

CYC OUT[™]



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1. GETTING STARTED

What's In The Box?

- 1 x Cyc Out™ Professional LED Fixture
- An Ever-So-Handy Power Cord
- One Really Classy DMX Cable
- This Lovely User Manual

Getting It Out Of The Box

Congratulations on purchasing Cyc Out™, the ultimate RGBW colored LED strobe/cyc light with intense flash effects, in every pulse variant! Now that you've got your Cyc Out™ (or *hopefully*, *OUTs*), 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 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.blizzardlighting.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.blizzardlighting.com.

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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.blizzardlighting.com/support.

2. MEET THE CYC OUT™ LED FIXTURE

MAIN FEATURES

- 256 x (64* R/G/B/W) 3W LEDs, 50,000-100,000 hours
- Dual zone control (top/bottom) via DMX
- Individual R/G/B/W intensity, strobe duration, and rate control
- Wide 60° beam angle, plus 2 leaf barndoor set
- User-selectable 32-bit dimming curves
- Variable electronic dimming & strobe
- Automated temperature controlled, or continual fan cooling
- Virtual color wheel effects
- Flicker-free constant-current 1500HZ LED driver
- Micro OLED display menu with 4* touch sensitive buttons
- Mounting bracket w/dual stabilizers for free standing positioning
- 4/5/8/10/15/16/28-channel DMX modes
- 3/5-pin male input and 3/5-pin female output
- PowerCon™ compatible AC power input connector

DMX Quick Reference: 4/5/8/10/15/16/28-Channel Modes

4CH	5CH	8CH	10CH	15CH	16CH	28CH	What It Does
1	1	1	1	--	1	1	Master Intensity (0% <--> 100%)
--	--	--	--	1	--	--	Master Intensity 1 (0% <--> 100%)
2	2	2	2	2	2	2	Red 1 Intensity (0% <--> 100%)
--	--	--	--	--	3	3	Red 1 Duration (0-255)
--	--	--	--	--	4	4	Red 1 Rate (0-255)
3	3	3	3	3	5	5	Green 1 Intensity (0% <--> 100%)
--	--	--	--	--	6	6	Green 1 Duration (0-255)
--	--	--	--	--	7	7	Green 1 Rate (0-255)
4	4	4	4	4	8	8	Blue 1 Intensity (0% <--> 100%)
--	--	--	--	--	9	9	Blue 1 Duration (0-255)
--	--	--	--	--	10	10	Blue 1 Rate (0-255)
--	5	5	5	5	11	11	White 1 Intensity (0% <--> 100%)
--	--	--	--	--	12	12	White 1 Duration (0-255)
--	--	--	--	--	13	13	White 1 Rate (0-255)
--	--	--	--	6	--	--	Master Intensity 2 (0% <--> 100%)
--	--	--	--	7	--	14	Red 2 Intensity (0% <--> 100%)
--	--	--	--	--	--	15	Red 2 Duration (0-255)
--	--	--	--	--	--	16	Red 2 Rate (0-255)
--	--	--	--	8	--	17	Green 2 Intensity (0% <--> 100%)
--	--	--	--	--	--	18	Green 2 Duration (0-255)
--	--	--	--	--	--	19	Green 2 Rate (0-255)
--	--	--	--	9	--	20	Blue 2 Intensity (0% <--> 100%)
--	--	--	--	--	--	21	Blue 2 Duration (0-255)
--	--	--	--	--	--	22	Blue 2 Rate (0-255)
--	--	--	--	10	--	23	White 2 Intensity (0% <--> 100%)
--	--	--	--	--	--	24	White 2 Duration (0-255)
--	--	--	--	--	--	25	White 2 Rate (0-255)
--	--	--	6	11	--	--	Duration (0-255)
--	--	--	7	12	--	--	Rate (0-255)
--	--	6	8	13	14	26	Strobe Effects
--	--	7	9	14	15	27	Virtual Color Wheel
--	--	8	10	15	16	28	32-bit Dimming

Figure 1: The Cyc Out™ Pin-Up Picture



Figure 2: The Rear Connections



3. SETUP



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

Fuse Replacement

With a Philips screwdriver, unscrew the fuse holder out of its housing and remove the blown fuse from its holder. Replace the blown fuse with a fuse of the exact same type and rating, then screw the fuse holder back into place and reconnect power.

