

blackhead III_{EM}



Blizzard Lighting, LLC
www.blizzardlighting.com
Waukesha, WI USA
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1. GETTING STARTED

What's In The Box?

- 1 x BlockHead™ II Moving Head Fixture
- 2 x Omega 1/4 Turn Mounting Brackets
- A Sweet Safety Cable & Set of Mounting Brackets
- An Ever-So-Handy Power Cord
- This Lovely User Manual

Getting It Out Of The Box

Congratulations! You have just purchased a the coolest quad-color RGBW 5x5 pixel matrix moving head fixture on the market with infinite pan, infinite tilt, and infinite awesomeness! So now that you're the proud owner of a BlockHead™ II (or hopefully, BlockHeads!), 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, please contact us at www.blizzardlighting.com/tickets. 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

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Author:	Date:	Last Edited:	Date:
J. Thomas	4/6/2015	J. Thomas	5/7/2015

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 cord. 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 www.blizzardlighting.com/tickets.

2. MEET THE BLOCKHEAD II MOVING HEAD™

MAIN FEATURES:

- 5x5 pixel matrix moving head w/25x CREE® 12W RGBW LEDs
- Infinite pan and tilt
- 3-phase pan/tilt motors with 16-bit resolution
- Full RGBW color in standalone & DMX mode
- Display built-in numbers, letters, and graphic effects
- 7 degree beam angle
- Built-in sound active programs
- Built-in automated programs via master/slave
- Built-in sound activated programs via master/slave
- 3-pin male input and 3-pin female output
- PowerCon™ compatible AC power In/Out connectors

CONTROL:

- USITT DMX-512 (19/29/117-channels)
- 3-pin Input/Output
- 4-button menu with LCD display

DMX Quick Reference (19-Channel Mode)

Channel	What it does
1	Pan (0-540 degree)
2	Infinite Pan
3	Tilt (0-270 degree)
4	Infinite Tilt
5	Pan/Tilt Speed (fast <--> slow)
6	Dimmer (0% <--> 100%)
7	Strobe (slow <--> fast)
8	Red Intensity (0% <--> 100%)
9	Green Intensity (0% <--> 100%)
10	Blue Intensity (0% <--> 100%)
11	White Intensity (0% <--> 100%)
12	Numbers (0-9), Symbols, and Patterns
13	Letters (A-Z)
14	Static Pattern Effects
15	Number & Letter Colors
16	Dynamic Pattern Effects
17	Effect Speed
18	Built-in Programs / Auto Mode / Sound Active
19	Motor Reset (251-255)

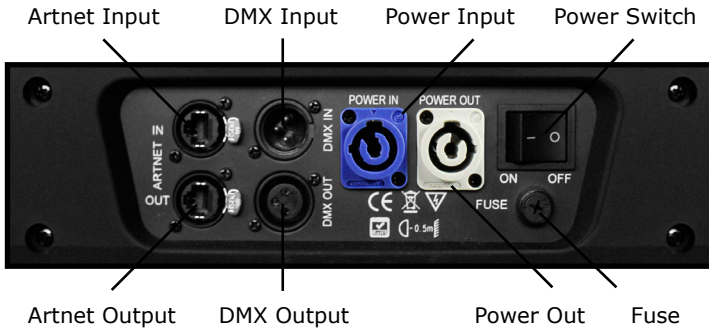
DMX Quick Reference (29/117-Channel Modes)

