

# mendo

## TJ SMITH

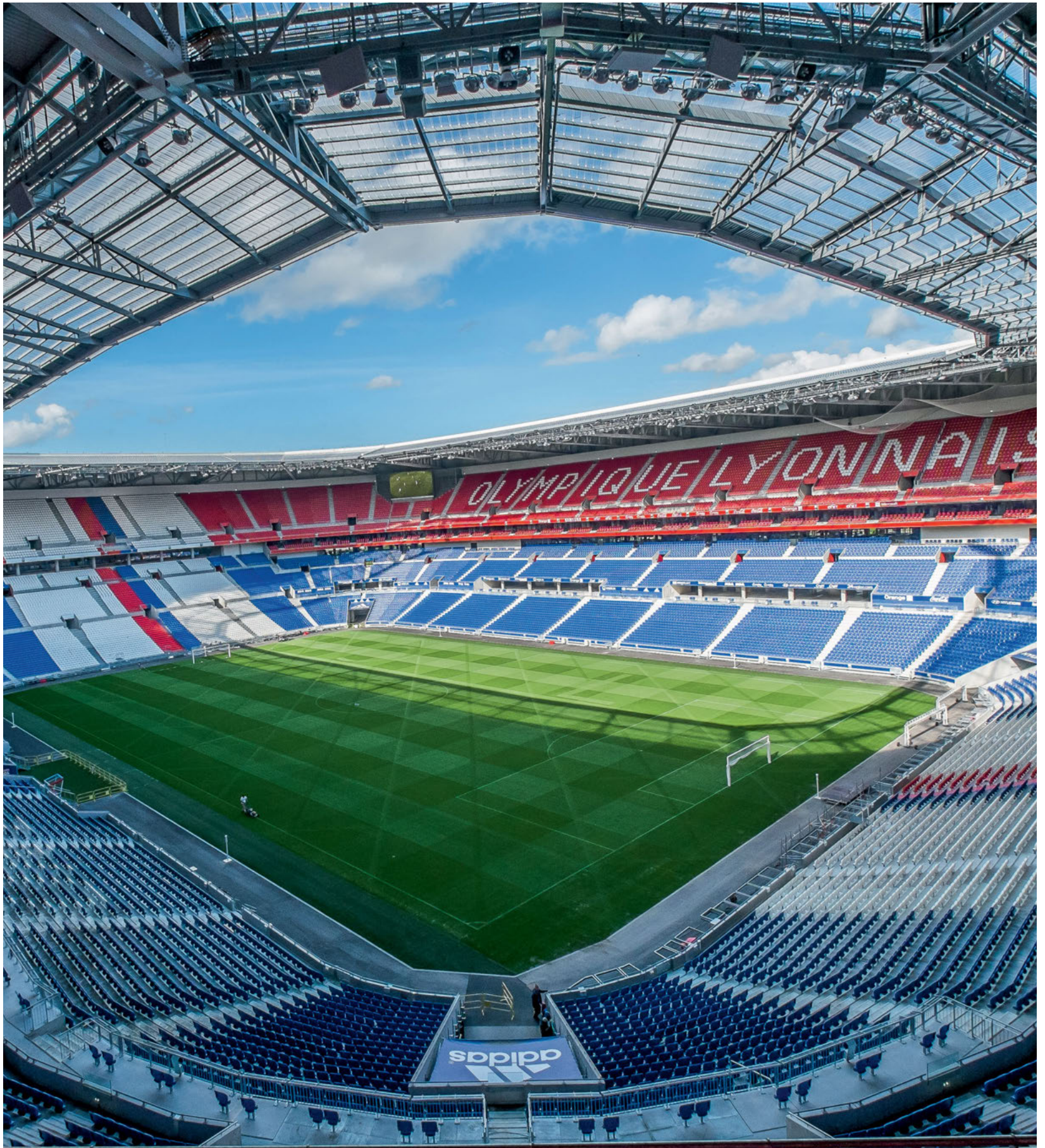
The new EAW President and GM talks pastures old and new.

## SPORTING VENUES

The latest installations in sports hubs around the world

## PROJECTORS & MEDIA SERVERS

A round-up of visual technology







In a small town like St. Francis, Kansas, situated on the Kansas-Colorado state line, the local high school gymnasium bears a much greater responsibility than simply hosting the occasional school assembly. In this regard, St. Francis High School's gymnasium is an overachiever, able to handle district-wide sports tournaments, town meetings, and local entertainment events. Its flexible and highly intelligible sound system, installed last October by Colorado and Kansas-based DKAV Video, has Powersoft amplifiers at its foundation and is now the pride of the local community.

