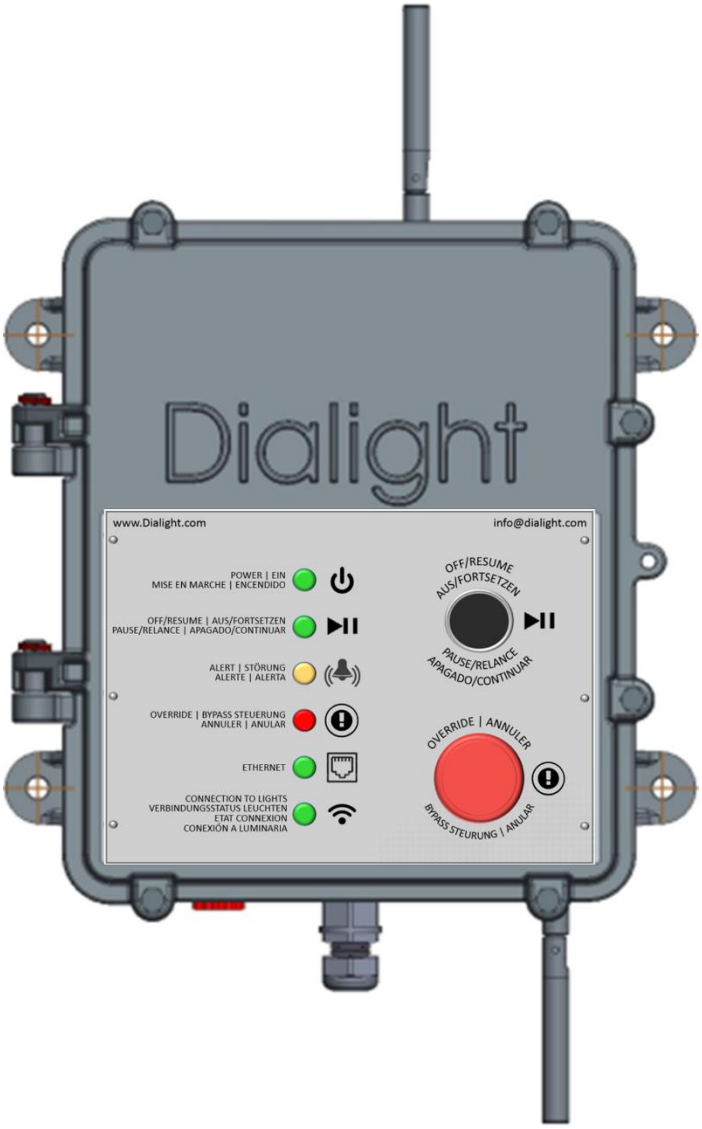
IntelliLED™

Gateway



User Manual

SAVE THESE INSTRUCTIONS!!

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- Refer to operating temperature ratings of this device before installing.
- DO NOT let the Gateway touch hot surfaces.
- DO NOT mount near gas or electric heaters
- Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause unsafe conditions.
- DO NOT use this equipment for other than intended use.
- DO take pictures of the installation and mounting for future reference.
- Contact your local Sales representative or Dialight when necessary
- The installation and maintenance must be carried out by authorized personnel.
- Repairs and Installation must only be carried out by a qualified electrician.
- Only genuine or authorized Dialight replacement parts must be used when unforeseen repairs are required.
- Observe the national safety rules and regulations during installation!
- Mounting in extreme heat locations should be avoided. Failure to do so could void all warranties!
- No alterations are allowed without the written agreement from Dialight Corp. Alterations other than written in this manual will void all warranties.

Table of Contents

Introduction

This manual is for orientation and a quick guide to the installation process and configuration of the Control and Monitoring gateway.

It applies to the following model numbers:
GAUW24AG WIFI IntelliLED™ GATEWAY ASSEMBLY

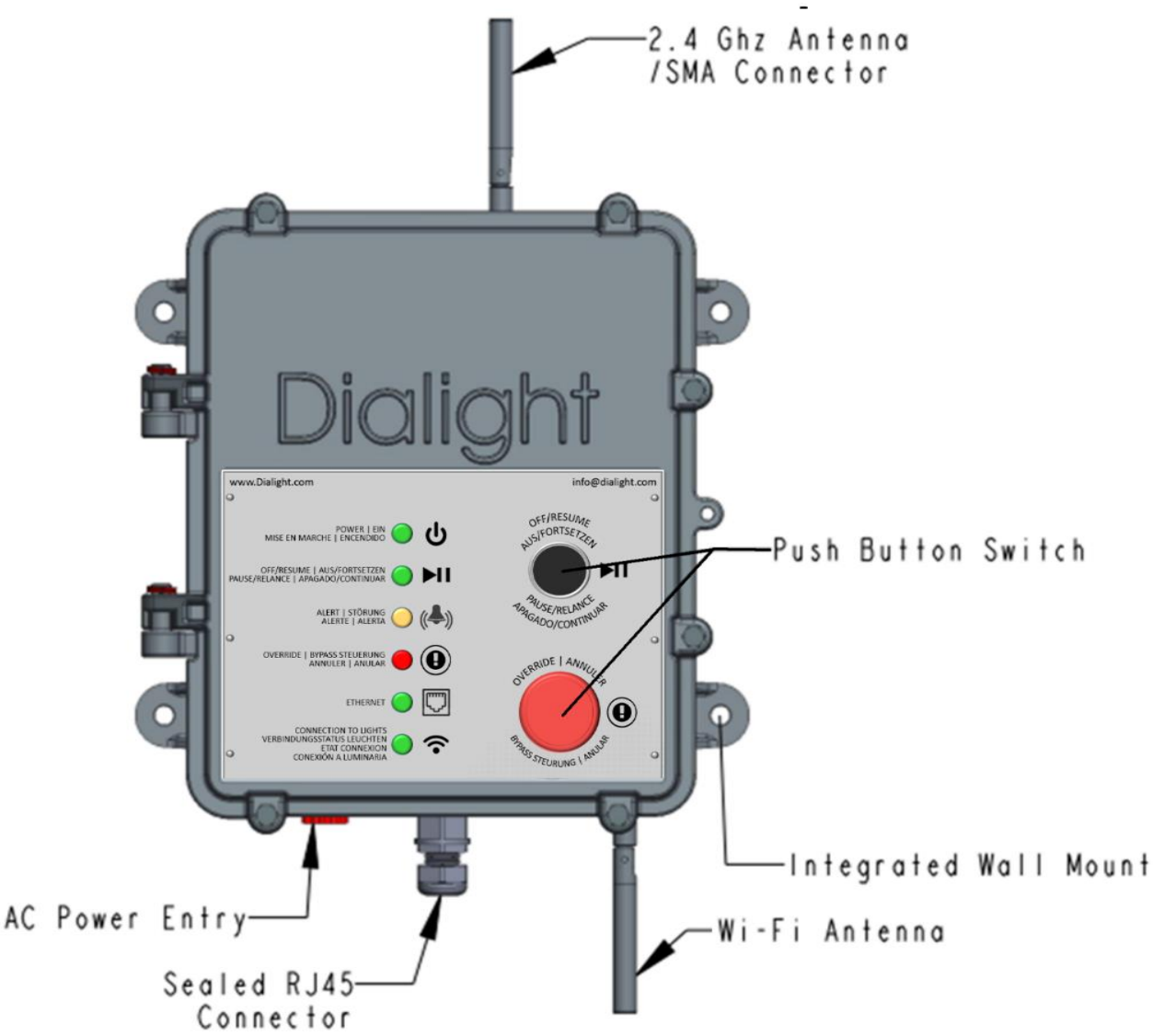
Included in this manual:
System overview
System configuration instructions
User Interface overview

Note:
In order to use WiFi functionality, a Wi-Fi enabled device must be used.

System Specifications

Certification	UL 916, CSA C22.2 No.205, FCC, Canada IC, NEMA 4x, IP66, EN 55032, EN 55016-2-1, EN 55016-2-3, EN 61000-3-2, EN 61000-3-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11
AC Operating Voltage	100-277 VAC, 50/60Hz
Operating Temperature	-40C to +65C
Ethernet	10/100/Gb Ethernet
Dimensions (WxDxH)	13.09 x 15 x 21.214 | 323.5mm x 382mm x 538.84mm
Dialight Part #	GAUW24AG
Ratings	Install only dry locations, IP66
Quick Disconnect	This device must be connected to a quick disconnect device, such as a circuit breaker

IntelliLED™ Gateway Visual Overview

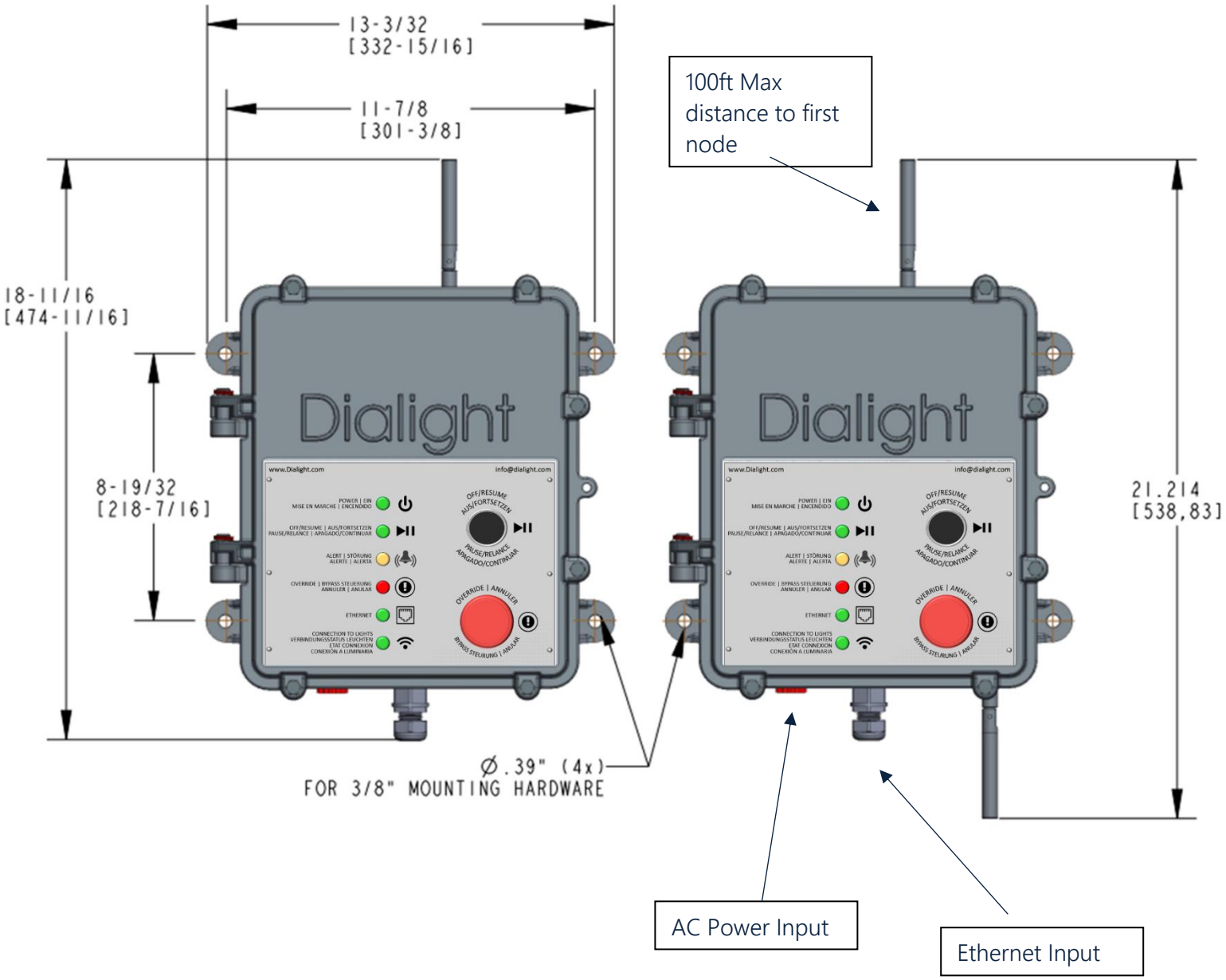


In the box

1x – IntelliLED™ Gateway
1x – Sealed RJ45 network connector assembly
1x – Antenna
1x – Antenna (Wi-Fi Gateway only)

Note: Ac Power entry is ¾" (19.05 mm) NPT threaded

Mounting & Placement



Additional Mounting Considerations

- For optimal performance gateway must have direct line of sight (LoS) to at least one light fixture to be controlled.
- Do not mount gateway behind walls or behind/in metal cages. This will diminish the wireless signal

- Ensure that the mounting bolts are securely fastened to a solid backing.

