Keystone SMART LOOP WIRELESS CONTROL User Manual

Contents

keystone

Keystone SMART LOOP WIRELESS CONTROL

USER MANUAL

GENERAL INFORMATION

SmartLoop enables the quick and easy integration of wireless lighting controls via Bluetooth mesh technology. This user manual explains how to use the app and the features available within it. For device-specific information, refer to the corresponding specifications sheets or installation instructions.

FIRST TIME USE

APP INSTALLATION

SmartLoop app

Search for ‘SmartLoop’ on the app store for iPhone (iOS 8.0 or later, and Bluetooth 4.0 or later), or the google play store for Android (Android 4.3 or later, and Bluetooth 4.0 or later).

INITIAL SETUP

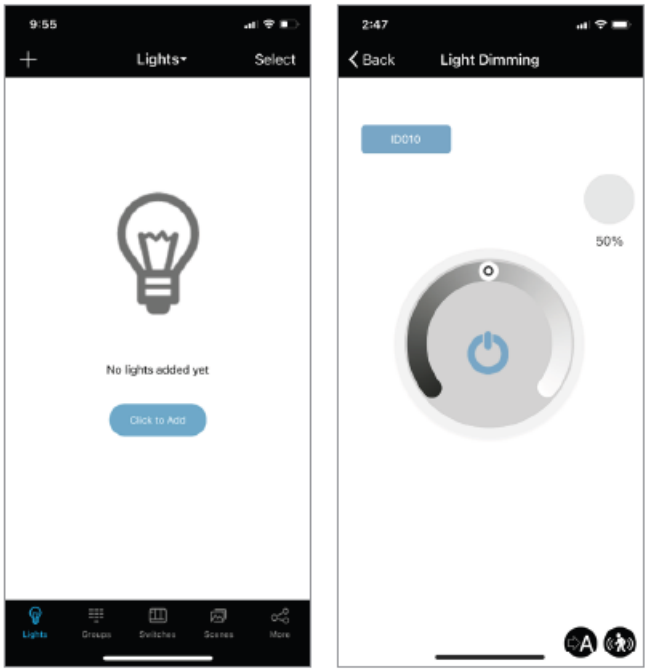
When starting the app for the first time, it will ask for access to photos and Bluetooth. Grant these permissions. They are required for the proper operation of the system. A region called My Lights will automatically be created and QR codes for admin and user access are then saved in your photos. The code with an orange center and a hand pointing are for administrator access, while the code with a green center is for user access. Save this QR code to a secure storage location for future reference. Admin QR codes cannot be retrieved if lost! Any controllers left commissioned to a lost region (QR code images misplaced and regions deleted from the app) will need to be decommissioned via a power cycle reset sequence or reset button. Only share the admin QR code with those you trust to control and edit your system. For general users, provide the user-level code. This disables all editing capabilities.

NAVIGATING THE APP

BOTTOM PANE

Five options are shown in the bottom pane when first starting the app. These are Lights, Groups, Switches, Scenes, and More:

- Lights- Add, edit, delete, and control the lights within a region
- Groups- Create, edit, delete, and control the groups within a region
- Switches- Add, edit, delete, and control the switches within a region
- Scenes- Add, edit, delete, and trigger the scenes within a region
- More- Edit schedules, manage regions, adjust high-end trim, and other advanced features Each of these pages is explained in the corresponding sections of this manual.

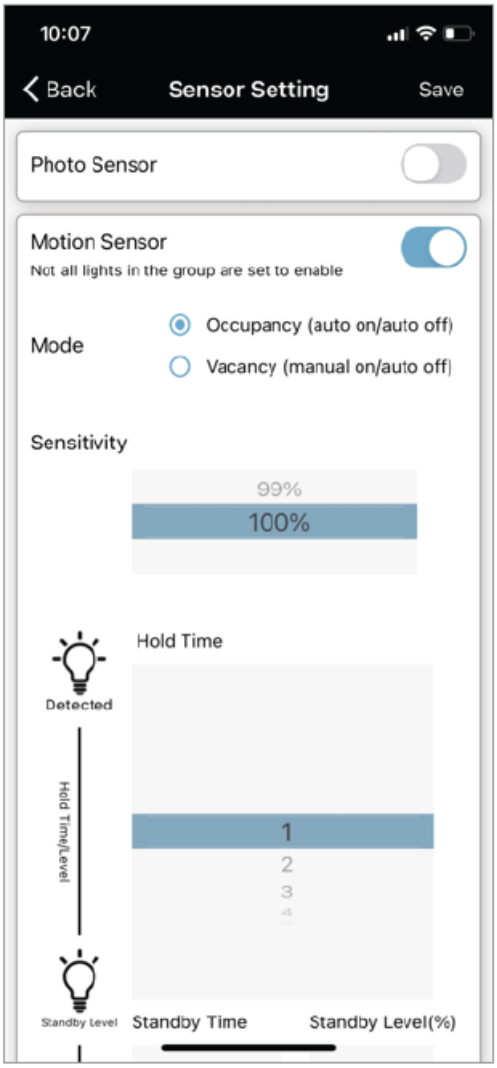


DIMMING PAGE

The Dimming page is available for individual lights and groups. On this page, you can edit the name, adjust the light level with the circular slider, toggle power on/off, set the auto level, and access the Sensor page.

SENSOR PAGE

The Sensor page is available for individual lights and groups. On this page, you can toggle the daylight function (photo sensor), adjust the motion sensor sensitivity, toggle the motion function, select occupancy or vacancy mode, and edit the bi-level dimming timer and level settings.