When the school reached out to DKAV about its sound needs during the autumn of last year, it was clear about what it hoped to achieve, according to DKAV owner Lucas Lafferty: "They wanted a full sound system upgrade and they told us to 'dream big'."

"I immediately thought of Powersoft amplification because I thought it would have the ideal combination of features: clear sound, easy-to-use operation, and strong built-in DSP processing." Lucas put together a package that included one Powersoft X4 amplifier, which were used to drive two EAW QX326 two-way loudspeakers and two EAW SB250z subwoofers. The school was immediately on board with the plan. "After I told them about the incredibly low power consumption of Powersoft amplifiers, it was the icing on the cake," he said. DKAV worked with C.J. Lewis in the Denver branch of The Marshank Group, which helped secure the Powersoft and EAW elements required for the installation. "We were so pleased to see a local school system consider this a 'long-term investment' rather than a temporary solution to an immediate need," C.J. recalled. "By choosing a high-end audio solution that was powerful, nimble and reliable, DKAV was able

to introduce another dimension of value into the transaction - one that will benefit the St. Francis community for years to come."

During the design and installation phase, the gymnasium presented significant challenges with its 40ft domed ceiling and solid brick walls. "The room had many uncooperative reflective surfaces," Lucas said. "They had tried using sound dampening in the past without much success, so we decided to avoid transmitting any sound towards the dome areas."

The speakers were suspended from the ceiling in two pairs, about 20ft high on the north end of the gymnasium. With dispersion pattern of approximately 120° x 60°, the sound covered the entirety of the gymnasium, while avoiding excessive bounce back. "We wanted the audio to reach the entire audience as far as we could, but we were careful to aim the speakers at ear level as much as possible," he continued.

Lucas, who had known about Powersoft amplifiers but didn't have any first hand installation experience with Powersoft prior to this installation, also managed to get his first hands-on experience with Powersoft's powerful DSP software as the system testing and room-tuning phases of the installation ensued. "Armonía was super-easy to use," he said. "When I had questions, I called Powersoft directly and they answered all of them quickly and easily." After implementing a simple crossover and some equalisation for tuning, he also used Armonía to place a hard limiter on the output to avoid any mishaps with overly curious students. "The speakers we chose have a very high output range and could go well above any conceivable use for that space, so we put a dead stop in place," Lucas explained.

The two Powersoft amps were situated in a 'restricted

access' upstairs room, along with a Juice Goose remote power sequencer. "Before Armonía, we would have needed separate, standalone EQs and compressors, but now everything is completely self-contained and so easy to hide away," Lucas said. The mixing board, housed in a portable case, can plug into any one of three separate tie-in locations on the floor of the gymnasium depending on the floorplan of a given event. Also, the system can be powered on from the board remotely via turnkey.

When Lucas and his team first powered up the system, the results were astonishing. "Shortly after we fired it up, the principal put a stop to all classes and told everybody to come down to the gym and take a listen - it was that cool!" Lucas recalled. Nearly 300 additional visitors eventually made their way to the gymnasium over the course of the day to experience the new system for themselves. "We had people from the local town coming by saying, 'we heard there's an awesome new sound system and we want to hear it.'" To Lucas's own ears, the value of Powersoft is abundantly clear: "The sound is incredibly detailed, and the simplicity of the system is second to none. My main goal was to attain a system that was simple for my client to use, and with Powersoft and Armonía, we achieved all that and so much more."

Since the completion of the install in late October, the gymnasium has hosted concerts, weddings, town meetings and various athletic events, imbuing a true impact on the broader community. "They can do anything in that space now - it's only limited to their imagination," Lucas concluded.

[www.powersoft-audio.com](http://www.powersoft-audio.com)





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# PARC OLYMPIQUE LYONNAIS



**LYON, FRANCE**  
EUROPE, MIDDLE EAST & AFRICA

The new stadium built for the Euro 2016 and home to football team, Olympique Lyonnais has been kitted out with a state-of-the-art audio solution courtesy of EAW, Powersoft and Symetrix. Sam McLean reports on the install.

