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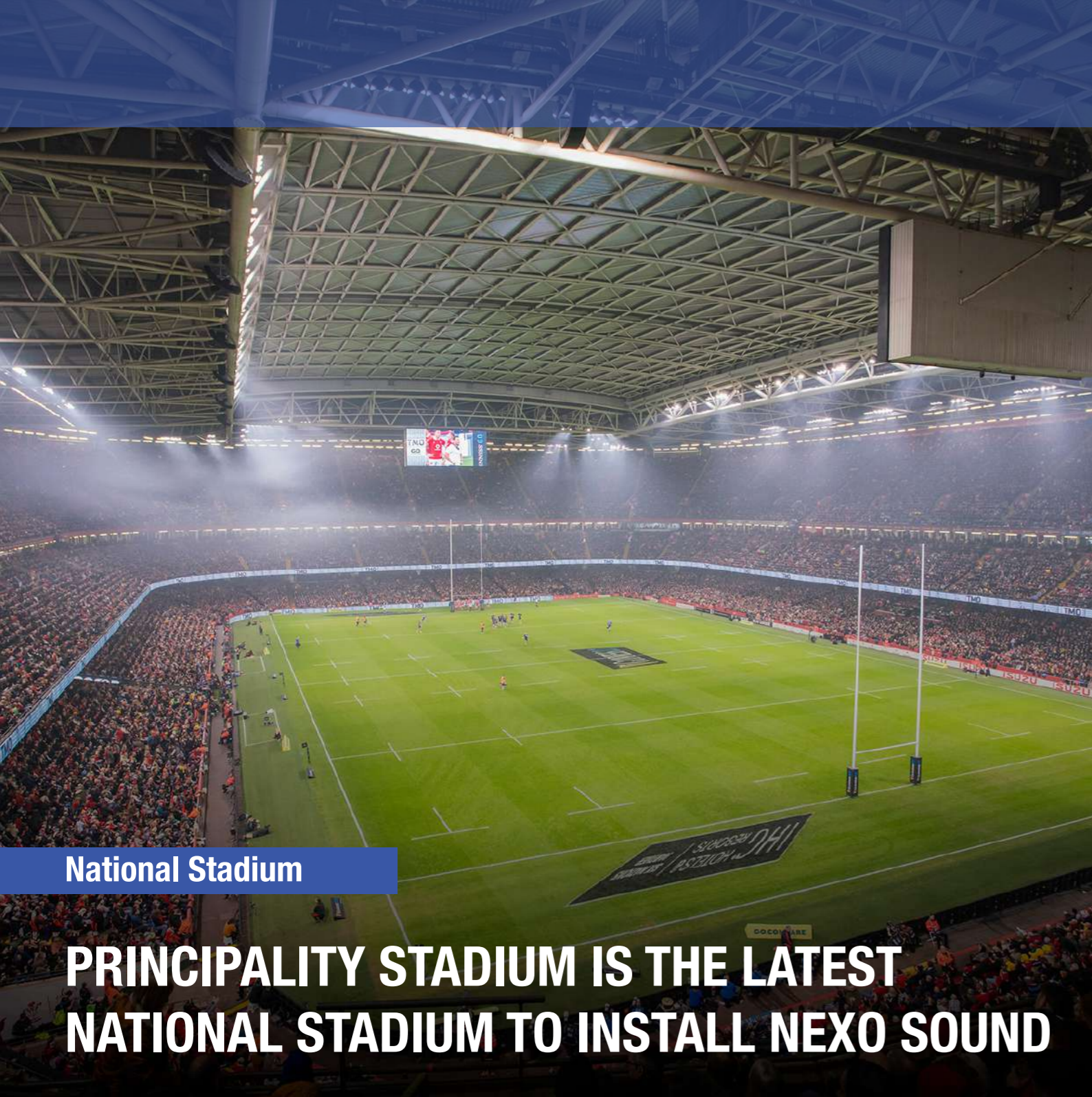
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SYSTEM INSTALLATION CASE STUDIES

Showcasing installations in stadiums and arenas.

