

# Lutron® | lighting the way

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A good lighting system enhances the performance, flexibility and simplicity of control in any house of worship. At the same time, integrating lighting control in the facility helps to save energy and reduce costs.

## How easy-to-use lighting control transforms a house of worship

By Jim Yorgey, Lutron Electronics Co., Inc.

There's no shame in admitting it—managing a house of worship isn't easy. Your congregation may not realize it because the service leaves them inspired, but there's a lot of behind-the-scenes hard work. Detail work. The "t"s crossed and "i"s dotted kind of work. Where to begin? Your support staff is made up mostly of devoted volunteers who, unfortunately, don't have the time for intensive training. If they're going to be using any kind of technology during your service, it must be of the use-once-understand-forever variety. The building that houses your congregation consumes electricity—at times, lots of it. There are better uses for your funds than the

electric bill. There are much better uses for your time than worrying about whether or not the building is complying with local energy codes. Most importantly, the congregation has to hear the message. Hearing the message is about more than listening to the words. It's about feeling them. So you're always thinking about creating a more effective experience. Many houses of worship use a good lighting control system to help create that experience. Good lighting control also cuts down on energy costs so you can use those funds for more important things. And—here's the best part—a good lighting control system can be easy to use.



### Lighting control in real-world scenarios

“Get it?”

“Got it.”

“Good.”

That’s about how long training should take when lighting control is done right. What comes next can really wow a congregation. Using intuitive wall controls, programming stations and wireless controls, your support staff can call up lighting “presets”—not unlike the presets on a car stereo. One preset scene might be “Wedding.” Press an engraved button and all the lights in the space work together to create a joyous, celebratory mood. Another might be “Service.” For a funeral, a reflective and solemn mood can be called up. Every-day events, like choir rehearsal, benefit especially from lighting control. You can get exactly the right scene with one-touch ease. One of the biggest benefits of adding preset lighting control to your space is that it simplifies the process of setting lighting scenes. Many houses of worship have banks of dimmers—some in the sound booth, some on the walls of the sanctuary, with no clear indication of which controls adjust which lights. Adding a lighting control system eliminates uncertainty and simplifies the process of presetting the scenes. Additionally, you can set the lights to dim gradually over several seconds or minutes to set the mood, making it easy and convenient for any volunteer to control the lights.

Many larger houses of worship rely on theatrical lighting and control systems for performance-oriented worship services. House lighting should

A centralized lighting control system with pre-set scene control makes it easy to set and change the mood for any activity at the touch of a button. Lighting can even integrate with DMX systems to provide theatrical lighting when needed.

be able to integrate seamlessly with theatrical lighting. You should have the ability to switch easily from a complex control console used for a worship service to simple preset control for every-day use. Moreover, the house lighting should integrate with the A/V system as well so that the entire service functions seamlessly. When it’s done right, the lighting for your service looks easy—because it is easy.

Quality light control doesn’t stop at the doors to a sanctuary. A house of worship uses lighting control in the entire facility. Classrooms, fellowship halls, chapels, hallways, signage, landscaping, parking lots and restrooms all need lighting control. The lighting can be controlled by individual systems or by a central control system. Either way, systems can be programmed to a schedule so the lights are controlled automatically, allowing you to focus on more important things.

To do this, motion sensors, occupancy sensors and daylight sensors are integrated into the lighting control system to adjust light levels accordingly. Automated sensors are also a great way to get rid of the energy waste caused by leaving the lights on in unoccupied areas or wasting electricity at full output when available natural light is abundant. With an occupancy sensor in a restroom or classroom, the lights turn on when someone enters the space and turn off when they leave. Exterior lights can be turned on and off automatically as well.

Whether the space is a retrofit, renovation or brand new, available wireless technologies help make installation simple.



### **Retrofit vs. new construction**

Determining the kind of lighting control system your space needs depends upon whether you're retrofitting an existing space or building a brand new gathering place.

When it comes to lighting control, "retrofit" has a very specific meaning. It means installing a system that requires no rewiring, no holes in the wall, no torn-up plaster. "Retrofit" just means replacing one fixture with another, one wall control with another, replacing a switch with a dimmer. In fact, lighting control systems exist that can be designed and installed without any rewiring. The effect of these retrofits, if they're done thoughtfully and with the right technology, can be dramatic, and the whole building becomes more functional. Retrofitting an existing space with multi-zone preset lighting control requires radio frequency (RF) technology. In a retrofit situation, radio signals connect the wall controls to the lights instead of wires.

New construction and renovation are the same category as far as lighting control is concerned. For these projects, the wide selection of high-quality, easy-to-use control systems means limitless possibilities for your congregation's new space.

### **Putting it all together**

Understanding how architectural lighting control works in a house of worship requires a little background. A lighting scene, as discussed, could be "wedding," "worship," "concert"—any

mood you create with the lighting. A scene is created by adjusting lighting "zones." A zone is simply one or more fixtures controlled as a group. For example, when one dimmer controls two lights, those two fixtures function as a "zone." Naturally, a house of worship has far more than two fixtures. An architectural lighting control system not only offers the power to consolidate control of all the zones into one location, it also offers the flexibility to reassign lights to new zones.

To wire a single space for lighting control—the sanctuary, for example—all the fixtures that would typically be wired to individual switches or dimmers are instead wired to a central control panel. Within that panel, the different lights are assigned to zones. To create a scene, the light levels of each zone are adjusted one by one. When the lighting in the space looks just as it should, the levels are saved as a preset and can be recalled at any time with the touch of a button—just like the presets on a car stereo. If a space requires more than one wall control—this is called multi-location dimming in the industry—keypads with preset buttons can be installed where needed.

Using Class 2 wiring—that's the same low-voltage wire used for telephones and computers—a number of keypads and other components can be wired into the system. Occupancy sensors, which are mounted on the ceiling or walls, integrate with the architectural lighting at the panel. The same goes for ceiling-mounted



Elegant, custom-engraved wall controls make controlling the lighting convenient and user-friendly.

daylight sensors. Working together, the two types of sensors and the control system keep energy usage at a minimum. An infrared (IR) or radio frequency (RF) receiver can be added to the system in a similar manner, which allows for control of the lights with a remote switch. When the lighting control system is centralized at a panel, an astronomical timeclock offers the opportunity to control the lights on a schedule, including sunrise and sunset. For retrofits, an RF controller is wired to each zone of light at the fixture. Then, the wall switch is replaced with a wireless wall control. A tabletop RF remote can be used to select presets as well.

### What to look for in a manufacturer

When the time comes to search for a lighting control system that makes the best sense for your installation, there are three rules to follow: Reliability, reliability, reliability. As easy-to-use as light control can be, the systems must be precision engineered for the highest quality and reliability. Before doing business, do a little research about how long different manufacturers have been in business. Educate yourself about the reputation of their products among installers, contractors, architects, engineers—and other congregations. Find out how well the technical support stacks up in case you do need help.

Some good questions to ask are, “Is the equipment UL listed?” and “Is the manufacturer ISO 9000 certified?” Get a “yes” to both these questions, and you’re dealing with a reliable manufacturer turning out high-quality equipment. So start asking more questions. You might want to ask, “How easily will this system integrate with my stage lighting consoles or A/V system?” You’ll also want to know how well the manufacturer backs up their products with support. How often is the support available? Can you get expert help any time you need it? Perhaps the best place to start is with your electrical contractor or pro A/V dealer. Chat with them about these issues, and get a better understanding of how lighting control can transform a house of worship.

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