Smart Dimmer Switch

SDS100

© 2017 Nuro Technologies, Inc. All rights reserved. Nuro™ and BriteLight™ are trademarks of Nuro Technologies, Inc.

Welcome

Thank you for purchasing the Nuro™ BriteLight™ smart dimmer switch.

The Nuro BriteLight delivers a new level of intuitive and automated control for your home's lighting. Because it learns your personal patterns and preferences automatically, the Nuro BriteLight makes it easy to control all your lighting needs.

All Nuro products have been designed to operate with as little manual control as possible. With its built-in self-learning capabilities, the Nuro BriteLight switch learns your personal patterns and preferences and will automatically adjust the lights to your preferred level when it detects activity. Over time, you may never need touch the switch again.

However, there may be times when you want to "override" the automated operation of the Nuro BriteLight. No problem. Nuro makes that easy as well.

About This Manual

This manual covers the following topics:

- Understanding the switch's modes of operation (automated and manual)
- Controlling the switch with the Nuro app
- Accessing additional capabilities on the Nuro app
- Adjusting the settings of the switch's automated functions

Requirements

To get the most out of your Nuro BriteLight switch, you should install the free Nuro app, which is available for both iOS and Android.

- The iOS version of the app is available on Apple iTunes: https://itunes.apple.com/us/app/nuro/id1204746348
- The Android version of the app is available on Google Play: https://play.google.com/store/apps/details?id=com.app.nprod

Quick-Start Guide

1 *Install the Nuro app.*

2 *Pair your Nuro BriteLight switch with the app.*[1]

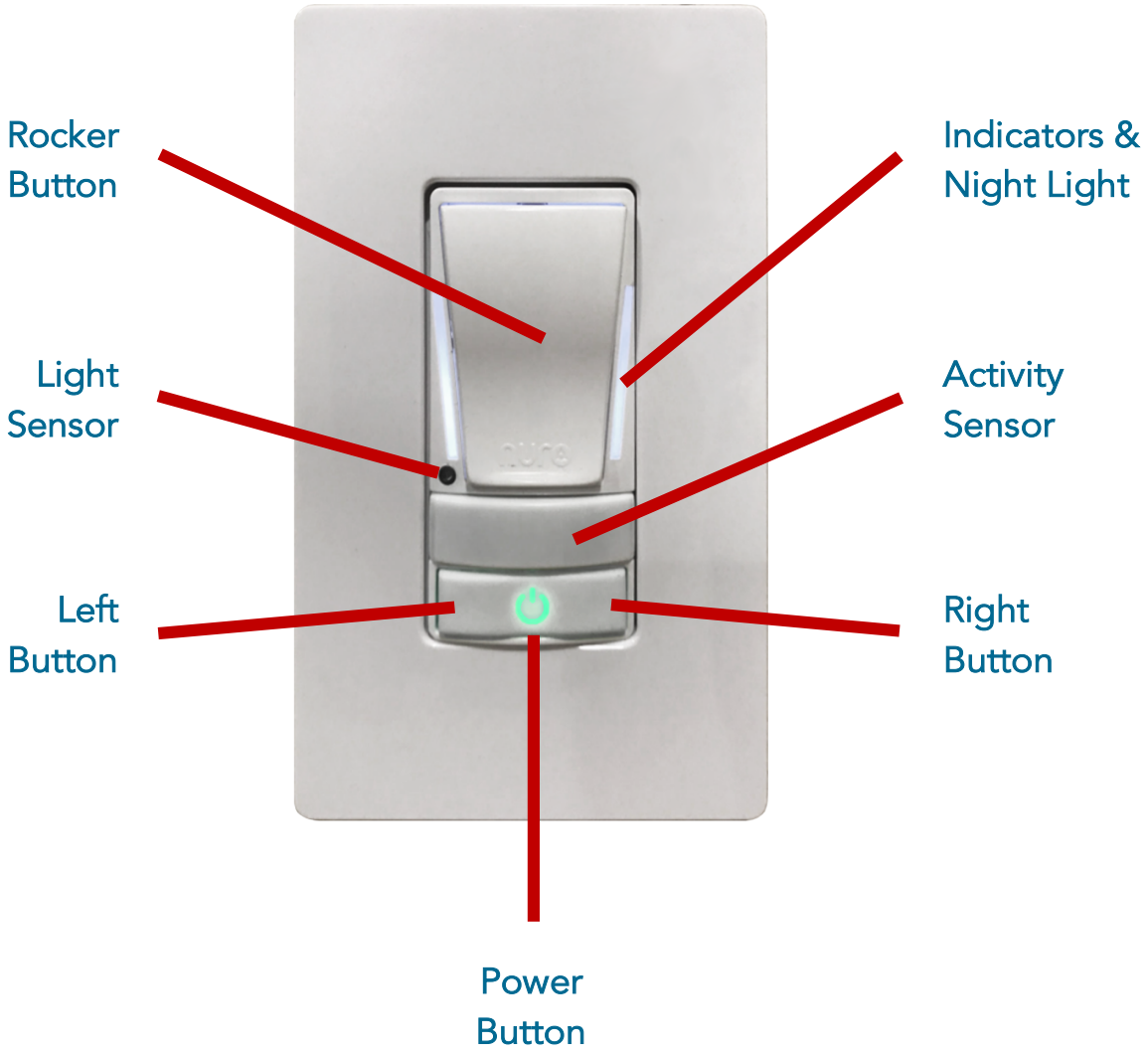
- This will automatically place the switch in Auto Mode (indicated by a blue power button).

