

Worship **AL** Asia

A/V • LIGHTING • SOUND REINFORCEMENT • RECORDING • STAGE SOUND • BROADCAST

SPRING 2015

STEERING PROGRESS

CCF Alabang's major technical upgrade

THE FULL PICTURE

Tips for purchasing videowalls

HOW TO PLACE A MIC

Getting the best sound from fretless strings

IN WITH THE NEW

Flexible audio at Temple Beth Israel



PROJECTS



(Clockwise from top): The view from front of house, including the SSL Live console; Mr Kevin Jove Yague is the audioman of CCF Alabang; Covered by canvas, six Fohhn AS40 subwoofers together with two AT201 front-fill speakers are discretely located under the stage; Glenn Dennis Fabunan is the audioman in training

Steering progress

Manila's CCF Alabang is meeting the challenge of increased services and a growing congregation with a major technical upgrade, writes **Richard Lawn**

WHEN PASTOR PETER TAN-CHI HOSTED THREE couples to an evangelistic home Bible study in the suburb of Cainta in Rizal, little did he imagine what he was about to begin. Fast forward 30 plus years and Christ's Commission Fellowship (CCF) has blossomed into a non-denominational megachurch whose membership today numbers more than 60,000 people in all outreaches. It has stretched beyond the 47 churches in the Philippines to a further eight countries hosting large expatriate Filipino communities, such as Sydney in Australia, the Bahamas, Saskatchewan in Canada, Auckland in New Zealand, Doha, Qatar, Singapore, Los Angeles, Brunei and the UAE emirates of Dubai and Abu Dhabi. Although the CCF's headquarters is based in the northern Manila suburb of Pasig City, CCF Alabang, its main church in the South Metro, is currently shining brightly having installed a new audio system into its sanctuary.

As church membership has grown, so have the number of church services. The number currently stands at five each Sunday in addition to three Saturday services dubbed as Elevate Youth service and B1G South Singles Ministry. It's a question of when rather than if for a sixth Sunday service being added to the already tight schedule. Dedicated in 2004, CCF Alabang's vibrant services have also grown on stage with more musicians and singers being added to the FOH mix. With an increasing adoption of A/V technology, the church commissioned Erwin G. Balangue in 2012 as its preferred consultant to assist the southern Manila CCF satellite church in terms of training and



The church is currently using seven myMix personal mixers

technical development. Working closely with Mr Jenor Aguilar, in charge of the CCF Alabang audio video department and Kevin Yague, overseer of the live productions, together they are training a team of increasingly competent volunteer technicians.

Following two years of assessing the church services within CCF Alabang, Mr Balangue made a number of recommendations. 'It was becoming increasingly obvious that the backline spillage from the musicians at stage right was distracting the congregation immediately in front of the stage,' confided Mr Balangue. 'The congregation weren't participating in the worship experience and so I recommended an in-ear personal monitor mixing solution.' To date, seven myMix personal monitor mixers have been added to the musicians' spots

whilst the customary wedges and individual instrument amplifiers have been removed. This has not only created a better audio experience for the congregation – and the musicians – but it also enhanced the visual aspect of the 12m wide stage.

Having noticeably improved this aspect of the church services, it acted as a catalyst, prompting Mr Balangue to take further action. Equipped with Sennheiser e835 wired handheld microphones mounted on stands, the prompts are monitored via two wall mounted K-Array KP52 speakers, which are discretely out of view of the audience. 'These speakers are incredibly powerful, but occupy a small footprint,' explains Mr Balangue. With the sides of the stage clear, his attention finally went to centre stage, which is now monitor free. Belonging to the same Python family as the aforementioned KP52, four K-Array KP102 speakers have been recessed into the stage, covered with grey grilles and fixed into position facing towards the pastor and the worship leaders. Two channels of Sennheiser ew300 and three Shure SLX wireless microphone systems complete the stage set-up, leaving it completely free of cables, loudspeakers and microphone stands.