29-CH	What it does	117-CH	What it does
1	Pan (0-540 degree)	1	Pan (0-540 degree)
2	Infinite Pan	2	Infinite Pan
3	Pan Fine	3	Pan Fine
4	Tilt (0-270 degree)	4	Tilt (0-270 degree)
5	Infinite Tilt	5	Infinite Tilt
6	Tilt Fine	6	Tilt Fine
7	Pan/Tilt Speed (fast <--> slow)	7	Pan/Tilt Speed (fast <--> slow)
8	Dimmer (0% <--> 100%)	8	Dimmer (0% <--> 100%)
9	Strobe Effects	9	Strobe Effects
10	Section 1 Red Intensity (outer square)	10	LED 1 Red Intensity
11	Section 1 Green Intensity (outer square)	11	LED 1 Green Intensity
12	Section 1 Blue Intensity (outer square)	12	LED 1 Blue Intensity
13	Section 1 White Intensity (outer square)	13	LED 1 White Intensity
14	Section 2 Red Intensity (middle square)	14	Global Blue Intensity (0% <--> 100%)
15	Section 2 Green Intensity (middle square)	15	Global White Intensity (0% <--> 100%)
16	Section 2 Blue Intensity (middle square)	16	LED 1 - Red Intensity
17	Section 2 White Intensity (middle square)	17	LED 1 - Green Intensity (0% <--> 100%)
18	Section 3 Red Intensity (center LED)	18	LED 1 - Blue Intensity (0% <--> 100%)
19	Section 3 Green Intensity (center LED)	19	LED 1 - White Intensity (0% <--> 100%)
20	Section 3 Blue Intensity (center LED)	---	---
21	Section 3 White Intensity (center LED)	---	---
22	Numbers (0-9), Symbols, and Patterns	106	LED 25 - Red Intensity
23	Letters (A-Z)	107	LED 25 - Green Intensity (0% <--> 100%)
24	Static Pattern Effects	108	LED 25 - Blue Intensity (0% <--> 100%)
25	Number & Letter Colors	109	LED 25 - White Intensity (0% <--> 100%)
26	Dynamic Pattern Effects	110	Numbers (0-9), Symbols, and Patterns
27	Effect Speed	111	Letters (A-Z)
28	Built-in Programs / Auto Mode / Sound Active	112	Static Pattern Effects
29	Motor Reset (251-255)	113	Number & Letter Colors
---	---	114	Dynamic Pattern Effects
---	---	115	Effect Speed
---	---	116	Built-in Programs / Auto Mode / Sound Active
---	---	117	Motor Reset (251-255)

Figure 1: The BlockHead™ II 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 Philips screwdriver, unscrew the fuse holder out of its housing and remove the blown fuse from its holder. Replace the blown fuse with a fuse of the exact same type and rating, then screw the fuse holder back into place and reconnect power.

Connecting A Bunch of BlockHead™ II 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

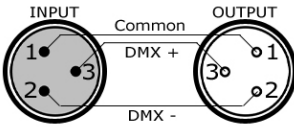
To link fixtures together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

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

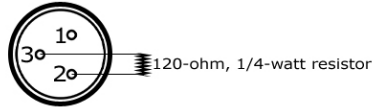
Cable Connectors

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:

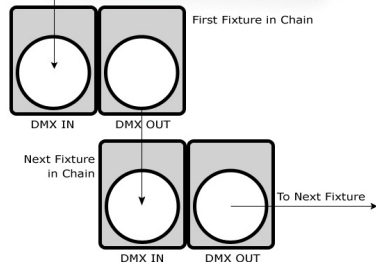
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
DMX Data (-)	Pin 2	Pin 2
DMX Data (+)	Pin 3	Pin 3
Not Used.	No Connection.	No Connection.
Not Used.	No Connection.	No Connection.

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.



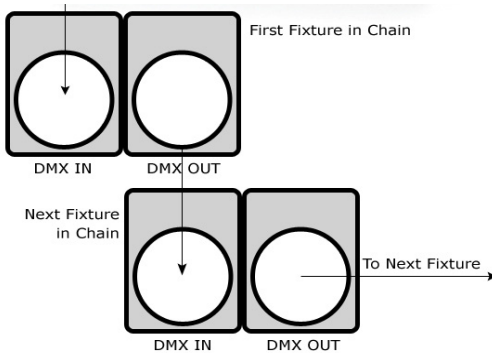
Step 2: Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture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

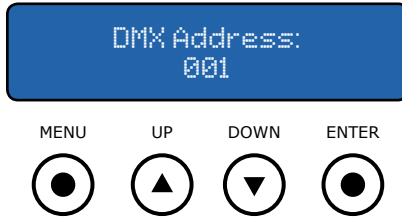
Adjust the angle of the fixture by loosening both knobs and tilting the fixture. After finding the desired position, retighten both knobs.

- 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 BlockHead™ II 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
<MENU>	Used to access the menu or to return to a previous menu option.
<UP>	Used to select and store the current menu or option within a menu.
<DOWN>	Scrolls through menu options in ascending order.
<ENTER>	Scrolls through menu options in descending order.

To navigate the LCD control menu, use the <MENU> button to scroll through the various top level options, then and press <ENTER>. Then to scroll through sub-menu options, use the <UP/>DOWN> buttons. Push the <ENTER> button to save any changes made.