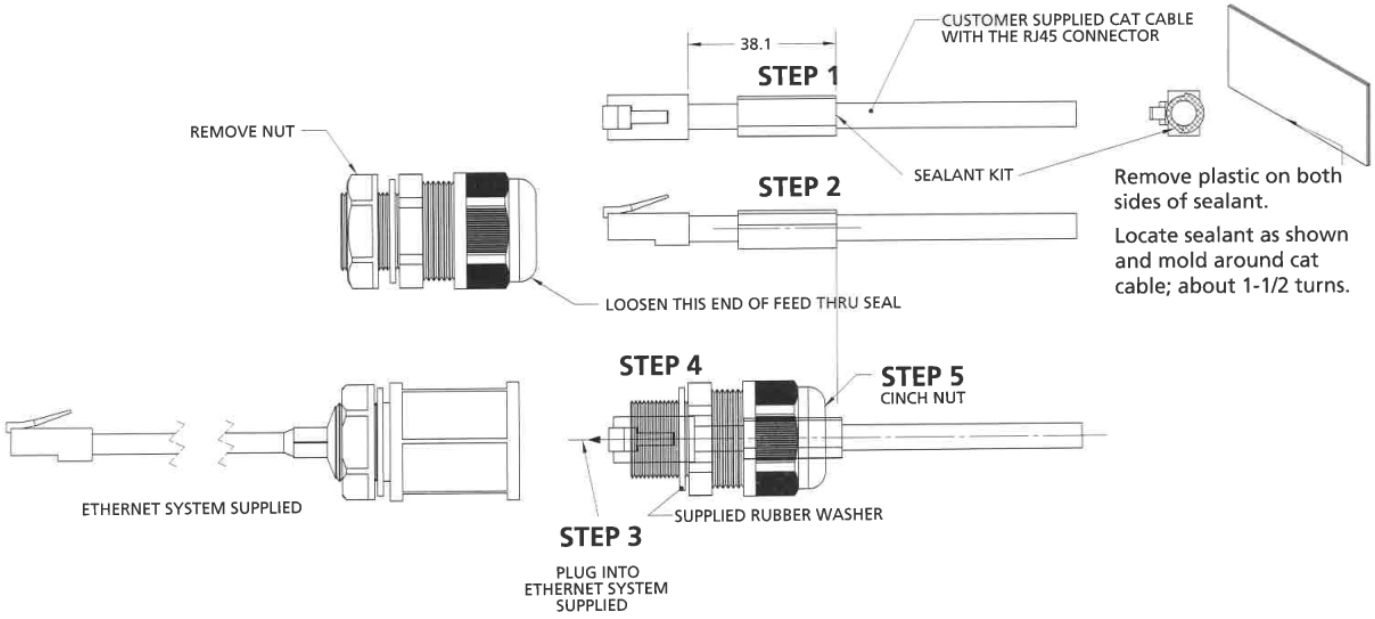
Powering On the IntelliLED™ Gateway for the First Time

The IntelliLED™ Gateway does not have an external power switch; it will automatically turn on when power is connected.

- Apply AC power to terminal block.
- AC supply requirements, 110-277VAC, 50/60Hz, capable of supplying 1 Amp.
- A minimum of 14 AWG(2.08mm^2) cable is to be used. The terminal block can accept up to 8 AWG(10.55mm^2) cable.
- Once power has been applied, wait for the gateway to start up. (approximately 1 minute)
- Once power LED turns ON you can control your gateway via Wi-Fi or Ethernet connection.

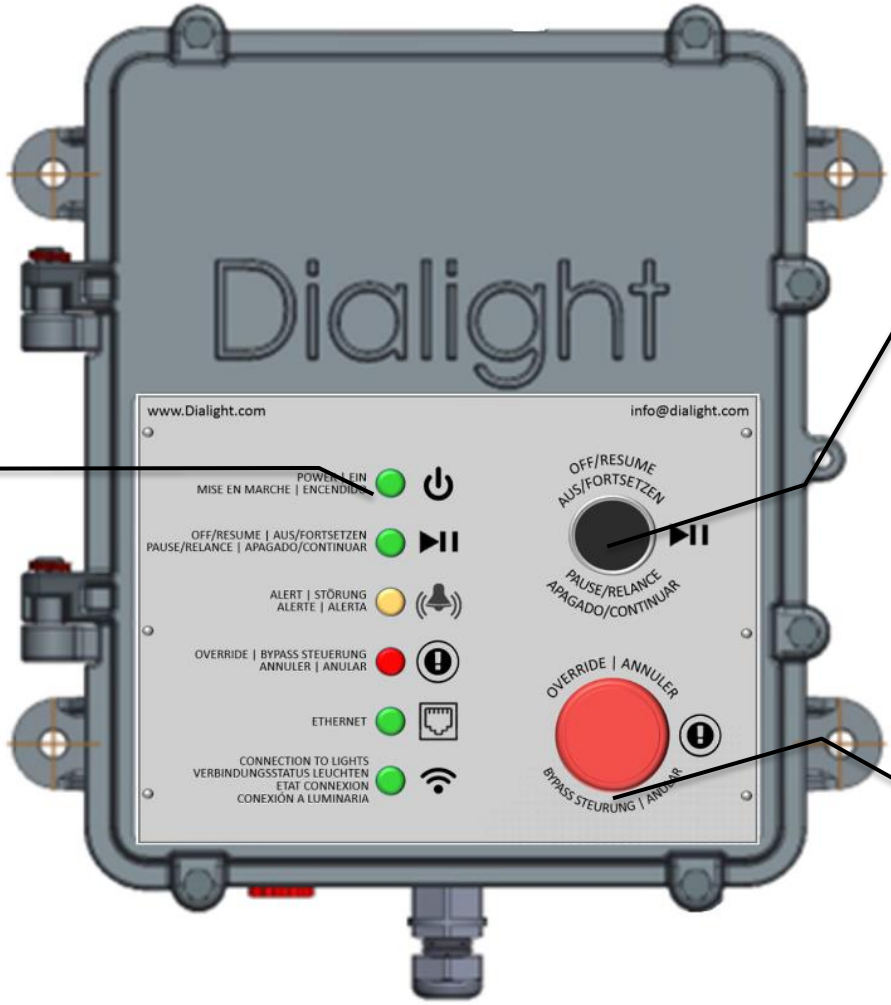
Installation Instruction of RJ45

1. Apply sealant
2. Slide cable thru fitting
3. Mate plug and jack inside Ethernet port
4. Fully seat supplied feed thru to Ethernet port
5. Tighten cinch nut only if sealant is in proper location



IntelliLED™ Gateway Interface Features

Gateway LED Interface gives you status of controls enabled LED fixture system performance.



LEDs provide notifications for the current state of Gatewav.

Off/Resume Switch – This button allows you to manually resume the schedule or turn OFF the connected lights. This button must be held for 5 seconds to activate

Override – This button allows you to manually override any system schedules by quickly turning on your lighting network to 100% capacity . The red OVERRIDE LED gives status notification.

Note: Once activated, both buttons will override the regular operation of the lighting system

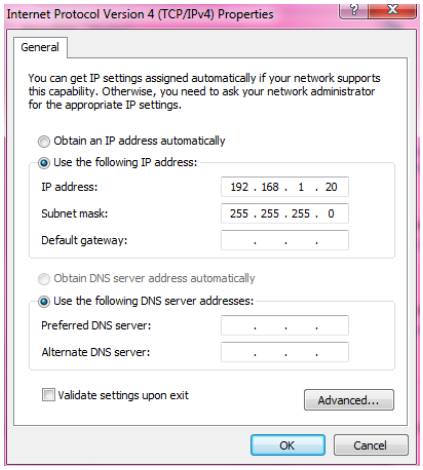
IntelliLED™ Gateway Web Application

Stand-Alone Gateway User Interface Web Application Login

Supported Browsers:

- Dialight supports browser interaction with the control system using the following browsers:
  - Google Chrome v. 42 or newer
  - Mozilla Firefox v. 40 or newer

NOTE: Using Internet Explorer may lead to performance/visual issues



Launching the UI though LAN wired connection:

- When using a wired LAN, you must set up the IP address of your Laptop/Desktop to 192.168.1.20 and its subnet mask to 255.255.255.0 using Windows LAN configuration utility as shown in Figure below.
- Once configured, open the Google Chrome Browser and type into its address bar: 192.168.1.150 and then hit ENTER.

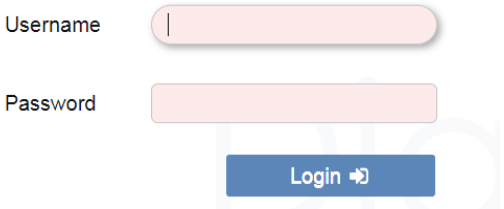
Launching the UI though Wi-Fi connection:

- If you choose to use WIFI to access the Gateway, then make sure to enable the Wi-Fi interface on your Laptop/Desktop. Join the Dialight_GW_XXXX network with the password DialightGW. Each Gateway will have a unique set of numbers/letters for the XXXX portion of the Wi-Fi network name.
- Open one of the supported browsers on your Laptop/Desktop machine and using the address bar browse to address 10.10.0.1.

