

## LCP/XPS System On-Site System Start-up

### What Standard GRAFIK LCP/XPS Start-up includes:

- One visit to the job site during normal business hours. This is one visit between the hours of 7 AM and 5 PM on a Monday through Friday that is not a Lutron Holiday.
- This visit may require multiple days depending on the size of the system.
- Phased construction projects (requiring multiple visits) should verify this was included with the system provider.
- Visits can be made outside these hours for an additional charge.
- Lutron requires Ten (10) business days notice to schedule a start-up date. Shorter notices may incur expedite fees.
- All terminations will be done by the installing agency. A person from the installing agency needs to be present for the startup. This person should be familiar with the installation of the system.
- A Lutron factory certified technician performs all system start-up items.

### System start up includes:

- Verification that the XPS/LCP is installed according to Lutron specifications.
- Panels should be energized in by-pass fully lamped and tested prior to our arrival.
- Load circuits are checked for shorts and overloads and bypass jumpers are removed.
- Programming the dimming/switching panels to include:
  - Panel addressing
  - Proper load types as installed in field or as per approved submittal drawings. As installed conditions take precedence. This system may have modular components and if loads differ from design additional/different equipment may be required.
  - Circuit to zone assignment as per approved submittal drawings. If no zoning information exists prior to start-up, programming will be done according to written instructions from end user or end users representative, contractor, or will be set up based on the field engineers past experience in that order of priority.
  - Set light levels and fade times on controls as per approved submittal drawings. If no information is provided, test scenes will be set to 100%, 75%, 50% and 25% and default fade times will be set to 3 seconds.
  - Program emergency function per the installation guide for the system. This may not be applicable for every system.

### Programming the wall controls/interfaces to include:

- Control addressing
- Verify proper wiring and operation of control link
- Set up controls to function as per approved submittal drawings. If no control functionality is included, controls will be programmed according to written instructions from end user or end users representative, contractor, or will be set up based on the field engineers past experience in that order of priority.
- Test all buttons to assure proper operation
- Occupancy sensor
  - Verification of proper installation and operation.

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- Unless otherwise noted, a rough calibration will be performed at system start-up. Final calibration is the responsibility of the end user since it is very dependent on furniture placement, HVAC operation, and space usage.
- Photocell
  - Verification of proper installation and operation.
  - Unless otherwise noted a rough calibration will be performed at system start-up. Final calibration is the responsibility of the end user since it is very dependent on furniture placement, window treatments, outside weather conditions and space usage.
- Time clock set up
  - Lutron will set up the system location, daylight savings, and time of day preparation for event programming.
  - Lutron will set up time clock events as per the approved submittal drawings or written instructions from end user or end users representative, contractor in that order of priority.
  - In lieu of instructions, the time clock will not be programmed.

#### Items not included in standard on-site startup:

- Lutron service technicians will not perform work on non-Lutron equipment. Lutron will work with other manufacturers on integration of equipment by others.
- Programming or any other changes that are requested to be performed counter to the approved submittal drawings must be approved in writing via the proper channels.
- Field wiring changes or corrections that delay the startup process such that additional time is required for Lutron to complete the startup will result in additional charges.
- Replacement of controls damaged due to miss-wires or incorrect installation or any other related issue not covered under the Lutron warranty is the responsibility of the installer.
- Reprogramming of any functions after initial programming and sign-off.

#### End user training on overall system operation. Typical training agenda listed below:

- This system is not typically sold with a separate visit for the training of the end user. Check with purchasing agent if this is required.
- It is the responsibility of the person scheduling the startup to ensure the appropriate end users are present for system training. Lutron typically does not have these contacts.
- Additional charges will apply if a separate visit is required for training the end user.
- Video media is not provided by Lutron for training sessions. This may be provided by "others" for turnover to the end user or job site documentation.
- System demonstration and sign-off by the end user.

#### Additional items that are not included with standard startup, but may be purchased – check your quote to verify an item has been included with your quote. The quantity of the items listed below on the BOM will determine how many days are included with this item.

- LSC-AF-VISIT. Aim and focus visit with design team or end user. This visit is typically coordinated by the construction team, that includes designers, Lutron, and end user to set up light levels and adjust fixtures.
- LSC-SYSOPT. System optimization visit with end user. This visit is coordinated by the EC or end user to optimize the system performance to specific project details.

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- LSC-WALK. Start-up agent or design team walk-through visit. The construction team and the agent requiring the walk-through coordinate this visit. This visit is for any type of additional walk-through that is required for job completion.
- LSC-SILV/GOLD/PLAT-IW. These are extended warranty part numbers for the system per the specification. Warranty information is supplied within the submittal documentation.
- LSC-TRAINING. This visit is for additional time on the job for training the end user. The EC or the end user typically coordinates this visit.
- LSC-AH-SU. After hours start-up. If normal business hours are not acceptable for start-up, after hours start-up can be purchased.

**Additional items listed below may be charged for jobsites that are scheduled for start-up, but not ready when field service engineer arrives.**

- LSC-NS-TRAVEL. Non standard travel arrangements
- LSC-SITE-RDY-CHG. Site ready charge. Jobsite not ready.

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## XPS/LCP system description

XPS is a Lutron Switching System that is designed to provide exceptional value and reliability to our customers. It utilizes Lutron's patented arcless Softswitch circuit that dramatically increases the lifetime of the system over conventional switching relay systems. Even when fully loaded, the arc elimination extends a relay's average rated life to more than 1,000,000 on/off cycles. Digital wall controls may be purchased for simple control in the space. The product also features an integrated time clock for automated system control.

LCP is a Lutron Dimming/Switching System that is designed to provide exceptional value and reliability to our customers. It allows the end user to use dimming and switching in the same panel for all of the space requirements. Digital wall controls may be purchased for simple control in the space. The product also features an integrated time clock for automated system control.

Both systems are similar in appearance, programming, and maintenance, however the XPS is solely a switching system and LCP can have dimming and switching capability in the same panel.

### XPS/LCP Training Visit – Typical Agenda (duration – approximately 1 hour):

- Review of XPS/LCP system with end-user (control location and function).
- Discuss system model numbers
- Discuss Lutron lexicon - what is a zone, scene, fade rate, delay rate
- Review all system components
- Panel(s) and XPS/LCP Controller
  - o Bypassing outputs
  - o Spare dimmer cards/modules, switching modules
  - o Load schedule
  - o Programming of timeclock
- Wall controls
  - o Addressing
  - o Reprogramming
- Troubleshooting system. Panels, processor, controls, interfaces
- System integration (if applicable)
- Warranty information
- Tech support
- Preventive maintenance

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