

SPEKTACL



 **blizzard**

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1. GETTING STARTED

What's In The Box?

- 1x SpektACL™ LED Fixture
- 1x Ever-So-Handy Power Cord
- This Lovely User Manual

Getting It Out Of The Box

Congratulations on your purchase of SpektACL™, the LED fixture that is built to impress, and quite a show off! So, now that you've got your SpektACL™ (*or hopefully, SpektACL's*), 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 it 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 just visit our website at 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.

2. MEET THE SPEKTA CL™ LED FIXTURE

MAIN FEATURES

- 10* 3W CREE® LEDs (2600K WW), plus 60* 5050SMD RGB LEDs
- Individual pixel control of 3W beams + SMD5050 R/G/B background pixels
- Super-sharp 4° warm white beams
- Completely silent operation, natural convection cooling system
- Backlit alphanumeric 2x16 character LCD display for easy menu navigation
- 3/5-pin DMX + RJ45 In/out
- Art-Net, Kling-Net, and RDM ready
- PowerCON® compatible AC power input/output
- Standalone, master/slave, auto, sound active modes
- Multifunctional bracket designed for both floor and truss mounting

DMX Quick Reference - 11/20 Channel Modes

11CH	20CH	What It Does
1	1	Dimmer
2	2	Strobe
3	--	SMD5050 Red Dimmer
4	--	SMD5050 Green Dimmer
5	--	SMD5050 Blue Dimmer
6	--	3W Warm White LED Dimmer
7	3	3W Warm White LED Chase Patterns
8	4	SMD5050 RGB Chase Patterns
9	5	Effect Speed
10	6	Virtual Color Wheel
11	7	Sound Active Mode
--	8	3W Warm White LED 1
--	9	3W Warm White LED 2
--	10	3W Warm White LED 3
--	11	3W Warm White LED 4
--	12	3W Warm White LED 5
--	13	3W Warm White LED 6
--	14	3W Warm White LED 7
--	15	3W Warm White LED 8
--	16	3W Warm White LED 9
--	17	3W Warm White LED 10
--	18	SMD5050 Red Dimmer
--	19	SMD5050 Green Dimmer
--	20	SMD5050 Blue Dimmer

DMX Quick Reference - 47 Channel Mode

Channel	47-Channel
1	Dimmer
2	Strobe
3	3W Warm White LED Chase Patterns
4	SMD5050 RGB Chase Patterns
5	Effect Speed
6	Virtual Color Wheel
7	Sound Active Mode
8-17	Individual 3W Warm White LED Intensity
18-47	SMD5050 Groups 1-10 R/G/B Intensity

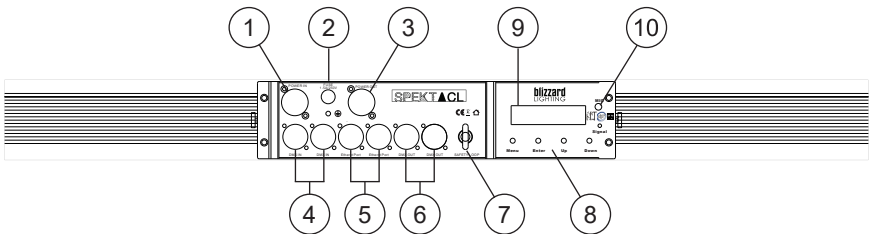
DMX Quick Reference - 190 Channel Mode

Channel	190-Channel
1-10	Individual 3W Warm White LED Intensity
11-190	Individual SMD5050 LED R/G/B Intensity

Figure 1: The SpektACL™ Pin-Up Picture



Figure 2: The Rear Connections



1. Power In	3. Power Out	5. Ethernet Ports	7. Safety Loop	9. LCD Display
2. Fuse Holder	4. DMX Inputs	6. DMX Outputs	8. Menu Buttons	10. Microphone

3. SETUP



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

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 SpektACL™ 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

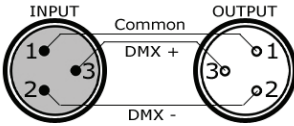
To link fixtures together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

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

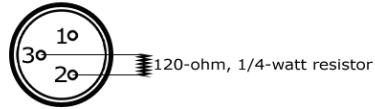
Cable Connectors

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?!?