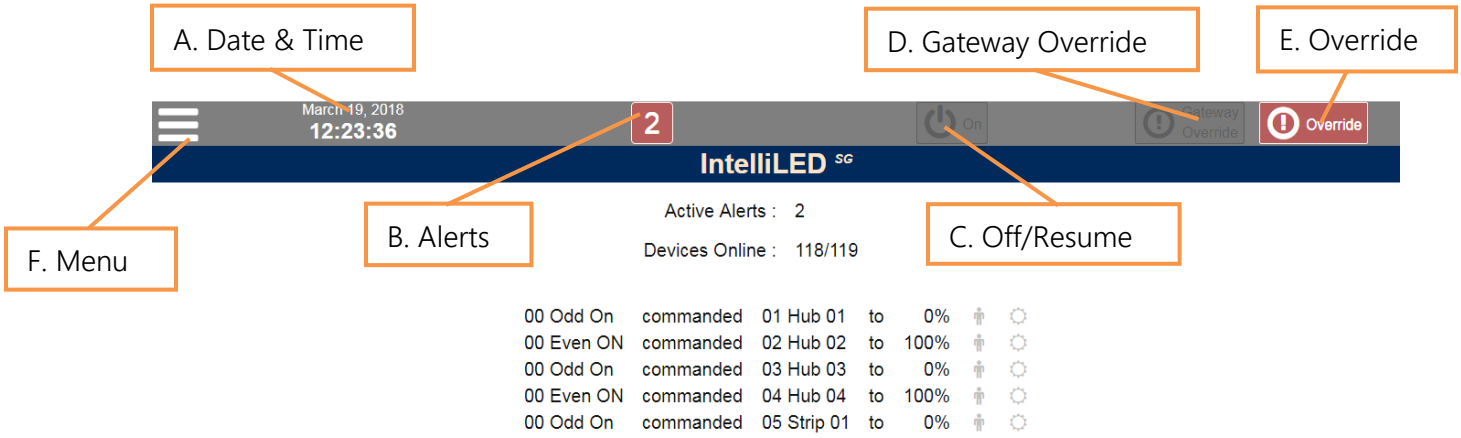
Login Screen

IntelliLED
for
Gateway

- Enter default *Username*: **admin**
- Enter default *Password*: **password**
- Click Login
- Note: Username and Password are case sensitive



Home Page



Info Bar Detail

A. Date & Time

- Server Date 

    - Date displayed by Month, Day, Year
- Server Time (24 Hour time) 

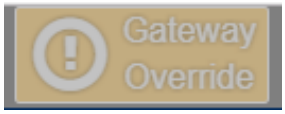
    - Time displayed by Hour, Minute, Second
- Auto-Logout (60 Minute countdown)
    - Hover cursor over time, tooltip displays countdown time.
    - The system automatically logs the user out after 60 minutes of inactivity.

B. Unacknowledged Alerts indicator: 

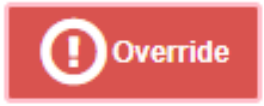
- Displays number of unacknowledged alerts
- Click on Alert icon- Manage Alerts page opens

C. Off/Resume 

- Turns off lights for entire system!
- All lighting devices go to 0% brightness
- Off Icon will turn yellow while in off mode
- Click on icon to turn off lights and to resume previous lighting state
- All lighting devices return to their previous state after deactivating button.

D. Gateway Override (G.O) 

- Displays the status of the Override button on the gateway
- The Gateway Override (G.O.) will turn yellow and blink when the Override button is pressed on the gateway

E. Override 

- Turns Override on for entire system!
- All lighting devices go to 100% brightness
- Override Icon will flash while in override mode
- Click on icon to enable or disable override
- All lighting devices return to their previous state when override is turned off

Note: Override will override all functions of the gateway while active (scheduling, manual control, off/resume, etc.). To resume these functions, the button must be turned off.

F. Menu Icon

Note - The Menu Icon is the main method to access all of the pages in the UI. 

Menu Options

This section of the manual will review the features found on each page of the user interface.

Home:

- Selecting Home icon returns user to homepage

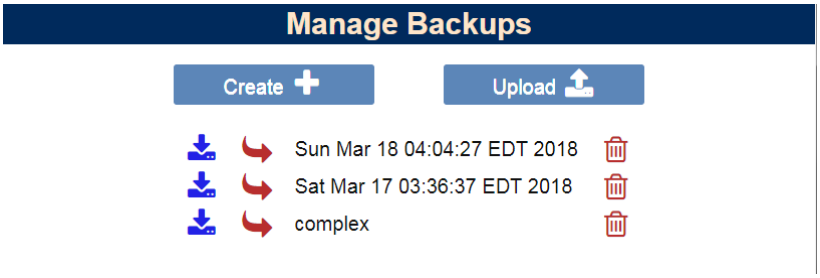
About:

- Selecting About icon displays an information page:

Logout:

- Selecting Logout locks GUI
- User must log back into system

Backup:



- The Create button creates a local backup that is stored in gateway memory.

- The Upload button the user to upload a saved backup to the gateway

- The Download button allows the user to save a backup to their computer

- The Apply button allows the user to save a backup to their computer.

- The Delete button removes a backup from the gateway memory

Best Practice: Users should take a backup after any major configuration change, these backups should downloaded and stored in secure location.

Note: The name of a backup cannot contain spaces or special characters.

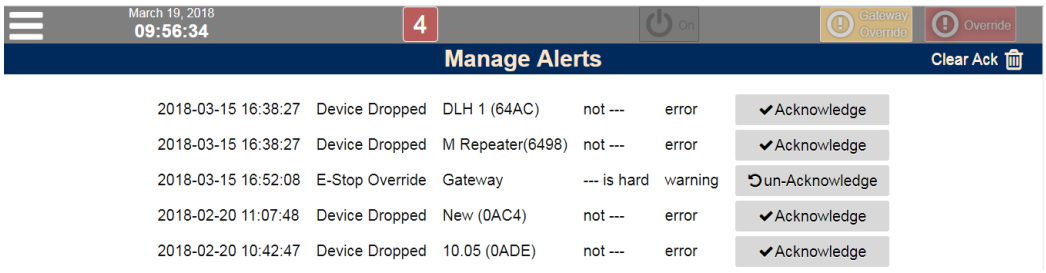
Manage

The manage section contains links to pages having to do with managing various portions of the system including groups, alerts, devices etc.

Manage Alerts

- Select Alerts icon to open Manage Alerts page
- Date and time event occurred
- Alert description
- Name of device
- Connection status
- Severity level of the alert

- Clear, Acknowledge or Un-Acknowledge Alert(s)
- Acknowledge All Alerts will acknowledge all present alerts
- Acknowledging alerts, clears alert from total number of alerts displayed in the top menu.
- Acknowledged alerts will remain on alerts page.
- Clear Ack clears all acknowledged alerts



Note: Clearing acknowledged alerts cannot be undone

Group Control

Group Override Icon 

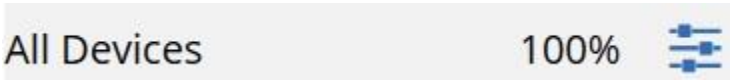
- Selecting Group icon allows user to manually control light level of lighting devices in that group.
- Selecting Group icon a second time disables group control.

Note: Groups must be created from Manage Groups screen.
Note: Clicking on this icon enables and disabled Group Manual Control.

- User defined groups
  - Groups are built to meet user demands.

- All Devices

All devices is a special group that automatically has all devices associated with it. All lights in the system may be controlled by manually controlling the group named "All Devices".

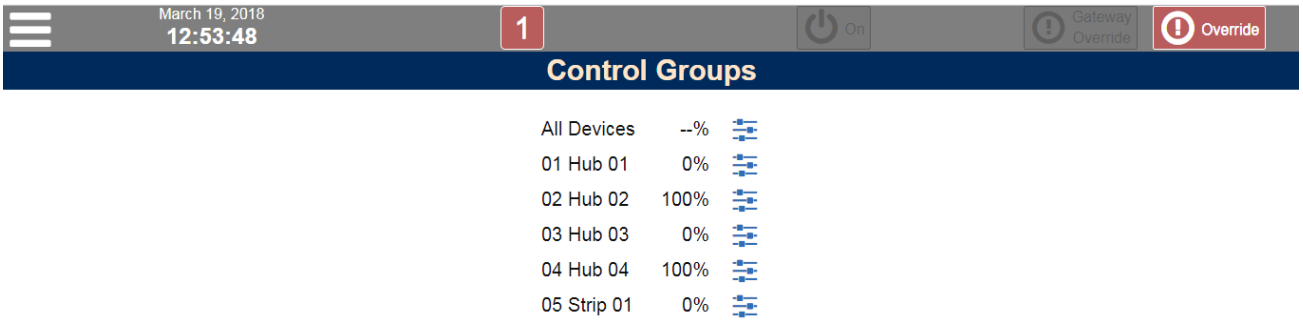


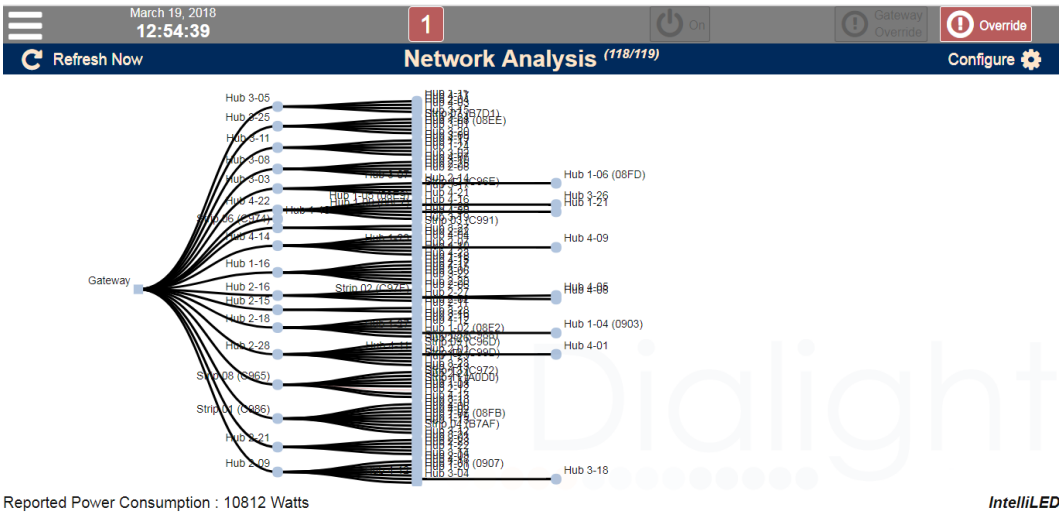
- Select ALL Devices Group icon

- User now can control all devices manually using slide bar.
- Select All Devices icon a second time to disable group control.

Note: this slider will override all lights, regardless of what group they belong to. The All Devices slider will take priority over all other groups

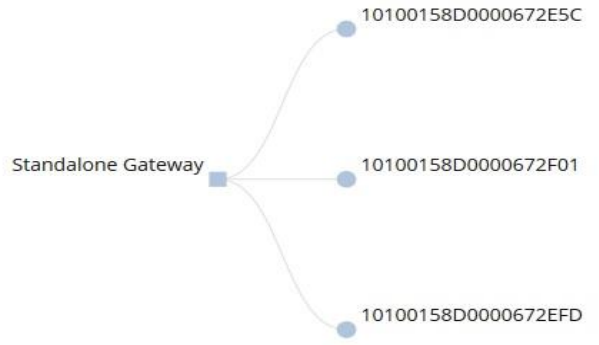
This screen is ideal for overriding scheduled dim values on single groups as well as the entire lighting system.





The Net Analysis page shows a graphical representation of the tree formed by the wireless mesh network that is used to control the lights. This is useful in understanding the network connectivity and general health of the wireless network. This is helpful for troubleshooting issues on site.

The figure below shows the Gateway on the left, shown as a square, and devices on the right, shown as circles. The device names or UID are displayed next to their icon. Clicking on Device names allows easy identification and naming.

