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LIGHTING

HYDRA SERIES - AIP-200
IP65 LED LUMINAIRE
USER MANUAL

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Preface

The document provides basic information on installation and operational instructions for a quali-
fied, trained installer. These instructions provide information for the following product:

   AIP-200-RGBL-B

Additional product information can be found on our web site at
www.altmanlighting.com or by scanning the QR code to the right.

Have a question regarding this manual?

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and/or updates to this manual, please visit the Altman Lighting web site at www.altmanlighting.com or contact your nearest Altman
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naechsten Altman Lighting Niederlassung aufzunehmen.

Should you have a suggestion or question regarding your Altman Lighting product, we would love to hear from you.

You can reach us at:

<div align="center">

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1400 East 66th Ave.
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of Altman Lighting Its sole purpose is to provide the user with conceptual information on the equipment mentioned. The use of this
document for all other purposes is specifically prohibited.

Our Commitment

Altman Lighting continually engages in research related to product improvement. New materials, production methods and design
refinements are introduced into existing products without notice as a routine expression of the philosophy. For this reason any current
Altman Lighting product may differ in some respect from its published description, but will always equal or exceed the original design
specifications unless otherwise noted.

Important Information

Product Safety Notices

When using electrical equipment, basic safety precautions should always be followed including the following:

1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
2. Do not mount near gas or electric heaters.
3. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
4. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
5. Do not use this equipment for other than intended use.
6. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.

Warnings

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

WARNING: This Lighting Fixture IS NOT for residential installation or use.

WARNING: The structure where fixture(s) is to be mounted must be capable of supporting the weight of the fixture and its accessories. This fixture is for temporary, portable mounting only.

WARNING: The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE.

CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR. CONSULTER UN ÉLECTRICIEN QUALIFIÉ POUR VOUS ASSURER QUE LES CONDUCTEURS DE LA DÉRIVATION SONT ADÉQUATS.

FCC Notice

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.

Altman Lighting Product Warranty

Warranty Terms

Altman Lighting, Inc., a subsidiary of Altman Stage Lighting Company, Inc., herein referred to as Altman, warrants each new product (except for spare parts or products Altman does not manufacture) for a period of FIVE (5) years and ONE (1) day from date of shipment to correct by repair or replacement any part defect due to faulty material or workmanship.

Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, including, but not limited to, lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc.; Altman will grant the same warranty given Altman by its vendors. Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others. This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others.

This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

Warranty Service

The customer must receive a Return Material Authorization (RMA) number prior to return, return shipment must be visibly marked with the RMA number and the product must be returned to the factory at:

<div align="center">

1400 East. 66th Avenue
Denver, CO 80229 USA
+1-303-500-7072
support@altmanlighting.com

</div>

The return must be within FORTY-FIVE (45) days of receiving the RMA from Altman. Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, such as lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc. Altman will grant the same warranty given Altman by its vendors.

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Table Of Contents

Product Overview

Components

AIP-200-RGBL-B (front)   **AIP-200-RGBL-B (back)**   **AIP-200-RGBL-B with Accessory Holder**

Accessories

Contact your Authorized Altman Lighting Dealer for price and availability of all accessories for AIP-200. Additional information can be found on the Altman Lighting web site at www.altmanlighting.com.

PART NUMBER	DESCRIPTION
6-BD-4	Barndoor
AIP200-FF	Spare Face Frame with Screws
6-SN	Tope Hat / Snoot
6-CFB	Color Frame
SC-36-BK	36-Inch Black Safety Cable with Spring Clip
SS-SC-40-BK	40-Inch Stainless Steel Safety Cable with Spring Clip
510	Pipe Clamp
SPK-PBG-12-5	Seetronic PowerKON (IP65) to Edison Male, 5-foot 20A power input cable **
SPK-2P&G-12-5	5' 20 Amp Seetronic PowerKON from Stage Pin Connector Male **
SPK-TLG-12-5	5' 20 Amp Seetronic PowerKON from Twist Lock GTL Male **
SPKJ-12-5	5' 20 Amp Seetronic PowerKON In to PowerCON Out Feed Thru Jumper
SPKJ-12-10	10' 20 Amp Seetronic PowerKON In to PowerCON Out Feed Thru Jumper
SPKJ-12-15	15' 20 Amp Seetronic PowerKON In to PowerCON Out Feed Thru Jumper
SPKJ-12-25	25' 20 Amp Seetronic PowerKON In to PowerCON Out Feed Thru Jumper
SPK-BARE-12-5	5' 20A Seetronic PowerKon to Bare End
SPK-BARE-12-10	10' 20A Seetronic PowerKON to Bare End
SPK-BARE-12-25	25' 20A Seetronic PowerKon to Bare End

*** - The AIP-200 is an IP65 rated Par that offers IP65 rated connections at the luminaire, Accessories offered for this product Include male end wire plugging terminations of Edison (5-15P), Twist-Lock (GTL), and Pin (2P&G) plugs. These connector types are not IP-65 rated and will require protection from ingress when used in wet locations.*

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Installation And Setup

Accessory Holder

Installation of the Accessory Holder can be done with simple hand tools.

The Accessory Holder kit includes the following:

Part #: AIP200-FF
- Accessory ring
- QTY 4: M4 x 6mm screws
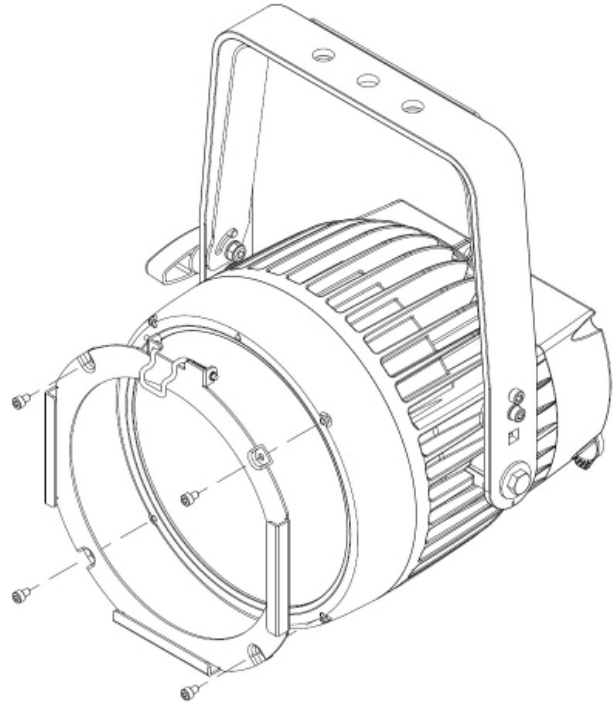
NOTE: AIP-200 is rated to IP65 only when used with suitably rated cables and connectors. When used outside or in wet environments, ensure that power and data connections are rated and designed to mate with the supplied AIP-200 cabling.

NOTE: A safety cable (not supplied with unit, sold separately) should be used and may be required by local and/or national codes when hanging this luminaire.

Power Requirements

Before performing any field wiring, refer to and read the warnings contained in "Important Information" on page 4.

WARNING! AIP-200 should be connected to a constant circuit or a relay device. It should never be connected to a dimmer or circuit controlled by a dimmer.

WARNING! The maximum allowable input current is 16 Amps. Do not overload circuits! Luminaires must be supplied by a branch circuit protected by a maximum 16 Amp circuit protector. Doit être alimenté par un circuit de dérivation protégé par un maximum de 16 ampères circuit protecteur. Ne surchargez pas les circuits!

WARNING! When using the daisy-chain connection method, only connect your AIP-200 RGBL Par LED Luminaire to AC Output Connection of other AIP-200 RGBL Par LED Luminaires. DO NOT CONNECT OTHER TYPES OF LUMINAIRES OR DEVICES! The maximum allowable of number of AIP-200 RGBL Par LED Luminaires that can be daisy-chained on one power feed should not exceed the first fixture's 16 Amp power rating.

Connecting Power

Units are powered via an AC input cable (sold separately, refer to "Accessories" on page 6 for optional AC input cables) from 100 to 240VAC, 50/60Hz and draw approximately 200 Watts of power. The table below outlines the wire colors and their purpose.

WIRE COLOR	PURPOSE
Brown or Black	Main / (L)ine
Blue or White	(N)eutral
Gren/Yellow or Green	Ground / Earth

The AIP-200 Luminaire must be connected to and properly grounded to an viable earth ground.

AIP-200 utilizes Seetronic PowerKon 16 amp IP65 rated connectors.
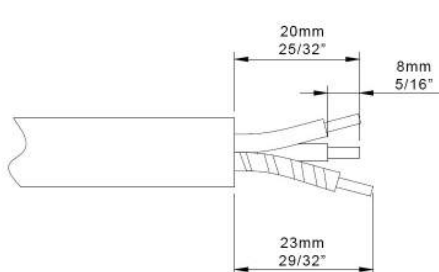
Recommended stripping lengths   Male Connector   Female Connector
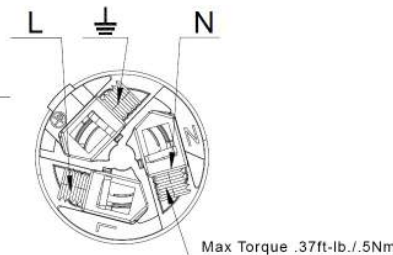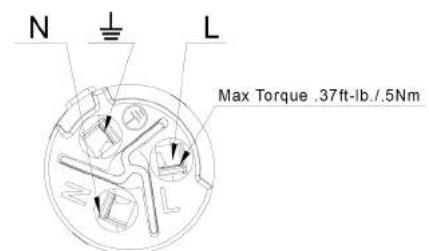
Connector Wiring

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Daisy-Chaining Units

When daisy-chaining units, do not exceed the number of units as shown in the table below. Also, please make sure to read and understood the warnings contained in this section of the manual ("Power Connection Warnings".)

AC Power Input ── ── AC Power Output

DMX Input ── ── DMX Output

VOLTAGE	Max Qty. / Circuit
120VAC	8
230VAC	15

Please ensure that all water tight caps for power and data are installed when not in use.

Connecting DMX

The AIP-200 Luminaire offers two DMX512 connections. One for DMX Input (from a DMX source) and one DMX throughput (out). Basic DMX512 installation consists of connecting multiple DMX controlled AIP-200 Luminaire together (up to 32 Total devices per DMX string) in "daisy-chain" fashion. A cable runs from the DMX512 control source to the DMX INPUT connection on the first luminaire. From the DMX OUTPUT of the luminaire another cable runs to the DMX IN connector on the next luminaire (or DMX512 device to be controlled).

At the end of each DMX Daisy chain, it is highly recommended that a DMX TERMINATOR (Altman Lighting part number DMX-5-TERM) is installed on the last luminaire (or device) in the chain.

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522).

USITT Contact Information: www.usitt.org

DMX - XLR Connectors

The table to the right shows the pin-out and corresponding DMX signals for a 5-pin XLR connector.

Common (Drain)	Pin 1
DMX -	Pin 2
DMX +	Pin 3
Not Used	Pin 4
Not Used	Pin 5

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Mounting

The AIP-200 is simple to install and position where work lighting is needed. When mounting the AIP-200 Light, you must follow all national and local codes for safe installation and use. Unit weight, without accessories is 13.80 pounds / 6.26 kilograms.

