Tidal Helix Z IP

120w RGBL Wash/Beam FX Light

GAMMA

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User Manual

Contents

Introduction and Setup

Unpacking and In the Box

Thank you for choosing our Tidal Helix Z IP. For your own safety, please read this manual before installing or using the device. This manual covers the important information on installation and applications. Please install and operate the fixture with following instructions. Meanwhile, please keep this manual for future needs.

In the box you will receive:

- Tidal Helix Z IP 1
- Waterproof 3 Pin DMX Cable 1
- Waterproof Ethernet Cable 1
- True1 Compatible Power Cable 1

Features

- 120w RGBL LED Light Engine with 2500 lumen output
- 3.8°-38° Zoom
- Color Temperature Control: 2,500-12,850K
- IP65 Rated for Outdoor Use
- Calibrated Color and Green/Magenta Shift
- Backlight Pixel Effect

Mounting and Operation

Clamp Mounting: The Tidal Helix Z IP provides an omega bracket which you can attach a clamp to for typical clamp mounting. Once the clamp is attached to the omega bracket, you can attach the omega bracket to the fixture via the 1/4 turn fasteners.

As an added safety measure be sure to attach at least one properly rated safety cable to the fixture using one of the safety attachment holes on the sides of the fixture base.

Customer Support

WARRANTY POLICY

GAMMA LED Vision warrants its products for the periods set below from the date of purchase to be free of manufacturer and workmanship defects. Warranty does not cover normal wear and tear caused by force, negligence or misuse of products. GAMMA LED Vision is not responsible for any damages or injury caused by misuse or improper handling of the products and in accordance with instructions and specifications of manual.

Warranty terms are as follows:

LED Fixtures:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Lamp Fixtures: 1 year / excludes the lamp

LED Video Products:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Controllers: 2 years

Batteries: 6 months

All Trussing Related Products and Accessories: 1 Year

Please visit WWW.GAMMALEDVISON.COM for complete Limited Warranty terms and contact information.

Setup and Operation

Using the LCD Menu and Buttons

The LCD system includes Menu, Up, Down, and Enter buttons to the sides of the LCD screen. Press “Enter” to enter the menu or to go back from a sub-menu. Use “Up”/”Down” to navigate through the choices, and use “Enter” to save your choices.

The menu options are as follows:

Main Menu Option	Sub Menu Option	Sub Menu 2 Option	Key Operation
Control	Base Control	DMX Address	Set the DMX Address
		Channel Mode	Set the Channel Mode
		Protocol	Set whether the base control is via DMX, Art-Net, or sACN
		Universe	Set the Universe Number for Art-Net or sACN.
	Aura Pixels Control	DMX Address	Set the DMX Address
		Protocol	Set the Channel Mode
		Universe	Set whether the pixel control is via DMX, Art-Net, or sACN
		Color Mode	Set to RGB or RGBW Color Mode
	Net to DMX	No, Yes	Set Whether the Art-Net or sACN data is re-transmitted via the DMX plugs on the fixture.
	Manual		Control for Each Parameter in Manual (test) mode, 000-255
Network	IP Mode	IP Mode	Set the IP Address mode to DHCP or Static
	IP Address	IP Address	Set the IP Address for Static Operation

Main Menu Option	Sub Menu Option	Sub Menu 2 Option	Key Operation
		Subnet Mask	Set the Subnet Mask for Static Operation
Settings	Display		Set Display On/Off Time
	Display Invert		Set Display to Invert or Standard
	Key Lock		Set the Display to Lock after timeout. Display password hints are displayed on lockout, the passkey is “Menu, Up, Down, Up, Down, Enter”
	DMX Fault		Set the “DMX Loss” behavior to “Hold” last data or “Blackout”.
	Dimmer Speed		Set the dimmer response speed to Standard, Fast, or Slow.
	Dimmer Curve		Set the dimmer curve to Linear, Square, or S-Shape.
	LED Frequency		Set the PWM frequency. The options are: 4 kHz, 8 kHz, 16 kHz, 24 kHz.
	Red Shift		Set the “dim to warm” red shift on/off.
	Fan Mode		Set the fan mode to auto, silent, or full. Running fans on silent will reduce brightness when the fixture gets warm.
	Pan Setting	Invert	Invert the fixture’s pan
		Calibration	Set a calibration offset for the pan.
		Encoder	Turn on/off the pan correction when the fixture is bumped out of place.

