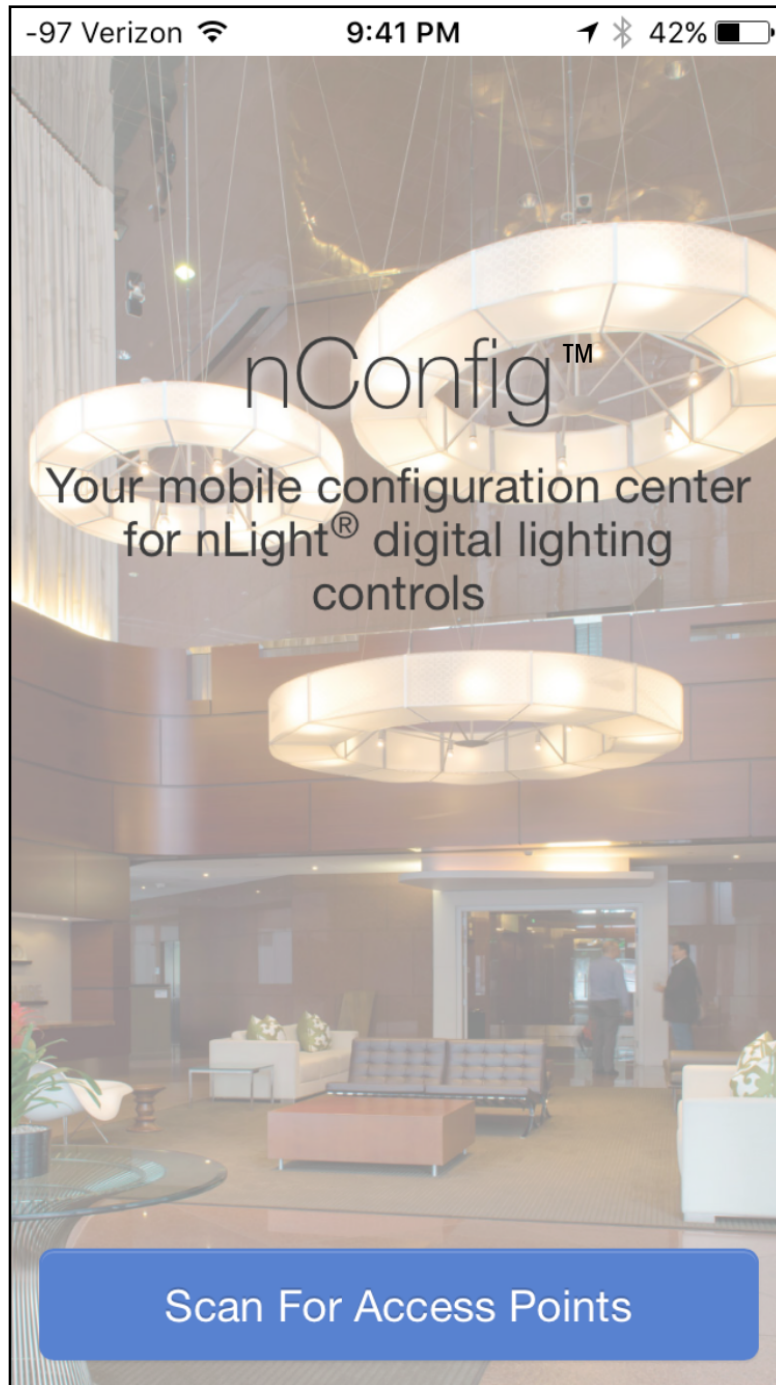


nConfig Mobile App User Guide



INTRODUCTION

Welcome to the Acuity Brands nConfig mobile app. Completing simple nLight® device configuration has never been easier! The Acuity Controls nLight Configuration application pairs with a nLight Bluetooth® Low Energy (BLE) access point (model: nIO BT) for simple system configuration changes.

This guide explains all the features and functionality within the nConfig mobile app. If you still have questions, please reach out to our Technical Support line at 1-800-535-2465 or nLight-Support@acuitybrands.com.

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STARTUP PROCESS OVERVIEW

nLight is an intelligent lighting control system that is comprised of devices that communicate with one another through a daisy-chained CAT-5e connection. The system is very flexible and easy to install. After installation devices operate with a specific out-of-the-box behavior, but modifying how the devices operate together is available through the nConfig mobile app.

An overview of the startup process we recommend you follow is shown below. While there are other ways you can navigate through nConfig, this is the process that makes the most sense to us. Note, a definition of terms section is located near the end of this guide.

1. Install and energize the equipment. You can proceed to the next step once one group of nLight equipment has been installed in a given functional area of the building.
2. Download the app (This can be done before the equipment is installed)
3. Walk into the area being programmed
4. Connect the nIO-BT device as part of the CAT5e daisy-chain (In the app, these are called access points), if not already done
5. Using the nConfig App, connect to the access point
6. Discover the devices
7. Modify devices zones, if necessary
8. Set desired behaviors for each zone
9. Modify trim levels for the devices, if desired
10. Modify photosensor target light levels, if desired
11. Create scenes for scene capable devices, if desired
12. Return to step 3 when you're ready to move to the next area

nCONFIG VS SENSORVIEW

nConfig has been optimized for small to medium nLight installations. There are times that SensorView, which is a PC-based programming tool for nLight, is a better choice. Please use SensorView in the following circumstances.

- If the nLight groups exceed 50 devices (note: nConfig will work for the largest of nLight zones. However, it may be difficult to manage on a mobile device)
- If the nLight system includes bridges and gateways
Note: The nIO BT is designed to co-exist on an nLight group that is plugged into a bridge port, but SensorView is optimal in this case as it is able to connect to a gateway to view an entire system at one time.
- If the equipment in the group includes Fresco units, or if devices are connected directly to an nLight ECLYPSE (instead of to an nLight bridge port). There are also a small number of nLight devices that are not supported by nConfig, and each will be identified upon connecting to the nLight group.

DOWNLOAD nCONFIG

Start by downloading the nConfig mobile app from the Apple or Google Play store by searching for "Acuity nConfig." There is no charge for the app.

Requirements:

- 1) iOS devices v7.0 or newer


NOTE: Performance will vary on Android devices due to the wide variety of processors, memory, and Bluetooth® radios.