9.01 IN /
229 MM

Ø0.39 IN /
10 MM

13.23 IN /
336 MM

3.77 IN /
96 MM

8.70 IN /
221 MM

Ø6.73 IN /
171MM

4.84 IN /
123 MM

9.72 IN /
247 MM

11.22 IN /
285 MM

7.48 IN /
190 MM

2.95 IN /
75 MM

3-Ø0.51 IN /
13 MM

7.59 IN /
193 MM

7.71 IN /
196 MM

Ø8.46 IN
/ 215 MM
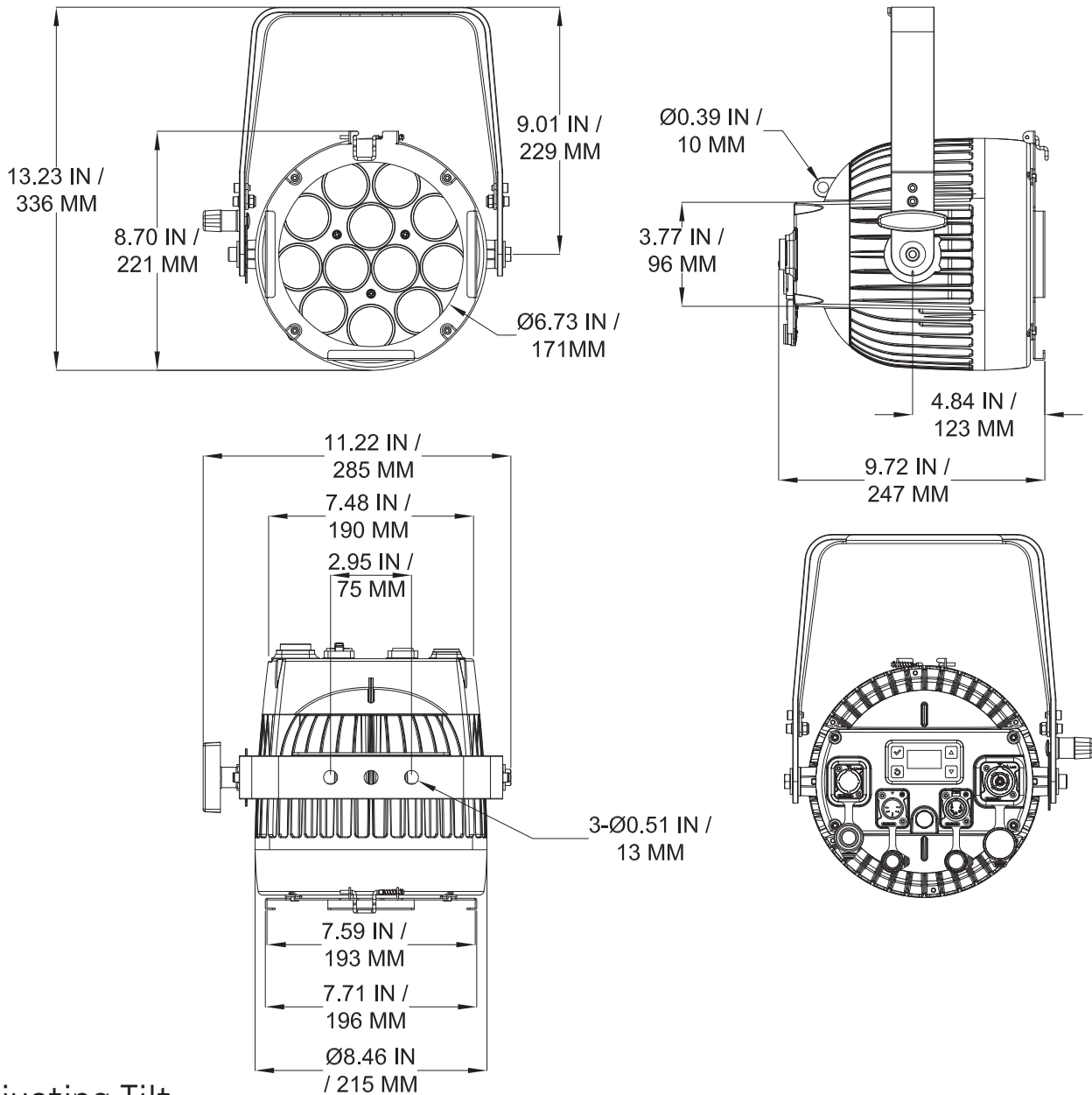
Adjusting Tilt

The AIP-200 can have its tilt adjusted via the lock off handles on the side of the luminaire. Simple loosen (but DO NOT REMOVE) the handle so the unit is able to swing up and down. Set tilt as desired and re-tighten the two lock off handle so the unit does not move from the set position.

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Installing C-Clamp

If you are planning on using a c-clamp to mount the unit, should be installed as shown. Only use the hardware supplied with the c-clamp.

NOTE: The AIP-200-RGBL-B, AIP-200-RGBL-B-PCED and AP-200-RGBL-B-PCBE do not include a C-Clamp. This must be ordered separately.

C-Clamp

AIP-200 Yoke

1/2-inch (13mm) Mounting Hole

1/2-inch Flat Washer

1/2-inch Lock Washer
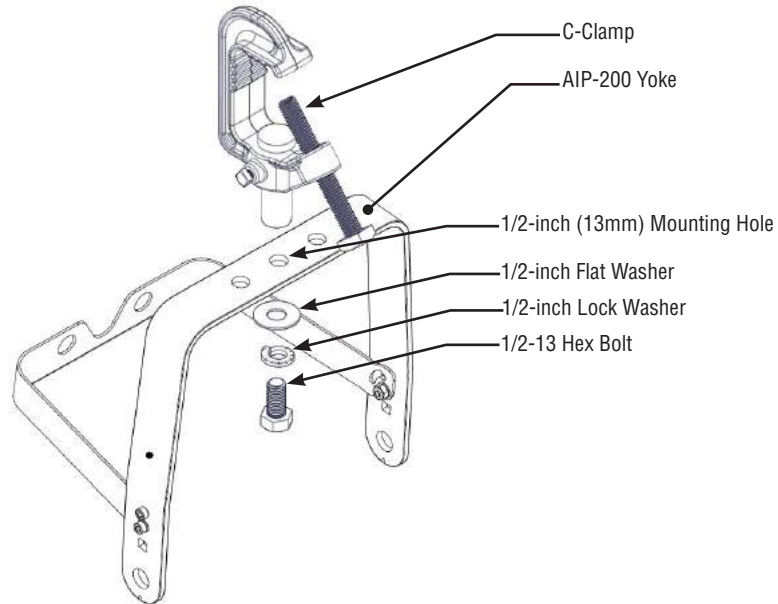
1/2-13 Hex Bolt

To Install the C-clamp:

1. With luminaire on a flat, steady surface, position yoke assembly for easy access as illustrated above.

2. Place on 1/2-13 hex bolt, in this order, the 1/2-inch lock washer and then the 1/2-inch flat washer.

3. Insert bolt into hole on yoke assembly.

4. Position c-clamp over bolt and thread bolt into c-clamp.

5. Tighten bolt.

Installing Safety Cable

The safety cable should be installed in accordance to local and national codes.

NOTE: The safety cable should be used and may be required by local and/or national codes when hanging this luminaire. The mounting structure must be capable of supporting the weight of the fixture, lens, cabling, any accessories, etc.

NOTE: The AIP-200-RGBL-B, AIP-200-RGBL-B-PCED and AP-200-RGBL-B-PCBE do not include a C-Clamp or safety cable. These must be ordered separately.

Safety Cable Anchor Point

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Menu System

The AIP-200 Par LED Luminaire has an on-board menu system that allow users to set up the luminaire for standalone operation, control via DMX, or control a variety of luminaire features. This section will cover the on-board menu system.

The unit has a LCD display that users can use to see and set various parameters for luminaire operation. This section will review how to access these settings.

The menu system Home Screen can be accessed at anytime the luminaire is powered. Simply press the Back / Escape button.

When the luminaire is powered, a QR Code embedded in the software can be displayed (as shown in Figure 5) when pressing the BACK and DOWN arrow buttons simultaneously for 5 seconds.

The Lock icon is shown in the top right of the screen. When present, buttons will not work. Hold the Back/ Escape button for 3 seconds to lock or unlock AIP-200.

up arrow + down arrow held for 3 seconds will lock and unlock fixture
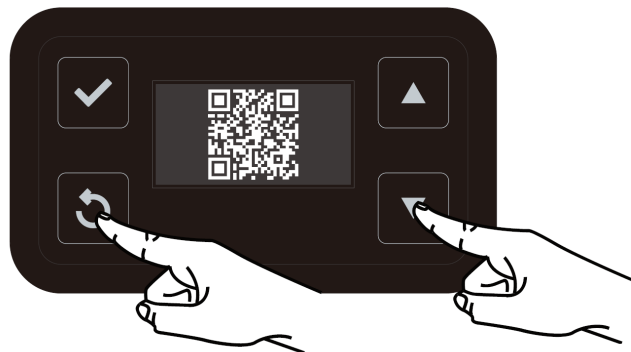
This QR Code can be used to access the AIP-200 RGBL Par LED Luminaire product web page using a smart phone (the smart phone must have a QR Code reader application, by others). On the product web page, you will find the latest available information (this manual, product specification sheet, etc.). Pressing the ESC button will exit this screen.

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Main Menu

There are 15 different options / functions available in the main menu. These are:

1. DMX Address	4. Power Limit	8. Color Calibration	12. Manual Mode
2. Modes	5. Power Up Action	9. LCD Timeout	13. Zoom Set
2. Dimmer Curves	6. PWM Frequency	10. Hours Reset	14. Zoom Mode
3. Loss of DMX action	7. Tungsten Simulation	11. Status	15. Strobe

The keypad and display can be locked. Pressing and holding both the UP and DOWN buttons at the same time for 2 seconds will lock the keypad. Pressing and holding escape for 2 seconds will unlock the keypad.

DMX Address - Setting DMX address from the Home Screen

Step 1 - Navigate to **DMX Adr.** in the menu.
Step 2 - Press Enter.

Step 3 - Press up or down buttons until the required address is reached.
Step 4 - Press Enter.

Note the number of slots that the luminaire is using in order to avoid a DMX address overrun or DMX overlap with other luminaires in the chain. Refer to DMX Modes

Modes - DMX Modes

The AIP-200 Par is capable of operating in 8 DMX modes or personalities. The Modes menu allows users to select which DMX map the luminaire will operate. For further information on modes of operation and mapping, refer to "DMX Mapping and Control" on page 18.

The DMX mapping options are:
- RGBL 16-bit (15 Channels)
- RGBL 8-bit (10 Channels) (Default)
- CMY 16-bit (13 Channels)
- CMY 8-bit (9 Channels)
- HSIC (10 Channels)
- RGB (5 Channels)
- Compact Mode (6 Channels)
- Compact Zoom Mode (7 Channels)

Step 1 - Navigate to **MODES** in the menu.
Step 2 - Press Enter.
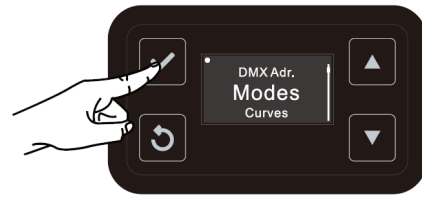
Step 1 - Press up or down buttons until the required mode is reached.
Step 2 - Press Enter.
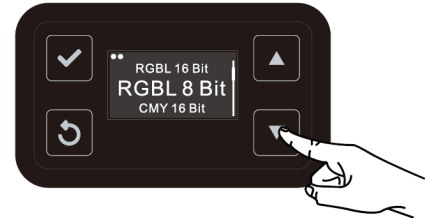
Dimming Curves

Step 1 - Navigate to **Curves** in the menu.
Step 2 - Press Enter.

