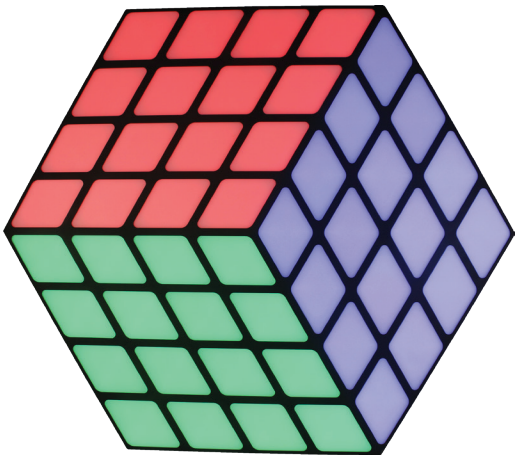
SQUAREDOX 3D



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1. GETTING STARTED

What's In The Box?

- 1 x Squarodox™ 3D
- An Ever-So-Handy Power Cord
- A Sweet Mounting Bracket
- This Lovely User Manual

Getting It Out Of The Box

Congratulations on purchasing the Squarodox™ 3D. Now that you've got your Squarodox™ 3D, 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.blizzardpro.com/support and open a support ticket. We'll be happy to help, honest.

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.blizzardpro.com.

Author:	Date:	Last Edited:	Date:
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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 open a support ticket at www.blizzardpro.com/support.

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2. MEET THE SQUARODOX™ 3D

MAIN FEATURES

- 192* 3-in-1 RGB 5050 LED chips
- Built-in auto & sound active modes
- 1-25Hz strobe effects
- LED digital display
- PowerCON® compatible power input/output connections
- 3-pin DMX input/output
- Centered rear omega mounting bracket with 1/4-turn fasteners
- 6* rear perimeter omega mounting points

CONTROL:

- Protocol: USITT DMX-512
- DMX channels: 5/8/41/144/149-channel modes
- Easy-to-use 4-button control panel with LED display
- Operating modes: DMX512, master/slave, auto, sound active

DMX Quick Reference (5/8/41/144/149-Channel Modes)

5CH	8CH	41CH	144CH	149CH	What It Does
1	1	1	--	1	Master Dimmer
2	2	2	--	2	Strobe (slow <-> fast)
3	3	--	--	--	Red Intensity
4	4	--	--	--	Green Intensity
5	5	--	--	--	Blue Intensity
--	6	--	--	--	Color Presets
--	7	--	--	--	Built-in Programs
--	8	--	--	--	Program Speed
--	--	3-5	--	--	Section Group 1 - R/G/B
--	--	6-8	--	--	Section Group 2 - R/G/B
--	--	9-11	--	--	Section Group 3 - R/G/B
--	--	12-14	--	--	Section Group 4 - R/G/B
--	--	15-17	--	--	Section Group 5 - R/G/B
--	--	18-20	--	--	Section Group 6 - R/G/B
--	--	21-23	--	--	Section Group 7 - R/G/B
--	--	24-26	--	--	Section Group 8 - R/G/B
--	--	27-29	--	--	Section Group 9 - R/G/B
--	--	30-32	--	--	Section Group 10 - R/G/B
--	--	33-35	--	--	Section Group 11 - R/G/B
--	--	36-38	--	--	Section Group 12 - R/G/B
--	--	39	--	--	Color Presets
--	--	40	--	--	Built-in Programs
--	--	41	--	--	Program Speed
--	--	--	1-3	3-5	Individual Section 1 - R/G/B
--	--	--	4-6	6-8	Individual Section 1 - R/G/B
--	--	--	7-9	9-11	Individual Section 1 - R/G/B
--	--	--	--	--	--
--	--	--	136-138	138-140	Individual Section 48 - R/G/B
--	--	--	139-141	141-143	Individual Section 48 - R/G/B
--	--	--	142-144	144-146	Individual Section 48 - R/G/B
--	--	--	--	147	Color Presets
--	--	--	--	148	Built-in Programs
--	--	--	--	149	Program Speed

