HELIOS™

RGBW MOVING HEAD SPOT

blizzard LIGHTING

Blizzard Lighting, LLC
www.blizzardlighting.com
Waukesha, WI USA

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- An Ever-So-Handy Power Cord
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- This Lovely User Manual

Getting It Out Of The Box

Congratulations on purchasing the Helios™, the next generation 150-watt LED module powered zoomable beam moving head fixture of the future! Now that you've got your Helios™ moving head spot (or hopefully, more!), you should carefully unpack the box and check the contents to ensure that all parts are present and in good condition. If anything looks as if it has been damaged in transit, notify the shipper immediately and keep the packing material for inspection. Again, please save the carton and all packing materials. If a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Powering Up!

All fixtures must be powered directly off a switched circuit and **cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch**.

AC Voltage Switch - Not all fixtures have a voltage select switch, so please verify that the fixture you receive is suitable for your local power supply. See the label on the fixture or refer to the fixture's specifications chart for more information. A fixture's listed current rating is its average current draw under normal conditions. Check the fixture or device carefully to make sure that if a voltage selection switch exists that it is set to the correct line voltage you will use.

Warning! ***Verify that the voltage select switch on your unit matches the line voltage applied. Damage to your fixture may result if the line voltage applied does not match the voltage indicated on the voltage selector switch. All fixtures must be connected to circuits with a suitable Ground (Earthing).***

Getting A Hold Of Us

If something is wrong, just give us a call or send an email. We'll be happy to help, honest.

Blizzard Lighting
N16 W23390 Stoneridge Dr. Ste E
Waukesha, WI 53188 USA
www.blizzardlighting.com
414-395-8365
Email: support@blizzardlighting.com

Author:	Date:	Last Edited:	Date:
J. Thomas	1/21/2014	J. Thomas	2/7/2014

SAFETY INSTRUCTIONS

Please read these instructions carefully. They include important information about the installation, usage and maintenance of this product.

- Please keep this User Guide for future use. If you sell the unit to someone else, be sure that they also receive this User Guide.

- ALWAYS make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.

- This product is intended for indoor use only.

- To prevent risk of fire or shock, do not expose fixture to rain or moisture.

- Make sure there are no flammable materials close to the unit while operating.

- The unit must be installed in a location with adequate ventilation, at least 20in (50cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.

- ALWAYS disconnect from the power source before servicing or replacing fuse and be sure to replace with same fuse size and type.

- ALWAYS secure fixture using a safety chain. NEVER carry the fixture by its head. Use its carrying handles.

- DO NOT operate at ambient temperatures higher than 104°F (40°C).

- In the event of a serious operating problem, stop using the unit immediately. NEVER try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.

- NEVER connect the device to a dimmer pack.

- Make sure the power cord is never crimped or damaged.

- Never disconnect the power cord by pulling or tugging on the cord.

- Avoid direct eye exposure to the light source while it is on.

Caution! There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact Blizzard Lighting at support@blizzardlighting.com.

2. MEET THE HELIOS™ MOVING HEAD SPOT

MAIN FEATURES

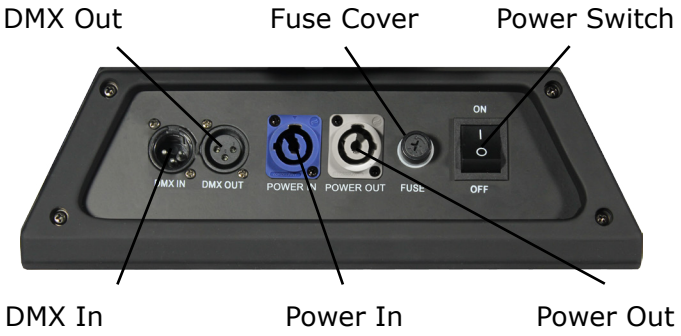
- Light Source: 1x Red Butterfly 150W RGBW LED Module (60,000 hr.)
- Full RGBW Color Mixing (no color wheel)
- 2 Gobo Wheels:
  - One Fixed Gobo Wheel: 7 gobos (5 metal+2 glass) +open
  - One Rotating Gobo wheel: 7 gobos (5 metal+2 glass) +open
- Electronic Focus
- High speed shake effect
- 3-facet rotating prism
- Cycle, random, and random color strobe effect (1Hz~13Hz)
- Linear dimmer
- Pan/Tilt Resolution: 16 bit
- PAN = 540° TILT = 270° with locking mechanisms for transportation
- 3-pin XLR input and output
- ¼-turn "omega" style clamp brackets
- POWERCON-compatible power in/out
- Easy to use 4-button LCD-based menu system

