

Church Production

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Magazine

[WFX CONFERENCE AND EXPO WRAP-UP]

Lakewood Church, Houston, Texas

Part II: Video and Lighting

Christian Life Assembly, Camp Hill, Pennsylvania

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Photo courtesy of Lakewood Church.

Video and lighting play major roles during Lakewood's services, with Daktronics LED screens providing the immense screen size and intensity needed for the 16,000-seat room.



More than 600 broadcast, theatrical stage and house lighting fixtures can be found in the new Lakewood Church sanctuary. Equipment from Arri, ETC, High End, MA Lighting, Vari-Lite, Wybron and others was chiefly supplied by Barbizon Lighting Company of Denver, Colorado.

Photo courtesy of Lakewood Church.



Photo courtesy of Lakewood Church.



Lakewood Church

Part II: Walking the Line between Live and Broadcast

Houston's former NBA arena, the Compaq Center, has new life – a team comprised of Lakewood's staff and top consultants descended on the Coke-stained, mostly concrete room with stunning results – Lakewood's new sanctuary, fully equipped for televised broadcast, is the country's largest and arguably, most spectacular house of worship venue.

By Alison Istnick

[Editor's note: In the November/December 2005 issue of Church Production Magazine we covered Lakewood's audio systems. In this continuation of that article, we explore the video and lighting systems of Lakewood.]

Houston, Texas – When Lakewood Church set out to make Houston's former NBA basketball arena, the Compaq Center, their new church home, the thirty-year-old stadium received new life. A team comprised of Lakewood's staff and top consultants descended on the Coke-stained, mostly concrete room with stunning results. Today Lakewood's new sanctuary, fully equipped for televised broadcast, is this country's largest and arguably, most spectacular house of worship venue.

Like the audio design team (covered in part I), the design team for Lakewood's lighting and video systems had their hands full. First was the task of personalizing a sixteen-thousand-seat live worship experience, and second, they needed to provide quality broadcast media for Lakewood's weekly television programming.

"Moving from an eight-thousand-seat auditorium to sixteen-thousand seats has really altered what we do," tells Jon Swearingen, director of broadcast media for Lakewood Church. "To start, the camera angles are different, and their placement is different. It changes not only the way we shoot but also the way Pastor Joel [Osteen] delivers his message. Overall, it's a better feeling room

The impact of video and lighting to the overall church experience is substantial... They add just one more layer of experience for the people who go attend... Just being there is an amazing experience.

Photo courtesy of Fujinon.



Fujinon was key in selecting the proper video camera lenses for the facility, allowing Lakewood to try various options to determine the best fit.

even though it's bigger. Early on, designers kept in mind camera angles as well as sightlines for live audience."

The stage's design reflects forethought for televised programming significantly improving depth of field. Swearingen explains, "A deeper stage is positive for us because the person on stage stands out with more separation from him and the background – it makes for cleaner, more impressive shots." Saturating the main curtain behind Lakewood's Pastor, Joel Osteen are 60 Wybron CXI dual scroll color mixers mounted to a range of Source Four PAR lighting fixtures. The two strings of fixtures have the ability to mix and match to create rich colors.

Osteen provided an unwavering vision for Lakewood's new sanctuary and was very much "hands on" in technical decisions. "Pastor Osteen determined the camera

angles we wanted. We brought down one of our hand held and jib cameras and set them up in the auditorium during the construction process and actually looked at different shots. Camera lens manufacturer, Fujinon, was instrumental in letting us use some of their lenses during this process in determining what type of lenses we would need," says Swearingen.

Taking a "technical leap forward" toward the goal of high definition, Lakewood purchased six Sony HDC-950 handheld and two Sony HDC-900 high-definition broadcast cameras. The 900's are large studio cameras which are attached to heavy studio pedestals. The 900's are Lakewood's centerline cameras equipped with Fujinon's telephoto lenses (seventy-five-to-one ratio) to capture close-ups for broadcast and IMAG (image magnification). Three of Lakewood's Sony 950's are mounted on jibs with wide angle lenses

and three remaining cameras are handheld with standard lenses.

The control room, located in the media suite - the entire fifth floor of Lakewood's brand new five story addition - is configured with a tiered seating design, placing the front bench at the lowest point. Eight racks are installed across the front with a traditional glass monitor wall with a hope of going to a virtual monitor wall using LCD or projection. For their video switcher Lakewood purchased a standard definition Sony 7000 series switcher prior to their move. Swearingen, whose responsibilities include directing Lakewood's services, staffs a mere three positions to run a service in the control room: himself, a person to run song lyrics, and another to answer phones for parent notifications (camera shaders are located in an adjacent room).

Although Lakewood is not able to broadcast yet in high definition, their purchase of HD cameras moves them down the road towards that goal. Swearingen explains, "HD is the future. Our thought process was that very few people can watch in high definition, especially within the Christian market. So, we didn't feel we could justify that money being spent now." Lakewood is able to utilize HD for IMAG on three Daktronics LED screens. "Feedback has been incredible – we just keep hearing how great the screens are. Our center screen is 32-feet wide. It's huge, it really is. We actually shrunk down the LED's from our original plan of 40-foot wide. During renovation

we projected an image onto a billboard type material and we realized the 40-foot width was too big."

