

# Athena System On-site Startup

## Models Available:

- LSC-OS-SU-A-SA
- LSC-OS-SU-A-RPS
- LSC-OS-SU-A-PS
- LSC-OS-SU-A-ST
- LSC-OS-SU-A-RPST
- LSC-OS-SU-A-PST

## Abbreviation Descriptions:

- S=On-site Startup
- RP=Remote Pre-wire Session
- P=On-site Pre-wire Visit
- T=Training Package

## Overview

- **LSC-OS-SU-A-SA:** On-site Athena startup by a Lutron Services Company representative for this system after Lutron equipment is installed:
  - On-site startup visit(s) after Lutron equipment is installed; equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
    - Unless noted on BOM, a separate pre-wire and training visit are not included with this system. A brief system overview will be conducted on the last day of commissioning at time of system turnover.
- **LSC-OS-SU-A-RPS:** On-site Athena Startup by a Lutron Services Company representative for this system includes the following services:
  - A remote pre-wire session with the electrical contractor, project manager, and owner's representative to discuss the project scope (including installation details on all equipment), review the Lutron submittal package (specifically the system one-line, device spec sheets and system layout) and discuss the construction timeline.
  - On-site startup visit(s) after Lutron equipment is installed; Equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
    - Unless noted on the BOM, a training visit is not included with this system. A brief system overview will be conducted on the last day of commissioning at time of system turnover.
- **LSC-OS-SU-A-PS:** On-site Athena startup by a Lutron Services Company representative for this system includes the following visits:
  - An on-site pre-wire visit with the electrical contractor, project manager, and owner's representative to discuss the project scope (including installation details on all equipment) and timeline.
  - On-site startup visit(s) after Lutron equipment is installed; equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
    - Unless noted on the BOM, a separate training visit is not included with this system. A brief system overview will be conducted on the last day of commissioning at time of system turnover.
- **LSC-OS-SU-A-ST:** On-site Athena startup by a Lutron Services Company representative for this system includes the following visits:
  - On-site startup visit(s) after Lutron equipment is installed; equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
    - Unless noted on the BOM, a pre-wire service is not included with this system.
  - A training package which includes: (1) 2-hour system closeout training on the last day of commissioning and (1) Customer System Orientation visit (LSC-CSO-VST) 30-90 days post occupancy.
    - Any person who will be operating in the system on a regular basis should be in attendance to the customer system orientation visit (LSC-CSO-VST).

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## Overview (continued)

- **LSC-OS-SU-A-RPST:** On-site Athena Startup by a Lutron Services Company representative for this system includes the following services:
  - A remote pre-wire session with the electrical contractor, project manager, and owner's representative to discuss the project scope (including installation details on all equipment), review the Lutron submittal package (specifically the system one-line, device spec sheets and system layout) and discuss the construction timeline.
  - On-site startup visit(s) after Lutron equipment is installed; equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
  - A training package which includes: (1) 2-hour system closeout training on the last day of commissioning and (1) Customer System Orientation visit (LSC-CSO-VST) 30-90 days post occupancy.
    - Any person who will be operating in the system on a regular basis should be in attendance to the customer system orientation visit (LSC-CSO-VST).
- **LSC-OS-SU-A-PST:** On-site Athena startup by a Lutron Services Company representative for this system includes the following visits:
  - An on-site pre-wire visit with the electrical contractor, project manager, and owner's representative to discuss the project scope (including installation details on all equipment) and timeline.
  - On-site startup visit(s) after Lutron equipment is installed; equipment installation is verified, and the system is programmed and tested during this time to comply with the approved sequence of operations.
  - A training package which includes: (1) 2-hour system closeout training on the last day of commissioning and (1) Customer System Orientation visit (LSC-CSO-VST) 30-90 days post occupancy.
    - Any person who will be operating in the system on a regular basis should be in attendance to the customer system orientation visit (LSC-CSO-VST).