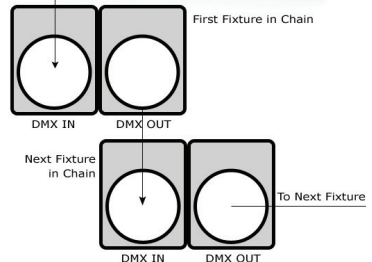
If you use a controller with a 5-pin DMX output connector, it's no problem! Just use the installed 5-pin DMX input and/or output connections found on the back of your fixture(s).

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
Data 2+ (Optional Secondary Data Link)	--	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.



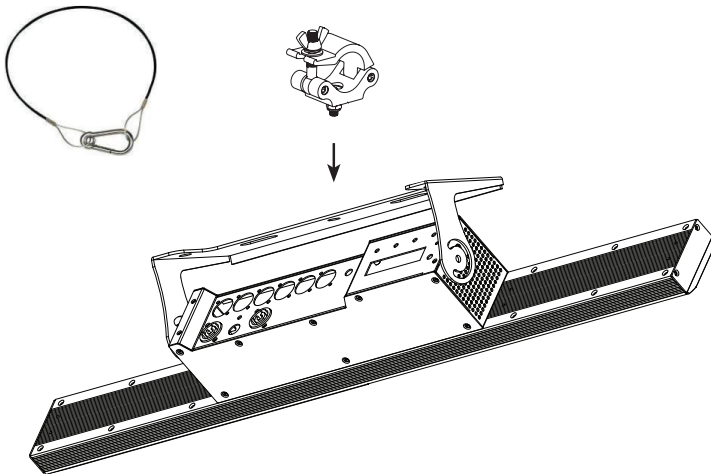
Step 3: Connect other fixtures in the chain from output to input as above. Place a DMX terminator on the output of the final fixture to ensure best communication.

Installation

The fixture can be installed resting on the floor on its mounting bracket, or it can be mounted on truss.

- Choose a suitable place to put or hang the equipment when installing. When hanging the fixture, use the included clamp mounting brackets with suitable clamps to properly support the weight of the fixture.
- When installing the equipment, ensure that no flammable or explosive materials are within 1/2 meter distance.
- Please ask professionals to install the equipment. Any improper installation can cause personal injury or material damage.
- The equipment must be placed in a ventilated area, at least 50 cm from the ground, and always ensure that the vents are not clogged.
- Mount the fixture using suitable type clamps. The clamp should be rated to hold at least 12x 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.

WARNING: With the exception of when the fixture is positioned on the floor, a safety cable must always be used. It must be securely fixed to the support structure of the projector and then connected to the fixing point at the center of the base.



4. OPERATING ADJUSTMENTS

The Control Panel

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

<MENU>

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

<ENTER>

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

<UP>

Scrolls through menu items and numbers in ascending order.

<DOWN>

Scrolls through menu items and numbers in descending order.



The control panel 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.

Control Panel Menu Structure

DMX Address	1-512	To choose the DMX address
DMX CH Mode	11CH	11-channel DMX mode
	20CH	20-channel DMX mode
	47CH	47-channel DMX mode
	190CH	190-channel DMX mode
Auto Mode	Speed	Speed adjustments (1-9)
	Program	Built-in programs (1-29) + Mix Mode (30)
Slave Mode	Yes/No	Sets fixture to run in slave mode
Sound Mode	1-10	Sound active modes
Network Setup	IP Address	IP address settings
	Subnet Mask	Subnet mask settings
	Universe	Universe 1-255

DMX Mode

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

Change the Starting DMX Channel:

1.) The default DMX channel appears as **1** on the LCD readout. To select a different starting DMX channel, use the **<UP/DOWN>** buttons to navigate to **DMX Address**, and press the **<ENTER>** button. Then use the **<UP/DOWN>** buttons to select a value ranging from 1-512, and press the **<ENTER>** to confirm your choice.