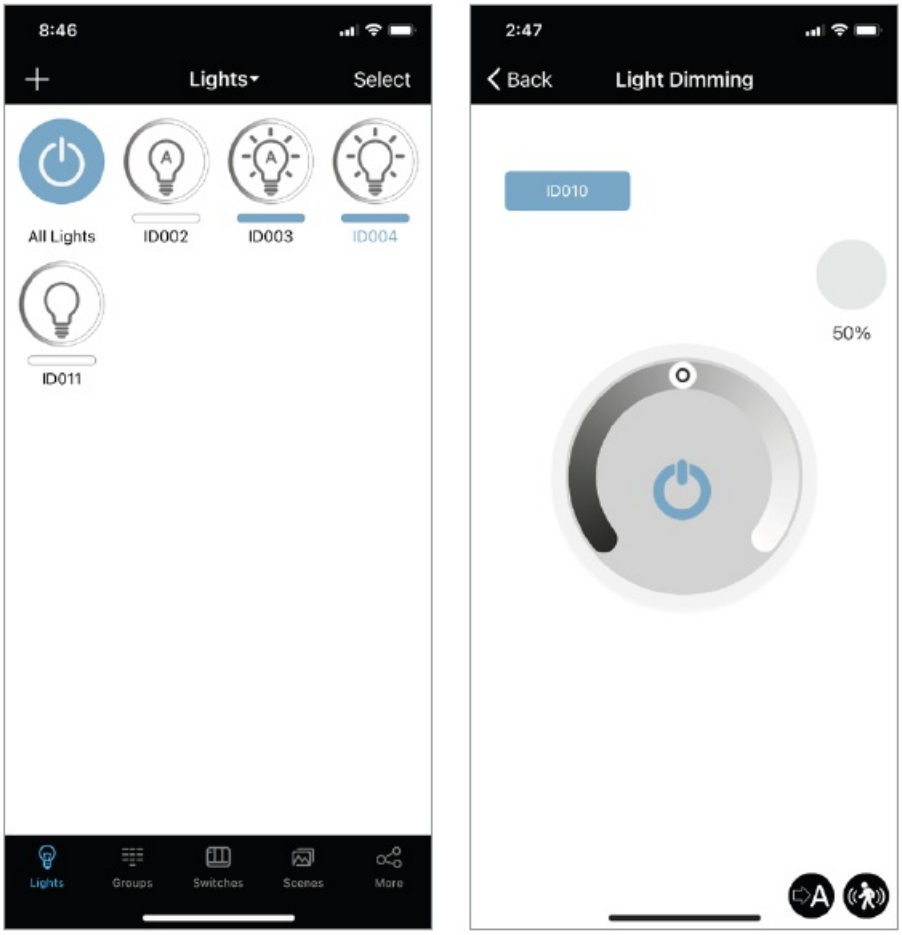


AUTO MODE FEATURE

Any light with an ‘A’ in the icon is in auto mode, which means the controller will automatically utilize sensors and a preset light level (auto level) to determine how to illuminate the space. A light in auto-on mode shows illumination lines in the icon and means the light is currently illuminated. A light in auto-off mode shows just the ‘A’ in the icon, with no illumination lines, and means the light is off but ready to turn on from motion and linkage triggers.

EDIT AUTO LEVEL

The auto level can be set on the light/group Dimming pages. By default, the auto level is 100%. Adjust the illumination in the space to the desired level. Then press . When daylight sensing is disabled, the auto level is simply the specified dim level, such that an auto-level of 80% is always at this dim percentage. With daylight enabled, the lighting percentage will adjust continuously in order to match the measured light level in the space when the auto level was set. So when daylight sensing is enabled, the auto level is a specified light level in the space rather than a simple set percentage. For more information on daylight control, see the Sensor Page section.



MANUAL OVERRIDE

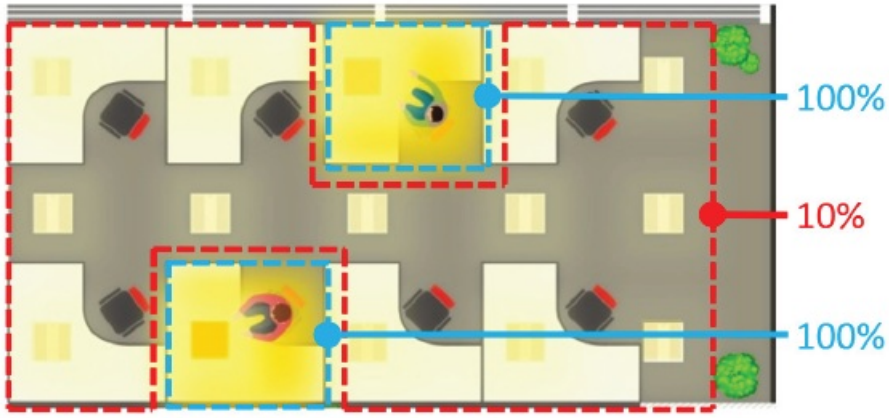
Any light with the ‘A’ missing from the light icon is in manual mode. The light will stay at the specified level until adjusted by a person or schedule. If motion sensors are enabled for a given light/group, lights left in a manual-on state will return to auto-off mode after no motion is detected for the sum of the motion sensor delays. This will prevent rooms from being left on in manual mode while unoccupied. However, if lights are set to manual-off, they will not timeout to auto-off mode.

Most actions will put light into auto mode. Manual override is triggered in a few ways:

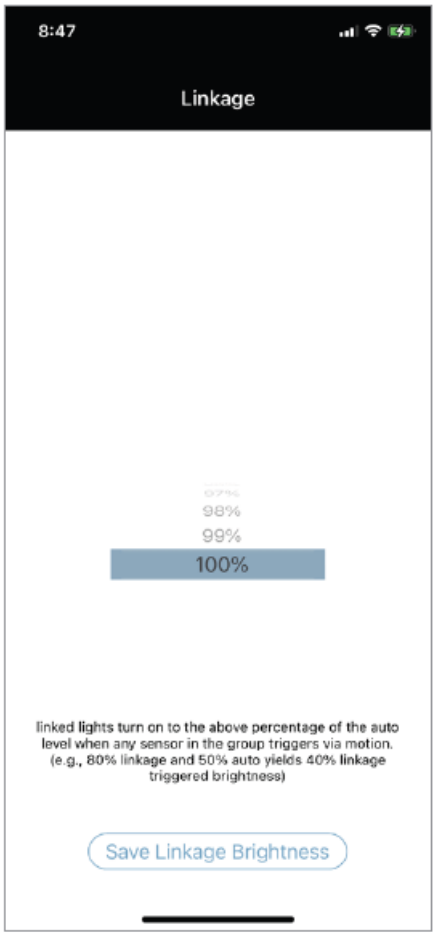
- Scenes, even if configured while lights are in auto mode, will trigger lights to the set levels in manual mode.
- When toggled off, all toggle buttons on the keypad and app will turn lights to manual and off.
- When toggled on, the keypad power toggle button will turn the lights to manual and full-on.

LINKAGE FEATURE

When a light detects motion, the linkage feature causes other lights in the group to turn on as well. The linkage triggered light level is the linkage level multiplied by the auto level. So if the auto-level is 80% and the linkage level is 50%, a linkage-triggered light will go to 40%. This multiplication rule applies to the occupancy standby level for linkage as well. For the same 80% auto and 50% linkage levels, a standby level (from sensor settings) of 50% will yield a 20% light level during linkage standby (50%*80%*50%).