Main Menu Option	Sub Menu Option	Sub Menu 2 Option	Key Operation
	Tilt Setting	Invert	Invert the fixture's tilt
		Calibration	Set a calibration offset for the tilt.
		Encoder	Turn on/off the tilt correction when the fixture is bumped out of place.
	Zoom Calibration		Set a calibration value for zoom.
	Color Calibration	Raw Mode	Full, non-Calibrated color
		Adjust	Set a calibrated "full point" for each color - Red, Green, Blue, and Lime.
	Factory Reset		"Yes" will reset the fixture to factory defaults.
Information	Error Info		Displays diagnostic info on any present errors.
	Temperature		Displays the temperature of the main LED array.
	Version		Displays the firmware version of various internal modules.
	RDM UID		RDM UID is Displayed at the Bottom - 073A7ABF8CA2

Pixel Control Modes:

The Tidal Helix Z IP has 3 different DMX control modes, each control mode offers different control of the pixels via macros and non-pixel control.

To control each individual pixel, the fixture must be given Art-Net or sACN data to control the pixels. The non-pixel channels can also be set to be controlled via Art-Net/sACN if desired, with independent universe/start channels available for the pixels and non-pixel channels.

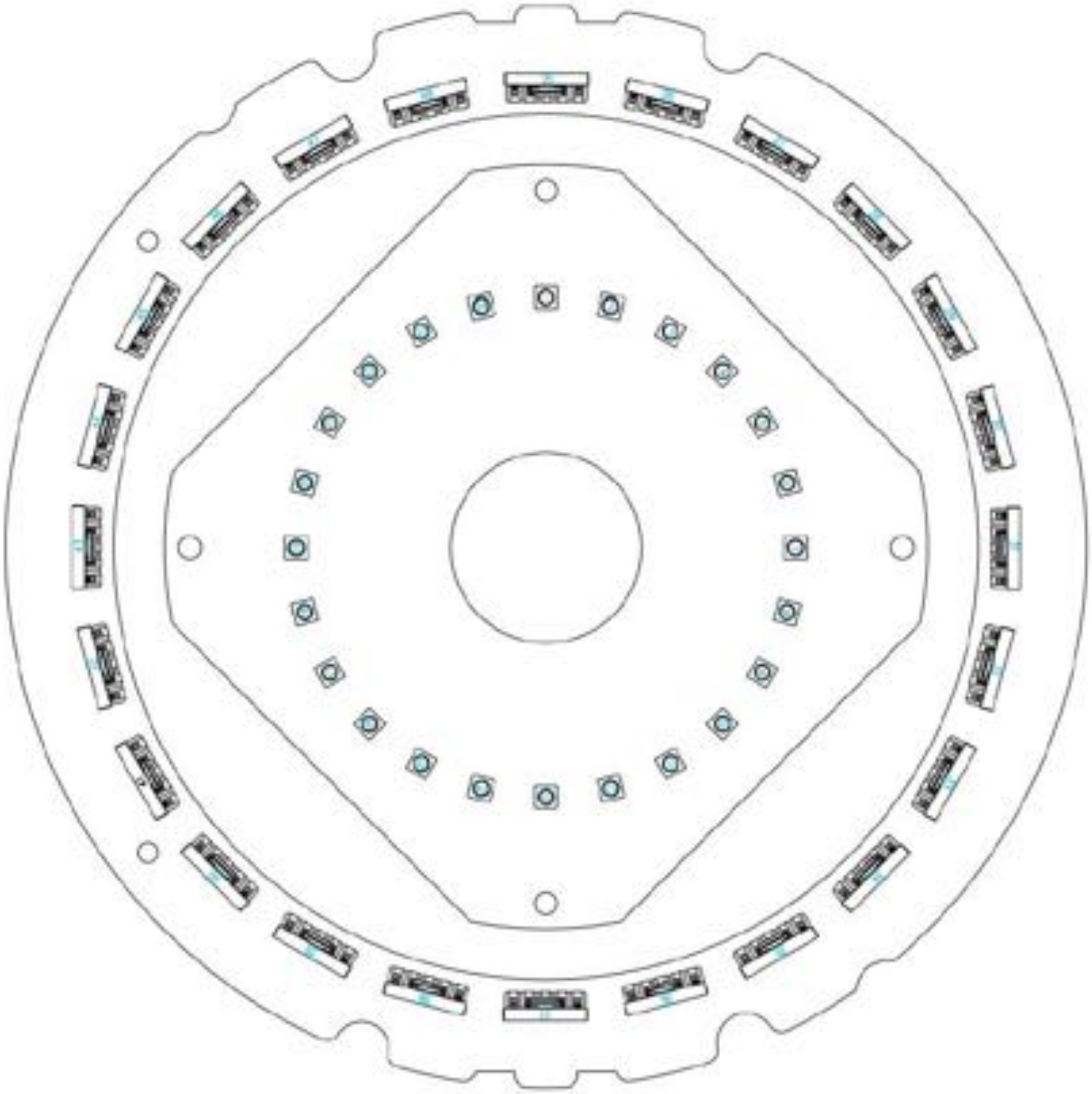
In the pixel control modes, pixels may be set to RGBW or RGB. When the pixel control is used via Art-Net/sACN, there is a “Pixel Control” channel via DMX which determines whether the pixels are controlled by DMX, Art-Net/sACN, or a mix of the two.