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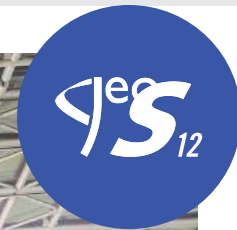


National Stadium

PRINCIPALITY STADIUM IS THE LATEST NATIONAL STADIUM TO INSTALL NEXO SOUND

Llanelli-based PAI Group/Vaughan Sound has completed the design and installation of a new NEXO sound system at Principality Stadium in Cardiff. Home to Welsh rugby, the 74,500-seat venue is one of just two European sports stadiums with a fully retractable roof and joins a growing number of national stadiums standardising on NEXO sound that already includes the Stade de France in Paris and Croke Park in Dublin.

“We’ve been involved in maintaining and upgrading the original system at the stadium for many years, and welcomed the opportunity to propose a new system which would both enhance the match day experience for fans and keep them safe with the clear intelligibility and uniform coverage of every seat necessary for effective public address and voice alarm functions” comments PAI Project Manager Stuart Williams.



Designed in conjunction with the NEXO Engineering Support team and drawing on NEXO line array and point source technology, the main system at Principality Stadium comprises 18 arrays of 8 x NEXO GEO S1230 with 10 banks of 3 x L18 subs and a delay line of 32 x NEXO P12 and 12 x NEXO P10 speakers. Pitch coverage is provided by a further 4 arrays of 4 x GEO S1230 each, with under balconies on level 3 covered by 44 x NEXO P8s and VIP hospitality boxes around the stadium covered by 75 x NEXO ID24s.

A total of 41 x NEXO NXAMPMk2 powered TD Controllers are spread across 6 amplifier rooms with a fibre ring connecting Dante™ and Q-LAN distribution networks, with remote control and monitoring from NEXO’s NeMo app together with system control and matrix routing from Q-SYS Core 610 processors. The Baldwin Boxall VIGIL3 integrates seamlessly for PAVA announcements and external sources are bridged into the system at locations including pitch side, the video studio and at the stadium bowl access area known as the Dragon’s Mouth.

“Anyone that’s been to a rugby international at Principality Stadium will know all about the unrivalled atmosphere created by Welsh supporters” states Mark Williams, Principality Stadium Manager.

“Alongside the clarity of the sound, what’s particularly impressive is the coverage; from the back of every seating tier to the hospitality boxes and lounges, every seat in the stadium will get to experience the same outstanding sound this new system provides.”

Speaking on behalf of NEXO, Sales and Marketing Director Gareth Collyer says, “The team at PAI/Vaughan Sound has done a great job at Principality Stadium, and it’s good to see yet another national stadium choosing NEXO sound to ensure crowd safety and enhance the experience for fans.”



“The addition of a clear and powerful new NEXO sound system will enhance our renowned stadium experience, as well as helping keep the crowd safe throughout all of our world-class events, from major concerts to sporting events.

-Mark Williams, Principality Stadium Manager



E-Sport Arena

FORTRESS SYDNEY LEVELS UP WITH THE MIGHT OF NEXO

With over 50 years of dedicated experience in the audio-visual landscape, The Avit Group deploys industry-leading technology in the design of comprehensive systems for hospitality and entertainment venues nationwide. The company's reputation for compelling solutions is due in part, to their affinity for well-crafted hardware. Tasked with the installation of a premiere audio system for the exhilarative Fortress Sydney, The Avit Group chose state-of-the-art technology from French loudspeaker brand NEXO.

Located in Chippendale's Central Park Mall, Fortress Sydney is a ground-breaking gamer's haven. The expansive new site now holds the title of largest esports complex in the Southern Hemisphere, drawing crowds as a modern entertainment mecca. Packed with a myriad of elite gaming PCs, peripherals and addressable lighting, the word 'performance' was on the lips of every supplier involved in the project. Faced with providing a loudspeaker solution befitting of such a technological pedigree, The Avit Group selected NEXO's P15 point source system for the Alienware Arena.