Consider an office group of 15 lights, 8 of which are within motion sensing range for the desk immediately below, respectively. The linkage is set to 10% and auto is 100%, and daylight sensing is disabled for simplicity. When occupancy is triggered for a light, it goes to the auto level of 100%. Other lights go to the group linkage level of 10%. A prompt to set the linkage level occurs when a group is created or the members are edited. It can also be edited at any time by pressing Linkage for a given group on the Groups page. Linkage can be enabled or disabled via the toggle button here as well. For linkage to function, it must be enabled and the lights to be linked must be in auto mode. Only motion information is shared via linkage, daylight measurements are unique to individual lights.



REGIONS

Every region is a separate mesh system, and larger installations may be composed of a number of regions. To access the Regions page, press More in the bottom pane, then press Regions. Each region can contain up to 100 lights, 10 switches, 127 scenes, and 32 schedules. When created, QR codes are generated for both administrator and user levels of access, which enables the app user to download the commissioning data for that region from the cloud.

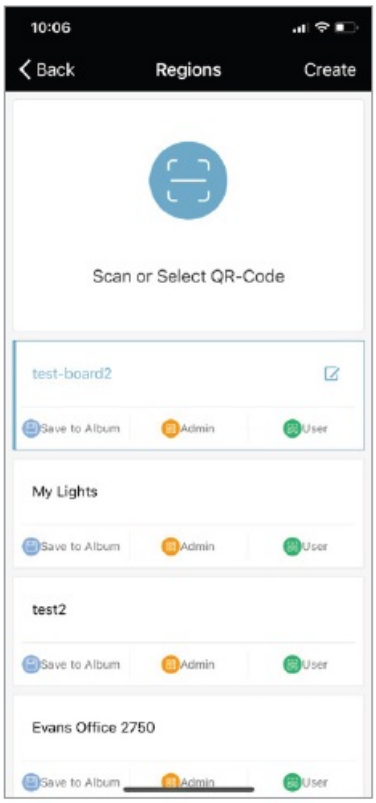
Admin QR codes:

- Enable full control of a region
- Can share admin and user QR codes

User QR codes:

- Restrict any edits to the settings
- Can only share user QR codes

These QR codes are saved to the photo album on the commissioning phone/tablet. They should be handled as secure login credentials like usernames/passwords, so save them to a secure storage location for future reference. Only share the admin QR code with those you trust to control and edit your system. For general users, provide the user level QR code. This disables all editing capabilities. Admin QR codes cannot be retrieved if lost! Any controllers left commissioned to a lost region (QR code images misplaced and regions deleted from app) will need to be decommissioned via power cycle reset sequence or reset button.



CREATE REGION

Press Create, and enter a name for the region. The app will switch to this new region, and generate and store the QR codes on the phone/tablet photo album. It will automatically synchronize with the cloud as long as an internet connection is available.

EDIT REGION-NAME

- When in a given region (blue outline) press the rename icon to edit region-name

SWITCH REGIONS

- Press another region and confirm to switch to that region

LOAD REGION

Press Scan or Select QR-Code. Then, either:

- Scan an image with your camera
- Import QR code from your picture library

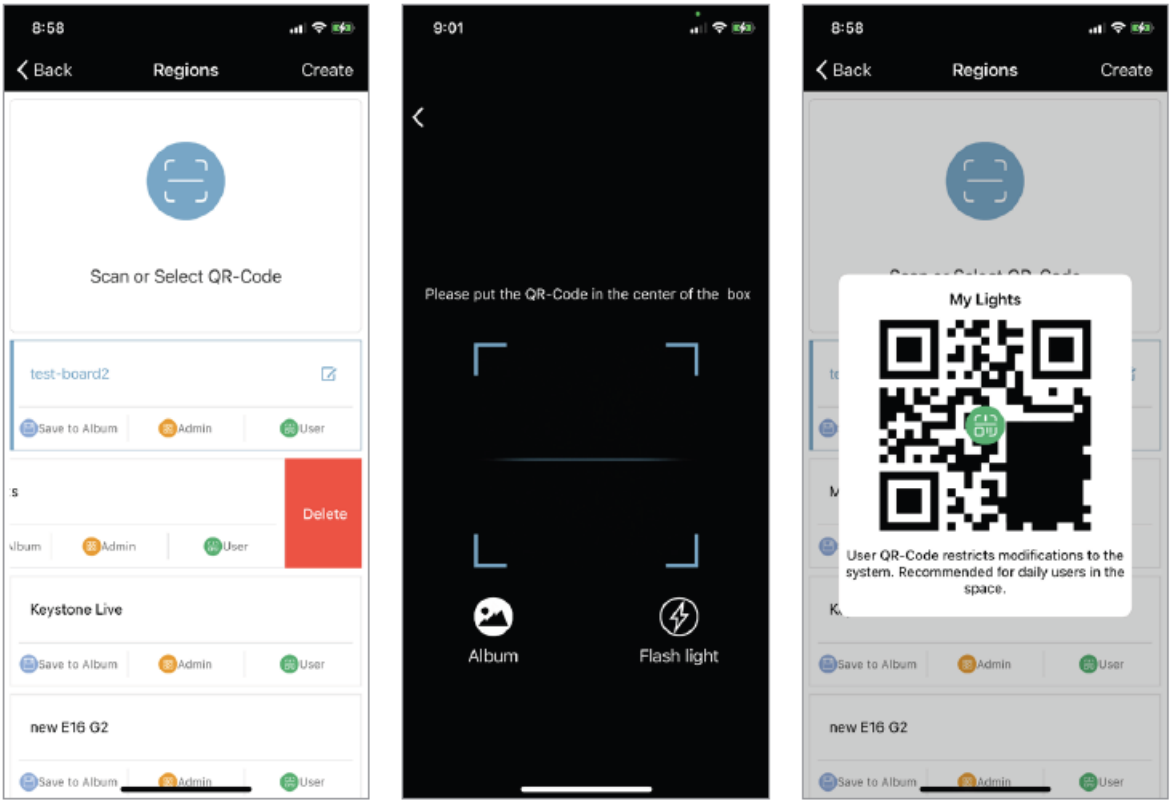
DELETE REGION

QR codes cannot be retrieved if lost! Ensure at least one copy of the admin QR code is saved somewhere safe. If a region is deleted from the commissioning device, it is still saved on the cloud and can be accessed again with the admin QR code. Slide left on the region to reveal the Delete button. Press this and confirm to remove the region from the device. You cannot delete a region which is currently being used (blue outline).

