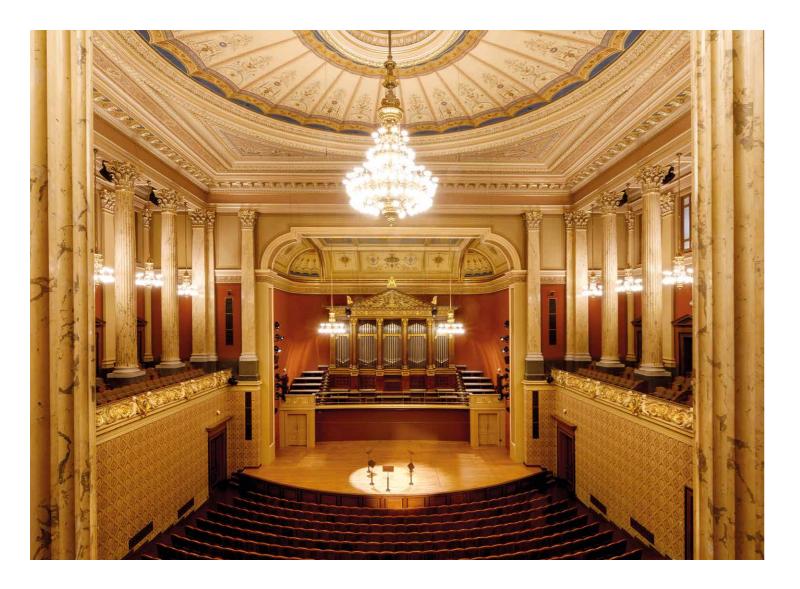
"I'm delighted with the new KV2 system at every level. Our audiences deserve the best, and as far as I'm concerned, this is it."

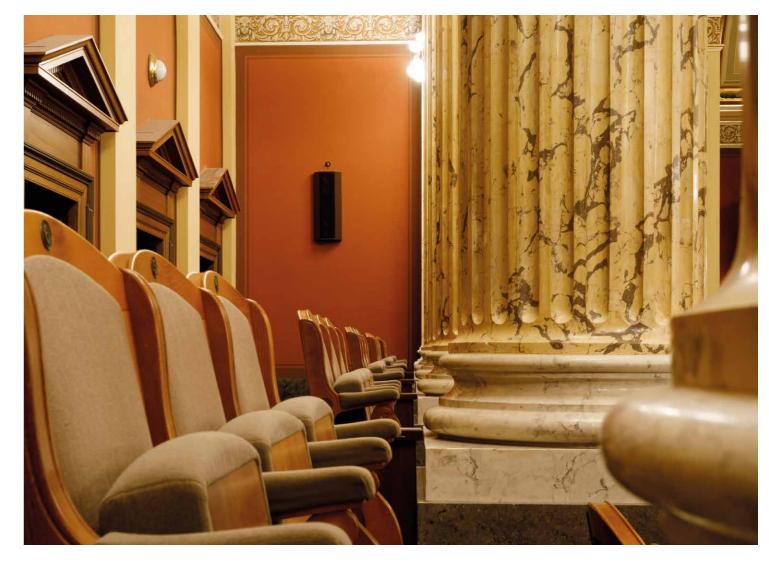
Photo credit: Petr Zikmund

### **KV2 Audio system setup**

6x ESR215S 10x ESR212 2x SL412 2x ESD25 2x ESD12 10x ESD10 12x ESD6 6x VHD2.18J 2x VHD4.21 Active 2x VHD4.21 Passive 40x ESP2000D 6x ESR2800D 4x ESR3000D 2x SL3000D 7x VHD3200D

Theaters Theaters





KV2 delivers tailor-made audio solution for Prague's most prestigious concert hall, Rudolfinum, Prague, Czech Republic Conceived as a multi-purpose cultural centre combining exhibition rooms with concert halls, the Rudolfinum is one of the most architecturally remarkable buildings in Prague. It is also the home of the Czech Philharmonic Orchestra, which first performed in the Rudolfinum's world-famous concert hall in 1896 under the baton of Antonín Dvořák. Today it is still the most prestigious concert hall in Prague and offers a dense and varied program of exceptional classical music concerts. The 1,100-capacity Dvořák Hall, named after the famous Czech composer, is renowned for its remarkable acoustics and is sought after for its unique atmosphere and for recording classical works.

Ahren Prohmann, world-renowned producer, music director, and winner of several Grammy Awards, remarked after making a complete recording of Dvořák's symphonies in 2014 that none of the world's famous old halls, such as the Musikverein in Vienna, the Concertgebouw in Amsterdam or the Symphony Hall in Boston, have such a highly recognizable sound as the Dvořák Hall. The acoustics are characterized by a very long reverberation, most notably in the mid frequencies and the distinctiveness of the sound in the Dvořák Hall is enhanced by other unique elements, such as the construction of the auditorium.

For many years, however, sound masters have struggled with the reproduction of amplified speech, especially with intelligibility and even coverage of the entire space. Efforts to resolve this have always run up against limitations in technology and the very strict requirements of the Rudolfinum's listed building status, which do not allow technical installations that are not in keeping with the architectural aesthetics. "We have been struggling for a long time with insufficient intelligibility of the spoken word in the Dvořák Hall; it was never ideal due to the particular nature of the acoustics," admits Radomír Stöhr, technical administrator of Rudolfinum.

George Krampera, the world-famous designer of sound systems and the founder of the Czech company KV2 Audio, undertook the task of resolving these issues with his team. His career spans over five decades in the development of professional audio technologies, many of which have become industry standards. His company's philosophy is built on a unique technological approach, which is focused on achieving the highest possible dynamic range and the lowest possible losses caused by distortion and signal change when passing through individual parts of the sound chain. "Our technology respects many factors that are important for sound quality, whether we are talking about electronic integrity, sampling of digital systems, pulse response, dynamic range or acoustic design," says Krampera.

David Mareček, CEO of the Czech Philharmonic, also welcomed the cooperation with KV2 Audio: "We have excellent experience with KV2 sound systems, in particular with the annual Open Air concert, which heralds the end of the Czech Philharmonic's concert season in June. It is traditionally broadcast live on Czech Television."

The physical constraints of the building meant that the spaces available for loudspeaker placement were

not optimal for standard loudspeaker coverage patterns, so a bespoke solution had to be developed. The team, led by George Krampera, designed and built a fully customized system, not available in the KV2 catalogue, with custom horns designed to meet the unique dispersion requirements of the room. Equal emphasis was placed on both controlled dispersion and minimizing the effects of reverberation from above, by designing the system in such a way that it would not disperse towards the ceiling, but play directly towards the audience.

Built into the fabric of the building where possible the stalls are covered by two three-way custom install passive column systems with very high resolution and controlled dispersion, equipped with six 10" speakers for low-mid frequencies, two 5" for midrange and one 1" speaker for highs. The balcony is served by a similarly designed three-way system with additional custom sidefills comprising four 6" speakers for low-mids, one 5" speaker for mid-high frequencies and one 1 "for highs.

Two ESP4000 amplifiers provide amplification for the passive full-range speakers in the Dvořák Hall, and two analog SAC2 analog controllers provide sound processing.

"At KV2, we try to minimize the distortion of the entire electroacoustic chain, which is why we have maintained the complete signal path in the highest possible, fully analog quality. We completely avoid any digital processing here, which really helps" emphasizes Krampera.

The sound booth for the Dvořák Hall is equipped with a pair of active EX6 speakers from the standard KV2 production portfolio and a Soundcraft analog mixing console, which has been specially modified in KV2's labs for high-resolution sound. The choir benefit from a pair of passive ESD10 monitors, as well as a pair of ESD6s in the backstage area, all powered by ESP amplifiers.

"I am very proud of the work of my team who faced difficult conditions with this assignment, necessitating a majority of tailor-made, unique solutions. We were able to capitalize upon our many years of experience in building sound systems and fully respect the technological principles on which our company stands in order to deliver the audio experience they have been dreaming of for so long," adds George Krampera.

In the vast majority of cases, the new sound system is used to reproduce the spoken word. Audiences and technicians alike are thrilled with the results, especially for televised broadcasts.

Photo credit: Petr Zikmund

Concert hall Concert hall





# "KV2 offers an accuracy and transparency practically unequaled in the professional audio system market today."

"I can't say enough about KV2 Audio's exceptional audio speaker products and systems. I have been extremely pleased with the incredibly pristine sonic and robust build quality of every product I have had the pleasure of using. They offer an accuracy and transparency practically unequaled in the professional audio system market today. In addition to superb audio quality, the cost effectiveness of the KV2 point source system verses a line array system is also something to seriously consider when specifying a system."

### **John Shivers**

Sound Designer
Tony Award Winner

## Kinky Boots, Royal Alexander Theater, Toronto, Canada

KV2 Audio is extremely proud to have the ESR series, (ESR215, ESR3000) delivering the experience of a lifetime at the Royal Alexander Theater in Toronto via the incredible production of Kinky Boots. The current show has already been extended because of enormous interest and demand. Live performances require a repsonse that will deliver extreme intelligability, whilst remaining natural, warm and full to all audience members. No other system, regardless of size evidently could provide such results.

Kinky Boots is a captivating show, filled with energy, dynamisicm and an engaging story drawing attention with an eye popping design. For such a performance to deliver this complete circle of pleasantries, it is a very satisfying experience to acknowledge that the KV2 Audio ESR system in place is a strong and important part of such a complex puzzle.

The KV2 Audio ESR series was hand selected by the audio engineers who put their names to the performance, and did so with condence after having taken due diligence in sampling countless manufacturers and series of each Loudspeaker system. The added benefit, welcomed by all, was the small footprint, ease of installation and simple conguration for the venue filling sound system. Being able to do more with less was yet another show stopper which KV2 Audio was able to deliver upon.

"I continue to be impressed with the overall sound quality of the ESR215. They are capable of accurately reproducing extremely natural sounding vocals and solid, tonally balanced music at pretty much any SPL", says John Shivers, the main sound designer for the production. "With excellent performances, from the actors on stage and the musicians in the pit, the system sounds nothing less than spectacular", adds Shivers.

The design team for Kinky Boots includes Tony Award nominee David Rockwell (Scenic Design), Tony Award-winner Gregg Barnes (Costume Design), Tony Award-winner Kenneth Posner (Lighting Design), Tony Award-winner John Shivers (Sound Design), Josh Marquette (Hair Design), Stephanie Gorin and Telsey + Company/Justin Hu, CSA (Casting), with Musical Supervision and Arrangements and Orchestrations by Tony and Grammy Award-winner Stephen Oremus.

**KV2 Audio system setup**2x ESR215
1x ESR3000





9 to 5: The Musical is a sparkly, fast-paced romp through 1980s office life, along with the daily normalisation - and acceptance - of blatant workplace sexism. It tells the story of what happens when three very different women - Doralee, Violet and Judy - join forces to do something about it. The show is also a reminder, in the era of #MeToo, of how far we haven't come in terms of dealing with discrimination, which seemingly remains wholly embedded in the top echelons of the political and media establishment! Bringing a fresh design perspective for the stage to this narrative are scenic designer Tom Rogers, lighting designer Howard Hudson, video designer Nina Dunn and sound designer Poti Martin.

Famous sound designer Poti Martin brought the show to vibrant life with a well-produced and powerful soundscape that lost nothing of the clarity and detail of the orchestrations.

"The Savoy Theatre is small and intimate space, but was designed a long time before acoustics for amplified sound were a concern," he reveals. "I had no way to treat the acoustics of the building. It's a beautiful listed theatre, but acoustically it's challenging. The prosc' is surrounded by three rigid surfaces that act as a resonance box, so optimum speaker positioning is crucial."

Supplied by Autograph Sound, the main PA comprises KV2 ESR212 speakers left, right and centre; a personal choice for Martin. In addition, the delays, fills and subs are also KV2 and include EX1.8 subs plus EX1.8s, EX26s, EX6s, EX12s and ESD5s. "From the first time I heard these speakers I fell in love with them," he says. "As far as I'm concerned, they are the best sounding point sources on the market, I use them whenever I can."

The main PA is incorporated into the stylised proscenium arch that frames the stage: "It works beautifully in this particular set design," Martin explains. "To be honest, The Savoy Theatre is so small that there was no other place they could go. However, this will probably be the first and last time a set designer incorporates my speakers into their design!"

One of the toughest jobs for any sound designer working on a musical is to balance the quality of the audience's audio while ensuring that the actors and musicians can hear clearly. Martin elaborates: "Monitoring on stage changes scene-by-scene. We have amazing tools nowadays that allow us to do this in an effective way, including multitrack recording of the show and remote control of the desk. This makes it possible to adjust the tiniest of details."

## KV2 Audio system setup

7x ESR212 2x EX15 4x EX1.8 4x EX2.2 30x ESD5 4x EX26 6x EX6 4x ESR2800 8x ESP2000

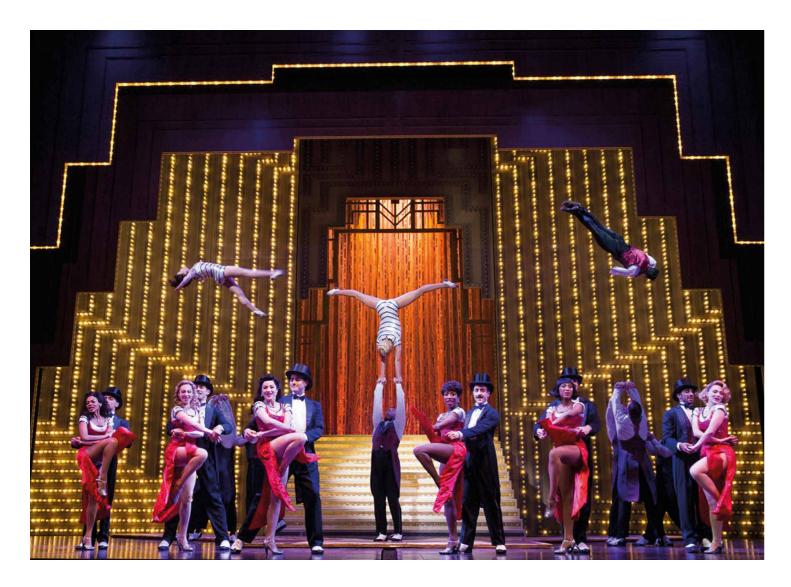


## "KV2 was a true revelation to me. They are incredibly honest speakers!"

"The first time I heard KV2 speakers I couldn't believe the amount of detail in them. I was hearing things in a way that I had forgotten they could sound (in this digital world we now live in). Despite the advantages of digital, which I'm not against and use in my work each day, I just found them so revealing, reminding me of the very first principle of what we do, sometimes forgotten, which is about the quality of the sound. What I hear when listening to KV2 speakers is, in one word, truth."

#### **Poti Martin**

Sound Designer





Playing at the Lyric Theater, PARAMOUR features three stereo sets of ESR215 Full Range Enclosure – one for each of the three levels of seating. For low end reinforcement, the installation features 4x VHD2.16 double 15" subwoofers flown from the balcony level truss, and two pairs of VHD1.21 double 21" subwoofers - one pair located in the box seating area of the dress circle and the other pair located in the orchestra pit. For fills, surrounds and imaging support, there are two SL412 three-way wide dispersion speakers alongside an extensive distributed network of ESD5 and EX6 fills.

The KV2 systems were specified for PARAMOUR by Tony Award winning sound designer John Shivers and long-time collaborator David Patridge in association with Masque Sound. Shivers and Patridge have previously specified ESR215 systems for KINKY BOOTS in Toronto, London and New York. On DAS WUNDER VON BERN in Hamburg, Germany they put together a comprehensive system comprised of SL412, SL2.15 and a large number of EX6 and EX12 speakers for fills and surrounds.

"We continue to be very impressed by the horn design in both the ESR215 and SL412. It provides a very true 110°x40° coverage with very little falloff around the edges and a clarity and coherency which is unparalleled in other products with a similar power rating," says Patridge, adding "the ESR215 offers a really rich powerful low end which practically negates the need for subwoofers other than for extreme low-end extension."

With a seating capacity of 1,896 the Lyric is the second largest theater on Broadway - great for the acrobatics that Cirque du Soleil is famous for. While a line array would be the go-to choice for the majority of designers in such a space, Patridge explains, "Our major worry in shifting away from line array system designs was the lack of vertical pattern control on point source boxes and how the overlapping ESR215 coverage would interact within the room. We have grown used to being able to reduce the interactions of systems in the vertical domain by manipulating array geometry and certainly sound system alignment principals dictate that overlap is a bad thing generally. In truth, the shorter line arrays that we use in theatre don't offer much pattern control in the low-mid and low frequency range and so we can only avoid overlap in the high end. This leads to a confluence of muddiness that can tend to overwhelm the clarity of the system and with point source, you get 100% of the frequencies overlapping! While the shorter wavelength frequencies suffer some cancellation effects in the overlapping zone, the precedence of SPL for each zone i.e. if you're in the Orchestra Level, the overlap from the Dress Circle level will occur at lower SPL and therefore its importance to the ear is lessened vs the closer. higher SPL of the Orch. system. The 'musicality' of the full-range overlapping signal is much less of an issue than we envisioned. Hey... it's what we used to have before the line array and it wasn't all that bad!"