3 *That's it. Setup is complete.*

- The Nuro BriteLight will automatically turn on and off the light and adjust the dimming level, based on room activity, ambient light, and time of day.
- If you want to make the light brighter or dimmer, just use the rocker button on with switch or the app on your phone to set the level to your liking. After a couple of times doing this, the Nuro BriteLight will automatically learn your preferences and adjust the lights accordingly.

[1] Detailed instructions for this can be found in "Pairing the Nuro App with Your Nuro BriteLight" on page 7.

Switch Controls



Modes of Operation

Before any Nuro BriteLight is paired with the Nuro app, the switch's power button will be green in color. A green power button indicates that the switch is ready to control your lights.

Once the switch has been paired with the Nuro app, the power button will be either blue (Auto Mode) or white (Manual Mode).

The following chart summarizes the three modes of operation:

Power Button	Green	Blue	White
Mode	Default Mode	Auto Mode	Manual Mode
Lighting Control	manual	fully automated	manual
Sensing	off	continual	continual
Self-Learning	off	continual	continual

The following sections describe these three modes in further detail.

Default Mode: Standard Dimmer

When the Nuro BriteLight switch is first installed (and the power button is green), it works just like any standard dimmer switch.

No setup is required for standard dimming operation.

Here is a quick summary of the basic (standard) controls of the Nuro BriteLight switch:

- **Power On/Off**: Tapping the power button turns the light on at 100% or off completely.
- **Dimmer On/Off**: Tapping the "up" rocker button will turn the light on at the previous dim level. Tapping the "down" rocker button will turn the light off completely.
- **Dimming**: Pressing and holding the rocker button (up or down) will adjust the dim level.

Auto Mode: Full Automation

Pairing the Nuro BriteLight with the Nuro app will automatically put the switch into Auto Mode (blue power button).

When in Auto Mode, the Nuro BriteLight will operate as a fully automated dimmer switch, with the following capabilities:

- Monitor room activity and conditions.
    - Presence of people
    - Presence of pets
    - Ambient light
    - Energy usage
- Adjust light automatically, based on activity, room conditions, time of day, and personal preferences.

Manual Mode

Pressing the rocker button or power button will instantly put the switch into Manual Mode (white power button). While in Manual Mode, the switch will not adjust the light automatically (until put back into Auto Mode).

Even though the switch is in Manual Mode, it will continue to monitor room activity and conditions, and it will continue to learn your lighting preferences.

Switching Between Auto Mode and Manual Mode

To put the switch into Manual Mode, tap either the rocker button or the power button. The power button should turn white, indicating that the switch is now in Manual Mode.

Once in Manual Mode, the switch will automatically return to Auto Mode (full automation) after 30 minutes of no activity.

To return the switch to Auto Mode before this time elapses, press and hold the power button for about ½ second, until you hear two beeps. The power button will turn blue, indicating that the switch is in Auto Mode.

Sensing and Self-Learning

Once the Nuro BriteLight has been paired with the Nuro app, the room activity sensing and self-learning capabilities built into every switch will continue to operate, whether in Auto Mode or Manual Mode.