See the diagram on the next page for the pixel layout.

There are 48 pixels, in 2 rings of 24 pixels each, inner and outer. The first pixel is at the top (12 o’clock position), and the pixels go clockwise around the full 360° circle.

The main light source is in the center.

Pixel Layout:



DMX Setup

DMX Basics

DMX512 stands for digital multiplex 512. This means that 512 channels are controlled digitally through 1 data cable.

A channel is a set of 255 steps that are assigned to control attributes in each light. This may be a color like red, green or blue, and intensity, strobe, pan/tilt or other attributes.

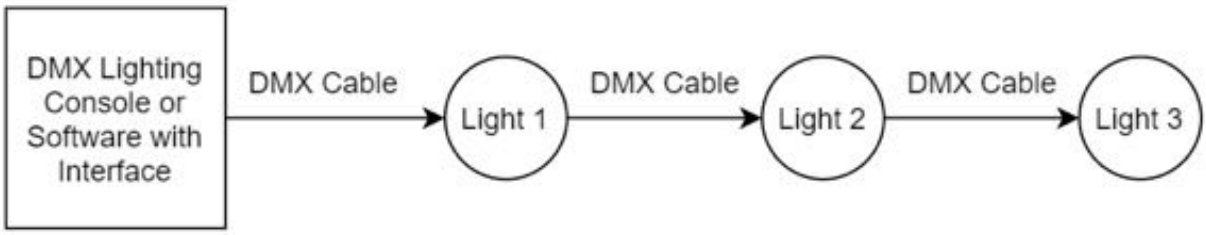
Multiple sets of 512 “universes” may be used. Only 1 universe will travel on a DMX cable, but through networked DMX (Art-Net or sACN E1.31), many universes can travel over a network.

DMX Wiring

DMX works by connecting 1 or multiple lights to the output of a DMX lighting console or software with a DMX interface.

