

Using a Green Laser to Program Lutron Ceiling and Wall-Mounted Devices

English

Several Lutron ceiling and wall-mounted devices have the ability to have their features accessed using a green laser (sold separately) operated from floor level. This feature allows the installer or maintenance person to avoid using a ladder while doing set-up or maintenance activities. This feature can be found on the following products:

- Radio Powr Savr Daylight Sensor (model LRF2-DCRB)
- Radio Powr Savr Occupancy/Vacancy Ceiling Sensor (model LRFX-OCR2B-P, LRFX-OCRB-P)
- Radio Powr Savr Vacancy Ceiling Sensor (model LRF2-VCR2B-P)
- Radio Powr Savr Occupancy/Vacancy Wall Sensor (model LRFX-OWLB-P, LRFX-OHLB-P, LRFX-OKLB-P)
- Radio Powr Savr Vacancy Wall Sensor (model LRF2-VWLB-P, LRF2-VHLB-P, LRF2-VKLB-P)
- PowPak Fixture Sensor (FC-SENSOR, FC-VSENSOR) and PowPak Wireless Fixture Control (FCJ-010, FCJ-ECO)
- QS Sensor Module (QSMx-xW-x)

This application note details using a green laser as a substitute for button presses on the ceiling and wall-mounted products.

Green laser specifications:

- Wave output: constant
- Wavelength: 532 nM
- Output power: 5 mW maximum



WARNING



DANGER

Eye injury and/or blindness hazard; avoid direct eye exposure to laser beam.

- Use of laser pointer is NOT recommended for use with Lutron® products located near reflective surfaces.
- Do NOT aim or shine laser pointers at any person, pet, vehicle, or aircraft directly, or through reflection by mirrors or other shiny surfaces. Do NOT view the laser beam through binoculars, magnifying glass, or other optical devices.
- Do NOT allow children to use laser pointers.
- **Read and follow the laser pointer manufacturer's instructions on safe use.** In the event of injury, get medical attention immediately.

Radio Powr Savr Daylight Sensor (LRF2-DCRB)

Follow the installation guide included with the product, with the exceptions noted below:

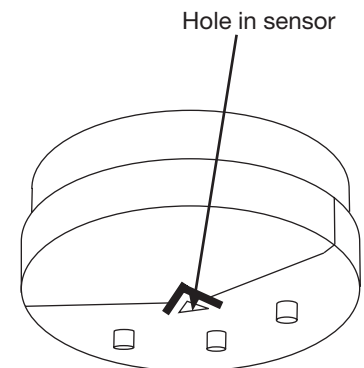
To associate the sensor with compatible Lutron products:

1. During sensor set-up: **Skip the step** to press and hold the "Link" button on the front of the sensor for approximately 6 seconds.
2. Instead, turn on the laser and pass the beam over the hole in the sensor. The sensor's lens LED will flash rapidly, then blink once per second.
3. Once the sensor is flashing once per second, pass the beam of the laser over the hole in the sensor again within 10 seconds. This initiates the association command. The sensor's lens LED will flash rapidly. For expected response upon completion of association, refer to your specific product documentation.

Note: If the laser is not passed over the sensor hole again within the 10-second window, the unit reverts to normal operation.

4. The sensor automatically goes into Calibration Mode at this point. To calibrate the sensor to the base unit(s), follow the calibration procedure in your product documentation.

To exit calibration mode, wait for the 10-second timeout.



(continued on Page 2)

Radio Powr Savr Occupancy/Vacancy Ceiling Sensor (LRFX-OCR2B-P, LRFX-OCRB-P, LRF2-VCR2B-P)

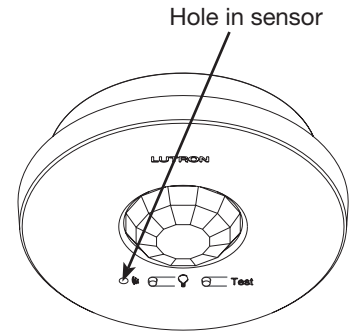
To associate the sensor with compatible Lutron products (except GRAFIK Eye QS Wireless Control Units), follow the installation guide included with the product, with the exceptions noted below:

1. During sensor set-up: **Skip the step** to press and hold the “💡” button on the front of the sensor for approximately 6 seconds.
2. Instead, turn on the laser and pass the beam over the hole in the sensor. The sensor's lens LED will flash rapidly, then blink once per second.
3. Once the sensor is flashing once per second, pass the beam of the laser over the hole in the sensor again within 10 seconds. The sensor's lens LED will flash rapidly. For expected response upon completion of association, refer to your specific product documentation.