3 dimming curves are available. The options are:

Linear - When set to Linear, the dimming curve is in direct relationship to the DMX value. For example, if the DMX value of the DMX slider is at 25% of its range, then the signal to the luminaire (and its output) will also be at 25%. (Default)
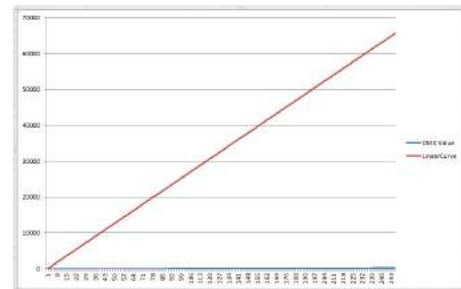
Linear

Incandescent: When set to Incandescent, the dimming curve, (also called a logarithmic curve by some manufacturers), sets the luminaire to mimic a dimming effect that is perceived as linear (naturally following an incandescent lamp fade).
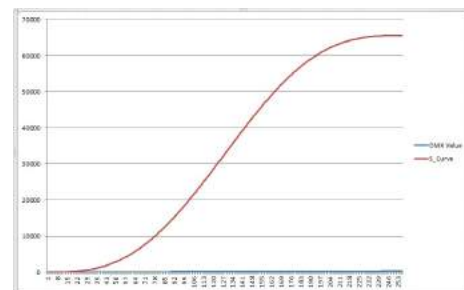
Incandescent

Standard: When set to Standard, the dimming curve (also called Square by some manufacturers) results in a dimming effect that follows a slow or soft bottom-end response and follows a linear line at the top end.

Standard

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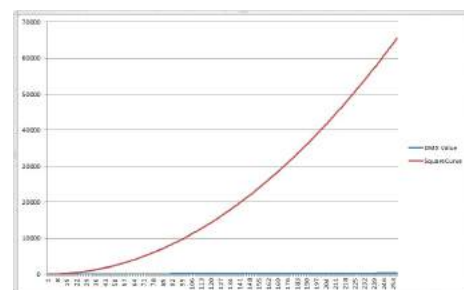
Each dimming curve has a different low-end and high-end set point. If luminaries are set to different dimming curves the luminaires will react very differently. To ensure consistent dimming between luminaires, please set all AIP-200 Par Luminaires to the same dimming curve.

Loss of DMX action

Step 1 - Navigate to **No DMX** in the menu.
Step 2 - Press Enter.

3 options are available:
- Off (turn the luminaire off - no light output)
- Last Hold (hold the last look before signal was lost). Note, if DMX is lost and the luminaire is at zero intensity (no output), it will remain (hold) at zero intensity.
- Power Up Preset - (turns on the Power up Preset)

Power Limit - Maximum Power Limit

Step 1 - Navigate to **Power Limit** in the menu.
Step 2 - Press Enter.

A setting from 1-100% of maximum can be set. The AIP-200 will not utilize more than the upper threshold of power set here.

10%	20%	30%	40%	50%	60%	70%	80%	90%	100%*
20W	40W	60W	80W	100W	120W	140W	160W	180W	200W

* - Default

Power Up Action - Start-Up Sequence

Step 1 - Navigate to **Power Up** in the menu.
Step 2 - Press Enter.

3 options are available:

Preset:
- Last Status - The luminaire will recall its last state

- Preset (1-20) - The luminaire will replay one of the programmable presets, please refer to the Contro section on page 31.

- Color Filter - Selects one of 43 colors pre-programmed in the luminaire, please refer to the Control section on page 31.

Fade Time:
- 0 - 5 minutes

Pulse Width Modulation Frequency (Dimming Engine Speed)

Step 1 - Navigate to **Frequency** in the menu.
Step 2 - Press Enter.

Various PWM speeds are available from 600Hz - 25kHz to provide flexibility for top quality dimming and flicker free operation for camera.

8 options are available:

600 Hz	1.2 kHz	2.4 kHz*	4.8 kHZ	9.6 kHz	16 kHz	20 kHz	25 kHz

* - Default

Higher PWM rates reduce fading performance. This can affect the smoothness, color-mix, or both when dimming.

Tungsten Dimming Simulation (Amber Shift)

Step 1 - Navigate to **Tungsten Sim** in the menu.
Step 2 - Press Enter.

This function simulates the natural color shift which occurs when a tungsten filament lamp is switched off.

6 options are available:

Off *	750W	1000W	1200W	2000W	2500W

* - Default

Color Calibration

Step 1 - Navigate to **Color Cal.** in the menu.
Step 2 - Press Enter.

Calibration (when turned on) sets the output to the factory setting for consistent colors between luminaires. The output of the luminaire is reduced. When Calibration is turned off (factory default), the luminaire's output is not reduced. For full output of the luminaire turn Calibration off.

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LCD Display Timeout

Step 1 - Navigate to **LCD Off** in the menu.
Step 2 - Press Enter.

Screen Off Time will set an internal timer to turn off the backlight to the LCD display and the status LED indicators will dim when the backlight turns off. The setting options are:

On	5 Seconds	10 Seconds*	30 Seconds	1 Minute

* - Default

Hours Reset

Step 1 - Navigate to **Hour Reset** in the menu.
Step 2 - Press Enter

This is the Hours reset which will zero out the user hours back to zero. Note that there are two timers on this unit. One is an over-all fixture hours (which cannot be reset) and this timer which can be used to track hours of use on a show or on a rental.

Status

Step 1 - Navigate to **Status** in the menu.
Step 2 - Press Enter.

This section will provide information for identification and operation of the fixture.

6 options are available:
- LED Temperature - temperature will be shown in Celsius
- Zoom sensor - "OK" or "Error" will be shown
- Operating hours since last reset
- Total operating hours
- Software version
- RDM UID

Manual Mode Operation

Step 1 - Navigate to **Manual** in the menu.
Step 2 - Press Enter.

Manual setting of the luminaire's features can be set here. These are organized as follows:

- Intensity - 0-100%
- Preset (20 available)
  - ↳ RGBL / CMY Mode
    - ↳ Red -   1-100%
    - ↳ Green -   1-100%
    - ↳ Blue -   1-100%
    - ↳ Lime -   1-100%

  - ↳ HSIC Mode
    - ↳ Hue -   0-359
    - ↳ Saturation -   1-100%
    - ↳ Intensity -   1-100%
    - ↳ CCT -   2700K - 6500K

- Color Filter - 0-43 (with Color name)
- Strobe - 0-255
- Duration - 0-255

Zoom Set

Step 1 - Navigate to **Zoom Set** in the menu.
Step 2 - Press Enter.

Two zoom modes are available:
- Wash

- Spot

- Zoom Reset
  - Confirmation?

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Zoom Mode

Step 1 - Navigate to **Zoom Mode** in the menu.
Step 2 - Press Enter.

Control of the zoom is managed here. Control can be via DMX or manually preset. Options are:
- DMX Control
- Zoom Tab

  ↳ VNSP
  ↳ NSP
  ↳ MFL
  ↳ WFL
  ↳ XWFL

- Zoom Value - 0-255

Range of zoom is effected by spot or wash mode.

Strobe

Step 1 - Navigate to **Strobe** in the menu.
Step 2 - Press Enter.

There are 2 options available:
- Enabled
- Disabled

The option to Disable/Enable the Strobe can also be accomplished throught the DMX Control Channel

Factory Default

To enter into the Factory default page, remove DMX from the fixture, press and hold both the ESCAPE and UP buttons for five (5) seconds. Enter the Password PIN (default is 4131). Factory defaults can also be set via the control channel.

Resetting the fixture to factory defaults will erase any saved presets.

DMX Control Modes

This section covers the available DMX mapping options and their control.

RGBL 16 Bit Direct Mode

RGBL (Red, Green, Blue, Lime) 16 Bit Direct Mode allows for the direct control of both coarse and fine (high and low byte) of color and the master intensity channels, as well as zoom, preset, strobe, control, and fan channels. RGBL 16 Bit Direct Mode will produce the highest quality color crossfades and LED control.

RGBL 16 BIT DIRECT MODE

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity - High Byte	0-65535	Control of Intensity Channel
2	Intensity - Low Byte		
3	Red - High Byte	0-65535	Control of Red LEDs
4	Red - Low Byte		
5	Green - High Byte	0-65535	Control of Green LEDs
6	Green - Low Byte		
7	Blue - High Byte	0-65535	Control of Blue LEDs
8	Blue - Low Byte		
9	Lime - High Byte	0-65535	Control of Lime LEDs
10	Lime - Low Byte		
11	Zoom	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°

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RGBL 16 BIT DIRECT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
12	Presets / Color Filters	0-255	Channel OFF (disabled) Preset_1 Preset_2 Preset_3 Preset_4 Preset_5 Preset_6 Preset_7 Preset_8 Preset_9 Preset_10 Preset_11 Preset_12 Preset_13 Preset_14 Preset_15 Preset_16 Preset_17 Preset_18 Preset_19 Preset_20 CF_0_OFF CF_1_10000K CF_2_8000K CF_3_6500K CF_4_5600K CF_5_5000K CF_6_4500K CF_7_4000K CF_8_3200K CF_9_3000K CF_10_2700K CF_11_Moroccan Pink CF_12_Pink CF_13_Special Rose Pink CF_14_Follies Pink CF_15_Fuchsia Pink CF_16_Surprise Pink CF_17_Congo Blue CF_18_Deep Blue CF_19_Just Blue CF_20_Medium Blue CF_21_Double C.T Blue CF_22_Slate Blue CF_23_Regal Blue CF_24_Fullt C.T Blue CF_25_Half C.T Blue CF_26_Steel Blue CF_27_Lighter Blue CF_28_Light Blue CF_29_Medium Blue- Green CF_30_Dark Green CF_31_Primary Green CF_32_Moss Green CF_33_Fem Green CF_34_JAS Green CF_35_Lime Green CF_36_Spring Yellow CF_37_Deep Amber CF_38_Chrome Orange CF_39_Orange CF_40_Gold Amber CF_41_Millennium Gold CF_42_Deep Golden Amber CF_43_Flame Red Reserves(Future use)	= DMX 0-4 = DMX 5-7 = DMX 8-10 = DMX 11-13 = DMX 14-16 = DMX 17-19 = DMX 20-22 = DMX 23-25 = DMX 26-28 = DMX 29-31 = DMX 32-34 = DMX 35-37 = DMX 38-40 = DMX 41-43 = DMX 44-46 = DMX 47-49 = DMX 50-52 = DMX 53-55 = DMX 56-58 = DMX 59-61 = DMX 62-64 = DMX 65-67 = DMX 68-70 = DMX 71-73 = DMX 74-76 = DMX 77-79 = DMX 80-82 = DMX 83-85 = DMX 86-88 = DMX 89-91 = DMX 92-94 = DMX 95-97 = DMX 98-100 = DMX 101-103 = DMX 104-106 = DMX 107-109 = DMX 110-112 = DMX 113-115 = DMX 116-118 = DMX 119-121 = DMX 122-124 = DMX 125-127 = DMX 128-130 = DMX 131-133 = DMX 134-136 = DMX 137-139 = DMX 140-142 = DMX 143-145 = DMX 146-148 = DMX 149-151 = DMX 152-154 = DMX 155-157 = DMX 158-160 = DMX 161-163 = DMX 164-166 = DMX 167-169 = DMX 170-172 = DMX 173-175 = DMX 176-178 = DMX 179-181 = DMX 182-184 = DMX 185-187 = DMX 188-190 = DMX 191-193 = DMX 194-196 = DMX 197-255
13	Strobe	0-255	Open Closed Slow Rand(0.4hz) Med Rand(5hz) Fast Rand(30hz) Strobe Range(0.4-30hz) Pulse - Slow Rand(0.4hz) Pulse + Med Rand(5hz) Pulse + Fast Rand(30hz) Pulse + Range(0.4-30hz) Pulse - Slow Rand(0.4hz) Pulse - Med Rand(5hz) Pulse - Fast Rand(30hz) Pulse - Range(0.4-30hz)	= DMX 0 - 2 = DMX 3 - 5 = DMX 6 - 7 = DMX 8 - 10 = DMX 11 - 12 = DMX 13 - 127 (fastest) = DMX 128 - 129 = DMX 130 - 131 = DMX 132 - 133 = DMX 134 - 191 = DMX 192 - 193 = DMX 194 - 195 = DMX 196 - 197 = DMX 198 - 255
14	Duration	0-255		

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RGBL 16 BIT DIRECT MODE cont.