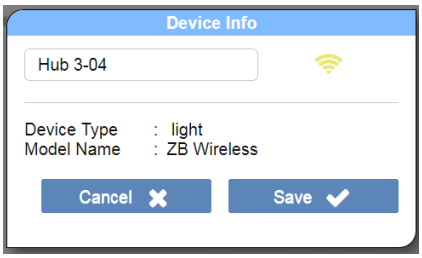


Hovering the mouse pointer over the Gateway name displays:

- Name: Standalone Gateway
- Device_Type: gateway
- Model_Name: High Bay Gateway
- UID: GW:xx:xx:xx:xx:xx:xx Where the xx values represent a unique set id number for each gateway.

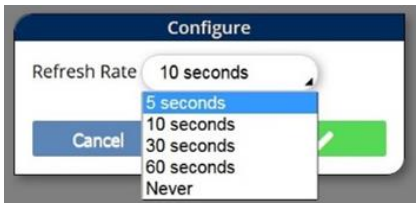
Clicking on device name:

- Device Model Popup
- Device Type and Model Name (auto-populated)
- User can Name device
- User can Identify device



- Configure Button 

    - Select the configure icon to set the refresh rate of the display.



Configure

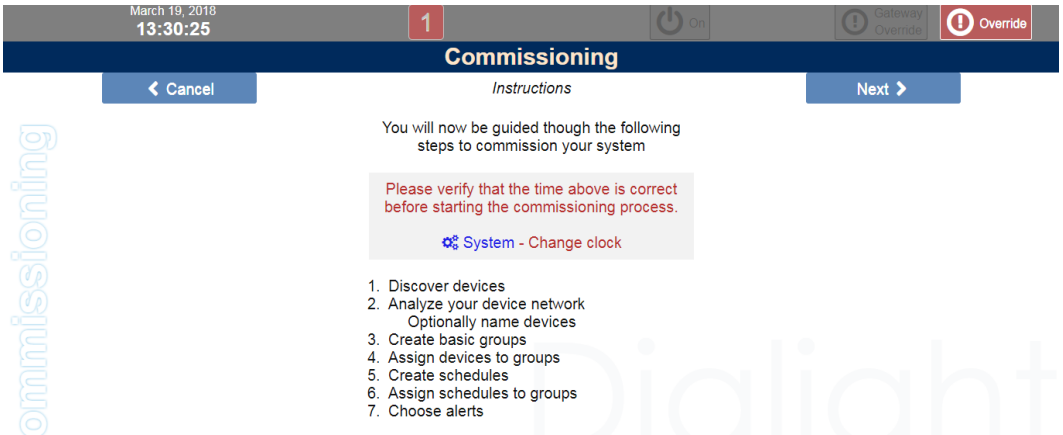
The Configure category of GUI pages is concerned with providing tools that help to set up and commission the lighting system.

Step-by-Step Commissioning Wizard

A Wizard has been provided to help walk you through the common steps involved in commissioning the lighting system. From the commission menu option you will be taken through a series of steps that will get the lighting system up and running.

- Select Commission icon

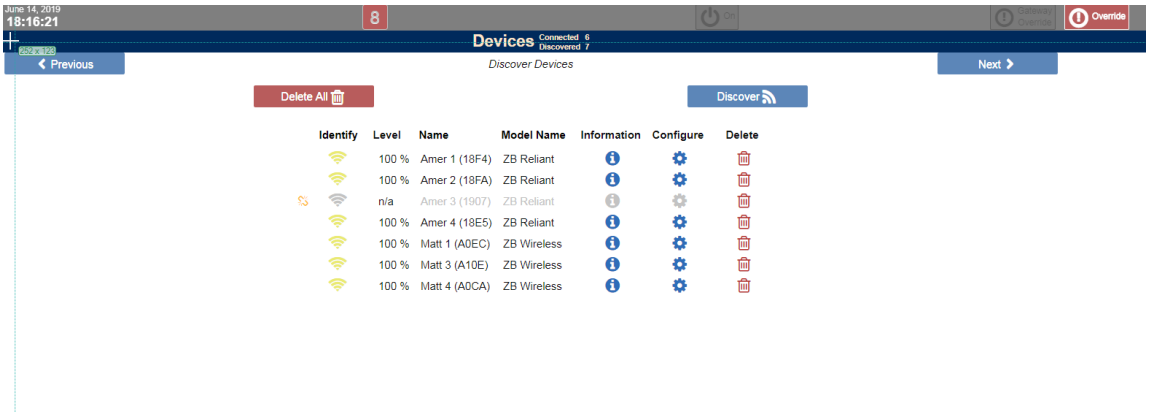
Note: All nodes (lights and sensors) should be installed and powered on at this point)



NOTE: Make sure to set the time on the system before beginning the commissioning, note that the system will reboot and you will be logged out.

- To start commissioning *Select Next* 

Discover your Devices



The Commissioning Wizard with first take you to the Device Discovery Page to enable the system to discover devices.

- Select discover icon 

- Discover icon flashes while in discover mode
- Select Discover icon a second time to disable discover mode
- Discover will time-out by itself after being on for 15 minutes

Note: Each gateway supports up to 120 devices. Once the gateway has reached 120 device discovery will automatically turn off. The gateway supports a maximum of 5 Daylight harvesting sensors (DLH).

If you need to clear the system you may delete all devices.

Delete All Button

- *Delete All* icon 

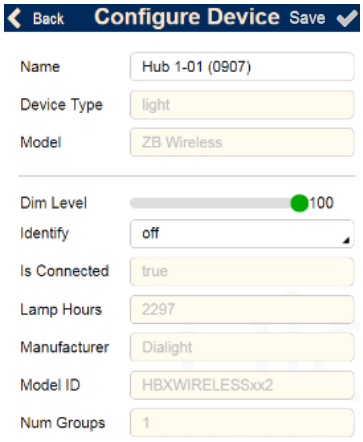
- User will Delete all devices once Delete is confirmed

Identify Icon

- Select Identify icon
- Allows lighting devices to be identified
- Lighting device will flash on and off
- Select identify icon a second time to turn identify off

Note: use this functionality to determine the location of each fixture within your facility. Name them based on location for easy grouping/control

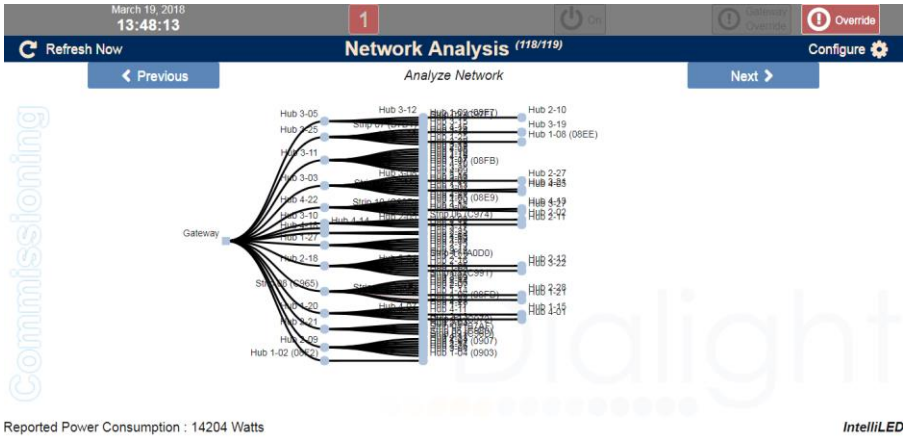
Configure and Information Icons 



- Select Back icon to return to devices page. 
- Select Next Icon to go to Network Analysis page. 

Check Network Health on Network Analysis Page

The Commissioning Wizard then takes you to the Network Analysis Page so you can review the network topology. Clicking on the UID tags will allow you an efficient method for identifying and naming devices.

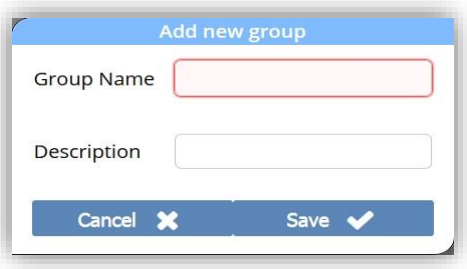


- Select Next Icon to go to the Configure Groups page. 

Create Groups on the Configure Groups Page

The Commissioning Wizard next takes you to the Configure Groups Page to help create groups for lighting control commands.

Click to add a new group:



- Assign devices to groups
- Click on device names to select them and add them to the group. Selected devices are highlighted in green.

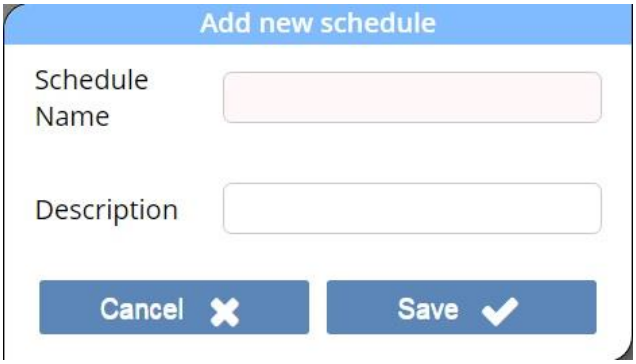
- Select Save when you're finished. 

- Select Next 

Create Schedules to Control Your New Groups

- Select Add schedules icon 

- Create schedule name
- Create schedule description
- Select save or cancel



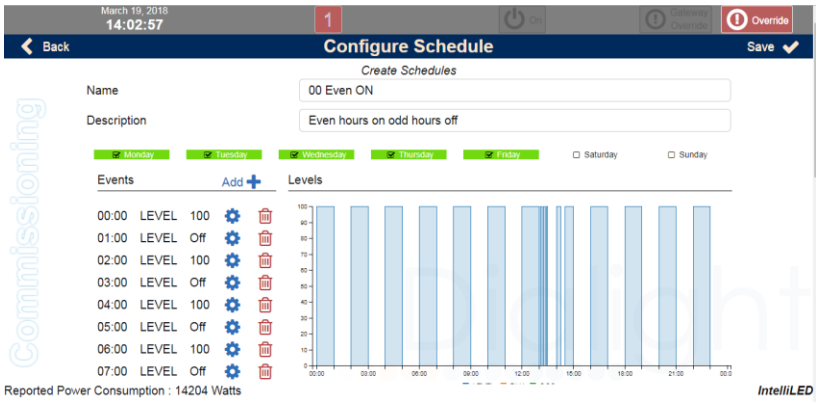
- Click on Configure icon 

The configure icon provides a collection of features used to set up and configure your new schedule.

- Select days for schedule to run
  - Click on day of week to select

Schedules consist of a collection of events which define the time at which the event action is executed. Once you have created and named your new schedule the next step is to add events to the schedule.

1. Click on add event button to add a schedule event: 

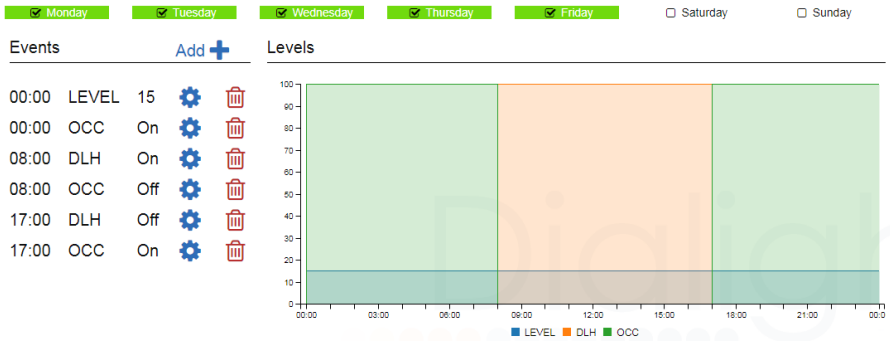


- Select event time – this is the time that the event will be executed.
- Select type of event – this determines what kind of event it is and what action it will perform.
    - Light level
    - Occupancy Sensor
    - Daylight Harvesting
- Select Value – this is a value associated with the event, such as the level of a dimmer event. Some typical event values are:
    - On
    - Off
    - 10% to 100%
- Click delete icon to remove event. 

Levels Graph

The Levels Graph section of the Manage Schedules Page shows a graphical representation of the schedule that you are working on.

- Click on Level, DLH, OCC beneath levels graph
- Graph will populate with scheduled events
- Hovering over the levels graph will also display event settings



Add Schedules to Groups

The next page of the Commissioning Wizard provides tools to allow you to add one of more schedules to the group that was created in the previous step.

- Select Add schedules to this group icon. 

- Click on the schedules you would like to include such that the selected schedules are checked and turn green.

- Click on Save to save your schedule configuration.

Click Next 

Configure Active Alerts

The next page offers an easy way to enable alerts for the system. Click to turn on alert reporting for the associated type.

- Click on alert to select
    - Device Dropped
    - Device temperature
    - Gateway temperature
    - Low Battery

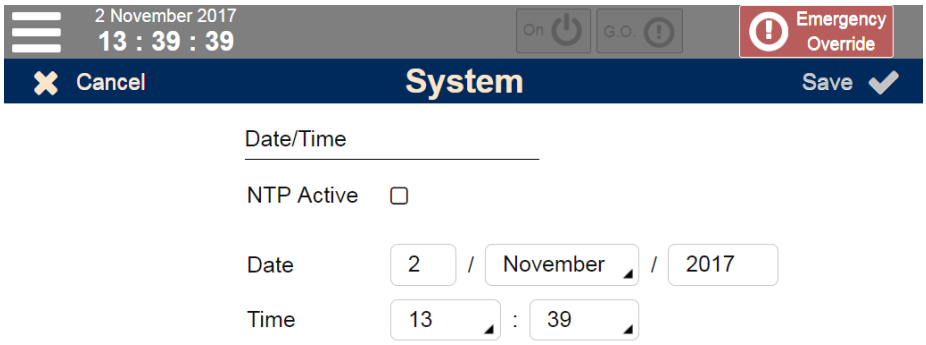
*Note: Occupancy Sensor Alert can take up to 24 hr to report

This concludes the Commissioning Wizard.

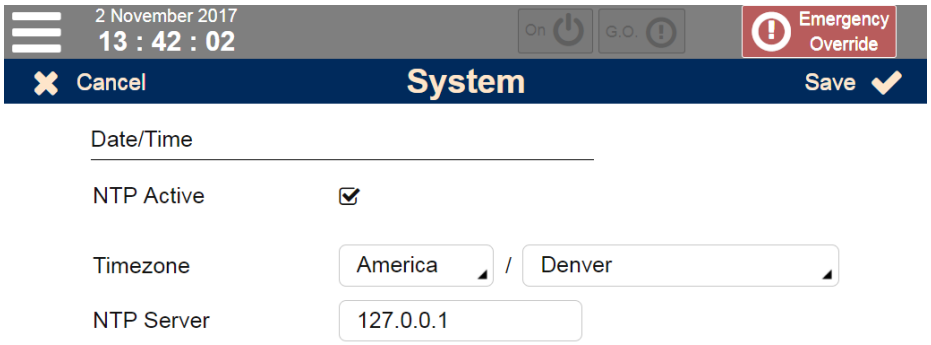
Note: once your system is commissioned, you are free to make changes to the system without having to re-commission. This can be done easily by using the menu options under the 'Configure' section

System

The Configure System page provides an interface that is used to configure system parameters. Currently this includes configuring the time and date settings.



- Setting the system time
  - Enter date
  - Enter time (24 Hour Time)
  - Select Save
  - You will be automatically logged out of the server
  - Log back into light controller and verify date and time are correct



- Enable NTP Network Time
  - Enable NTP (Network Time Protocol) checkbox
  - Set time zone (Area and City)
  - Set NTP server (i.e. pool.ntp.org)
  - Note that NTP requires a valid NTP server accessible on the network to work.

Note - When NTP is not enabled, the system defaults to the UTC time zone. If you would like to specify your local time zone to enable automatic time changes for daylight savings time, you need to set the date and time to the correct time for UTC. Then enable NTP and set your local time zone and the server address to 127.0.0.1 (local loopback address). This will allow the system to follow the daylight savings time changes for your local time zone, but NTP will not make any automatic changes to the clock.

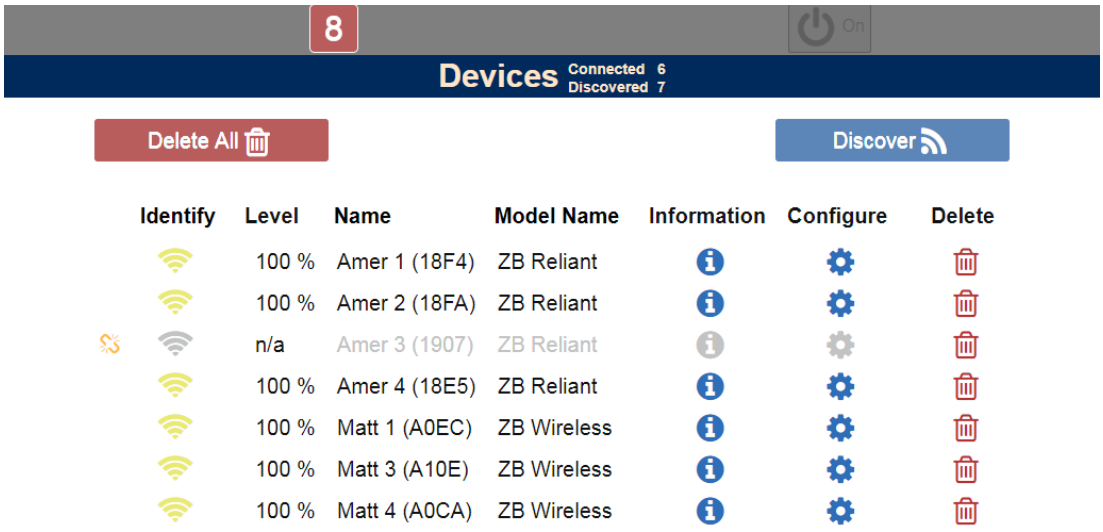
Alerts

The alerting mechanism available in Stand Alone mode offers options for enabling 4 kinds of alerts:

- Device Dropped
- Gateway Override active
- Gateway OFF/Resume active
- WOS Low Battery

Configure Devices

The Configure Devices page shows a list containing all of the devices that are currently discovered on the system.



- The "Devices (6/7)" icon at the top of the screen indicates that 6 devices of 7 discovered are currently online and responding.

- The "Discover" button turns on device discovery, as described in the Commissioning portion of this manual. 

- The "Delete All" button will delete all devices from the system, after a confirmation dialog is acknowledged. 

- Device information is available on the Device Information page which is available by thicking on the 'I' icon associated with each device

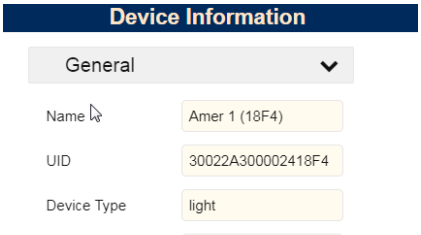
- Device configuration is available on the Device configure page which is available by clicking on the gear icon associated with each device.

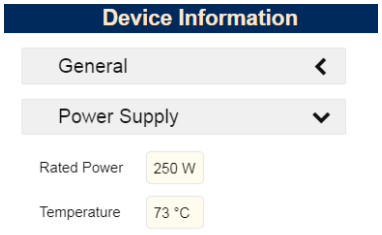
Configure Device and Information Page

The Configure Device and Information pages display all available information for the associated device. This information will vary depending on what kind of device is being viewed.

Parameter Descriptions

- Name – The user specified name of this device.
- Device Type – The type of device being displayed.
- Model – The model number of the device being displayed.
- Dim Level – A local control that allows the light to be temporarily set to a manual level for the purpose of testing. The level will return to the proper scheduled level for the device in its group once the Configure Device page is exited.
- Identify – Turning Identify on will cause the light to flash at ~ 1 flash per second. This is useful in identifying which fixture, out of a large installation of fixtures, is being currently displayed.
- Is Connected – This shows if the light is currently active on the control network.
- Lamp Hours – The total number of hours the fixture has been on and outputting light.
- Num Groups – This is the maximum number of groups that the device may be a part of. Some devices have limitations and may only be able to be added to a particular number of groups.
- RF Parent – This field displays the UID of the device that is this device's parent in the network tree. See the Net Analysis page in this manual for additional information on the structure of the wireless network.
- RF Strength – This is a measure of the received signal strength for this device in the network.
- Software Version – This is the currently installed firmware revision running on the device.
- UID – This is a unique identifier string for the device. Each device in the lighting system has a unique UID which is used to positively identify it.
- LED Driver Status – Current status of LED Driver
- Rated Power – Power rating of the connected power supply
- Temperature – reading of power supply temperature

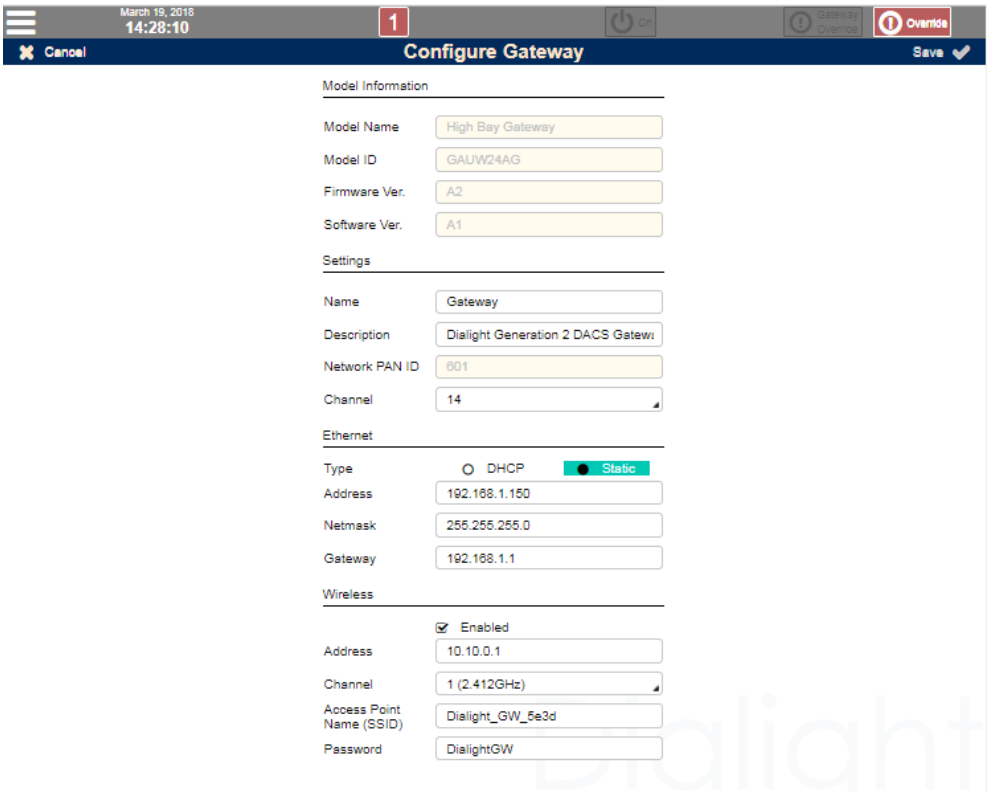




Note: Use the arrow next to each header to expand and hide device parameters

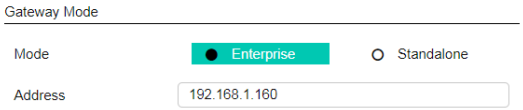
Configure Gateways

The Configure Gateways page provides a mechanism for adjusting various settings for the gateway controller.



- Model Information
  - Model Name – Manufacturer model name of the gateway.
  - Model ID – part number of the gateway.
  - Firmware Version – Internal firmware version info.
  - Software Version – Internal Software version info.
- Settings
  - Name – User settable text name for identifying the gateway.
  - Description - Textual description of the gateway. Could include notes or location description.
  - Network Pan ID – Numeric id for wireless network.
  - Channel – User selectable channel for the wireless lighting network.
- Ethernet
  - Type – Select DHCP or Static for IP address configuration type.
  - Address – Manually entered IP address.
  - Netmask – Manually entered Netmask.
  - Gateway – Manually entered Ethernet network gateway address.
- Wireless
  - Enabled – This allows Wi-Fi to be turned on and off.
  - Address – This specifies the Wi-Fi IP address to connect to.
  - Channel – User selectable Wi-Fi channel.

- SSID – User settable SSID for the Wi-Fi network.
- Password – Wi-Fi password.



Gateway Mode

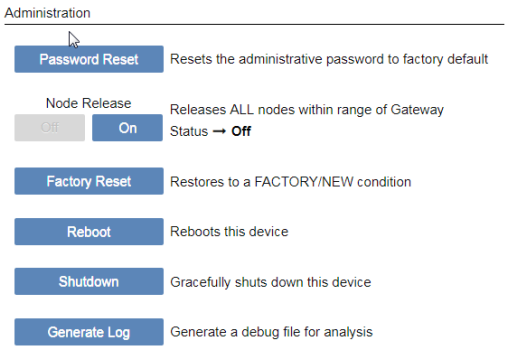
This section is useful for changing the gateway to Enterprise Mode, which enables a connection to an IntelliILED™ system. Once set to enterprise mode, this gateway will not function without an Enterprise Server present. After switching the gateway using the Enterprise radio button, enter the IP address of your IntelliLED™ system and a port number of 80. Ensure all information is correct before selecting 'Update' as the gateway will reboot in Enterprise mode. Before switching from standalone mode to enterprise mode, delete any devices, groups, and schedules from the gateway.

NOTE: If you are using the Gateway as part of a standalone system, the Gateway MUST be in Standalone Mode to operate

Administration

Section 6

This section allows the user to reset forgotten passwords, nodes, and even the gateway itself. Selecting the *Password Reset* option will reset the login password to factory default. *Node Release* is useful when you have lights which were previously connected to a non-working gateway. Before they are connected to a new gateway, they need to be released. This button will prompt the user before performing a node release. Finally, The *Factory Reset* button will return the Gateway to factory default settings



NOTE: Node release will go through a 'transition' phase inbetween On/Off. This can take up to 1 minute

Administration -> Debug Assistance

Section 7

This section allows the user to create and download a debug file. This file is useful when debugging problems with the gateway.

Administration ->Gateway Control

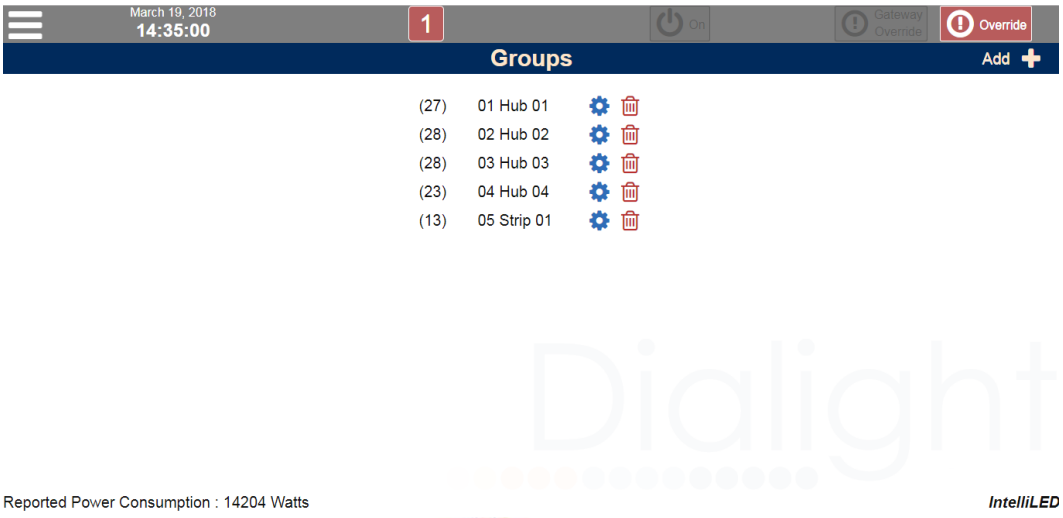
Section 8

This section allows the user to reboot and shut down the Gateway. While there should never be a reason to reboot the gateway, it is important that the gateway is shut down before power is removed.

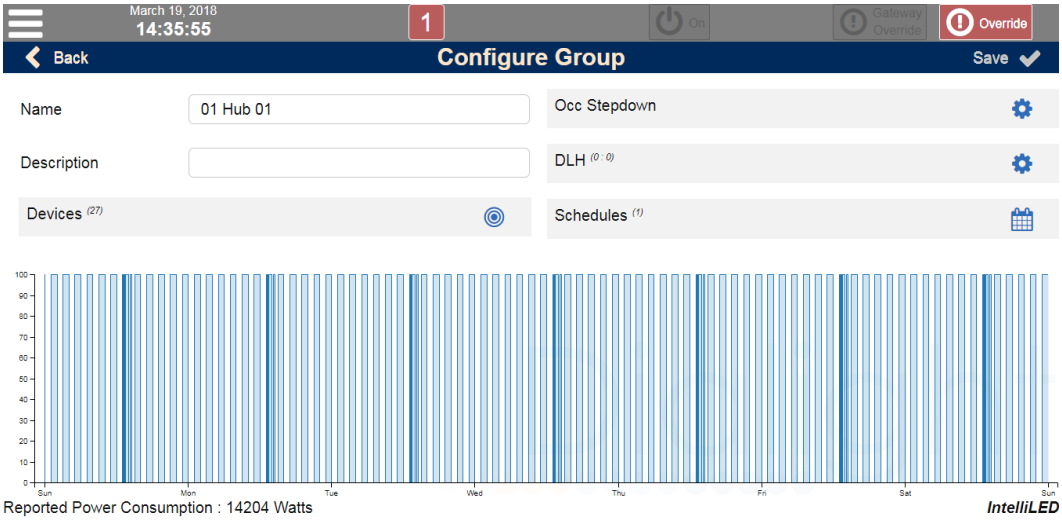
Important – To avoid data loss it is important that the Gateway is shut down using the Shut Down mechanism located on this page BEFORE power is removed from the gateway. Failure to do so could result in system settings becoming corrupted.

Configure Groups

The Configure Groups page provides tools that are used to create and set up groups of devices which will be operated on schedules of control events. The Configure Groups page initially shows a list of all existing groups in the system.



Clicking on the Configure Group icon  for a particular group will open the Configure Group page.



This page contains a collection of parameters and settings, as well as links to pages for managing which devices are members of the group, a page for associating one of more schedules with the group and 2 pages for configuring sensors to work with the group. Finally, the lower portion of the page shows a week-long graph which illustrates the activity of the lighting system over a week's time.

Parameters and Pages

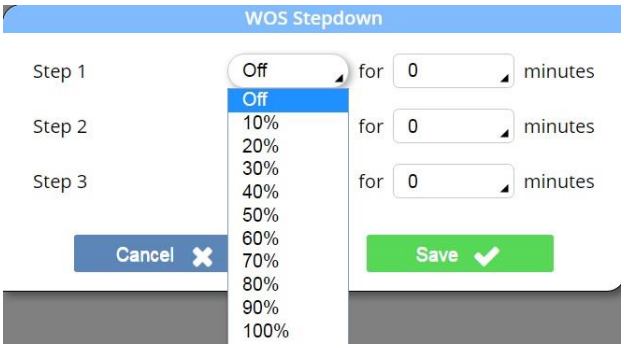
- Name – User defined group name.
- Description – User created text description for the group.
-  Devices icon- This opens a page used to add / remove devices form the group. The user selects each device that is intended to be in the group. Clicking on a device button selects / deselects that device.

-  WOS Stepdown - Click on the icon to open a dialog box used for configuring daylight harvesting.

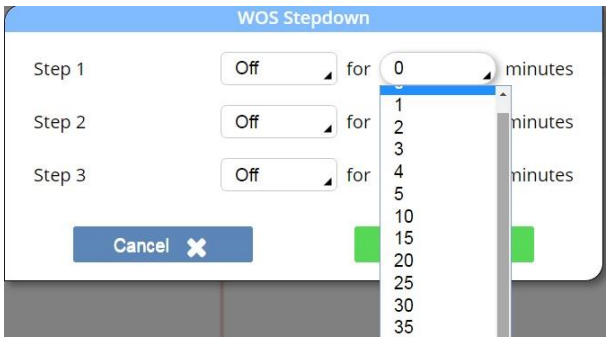
Wireless Occupancy Sensor Configuration

When enabled in a schedule and motion is detected the configured group will be commanded to follow the configured stepdown schedule.

- Set dim value for all three stepdown steps



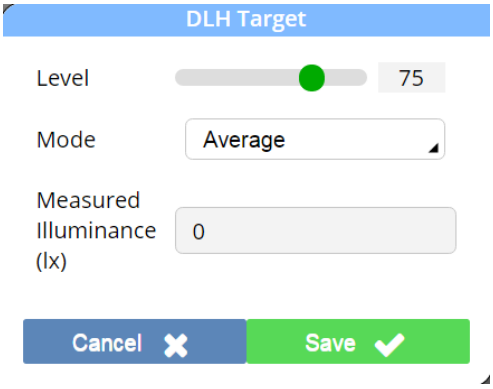
- Set a duration for each of 3 stepdown steps.



Daylight Harvesting Configuration

Daylight Harvesting allows sunlight to supplement electric lighting to affect energy savings. DLH uses installed ambient light sensors (WDLH sensors) to measure the light level in a work-space, and then allows energy savings by dimming electric lighting to maintain a constant illumination.

Daylight harvesting must be calibrated by setting a target illuminance for the system. This is the light level that the DLH algorithm we seek to maintain.