SHARE QR CODES

To give another user access to a region, either:

- Send the admin or use QR code image in your device photo library.
- Press the admin or user QR code icon on the Regions page and have the other device scan this.



LIGHTS PAGE

- The Lights page is the main interface for controlling the lights in a region. Press Lights in the bottom pane to access this page.

ICONS

Each light can display different icons to indicate the state of the device.

- Auto-off- Light output is off, and will be triggered to auto-on if motion is detected.
- Auto-on- Light output is on, and light is operating in auto mode.
- Manual-off- Light output is off, and light output stays off until a scheduled event or manual command overrides this.
- Manual-on- Light output is set to a manual override level via a scene trigger or manual override command. It will return to auto-off mode automatically after the sum of the motion sensor delays.
- Offline- The controller is most likely either not getting power or is out of range of the mesh network.
- Blue Light Name- This is the light that the phone/tablet is using to connect to the mesh network.
- All Lights- A default full system on/off switch, toggles all lights in the region between auto-on and manual-off.

ADD

With controllers installed and lights powered on, press + or Click to Add. The app will begin searching for available lights.

1. Check [ic each light to be commissioned to the region.

Press Add to confirm selections. The selected lights will now appear on the Lights page.
Press Not Added or Added in the top pane to view which controllers are available to commission or already commissioned to the region.

Note: Press a light icon to toggle power to help identify it. If light cannot be found, move closer to the light, ensure the controller is not enclosed in metal, and/or follow the factory reset procedure.

DECOMMISSIONING

Decommissioning can be done by deleting a controller from the region, a power reset sequence, or by using the reset button for certain models.

In the app:

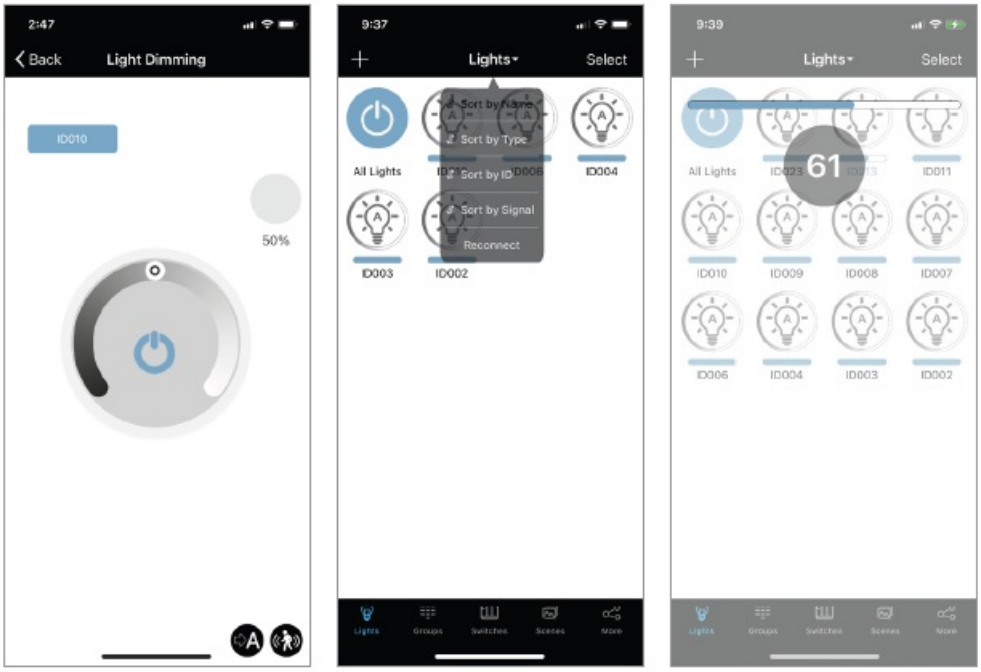
The phone/tablet must be connected to the device through the mesh network in order for the controller to be factory reset. Otherwise, the light will simply be removed from the region in the app, and the controller will need to be factory reset using one of the other methods below.

1. Go to the Lights page.
    1. Press Select and check [ic the desired lights to decommission.
    2. Press Delete and confirm.

Power cycle reset sequence:

If a controller is assigned to another region, it will not appear when searching for new fixtures. Perform the below power cycle sequence to factory reset the controller.

1. Power on for 1 second, then off for 10 seconds.
2. Power on for 1 second, then off for 10 seconds.
3. Power on for 1 second, then off for 10 seconds.
4. Power on for 10 seconds, then off for 10 seconds.
5. Power on for 10 seconds, then off for 10 seconds.
6. Turn the light back on. The device should now be decommissioned and ready to add to a region.



Reset button

- Certain devices have a reset button. Press and hold this button for 3 seconds while powered to initiate a factory reset. Refer to device specifications for more details.

RENAME

- Press and hold a light icon to enter the corresponding Dimming page. Press the blue bar to edit the light name.

SORT

- Press the Lights drop-down menu in the top pane to choose between different sorting options.

SWITCH / DIM

There are two methods to control individual lights on the Lights page. Adjusting a light either way will stay in auto or manual mode.

- Press a light icon and immediately slide left/right to adjust the light level.
- Press and hold a light icon to open the Dimming page. Refer to the Dimming Page section for more details.

GROUPS PAGE
To simplify control, lights can be grouped together. Press Groups in the bottom pane to access this page. The only default group is the All Lights group, which includes all lights in the region.
CREATE

Press + and enter a name for the group.

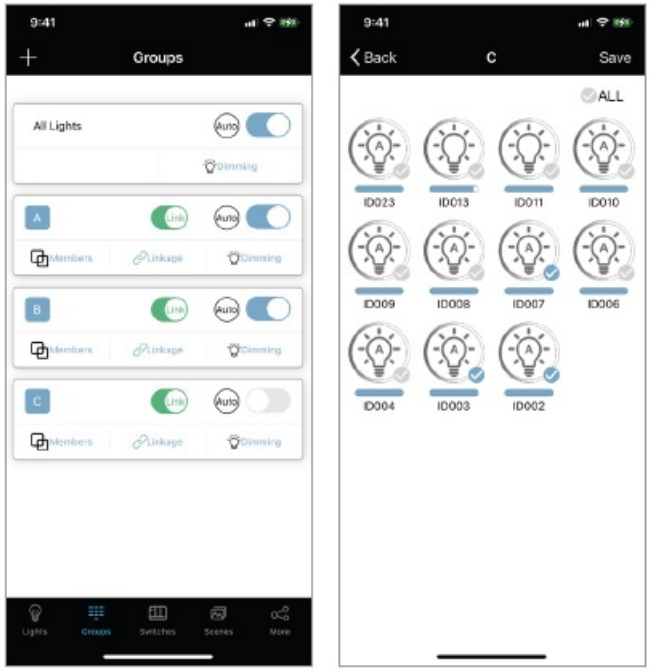
1. Check [ic the lights to be added to the group, then press Save.
2. Adjust the linkage brightness, then press Save Linkage Brightness. The new group will now appear on the Groups page.

