

# LITEDIMMER SPECTRUM AC/DC 200 & 400 USERS GUIDE



© 2024 LITEGEAR, INC.

All rights reserved. Information subject to change without notice. LiteGear and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document.

LiteRibbon® and FauxFlo® are registered trademarks of LiteGear, Inc.

LiteGear™, LiteMat™, LiteDimmer™, Auroris™, LiteStix™, LitePower™, LiteEFX™, E-Control™, and FauxRes™, Chroma™, Chroma-Correct™, LiteTile™, LiteBox™, CineMitter™, Cinema Series™, Studio Series™, Studio Hybrid™, FauxRes™, LiteEngine™, LiteNet™, QuickLinx™, TrueHybrid™, and Vibrant Colors Beautifully Saturated™ are trademarks of LiteGear, Inc.

W-DMX® is a registered trademark of LumenRadio AB

CRM™ and LumenRadio™ are trademarks of LumenRadio AB

# Index

## Safety Information

Dangers.....	1
Notices.....	1
Warning.....	2

## Introduction..... 3

Included in the Box.....	3
Additional Accessories.....	3

## Features

Hardware Features.....	4
Software Features.....	4-5

## Overview

Front Panel (Controls).....	6-7
Back Panel (Connections).....	8-9
Top & Bottom (Features).....	10
Connecting 28-Pin Cable.....	11

## Installation

LiteDimmer Truss Mount.....	12
LiteDimmer Stand Mount.....	13

## Settings

DMX Settings.....	14
DMX Address.....	15
DMX Personalities.....	16
DMX Loss Behavior.....	17
RDM State.....	18
Fixture #/Universe Assignment.....	19
Load-In Presets.....	20

Art-Net/sACN.....	21-22
CRMX Settings.....	23-24
Local Control.....	25
Output Settings.....	26-27
Display Settings.....	28
Dimmer Firmware Update.....	29
Pixel Firmware Update.....	30
Save/Load Settings.....	31
Save Service Log.....	32
Format USB Drive.....	33
Network Settings.....	34-37
System Info.....	38-41
Utilities.....	42
Set Real Time Clock.....	43
Clear Service Logs.....	44
Factory Reset.....	45

## Functions

Setting Tint - True Hybrid and Spectrum Modes.....	46
Setting x,y Coordinates.....	47
Audition.....	48
Parameter Presets.....	49
Cue Function.....	50

## Error Codes

Pixel Faults.....	51
-------------------	----

Dimmer Faults.....	51
--------------------	----

## Specifications

Technical Specifications.....	52-53
Dimensions.....	54

## Maintenance..... 55

## Help..... 55

## Certifications..... 56

## DANGER

- Repairs must be performed by LiteGear or an authorized service agent.
- Maintenance to be performed only when identified in this user guide.
- High voltage! Risk of electric shock and fire.
- Follow all safety information and operation instructions before operating or installing this product or system.
- Not following these instructions may result in injury, death, and equipment damage.
- For use solely and exclusively as described in the instructions.
- Confirm local AC power matches the voltage and frequency range printed on the product specifications label use.
- Never use the cables for transportation. Never hang the product from its cables.
- Do not bypass or remove any safety feature of the product.

## NOTICE

- LiteGear products are to be operated by qualified personnel only.
- Not intended for household use.
- Repairs to be made by qualified LiteGear technician only.
- Follow all practical safety precautions when using this product.
- Product surface can be cleaned by lightly spraying a mild detergent onto a soft cloth and wiping the product.
- Using this device other than described above is not permitted and can damage the product and can lead to personal injury.
- If the external flexible cable or cord of this product is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or an authorized service agent.

## WARNING

### **Risk of electric shock from high humidity.**

- Do not operate or expose this product to rain or moisture.
- If the product is exposed to moisture, allow unit to dry for a period of 4 hours to prevent any electrical damage from occurring to electrical components.
- Confirm all electrical connections are securely fastened to avoid electrical shorts occurring from moisture build-up on the connectors.

## WARNING

### **Risk of fire.**

- Do not operate this product if the ambient temperature exceeds 122°F (50°C).
- Do not place the product on or near heat sources.
- Do not expose product to open flames.
- Intense heat cause damage to the product. Intense heat can damage unit.
- When using in high ambient temperatures, allow the product to cool down before storing and/or transporting.

## WARNING

### **Heavy load fixture. Risk of injury and/or damage.**

- The product and all attached accessories must be secured properly when mounted above floor level.
- Local safety regulations must be followed when operating unit.
- Disconnect all cables before storing and/or transporting unit.

# Introduction

LiteDimmer Spectrum AC/DC 200 and LiteDimmer Spectrum AC/DC 400 are part of a new class of dimmers packed with great new features, an ergonomic design, and ultra-compact form factor. Complete with local control and industry leading communication protocols, the LiteDimmer Spectrum AC/DC 200 and LiteDimmer Spectrum AC/DC 400 can control multiple large-format pixels, making pixel mapping of the LiteMat Spectrum easier than ever.

Specially designed with advanced processing power, an integrated network switch, expanded memory, and a faster processor, this new hardware offers Art-Net and sACN ethernet-based communication protocols, Art-Net/sACN gateway, local and DMX x,y coordinate color mode, advanced color control, a choice of four dimming curves, and additional cutting-edge software features. An integrated USB-A port allows for easy updates that will bring new, innovative software for years to come.

