

A Higher Calling. Design 2020 Sets Standards for AV & Lighting Power Systems in House of Worship



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Audio, video and lighting systems are important in most installations but for Houses of Worship these components can often mean the difference between serving up a sermon that makes an impact and packs a church versus one that leaves parishioners wishing they were somewhere else.

THE PROJECT

Recently, Design2020, a consulting firm specializing in HOW facilities along with WAVE, a systems integration firm, completed a large scale House of Worship extension of the third facility for North Carolina's Forest Hill Church. This large nondenominational church had grown & required additional space for Sunday worship services. Taking the church to the people, and serving approximately 1800 families in the area, the Ballantyne expansion for the Forest Hill Church was built as a structural extension of the local Morrison YMCA.

THE CHALLENGE

This unique venue provided some interesting challenges as the functionality of the space needed to change from sports & recreation during the week to a weekend worship facility. The expansion which houses two basketball courts, an indoor track and exercise rooms Monday – Friday had to seamlessly convert on Sunday mornings to an 800 seat worship facility. In addition, the sermons, which are recorded off-site on Saturday evenings, are replayed to the worship facility on Sunday mornings.

This paper was developed based on an interview with Justin Hames, Design Engineer for Design2020, an award winning engineering and design firm located in Harrisburg, North Carolina. Justin shares his insights on setting standards for lighting and power controls and their application in Houses of Worship design.



To ensure that the messages were not lost in the playback of the previous night's recording, providing quality technical support, truly high definition video and audio and impactful lighting became an even more critical design element for the success of the project.

THE SOLUTION

Design2020 clearly understood the importance of the technical equipment and tools that would be used in creating this multi-use worship space. They also realized that importance of properly managed power distribution for the AV and Lighting systems. In addition, monitoring and control of the AC power systems would need to be, reliable, scalable, easily accessible and user friendly to operate on an on-going basis to meet the function changes of the space.

Firmly believing in following standards for their designs, Design2020 called for two separate circuit breaker panels, one dedicated to handle the AV equipment and one dedicated for the Lighting.

The AV systems included a Meyer Sound system, multiple (3) video front projection displays and all the audio/video production support equipment (cameras, switchers, etc.) to record and display the high definition playback of the services.



Their creative lighting solutions needed to provide movement and dramatic lighting effects on stage and include full stage lighting, moving lights, as well as LED lighting.

THE PRODUCTS & CAPABILITIES

Two LynTec RPC 341 panels were chosen. The AV panel included an isolation transformer which provided a good technical ground for all the audio and video equipment. This panel provided all the necessary circuits with room for expansion if needed in the future.



The second panel supported all of the lighting equipment including stage lighting, moving lights,

flown fixtures, LED lighting etc. This was a non-dim lighting panel, providing the needed circuits to support the complete lighting system.

In both panels, the LynTec solution provided remote monitoring and control capabilities accessible over the local area network (IP based) which was important functionality requested by the client. In fact, remote monitoring was one of the prime reasons for selecting the LynTec panels. Used by the church's technical director to manage, set programming, configure the system, monitor the incoming



voltage and to see the status of each of the breakers, the client log in portal and access to the panels via the web was critical to meeting their performance objectives and Design2020's design standards.

THE RESULT

In operation, the client has access to each and every circuit for the AV and Lighting systems. Practical yes; convenient without a doubt!

Mark Bishop, President of LynTec commented "Design2020 is one of those progressive design and engineering firms that understand the value of setting standards to ensure that clients are always pleased with the results."

For this project and for all of their project work, Design2020 specifies two separate circuit breaker panels. They work closely with the specifying Electrical Engineers to provide them with detailed specifications on how the AV and Lighting panels are to be circuited.



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In this manner, the Electrical Engineer knows precisely how much power is required for each panel, how the panels are to be circuited and configured and where the isolation transformer is required.

In this instance, clients like Forest Hill Church rely on Design2020 to ensure best practices and standards are met particularly when it comes to AC power distribution. Says Justin Hames, Design Engineer at Design2020, "The LynTec panels and isolation transformer were well suited for this project. We've used these previously on other project with similar success." "There product provides a clean and efficient solution from a control and connectivity stand point."