Connecting A Bunch of Cyc Out™ 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

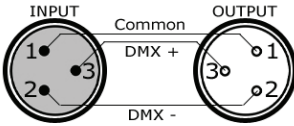
To link fixtures together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

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

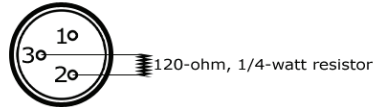
Cable Connectors

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! You can simply use the installed 5-pin DMX input and/or output connections found on the back of your fixture(s).

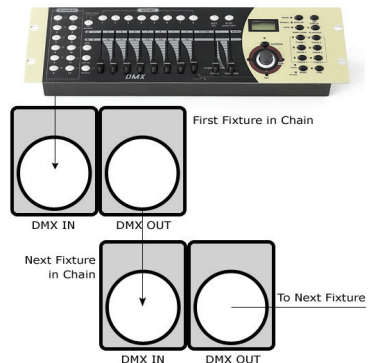
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data 1- (Primary Data Link)	Pin 2	Pin 2
Data 1+ (Primary Data Link)	Pin 3	Pin 3
Data 2- (Optional Secondary Data Link)	Pin 4	Pin 4
Data 2+ (Optional Secondary Data Link)	Pin 5	Pin 5

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.

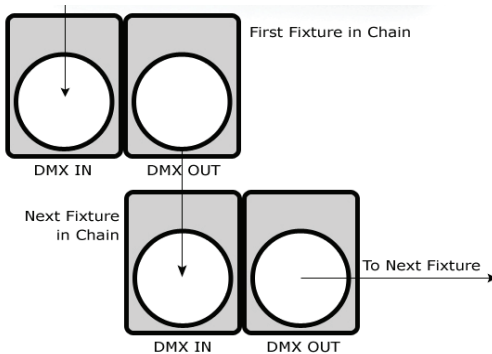
Step 2: Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture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



Fixture Linking (Master/Slave Mode)

1. Connect the (male) 3/5-pin connector side of the DMX cable to the output (female) 3/5-pin connector of the first fixture.
2. Connect the end of the cable coming from the first fixture which will have a (female) 3/5-pin connector to the input connector of the next fixture consisting of a (male) 3/5-pin connector. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.



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

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

Mounting & Rigging

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

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

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

- When selecting installation location, take into consideration lamp replacement access (if applicable) and routine maintenance.
- Safety cables MUST ALWAYS be used.

4. OPERATING ADJUSTMENTS

The Control Panel

All the goodies and different modes possible with this fixture can be accessed by using the control panel on the rear of the fixture. There are 4 control buttons 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