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Figure 1: The Squarodox™ 3D Pin-Up Picture

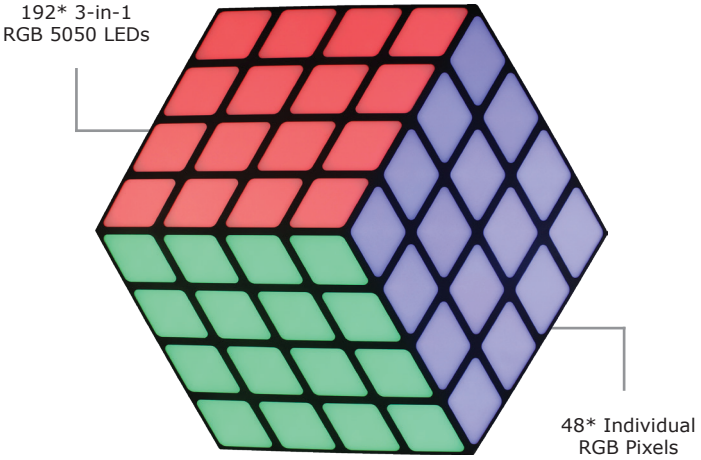

Figure 2: The Rear Connections

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3. SETUP

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

Fuse Replacement

Remove the fuse holder from of its housing. Then take out the damaged fuse from its holder and replace with exact same type of fuse. Reattach the fuse holder, and then reconnect power.

Connecting A Bunch of Squarodox™ 3D 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

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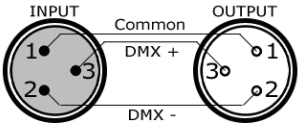
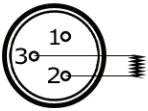
Cable Connectors

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, it's no problem! You can simply use the installed 5-pin DMX input and/or output connections found on the back of your fixture(s).

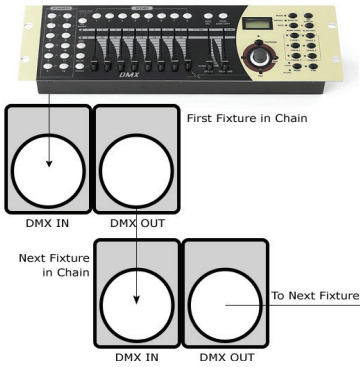
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data 1- (Primary Data Link)	Pin 2	Pin 2
Data 1+ (Primary Data Link)	Pin 3	Pin 3
Data 2- (Optional Secondary Data Link)	Pin 4	Pin 4
Data 2+ (Optional Secondary Data Link)	Pin 5	Pin 5

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.



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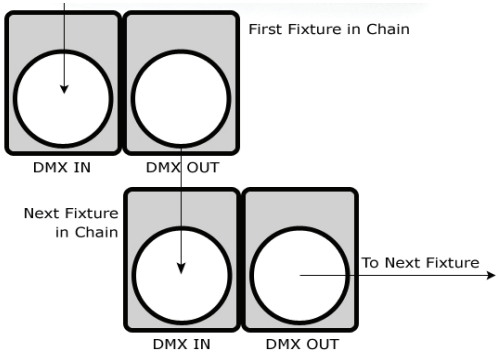
Fixture Linking (Master/Slave Mode)

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.

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4. OPERATING ADJUSTMENTS

The Control Panel

All the features and different modes possible with the Squarodox™ 3D are accessed by using the LED control panel. There are 4 control buttons below the 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>

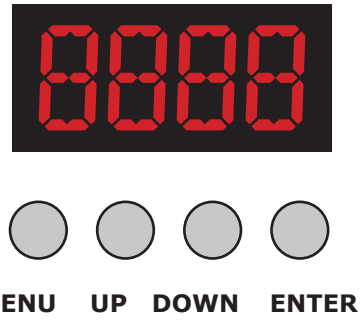
Scrolls through menu items and numbers in ascending order.

