blockhead Z9

blizzard LIGHTING

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

TABLE OF CONTENTS

1. GETTING STARTED

What's In The Box?

- 1 x Blockhead™ Z9 Moving Head
- An Ever-So-Handy Power Cord
- A Sweet Mounting Bracket
- This Lovely User Manual

Getting It Out Of The Box

Congratulations! You have just purchased a the coolest quad-color RGBW 3x3 pixel matrix moving head fixture on the market with infinite pan, infinite tilt, and infinite awesomeness! Now that you've got your Blockhead™ Z9, 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 happens goes wrong, please visit www.blizzardlighting.com/support and open a support ticket. We'll be happy to help, honest.

Blizzard Lighting
N24 W23750 Watertown Rd. Suite B
Waukesha, WI 53188 USA
www.blizzardlighting.com

Disclaimer: The information and specifications contained in this document are subject to change without notice. Blizzard Lighting™ assumes no responsibility or liability for any errors or omissions that may appear in this user manual. Blizzard Lighting™ reserves the right to update the existing document or to create a new document to correct any errors or omissions at any time. You can download the latest version of this document from www.blizzardlighting.com.

Author:	Date:	Last Edited:	Date:
J. Thomas	3/29/2016	J. Thomas	3/29/2016

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/support.

2. MEET THE BLOCKHEAD™ Z9 MOVING HEAD

MAIN FEATURES

- 3x3 LED Pixel Matrix Moving Head
- Light Source: 9* 15W RGBW 4-in-1 LEDs
- Pan: 540° Tilt: 360° + Infinite Pan/Tilt
- High-efficiency Gaggione™ Optical System
- Electronic Focus
- Extremely Accurate 16-bit Motors
- Built-In Auto & Sound Active Programs
- 16/22/50-channel DMX Modes
- 4-button LED control panel menu
- Single 1/4-turn mounting bracket
- 3-pin male and female DMX In/Out
- PowerCon™ compatible AC power input/output connectors

DMX Quick Reference (22/50-Channel Modes)

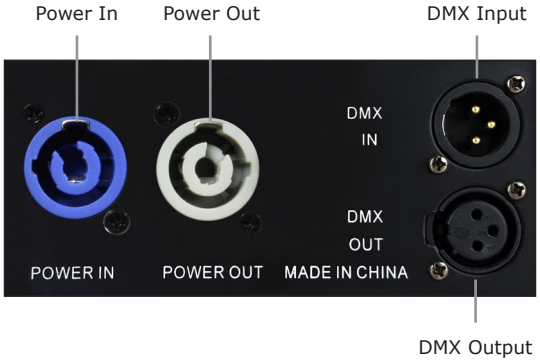
22CH	50CH	What It Does
1	1	Pan (0-540 degree)
2	2	Infinite Pan
3	3	Pan Fine (16-bit)
4	4	Tilt (0-360 degree)
5	5	Infinite Tilt
6	6	Tilt Fine (16-bit)
7	7	Pan/Tilt Speed (fast <--> slow)
8	8	Focus (minimum to the maximum)
9	9	Dimmer (0% <--> 100%)
10	10	Strobe Effects
11	11	Red 1 Intensity (0% <--> 100%)
12	12	Green 1 Intensity (0% <--> 100%)
13	13	Blue 1 Intensity (0% <--> 100%)
14	14	White 1 Intensity (0% <--> 100%)
15	--	Red 2-9 Intensity (0% <--> 100%)
--	15	Red 2 Intensity (0% <--> 100%)
16	--	Green 2-9 Intensity (0% <--> 100%)
--	16	Green 2 Intensity (0% <--> 100%)
17	--	Blue 2-9 Intensity (0% <--> 100%)
--	17	Blue 2 Intensity (0% <--> 100%)
18	--	White 2-9 Intensity (0% <--> 100%)
--	18	White 2 Intensity (0% <--> 100%)
--	19-46	LEDs 3-9 Individual RGBW Intensity (0% <--> 100%)
19	47	Built-In Programs
20	48	Effect Speed (slow <--> fast)
21	49	Auto + Sound Active
22	50	Reset after 3 seconds