DELETE

- Press and slide left anywhere on a given group to show the Delete button.

RENAME

- Press the blue bar for a given group to edit the group name.



EDIT MEMBERS

- Press Members for a group to open the Members page. Check [icoeach desired fixture. Press Save to confirm.

EDIT LINKAGE

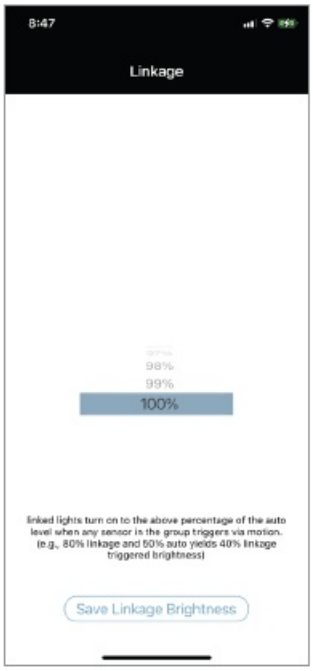
Press Linkage for a group to open the Linkage page. Adjust to the desired level and press Save Linkage Brightness to confirm. The Link toggle switch will enable/ disable linkage for the group.

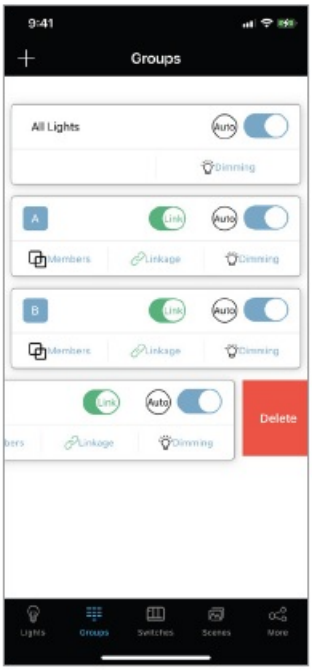
ON (AUTO), OFF

- Press Auto to adjust a group to auto mode. The rightmost switch will toggle between manual-off and auto-on for the group.

DIMMING

Press Dimming to open the Dimming page for the group. Adjustments and settings applied here and on the Sensor, page apply to all members of the group (where applicable for sensors). Refer to the Dimming Page and Sensor Page sections for more details.

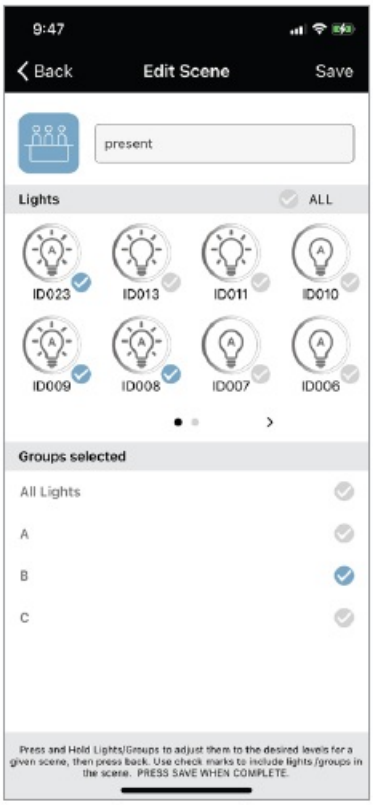




SCENES PAGE

A scene is a command for lights/groups to go to specific manual levels. When a scene is triggered, the included checked [icomembers go to these desired manual settings. Press Scenes in the bottom pane to access this page. Three default scenes exist:

- Full Light- All lights go to manual-on at 100%.
- All Off- All lights go to manual-off.
- Auto Light- All lights go to auto-on.



CREATE

Programming a scene involves selecting members and designating their actions.

1. Press +, and enter a name for the scene.
2. Check  the lights/groups to be included in the scene.
3. For any checked  light/group, press and hold to open the Dimming page.
4. Adjust to the desired level, and press Back in the top pane when done.
5. Repeat steps 3 and 4 for each checked  light/group.
6. Confirm visually that all checked  lights are at the desired levels. Press Save in the top pane.

DELETE

1. Press Select in the top pane.
2. Check  the desired scene.
3. Press Delete in the top pane.

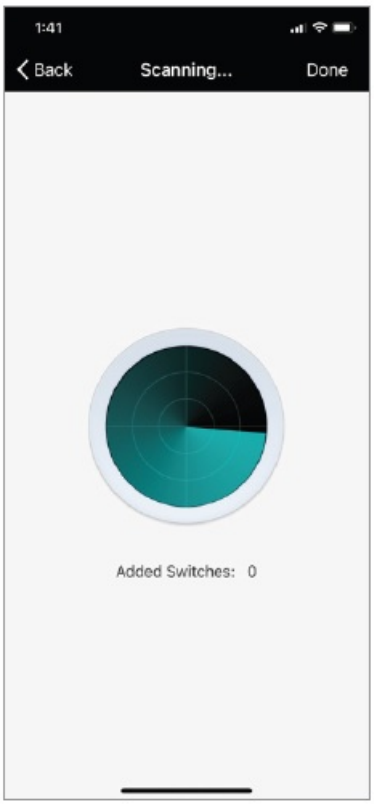
SWITCHES PAGE

The Switches page is used to program the keypads and timekeepers in a region. Press Switches in the bottom pane to access this page.

ADD

1. Press + to enter the Scanning page.
2. On a keypad, press and hold Auto and ^ for about 2 seconds to enter pairing mode. Once the keypad LED flashes red, the buttons can be released. The Added Switches counter will then increment.
3. On a timekeeper, press and hold the button for about 2 seconds to enter pairing mode. Once the LED briefly flashes off and on, the button can be released. The Added Switches counter will then increment.
4. Repeat step 2. A or 2. B to add more devices, or press Done.

Note: A keypad will automatically exit pairing mode after 30 seconds, or if another button is pressed.