ENABLE BLUETOOTH ON YOUR MOBILE DEVICE

Once the app has downloaded, ensure that Bluetooth® is enabled on mobile device. If you're unsure, follow the steps below for an iOS device.

For iOS Devices:

1. On your iOS device, tap Settings > Bluetooth
2. Tap the switch to turn Bluetooth On
3. Once complete, look for the Bluetooth icon  in the status bar of your device

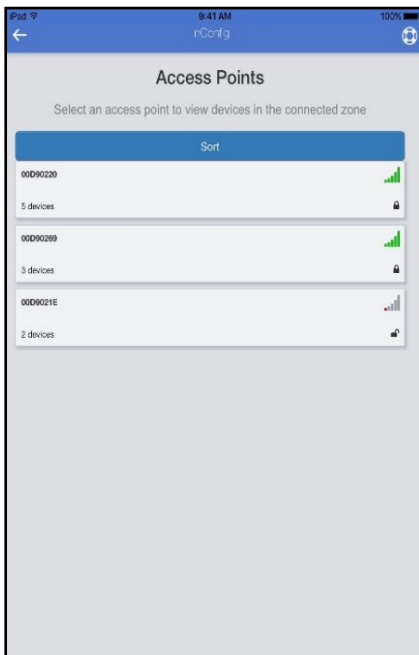
Note: If Bluetooth is not enabled, you will be prompted when opening the nConfig app.

ADD AN ACCESS POINT TO YOUR ZONE

For the nConfig app to work with your nLight equipment, a nIO BT must be part of the group. A nIO BT is the access point that your phone uses to connect to the nLight equipment. The nIO BT can be added to any location within the nLight daisy-chain being programmed, and the unit powers directly off of the nLight bus. No additional wiring required.

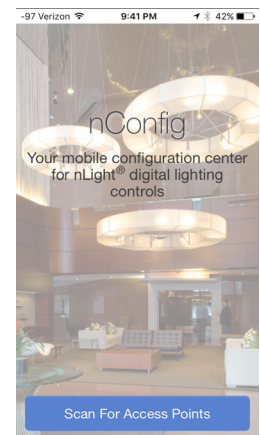
CONNECTING TO AN ACCESS POINT

When the nConfig app is opened, you will see a button at the bottom of the screen that says "Scan for Access Points". Tap that button. The nConfig app will search for access points within range of your phone. The reliable operating range is within about 50 feet line-of-sight of the nIO-BT. Plasterboard, wood and concrete walls are all likely to cut the signal strength in half or less.



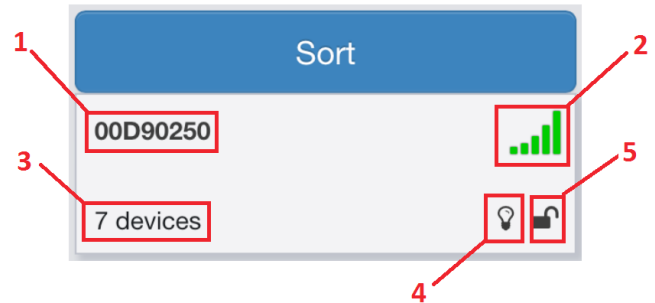
The nConfig app will display all access points available. In the image to the left, 3 access points were found. The signal strength icon typically indicates which are closest to your location. If you're unsure which is the access point to which you need to connect, press any on/off/dimming button on one of the nLight wall switches in the zone you're attempting to program. A light bulb icon will appear in the nConfig app next to the corresponding access point (see image on the following page).

In an area with multiple nIO BT devices (perhaps you have one installed per nLight group), they will list in order of signal strength as the app is able to see them. Since signal strength will often change as you move around, the list will remain static (to avoid confusion in selecting the incorrect access point). To re-order the list based on signal strength, select "Sort" above the list.



The below image highlights all of the information available for each access point on the list.

1. Serial ID from the nIO BT device, which should match the sticker on the unit.
2. Signal strength of the Bluetooth connection with the nIO BT
3. Number of nLight devices connected to the nIO BT, not counting the nIO BT itself – this can be used as a troubleshooting tool, as every connected nLight device in the CAT-5e daisychain should count as 1.
4. This light bulb will appear when a switch on/off/dimming button has been pressed in the group connected to the nIO BT
5. This indicates whether the nIO BT has a password to lock it out (by default the units do not have a password, but one can easily be added from the app interface). If this padlock shows as “locked”, you will be prompted to enter a password upon attempting to connect.



NOTE: If you have lost your password, you can clear the password on a unit through completing a factory reset on the nIO BT. This is accomplished by completing the following sequence:

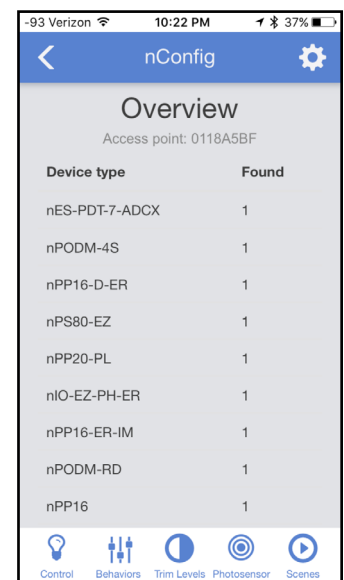
1. Push and hold the push-button on the nIO BT. When the green LED begins to rapid flash, let go.
2. Push the button 9 times, pause.
3. As the LED begins slowly blinking, push the button twice. The LED will blink twice to confirm.
4. Push and hold the push-button on the nIO BT. When the green LED begins to rapid flash, let go.
5. Push the button 9 times. The LED will blink twice to confirm a successful factory reset.

There is one additional icon that may appear on the access point – a revolving arrow. If this icon is present, the group of nLight devices is in “discovery”. Allow up to 60 seconds for this to clear, especially if you have just cycled power and unplugged/plugged within the group. If this does not clear, there is a connection or communication issue within the group. Begin troubleshooting the group as described in the nLight Pocket Guide. After you have found the desired access point on your list, tap it in order to connect to the group of devices.