<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. To select a menu item, press **<ENTER>**.

Use the **<UP>** and **<DOWN>** buttons to navigate the menu options. Press the **<ENTER>** button to select 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 **<MENU>** button.

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Control Panel Menu Structure

CH--	CH5	5-channel DMX mode
	CH8	8-channel DMX mode
	CH41	41-channel DMX mode
	C144	144-channel DMX mode
	C149	149-channel DMX mode
d001	001-512	Set the starting address from 001-512
r---	000-255	Red intensity (0% <-> 100%)
G---	000-255	Green intensity (0% <-> 100%)
b---	000-255	Blue intensity (0% <-> 100%)
Pr--	01-30	Built-in programs (1-30)
SP--	01-16	Program speed (slow <-> fast)
AUTO/AUDI	AUTO	Auto mode
	AUDI	Sound active mode
EP00/EP01	EP00	Loss of DMX - Hold
	EP01	Loss of DMX - Blackout
DISP	Yes/No	Rotate of the menu display by 180°

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

Select the Starting DMX Address

1.) Navigate the main menu to reach **d---**, press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to choose a starting DMX address ranging from 001-512, press **<ENTER>** to confirm, or **<MENU>** to exit.
3.) When a DMX signal is being received, the display will change to **A---**.

Select the Channel Mode

1.) Navigate the main menu to reach **CH--**, press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight your choice, and press **<ENTER>**.

Master/Slave Mode Settings

1.) Daisy chain fixtures together via DMX input/output connections.
2.) The first fixture in the DMX chain is the master fixture, and the following units will operate in unison with the master.

Auto and Sound Active Modes:
Allows a single or Master/Slaved units to run factory installed programs.

1.) Navigate the main menu to reach **AUTO/AUDI**, press **<ENTER>**.
2.) Use the **<UP/DOWN>** buttons to highlight **AUTO** (auto) or **AUDI** (sound active mode), and press **<ENTER>** to confirm.
3.) For individual auto programs (01-30), navigate to **Pr--**, and press **<ENTER>**.
4.) Use the **<UP/DOWN>** buttons to select a program, and press **<ENTER>**.
5.) To adjust the program speed (01-16), navigate to **Sp--**, and press **<ENTER>**.
6.) Use the **<UP/DOWN>** buttons to select a speed, and press **<ENTER>**.

Manual Adjustments

1.) Navigate the main menu to reach **r---** (red), **G---** (green), **b---** (blue), and press the **<ENTER>** button.
2.) Then use the **<UP/DOWN>** buttons to make adjustments to the value (000-255), and press the **<ENTER>** button to confirm.

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DMX Values In-Depth (5-Channel Mode)

5CH	Value	What It Does
1	000 <--> 255	Master Dimmer (0% <--> 100%)
2	000 <--> 255	Strobe (slow <-> fast)
3	000 <--> 255	Red Intensity
4	000 <--> 255	Green Intensity
5	000 <--> 255	Blue Intensity

DMX Values In-Depth (8-Channel Mode)

8CH	Value	What It Does		
1	000 <--> 255	Master Dimmer (0% <--> 100%)		
2	000 <--> 255	Strobe (slow <-> fast)		
3	000 <--> 255	Red Intensity		
4	000 <--> 255	Green Intensity		
5	000 <--> 255	Blue Intensity		
6	000 <--> 255	Color Presets (overrides RGB values)		
7		**Built-in Programs**		
	000 <--> 021	No Function	126 <--> 132	Effect 11
	022 <--> 027	Red	133 <--> 139	Effect 12
	028 <--> 034	Green	140 <--> 146	Effect 13
	035 <--> 041	Blue	174 <--> 153	Effect 14
	042 <--> 048	Yellow	154 <--> 160	Effect 15
	049 <--> 055	Magenta	161 <--> 167	Effect 16
	056 <--> 062	Effect 1	167 <--> 174	Effect 17
	063 <--> 069	Effect 2	175 <--> 181	Effect 18
	070 <--> 076	Effect 3	182 <--> 188	Effect 19
	077 <--> 083	Effect 4	189 <--> 195	Effect 20
	084 <--> 090	Effect 5	196 <--> 202	Effect 21
	091 <--> 097	Effect 6	203 <--> 209	Effect 22
	098 <--> 104	Effect 7	210 <--> 216	Effect 23
	105 <--> 111	Effect 8	217 <--> 223	Effect 24
	112 <--> 118	Effect 9	224 <--> 230	Color Chase
	119 <--> 125	Effect 10	231 <--> 225	Random Effects
8	000 <--> 255	Program Speed (slow <-> fast)		