15	Control	0-255	Default Setting on Console	= DMX 0
			Display On/Off	= DMX 3 - 5
			Reserved	= DMX 6 - 23
			Spot Mode	= DMX 24 - 26
			Wash Mode	= DMX 27 - 29
			Zoom Control by DMX	= DMX 30 - 32
			Zoom VNSP	= DMX 33 - 35
			Zoom NSP	= DMX 36 - 38
			Zoom MFL	= DMX 39 - 41
			Zoom WFL	= DMX 42 - 44
			Zoom XWFL	= DMX 45 - 47
			Preset 1 Store	= DMX 48 - 50
			Preset 2 Store	= DMX 51 - 53
			Preset 3 Store	= DMX 54 - 56
			Preset 4 Store	= DMX 57 - 59
			Preset 5 Store	= DMX 60 - 62
			Preset 6 Store	= DMX 63 - 65
			Preset 7 Store	= DMX 66 - 68
			Preset 8 Store	= DMX 69 - 71
			Preset 9 Store	= DMX 72 - 74
			Preset 10 Store	= DMX 75 - 77
			Preset 11 Store	= DMX 78 - 80
			Preset 12 Store	= DMX 81 - 83
			Preset 13 Store	= DMX 84 - 86
			Preset 14 Store	= DMX 87 - 89
			Preset 15 Store	= DMX 90 - 92
			Preset 16 Store	= DMX 93 - 95
			Preset 17 Store	= DMX 96 - 98
			Preset 18 Store	= DMX 99 - 101
			Preset 19 Store	= DMX 102 - 104
			Preset 20 Store	= DMX 105 - 107
			Erase all user presets	= DMX 108 - 110
			Reserved	= DMX 111 - 149
			Frequency 600 hz	= DMX 150 - 152
			Frequency 1.2K hz	= DMX 153 - 155
			Frequency 2.4K hz	= DMX 156 - 158
			Frequency 4.8K hz	= DMX 159 - 161
			Frequency 9.6K hz	= DMX 162 - 164
			Frequency 16K hz	= DMX 165 - 167
			Frequency 20K hz	= DMX 168 - 170
			Frequency 25K hz	= DMX 171 -173
			Curves_Linear	= DMX 174 - 176
			Curves_Incandescent	= DMX 177 - 179
			Curves_Standard	= DMX 180 - 182
			TungstenSIM_Off	= DMX 183 - 185
			TungstenSIM_750W	= DMX 186 - 188
			TungstenSIM_1000W	= DMX 189 - 191
			TungstenSIM_1200W	= DMX 192 - 194
			TungstenSIM_2000W	= DMX 195 - 197
			TungstenSIM_2500W	= DMX 198 - 200
			Color Cal._Off	= DMX 201 - 203
			Color Cal._On	= DMX 204 - 206
			Strobe Enabled	= DMX 207 - 209
			Strobe Disabled	= DMX 210 - 212
			Reserved	= DMX 213 - 249
			Fixture Reset*	= DMX 250 - 252
			Reserved Future Use	= DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

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RGBL 8 Bit Direct Mode

RGBL (Red, Green, Blue, Lime) 8 Bit Direct Mode allows for the direct control of each individual color with a separate master intensity channel. RGBL 8 Bit Direct Mode will produce the good quality color crossfades and LED control.

If the zoom settings are set to anything other than DMX via the control channel they will default to Local (manual). If control of these channels are to be DMX controlled either set each to DMX CONTROL via the control channel, RDM, or rear display.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity - High Byte	0-255	Control of Intensity Channel
2	Red - High Byte	0-255	Control of Red LEDs
3	Green - High Byte	0-255	Control of Green LEDs
4	Blue - High Byte	0-255	Control of Blue LEDs
5	Lime - High Byte	0-255	Control of Lime LEDs
6	Zoom	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°

RGBL 8 BIT DIRECT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
7	Presets / Color Filters		Channel OFF (disabled)	= DMX 0-4
			Preset_1	= DMX 5-7
			Preset_2	= DMX 8-10
			Preset_3	= DMX 11-13
			Preset_4	= DMX 14-16
			Preset_5	= DMX 17-19
			Preset_6	= DMX 20-22
			Preset_7	= DMX 23-25
			Preset_8	= DMX 26-28
			Preset_9	= DMX 29-31
			Preset_10	= DMX 32-34
			Preset_11	= DMX 35-37
			Preset_12	= DMX 38-40
			Preset_13	= DMX 41-43
			Preset_14	= DMX 44-46
			Preset_15	= DMX 47-49
			Preset_16	= DMX 50-52
			Preset_17	= DMX 53-55
			Preset_18	= DMX 56-58
			Preset_19	= DMX 59-61
			Preset_20	= DMX 62-64
			CF_0_OFF	= DMX 65-67
			CF_1_10000K	= DMX 68-70
			CF_2_8000K	= DMX 71-73
			CF_3_6500K	= DMX 74-76
			CF_4_5600K	= DMX 77-79
			CF_5_5000K	= DMX 80-82
			CF_6_4500K	= DMX 83-85
			CF_7_4000K	= DMX 86-88
			CF_8_3200K	= DMX 89-91
			CF_9_3000K	= DMX 92-94
			CF_10_2700K	= DMX 95-97
			CF_11_Moroccan Pink	= DMX 98-100
			CF_12_Pink	= DMX 101-103
			CF_13_Special Rose Pink	= DMX 104-106
			CF_14_Follies Pink	= DMX 107-109
			CF_15_Fuchsia Pink	= DMX 110-112
			CF_16_Surprise Pink	= DMX 113-115
			CF_17_Congo Blue	= DMX 116-118
			CF_18_Deep Blue	= DMX 119-121
			CF_19_Just Blue	= DMX 122-124
			CF_20_Medium Blue	= DMX 125-127
			CF_21_Double C.T Blue	= DMX 128-130
			CF_22_Slate Blue	= DMX 131-133
			CF_23_Regal Blue	= DMX 134-136
			CF_24_Fullt C.T Blue	= DMX 137-139
			CF_25_Half C.T Blue	= DMX 140-142
			CF_26_Steel Blue	= DMX 143-145
			CF_27_Lighter Blue	= DMX 146-148
			CF_28_Light Blue	= DMX 149-151
			CF_29_Medium Blue- Green	= DMX 152-154
			CF_30_Dark Green	= DMX 155-157
			CF_31_Primary Green	= DMX 158-160
			CF_32_Moss Green	= DMX 161-163
			CF_33_Fem Green	= DMX 164-166
			CF_34_JAS Green	= DMX 167-169
			CF_35_Lime Green	= DMX 170-172
			CF_36_Spring Yellow	= DMX 173-175
			CF_37_Deep Amber	= DMX 176-178
			CF_38_Chrome Orange	= DMX 179-181
			CF_39_Orange	= DMX 182-184
			CF_40_Gold Amber	= DMX 185-187
			CF_41_Millennium Gold	= DMX 188-190
			CF_42_Deep Golden Amber	= DMX 191-193
			CF_43_Flame Red	= DMX 194-196
			Reserves(Future use)	= DMX 197-255
8	Strobe		Open	= DMX 0 - 2
			Closed	= DMX 3 - 5
			Slow Rand(0.4hz)	= DMX 6 - 7
			Med Rand(5hz)	= DMX 8 - 10
			Fast Rand(30hz)	= DMX 11 - 12
			Strobe Range(0.4-30hz)	= DMX 13 - 127 (fastest)
			Pulse - Slow Rand(0.4hz)	= DMX 128 - 129
			Pulse + Med Rand(5hz)	= DMX 130 - 131
			Pulse + Fast Rand(30hz)	= DMX 132 - 133
			Pulse + Range(0.4-30hz)	= DMX 134 - 191
			Pulse - Slow Rand(0.4hz)	= DMX 192 - 193
			Pulse - Med Rand(5hz)	= DMX 194 - 195
			Pulse - Fast Rand(30hz)	= DMX 196 - 197
			Pulse - Range(0.4-30hz)	= DMX 198 - 255

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RGBL 8 BIT DIRECT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
9	Duration	0-255		
10	Control		Default Setting on Console	= DMX 0
			Display On/Off	= DMX 3 - 5
			Reserved	= DMX 6 - 23
			Spot Mode	= DMX 24 - 26
			Wash Mode	= DMX 27 - 29
			Zoom Control by DMX	= DMX 30 - 32
			Zoom VNSP	= DMX 33 - 35
			Zoom NSP	= DMX 36 - 38
			Zoom MFL	= DMX 39 - 41
			Zoom WFL	= DMX 42 - 44
			Zoom XWFL	= DMX 45 - 47
			Preset 1 Store	= DMX 48 - 50
			Preset 2 Store	= DMX 51 - 53
			Preset 3 Store	= DMX 54 - 56
			Preset 4 Store	= DMX 57 - 59
			Preset 5 Store	= DMX 60 - 62
			Preset 6 Store	= DMX 63 - 65
			Preset 7 Store	= DMX 66 - 68
			Preset 8 Store	= DMX 69 - 71
			Preset 9 Store	= DMX 72 - 74
			Preset 10 Store	= DMX 75 - 77
			Preset 11 Store	= DMX 78 - 80
			Preset 12 Store	= DMX 81 - 83
			Preset 13 Store	= DMX 84 - 86
			Preset 14 Store	= DMX 87 - 89
			Preset 15 Store	= DMX 90 - 92
			Preset 16 Store	= DMX 93 - 95
			Preset 17 Store	= DMX 96 - 98
			Preset 18 Store	= DMX 99 - 101
			Preset 19 Store	= DMX 102 - 104
			Preset 20 Store	= DMX 105 - 107
			Erase all user presets	= DMX 108 - 110
			Reserved	= DMX 111 - 149
			Frequency 600 hz	= DMX 150 - 152
			Frequency 1.2K hz	= DMX 153 - 155
			Frequency 2.4K hz	= DMX 156 - 158
			Frequency 4.8K hz	= DMX 159 - 161
			Frequency 9.6K hz	= DMX 162 - 164
			Frequency 16K hz	= DMX 165 - 167
			Frequency 20K hz	= DMX 168 - 170
			Frequency 25K hz	= DMX 171 -173
			Curves_Linear	= DMX 174 - 176
			Curves_Incandescent	= DMX 177 - 179
			Curves_Standard	= DMX 180 - 182
			TungstenSIM_Off	= DMX 183 - 185
			TungstenSIM_750W	= DMX 186 - 188
			TungstenSIM_1000W	= DMX 189 - 191
			TungstenSIM_1200W	= DMX 192 - 194
			TungstenSIM_2000W	= DMX 195 - 197
			TungstenSIM_2500W	= DMX 198 - 200
			Color Cal._Off	= DMX 201 - 203
			Color Cal._On	= DMX 204 - 206
			Strobe Enabled	= DMX 207 - 209
			Strobe Disabled	= DMX 210 - 212
			Reserved	= DMX 213 - 249
			Fixture Reset*	= DMX 250 - 252
			Reserved Future Use	= DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

HSIC Mode

HSIC (Hue, Saturation, Intensity, Color Point) mode allows for the high resolution control of hue with a single channel control of intensity, saturation, and CCT (Correlated color temperature). HSIC mode will produce color fades around a color space with a variable CCT channel in the center to adjust the color temperature of the luminaire. In this mode we define hue as color and saturation as the amount of color. Adding CCT to this allows for a value or white point to be added into the mix.