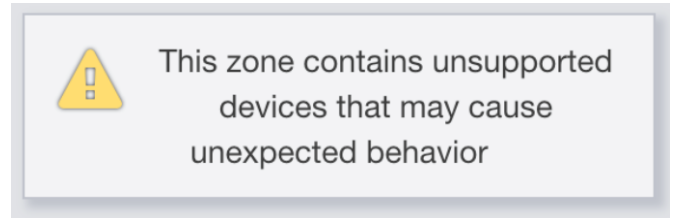


DISCOVERING DEVICES

After you’ve selected the access point, the app will begin discovering all devices in that group (e.g. – all the devices on that daisy chain). In the image shown, the access point has found a total of 9 connected devices. These will display in the list separated by device type and quantity of each.



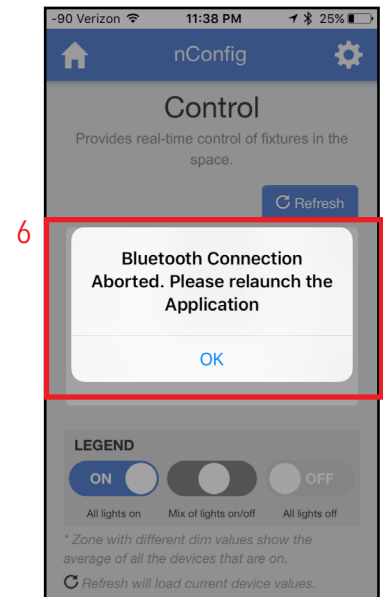
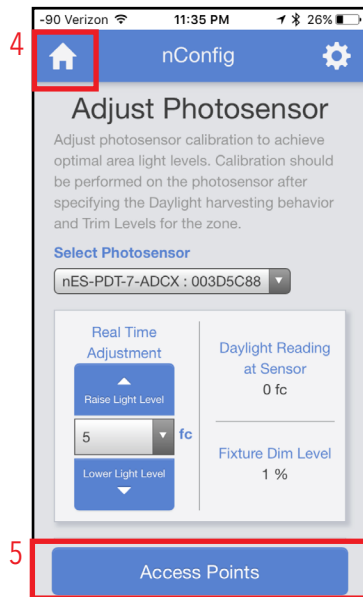
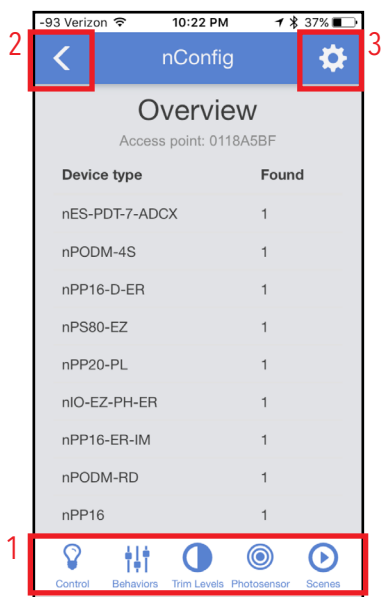
If you see the below error, there is an unsupported device within the group. The specific device(s) in the list will appear with an exclamation symbol next to it. The app will allow programming of all other devices within the group, but the unsupported device(s) will not take any of the system programming.



GENERAL APP OPERATION

The following section will assist when navigating through the app after connecting to an access point:

1. The overview toolbar provides access to all of the various control and programming features of the nConfig App.
2. The back arrow will bring you back a page. If on the overview screen, it will terminate connection to the nIO BT and bring the user back to the general "Access Points" page. If on one of the control/programming screens, it will return to the overview page.
3. The cog icon is present on all pages within the app, and it provides access to technical support phone and email links, this app user guide, pin code setting on the nIO BT, and factory reset on all connected devices.
4. The home icon will always bring the user back to the overview page to access additional control and programming features for the connected access point.
5. The "Access Points" button will terminate the connection from the nIO BT and bring the user back to the list of available access points.
6. If at any point the user moves nConfig to the background, whether to take a call or open another app on your mobile device, the Bluetooth connection will terminate and prompt the user to relaunch the app.

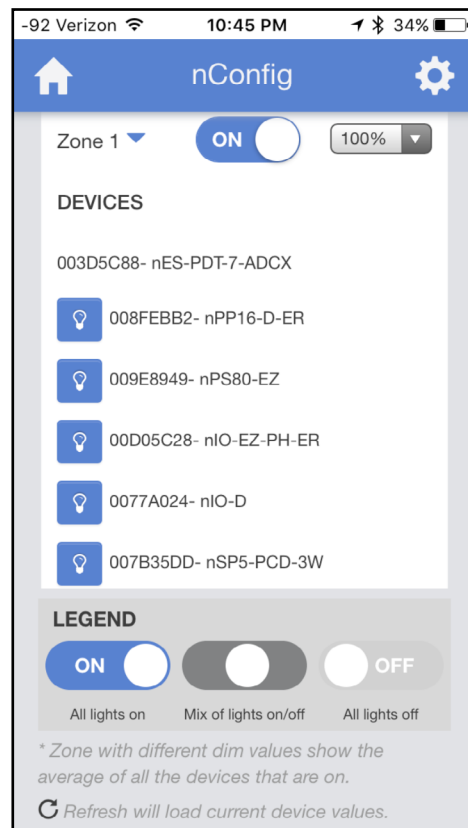
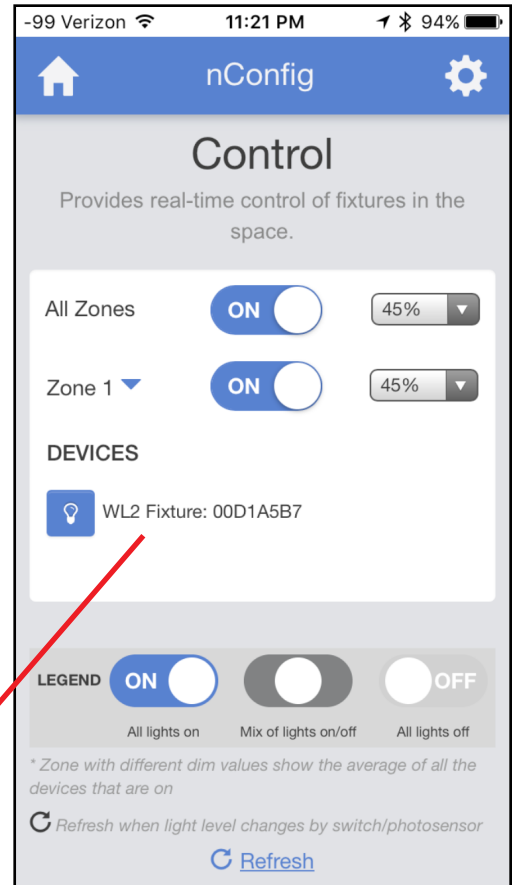


REAL TIME CONTROL OF THE LIGHTING ZONES

From the Overview screen, tap on the "Control" button. This will bring up a screen like that shown to the right. This screen provides real-time control of the zones of lights within the connected access point.