DMX Quick Reference (16-Channel Modes)

16CH	What It Does	16CH	What It Does
1	Pan (0-540 degree)	9	Red Intensity (0% <--> 100%)
2	Infinite Pan	10	Green Intensity (0% <--> 100%)
3	Tilt (0-360 degree)	11	Blue Intensity (0% <--> 100%)
4	Infinite Tilt	12	White Intensity (0% <--> 100%)
5	Pan/Tilt Speed (fast <--> slow)	13	Built-In Programs
6	Focus	14	Effect Speed (slow <--> fast)
7	Dimmer (0% <--> 100%)	15	Auto + Sound Active
8	Strobe Effects	16	Reset after 3 seconds

Figure 1: The Blockhead™ Z9 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

Remove the fuse holder from its housing and remove the damaged fuse from its holder, then it replace with exact same type fuse. Insert the fuse holder back in its place and reconnect power.

Connecting A Bunch of Blockhead™ Z9 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

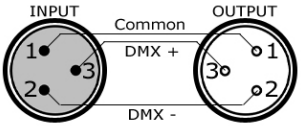
To link fixtures together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

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

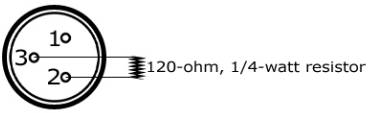
Cable Connectors

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:

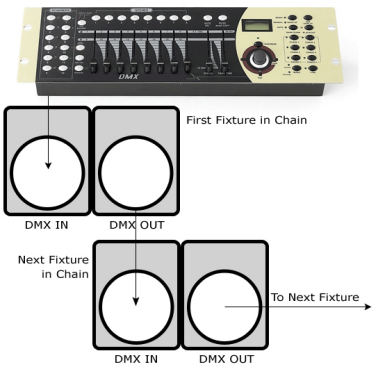
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
DMX Data (-)	Pin 2	Pin 2
DMX Data (+)	Pin 3	Pin 3
Not Used.	No Connection.	No Connection.
Not Used.	No Connection.	No Connection.

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.

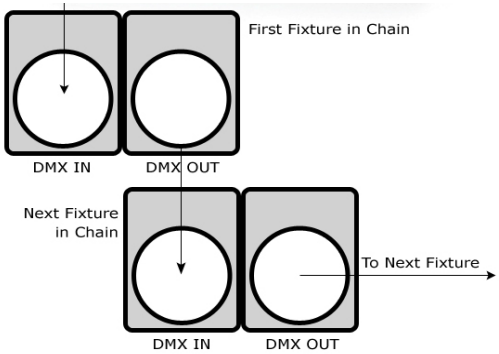
Step 2: Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture 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 Blockhead™ Z9 are accessed by using the control panel on the front of the fixture. There are 4 control buttons below the LED display which allow you to navigate through the various control panel menus.

<MENU>

Is used to navigate to the previous higher-level menu item.

<UP>

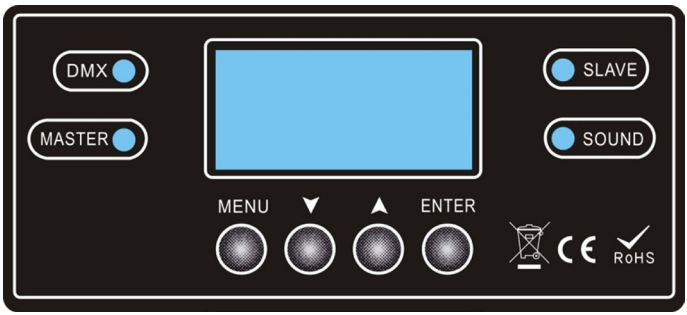
Scrolls through menu items and numbers in ascending order.