**KV2 Audio system setup** 62x ESD5 3x ESP4000 6x ESR215 3x ESR3000 12x EX6 2x EX12 2x SL412 1x SL3000 4x VHD2.16

> 4x VHD1.21 3x VHD3200



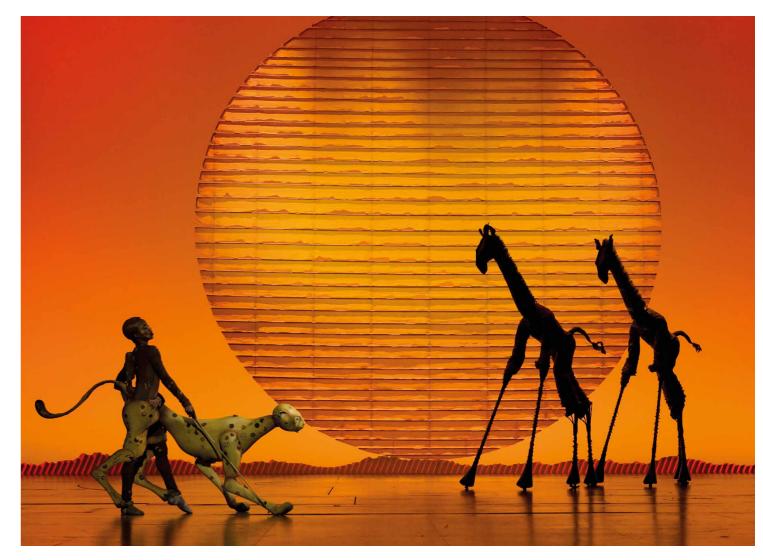
## "KV2 has returned Point Source Speakers to their rightful place as the best possible solution for audio clarity, soundstage and spectral balance."

"KV2 has returned point source speakers to their rightful place as the best possible solution for audio clarity, soundstage and spectral balance. Products such as the ESR215 have reinvented our ability to provide audiences with unsurpassed detail in the mix - a major improvement over the small and medium format line arrays which we have been using in the theatre over the past 15 years. The low extension available in the 215 practically makes subwoofers optional and I still look forward to the reactions that I get from fellow audio professionals when I demonstrate our KV2 rig."

#### **David Patridge**

Production Sound Engineer, Associate Sound Designer, Mixer





THE LION KING on Broadway Celebrates its 20 Year Anniversary With a KV2 Audio Upgrade, New York, US After 20 landmark years on Broadway, THE LION KING continues ascendant as one of the most popular stage musicals in the world. Since its premiere on November 13, 1997, 24 global productions have been seen by more than 95 million people. Produced by Disney Theatrical Productions (under the direction of Thomas Schumacher), THE LION KING is the only show in history to generate six productions worldwide running 15 or more years. The internationally acclaimed, six-time Tony Award® winning Broadway musical, and highest-grossing Broadway production of all time celebrated its 20th Anniversary on Broadway in November, 2017. The production, which first opened in 1997 at Broadway's New Amsterdam Theatre, moved venues to the nearby Minskoff Theatre, where it has been since 2006. Performing eight performances a week, THE LION KING is the third longest running production in broadway history, surpassed only by *Chicago* and *Phantom of The Opera*, the latter of which entered its 30th year in January 2018.

The Broadway score features Elton John and Tim Rice's music from The Lion King animated film along with three new songs by John and Rice; additional musical material by South African Lebo M, Mark Mancina, Jay Rifkin, Julie Taymor and Hans Zimmer; and music from "Rhythm of the Pride Lands," an album inspired by the original music in the film, written by Lebo M, Mark Mancina and Hans Zimmer. The resulting sound of THE LION KING is a fusion of Western popular music and the distinctive sounds and rhythms of Africa, ranging from the Academy Award®-winning song "Can You Feel the Love Tonight" to the haunting ballad "Shadowland."

The 20th anniversary system overhaul was a collaborative design effort by Steve Kennedy, John Shivers, Hugh Sweeney and David Patridge. As the show did not halt performances for this overhaul, the team had to install the system in phases on "dark days" so as to not disturb the performers and showtimes. On completion, Shivers remarks: "We have received positive comments from pretty much everyone involved with THE LION KING's 20th anniversary. Mark Mancina (composer) and Dave Metzger (orchestrator) both commented that the sound of the production was the "best we have ever heard on any production of THE LION KING". This is nothing new of course... frequently, fellow audio professionals, musicians, producers and audience members hear KV2 speakers and comment on how amazing they sound."

Shivers remarks: "THE LION KING and much of its success can be attributed to the beautifully composed, orchestrated and executed music. The subtlety, nuance and wide dynamics in the score, vocal arrangements, orchestrations and effects all lead to an evocative and at times visceral experience. The newly installed system enables us to accurately present every detail as it was intended. The KV2 system reveals every nuance."

The Minskoff Theatre stands in the very heart of New York's Times Square, with spectacular views across the urban landscape. As you enter the room, the large size is immediately striking as Broadway houses can often be quite small in comparison. Where typically a large format Line Array system might have otherwise been applied in an equivalent sized installation, the physical size of the KV2 system appears very neat and surprisingly unobtrusive in the room. The main system, is a dual hanging A/B left and right

comprising of ESR215 full range three way cabinets, with a center cluster of 4x SL412. The balcony delays are again an A/B L+R hang of ESR212 with an A/B center cluster of 2x SL412. As under-balcony fills and throughout the theater there are hangs of EX6, ESD6 and ESD10. On his experience with the system, Mixing Engineer Alain Van Achte adds "the detail and accuracy of the KV2 system makes mixing the show easier and more rewarding. I am able to hear more nuances and respond accordingly. As if I were listening to reference monitors for example. I am confident that with the KV2 system I am delivering the soundscape that has been envisioned for THE LION KING."

On the decision to hang the system with a dual hang configuration the designers commented: "For THE LION KING in New York we wanted to maintain many of the original design concepts, one of which was the A/B speaker system design. This offers the advantage of minimizing the phasing effect that occurs when two open omnidirectional microphones are presented to the same physical speaker cabinets at the same time. When the actors microphones are combined acoustically through the redundant speaker systems, as opposed to electronically, the objectionable phasing artifacts are greatly reduced."

This production marks the 10th show design for Shivers using KV2 and now represents a history built on success implementing the product. On these repeated specifications, Shivers remarks "I have been a fan of KV2 since I first heard and subsequently specified them on the Stage Entertainment production of Das Wunder Von Bern in 2013. The Point Source design offers precise clarity and musicality that few if any other profession speaker systems currently achieve". It is like using a 'hi-fi reference speaker' for a pro-sound application."

This questioning and re-education of the best approach to modern day system design in theatre sound is one that KV2 users are regularly undergoing, with results confirming that Point Source technology, when executed well, is the superior approach to achieving transparent natural sound. "George has one of the largest anechoic testing chambers in Europe and he is meticulous in ensuring that drivers, horns, cabinets and amplifiers work together to provide a series of speakers which are second to none. I would say it is the attention to meticulous detail which differentiates the KV2 loudspeakers from the rest," adds Patridge, "KV2 speakers are designed as a comprehensive system of custom components, cabinet designs and amplification with a holistic approach. George Krampera Sr. has a long track record as a transducer designer and even his historical designs for manufacturers (such as RCF and B&C) are very much in demand by other loudspeaker manufacturers. When compared to deploying a Line Array system, KV2 offers similar coverage and SPL, but with a greatly reduced physical footprint, weight and cost."

In addition to the flagship New York City production, THE LION KING, is also touring the US with KV2's EX and ESD lines. The Broadway production continues with 8 performances a week to consistently sold out crowds.

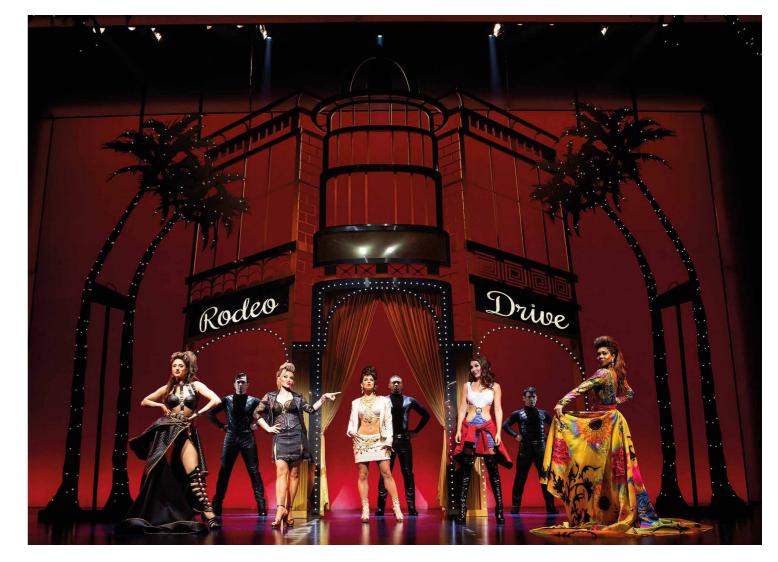
Photo credits: © Joan Marcus

## KV2 Audio system setup

8x ESR215 6x SL412 4x ESR212 28x ESD6 4x ESD10 5x EX6 3x SL3000 6x ESP4000 2x ESR2800 4x ESR3000

Theaters Theaters





Pretty Woman Opens on Broadway to Rave Reviews Powered by KV2 Audio, New York, USA Following a successful limited run world premiere at the Oriental Theatre in Chicago in March and April of 2018, PRETTY WOMAN – THE MUSICAL made its expected move to Broadway in the summer of 2018 enhanced by a comprehensive Point Source audio system from KV2 Audio.

During four weeks of preview performances at the Nederlander Theatre, it became clear Broadway was in for a treat. Even before it's official opening on August 16, 2018, the musical broke the Nederlander Theatre box office record for an eight-performance week.

Based on the 1990 film Pretty Woman, the book for the musical was written by the film's director, the late Garry Marshall, and screenwriter J.F. Lawton. PRETTY WOMAN – THE MUSICAL opened on Broadway in August 2018, directed and choreographed by Jerry Mitchell and featuring an original score with music and lyrics by rock icon Bryan Adams and his songwriting partner Jim Vallance. Orchestration was by Will Van Dyke with sound design by renowned Broadway sound designer, John Shivers, and long-time collaborator, sound designer and audio engineer, David Patridge.

Having used KV2 Audio gear for more than 10 Broadway musicals - including the audio refit of THE LION KING - Shivers and Patridge once again chose KV2 because of the extraordinary high quality, definition, ease of deployment and economy. They specified a system based around KV2s powerful and dynamic SL412 point source speaker system for the center and two actively driven, narrow footprint full range ESR215s at left and right and supplemented by a variety of application-defined loudspeakers from the KV2 portfolio, including the passive ESD Series and the active EX Series.

According to Patridge, "Working in Broadway theatre is always a challenge physically. Locations for speakers are often dictated by architecture such as box seats and sight lines. Fortunately, the narrow width of the ESR215 is a real asset. It has become our go-to loudspeaker for a main system at the proscenium."

Shivers and Patridge also commented on the benefit of Point Source design:

According to Shivers it can be distilled to "Clarity, clarity, clarity. The challenge is always to make it sound good for everyone, from the on-stage performers, to the orchestra, to the audience. As is typical with every design for musicals, the devil is in the details."

Patridge adds, "Clarity and detail of the soundstage is most noticeable. Point source also ends up being more economical and easier to deploy in a theatre environment. Another benefit is the rejection of feedback when forward of the PA as compared to a line array. On PRETTY WOMAN this came in handy because much of the action is staged on a passerelle located where the railing of the orchestra pit would normally be – downstage of the speakers! We find KV2 loudspeakers are closer to working with something hi-fi."

KV2's superior audio has been received well by everyone involved with PRETTY WOMAN – THE MUSICAL. Says Shivers, "We got raves from everyone involved. Everyone from the producers to the director, choreographer, music supervisor, orchestrator/arranger and music contractor has commented on how amazing the system sounds. The smiles on the faces of the patrons and critics confirms it."

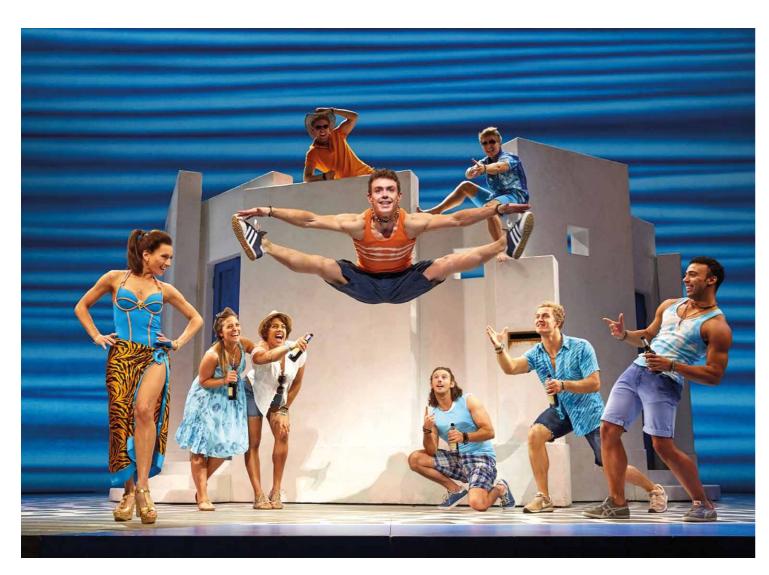
Results from PRETTY WOMAN – THE MUSICAL once again verify that point source technology, when executed well, is the superior approach to achieving transparent natural sound in the theatre environment.

Photo credits: © Matthew Murphy, 2018

### **KV2** Audio system setup

3x ESD36 58x ESD5 9x ESP4000 2x ESR215 2x ESR3000 14x EX6 2x EX10 2x EX15 2x SL412 2x SL412 2x SL3000 4x VHD2.18J 3x VHD3200

Theaters Theaters





Having delighted audiences since its debut in 1999, Mamma Mia! has embarked on its first ever UK tour and it is with great pride that we can report that KV2 Audio loudspeakers have been chosen to replace the outgoing Line Array system for yet another high-profile Theatre production. As part of the Creative team behind the original West End production, renowned Sound Designer Bobby Aitken decided to "Take a Chance on KV..." for the tour.

Bobby's notable West End and Broadway credits include Dirty Dancing, We Will Rock You, Grease and Ghost amongst countless others and he was the Sound Designer for the Opening and Closing Ceremonies of the London 2012 Olympic / Paralympic Games as well as consultant for the Sochi 2014 Winter Olympics and the 2016 Opening Ceremony in Rio.

The Mamma Mia! International Tour has been on the road for almost eleven years. It is an English speaking version and was designed to play territories that could not justify an "own language" production. It has toured very successfully through Europe, Asia and the Far East playing mainly arenas and the larger soft-seat theatres. Last year, the producers decided to bring the package home and to re-format it for a two year U.K. tour. One of the principal areas they looked at changing was the loudspeaker package. The tour takes in a wide range of venues of different sizes and layouts. As such Bobby and the design team needed to come up with an equipment "tool-box" that could handle any eventuality. After evaluating much of the rest of today's Loudspeaker market, Bobby was recommended to audition the KV2 product ranges. Following a critical listening session, Bobby and the team decided unanimously to specify KV2 Audio for Mamma Mia!"

**KV2 Audio system setup** 

4x ESR215 2x ESR3000 4x EX15 2x EX12 2x EX10 6x ESD6

16x ESD5



# "It's often hard to find the vocabulary to express the listening experience... The system sounded sensational — almost too good to believe."

The Mamma Mia! International Tour had always used Line Array, but for some time I had been keen to move away from this technique, as I have become increasingly aware of the compromises. Around this time a well -respected friend of mine invited me to hear a KV2 System that he had specified for a Broadway and West End show. The system sounded sensational - almost too good to believe. Two weeks later we were on a plane to visit KV2 in the Czech Republic and after two days of critical listening to both recorded program and live musicians, we agreed to specify KV2 for Mamma Mia!

It's often hard to find the vocabulary to express the listening experience, however, I would describe the effortless manor in which the sound is developed by the system, even over distance and with a refreshing "airiness" or "openness" about the HF. The room never feels "too loud".

#### **Bobby Aitken**

Sound Designer 43rd Annual Daytime Emmy Awards Winner





KV2 Audio takes audiences to the moon and back with APOLLO 11, Pasadena, CA, US As the world celebrates the 50th anniversary of the moon landing in 1969, a new play endeavours to recreate the thrill of this historic event with a unique, immersive theatrical experience. APOLLO 11 tells the story of the 400,000 men and women who worked to accomplish this extraordinary mission.

Told through the eyes of a retired NASA aerospace engineer as he recounts the story to his teenaged granddaughter, APOLLO 11 is staged in ground-breaking, purpose-built venue that plays host to twenty actors, 40,000 square feet of 360-degree video projection, a life-sized rocket and a powerful KV2 Audio sound system designed by renowned Broadway and West End theatre sound designer, Bobby Aitken, and supplied by Stage Sound Services in Cardiff. The first run has just finished in Pasadena, CA, with the next shows scheduled in Houston, TX in December.

"This was a very interesting production to work on as it shifts in scale enormously from what is a fairly domestic drama where the sound is simply the spoken voice to these massive moments of immersive, 360-degree interstellar projection where all of a sudden the sound is everywhere and all-enveloping," recalls Aitken. "I was charged with System Design as well as the Sound Design. I worked with Fergus O'Hare on the content."

The TiMax spatial reinforcement and tracking system was a key part of Aitken's design and required a lot of work in the programming stage. "Everything came through the console and straight out from the faders into TiMax," explains Aitken. "That gave us 64 outputs for around eighty loudspeakers in total, meaning that a very high percentage of the speakers were independently addressable. That gave us a lot of scope to move sound around the room. Also, all the actors were wearing trackers which enabled us to sort out levels and delay times on an actor-per-actor basis - one of the inherent issues of working in the round is that the cast member speaking inevitably has their back to someone, so there's a lot of correction to do."