Setting the DMX Channel Mode:

1.) To select a DMX channel mode, use the **<UP/DOWN>** buttons to navigate to **DMX CH Mode**, and press the **<ENTER>** button. Then use the **<UP/DOWN>** buttons until the display reaches your desired channel mode. Press the **<ENTER>** button to confirm.

Slave Mode:

1.) To set a fixture to run in slave mode, use the **<UP/DOWN>** buttons to navigate to **Slave Mode**, and press the **<ENTER>** button. Then use the **<UP/DOWN>** buttons to highlight either **Yes** or **No**. Press the **<ENTER>** button to confirm your choice.

Stand-Alone, Auto, & Sound Active Modes:

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

Auto Mode:

1.) To run any of the fixture's individual programs or all of them in "Mix Mode", use the **<UP/DOWN>** buttons to navigate to **Auto Mode**, and press the **<ENTER>** button. You can then adjust the speed setting from 1-9 (slow <-> fast), or press the **<UP/DOWN>** buttons to navigate to **Program** to select any of its 29 programs, or Mix Mode (30) to cycle through them all. Press the enter button to confirm your choice.

Sound Active Mode:

1.) To use sound active mode, select **Sound Mode** from the main menu and press the **<ENTER>** button. Then use the **<UP/DOWN>** buttons to select any sound active program 1-10, and press then press the **<ENTER>** button.

DMX Values In-Depth (11/20-Channel Mode)

11CH	20CH	Value	What It Does
1	1	000 <--> 255	Dimmer
2	2	000 <--> 255	Strobe
3	--	000 <--> 255	SMD5050 Red Dimmer
4	--	000 <--> 255	SMD5050 Green Dimmer
5	--	000 <--> 255	SMD5050 Blue Dimmer
6	--	000 <--> 255	3W Warm White LED Dimmer
7	3	000 001 <--> 017 018 <--> 034 035 <--> 051 052 <--> 068 069 <--> 085 086 <--> 102 103 <--> 119 120 <--> 136 137 <--> 153 154 <--> 170 171 <--> 187 188 <--> 204 205 <--> 221 222 <--> 238 239 <--> 255	3W Warm White LED Chase Patterns No Function Single LED Linear scroll (right <--> left) Single LED Linear scroll (left <--> right) Two LED Linear scroll (right <--> left) Two LED Linear scroll (left <--> right) Split scroll, outward Split scroll, inward Split bounce in/out Linear fade (right <--> left) Linear fade (left <--> right) Linear bounce fade LEDs fill (right <--> left) LEDs fill (left <--> right) Random/lightning strobe effect 3W LEDs full bar fade up/down Auto mode, all 3W LED programs (1-14)
8	4	000 001 <--> 017 018 <--> 034 035 <--> 051 052 <--> 068 069 <--> 085 086 <--> 102 103 <--> 119 120 <--> 136 137 <--> 153 154 <--> 170 171 <--> 187 188 <--> 204 205 <--> 221 222 <--> 238 239 <--> 240 241 <--> 255	SMD5050 RGB Chase Patterns No Function SMD5050 Chase Patterns Multicolor, multipixel effect #1 Multicolor, multipixel effect #2 Multicolor, multipixel effect #3 Multicolor, multipixel effect #4 Multicolor, multipixel effect #5 Multicolor, multipixel effect #6 Multicolor, multipixel effect #7 Single color linear fade (right <--> left) Single color linear fade (left <--> right) Single color fade fill (right <--> left) Single color fade fill (left <--> right) Single color split bounce in/out Single color linear bounce fade Single color split scroll, outward Auto mode, all SMD5050 programs (1-14)
9	5	000 <--> 255	Effect Speed (slow <--> fast)
10	6	000 001 <--> 036 037 <--> 073 074 <--> 110 111 <--> 147 148 <--> 184 185 <--> 221 222 <--> 255	Virtual Color Wheel (use with RGB Chase Patterns, 8-14) No Function Red Green Blue Yellow Cyan Pink White
11	7	000 <--> 245 255	Sound Active Mode No Function Sound Active On