DMX Quick Reference

Channel	Short Mode	Channel	Standard Mode	Channel	Extended Mode
1	Pan	1	Pan	1	Pan
2	Tilt	2	Pan Fine	2	Pan Fine
3	Dimmer	3	Tilt	3	Tilt
4	Strobe	4	Tilt Fine	4	Tilt Fine
5	Red Intensity	5	Moving Speed	5	Moving Speed
6	Green Intensity	6	Dimmer	6	Dimmer
7	Blue Intensity	7	Strobe	7	Strobe
8	White Intensity	8	Red Intensity	8	Red Intensity (8-bit)
9	Gobo Wheel 1	9	Green Intensity	9	Red Intensity (16-bit)
10	Gobo 1 Rotation	10	Blue Intensity	10	Green Intensity (8-bit)
11	Gobo Wheel 2	11	White Intensity	11	Green Intensity (16-bit)
12	Gobo 2 Rotation	12	Built-in Colors	12	Blue Intensity (8-bit)
13	Prism	13	Gobo Wheel 1	13	Blue Intensity (16-bit)
14	Prism Rotation	14	Gobo 1 Rotation	14	White Intensity (8-bit)
15	Focus	15	Gobo Wheel 2	15	White Intensity (16-bit)
16	Built-in Programs	16	Gobo 2 Rotation	16	Built-in Colors
17	Reset	17	Prism	17	Gobo Wheel 1
--		18	Prism Rotation	18	Gobo 1 Rotation
--		19	Focus	19	Gobo Wheel 2
--		20	Built-in Programs	20	Gobo 2 Rotation
--		21	Reset	21	Prism
--		--		22	Prism Rotation
--		--		23	Focus
--		--		24	Built-in Programs
--		--		25	Reset

Figure 1: The Helios Pin-Up Picture

Figure 2: The Rear Connections

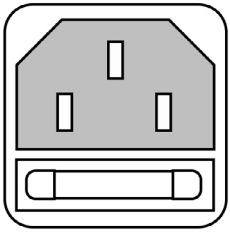


3. SETUP

Before replacing a fuse, disconnect power cord. ALWAYS replace with the same type and rating of fuse.

Fuse Replacement

With a flat head screwdriver, wedge the fuse holder out of its housing. Remove the damaged fuse from its holder and replace with exact same type fuse. Insert the fuse holder back in its place and reconnect power.



Connecting A Bunch of Helios Fixtures™

You will need a serial data link to run light shows using a DMX-512 controller or to run shows on two or more fixtures set to sync in master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Fixtures on a serial data link must be daisy chained in one single line. Also, connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.
The maximum recommended cable-run distance is 500 meters (1640 ft). The maximum recommended number of fixtures on a serial data link is 32 fixtures.

Data/DMX Cabling

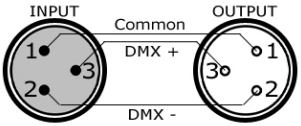
To link fixtures together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

For instance, Belden© 9841 meets the specifications for EIA RS-485 applications. Standard microphone cables will "probably" be OK, but note that they cannot transmit DMX data as reliably over long distances. In any event, the cable should have the following characteristics:

2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 30 pF/ft.
Maximum capacitance between conductor & shield – 55 pF/ft.
Maximum resistance of 20 ohms / 1000 ft.
Nominal impedance 100 – 140 ohms

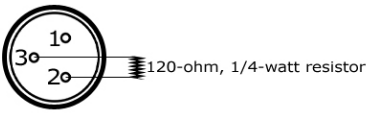
Cable Connectors

Cables must have a male XLR connector on one end and a female XLR connector on the other end. (Duh!)