ADDR	001-512	To choose the DMX address	
STAT	MAST INT	Master intensity (0% <--> 100%)	
	R INT	Red intensity (0% <--> 100%)	
	R DURA	Red duration (0-255)	
	R RATE	Red rate (0-255)	
	G INT	Green intensity (0% <--> 100%)	
	G DURA	Green duration (0-255)	
	G RATE	Green rate (0-255)	
	B INT	Blue intensity (0% <--> 100%)	
	B DURA	Blue duration (0-255)	
	B RATE	Blue rate (0-255)	
	W INT	White intensity (0% <--> 100%)	
	W DURA	White duration (0-255)	
	W RATE	White rate (0-255)	
SET	NO DMX	KEEP	Hold last signal upon DMX signal loss
		BLACKOUT	Blackout upon DMX signal loss
		STAT	Output current static value upon DMX signal loss
	CHMD	4CH	To run in 4-channel mode
		5CH	To run in 5-channel mode
		8CH	To run in 8-channel mode
		10CH	To run in 10-channel mode
		15CH	To run in 15-channel mode
		16CH	To run in 16-channel mode
		28CH	To run in 28-channel mode
	DIM (dimming)	LIN	Linear dimming curve
		SQR	Square law curve
		ISQR	Inverse square law curve
		SCUR	S-curve
		LIN.	Linear dimming curve (smooth)
		SQR.	Square law curve (smooth)
		ISQR.	Inverse square law curve (smooth)
		SCUR.	S-curve (smooth)
	FAN	ON	Keep fan on continually
		SMART	Automatic temperature controlled fan cooling
	OUTPUT	MAX	Max output (100%) - Use with strobe only
		CYC-HI	High output (70%) - high-output cyc/wash use
		CYC-LOW	Low output (50%), low-output cyc/wash use
	INFO	SOFT	<ENTER> Software version information
		TEMP	<ENTER> LED board temperature in Celsius
		POW	<ENTER> Current automated overheat protection level (100%/80%/50%)
	RESET	YES/NO	Reset all default parameters, with the exception of ADDR .

WARNING: "MAX" OUTPUT MODE IS FOR USE IN STROBE/BLINDER APPLICATIONS ONLY. CONTINUOUS USE OF THIS FIXTURE IN MAX MODE MAY CAUSE PREMATURE FAILURE. FOR CYC/WASH USE, USE ONLY "CYC-HI" OR "CYC-LO" MODES. SEE PAGE 13 FOR MORE INFORMATION.

DMX Mode

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

Set the Starting DMX Address:

- 1.) Navigate the menu using the **<MENU>** button until you reach **ADDR**.
- 2.) Use the **<UP/DOWN>** buttons to select a DMX channel from **001-512**.
- 3.) Press the **<ENTER>** button to confirm.

Select the DMX Channel Mode:

- 1.) Navigate the menu to reach **SET**, then press **<ENTER>**.
- 2.) Then use the **<UP/DOWN>** buttons to highlight **CHMD**, and press **<ENTER>**.
- 3.) Use the **<UP/DOWN>** buttons to select **4CH**, **5CH**, **8CH**, **10CH**, **15CH**, **16CH**, or **28CH**.
- 4.) Press the **<ENTER>** button to confirm.

Slave Mode:

- 1.) Daisy chain the fixtures DMX in/out, having the controller at the beginning of the line.
- 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.

Static Settings:

Create custom colors with individual R/G/B/W level and strobe settings.

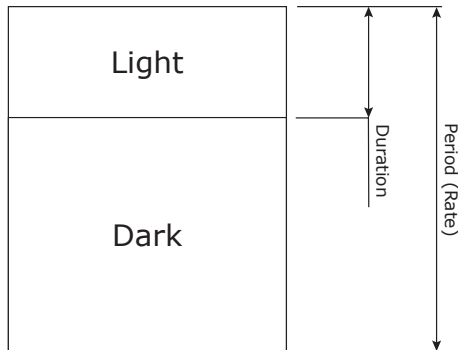
Intensity:

- 1.) Navigate the menu to reach **STAT**, then press **<ENTER>**.
- 2.) Use the **<UP/DOWN>** buttons to highlight **MAST INT** (master intensity), **R INT** (red intensity), **G INT** (green intensity), **B INT** (blue intensity), **W INT** (white intensity), and press the **<ENTER>** button.
- 3.) Use the **<UP/DOWN>** buttons to select adjust the intensity level from **0-255**.
- 4.) Press the **<ENTER>** button to confirm.

Strobe:

- 1.) Navigate the menu to reach **STAT**, then press **<ENTER>**.
- 2.) Use the **<UP/DOWN>** buttons to highlight any R/G/B/W **DURA** (duration) setting, and **RATE** (time) setting, and press the **<ENTER>** button.
- 3.) Use the **<UP/DOWN>** buttons to select adjust the intensity level from **0-255**.
- 4.) Press the **<ENTER>** button to confirm.