DMX Values In-Depth (11/20-Channel Mode), continued

11CH	20CH	Value	What It Does
--	8	000 <--> 255	3W Warm White LED 1
--	9	000 <--> 255	3W Warm White LED 2
--	10	000 <--> 255	3W Warm White LED 3
--	11	000 <--> 255	3W Warm White LED 4
--	12	000 <--> 255	3W Warm White LED 5
--	13	000 <--> 255	3W Warm White LED 6
--	14	000 <--> 255	3W Warm White LED 7
--	15	000 <--> 255	3W Warm White LED 8
--	16	000 <--> 255	3W Warm White LED 9
--	17	000 <--> 255	3W Warm White LED 10
--	18	000 <--> 255	SMD5050 Red Dimmer
--	19	000 <--> 255	SMD5050 Green Dimmer
--	20	000 <--> 255	SMD5050 Blue Dimmer

DMX Values In-Depth (47-Channel Mode)

Individual 3W Warm White LEDs, and SMD5050 Groups (6x RGB SMD5050 LEDs in 10 groups.)

Channel	Value	What It Does
1	000 <--> 255	Master Dimmer
2	000 <--> 255	Strobe
3	000	3W Warm White LED Chase Patterns No Function
	001 <--> 017	Single LED Linear scroll (right <--> left)
	018 <--> 034	Single LED Linear scroll (left <--> right)
	035 <--> 051	Two LED Linear scroll (right <--> left)
	052 <--> 068	Two LED Linear scroll (left <--> right)
	069 <--> 085	Split scroll, outward
	086 <--> 102	Split scroll, inward
	103 <--> 119	Split bounce in/out
	120 <--> 136	Linear fade (right <--> left)
	137 <--> 153	Linear fade (left <--> right)
	154 <--> 170	Linear bounce fade
	171 <--> 187	LEDs fill (right <--> left)
	188 <--> 204	LEDs fill (left <--> right)
	205 <--> 221	Random/lightning strobe effect
222 <--> 238	3W LEDs full bar fade up/down	
239 <--> 255	Auto mode, all 3W LED programs (1-14)	
4	000	SMD5050 RGB Chase Patterns No Function
	001 <--> 017	SMD5050 Chase Patterns
	018 <--> 034	Multicolor, multipixel effect #1
	035 <--> 051	Multicolor, multipixel effect #2
	052 <--> 068	Multicolor, multipixel effect #3
	069 <--> 085	Multicolor, multipixel effect #4
	086 <--> 102	Multicolor, multipixel effect #5
	103 <--> 119	Multicolor, multipixel effect #6
	120 <--> 136	Multicolor, multipixel effect #7
	137 <--> 153	Single color linear fade (right <--> left)
	154 <--> 170	Single color linear fade (left <--> right)
	171 <--> 187	Single color fade fill (right <--> left)
	188 <--> 204	Single color fade fill (left <--> right)
	205 <--> 221	Single color split bounce in/out
222 <--> 238	Single color linear bounce fade	
239 <--> 240	Single color split scroll, outward	
241 <--> 255	Auto mode, all SMD5050 programs (1-14)	
5	000 <--> 255	Effect Speed (slow <--> fast)

DMX Values In-Depth (47-Channel Mode), continued

Individual 3W Warm White LEDs, and SMD5050 Groups (6x RGB SMD5050 LEDs in 10 groups.)