## Included in the Box

LiteDimmer Spectrum AC/DC 200

or

LiteDimmer Spectrum AC/DC 400



## Additional Accessories

LiteDimmer Truss Mount

LiteDimmer Stand Mount

PDX Cable - Available in 25 ft (7.5 m), and 50 ft (15 m)

Mains Cable - Available in Edison, Schuko, Bare-End, and Pass-Thru

# Features

## Hardware Features

- Simple and intuitive user interface.
- Advanced processing power.
- Expanded memory
- Ethernet-based communication.
- Quick and secure mounting solution.
- Convenient of connecting data and power.
- Advanced color control
- Software updates via a USB-A port.
- Integrated Network Switch

## Software Features

x, y Coordinate Color Mode: Enables advanced color workflows, easy light source matching, precision color picking, and much more. Dial in your x and y color value via local controls or with four new DMX personalities, including large-format pixel x,y modes.

Platform: Features up to 12 large format pixels combined with pixel mapping, soft light through pixelization, enhanced brightness, improved color science and tint feature, an economic user interface, ballast status visibility, enhanced low-light color consistency, and much more.

Video DMX personality for RGB video walls: The Video DMX personality in Spectrum OS 3.0 provides control to match the LED video walls' color output. In combination with Auroris and LiteMat Spectrum, lighting technicians can create cinematic quality lighting while using and matching to video walls.

DMX Smoothing: Enables the ability to smoothly transition between one DMX value and another automatically through a new DMX channel. Adjustments are made to the number of levels to achieve lightning-fast reactions or smoother transitions.

DMX, Refreshed: Revamped the DMX personalities in Spectrum dimmers offer highly sought-after improvements and new modes to fill an extensive range of applications.

# Features

## Software Features

Easy configuration and troubleshooting via USB: The USB-A port on the LiteDimmer AC600, AC/DC 200, and AC/DC 400 makes updating software a breeze, enables many more functions through the USB port.

Streaming ACN (E1.31): Fully implemented in the LiteDimmer Spectrum AC/DC 200 and the LiteDimmer Spectrum AC/DC 400. This standard ethernet-based protocol efficiently transports DMX universes over the network and eliminates the need for a DMX gateway.

Art-Net: Art-Net 4, like sACN, efficiently transports DMX universes over the network and eliminates the need for a DMX gateway. An added benefit of Art-Net is its ability to allow 2-way communication between devices using both DMX and RDM lighting data.

Ethernet DMX Gateway: The Art-Net and sACN gateway takes full advantage of the integrated network switch and the 5-Pin DMX hardware on the LiteDimmer Spectrum AC/DC 200 and the LiteDimmer Spectrum AC/DC 400. The gateway translates Art-Net or sACN lighting data into DMX512 and outputs the signal through the 5-Pin DMX XLR ports.

Dimming Curves: Spectrum OS 3.0 gives you greater control of your dimmer by offering the ability to choose between four dimming curves: Exponential, Linear, Logarithmic, and S-Curve.

# Overview

## Front Panel (Controls)



# Overview

## Front Panel (Controls)

1. OLED Display - Offers an intuitive navigation for the LiteDimmer Spectrum AC/DC 200 and LiteDimmer Spectrum AC/DC 400 control center.
2. Function Buttons - Allows for effortless interface selections when used in conjunction with the encoders.
3. Power LED Indicator - Lights on when dimmer is powered on, or if there are fault conditions.
4. Data LED Indicator - Lights on with respective color when DMX, sACN, Art-Net or CRMX received. Lights Red if data is removed.
5. Encoders (Top and Bottom) - Allows for easy scrolling and mode selection available with this dimmer.
6. Multi-Function Handle - Conveniently allows the dimmer to be carried and provides a sturdy attachment point

# Overview

## Back Panel (Connections)



# Overview

## Back Panel (Connections)

- 8.** Power Switch - Integrated power switch acts as both a breaker and on/off switch.
- 9.** USB-A Port - The integrated port allows for quick and easy firmware updates.
- 10.** EtherCon Ports - Supports Art-Net and sACN communication protocols and features an Art-Net/sACN gateway and an integrated network switch..
- 11.** Wireless Antenna - The internal antenna eliminates the need for attaching an external antenna while providing excellent signal strength when using Lumen Radio CRMX.
- 12.** 5-Pin DMX Connector - In and Through 5-Pin XLR connectors enable DMX and RDM communication.
- 13.** PDX Connector - Allows the dimmer to control the LiteMat Spectrum product line.
- 14.** 48V Battery Connector - Connect a 48-volt DC battery to the 3-pin XLR connector
- 15.** PowerCon Connectors - Lockable, industry standard mains power connectors with in and through AC power. Enables daisy chaining the mains power of multiple dimmers.

# Overview

- 16. Multi-Function Handle - Conveniently allows the dimmer to be carried and provides a sturdy attachment point
- 17. K-Mount Plate - Quickly and easily attach any LiteGear K-Mount accessory.



# Overview

## Connections

### Best practices for connecting to and disconnecting from the **PDX connector**.

1. Toggle the Power Switch to the OFF position.
2. Insert the cable connector into the PDX OUT port until the connector locks in place.
3. Toggle the Power Switch to the ON position.

### Best practices for connecting to and disconnecting from the **Battery connector**.

1. Toggle the Power Switch to the OFF position.
2. Insert the cable connector into the BATTERY IN port until the connector locks in place.
3. Toggle the Power Switch to the ON position.



**NOTE:** The PDX and Battery connectors are not intended to be connected and disconnected when the dimmer is powered.

# Installation

## LiteDimmer Truss Mount

The LiteDimmer truss mount provides secure attachment of the LiteDimmer Spectrum AC/DC 200 or the LiteDimmer Spectrum AC/DC 400 to any 1.5" to 2" pipe. A k-Mount enables quick attachment to the AC600 while the 2" cheeseborough affixes firmly to almost any pipe.

