



Assembled technology

The main assembly hall at Hong Kong's Munsang College has had a complete technical overhaul. **Caroline Moss** pays a visit

FOUNDED IN 1926 TO ADDRESS the lack of places for children to study in Kowloon City, Munsang College began life in a three-storey colonial house in the Kai Tak Bun district, boasting four teachers and 18 students. As the years passed, two nearby houses were also rented to accommodate the growing school, and it was decided to buy some land at the end of Grampian Road for a purpose-built campus. The move, by now affecting more than 500 students, was completed between 1939 and 1940.

Over the years there have been many subsequent changes and additions to the campus and its buildings. In January 1969 a new, 1,000 capacity school assembly hall was completed and later opened by Hong Kong's Secretary for Home Affairs Sir Ronald Holmes, who played a significant role in rebuilding Hong Kong after the Second World War. The Lim Por-yen Hall, as the hall became known in 1982, is central to the school's activities, bringing students together at morning assemblies, regular meetings, church services and drama and music productions. Today, there are 800 students in the middle school, 1,100 students in the primary school and 500 kindergarten students, all sharing the same hall, and the school principals decided it was time for an overhaul of its technical facilities. During 2012, a tender went

out for a complete new audio, video and lighting refit of the hall, the first two of which were awarded to Jolly ProAudio Broadcast Engineering of Hong Kong.

'The hall was undergoing a complete refurbishment, and we worked alongside the contractors handling the renovations to design all speaker, camera and projector positions, and the access points,' he says. We used acoustic modeling software developed by Odeon from Denmark for our initial designs, then we used EASE to carry out simulations and simple acoustic checks.'

Jolly also recommended off-the-shelf acoustic paneling from Chinese brand XinJingJie which was installed by a special team of contractors, to cut down on reverb throughout the hall. 'There are lots of live surfaces throughout the hall, explains Andy Leung, executive director of Jolly ProAudio, referring particularly to the windows that run alongside both of the halls right up to the 10m high ceiling. 'Because the hall's whole structure was built around 40 years ago we couldn't physically make a lot of acoustic changes. You can still hear some reverb for example, but it's greatly improved.'

At the heart of the installation is a Fohhn speaker system, which Mr Leung describes as 'one of the loveliest things about the new hall; it's very good for speech, and as



Andy Leung of Jolly ProAudio

this is a school assembly hall this function was primary. The Fohhn speakers have a long, clear throw; they are so small and yet can cover the whole room. One of the reasons we went with them was because of their size; they're so compact that they don't intrude into the room and detract from the architecture. For musical applications we have installed the subs to give added punch and clarity.'

Two Fohhn AL-150 line source speaker systems have been installed at either side of the stage as the main speaker system, with two AL-100s as balcony speakers. These systems, from Fohhn's Linea AL range, are built into a linear design enclosure and have been specially designed for architecture with demanding acoustics and long reverberation times such as churches, museums and conference

rooms. The speaker systems are powered by two VS34 power amps from Korean manufacturer STK. Two Fohhn AL-50 line source speaker systems are being used as under balcony speakers, with two AT-05 full range speakers as front fills, all powered by STK VS20 amps. The installation also includes a Fohhn XS-20 active and a XSP-2 passive subwoofer and four STK PSM-6150AP stage monitors. 'The reason we used these STK wedge monitors is because they are active,' says Mr Leung. 'Musicians can plug in wireless microphone modules and move around as they play. This adds great flexibility to the performance space and allows musicians to move around freely.'

The audio system can be controlled from a simple, on-stage setup consisting of an STK HVX-1643R mixer, a Sennheiser wireless mic system and a patching system. For more complex productions, a glass-fronted control room at balcony level has been newly constructed at the rear of the hall. This is equipped with an Allen & Heath GL-2800 live mixing console, with Emes Kobalt two way active studio monitors, TC Electronic M350 multiple effects and reverb processor, an iBO D-26II digital audio delay, Pioneer CD, DVD and Blu-ray players, STK DI-2000A DI boxes and Sennheiser HD-280 Pro headphones.

'For school assemblies, and on Sundays when they have a church



a Blackmagic card to allow audio and video recording and editing. An intercom system by Chinese manufacturer Gigatec allows contact between the control room and stage or other parts of the hall. The hall's control room is also connected via fibre optic cabling to the studio of Campus TV, the college's broadcaster. 'The infrastructure of the school is very good,' said Mr Leung. 'We've linked the Campus TV station to the hall via fibre optic cabling, so all signals from here go to their studio, situated across the athletics track, from where they can broadcast to the whole school. So anyone can watch whatever is going on in the hall, throughout the school.'

Jolly has also linked a nearby lecture theatre to the hall, allowing two-way connections. 'We had to lay lots of cabling around the building,' says Mr Leung. 'Trunking systems run from either side of the stage up to the control room, then there's an underground passage across to the TV station, and also to the lecture theatre. We've provided cable troughs that can be easily accessed for maintenance or upgrading. We installed a selection of Belden fibre optic, optical, Cat-5 and Cat-6 cabling, so it can be used for many different connections.' The lecture theatre's audio system has also been upgraded with an STK mixer and an AKG wireless system.



The commemorative plate

Now that phase one of the hall's refurbishment is complete, the college has begun to think about a second phase. 'They would like control panels to remotely control the projectors, move the screens up and down, open and close the curtains etc,' says Mr Leung. 'They also want

us to train some of the students and teachers to operate the system. At the moment, for larger events, they have to hire a team of people that we recommend.' In its mission statement, the school declares its commitment to offering 'a holistic education upon Christian principles and nurture in them a positive outlook on life, so that they can be self-motivated, resolute, devoted to making valuable contributions to the community, and prepared for the sublime state of life'. The new assembly hall should make a valuable contribution to uniting students in this mission.

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service, they don't need a very big system, so they just use the small STK control system down on the stage,' says Mr Leung. 'However the students also organise musicals, concerts and other more complex productions, when they'll switch over to the bigger system. This is why we've followed the rule of thumb for theatres, so that bigger events could be put on, but also bearing in mind that a lot of the equipment will be operated by students and volunteers.'

Jolly also supplied a comprehensive microphone package including Sennheiser wireless headset, clip and handheld mics, Countryman wireless earset and headset mics, Astatic gooseneck mics, AV Leader dynamic handheld mics and CAD percussion pack, condenser mics and condenser piano mics. The company also provided video and projector systems including Sony cameras, Panasonic projectors, Grandview screens, Kramer video distribution amps, scalars, VGA matrix, converters and switchers, and



A Fohhn AL-100 balcony speaker