Aitken also pointed out that hanging loudspeakers was far from straightforward on this production, which added further complexity to the sound design. "One of the drawbacks of having such a huge amount of projection is that wherever you want to fly a loudspeaker, you're inevitably cutting through a projection cone. We all had to make compromises, but fortunately the projection department has lots of clever ways of mapping their way around obstacles."

So what of the loudspeaker system itself? "I love the sound of KV2 loudspeakers," declares Aitken. "There's nothing they produce that I don't like, so it was an easy choice for me. I made the decision about four years ago that actually, point source systems in many venues makes a lot of sense, and I needed to go back to using point source equipment as much as possible. If I'm using point source, then I'll try to use KV2 because they sound great, and frankly, they represent good value."

For the vocal system, Aitken specified a drop of eight EX26 high intelligibility active speaker systems around the 280-degree playing circle and twenty EX6s cut into the floor to cover the first three rows before the overhead speakers come into play. "Each of these speakers was individually addressable via the TiMax system to enable the actors to be tracked, as the geometry of the space is pretty complicated, and that worked super well." A further 20 EX26s were flown behind the last row as a surround sound system which Aitken used for effects, reverb and a bit of music reverb as well.

The main music system was situated upstage on a walkway above a pair of huge gantry doors that formed part of the set. Aitken chose five wide dispersion, full range ESR212s – the outer pair mounted horizontally due to the architecture of the set, whilst the middle three were mounted vertically. "We didn't have room for the bigger ESR215s which would have been my first choice, but the 212s actually worked really well. Better than I expected, in fact. They had to throw about 60m which is pushing it a bit for that sized box, so we touched in some of the vocal system as well just to brighten things up a bit towards the back and centre of the room. It sounded great."

The 'piece de resistance' was perhaps the system – and the effects – used for the life-sized lunar lander which flies down from the roof amidst much CO2. "We used four EX10s to really localise the sound to the lander, but we also had four of KV2's enormous VHD4.21 subs spaced at intervals under the seating up to about 3m off the ground. I've never used them before, but they are just ridiculous – they're the size of a small car!" Aitken is laughing now: "Honestly, they are just hysterical – we didn't use them that much, but when we did, Jesus, you knew about it...! They were just great, they moved the whole place."

Aitken is thoroughly pleased with the results. "We had a really tight get-in on site, so really, the only way to guarantee that it would go smoothly was to do a technical build to prove the concept first. As all of the creative team and the equipment came from the UK, we did the technical build at Pinewood Studios. Once it had been fully tested, we containered it all up, shipped it to California and then re-built everything at the Rose Bowl in Pasadena. From a technical perspective, this is an amazing show, and I'm delighted to say that it sounded absolutely fantastic. In fact, it sounded a lot better than it should have done given the constraints that were imposed upon us. So yes, I'm pleased, and yes, it's another great show with KV2."

Photo credits: © Jim Cox

**KV2 Audio system setup**28x EX26
20x EX6
2x ESR212
4x EX10
4x VHD4.21

Theaters Theaters





## "Believing that Line Array has to be the Standard in Theatres is a Big Mistake."

"I have to honestly say that after decades of using line array loudspeaker systems — no matter which manufacturer — this was a big mistake in musical theatre. Line Array is almost taken for granted as a solution for sound reinforcement in musical theatre but KV2's point source speakers with their unique sonic qualities and enormous headroom opened my mind again. They put the engineer back to where he belongs in to a listening position to concentrate on making the right adjustments without being distracted by technical aspects of a system."

#### **Andreas Hammerich**

Theatrical Sound Coordinator Stage Entertainment GmbH

## Stage Theater an der Elbe, Hamburg, Germany

KV2 Audio system setup

6x SL412 8x SL215 4x VHD2.21 2x EX12 22x ESD6 12x EX6 4x ESD12 3x SL3000 6x VHD3200 7x ESP2000 2x JK1 A multi-million investment, the Stage Theatre was specially designed and built for Stage Entertainment productions and initially showcased an exciting new show about Germany winning the 1954 World cup, called 'Das Musical WUNDER von BERN'.

Being relatively new to KV2 Audio, multi-award winning sound designers, John Shivers and David Patridge requested a visit to KV2 Audio's Czech Republic facility, where they could conduct a full evaluation of the system being proposed. This included an outdoor demo where they also invited a famous German loudspeaker brand to pitch their own products against KV2. The results were very clear and following discussions and assistance from Andy Austin Brown, John Shivers and David Patridge committed to an imaginative KV2 Audio system built around a wide dispersion Point Source 5-way SL system.

Andy had the following to say about the installation: "I soon realised through my discussions with John and David that this show required a very bold, dynamic and big sounding system. Once again this needed to deliver atmosphere, image and depth along with a true natural focus on the performers throughout the venue at all levels. The main front of house system utilised 'column erect placement' of combined KV2 Audio SL412 and SL215 system enclosures, accompanied by very low frequency VHD2.21 subwoofers. Complemented with a centre SL412, multiple ESD6 and ESD12 inlls and monitors, the system has proved itself to present a vivid realistic performance, whilst creating full coverage and extremely high denition sound throughout the venue".

"It's an outstanding success to have such consistent performance of both systems, in totally different environments with different demands", explained Andreas Hammerich and Michel Weber, Theatrical Sound coordinators for Stage Entertainment, completely validating their decision to apply and use a KV2 Audio point source solution with the technical merits and attributes that such a system brings. On the back of this success a forthcoming third KV2 Audio system is now being specified by Stage Entertainment for a further new show in an established Berlin Theatre over the coming months.





## **West Side Story at** Exchange, Manchester, UK

West Side Story ranks as one of the most popular musicals of all time and continues to delight audiences sixty years after its Broadway debut. Leonard Bernstein's score remains as timeless as ever, and Arthur Laurents' storyline, based on Shakespeare's Romeo and Juliet transposed to gang-ridden 1950's America, also remains hauntingly relevant. However, the production at Manchester's Royal Exchange theatre is the first ever not to feature Jerome Robbins' original choreography, having been adapted for the theatre's in-the-round configuration by Aletta Collins. The re-imagined production – directed by Sarah Frankcom and mixed by associate sound designer, Owen Lewis - has received rave reviews from every quarter and for just about every aspect, including the superb sound which was designed by Richard Brooker

"As a theatre, the Manchester Royal Exchange is brilliant because it's so intimate," says Brooker. "There are 700 seats, but not one is further than 9m away from the stage, so it's a wonderful experience for audiences. However, it's a very challenging venue in which to deliver good sound, especially for a musical, and particularly when the majority of the audience already knows every word and every note of every sonq!" Nevertheless, Brooker clearly got it right as the reviews proved, with his design receiving specific accolades from the Guardian, the Times and Mancunian Matters amongst others. Indeed, the show has proved so popular that, for the first time in over 40 years, it will be coming back for a second run in 2020.

Brooker has been using KV2 Audio loudspeakers almost exclusively since 2013 and had absolutely no hesitation in specifying KV2 for West Side Story. "I simply can't imagine how I could have achieved the same results using anything else," he says, shrugging. "One of the biggest issues in the Royal Exchange is that you're extremely limited as to where you can put speakers, so as a designer it helps to know that the tools at your disposal are the very best and that you're used to using them."

Brooker's design is based on concentric rings of loudspeakers to serve each of the three tiers of seats that are divided into seven separate blocks all the way around the stage. There are fourteen front fills sunk around the edge of the stage floor, while the main vocal system, comprised of seven KV2 Audio EX10 compact, high-output, full range active loudspeakers, is flown in a ring above the stage. 41 vocal delay speakers form part of the concentric rings to supplement the frontfills and main EX10 vocal ring. "The EX10s are phenomenal speakers." declares Brooker. "They deliver unbelievable yocal clarity and a true, natural sound. Combined with the front fill speakers, I can pull the image down to the stage to make it appear as though the sound is coming from the actors rather than the speakers above their heads."

A ring of seven compact, low-profile ESD25s flown above the EX10s serves the upper gallery. "Space restrictions meant that we couldn't put in another ring of EX10s – we had to have something physically smaller, so the low-profile, wide dispersion ESD25s were perfect. They have the same amazing vocal clarity and natural voice as the EX10s, so they are a great extension to the main system in a physically discreet

The band system also acts as foldback on stage and avoids any nasty timing issues we may otherwise have As a complement to the main L/R system, Brooker has also provided for a comprehensive delay system based on the compact EX6 2-way active loudspeaker. "EX6s are just another part of the amazing KV2 Audio toolbox – they deliver fantastic quality and power for such a little box, so they're a perfect delay system for EX10." Brooker specified a total of 16 EX6s across the three levels of seating, supplemented by six widedispersion, under-balcony EX26s for the upper circle. Finally, a pair of EX2.5 dual 15-inch subwoofers flown up in the roof complete the design. "The result is a superbly rounded, powerful yet totally natural

sound that enables the audience to lose themselves completely in the music and the atmosphere. I'm really

In addition to the vocal system, Brooker specified a pair of EX10s in a L/R configuration for the band

inside the theatre itself, but rather in a specially designed sound-proof booth in the foyer equipped

system. Interestingly, due to the in-the-round nature of the venue, the 11-piece orchestra is not located

with a video relay so that the musicians can see the stage and the cast can see the conductor. "The band

the case for the actors, and coming from a specific place, as if the band was in the theatre with the audience.

system is completely separate from the vocal system," he explained. "We went for a L/R configuration as we

decided that we'd like to have the sound of the band coming from somewhere other than the stage as is

Sorcha Steele, head of sound at the Manchester Royal Exchange and associate sound designer, is in full agreement. "Having worked with Richard Brooker on four previous productions here at the Royal Exchange, it's been great to have the opportunity to build on the successes we've had with his system designs and take it another step further. For all but one of the previous shows he had specified KV2 for the band system and we used our in-house system for the vocals, which worked well for us but on this occasion having the opportunity to use KV2 for both the band and vocals was quite exciting and I think it really has taken the sound for the production to another level. In a space that can be very unforgiving with sound, having clarity in the vocals and definition in the music is hugely important, especially with the complex scores of West Side Story. KV2 Audio has been instrumental in being able to deliver that. It sits well in the space, moving between dialogue and musical numbers feels very natural and not overly processed. Overall, I think it has been a huge success and I look

Photo credits: Richard Davenport at The Other Richard

forward to the production returning to us again next year."

proud of what we've all achieved here."

# **Manchester Royal**

20x EX6 7x ESD25 2x EX2.5MkII 2x ESP2000

**KV2** Audio system setup

9x EX10

6x EX26

Theaters **Theaters** 





Andrew Lloyd Webber's record-breaking, award-winning musical Cats has embarked on a large-scale international tour throughout Europe, direct from its sell-out seasons at the London Palladium. Rather than touring traditional theatre venues, the tour takes in significantly larger arenas which typically pose challenges for sound designers wanting to replicate the sonic intricacies and detail expected from such a high-profile production.

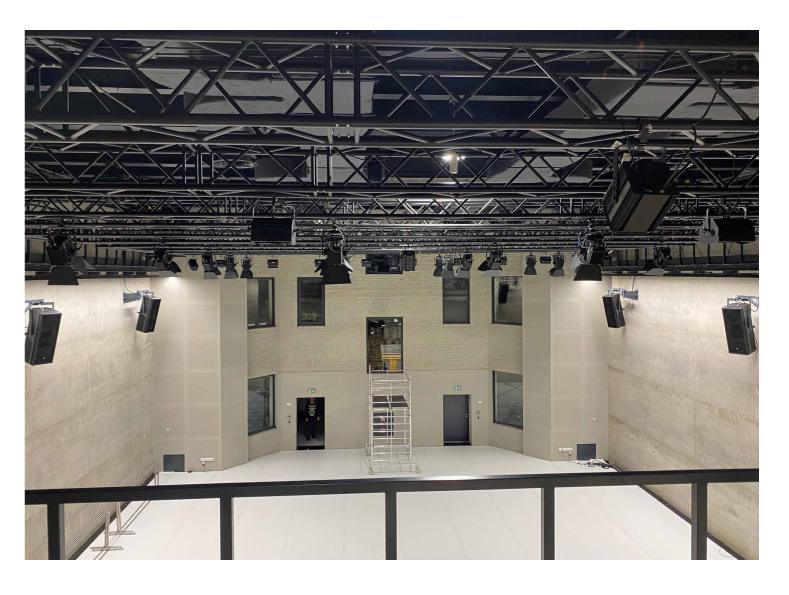
With audio production supplied by Autograph Sound, sound designer Greg Pink had no hesitation in turning to KV2 Audio loudspeakers to fulfil the task in hand. "Having been designing musicals for over 30 years, I have used PAs from many different manufacturers, but it is without doubt that KV2 Audio's range of loudspeakers are second to none!" enthuses Pink. "Whether you are using them in a small theatre or a large arena they handle the job perfectly. We are currently touring a production of Cats around European arenas using a VHD system. The system looks ridiculously small in the venues, but the clarity and coverage are phenomenal. The dynamic range of the system allows us to run the system louder, if needed, without the risk of any distortion. The throw required in these arenas can be up to 100 meters which we easily achieve with just 6 x VHD2.0s and 12 x VHD4.18 subwoofers," he continues. "All VHD2.0s are flown, so for the audience sitting front of stage, consistent coverage is achieved with a just a pair of ESR215s and 4 x EX26s."

Speaking more broadly about KV2, Pink adds, "As a designer, KV2 gives you exactly what you want – clarity at any level, frequency response and even coverage. If KV2 says the box is 110 degrees then it is, without any loss of certain frequencies."

Assuming the role of Head of Sound for the tour is Jens Drieghe who – like an ever-increasing number of audio professionals – has enjoyed similar experiences with KV2 Audio's products in the real world. "I first came into contact with KV2 during a demo at PLASA several years ago and was immediately impressed," he recalls. "The first time I had the pleasure of mixing on a full KV2 rig was during the run of 'Bring It On – The Musical' at the Queen Elizabeth Hall, London where we used a combination of ESR212s with EX6, 10s and 26s as fills. For the 'smaller' shows on Cats we took it a step further by using ESR215s and EX15 as main PA with SL412, ESD25, EX6, 12 and 26s as centre fill, delays and fills complemented by EX1.8 and VHD2.18J subs and then the VHD2.0 system for the arena leg of the tour."

Drieghe is particularly struck by the quality of reproduction and the intelligibility of KV2 systems: "From the moment you switch on a KV2 system and play some music you know you are dealing with something special," he notes. "I can make sure that every word of the show can be clearly heard in every seat in the auditorium, even in massive arenas, where a band can sound intimate and distant in one moment and instantly switch to in-your-face rock n' roll the next, without ever losing detail. It's so clean that you can pick up individual voices even during big ensemble songs, and the slightest fader move is audible on a KV2 rig which lets me put a lot of detail in my mixes."

**KV2 Audio system setup**6x VHD2.0
12x VHD4.18



## Polish Dance Theatre Poznań, Poland

Polski Teatr Tańca, or Polish Dance Theatre, is an interdisciplinary dance company formed in 1973. While the company owns a rehearsal studio in Poznań in western Poland, it has never had its own performance space – until now. The curtain is about to go up on a brand new theatre in the historic centre of Poznań, complete with a carefully designed KV2 Audio sound system.

KV2 Audio were brought in by their Polish distributor, Arcade Audio, to design an appropriate system following recommendation from Pawel Szulc of Music Store, whom the management had contacted for advice on the best audio solution. Arcade Audio called on KV2's Technical Projects Director, Andy Austin-Brown, to start working on the sound system design. Andy takes up the story: "The requirement was for a totally flexible and switchable system capable of delivering high fidelity sound everywhere and anywhere throughout the room," recalls Austin-Brown. "As a dance performance venue, the emphasis was more on high definition output even at low levels rather than high output, extended low frequency performance. This made our ESR212 3-way, full range units a good choice as they are capable of producing the accurate, full-range sound required without the need for subs and without losing imaging or atmosphere and perspective, even at lower levels. ESR Series is a proven choice in theatre environments for all of these reasons, and even though the application at the Polish Dance Theatre is not a conventional theatre system with a fixed stage and tiered seating, the same criteria of accurate, detailed output still apply."

Austin-Brown decided to keep things simple with as few points of source as possible within the performance environment. The aim was to cut down on potential interaction and time arrival issues as well as minimising any acoustical excitement concerns with the reverberation times, particularly with so much bare concrete around. Once the positioning of the loudspeakers had been determined, it became clear that bespoke brackets would be required to allow the speakers to be swung out from the walls beyond any wall drapes used to define the performance area or as part of the set design. The brackets were designed and manufactured in house. The system is fully controlled via KV2's dedicated ESR2800 amplifier controllers ensuring optimum performance at all levels. Matrix switching, muting and combining is handled by the FoH mixer. "The Polish Dance Theatre now has a flexible, high quality performance system that is completely configurable according to the requirements of the production," concludes Austin-Brown. "The ESR units may be used in any combination and, thanks to the custom brackets, positioned at will for maximum versatility. The whole system is easy to control and operate and the design allows for any updating or upscaling that may be required, making it fully future proof. In short, it's a simple, professional system that meets all of the client's requirements."

KV2 Audio system setup
6x ESR212
3x ESR2800
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that

Director of Polish Dance Theatre Iwona Pasińska is thrilled with the results. "We're grateful to Pawel at Music Store for recommending KV2 who were thoroughly professional and delivered excellent service. Music Store themselves did a great job of the installation, completing the entire project in just two weeks. We're delighted that our audiences will benefit from the highest quality audio from a world class manufacturer, and we can't wait to welcome the public to our new home."