<DOWN>

Scrolls through menu items and numbers in descending order.

<ENTER>

Is used to select and confirm/store the current selection.



The control panel LED 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.

Use the **<UP/DOWN>** buttons to navigate the main menu options. Press the **<ENTER>** button to select any menu function currently displayed, then use the **<UP/DOWN>** buttons to scroll through any submenu options. You can the press **<ENTER>** to save any changes made, or press the **<MENU>** button to exit without saving.

Control Panel Menu Structure

DmxAddr	**<ENTER>**	Set the starting address from 001-512
WorkMod	Dmx512	DMX working mode
	Auto	Auto run mode
	Sound	Sound active mode
ChanMod	16CH	16-channel DMX mode
	22CH	22-channel DMX mode
	50CH	50-channel DMX mode
Tool	Display	Set display always ON, or OFF after 60 seconds
	SundHig	Microphone sensitivity level (0-16)
PT Sett	Xrevise	Pan calibration adjustment (0-255)
	Yrevise	Tilt calibration adjustment (0-255)
	Frevise	Focus calibration adjustment (0-255)
	Xreverse	Reverse pan (Yes/No)
	Yreverse	Reverse tilt (Yes/No)
Info	Version	Software version
	RunTime	Operating time
Rest	**<ENTER>**	Reset fixture

DMX Mode

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

Select the Channel Mode

1.) Navigate the main menu to reach **ChanMod**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **16CH**, **22CH,** or **50Ch**.
3.) Press the **<ENTER>** button to confirm.

Select the Starting DMX Address

1.) Navigate the main menu to reach **DmxAddr**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to choose a starting DMX address ranging from 001-512, and press the **<ENTER>** button to confirm.

Master/Slave Mode Settings

1.) Daisy chain fixtures DMX in/out, with the controller at the beginning.
2.) There is nothing else to it! The first fixture in the DMX chain is the master fixture, and the following fixtures will follow the master.

Auto and Sound Active Modes:

Set single or Master/Slaved units to run in auto mode at user selectable speeds.

Auto Mode

1.) Navigate the main menu to reach **WorkMod**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to choose **Auto**, press **<ENTER>**.

Sound Active Mode

1.) Navigate the main menu to reach **WorkMod**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to choose **Sound**, press **<ENTER>**.

Mic Sensitivity

1.) Navigate the main menu to reach **Tool**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to choose **SundHig**, press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to choose the microphone sensitivity level ranging from 0-16, then press the **<ENTER>** button to confirm.

Pan Inverse

1.) Navigate the main menu to reach **PT Sett**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **Xreverse**, and press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to highlight **Yes** or **No**.
4.) Press the **<ENTER>** button to confirm your choice.

Tilt Inverse

1.) Navigate the main menu to reach **PT Sett**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **Yreverse**, and press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to highlight **Yes** or **No**.
4.) Press the **<ENTER>** button to confirm your choice.

Pan Calibration

1.) Navigate the main menu to reach **PT Sett**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **Xrevise**, and press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to adjust the value from 0-255.
4.) Press the **<ENTER>** button to confirm your choice.

Tilt Calibration

1.) Navigate the main menu to reach **PT Sett**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **Yrevise**, and press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to adjust the value from 0-255.
4.) Press the **<ENTER>** button to confirm your choice.

Focus Calibration

1.) Navigate the main menu to reach **PT Sett**, and press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **Frevise**, and press **<ENTER>**.
3.) Use the **<UP/DOWN>** buttons to adjust the value from 0-255.
4.) Press the **<ENTER>** button to confirm your choice.