Pairing the Nuro App with Your Nuro BriteLight

Step 1: Install the Nuro App

- Download and install the Nuro mobile app.
  - The iOS version of the app is available on Apple iTunes: https://itunes.apple.com/us/app/nuro/id1204746348
  - The Android version of the app is available on Google Play: https://play.google.com/store/apps/details?id=com.app.nprod
- Open the Nuro app.
- When prompted, sign up for a new Nuro account (if you have not done so already).
  - Once you have created a new account, you will receive a notification via email to confirm your email address.
  - Check your email (and your spam folder, just in case).
  - Enter the verification code in the Nuro app.

Why do we ask for your personal information?
Your email address is needed to protect your account and provide alerts and/or updates when necessary. Your mobile number is needed to send text alerts. Your zip code is used to identify your time zone automatically.

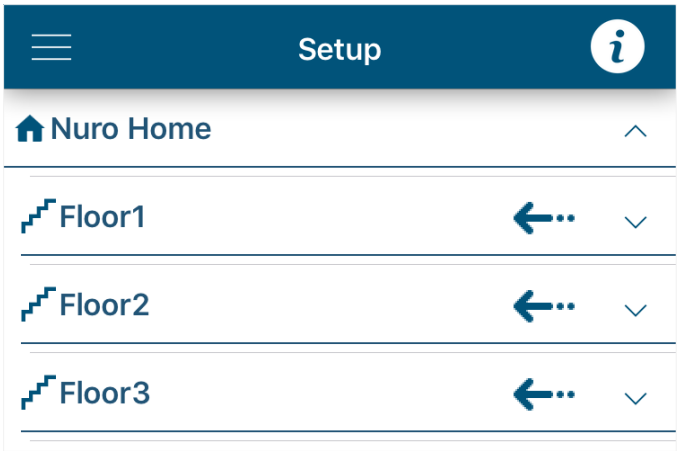
Protecting Your Information
Here at Nuro, we take the issue of personal privacy very seriously. • We do not store personally identifiable information (PII) on the cloud. • All Nuro-enabled devices and services use end-to-end encryption to protect all personal information, including passwords. • All Nuro authentication processes use public key infrastructure (PKI) certificates.

Step 2: Add a Home to Your Account

- Once you have verified your account successfully, the Nuro app will ask you to add a new home to the app.
- When prompted, please provide the following information:
    - **House Name**: Provide a simple name for your home so you can easily identify it, such as "Smith Residence" or "123 Main St."
    - **Number of Floors**: Include all floors in your home, including the basement.

Step 3: Add Rooms to Each Floor

- After you have added a new home and specified the number of floors, the app will display a list of floors in your home. In the following example, there are three floors in the "Nuro Home."



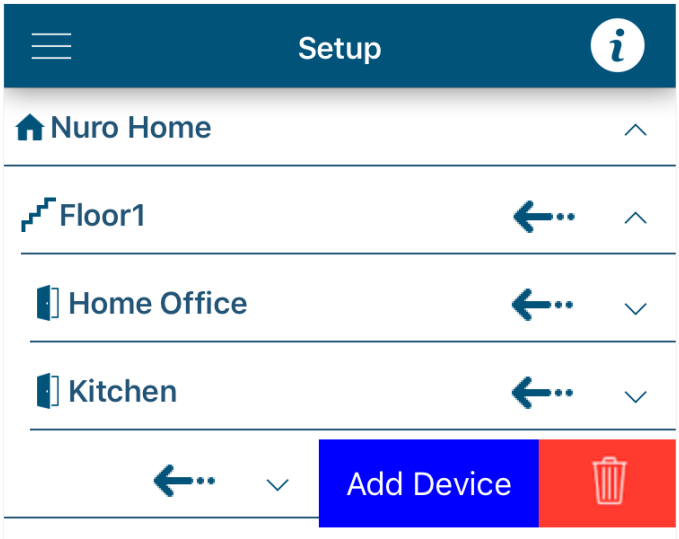
- Add rooms on each floor, as desired.
    - Decide the floor on which you'd like to add a room and swipe left (as indicated by the arrow next to the floor name).
    - Tap on the "Add Room" button.
    - Give the new room a unique name so that you can identify it easily, such as "Living Room" or "Home Office."

Step 4: Add a Device

- Adding a Nuro switch to the Nuro app involves connecting to your Wi-Fi network. Before you begin the steps below please have your Wi-Fi password ready.