1. Attach LiteDimmer Truss Mount to truss and securely tighten.
2. Align the LiteDimmer with the receiver pins in the LiteDimmer truss mount.
3. Rotate the LiteDimmer until the locking pin clicks and locks into place.
4. To secure the LiteDimmer to the truss, loop the Safety Cable through the dimmer handle, around the truss, and clip the cable ends together.
5. Attach the required power and data cables.



# Installation

## LiteDimmer Stand Mount

The LiteDimmer Stand Mount provides a secure attachment of the LiteDimmer Spectrum AC/DC 200 or the LiteDimmer Spectrum AC/DC 400 to a light stand. A k-Mount enables quick attachment to the AC600, while the Super Clamp affixes firmly to the stand stem.

1. Attach LiteDimmer Stand Mount to truss and securely tighten.
2. Align the LiteDimmer with the receiver pins in the LiteDimmer Stand mount.
3. Rotate the LiteDimmer until the locking pin clicks and locks into place into place.
4. Attach the required power and data cables.



# Settings

## DMX Settings

DMX Settings allows the user to control the fixture through any DMX control device. The user can connect through wired or wireless DMX. When using wired DMX it is possible to daisy-chain between units. OS 3.1 DMX operation includes its collection of DMX settings that are separate from Local settings. When Spectrum detects DMX signal, regardless of switch state, the system immediately takes precedence over local control. This can happen over XLR or Lumen Radio wireless.

- DMX PERSONALITY defines the mode and channel setup for controlling a lighting fixture. Spectrum OS 3.1 provides 27 DMX personalities, with both 8-bit and 16-bit modes for full fixture and large-format pixel control.
- RDM FUNCTIONALITY Remote Device Management (RDM) implementation enables compatible devices to interact with the ballast by making inquiries as to settings and sensor data, or to make changes to settings such as DMX start address.
- DMX STREAMING MONITOR is an essential feature for troubleshooting DMX networks. Makes it possible to see live streaming data of all control parameters of (up to) 12 LF-Pixels.
- LOSS BEHAVIOR allows for setting of ballast behavior when DMX data is removed. When set to "Hold" the ballast will maintain the same light when the DMX data is removed. When set to "Black Out", the ballast will revert to the Local settings of the ballast if DMX data is removed.
- DMX SERIES SELECT LiteDimmer Spectrum ACDC200 and ACDC400 can operate as previous Spectrum DC200 release as SERIES 1 (2019), OS 2.0 release as SERIES 2 (2020) or SERIES 3 (2023). When performing a factory reset, SERIES 3 is set.

# Settings

## **DMX Settings – DMX Address**

DMX Address mode allows the user to set a desired DMX Address.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to DMX ADDRESS and press the top encoder knob to select.
4. Rotate the top encoder knob to set the desired DMX Address.

# Settings

## DMX Settings – DMX Personalities (OS 3.1)

DMX Personality Setting allows the user to select desired DMX Personality.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to DMX PERSONALITY and press the top encoder knob to select.
4. Rotate the top encoder knob to select the desired DMX personality.

- |                                |                                |
|--------------------------------|--------------------------------|
| 1. Hybrid Plus 8b              | 15. RGBATD, Pixel, 16b         |
| 2. Hybrid Plus 16b             | 16. V.RGB, 8b                  |
| 3. Spectrum 8b                 | 17. V.RGB, 16b                 |
| 4. Spectrum 16b                | 18. V.RGB, Pixel, 8b           |
| 5. Spectrum Pixel 8b           | 19. V.RGB, Pixel, 16b          |
| 6. Spectrum Pixel 16b          | 20. V.RGB, Spectrum, 8b        |
| 7. Spectrum Gradient 8b        | 21. V.RGB, Spectrum, 16b       |
| 8. Spectrum RGBATD, 8b         | 22. V.RGB, Spectrum, Pixel 8b  |
| 9. Spectrum RGBATD, 16b        | 23. V.RGB, Spectrum, Pixel 16b |
| 10. Spectrum RGBATD, Pixel 8b  | 24. x,y 8b                     |
| 11. Spectrum RGBATD, Pixel 16b | 25. x,y 16b                    |
| 12. RGBATD, 8b                 | 26. x,y Pixel 8b               |
| 13. RGBATD, 16b                | 27. x,y Pixel 16b              |
| 14. RGBATD, Pixel, 8b          |                                |



To view Spectrum OS 3.1 DMX Personalities, scan the QR code above or go to <https://www.litegear.com/spectrum-os/downloads/>

# Settings

## DMX Settings – Loss Behavior

DMX Loss Behavior mode allows the user to save or erase DMX settings after unplugging the dimmer.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to LOSS BEHAVIOR and press the top encoder knob to select.
4. Rotate the top encoder knob to select the desired Loss Behavior and press the top encoder knob to select.
  - If DMX is removed, HOLD will maintain the last DMX values received by the dimmer.
  - If DMX is removed, BLACK OUT will revert the dimmer to the Local Settings.

# Settings

## DMX Settings – RDM State

RDM State enable the user to turn the RDM functionality on or off.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to RDM STATE and press the top encoder knob to select.
4. Rotate the top encoder knob to select the desired RDM State and press the top encoder knob to select.
  - ON will enable RDM functionality.
  - OFF will disable RDM functionality.

# Settings

## **DMX Settings – Fixture #**

Fixture # allows for setting the fixture number.