DMX Values In-Depth (50-Channel Mode)

CH.	Value	What It Does
1	000 <--> 255	Pan (0-540 degree)
2	 000 <--> 055 056 <--> 155 156 <--> 255	**Infinite Pan** Stop Clockwise (slow <--> fast) Counterclockwise (slow <--> fast)
3	000 <--> 255	Pan Fine (16-bit)
4	000 <--> 255	Tilt (0-360 degree)
5	 000 <--> 055 056 <--> 155 156 <--> 255	**Infinite Tilt** Stop Clockwise (slow <--> fast) Counterclockwise (slow <--> fast)
6	000 <--> 255	Tilt Fine (16-bit)
7	000 <--> 255	Pan/Tilt Speed (fast <--> slow)
8	000 <--> 255	Focus (minimum to the maximum)
9	000 <--> 255	Dimmer (0% <--> 100%)
10	 000 <--> 019 020 <--> 049 050 <--> 064 065 <--> 069 070 <--> 084 085 <--> 089 090 <--> 104 105 <--> 109 110 <--> 124 125 <--> 129 130 <--> 144 145 <--> 149 150 <--> 164 165 <--> 169 170 <--> 184 185 <--> 189 190 <--> 204 205 <--> 209 210 <--> 224 225 <--> 229 230 <--> 244 245 <--> 255	**Strobe Effects** No function Strobe on Conventional strobe (fast <--> slow) Strobe on Strobe turn on pulse (fast <--> slow) Strobe on Strobe turn off pulse (fast <--> slow) Strobe on Random strobe (fast <--> slow) Strobe on Random turn on pulse (fast <--> slow) Strobe on Random turn off pulse (fast <--> slow) Strobe on Lightning strobe (fast <--> slow) Strobe on Random lightning strobe (fast <--> slow) Strobe on Sine strobe (fast <--> slow) Strobe on Lightning 2 strobe (fast <--> slow) Strobe on
11	000 <--> 255	LED 1 Red Intensity (0% <--> 100%)
12	000 <--> 255	LED 1 Green Intensity (0% <--> 100%)
13	000 <--> 255	LED 1 Blue Intensity (0% <--> 100%)
14	000 <--> 255	LED 1 White Intensity (0% <--> 100%)
15	000 <--> 255	LED 2 Red Intensity (0% <--> 100%)
16	000 <--> 255	LED 2 Green Intensity (0% <--> 100%)
17	000 <--> 255	LED 2 Blue Intensity (0% <--> 100%)
18	000 <--> 255	LED 2 White Intensity (0% <--> 100%)
19	000 <--> 255	LED 3 Red Intensity (0% <--> 100%)
20	000 <--> 255	LED 3 Green Intensity (0% <--> 100%)
21	000 <--> 255	LED 3 Blue Intensity (0% <--> 100%)
22	000 <--> 255	LED 3 White Intensity (0% <--> 100%)
23	000 <--> 255	LED 4 Red Intensity (0% <--> 100%)
24	000 <--> 255	LED 4 Green Intensity (0% <--> 100%)
25	000 <--> 255	LED 4 Blue Intensity (0% <--> 100%)
26	000 <--> 255	LED 4 White Intensity (0% <--> 100%)
27	000 <--> 255	LED 5 Red Intensity (0% <--> 100%)
28	000 <--> 255	LED 5 Green Intensity (0% <--> 100%)
29	000 <--> 255	LED 5 Blue Intensity (0% <--> 100%)
30	000 <--> 255	LED 5 White Intensity (0% <--> 100%)