Control Panel Menu Structure

Function	Value	What it does
DMX Address Set	001-512	Sets the DMX starting address
Work Mode Set	DMX512	Run the fixture in DMX mode
	Slave	Run the fixture as a slave
	Sound	Run in sound active mode
	Fast	Auto mode (fast)
	Slow	Auto mode (slow)
	Artnet	Artnet mode
Invert PAN	<ENTER>	Invert pan movement
Invert TILT	<ENTER>	Invert tilt movement
Display Set	Yes/No	Backlight continually on, or shuts off after 20s of inactivity
Channel Mode Set	<ENTER>	Choose to work in either 19/29 or 117-channel DMX mode
Restore Factory Settings	<ENTER>	Select YES to restore all default factory settings
Reset	<ENTER>	Select YES to reset the motors

DMX Mode

Allows the unit to be controlled by any universal DMX controller.

Set The DMX Starting Address

To assign a DMX starting address to the fixture, use the **<MENU>** button to scroll to **DMX Address SET**, and press the **<ENTER>** button. Then use the **<UP/DOWN>** buttons to display any value within the range of **001-512**, then push the **<ENTER>** button.

DMX Channel Mode

To select a DMX channel mode that you wish to work in, use the **<MENU>** button to scroll to **Work Mode Set**, and press **<ENTER>**. Then use the **<UP/DOWN>** buttons to display either **19, 29, or 117** channel mode, and push the **<ENTER>** button to confirm your choice.

Working Mode Selection

The default working mode is DMX512. To select a different working mode, use the **<MENU>** button to scroll to **DMX Address SET**, and press the **<ENTER>** button. From here you can use the **<UP/DOWN>** buttons to highlight either **DMX512, Slave, Sound, Fast** (fast auto), **Slow** (slow auto), or **Artnet**, then push the **<ENTER>** button to confirm your choice.

Slave Mode

- 1.) Disconnect fixture(s) from any DMX signal source.
- 2.) Set each fixture to matching DMX modes (**19, 29, or 117**).
- 3.) For each fixture you want to run in slave mode, use the menu button to navigate to **Work Mode Set**, and press **<ENTER>**. Then use the **<UP/DOWN>** buttons to navigate to **Slave Mode**, and press **<ENTER>** to confirm.
- 4.) Connect all fixtures together via DMX. The first fixture in the DMX chain will be the master fixture, followed by the slave fixtures.
- 5.) Connect DMX controller to the master unit for DMX control.

Auto, Stand-Alone, Sound Active Modes:

Allows a single or Master/Slaved units to run factory installed programs at user selectable speeds.

Auto Mode

- 1.) Use the **<MENU>** button to scroll to **Work Mode Set**, and press **<ENTER>**. Now use the **<UP/DOWN>** buttons to highlight either **Slow** or **Fast** and press the **<ENTER>** button for slow or fast paced auto mode.

Sound Active Mode

- 1.) Use the **<MENU>** button to scroll to **Work Mode Set**, and press **<ENTER>**. Now use the **<UP/DOWN>** buttons to highlight **Sound** and press the **<ENTER>** button.

Invert Pan/Tilt

- 1.) Use the **<MENU>** button to scroll to **Invert PAN** or **Invert Tilt**, and press **<ENTER>**.
- 2.) Then use the **<UP/DOWN>** buttons to display either Yes or No.
- 3.) Press the **<ENTER>** button to confirm your choice.

DMX Values In-Depth (117-Channel Mode)

117CH	Value	What it does
1	000 <--> 255	Pan (0-540 degree)
2	000 <--> 055 056 <--> 155 156 <--> 255	Infinite Pan No function Continuous Rotating CW Continuous Rotating CCW
3	000 <--> 255	Fine Pan (16-bit)
4	000 <--> 255	Tilt (0-540 degree)
5	000 <--> 055 056 <--> 155 156 <--> 255	Infinite Tilt No function Continuous Rotating CW Continuous Rotating CCW
6	000 <--> 255	Fine Tilt (16-bit)
7	000 <--> 255	Pan, Tilt Speed (Slow <--> Fast)
8	000 <--> 255	Dimmer (0% <--> 100%)
9	000 <--> 003 004 <--> 095 096 <--> 176 177 <--> 255	Strobe (slow <--> fast) No Function Strobe Speed Random Strobe Thunder Strobe