The Avit Group's Operations Manager, Adrian Davis, outlines Avit's role in realising the venue's grand vision: "For the Fortress esports project, we were given the brief to create a dynamic, immersive, and technologically advanced AV system, which sits somewhere between an entertainment venue and a broadcast studio. It was essential to provide seamless and high-quality audio experiences that would engage audiences, whether they were on-site or connecting digitally. Our goal was to ensure that the AV infrastructure was flexible and robust enough to accommodate a variety of events and broadcasts without compromising on quality or user experience."



After careful review of a variety of speaker options for the Arena, NEXO's celebrated P+ system was deployed in a L+R hang configuration, made up of a P15 loudspeaker and L18 sub on each side. Adrian reveals that

Proving NEXO a worthy contender for the Alienware Arena, where gaming tournaments are rendered into a thrilling spectator sport, Adrian champions the capabilities of the P+ Series: "The obvious standout features of the NEXO P15 speakers and L18 subs are their impeccable sound quality, high output, and compact design. The P15's asymmetric dispersion pattern provides excellent coverage to everyone in the arena, while the L18 subwoofers deliver powerful and accurate low frequencies, crucial for an immersive gaming and entertainment experience. The quality and SPL level of these speakers was very surprising. We were first presented this option on paper from the team at Group Technologies and it was only when auditioning that we realised that the unbelievable specs were no lie – they exceeded everyone's expectations at The Avit Group, especially our audio nerds. Both the speaker and subwoofer components are robust and reliable, ensuring that Fortress can operate smoothly during high-stakes esports events."

With an extensive history utilising NEXO across a variety of installs, The Avit Group's Managing Director, Brad Magri summarizes: "The reason we went with NEXO is that we have always been so pleased using the brand for years. I have a bit of a passion for the product range thanks to the quality of output, and high-end sound and aesthetic in such small-form cabinets."



P15's asymmetric dispersion pattern provides excellent coverage to everyone in the arena

"NEXO's reputation for delivering pristine sound quality, combined with the versatility of their P+ series, made it a clear choice."

- Adrian Davis, Avit Group's Operations Manager



Point-Source Install

**NEXO P+ SYSTEM AT SWANSEA.COM STADIUM
KEEPS THE FANS SAFE**

Images : Swansea City AFC / Athena Picture Agency Ltd, MONDO | STADIA

Text : MONDO | STADIA

Opened in 2005 to provide a home for Swansea City and Ospreys Rugby, the Swansea.com Stadium is a venue the city can be proud of. Built on the site of the former Morfa Athletics Stadium and playing fields, the 21,000-capacity stadium has become one of the foremost sporting venues in the country.

With an array of matches, concerts and events at Wales' third-largest stadium, the whole ground was in need of a full audio revamp to modernise the facility and enhance the atmosphere for the fans.

Gordon David, Facilities Manager at Swansea City Football Club, takes up the story: "The decision to upgrade the existing audio system, which had been in place since the stadium opened in 2005, was taken in early 2020. The reasons

behind that were partly down to the age of the system, but also, more importantly, to ensure it remained compliant to the necessary British standards.

"What we needed was a fully integrated public address and voice alarm system that ensured safety and evacuation messaging was clear, concise and integrated into our fire alarm system, adding high-quality audio for the fan engagement delivery on event days for both football and rugby." said Gordon.

After looking at various options, NEXO became the clear choice for Swansea City's new audio system, particularly after listening to the quality delivered in other stadiums, as Gordon explained: "We looked at several options in terms of brand and decided to go with NEXO based on the quality and specification of they were offering. We needed to ensure that the system we were proposing was not only fully compliant and future proof, but that it would allow us more intricate control in all areas."

The club enlisted the help of Vaughan Sound Installations (VSI) for the project. VSI's relationship with NEXO was a vital part of the project, too, as Operations Director, Richard Vaughan explained: "NEXO were also able to deliver very good technical submittals, which crosses the credibility gap when you're dealing with a club – basically, the system delivers what it claims to on paper. That's really important for us when it comes to modelling spaces such as Swansea.com Stadium, as it's quite a difficult acoustic space to fill."