A Word on Termination: DMX is a resilient communication protocol, however errors still occasionally occur. Termination reduces signal errors, and therefore best practices include use of a terminator in all circumstances. If you are experiencing problems with erratic fixture behavior, especially over long signal cable runs, a terminator may help improve performance.

To build your own DMX Terminator: Obtain a 120-ohm, 1/4-watt resistor, and wire it between pins 2 & 3 of the last fixture. They are also readily available from specialty retailers.



CAUTION: Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

3-Pin??? 5-Pin??? Huh?!?

If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. They are widely available over the internet and from specialty retailers If you'd like to build your own, the chart below details a proper cable conversion:

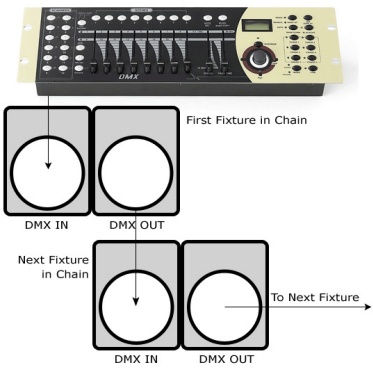
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
DMX Data (-)	Pin 2	Pin 2
DMX Data (+)	Pin 3	Pin 3
Not Used.	No Connection.	No Connection.
Not Used.	No Connection.	No Connection.

Take It To The Next Level: Setting Up DMX Control

Step 1: Connect the male connector of the DMX cable to the female connector (output) on the controller.

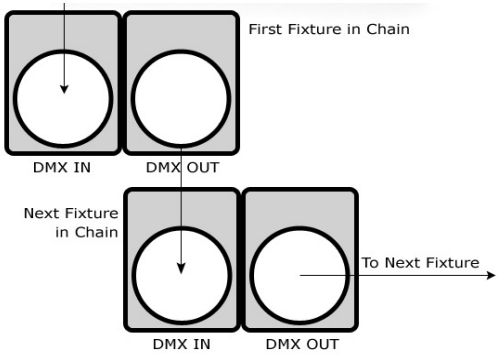
Step 2: Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture number first, and so on.

Step 3: Connect other fixtures in the chain from output to input as above. Place a DMX terminator on the output of the final fixture to ensure best communication.



Fixture Linking (Master/Slave Mode)

1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the first fixture.
2. Connect the end of the cable coming from the first fixture which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.



A quick note: Often, the setup for Master-Slave and Standalone operation requires that the first fixture in the chain be initialized for this purpose via either settings in the control panel or DIP-switches. Secondarily, the fixtures that follow may also require a slave setting.

Check the "**Operating Adjustments**" section in this manual for complete instructions for this type of setup and configuration.

Mounting & Rigging

This fixture may be mounted in any SAFE position provided there is enough room for ventilation.

It is important never to obstruct the fan or vents pathway. Mount the fixture using a suitable "C" or "O" type clamp. The clamp should be rated to hold at least 10x the fixture's weight to ensure structural stability. Do not mount to surfaces with unknown strength, and ensure properly "rated" rigging is used when mounting fixtures overhead.

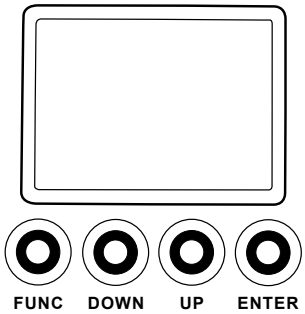
Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

- When selecting installation location, take into consideration lamp replacement access (if applicable) and routine maintenance.
- Safety cables MUST ALWAYS be used.
- Never mount in places where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation.