The figure to the right is an example the HSIC color concept where red is 0% DMX and as DMX values increase they move clockwise through the example color wheel ending at red (again) at 100% (DMX value of 255).

As Saturation is added, the movement of the color moves from the center of the wheel to the outside, thus adding or removing white. The CCT channel sets the white point in the center of the wheel - the lower the DMX value, the lower the CCT value becomes. The CCT range is from 2700K to 6500K.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity	0-255	Control of Intensity Channel
2	Hue - High Byte	0-65535	Control of Hue
3	Hue - Low Byte	0-65535	Control of Hue
4	Saturation	0-255	Control of Saturation
5	CCT	0-255	Control of White Point
6	Zoom	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°

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HSIC MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
7	Presets / Color Filters		Channel OFF (disabled)	= DMX 0-4
			Preset_1	= DMX 5-7
			Preset_2	= DMX 8-10
			Preset_3	= DMX 11-13
			Preset_4	= DMX 14-16
			Preset_5	= DMX 17-19
			Preset_6	= DMX 20-22
			Preset_7	= DMX 23-25
			Preset_8	= DMX 26-28
			Preset_9	= DMX 29-31
			Preset_10	= DMX 32-34
			Preset_11	= DMX 35-37
			Preset_12	= DMX 38-40
			Preset_13	= DMX 41-43
			Preset_14	= DMX 44-46
			Preset_15	= DMX 47-49
			Preset_16	= DMX 50-52
			Preset_17	= DMX 53-55
			Preset_18	= DMX 56-58
			Preset_19	= DMX 59-61
			Preset_20	= DMX 62-64
			CF_0_OFF	= DMX 65-67
			CF_1_10000K	= DMX 68-70
			CF_2_8000K	= DMX 71-73
			CF_3_6500K	= DMX 74-76
			CF_4_5600K	= DMX 77-79
			CF_5_5000K	= DMX 80-82
			CF_6_4500K	= DMX 83-85
			CF_7_4000K	= DMX 86-88
			CF_8_3200K	= DMX 89-91
			CF_9_3000K	= DMX 92-94
			CF_10_2700K	= DMX 95-97
			CF_11_Moroccan Pink	= DMX 98-100
			CF_12_Pink	= DMX 101-103
			CF_13_Special Rose Pink	= DMX 104-106
			CF_14_Follies Pink	= DMX 107-109
			CF_15_Fuchsia Pink	= DMX 110-112
			CF_16_Surprise Pink	= DMX 113-115
			CF_17_Congo Blue	= DMX 116-118
			CF_18_Deep Blue	= DMX 119-121
			CF_19_Just Blue	= DMX 122-124
			CF_20_Medium Blue	= DMX 125-127
			CF_21_Double C.T Blue	= DMX 128-130
			CF_22_Slate Blue	= DMX 131-133
			CF_23_Regal Blue	= DMX 134-136
			CF_24_Fullt C.T Blue	= DMX 137-139
			CF_25_Half C.T Blue	= DMX 140-142
			CF_26_Steel Blue	= DMX 143-145
			CF_27_Lighter Blue	= DMX 146-148
			CF_28_Light Blue	= DMX 149-151
			CF_29_Medium Blue- Green	= DMX 152-154
			CF_30_Dark Green	= DMX 155-157
			CF_31_Primary Green	= DMX 158-160
			CF_32_Moss Green	= DMX 161-163
			CF_33_Fem Green	= DMX 164-166
			CF_34_JAS Green	= DMX 167-169
			CF_35_Lime Green	= DMX 170-172
			CF_36_Spring Yellow	= DMX 173-175
			CF_37_Deep Amber	= DMX 176-178
			CF_38_Chrome Orange	= DMX 179-181
			CF_39_Orange	= DMX 182-184
			CF_40_Gold Amber	= DMX 185-187
			CF_41_Millennium Gold	= DMX 188-190
			CF_42_Deep Golden Amber	= DMX 191-193
			CF_43_Flame Red	= DMX 194-196
			Reserves(Future use)	= DMX 197-255
8	Strobe		Open	= DMX 0 - 2
			Closed	= DMX 3 - 5
			Slow Rand(0.4hz)	= DMX 6 - 7
			Med Rand(5hz)	= DMX 8 - 10
			Fast Rand(30hz)	= DMX 11 - 12
			Strobe Range(0.4-30hz)	= DMX 13 - 127 (fastest)
			Pulse - Slow Rand(0.4hz)	= DMX 128 - 129
			Pulse + Med Rand(5hz)	= DMX 130 - 131
			Pulse + Fast Rand(30hz)	= DMX 132 - 133
			Pulse + Range(0.4-30hz)	= DMX 134 - 191
			Pulse - Slow Rand(0.4hz)	= DMX 192 - 193
			Pulse - Med Rand(5hz)	= DMX 194 - 195
			Pulse - Fast Rand(30hz)	= DMX 196 - 197
			Pulse - Range(0.4-30hz)	= DMX 198 - 255

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HSIC MODE cont.

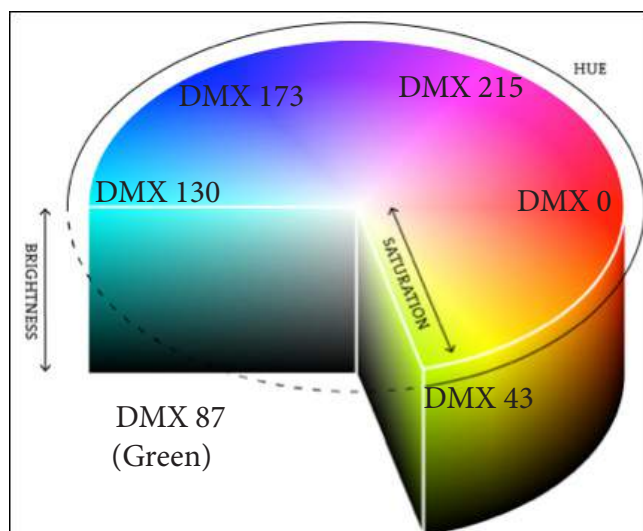| DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
9	Duration			
10	Control		Default Setting on Console	= DMX 0
			Display On/Off	= DMX 3 - 5
			Reserved	= DMX 6 - 23
			Spot Mode	= DMX 24 - 26
			Wash Mode	= DMX 27 - 29
			Zoom Control by DMX	= DMX 30 - 32
			Zoom VNSP	= DMX 33 - 35
			Zoom NSP	= DMX 36 - 38
			Zoom MFL	= DMX 39 - 41
			Zoom WFL	= DMX 42 - 44
			Zoom XWFL	= DMX 45 - 47
			Preset 1 Store	= DMX 48 - 50
			Preset 2 Store	= DMX 51 - 53
			Preset 3 Store	= DMX 54 - 56
			Preset 4 Store	= DMX 57 - 59
			Preset 5 Store	= DMX 60 - 62
			Preset 6 Store	= DMX 63 - 65
			Preset 7 Store	= DMX 66 - 68
			Preset 8 Store	= DMX 69 - 71
			Preset 9 Store	= DMX 72 - 74
			Preset 10 Store	= DMX 75 - 77
			Preset 11 Store	= DMX 78 - 80
			Preset 12 Store	= DMX 81 - 83
			Preset 13 Store	= DMX 84 - 86
			Preset 14 Store	= DMX 87 - 89
			Preset 15 Store	= DMX 90 - 92
			Preset 16 Store	= DMX 93 - 95
			Preset 17 Store	= DMX 96 - 98
			Preset 18 Store	= DMX 99 - 101
			Preset 19 Store	= DMX 102 - 104
			Preset 20 Store	= DMX 105 - 107
			Erase all user presets	= DMX 108 - 110
			Reserved	= DMX 111 - 149
			Frequency 600 hz	= DMX 150 - 152
			Frequency 1.2K hz	= DMX 153 - 155
			Frequency 2.4K hz	= DMX 156 - 158
			Frequency 4.8K hz	= DMX 159 - 161
			Frequency 9.6K hz	= DMX 162 - 164
			Frequency 16K hz	= DMX 165 - 167
			Frequency 20K hz	= DMX 168 - 170
			Frequency 25K hz	= DMX 171 -173
			Curves_Linear	= DMX 174 - 176
			Curves_Incandescent	= DMX 177 - 179
			Curves_Standard	= DMX 180 - 182
			TungstenSIM_Off	= DMX 183 - 185
			TungstenSIM_750W	= DMX 186 - 188
			TungstenSIM_1000W	= DMX 189 - 191
			TungstenSIM_1200W	= DMX 192 - 194
			TungstenSIM_2000W	= DMX 195 - 197
			TungstenSIM_2500W	= DMX 198 - 200
			Color Cal._Off	= DMX 201 - 203
			Color Cal._On	= DMX 204 - 206
			Strobe Enabled	= DMX 207 - 209
			Strobe Disabled	= DMX 210 - 212
			Reserved	= DMX 213 - 249
			Fixture Reset*	= DMX 250 - 252
			Reserved Future Use	= DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

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CMY 16-bit Mode

CMY (Cyan, Magenta, Yellow) mode allows for control of the Red, Green, Blue and Lime LEDs with a layer of logic applied to mimic the behavior of a subtractive color mixing fixture. Instead of adding colors to mix a new color, the logic of CMY is to start with white and dial in colors by subtracting cyan, magenta, and yellow until the desired color is made.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity - High Byte	0-65535	Control of Intensity Channel
2	Intensity - Low Byte		
3	Cyan - High Byte	0-65535	Control of Red LEDs
4	Cyan - Low Byte		
5	Magenta - High Byte	0-65535	Control of Green LEDs
6	Magenta - Low Byte		
7	Yellow - High Byte	0-65535	Control of Blue LEDs
8	Yellow - Low Byte		
9	Zoom	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°