Channel	Value	What It Does
6	000	Virtual Color Wheel (use with RGB Chase Patterns, 8-14) No Function
	001 <--> 036	Red
	037 <--> 073	Green
	074 <--> 110	Blue
	111 <--> 147	Yellow
	148 <--> 184	Cyan
	185 <--> 221	Pink
	222 <--> 255	White
7	000 <--> 245	Sound Active Mode No Function
	255	Sound Active On
8	000 <--> 255	3W Warm White LED 1
9	000 <--> 255	3W Warm White LED 2
10	000 <--> 255	3W Warm White LED 3
11	000 <--> 255	3W Warm White LED 4
12	000 <--> 255	3W Warm White LED 5
13	000 <--> 255	3W Warm White LED 6
14	000 <--> 255	3W Warm White LED 7
15	000 <--> 255	3W Warm White LED 8
16	000 <--> 255	3W Warm White LED 9
17	000 <--> 255	3W Warm White LED 10
18	000 <--> 255	SMD5050 Group 1 Red
19	000 <--> 255	SMD5050 Group 1 Green
20	000 <--> 255	SMD5050 Group 1 Blue
21	000 <--> 255	SMD5050 Group 2 Red
22	000 <--> 255	SMD5050 Group 2 Green
23	000 <--> 255	SMD5050 Group 2 Blue
24	000 <--> 255	SMD5050 Group 3 Red
25	000 <--> 255	SMD5050 Group 3 Green
26	000 <--> 255	SMD5050 Group 3 Blue
27	000 <--> 255	SMD5050 Group 4 Red
28	000 <--> 255	SMD5050 Group 4 Green
29	000 <--> 255	SMD5050 Group 4 Blue
30	000 <--> 255	SMD5050 Group 5 Red
31	000 <--> 255	SMD5050 Group 5 Green
32	000 <--> 255	SMD5050 Group 5 Blue
33	000 <--> 255	SMD5050 Group 6 Red
34	000 <--> 255	SMD5050 Group 6 Green
35	000 <--> 255	SMD5050 Group 6 Blue
36	000 <--> 255	SMD5050 Group 7 Red
37	000 <--> 255	SMD5050 Group 7 Green
38	000 <--> 255	SMD5050 Group 7 Blue
39	000 <--> 255	SMD5050 Group 8 Red
40	000 <--> 255	SMD5050 Group 8 Green
41	000 <--> 255	SMD5050 Group 8 Blue
42	000 <--> 255	SMD5050 Group 9 Red
43	000 <--> 255	SMD5050 Group 9 Green
44	000 <--> 255	SMD5050 Group 9 Blue
45	000 <--> 255	SMD5050 Group 10 Red
46	000 <--> 255	SMD5050 Group 10 Green
47	000 <--> 255	SMD5050 Group 10 Blue

DMX Values In-Depth (190-Channel Mode)

Individual 3W Warm White LEDs and SMD5050 Pixel Control Value: 000 <--> 255.