DMX lights connect in what is called a “daisy-chain”. Your first DMX cable will plug it’s male DMX connector into the female DMX connector on your lighting console. The remaining female connector will then connect to the DMX input on your first light.

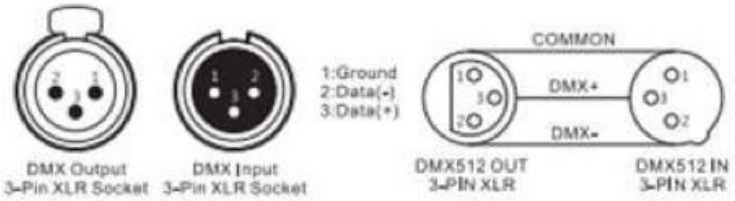
You may then connect your next fixture to the output of your first light, and continue the chain.



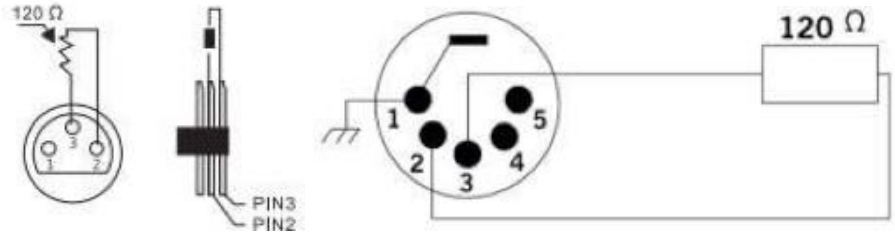
32 Fixture Rule – DMX only allows you to connect up to 32 fixtures in a single daisy chain for signal strength. Sometimes, depending on the fixtures and cable length, this number is less (or more).

DMX Cables can be 3-pin or 5-pin. These use the same type of data, and in the 5-pin only pins 1, 2, and 3 are used. The cable should be a 2 conductor, shielded cable of at least 110 ohms resistance. Microphone cable is not DMX cable.

Please refer to the diagram below:



For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise and reflections. The DMX terminator is simply an XLR plug with a 120 Ω resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below:



DMX Channel Mode Sheet:

21 CH	39 CH	223 CH	Function	Channel Value	Description
1	1	1	Pan	0-255	Pan Control, 540°
	2	2	Pan Fine	0-255	Fine Control of Pan
2	3	3	Tilt	0-255	Tilt Control, 220°
	4	4	Tilt Fine	0-255	Fine Control of Tilt
	5	5	Pan/Tilt Speed	0-255	Fast to Slow
3	6	6	Zoom	0-255	Narrow to Wide, 3.8°-38°
	7	7	Zoom Fine	0-255	Fine Control of Zoom
4	8	8	Intensity	0-255	Dimmer Control, Main LED's
	9	9	Intensity Fine	0-255	Dimmer Control Fine, Main LED's
5	10	10	Strobe	0-5	Open
				6-10	Closed
				11-35	Random Pulse, Slow to Fast
				36-60	Random Ramp Up, Slow to Fast
				61-85	Random Ramp Down, Slow to Fast
				86-110	Random Strobe, Slow to Fast
				111-135	Lightning Effect, Large Pause to Small Pause
				136-250	Strobe, Slow to Fast
				251-255	Strobe Open
6	11	11	Red	0-255	Red Intensity Control
	12	12	Red Fine	0-255	Fine Red Intensity Control
7	13	13	Green	0-255	Green Intensity Control
	14	14	Green Fine	0-255	Fine Green Intensity Control