Entering the Password for Your Wi-Fi Network
To maintain the safety and security of your Wi-Fi network, the process for connecting the first Nuro BriteLight to your Wi-Fi network requires leaving the Nuro app temporarily to enter your Wi-Fi password in your phone's Settings app. While this can seem confusing, following the steps below will help make it easy.

- Add a Nuro switch to the app.
    - Decide the room in which you'd like to add a device.
        - Starting with any switch in any room is OK, so long as it is within range of your Wi-Fi network.
    - Swipe left (as indicated by the arrow next to the room).
    - Tap on the "Add Device" button.



Step 5: Connect Device to Your Wi-Fi Network

- The app will display a notification with instructions for connecting a Nuro switch to your home network and adding the switch to the app. (These directions are repeated here.)
    - Press and hold the power button on the Nuro BriteLight for three seconds.
        - You will hear two beeps, followed by a single beep after three seconds.
        - The power button will flash red and blue.
    - Go to the Settings app on your phone, and then go to the screen where you can add a Wi-Fi network:
        - Select "nuroswitch-####." (Each Nuro BriteLight switch has its own unique ID code.)
        - When prompted, enter the password "**nuroswitch**" (without the quotation marks). This will connect the app to your switch.
        - Note: After entering the password, your Wi-Fi settings may display a spinning icon as it tries to connect to the Internet, and you may see a message "No Internet Connection." This is normal (as the switch itself does not provide an Internet connection). Proceed to the next step.

Step 6: Pair App with the Device

- Return to the Nuro app.
    - If the previous prompt with directions is still displayed, tap "OK" to proceed.
- Tap on the "Add Device" button again.
    - When prompted, give the new device a unique name so that you can identify it easily, such as "Living Room Ceiling" or "Home Office Light." This pairs the device with the Nuro app.
    - If prompted, enter the password for your Wi-Fi network. This will re-connect your phone to your Wi-Fi network.
- This completes the setup. The power light on the Nuro BriteLight will turn yellow for a short time to confirm that it has connected properly to your Wi-Fi network.
- Within a few minutes, the power light will turn blue. The blue light indicates that your switch has been configured properly and all advanced features are now enabled.

Step 7: Add Additional Nuro Devices

- Repeat Steps 1–6 above for each device that you would like to add to the app.
- You may add any Nuro device at any time. You do not need to add all devices at once, nor do they need to be added in any particular order.

Tip
To access the setup page again later, go to the app's main menu and select "Setup."

Beta Program Notes

As part of the Nuro Beta Program, the need to repeat the Wi-Fi connection process for every individual Nuro switch is a temporary requirement. In the future, we will be adding self-configuration capabilities to simplify this process (and remove the need for repetition).

Once these updates are made, the setup process will require Wi-Fi connection for only the first Nuro switch connected. After that, all Nuro devices will talk to each other and configure themselves automatically. All that you will need to do is assign individual switches to each room in the app, as desired.

Using the Switch's Buttons

As mentioned above, the Nuro BriteLight will work as a standard dimmer switch right out of the box. No additional setup or programming is required.

However, pairing the switch with the Nuro app will activate several advanced features, some of which can be accessed by the buttons on the switch.

Basic Features: Dimming and On/Off

When the switch is paired with the Nuro app, the rocker button and power button will continue to operate like a standard dimmer switch:

- **Power On/Off**: Tapping the power button turns the light on at 100% or off completely.
- **Dimmer On/Off**: Tapping the "up" rocker button will turn the light on at the previous dim level. Tapping the "down" rocker button will turn the light off completely.
- **Dimming**: Pressing and holding the rocker button (up or down) will adjust the dim level.

Extra Button Features

Once the switch is paired with the Nuro app, the left button and right button on the switch give you access to Sleep Mode and to the built-in night-light.

When in Sleep Mode, the Nuro BriteLight will not turn on the lights automatically, even if it detects any activity in the room. This mode is similar to Manual Mode, except that Sleep Mode does not return to Auto Mode after a period of inactivity.

Entering Sleep Mode (Right Button)

- To turn on Sleep Mode, tap the right button.
    - You should hear one beep.
    - The power button will turn white and pulse for 30 seconds.
    - The main light (controlled by the switch) will gradually dim and then turn off completely after 30 seconds.

Setting the Night-Light (Left Button)

- To adjust the night-light, the switch must be in Sleep Mode.
- There are three states for the night-light on the switch:
    1. Both the power button and the lights alongside rocker are on.
    2. The power button is on at a very dim level.
    3. Both the power button and the lights alongside rocker are completely off.

