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Maximising monitoring



Sometimes it's what the congregation doesn't hear that counts – a monitoring system upgrade and a new console are enhancing worship at Freie Christengemeinde Bremen. **Frank Wells** reports







(Clockwise): Praise band vocalist using a Shure wireless mic; The worshipper's view during praise; FOH, lighting and video control; Lighting and loudspeakers grace the ceiling at FCB

THE GERMAN CONGREGATION

Freie Christengemeinde Bremen (FCB), which translates as Free Christian Community of Bremen, professes a goal of positively influencing society through a commitment to people and to 'bringing the good news of a living and caring God into their city'.

'Live music plays a key role in our praise and worship times,' Dirk Meier, FCB sound engineer, says of the church's contemporary worship. Each Sunday's line-up of eight musicians is currently built from a pool of 23. The FCB hosts a more traditional service weekly, as well as its contemporary service. There is a small youth worship team as well, and there is support for additional programmes, women's conferences and weddings.

The church has been at its current main campus location since December of 2004; there are two smaller campuses in neighbouring cities. The sanctuary at the main campus has a maximum capacity of 1,200 seats, though 2,000 worshippers can be accommodated in a standing service. The main campus is also home to a second smaller hall and a dedicated youth hall.

The FCB has a membership of around 700. With visitors counted, some 130 individuals attend each Sunday morning's traditional service, on average, with 400 worshippers commonly attending the contemporary service that follows. There are also Sunday services at the additional campuses.

The main hall Sunday service production team at FCB consists of two audio operators, one lighting operator and one video operator. The audio team manages 10 channels of wireless signals for microphones, headset mics and instrument transmitters. While the total instrument channel count is 20-24 sources between drums, percussion, bass guitar, keyboards, electric and acoustic guitars, violins, loops and more. Four audio channels are assigned for music and video audio track playback.

The audio is all controlled by a new Soundcraft Vi600 digital console with a 44-fader control surface. There are four channels of talkback, used by the music director, the worship leader, the FOH engineer and the programme director.

The hall's loudspeaker system is the next area slated for upgrade. 'At the moment,' says Mr. Meier, 'we are still using a conventional speaker setup, with a right-left-right-left main speaker configuration, augmented by sub, near-fill and delay cabinets.' The all Fohhn system has four 12-inch woofer loaded two-way cabinets as mains, four subs with 18-inch woofers, 16 two-way cabinets with 6-inch woofers as delays, and, for near-fills, two groups of four two-ways with 8-inch woofers. The system is controlled by a Fohhn FC-8 DSP-based loudspeaker controller, with additional processing from a Peavey Digitool DSP unit. Lab.gruppen amps power the system.

'Our main campus has a small audio studio used to source audio-only live streams and podcasts, and for recording,' Mr Meier continues. 'At the moment we are working on the realisation of a multitrack recording solution which will be used by our musicians to improve their performances.'

Eight wireless stereo transmitters and body-pack receivers are used for in-ear monitoring by the vocalists, keyboard players, guitarists and translators (the latter when the church hosts non-German speakers). There are four wired IEM feeds for musicians including the percussionist, drummer, and bass guitar player. Along with the recent audio console upgrade, the FCB installed a Klang:technologies IEM mixing system.

The heart of the monitor system is the Klang:fabrik router and mixer/processor. The Klang:fabrik is fed individual channels from the Soundcraft mixer— the fabrik handling up to 56 audio input channels while serving as a 64 x 64 Dante/Madi (or 32 x 32 ADAT) router. Up to 16 musicians and production team members can create custom mixes from smart phones, laptops/computers or from a mixing desk.

The Klang system allows the musicians to not only create a conventional mix, but through DSP, to place sources in a three-dimensional

space, allowing the musicians to stage sources in their mix as they exist on stage (and with head tracking, even allow the 3D source placement to move in correlation to where the musician is looking). The Klang system is completed by the incorporation of a Klang:vier mixer for the wired feeds, with 24-channel ADAT input, 24 x 10 Dante I/O and four individual stereo headphone outputs (mirrored to four line-level outputs).

'I heard and read about the Klang system long before we considered buying it,' recalls Mr Meier. 'Musician-mixed in-ear monitoring is important to us. We need a silent stage because the rear of our stage and the roof cause a lot of reflection when using wedge loudspeakers for monitoring. We are always looking for solutions to minimise stage noise for a better control of our FOH mix.'

Several advantages of the Klang system stood out immediately, for Mr Meier. First was the system's capability to have more that 16 input channels -



FCB praise band members with Shure wireless mics

the lack of which being what Mr Meier calls 'the main disadvantage' of other systems. 'It enables us to realise 13 mixes with 24 input channels. Plus, it is easy for the musicians to handle and offers them a good stereo or 3D image.' The band members benefit from better mixes, he says, while 'the silent stage allows us to have services with different volume levels without affecting the feel of what the musicians hear. At the same time, the Klang system is helpful in keeping our audio operators focused on the audience mix.'

To feed the system, 'we use a separate layer of our FOH console where we are mirroring all signals from the band – microphones, pickups and direct-ins,' Mr Meier elaborates. 'With these mirrored signals, we feed the inputs of the Klang devices through console direct-outs via Dante. After getting used to Dante it was quite easy to install. The system runs very stable.'

Behringer's Powerplay system was the FCB's previous monitor solution. 'The main problem was the limitation of the channel count,' says Mr Meier. 'Sixteen input channels are not enough if you need channels for ambience mics, MD/FOH talk, programme director, click, pre-recorded music tracks, etcetera.



The view from the balcony

We still use the Powerplay gear in one of our smaller campuses and in the hall we use for our youth services.'

Video use is simple at FCB. 'We only use video for promotion of our events and song lyrics,' Mr Meier details. The 16:9 aspect ratio stage rear screen is 8.5m x 4.8m. In addition, forward projection is used to provide lyrics for the vocalists on stage, and for speakers, for preview and a countdown timer.

For lighting, 'we use three point-lighting in the center stage, mostly with a convenient profile spot from Altman,' says Mr Meier. 'Our standard system uses Robe ColorSpot 575 AT and SGM Giotto Wash 400 fixtures along with eight good old six-light PAR bars. These all work pretty well with an MDG ATMe haze generator.

'Depending on the occasion,' he continues, 'we add some stuff like the YPOC 700 spot or some nice little Expolite TourWash Compact 76 CM+W, strobes and audience blinder. At the moment we are back to using the standard three-truss approach, parallel to the stage edge (front, mid and back trusses).' The church uses an MA Lighting grandMA2 desk for lighting control.

While he has praise for the Soundcraft Vi600 console, and the new Klang system, Mr Meier wouldn't let himself be pinned down when asked to name the single most critical aspect of the FCB tech chain. 'All parts of our production are important to achieve the best possible overall experience for our visitors.'

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