Theaters Theaters





Grand old theatre from the late 20's, owned at one stage by the famous and eccentric billionaire, Howard Hughes. It was saved from demolition and decline in the late 90's by debonair and svelte actor, Ricardo Montalbán well known for Fantasy Island, Wrath of Khan, and numerous other roles that filled both our

When The Montalbán decided to invest in a new audio system the management wanted one that would satisfy the highest expectations of the most critical audiences. The Montalbán is used for a very wide range of productions, from spoken word, plays, conferences, film festivals, film shoots, and photo shoots to full blown music concerts. The need for a robust, powerful system that could be utilized for such a diverse range of applications was a key requirement in the specification. They looked towards KV2 Audio due to the number of recommendations he received about the brand when searching for a high quality and affordable system. Theatre Manager, Gilbert Smith said:

"The decision to invest in KV2 Audio was based around the comments word of mouth and growing respect for the brand that I continue to see and hear, first hand from engineers, performers and listeners alike".

The Montalbán system consists of four ESR215 full range column speakers and eight ES2.6 Subwoofers, four mounted centrally close to the ceiling just in front of the stage and two on the floor on each side of the stage. ESD36s were utilized for under balcony infill, and ESD15s for the upper balcony coverage. ESM12s and ESM26s were also utilized for stage monitoring. All control, alignment and amplification was done via KV2 Audio SAC2 controllers, SDD3 delay lines, Compex dynamic control and ESR3000, VHD3200 and ESP2000 amplifiers.

**KV2 Audio system setup** 4x ESR215 8x ES2.6 6x ESD36 2x ESD15 4x ESM12 4x ESM26 2x SAC2 2x SDD3 2x ESR3000 3x VHD3200 2x ESP2000



## **Princess Alexandra** Auditorium, Yarm School,

The Princess Alexandra Auditorium is a stunning 750-seat performance venue based on the banks of the River Tees at Yarm School. The final piece of the jigsaw was to upgrade the sound system to one that matches the quality of the Civic Trust Award and RIBA Award winning auditorium.

The space is fully flexible with tiered retractable seating and hosts an incredibly varied and versatile program of material - from school productions and lectures to touring bands and some of countries best known comedians. The existing system was struggling to put across the clarity and detail needed for such work and the decision to audition a variety of loudspeaker brands was taken.

The unique space - described by the press as "... Sydney Opera House, Gateshead's Sage and a bit Starship Enterprise..." - is a very wide auditorium that can be configured in many ways and the new system needed to offer full coverage, high SPL and clarity throughout whilst also being sensitive to sightlines.

Steering away from the existing distributed speaker concept KV2 were brought in by Richmond based audio suppliers Sound Hire to show what could be achieved by a more simplified Left Right Point Source approach. Whilst other systems would struggle to tackle such a space with just a single mid/hi and sub per side KV2's now legendary ES System did just that.

Dan Brookes, Princess Alexandra Theatre Auditorium Manager picks up the story. "We looked at a number of different systems for the auditorium and KV2 were head and shoulders above the rest in terms of clarity and overall sound. The system really allows the nuances of the music and vocal work we do at the school to stand out and take centre stage." Speaking of the decision to bring in KV2, Sound Hire's Joe Mitchell comments." I was approached by Dan to give my thoughts on a new system for Yarm School's Princess Alexandra Auditorium. Having already achieved amazing results with KV2 in both fixed install projects and events courtesy of my own hire stock of KV2 products I had no hesitation in recommending KV2. KV2 brought in a single ES System with just ES1.0 and ES2.5 per side with their bespoke EPAK2500 amplifiers and all agreed that this was the ultimate choice for this venue."

To say the system has impressed since its install is an understatement with Dan, Joe and School Headmaster David Dunn effusive in their praise. "We have had some wonderful feedback on the system from both parents and visiting artists alike. We now have a system that matches the quality of our venue." Says Dan. Headmaster David Dunn comments, "We are delighted that we invested in the KV2 system. Since the system has been installed we have held a wide range of events, from School concerts to high-profile comedians and the sound quality is excellent!" Joe from Sound Hire even goes as far as stating, "Now it's been installed I have to say that without exception it's the finest sounding loudspeaker system I've heard in my 25 years in

## **KV2 Audio system setup**

Main System: 2x ES1.0 2x ES2.5 2x EPAK2500R Delay / Portable speakers: 2x ESD5 2x ESD25 2x ESD6

Theaters Theaters





## Amnesia Club, Ibiza, Spain

**KV2 Audio system setup** 

9x SL412
5x SL3000
4x VHD8.10
19x VHD2.18J
12x VHD3200
4x ESM312
4x ESP2000
10x EX15
10x ESD12
2x ESD10
2x ESR212
1x ESR2800
2x ES1.0
4x ES1.8

2x EPAK2500R

Amnesia is the home of music lovers all over the world and perhaps Ibiza's most iconic club with a global reputation to match. First opened in 1974, Amnesia has become a leading light in one of the club scene's key locations and is home to some of the best-known electronic music artists from around the world. After lying dormant for two years, the venue opened to a packed-out night in late May, which ran for an impressive 18 hours. Amnesia favourites such as Mar-T and Jamie Jones were in attendance, as were the club's famed dancers, decked out in shiny metallic gear. The night was made even more special as it was also the inauguration of the brand new KV2 sound system in the Main Room – a much-anticipated event since KV2 was installed in the Terrace in 2019, taking the Amnesia sound experience to another level. According to Amnesia's artistic director and long-term resident, Martin Vega, aka Mar-T, there was never any doubt that the main room would eventually upgrade to KV2. "Like the Terrace, the system in the Main Room had been custom-built for us and served us well for over a decade. However, when we moved the Terrace to a KV2 system in 2019, we were blown away by the difference. Technology has changed and it was time for us to change too. We'd have renewed the system in the Main Room earlier, but the pandemic got in the way. However, it gave us the time to do things properly and now we're back with a vengeance and loving it!" The brief was simple – to deliver the same audio experience in the Main Room as for the Terrace – in short, the best club sound on the island. The system was designed by Stefano Trevisan from PLUSMUSIC INTERNATIONAL, a multinational sales and consultancy firm that specializes in event venue development though AV technologies. With headquarters in Switzerland and operations in Ibiza and the United States, PLUSMUSIC has a portfolio of world-renowned nightclubs, event venues and production partners to its name that made them a natural partner for the project.

The system is based around nine of KV2's ultra-slim, wide dispersion, 3-way active SL412s coupled with four VHD8.10 low mid modules and no fewer than nineteen VHD2.18J subs from the company's flagship VHD range for the main dancefloor area. A variety of EX15s, ESD10s and ESD12s act as fills for the balcony and VIP areas. "Our aim was to deliver the best possible sound throughout the venue, and especially on the dancefloor, projecting a strong bass presence where it is needed most," explains Trevisan. "For the rest, the watchwords were unrestrained clarity, flexibility, and power. I think we have achieved that."

KV2's unique SLA technology delivers unprecedented levels of dynamic range, ultra-low distortion, extreme clarity and, crucially, unparalleled definition over distance thanks to the use of hybrid electronics matched to each of the fastest and lowest distortion transducers available today, and digital electronics with the highest sampling rate ever used in a professional loudspeaker system.

Amnesia's regular and resident DJs have noticed the difference. Marco Farone has played the club more

Amnesia's regular and resident DJs have noticed the difference. Marco Farone has played the club more than most this summer, and he says, "One of the most important updates Amnesia did this year is the sound system. Both rooms are now sounding incredible - warm and dynamic. I was really surprised by the sound in the Main Room; it's now one the best sound systems I've played on so far."

CAAL is also a regular at the club, and he adds, "This is the perfect sound system for our Main Room. I love to be able to listen to music in its purest state, from low to high frequencies, without any processes altering the sound. That is exactly what KV2 delivers."

# "KV2 was the best option for us, it's the only professional sound system that's still analogue and the sound on the Terrace and in the Main Room is perfect."

"Like the Terrace, the system in the Main Room had been custom-built for us and served us well for over a decade. However, when we moved the Terrace to a KV2 system in 2019, we were blown away by the difference. Technology has changed and it was time for us to change too. We'd have renewed the system in the Main Room earlier, but the pandemic got in the way. However, it gave us the time to do things properly and now we're back with a vengeance and loving it!"

#### Mar-t

Amnesia's Artistic Director, Dj, Producer

Clubs



"After 20 years at Amnesia, I can now say we have a loud and clear sound system at the Terrace."

**Ricardo Villalobos** Dj, Producer



"The KV2 sound system at Amnesia's Terrace is one of the best I've heard so far. It's clarity and sound is incredible. A perfect combination."

**Hector, Vatos Locos** Dj, Producer



"Sound is one of the key elements in a club. It allows you to feel the music, a tool to reflect art and expression. For me, it's important to have a system that can translate those feelings in the best possible way. I think Amnesia's Terrace totally achieves that through its KV2 sound system."

**Luciano** *Dj, Producer* 



"KV2 has been a great improvement for Amnesia's Terrace. A perfect sound with all musical nuances."

**Cuartero** *Di, Producer* 



"KV2 is, without a doubt, one of the best and most innovative sound systems that I have worked with. It preserves sound quality without compromising musical nuances. It's a pleasure playing with such frequency precision."

Hector Couto Dj, Producer



"One of the most important updates Amnesia did this year is the sound system. Both rooms are now sounding incredible - warm and dynamic. I was really surprised by the sound in the Main Room; it's now one the best sound systems I've played on so far."

**Marco Faraone** Di, Producer



"The perfect sound system for our Terrace. I love to be able to listen to music in its purest state, from low to high frequencies, without any processes altering the sound. That is exactly what KV2 is."

**Caal** Dj, Producer







## The Avant Gardner, New York, US

**KV2 Audio system setup** 

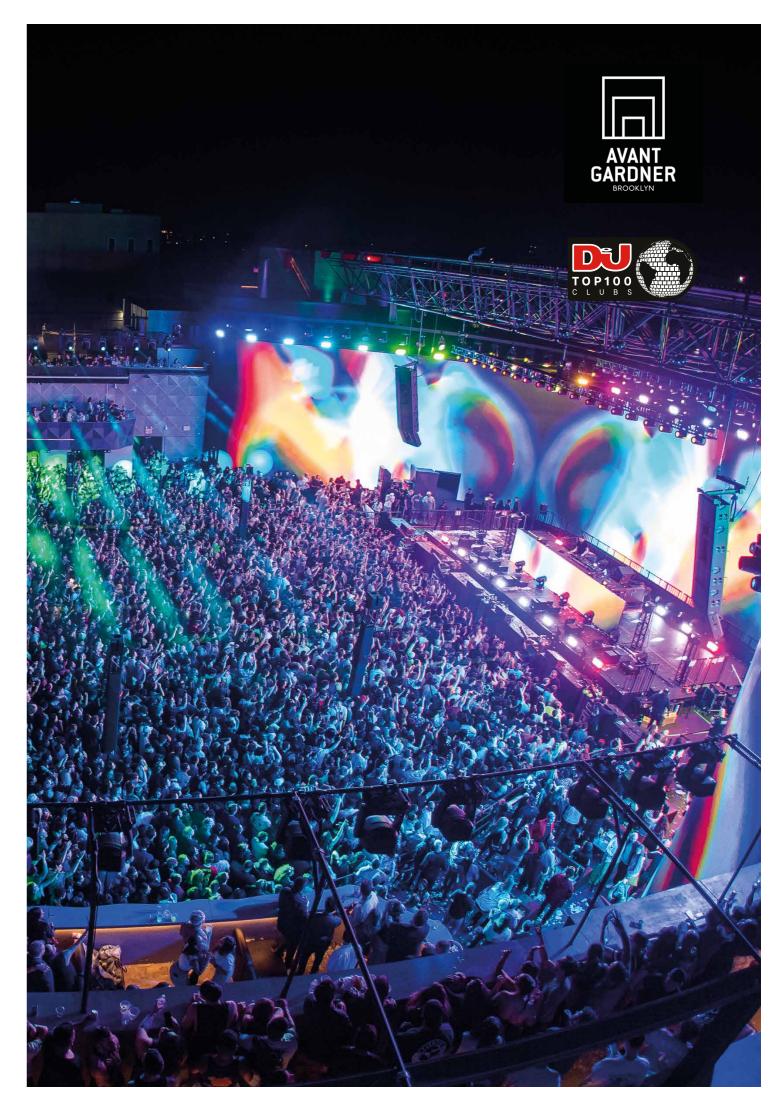
4x VHD5.0 2x VHD5.1 1x VHD5100 6x VHD8.10 6x VHD4.21 40x VHD4.18 10x VHD5000 2x VHD5000 2x VHD5000s 2x SL412 1x SL3000 6x ESD10 4x SAC2 5x SDD3

> 6x SD8 4x LD4 3x LD4 mix

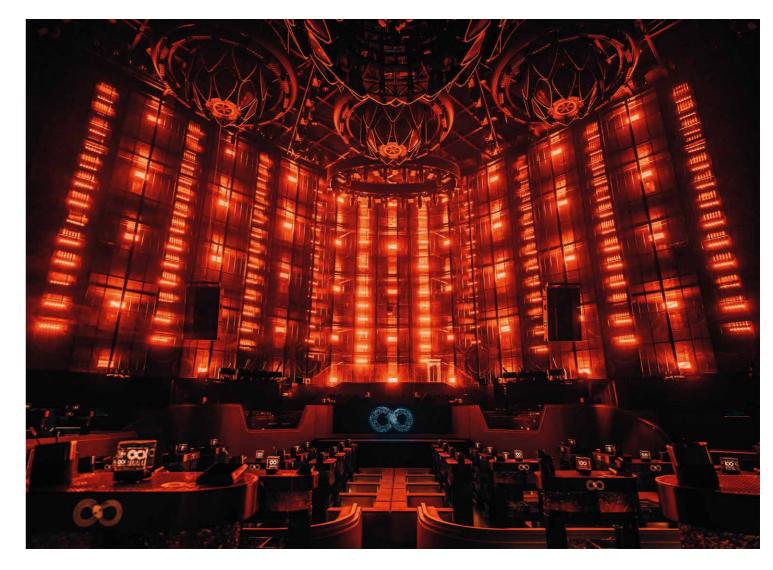
The Avant Gardner complex is New York's most gargantuan dance music venue and as expected, it hosts a line-up of artists to match. Located deep in the industrial heart of East Williamsburg, its triad of indoor and outdoor spaces the 5,000 capacity outdoor Brooklyn Mirage, the warehouse like Great Hall and the relatively intimate Kings Hall have seen Charlotte de Witte, Above & Beyond, The Martinez Brothers, ZEDD, David Guetta, Black Coffee and in house party throwers The Cityfox Experience, among others, work their magic in recent months. The space's array of upcoming guests, meanwhile, takes in the wide ranging likes of Tiësto, Derrick Carter, UNIIQU3, Toro y Moi, Denis Sulta and The Chainsmokers.

But the space is as much a total experience as it is a place to check out DJs and performers, an experience that's enhanced by the recent addition of a 200 by 30 foot video wall (reportedly the largest of its kind in North America), along with a custom built KV2 Audio soundsystem, supplied entirely by Plusmusic US. Inc. and designed by Stefano Trevisan of Plusmusic International. With expanded food and drink offerings, renovated mezzanine and balcony levels, an upgraded main stage and other recent revamps, it's no shock that it snagged the top spot as Best Large Club 2023 DJ Mag Best of North America awards.

Its total capacity of roughly 6,000 people in the heart of an industrial neighborhood in Brooklyn lags only behind arenas and stadiums like Madison Square Garden and Barclays Center in terms of size. The complex boasts three separate concert spaces: the Brooklyn Mirage, the Great Hall and Kings Hall.







## TAXX II Shanghai, China

The original TAXX club in Shanghai was one of the city's largest clubs, boasting over 3000 sqm of partying space over two floors. KV2's Chinese distributor, AVMedia based in Guangzhou City, designed and installed a state-of-the-art KV2 Audio system based on the powerful VHD2.0 long throw system supplemented by SL412s and several ESD12s. From the day it opened, TAXX established itself as one of Shanghai's hottest venues with a record-breaking monthly turnover. It therefore comes as no surprise that the TAXX investment team decided to open a second venue – this time even bigger and demanding an even more powerful system. Having decided to stick with a winning formula, the investment team opted once again for a KV2 system, this time for the company's flagship VHD5 – the first installation of its kind in China.

TAXX II, with a capacity of 1000 people, is a club designed to push the boundaries at every level, offering 5D sound and light experiences to create a transforming sensory world. A 'super-dimensioned' panoramic DJ station that stretches for 30m, occupying the full length of the room redefines the DJ/crowd experience, made even more intense by the unrivalled KV2 sound quality.

With the aim of creating the best nightclub experience in Shanghai, investors spared no expense in investing in KV2's flagship VHD5 constant power point source array system designed to cover massive crowds with ultra-high definition, high energy audio. The system comprises a L/R system of one VHD5.0 mid/hi element and two VHD8.10 low/mid elements per side powered and controlled by a pair of VHD5000 units for the mid/highs and a further two VHD5000s units for the low/mids. Fourteen ESD12 (known as TIME12T in China) 2-way full range loudspeakers act as a fill system for the numerous private booths and VIP areas.

AVMedia's Mr Tony who specified the initial system at TAXX is proud to see China's first VHD5 system installed into TAXX II. "The investors' vision was to bring the atmosphere of an outdoor festival indoors – and what better way to do that than with a VHD5 system," he says. "They loved the sound of the first club with VHD2.0 and had even greater ambitions for the second venue. The clarity and definition of KV2 systems is legendary, and the VHD5 is, in my opinion, the best sounding large format point source system in the world. The investors, club-goers and DJs alike are all thrilled with the results. TAXX is a pioneering club at every level – it has the most highly specified hardware configuration in Shanghai and is undoubtedly one of the world's best-sounding large clubs with an unprecedented customer experience."