- To toggle among these three states, tap the left button.
- The first time the switch enters Sleep Mode, the night-light will enter its default state (the second state), with a dim power button.
- The next time the switch enters Sleep Mode, the switch will remember the previous state of the night-light (when it exited Sleep Mode), so the night-light will remain at your preferred state.

Exiting Sleep Mode

- To exit Sleep Mode and return to Auto Mode, tap either the rocker button or power button. The power button will turn blue, indicating that the switch is in Auto Mode.

Sensing and Self-Learning
The room activity sensing and self-learning capabilities of the Nuro BriteLight will continue to operate, whether in Auto Mode or Sleep Mode.

Optimizing the Dimming Capability

Depending on the type of light bulb you're using, different types of bulbs can dim in different ways (or not at all). To help ensure that your lights always dim properly, the Nuro BriteLight can detect and safely control almost any type of bulb (LED, incandescent, or CFL).

Simply follow this one-step procedure, and the Nuro BriteLight will automatically identify the type of bulb you're using and adjust accordingly:

- Simultaneously tap BOTH the left button and the right button (on either side of the power button). You should hear two beeps, and the power button will flash red and amber while the Nuro BriteLight detects the type of bulb.

Once the blinking stops, the Nuro BriteLight will automatically adjust the dimming curve to match the light bulb so that your lights will always dim smoothly.

Using the Nuro App

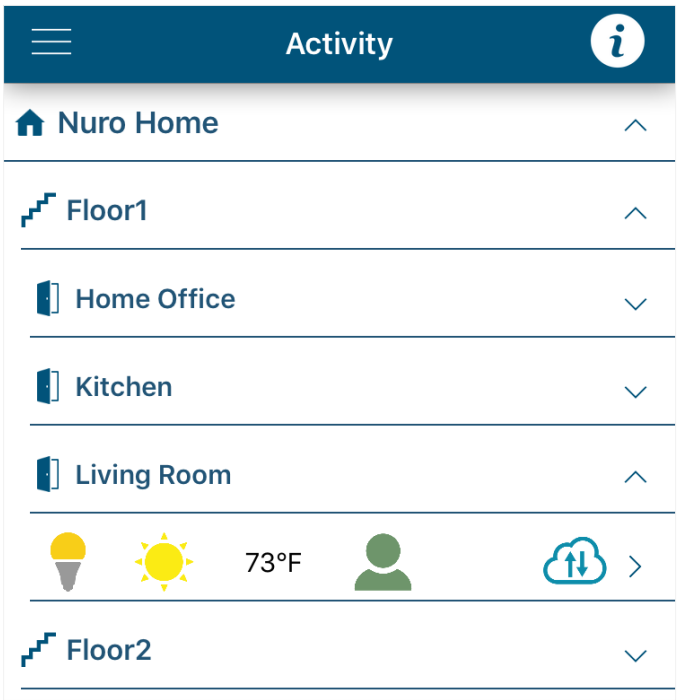
Pairing the Nuro BriteLight with Nuro app will provide access to the following advanced features on the app:

- Viewing the status of the switch and various conditions in your room, including:
    - Recent activity
    - Ambient light
    - Power usage
    - Room temperature
- Controlling your lights (locally and remotely)

Viewing Status

The Nuro app makes it easy to see what's happening in your room in a single glance, as shown in the main "Activity" window.

- Expanding a floor will display all rooms on that floor.
- Expanding a room will display all devices in that room.
- Beneath each room is a summary of the status of the switch and room conditions.



Status Indicators

The following chart summarizes the various symbols used in the app:

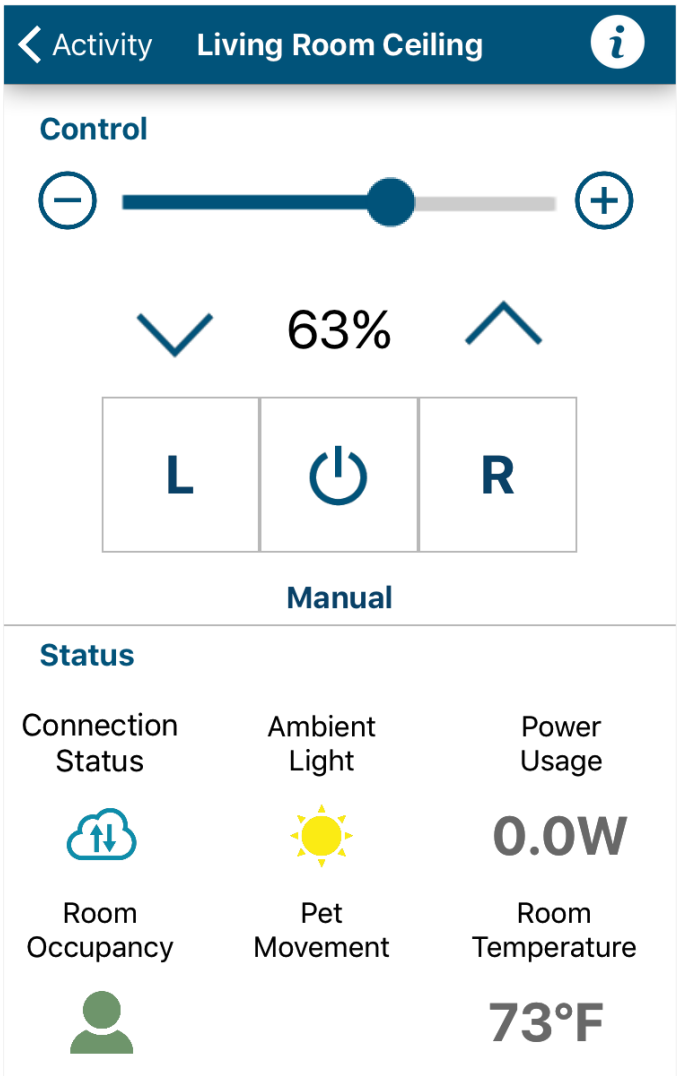
Lighting	full	partial	dim	off
Ambient Light	bright	moderate	dim	dark
Occupancy	now	recent	none	
Pet Activity	now	recent	none	
Internet	connected	waiting	offline	

Controlling Your Light

The Nuro app lets you control every Nuro BriteLight switch in your home, whether from across the room or across the country.

To access these lighting controls:

- Tap on any switch in the main "Activity" window.
- The lighting controls are located on the top half of the screen.
- The bottom half of the screen displays the various conditions in the room.



Local and Remote Access
To access your Nuro BriteLight from outside your home, you will need a Wi-Fi network and connection to the Internet. Within your home, the Nuro app on your phone will be able to control your lights regardless of whether there is an Internet connection.

Adjusting Your Preferences

The Nuro BriteLight is designed to automate as much of your lighting needs as possible. For example, it can turn on the lights when it detects activity in the room and turn off the lights when people leave the room. It will even adjust the dimming level of the lights based on activity, ambient light, and time of day.

Even with all these automated capabilities, there may be times when you'd like a little more or a little less light. To "teach" your Nuro BriteLight what you like, simply adjust the brightness to your liking. Each switch will record your preferences, and after only 2-3 days, the switch will automatically turn on the lights to your preferred level.

As the Nuro BriteLight learns your preferences and patterns, you will need to touch the switch less and less. Eventually, you may never need to touch the light switch again.

Dim Levels

The Nuro BriteLight has a set of predetermined dimming levels for adjusting the brightness of the light it controls. Here are a few examples of the switch's default settings:

- ***Bright Room***
  If the sun is shining brightly into the room or if there is a great amount of ambient light, the switch may not turn on your lights.
- ***Early Evening***
  As the ambient light decreases in the evening, the switch will automatically increase the brightness of the lights.
- ***Late Night***
  If you wake up at 2:00 in the morning, the switch knows that it's the middle of the night and will NOT turn on at a bright level. The lights will come on at only a dim level, making it easy on your eyes.

At any time, if the default levels are too dim or too bright for you, simply adjust the levels to your liking (using either the switch or the app). The switch will learn your preferences over time (usually only a couple of days), so the next time there is activity in the room at that time of day, the switch will turn on the lights to your preferred level.

Troubleshooting

Power Button Status

Power Button	*Status*
Green	Installation OK; standard dimmer mode
Blue	Internet OK; Auto Mode
White	Internet OK; Manual Mode
Yellow	Internet OK, but no connection to Nuro
Red	Hardware error

FCC Statement
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Reorient or relocate the receiving antenna.
Reorient or relocate the receiving antenna.
Consult the dealer or an experienced radio/TV technician for help important announcement

Important Note:

Radiation Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.