- Click on the DLH icon to open the configuration window.
- Set target light level on dim slider
- Select the operating mode (Average, Maximum, and Minimum). This is useful if more than one sensor has been installed and assigned to the group.
    - Average will use the illuminance level that is the average of the levels read from the sensors.
    - Maximum will use the highest reading from the collection of sensors.
    - Minimum will use the lowest reading from the collection of sensors.

- Adjust the Level slider to achieve desired illuminance. This must be done when the area is not being illuminated by supplemental light, such as sunlight. Note that the "Measured Illuminance field will automatically update to show the measured light level.
- Select "Save" when complete. This step sets the target illuminance for the DLH algorithm.

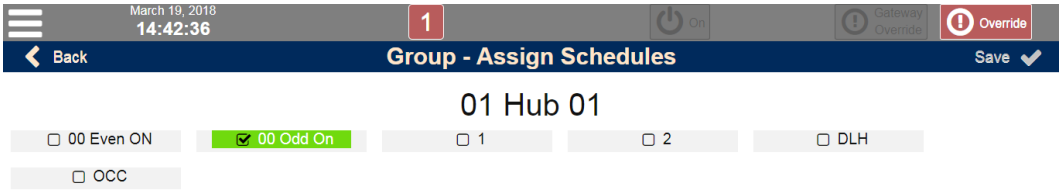
Note: The DLH setting should be done at a time where no other light sources will affect the reading.

Add Schedules to a Group

- Select Schedules Icon to add or remove schedules from this group.

A schedule can be separately from configuring a group, and defines 7 days' worth of control events. Multiple schedules may operate on a group at the same time. For Example: A schedule named "Weekends" as well as a schedule named "Weekdays West Facility" can be assigned to a group.

- Click on the labeled buttons to select desired schedules and click "Save" and then "Back".



The Configure Group page will now show a graphical representation of the state of the system over time, based on the control events contained in the schedules that have been assigned to the group. Displayed is light level and the active times for DLH and OCC sensors.

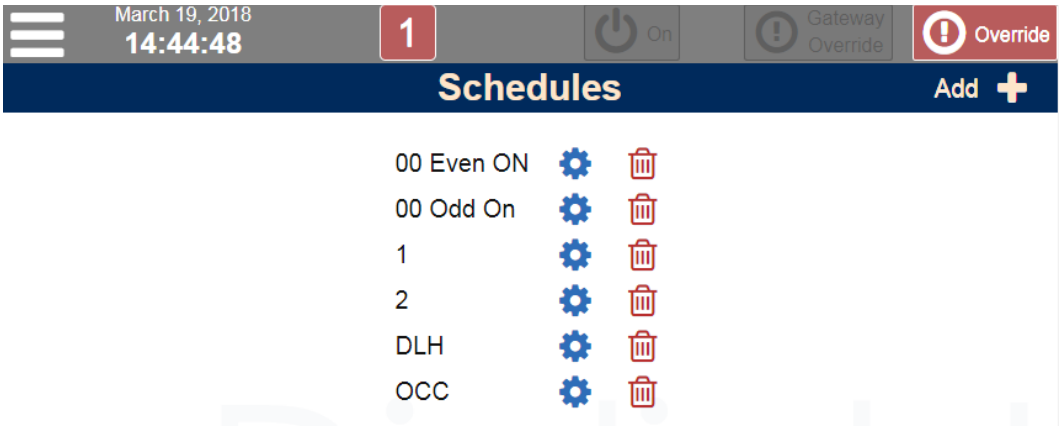
Schedules

Schedules are collections of control events used to operate on groups of devices in the lighting system. Schedules are created, named and saved, to be later applied to one or more groups.

Example: Consider the case in which you have a large number of isles in a warehouse which at times need to be controlled as separate groups but essentially follow the same schedule. By defining and naming schedules as separate entities, it is possible to create a single schedule and apply it multiple times. Therefore commissioning the warehouse does not require entering in the schedule for each isle.

Creating a New Schedule

- Choose the "Schedules" option from the menu to go to the Schedules page.

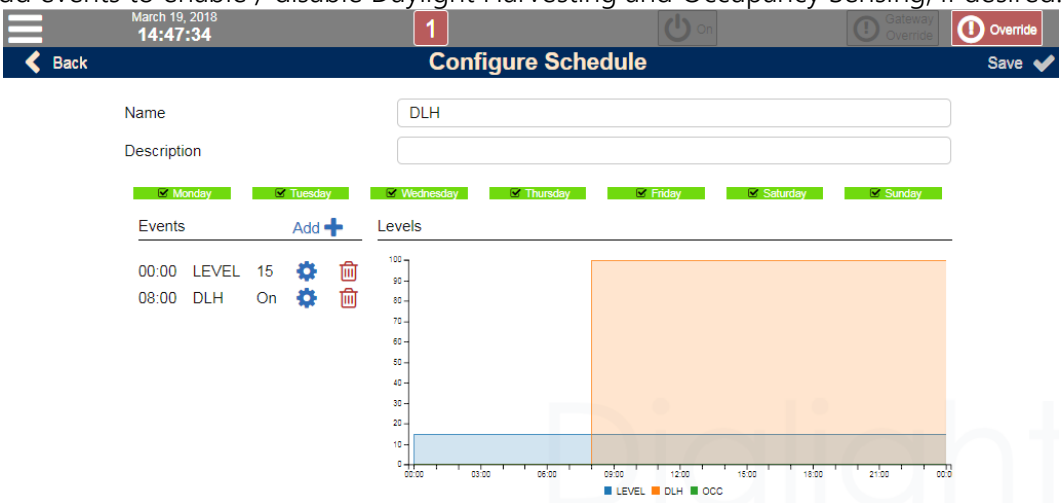


- Click on the "Add +" button to create a new schedule.
    - Enter a name and description for the group and click "Save".
    - Back on the Schedules page, your new schedule will be listed. Click on the gear icon to configure the group.

Configuring a Schedule

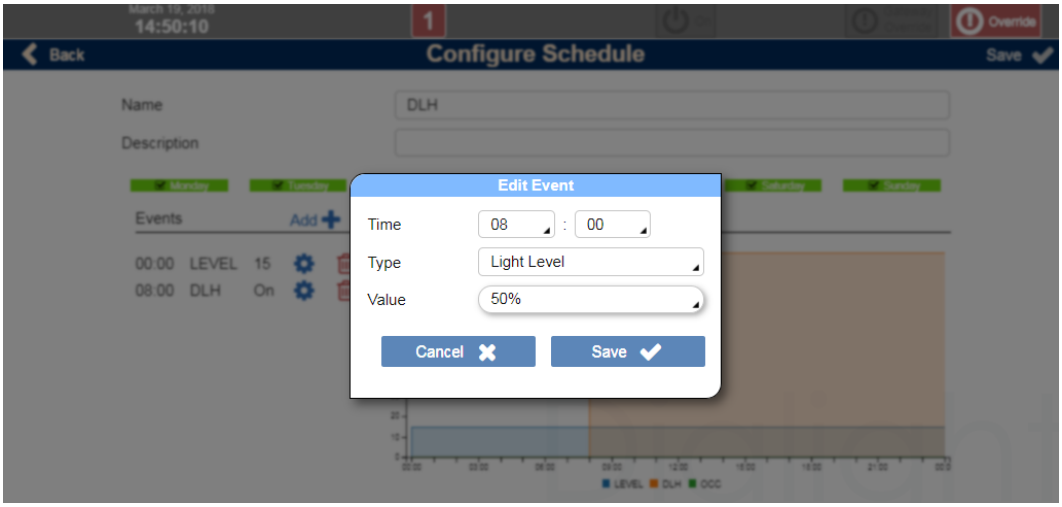
Schedules define 24 hours of lighting system events, and that 24 hours may be applied to any of the 7 days of the week creating a weeklong schedule. To configure a schedule you must perform the following steps:

- Select which days of the week the schedule is to be active.
- Add light level events to specify what light level a group running the schedule should be maintained at any specific time.
- Add events to enable / disable Daylight Harvesting and Occupancy Sensing, if desired.



Instructions to configure schedule:

1. Select which days of the week the schedule is to run by clicking on the days of the week.
2. Add Light Level dimming events to the schedule by clicking on the "Add +" button.



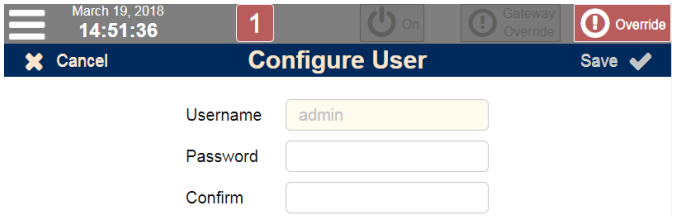
3. Enter the Time, Type (Light Level) and Value. Click "Ok."
4. Repeat the previous 2 steps and add all of the desired dimmer commands.
5. Add events for enabling / disabling daylight harvesting and occupancy sensing in the same manner, but the event Type and Value will correspond to the desired sensor actions.

Note: The schedule only enables and disables sensor activity with schedule events. The behavior of the sensors and configuration of daylight harvesting or occupancy sensing is done in Group Configuration for that group.

Users

The standalone version of Dialight's IntelliLED™ lighting control software supports only a single user login.

Username: admin
Password: password

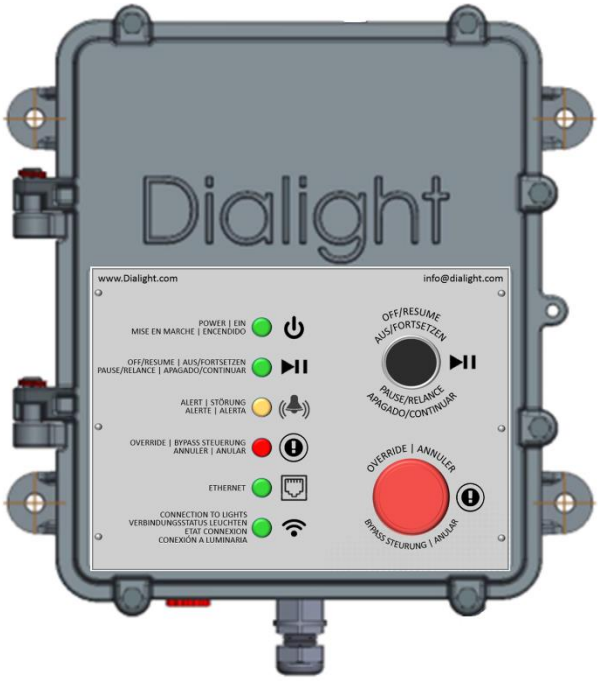


The User page allows the default password to be changed.

Note: You should change the password immediately after logging in for the first time.

Note: Username and Password are case sensitive

Gateway LED Panel Indicators



The gateway's front panel provides several helpful LED indicators that are useful in troubleshooting common issues.

Power LED

When Gateway is turned on this LED will always be steady green

OFF / Resume

This indicator will light when the system has been commanded to the OFF state via the front panel button. When off the system is running normally.

Alert

The Alert LED shows various top level alerts in the system such as a light losing network connection.

Event	LED behavior	Priority
Light node disconnected	Steady ON	1
Other nodes disconnected	Blink 0.2 sec ON – 0.2 sec OFF	2
OCCS Low voltage	Blink 0.25 sec ON – 1 sec OFF	3

Alert LED is **OFF** otherwise

Emergency

If the Emergency (override) button is pushed then this LED will be steady ON

Ethernet

The Ethernet LED uses blink codes to convey 6 different states, as shown in the table below. Information about the gateway network settings and its connected status is represented.