Universe Assignment allows for labeling the DMX universe (*Note: This does not set the DMX Universe*)

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to FIXTURE # and press the top encoder knob to select.
4. Rotate the top encoder knob to set the desired number State and press the top encoder knob to select.

# Settings

## **DMX Settings – Load-In Presets**

allows for the storage and loading of up to 10 DMX setups.

Setup parameters include: Series, Personality, Art-Net Network, Art-Net Subnet, Art-Net Universe, sACN Universe

- 1.** Press the right function button.
- 2.** Rotate the top encoder knob to navigate to DMX SETTINGS and press the top encoder knob to select.
- 3.** Rotate the top encoder knob to navigate to DMX Load-In Presets and press the top encoder knob to select.
- 4.** Rotate the top encoder knob to select the desired Storage/Recall slot.
- 5a.** Store the present DMX settings by pressing and holding the top encoder knob.
- 5b.** Load (recall) the desired DMX settings slot by pressing the top encoder knob.

# Settings

## Art-Net/sACN

Art-Net/sACN allows the user to choose the desired communication protocol.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to ART-NET & sACN and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to ART-NET/sACN STATE, ART-NET NET, ART-NET SUBNET, ART-NET UNIVERSE, MERGE MODE, GATEWAY, sACN UNIVERSE or IP MODE and press the top encoder knob to select.
4. Rotate the top encoder knob to select the setting for each Output Settings menu option.
5. Once Output Settings have been selected, press the top encoder knob to navigate back to the main screen.

Art-Net/sACN State:

- AUTOMATIC
- ART-NET ONLY
- sACN ONLY
- OFF

Art-Net Net:

- SET NETWORK NUMBER choose the network you would like to join. Range from 0 to 127.
  - Once the Network has been selected, press the center function button on the display below SET.

Art-Net SubNet:

- SET SUBNET NUMBER choose the SubNetwork you would like to join. Range from 0 to 15.
  - Once the subNet has been selected, press the center function button on the display below SET.

# Settings

## Art-Net/sACN (Continued)

### Art-Net Universe:

- SET UNIVERSE NUMBER choose the universe you would like to join. Range from 0 to 15.
  - Once the universe has selected, press the center function button on the display below SET.

### Merge Mode:

- Last Take Preced
- High Take Preced

Gateway: Gateway: (Sends the Art-Net or sACN DMX data to the 5-Pin DMX Thru Connector)

### sACN Universe:

- SET sACN UNIVERSE NUMBER choose the universe you would like to set.
  - Select Next to input each digit of universe number. Range from 0 to 65000.
  - Once sACN Universe number has been selected, press the center function button on the display below SET.

### IP Mode:

- DHCP
- Art-Net 2.x.x.x
- Art-Net 10.x.x.x
- Manual
  - Set IP Address
  - Select Next to input each digit of IP Address number.
  - Once IP Address has been selected, press the center function button on the display below SET.

# Settings

## CRMX Settings

CRMX settings allows the user to select the DMX transmit/receive state.

### CRMX State

1. Press the right function button.
2. Rotate the top encoder knob to navigate to CRMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to CRMX STATE and press the top encoder knob to select.
4. Rotate the top encoder knob to navigate to select desired CRMX STATE and press the top encoder knob to select.

#### TX:

- Rotate the top encoder knob to navigate to TX and press the top encoder knob to select.
- Press the center function button on the display below LINK TX.
- Verify if TX is RF Linked.
- Link with other Receivers by pressing LINK TX
- DMX=OK if a DMX source is applied to the 5-Pin DMX Thru Connector

#### RX:

- Rotate the top encoder knob to navigate to RX and press the top encoder knob to select.
- VERIFY if RX is linked.
- If PAIRED=OK, then the unit is paired to a Transmitter
- If RF LINK=OK, then a paired Transmitter is within range and a Signal Strength is displayed (0-100%)
- If DMX=OK, then the unit is receiving CRMX Wireless DMX Data.
- To Pair with a different Transmitter, Press UNPAIR and link to this Receiver at the Transmitter.

# Settings

## CRMX Settings (Continued)

Off:

- Rotate the top encoder knob to navigate to OFF and press the top encoder knob to select.
- VERIFY if CRMX State is off.

## CRMX RX Quality

1. Press the right function button.
2. Rotate the top encoder knob to navigate to CRMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to CRMX RX Quality and press the top encoder knob to select.
  - Monitor CRMX reception.

DMX Transmit - if ON, then the incoming CRMX DMX data is sent to the 5-Pin DMX Thru Connector

1. Press the right function button.
2. Rotate the top encoder knob to navigate to CRMX SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to DMX TRANSMIT and press the top encoder knob to select.
4. Rotate the top encoder knob to navigate to select desired DMX TRANSMIT state and press the top encoder knob to select.
  - ON will enable DMX transmit state.
  - OFF will disable DMX transmit state.

# Settings

## Local Control

Local Control allows the user to control the fixture through the 2 encoders and set of 3 function buttons below the OLED display. PIXEL MODE is not accessible when using the dimmer manually. To learn about pixel see "Pixel" and "DMX Operation" sections.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to LOCAL CONTROL and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to COLOR MODE and press the top encoder knob to select.
4. Rotate the top encoder knob to select the setting for each Local Control menu option.
5. Once Local Control settings have been selected, press the top encoder knob to navigate back to the main screen.

# Settings

## Output Settings

Output Settings allow for the adjustment of the dimmer color space, pixel handling, and power limiting features. These settings apply both with local control and via DMX.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to OUTPUT SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to COLOR SPACE, DIMMING CURVES, PIXEL HANDLING, POWER LIMIT and press the top encoder knob to select.
4. Rotate the top encoder knob to select the setting for each Output Settings menu option.
5. Once Output Settings have been selected, press the top encoder knob to navigate back to the main screen.