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## Athena Service Notes

- Any site visits included in the service will occur between the hours of 1:00 am and 5:00 pm on a Monday through Friday that is not a Lutron Holiday.
- Visits can be made outside these hours for an additional charge.
- Visits may require multiple days depending on the size of the system.
- Lutron standard startup consists of a single phase of service, without interruptions by a single field service engineer.
- Lutron requires fifteen (15) business days' notice to schedule a startup visit. Additional charges may apply for expediting service within fifteen (15) business days.
- Lutron offers a portfolio of additional items (see page 8) that support the startup process; these services are offered a-la-carte and are not included as part of the typical scope of startup. If they are required, verify that they were included with the system purchase.

**A Lutron Services Company representative performs all system startup items.**

**All terminations will be done by the installing agency. A representative from the installing agency must attend the pre-wire meeting and startup visits and must be familiar with the installation of the system.**

## Items not included in standard Athena Startup

- Lutron Services Company representatives will not perform work on non-Lutron equipment.
- Programming or any other changes that are requested to be performed counter to the approved submittal sequence of operations must be approved via the proper channels and may result in additional charges.
- 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 mis-wires, 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 may result in additional charges.
- Construction phasing, which may require multiple visits, is not included in a standard Athena startup. If this is required, please contact your Lutron representative.

### Logistics

- To schedule a service, please submit a "Schedule a Visit" form at [www.lutron.com/scheduling](http://www.lutron.com/scheduling) or call: 1.888.LUTRON1 (588.7661). Press 3
- Please contact Lutron at least fifteen (15) days prior to the requested visit date

Job Name:	Model Numbers:
Job Number:	

### **Meeting 1: System pre-wire service** **(Included with the RPST (remote pre-wire), RPS (remote pre-wire), PST (on-site pre-wire) & PS (on-site pre-wire) [defined on page 1])**

- Familiarize the electrical contractor, project manager, and/or owner's representative with wiring and/or mounting of system devices.
- Understand the overall project schedule.
- Review preliminary mounting locations and wiring practices for QS devices or shades, dimming/switching panels, local wall controls, ceiling-mount controls/sensors, interface devices, ballasts, and Athena hub(s).
- Review preliminary wiring plans of devices wired to ballasts (i.e., occupancy sensor xx is wired to fixture number xx). Ensure infrared (IR) sensors are wired to ballasts on the same loop.
- Review preliminary drawings for proper hub to EcoSystem loop wiring.
- Provide training to appropriate parties in dipswitch overrides.

### **Meeting 2: On-site system startup** **(Included with the RPST, RPS, PST, PS & ST [defined on page 1])**

- Audit the system to ensure the Athena system is installed according to Lutron specifications.
- EcoSystem and/or T-Series LED driver discovery and addressing.
- Verify Athena hubs and Clear Connect-Type X gateways and transfer system database.
- Check loads for shorts and overloads and remove bypass jumpers.
  - Dimming/switching panels should be energized in bypass, fully lamped and tested prior to our arrival.
- Verify proper wiring and operation of the Athena controls.
- Programming the dimming/switching panels includes:
  - Panel addressing.
  - Verify proper wiring and operation of control link.
  - Proper load types assigned as installed or as per approved submittal drawings. As installed conditions take precedence. This may be a modular system if load types differ from the original design additional equipment may be required.
  - Circuit to button assignments per recommended sequence of operations.
  - When applicable, program emergency function per the installation guide for the system.
- Device programming (to include wall controls, sensors, interfaces, and/or timeclocks).
  - Control addressing.
  - Verify proper wiring and operation of the control link.
  - Setup controls to function as per the recommended, normal used case sequence of operations per devices on the bill of material.

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<b>Job Number:</b>	

## Meeting 2: On-site system startup (continued)

If your project contains:

- Static White Light: Lutron recommended normal case settings is as follows:
  - Occupancy/Vacancy sensors:
    - In spaces with a wall control, occupancy/vacancy sensors will be set up as a vacancy sensor (only automatically turning off the lights) with 15-minute, +/- 1-minute, time-out.
  - Daylight sensors:
    - Calibrated in such a manner to provide 40 fc, +/- 5 fc, 3 ft (91 cm) off the floor at a specific point in the room, typically the center of a desk or directly under a fixture. Note the consistency of light distribution throughout the space is highly dependent upon fixture design and placement.
  - Wall controls:
    - One button: Toggle lights on and off.
    - Two button: Top button will turn lights on; bottom button will turn lights off.
    - More than two buttons, for dimmer zones: Top buttons will set the lights to different levels; bottom button will turn the lights off.
  - Timeclock settings:
    - The building's exterior lights on the Lutron system will turn on at sunset and turn off at sunrise.