DMX Values In-Depth (50-Channel Mode), continued

CH.	Value	What It Does
31	000 <--> 255	LED 6 Red Intensity (0% <--> 100%)
32	000 <--> 255	LED 6 Green Intensity (0% <--> 100%)
33	000 <--> 255	LED 6 Blue Intensity (0% <--> 100%)
34	000 <--> 255	LED 6 White Intensity (0% <--> 100%)
35	000 <--> 255	LED 7 Red Intensity (0% <--> 100%)
36	000 <--> 255	LED 7 Green Intensity (0% <--> 100%)
37	000 <--> 255	LED 7 Blue Intensity (0% <--> 100%)
38	000 <--> 255	LED 7 White Intensity (0% <--> 100%)
39	000 <--> 255	LED 8 Red Intensity (0% <--> 100%)
40	000 <--> 255	LED 8 Green Intensity (0% <--> 100%)
41	000 <--> 255	LED 8 Blue Intensity (0% <--> 100%)
42	000 <--> 255	LED 8 White Intensity (0% <--> 100%)
43	000 <--> 255	LED 9 Red Intensity (0% <--> 100%)
44	000 <--> 255	LED 9 Green Intensity (0% <--> 100%)
45	000 <--> 255	LED 9 Blue Intensity (0% <--> 100%)
46	000 <--> 255	LED 9 White Intensity (0% <--> 100%)
47	 000 <--> 004 005 <--> 024 025 <--> 049 050 <--> 074 075 <--> 099 100 <--> 124 125 <--> 149 150 <--> 174 175 <--> 199 200 <--> 224 225 <--> 255	**Built-In Programs** No function Program 1 Program 2 Program 3 Program 4 Program 5 Program 6 Program 7 Program 8 Program 9 Program 10
48	000 <--> 255	Effect Speed (slow <--> fast)
49	 000 <--> 049 050 <--> 099 100 <--> 149 150 <--> 199 200 <--> 255	**Auto + Sound Active** No Function Static Effects (built-in effect) Dynamic Effect (built-in effect) Auto Run Sound Active
50	 000 <--> 250 251 <--> 255	**Reset** No Function Reset after 3 seconds

DMX Values In-Depth (22-Channel Mode)

CH.	Value	What It Does
1	000 <--> 255	Pan (0-540 degree)
2	 000 <--> 055 056 <--> 155 156 <--> 255	**Infinite Pan** Stop Clockwise (slow <--> fast) Counterclockwise (slow <--> fast)
3	000 <--> 255	Pan Fine (16-bit)
4	000 <--> 255	Tilt (0-360 degree)
5	 000 <--> 055 056 <--> 155 156 <--> 255	**Infinite Tilt** Stop Clockwise (slow <--> fast) Counterclockwise (slow <--> fast)
6	000 <--> 255	Tilt Fine (16-bit)
7	000 <--> 255	Pan/Tilt Speed (fast <--> slow)
8	000 <--> 255	Focus (minimum to the maximum)
9	000 <--> 255	Dimmer (0% <--> 100%)