NEXO's P12 loudspeakers from the P+ Series were used for the main audio system at Swansea City, which everyone agreed were the ideal choice right across the board. Andy Simmons (NEXO's UK Sales Manager) says: "The P12i loudspeakers are great for this project – they actually utilise an asymmetric PS horn similar to that used in our older PS Series.



One of the advantages of the P Series is that the horn flares are interchangeable, so you can change the dispersion characteristics. The P12i's in place at the front are pointing quite steep, which allows for great coverage of the front row of seating, but also aims it towards the centre of the stand. It really drops off as soon as you get onto the pitch as well. They are absolutely perfect for this stadium."

"The new system has certainly improved the way we deliver front end fan engagement ; we now have a much better user interface that allows us to use the system in many different ways that we were unable to do before." said Gordon.



National Stadium

RETURN MATCH FOR NEXO AT THE STADE DE FRANCE

The Stade de France in Paris is instantly recognisable on the international sporting scene for its distinctive elliptical lines. Built as the principal venue for the 1998 World Cup, hosted and won by France, the 80,000+ capacity stadium has enjoyed a lifelong relationship with NEXO, with nearly 300 of its high-output loudspeakers affixed to its immense floating roof.

One of the remarkable aspects of the stadium's design is the cushion of air that allows the lower stands to slide out in approximately 72 hours, depending on the different configurations needed, allowing the stadium to be reconfigured to house a running track for track and field events, or to be used for prestigious concerts and spectacles.

With all its different uses, this huge structure was designed to be a stadium for the 3rd millennium, and, after 14 years of successful service from its NEXO Alpha sound system, the Stade de France turned again to NEXO to come up with an equally forward-looking audio design.



A new 13-zone audio system was installed, featuring nearly 300x NEXO GEO S12 loudspeaker cabinets and nearly 30x RS18s, the first time NEXO delivered these powerful sub-bass units into a sports stadium install. The GEO S12 design was, at that time, one of NEXO's popular live music line array designs. It was customised especially for the Stade de France installation, resulting in the creation of the now-standard S12-ST cabinet, so successful in large-format sporting environments. "We modified the GEO S12 with a +3dB treble boost to provide the output necessary for a loudspeaker that is installed so far above its listeners: 45 metres above, in the case of the Stade de France," explains Paul Massiani, NEXO's stadium sound manager.

Put together with NEXO's GEOSoft programme and EASE, Melpomen's design provides high levels of management: control of the directivity of the loudspeaker output, which keeps the sound within regulation limits and within the stadium itself, and control of the operation of the system, which allows any signal to be sent to any zone from pitch to car-parks from a single control room.

The NEXO sound system is split to cover the upper and lower parts of the stadium. 40 clusters of NEXO cabinets are flown from the roof for the stands: 7x GEO S12-ST modules are directed at the upper levels, while a separate array of 6x S12s faces directly down towards the lower levels. Another 32 cabinets of S12 are used for fill at ground level. RS18s are flown, 27 in total.

A high level of diagnostic control is provided by 32x NXAMPs, NEXO's proprietary controller/amplifier, tucked away in 9 amp rooms in the stadium roof. These provide full diagnostic information to the control room, warning of a problem in a rack even if functionality is not actually affected. An additional 8x NXAMPs are used to control a separate PA system for the stadium plaza, the open areas surrounding the stadium, which is equipped with NEXO GEO S8 compact line array modules.

The Stade de France system runs on a full EtherSound network. Such is the level of system control that any input can be sent to any output at the Stade; publicity announcements for the car parks, or a message to a specific area of the grandstand.

Since the construction of France's national stadium, NEXO has gone on to become one of the world's pre-eminent suppliers of stadium and arena sound systems, recognised for loudspeaker products which can throw audio over large distances without loss of intelligibility or power.