The Parc Olympique Lyonnais, also known as the Grand Stade and the Stade des Lumières, is being heralded as the stadium of the future. The new 59,186-seat stadium - built for the French football club of the same name - is located in Décines near Lyon and boasts HD Wi-Fi for 25,000 and a cash-free payment system that utilises a smart phone app, for everything. The city had been looking at the possibility of building a new stadium since 2007 but had trouble getting the project off the ground financially. When France was awarded the Euro 2016 tournament and Lyon was selected as a host city, the club of Olympique Lyonnais decided to finance the project independently and the deal was sealed. With an estimated cost of €450 million, construction began in 2012 and the stadium opened its doors in January 2016. One of the goals for the new stadium was to provide fans with a game day



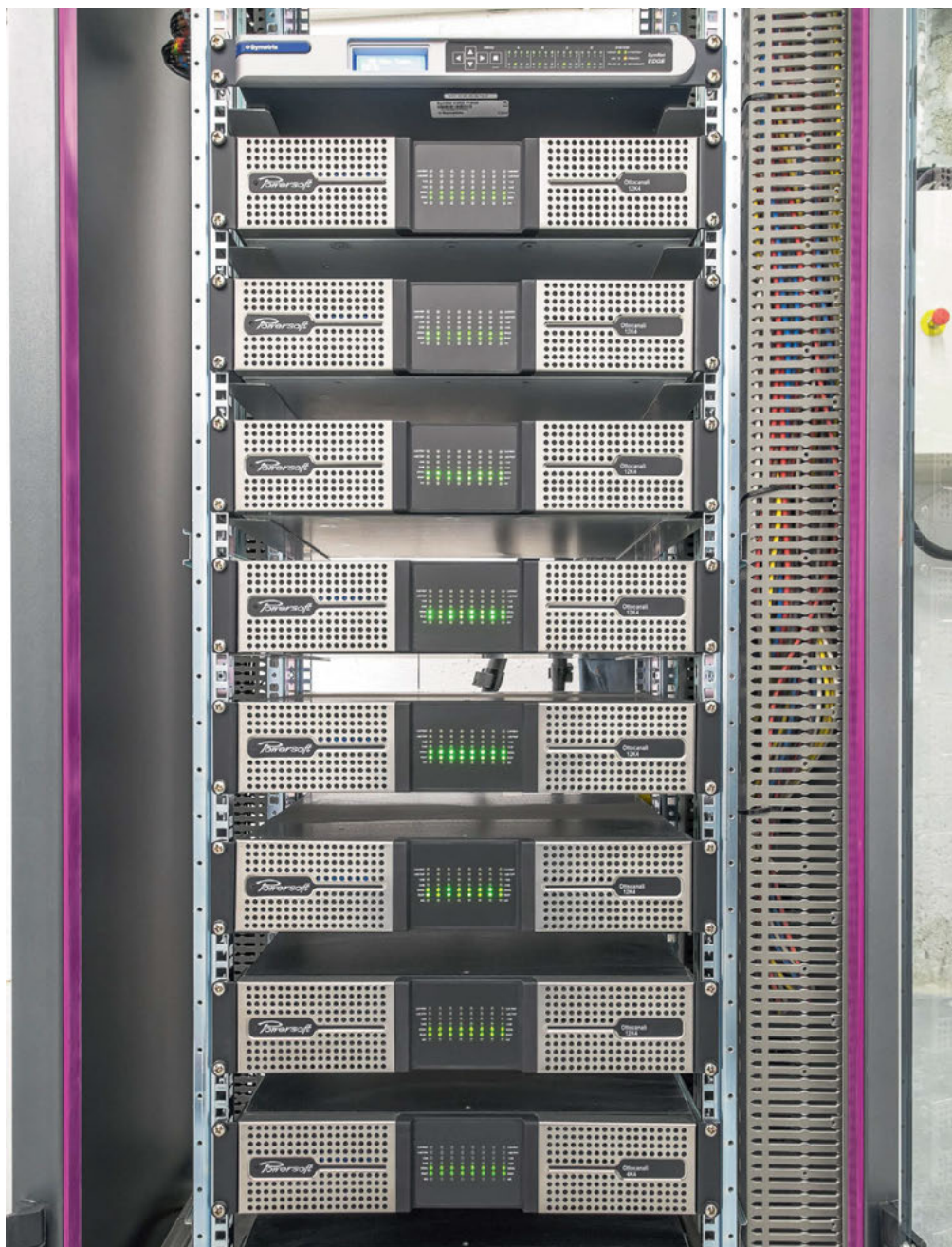
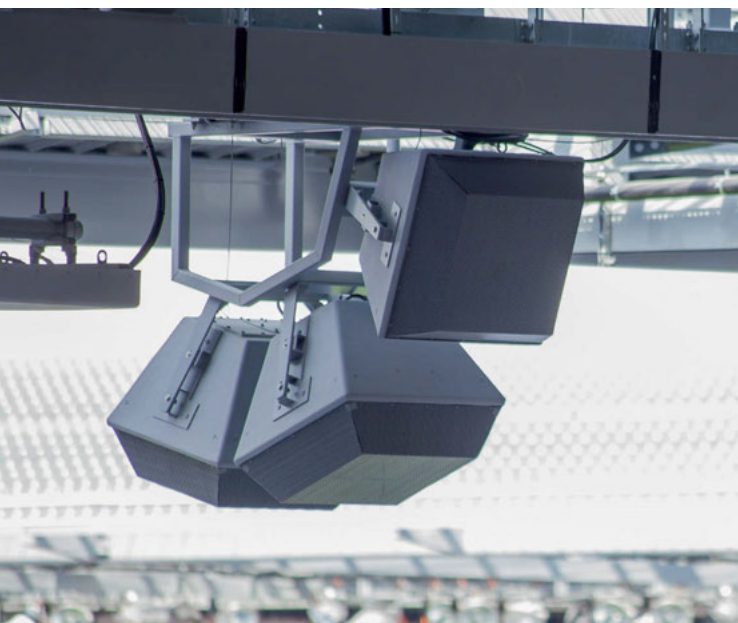