### Color Space Options:

- REC 2020 (default) enables full color gamut of the fixture.
- Rec 709 limits color gamut to the Rec 709 color space.
- \* Some DMX modes override this setting.

### Dimming Curves:

- EXPONENTIAL
- LINEAR
- LOGARITHMIC
- S-CURVE

# Settings

## Output Settings (Continued)

### Pixel Handling Options:

- SET PIXEL QTY choose how many pixels you would like to control. The range is from 1 to 4 pixels for the LiteDimmer Spectrum AC/DC 200. The range is from 1 to 8 for the LiteDimmer Spectrum AC/DC 400.

### Power Limit Options:

- Set a limit for the total power the dimmer is able to consume. Range from FULL POWER to 5% of total dimmer wattage capacity.

# Settings

## Display Settings

Display Settings allow the user to control the OLED display screen's illuminated time. The display also allows users to select the screen rotation depending on the orientation of the dimmer.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to DISPLAY SETTINGS and press the top encode to select.
3. Rotate the top encoder knob to navigate to ILLUMINATION or ROTATION and press the top encode knob to select.
4. Rotate the top encoder knob to select the setting for each Display menu option.
5. Once Display settings have been selected, press the top encoder knob to navigate back to the main screen.

### Illumination Options:

- ALWAYS ON keeps the display illumination always on.
- OFF AFTER 30 SECS turns the display off after 30 seconds.

### Rotation Options:

- STANDARD display orientation is normal with the bottom of the display near the function buttons.
- UPSIDE DOWN display orientation is rotated 180° with the top of the display near the function buttons.

# Settings

## USB Functions - Updating Dimmer Firmware

USB Functions / Updating Dimmer Firmware allow the user to install /update the dimmer firmware.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to USB FUNCTIONS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to Dimmer FW Update and press the top encoder knob to select.
4. Insert USB-A\* device with firmware update into USB-A Port.
5. Press the center function button.
6. Rotate the top encoder knob to navigate to desired update file and press the top encoder knob to select.
7. Verify the desired update is shown on the OLED Screen.
8. Press the center function button.
9. The dimmer will reboot after the update is complete (*this may take several seconds*).
10. Verify the desired firmware is installed. (*see Dimmer Info in the Settings section*).

**WARNING:** Do not unplug the dimmer from power or remove the USB drive during the update process. Doing so may damage the dimmer.

\*To unlock all features of Spectrum OS 3.0, Dimmer and Pixels must be updated to the latest firmware.

\*A USB 1.0 or 2.0 flash drive with the maximum storage size of 32GB must be formatted using FAT 16 or FAT 32 file systems

# Settings

## **USB Functions- Updating Pixel Firmware** (*Dimmer must be connected to fixture to update pixel firmware*)

USB Functions/Updating Pixel Firmware allow the user to install/update the pixel engine firmware.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to USB FUNCTIONS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to Pixel FW Update and press the top encoder knob to select.
4. Insert USB-A\* device with firmware update into USB-A Port.
5. Rotate the top encoder knob to navigate to desired update file and press the top encoder knob to select.
6. Verify the desired update is shown on the OLED Screen.
7. Press the center function button.
8. Rotate the top encoder knob to input desired pixel number and press the top encoder knob to select.
9. Press the center function button.
10. Verify the desired update is shown on the OLED Screen.
11. Press the center function button.
12. Press the left function button
13. Repeat steps #9-#13 until each pixel is updated.

**WARNING:** Do not unplug the dimmer or fixture from power or remove the USB drive during the update process. Doing so may damage the dimmer.

\*To unlock all features of Spectrum OS 3.1, Dimmer and Pixels must be updated to the latest firmware.

\*A USB 1.0 or 2.0 flash drive with the maximum storage size of 32GB must be formatted using FAT 16 or FAT 32 file systems.

# Settings

**USB Functions- Save/Load Settings** allows for the saving or loading of all of the settings for the ballast (cloning) using a USB flash drive

1. Press the right function button.
2. Rotate the top encoder knob to navigate to USB FUNCTIONS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate SAVE/LOAD SETTINGS and press the top encoder knob to select.
4. Insert USB-A\* device with firmware update into USB-A Port.

Save:

1. Rotate the top encoder knob to navigate to SAVE SETTINGS and press the top encoder knob

Load:

1. Rotate the top encoder knob to navigate to LOAD SETTINGS and press the top encoder knob
2. Rotate the top encoder knob to select the desired SETTINGS FILE and press the top encoder knob.

# Settings

**USB Functions- Save Service Log** *allows for saving the Ballast Service Log to a USB flash drive*

1. Press the right function button.
2. Rotate the top encoder knob to navigate to USB FUNCTIONS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate SAVE SERVICE LOG and press the top encoder knob to select.

# Settings

**USB Functions- Format USB Drive** will format a USB drive to FAT16 or FAT32 as appropriate for use in the AC/DC200, AC/DC400 or AC600. This operation also copies FW files to the newly formatted drive, so that it can be used to update other ballasts.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to USB FUNCTIONS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to FORMAT USB DRIVE and press the top encoder knob to select.

# Settings

## Network Settings

Network Settings allow the user to select and verify network status, addresses, and information.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to NETWORK SETTINGS and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to CONNECTION STATUS, IP ADDRESS, IP MODE, Subnet Mask, Gateway, DNS1, DNS2, MAC ADDRESS, or NETWORK DEVICE NAME and press the left encode knob to select.