4. OPERATING ADJUSTMENTS

The Control Panel

All the goodies and different modes possible with the Helios™ are accessed by using the control panel on the front of the fixture. There are 4 control buttons below the LCD display which allow you to navigate through the various control panel menus.



Button	Function
<FUNCTION>	Used to access the menu or to return to a previous menu option.
<DOWN>	Scrolls through menu options in descending order.
<UP>	Scrolls through menu options in ascending order.
<ENTER>	Used to select and store the current menu or option within a menu.

Access control panel functions using the four panel buttons located directly underneath the LCD Display.

The Control Panel LCD Display shows the menu items you select from the menu map on page #11. When a menu function is selected, the display will show immediately the first available option for the selected menu function. To select a menu item, press **<ENTER>**.

Use the **<UP>** and **<DOWN>** buttons to navigate the menu map and menu options. Press the **<ENTER>** button to access the menu function currently displayed or to enable a menu option. To return to the previous option or menu without changing the value, press the **<FUNC>** button.

Control Panel Menu Structure

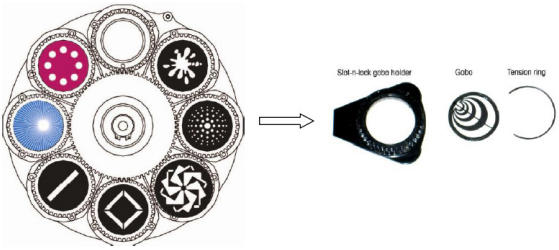
Main Function	Sub Function		Selection	What It Does...
Address Setup	N/A		=001 <-> =512	Sets the DMX address
Load Default	N/A		=NO / =YES	Loads the fixtures default factory settings
Information	Temperature		**<ENTER>**	Displays the temperature at the LED heat sink
	Version		**<ENTER>**	Displays the fixtures firmware version
	View DMX Value		**<ENTER>**	Displays DMX values, channels 001 - 512
	Product ID		**<ENTER>**	Displays the fixtures ID number
	Fixture Hours		**<ENTER>**	Displays the current total fixture runtime hours
Advanced	Access Code		=000 <-> =255	**Code: 008**, **<ENTER>** enables advanced editing
	Mic Sensitivity		=0% <-> =100%	Built-in microphone sensitivity level adjustment
	Adjust	Red	=000 <-> =255	Red Intensity (0% <--> 100%)
		Green	=000 <-> =255	Green Intensity (0% <--> 100%)
		Blue	=000 <-> =255	Blue Intensity (0% <--> 100%)
		White	=000 <-> =255	White Intensity (0% <--> 100%)
		Fixed Gobo Wheel	=-127 <-> =+127	Fine incremental fixed gobo wheel adjustments
		Rot. Gobo Wheel	=-127 <-> =+127	Fine incremental rotating wheel adjustments
		Focus	=-127 <-> =+127	Fine incremental focus adjustments
		Prism	=-127 <-> =+127	Fine incremental prism adjustments
		Tilt	=-127 <-> =+127	Fine incremental tilt adjustments
		Pan	=-127 <-> =+127	Fine incremental pan adjustments
Option Settings	Pan Tilt Swap		=OFF / =ON	Swaps pan/tilt settings
	Lost DMX		=Clear Value =Hold Value	When DMX signal is lost, either clear or hold the last DMX signal received
	Display Setup		=Display Invert =Language =Display Off	Adjusts the setttings to invert the display (on/off), change the language (English or Chinese), or turn off the LCD display (on/off).
	Pan Invert		=OFF / =ON	Inverts the fixtures pan movments
	Tilt Invert		=OFF / =ON	Inverts the tilt movments
Option Mode	DMX Mode		Short Mode	Sets fixture to run in 17-channel DMX mode
			Standard Mode	Sets fixture to run in 21-channel DMX mode
			Extended Mode	Sets fixture to run in 25-channel DMX mode
	Music Mode		=001 <-> =004	Sound active mode (choose built-in program 1-4)
	Slave Same Mode		**<ENTER>**	Slave mode
	Slave Sync Mode		**<ENTER>**	Slave mode (choose built-in program 1-4)
	Master Mode		**<ENTER>**	Master auto mode (choose built-in program 1-4)
	Auto Mode		**<ENTER>**	Single auto mode (choose built-in program 1-4)
Manual Operation	Pan		=000 <-> =255	Allows you to manually set the fixture to a fixed setting using the DMX values for each channel. For more information on the DMX values available for each channel, see pages 12-13.
	Tilt		=000 <-> =255	
	Red		=000 <-> =255	
	Green		=000 <-> =255	
	Blue		=000 <-> =255	
	White		=000 <-> =255	
	Strobe		=000 <-> =255	
	Fixed Gobo Wheel		=000 <-> =255	
	Rot. Gobo Wheel		=000 <-> =255	
	Gobo Rotation		=000 <-> =255	
	Prism		=000 <-> =255	
	Prism Rot		=000 <-> =255	
	Focus		=000 <-> =255	
Reset	Reset Pan & Tilt		**<ENTER>**	Resets pan and tilt
	Reset Effects		**<ENTER>**	Resets all of the effects
	Reset Complete		**<ENTER>**	Resets all

