

Hakka Methodist Church installs KV2

KV2's first church installation in Singapore delivers impressively

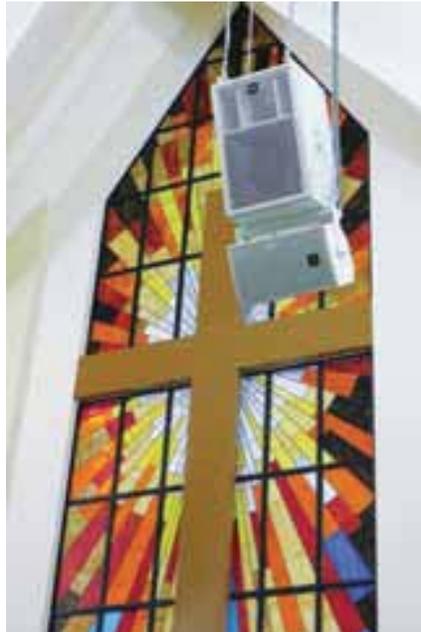


Completed in 1967, the most distinctive feature of this iconic modern church building located at Evelyn Rd is its angular roof form. Designed to resemble a Gothic-styled roof, its underside mimics the ribs and webs of the traditional internal vaults, presenting them in a modern manner with the skilful use of reinforced concrete. The building was given conservation status on 25 November 2005 by the Urban Redevelopment Authority of Singapore. This also meant that when the church recently refurbished its Sanctuary, it had limitations imposed which proved to be a challenge for the appointed Acoustic consultant, **Robert Soo of Cogent Acoustics**.

"The tall angular roof, the glass windows which we could not touch due to the church's conservation status, the flooring, the pews, all combined did give me a challenge. Apparently for many years the congregation had to put up with an inadequate sound system and a non-conductive acoustic environment for reinforced sound. So when the Sanctuary was up for refurbishment, I was called in early to help ensure a more pleasant experience for the congregation. I am grateful that I had the opportunity to come in an early stage as this helped me suggest solutions that would help in controlling reverberation and so forth," says Robert.

Serious consideration was placed on the choice of the speakers. Six brands were involved in the loudspeaker shoot-out which was assessed by the Church pastors, Robert Soo as well as the Church Committee. At the end of

the demonstrations, KV2 Audio was unanimously chosen.



According to Reverend Daniel Lee the KV2 system retained natural sound flow and the sound was very clear for vocals and speech without being overpowering.

"The KV2 system retained natural sound flow and the sound was very clear for vocals and speech without being overpowering. The speakers had little distortion and most importantly wherever you are seating the speakers provided even coverage without any delays. Frankly we were very pleased with the sound system. On the first worship service where we used the system, there was a visible appreciation

of the system from the congregation – I believe they enjoyed their service very much," says Reverend Daniel Lee.

The main speakers being the **KV2 ES1.0 3-way point source** and **KV2 ESD10 down fill** were all hung from the ceiling in a left and right configuration in the front of the altar. KV2 ES1.8 18 inch subwoofers were floor mounted to provide the deep end. Delay loudspeakers wasn't an option as the ceiling structures were not designed to carry loads, as such the front clusters had to do all the work in filling the 350 capacity church. "Some of the church members were initially unsure that the system would effectively cover the whole 24 meters depth of the church seating area, but they were pleasantly surprised when they heard how clear, pristine and even the sound was from wherever you were standing or sitting in the church," says Robert.

Amplification for the Main and sub speakers was provided by two units of the **KV2 EPAK2500R** and for the Down-fill, the amps were **two units of the QSC RMX2450**. Mixing was done on an **A&H ZED428**, which is an analogue system that was in the church's inventory for some time, complemented with a new **A&H PA12**.



Blinds were installed for the glass windows



Acoustic panels were added to the back walls as well

On request from the committee, the speakers were painted white so that aesthetically it would blend in with the refurbished environment. Robert adds that since the church's structure was old, he had to get the structure tested to ensure that the speakers could be

hung safely. "The speaker clusters were hung at strategic positions and angles to provide the required sound dispersion and coverage. Plus it also helped in reducing the amount of undesired room excitation," says Robert. In addition, Robert had blinds installed for the glass windows and added acoustic panels at the front and back walls, as well as in the front at the altar. This resulted in the RT60 time being brought down from 2 seconds to a more conducive 1.35 seconds.



MyMix personal monitoring system

The MyMix personal monitoring system was also implemented for the worship musicians and singers. "This enabled the worship team to not only better hear themselves and have their own preferred monitor mix, but it also provided the much needed control on stage volume, a fact most welcomed by sound engineers," says Robert.



The SANYO 12,000 lumens projector with long throw lens

Installation and integration was provided by Christopher Chang; Founder and Managing Director of WOW! Media Resources Pte Ltd. "I had to personally supervise the entire project as the building is old and has been granted the conservation status so we have only one go in the installation of the entire system."

Said Christopher who has been in the audio industry for more than 23 years, "Rigging of the loudspeakers in such a building is challenging. In the absence of proper structural documentation, we had to decide how the loudspeakers were to be suspended from the ceiling and also consider the method of suspension; of course with the advice of a structural engineer."

The KV2 systems, the QSC amps and the A&H PA12 was supplied by Sindo Exports Pte Ltd.

Other installed equipment include:

- 3 x Furman PS Pro E-II Power Sequencer and conditioner
- 2 x Yamaha REV 100 digital reverb
- 1 x 2-way TOA F-1300WT Bass reflex wide dispersion speaker
- 1 x 2-way TOA F-1000WT Bass reflex wide dispersion speaker

- 1 x A2120TOA integrated mixer amplifier
- 2 x Ashly CLX-52 Compressor Limiter
- 3 x Ashly MQX-3210 1/3 Oct Graphic Equalizer
- 1 x lot of Shure Microphones – SM81LC, Beta 98AMP/C, Beta 91, SM57, PSM200
- 2 x U859QL Audio-Technica, gooseneck microphone
- 6 x Countryman DI 85
- 1 x SANYO PLC-XF1000 12,000 ANSI Lumens LCD projector with long throw lens
- 1 x 180" fixed LithoLAV Screen
- 1 x lot of Extron equipment - VSC-500, SW-8V, MDA 4V EQ, MTPPT 15HD A, MTP RL 15HD A, CVEQ 100

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(L-R) Huimin from Sindo, Chris from WOW! Media, Robert from Cogent Acoustics, Reverend Daniel and Dave from KV2 Audio