Working from top to bottom, you have the following on this page:

- Refresh button – if light levels are changed from a physical devices within the space (e.g. nLight switch, photocell, etc.), Selecting this button will update the on/off/dim level values
- The zones window populates all zones that were created from the "Behaviors" page.
 - o "All Zones" – this allows control of all zones at the same time. Use the toggle button to turn lights on/off, and use the drop down to adjust the dim level.
 - o "Zone x" (where x = 1-16) – this allows control of each zone. Selecting the arrow next to zone number will display a list of all control devices within that zone, with a light bulb icon used to identify each device
- Legend/static text section – the legend and static text provide the user assistance when using the "Control" page



SETTING AND MODIFYING BEHAVIOR GROUPS

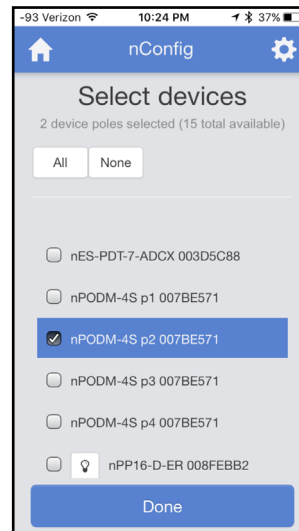
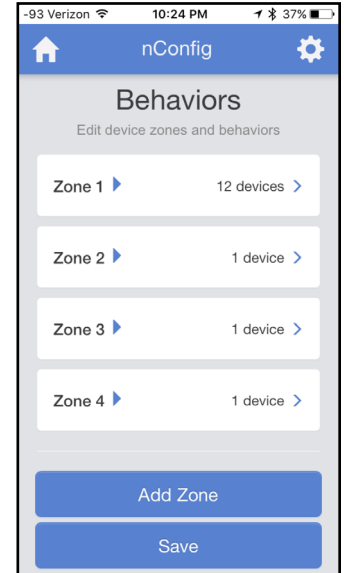
From the Overview screen, tap on the “Behaviors” button. Once completed you’ll see a screen like the one on the right. Each behavior zone that was previously created for the group, even if still under default out-of-the-box programming, will appear here.

The best way to think of a zone is, **Devices that are zoned together, work together.** So if you put a switch and power pack in the same zone, they will work together. Putting an occupancy sensor in a zone with multiple fixtures will result in the sensor controlling those fixtures.

To add or remove devices from the behavior zone, tap the arrow next to the number of devices listed in the zone.

On the “Select devices” page, there is a check box for each device that is part of the current zone. All/None buttons allow you to quickly select the entire group (for simple zone programming), or remove all devices from the zone when looking to only select specific devices. Each device is identified by its model name and serial ID, which will match the stickers on the physical unit. For control devices (e.g. power packs, nLight enabled fixtures) there is light bulb icon shown – pushing this button will force the fixture to blink one time for simple identification.

Once you have selected all of the desired devices for the zone, select “Done” to return to the behavior programming.



NOTE: Devices broadcasting information (i.e. occupancy sensors, photosensors, switch poles) are only able to be part of a single zone. If added to multiple zones, the device will only save in the highest zone number (e.g. if you put an occupancy sensor in zone 1 and zone 2, it will only save to zone 2).

Devices controlling fixtures (i.e. power packs, nLight enabled fixtures) are able to be part of multiple zones.

SELECTING A BEHAVIOR FOR A ZONE

Behavior programming is what is used to define the sequence of operation for the zone, or how the devices interact. It is programmed as a series of decisions, depending on the type of devices within the zone.

When first navigating to the behavior programming screen, the current behavior of the zone will populate. Therefore, if only simple changes need to be made, it will just require making the minor setting adjustment and saving the new behaviors. The following is a description of how all behaviors affect the operation of the devices:

1) On/off and dimming by switch

This indicates that if a switch is in the group, all output devices in the group will respond to that switch. This setting will automatically display within each zone.

2) On by Occupancy (Auto-On) / Vacancy (Manual-On)

This indicates whether the lights automatically turn on when you enter the space, or if you need to press the switch to turn the lights on.

3) Off after xx vacancy

This is the occupancy time delay. This is the amount of time the lights will remain on after the last detected occupancy.

4) Turn on to "Previous Dim Level, 100%, 99%...1%"

This indicates the level the lights will turn on to when turned on via switch or occupancy. If "previous dim level" is selected, the lights will turn on to the last dim level the occupant had the lights on to. If a percentage is selected, the lights will turn on to this percentage each time they turn on via switch or occupancy sensor.

5) Dim after xx vacancy

If dimming devices are present, this indicates the amount of time after the last detected occupancy after which the lights will dim down to minimum level

6) Dual Tech Sensitivity

This setting will display only when dual technology occupancy sensors (identified with model name "PDT") are devices within the zone. This setting allows the user to adjust the sensitivity of the Microphonics™ technology within the sensors.

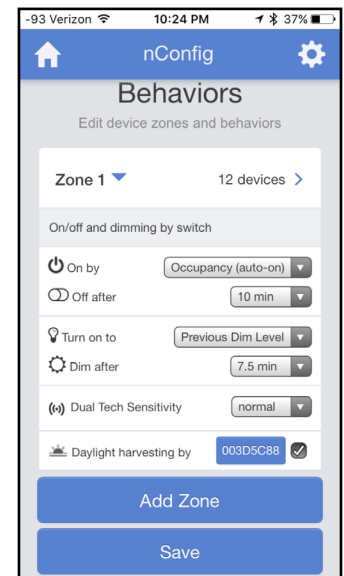
7) Daylight harvesting by xyz12345

When this behavior is present, this allows the user to select the master photosensor for that specific zone. Selecting the 8-digit serial ID will pull up a list of all available photosensors in the zone to choose from, and checking the box activates the daylight harvesting behavior.