Static IP	DHCP	Factory default IP (192.168.1.150)	Ethernet connectivity	LED State
Yes	NO	Yes	NO	OFF
Yes	NO	Yes	Yes	Blink 0.2 sec ON – 0.2 sec OFF
Yes	No	No	No	Blink 0.25 sec ON – 1 sec OFF
Yes	No	No	Yes	LED Steady On
No	Yes	No	No	Blink 1 sec ON – 0.25 sec OFF
No	Yes	No	Yes	LED Steady On

Wireless Network

This LED displays basic information about the wireless mesh lighting network such as if discovery is currently running and if there are or are not any devices currently in the device list.

Discovery	Devices in the list	LED status
ON	N/A	Blink 0.2 sec ON – 0.2 sec OFF
OFF	No devices	LED OFF
OFF	We have devices	Steady ON

Gateway Local Controls

OFF/RESUME, Override Buttons

The Override E-Stop button provides a failsafe way to turn all of the lights on in the system, regardless of configuration, setting or schedule. When the Override Button is pressed, all lights in the network will be commanded on. They shall remain on until the button is released (twist), at which time they will resume to their currently scheduled levels.

The OFF / Resume button provides a convenient way to turn all of the lights in the system off. Pressing and holding this button for 3 seconds will cause al lights in the system to be commanded

off. Pressing the button a second time will cause all of the lights to resume their regularly scheduled dimmer levels.

The following table illustrates the interaction between the buttons, the panel LED indicators and the system run state.

OFF/Resume Button State	Override Button State	Lighting System State	OFF/RES LED	E-OR LED
States: OFF, RESUME	States: OVERRIDE, RESUME			
RESUME	RESUME	RUN Schedule	OFF	OFF
RESUME	OVERRIDE	Override: Lights 100%	OFF	ON
OFF	RESUME	Lights Off	ON	OFF
OFF	OVERRIDE	Override: Lights 100%	OFF	ON
The Override button is a maintained push-pull (twist release) button				
The OFF/Resume button is a momentary type. Holding the button for 5 seconds toggles its state. The initial state is Resume.				

Field Replacements

Note: On loss of Gateway power, the connected lights will take up to 8 minutes to return to 100%

Light Replacement

1. Note the name and groups to which the old light resides
2. Delete old light from the Gateway
3. After new light is installed and powered on start a discovery
4. Once new light is discovered rename the light
5. Go to groups in which the old light resided and add the new light

6. Turn on manual control for each group that the light was added to
7. Release the manual control for each group, this will ensure lights return to their schedule
8. Create and download a new backup file

Gateway replacement (with backup file)

1. If the gateway is functional, create and download a backup file. If the gateway is not functional, locate a stored backup file, if available.
2. Remove the old gateway and install the new gateway
3. Power on the new gateway.
4. Connect to the gateway and setup the gateway IP settings per IT department requirements
5. Got to the administrative settings page and click on the node release button, this process takes twenty minutes, the lights will dim to 80% for 1 second and then return to 100% every minute.
6. Once the node release has been completed, log in to the gateway
7. Upload and restore the backup file, all devices should rejoin.
8. Once all nodes rejoin, turn on manual control for each group.
9. Release the manual control for each group, this will ensure lights return to their schedule.
10. Create and download a new backup file

Gateway replacement (without backup file)

1. Remove the old gateway and install the new gateway
2. Power on the new gateway.
3. Connect to the gateway and setup the gateway Ip settings per IT department requirements(if necessary)
4. Got to the administrative settings page and click on the node release button, this process takes twenty minutes, the lights will dim to 80% for 1 second and then return to 100% every minute.
5. Once the node release has been completed, log in to the gateway
6. Refer to the commissioning section of this manual for configuring a new gateway
7. Create and download a new backup file

Field Repairs

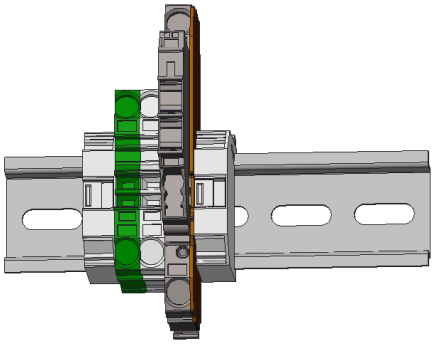
Opening the gateway

Before opening the gateway, it is recommended that you remove power from the gateway.
Use a flat head screwdriver or a 3/8" (10 mm) hex driver to loosen the 6 screws on the gateway.

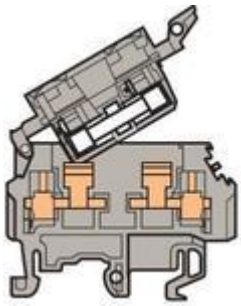
Fuse Replacement

Before opening the gateway, it is recommended that you remove power from the gateway.

Pull up on the fuse holder; it will open toward the bottom of the gateway. The fuse is located on the right side of the holder. To remove the fuse pull the cover to access the fuse.



To replace put the fuse in the holder, close the access cover push down on the holder until it clicks.



Appendix B- Multi-Gateway Discovery

A customer facility with multiple gateways wireless networks presents challenges for commissioning the system to discover all lights. This procedure gives principles and methods for how best to achieve discovery of all nodes.

Method

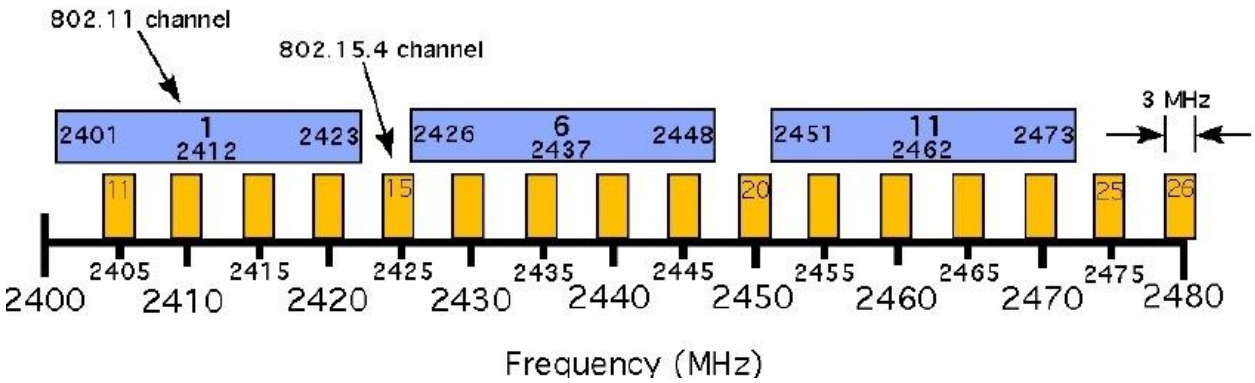
1) If available, use a 2GHz handheld spectrum analyzer to find channels in the 11-25 range with the least RF energy on them. One such analyzer that has been used is the RigExpert IT-24. Scan in the range 24-25Ghz. Consult the figure below to see where the channels are in this range.

2) Explicitly assign channel numbers on all gateways from the gateway web page if in standalone mode or from the Enterprise server page. If a spectrum analyzer was not used in the previous step then assign channel numbers starting with 25 and work down.

3) Turn on discovery on the gateway with the highest channel number. If it is possible to turn off lights at the customer facility then it would help tremendously to turn off all lights except for the ones you want discovered into this first gateway. This is normally not possible. Therefore after discovery is complete you will have to delete all lights from the gateway that you don't want in it. You will have to Identify each light to confirm its position and if it should be in the gateway.

4) Wait 15 minutes after the last desired light has joined or the last unwanted light has been deleted for the network to stabilize.

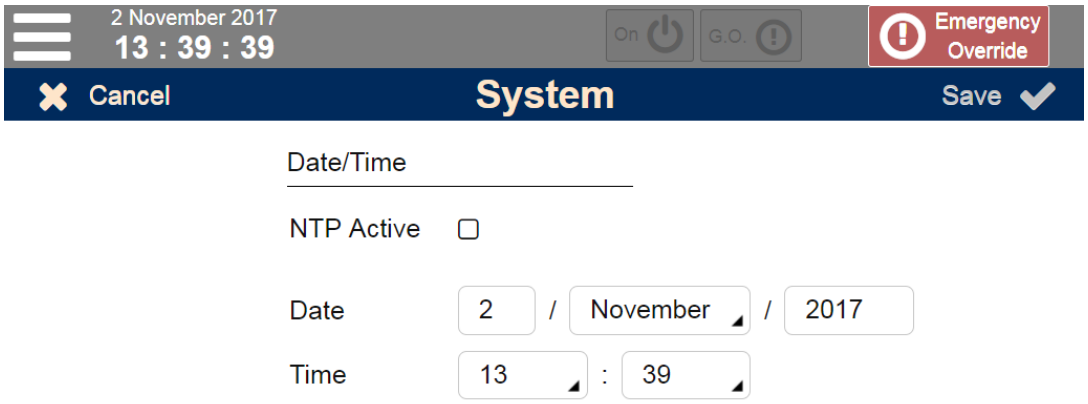
5) Continue repeating steps 3-4 for the gateway with the next highest channel number.



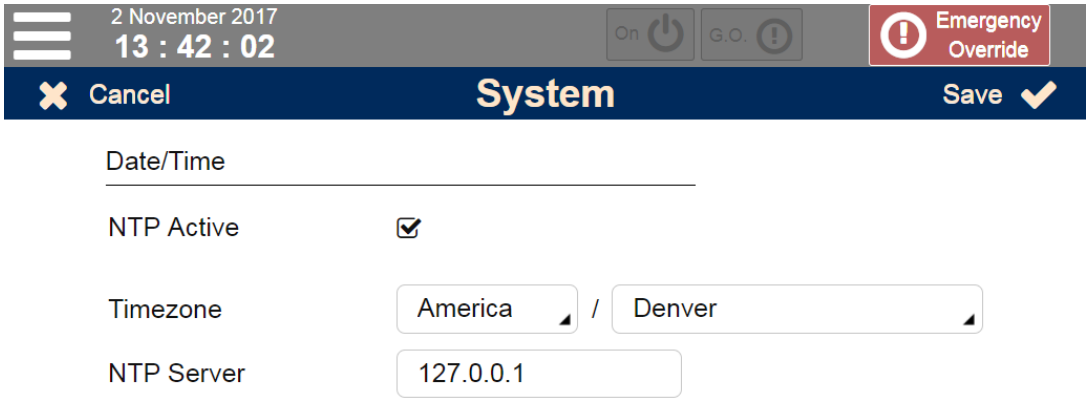
Appendix C- Time Settings

DACS Standalone Gateway - Enable time zone for automatic daylight savings adjustments

1) Log into the web GUI and click the menu to go to System
2) Make sure NTP checkbox is off, and set the correct date and time for UTC
3) Click the Save button in the top right



4) Give the gateway time to restart and log back in
5) Go back to the Menu -> System page
6) Click the NTP Active checkbox
7) Select the correct time zone from the dropdown menus
8) Enter 127.0.0.1 for the NTP Server
9) Click the Save button



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Contains FCC ID: W7Z-ZICM357SP0
Contains IC: 8254A-ZICM357SP0

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Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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