Duration Time/Rate Time (Period) Relation:

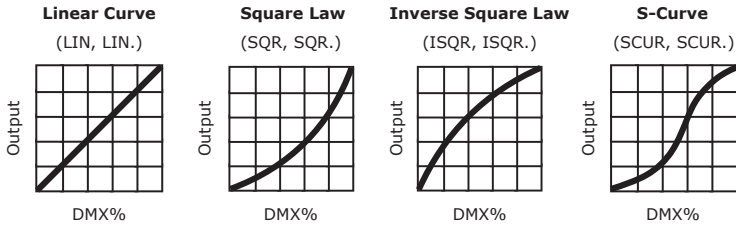


Duration < Period (Rate) = Flashing

Duration >= Period (Rate) = Light Continuously ON

Dimming Mode Settings:

Allows users to set the fixture to use 1 of 4 (x2) dimming curve settings for smoother (and slower) dimming capabilities. In the control panel menu, there are two settings for each curve that are distinguishable from one another by the trailing dot.



*The curve settings with the trailing dot adds a bit more delay to the curve for a smoother effect.

- 1.) Use the **<MENU>** and **<UP/DOWN>** buttons to navigate to **SET** and press **<ENTER>**, then **<UP/DOWN>** buttons again to scroll to **DIM**, and press the **<ENTER>** button.
- 2.) Now use the **<UP/DOWN>** buttons to highlight either **LIN** (Linear), **SQR** (Square), **ISQR** (Inverse Square), **SCUR** (S-Curve), **LIN.** (Smooth Linear), **SQR.** (Smooth Square), **ISQR.** (Smooth Inverse Square), or **SCUR.** (Smooth S-Curve), and press **<ENTER>**.

DMX Signal Loss Settings:

Choose a default fixture output in the case of DMX signal loss.

- 1.) Use the **<MENU>** and **<UP/DOWN>** buttons to navigate to **SET**, and press **<ENTER>**, then use the **<UP/DOWN>** buttons to scroll to **NO DMX**, and press **<ENTER>**.
- 2.) Now use the **<UP/DOWN>** buttons to highlight **KEEP** (hold last signal), **BLACKOUT**, or **STAT** (output the static setting value), and press **<ENTER>**.

Fan Mode Settings:

Set the cooling fans to SMART cooling, or continually ON.

- 1.) Use the **<MENU>** and **<UP/DOWN>** buttons to navigate to **SET** and press **<ENTER>**, then use the **<UP/DOWN>** buttons to scroll to **FAN**, and press **<ENTER>**.
- 2.) Now use the **<UP/DOWN>** buttons to highlight **ON** (continually on), or **SMART** (automatic, temperature controlled), and press **<ENTER>**.

Power Output Settings:

Manually set the power output mode.

- 1.) Use the **<MENU>** and **<UP/DOWN>** buttons to navigate to **SET** and press **<ENTER>**, then use the **<UP/DOWN>** buttons to scroll to **OUTPUT**, and press **<ENTER>**.
- 2.) Now use the **<UP/DOWN>** buttons to highlight **MAX** (100%, for use with strobe only), **CYC-HI** (70%), or **CYC-LOW** (50%), and press **<ENTER>**.

Fixture Information:

These are not editable features, they are for informational purposes only.

- 1.) Use the **<MENU>** and **<UP/DOWN>** buttons to navigate to **INFO** and press **<ENTER>**, then use the **<UP/DOWN>** buttons to highlight **SOFT**, **TEMP**, or **POW**, and press **<ENTER>**.
- 2.) The **SOFT** information simply displays the current software version installed, **TEMP** displays the current board temperature, and **POW** displays the fixtures current power level setting. Under normal conditions, it will be at 100%... but this fixture has built-in overheat protection that may automatically reduce the output level to 80%, or 50% in high temperature situations.