CMY 16 BIT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
10	Presets / Color Filters	0-255	Channel OFF (disabled)	= DMX 0-4
			Preset_1	= DMX 5-7
			Preset_2	= DMX 8-10
			Preset_3	= DMX 11-13
			Preset_4	= DMX 14-16
			Preset_5	= DMX 17-19
			Preset_6	= DMX 20-22
			Preset_7	= DMX 23-25
			Preset_8	= DMX 26-28
			Preset_9	= DMX 29-31
			Preset_10	= DMX 32-34
			Preset_11	= DMX 35-37
			Preset_12	= DMX 38-40
			Preset_13	= DMX 41-43
			Preset_14	= DMX 44-46
			Preset_15	= DMX 47-49
			Preset_16	= DMX 50-52
			Preset_17	= DMX 53-55
			Preset_18	= DMX 56-58
			Preset_19	= DMX 59-61
			Preset_20	= DMX 62-64
			CF_0_OFF	= DMX 65-67
			CF_1_10000K	= DMX 68-70
			CF_2_8000K	= DMX 71-73
			CF_3_6500K	= DMX 74-76
			CF_4_5600K	= DMX 77-79
			CF_5_5000K	= DMX 80-82
			CF_6_4500K	= DMX 83-85
			CF_7_4000K	= DMX 86-88
			CF_8_3200K	= DMX 89-91
			CF_9_3000K	= DMX 92-94
			CF_10_2700K	= DMX 95-97
			CF_11_Moroccan Pink	= DMX 98-100
			CF_12_Pink	= DMX 101-103
			CF_13_Special Rose Pink	= DMX 104-106
			CF_14_Follies Pink	= DMX 107-109
			CF_15_Fuchsia Pink	= DMX 110-112
			CF_16_Surprise Pink	= DMX 113-115
			CF_17_Congo Blue	= DMX 116-118
			CF_18_Deep Blue	= DMX 119-121
			CF_19_Just Blue	= DMX 122-124
			CF_20_Medium Blue	= DMX 125-127
			CF_21_Double C.T Blue	= DMX 128-130
			CF_22_Slate Blue	= DMX 131-133
			CF_23_Regal Blue	= DMX 134-136
			CF_24_Fullt C.T Blue	= DMX 137-139
			CF_25_Half C.T Blue	= DMX 140-142
			CF_26_Steel Blue	= DMX 143-145
			CF_27_Lighter Blue	= DMX 146-148
			CF_28_Light Blue	= DMX 149-151
			CF_29_Medium Blue- Green	= DMX 152-154
			CF_30_Dark Green	= DMX 155-157
			CF_31_Primary Green	= DMX 158-160
			CF_32_Moss Green	= DMX 161-163
			CF_33_Fem Green	= DMX 164-166
			CF_34_JAS Green	= DMX 167-169
			CF_35_Lime Green	= DMX 170-172
			CF_36_Spring Yellow	= DMX 173-175
			CF_37_Deep Amber	= DMX 176-178
			CF_38_Chrome Orange	= DMX 179-181
			CF_39_Orange	= DMX 182-184
			CF_40_Gold Amber	= DMX 185-187
			CF_41_Millennium Gold	= DMX 188-190
			CF_42_Deep Golden Amber	= DMX 191-193
			CF_43_Flame Red	= DMX 194-196
			Reserves(Future use)	= DMX 197-255
11	Strobe	0-255	Open	= DMX 0 - 2
			Closed	= DMX 3 - 5
			Slow Rand(0.4hz)	= DMX 6 - 7
			Med Rand(5hz)	= DMX 8 - 10
			Fast Rand(30hz)	= DMX 11 - 12
			Strobe Range(0.4-30hz)	= DMX 13 - 127 (fastest)
			Pulse - Slow Rand(0.4hz)	= DMX 128 - 129
			Pulse + Med Rand(5hz)	= DMX 130 - 131
			Pulse + Fast Rand(30hz)	= DMX 132 - 133
			Pulse + Range(0.4-30hz)	= DMX 134 - 191
			Pulse - Slow Rand(0.4hz)	= DMX 192 - 193
			Pulse - Med Rand(5hz)	= DMX 194 - 195
			Pulse - Fast Rand(30hz)	= DMX 196 - 197
			Pulse - Range(0.4-30hz)	= DMX 198 - 255

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CMY 16 BIT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
12	Control		Default Setting on Console	= DMX 0
			Display On/Off	= DMX 3 - 5
			Reserved	= DMX 6 - 23
			Spot Mode	= DMX 24 - 26
			Wash Mode	= DMX 27 - 29
			Zoom Control by DMX	= DMX 30 - 32
			Zoom VNSP	= DMX 33 - 35
			Zoom NSP	= DMX 36 - 38
			Zoom MFL	= DMX 39 - 41
			Zoom WFL	= DMX 42 - 44
			Zoom XWFL	= DMX 45 - 47
			Preset 1 Store	= DMX 48 - 50
			Preset 2 Store	= DMX 51 - 53
			Preset 3 Store	= DMX 54 - 56
			Preset 4 Store	= DMX 57 - 59
			Preset 5 Store	= DMX 60 - 62
			Preset 6 Store	= DMX 63 - 65
			Preset 7 Store	= DMX 66 - 68
			Preset 8 Store	= DMX 69 - 71
			Preset 9 Store	= DMX 72 - 74
			Preset 10 Store	= DMX 75 - 77
			Preset 11 Store	= DMX 78 - 80
			Preset 12 Store	= DMX 81 - 83
			Preset 13 Store	= DMX 84 - 86
			Preset 14 Store	= DMX 87 - 89
			Preset 15 Store	= DMX 90 - 92
			Preset 16 Store	= DMX 93 - 95
			Preset 17 Store	= DMX 96 - 98
			Preset 18 Store	= DMX 99 - 101
			Preset 19 Store	= DMX 102 - 104
			Preset 20 Store	= DMX 105 - 107
			Erase all user presets	= DMX 108 - 110
			Reserved	= DMX 111 - 149
			Frequency 600 hz	= DMX 150 - 152
			Frequency 1.2K hz	= DMX 153 - 155
			Frequency 2.4K hz	= DMX 156 - 158
			Frequency 4.8K hz	= DMX 159 - 161
			Frequency 9.6K hz	= DMX 162 - 164
			Frequency 16K hz	= DMX 165 - 167
			Frequency 20K hz	= DMX 168 - 170
			Frequency 25K hz	= DMX 171 -173
			Curves_Linear	= DMX 174 - 176
			Curves_Incandescent	= DMX 177 - 179
			Curves_Standard	= DMX 180 - 182
			TungstenSIM_Off	= DMX 183 - 185
			TungstenSIM_750W	= DMX 186 - 188
			TungstenSIM_1000W	= DMX 189 - 191
			TungstenSIM_1200W	= DMX 192 - 194
			TungstenSIM_2000W	= DMX 195 - 197
			TungstenSIM_2500W	= DMX 198 - 200
			Color Cal._Off	= DMX 201 - 203
			Color Cal._On	= DMX 204 - 206
			Strobe Enabled	= DMX 207 - 209
			Strobe Disabled	= DMX 210 - 212
			Reserved	= DMX 213 - 249
			Fixture Reset*	= DMX 250 - 252
			Reserved Future Use	= DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

CMY 8 Bit Mode

RGBL (Red, Green, Blue, Lime) 8 Bit Direct Mode allows for the direct control of each individual color with a separate master intensity channel. RGBL 8 Bit Direct Mode will produce the good quality color crossfades and LED control.

If the zoom settings are set to anything other than DMX via the control channel they will default to Local (manual). If control of these channels are to be DMX controlled either set each to DMX CONTROL via the control channel, RDM, or rear display.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity - High Byte	0-255	Control of Intensity Channel
2	Cyan - High Byte	0-255	Control of Cyan LEDs
3	Magenta - High Byte	0-255	Control of Magenta LEDs
4	Yellow - High Byte	0-255	Control of Yellow LEDs
5	Zoom	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°

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CMY 8 BIT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
6	Presets / Color Filters	0-255	Channel OFF (disabled)	= DMX 0-4
			Preset_1	= DMX 5-7
			Preset_2	= DMX 8-10
			Preset_3	= DMX 11-13
			Preset_4	= DMX 14-16
			Preset_5	= DMX 17-19
			Preset_6	= DMX 20-22
			Preset_7	= DMX 23-25
			Preset_8	= DMX 26-28
			Preset_9	= DMX 29-31
			Preset_10	= DMX 32-34
			Preset_11	= DMX 35-37
			Preset_12	= DMX 38-40
			Preset_13	= DMX 41-43
			Preset_14	= DMX 44-46
			Preset_15	= DMX 47-49
			Preset_16	= DMX 50-52
			Preset_17	= DMX 53-55
			Preset_18	= DMX 56-58
			Preset_19	= DMX 59-61
			Preset_20	= DMX 62-64
			CF_0_OFF	= DMX 65-67
			CF_1_10000K	= DMX 68-70
			CF_2_8000K	= DMX 71-73
			CF_3_6500K	= DMX 74-76
			CF_4_5600K	= DMX 77-79
			CF_5_5000K	= DMX 80-82
			CF_6_4500K	= DMX 83-85
			CF_7_4000K	= DMX 86-88
			CF_8_3200K	= DMX 89-91
			CF_9_3000K	= DMX 92-94
			CF_10_2700K	= DMX 95-97
			CF_11_Moroccan Pink	= DMX 98-100
			CF_12_Pink	= DMX 101-103
			CF_13_Special Rose Pink	= DMX 104-106
			CF_14_Follies Pink	= DMX 107-109
			CF_15_Fuchsia Pink	= DMX 110-112
			CF_16_Surprise Pink	= DMX 113-115
			CF_17_Congo Blue	= DMX 116-118
			CF_18_Deep Blue	= DMX 119-121
			CF_19_Just Blue	= DMX 122-124
			CF_20_Medium Blue	= DMX 125-127
			CF_21_Double C.T Blue	= DMX 128-130
			CF_22_Slate Blue	= DMX 131-133
			CF_23_Regal Blue	= DMX 134-136
			CF_24_Fullt C.T Blue	= DMX 137-139
			CF_25_Half C.T Blue	= DMX 140-142
			CF_26_Steel Blue	= DMX 143-145
			CF_27_Lighter Blue	= DMX 146-148
			CF_28_Light Blue	= DMX 149-151
			CF_29_Medium Blue- Green	= DMX 152-154
			CF_30_Dark Green	= DMX 155-157
			CF_31_Primary Green	= DMX 158-160
			CF_32_Moss Green	= DMX 161-163
			CF_33_Fem Green	= DMX 164-166
			CF_34_JAS Green	= DMX 167-169
			CF_35_Lime Green	= DMX 170-172
			CF_36_Spring Yellow	= DMX 173-175
			CF_37_Deep Amber	= DMX 176-178
			CF_38_Chrome Orange	= DMX 179-181
			CF_39_Orange	= DMX 182-184
			CF_40_Gold Amber	= DMX 185-187
			CF_41_Millennium Gold	= DMX 188-190
			CF_42_Deep Golden Amber	= DMX 191-193
			CF_43_Flame Red	= DMX 194-196
			Reserves(Future use)	= DMX 197-255
7	Strobe	0-255	Open	= DMX 0 - 2
			Closed	= DMX 3 - 5
			Slow Rand(0.4hz)	= DMX 6 - 7
			Med Rand(5hz)	= DMX 8 - 10
			Fast Rand(30hz)	= DMX 11 - 12
			Strobe Range(0.4-30hz)	= DMX 13 - 127 (fastest)
			Pulse - Slow Rand(0.4hz)	= DMX 128 - 129
			Pulse + Med Rand(5hz)	= DMX 130 - 131
			Pulse + Fast Rand(30hz)	= DMX 132 - 133
			Pulse + Range(0.4-30hz)	= DMX 134 - 191
			Pulse - Slow Rand(0.4hz)	= DMX 192 - 193
			Pulse - Med Rand(5hz)	= DMX 194 - 195
			Pulse - Fast Rand(30hz)	= DMX 196 - 197
			Pulse - Range(0.4-30hz)	= DMX 198 - 255