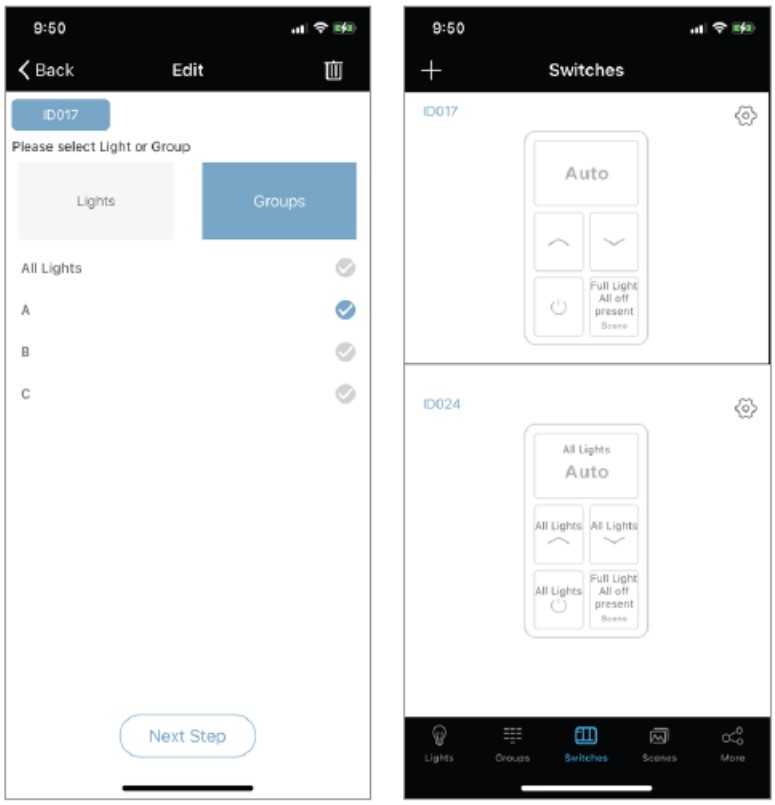
PROGRAM

1. Press the gear icon to open settings for a keypad.
2. Press the blue bar to edit the device name.
3. Press Lights or Groups, then check [ic the desired light/group. Only one light/ group can be assigned per keypad.
4. Press Next Step.
5. Press up to 3 desired scene names to program to the keypad Scene button. If no scenes have been programmed and are still desired for keypad commissioning, see the Scenes Page section.
6. Press Save.

Note: Timekeepers only need to be added to function, they do not need to be programmed.

DELETE

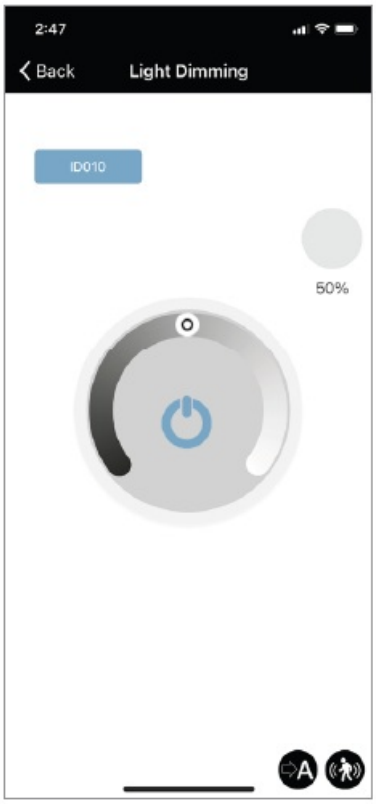
1. Press the gear icon to open settings for a keypad.
2. Press the trash can icon to delete the switch from the region.



DIMMING PAGE

The Dimming page is accessible for each light/group. Press and hold on a light, or press Dimming to access this page. The displayed features affect the light/group shown in the blue name bar.

- Press and slide the rotary dimmer to adjust the light level.
- Press the power button to toggle between auto-on and manual-off.
- Press Auto  to set the auto level to the current level.
- Press Sensor  to open the Sensor page. Refer to the Sensor Page section for more details.



SENSOR PAGE

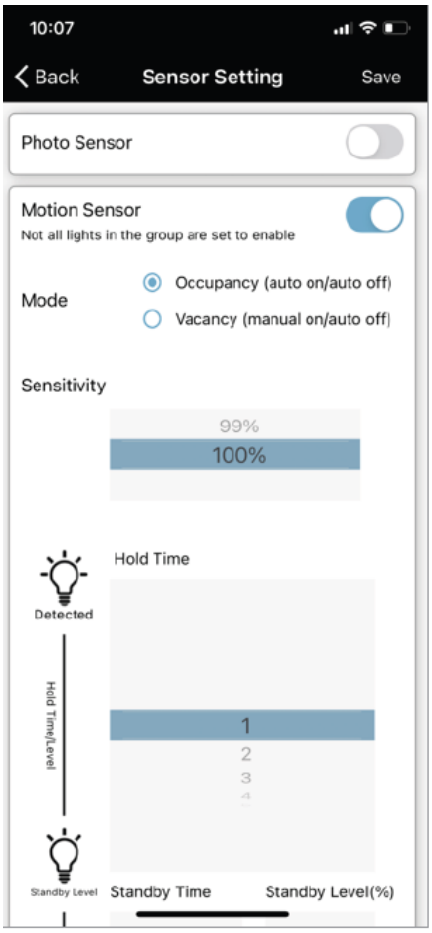
The Sensor page is accessible for each light/group. Press Sensor [ic to access this page.

- Press Photo Sensor to toggle dynamic daylighting on/off.
- Scroll Sensitivity to edit the strength of the motion sensor.
- Press Motion Sensor to toggle motion sensor on/off.
- Press Occupancy or Vacancy to edit motion sensor mode.
- Scroll Hold Time to edit hold time at auto level (dims to standby level after).
- Scroll Standby Level to edit standby dim level.
- Scroll Standby Time to edit standby time at standby level (dims to auto-off after).

Daylight-enabled auto mode should be set when ambient light conditions are relatively low. The daylight feature dynamically adjusts light output to match the light level measured when the auto level was set. Therefore, if the photo sensor is saturated with natural light, the luminaire will always output the highest level to try to match this.