experience not found anywhere else. The design office of Atelier Audiovisuel Equipements, the engineering consulting firm brought in by Vinci Construction, put out a tender for the sound reinforcement system. Axente, a well-respected professional audio distributor in France, and integration specialists SNEF and Axians worked together to design the distributed system that ultimately won the tender. The goal was state-of-the art sound reinforcement that would rival audio at the highly regarded Wembley and Nou Camp Stadiums. The new system features Eastern Acoustic Works (EAW) loudspeakers powered by Powersoft amplifiers on a Symetrix Edge network. Alain Hercman, Audio Department Director at Axente, stated: "This was an amazing project from the start - the stadium provides visitors with free HD Wi-Fi, more than 175 sq metres of video screens and the highest quality audio system available. They spared no expense

and it shows everywhere you look." The Grand Stade is part of a new sports complex that stretches over 50 hectares and features a training ground for Olympique Lyonnais as well as hotels and office buildings. The oval-shaped stadium - the centerpiece of the grounds - provides three tiers of covered seating designed to provide fans with maximum visibility regardless of seat location. The roof canopy not only covers the stands but also extends over a large part of the podium surrounding the stadium, creating new spaces for fans to come together outside of the venue. "The goal of the sound system was to provide intelligibility, high output and pattern control throughout the space not only for games but for events the city might host during the off season," explained Rodolphe Roellinger of SNEF. "We designed a distributed system made up of EAW QX500 Series loudspeakers that provides more than 105dB / STI sup 0.5 and extended bandwidth which easily >

*"The QX Series are state of the art for venues like Grand Stade that that require high output and intelligibility."*





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• **Top**  
The EAW clusters feature two QX596i and one QX564i loudspeaker.

• **Left**  
The Yamaha QL1 is located in the commentator booth.

• **Right**  
The Powersoft Ottocanali amps and Symetrix Edge in the rack.

delivered on that objective."

Frankie Celeste of Axians added: "The system was designed to inter-operate with the public address system and with the EVAC audio system. We also managed Dante and MADI interfaces via Symetrix and Riedel components. The end result exceeded expectations."

The distributed system consists of 20 loudspeaker clusters with the majority of the clusters made of two EAW QX596i and one EAW QX564i loudspeakers. The QX596i shoot down to cover the first and second tiers of seating while the QX564i covers the upper tier. Four corner clusters consist of one QC596i and one QX564i aimed to cover the corner seating areas. The clusters are mounted 35-metres (115ft) high under the gangway utilising custom hanging hardware designed by SNEF.

