



NEXO STM MAKES A SPORTING DEBUT AT SEA GAMES, SINGAPORE

It was a night filled with spectacular lights, audio and visuals for the audiences watching live at the South East Asia (SEA) Games. About 40,000 people came together on 5th June 2015 in Singapore's National Stadium. Organised by the Singapore Southeast Asian Games Organising Committee (SINGSOC), the SEA Games centered around the Singapore Sports Hub.

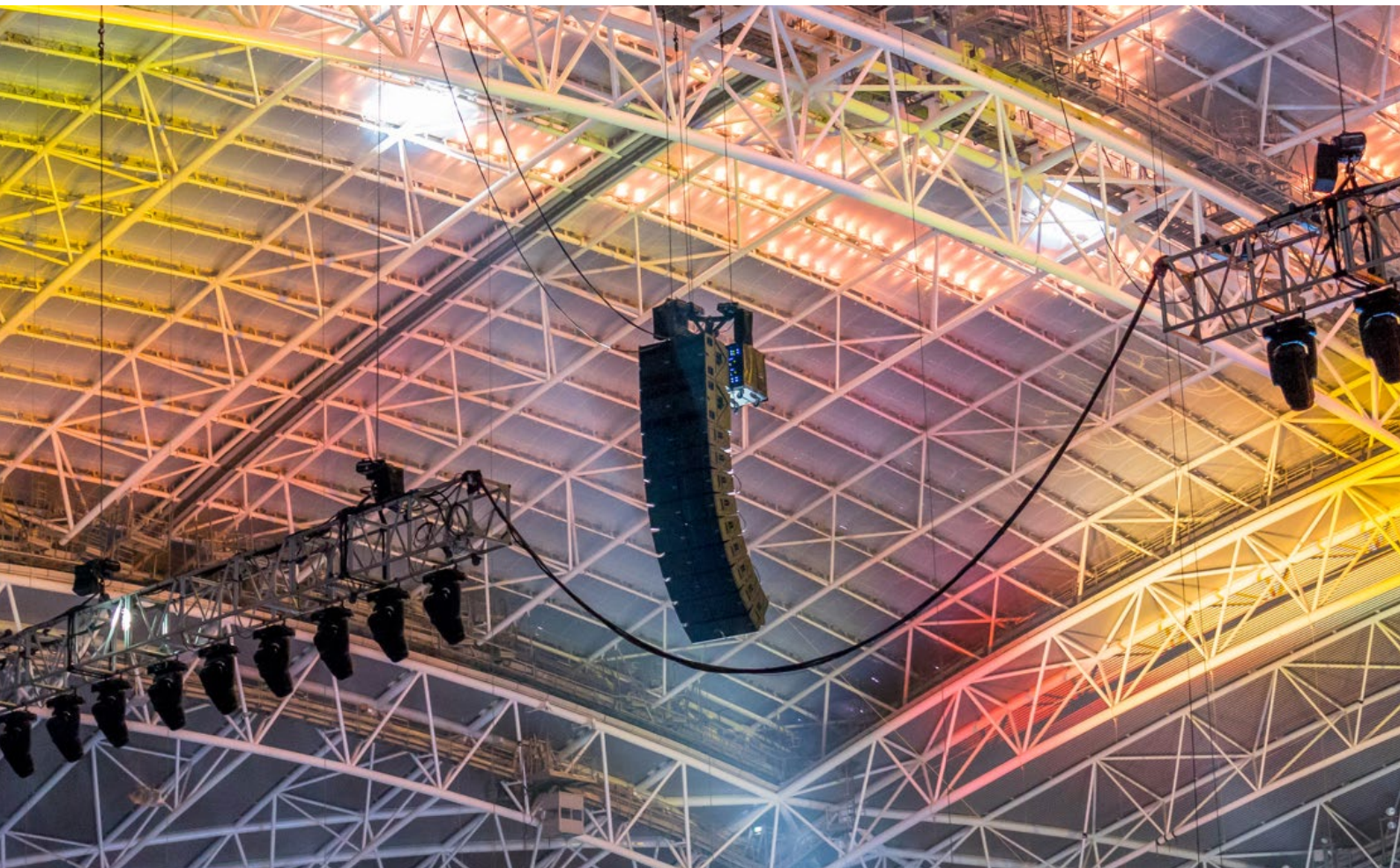
The sold-out Opening Ceremony was a three-hour spectacle, where the audience watched more than 5,000 performers and volunteers participating in a breathtaking show at Singapore's National Stadium, integrated with vibrant multimedia and lively displays of audio performances in different acts.