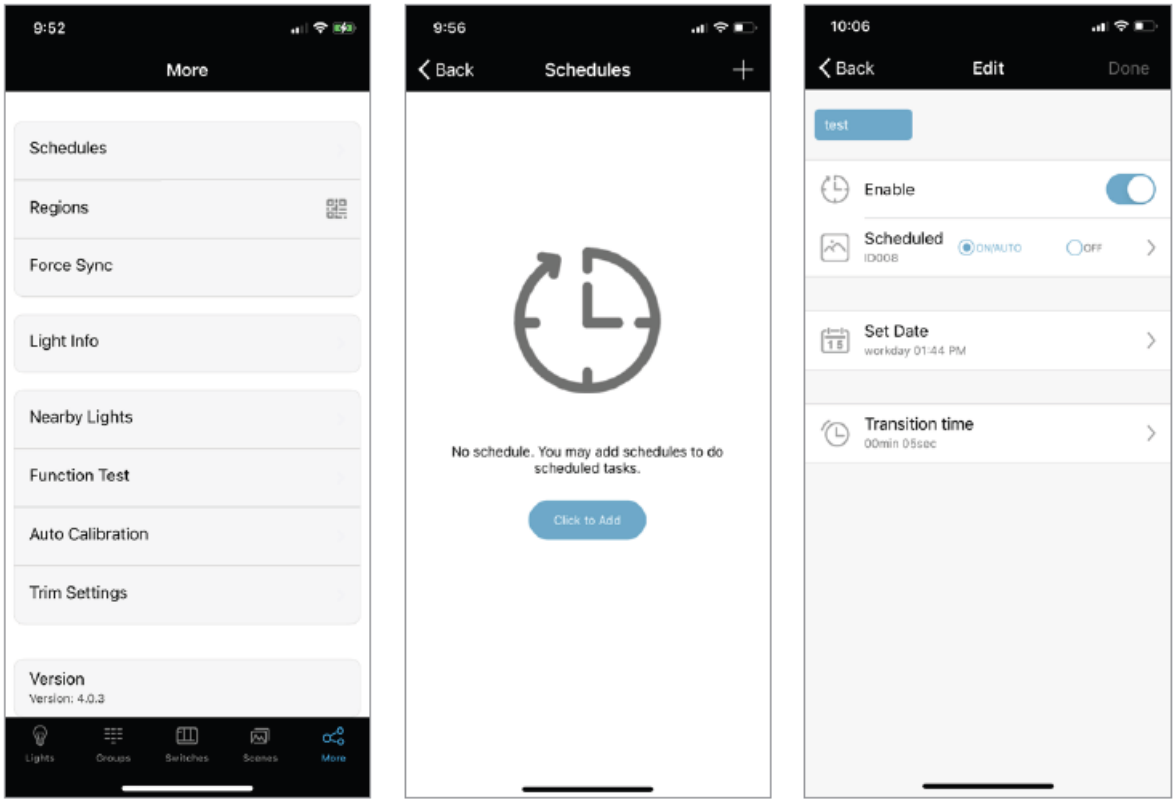
Note

- Daylight sensing data is not shared with other lights. A controller only uses these measurements to adjust its own output when the photo sensor is enabled.
- If a light/group is not using linkage or a sensor directly, ensure that Motion Sensor is toggled to the disabled position, and/or that Hold Time is set to infinite.
- Otherwise, lights will turn off after the time delays due to a lack of motion/linkage triggers.
- The luminaire will still come on to the auto level for either option, but the former will not display the ‘A’ in the light icon.



SCHEDULES PAGE

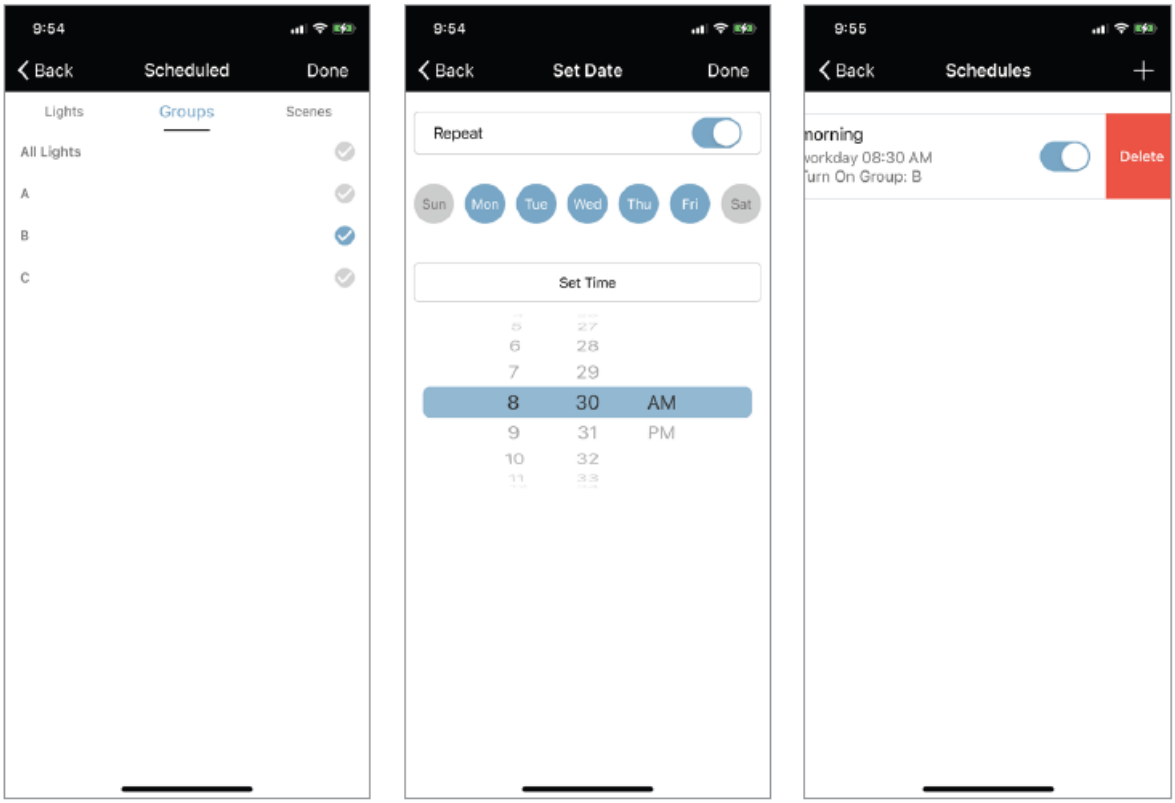
To access the Schedules page, press More in the bottom pane, then press Schedules.



CREATE

Press + or Click to Add, and enter a name for the schedule.

1. Ensure Enable is toggled on.
2. Press Scheduled, select the tab according to if the scheduled event should turn a light or group to auto-on, or trigger a scene. Check [ic the appropriate light/group, or highlight the appropriate scene.
3. Press Done.
4. Press Set Date.
5. A. For a recurring schedule event, set Repeat to the toggle on position. Highlight the days on which this schedule should trigger.
6. For a single schedule event, set Repeat to the toggle off position. Scroll to set the desired date.
7. Scroll Set Time to the desired schedule trigger time, then press Done.
8. Edit transition time if preferred. Otherwise, press Done.