The three-way, point source QX596i and QX564i loudspeakers load ultra-efficient mid-high compression drivers (90° x 45° and 60° x 45° respectively) with a constant directivity horn. Four

phase aligned 12-inch low frequency transducers arranged as vertical and horizontal pairs leverage beneficial interaction based on their spacing to extend pattern control will into the low frequency range.

"The QX Series are state of the art for venues like Grand Stade that that require high output and intelligibility," Frankie noted. "The four 12-inch LF cones were exactly what we needed to achieve excellent low end without compromising intelligibility."

When it came to powering the loudspeakers, the design team looked for reliability, power and efficiency. It was important that the amplifiers could not only power the system but provide the flexibility it required. Four eight-channel Powersoft Ottocanali 4K4 and 14 Powersoft Ottocanali 12K4 were specified to drive the 20 loudspeaker clusters. The 12K4's feed the low end sections - mono bridged at eight ohms - and the 4K4 manage the mid and high sections into a four ohm load. The amplifiers were rack





*“Each of the manufacturers in this project represent the top of the range, and they work together perfectly.”*

mounted in amplifier rooms located on the catwalk at the north and south ends of the stadium.

“Together the amplifiers provide more than 184,000W of power,” Rodolphe stated. “Because each provides eight independent configurable channels, they had the power and flexibility we needed for such a large multi-zone system.”

Dual redundant power supplies ensure not only great efficiency and reliability, but also provide backup in case catastrophe strikes. Powersoft’s patented SRM (Smart Rails Management) technology maximises the efficiency of the system as well as reduces power consumption. Fixed frequency switch-mode technology in both the power supply and output stage translates into lower crosstalk and perfect matching between the two. Fortunately, Ottocanali amplifiers handle over and under voltage extremely well without affecting performance. PFC lowers peak current adsorption, fostering the reduction of the wiring gauge which translates into lower installation costs.

“One of the main characteristics you look for in amplifiers is reliability - especially in a large venue like Grand Stade,” said Frankie. “Powersoft has an excellent reputation in this area and the eight-channel units are ideal for this application.”

Alain added: “The quality of this amplifier platform is far superior to others and allows us to use fewer amplifiers. It was a win-win situation.”

“DSP with built-in Audinate Dante that would work around networking technology in place was a necessity,” Celeste pointed out. “Edge from Symetrix with its flexible input / output configuration was ideal. Fortunately, EAW has designed dedicated super modules for the Composer software that make it easy to monitor, control and process the audio distribution network.” Two Edge units - one rack mounted in the amplifier room, the other was rack mounted in the control room - provide the crew with consistent support for the Dante media networking technology. A Symetrix Radius 12x8 EX DSP along with Symetrix expansion I/O units offer audio sign routing and distribution of the signal to VIP rooms, player areas and other spaces equipped with ARC-2e wall panels used to tap into the system.

“Each of the manufacturers in this project represent the top of the range, and they work together perfectly,” explained Alain.

“With the Symetrix Composer software it was simple for us to import pre-sets for the EAW QX system, and that was a big advantage - there is no difference between the Symetrix processing and the manufacturer processing. Also using ▶

• Above When France was awarded the Euro 2016 tournament and Lyon was selected as a host city, the club of Olympique Lyonnais decided to finance the project independently and the deal was sealed.





• Above  
Marc Kocks  
(Powersoft),  
Alain Hercman  
(Axente),  
Christophe  
Carles (Axente),  
Maxime  
Jonda (SNEF),  
Frankie Celeste  
(Axians),  
Rodolphe  
Roellinger  
(SNEF), and  
David Thiebaut  
(Atelier  
Audiovisuel).

#### TECHNICAL INFORMATION


##### SOUND

36 x EAW QX596i loudspeaker; 20 x EAW QX564i loudspeaker; 4 x Powersoft Ottocanali 4K4 amplifier; 14 x Powersoft Ottocanali 12K4 amplifier; 2 x Symetrix Edge DSP; 1 x Symetrix Radius 12x8 EX DSP; 1 x Yamaha QL1 console

[www.parc-ol.com](http://www.parc-ol.com)

Symetrix Composer meant we were able to design a user friendly interface for simple control of the system.”

With the UEFA Euro 2016 championships in sight, the Parc Olympique Lyonnais is ready to host the championship. Over the course of 30 days, thousands of fans will pass through their gates looking forward to an incredible game and experience in the new stadium.