DMX Values In-Depth (41-Channel Mode)

41CH	Value	What It Does
1	000 <--> 255	Master Dimmer (0% <--> 100%)
2	000 <--> 255	Strobe (slow <-> fast)
3	000 <--> 255	Section Group 1 - Red
4	000 <--> 255	Section Group 1 - Green
5	000 <--> 255	Section Group 1 - Blue
6	000 <--> 255	Section Group 2 - Red
7	000 <--> 255	Section Group 2 - Green
8	000 <--> 255	Section Group 2 - Blue
9	000 <--> 255	Section Group 3 - Red
10	000 <--> 255	Section Group 3 - Green
11	000 <--> 255	Section Group 3 - Blue
12	000 <--> 255	Section Group 4 - Red
13	000 <--> 255	Section Group 4 - Green
14	000 <--> 255	Section Group 4 - Blue
15	000 <--> 255	Section Group 5 - Red
16	000 <--> 255	Section Group 5 - Green
17	000 <--> 255	Section Group 5 - Blue
18	000 <--> 255	Section Group 6 - Red
19	000 <--> 255	Section Group 6 - Green
20	000 <--> 255	Section Group 6 - Blue

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DMX Values In-Depth (41-Channel Mode), continued

21	000 <--> 255	Section Group 7 - Red		
22	000 <--> 255	Section Group 7 - Green		
23	000 <--> 255	Section Group 7 - Blue		
24	000 <--> 255	Section Group 8 - Red		
25	000 <--> 255	Section Group 8 - Green		
26	000 <--> 255	Section Group 8 - Blue		
27	000 <--> 255	Section Group 9 - Red		
28	000 <--> 255	Section Group 9 - Green		
29	000 <--> 255	Section Group 9 - Blue		
30	000 <--> 255	Section Group 10 - Red		
31	000 <--> 255	Section Group 10 - Green		
32	000 <--> 255	Section Group 10 - Blue		
33	000 <--> 255	Section Group 11 - Red		
34	000 <--> 255	Section Group 11 - Green		
35	000 <--> 255	Section Group 11 - Blue		
36	000 <--> 255	Section Group 12 - Red		
37	000 <--> 255	Section Group 12 - Green		
38	000 <--> 255	Section Group 12 - Blue		
39	000 <--> 255	Color Presets (overrides RGB values)		
40		**Built-in Programs**		
	000 <--> 021	No Function	126 <--> 132	Effect 11
	022 <--> 027	Red	133 <--> 139	Effect 12
	028 <--> 034	Green	140 <--> 146	Effect 13
	035 <--> 041	Blue	174 <--> 153	Effect 14
	042 <--> 048	Yellow	154 <--> 160	Effect 15
	049 <--> 055	Magenta	161 <--> 167	Effect 16
	056 <--> 062	Effect 1	167 <--> 174	Effect 17
	063 <--> 069	Effect 2	175 <--> 181	Effect 18
	070 <--> 076	Effect 3	182 <--> 188	Effect 19
	077 <--> 083	Effect 4	189 <--> 195	Effect 20
	084 <--> 090	Effect 5	196 <--> 202	Effect 21
	091 <--> 097	Effect 6	203 <--> 209	Effect 22
	098 <--> 104	Effect 7	210 <--> 216	Effect 23
	105 <--> 111	Effect 8	217 <--> 223	Effect 24
	112 <--> 118	Effect 9	224 <--> 230	Color Chase
	119 <--> 125	Effect 10	231 <--> 225	Random Effects
41	000 <--> 255	Program Speed (slow <-> fast)		