For several years, Singapore-based The Show Company (sound rental provider) has used NEXO PA systems for its prestigious events. The National Stadium equipped throughout with NEXO sound reinforcement, including the STM Series modular line array. NEXO's line array met the requirements perfectly for this ceremony. It all started with

NEXO PS15s in 1996, and soon followed with Alphas, GEO S, GEO-T, GEO-D-, the CD subbass series, and lately the new modular line array STM Series, which were delivered in December 2014 and debuted on the ZoukOut Moon Stage rave party in Singapore.

It was also December 2014 when The Show Company initially approached Shah Tahir, the sound designer from the SEA Games committee, to express their interest, identifying the perfect occasion to push the new STM Series modular line array into the Asian limelight.

With the NEXO STM M28 compact cabinets coming onto the market in the 4th quarter of 2014, The Show Company was able to propose a complete system solution and arranged a speaker demo to the committee. NEXO's David Hochstenbach and Nicolas Kirsch assisted The Show Company design team of Desmond Fong (Project Director), Jon Sim (Audio Project manager/Chief Systems Engineer), and Jerome Soh (Chief Field Engineer RF Systems).



The Show Company had to work with the existing acoustic challenges because of the structural issues of the stadium especially its dome-shaped roof, and there was no quick solution to this. The team used NEXO's NS-1 proprietary software design and modeling software to achieve precise positioning and an optimum result, as NEXO's Nicolas Kirsch confirmed, "the sound is clear and detailed even though that huge dome shaped roof gives a 7 sec reverb time. STM is soooo precise."

The stages consisted of a Field of Play which encompasses practically the whole field as one big stage, a Music Stage for bands, and a Robot Stage for performances. The Show Company's responsibility for delivering high-quality audio resulted in an overall design involving flown and groundstacked STM Series modules, with additional point-source PS Series speakers for holding areas and stage monitor redundancy.

In the roof were 10 flown clusters, each with 9x STM M46 main modules, 9x STM B112 bass, 4x STM S118 subs and 2x NEXO Universal Amp



Racks (NUAR) each, with the NUARs flown behind the clusters to keep speaker cables short and lightweight. These covered the top 2 tiers of seating and VIP balconies.

Trackside, there were 12 groundstacks of 3x STM M28 mains, 2x STM B112 bass and 2x STM S118 subs to cover the first tier of seating. These clusters provided same detailed and clear powerful sound but with more vertical splay. The STM groundstacks proved to be a vital element in this stadium configuration as they allowed coverage for the seats under the balcony, not covered by the flown array.

Another 6 ground stacks of 2x STM M46 mains and 2x STM S118 subs focussed on the performers area, to be used as a 'foldback system' in case the wireless in-ears of MCs and performers failed.

All that seemed easy enough to handle, but there were complicating issues with rigging the system, as Jon Sim, Head of Audio at The Show Company, explained, “We were given fixed rigging points due to roof loading which didn’t work in favour of flying arrays. The points were situated on a straight horizontal beam, making it difficult to adjust vertical tilt angles and horizontal aiming.” He continued, “after much research, we managed to offset our rig points on the straight beam to allow us fixed horizontal angles and also solved our array tilt angle.”

The challenge was not only technical but logistical. To bring so many systems together, some systems had to be shipped in from outside Singapore. And the setup requirements were to provide and commission the sound system at least 2 months before the Opening Ceremony, enabling the performers to have ample time

to rehearse. The Show Company was able to provide 48x M46 systems (total 144 modules) and 24x M28 systems (total 48 modules) but that was still short of the 320 modules required. After an introduction to ENGINEERING IMPACT LTD, NEXO’s STM partner in Hong Kong, the two parties quickly agreed to cooperate and, within weeks, the 36x additional M46 systems from ENGINEERING IMPACT LTD set sail for the 3-month job in Singapore.

Jon Sim and The Show Company’s team was duly impressed with the STM system and how it performed. “Overall we were very happy with the results of the system. We have plenty of headroom in the system and the direct sound clarity is amazing even with a reverberation time of 7 seconds.” The installation has resulted in remarkable sound performance and high intelligibility of speech for the stadium.