21 CH	39 CH	223 CH	Function	Channel Value	Description
8	15	15	Blue	0-255	Blue Intensity Control
	16	16	Blue Fine	0-255	Fine Blue Intensity Control
9	17	17	Lime	0-255	Lime Intensity Control
	18	18	Lime Fine	0-255	Fine Lime Intensity Control
10			Pixel Ring Red	0-255	Red Intensity Control of All Backlight Pixels
11			Pixel Ring Green	0-255	Green Intensity Control of All Backlight Pixels
12			Pixel Ring Blue	0-255	Blue Intensity Control of All Backlight Pixels
13			Pixel Ring Warm White	0-255	White Intensity Control of All Backlight Pixels
	19	19	Inner Pixel Ring Intensity	0-255	Dimmer Control of Inner Pixel Ring
	20		Inner Pixel Ring Red	0-255	Red Intensity Control of Inner Pixel Ring
	21		Inner Pixel Ring Green	0-255	Green Intensity Control of Inner Pixel Ring
	22		Inner Pixel Ring Blue	0-255	Blue Intensity Control of Inner Pixel Ring
	23		Inner Pixel Ring Warm White	0-255	Warm White Intensity Control of Inner Pixel Ring
	24	20	Inner Ring Strobe	0-5	Open
				6-10	Closed
				11-35	Random Pulse, Slow to Fast
				36-60	Random Ramp Up, Slow to Fast
				61-85	Random Ramp Down, Slow to Fast
				86-110	Random Strobe, Slow to Fast
				111-135	Strobe/Pause, Large Pause to

21 CH	39 CH	223 CH	Function	Channel Value	Description
					Small Pause
				136-250	Strobe, Slow to Fast
				251-255	Strobe Open
	25	21	Outer Pixel Ring Intensity	0-255	Dimmer Control of Outer Pixel Ring
	26		Outer Pixel Ring Red	0-255	Red Intensity Control of Outer Pixel Ring
	27		Outer Pixel Ring Green	0-255	Green Intensity Control of Outer Pixel Ring
	28		Outer Pixel Ring Blue	0-255	Blue Intensity Control of Outer Pixel Ring
	29		Outer Pixel Ring Warm White	0-255	Warm White Intensity Control of Outer Pixel Ring
	30	22	Outer Pixel Ring Strobe	0-5	Open
				6-10	Closed
				11-35	Random Pulse, Slow to Fast
				36-60	Random Ramp Up, Slow to Fast
				61-85	Random Ramp Down, Slow to Fast
				86-110	Random Strobe, Slow to Fast
				111-135	Strobe/Pause, Large Pause to Small Pause
				136-250	Strobe, Slow to Fast
				251-255	Strobe Open
14	31	23	Color Temperature Control	0-5	No Function
				6-21	1800k
				22-37	2000k
				38-53	2500k

21 CH	39 CH	223 CH	Function	Channel Value	Description
				54-69	2700k
				70-85	3000k
				86-101	3200k
				102-117	3500k
				118-133	4000k
				134-149	4500k
				150-165	5000k
				166-181	5600k
				182-197	6000k
				198-213	6500k
				214-229	7200k
				230-255	8000k
	32	24	Green/Magenta Shift - Note, this only has affect with the above color temperature control.	0	No Function
				1-127	Full Magenta Shift to OFF
				128	No Function
				129-255	Off to Full Green Shift
15	33	25	Color Macros	0-5	No Function
				6-10	Magenta
				11-15	Peacock Blue
				16-20	Steel Blue
				21-25	Light Blue
				26-30	Dark Blue
				31-35	Leaf Green
				36-40	Dark Green
				41-45	Mauve

21 CH	39 CH	223 CH	Function	Channel Value	Description
				46-50	Deep Golden Amber
				51-55	Pale Lavendar
				56-60	Primary Green
				61-65	Bright Blue
				66-70	Apricot
				71-75	Pale Gold
				76-135	Rainbow Effect, Slow to Fast
				136-195	Color Macro Chase, Slow to Fast
				196-255	Color Macro Fade, Slow to Fast
16	34	26	Inner Pixel Ring Macros	0-9	No Function
				10-34	Breathing
				35-59	CCW Chase
				60-84	CW Chase
				85-109	CW Chase - Tri
				110-134	3 Segment Marquee
				135-159	Top to Bottom Chase
				160-184	Bottom to Top Chase
				185-209	Fill/Empty Chase
				210-234	Dual Quad Chase
				235-244	Sides/Top Chase
				245-255	Auto Run Effects
17	35	27	Inner Pixel Ring Macro Speed	0-127	Index Effect
				128	Stop
				129-191	CW Rotation, Fast to Slow

