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WINTER 2013

KOREA'S ARK

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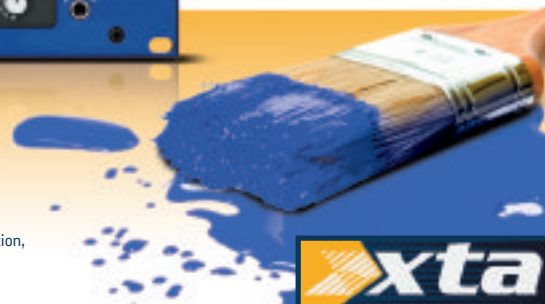
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Gangsa Style

The new home of the Korean Church in Singapore required a whole new A/V system, as **Richard Lawn** reports

IT HAS BEEN SOME 32 YEARS

since the foundation of the Korean Church in Singapore (KCIS), but its patient worshippers have now finally been provided with a home in Bukit Panjang. Most Korean headlines focus on the YouTube sensation emitting from Gangnam, but this purpose-built church on Gangsa Road some 3,000 miles south is creating a unique style of its own. Four years in the making, the church leaders insisted that the A/V technology that was to be used in enhancing services had to be user-friendly and simple to operate. In a city where cutting-edge technology is usually the pre-requisite, KCIS has set itself apart from its neighbours.

Having relocated from a nearby temporary home on Barker Road, the imposing structure of the four-storey church represents a significant upgrade. It will stand to serve the needs of the Korean community in Singapore for long into the future with a kindergarten and church services that will strengthen its ties with worshippers and ex-pats alike. The main traditional church services are conducted in the Main Sanctuary on the third floor, but Sanctuaries Two and Three, located a floor above, extend the worship experience to younger members and overflow audiences. Naturally, the church stipulated an A/V connection between all three, allowing the entire church to enjoy one service.

Electronics & Engineering Pte Ltd (E&E) worked closely with the consultant Alpha Acoustics to supply and install an A/V solution that would fulfil their needs, for which a dedicated team started work on site in April 2012, beginning the rigorous task of pulling cables. The services in the main Sanctuary are fairly basic in which spoken word is blended with a grand piano and organ on stage. To enhance the music and the sermons to the 1,000 worshippers, E&E has installed an L-C-R front of house EAW QX596 speaker system to promote even coverage throughout the fan shaped layout. Combining four 12-inch phase-aligned woofers with dual two-inch compression drivers, the QX596 qualifies as a three-way loudspeaker providing 90-degree x 60-degree coverage down to 55Hz. In the central cluster of this configuration, two AX118



The Korean Church in Singapore located in Bukit Panjang

subwoofers have been added to extend the low frequencies down to 30Hz. The 800W single 18-inch subwoofers share the same cabinet profile as the AQ596 speakers. Three Powersoft K3 and



Self powered Mackie SRM350 floor monitors can be connected to any of the five facility panels on stage

three Powersoft K8 amplifiers power the entire FOH system.

It may be a digital world, but the KCIS selected a Yamaha IM8 32-channel console as its mixer of choice in the rear control room, citing a familiarity with analogue as the reason. As a result, a number of racked outboard units have been added to the mix including a Yamaha REV100 reverberator, Ashly MQX-2310 graphic equaliser, Drawmer DS201 dual noise gate and an Ashly CLX-SL compressor/limiter. The entire system can be powered up and powered down courtesy of the racked Furman PS-8RE power conditioners which also



A Mackie Onyx 24-4 console, Sony camera remote control unit and Blackmagic Atem1 switcher are used in the second Sanctuary

suppress power surges and spikes – an important consideration during almost daily thunderstorms in Singapore. Floor monitoring can be provided via five discrete on-stage facility panels, allowing Mackie SRM350 plug and play speakers to be positioned close to the pastor, pianist or organist. The facility panels come with tie lines, microphone inputs, monitors, UTP and SDI video connections. Four channels of Shure SLX wireless have been installed, although some wired SM58 models are used on stage.

Above the stage, a row of par can lights create different moods, which can be controlled via a Theatrelights Nova 24 console. Three Sony D70 cameras inside the Sanctuary can be further controlled via an RM-BR300 remote unit, whose images can then be projected onto a fixed 4:3 resolution screen at the rear of the stage from a Panasonic PT-DW730 projector. Presentations and videos can be played out onto a 16:9 resolution Remaco motorised screen, receiving its images from a Panasonic PT-D800DS projector. A Blackmagic Design ATEM1 M/E production switcher in the control room allows the A/V operator to vary the content via the SDI, HDMI and analogue inputs. The lighting, video and audio controls can be operated from a fixed Crestron TPS6 touchscreen linked to an AV2 unit, which receives all the various feeds.

Sanctuary Two is a smaller hall which can seat up to 250 worshippers and lends itself to younger churchgoers by staging musical performances from a stage. Three EAW MK2396



The FOH speaker system in the main sanctuary at the KCIS consists of three L-C-R EAW QX596 speakers augmented by two QX118 subwoofers

PROJECTS

speakers have been mounted in an L-C-R configuration once again onto the 3m ceiling via threaded mounting points. The two-way 12-inch speakers provide 90- by 60-degree dispersion, but the rear seats required the further addition of three dual 5.25-inch UB52 speakers. The lower frequencies have been boosted by adding two floor-standing SB482zP subwoofers. Four Ashly Audio KSR 3200 amplifiers supply the power to the entire system in Sanctuary Two, whilst a single Symetrix Jupiter 8 provides all the DSP required. Mixing duties are performed on a Mackie Onyx 24:4 analogue console. Once again, two Furman PS-8RE sequencers ensure peace of mind amongst the volunteers when switching on the system, whilst four channels of Shure SLX wireless are available for the singers and preachers. Video presentations can be played out onto a motorised screen from an Epson EB-G5950 projector taking its feed from two Sony cameras and a DVD player. The inputs are fed into two rack mounted Blackmagic monitor displays, which allow the volunteers to select how they are displayed.

Similar in size, Sanctuary Three is in close proximity to Two and serves as an overflow room when the Main Sanctuary has reached capacity. Therefore, the worship experience



Powersoft K3 and K8 amplifiers power the EAW FOH speaker system

is replicated as much as possible through the A/V system in the room. This has been achieved by installing four EAW MK2396 speakers onto the ceiling together with two floor standing SB180zP subwoofers, powered by three Ashly Audio KLR4000 amplifiers. A Mackie CFX16 console and a Jupiter 8 processor provide mixing and loudspeaker management. A Remaco Touch Tension TEN-241 screen receives its images from a Panasonic PT-FX400 projector which utilises a Blackmagic Design mini converter and Extron IN1508 scaling presentation switchers. The religious leader prefers to use a Shure SLX4 headworn wireless microphone.

E&E's project manager CH Khor was assisted by project engineer David Hen over the eight months on site,



A rack of analogue processors, limiters, reverbs and EQ installed in the rear control room

which concluded in December 2012 with final commissioning. 'We were just one contractor amongst many others on site and co-ordination was difficult,' explains Mr Hen. 'The end result is good – the client likes it and we finished on time.'



A/V control systems for the main sanctuary

E&E designs, supplies and installs more A/V systems into Singaporean churches than any other systems integrator and usually conjures up more sophisticated, cutting edge designs. The company has, for example, made provisions for a fibre upgrade whilst installing the Cat-5 infrastructure, thus adding an element of future-proofing into the new building. Having carried out the blueprints and instructions to the letter, E&E has adhered to the old retail motto: 'the client's always right.'

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