CH10-CH109 - Individual LED R/G/B/W Intensity (0% <--> 100%)

10	R1	23	G4	36	B7	49	W10	62	R14	75	G17	88	B20	101	W23
11	G1	24	B4	37	W7	50	R11	63	G14	76	B17	89	W20	102	R24
12	B1	25	W4	38	R8	51	G11	64	B14	77	W17	90	R21	103	G24
13	W1	26	R5	39	G8	52	B11	65	W14	78	R18	91	G21	104	B24
14	R2	27	G5	40	B8	53	W11	66	R15	79	G18	92	B21	105	W24
15	G2	28	B5	41	W8	54	R12	67	G15	80	B18	93	W21	106	R25
16	B2	29	W5	42	R9	55	G12	68	B15	81	W8	94	R22	107	G25
17	W2	30	R6	43	G9	56	B12	69	W15	82	R19	95	G22	108	B25
18	R3	31	G6	44	B9	57	W12	70	R16	83	G19	96	B22	109	W25
19	G3	32	B6	45	W9	58	R13	71	G16	84	B19	97	W22		
20	B3	33	W6	46	R10	59	G13	72	B16	85	W19	98	R23		
21	W3	34	R7	47	G10	60	B13	73	W16	86	R20	99	G23		(٢٢)
22	R4	35	G7	48	B10	61	W13	74	R17	87	G20	100	B23		

110	000 <--> 007 008 <--> 015 016 <--> 023 024 <--> 031 032 <--> 039 040 <--> 047 048 <--> 055 056 <--> 063 064 <--> 071 072 <--> 079 080 <--> 087 088 <--> 095 096 <--> 103 104 <--> 111 112 <--> 119 120 <--> 127 128 <--> 135 136 <--> 143 144 <--> 151 152 <--> 159 160 <--> 167 168 <--> 175 176 <--> 183 184 <--> 191 192 <--> 199 200 <--> 207 208 <--> 215 216 <--> 223 224 <--> 231 232 <--> 239 240 <--> 255	Numbers, Symbols, and Punctuations 0 1 2 3 4 5 6 7 8 9 + ~ x ÷ / < > Pattern 1 Pattern 2 Pattern 3 Pattern 4 Pattern 5 Pattern 6 Pattern 7 Pattern 8 Pattern 9 . = ! ? Cycle all (channel 115 controls speed)
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DMX Values In-Depth (117-Channel Mode, continued)

117CH	Value	What it does
111	000 <--> 008	Letters
	009 <--> 017	A
	018 <--> 026	B
	027 <--> 035	C
	036 <--> 044	D
	045 <--> 053	E
	054 <--> 062	F
	063 <--> 071	G
	072 <--> 080	H
	081 <--> 089	I
	090 <--> 098	J
	099 <--> 107	K
	108 <--> 116	L
	117 <--> 125	M
	126 <--> 134	N
	135 <--> 143	O
	144 <--> 153	P
	154 <--> 161	Q
	162 <--> 170	R
	171 <--> 179	S
	180 <--> 188	T
	189 <--> 197	U
	198 <--> 206	V
	207 <--> 215	W
216 <--> 224	X	
225 <--> 233	Y	
234 <--> 255	Z	
	Cycle all (channel 115 controls speed)	
112	000 <--> 008	Static Pattern Effects
	009 <--> 017	Static Pattern 1
	018 <--> 026	Static Pattern 2
	027 <--> 035	Static Pattern 3
	036 <--> 044	Static Pattern 4
	045 <--> 053	Static Pattern 5
	054 <--> 062	Static Pattern 6
	063 <--> 071	Static Pattern 7
	072 <--> 080	Static Pattern 8
	081 <--> 089	Static Pattern 9
	090 <--> 098	Static Pattern 10
	099 <--> 107	Static Pattern 11
	108 <--> 116	Static Pattern 12
	117 <--> 125	Static Pattern 13
	126 <--> 134	Static Pattern 14
	135 <--> 143	Static Pattern 15
	144 <--> 153	Static Pattern 16
	154 <--> 161	Static Pattern 17
	162 <--> 170	Static Pattern 18
	171 <--> 179	Static Pattern 19
	180 <--> 188	Static Pattern 20
	189 <--> 197	Static Pattern 21
	198 <--> 206	Static Pattern 22
	207 <--> 215	Static Pattern 23
216 <--> 224	Static Pattern 24	
225 <--> 233	Static Pattern 25	
234 <--> 255	Static Pattern 26	
	Cycle all (channel 115 controls speed)	
113	000 <--> 024	Color of Numbers, Symbols, and Letters
	025 <--> 049	Red
	050 <--> 074	Green
	075 <--> 099	Blue
	100 <--> 124	White
	125 <--> 149	Red + Green
	150 <--> 174	Red + Blue
	175 <--> 199	Green + Blue + White
	200 <--> 224	Blue + White
	225 <--> 249	Red + Green + Blue
	250 <--> 255	Red + Green + White
	Red + Blue	