**KV2 Audio system setup** 2x VHD5.0

4x VHD8.10 2x VHD5000 2x VHD5000s 14x ESD12 (TIME12T)

## FOREVER Club, Wuhan, China

A spectacular opening night in November heralded the launch of the FOREVER Club in Wuhan, China's biggest nightclub project in 2022. Situated in the Xintiandi business district of Wuhan, FOREVER uses fashion, art and music to create a new entertainment landmark. In keeping with the rest of the ultra-high-class décor and astonishing ceiling creations, FOREVER has also invested in a state-of-the-art audio system, the flagship VHD5 from KV2 Audio. This marks the second VHD5 installation in a Chinese nightclub, the first being at TAXX II in Shanghai in 2021.

Financed by Chinese entertainment giant, Noah's Ark Group, FOREVER Wuhan is a 5,000-square-meter venue consisting of three main areas: the principal 2000-capacity 'House Style' hall, a smaller 'HipHop' area, and several private KTV rooms. The main hall contains some breath-taking trussing structures, sophisticated lighting and 3D effects as well as the ultra-powerful KV2 VHD5 system which was specified, designed and installed by Guangzhou Idee International Sound System Co., Ltd. (IDEE) part of KV2's Chinese distributor AVMedia.

"As with everything else in the FOREVER club, the investors wanted a sound system that was out of the ordinary – something that would create an experience never to be forgotten," says AVMedia's Mr Tony. "Noah's Ark were already familiar with KV2 as they'd previously replaced systems from other extremely well-known audio brands with KV2 in five of their other nightspots around China, as the other systems simply didn't live up to their expectations. When I suggested the flagship VHD5 for FOREVER, they didn't hesitate."

Mr Tony specified a L/R system comprising a VHD5.0 mid/hi and a VHD8.10 low/mid element per side with two VHD2.0 frontfills. 16 x ESD12 2-way full range loudspeakers (known as TIME12 in China) act as a fill system for the numerous private booths and VIP areas, while 50 x ESD1.18 subwoofers provide powerful sub bass reinforcement. 24 of the 50 subwoofers cover the 16m in front of the DJ booth, with eight subs built into the front of the booth itself and eight subs flown per side. The remaining 26 units are built into seating booths distributed across the back of the room. Power, processing and control for the VHD systems are supplied by dedicated VHD power units, VHD5000, VHD5000S and VHD2000 respectively. Finally, a pair of powerful ESM312 monitors act as DJ monitors.

Audio for the (much) smaller HipHop room – just 150 capacity – is provided by a pair of ESM312s, a pair of TIME12s and twelve ESD1.18 subs.

"What never fails to impress with KV2, and in particular the VHD systems, is the ability to cover such vast areas with so few boxes, yet the clarity and precision wherever you are in the room is simply unrivalled," enthuses Mr Tony. "FOREVER aims to impress at every level – visually, aesthetically, and sonically – it is certainly right up there with TAXX II as one of the world's superclubs. We're very proud to be part of the FOREVER experience."

### KV2 Audio system setup

2x VHD5.0 2x VHD8.10 2x VHD5000 2x VHD5000S 2x VHD2.0 2x VHD2000 4x ESM312 18x TIME12 62x ESD1.18

Clubs





Award-winning Australian electronic dance music combo RÜFÜS DU SOL is currently in the midst of a world tour that has taken them throughout Europe before heading over to the US and terminating in Australia (via New Zealand) at the end of the year. The group has enjoyed huge success in their native Australia and has since relocated to Los Angeles to further their international reputation – clearly now well established as the band has just received a 2022 Grammy Award for Best Dance Recording for 'Alive', the lead single from their fourth studio album, 'Surrender'. As part of their European tour, the trio recently played a sold-out gig in Prague at the 3,000-capacity Forum Karlin using KV2's flagship VHD5 system.

RÜFÜS DU SOL's relationship with KV2 began in earnest last year in early 2021 when KV2's technical support director for the APAC region, Angus Davidson – himself a highly respected FoH engineer – met Cam Trewin, a Melbourne-based studio and live sound engineer. "Cam had recorded a live set with RÜFÜS DU SOL at The Joshua Tree in the Mojave Desert which had been mixed in Dolby Atmos for the video in Los Angeles," explains Davidson. "I told him about Red Road Immersive, the Dolby Atmos studio I had built during lockdown. He then talked to the band and they decided to remix the live set at Red Road for release on Apple Music."

The studio is based around 14x KV2 EX Series speakers and is the first studio in APAC to be certified by Dolby. Trewin was extremely impressed with the sound of the KV2 9.1.4 Dolby Atmos system, as was Dale Becker from Becker Mastering in LA, who commented, "Wow, friend, you do quite the incredible work. This translates to my room perfectly. I'm so impressed!" The live set made it to Number 3 on the Apple Spatial Hits playlist and is still up there over a year later.

Fast forward to August 2022 and RÜFÜS DU SOL are in Prague as part of their European tour. The opportunity arises for the band to use KV2's flagship VHD5 system, and thanks to Trewin's extremely positive experience with KV2 products at Red Road Immersive and then at the legendary New York club, Avant Gardner, he jumps at the chance. "RÜFÜS played the Cityfox Odyssey over New Year's Eve at Avant Gardner this year, and they loved it," remarks Davidson. "Avant Gardner is one of our biggest VHD5 installations to date and sounds amazing. Cam was delighted to be able to use one in Prague."

In conjunction with UK-based production company, Production Value, who was responsible for the European leg of the tour, KV2 supplied a VHD5 system for main left and right, plus 16x VHD4.21 subwoofers combined with 4x VHD2.18J subwoofers in a cardioid configuration. 4x EX26 provided front fill. "It was great to hear the VHD5 system stretch its legs on the RÜFÜS DU SOL gig – for me it really confirmed its standing as the best large format point source system on the planet," says Davidson.

Cam Trewin was just as enthusiastic: "I was very impressed with the power output of the VHD5 system for a show like RÜFÜS DU SOL which demands clean undistorted sound with powerful bottom-end."



## Czechoslovakia **Got Talent,** Slovakia

**KV2 Audio system setup** 

2x VHD2.0

2x VHD1.0

4x VHD2.16

2x VHD2000

2x VHD3200

1x VHD4.21

The hugely successful global TV format "Got Talent" has seen the Czech Republic and Slovakia reuniting as one nation in the regions adaptation of the show since 2010. For the very first time the current series is now benefiting from powerful audio reinforcement provided by local Czech-based manufacturers KV2 Audio. Prolight + Sound 2014 saw Czechoslovakia's Got Talent's Main Sound Engineer Alex Molcanov witness a live demonstration of KV2 Audio's large format True Point Source VHD System.

"I remember the exact moment when the VHD System took over the stage. I was just blown away and staring at such a compact box with so much power and clarity", Alex remembers fondly. "We have been shooting Czechoslovakia's Got Talent for a number of years and have always used a Line Array solution for the main PA and a separate set of smaller boxes for the judge's speeches". "I went back and persuaded my partner and Producer of the show Jeffo Minařík to come to Prolight + Sound 2015 to have a listen. Although Jeffo has always been more concerned about the production and artistic aspects of the show - leaving me to take care of the sound - he felt the difference immediately as well. After that there was no going back, we both fell in love with KV2!"

Like every new KV2 user the pair were amazed by the ease and speed of set-up, clarity and intelligibility delivered to every corner of the venue. "The principal requirement in Got Talent is to transfer emotions from the stage to the audience in the studio. Only then can you create intense interaction which is so essential in audio post-production so you can pass these emotions and feelings to the viewers at home", Jeff Minarik

The venue for the show is equipped with a flown VHD System comprising one VHD2.0 mid/hi and dedicated VHD1.0 down-fill enclosure complimented by two VHD2.16 subwoofers per side with dedicated VHD2000 and VHD3200 amplification and control units. In addition to this the recently released VHD4.21 Subwoofer System featuring one active 2x21" subwoofer powering a second passive enclosure was deployed for added low frequency reinforcement.

As well as the simple set-up and ease-of-operation there is another benefit that Alex loves about his new system. "In previous years I had to use a completely separate smaller speaker system for the judges comments. With KV2's VHD System System all I do is just lower the main PA and because of the unbelievable intelligibility the audience can clearly understand every word they say. This also guarantees perfect intelligibility of the judges speeches in post-production due to the very low level of unwanted room reflections recorded in the judges mics. The positive feedback and acclaim is not only received from audience members but the cast and crew are always highlighting the clarity and resolution achieved."

### **KV2** Audio system setup

2x VHD5.0 6x VHD8.10 2x VHD5.1 16x VHD4.21 4x VHD2.18J 4x EX26 2x VHD5000 2x VHD5000S 2x VHD5100 2x VHD3200

and the even coverage and clarity in the top-end. The subs had great low information and response, especially

**Live Events Live Events** 



## "VHD5 changes the game. I didn't expect that something like that can be done."

"VHD5 was maybe the biggest surprise for me in the last 10 years. For a long time, the result of Point Source vs Line Array comparisons seemed to be clear. VHD5 changes the game. It delivers by volume the same as an 6 - 9 top 12" based line array. But with the quality of point source sound, I didn't expect that something like that can be done. Until I heard it with my own hi resolution sound files and a live band on faders. That was simply amazing and I haven't heard something better in that size."

### **Johannes Krämer**

Sound Engineer Time Warp

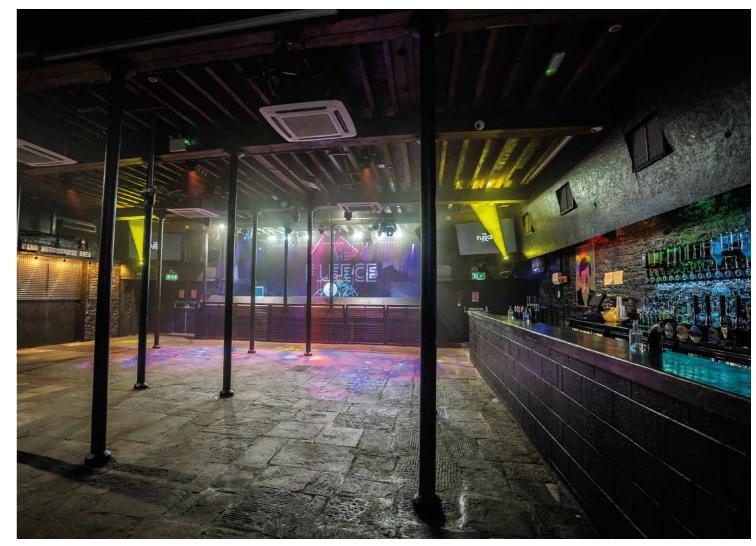
## "The monitors and the front of house KV2 speakers have taken my studio stage to the next level!"

"The KV2 DI's made my instruments sound richer than ever before. My keyboards sound so full that I feel like they've took on a whole new life now! The monitors and the front of house KV2 speakers have taken my studio stage to the next level. With the clientele that I have there often (Foo Fighters, Hollywood Vampires, The Wallflowers, etc.), I finally have the sound they deserve!"

#### Rami Jaffee

Studio Owner, Producer, Keyboardist (Fonogenic Studios, Foo Fighters, The Wallflowers)





## Kaufleuten Klub, Zürich, Switzerland

On 1 April 1915, the commercial school and offices of the Swiss Commercial Association moved into its new building on Pelikan Street. This new building featured an auditorium designed for 850 guests with a ground floor restaurant/student canteen and basement housing a gym and two-lane bowling alley.

In the nineties the historic building became the new meeting place of the city of Zurich. With its imposing Club hall, extravagant courtyard, stylish ballroom and the elegant restaurant, Kaufleuten remains amongst the most popular meeting places in Zurich. The historic building on Pelikan Place is considered an attraction in urban Zurich and a symbol of cosmopolitanism.

For this year's Street Parade on August 12, 2017 a brand new KV2 audio system was designed and set up by Stefano Trevisan of Plusmusic International and supplied by Plusmusic AG. Since then the Kaufleuten Klub has played host to high profile international DJs such as Jamie Jones, Andrea Oliva, Mousse T, Deborah de Luca, Butch, Magdalena, Joey Negro and Karmon to name a few – all playing through products from KV2 Audio's SL, VHD, ESR and EX ranges.

Events such as Disco Party, Kaufhouse, Glitterbox, Sanapa and Wave cover a wide range of different of genres

## KV2 Audio system setup

4x SL412 6x VHD8.10 10x VHD2.18J 2x SL3000 8x VHD3200 2x SL412 1x SL3000 4x ESR212 2x ESR2800 2x EX15 2x VHD2.18J 1x VHD3200

## The Fleece, Bristol, UK

Housed in a former sheep-trading market, now a grade II listed building, The Fleece is Bristol's largest independent music venue and has welcomed the likes of Radiohead, Oasis, Muse, Jeff Buckley, Coldplay, Sea Girls, Amy Winehouse, Frank Carter & Rattlesnakes, Queens Of The Stone Age, George Ezra and Ed Sheeran to name but a few. When the Covid-19 pandemic forced The Fleece into temporary closure, it presented a rare opportunity for a complete refurbishment – one that the management seized with both hands. The Fleece has been offering live music and club nights seven nights a week since 1982 – little wonder then, that the facilities, including the PA system, were due for an upgrade. The ambitious project comprised a full interior redesign including a new, larger stage with new LED screens, new lighting systems and a comprehensive KV2 sound system. Technical manager Rich Munday explains that the previous PA had been in place and working hard for twenty years, so was well overdue for an upgrade. "The enforced closure induced by the Covid-19 pandemic was the ideal opportunity for us to refurbish from top to bottom," he says. "I'd first heard the KV2 PA in action at a demo at PLASA 2019. The sound was head and shoulders above everything else I'd heard, and I made a mental note that if the opportunity to get a new PA for the Fleece ever arose, this is what I'd recommend!"

Munday was also keen to differentiate The Fleece from other venues in Bristol. "I felt that if we wanted to be better, we have to be different. Where other venues have opted for line arrays, I actively prefer a point source system – with its well-defined high end, it's more immediate and packs a lot more punch in my opinion." After consultation with the team at KV2, Munday opted for a pair of VHD2.0 3-way mid/hi cabinets supplemented by eight VHD4.18 passive 18' subwoofers and a pair of EX12 infills. "I'd already created a digital 3D model of the venue as a blueprint for the refit so, once we had a specific KV2 solution in mind, I was able to add that into the virtual model to check the exact fit and audio coverage requirements," he explains. "During our onsite testing, the KV2's sheer power literally shook the dust from the rafters, and its hi-fi quality sound showed up the limitations of mp3 like no system I've ever heard."

"We've been using the KV2 PA for 7 months now and have no doubts that we made the right decision," continues Munday. "It's incredibly detailed at all volumes and hugely powerful, with an extraordinary amount of headroom. It effortlessly handles everything from whisper-quiet spoken word to the most extreme death metal show! The soundstage is also remarkable. The sound is just there across the whole stage, coming from the performers, not the PA. Finally, the feedback rejection and stability are excellent - a major plus for a live system." Munday notes that reactions to the system, both from visiting engineers and audiences, have been nothing but positive. "When guest engineers arrive with touring bands, the sound check is usually the first time they've used a KV2 system and they've universally praised it. There's an enormous grin that appears as soon as they unleash the KV2's sheer power and experience the hi-fi quality - at that point, we know they're sold on it!"

"Any audience coverage issues with our old PA have been resolved by the KV2 system, particularly at the front of the audience. Vocals are clear and legible throughout the auditorium, yet the compact form factor of the loudspeaker systems means that the PA doesn't dominate the performance space. Feedback from audiences has been very positive - they definitely notice the difference and love the immersive experience. We couldn't have made a better choice!"

## **KV2 Audio system setup** 2x VHD2.0

8x VHD4.18 2x VHD2000 2x VHD3200 2x EX12 2x EX15

Clubs Clubs





Loudspeaker manufacturer KV2 Audio has been working with recently appointed Korean distributor, Daon SD, to establish the brand in the Korean market. Based in the Korean capital of Seoul, Daon SD distributes a number of well-known audio brands in both the commercial AV and live entertainment sectors and supports its customers at every stage of their project, from system design through to production, installation, logistics, technical support and financing. KV2 is a welcome addition to the portfolio, offering high quality audio solutions to a variety of applications.

Daon SD has deployed KV2 systems on a large number of events, including the reality TV singing competition, Mr. Trot, currently the highest-rated show ever in the history of cable television in South Korea. "This was a great showcase for us and KV2" says Koo. "Over the course of six recordings, we were able to experiment with different configurations as production requirements evolved. We and the whole of the production team were blown away by the results. One configuration comprised a main system of two VHD2.0 with four VHD2.16 and four VHD4.18 subs with ESM26 stage monitors, whilst on another occasion we used four ES1.0 systems for mains supplemented with four ES2.5 subs. In both cases we had four ESM26 monitors on stage plus two EX10s in the video production area and an EX6 as control booth monitor."

After the finals of Mr. Trot, the winners went on to perform alongside an impressive roster of the country's headlining K-Pop acts at the Korean War 70th Anniversary Memorial Concert that was finally able to take place at Haeinsa Temple last June. This was the first large-scale event that was able to take place in Korea in the wake of the ongoing COVID-19 crisis that saw events worldwide cancelled en masse. The space is able to accommodate a seated audience of 5,000 but social distancing rules dictated a maximum of 1,000 spectators at a distance of 2m from each other. The entire concert was recorded for broadcast on national television.