LynTec's benefits include fewer panels, one control platform and easy controls by contact closure as well as strong customer service and support. Designers and clients are always appreciative. And in the case of HOW design, they may even be singing their praises.

THE VALUE ADD

In today's world, our sensitivities are bombarded with visual and audio experiences every day. We are programmed for multi-tasking and are continually asked to shift attention and focus. From the games our children play, to the movies we watch and the special effects that we see, we are inundated with powerful graphic and auditory messages from people that are trying to get and maintain our attention.

In addition, cell phones, iPads, iPods, Androids and other applications provide us with mobile solutions and content that we can access 24 / 7, 365. The House of Worship market sees these innovations as another resource and tool with which to reach congregants and to provide outreach to potential newcomers.



Design2020 is an award winning engineering and design consulting firm located in Harrisburg, North Carolina.

Their secret formula is found in the intersection of math and emotion for every project, and embodies the partnership of Paul Henderson and Armando Fullwood, founders of the firm. Together, they have connected a boutique team of skilled professionals that base success on performance and are the proud winners of four Solomon Awards for Best Design Projects.

With over 90% of their business focused on worship facilities, their secret formula blends math and emotion in every project and creates a blissful balance between aesthetics and performance in HOW design. Says Design2020's Design Engineer, Justin Hames, "Our mission is to create state of the art acoustics, audio, video, lighting and media technology designs for clients who have a passion to proclaim the gospel in a traditional presentation."

www.Design2020.com

ABOUT JUSTIN HAMES

Design Engineer, Justin Hames, is an electrical engineer from Clemson University with 15 years experience in A / V / L and high definition broadcast design. He sees a bright future for House of Worship design that embraces flexible spaces and mobile opportunities in addition to traditional brick and mortar designs. Justin is proud to be part of a company that creates incredible environments that communicate the heart and passions of the clients they serve.



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Justin says, "As a whole, many churches are deciding not to spend all of their financial resources on buildings and instead are considering portable or multi-use buildings and putting their money in technology to create greater spiritual impact and expand their reach into our communities."

FINAL THOUGHTS

By embracing technology, part of this "mass" appeal will always fall on the people that design and set the stage for audio, video and lighting in HOW. These engineers rely on proper circuitry, power and controls to manage and monitor the technical tools and resources they utilize as part of their designs and LynTec is a proud product partner in these designs.

ABOUT LYNTEC

LynTec brings to market electrical protection and circuit switching capabilities in the same enclosures. In doing so, the company has always found ways to save space, lower system installation costs and build trusted relationships with audio system and lighting designers. Its expansion into electrical and lighting controls, and now its growth into expanded lighting control, energy monitoring, built in power conditioning, and mobile applications continues to position the company as a leading resource for the AV and lighting industries and an integral partner for sustainable energy practices. For more information visit www.lyntec.com.

LynTec

ABOUT CHRISTOPHER MAIONE



Christopher Maione is a recognized leader and expert in the AV industry with over 28 years of audiovisual expertise. Regarded as an industry visionary, his forward thinking and progressive approach to business led him to found and become the managing partner of one of the world's leading AV consulting firms earning the company accolades as a leader in AV solutions and technologies. In his new company, Christopher Maione Associates, Maione employs the same stringent procedures and protocols that enabled his previous company to achieve global success and a reputation for the highest caliber and quality of work. Maione now focuses his attention on AV System Integrators, Manufacturers and Fortune 500 clients to help them identify strategic ways of handling their clients, products, & projects. Maione has a talent for forecasting trends and identifying emerging technologies that substantially impact the AV industry. Based on his own business model, he encourages colleagues to strive for excellence and consistently challenges AV System Integrators, Manufacturers and the AV industry as a whole to improve its practices, grow its services, and develop better products all in an effort to set a higher standard and respond to the changing needs of clients. Well versed in all aspects of AV, IT, Integrated Technologies, Industry Standards, Green AV and best practices and protocols, Maione is an Adjunct InfoComm Faculty Member and CTS-D/CTS-I provider. He serves on a variety of key industry standard committees and in doing so, he continues to help set industry benchmarks for quality and compliance. For more information please contact info@chrismaione.com.



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