DMX Values In-Depth (117-Channel Mode, continued)

117CH	Channel Value	What it does
114	000 <--> 009	Dynamic Pattern Effects Effect 1
	010 <--> 019	Effect 2
	020 <--> 029	Effect 3
	030 <--> 039	Effect 4
	040 <--> 049	Effect 5
	050 <--> 059	Effect 6
	060 <--> 069	Effect 7
	070 <--> 079	Effect 8
	080 <--> 089	Effect 9
	090 <--> 099	Effect 10
	100 <--> 109	Effect 11
	110 <--> 119	Effect 12
	120 <--> 129	Effect 13
	130 <--> 139	Effect 14
	140 <--> 149	Effect 15
	150 <--> 159	Effect 16
	160 <--> 169	Effect 17
	170 <--> 179	Effect 18
	180 <--> 189	Effect 19
	190 <--> 199	Effect 20
	200 <--> 209	Effect 21
	210 <--> 219	Effect 22
	220 <--> 229	Effect 23
	230 <--> 239	Effect 24
	240 <--> 255	Cycle all (channel 115 controls speed)
115	000 <--> 255	Effect Speed (fast <--> slow)
116	000 <--> 049	Macro Function Control No Function
	050 <--> 074	Numbers, Symbols, and Patterns (control with channel 110)
	075 <--> 099	Letters (control with channel 111)
	100 <--> 124	Static Pattern Effects (control with channel 112)
	125 <--> 149	Dynamic Pattern Effects (control with channel 114)
	150 <--> 199	Auto Mode
	200 <--> 255	Sound Active Mode
	117	000 <--> 250 251 <--> 255

DMX Values In-Depth (29-Channel Mode)

29CH	Channel Value	What it does
1	000 <--> 255	Pan (0-540 degree)
2	000 <--> 055	Infinite Pan No function
	056 <--> 155	Continuous Rotating CW
	156 <--> 255	Continuous Rotating CCW
3	000 <--> 255	Fine Pan (16-bit)
4	000 <--> 255	Tilt (0-540 degree)
5	000 <--> 055	Infinite Tilt No function
	056 <--> 155	Continuous Rotating CW
	156 <--> 255	Continuous Rotating CCW
6	000 <--> 255	Fine Tilt (16-bit)
7	000 <--> 255	Pan, Tilt Speed (Slow <--> Fast)
8	000 <--> 255	Dimmer (0% <--> 100%)
9	000 <--> 003	Strobe (slow <--> fast) No Function
	004 <--> 095	Strobe Speed
	096 <--> 176	Random Strobe
	177 <--> 255	Thunder Strobe

DMX Values In-Depth (29-Channel Mode, continued)

