



THE PRINCIPALS OF PURCHASING AN EXTERIOR LED DISPLAY SYSTEM (PART-2)

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The Principles of Purchasing an Exterior LED Display System

BY SHAWN KLINGER



Exterior LED displays for worship facilities can keep congregants and the community informed about news and events while projecting a modern environment. Electronic message centers (EMCs) provide clear, bright, engaging visuals to communicate 24/7, they are energy-efficient, and more effective and flexible than traditional static signage. Gone are the days of printed banners and static reader boards. The ability to have visuals to communicate congregations' key events and multiple messages versus just one message is a dramatic improvement.

But, as discussed in Part I of this series, too often costs and budget are the driving considerations for purchasing an exterior LED display system, which, unfortunately, may lead to additional expenses in the long run or a system that doesn't meet the facility's needs. Following are many important issues that should be discussed when selecting an exterior system.

Display Location and Viewing Distance

Understanding where viewers are seeing the display and how far they are from the sign must be addressed before purchasing an EMC. For example, is the display near a roadway and viewed from a vehicle or is it on the property and seen primarily by pedestrians?

If the sign is mainly for people to see while driving, then it's important to know the speed limit, traffic patterns, sign

height and lanes of traffic, which will affect the viewing time and determine the EMC's size. This information will also help with content because the letters will need to increase in size in relation to speed. For example, if it is a 40 miles-per-hour road, drivers will have two seconds of readability time for 12-inch letters, but up to six seconds for 36-inch letters. Sign companies are experts in this area and can review your specific location and advise you on the best led display product to achieve your goals.

Importance of Pixel Pitch

A pixel is the smallest element of a digital image, relative to where it is presented. On an LED display, one LED is referred to as a pixel because it is the smallest unit on the LED display. An LED screen is made up of an array of pixels, lighting up to different intensities and colors to create letters, graphics, animations, and videos.

Pitch is the center-to-center distance between each pixel both vertically and horizontally. The smaller/tighter the pitch of a display, the higher the resolution and closer the viewing distance. If there are two LED displays side-by-side and each one is the same height and width but they have

PHOTO ABOVE: FOX RIVER CHRISTIAN CHURCH, WAUKESHA, WIS., INSTALLED A 10MM, 2'X9'-10 1/2" INFINITY RGB™ LED DISPLAY THAT CAN EASILY BE SEEN FROM THE ROADWAY IN ANY WEATHER CONDITION. ALL PHOTOS COURTESY OF OPTEC DISPLAYS, INC



different pitches, the LED sign with the smaller, tighter pitch will have more pixels and a better resolution – the distance between pixels and the pitch determines the resolution.

If viewers are a far distance from the display, the pixel density may be of less importance. However, if the EMC is in close proximity to people then high resolution is critical. Pixel pitch determines the resolution, minimum viewing distance and best viewing distance of the LED display. The smaller the pixel pitch, the more pixels and results in more details and higher image quality. So, if high resolution images or video will be shown, the LED display must have a small pixel pitch. Understanding this important distance-to-resolution concept establishes realistic expectations and will achieve your visual-quality goals.

Brightness

Another major technical issue that must be addressed is how viewable is the content when exposed to direct sunlight. Anyone who has ever tried to use a laptop or tablet outside knows that the brightness of the screen impacts visibility, whether the screen is in direct sunlight or even in the shade. A screen with inadequate brightness and poor anti-reflective treatment makes the image difficult to see. If the image cannot be adequately seen, then your congregation's investment in an outdoor

digital display solution is wasted.

A screen's brightness is measured by number of nits. The higher the nit, the brighter the display. Outdoor displays need to be significantly brighter than their indoor counterparts. An average indoor LED display will feature a brightness measurement of ± 1000 nits. Outdoor LED displays should have a brightness measurement of $\pm 7,500$ nits. However, a display won't be run at 100 percent brightness. When seeing an LED display demonstration, it's important to ask your sign dealer to dim the display to see the quality of visuals at lower brightness. While it's tempting to purchase an inexpensive LED system from overseas or price-driven companies to lower the up-front costs, often, the visuals on these displays are of poor quality at low brightness levels.

Content

How communities regulate signage can vary greatly, which is why it's important to work with a sign company in your area that has experience with the zoning and permitting process in your community. Choose a partner who is familiar with your local sign ordinances and has the experience to guide you through the permitting process and understands any size, location and brightness ordinances.