Note: If the laser is not passed over the sensor hole again within the 10-second window, the unit reverts to normal operation.

4. The sensor automatically goes into Test Mode at this point. When activated by the green laser, Test Mode lasts for 5 minutes.

Note: In this Test Mode the receiving device will respond to the occupancy state changes and the occupancy timeout is 20 seconds.



Radio Powr Savr Occupancy/Vacancy Wall Sensor (LRFX-OWLB-P, LRFX-OKLB-P, LRFX-OHLB-P, LRF2-VWLB-P, LRF2-VKLB-P, LRF2-VHLB-P)

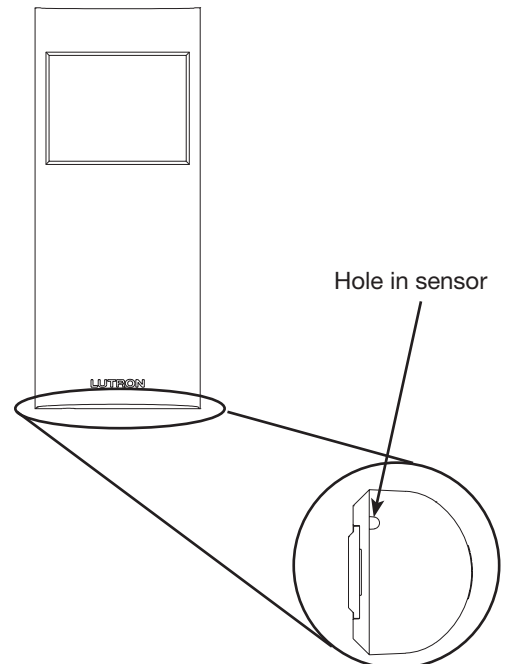
To associate the sensor with compatible Lutron products (except GRAFIK Eye QS Wireless Control Units), follow the installation guide included with the product, with the exceptions noted below:

1. During sensor set-up: **Skip the step** to press and hold the “💡” button on the front of the sensor for approximately 6 seconds.
2. Instead, turn on the laser and pass the beam over the hole in the sensor. The sensor's lens LED will flash rapidly, then blink once per second.
3. Once the sensor is flashing once per second, pass the beam of the laser over the hole in the sensor again within 10 seconds. The sensor's lens LED will flash rapidly. For expected response upon completion of association, refer to your specific product documentation.

Note: If the laser is not passed over the sensor hole again within the 10-second window, the unit reverts to normal operation.

4. The sensor automatically goes into Test Mode at this point. When activated by the green laser, Test Mode lasts for 5 minutes.

Note: In this Test Mode the receiving device will respond to the occupancy state changes and the occupancy timeout is 20 seconds.