DELETE

- Press and slide left on a schedule, then press Delete.

ADDITIONAL FEATURES

CLOUD SYNCHRONIZATION

Data synchronization with the cloud is automatic but can be manually triggered on the More page. Press Force Sync to synchronize.

LIGHTS INFO PAGE

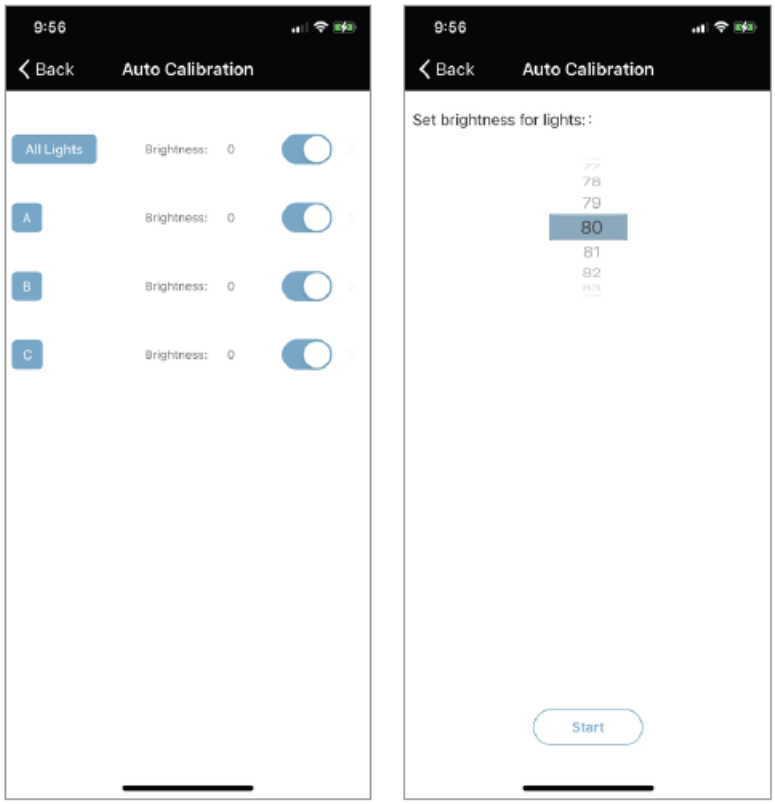
Information on lights, groups, and scenes within a region can be found on the Light Info page. Access this via the More page.

AUTO CALIBRATION

Auto Calibration is on the More page. It is used to help eliminate the effect of natural light when setting up the auto level with daylight enabled. During the calibration process, lights will turn on and off several times.

1. Select the group to calibrate.
2. Scroll to the desired brightness for the night.
3. Press Start.

The test will complete on its own, and remove the testing pop-up message when finished.



FUNCTION TEST

Function Test is on the More page. It is for testing the function of the motion sensor.

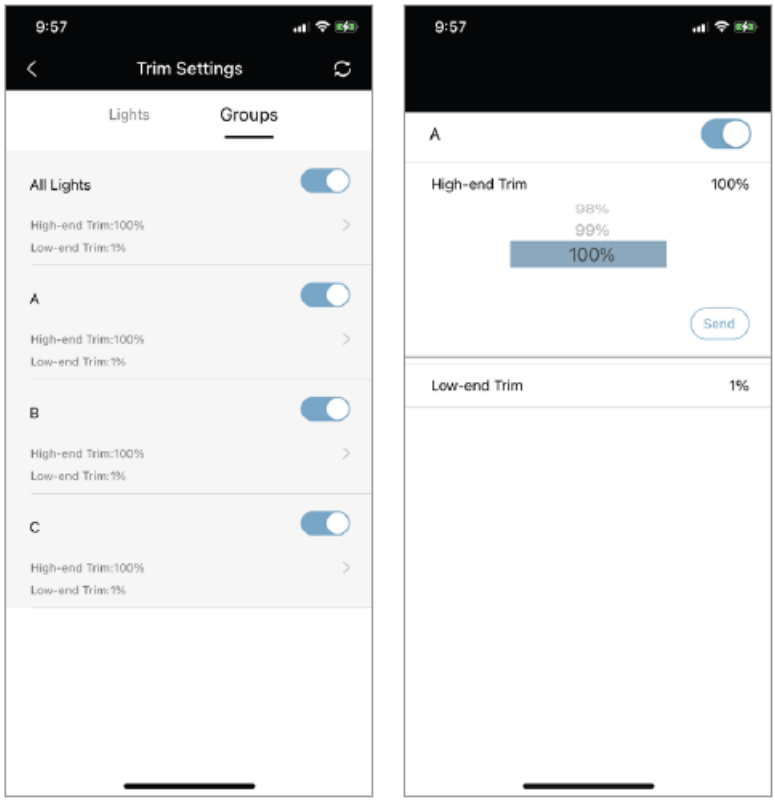
1. Ensure all sensor detection area are clear of motion.
2. Ensure all lights are in auto mode.
3. Press Motion Sensor Test to begin testing. The lights will be put in auto-off mode.
4. Trigger motion for each fixture to confirm function.

TRIM ADJUSTMENTS

Some installations require trim adjustments as a global setting for lights. This takes priority over all other dimming settings.

1. On the More page, press Trim Settings.
2. Select the Lights or Groups tab, and then press on the light/group to be edited.
3. Press High-end Trim or Low-end Trim.

4. Scroll to the desired trim setting.
5. Press Send.



FAQS

1. How many luminaires can be wired to one controller? Refer to the maximum load current, called out in the spec sheet for the specific controller.
2. Why is one of the light names in the Lights page colored blue? This is the device that the controlling phone/tablet is using to connect to the mesh network.

Why can’t I find lights to commission?

- The controller may not have power or may be wired improperly. Refer to the wiring diagram in the instructions, or ensure the power is applied to the circuit.
- The controller may be out of range of the phone, or reception may be blocked by obstacles. Move closer to the controller, or confirm that the controller is not installed such that it is fully enclosed by metal.
- The controller may have already been commissioned to another region. Try restarting the app, toggling the Bluetooth radio on the commissioning device off and on, or factory resetting the controller.

Documents / Resources

	Keystone SMART LOOP WIRELESS CONTROL [pdf] User Manual SMART LOOP WIRELESS CONTROL, WIRELESS CONTROL

References

- Keystone Technologies - Light Made Easy – Since 1945