Some months later, the FOH loudspeakers were put under the microscope. 'An LCR point source system with distributed back and under-balcony fills serving the fan shaped room was providing inconsistent coverage throughout the venue, so we decided to seek an alternative. In addition some of the drivers had blown and needed re-servicing.' Inviting leading suppliers to host their best loudspeaker systems for Sunday services proved

to be an enlightening experience. Despite the protestations of some of the suppliers who hadn't fully prepared for their demonstrations and realised they hadn't performed to their strengths, Mr Balangue was unsympathetic. "If a supplier is making excuses at the outset, you have to take that as an indication as to how that relationship will develop."

Several line array systems later, CCF Alabang welcomed its final demonstration in the form of a beam steering column solution. "I must admit that we were sceptical regarding this design as we simply felt that there would be insufficient power and coverage," explained Mr Balangue. However, he was quickly provided with a lesson in beam steering electro-acoustics. The supplier, StageCraft International Incorporated, were joined by Ralf Freudenberg and Samuel Hartmann from the Fohhn headquarters in Germany, and I have to say that we were greatly impressed by the demonstration. They went the extra mile as they asked us for a floor plan beforehand and from this they mapped out the venue using EASE Focus software, calculating the signal strength and dispersion."

For the demonstration, two Fohhn FM/I-400 columns were erected on top of one another whilst two further Fohhn FM/I-110 models were added



Located behind the stage, the prompters use Sennheiser e835 microphones



The Fohhn columns provide an effective yet unobtrusive solution

on the top and bottom of this from the Focus Modular family. The Fohhn FM/I-110 high frequency modules include 16 compression drivers coupled to a waveguide/horn system together with 16 multi-channel DSP amplifiers, capable of producing a maximum SPL of 148dB at 1m. The longer Fohhn FM/I-400 low-mid modules include 32 speakers and 16 DSP amplifiers. Integrating Fohhn's Two Beam Technology enables two separate beams to be generated,

allowing simultaneous coverage of different areas such as the stalls and balcony, using a minimal number of systems. In addition, a Side Lobe Free algorithm suppresses unwanted side lobes enhancing targeted coverage and better speech intelligibility.

Weighing 158kg in total, the combined module measures 3m in height and 120mm in width.

When both modules were combined with six Fohhn AS-40 single 18-inch subwoofers, the church committee were stunned with the results. "Some systems excelled for playback and others for live music, but the Focus Modular system scored consistent points across all categories and especially for speech intelligibility. We were invited to walk all around the venue in order to detect any hot spots. The beams from the modules and the subwoofers were being steered and incredibly it was smooth from back to front and side to side.

I couldn't believe that we were



One of the two Fohhn columns that make up FOH



Best Wireless Solutions for Worship

Based in Taiwan, MIPRO, an expert in wireless audio, has developed various products designed to provide both clear audio quality and reliable wireless transmission. Their systems easily accommodate multi-channel applications and boast a well-earned reputation for easy installation. MIPRO's goal is to provide the best possible wireless solutions for lecture, worship and musical instrument playing at an unsurpassed value.

Wireless Microphone Systems



Boundary / Gooseneck Microphones



Instrument Microphones



www.mipro.com.tw 100% Made in Taiwan

PROJECTS

getting measurements of 110dBA at mix position (10m) with this. The technology actually worked!"

The fact that the design was so unobtrusive and almost invisible to the eye was a further bonus. 'Some of the line arrays that were tested were too big and long once fully suspended. Not only were they an eyesore, but they were an obstruction. When combined with the subwoofers, the Focus Modular system was powerful, providing smooth, even coverage and clarity. We thought naturally that the modules would only be available in either black or white when we asked them if they could match the decor of the church. When they replied that they could create a natural wooden match, we were totally won over.'

Having impressed CCF Alabang sufficiently to acquire the system, the same team returned from Germany to fine-tune it during installation and commissioning. Six Fohhn AS-40 subwoofers have been positioned under the stage at equal distances and enclosed in sub shields made of dense fibem board, which ensures



Glenn Dennis Fabunan with Church consultant Erwin Balangue

the energy is directly towards the audience and away from the stage. 'We had the stage renovated and acoustically treated to give it that new clean look and for it not to rumble when the band plays. Thanks to Basic Machinery and Acoustics Corporation for their expertise.'