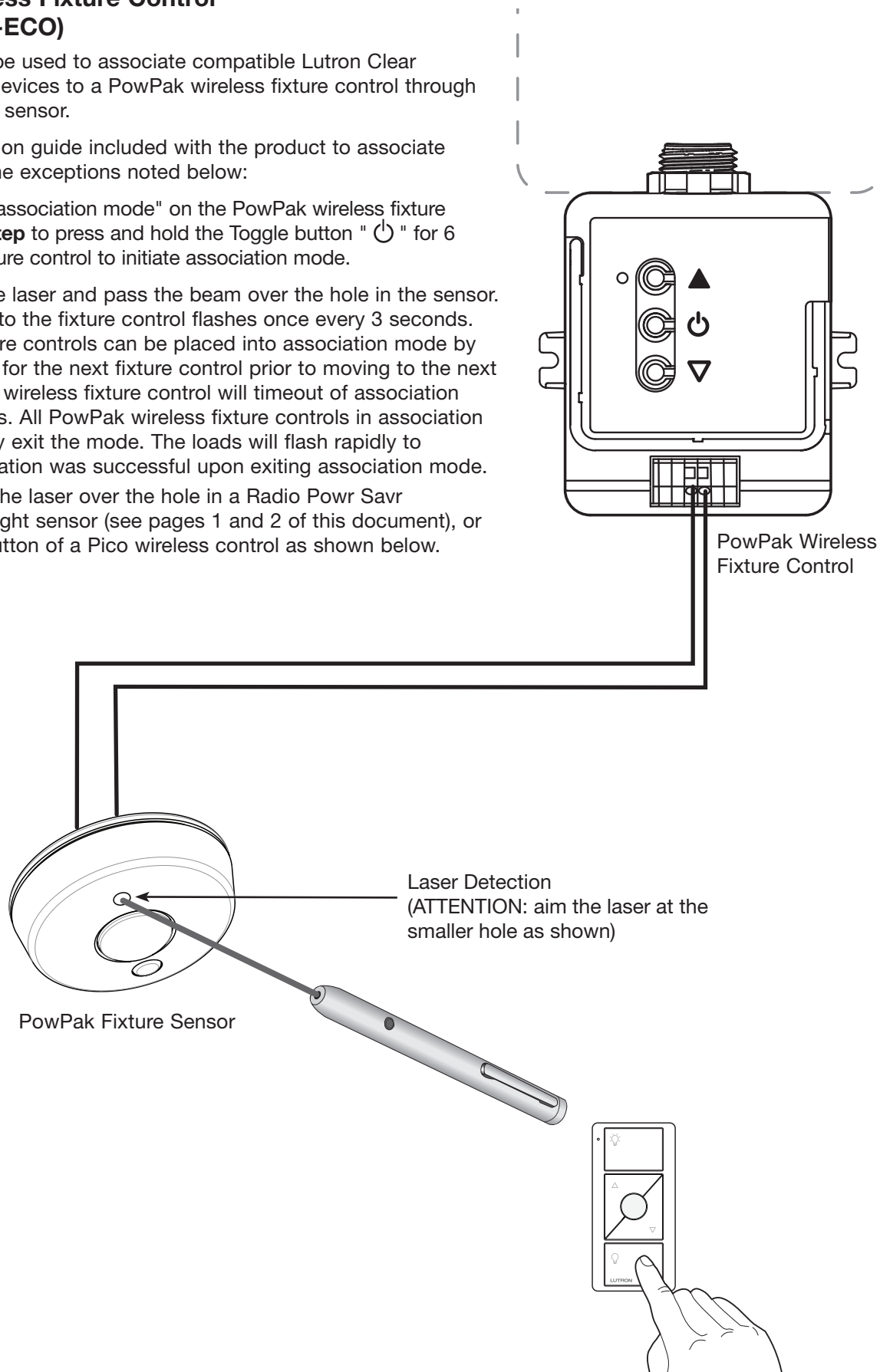


PowPak Wireless Fixture Control (FCJ-010, FCJ-ECO)

A green laser can be used to associate compatible Lutron Clear Connect wireless devices to a PowPak wireless fixture control through the PowPak fixture sensor.

Follow the installation guide included with the product to associate transmitters with the exceptions noted below:

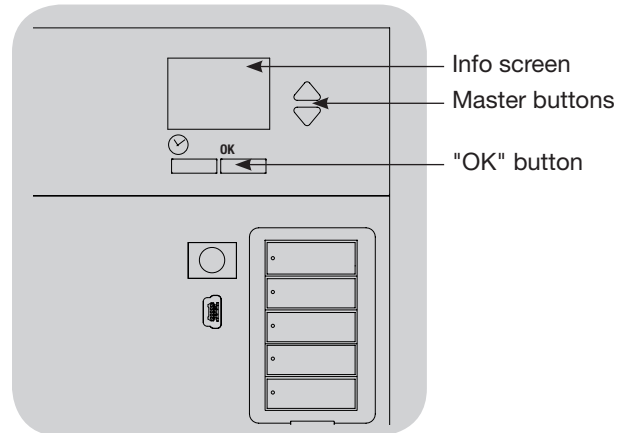
1. During the "initiate association mode" on the PowPak wireless fixture control: **Skip the Step** to press and hold the Toggle button " ⏻ " for 6 seconds on the fixture control to initiate association mode.
2. Instead, turn on the laser and pass the beam over the hole in the sensor. The load attached to the fixture control flashes once every 3 seconds. Note: Multiple fixture controls can be placed into association mode by repeating this step for the next fixture control prior to moving to the next step. However, the wireless fixture control will timeout of association mode in 10 minutes. All PowPak wireless fixture controls in association mode automatically exit the mode. The loads will flash rapidly to indicate the association was successful upon exiting association mode.
3. Pass the beam of the laser over the hole in a Radio Powr Savr occupancy or daylight sensor (see pages 1 and 2 of this document), or press the "OFF" button of a Pico wireless control as shown below.