Located in the stunning Gaya Mountain National Park in South Gyeongsang Province, Haeinsa is one of Korea's Three Jewel Temples and home to the Tripitaka Koreana, the complete Buddhist Scriptures carved onto 81,350 wooden printing blocks. In addition to being classed as a UNESCO World Heritage site, Haeinsa is of immense national importance, and was therefore a fitting backdrop for the 70th Anniversary Korean War Memorial concert. To host the event, a stage was constructed in 50 x 100m natural arena at the highest point of the temple grounds. The main system comprised a flown LR system of one VHD2.0 long throw mid-high enclosure, one VHD1.0 mid-high/downfill and two VHD2.16 subs per side supplemented by a further four VHD4.18 and ES2.5 subwoofers in total. Two ES1.0 delays and a pair of EX10s complete the system. Control and amplification was handled by two VHD2000s. two VHD3200s and six EPAK2500Rs.



## P23 and CEL Clubs, Katowice, Poland

### **KV2 Audio system setup**

P23 Club:
2x SL4.12
4x SL2.15
4x VHD2.21
4x ESD12
2x ESD15
2x EX12
2x EX1.8
5x VHD3200
2x SL3000
1x ESP4000
CEL club:
2x ES1.0
4x ES1.8
2x EPAK2500R

Wise Clubs is a leading AV consultancy and integration firm based in Kraków, Poland. The company was recently called upon to design and integrate systems into two of Katowice's hottest nightspots – the iconic P23 club located in a former porcelain factory, and its little brother, the recently opened CEL club in the centre of Katowice. Both venues have been equipped with comprehensive KV2 sound systems - the first KV2 systems to go into clubs in Poland - designed and installed by Wise Clubs and supplied by KV2's polish distributor, Arcade Audio.

P23 has a true post-industrial feel with its natural brick walls, steel girders and lofty ceilings. One of the city's premier live music venues, P23 plays host to a variety of events, from acoustic concerts through to rock music and – perhaps the genre for which it is best known – techno. The biggest names in techno and electronic music have all played P23 in recent years. The venue has recently upgraded its sound system to a full front-to-back KV2 solution based on the SL412 full range wide dispersion system plus a pair of SL2.15 subwoofers and two VHD2.21 ultra low frequency subwoofers per side. Four ESD 12s and two ESD 15s act as frontfill and balcony delays. On stage two EX12s accompanied by two EX1.8 subwoofers provide a monitor system, which may also be used as a stand-alone sound system for separate events.

CEL, on the other hand, is a venue dedicated strictly to clubbing – techno, house, electro, drum & bass; the cream of the Polish club scene and numerous European artists play here. Wise opted for KV2's classic ES system comprising a pair of ES1.0 mid/high speakers supplemented by four ES1.8 single 18-inch subwoofers, with power and control supplied by two EPAK2500/R units.

Michal Piwowar co-owns and manages both venues. He explains that for P23 they were looking for a system that would provide high quality sound and even coverage throughout the venue – which he admits is not an easy task due to its unusual shape. They also wanted something that would fit the austere aesthetics of the club, and yet keep acoustic treatment work to a minimum. "We tested many systems and played concerts and events on several different rental setups, but it was the KV2 system that sounded truly exceptional," says Piwowar. "It delivers across the full spectrum of sound – attacking in the middle, massaging the bottom end and penetrating the highs. Only a few of the so-called 'top-shelf' system sounded comparable, but they didn't cover all of our concert space and yet were more expensive."

"We've had the opportunity to use the KV2 on many events now," he continues. "It works well for everything, from intimate solo events to a full house with black metal bands and all-night techno events. The feedback has been unequivocal, and in line with ours."

When it comes to CEL club, Piwowar explains that the requirements were slightly different in that it is a pure underground techno/electro venue. "Our clients demand a lot, so we needed an efficient, maintenance-free system to cover the long, narrow space that is our main dance floor," he describes. "That's why we opted for KV2 again because frankly, having heard the system we have in P23, it's hard to look at equipment from any other manufacturer any more."

Live Events Clubs





4x SL412 6x VHD2.18J 2x ESR212 2x SL3000 4x VHD3200 1x ESR2800 2x EPAK2500R 2x SDD3 4x SAC2 2x EX15 4x ES1.8

2x ES1.0

1x ES1.5

2x EX6

First opened in 1998 in what was then an industrial wasteland in Zürich West, the Supermarket was a true pioneer in the Swiss party scene. Thanks to the efforts and influence of the Supermarket, the area has developed into one of the most exciting hotbeds of electronic music in Europe.

Partygoers are attracted by a heady mix of Zürich underground music, a strong roster of international DJs and a superlative KV2 sound system designed and specified by Plusmusic AG Switzerland with assembly and installation by Piso AG.

Supermarket owner Sandro Bohnenblust made two important decisions early on: the first was to strive to operate in an international context by forming strong bonds with DJ and club artists from around the world. The second – to enable the first – was to offer an attractive performance platform, and that meant a world-beating audio system.

"As an amateur musician and pianist, I was always looking for the most natural source reproduction for any application – club, studio or even home entertainment. KV2's Super Live Audio technology fulfils all my requirements for the highest resolution and dynamics with the lowest possible distortion," says Sandro Bohnenblust, owner of the club.

The configuration for Supermarket is based on a classic 4.1 system for the dance floor with four SL412 wide dispersion mid-hi boxes supplemented by six VHD2.18J double 18" subs plus a further two ESR212 downfills for the front row. Furthermore, Sandro has taken the trouble to ensure full acoustic treatment for the club to dampen vibrations and absorb reflections. The results are stunning.

"With a fully acoustically treated club, we can really hear the difference between KV2's SLA technology and mainstream digital audio systems. KV2 feels like a precise Swiss watch when it comes to the aesthetics of sound. Other systems simply don't reproduce the same level of detail," says Sandro.

The Supermarket club continues to be successful thanks to owner, Sandro Bohnenblust's pioneering approach to both business and music. His policy of working almost exclusively with external organisers and promoters keeps his events fresh, and his investment in a top-notch, highly specc'd KV2 audio system guarantees uncompromised quality.

"After 20 years of running an electronic music club and comparing it to the best music clubs in the world, I am pretty sure that no other brand can compete with the quality of KV2 systems today. In terms of clarity, precision and the totally transparent reproduction of the sound source, KV2 is unbeatable,"



## Aura Zürich, Zürich, Switzerland

**KV2** Audio system setup

54x ESD10

2x EX10

2x EX12

2x EX2.5

16x ESD1.12

Set among the Paradeplatz business district in downtown Zurich is a unique, breath-taking event space, offering versatility beyond imagination. Aura is a dynamic venue, which boasts a fine dining restaurant serving sumptuous European cuisine, a bar and smoker's lounge featuring chic and stylish interiors and a multi-functional event hall stretching across 450 sq metres, which benefits from nine metre high ceilings and exceptional technical facilities that encompass 360° projections and 3D sound.

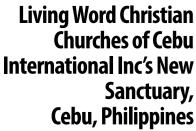
Aura was realised by Zurich gastronome, Philippe Haussener of Aura Group, after he won a competition to convert an existing building in the famous Paradeplatz square with his design for a modern multipurpose event venue using cutting edge technology. Philippe had a clear vision from the beginning, a 360° projection system would be the central focus, while the audio, lighting and video content would work in harmony. Live compositing and real time rendering of the projected video content was also a necessity, and start-up, shut-down and settings of the system, the architectural lighting and basic settings all needed to be controllable by several touch panels. Knowing it was the stand out feature at Aura, Marcel Widmer from PISO AG and Philippe considered the visual dimensions of the space first and decided to install six metre high projection screens around the perimeter of the room, covering

In order to bring the projection screens to life, Stefano Trevisan, CEO of PLUSMUSIC AG, installed a Coolux system to manage, compile, control and display three-chip DLP projectors using 8 Barco RLM-W12. The lighting system from Aura includes accessories from DTS, Briteq and SGM, which is controlled by a Jands Vista T2 lighting console.

Once the eyes were satisfied, it was time to turn the attention to the ears. The aim was to create a 3D sound environment using a Sonic Emotions Sonic Wave I Madi HD 24/64 processor, which allows all the loudspeakers to benefit from the unit's algorithms based on wave field synthesis. Preprogrammed presets allow the use of either all loudspeaker systems together, or any combination of them dependent on the application: live performance, live with 3D surround sound, club or 7.1 surround sound. The Sonic Wave I controls all the loudspeakers in a room to reproduce sound sources that are virtually outside the room. If these sound sources are placed far away, the characteristics of plane waves can be reproduced. With plane waves, the angle at which someone perceives a sound source remains the same everywhere, enlarging the sweet spot to the entire room and enabling a spatial sound experience for all listeners. Reproduced sound sources can be moved around allowing the production of creative sound designs. In Aura all of the system's capabilities to reproduce either plane waves or point sources and moving sources are used." At Aura, Marcel Widmer and Stefano Trevisan specified 54 KV2 ESD10 compact, fullrange loudspeakers, mounted on dampers behind the screen where acoustic treatments have been applied to reduce reverb time. While a total of 16 KV2 ESD1.12 12-inch passive subwoofers have been placed along the length of the sidewalls. "The KV2 ESD10's have a smooth and even roll-off in the horizontal plane which complements the sonic emotion processing."

Clubs Clubs





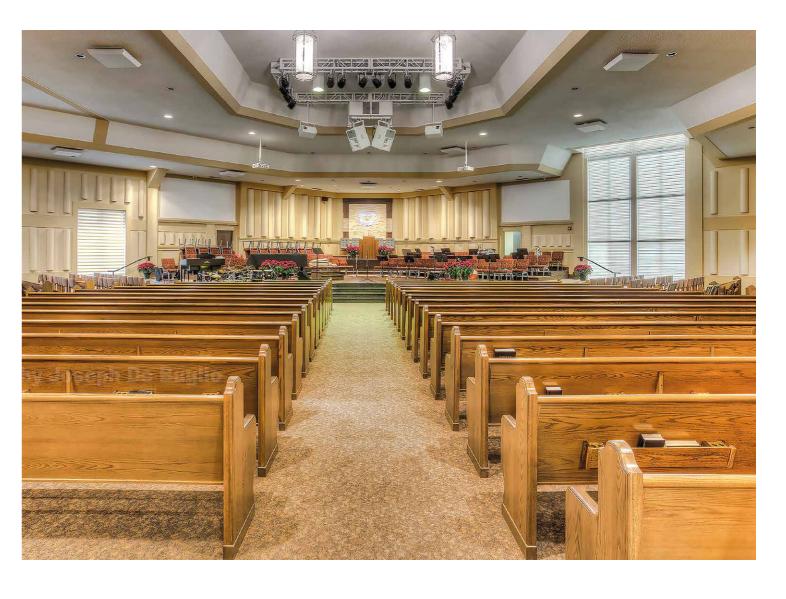
2x VHD2.0 2x VHD1.0 2x VHD2000 1x VHD4.18 1x VHD3200 1x ESM26 1x ESP4000 1x SAC2 1x SDD3 Living Word Christian Churches of Cebu International, Inc. (LWCCCII) is a corporation organised exclusively for spiritual and religious purposes. They are a family of churches founded and built on the gospel of Jesus Christ. Currently there are 90 outreach churches throughout the Philippines and in some other parts of the world under the LWCCCII umbrella.

Living Word Christian Churches of Cebu International Inc. main church located in Cebu in the Philippines carried out an expansion last year of its existing building to cater to the growing congregation. The new sanctuary was built on the third floor of the building to accommodate 2500 worshippers.

The church was keen to ensure that their new sanctuary will provide the right ambience for the congregation. One of their key objectives was to ensure wide clear dispersion of quality sound. The church formed a committee to look into a system that will meet their objectives. One of the brands that showed up for evaluation was KV2 Audio. The challenge was the building was an existing one which meant that structure wise, the audio system employed had to work within any constraints. Furthermore the church called in the sound system only after the structural work was confirmed. The new sanctuary was fan shaped and there were design elements for example like the ceiling with its wave like design that could not be touched. Regardless the demonstration by KV2 showcased to the church committee its ability to provide near perfect sound, which won them over.

"Due to limitations on the structure of the truss, the VHD system was chosen because it provides huge cost savings in terms of size, weight as compared to the popular trend of line array technology and at the same time offers unparalleled quality, power, coverage and a new level of sound reproduction previously unheard of in large scale audio systems. The VHD being an efficient system provides the High SPL while still providing superb clarity with NO Distortion," said Mr Tony Kwan, Director of Montecruz Enterprises, Inc. who supplied and installed the KV2 Audio speakers.

The congregation and the church has showered praises on the new audio system. "KV2 is the best audio system that I know as compared to the different brands and models that I used for more than 25 years. Dispersion is wide, clear, consistent and reliable. I am also very happy and grateful of KV2's continuing support to us that started from audio planning to installation and even in our actual use. KV2 audio is the clearest and cleanest sounding system I have ever heard. This allows us to convey God's words and wishes to our congregation," said a very pleased Mr Roy, S. Ricacho, Technical Team-Ministry Head.



## Romanian Pentecostal Church of God Kitchener, Ontario, Canada

The 900-seat church is typical of a church that has no acoustical management. The low ceiling fan shaped room had issues with standing waves, excessive noise from to many early reflections, and lots of bass stored in the corner. As with most typical churches, carpeted floor and padded seating give the room the performance of the room being 50% full when it is empty. What is also typical is that the carpeting and padded seating do enough absorption above 2000Hz that adding more absorption panels to manage the lower frequencies would also mean killing the room even more for congregational signing and any hope for quality acoustical performances. With the reverberation above 2K already less than 1.4 seconds and the frequencies below 1K were almost 2 seconds, there were not too many options available. In this case, it was found that frequency specific diffusion would be the best way to go. The performance of the diffuser system was enough to reduce bass energy, midrange energy and eliminate standing waves. This would bring the overall reverb time down to an average of 1.3 seconds from 200 to 4000 Hertz, which makes it a great room for a Pentecostal type worship program. Short enough RT60 for a high quality contemporary worship service and live enough for great congregational singing. Eight and twelve inch diffusers were used in a detailed system to cut over 25dB between 200 to 800 Hertz. This design also absorbs bass energy down to 40 Hertz. Since most of the bass energy is diffused or scatter along the walls, there is no bottom end buildup in the corner and therefore no need for bass traps in the corners. This system makes it easier to hear that low note below 100 hertz. They come across as cleaner, clearer sounds at a lower volume. As a bonus you can feel more bass.

With the transformation of the room completed it was time to review the sound system. The existing speaker was old and they were not really speakers meant for installation work. Portable plastic speaker boxes are not really suited for fixed church installations. The options were limited. The ceiling was too low for any type of line array system, so it was necessary to stick with well-controlled brute force full range boxes. With the drop ceiling and limited suspension points, the lightest boxes than can move air the best were at the front of the line. Being familiar with a number of speaker brands, a not so well known speaker brand call KV2 Audio was brought to attention. Speakers with horns that crossover below 1000Hz always move to the front of the line. In this case, the ES1.0 speakers have a horn crossover at 500Hz – which means better gain before feedback by default. When you have a low ceiling, directivity control is very important. Not because the acoustical treatment was not good enough but because of the proximity of the loudspeakers to open microphones on stage. When loudspeakers are within 15 ft of open mics and you are trying to mic a choir, you need speakers that are well controlled and these speakers have that kind of control. What is also helpful is that the ES1.0 is a Three-way speaker. Most three-way speakers tend to be heavy but the ES1.0 is only 74 pound or 34kg. The KV2 Audio "Less is More" truly hit the mark on this.

These loudspeakers had been compared to other well know speaker and each time, the KV2 speakers out performed what the churches had on hand or other speakers they were considering as replacements. The KV2's sounded better and performed better. It is seamless system that is matched up to an amplifier/processor (EPAK2500R) that is all built by KV2 Audio.

2x ES1.0 2x ES1.5 2x EPAK2500R 2x ESD10 2x ESD6 1x ESP2000

Houses of Worship

Houses of Worship





5x VHD2.0 6x VHD1.0 4x VHD2.15 8x VHD4.18 4x VHD2.21 6x VHD2000 8x VHD3200 6x ES1.0 6x ESM.26 6x ESM.26 8x EX10 10x EX10 2x ES1.8

2x EX12

The Rock Cathedral is the multipurpose facility that houses the headquarters of The Rock Foundation and the House on the Rock. The building with a total floor area of 32,000 m2, (the largest footprint for a single building in Lagos State) accommodates facilities for worship, education, healthcare, community development, reformation training, recreation and social rehabilitation among many other initiatives. The user-friendly main auditorium, multi-purpose halls and overflow spaces comfortably seats up to 14,000 people at full capacity. The state-of-the-art ergonomically designed facility is structured to permit the efficient evacuation of human traffic in just less than 10 minutes.

HOTR was seeking to cooperate with a European Company for Acoustics, Audio, Light and Video. After screening and shortlisting they finally chose the Greek company Audigys to design, supply and overview installation for these large and demanding systems. Africa has a passion for the art of music and sound. Audigys designers and engineers had approached their proposal with this same passion, and it was a success.

The main concern was to create systems that would be powerful, accurate, flexible, easy to operate and fitted to the complex's various requirements of zones for different uses. It was not an easy set of tasks given that there were several construction and architectural constraints. The Main Auditorium accommodates 12.000 people, Prayer Chapel 700 people, the foyer, the corridors, utility rooms etc., are areas of traffic of congregation, visitors, and staff. Audigys implemented the acoustic, sound reinforcement system, lighting system, audio and video studies. The second most important element of a good system is the choice of loudspeakers and their placement in the building. In contrast with the trends and to what one would expect to see in such a place, Audigys designed and installed single point source systems instead of a line array ones, the current 'best practice' in large–scale PA.

"KV2 was our inspiration and supporter in this project. Our synergy and synchronicity together achieved spectacular results. There is not a Sunday that goes by, when someone doesn't remark about the quality of the sound" G. Theodoropoulos chief installation engineer of Audigys. The House on The Rock project was delivered at the end of 2013.