Additionally, four Fohhn Arc-series AT201 10-inch two-way speakers have

the engineers to get a feel for it. Straightaway, the Live 500 had this amazing warmth and sound quality unlike other digital consoles we have used and there was much more signal with a wider bandwidth. Consequently, the church leaders decided to buy it and one of Stagecraft's product specialists came and conducted basic training. There are so many features that are cool such as the on board plugins like the SPL meter, guitar cabinets and the tube emulator. And we can now perform multi-track recording and virtual soundcheck via the two SSL Delta-Link MADI HD interfaces with Pro Tools. A customised mix can be created from the sanctuary mix and routed to the overflow rooms or anywhere else in the church. We are really happy with the combination of Fohhn and SSL.'

Having flown to Singapore for Broadcast Asia in June 2014, Mr Jenor Aguilar was intrigued by a number of A/V products developed by Blackmagic Design. 'We did some research beforehand, but what particularly caught my eye was the H.264 Pro Recorder. This is a neat little device, which allows us to upload videos onto our Facebook page and YouTube channel by encoding HDMI files in real-time quickly and easily.' The original cassette recorder used for broadcasting services has also been replaced with a pair of HyperDeck Studio disk recorders providing uncompressed and compressed ProRes and DNxHD video formats. Outfitted with two SSD slots allows continuous recording and when one disk is full, recording automatically continues on the next SSD. 'We also acquired a VideoHub 20x20, which allows us to visually route video from the built in monitor showing live video and cross point connection labels simultaneously. You can switch the video by using the spin knob or the dedicated button panel. Set-up

was easy as the IP settings were configured on the front of the unit without a computer. We also bought a SmartView Duo providing further monitoring for the A/V staff in the control room.'

A Digital Projection projector is located at FOH, displaying its images onto a motorised 9m x 5m screen. The services are captured in high definition with Sony XD cameras before being fed into a Panasonic AV-



A Panasonic AV-HS410 switcher receives six feeds from Sony HD cameras and Apple Macs

HS410 switcher, which also receives three feeds from the Apple Mac computers one of which is loaded with pro Presenter 5 software. Playback from DVD players and such like is fed into a NewTek Tricaster LiveControl LC-11 via a TCXD300 portable production panel. The feeds are routed to the IT server and displayed on any of the digital signage throughout the church.

Smaller rooms on the ground, second and third floors accommodate the youth services, Sunday schools, Bible studies and other classes, whilst acting as overspill rooms during busy Sunday services. These are currently under renovation and are being equipped with a Mackie DL32R digital console and K-Array speakers and the A/V room is also being upgraded to ensure a smoother workflow. 'It's very much a work in progress,' concludes Mr Balangue. 'You finish one aspect of the church and another demands your attention. Training our technical teams is the most difficult challenge though. But there's never a shortage of volunteers wanting to learn the fundamentals of audio engineering and with the equipment we have here, they certainly appreciate listening to our systems, as we all do.'

www.ccf-org.ph
www.ccf-alabang.org
www.blackmagicdesign.com
www.fohhn.com
www.solid-state-logic.com
www.stagecraftintl.com
www.basicmac.com



A view of the 1,300 seat sanctuary from one of the three Sony XD HD camera tripods



Church consultant Erwin Balangue reveals one of the four hidden K-Array KP102 speakers that serve as stage monitors

also been positioned under the stage, serving as front-fills. Once the cabling, bracketing and placements had been made, Mr Freudenberg tuned the system from his laptop installed with Fohhn Audio Soft v3 software via Wi-Fi. The DSP settings within the interlinked active speaker systems allows them to be monitored and managed. Using the Fohhn-Net control network allowed Mr Freudenberg to finely adjust the vertical beam width (0-90-degrees) and sound inclination angle (-40-degrees/+40-degrees) in steps of 0.1-degrees and in real-time.

Having resided at FOH for several years, the console position was also earmarked for an upgrade. 'We tried several boards before Stagecraft International demonstrated an SSL Live 500, which they kindly allowed us to use for three months, allowing