DMX Channel Values

Short Mode	Standard Mode	Extended Mode	Channel Value	What it does
1	**1**	**1**	000 <-> 255	Pan
...	**2**	**2**	000 <-> 255	Pan Fine (16-Bit Pan)
2	**3**	**3**	000 <-> 255	Tilt
...	**4**	**4**	000 <-> 255	Tilt Fine (16-Bit Tilt)
...	**5**	**5**	000 <-> 255	Movement Speed (fast <--> slow)
3	**6**	**6**	000 <-> 009 010 <-> 255	No Function Dimmer
4	**7**	**7**	000 <-> 004 005 <-> 009 010 <-> 199 200 <-> 204 205 <-> 224 225 <-> 229 230 <-> 249 250 <-> 255	No Function No Strobe (Open) Strobe (slow <--> fast) No Strobe (Open) Random Strobe (slow <--> fast) No Strobe (Open) Random Color Strobe (slow <--> fast) No Strobe (Open)
5	**8**	**8**	000 <-> 255	Red (8-bit)
...	**...**	**9**	000 <-> 255	Red Fine (16-bit)
6	**9**	**10**	000 <-> 255	Green (8-bit)
...	**...**	**11**	000 <-> 255	Green Fine (16-bit)
7	**10**	**12**	000 <-> 255	Blue (8-bit)
...	**...**	**13**	000 <-> 255	Blue Fine (16-bit)
8	**11**	**14**	000 <-> 255	White (8-bit)
...	**...**	**15**	000 <-> 255	White Fine (16-bit)
...	**12**	**16**	 000 <-> 009 010 <-> 019 020 <-> 029 030 <-> 039 040 <-> 049 050 <-> 059 060 <-> 069 070 <-> 079 080 <-> 089 090 <-> 099 100 <-> 109 110 <-> 119 120 <-> 129 130 <-> 139 140 <-> 255	**Built-in Colors** Open Color Temperature = 2700k Color Temperature = 3200k Color Temperature = 4200k Color Temperature = 5600k Color Temperature = 8000k Red Orange Green Blue Yellow Cyan Magenta White Multi-Colors
9	**13**	**17**	 000 <-> 009 010 <-> 019 020 <-> 029 030 <-> 039 040 <-> 049 050 <-> 059 060 <-> 069 070 <-> 079 080 <-> 089 090 <-> 099 100 <-> 109 110 <-> 119 120 <-> 129 130 <-> 139 140 <-> 149 150 <-> 202 203 <-> 255	**Gobo Wheel #1** Open (White) Gobo 1 Gobo 2 Gobo 3 Gobo 4 Gobo 5 Gobo 6 Gobo 7 Gobo Shake 1 (slow <--> fast) Gobo Shake 2 (slow <--> fast) Gobo Shake 3 (slow <--> fast) Gobo Shake 4 (slow <--> fast) Gobo Shake 5 (slow <--> fast) Gobo Shake 6 (slow <--> fast) Gobo Shake 7 (slow <--> fast) Clockwise Rotation (fast <-> slow) Counter-Clockwise Rotation (slow <-> fast)
10	**14**	**18**	 000 <-> 127 028 <-> 190 191 <-> 192 193 <-> 255	**Gobo #1 Rotation** Gobo Indexing Clockwise Rotation (Fast <-> Slow) Rotation Stop Counter-Clockwise Rotation (Slow <-> Fast)

DMX Channel Values (Continued)

Short Mode	Standard Mode	Extended Mode	Channel Value	What it does
11	**15**	**19**		**Gobo Wheel #2**
			000 <-> 009	Open (White)
			010 <-> 019	Gobo 1
			020 <-> 029	Gobo 2
			030 <-> 039	Gobo 3
			040 <-> 049	Gobo 4
			050 <-> 059	Gobo 5
			060 <-> 069	Gobo 6
			070 <-> 079	Gobo 7
			080 <-> 089	Gobo Shake 1 (slow <--> fast)
			090 <-> 099	Gobo Shake 2 (slow <--> fast)
			100 <-> 109	Gobo Shake 3 (slow <--> fast)
			110 <-> 119	Gobo Shake 4 (slow <--> fast)
			120 <-> 129	Gobo Shake 5 (slow <--> fast)
			130 <-> 139	Gobo Shake 6 (slow <--> fast)
			140 <-> 149	Gobo Shake 7 (slow <--> fast)
			150 <-> 202	Clockwise Rotation (fast <-> slow)
			203 <-> 255	Counter-Clockwise Rotation (slow <-> fast)
12	**16**	**20**		**Gobo #2 Rotation**
			000 <-> 127	Gobo Indexing
			028 <-> 190	Clockwise Rotation (Fast <-> Slow)
			191 <-> 192	Rotation Stop
			193 <-> 255	Counter-Clockwise Rotation (Slow <-> Fast)
13	**17**	**21**		**Prism**
			000 <-> 127	Prism Out
			128 <-> 255	Prism In
14	**18**	**22**		**Prism Rotation**
			000 <-> 127	0° <--> 540° rotation
			028 <-> 190	Clockwise Rotation (Fast <-> Slow)
			191 <-> 192	Stop
			193 <-> 255	CCW Rotation (Slow <-> Fast)
15	**19**	**23**	000 <-> 255	**Line Focus**
16	**20**	**24**		**Built-in Programs**
			000 <-> 050	No Function
			051 <-> 100	Preset Program 1
			101 <-> 150	Preset Program 2
			151 <-> 200	Preset Program 3
			201 <-> 255	Preset Program 4
17	**21**	**25**		**Reset (initiates after 5 seconds within a value)**
			000 <-> 024	No Function
			025 <-> 049	Reset Effects
			050 <-> 074	No Function
			075 <-> 099	Reset Pan & Tilt
			100 <-> 124	No Function
			125 <-> 149	Complete Reset
			150 <-> 255	No Function



Gobo Replacement

1) Remove the gobo cover by removing the four screws on the top of the fixture head.
2) Remove the slot-n-lock gobo from the gobo wheel by lifting up slightly and sliding it out.
3) Using a small tool, pry the tension ring from the gobo holder.
4) Remove the old gobo, insert the new gobo, and replace in the reverse steps of removal.