“This was a project that was a long time in the making,” concluded Alain. “I think the owners and fans would agree that it has been worth the wait. The audio system is stunning - it provides everything necessary for what is needed now and well into the future due to great team work between manufacturer, distributor and integrators. Everyone is extremely pleased with the end result.” 

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Dynamic Audio Solutions

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### Subwoofer

- Powerful, deep and dynamic bass
- Customized BEYMA 18" driver
- D.F.L.(Dual Frequency Loading) technology
- Touring grade emery spraying
- A perfect match for all AUDIOCENTER full range speakers
- Rock solid humidity free CNC cabinet made of Russian birch plywood without resonance



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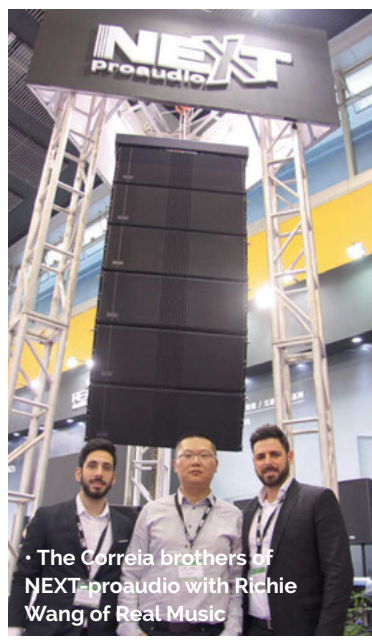
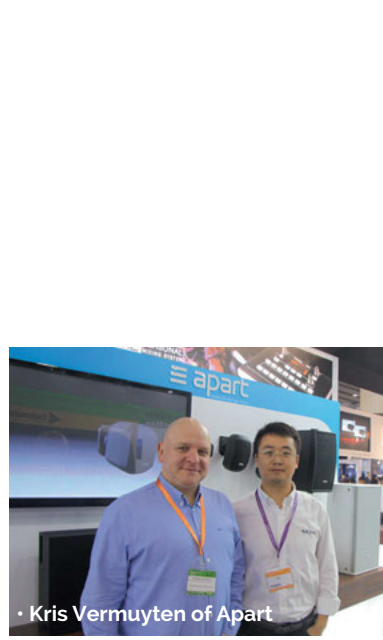
of companies had made the decision to invest in both of the shows. It may be that companies were simply using this year to establish which is the more effective tradeshow for their products. That would make sense, as outlaying for both shows each year would be an expensive - and difficult - operation.

With over 500 exhibitors packed into the hall, there was certainly a buzz on the floor, which may go some way to explaining the 58,053 visitors that attended - a new record for the show. In terms of the exhibitors' stands, PR Lighting's larger-than-usual booth - which displayed two show-stopping 'Canton Towers', with a striking PR Lighting logo as the centrepiece - it definitely sparked attention.

It was also difficult to miss EK Lighting's presence, with its new booth design

inspired by visions of Daft Punk performing live on the Starship Enterprise - a personal highlight of the show. On reflection, both shows enjoyed success, with increases in numbers for both exhibitors and visitors. After this kind of success, there is plenty of optimism among the Chinese manufacturers. Many are beginning to feel that, following an uncertain period in the industry, things are starting to pick up and improve. We are very interested to see if both shows can retain the traction that has been gained after this year.

*The next Prolight+Sound Guangzhou will take place between 22-25 February 2017. For more info, go to: <http://prolight-sound-guangzhou.hk.messefrankfurt.com> Dates for The GET Show 2017 have yet to be announced. For more info, go to: [www.getshow.com.cn](http://www.getshow.com.cn)*





- DPA Microphones added to its hugely popular d:facto Handheld Microphone range with the launch of the d:facto Vocal Microphone. The new d:facto Linear Vocal Microphone is for sound engineers who want the ability to design the complete sound pattern to create their own unique sound.

Featuring a new capsule with an isolation-optimised supercardioid polar pattern that is specifically designed to augment the human vocal range, the d:facto Linear Vocal Microphone combines the very best of cardioid and supercardioid directional characteristics.

- DTS displayed Katana – the cutting-edge LED bar that offers ultra-bright, extra-sharp 'blade' projection for the first time ever, along with single pixel control, motorised zoom and motorised tilt. There was also the Core, which is a real hybrid discharge moving head – spot and beam all in one. Finally, also on display was the Nick NRG 1401 – a creative LED wash light that delivers top-of-the-line visual effects or uniform wash lighting.