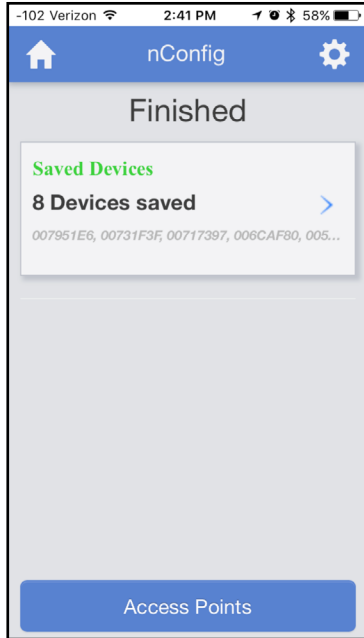
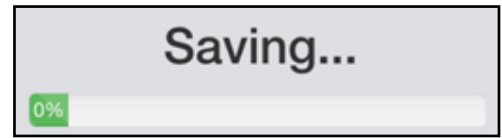
Note: There can only be one master photosensor per zone.

Once the behaviors for that zone of devices has been finalized, create additional zones as necessary by selecting "Add zone". Behavior programming will require the same process as outlined above, after selecting the necessary devices to be in the zone.

Note: Devices controlling fixtures (i.e. power packs, nLight enabled fixtures) are able to be part of multiple zones. If a conflicting behavior exists in the zones, the device will only take the behavior from the highest zone number (e.g. if a power pack has "turn on to: previous level" in zone 1, "turn on to: 50%" in zone 2, the fixture will take the "turn on to: 50%" behavior).



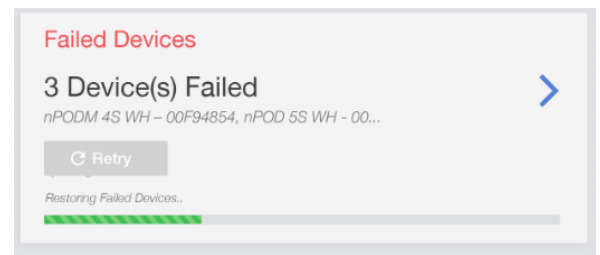
Once all zones have been created and appropriate behaviors selected, select "save" to push all new programming to the devices.



A status bar similar to the that shown above will display. After a successful save, the screen will appear as shown to the left. If the app fails to save the settings to 1 or more devices, an error will generate that allows the user to retry.

NOTE: If the zone continues to fail saving, please determine if you are out of range of the nIO BT, or if devices have been disconnected or powered down.

After saving the new settings to each device, the next step is to either:
 1) Select the home icon to return to the "Overview" page and continue programming the same group.
 2) If no additional programming is necessary, select "Access Points" to go back to the access points list.

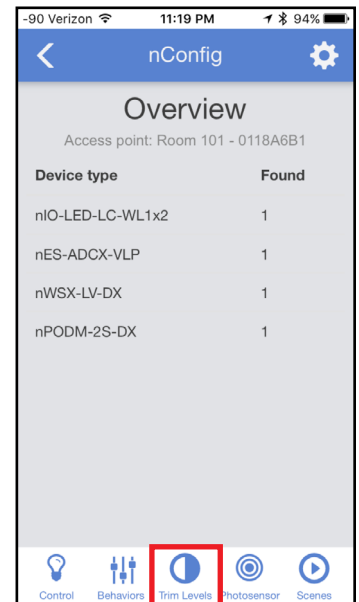


SETTING HIGH AND LOW END TRIM

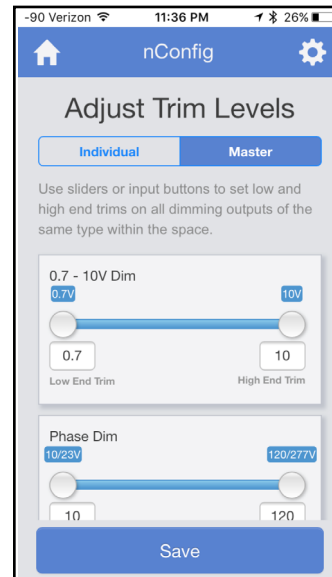
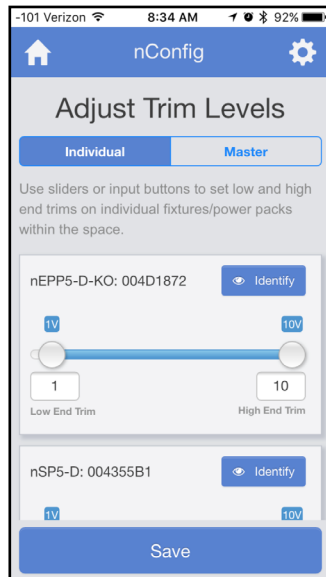
After completing the behavior programming and returning to the "Overview" page, if trim level adjustments are to be made to the fixtures, this would generally be the next step. If no behaviors settings need to be modified (i.e. if the out-of-box operation of all devices in a single zone, responding to switches and occupancy sensors, is the desired operation), you can also skip behaviors altogether and program trim levels first.

Enter the trim level screen by selecting the "Trim Level" icon. This will bring you to a screen that looks similar to that below. At this point you can toggle between "Individual" and "Master" screens:

Individual: This pulls in the current value for each individual dimming device in the group and allows you to set each one independently. From this screen you have the ability to identify each device, then use either the sliders or digital input boxes and keypad to enter the appropriate values. Once complete, select "Save" - the lights will immediately adjust to the new trimmed level (which may or may not be visible, depending on the amount changed and current level of the lights).



Master: This screen is used to modify the trim levels of all of the same dimming device types at once (i.e. 0-10V dimming devices, phase dimming devices, digital dimming devices). You can also use either the sliders or digital input boxes and keypad to enter the desired values. Once complete, select Save to adjust the trim on all like devices (which will once again, result in an immediate change of the fixture trim levels).