### Connection Status:

- Rotate the top encoder knob to navigate to CONNECTION STATUS and press the top encoder knob to select.
- VERIFY if CONNECTION STATUS is correct.

### IP Address:

- Rotate the top encoder knob to navigate to IP ADDRESS and press the top encoder knob to select.
- Rotate the top encoder knob to input desired IP ADDRESS.
- Verify IP ADDRESS is correct.
- Press the center function button.

# Settings

## Network Settings (Continued)

### IP Mode:

- Rotate the top encoder knob to navigate to IP MODE and press the top encoder knob to select.
- Rotate the top encoder knob to navigate to select desired IP MODE and press the top encoder knob to select.
  - DHCP
  - Art-Net 2.x.x.x
  - Art-Net 10.x.x.x
  - Manual IP Mode input:
    - Rotate the top encoder knob to navigate to Manual and press the top encoder knob to select.
    - Rotate the top encoder knob to input desired IP Mode
    - Verify IP Mode is correct.
    - Press the center function button.

### IP Subnet Mask:

- Rotate the top encoder knob to navigate to SUBNET MASK and press the top encoder knob to select.
- Rotate the top encoder knob to input desired IP SUBNET MASK.
- Verify IP SUBNET MASK is correct.
- Press the center function button.

# Settings

## Network Settings (Continued)

### IP Gateway:

- Rotate the top encoder knob to navigate to GATEWAY and press the top encoder knob to select.
- Rotate the top encoder knob to input desired IP GATEWAY.
- Verify IP GATEWAY is correct.
- Press the center function button.

### IP DNS1:

- Rotate the top encoder knob to navigate to IP DNS1 and press the top encoder knob to select.
- Rotate the top encoder knob to input desired IP DNS1.
- Verify IP DNS1 is correct.
- Press the center function button.

### IP DNS2:

- Rotate the top encoder knob to navigate to IP DNS2 and press the top encoder knob to select. .
- Rotate the top encoder knob to input desired IP DNS2.
- Verify IP DNS2 is correct.
- Press the center function button.

# Settings

## Network Settings (Continued)

Observe MAC ADDRESS:

- Rotate the top encoder knob to navigate to MAC ADDRESS and press the top encoder knob to select.
- Verify IP MAC ADDRESS is correct.

Observe NETWORK DEVICE NAME:

- Rotate the top encoder knob to navigate to NETWORK DEVICE NAME and press the top encoder knob to select.
- Verify IP NETWORK DEVICE NAME is correct.

# Settings

## System Info

System Info allows the user to view dimmer information such as System status, Dimmer Info, Pixel Info, Help, and System Copyright.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to SYSTEM STATUS, DIMMER INFO, PIXEL INFO, HELP, AND SYSTEM COPYRIGHT and press the top encode knob to select.
4. Rotate the top encoder knob to select the setting for each DIMMER INFO menu option.
5. Once DIMMER INFO settings have been selected, press the top encoder knob to navigate back to the main screen.

# Settings

## System Info-

### System Status

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to SYSTEM STATUS and press the top encode knob to select.
4. SYSTEM STATUS will appear.
5. Press the top encoder knob to navigate back to the main screen.

### Dimmer Info

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to DIMMER INFO and press the top encode knob to select.
4. Rotate the top encoder knob to navigate to DIMMER TEMPERATURE, DIMMER POWER INFO, RDM INFO, FW & HW VERS and press the top encode knob to select and to check the status of the selected DIMMER INFO option
5. Press the top encoder knob to navigate back to the main screen.
  - DIMMER TEMPERATURE displays the PCB temperature and power supply temperature in degrees Celsius.
  - DIMMER POWER INFO displays the dimmers wattage, input voltage, and amperage.
  - RDM INFO displays the RDM ID and RDM device label.
  - FW & HW VERS; FW displays the dimmer's firmware version and date, HW displays the dimmer's hardware version

# Settings

## System Info

Pixel Info

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to PIXEL INFO and press the top encode knob to select.
4. Rotate the top encoder knob to navigate to FW VERSIONS and press the top encode knob to select and check the status of FW VERSIONS.
6. Press the top encoder knob to navigate back to the main screen.

# Settings

## System Info

### Help

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to HELP and press the top encode knob to select.
4. Scan QR code to link to a help page
6. Press the top encoder knob to navigate back to the main screen.

- HELP displays a QR code that links to a website. Scan this QR code with your phone to be directed to a help page.

### Copyright

1. Press the right function button.
2. Rotate the top encoder knob to navigate to System Info and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to HELP and press the top encode knob to select.
4. Scan QR code to link to a help page
6. Press the top encoder knob to navigate back to the main screen.

- DIMMER COPYRIGHT displays copyright information related to the dimmer.

# Settings

## Utilities

Utilities allow the user to assign If-pixels and to set and test If-pixels.

1. Press right function button.
2. Rotate the top encoder knob to navigate to UTILITIES and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to select TEST PATTERN or ASSIGN PIXEL # and press the top encoder knob to select.

### Test Pattern

- Rotate the top encoder knob to navigate to TEST PATTERN and press the top encoder knob to select.
- Rotate the top and right encoder knobs to set desired speed and intensity.
- Press the left and right function buttons to set desired pixel and color.
- Press the center function button on the display below START to begin test.
- Press the center function button on the display below STOP to stop test.

### Assign Pixel #

- Rotate the top encoder knob to navigate to ASSIGN PIXEL # and press the top encoder knob to select..
- Rotate the top encoder knob to input desired pixel number.
- Press the center function button on the display below START.
- Press button on fixture pixel. (may take several seconds to assign)
- Verify desired pixel number has been assigned to pixel.