- Dynacord showcased its new PROMATRIX 6000, a combined public address and voice evacuation system that offers outstanding audio quality. Quickly and easily specified and configured with optimised system costs, and extremely efficient in its power consumption, PROMATRIX 6000 sets a new standard in the field of combined public address and voice evacuation systems.

- At this year's Prolight+Sound, EAW sponsored the 2016 PRG Live Entertainment Awards, which was held at the Messe Festhalle on Monday 4 April. An EAW ADAPtive System – comprised of Anna and Otto systems – was deployed for the show and remained in place for the whole exhibition.

Visitors were able to experience Anna and Otto first hand, with 10-minute demonstrations held four times a day throughout the exhibition. As well as that, EAW also showcased their Redline system.

- Elation's offerings included three new product series, with the ZCL Series, DTW Series and the Fuze Series, along with some surprise launches, all on display. The Platinum SEVEN, a new seven-colour LED wash luminaire, and the TVL CYC, a cyclorama wash luminaire, were debuted at the stand, too.

- Electro-Voice presented a number of products including the new ND Series of wired vocal and instrument microphones.

Also showcased on the stand was the new X-Line Advance family of line-array loudspeakers, which represents a dynamic step forward in line-array loudspeaker system design, offering a range of new features and advanced audio technologies that work together to surpass the performance of other line arrays available today – and all in a significantly more compact cabinet.

- ETC marked its 40th anniversary with a new stand concept spread across four different stands. In Hall 3.0, the ETC presented its current products, including the Source Four LED system, the Eos and Cobalt console families, the ColorSource range, and ETC's latest line of stage machinery, ETC Rigging, while another stand was reserved entirely for presentations and workshops.

- The Eurotruss stand at Prolight + Sound featured the full range of products, as well as the new XTS TrussSeries. Also on display were a broad spectrum of other truss types, lifters, stage decks, barriers and rigging materials. Visitors were welcomed by the global Eurotruss team and invited to discuss their requirements, with the team ready to assist.

- FBT displayed its full range of products, with new



• The Eagle Truss team



• Alex Bryan of Fenix Stage



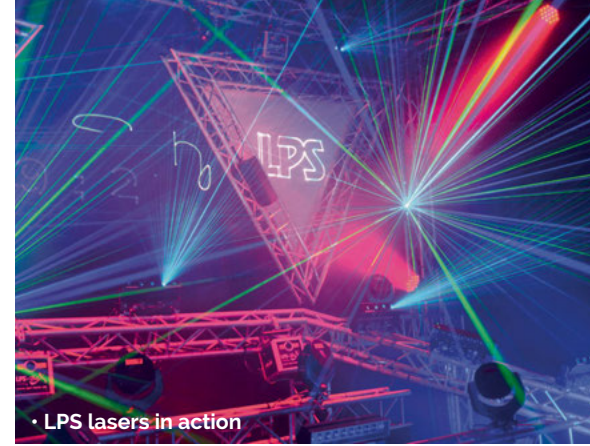
• DPA Microphones  
Anne Berggrein



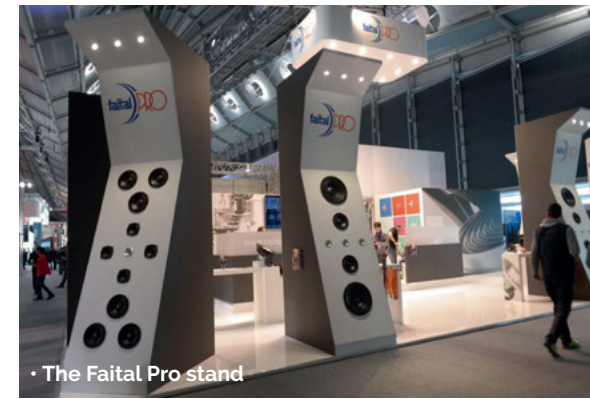
• The Doughty stand



• Christoph Moll of  
Fihhn Audio



• LPS Lasers in action



• The Faisal Pro stand



• The FBT team line up



• Gerald Giraudon of Colorsonic and French Flair Audio's Guillaume Boda



• Ann and Tony Andrews of Funktion One



• GLP's Noel Smith and Annalise Laundrup



products for 2016 presented for the first time. The next step in the PROMAXX range of portable PA enclosures was launched – with a specially-developed polypropylene cabinet and full grille aesthetic, the new PROMAXX represents the evolution of a portable sound classic.

