Spotlight Audio Video Lighting Review Broadcast Q&A





by Charlton Scullard
Photos: Inspirechurch.tv

nspire Church (inspirechurch.tv) remembers fondly its humble beginnings twelve years ago, when they met in Waikele Elementary School. Currently ministering to over 3700 people at 3 campuses, Inspire Church runs nine services per weekend. Started as Hope Chapel West Oahu, the church rebranded itself as Inspire Church in 2013. Senior Pastor Mike Kai (@mike_kai) has led the church through this period of growth since it's inception at the elementary school.

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Inspired Heart

Inspire Church's heart shines through in all that it does, and the formula has gained much recognition. As a result, Inspire holds several conferences each year where it shares with attendees some innovations for reaching the lost and ministering to people. At the forefront of Inspire's formula is a very strong. dynamic worship experience. Worship is high energy, well arranged, and filled with the spirit, with high demands placed on the lighting, video, and audio systems. The technical infrastructure at the main campus has evolved from their portable systems at the school to the simple systems that the church started with in their current facility. However, needs had grown to a place where the (very skilled) volunteer staff needed some external assistance. Inspire called on Bryan Cole of Axia Concepts to help bring us into the digital age, and he provided a digital mixing console, Dante-based processing, and new loudspeaker system for the sanctuary that is able to keep up with the energy of worship at Inspire.

Inspired Growth

Pastor Mike has always held as part of his vision to reach more communities on Oahu (and internationally). In early 2013, we came across a building for sale in the town of Mililani, which met all of our desired metrics - a neighborhood not currently served by a church like Mililani, and a building just the right size for the task! We purchased in record time, and construction began almost immediately after receiving the keys.

We view Inspire as one church with many locations. When people walk into Inspire Mililani, we want them to experience the same type of worship they would at Waikele; we want them to feel at home. This means we must keep audio, visual, lighting, and other systems standardized and familiar, which also allows our volunteer tech team members to easily rotate between campuses without having to learn new systems at each location (they are only six miles apart). While Waikele evolved to where it is today, Mililani needed to be created with all of the capability of the main campus in place from the very first day. We once again approached Axia Concepts to design and implement the Audio, Video, Lighting, and IT infrastructure early on in order to help us meet this goal.

Inspired Approach

For Inspire, flexibility is the name of the game. We often host conferences and other off-Sunday events, and it is difficult to predict what future uses of the facility will involve. At the main campus, where the infrastructure has evolved over the years, reconfiguration is not as easy as it could be. For Mililani, a flexible infrastructure needed to be implemented. Instead of point to point wiring for audio, video, lighting, and IT, Axia designed a cost effective, single-media type infrastructure system with several main patch points around the facility (production area, backstage, etc.). A Cat6 Shielded cable handles all of the different types of signals present at Mililani (except loudspeakers) and, by using shielded cable, Axia made it so that any infrastructure cable point can be used for any of our intended purposes.

This approach has paid off, as even adapting to design changes that occur "on the fly" is very easy, since we have extra infrastructure to handle additional needs. A side benefit to the single media type is that on the whole, Cat6

Main Audio



3 x Tannoy VQ100 Loudspeakers 4x On Point Audio OPA-118 Subwoofers 2x Lab Gruppen C88:4 Amplifiers 2x Lab Gruppen C16:4 Amplifiers Peavey MediaMatrixNion N3 w/Dante Stewart Audio NetAV 10 2x2 Dante Allen and Heath GLD80 Mixing Console Allen and Heath AR2412 Digital Snake

2x Allen and Heath ME-1 Personal Monitor Mixer 2x Allen and Heath AR84 Digital Snake Expander Shure ULX-D Dual Channel with Beta87 and Dante

> 8x Line6 XD-V70 1x Line6 XD-AD8 Antenna Combiner 2x Line 6P180 Directional Antennas 6x MiPro MI-808 In Ear Monitor Wireless Perdue Acoustics Deluxe Drum Enclosure

> > Proel Microphone Cables PrimAcousticsKickStand Audix D7 Drum Microphone Kit K&M Microphone stands, various 6x Radial J48 DI Boxes

Apple iPads (IEM Control and FOH) Apple iMac (multi tack recording and virtual sound check)

Polar Focus mounting hardware (for Tannoy VQ100) Distributed Audio/Multi-Purpose

> 10x Tannoy CMS801DCBM Ceiling Speakers 5x Lab Gruppen Lucia 240/2M Amplifiers

Allen and Heath QU-16 small format digital console (multi purpose room) Allen and Heath AR2412 Digital Snake

Video/Projection

BlackMagic ATEM 2 production switcher VaddioProductionView Controller 2x Vaddio HD-30-CCU PTZ cameras Digital Projection eVision 7000 WXGA projector

6x Aurora Multimedia DXE-CAT-RX1 HDbaseT Receivers 6x Aurora Multimedia DXE-CAT-TX1 HDBaseT Transmitters Aurora Multimedia DXW-2 2-input HDBaseT Wall Plate

Lighting

High End Systems Single Universe USB Widget HP 23" Touch Screen running Hog4PC Software Lightronics WSTXF/RXFWireless DMX transmitter/receiver

Lightronics SR-516D 16 scene wall controller w/architectural wall control

6x Elektralite ML601 60W LED moving head fixture 4x Lightronics FXLE1232W Warm White LED ellipsoidal 6x Elektralite Eyeball 40 Degree 7x10Watt LED fixture 30x The Light Source 80 Degree Fresnel pendant fixtures

Miscellaneous

4x PowerEx Charging Stations 32 PowerEx 2700 mAh rechargeable batteries PrimAcoustics paintable 2'x4' x2" panels for behind sound booth 2x Lowell Manufacturing 44 space enclosed rack Communication

Clearcom RS601 Single Channel Belt Pack w/single ear headset Clearcom RS602 Dual Channel Belt Pack w/singe ear headset Commstar wireless base station

3x Commstar Wireless Headsets, single ear

Untangle Routing application running on NexGen Appliance 3x Ubiquiti Unifi AP-AC WiFi Access Points w/ Unifi Controller management & Guest

UbiquitiTouchSwitch Gigabit PoE Switch (for Access Points and Security Cameras) 3x Cisco SG200-24 Managed Gigabit Ethernet Switch

Power

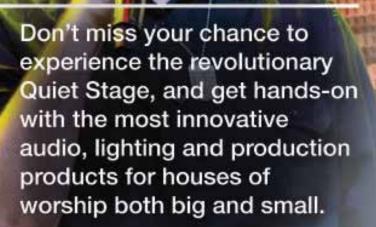
Lyntec RPC-329 Motiorized Breaker Panel, 125A 2x NXRT-Pro-1000 Online UPS system



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Shielded is less costly than other cable types. We currently have audio (Dante and Allen and Heath DSnake,) video (Aurora Multimedia HDbaseT,) lighting (DMX) and various analog, RS232, and other proprietary control infrastructure using the Cat6 wiring.

Once the infrastructure wiring was in place the system came together very quickly. It was just a matter of patching the appropriate signal to their intended destinations. We made the decision to open the facility one week earlier than anticipated and while it was a bit of a scramble, the simple infrastructure allowed the system to come together very quickly.

IT was installed first, with Cisco switches in strategic places around the venue. The WiFi system

was brought online so that various control pages could be accessed for things like the Lyntec power panel with motorized circuit breakers, MediaMatrix DSP, etc. Once this was in place, the audio system was completed, the video system with Vaddio PTZ cameras and Digital Projection was brought online, and a multitude of Aurora Multimedia HDbaseT adapters were used to distribute audio and video to various flat screens around the facility. Dante audio networking was chosen for the main console feed, along with Shure ULX-D wireless microphones, which feed back and forth between the production area and the audio console. Stewart Audio NetAV IO Dante breakout boxes sends audio to places like the production nest (the room is behind a glass window) and, thanks to Dante, this is done without



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any dedicated runs or analog outputs being used on the console. Various Elektralite and Lightronics theatrical lighting fixtures, and LED house lighting from The Light Source, have been placed under DMX control using a High End Systems Hog PC USB adapter, with HOG4PC software and HP touch screens for control. Lightronics desktop lighting control with external wall pads is being utilized for entry/exit house lighting and scene control.

Inspired Service

The opening service was a real joy, with over 650 in attendance in two services. Our new systems performed very smoothly, much better than I had even hoped for a first service. Many

who had been to the original Inspire Church facility, walked in and said "wow, this feels just like Waikele" which was confirmation that our design goals were met.

A discussion of this project would not be complete without recognizing the amazing team of volunteers from Inspire Church that made it all possible! I have not had the honor to work with a more dedicated, selfless team in all of my years of working with Church teams. With teams like these in place, I know that the vision to reach more communities with the heart of Inspire Church will certainly come to pass in short order!

Pastor Charlton is an Executive pastor at Inspire church and also serves as the Mililani campus pastor.