# Settings

## Utilities - Set the Real Time

Allows for the setting of the clock which is used for timestamping events and files.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to UTILITIES and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate SET REAL TIME CLOCK and press the top encoder knob to select.

# Settings

## Utilities - Clear Service Logs

Clears the Service Logs (the Service Logs are not cleared during a Factory Reset)

1. Press the right function button.
2. Rotate the top encoder knob to navigate to UTILITIES and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate CLEAR SERVICE LOGS and press the top encoder knob to select.

# Settings

## Factory Reset

Reset will reset all settings, modes, profiles, and DMX selections to the factory defaults. (Service Log is not Cleared. See Utilities)

1. Press the right function button.
2. Rotate the top encoder knob to navigate to FACTORY RESET and press the top encoder knob to select.
3. Press the right function to select, or press the left function to cancel.
4. Once factory reset is complete, press the top encoder knob to navigate back to the main screen.

# Functions

## Setting Tint in True Hybrid and Spectrum Modes

Pressing the Tint button allows for  $\pm$ Magenta/Green Color Correction. There are 100 steps of Green (+) and 100 steps of Magenta (-) correction from neutral (0). When the desired Tint is selected, press DONE to return to the previous screen or simply remain at the screen that shows all parameters. Once Tint has been set, the value appears on the screen.

1. Press the bottom encoder knob.
2. Press the top encoder knob to navigate to TINT
3. Rotate the top encoder knob to select TINT level.
4. Once the TINT is set, press the bottom encoder knob to navigate back to the main screen.

# Functions

## Setting x,y Coordinates

x, y Coordinate Color Mode allows for precise color picking by selecting x,y coordinates.

1. Press the right function button.
2. Rotate the top encoder knob to navigate to LOCAL CONTROL and press the top encoder knob to select.
3. Rotate the top encoder knob to navigate to COLOR MODE and press the top encoder knob to select.
4. Rotate the top encoder knob to select the “x,y Coord” and press the top encoder knob to select.
5. Press the top encoder knob to navigate to the Local Control x,y screen

## Local Control x,y Screen:

1. Rotate the top encoder knob to change the x coordinate and press the top encoder knob to select.
2. Selection automatically advances to the y coordinate.
2. Rotate the top encoder knob to change the y coordinate and press the top encoder knob to select.
3. Once the y coordinate is set, rotate the bottom encoder knob to adjust the intensity.

## x,y Presets:

1. Press the center function button to activate presets. (preloaded with 4 CCT values; 3200K, 4500K, 5600K, and 6000K)
2. Rotate the top encoder knob to navigate through the factory presets.
3. Press the center function button to activate the selected preset.

*To save a new x,y preset see DMX Settings, Load-In Presets.*

*Note: Pixel mode available in DMX only.*

# Functions

## Audition

Audition, available in local modes, allows the operator to fade the output OFF and then back ON, allowing for previewing lighting.

1. Press the bottom encoder knob.
2. Press the center function button below AUD (on the OLED display) to active and hold as required. To inactive simply release.

# Functions

## Parameter Presets

Parameter Presets exist for each main parameter, CCT, Accent Color, and Saturation. Six factories presets are available at your fingertips. Easily invoke the feature by short-pressing the top screen-side button. Three of the most common presets are offered on the lower line of the display and a slight turn of the top encoder shows additional options. A short-press of the top encoder cycles through parameters. In all, that are 216 possible combinations that can be customized to match your workflow. To overwrite any factory preset, set the parameter to the desired value, then long-press the associated screen-side button.

1. Press the bottom encoder knob .
2. Press the left function button on the display below PRESETS to invoke Parameter Presets. Turn the left encoder to show additional options.
3. 6 factory presets are available for each main parameter (CCT, ACCENT and SAT).
4. Manually exit Parameter Preset screen by simply pressing on left encoder. Screen auto-exits after 10 seconds.

# Functions

## Cue Function

Cue Function operates like global-presets with a dedicated playback screen. This feature consists of three “looks” including two standard looks and one momentary look.

1. Press the bottom encoder knob to select.
2. Set the color you would like to store in a cue.
3. Long-press the bottom encoder until the CUE screen appears.
4. To store a cue, long-press any one of the function buttons and the left encoder simultaneously.
5. To recall a cue, short press any of the cue function buttons.
6. The number (3) cue is a momentary cue recall.
7. To return to the color mode screen, short press the bottom encoder.

# Error Codes

## Pixel Faults

Com Flt: Faulty Dimmer to Pixel communications

Over A: Pixel current exceeds circuit rating. (1.8A)

Undr VW: Pixel supply voltage nears low voltage circuit rating. (44V)

Over VW: Pixel supply voltage approaches high voltage limit. (51V)

Over VF: Pixel supply voltage exceeds high voltage limit. (54V)

**Dimmer Faults:** *(Dimmer faults and warning may trigger Red Status Led flash sequences on Dimmer front panel)*

FLT: Fuse Comms Fail - Fuse related communications within the Dimmer has faulted. // 6 blink sequence

FLT: Undervolts - Dimmer internal supply voltage is below the low voltage circuit rating. // 2 blink sequence

FLT: Overvolts Warn - Dimmer internal supply voltage approaches high voltage circuit rating.