Troubleshooting

Symptom	Solution
Fixture Auto-Shut Off	Check the fan in the fixture. If it is stopped or moving slower than normal, the unit may have shut itself off due to high heat. This is to protect the fixture from overheating. Clear the fan of obstructions, or return the unit for service.
Beam is Dim	Check optical system and clean excess dust/grime. Also ensure that the 220V/110V switch is in the correct position, if applicable.
No Light Output	Check to ensure fixture is operating under correct mode, IE sound active/auto/DMX/Etc., if applicable. Contact service for more information.
Chase Speed Too Fast/Slow	Check to ensure proper setup of speed adjustment.
No Power	Check fuse, AC cord and circuit for malfunction.
Blown Fuse	Check AC cord and circuit for damage, verify that moving parts are not restricted and that unit's ventilation is not obstructed
Slow Movement	Verify that 220V/110V switch is in the correct position, if applicable. Also check that speed channels are set appropriately.
No Response to Audio	Verify that the fixture is in "Sound Active" mode. Adjust Audio Sensitivity, If Applicable.
Fixture Not Responding / Responding Erratically	Make sure all connectors are seated properly and securely. Use Only DMX Cables. Install a Terminator. Check all cables for defects. Reset fixture(s).
Intermittent Lamp	Check lamp for properly installation. Relamp, lamp may have reached end of life.
Fixture Moving On Its Own	Verify proper mode of operation. Is the fixture in "Auto" mode?

If your problem isn't listed, or if problems persist, please contact support: support@blizzardlighting.com.

5. APPENDIX

A Quick Lesson On DMX

DMX (aka DMX-512) was created in 1986 by the United States Institute for Theatre Technology (USITT) as a standardized method for connecting lighting consoles to lighting dimmer modules. It was revised in 1990 and again in 2000 to allow more flexibility. The Entertainment Services and Technology Association (ESTA) has since assumed control over the DMX512 standard. It has also been approved and recognized for ANSI standard classification.

DMX covers (and is an abbreviation for) Digital MultipleXed signals. It is the most common communications standard used by lighting and related stage equipment.

DMX provides up to 512 control "channels" per data link. Each of these channels was originally intended to control lamp dimmer levels. You can think of it as 512 faders on a lighting console, connected to 512 light bulbs. Each slider's position is sent over the data link as an 8-bit number having a value between 0 and 255. The value 0 corresponds to the light bulb being completely off while 255 corresponds to the light bulb being fully on.

DMX data is transmitted at 250,000 bits per second using the RS-485 transmission standard over two wires. As with microphone cables, a grounded cable shield is used to prevent interference with other signals.

There are five pins on a DMX connector: a wire for ground (cable shield), two wires for "Primary" communication which goes from a DMX source to a DMX receiver, and two wires for a "Secondary" communication which goes from a DMX receiver back to a DMX source. Generally, the "Secondary" channel is not used so data flows only from sources to receivers. Hence, most of us are most familiar with DMX-512 as being employer over typical 3-pin "mic cables," although this does not conform to the defined standard.

DMX is connected using a daisy-chain configuration where the source connects to the input of the first device, the output of the first device connects to the input of the next device, and so on. The standard allows for up to 32 devices on a single DMX link.

Each receiving device typically has a means for setting the "starting channel number" that it will respond to. For example, if two 6-channel fixtures are used, the first fixture might be set to start at channel 1 so it would respond to DMX channels 1 through 6, and the next fixture would be set to start at channel 7 so it would respond to channels 7 through 12.

The greatest strength of the DMX communications protocol is that it is very simple and robust. It involves transmitting a reset condition (indicating the start of a new "packet"), a start code, and up to 512 bytes of data. Data packets are transmitted continuously. As soon as one packet is finished, another can begin with no delay if desired (usually another follows within 1 ms). If nothing is changing (i.e. no lamp levels change) the same data will be sent out over and over again. This is a great feature of DMX -- if for some reason the data is not interpreted the first time around, it will be re-sent shortly.

Not all 512 channels need to be output per packet, and in fact, it is very uncommon to find all 512 used. The fewer channels are used, the higher the "refresh" rate. It is possible to get DMX refreshes at around 1000 times per second if only 24 channels are being transmitted. If all 512 channels are being transmitted, the refresh rate is around 44 times per second.