Radio Powr Savr Occupancy/Vacancy Sensor (LRFX-OWLB-P, LRFX-OKLB-P, LRFX-OHLB-P, LRF2-VWLB-P, LRF2-VKLB-P, LRF2-VHLB-P, LRFX-OCR2B-P, LRF2-VCR2B-P, LRFX-OCRB-P) and GRAFIK Eye QS Wireless Control Units (wireless enabled units only)

To associate the sensor with the GRAFIK Eye QS Wireless Control Unit using the green laser method, do not follow the instructions that accompany the GRAFIK Eye QS Wireless Control Unit. Instead:

1. Make sure the wireless mode of the GRAFIK Eye QS control unit is Enabled (see the GRAFIK Eye QS installation guide).
Note: To properly save the wireless mode, exit and then re-enter programming mode before associating wireless sensors.
2. Enter programming mode on the GRAFIK Eye QS unit (see installation guide).
3. Use the Master buttons to highlight “*Sensor setup*” and press the “OK” button to accept.
4. Use the Master buttons to highlight “*Add wireless sensors*” and press the “OK” button to accept.
5. Turn on the laser and pass the beam over the hole in the sensor. The sensor will flash rapidly, then blink once per second.
6. Once the sensor is flashing once per second, pass the beam of the laser over the hole in the sensor again within 10 seconds. The sensor will flash rapidly, and the room’s lights will flash 3 times. The info screen on the GRAFIK Eye QS will display the sensor’s serial number. This indicates that the sensor-base unit association has been completed successfully.
Note: If the laser is not passed over the sensor hole again within the 10-second window, the unit reverts to normal operation.



7. Press the “OK” button on the GRAFIK Eye QS control unit. A screen will confirm that the sensor has been associated.
8. Exit programming mode on the GRAFIK Eye QS unit (see installation guide).
9. The sensor automatically goes into Test Mode at this point. When activated by the green laser, Test Mode lasts for 5 minutes.

Note: In this Test Mode the receiving device will respond to the occupancy state changes and the occupancy timeout is 20 seconds.

QS Sensor Module (QSMx-xW-x) (wireless enabled units only)

A green laser can be used to associate compatible Lutron Clear Connect wireless devices to a QS Sensor Module (QSM). Follow the installation guides included with the wireless device and the QSM to associate them with the exceptions noted below:

1. During the "Associate wireless input devices" step in the QSM guide: Skip the step to "press and hold the Program button for 3 seconds on the QSM to enter Sensor Association Mode." Instead, turn on the laser and pass the beam over the hole in the QSM between the Program button and the Status LED. You will hear a sustained beep and the LED will blink twice every second signaling that the QSM has entered Sensor Association Mode.
2. To associate a Pico wireless control, hold the OFF button for 6 seconds until the QSM beeps 3 times. If the QSM beeps more or less than 3 times, please refer to QSM troubleshooting. Repeat this step as necessary to associate all Pico wireless controls.
3. To associate a Radio Powr Savr wireless occupancy or daylight sensor, you can either press and hold a button on the sensors as described in the sensor instruction manual or you can use a green laser as described in the other sections of this application note. The QSM will beep 3 times after successful association. If the QSM beeps more or less than 3 times, please refer to QSM troubleshooting. Repeat this step as necessary to associate all Radio Powr Savr sensors.
4. Exit Sensor Association Mode on the QSM by turning on the laser and passing the beam over the hole in the QSM between the Program button and the Status LED. You will hear a sustained beep signaling that the QSM has exited Sensor Association Mode.



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