## Jerash Festival, Jerash, Jordan

The Jerash Festival for Culture and Arts, traditionally held in July, transforms the ancient city of Jerash into one of the world's liveliest and most spectacular events. In December this year, after a three-year, pandemic-enforced absence, the festival was back in force with an impressive line-up of top regional artists including Tamer Husny, Marwan Khoury, Asi Hillani, and Rabeh Saqer to name but a few. For the eighth year running, Amman-based live production specialists, Triad Live Productions, were tasked with full sound and lighting production for the event. Their sound system of choice was KV2.

"The setup this year was a little different," explains Triad's General Manager, Amjad T. Marar. "In the main 5,000-capacity South Theatre, we were required to install a large truss structure on stage with a height of 16m. Ultimately, that worked to our advantage as we flew a VHD2.0 cabinet left and right at 16m that took care of the upper tier seating; and thanks to its vertical dispersion of 40 degrees, it also provided perfect coverage all the way down to the bottom of the middle seating section as well."

"We set up another pair of VHD2.0s ground stacked left and right at the front of the stage at a height of 6m off the ground (on top of the subs) to cover the lower seating areas," he continues. "In terms of subwoofers, we deployed a total of 8 x VHD4.18s and 4 x VHD2.16 ground stacked left and right. A double ES1.0 systems and four ES2.16s acted as side fills and 20 x EX12 stage monitors completed the system."

For the smaller, 2,000-capacity North Theatre, Triad opted for a double ES1.0 system supplemented by four ES2.16 subwoofers.

"The sound we achieved was incredible to say the least," affirms Marar. "Of course, we had the occasional comment from certain sound engineers along the lines of, "Where are the speakers?" My answer to that is always the same - forget the hanging bananas! Just close your eyes and try to forget your traditional notions of what SHOULD sound good - just listen!"

"We've been working with KV2 Audio for 15 years now, and we have not had a single complaint from anyone. For my money, these are the best sound systems on the planet, period!"

**KV2 Audio system setup**4x VHD2.0

8x VHD4.18

4x VHD2.16

4x ES1.0

4x ES2.6

20x EX12

Houses of Worship

Live Events





## Lucie Bílá, Fifty Fifty Tour Bratislava, Slovakia

**KV2 Audio system setup** 

5x VHD5.0 4x SL412 10x VHD4.21 5x VHD5000 5x VHD5000S 4x SL3000 2x VHD2.0 2x VHD3200 4x ESM26 2x ESM12 4x EX12 10x ESD5

1x ESP4000

KV2's revolutionary new VHD5.0 Large Format Concert System proved its enormous potential for changing the world of large scale sound reinforcement as we recognize it today. The system was successfully applied for three sell out concerts in Bratislava for the country's leading singer, Lucie Bílá, celebrating her 50th birthday and being acknowledged with multiple awards as the most popular singer of the last 25 years at the same time.

To date, there has not been a larger production in the history of Czech and Slovakia show business. Over 300 production personnel were employed for the show and involved in preparation over a year, with monumental scenes and an incredible Soundscape being created in the largest stadium in the Slovakian capital.

Producer and director of the show - Jeffo Minarik commented on his long term hunt for the best sound system that would have matched the highest criteria for the planned production: "We wanted the best sound system available, with crystal clear resolution and high dynamics, not only to reproduce Lucie's amazing voice, but also to cover the large, varied broad instrumental portfolio we planned to use.

Each part of the VHD5.0 system is proportional in size to the frequency wavelengths it reproduces. The radiated power of each bandwidth therefore remains consistent and balanced in relevance to the overall frequency response. This was one of the main benefits as the same consistent sound was delivered to every seat in the house. "I was literally shocked during the first test of this system. I have never heard both vocals and instruments so directly, but more importantly - naturally, directly in front of my face and what is more incredible, unlike other systems we used before, with the VHD5.0, the sound stays clear, fast, powerful and dynamic everywhere.", adds Jeffo.

The concert's system setup consisted of 5x VHD5.0 (2x doubles per side including 4x SL412s as downfill, 1x single in the middle) as main PA, a single VHD2.0 per side as side-fill and 10x VHD4.21 Active Passive Subwoofers uniquely flying alongside the VHD5.0s. For monitoring purposes of the orchestra, 4x ESM26 and 2x ESM12 were used. The whole audio chain was analog controlled throughout by two modified 48-channel Audient Aztec mixers.

"You can't actually localize the source of the sound since it stays balanced and goes from the stage wherever you move", say Alex Molcanov, main sound engineer of the concert. "When you look at the proportion of the system including all subs flying and at the same time have 110dB of crystal clear sound in 70 meters you don't believe it", says Alex.

Photo credits: Ctibor Bachratý

## Czech Philharmonic Open Air Concert, Prague, Czech Republic

A Unique joint performance by the Czech Philharmony and world famous jazz promoter - Wynton Marsalis, alongside his Jazz at Lincoln Centre Orchestra, was held within the traditional Open Air Concert at Prague Castle. In what is becoming the norm, KV2 Audio was chosen to provide the excellent sound system.

Marsalis first tuned the audience with three standard pieces by Duke Ellington and then both orchestras played in unison, Marsalis symphony conducted by Wayne Marshall. This had to be unfortunately terminated just before its end due to the sudden adverse weather conditions. However this piece acted like a history guide through various forms of swing. It needs to be highlighted that members of the Czech Philharmony were the absolute equivalent companions to the star performer, especially trumpets and clarinets.

Unlike previous years, when promoters chose the KV2 Audio VHD2.0 Large Format Point Source System, this year the new revolutionary system VHD5.0 was utilized. It is a matter of course that the whole acoustic chain was kept analogue, including mixing consoles Audient Aztec 48 for the orchestra and Audient Aztec 32 for the jazz ensemble.

Photo credits: Czech Philharmony

## KV2 Audio system setup

2x VHD5.0 6x VHD8.10 2x SL412 2x VHD5000 2x VHD5000S 2x SL3000 2x EX10 2x SL412 2x EX12

Live Events Live Events





Described as a 'game-changing music weekender', Electric Bay is a unique open-air dance music festival that takes place over two days in the stunning Torre Abbey meadows on the Torquay seafront. Following a completely sold-out first edition last year, the 2023 event promised to be 'bigger and better' at every level, with a bigger production, a larger stage, an even more powerful sound system and increased facilities and food and drink options. The 2023 lineup featured some of the biggest names in electronic music, including Hedex, Pendulum LIVE, Dave Rodigan, Andy C, Gardna Live, Sub Focus, and many more. Festival organisers and renowned electronic music promoters, Louder Events, once again turned to local AV rental experts, Future Technical Solutions (FTS) who supplied a kicking KV2 sound system.

"FTS has a working relationship with Louder in other venues for both live and DJ sets, so it was natural that they asked us to quote for last year's event," describes FTS managing director, Neil Carpenter. "We specified KV2's VHD system, having already used it for events up to 5000 people on the same site. Electric Bay 2022 brought in 7000 people, but I knew it could do the job. Admittedly, Louder's production manager, Alex Anderson was dubious at first, but he decided to go with us, and I'm delighted to say he was more than happy with the results!"

Based on the resounding success of the first edition, Louder Events decided to up the ante for 2023 with an even bigger production, this time for 10,000 revellers. Anderson once again turned to FTS for the audio system package. "We had fantastic coverage and superb sound quality across the site last year using our VHD system, and I was confident that it would handle 10,000 people with no problem," notes Carpenter. "However, we had to do some EASE Focus simulations to convince Alex that we didn't need delay towers! The system has to face the sea so as not to disturb local residents, which limits coverage towards the long part of the site. However, I've always felt that a line array system would cause more problems that it would solve in attempting to cover the complete site rather than a point source system like KV2 that gives great energy in the areas that need it with less than half the number of boxes."

 $FTS\ supplied\ a\ pair\ of\ VHD 2.0\ and\ a\ VHD 1.0\ per\ side\ as\ a\ flown\ L/R\ system.\ Bass\ and\ sub-bass\ was\ provided$ by four VHD2.16, eight VHD4.18 and eight VHD2.21 arrayed in front of the stage, along with a pair of ES1.0 as centre fills. "Essentially it's the same system as last year with the addition of a fourth pair of VHD2.21s and the ES1.0 centre fills which worked really well and covered the whole of the listening zone with ease," says Carpenter. "The biggest changes were to the DJ monitor system on stage – last year we used VHD1.21s with ESD15s, largely because Carl Cox has used ESDs before and likes them. However, we had a few issues with sub bass travelling behind the stage and causing noise issues for some residents, so this year we went for an ES rig comprising a pair each (one per side) of ES1.0, ES2.16 and ES1.8. This gave us more bass control options and definitely worked much better for us. The final change was that we added six ESM12 floor monitors to the package to replace the non-KV2 monitors we used last year, as I gathered that wasn't a popular move!

"Needless to say, the whole system performed amazingly and we're already looking forward to next year!"



## Rave Jam Music Carnival,

Lianjiang, China

**KV2** Audio system setup

2x SL412 2x EPAK2500R

2x VHD5.0

6x VHD8.10

16x VHD4.21

2x VHD5000

2x VHD5000S

2x SL3000

2x VHD2.0

4x VHD2.16

2x VHD2000

2x VHD3200

1x SAC2

1x SDD3

4x VHD1.0

1x VHD2000

2x VHD2000

2x ES1.0

4x ES1.8

6x ESM12

1x ES1.8

1x ESP4000

1x VHD4.18

1x ESP2000

1x VHD3200

of the event – the Rave Jam Music Carnival is a massive outdoor music festival that combines an eclectic spread of electro, rap and pop music to appeal to a wide audience. The first edition took place in Linjiang's Cherry Blossom Park over the May Day holiday weekend and welcomed nearly 24,000 festival-goers over the course of the two days. To cover such a vast area, the Longjoin Group provided a front-to-back KV2 Audio system based on the flagship VHD5 Constant Power Point Source system supplemented by smaller VHD systems for sidefill and frontfill, plus a full complement of ES Series DJ monitors and ESM stage monitors.

Hosted by the Entertainment Times and co-organised by the Longjoin Group – who are also the creators

The festival boasted a stellar line-up of nationally and internationally renowned Chinese and Asian artists including Aryue Zheng Yue, one of the world's top 100 DJs in 2022, DJ KAKA - the first Chinese top 100 female DJ - plus DJ Tommy, DJ Remis, DJ EDL and many, many more. In addition to the music, festival-goers were treated to a dynamic technology exhibition area, 60 local food stalls and a spectacular fireworks display plus of course state-of-the-art video technology.

The Longjoin Group - an organisation dedicated to the global audio and video industry and to building a world-class integrated platform for musical culture - was determined to provide the best possible audio and video experience for audience members and artists alike. To handle the audio experience for over 10,000 people, they selected KV2's VHD5 Constant Power point source system that is specially designed for large scale concert sound reinforcement. A L/R system comprising a VHD5.0 mid/hi unit, a VHD8.10 low-mid and an SL412 downfill per side was deployed - all powered by their dedicated power and control units - with the low end being handled by eight super-powerful VHD4.21A (active) subwoofers which also provided power for a further eight VHD4.21P passive subs. Sidefill duties were handled by a pair of VHD2.0 long throw mid-high systems along with six VHD4.18 quad 18-inch subwoofers. A VHD1.0 per side was chosen for frontfill along with four ESD12s. The DJ monitor set comprised two ES1.0 combined with a pair of ES1.8 subwoofers along with an SD8 stage preamp and a COMPEX dynamic harmonics control unit, also from KV2. Finally, the lineup was completed with four ESM12 and two ESM312 stage monitors for the band performers.

"It was a privilege to have been involved with such a spectacular, yet well-run event," says Chief Festival Director Lin Liu. "The audio was absolutely stunning, even right at the back of the listening area – loud, punchy and yet crystal clear, no distortion at all, so even though you've spent all night in what is essentially a massive outdoor club, you don't leave with a headache and your ears ringing. The other amazing thing about KV2 technology is how compact it is for the area it has to cover. It makes setup and breakdown so much easier! We're already looking forward to the next show."

## **KV2 Audio system setup**

4x VHD2.0 2x VHD1.0 4x VHD2.16 8x VHD4.18 8x VHD2.21 4x ES1.0 2x ES2.16 2x ES1.18 6x ESM12's

**Live Events Live Events** 



## Queen's 80th Birthday Celebration, Balmoral Castle, UK

Set within the grounds of Balmoral Castle amongst the stunning scenery of the Scottish Highlands, a concert took place to celebrate the Queen of England's Birthday.

The concert was put together by George Walker Events to not only celebrate with Her Majesty, but also to raise funds for the Anthony Nolan Trust for Leukaemia. The line up featured a north of the border flavour - Fiona Kennedy, The Scottish Fiddle Orchestra, The Graham Geddes Scottish Dance Band, Mass Pipes and Drums, Celtic Scottish Dancers, with the highlight of the evening being a stunning performance by renowned classical singer Katherine Jenkins. Presented by BBC2's Ken Bruce, the concert was attended by a crowd of almost 10,000 people and lasted over a five-hour period, including a spectacular reworks display and an air display by the 2Excel Blades aviation team. The system quality was paramount for this most prestigious of Events and as a result KV2 Audio were approached after the head of sound for the project heard a demonstration of the VHD system at Frankfurt's Pro Light & Sound exhibition, where it featured in the Live Sound Forum outdoors in a comparison to competitor's line arrays.

Commenting on this experience he explains further: "In Frankfurt the VHD system was stunning; I've never really heard anything quite like it, clarity, coverage, it was all there and it's so physically small in comparison to other systems. I knew instantly it was the system to use for Balmoral."

After consulting with Jonathan Reece-Farren and Andy Austin-Brown of KV2, it was decided to utilise a system configuration of just two VHD 2.0 Mid/High cabinets per side and a ground stacked mix of four VHD4.18 subs and two VHD2.15 subs per side, powered by KV2's VHD amplifiers.

Upon arriving on site for the first time he knew the audio consultants knew there may be some initial apprehension about the small physical size of the system, commenting "When we arrived, we were not surprised to see and hear the expressions of several of the experienced event organisers questioning the supposed small amount of PA that appeared to be available, however this quickly changed to universal acceptance and broad smiles once the system was switched on and the first sound checks came through. The quality was truly amazing and far from struggling to cover the area, the only problem we encountered during sound check was a little bit of 'slap-back' from a mountainside over a mile away! So we turned it down a little!" Great success all round and a Royal seal of approval for KV2.

KV2 Audio system setup

4x VHD2.0 8x VHD4.18 4x VHD2.15 4x VHD2000 4x VHD3200



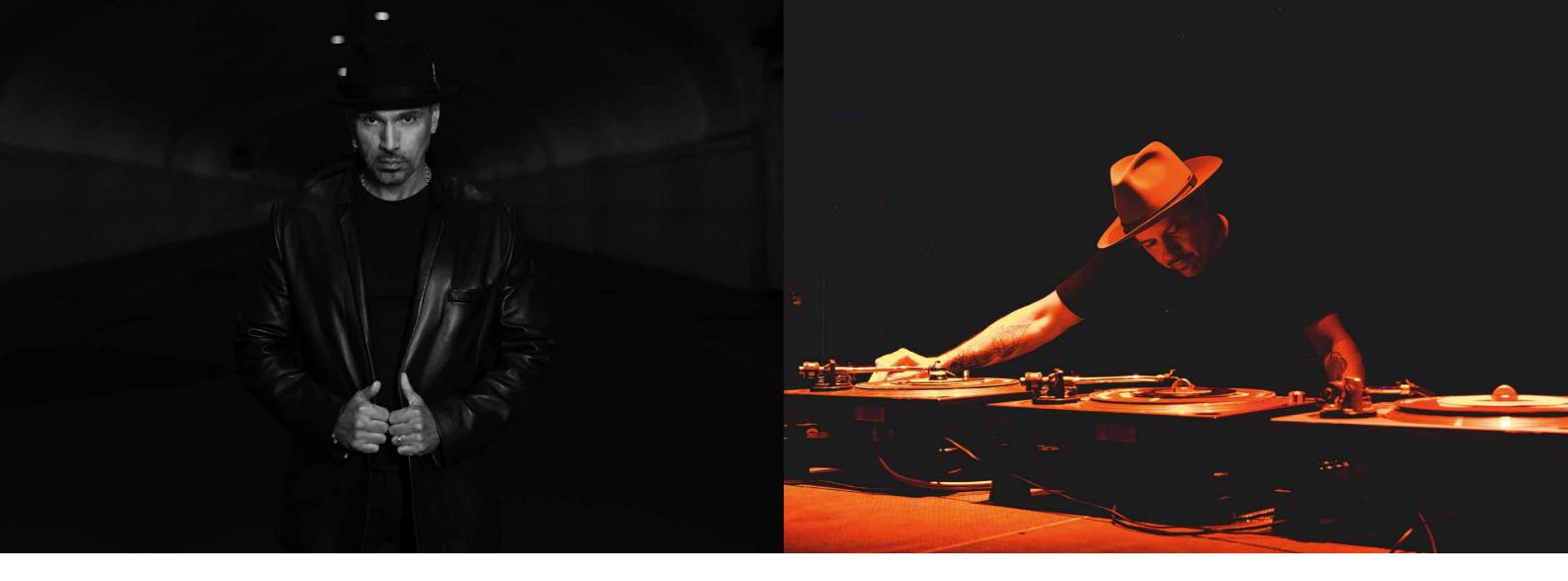
## Further Future Festival, Las Vegas, Nevada, US

LAS VEGAS – PLUSMUSIC US was proud to partner with the Further Future festival, April 29th – May 1st which took place on a remote patch of desert 60 miles north of Las Vegas, Nevada at the Moapa Valley Indian Reservation. PLUSMUSIC brought an extensive set of KV2 Audio equipment for use on three stages.