There was also the launch of the VERTUS CS1000 compact line array, which combines maximum performance with a modular, scalable approach. Also debuted was the VENTIS range, which comprises of four versatile loudspeakers enclosures for either portable or fixed installation use.

- Fenix Stage brought its latest offerings, the FSH System security system and the TRC-700 ground support tower to the show and reported a positive response from visitors.

- Fohhn presented new connectivity options for digital audio networking and exclusive loudspeaker surface designs. Fohhn released the AIREA Breakout Extension ABX-3, a new D/A convertor for the company's fully digital, networkable and remotely controllable AIREA system.

The compact ABX-3 breakout box has the same basic functionality as Fohhn's existing AIREA ABX-1 D/A convertor, but is additionally equipped with a high performance Fohhn DSP. This enables the inclusion of active loudspeakers without integrated Fohhn DSPs in the AIREA system.

- UK manufacturer, Full Fat Audio had its full range of amplifiers on display and highlighted its new G2 DSP software for the FFA-4004 G2DSP and FFA-6004 G2DSP models.

- Following six years of development, British loudspeaker manufacturer, Funktion-One, decided to use Prolight + Sound for the exclusive launch of Vero - the new, large-format touring sound system that is set to redefine audio and operational performance expectations.

Vero is a complete system, with each element specified or designed for the highest possible performance. The system includes speakers, amplifiers, cabling, rigging, transport dollies, weather-proof covers and software. Elsewhere, Funktion-One also debuted the Evo 7T Touring loudspeaker and F132 bass enclosure.

- Genelec presented five additions to its Smart Active Monitoring (SAM) system series, with the new 8340 and 8350 monitors, 7360 and 7370 subwoofers and 9301 AES/ EBU Multichannel interface all available for attendees to inspect.

- GLP's stand featured no fewer than 313 fixtures, showcasing 92 impression X4's, 58 impression X4 Bar 10's, 45 impression X1's, 17 impression X4 Ls, 32 impression X4 Ss, 60 X4 atoms, and nine of the new GT-1 discharge light, being seen on a major stage for the first time.

- New products from the Green Hippo's Hippotizer v4.1 range entered the game with the launch of the demo software, Hippotizer PLAY, giving users the opportunity to dive straight into the software as well as the new laptop-based solution, the Hippotizer V4 Portamus, bringing users power and portability, two attributes rarely found in a media server.

- GUIL exhibited a completely new range of platforms for stages and events at the show, with five new models. The TM440, TM440XL, TM442XL, TM441 and TM440S have a load capacity ranging from 500kg/sq metre up to 1,500kg/sq metre.

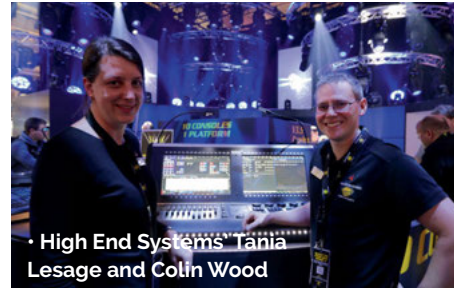
The company also presented new accessories for stages, such as ramps, stairs and safety handrails, and special panel finishes including transparent (methacrylate),



• The Genelec press call



• Zero 88's David Catterall and Mondiale's Justin Gawne



• High End Systems' Tania Lesage and Colin Wood



• The IDEA team



• Dave Millard of FFA



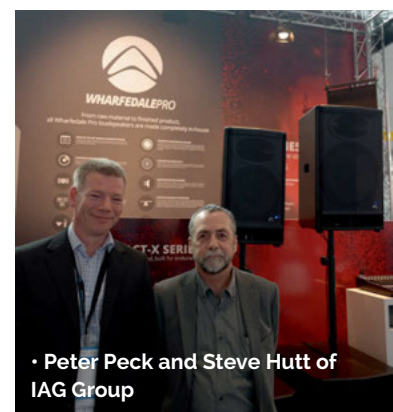
• The GTD team



• The team on the JB Lighting stand line up



Marta Hinarejos of GUIL



• Peter Peck and Steve Hutt of IAG Group



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• Curdin Bisaz, Remo Zollinger from Z-Audio and XTA's Jason Kelly