CALIBRATING THE DAYLIGHTING IN AN AREA

After completing the behavior programming and setting the device trim levels, the next available programming feature is photosensor adjustment. If the reason you are connecting to the zone is to adjust the daylight harvesting behavior directly, skip behavior and trim settings and go straight to "Photosensor" from the "Overview" screen.

NOTE: If no photosensors are connected to the access point, this button will be grayed out and not selectable.

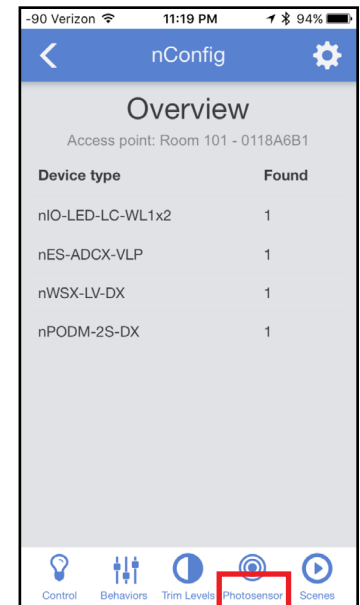
From this page there are a few options and various live readings that can assist when programming photosensors:

Selected Photosensor: This is a drop down menu that allows you to select the desired photosensor you are looking to program. If there are multiple photosensors in the group, select the appropriate one as the first step

If you are only looking to make minor adjustments to the photosensor, the next step is the following:

Real Time Adjustment: If you want to make minor adjustments to the photosensor, then utilize the up arrow ("Raise Light Level") and down arrow ("Lower Light Level") to make such adjustments to the photosensor set-point, which is the light level the photosensor is attempting to maintain. If you want to make larger adjustments, specify a numerical value between the arrows by selecting a specific foot-candle level. Tap the numerical value to expand the dropdown. Select a value then press "Done"

NOTE: This is the foot-candle level at the sensor on the ceiling, not what is being seen on the work surface.



Daylight Reading at Sensor: This is live feedback of the light level the sensor is currently reading – the sensor will be constantly adjusting the fixture dim level in very small increments based on this value, attempting to match the “Daylight Reading at Sensor” to the “Real Time Adjustment” value.

Fixture Dim Level: This provides feedback for the dimming level which the photosensor is controlling the lights to. If at 1% or 100%, you have reached the low/high limit of the photosensor. If you find the “fixture dim level” is at 1% and you desire more light in the space, use the “Raise Light Level” arrow and make adjustments until you see this level begin to climb (wait a few seconds between each press of the arrow, since these are live running changes).

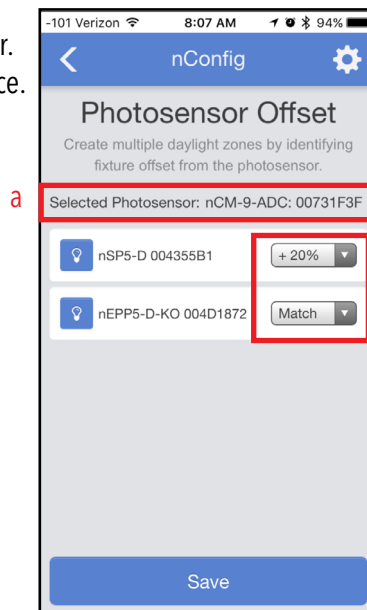
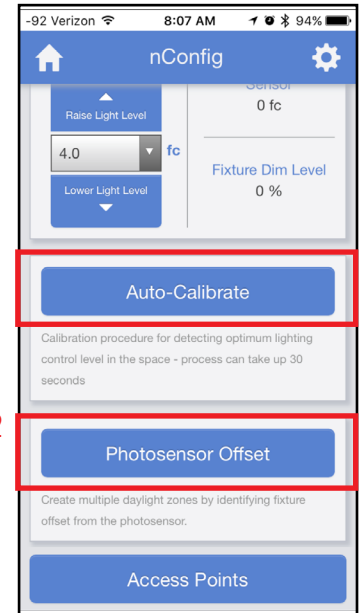
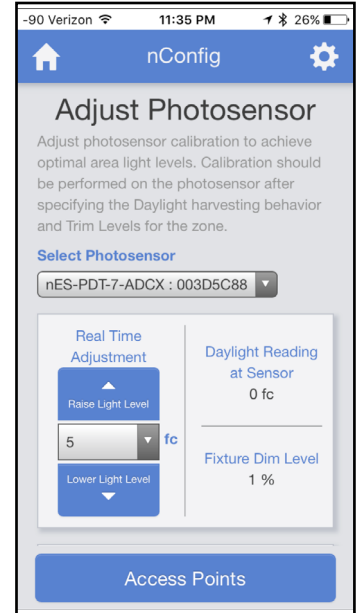
If you are calibrating a sensor for the first time:

1. Auto-Calibrate: Selecting this feature runs the sensor through an “auto-calibration”, which turns the lights off and on a series of times to determine the optimal light level for the space. Please note, this could take up to 30 seconds to complete (all app features will lock out during this time), and lights will turn off and on up to 4 times during the calibration.

2. Photosensor Offset: If there is a need to create multiple daylighting zones based on one photosensor, this can be completed through the “Photosensor Offset” page. Note that this option is available for selection only if the photocell that has been specified is capable of dimming. Selecting this option will bring up a screen as shown below – the available features are the following:

- a. Selected Photosensor – this identifies the photosensor which was selected for adjustment on the “Adjust Photosensor” page
- b. Device list – this will be a list of all control devices (e.g. power packs, nLight enabled fixtures, etc.) within the same zone as the selected photosensor. There is an “identify” lightbulb icon for each device.

- 1. The drop down arrow to the right of each device sets the “offset” from the photosensor, with values from -200% to +200%. Selecting a positive value results in lights that are brighter than the photosensor, selecting “Match” results in lights that match the photosensor directly, and selecting a negative value results in lights that are dimmer than the photosensor.



b.1.

SETTING SCENES

If there are scene capable devices on the access point, scenes can be programmed from the nConfig app. From the Overview screen, tap on the “Scenes” button.

NOTE: If the button is showing in gray and the user is unable to select, this is the result of the app not seeing any scene capable devices connected to the access point.