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## Meeting 2: On-site system startup (continued)

If your project contains: Dynamic white lighting (i.e., Ketra, T-series, DALI Type 8)

- If a pre-determined sequence of operations is not provided at the time of specification, the system database will be set with the Lutron recommended, normal used case color settings mentioned below.
  - Dynamic White SoO-Lutron recommended, normal use case settings.
    - For Ketra:
      - Static Scenes will be programmed to a default color temperature of 3000K.
      - Scene Intensity set for 3000 K.
        - CCT shall be controlled automatically per Lutron's default Natural Show curve. Fixture CCT shall begin ramping from 2700 K starting 6:00 am, completing the ramp up to 4000 K 9:00 am. Fixture CCT shall begin ramping down from 4000 K at 5:00 pm, completing the ramp down to 2700 K at 8:00 pm.
        - Manual Controls will activate scenes 1-4 with R/L.
    - For T Series and Tunable White DALI:
      - CCT Zoning.
        - The CCT of tunable white fixtures in this space shall be controlled as a single zone.
      - Tunable white fixture CCT shall be controlled automatically per Lutron's default Automatic CCT curve. Fixture CCT shall begin ramping from 2700 K starting 60 minutes before sunrise, completing the ramp up to 4000 K 120 minutes after sunrise. Fixture CCT shall begin ramping down from 4000 K 120 minutes before sunset, completing the ramp down to 2700 K 60 minutes after sunset.
      - Return to Automatic CCT curve.
        - The Automatic CCT curve shall not be overridden by the controls in the space.
- Daylight sensors shall only modify intensity and not CCT.
- Occupancy/vacancy sensors:
  - In spaces with remotes and/or wall controls, sensors will be set up as vacancy sensors (only automatically turning off the lights).
  - In spaces without remotes and/or wall controls, sensors will set up as occupancy sensors (automatically turning the lights on and off the Natural Show).

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**Meeting 2: On-site system startup**  
**(continued)**

- o Manual Controls:
  - Intensity and CCT keypads and remotes.
    - Single Gang [Insert keypad/remote brand name/model number] for control of Intensity only. Button engraving and programming, from top to bottom, shall be “High” (set intensity to 100%), “Medium” (set intensity to 50%), “Low” (set intensity to 25%), Off (set intensity to 0%).
- o Intensity Timeclock Events:
  - User-defined timeclock events shall not be used in the space.
- o Emergency/Egress:
  - In the event of an emergency/egress situation, tunable white fixtures designated as Emergency/Egress will have their intensity automatically set to 100% and their CCT automatically set to 50% of the fixture’s CCT range.
- DMX- Lutron Recommended, normal use case settings:
  - o Pre-programmed DMX scenes will not be provided unless already specified. If not already specified, coordination of DMX scenes to be performed on-site and may incur additional cost.
  - o Intensity Considerations:
    - Occupancy/Vacancy sensing:
      - Occupancy sensors shall only modify intensity and shall not modify color.
      - Occupancy sensors shall turn on lighting automatically when the space is occupied and shall turn off/reduce lighting automatically 15 minutes after the space is vacated.
  - o Daylighting:
    - Daylighting is not an option for controlling DMX loads.
- o Manual Controls:
  - Intensity and color keypads and remotes.
    - Single Gang [Insert keypad/remote brand name/model number] for control of intensity and color.
  - Button coordination to be performed on-site unless previously specified.
- o Emergency/Egress:
  - In the event of an emergency/egress situation, DMX fixtures designated as Emergency/Egress will have all intensity levels set to 255.
- o Occupancy/Vacancy sensor:
  - Verification of proper installation and operation. If a sensor is not installed in accordance with Lutron procedures, Lutron will not continue startup activities on that sensor until the installation issues are corrected.
  - Calibration will be performed at system startup. Final adjustment is the responsibility of the end user since it is very dependent on furniture placement, window treatments, outside weather conditions, and space usage. End user will be trained on making final adjustments. Lutron will not fine-tune occupancy sensors to detect minor movements in the space nor to detect motion that contributes to false-trips.