In summary, since its design and evolution in the 1980's DMX has become the standard for lighting control. It is flexible, robust, and scalable, and its ability to control everything from dimmer packs to moving lights to foggers to lasers makes it an indispensable tool for any lighting designer or lighting performer.

Keeping Your Helios As Good As New

The fixture you've received is a rugged, tough piece of pro lighting equipment, and as long as you take care of it, it will take care of you. That said, like anything, you'll need to take care of it if you want it to operate as designed. You should absolutely keep the fixture clean, especially if you are using it in an environment with a lot of dust, fog, haze, wild animals, wild teenagers or spilled drinks.

Cleaning the optics routinely with a suitable glass cleaner will greatly improve the quality of light output. Keeping the fans free of dust and debris will keep the fixture running cool and prevent damage from overheating.

In transit, keep the fixtures in cases. You wouldn't throw a prized guitar, drumset, or other piece of expensive gear into a gear trailer without a case, and similarly, you shouldn't even think about doing it with your shiny new light fixtures.

Common sense and taking care of your fixtures will be the single biggest thing you can do to keep them running at peak performance and let you worry about designing a great light show, putting on a great concert, or maximizing your client's satisfaction and "wow factor." That's what it's all about, after all!

Returns (Gasp!)

We've taken a lot of precautions to make sure you never even have to worry about sending a defective unit back, or sending a unit in for service. But, like any complex piece of equipment designed and built by humans, once in a while, something doesn't go as planned. If you find yourself with a fixture that isn't behaving like a good little fixture should, you'll need to obtain a Return Authorization (RA).

Don't worry, this is easy. Just send an email to support@blizzardlighting.com, and we'll issue you an RA. Then, you'll need to send the unit to us using a trackable, pre-paid freight method. We suggest using USPS Priority or UPS. Make sure you carefully pack the fixture for transit, and whenever possible, use the original box & packing for shipping.

When returning your fixture for service, be sure to include the following:

1.) Your contact information (Name, Address, Phone Number, Email address).
2.) The RA# issued to you
3.) A brief description of the problem/symptoms.

We will, at our discretion, repair or replace the fixture. Please remember that any shipping damage which occurs in transit to us is the customer's responsibility, so pack it well!

Shipping Issues

Damage incurred in shipping is the responsibility of the shipper, and must be reported to the carrier immediately upon receipt of the items. Claims must be made within seven (7) days of receipt.

Tech Specs!

Weight & Dimensions						
Width	13.4 inches (340 mm)					
Depth	11.62 inches (295 mm)					
Height	21.7 inches (550 mm)					
Weight	46.2 lbs (30.9 kg)					
Power						
Operating Voltage	100-240VAC 50/60Hz (autoranging)					
Power Consumption	129w, 1.12a, pf:.99					
Light Source						
LED	1* 150w Red Butterfly LED module, 60,000 hours					
Optical						
Beam Angle	13 degree					
	Lux/m	Red	Green	Blue	White	All
	1m	6,500	7,200	9,150	19,350	40,700
Luminous Intensity	2m	1,900	2,060	2,600	5,420	12,300
Movement Range						
Pan	540 degrees					
Tilt	270 degrees					
Thermal						
Max. Operating Temp.	104 degrees F (40 degrees C) ambient					
Control						
Protocol	USITT DMX-512					
DMX Channels	17/21/25 channel (Short, Standard, & Extended)					
Input	3-pin XLR Male					
Output	3-pin XLR Female					
Other Information						
I think seals are really just dog mermaids.						
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LED's.					

DISCLAIMER:
The power connector fitted to the fixture and fixture cord are designed for compatibility with products manufactured by Neutrik AG, Neutrik USA and their related entities, however they are not manufactured by, affiliated with or endorsed by Neutrik AG, Neutrik USA, or any related entity. Neutrik® and powerCON® are registered trademarks of Neutrik AG.

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Enjoy your product!
Our sincerest thanks for your purchase!
--The team @ Blizzard Lighting