29CH	Channel Value	What it does
10	000 <--> 255	Section 1 Red Intensity (outer square)
11	000 <--> 255	Section 1 Green Intensity (outer square)
12	000 <--> 255	Section 1 Blue Intensity (outer square)
13	000 <--> 255	Section 1 White Intensity (outer square)
14	000 <--> 255	Section 2 Red Intensity (middle square)
15	000 <--> 255	Section 2 Green Intensity (middle square)
16	000 <--> 255	Section 2 Blue Intensity (middle square)
17	000 <--> 255	Section 2 White Intensity (middle square)
18	000 <--> 255	Section 3 Red Intensity (center LED)
19	000 <--> 255	Section 3 Green Intensity (center LED)
20	000 <--> 255	Section 3 Blue Intensity (center LED)
21	000 <--> 255	Section 3 White Intensity (center LED)
22		Numbers, Symbols, and Punctuations
	000 <--> 007	0
	008 <--> 015	1
	016 <--> 023	2
	024 <--> 031	3
	032 <--> 039	4
	040 <--> 047	5
	048 <--> 055	6
	056 <--> 063	7
	064 <--> 071	8
	072 <--> 079	9
	080 <--> 087	+
	088 <--> 095	~
	096 <--> 103	x
	104 <--> 111	÷
	112 <--> 119	/
	120 <--> 127	<
	128 <--> 135	>
	136 <--> 143	Pattern 1
	144 <--> 151	Pattern 2
	152 <--> 159	Pattern 3
	160 <--> 167	Pattern 4
	168 <--> 175	Pattern 5
	176 <--> 183	Pattern 6
	184 <--> 191	Pattern 7
	192 <--> 199	Pattern 8
	200 <--> 207	Pattern 9
	208 <--> 215	.
	216 <--> 223	=
	224 <--> 231	!
	232 <--> 239	?
	240 <--> 255	Cycle all (channel 27 controls speed)
23		Letters
	000 <--> 008	A
	009 <--> 017	B
	018 <--> 026	C
	027 <--> 035	D
	036 <--> 044	E
	045 <--> 053	F
	054 <--> 062	G
	063 <--> 071	H
	072 <--> 080	I
	081 <--> 089	J
	090 <--> 098	K
	099 <--> 107	L
	108 <--> 116	M
	117 <--> 125	N
	126 <--> 134	O
	135 <--> 143	P
	144 <--> 153	Q
	154 <--> 161	R
	162 <--> 170	S
	171 <--> 179	T
	180 <--> 188	U
	189 <--> 197	V
	198 <--> 206	W

DMX Values In-Depth (29-Channel Mode, continued)

23	207 <--> 215 216 <--> 224 225 <--> 233 234 <--> 255	X Y Z Cycle all (channel 27 controls speed)
24	000 <--> 008 009 <--> 017 018 <--> 026 027 <--> 035 036 <--> 044 045 <--> 053 054 <--> 062 063 <--> 071 072 <--> 080 081 <--> 089 090 <--> 098 099 <--> 107 108 <--> 116 117 <--> 125 126 <--> 134 135 <--> 143 144 <--> 153 154 <--> 161 162 <--> 170 171 <--> 179 180 <--> 188 189 <--> 197 198 <--> 206 207 <--> 215 216 <--> 224 225 <--> 233 234 <--> 255	Static Pattern Effects Static Pattern 1 Static Pattern 2 Static Pattern 3 Static Pattern 4 Static Pattern 5 Static Pattern 6 Static Pattern 7 Static Pattern 8 Static Pattern 9 Static Pattern 10 Static Pattern 11 Static Pattern 12 Static Pattern 13 Static Pattern 14 Static Pattern 15 Static Pattern 16 Static Pattern 17 Static Pattern 18 Static Pattern 19 Static Pattern 20 Static Pattern 21 Static Pattern 22 Static Pattern 23 Static Pattern 24 Static Pattern 25 Static Pattern 26 Cycle all (channel 27 controls speed)
25	000 <--> 024 025 <--> 049 050 <--> 074 075 <--> 099 100 <--> 124 125 <--> 149 150 <--> 174 175 <--> 199 200 <--> 224 225 <--> 249 250 <--> 255	Color of Numbers, Symbols, and Letters Red Green Blue White Red + Green Red + Blue Green + Blue + White Blue + White Red + Green + Blue Red + Green + White Red + Blue
26	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 <--> 159 160 <--> 169 170 <--> 179 180 <--> 189 190 <--> 199 200 <--> 209 210 <--> 219 220 <--> 229 230 <--> 239 240 <--> 255	Dynamic Pattern Effects Effect 1 Effect 2 Effect 3 Effect 4 Effect 5 Effect 6 Effect 7 Effect 8 Effect 9 Effect 10 Effect 11 Effect 12 Effect 13 Effect 14 Effect 15 Effect 16 Effect 17 Effect 18 Effect 19 Effect 20 Effect 21 Effect 22 Effect 23 Effect 24 Cycle all (channel 27 controls speed)

DMX Values In-Depth (29-Channel Mode, continued)

27	000 <--> 255	Effect Speed (fast <--> slow)
28	000 <--> 049 050 <--> 074 075 <--> 099 100 <--> 124 125 <--> 149 150 <--> 199 200 <--> 255	Macro Function Control No Function Numbers, Symbols, and Patterns (control with channel 22) Letters (control with channel 23) Static Pattern Effects (control with channel 24) Dynamic Pattern Effects (control with channel 26) Auto Mode Sound Active Mode
29	000 <--> 250 251 <--> 255	Reset No Function Resets fixture motors after 3 seconds