For Director of Lighting, Tom Stanziano, the move to Lakewood's new facility meant huge strides for the lighting ministry. According to Stanziano, "we have a catwalk which we never had before giving us the ability to get in there and light certain areas of the stage. We were quite limited to where other fixtures could be hung in the other facility." Stanziano helped bring the expertise of Emmy Award-winning Lighting Designer, Bill Klages, to the Lakewood design team. Klages first created what he feels are some of the best catwalks around. "The goal of the catwalks is to provide functionality and lighting positions," says Klages. "This is not a professional environment [since volunteers help in lighting and maintenance]. The whole point was to make it easy as well as safe to get at these instruments." Klages implemented a configuration of lighting pipes that allows as many lighting positions as possible by installing double rows of pipe both in front and in back of the catwalks.

Peter Maurelli of Barbizon in Denver, Colorado is very familiar with Lakewood's new catwalk. Maurelli recalls the "sheer magnitude" of Lakewood's lighting install. Barbizon delivered light fixtures, more than 600 of them, to an offsite warehouse where crews prepped the equipment by adding connectors, lamps and gels. Fixtures were then trucked to the construction site where Barbizon oversaw installation.

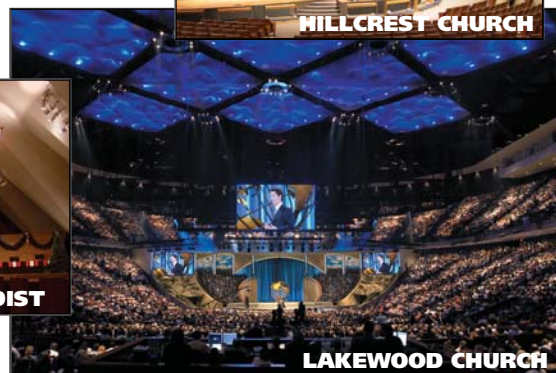
Complementing the catwalk are three movable lighting trusses above the congregation providing mounting positions for front light and a fixed centerline platform constructed for followspot positions. Klages selected the Vari-Lite VL3500 automated spot luminaire (color corrected

to incandescent) to light Lakewood's Pastor, Joel Osteen. "The fixture is able to provide the necessary amount of illumination that the video camera requires for proper exposure. This is coupled with the advantages of a moving light and the added benefit of adjustable shutters." For Lakewood's musical programming Klages implemented followspots. "Followspots

are a necessity to make the musical production as theatrical and photographic as possible - you must have the ability to very precisely control the foreground and the background. In order to do that you must have a followspot. There is just no other way." The trusses also contain 33 Arri 12-inch 5kW broadcast Fresnels. Other fixtures in Klages lighting design

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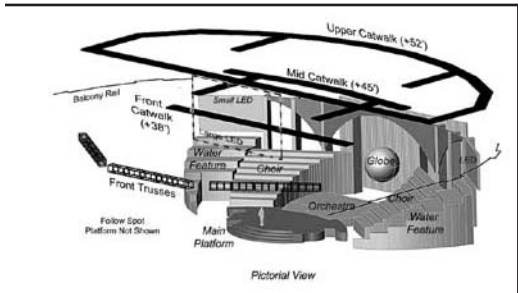
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Catwalks designed by Lighting Designer Bill Klages provide access to the hundreds of lighting fixtures at Lakewood. Quick, easy and safe access to lighting is important in a volunteer-based technical crew.

include 24 Vari-lite VL3000Q spots, eight Vari-lite VL3000 washes, six High End Color Commands, and over 400 ETC Source Four PARs. ETC Sensor dimmer racks were selected with 498 20A and 39 50A dimmers.

Enhancing the live performance for church attendees is a surreal visual ceiling overhead created to conceal the arena's old catwalk system. Jared Wood, with Studio Red Architects in Houston, Texas (lead architects on the Lakewood project), had seen a lighting effect in Las Vegas, at Cirque du Soleil's production of O, where the ceiling was downlit with multicolored LEDs through a perforated metal screen. Wood's idea changed the drab catwalks into billowing clouds of color over the audience. Wire mesh material drapes down through a series of 40-foot squares that comprise the original catwalk system.

Stanziano assisted in the decision for MA Lighting's grandMA lighting console. Lakewood purchased another grandMA console that, when networked with the main console, helps handle multiple [DMX] universes. "In our situation, flexibility is key," says Stanziano. "I don't know any other board that could offer us as much versatility." ETC Sensor dimmer racks were selected with 498 20A and 39 50A dimmers. For house lighting Lakewood owns almost 375 ETC Source Four PARs along with the ETC Unison System with 288 20A dimmers.

A backbone of the technical systems was provided by Beck Associates of Pflugerville, Texas. Company President Fred Beck recalls the building before renovations began. "To use the sports venue meant we had to rethink the whole thing. None of the existing wiring could work for us. We implemented a lot of fiber optics, which is needed for some extremely long runs from the main seating area and stage up to the control rooms. The main advantage of fiber optics is that you can use it over long distances without signal loss. The disadvantage is that it costs a lot of money. In Lakewood's case fiber optics is the best way to do it."

For many, seeing the spectacular results at Lakewood is believing. Fred Beck, who attended a service at Lakewood, was impressed with the project's results. "The impact of video and lighting to the overall church experience is substantial," asserts Beck. "To start, the sanctuary monitors are beautiful in the high definition format - I don't know any other way to describe it. They add just one more layer of experience for the people who go attend. The set itself is quite amazing. A twelve-foot globe rotates slowly and can be raised or lowered as can the Gala orchestra pit behind the pulpit. Flanking the musicians are choirs with cascading waterfalls on either side

framing them in." He concludes, "Just being there is an amazing experience."

Alison Istnick is a regular contributing writer to Church Production and Worship Facilities magazines.

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