CMY 8 BIT MODE cont.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
8	Control	0-255	Default Setting on Console	= DMX 0
			Display On/Off	= DMX 3 - 5
			Reserved	= DMX 6 - 23
			Spot Mode	= DMX 24 - 26
			Wash Mode	= DMX 27 - 29
			Zoom Control by DMX	= DMX 30 - 32
			Zoom VNSP	= DMX 33 - 35
			Zoom NSP	= DMX 36 - 38
			Zoom MFL	= DMX 39 - 41
			Zoom WFL	= DMX 42 - 44
			Zoom XWFL	= DMX 45 - 47
			Preset 1 Store	= DMX 48 - 50
			Preset 2 Store	= DMX 51 - 53
			Preset 3 Store	= DMX 54 - 56
			Preset 4 Store	= DMX 57 - 59
			Preset 5 Store	= DMX 60 - 62
			Preset 6 Store	= DMX 63 - 65
			Preset 7 Store	= DMX 66 - 68
			Preset 8 Store	= DMX 69 - 71
			Preset 9 Store	= DMX 72 - 74
			Preset 10 Store	= DMX 75 - 77
			Preset 11 Store	= DMX 78 - 80
			Preset 12 Store	= DMX 81 - 83
			Preset 13 Store	= DMX 84 - 86
			Preset 14 Store	= DMX 87 - 89
			Preset 15 Store	= DMX 90 - 92
			Preset 16 Store	= DMX 93 - 95
			Preset 17 Store	= DMX 96 - 98
			Preset 18 Store	= DMX 99 - 101
			Preset 19 Store	= DMX 102 - 104
			Preset 20 Store	= DMX 105 - 107
			Erase all user presets	= DMX 108 - 110
			Reserved	= DMX 111 - 149
			Frequency 600 hz	= DMX 150 - 152
			Frequency 1.2K hz	= DMX 153 - 155
			Frequency 2.4K hz	= DMX 156 - 158
			Frequency 4.8K hz	= DMX 159 - 161
			Frequency 9.6K hz	= DMX 162 - 164
			Frequency 16K hz	= DMX 165 - 167
			Frequency 20K hz	= DMX 168 - 170
			Frequency 25K hz	= DMX 171 -173
			Curves_Linear	= DMX 174 - 176
			Curves_Incandescent	= DMX 177 - 179
			Curves_Standard	= DMX 180 - 182
			TungstenSIM_Off	= DMX 183 - 185
			TungstenSIM_750W	= DMX 186 - 188
			TungstenSIM_1000W	= DMX 189 - 191
			TungstenSIM_1200W	= DMX 192 - 194
			TungstenSIM_2000W	= DMX 195 - 197
			TungstenSIM_2500W	= DMX 198 - 200
			Color Cal._Off	= DMX 201 - 203
			Color Cal._On	= DMX 204 - 206
			Strobe Enabled	= DMX 207 - 209
			Strobe Disabled	= DMX 210 - 212
			Reserved	= DMX 213 - 249
			Fixture Reset*	= DMX 250 - 252
			Reserved Future Use	= DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

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RGB Mode

RGB Mode allows for medium resolution control of each individual color (excluding the Lime channel) and conserves the amount of DMX channels the fixture uses for control while maintaining control of the zoom, preset, strobe and control settings. When in RGB Mode the Presets and Color Filter output still uses the Lime Channel.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION
1	Intensity - High Byte	0-255	Control of Intensity Channel
2	Red - High Byte	0-255	Control of Red LEDs
3	Green - High Byte	0-255	Control of Green LEDs
4	Blue - High Byte	0-255	Control of Blue LEDs
5	Control	0-255	Default Setting on Console = DMX 0 Display On/Off = DMX 3 - 5 Reserved = DMX 6 - 23 Spot Mode = DMX 24 - 26 Wash Mode = DMX 27 - 29 Zoom Control by DMX = DMX 30 - 32 Zoom VNSP = DMX 33 - 35 Zoom NSP = DMX 36 - 38 Zoom MFL = DMX 39 - 41 Zoom WFL = DMX 42 - 44 Zoom XWFL = DMX 45 - 47 Preset 1 Store = DMX 48 - 50 Preset 2 Store = DMX 51 - 53 Preset 3 Store = DMX 54 - 56 Preset 4 Store = DMX 57 - 59 Preset 5 Store = DMX 60 - 62 Preset 6 Store = DMX 63 - 65 Preset 7 Store = DMX 66 - 68 Preset 8 Store = DMX 69 - 71 Preset 9 Store = DMX 72 - 74 Preset 10 Store = DMX 75 - 77 Preset 11 Store = DMX 78 - 80 Preset 12 Store = DMX 81 - 83 Preset 13 Store = DMX 84 - 86 Preset 14 Store = DMX 87 - 89 Preset 15 Store = DMX 90 - 92 Preset 16 Store = DMX 93 - 95 Preset 17 Store = DMX 96 - 98 Preset 18 Store = DMX 99 - 101 Preset 19 Store = DMX 102 - 104 Preset 20 Store = DMX 105 - 107 Erase all user presets = DMX 108 - 110 Reserved = DMX 111 - 149 Frequency 600 hz = DMX 150 - 152 Frequency 1.2K hz = DMX 153 - 155 Frequency 2.4K hz = DMX 156 - 158 Frequency 4.8K hz = DMX 159 - 161 Frequency 9.6K hz = DMX 162 - 164 Frequency 16K hz = DMX 165 - 167 Frequency 20K hz = DMX 168 - 170 Frequency 25K hz = DMX 171 -173 Curves_Linear = DMX 174 - 176 Curves_Incandescent = DMX 177 - 179 Curves_Standard = DMX 180 - 182 TungstenSIM_Off = DMX 183 - 185 TungstenSIM_750W = DMX 186 - 188 TungstenSIM_1000W = DMX 189 - 191 TungstenSIM_1200W = DMX 192 - 194 TungstenSIM_2000W = DMX 195 - 197 TungstenSIM_2500W = DMX 198 - 200 Color Cal._Off = DMX 201 - 203 Color Cal._On = DMX 204 - 206 Strobe Enabled = DMX 207 - 209 Strobe Disabled = DMX 210 - 212 Reserved = DMX 213 - 249 Fixture Reset* = DMX 250 - 252 Reserved Future Use = DMX 253 - 255

CONTROL CHANNEL NOTES

Channel changes functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling.

Compact Mode

Compact mode provides direct 8-bit control over the color channels and strobe with no other attributes. This mode is the smallest DMX footprint on AIP-200. Zoom and other attributes can still be set manually.

Zoom, control, duration, and color presets are not available through DMX control in this mode.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
1	Intensity - High Byte	0-255	Control of Intensity Channel	
2	Red - High Byte	0-255	Control of Re LEDs	
3	Green - High Byte	0-255	Control of Green LEDs	
4	Blue - High Byte	0-255	Control of Blue LEDs	
5	Lime - High Byte	0-255	Control of Lime LEDs	
6	Strobe Control	0-255	DMX 0-2	Open or confirm strobe action selected
			DMX 3-5	No Strobe
			DMX 6-7	Slow Random (0.4Hz)
			DMX 8-10	Enabled/Med Random (5Hz)
			DMX 11-12	Enabled/Fast Random (30Hz)
			DMX 13-127	Enabled/Strobe Range (0.4-30Hz)
			DMX 128-129	Enabled/Pulse + Slow Random (0.4Hz)
			DMX 130-131	Enabled/Pulse + Med Random (5Hz)
			DMX 132-133	Enabled/Pulse + Fast Random (30Hz)
			DMX 134-191	Enabled/Pulse + Range (0.4-30Hz)
			DMX 192-193	Enabled/Pulse - Slow Random (0.4Hz)
			DMX 194-195	Enabled/Pulse - Med Random (5Hz)
			DMX 196-197	Enabled/Pulse - Fast Random (30Hz)
			DMX 198-255	Enabled/Pulse - Range (0.4-30Hz)

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Compact Zoom Mode

Compact mode provides direct 8-bit control over the color channels and strobe and zoom with no other attributes. Other attributes can still be set manually.

Control, duration, and color presets are not available through DMX control in this mode.

DMX CHANNEL	CHANNEL DESCRIPTION	DMX RANGE	FUNCTION	
1	Intensity - High Byte	0-255	Control of Intensity Channel	
2	Red - High Byte	0-255	Control of Re LEDs	
3	Green - High Byte	0-255	Control of Green LEDs	
4	Blue - High Byte	0-255	Control of Blue LEDs	
5	Lime - High Byte	0-255	Control of Lime LEDs	
6	Zoom Control	0-255	When in Spot Mode: 6.5°-32° When in Wash Mode: 8°-50°	
7	Strobe	0-255	DMX 0-2 DMX 3-5 DMX 6-7 DMX 8-10 DMX 11-12 DMX 13-127 DMX 128-129 DMX 130-131 DMX 132-133 DMX 134-191 DMX 192-193 DMX 194-195 DMX 196-197 DMX 198-255	Open or confirm strobe action selected No Strobe Slow Random (0.4Hz) Enabled/Med Random (5Hz) Enabled/Fast Random (30Hz) Enabled/Strobe Range (0.4-30Hz) Enabled/Pulse + Slow Random (0.4Hz) Enabled/Pulse + Med Random (5Hz) Enabled/Pulse + Fast Random (30Hz) Enabled/Pulse + Range (0.4-30Hz) Enabled/Pulse - Slow Random (0.4Hz) Enabled/Pulse - Med Random (5Hz) Enabled/Pulse - Fast Random (30Hz) Enabled/Pulse - Range (0.4-30Hz)

Recording Color Presets from a Console

Similar to recording a preset or "look" to a cue the AIP-200 RGBL Par LED Luminaire can record and playback a color preset from the lighting controller and store it locally in the luminaire's memory. There are twenty (20) user editable presets built into the fixture. This feature becomes very powerful when using multiple AP-200 RGBL Par LED Luminaire's together or when looking for single channel play back of prerecorded colors.

Color Presets can be recorded, edited, and stored. Color filters cannot be edited.

To record a color preset from a control console:
1. Set each color for your desired color mix.
2. Set the control channel to the desired value from control channel.
3. Wait 3 seconds.
4. Return control channel to 0.

These settings must be performed without any channel scaling between each of the DMX values. It is recommended that either a direct key entry is done from the console or use control channel macros.

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RDM Control

The AIP-200 is fully RDM compliant. This section outline the RDM features available in this fixture.

RDM Product Parameter IDs

Model ID	Manufacturer	Model	Product Category
0x2005	Altman Stage Lighting	AIP-200	0x0509

RDM UID

MSB of ESTA 41H	LSB of ESTA 31H	MSB of D1H	LSB of 05H	MSB of Unique Seq.	LSB of Unique Seq.

Supported RDM Parameter IDs

Network Management

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
		DISC_UNIQUE_BRANCH	0x0001		✓
		DISC_MUTE	0x0002		✓
		DISC_UN_MUTE	0x0003		✓
✓		PROXIED_DEVICES	0x0010		
✓		PROXIED_DEVICE_COUNT	0x0011		
✓	✓	COMMS_STATUS	0x0015		

Status Collection

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓		QUEUED_MESSAGE	0x0020		
✓		STATUS_MESSAGES	0x0030		✓
✓		STATUS_ID_DESCRIPTION	0x0031		✓
	✓	CLEAR_STATUS_ID	0x0032		
✓	✓	SUB_DEVICE_STATUS_REPORT_THRESHOLD	0x0033		

RDM Information

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓		SUPPORTED_PARAMETERS	0x0050	* Support required only if supporting Parameters	✓
✓		SUPPORTED_DESCRIPTION	0x0051	- Support required for Manufacturer-Specific PIDs	✓

Product Information

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓		DEVICE_INFO	0x0060		✓
✓		PRODUCT_DETAIL_ID_LIST	0x0070		
✓		DEVICE_MODEL_DESCRIPTION	0x0080		✓
✓		MANUFACTURER_LABEL	0x0081		✓
✓	✓	DEVICE_LABEL	0x0082		✓
✓	✓	FACTORY_DEFAULTS	0x0090		
✓		LANGUAGE_CAPABILITIES	0x00A0		
✓	✓	LANGUAGE	0x00B0		
✓		SOFTWARE_VERSION_LABEL	0x00C0		✓
✓		BOOT_SOFTWARE_VERSION_ID	0x00C1		
✓		BOOT_SOFTWARE_VERSION_LABEL	0x00C2		