What kind of content do you plan to display? Do you plan to use still images or animation, or both? If you will use

your EMC for images or animated content, you'll want to be sure to work with your sign company to fully understand how the display's dimensions will affect the type of content that may be shown. Take time to think about how you will use your display, because sign size, zoning regulations and resolution can impact the type of message content you'll be able to present. For example, smaller signs are best suited for bold text and simple logos, while higher resolution LED displays have more flexibility displaying more detailed logos, text and images.

With hundreds of color, graphics, and display options, you'll be able to customize each message to grab the attention of all those passing by. Create and schedule beautiful messages to reflect service times, upcoming events like fundraisers, inspirational verses, or welcoming of new members.

Software

In the simplest of terms, digital signage software enables you to manage content on your screens – to update and display messages for maximum impact and reach. It's where you add, edit, customize and schedule the content. It communicates with your digital signage player, a media playing device that connects to the internet and your screen(s). LED displays can now be controlled from almost any device like a laptop, a tablet, or even a smart phone, and can be programmed to rotate multiple messages at a time. The best digital signage software has the right mix of control features and design tools. Most importantly, however, it needs to be easy to use and meet your congregation's specific digital signage needs and technical skills.

A cloud-based digital signage software is an easy-to-use solution and the best choice when often depending on volunteers to manage updating content. Cloud-based means it's accessible from the web and content lives on an online server or network of servers. It's also secure because the software provider encrypts data, both while it's stored and while it's streaming; and users have total control over who can access the files and what kind of changes they can make.

PHOTO ABOVE: WELLSPRING BIBLE FELLOWSHIP, ROSEBURG, OR, INSTALLED A 20MM, 3'X10' INFINITY RGB™ LED DISPLAY TO INFORM CONGREGANTS OF UPCOMING SERVICES AND OTHER IMPORTANT MESSAGES.

It's important research and find a qualified U.S.-based LED display manufacturer, one who is dedicated to helping the customer's experience go smoothly. They'll offer software updates and be available for free training and ongoing support.

Conclusion

Similar to selecting an indoor system, there is a lot to think about when it comes to planning for, installing and operating an exterior LED display system. Understanding the primary audience – vehicular or walk-by traffic is the first consideration, which will then guide most of the other necessary decisions.

Congregations have many ways in which to communicate and engage members and the community. Outdoor LED displays can help modernize your facility, increase content and messages, and reduce costs over traditional placard signs or countless printed banners. That said, your congregation may have concerns about the expense of purchasing an exterior LED display; please don't let this be the deciding factor. Many sign companies offer financing, and have extensive experience working with faith-based institutions and realize the importance of congregations' need to balance this cost with the religious mission.

Understanding the considerations beyond just price that should be reviewed before investing in an exterior LED display system will help ensure it meets your objectives and creates engaging visual content for years to come.

This is the second of a two-part series and focuses on exterior message centers. Part I was featured in the November issue and examined interior LED display systems. ▀

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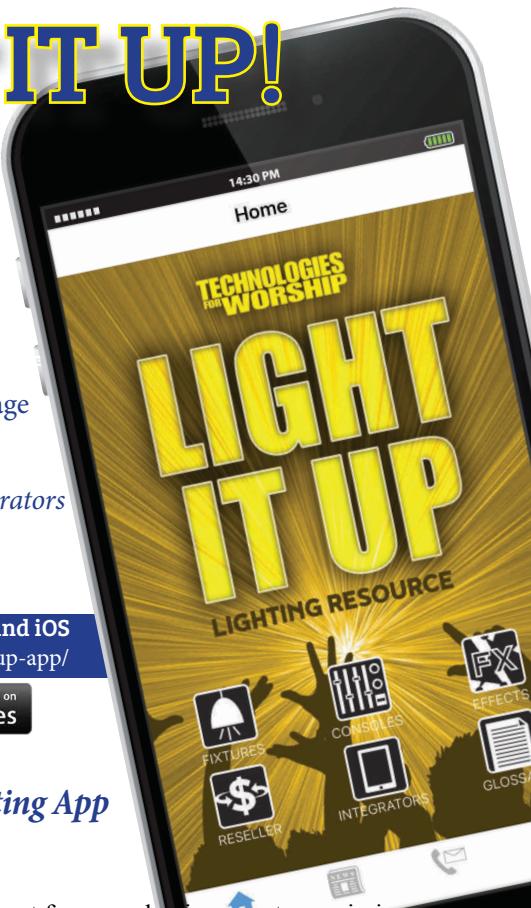
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