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DMX Values In-Depth (144/149-Channel Mode), continued

144CH	149CH	Value	What It Does
--	1	000 <--> 255	Master Dimmer (0% <--> 100%)
--	2	000 <--> 255	Strobe (slow <-> fast)
1	3	000 <--> 255	Section 1 - Red
2	4	000 <--> 255	Section 1 - Green
3	5	000 <--> 255	Section 1 - Blue
4	6	000 <--> 255	Section 2 - Red
5	7	000 <--> 255	Section 2 - Green
6	8	000 <--> 255	Section 2 - Blue
7	9	000 <--> 255	Section 3 - Red
8	10	000 <--> 255	Section 3 - Green
9	11	000 <--> 255	Section 3 - Blue
10	12	000 <--> 255	Section 4 - Red
11	13	000 <--> 255	Section 4 - Green
12	14	000 <--> 255	Section 4 - Blue
13	15	000 <--> 255	Section 5 - Red
14	16	000 <--> 255	Section 5 - Green
15	17	000 <--> 255	Section 5 - Blue
16	18	000 <--> 255	Section 6 - Red
17	19	000 <--> 255	Section 6 - Green
18	20	000 <--> 255	Section 6 - Blue
19	21	000 <--> 255	Section 7 - Red
20	22	000 <--> 255	Section 7 - Green
21	23	000 <--> 255	Section 7 - Blue
22	24	000 <--> 255	Section 8 - Red
23	25	000 <--> 255	Section 8 - Green
24	26	000 <--> 255	Section 8 - Blue
25	27	000 <--> 255	Section 9 - Red
26	28	000 <--> 255	Section 9 - Green
27	29	000 <--> 255	Section 9 - Blue
28	30	000 <--> 255	Section 10 - Red
29	31	000 <--> 255	Section 10 - Green
30	32	000 <--> 255	Section 10 - Blue
31	33	000 <--> 255	Section 11 - Red
32	34	000 <--> 255	Section 11 - Green
33	35	000 <--> 255	Section 11 - Blue
34	36	000 <--> 255	Section 12 - Red
35	37	000 <--> 255	Section 12 - Green
36	38	000 <--> 255	Section 12 - Blue
37	39	000 <--> 255	Section 13 - Red
38	40	000 <--> 255	Section 13 - Green
39	41	000 <--> 255	Section 13 - Blue
40	42	000 <--> 255	Section 14 - Red
41	43	000 <--> 255	Section 14 - Green
42	44	000 <--> 255	Section 14 - Blue
43	45	000 <--> 255	Section 15 - Red
44	46	000 <--> 255	Section 15 - Green
45	47	000 <--> 255	Section 15 - Blue
46	48	000 <--> 255	Section 16 - Red
47	49	000 <--> 255	Section 16 - Green
48	50	000 <--> 255	Section 16 - Blue
49	51	000 <--> 255	Section 17 - Red
50	52	000 <--> 255	Section 17 - Green
51	53	000 <--> 255	Section 17 - Blue
52	54	000 <--> 255	Section 18 - Red
53	55	000 <--> 255	Section 18 - Green
54	56	000 <--> 255	Section 18 - Blue

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DMX Values In-Depth (144/149-Channel Mode), continued

144CH	149CH	Value	What It Does
55	57	000 <--> 255	Section 19 - Red
56	58	000 <--> 255	Section 19 - Green
57	59	000 <--> 255	Section 19 - Blue
58	60	000 <--> 255	Section 20 - Red
59	61	000 <--> 255	Section 20 - Green
60	62	000 <--> 255	Section 20 - Blue
61	63	000 <--> 255	Section 21 - Red
62	64	000 <--> 255	Section 21 - Green
63	65	000 <--> 255	Section 21 - Blue
64	66	000 <--> 255	Section 22 - Red
65	67	000 <--> 255	Section 22 - Green
66	68	000 <--> 255	Section 22 - Blue
67	69	000 <--> 255	Section 23 - Red
68	70	000 <--> 255	Section 23 - Green
69	71	000 <--> 255	Section 23 - Blue
70	72	000 <--> 255	Section 24 - Red
71	73	000 <--> 255	Section 24 - Green
72	74	000 <--> 255	Section 24 - Blue
73	75	000 <--> 255	Section 25 - Red
74	76	000 <--> 255	Section 25 - Green
75	77	000 <--> 255	Section 25 - Blue
76	78	000 <--> 255	Section 26 - Red
77	79	000 <--> 255	Section 26 - Green
78	80	000 <--> 255	Section 26 - Blue
79	81	000 <--> 255	Section 27 - Red
80	82	000 <--> 255	Section 27 - Green
81	83	000 <--> 255	Section 27 - Blue
82	84	000 <--> 255	Section 28 - Red
83	85	000 <--> 255	Section 28 - Green
84	86	000 <--> 255	Section 28 - Blue
85	87	000 <--> 255	Section 29 - Red
86	88	000 <--> 255	Section 29 - Green
87	89	000 <--> 255	Section 29 - Blue
88	90	000 <--> 255	Section 30 - Red
89	91	000 <--> 255	Section 30 - Green
90	92	000 <--> 255	Section 30 - Blue
91	93	000 <--> 255	Section 31 - Red
92	94	000 <--> 255	Section 31 - Green
93	95	000 <--> 255	Section 31 - Blue
94	96	000 <--> 255	Section 32 - Red
95	97	000 <--> 255	Section 32 - Green
96	98	000 <--> 255	Section 32 - Blue
97	99	000 <--> 255	Section 33 - Red
98	100	000 <--> 255	Section 33 - Green
99	101	000 <--> 255	Section 33 - Blue
100	102	000 <--> 255	Section 34 - Red
101	103	000 <--> 255	Section 34 - Green
102	104	000 <--> 255	Section 34 - Blue
103	105	000 <--> 255	Section 35 - Red
104	106	000 <--> 255	Section 35 - Green
105	107	000 <--> 255	Section 35 - Blue
106	108	000 <--> 255	Section 36 - Red
107	109	000 <--> 255	Section 36 - Green
108	110	000 <--> 255	Section 36 - Blue

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DMX Values In-Depth (144/149-Channel Mode), continued

144CH	149CH	Value	What It Does		
109	111	000 <--> 255	Section 37 - Red		
110	112	000 <--> 255	Section 37 - Green		
111	113	000 <--> 255	Section 37 - Blue		
112	114	000 <--> 255	Section 38 - Red		
113	115	000 <--> 255	Section 38 - Green		
114	116	000 <--> 255	Section 38 - Blue		
115	117	000 <--> 255	Section 39 - Red		
116	118	000 <--> 255	Section 39 - Green		
117	119	000 <--> 255	Section 39 - Blue		
118	120	000 <--> 255	Section 40 - Red		
119	121	000 <--> 255	Section 40 - Green		
120	122	000 <--> 255	Section 40 - Blue		
121	123	000 <--> 255	Section 41 - Red		
122	124	000 <--> 255	Section 41 - Green		
123	125	000 <--> 255	Section 41 - Blue		
124	126	000 <--> 255	Section 42 - Red		
125	127	000 <--> 255	Section 42 - Green		
126	128	000 <--> 255	Section 42 - Blue		
127	129	000 <--> 255	Section 43 - Red		
128	130	000 <--> 255	Section 43 - Green		
129	131	000 <--> 255	Section 43 - Blue		
130	132	000 <--> 255	Section 44 - Red		
131	133	000 <--> 255	Section 44 - Green		
132	134	000 <--> 255	Section 44 - Blue		
133	135	000 <--> 255	Section 45 - Red		
134	136	000 <--> 255	Section 45 - Green		
135	137	000 <--> 255	Section 45 - Blue		
136	138	000 <--> 255	Section 46 - Red		
137	139	000 <--> 255	Section 46 - Green		
138	140	000 <--> 255	Section 46 - Blue		
139	141	000 <--> 255	Section 47 - Red		
140	142	000 <--> 255	Section 47 - Green		
141	143	000 <--> 255	Section 47 - Blue		
142	144	000 <--> 255	Section 48 - Red		
143	145	000 <--> 255	Section 48 - Green		
144	146	000 <--> 255	Section 48 - Blue		
--	147	000 <--> 255	Color Presets (overrides RGB values)		
--	148		**Built-in Programs**		
		000 <--> 021	No Function	126 <--> 132	Effect 11
		022 <--> 027	Red	133 <--> 139	Effect 12
		028 <--> 034	Green	140 <--> 146	Effect 13
		035 <--> 041	Blue	174 <--> 153	Effect 14
		042 <--> 048	Yellow	154 <--> 160	Effect 15
		049 <--> 055	Magenta	161 <--> 167	Effect 16
		056 <--> 062	Effect 1	167 <--> 174	Effect 17
		063 <--> 069	Effect 2	175 <--> 181	Effect 18
		070 <--> 076	Effect 3	182 <--> 188	Effect 19
		077 <--> 083	Effect 4	189 <--> 195	Effect 20
		084 <--> 090	Effect 5	196 <--> 202	Effect 21
		091 <--> 097	Effect 6	203 <--> 209	Effect 22
		098 <--> 104	Effect 7	210 <--> 216	Effect 23
		105 <--> 111	Effect 8	217 <--> 223	Effect 24
		112 <--> 118	Effect 9	224 <--> 230	Color Chase
		119 <--> 125	Effect 10	231 <--> 225	Random Effects
--	149	000 <--> 255	Program Speed (slow <-> fast)		

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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.

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Keeping Your Squarodox™ 3D 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 go to our website and open a support ticket at www.blizzardpro.com/support, 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.

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Tech Specs!

Weight & Dimensions	
Width	23.6 inches (600 mm)
Depth	19.7 inches (500 mm)
Height	3.2 inches (82 mm)
Weight	12.8 lbs (5.8 kg)
Power	
Operating Voltage	90V-260VAC, 50-60Hz
Power Consumption	60W
Light Source	
LED	192* 3-in-1 RGB 5050 LED chips
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Control	
Protocol	USITT DMX-512
DMX Channels	5/8/41/144/149-channel modes
Data	3-pin DMX input/output
Other Operating Modes	DMX512, master/slave, auto, sound active
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LEDs.

Troubleshooting

Symptom	**Solution**
Output is Dim	Check optical system and clean excess dust/grime.
No Light Output	Check to ensure fixture is operating under correct mode.
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 Audio	Verify that "Sound" mode is active.
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 problems persists, visit www.blizzardpro.com/support.

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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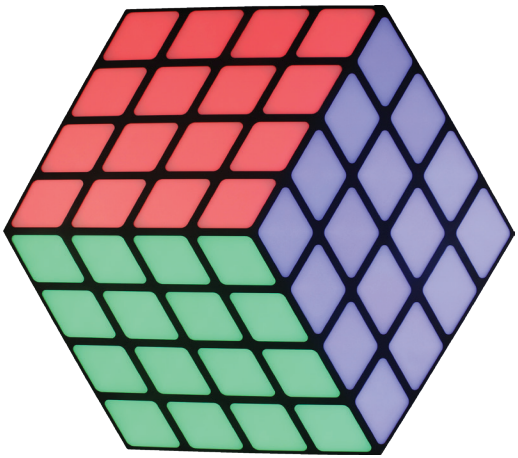

Enjoy your product!
Our sincerest thanks for your purchase!
--The team @ Blizzard Lighting