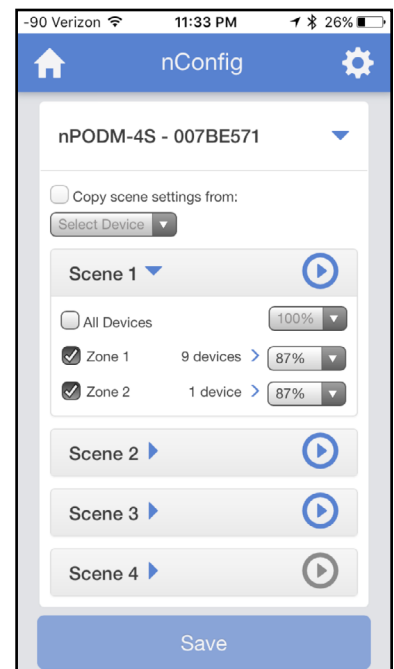
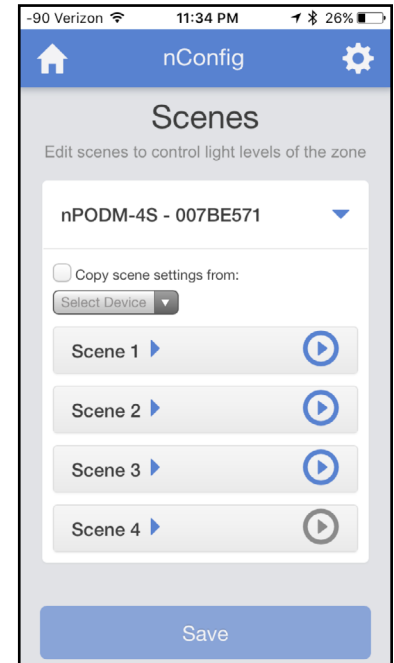
Upon entering the scenes page, the user will see a list of available scene devices. Selecting the arrow next to the device will provide the following options:

- “Copy scene settings from” option provides a drop down selection with all other scene selectors connected to the access point. This allows the user to program a single scene selector, and if there are multi-way scene selectors in the space, they can copy from one to another. If copying from different type scene selector devices, only the appropriate number of scenes will copy (e.g. copying a nPODM 4S to a nPOD GFX will result in only 4-scenes copying to the GFX, which is capable of 16 total scenes)
- Next will be a list of the all scenes on each scene capable device. Selecting the arrow directly to the right of the scene will display a list of all available zones on the access point (which can also be modified on the behaviors page). See screenshot below for an example of an access point with two zones. Creating a scene requires the following:
 - o To control ALL zones – select the “All devices” box, and use the drop down arrow to choose a value for the scene (off, 1-100%).
 - o To control any subset of zones – pick 1 or more zones by checking the box next to the zone. Use the drop down arrow to choose a value for the scene (off, 1-100%).

NOTE: If a control device (e.g. power pack, nLight enabled fixture) are within more than one zone, and these zones are selected within the same scene but driven to different levels (e.g. zone 1 is driven to 50%, zone 2 to 75%, and both include the same power pack), the zone 2 level will persist.

- To the right of each scene there is also a “Play” button displayed as an arrow within a circle. After scenes have been created and saved, this button allows the user to send the scene to the devices real time.
 - o Play button highlighted in blue – indicates scene is active
 - o Play button highlighted in gray – scene is inactive, or no scene available

NOTE: The scene “Play” feature is available on scenes 1-9 of the nPOD GFX, but disabled on scenes 10-16.

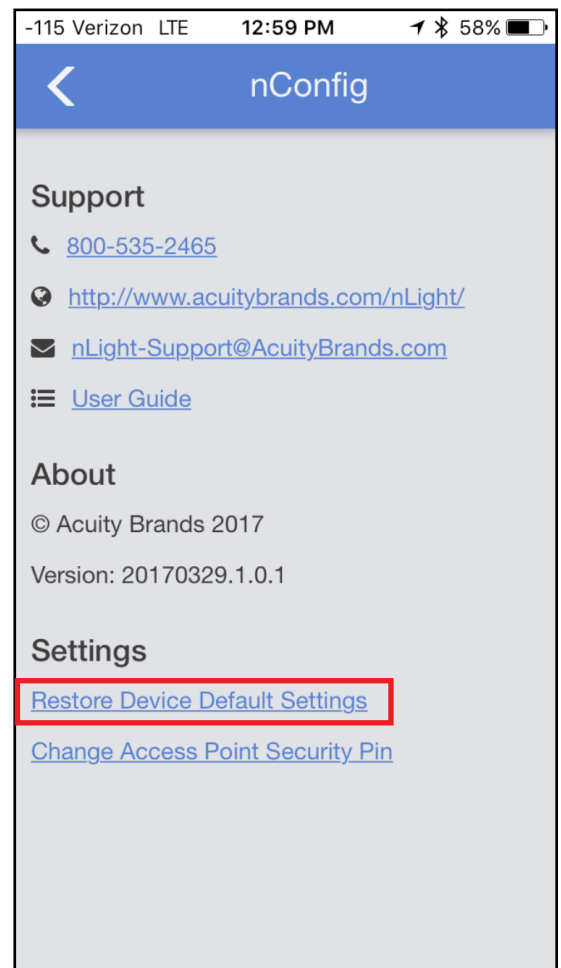
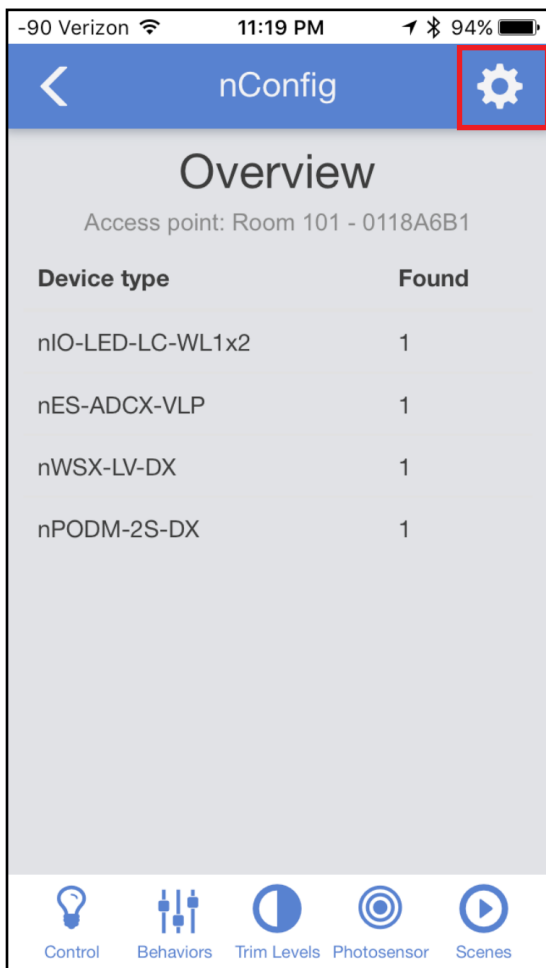


BRINGING DEVICES BACK TO FACTORY DEFAULT

Should there be a requirement to bring all nLight devices connected to an access point back to factory defaults and out-of-box operation, this can be done through the user setup menu accessed by selecting the cog icon from any page throughout the app.