The festival, founded by the team behind the popular Burning Man art car "ROBOT HEART" featured a number of bands, electronic acts, DJs and a daytime lecture series. Despite some tough weather conditions, KV2's weather sealed cabinets were able to keep the speakers dry, and the show going. Skies cleared mid-weekend leaving festival-goers a picturesque view and 3 stages of crystalline KV2 Audio sound.

**KV2 Audio system setup** 2x VHD2.0 2x ES1.8 12x VHD4.18 2x VHD1.0 2x VHD1.0 8x VHD2.21 2x ESR215 2x ESD1.18 2x ESD15 2x ES1.0 4x ES2.6 4x VHD2000 2x ESR212 1x ESR3000 2x ES1.8 4x EPAK2500R 2x SL412 1x ESP4000 4x SL215 16x VHD3200 2x VHD2.21 1x ESR2800 1x ES1.0 1x SL3000

Live Events Live Events



"When I first heard the KV2 speaker system, I was totally impressed. The quality of the sound coming out of the speakers was amazing. After listening to them I had to reach out to KV2 Audio and asked for a pair for my studio. I'm also now going to change my tech rider and ask for KV2 Audio speakers."

**David Morales** 

Grammy Award-winning DJ and Producer

"The EX10 and EX2.2 system in my studio has brought a kind of clarity I haven't had in other monitors. I'm even taking the KV2 gear out as monitors on club gigs!"

**Louie Vega** *DJ, Producer* 





Many argue that the battle between Line Array and Point Source loudspeaker systems has been won by line arrays. Attend a concert anywhere and it will more than likely be reinforced by a line array setup. So, when a rental company, such as Triad Technical Services, opts to exclusively work with point source systems, such as those from KV2 Audio, it finds itself often having to educate the sound engineers at an event of the advantages that those systems deliver over their line array cousins.

This was no different when it recently when the Triad supplied the full technical setup at the Jordan Festival, which comprised three concerts taking place over a week-and-a-half period with an eclectic mix of performers taking to the stage at the Amman Citadel, upon the highest hill in Amman and overlooking the city. The opening night was dedicated to the singing of Lebanese composer Marcel Khalifeh, while Turkish dance troupe The Fire of Anatolia performed during the second event. The headlining act closing out the festival during the third and final night was Yanni.

Triad made the decision to exclusively work with KV2 Audio after Mr Marar heard the Czech manufacturer's VHD point source systems in action. "We came about working with KV2 Audio when they first launched the VHD system", Mr. Marar confirms. "We decided to work with KV2's point source technology exclusively and to educate people on the benefits of working with it. We were used to using line array systems in our rental stock, which we worked with on a regular basis until we heard the VHD system, which was a game-changer."

Putting the VHD system to use for the festival was never in doubt for Triad, but it did raise queries from Yanni's FOH sound engineer and tour director, Anthony Stabile. This proved a bigger obstacle to overcome than that of the outdoor and historically significant hilltop venue.

That system, which Triad supplied for all three of the festival's events comprised four VHD2.0 loudspeakers, flown two per side, a pair of VHD1.0's serving as down-fills, four ES1.0 units for out-fills and four EX12's providing front-fill. To take care of the lows, four VHD2.16 subs were flown, while eight VHD4.18 and eight VHD2.16 cabinets were ground stacked. Four VHD2000 and four EPAK2500R control and amplification units were implemented and four VHD3200's powered the subwoofers. A pair of SDD3 Super Digital Delay Line processors were also deployed.

"The sold-out Yanni concert was a huge success", reflects Mr. Marar. "We received positive comments from a lot of people praising the sound in particular. Everyone in the audience was raving about the sound and, most importantly, Yanni's team was impressed".



The Preservation Hall **Jazz Band concert for Summit LA17** on Broadway, Los Angeles, US Summit LA17 was a three day festival held in the heart of Downtown Los Angeles. The festival hosted a diverse array of live performances, seminars and wellness classes alongside offerings of gourmet food with all experiences designed to foster relationships and inspire new perspectives.

Taking place between November 3rd and November 6th 2017 this was the 11th edition of the festival.

A highlight of the event took place on Saturday November 4th where the Preservation Hall Jazz Band (New Orleans Septet) played a great Concert at the Los Angeles Theatre, Broadway. Every nuance of the incredible musicianship was accurately transferred from the stage to the crowd through the distinctive crystal clear sound of KV2 Audio products.

About The Preservation Hall Jazz Band

At a moment when musical streams are crossing with unprecedented frequency, it's crucial to remember that throughout its history New Orleans has been the point at which sounds and cultures from around the world converge, mingle, and resurface, transformed by the Crescent City's inimitable spirit and joie de vivre. Nowhere is that idea more vividly embodied than in the Preservation Hall Jazz Band, which has held the torch of New Orleans music aloft for more than 50 years, all the while carrying it enthusiastically forward as a reminder that the history they were founded to preserve is a vibrantly living history.

**KV2 Audio system setup** 

### **KV2 Audio system setup**

4x VHD2.0 2x VHD1.0 4x ES1.0 4x EX12 4x VHD2.16 8x VHD4.18 8x VHD2.16 4x VHD2000 4x EPAK2500R 4x VHD3200 2x SDD3

1x SL3000 4x VHD3200 2x SAC2 1x SDD3

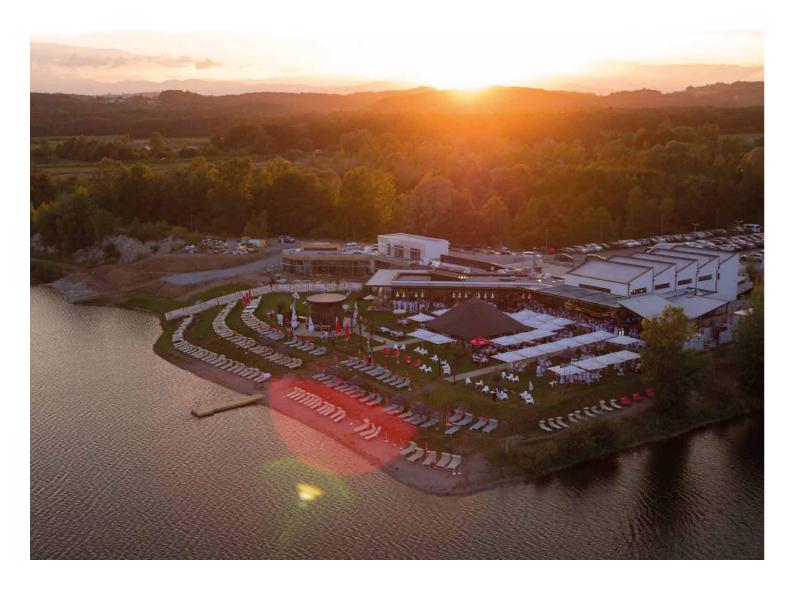
2x ESM12

2x SL412

4x SL2.15

2x VHD2.21

**Live Events** Live Events





4x SL412 8x VHD4.18 2x CS12 1x ESP2000 6x EX6 4x ES2.6 4x EX10 2x EX1.2 20x ESD Cube 5x ESD1.10 7x ESP1000 4x ESD15

1x ESP4000

2x EX12

Ibiza meets southern Styria: What started as a modest, seasonal bar on the shores of Lake Aldrian in Tillmitsch in southern Styria, has quickly developed into one of the region's premier hotspots. Ankerpunkt is the vision of Leo Rath, a DJ and house legend in Austria, and his wife Manuela.

The magnificent beach club is now open all year round and boasts its own beach, a bar and restaurant along with lawns and terraces for lazy summer days. Naturally, music takes centre stage and accompanies guests throughout the day - right into the party night. "I am a DJ myself and the right sound for Ankerpunkt is an important concern for me," reports Leo Rath, who wanted to bring a touch of Rimini and Ibiza flair to Styria with his club. "After some research, I became aware of KV2's sound systems. The sound quality of KV2 just totally convinced me and I quickly realized, this is what I need for Ankerpunkt."

No sooner said than done: the owner turned to event and club specialists Plusmusic Ibiza, who were also responsible for the sound of legendary hotspots such as Amnesia and Cova Santa in Ibiza. All systems integration was performed by Austrian AV experts, Happy Sound. The end result is impressive - and brings with it concentrated sound power: for the main outdoor system alone, Plusmusic specified two SL412 tops together with eight VHD4.18 quad 18" subwoofer systems, while a pair of CS12s handle front-fill duties. Inside the main restaurant, there is a DJ stage equipped with a pair of SL412 tops and four ES2.6 high-output active subwoofers. The other restaurant areas feature a mix of EX6 and EX10 active speakers, complemented by EX1.2 subwoofers. Ankerpunkt's quests also enjoy premium quality sound in the veranda, which features no less than 20 ESD CUBE speakers - KV2's most bijou offering to date but with astonishingly clean and powerful sound for its diminutive proportions. Low end is delivered by five ESD1.10s powered by five ESP1000 amplifiers.

Rich sound also accompanies the guests on the terrace and the spacious lawns: four ESD15 3-way passive loudspeakers with wide dispersion characteristics are in turn driven by two ESP1000 amplifiers. The equipment is completed by a pair of EX12s as DJ monitors. A total of 62 KV2 loudspeakers and several amplifiers adorn the popular party and relaxation location, which was finally reopened to the public in October 2021 after its remodelling. Gianluca Trevisan from Plusmusic AG in Switzerland reports on the success of the project: "Leo is overjoyed with the result. He knows he chose the right product!"

The ANKERPUNKT is perfectly equipped for the coming summer season with KV2's sound systems - the anchor can be dropped!



### Alezzi Yacht, Romania



**KV2 Audio system setup** 

2x ESR212 4x ES2.6 4x SL412 4x VHD2.18J 4x ESD10 2x ESD12 4x ES1.0 4x ES2.6 4x ES1.8 2x EX12 4x EX10

Alezzi Yacht is a high-spec, 42m x 18m, 1000-capacity catamaran dedicated to the sole purposes of pleasure and having fun. Based in the Romanian port of Navodari, Alezzi Yacht offers cruises along the beautiful Black Sea coast, complete with fine dining, cocktails and glamour along with breathtaking views of the lively beach resort of Mamaia and Constanta City. The afternoon is dedicated to an experience aimed at the whole family, whilst the evening cruise is reserved for those looking for a full-on party atmosphere. Any good party requires great audio, and Alezzi Yacht is no exception – Constanta-based AV specialists, AudioVision, were asked to design, supply and install a comprehensive AV system throughout the catamaran. AudioVision selected KV2 Audio as the best solution.

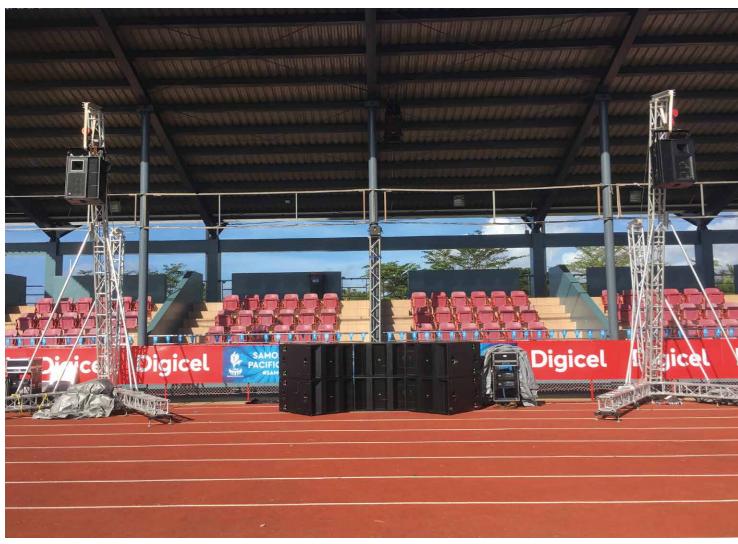
Alezzi Yacht features three decks, each offering a different experience. The lower deck is an exquisite restaurant space where guests can enjoy a relaxed brunch or a drink while admiring the sea views through the windows or the panoramic floor. The middle deck is the club where revellers can party without being at the mercy of the elements, and the upper deck is an outdoor club, where party-goers can really let their hair down.

"For the lower deck, the biggest challenge was the lack of ceiling height, yet we needed a system that could handle both live music and a DJ and cover the whole space adequately," explains Vasile Mara from AudioVision. "We opted for the ESR212 full range system accompanied by ES2.6 subs. The ESR Series is ideal for this space, offering wide dispersion and clear, detailed reproduction in a low profile format."

"The middle deck is also a wide open space, but with more generous ceiling height. As a dedicated club, here we required high SPL capacity and even coverage. The SL system is the perfect system for a club thanks to the enormous SPLs generated from a small enclosure, the wide horizontal coverage and the extremely high audio quality. We used two pairs of SL412s supplemented by VHD2.18J subs and several ESD10s and ESD12s as outfills. It sounds amazing!

The final challenge was to outfit the upper deck which is completely open to the elements, with the exception of some shade sails. "Obviously here the biggest issue is the wind and of course the need for high SPLs and even coverage, despite the wind. The upper deck is area destined for the wildest parties, so we needed a system with some serious muscle," says Mara. "KV2's double ES system is the perfect solution as it's unbelievably powerful for its size. We used a pair of ES1.0s per side flown above a pair each of ES1.8 and ES2.6 subs per side supplemented by several ESD6 backfills, all supplied in fully weatherproofed versions. A single ES1.0 is capable is of delivering sound for up to around 1000 people and double ES system offers coverage for up to 3000. In deploying a double ES system per side combined with both single 18-inch and double 15-inch subs, we can ensure that the whole of the top deck is flooded with high energy, high quality sound whatever the weather throws at us, and we'll still have headroom to spare! Of course no dance club system would be complete without high quality DJ monitoring, and KV2 has an answer for that as well – we used a pair of EX10s for the lower and middle decks, and a pair of the more powerful EX12s for upper party deck."

Multipurpose venue Multipurpose venue





2x VHD2.0

2x SL412

2x ES1.0

4x ES2.6

4x ESR212

4x VHD2.16

3x VHD4.21

Samoa is a small island in the middle of the Pacific. This year it plays host to the sixteenth edition of the Pacific Games which sees over 4000 athletes competing in 27 different sports. It is also home to DAWG Professional Audio whose success with their world-class KV2 Audio inventory was sufficient to win

Keil's love affair with KV2 began when he heard a pair of KV2 SL412s running with four double 21" subs on the demo stage at ProLight & Sound. "I was literally blown away," he recalls. "I just couldn't believe what was coming out of two such small boxes! I walked straight onto the KV2 stand where I met sales director, Dave Croxton, and said, 'I want the system you have outside!""

Fast forward to the Pacific Games 2019: DAWG Professional Audio came up against strong competition from both Australian and New Zealand companies bidding on the event. After months of negotiation the contract was awarded to DAWG in an effort to support local business but with a heavy mandate that the sound and coverage of the stadium must be world class. Dave Croxton from KV2 flew in to assist along with New Zealand sound engineer, Mack Tane. "Initially when Corey sent the stadium plans across to KV2 we looked at a time-aligned distributed system pointing out into the stands," says Croxton. "When I arrived, however, we realised that there was also a requirement to fill the field where the athletes would sit, and hundreds of school kids would perform. As we had limited inventory, it was decided we would set up a physically time-aligned system in a line on one side of the stadium shooting across the field to the main grand stands. Two single VHD2.0s were flown off 6m towers to throw across the field while two SL412 wide dispersion cabinets were placed on lower towers to cover the main field. Two single groundstacked ES systems were placed at each end of the main system angled out at 45 degrees to cover each end of the field. These systems consisted of two ES2.6 double 15" subwoofers with a three-way ES1.0 mid-high."

A sub bass cannon consisting of three VHD4.21s was centrally located to provide even bass distribution across the whole stadium. The creative director wanted strong bass reinforcement of the native drumming in the ceremony's soundtrack.

As the main system was around 130m from the main grandstand, four ESR212 three-way cabinets were positioned on top of VHD2.16 double 15" subs at 110m on delay to cover the main stadium. The end result was simply astounding.

"We measured 100db peaks with amazing full range clarity at the top of the main grandstand and the whole stadium was covered perfectly," recounts Keil. "The level dropped off a little out on the ends where the ES systems were shooting, but it was still perfectly clear and audible. The sound in the main stand was just fantastic - really clean and punchy for the performances. Even though we had the ESR212s hooked in as delays, the VHD2.0 system is just amazing and the VHD4.21 sub cannon satisfied the Samoans love of bass without compromise."

# the audio tender for the opening and closing ceremonies of the 2019 Pacific Games. DAWG is owned by Corey Keil who also owns Samoa's Radio Polynesia and TV3. Passionate about sound,

## Winter Olympics 2006, **Turin, Italy**

At the Turin Winter Olympics, KV2 Audio was selected as the key manufacturer for sound reinforcement at Sestriere, host to the Alpine Skiing events, and the company's flagship VHD system found itself fulfilling the roles of a sound triathlete.

By day, the several thousand athletes and visitors attending the events heard single stacks of VHD ensured announcements, presentations, and the occasional live act loud and clear. By night, a purpose-built nightclub in the Olympic village converted from a cinema specifically for the Olympic events, played host to the second VHD system.

Installed by KV2's Italian partners (for a total of four weeks with temperatures regularly dropping below -10°C) this was the first time the system has been used for such a prestigious event in the Italian marketplace, and "a testament to the increasing profile and reputation of KV2 as a premier audio manufacturer" say

So what of the results? The company says: "Within a few minutes of switch-on, there were big smiles all round as the sound penetrated every corner of the assembly square, attracting the interest of some very frustrated shop owners several hundred metres away who claimed they could hear every word."

**KV2** Audio system setup **VHD Series** 

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