21 CH	39 CH	223 CH	Function	Channel Value	Description
				192	Stop
				13-255	CCW Rotation, Slow to Fast
18	36	28		0-9	No Function
				10-34	Breathing
				35-59	CCW Chase
				60-84	CW Chase
				85-109	CW Chase - Tri
				110-134	3 Segment Marquee
				135-159	Top to Bottom Chase
				160-184	Bottom to Top Chase
				185-209	Fill/Empty Chase
				210-234	Dual Quad Chase
				235-244	Sides/Top Chase
				245-255	Auto Run Effects
19	37	29	Inner Pixel Ring Macro Speed	0-127	Index Effect
				128	Stop
				129-191	CW Rotation, Fast to Slow
				192	Stop
				13-255	CCW Rotation, Slow to Fast
20	38	30	Control	0-4	No Function
				5-9	Display Always On
				10-14	Display Sleep After 10s
				15-19	Display Sleep After 30s
				20-24	Display Sleep After 1m
				25-29	Screen Lock Off

21 CH	39 CH	223 CH	Function	Channel Value	Description
				30-34	Screen Lock On
				35-39	DMX Loss Behavior: Hold
				40-44	DMX Loss Behavior: Blackout
				45-59	No Function
				60-64	Dimming Speed - Standard
				65-69	Dimming Speed - Fast
				70-74	Dimming Speed - Fast
				75-84	No Function
				85-89	Dimming Curve - Linear
				90-94	Dimming Curve - Square
				95-99	Dimming Curve - S-Curve
				100-109	No Function
				110-114	PWM Frequency: 4000 Hz
				115-119	PWM Frequency: 8000 Hz
				120-124	PWM Frequency: 16000 Hz
				125-129	PWM Frequency: 24000 Hz
				130-139	No Function
				140-144	Fan Mode: Auto
				145-149	Fan Mode: Silent
				150-154	Fan Mode: Full
				155-164	No Function
				165-169	Red Shift Off
				170-174	Red Shift On
				175-179	No Function
				180-184	Pan Reverse: Off

21 CH	39 CH	223 CH	Function	Channel Value	Description
				185-189	Pan Reverse: On
				190-194	Pan Error Correction: Off
				195-199	Pan Error Correction: On
				200-204	Tilt Reverse: Off
				205-209	Tilt Reverse: On
				210-214	Tilt Error Correction: Off
				215-219	Tilt Error Correction: On
				220-224	Pan/Tilt Reset
				225-229	Zoom Reset
				230-234	Reset All
				235-255	No Function
21	39	31	Pixel Control Mode	0-15	DMX Mode
				16-238	Mixed Mode: Values Fade Between DMX and Art-Net Mode
				239-255	Art-Net/sACN Mode
		32-223	RGBW LED's, see the chart on page 8.	0-255	Intensity Control Channels for Each Individual Channel.

Note - Channels Past 31 on the 223 channel mode are individually controlled via DMX, Art-Net, or sACN, and do respect the Intensity channels for both the full pixel ring and individual rings - even when in Art-Net/sACN mode.

Maintenance

Routine Maintenance

Fan Cleaning

Periodically do a visual inspection of the fans. If they are dirty, power off the unit and use a small electronics vacuum to clean the fans out. Do not use a can of C02 or an Air Compressor. These will simply blow the dust into the unit and may leave other residue.

Front Lens Cleaning

The front lens should be cleaned so that light output is maintained.

Troubleshooting Problems

The following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work:

- Check that the unit is plugged in to a working power connector.
- Press the menu button to confirm that the unit is powered on. If the screen does not light up, the unit has no power.