DMX Values In-Depth (22-Channel Mode), continued

CH.	Value	What It Does
10		**Strobe Effects**
	000 <--> 019	No function
	020 <--> 049	Strobe on
	050 <--> 064	Conventional strobe (fast <--> slow)
	065 <--> 069	Strobe on
	070 <--> 084	Strobe turn on pulse (fast <--> slow)
	085 <--> 089	Strobe on
	090 <--> 104	Strobe turn off pulse (fast <--> slow)
	105 <--> 109	Strobe on
	110 <--> 124	Random strobe (fast <--> slow)
	125 <--> 129	Strobe on
	130 <--> 144	Random turn on pulse (fast <--> slow)
	145 <--> 149	Strobe on
	150 <--> 164	Random turn off pulse (fast <--> slow)
	165 <--> 169	Strobe on
	170 <--> 184	Lightning strobe (fast <--> slow)
	185 <--> 189	Strobe on
	190 <--> 204	Random lightning strobe (fast <--> slow)
	205 <--> 209	Strobe on
	210 <--> 224	Sine strobe (fast <--> slow)
	225 <--> 229	Strobe on
	230 <--> 244	Lightning 2 strobe (fast <--> slow)
	245 <--> 255	Strobe on
11	000 <--> 255	LED Group 1 (LED 1) Red Intensity (0% <--> 100%)
12	000 <--> 255	LED Group 1 (LED 1) Green Intensity (0% <--> 100%)
13	000 <--> 255	LED Group 1 (LED 1) Blue Intensity (0% <--> 100%)
14	000 <--> 255	LED Group 1 (LED 1) White Intensity (0% <--> 100%)
15	000 <--> 255	LED Group 2 (LEDs 2-9) Red Intensity (0% <--> 100%)
16	000 <--> 255	LED Group 2 (LEDs 2-9) Green Intensity (0% <--> 100%)
17	000 <--> 255	LED Group 2 (LEDs 2-9) Blue Intensity (0% <--> 100%)
18	000 <--> 255	LED Group 2 (LEDs 2-9) White Intensity (0% <--> 100%)
19		**Built-In Programs**
	000 <--> 004	No function
	005 <--> 024	Program 1
	025 <--> 049	Program 2
	050 <--> 074	Program 3
	075 <--> 099	Program 4
	100 <--> 124	Program 5
	125 <--> 149	Program 6
	150 <--> 174	Program 7
	175 <--> 199	Program 8
	200 <--> 224	Program 9
	225 <--> 255	Program 10
20	000 <--> 255	Effect Speed (slow <--> fast)
21		**Auto + Sound Active**
	000 <--> 049	No Function
	050 <--> 099	Static Effects (built-in effect)
	100 <--> 149	Dynamic Effect (built-in effect)
	150 <--> 199	Auto Run
	200 <--> 255	Sound Active
22		**Reset**
	000 <--> 250	No Function
	251 <--> 255	Reset after 3 seconds

DMX Values In-Depth (16-Channel Mode)

CH.	Value	What It Does
1	000 <--> 255	Pan (0-540 degree)
2		**Infinite Pan**
	000 <--> 055	Stop
	056 <--> 155	Clockwise (slow <--> fast)
	156 <--> 255	Counterclockwise (slow <--> fast)
3	000 <--> 255	Tilt (0-360 degree)
4		**Infinite Tilt**
	000 <--> 055	Stop
	056 <--> 155	Clockwise (slow <--> fast)
	156 <--> 255	Counterclockwise (slow <--> fast)
5	000 <--> 255	Pan/Tilt Speed (fast <--> slow)
6	000 <--> 255	Focus (minimum to the maximum)
7	000 <--> 255	Dimmer (0% <--> 100%)
8		**Strobe Effects**
	000 <--> 019	No function
	020 <--> 049	Strobe on
	050 <--> 064	Conventional strobe (fast <--> slow)
	065 <--> 069	Strobe on
	070 <--> 084	Strobe turn on pulse (fast <--> slow)
	085 <--> 089	Strobe on
	090 <--> 104	Strobe turn off pulse (fast <--> slow)
	105 <--> 109	Strobe on
	110 <--> 124	Random strobe (fast <--> slow)
	125 <--> 129	Strobe on
	130 <--> 144	Random turn on pulse (fast <--> slow)
	145 <--> 149	Strobe on
	150 <--> 164	Random turn off pulse (fast <--> slow)
	165 <--> 169	Strobe on
	170 <--> 184	Lightning strobe (fast <--> slow)
	185 <--> 189	Strobe on
	190 <--> 204	Random lightning strobe (fast <--> slow)
	205 <--> 209	Strobe on
	210 <--> 224	Sine strobe (fast <--> slow)
	225 <--> 229	Strobe on
	230 <--> 244	Lightning 2 strobe (fast <--> slow)
	245 <--> 255	Strobe on
9	000 <--> 255	Red Intensity (0% <--> 100%)
10	000 <--> 255	Green Intensity (0% <--> 100%)
11	000 <--> 255	Blue Intensity (0% <--> 100%)
12	000 <--> 255	White Intensity (0% <--> 100%)
13		**Built-In Programs**
	000 <--> 004	No function
	005 <--> 024	Program 1
	025 <--> 049	Program 2
	050 <--> 074	Program 3
	075 <--> 099	Program 4
	100 <--> 124	Program 5
	125 <--> 149	Program 6
	150 <--> 174	Program 7
	175 <--> 199	Program 8
	200 <--> 224	Program 9
	225 <--> 255	Program 10
14	000 <--> 255	Effect Speed (slow <--> fast)
15		**Auto + Sound Active**
	000 <--> 049	No Function
	050 <--> 099	Static Effects (built-in effect)
	100 <--> 149	Dynamic Effect (built-in effect)
	150 <--> 199	Auto Run
	200 <--> 255	Sound Active
16		**Reset**
	000 <--> 250	No Function
	251 <--> 255	Reset after 3 seconds