DMX Values In-Depth (19-Channel Mode)

19CH	Channel Value	What it does
1	000 <--> 255	Pan (0-540 degree)
2	000 <--> 055 056 <--> 155 156 <--> 255	Infinite Pan No function Continuous Rotating CW Continuous Rotating CCW
3	000 <--> 255	Tilt (0-540 degree)
4	000 <--> 055 056 <--> 155 156 <--> 255	Infinite Tilt No function Continuous Rotating CW Continuous Rotating CCW
5	000 <--> 255	Pan, Tilt Speed (Slow <--> Fast)
6	000 <--> 255	Dimmer (0% <--> 100%)
7	000 <--> 003 004 <--> 095 096 <--> 176 177 <--> 255	Strobe (slow <--> fast) No Function Strobe Speed Random Strobe Thunder Strobe
8	000 <--> 255	Red Intensity (0% <--> 100%)
9	000 <--> 255	Green Intensity (0% <--> 100%)
10	000 <--> 255	Blue Intensity (0% <--> 100%)
11	000 <--> 255	White Intensity (0% <--> 100%)
12	000 <--> 007 008 <--> 015 016 <--> 023 024 <--> 031 032 <--> 039 040 <--> 047 048 <--> 055 056 <--> 063 064 <--> 071 072 <--> 079 080 <--> 087 088 <--> 095 096 <--> 103 104 <--> 111 112 <--> 119 120 <--> 127 128 <--> 135 136 <--> 143 144 <--> 151 152 <--> 159 160 <--> 167 168 <--> 175 176 <--> 183 184 <--> 191 192 <--> 199 200 <--> 207 208 <--> 215 216 <--> 223	Numbers, Symbols, and Punctuations 0 1 2 3 4 5 6 7 8 9 + ~ x ÷ / < > Pattern 1 Pattern 2 Pattern 3 Pattern 4 Pattern 5 Pattern 6 Pattern 7 Pattern 8 Pattern 9 . =

DMX Values In-Depth (19-Channel Mode, continued)

	224 <--> 231 232 <--> 239 240 <--> 255	! ? Cycle all (channel 17 controls speed)
13	000 <--> 008 009 <--> 017 018 <--> 026 027 <--> 035 036 <--> 044 045 <--> 053 054 <--> 062 063 <--> 071 072 <--> 080 081 <--> 089 090 <--> 098 099 <--> 107 108 <--> 116 117 <--> 125 126 <--> 134 135 <--> 143 144 <--> 153 154 <--> 161 162 <--> 170 171 <--> 179 180 <--> 188 189 <--> 197 198 <--> 206 207 <--> 215 216 <--> 224 225 <--> 233 234 <--> 255	Letters A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Cycle all (channel 17 controls speed)
14	000 <--> 008 009 <--> 017 018 <--> 026 027 <--> 035 036 <--> 044 045 <--> 053 054 <--> 062 063 <--> 071 072 <--> 080 081 <--> 089 090 <--> 098 099 <--> 107 108 <--> 116 117 <--> 125 126 <--> 134 135 <--> 143 144 <--> 153 154 <--> 161 162 <--> 170 171 <--> 179 180 <--> 188 189 <--> 197 198 <--> 206 207 <--> 215 216 <--> 224 225 <--> 233 234 <--> 255	Static Pattern Effects Static Pattern 1 Static Pattern 2 Static Pattern 3 Static Pattern 4 Static Pattern 5 Static Pattern 6 Static Pattern 7 Static Pattern 8 Static Pattern 9 Static Pattern 10 Static Pattern 11 Static Pattern 12 Static Pattern 13 Static Pattern 14 Static Pattern 15 Static Pattern 16 Static Pattern 17 Static Pattern 18 Static Pattern 19 Static Pattern 20 Static Pattern 21 Static Pattern 22 Static Pattern 23 Static Pattern 24 Static Pattern 25 Static Pattern 26 Cycle all (channel 17 controls speed)
15	000 <--> 024 025 <--> 049 050 <--> 074 075 <--> 099 100 <--> 124 125 <--> 149 150 <--> 174 175 <--> 199 200 <--> 224 225 <--> 249 250 <--> 255	Color of Numbers, Symbols, and Letters Red Green Blue White Red + Green Red + Blue Green + Blue + White Blue + White Red + Green + Blue Red + Green + White Red + Blue