DMX Setup

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓	✓	DMX_PERSONALITY	0x00E0		✓
✓		DMX_PERSONALITY_DESCRIPTION	0x00E1		✓
✓	✓	DMX_START_ADDRESS	0x00F0	Required if device uses a DMX slot	✓
✓		SLOT_INFO	0x0120		✓
✓		SLOT_DESCRIPTION	0x0121		✓
✓		DEFAULT_SLOT_VALUE	0x0122		

Sensors 0x02xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓		SENSOR_DEFINITION	0x0200		✓
✓	✓	SENSOR_VALUE	0x0201		✓
	✓	RECORD_SENSORS	0x0202		

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Dimmer Settings 0x03xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓		DIMMER_INFO	0x0340		✓
✓	✓	MINIMUM_LEVEL	0x0341		
✓	✓	MAXMIMUM_LEVEL	0x0342		
✓	✓	CURVE	0x0343		✓
✓		CURVE_DESCRIPTION	0x0344	Support required only if CURVE is supported	✓
✓	✓	OUTPUT_RESPONSE_TIME	0x0345		✓
✓		OUTPUT_RESPONSE_TIME_DE-SCRIPTION	0x0346	Support required only if OUTPUT_RESPONSE_ TIME is supported.	✓
✓	✓	MODULATION_FREQUENCY	0x0347		✓
✓		MODULATION_FREQUENCY_DE-SCRIPTION	0x0348	Support required only if MODULATION_FREQUEN-CY is supported	✓

Power / Lamp Settings 0x04xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓	✓	DEVICE_HOURS	0x0400		
✓	✓	LAMP_HOURS	0x0401		
✓	✓	LAMP_STRIKES	0x0402		
✓	✓	LAMP_STATE	0x0403		
✓	✓	LAMP_ON_MODE	0x0404		
✓	✓	DEVICE_POWER_CYCLES	0x0405		

Display Settings 0x05xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓	✓	DISPLAY_INVERT	0x0500		
✓	✓	DISPLAY_LEVEL	0x0501		

Configuration 0x06xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓	✓	PAN_INVERT	0x0600		
✓	✓	TILT_INVERT	0x0601		
✓	✓	PAN_TILT_SWAP	0x0602		
✓	✓	REAL_TIME_CLOCK	0x0603		

Control 0x10xx

Get Allowed	Set Allowed	RDM Parameter IDS	Value	Notes	Implemented
✓	✓	IDENTIFY_DEVICE	0x1000		✓
	✓	RESET_DEVICE	0x1001		
✓	✓	POWER_STATE	0x1010		
✓	✓	PERFORM_SELFTEST	0x1020		
✓		SELF_TEST_DESCRIPTION	0x1021		
	✓	CAPTURE_PRESET	0x1030		
✓	✓	PRESET_PLAYBACK	0x1031		
✓	✓	IDENTIFY_MODE	0x1040		✓

Manufacturer Specific IDs

Get Allowed	Set Allowed	Parameter IDs	Type	Length	Unit	Prefix	Min.	Max.	Default	Description	Description2
✓	✓	8A00H	U8	1	NONE	NONE	0	100	100	Intensity	0---100%
✓	✓	8A0BH	U8	1	NONE	NONE	0	64	3	Power UP Fade Time	0-59 = 0-59 Seconds 60 = 1 Minute 61 = 2 Minute 62 = 3 Minute 63 = 4 Minute 64 = 5 Minute
✓	✓	8A0CH	U8	1	NONE	NONE	0	2	0	When no DMX	0 = Off 1 = Hold Last Look 2 = Power Up Preset
✓	✓	8A44H	U8	1	NONE	NONE	0	1	0	Calibration ON/OFF	0 = Factory Calibration Off 1 = Factory Calibration On
✓	✓	8A92H	U8	1	NONE	NONE	0	255	0	Strobe	0-255
✓	✓	8A93H	U8	1	NONE	NONE	0	1	0	Zoom Reset	0 - Ignore 1 - Reset
✓	✓	8A94H	U8	1	NONE	NONE	0	255	0	Duration	0-255
✓	✓	8A9BH	U8	1	NONE	NONE	0	1	1	Strobe Enable	0 - Disable 1 - Enable
✓	✓	8AA0H	U8	1	NONE	NONE	0	4	2	LCD Off Time	0 = On 1 = 5 Seconds 2 = 10 Seconds 3 = 30 Seconds 4 = 1 Minute
✓	✓	8AA6H	U8	1	NONE	NONE	0	1	0	Hour Reset	0 = Ignore 1 = Reset
✓	✓	8AA2H	U8	1	NONE	NONE	0	64	0	Power Up	0 = Last Set 1 - 20 = Preset 1 - 20 21 - 64 = Color Filter 0 - 43
✓	✓	8AB0H	U8	1	NONE	NONE	0	43	0	Color Filter	0 -43 = Color Filter 0 - 43
✓	✓	8AB1H	U8	1	NONE	NONE	1	20	1	PRESET	1 - 20 = Preset 1 - 20
✓	✓	8AB3H	U8	1	NONE	NONE	1	100	100	POWER LIMIT	Sets and displays power limit settings (1 to 100%).

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Manufacturer Specific IDs

Get Al-lowed	Set Al-lowed	Param-eter IDs	Type	Length	Unit	Prefix	Min.	Max.	De-fault	Description	Description2
✓		8AB4H	U32	4	NONE	NONE	0	65535	0	Operations Hours	Displays the number of user hours (time of use) of the luminaire.
✓		8AB5H	U32	4	NONE	NONE	0	65535	0	Fixture Hours	Displays the total number of hours of the luminaire has been used.
✓	✓	8AB6H	U8	1	NONE	NONE	0	1	0	ZOOM Control By DMX/MANUAL	0 = DMX Control 1 = Manual Control
✓	✓	8AB7H	U8	1	NONE	NONE	0	255	0	ZOOM level	In Manual mode, this parameter controls the zoom.
✓	✓	8AB9H	U8	1	NONE	NONE	0	1	0	ZOOM MODE	0 =WASHS Mode 1 = SPOT Mode

Sensor Information

Sensor #	Type	Unit	Prefix	Range Minmum	Range Maximum	Normal Minimum	Normal Maximum	Record value support	Description
0	00	01	00	-30	125	-20	78	02	LED Temp
1	00	01	00	-30	125	-20	69	02	MCU Temp
2	05	00	00	00	100	00	100	02	RED OUTPUT(%)
3	05	00	00	00	100	00	100	02	GREEN OUTPUT(%)
4	05	00	00	00	100	00	100	02	BLUE OUTPUT(%)
5	05	00	00	00	100	00	100	02	LIME OUTPUT(%)

Status Messages

Sub-Device ID	Status Type	Status Message ID	Data Value 1	Data Value 2	DESCRIPTION
0	04	8105H	00	00	ZOOM Sensor is Error
0	04	8106H	00	00	ZOOM Sensor is OK
0	04	8108H	00	00	LED Over-temperature
0	04	8109H	00	00	LED temperature normal

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Cleaning And Care

WARNING! All cleaning should be performed with power completely removed from the luminaire. Never remove protective covers when luminaire is powered. Wear appropriate protective eye wear and gloves when cleaning the fixture. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center. AT NO TIME SHOULD THE LEDs BE TOUCHED.

Cleaning Instructions

Being a solid-state fixture IP65 luminaire, the AIP-200 requires very little routine maintenance by the user. The luminaire requires special care to be taken with the plastic components because they are much easier to scratch or damage than glass.

The AIP-200 requires special care when it comes to cleaning front lens assembly. Additional care needs to be taken with the plastic components because they are much easier to scratch or damage than glass.

The following is a list of cleaning materials required to care for the AIP-200:

- Lint free lens tissue
- Lint or powder free gloves
- A mild soap solution.

WARNING! Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the Back-Lit Panel. These types of cleaners or solvents can permanently damage the optics or housings of the fixture.

Cleaning the Front Lens

Step 1. Turn off luminaire and allow to cool completely.
Step 2. Apply a small amount of mild soap solution to lint-free lens tissue.
Step 3. Wipe all debris, dirt, fingerprints, etc. From the lens.
Step 4. Using a second lint-free lens tissue, wipe off any residue.

Service and Maintenance

For all other service and maintenance issues, please contact your local Altman Lighting office or an Authorized Service Center.

WARNING! Disassembly, alterations, unauthorized service, etc. will void the product warranty. Contact your local Altman Lighting office or an Authorized Service Center for technical support and service

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Troubleshooting

Troubleshooting Guide

The chart below provides possible causes and remedies for various error messages and/or symptoms. If this chart is unable to address your issue, please contact your authorized dealer or Altman customer service for assistance.

Any service and maintenance (including troubleshooting), other than described herein should be performed by an Authorized Altman Lighting Dealer or Service Center.

DESCRIPTION	ISSUE	POSSIBLE CAUSE/REMEDY
No light output	Fixture will not produce or output light and connected to power. Display is active.	Manual Mode....menu is set at 0% intensity... DMX Mode....console is set at 0% intensity... Set intensity level above 0% or adjust to a higher intensity. One of the user defined colors may be active but nothing is recorded.
Low light output	Fixture produces low light output and connected to power.	Check unit for calibration on or off at menu... Operating temperature is at upper range of temperature range. If the power limit settings are set.
No power at luminaire	Luminaire does not power up.	Circuit not energized...verify circuit breaker is turned on. Not plugged in...ensure A/C cable is connected to power source. Power cable wired incorrectly...verify power cable and connector are wired correctly. See "Connecting Power" on page 7 for more information.
No DMX Data Control	Fixture will not respond to DMX commands.	Not detecting DMX data Unit is not set to proper DMX address - check settings. See "Setting DMX Address from the Home Screen" on page 11 for more information. Unit is not set to DMX mode. See "DMX Menu" on page 12 for more information. Disconnect and reconnect DMX input cable. Check all DMX connections (at control source and luminaire). DMX data cable not wired correctly or has a broken conductor... check DMX data cable for proper wiring. See "Connecting to the DMX512 Network" on page 22 for more information.
Fixtures not matching color	Fixture are given the same DMX command, but colors do not match.	Turn on color calibration. Note, units will not match if some are set to calibration on and some to calibration off. See "Calibration (Color Calibration)" on page 21 for more information.
Fixtures are dimming at different rates	Fixture are given the same DMX command, but dimming rates are different.	Make sure all units are set o the same dimming curve. See "Dimming Curves" on page 13 for more information. Make sure all units have the same tungsten simulation setting.

Technical Specifications

Materials: Corrosion-resistant materials and hardware
Beam Angle: 6.5° - 50°
Control: DMX/RDM
Light Engine: 12X20 Watt RGBL
Lumens: See photometrics for each beam spread
Max Lumens: 5792 *(Note at a Cold Start)*
Rated LED Life: Arrays are rated for >50,000 to L70
Input Voltage: **100-240 VAC 50/60 Hz**
Wattage: **222 Watts***
Current Draw: 1.67A @ 120VAC; 0.87A @ 230VAC
Current Inrush: At 120 VAC, 50A (1/2 cycle) @25°C
                       At 240 VAC, 40A (1/2 cycle) @25°C
Quiescent Load: 6.05 Watts
Power Factor: ≥ 0.95
Max Daisy Chain: 8 Units @120VAC; 13 Units @230VAC
Dimensions: 9-11/64" x 11-7/32" x 13-15/64" (233 x 285 x 336mm)
Cooling: Passive
Environment: IP65, -20°C to 45°C (-4°F to 113°F)
Impact Resistance: IK05
Weight: 13.80 lbs. (6.26 kg)
Body Color: Black
Compliance: cETLus listed for outdoor use and CE marked
Warranty: Five (5) years and one (1) day
Support: Forever for the life of the product

* - All LED's at Full from a Cold Start

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