FLT: Overvolts - Dimmer internal supply voltage is below the low voltage circuit rating. // 2 blink sequence

FLT: Temperature Warn - Dimmer internal temperature approaches high rating. // 1 blink sequence

FLT: Over Temperature - Dimmer internal temperature exceeds high rating. // SOLID ON indicator

FLT: Overcurrent - Dimmer output current exceeds rating. // 2 blink sequence

FLT: Comms - Dimmer to Pixel communications fault. // 1 blink sequence

FLT: Fuse Fail - Dimmer internal fuse(s) have failed. // R7 blink sequence

FLT: Misc fault - // 3,4 blink sequence

# Specifications

## LiteDimmer Spectrum AC/DC 200 Technical Specifications

Input Voltage: 100 – 240V AC, 50/60 Hz

Input Current: 3A

Output Voltage: 48V DC

Output Current: 5A

Data Connectors: USB-A, 2x EtherCon, 5-Pin DMX In and Thru, Internal CRMX Antenna

Data Connectors: PDX

Mains Power Connectors: powerCON TRUE1 TOP In and Thru (Edison / Schuko / Bare Ends cables available)

Control: DMX, RDM, CRMX, Art-Net, sACN

Switches: On-board On/Off Switch

Power: 250W Maximum

IP Rating: IP20

Weight: 6.8 lbs (3.1 kg)

Dimensions: Height: 4.1 in (104.4 mm)

Width: 7.3 in (185 mm)

Length: 13.3 in (338.6 mm)

Max Operating Temperature: 122°F (50°C)

Mounting: kMount (truss & stand mounts available)

Certifications: ETL, CE, UKCA, FCC (certification pending)

# Specifications

## LiteDimmer Spectrum AC/DC 400 Technical Specifications

Input Voltage: 100 – 240V AC, 50/60 Hz

Input Current: 4.5A

Output Voltage: 48V DC

Output Current: 9.25A

Data Connectors: USB-A, 2x EtherCon, 5-Pin DMX In and Thru, Internal CRMX Antenna

Data Connectors: PDX

Mains Power Connectors: powerCON TRUE1 TOP In and Thru (Edison / Schuko / Bare Ends cables available)

Control: DMX, RDM, CRMX, Art-Net, sACN

Switches: On-board On/Off Switch

Power: 450W Maximum

IP Rating: IP20

Weight: 7 lbs (3.2 kg)

Dimensions:

Height: 4.1 in (104.4 mm)

Width: 7.3 in (185 mm)

Length: 13.3 in (338.6 mm)

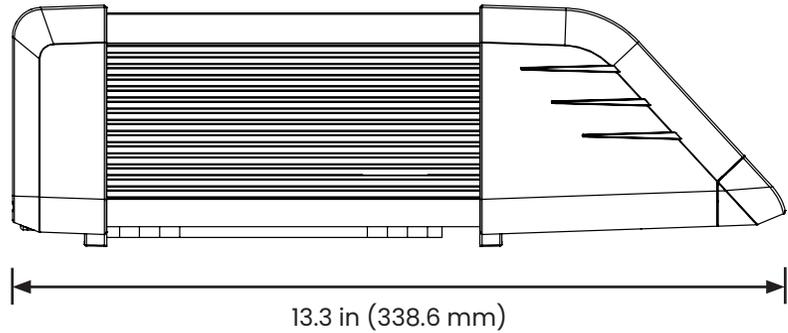
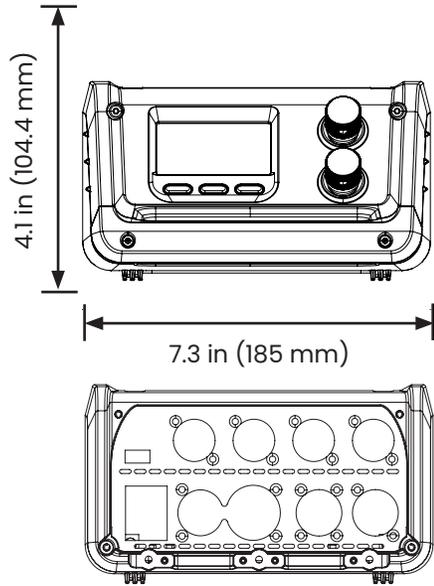
Max Operating Temperature: 122°F (50°C)

Mounting: kMount (truss & stand mounts available)

Certifications: ETL, CE, UKCA, FCC (certification pending)

# Specifications

## LiteDimmer Spectrum AC/DC 200 and LiteDimmer Spectrum AC/DC 400 Dimensions



## Maintenance

1. It is recommended to perform a factory reset on the LiteDimmer Spectrum AC/DC 200 at the completion of each job or rental. (*Please see FACTORY RESET in the SETTINGS section*).
2. Check for damage, including but not limited to; a cracked OLED screen, missing or loose encoders, bent or broken connector/pins.
3. Product surface can be cleaned by lightly spraying a mild detergent onto a soft cloth and wiping the product.

## Help

### Need Assistance

Pressing the function button below HELP on the Welcome Screen provides access to a QR code that will link your smart phone or tablet to the Spectrum support page on the LiteGear website. Here you will find resources to answer many common questions. If you feel you need further assistance, you can always call LiteGear customer experience at (818) 358-8542 Monday to Friday from 8:00 am to 4:30 pm PST.

# Certifications



**Intertek**  
5023376

**CONFORMS TO UL STD1573  
CERTIFIED TO CSA STD C22.2#166**



**CONTAINS FCC ID  
XRSTIMOMWAN209  
MODEL: 800-8107**

**THIS DEVICE COMPLIES WITH PART 15  
OF THE FCC RULES. OPERATION IS  
SUBJECT TO THE FOLLOWING  
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.**



For additional information on your Auroris and LiteDimmer Spectrum AC/DC 200 & 400, visit us at [litegear.com/litemat-spectrum](http://litegear.com/litemat-spectrum)