CH	LED	CH	LED	CH	LED	CH	LED	CH	LED
1	3W 1	39	SMD 10 - G	77	SMD 23 - R	115	SMD 35 - B	153	SMD 48 - G
2	3W 2	40	SMD 10 - B	78	SMD 23 - G	116	SMD 36 - R	154	SMD 48 - B
3	3W 3	41	SMD 11 - R	79	SMD 23 - B	117	SMD 36 - G	155	SMD 49 - R
4	3W 4	42	SMD 11 - G	80	SMD 24 - R	118	SMD 36 - B	156	SMD 49 - G
5	3W 5	43	SMD 11 - B	81	SMD 24 - G	119	SMD 37 - R	157	SMD 49 - B
6	3W 6	44	SMD 12 - R	82	SMD 24 - B	120	SMD 37 - G	158	SMD 50 - R
7	3W 7	45	SMD 12 - G	83	SMD 25 - R	121	SMD 37 - B	159	SMD 50 - G
8	3W 8	46	SMD 12 - B	84	SMD 25 - G	122	SMD 38 - R	160	SMD 50 - B
9	3W 9	47	SMD 13 - R	85	SMD 25 - B	123	SMD 38 - G	161	SMD 51 - R
10	3W 10	48	SMD 13 - G	86	SMD 26 - R	124	SMD 38 - B	162	SMD 51 - G
11	SMD 1 - R	49	SMD 13 - B	87	SMD 26 - G	125	SMD 39 - R	163	SMD 51 - B
12	SMD 1 - G	50	SMD 14 - R	88	SMD 26 - B	126	SMD 39 - G	164	SMD 52 - R
13	SMD 1 - B	51	SMD 14 - G	89	SMD 27 - R	127	SMD 39 - B	165	SMD 52 - G
14	SMD 2 - R	52	SMD 14 - B	90	SMD 27 - G	128	SMD 40 - R	166	SMD 52 - B
15	SMD 2 - G	53	SMD 15 - R	91	SMD 27 - B	129	SMD 40 - G	167	SMD 53 - R
16	SMD 2 - B	54	SMD 15 - G	92	SMD 28 - R	130	SMD 40 - B	168	SMD 53 - G
17	SMD 3 - R	55	SMD 15 - B	93	SMD 28 - G	131	SMD 41 - R	169	SMD 53 - B
18	SMD 3 - G	56	SMD 16 - R	94	SMD 28 - B	132	SMD 41 - G	170	SMD 54 - R
19	SMD 3 - B	57	SMD 16 - G	95	SMD 29 - R	133	SMD 41 - B	171	SMD 54 - G
20	SMD 4 - R	58	SMD 16 - B	96	SMD 29 - G	134	SMD 42 - R	172	SMD 54 - B
21	SMD 4 - G	59	SMD 17 - R	97	SMD 29 - B	135	SMD 42 - G	173	SMD 55 - R
22	SMD 4 - B	60	SMD 17 - G	98	SMD 30 - R	136	SMD 42 - B	174	SMD 55 - G
23	SMD 5 - R	61	SMD 17 - B	99	SMD 30 - G	137	SMD 43 - R	175	SMD 55 - B
24	SMD 5 - G	62	SMD 18 - R	100	SMD 30 - B	138	SMD 43 - G	176	SMD 56 - R
25	SMD 5 - B	63	SMD 18 - G	101	SMD 31 - R	139	SMD 43 - B	177	SMD 56 - G
26	SMD 6 - R	64	SMD 18 - B	102	SMD 31 - G	140	SMD 44 - R	178	SMD 56 - B
27	SMD 6 - G	65	SMD 19 - R	103	SMD 31 - B	141	SMD 44 - G	179	SMD 57 - R
28	SMD 6 - B	66	SMD 19 - G	104	SMD 32 - R	142	SMD 44 - B	180	SMD 57 - G
29	SMD 7 - R	67	SMD 19 - B	105	SMD 32 - G	143	SMD 45 - R	181	SMD 57 - B
30	SMD 7 - G	68	SMD 20 - R	106	SMD 32 - B	144	SMD 45 - G	182	SMD 58 - R
31	SMD 7 - B	69	SMD 20 - G	107	SMD 33 - R	145	SMD 45 - B	183	SMD 58 - G
32	SMD 8 - R	70	SMD 20 - B	108	SMD 33 - G	146	SMD 46 - R	184	SMD 58 - B
33	SMD 8 - G	71	SMD 21 - R	109	SMD 33 - B	147	SMD 46 - G	185	SMD 59 - R
34	SMD 8 - B	72	SMD 21 - G	110	SMD 34 - R	148	SMD 46 - B	186	SMD 59 - G
35	SMD 9 - R	73	SMD 21 - B	111	SMD 34 - G	149	SMD 47 - R	187	SMD 59 - B
36	SMD 9 - G	74	SMD 22 - R	112	SMD 34 - B	150	SMD 47 - G	188	SMD 60 - R
37	SMD 9 - B	75	SMD 22 - G	113	SMD 35 - R	151	SMD 47 - B	189	SMD 60 - G
38	SMD 10 - R	76	SMD 22 - B	114	SMD 35 - G	152	SMD 48 - R	190	SMD 60 - B

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 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 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.

Art-net™ Protocol

Art-Net is a protocol for transmitting the lighting control protocol DMX512-A (with RDM) over the User Datagram Protocol of the Internet Protocol suite. The protocol was developed by Wayne Howell and his company, Artistic Licence Engineering (UK) Ltd, is open for implementation with attribution but without charge, and made available as a software development kit for convenience. It is typically implemented as lighting-control nodes in embedded controllers, driven from a lighting desk or similar software operating as a server. Art-Net compatible products are made available by dozens of companies.