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.
No Light Output	Check to ensure fixture is operating under correct mode, IE sound active/auto/DMX/Etc., if applicable.
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
No Response to Audio	Verify that the fixture is in "Sound Active" mode.
Fixture Not Responding / Responding Erratically	Make sure all connectors are seated properly and securely. Use Only DMX Cables and/or check cables for defects Install a Terminator. Reset fixture(s).

If your problem persists or isn't listed, visit www.blizzardlighting.com/support.

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 Blockhead™ Z9 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 visit www.blizzardlighting.com/support and open a support ticket, 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

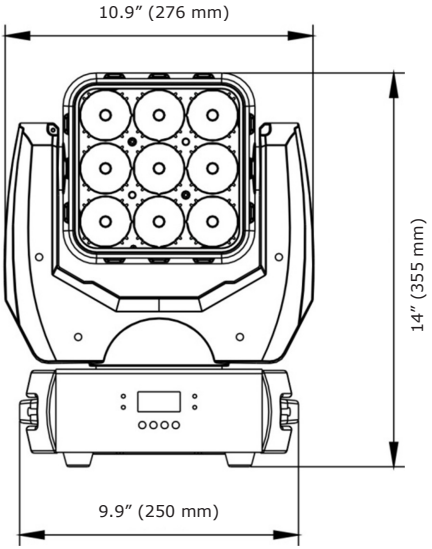
Damage incurred in shipping is the responsibility of the shipper, and must be reported to the carrier immediately upon receipt of the items. Claims must be made within seven (7) days of receipt.

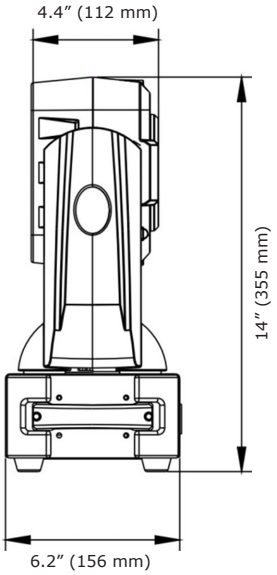
Tech Specs!

Weight & Dimensions			
Width	10.9 inches (276 mm)		
Depth	6.2 inches (156 mm)		
Height	14 inches (355 mm)		
Weight	14 lbs (6 kg)		
Power			
Operating Voltage	90-240VAC, 50-60Hz		
Power Consumption	180W		
Light Source			
LED	9* 15W RGBW 4-in-1 LEDs		
Optical			
Beam Angle	10-50° beam angle		
Luminous Intensity	Lux (m)	Narrow Angle	Wide Angle
	2-meter	17,431 Lux	1,239 Lux
	5-meter	2,660 Lux	189 Lux
Thermal			
Max. Operating Temp.	104 degrees F (40 degrees C) ambient		
Control			
Protocol	USITT DMX-512		
DMX Channels	16/22/50-channel DMX		
Input	3-pin XLR Male		
Output	3-pin XLR Female		
Other Operating Modes	Standalone, Master/Slave, Sound Active, Color Preset		
Parenting Tip			
Kid won't eat his veggies? Sneak 'em into his vape!			
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LEDs.		

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.

Dimensional Drawings





This page is intentionally left blank.

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