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**Meeting 2: On-site system startup  
(continued)**

- o Timeclock setup:
  - Lutron will set up the system location, daylight savings, and time of day preparation for event programming.
  - Lutron will set up timeclock events as per the approved submittal drawings or written instructions from the end user or the end user’s representative or contractor, in that order of priority.
  - In the absence of instructions, the timeclock will not be programmed. The end user will be trained on how to set up and adjust timeclocks.

**Meeting 3: Training Package  
(Included with the RPST, PST & ST  
[defined on page 1])**

- This includes both a 2-hour system closeout training on the last day of commissioning and a customer system orientation visit to train the end user 30-90 days post occupancy and provide system optimization suggestions (LSC-CSO-VST). Any person who will be operating in the system on a regular basis should be in attendance to the customer system orientation visit.
  - It is the responsibility of the person scheduling the startup to ensure the appropriate end users are present for training. Lutron typically does not have these contacts so the contractor will need to provide these.
  - Additional charges will apply if additional visits are required.
  - Any person who will be operating in the system on a regular basis should be in attendance to the customer system orientation visit.
  - Lutron does not provide video media for training sessions. The training may be recorded by others to be provided to the end user.
  - System demonstration and sign-off by the end user.
  - Typical training agenda is attached.

<b>Job Name:</b>	<b>Model Numbers:</b>
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## Additional Items

Additional items that are not included with standard startup, but may be purchased – check your quote to verify that an item has been included in your quote. Additional details of each item are available from your Lutron representative and can be added on to any bill of material if requested.

- LSC-AF-VISIT: On-site scene and level tuning visit with the design team or the end user.
- LSC-TRAINING: Customer-site solution training visit for additional time on the job for training the end user.
- LSC-SYSOPT: System optimization visit with end user.
- LSC-WALK: Startup agent or design team system performance-verification walkthrough.
- LSC-AH-SU: After-hours startup.
- LSC-E8S: 8-year, pro-rated enhanced warranty that was included with the purchase of the system startup. Details are supplied within the submittal documentation.
- LSC-E8G and LSC-E8P: Upgraded Enhanced Warranties which include expedited response time and a schedule preventative maintenance visit.
- LSC-INT-VISIT: System and network integration consultation. Typically conducted prior to startup, meeting is intended to meet with other equipment manufacturers, system integrators, and/or IT managers to discuss integration with Lutron equipment.

- LSC-LEED-DOC: Solution performance-verification documentation that describes the pre-functional tests, functional tests, and test results.
- LSC-SENS-LT: Sensor layout and tuning. Ensures that the Lutron sensors are properly positioned and programmed.
- LSC-BATT-RPL-SP: This service solution entails Lutron sending a tech to site and changing out all batteries one (1) time. If additional visits are requested, please specify the number desired and pricing will be provided.

Additional items listed below may be charged for job sites.

- LSC-NS-TRAVEL: Non-standard travel arrangement.
- LSC-RETURN: Job site contact schedules startup but job is not ready when field service engineer arrives, requiring a return visit.
- LSC-CHANGE-ORDER: For on-site or remote service time required to implement changes that fall outside of the scope of work for services quoted and ordered set forth in this document.

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# Athena Training: Typical Agenda for the Customer System Orientation Visit

- Any person who will be operating in the system on a regular basis should be in attendance to this training.
  - System Orientation (approx. 30 minutes)
    - Overview: Control/sensor/lighting hub locations and functions
    - Model numbers
    - Lutron lexicon: What is an area, scene, fade time, etc.
    - Components
  - Athena App Review (approx. 1-2 hours)
    - Navigation of app
    - Making changes in the app
  - Preventative Maintenance and Troubleshooting (approx. 1 hour)
  - Warranty, Service, and Support (approx. 1 hour)
  - Questions and Answers (approx. 30 minutes)
- NOTE:** All topics may not be relevant to every system. The topics listed above represent a standard Lutron training agenda.

### Contact Information

- **Phone:** 1.888.LUTRON1 (588.7661)
  - For Tech Support, press 1
  - Lighting/Shading Customer Service, press 2
  - To schedule a visit, press 3
- **Email:** [lscscheduling@lutron.com](mailto:lscscheduling@lutron.com)
- **Website:** [lutron.com/services](http://lutron.com/services)

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