ArKaos Kling-Net™

ArKaos has designed the Kling-Net protocol to allow the distribution of real-time video data to remote display devices, such as LEDs or LED panels, over Ethernet.

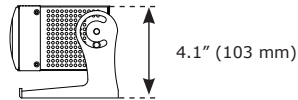
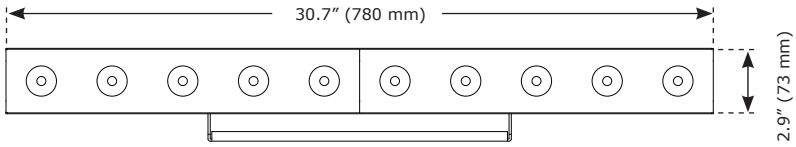
Many first time users are afraid of using LED lighting because of the complexity of networking and control issues. Using and networking LED lighting has required a high level of technical knowledge which has been a deterrent for many.

ArKaos wanted to remove all this complexity and replace it with an easy protocol which automatically takes care of the magic numbers for the user!

The purpose of Kling-Net is:

- To allow the automatic configuration and connection of display devices to a computer
- To add some "intelligence" into display devices, which enables auto configuration
- To ensure a perfect time synchronization of multiple display devices
- To avoid using expensive hardware video converters to send video to display devices
- To allow the creation of an heterogeneous network of display devices from different manufacturers, which can all be controlled from one computer

Dimensional Drawings



Troubleshooting

Symptom	Solution
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 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).
Fixture Moving On Its Own	Verify proper mode of operation. Is the fixture in "Auto" mode?

If your problem persists or isn't listed, please open a support ticket online at: 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.

Keeping Your SpektACL™ 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

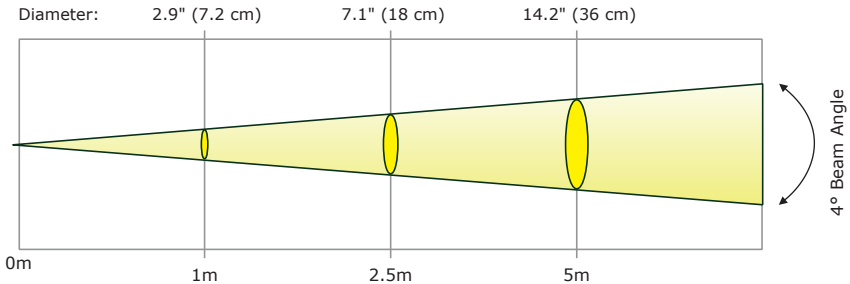
Damage incurred in shipping is the responsibility of the shipper, and must be reported to the carrier immediately upon receipt of the items. Claims must be made within seven (7) days of receipt.

Tech Specs!

Weight & Dimensions	
Width	30.7 inches (780 mm)
Depth	4.1 inches (103 mm)
Height	2.9 inches (73 mm)
Weight	8 lbs. (3.6 kg)
Power	
Operating Voltage	100-240VAC, 50-60 Hertz
Power Consumption	68W, 0.94A, PF: .94
Fuse	1.5A, 250V
Light Source	
LED	10* 3W CREE® LEDs (2600K WW) 60* 5050SMD RGB LEDs
Optical	
Beam Angle	4° beam angle (x10)
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Control	
Protocol	USITT DMX-512, Art-Net, Kling-Net, RDM
DMX Channels	11/20/47/190-channels
Input/Output	3/5-pin XLR male/female
Other Operating Modes	Standalone, Master/Slave, Auto, Sound Active
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LEDs.

Photometric Data

4° Beam Angle (x10)



Luminous Intensity:

Beam	1m lux	1m fc	2.5m lux	2.5m fc	5m lux	5m fc
4°	11,745	1,091.1	4,306	400.1	1,624	150.9



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