NOTE: Bringing all devices to factory default settings will result in loss of all behavior, photosensor, trim level and scene programming. There is no persistent storage mechanism to recover previous programming.

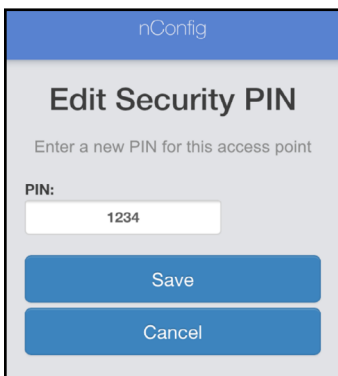
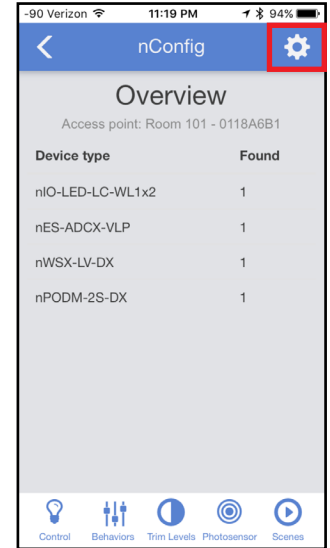
See screenshot below which shows the link to restoring default settings on devices. Upon selecting "Restore Device Default Settings", user will be presented with a confirmation dialog that permits cancelling or continuing the process.



CHANGING ACCESS POINT SECURITY PIN

As is described in the "Connecting to an Access Point" section, a security PIN consisting of a minimum of 4 numbers and maximum of 8 numbers, can be applied to each nIO BT to ensure security of the unit. Each time a user connects to a nIO BT with a PIN (as shown by a "locked" padlock on the Access Points screen), they will be prompted for this PIN. After entering the correct PIN, the user now has access to the programming configurations of the group.

The user can adjust this security pin after connecting to the access point. From any screen select the cog icon in the top right corner, and then select "Change Access Point Security Pin". This screen provides a numeric text box where the user can adjust the PIN and save, or cancel if they would prefer the PIN as is. Note: A PIN is not required for the nIO BT device, but it is highly recommended (especially in an environment where the nIO BT device is left within the nLight zone).

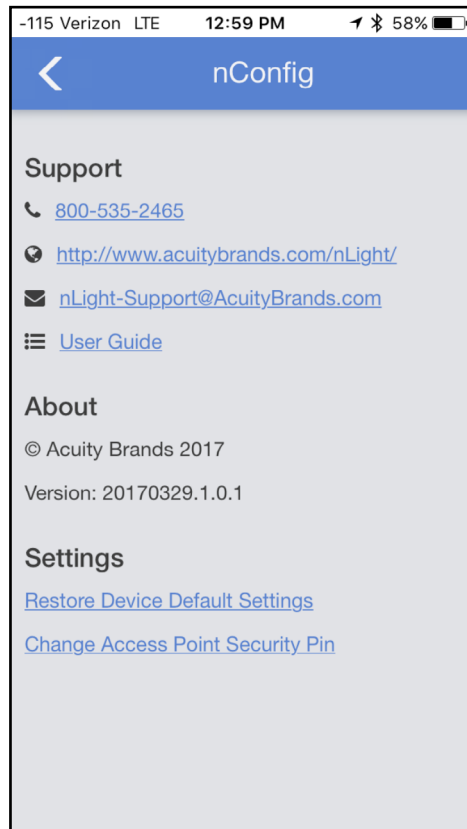


Note: If a user forgets the security PIN on the nIO BT, the PIN can be cleared by factory resetting the unit. The steps to complete this are described in the "Connecting to an Access Point" section above.

USER SUPPORT

For support with your nLight control system and the nConfig mobile app, please contact Acuity Technical Support at 1-800-535-2465 or nLight-Support@acuitybrands.com.

These support resources, along with this user guide, can be accessed within the app by selecting the cog icon on the top right corner from any page - see screenshot below.



UPDATING NCONFIG

In the event that a new version of nConfig is developed, you'll receive a notification through the app store that a new version has been made available. We recommend reading through the release notes associated with the new version so you can learn of the new features and capabilities prior to downloading it.

DEFINITION OF TERMS

Site	An installation of lighting control equipment for one customer at one location
Account	One or more sites that are all affiliated with one end user.
Area	A descriptor for a physical geographical area, within a customer site, that has some common use or purpose
Group	All the devices connected by a single nLight daisy-chain, max 128 stand-alone or per bridge port
Identify	A process by which a device provides some visual feedback (e.g. - the flashing of a fixture) so its location can be determined.
Zone	A collection of lighting fixtures expected to work together - resulting from a logical zoning
Behavior	The manner in which a collection of devices (zone) operate. Some people refer to this as the sequence of operation.
Fixture	A piece of equipment that outputs light
Switch	A piece of equipment that, is typically mounted on a wall, that a user may interact with to control lights in their vicinity
Device	A generic term used to describe the individual units that comprise a system.
Mobile Device	A personal handheld communication device that provides connectivity to wifi, cellular, or Bluetooth
Startup	The act of troubleshooting and programming a new installation of equipment
Photosensor	A device that detects the presence of light.
Daylighting	A lighting control strategy that accounts for the presence of natural light and changes the artificial light to achieve a desired light level
Occupancy Sensor	A control device that detects motion

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