B. Not Responding to the DMX Controller

- Check DMX cables to verify that they are plugged in and functional.
- Check the DMX address and mode – does it match the address and mode patched in the lighting console or software?
- Plug the light directly into the DMX controller with a cable that you know is good. Unplug all other lights – does it work?
- Try to use another DMX controller.

Technical Specifications

- 1*120W RGBL LED Array
- 48 RGBW Background Pixel LED’s in 2 rings
- 3.8°-38° Zoom Control
- 2500 lumen output.
- 540° Pan, 220° Tilt
- DMX or Art-Net/sACN Control
- 50,000 hours life and low power consumption
- 0-100% Smooth and precise linear dimmer
- 21, 39, and 223 DMX channel USITT DMX512, RDM control, and manual modes.
- 4-Button LCD display
- True1 connector IN/OUT
- 3-Pin XLR connectors IN/OUT
- RJ45 Ethercon Connectors IN/OUT
- Fanless heatsink cooling
- 40°C Max ambient temperature
- IP65 Outdoor Rated
- AC100-240V 50-60HZ

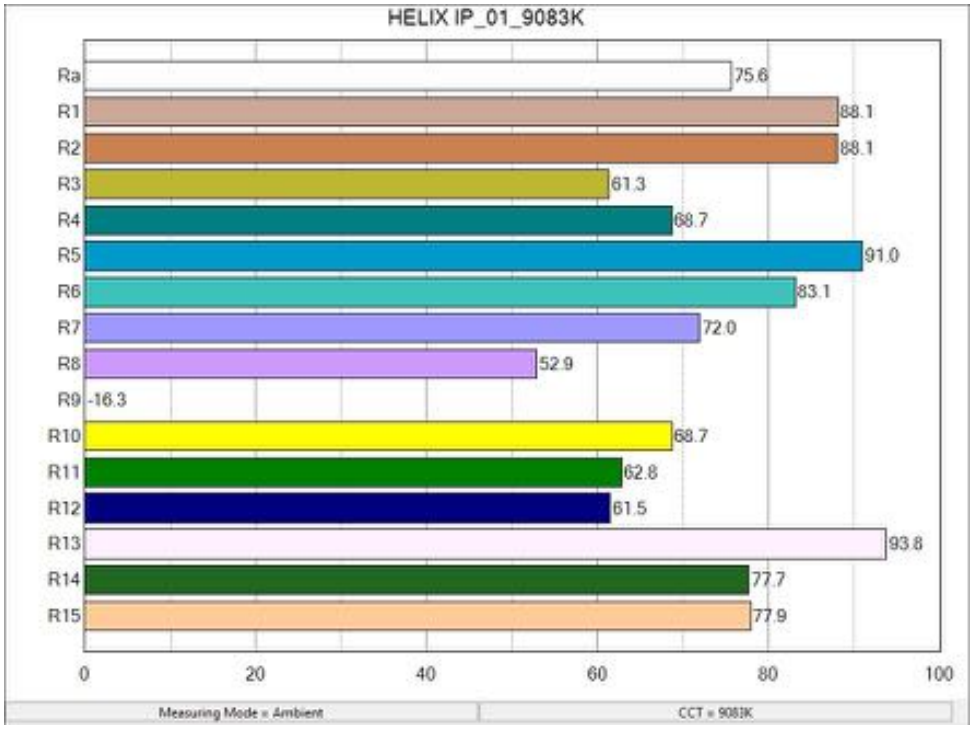
- Max. Power: 180W
- Dimensions: 11”x 9.8” x 14.3”
- Net Weight: 15.5lbs
- RDM UID073A7ABF8CA2

Photometrics

Distance in Ft	FC at Full - 3.8°	FC at Full - 38°
5	2737	101
10	1589	36
15	586	14
25	138	5.25
50	34	1.3

Color Quality

CRI:



TM30: