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CPM MAGAZINE
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BLOGS
OBSERVATIONS
FROM THE FAST
LANE

By Editor-in-chief and
Publisher, Brian
Blackmore

NOTES FROM THE
EDITOR OF WORSHIP
FACILITIES
MAGAZINE

By Carol Padgett

CHURCH IN THE
DIGITAL WORLD

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MAKING CHURCH
HAPPEN

By Gary Zandstra

ALL BLOGS



Raleigh, North Carolina-based Strategic Connections and Shawnee, Kansas-based Big Picture Productions supplied audio and video system (respectively) that featured products from, among others, JBL, Crown, BSS Audio, all Harman brands, plus video products from Barco.

Church on the Move Adds Audio and Video Clarity to Newly Expanded Sanctuary

Already the largest church in the region, the 12,000-member Church on the Move in Tulsa, Oklahoma chose to remodel its existing main sanctuary by adding an additional 700 seats.

Raleigh, North Carolina-based system designer Strategic Connections handled the sound system upgrade. The video end of the project was led by Shawnee, Kansas-based Big Picture Productions.

At the heart of the new sound reinforcement system are 38 JBL VerTec VT4888 midsize line array elements flown in four arrays with 16 JBL ASB6128V subwoofers, 10 flown and six located under the stage. For front fills, seven JBL AC28/95 loudspeakers are housed behind the perimeter of the stage. "The goal was to provide rock and roll style PA without filling the space with tons of speakers," says Brant Doell, system designer for Strategic Connections.

Doell says the decision to choose JBL was easy once the scope of the project became clear. "We did look at other vendors to start with until the number of boxes and racks were growing past our size limitations. JBL offers more for the dollar and size of their boxes than the competitors and they had all the gear in stock to ship that same week we ordered it."

The system is powered by 49 Crown MA5000i amplifiers and 10 CTs 2000 and CTs 3000 amplifiers with control and routing handled by BSS Soundweb London BLU-160 processors, all networked via Harman HiQnet System Architect. "Having the entire system on the network from one location allows us to handle troubleshooting sessions from our office to help insure the customer has the best support possible," adds Doell.

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"The system sounds great and six months after the install was completed, no corrective equalization or system adjustments have been necessary. Pastor Willie George was excited that his voice could be heard clearly and dynamically throughout the room without hurting the front rows and Audio Director, Andrew Stone, has been quite pleased with the clarity, punch and consistency being delivered to every seat," says Doell.

At Church on the Move services, the message is enhanced by lighting, stage sets, audio, and video that rivals big-name rock tours in design and effect. Like many concerts, "image magnification" video of the live performance, fed to large display screens, plays a big part in a Church on the Move service. This element is created by an in-house video system consisting of four standard-definition broadcast video cameras, several high-resolution computer graphics sources, and a Barco FSN 150 switcher feeding two 16x9 foot LED walls each comprised of 66 Barco iLite 6BK LED tiles.

The iLite 6BK tiles are designed to offer an ideal, cost-effective display solution that addresses the church's needs for high image quality and solid reliability over many years. The LED display boasts a long life span, with low maintenance and power consumption. Additional flexibility is gained with the modular design. The displays can be moved to almost anywhere on a stage full of powerful concert lighting without creating conflicts with the existing stage lighting. In addition to a bright display, the iLite 6BK provides a wider viewing angle. Members of the congregation positioned at an extreme off-axis angle to the screen can still see a clear and bright image.

Prior to the FSN switcher installation, Church on the Move used a switcher and external video special effects generator that introduced an unacceptable amount of delay into the output video. The audience saw events on screen about a half-second after they actually occurred on stage. When Church on the Move could not fix the delay problems caused by the existing switcher, they turned to Big Picture Productions who recommended the FSN switcher.

Barco's FSN is a 3G-ready switcher that combines advanced, multi-format production and presentation switching in one highly integrated unit. By seamlessly integrating multiple video and computer graphics formats on a common platform, the FSN series provides a streamlined package that's modular, easy to operate, and highly cost effective.

After the FSN's installation, Church on the Move saw immediate improvement. "The FSN cut the delay down to almost nothing," remarks Andrew Stone, production manager at Church on the Move. "There's also no discernable added delay when we add effects like strobing and colorization to shots using the FSN's built-in special effects package. It's been a really slick way for us to go."

The FSN's flexible, input and output architecture makes it an ideal fit for a hybrid SD/HD environment like Church on the Move. The Church's four existing standard definition-cameras are upscaled by the FSN to a 720p HD output with impressive results. "With the FSN switcher, we can't believe how good our upscaled standard def cameras look," Stone adds. "We've had pro video engineers come in here and swear that this is an all-HD house, but we're not; we just run our SD cameras in 16x9 mode and scale up through this awesome switcher." One secret behind the FSN's ability to bridge the gap between SD and HD is Barco's proprietary Athena scaler technology. The Athena scaling engine is at the heart of the FSN's scaling and provides exceptionally clear, scaled images, with only one frame of delay.

Stone's remarks are corroborated by Evan French, president of Big Picture Productions. "At Church on the Move we're outputting everything in 720p and it looks phenomenal. I've done a lot of video in a lot of different venues over the years, but I've never experienced the quality that's coming out of these Barco products, from the FSN, to the DX-700, to the iLite6XP LED walls," French says.

With the FSN switcher, upgrading to full HD is simply a matter of changing to all HD sources; no extra hardware or software keys are required. As Jed Deame, VP of Image Processing for Barco says, "The FSN was designed with the house-of-worship market clearly in mind as a cost-effective switcher solution supporting SD, HD, and a variety of computer sources. Church on the Move was able to enhance the experience with a switcher that is designed to take them well into the future. Now they are able to take full advantage of their sources, as well as maximizing their LED display investment."

www.barco.com
www.bigpictureproductions.com
www.harman.com
www.strategicconnections.net



STUFF YOU MIGHT WANT TO KNOW ...

PLASA and ESTA Vote to Merge

ESTA, the principal trade association for the entertainment services and technology industries in North America, and PLASA, the lead body for those working in the live events, entertainment and communication industries worldwide have voted to merge their two organizations.

The announcement comes on the back of lengthy consultations with both sets of memberships which concluded recently in a formal vote of Members - ESTA via a month-long electronic ballot which ran throughout May and PLASA via its annual AGM, which took place on Wednesday 2 June in London. Well over 93% of Members from each Association voted in support of the move, which will see ESTA and PLASA integrated to create a single international trade association operating under the PLASA name.

The merger is a significant development for the industry, as it will effectively create the first truly international industry-wide membership body of over 1200 manufacturers, installers, dealers, rental companies, service providers and consultants working across the entertainment and installation industries. This will also include members of PERA - the former Production Equipment Rental Association - which recently merged with ESTA.

In reality, the merger is a continuation of an already established relationship between the two organizations who have worked together on a range of initiatives for many years and who share the same values and aims. Uniting under the PLASA name will lead to a stronger voice for the organization and allow it to actively develop its range of business services and industry initiatives.

Both teams will now spend the next six months putting in place the infrastructure behind the merger, the first formal stage of which will be completed by December 2010, allowing the new organization to go live on 1 January 2011.

As part of this, an overarching Governing Body will be established to look after the interests of the membership worldwide, which will work closely with Regional Boards in North America and Europe.

The Boards of both ESTA and PLASA, who actively recommended the merger to their respective memberships, are delighted with the positive vote, as they believe combining PLASA with ESTA will create a highly effective and responsive trade body.

In a joint statement, PLASA CEO Matthew Griffiths and ESTA Executive Director Lori Rubinstein said: "We believe the logic driving the merger is totally sound: the strengths of both organizations are evident and we have an unequalled opportunity to increase the value we provide to Members through services, networking and improved business opportunities. A united approach to the issues and challenges of our industry will provide major long-term benefits and greatly broaden the role of the PLASA.



First Baptist Church of Orlando Launches HD Migration Around Snell Kahuna Production Switcher

Snell today announced that the First Baptist Church of Orlando, Fla. has installed a Snell Kahuna SD/HD multi-format production switcher as the cornerstone of its transition to high-definition production. Besides providing a significant upgrade of the church's facilities from obsolete switching equipment, Kahuna offers the ability to handle a wide variety of SD and HD video sources and a high degree of flexibility for switching complex worship services and other programs.

The installation was carried out by systems integrator Technical Innovations.

"For almost 50 years, our church has been facilitating, enhancing, and extending its ministry through broadcast television. That has meant evolving and continually embracing new technologies to create an exciting environment where people can meet God," says Scott Link, pastor of media and communications for the First Baptist Church of Orlando. "And now, with Kahuna in place, we have begun our transition to HD broadcasting and can now offer our congregants an even more meaningful worship experience. Kahuna allows us to accommodate a wide variety of video presentations from live worship services to special concerts and other events, and to integrate an even broader array of media into our programs."



Serving an overall congregation of 15,000, the First Baptist Church hosts more than 6,000 worshippers in three different Sunday morning services at its 140-acre campus in Orlando. The media and communications staff produce a live broadcast of the worship service for streaming on the church's website, and also edit the broadcast cut for later use in two television programs. In addition, they handle video production for a range of special events in the 5,500-seat worship center, ranging from musical presentations to conferences.

In anticipation of its transition to HD production, First Baptist chose a three-mix/effect (M/E) Kahuna switcher complete with two control panels and an auxiliary panel, to replace 20-year-old equipment that had begun to fail. For a typical weekend service, Kahuna is used to cut five camera feeds, three graphics sources (two of which are keyable), and up to four video playback sources. Two M/E outputs are devoted to IMAG switching, providing output to the large presentation screens from either live camera shots of the pastor and presenters, or outside video from both SD and HD sources. The third M/E is controlled by the broadcast director to produce the broadcast feed. Depending on the situation, the broadcast director and the IMAG director can access material from all three M/Es.

"We rely on volunteer labor to accomplish our weekly service production, so we especially appreciate the ease at which Kahuna allows us to perform complicated switches with the touch of a button. Recently we needed to do one switch, which previously would have required a volunteer to hit 12 buttons in the right sequence, within about three seconds. Our Kahuna allowed us to preset very quickly and simply that entire switch to one button stroke," adds Link.

www.firstorlando.com
www.snellgroup.com

New Choir Mic Design Solves Headroom Problem For Sanford, Florida's First Baptist Church

Discovering Astatic was a breakthrough for Richard Wagoner, associate pastor for music at the First Baptist Church of Sanford, Fla. "We got the 1600VPs just before a concert featuring our children's choir," Richard continues. "Anyone who has tried to mic a children's choir knows how challenging it can be. We tested the 1600VP overhead mics out in rehearsal and there was just no comparison with what we had before."



The sensitivity of the 1600VP is rated at -29 dBv (35mV) @ 1Pa, which gives it the ability to pick up even the softest voices in a children's choir.

"The programmable polar pattern gave us incredible headroom for the choir," Richard continues. The polar pattern on the 1600VP can be controlled through a small rack-mountable box called the VPC-1, included with the 1600VP, 1700VP and 1800VP microphone systems. What results does this produce? "I've never experienced that much headroom before and it was truly impressive," Richard concludes.

Because the 1600VPs were designed for hanging and the church didn't have that capability, they replaced the 1600VP's with the boom-mounted 1700VPs" "We didn't want to risk life and limb by hanging them from the ceiling and we also wanted to keep the mics available for the children in a free-standing mode."

Astatic's National Sales Manager Gary Dixon provides further clarification: "The microphone system's versatility allows the 1600VP to be easily converted into a 56" carbon-fiber boom by adding the MB-1 and an 18" gooseneck by adding the MB-18. Complete microphone systems can be purchased as the 1600VP, 1700VP and 1800VP. The 56" boom included with the 1700VP is lightweight and durable with its clutch-rotation pivot system."

Asked about the mics' appearance, Richard responds, "They look great! We put them right smack dab in the middle of the choir overhead junction spot where all four parts come together, and the Astatic microphones make having any other mic unnecessary. In our 2010 Easter program, the new mics and their stands were nearly invisible."

Summing up, Richard says, "We have a 30-member choir and the voices sound really good. We need less mics to get the flexibility we need and the remote control capability makes the Astatic mics a lot easier to work with."

www.cadmics.com
www.firstsanford.org

FREE GEAR

NEW PRODUCTS

01.

dnp Supernova Introduces Next Generation High-Gain Screen Material



dnp denmark, a leading supplier of optical, front projection screen technology, recently announced the release of the new Supernova 23-23-screen material. The new film made its debut at the recent Las Vegas Infocomm Show. The new next generation high-gain material will be available in June on selected products, beginning with Supernova One and Supernova Core.

“The 23-23 film offers a dramatic improvement over the previous 20-20 high-gain screen material,” says dnp US Senior Account Executive Manfred Freiburger. “The new film offers the same light rejecting technology as all other Supernova screens, and we’ve developed new technically sophisticated optical filters that eliminate hot-spotting, improve horizontal viewing angles and eliminate shimmering. No other high-gain material on the market can offer such wide horizontal viewing angles. With an on-axis peak gain of 2.3, the new 23-23 offers a 35% improvement in horizontal viewing angles over the 20-20-screen material. Additionally, the center to corner uniformity has been improved by 20%.”

With the introduction of Supernova high-gain 23-23 material, dnp denmark will now have two optical screen materials that are designed to perform extraordinary well in high ambient light environments, with uniform picture quality and ultra-high contrast. The ISF Certified 08-85 material offers extremely wide horizontal viewing angles and as independent product reviews would suggest, is arguably the best screen material on the market

www.dnp-screens.com

02.

Panasonic Introduces New AG-HMC80 Professional AVCCAM HD Should-Mount Camcorder with DV Recording



Panasonic Solutions Company announces the versatile AG-HMC80 professional AVCCAM HD shoulder-mount camcorder, the first in the company’s series of low-cost AVCHD camcorders to feature solid state DV as well as HD recording capabilities, making it ideal for customers who desire both formats.

With a high-resolution three-megapixel imager, multiple AVCCAM recording formats, DV support, and enhanced professional functions, the HMC80 delivers the full benefits of AVCCAM for users who prefer to work with a shoulder-mount camera and need flexible connectivity and format support. The camera, utilizing a professional three-chip imager, can also take 10.6-megapixel still images and store them as standard JPEGs on the solid-state card. AVCHD recordings and stills can be directly played back from the SD card on a wide range of low-cost players including Panasonic Blu-ray players, laptop PCs and advanced game consoles.

“With DV recording, the HMC80 affords users the flexibility to utilize either HD or SD formats in an affordable, reliable solid-state workflow,” says Jan Crittenden Livingston, product line business manager, Media & Production Services, Panasonic Solutions Company. “The new camcorder offers the image performance of our HMC40, plus added professional features, such as a manual focus ring, that boost its appeal for use in professional production applications.”

The camcorder’s full HD resolution three-megapixel 3MOS imager produces stunning 1920 x 1080 or 1280 x 720 AVCHD video with high sensitivity. Because the AVCHD format-based camcorder uses MPEG-4 AVC/H.264 high profile encoding – which provides a doubling of bandwidth efficiency and improved

video performance over the older MPEG-2 compression based formats (e.g. HDV) – recordings look clean and crisp, even during fast motion, without image degradation or dropouts.

The HMC80 records video in all four professional AVCCAM HD recording modes, including the highest-quality PH mode (average 21 Mbps/Max 24Mbps), the HA mode (approx.17 Mbps), the HG mode (approx.13 Mbps) and the extended recording HE mode (approx. 6 Mbps).

At 60 Hz, the camcorder supports the following HD formats in PH mode: 1080/60i, 1080/30p, 1080/24pN, 720/60p, 720/30p, 720/24pN; in HA, HG and HE modes, it records in 1080/60i. In standard definition DV, the camcorder records 480/60i, 480/30p, 480/24p.

The HMC80 records standard-definition DV directly onto SD cards in the AVI Type 2 file format and offers squeeze, letter box and side crop options.

Using just one 32GB SDHC memory card, a user can record three hours of full resolution 1920x1080 video and audio in PH mode, four hours at HA mode and 5.3 hours at HG mode. In the HE mode, the camera can record up to 12 hours of 1440 x 1080 HD content on a 32GB SDHC card. Up to two hours of DV content can be recorded on a single 32GB SDHC card.

For the first time in an AVCCAM shoulder-mount, the HMC80 includes such high-end professional features as a user-assignable manual focus ring functions (Focus/Iris/Zoom) for added control; time code/UB recording; time/date stamp; and two wired remote control terminals (for zoom, focus, iris, REC start/stop controls). The camcorder's lens system captures super sharp images at up to 12X optical zoom and features a 40.8mm (35mm lens equivalent) wide-angle setting. It also offers users useful functions including Optical Image Stabilizer (OIS) for smooth stable shooting, Dynamic Range Stretch (DRS), which helps compensate for wide variations in lighting, and a Cine-Like Gamma mode that gives recordings a more film-like look.

The HMC80 comes standard with HDMI output (AVCHD only), USB 2.0 (mini B-type devices), composite output (BNC x 1), analog component (BNC x 3), IEEE 1394 output (DV only), and a built-in stereo microphone as well as a 3.5 mm external mic-in jack. The camcorder features two locking XLR inputs with switches for mic/line, and +48V Phantom Power capability.

The camera offers useful solid-state recording functions including pre-record, interval recording, shot marker and metadata capture. Additional features include waveform monitor display, focus assists such as focus bar display and enlarged display, auto focus with face detection, white balance, mode display, zebra display, color bar, tally lamps, slow smooth zoom and soft landing, slow shutter and synchro-scan shutter functions, and three programmable user buttons. A wireless remote is also included.

For editing or playback, professionals can transfer content by inserting the SD Card into Mac or PC computers or by connecting the camera directly via its USB 2.0 interface.

The HMC80 will be available in September at a suggested list price of \$2,895. Panasonic will support the HMC80 with a three-year limited warranty (one year plus two extra years upon registration).

www.panasonic.com/business-solutions

03.

[Renkus-Heinz CF/CFX Series Modular Point Source Line Array Loudspeaker System](#)



Renkus-Heinz, a leading innovator in professional audio and loudspeaker design, has introduced the new CF/CFX Series, a modular point source line array loudspeaker system. Designed for power, portability and versatility, the CF/CFX Series is designed to meet the needs of today's small- and mid-sized venues, from auditoria and theaters to night clubs and houses of worship. With the flexibility to be flown, ground-stacked or pole-mounted, the CF/CFX Series delivers the performance and pattern control of a line array, with the clarity of a point source system, in a compact, sleek and affordable design that's equally at home as a portable system or a permanent installation, the company announcement says.

The CF101-LA Point Array Module is a 10-inch, two-way design that offers a 15-degree vertical coverage pattern, integrated crossover, and Renkus-Heinz's exclusive Tuned Conic Diverter waveguide. Up to four CF101-LA cabinets can be arrayed to provide a 90x60 degree coverage pattern, delivering up to 9 dB more output and tighter vertical pattern control than a conventional single cabinet. According to the company, traditional line arrays require two or three times as many cabinets to provide the same range of coverage as a single CF/CFX system.

The CF15S subwoofer is a compact sub that delivers powerful low-frequency performance. Single or dual CF15S cabinets can be combined with up to four CF101-LA cabinets to create a versatile, compact, portable system that delivers the full-range power and coverage to rival a full-sized line array. CF15S subwoofer cabinets can be flown as part of a full CF/CFX array, or used as a base for pole-mounting up to four CF101-LA boxes.

www.renkus-heinz.com