DMX Values In-Depth (19-Channel Mode, continued)

19CH	Channel Value	What it does
16	000 <--> 009	Dynamic Pattern Effects
	010 <--> 019	Effect 1
	020 <--> 029	Effect 2
	030 <--> 039	Effect 3
	040 <--> 049	Effect 4
	050 <--> 059	Effect 5
	060 <--> 069	Effect 6
	070 <--> 079	Effect 7
	080 <--> 089	Effect 8
	090 <--> 099	Effect 9
	100 <--> 109	Effect 10
	110 <--> 119	Effect 11
	120 <--> 129	Effect 12
	130 <--> 139	Effect 13
	140 <--> 149	Effect 14
	150 <--> 159	Effect 15
	160 <--> 169	Effect 16
	170 <--> 179	Effect 17
	180 <--> 189	Effect 18
	190 <--> 199	Effect 19
	200 <--> 209	Effect 20
	210 <--> 219	Effect 21
	220 <--> 229	Effect 22
	230 <--> 239	Effect 23
240 <--> 255	Effect 24	
		Cycle all (channel 17 controls speed)
17	000 <--> 255	Effect Speed (fast <--> slow)
18	000 <--> 049	Macro Function Control
	050 <--> 074	No Function
	075 <--> 099	Numbers, Symbols, and Patterns (control with channel 12)
	100 <--> 124	Letters (control with channel 13)
	125 <--> 149	Static Pattern Effects (control with channel 14)
	150 <--> 199	Dynamic Pattern Effects (control with channel 16)
	200 <--> 255	Auto Mode Sound Active Mode
19	000 <--> 250	Reset
	251 <--> 255	No Function Resets fixture motors after 3 seconds

5. APPENDIX

A Quick Lesson On DMX

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.

Keeping Your BlockHead™ II 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.

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.
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).

Tech Specs!

Weight & Dimensions	
Length	15.25 inches (38.74 cm)
Height	19 inches (48.26 cm)
Depth	15.25 inches (38.74 cm)
Weight	32.6 lbs (14.8 kg)
Power	
Operating Voltage	AC 90-260VAC, 50-60 Hertz
Power Consumption	284W, 2.58A
Power Factor	.99
Light Source	
LED	25x CREE® 12w RGBW LEDs
Optical	
Beam Angle	7° beam angle
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Control	
Protocol	USITT DMX-512
DMX Channels	19/29/117 Channels
Input	3-pin XLR Male
Output	3-pin XLR Female
Other Operating Modes	Standalone, Master/Slave, Auto, Sound Active
Other Information	
Helen Hunt but only when Helen hungry.	
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LED's.

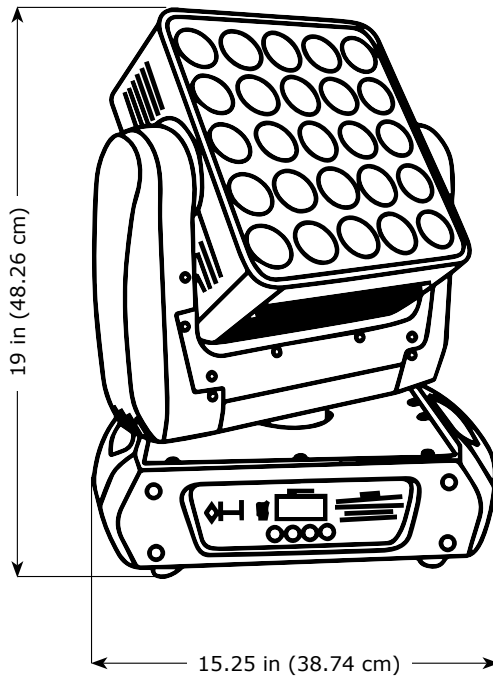
DISCLAIMER:

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.

Luminous Intensity

Lux/Meter	1 Meter	2 Meter
Red	22,100 Lux	8,900 Lux
Green	20,200 Lux	9,300 Lux
Blue	23,700 Lux	10,400 Lux
White	30,900 Lux	13,600 Lux
All	89,600 Lux	37,600 Lux

Dimensional Drawing





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