DMX In-Depth Reference: 4/5/8/10/15/16/28-Channel Modes

4CH	5CH	8CH	10CH	15CH	16CH	28CH	Value	What It Does
1	1	1	1	--	1	1	000 <-> 255	Master Intensity (0% <-> 100%)
--	--	--	--	1	--	--	000 <-> 255	Master Intensity 1 (0% <-> 100%)
2	2	2	2	2	2	2	000 <-> 255	Red 1 Intensity (0% <-> 100%)
--	--	--	--	--	3	3	000 <-> 255	Red 1 Duration
--	--	--	--	--	4	4	000 <-> 005 006 <-> 255	Red 1 Rate Open Rate
3	3	3	3	3	5	5	000 <-> 255	Green 1 Intensity (0% <-> 100%)
--	--	--	--	--	6	6	000 <-> 255	Green 1 Duration
--	--	--	--	--	7	7	000 <-> 005 006 <-> 255	Green 1 Rate Open Rate
4	4	4	4	4	8	8	000 <-> 255	Blue 1 Intensity (0% <-> 100%)
--	--	--	--	--	9	9	000 <-> 255	Blue 1 Duration
--	--	--	--	--	10	10	000 <-> 005 006 <-> 255	Blue 1 Rate Open Rate
--	5	5	5	5	11	11	000 <-> 255	White 1 Intensity (0% <-> 100%)
--	--	--	--	--	12	12	000 <-> 255	White 1 Duration
--	--	--	--	--	13	13	000 <-> 005 006 <-> 255	White 1 Rate Open Rate
--	--	--	--	6	--	--	000 <-> 255	Master Intensity 2 (0% <-> 100%)
--	--	--	--	7	--	14	000 <-> 255	Red 2 Intensity (0% <-> 100%)
--	--	--	--	--	--	15	000 <-> 255	Red 2 Duration
--	--	--	--	--	--	16	000 <-> 005 006 <-> 255	Red 2 Rate Open Rate
--	--	--	--	8	--	17	000 <-> 255	Green 2 Intensity (0% <-> 100%)
--	--	--	--	--	--	18	000 <-> 255	Green 2 Duration
--	--	--	--	--	--	19	000 <-> 005 006 <-> 255	Green 2 Rate Open Rate
--	--	--	--	9	--	20	000 <-> 255	Blue 2 Intensity (0% <-> 100%)
--	--	--	--	--	--	21	000 <-> 255	Blue 2 Duration
--	--	--	--	--	--	22	000 <-> 005 006 <-> 255	Blue 2 Rate Open Rate
--	--	--	--	10	--	23	000 <-> 255	White 2 Intensity (0% <-> 100%)
--	--	--	--	--	--	24	000 <-> 255	White 2 Duration
--	--	--	--	--	--	25	000 <-> 005 006 <-> 255	White 2 Rate Open Rate
--	--	--	6	11	--	--	000 <-> 255	Duration
--	--	--	7	12	--	--	000 <-> 005 006 <-> 255	Rate Open Rate
--	--	6	8	13	14	26	000 <-> 005 006 <-> 020 021 <-> 060 061 <-> 100 101 <-> 140 141 <-> 180 181 <-> 220 221 <-> 255	Strobe Effects (High Priority) No effect Random burst strobe (slow <-> fast) Normal strobe (slow <-> fast) Electronic sine wave (slow <-> fast) Random strobe (slow <-> fast) Opening pulse (slow <-> fast) Closing pulse (slow <-> fast) Square wave (slow <-> fast)

DMX In-Depth Reference: 4/5/8/10/15/16/28-Channel Modes

4CH	5CH	8CH	10CH	15CH	16CH	28CH	Value	What It Does
--	--	7	9	14	15	27	000 <-> 010 011 012 <-> 050 051 052 <-> 090 091 092 <-> 130 131 132 <-> 170 171 172 <-> 210 211 212 <-> 250 251 <-> 255	Virtual Color Wheel No Function Blue Blue (+ green) Teal Teal (- blue) Green Green (+ red) Yellow Yellow (- green) Red Red (+ blue) Magenta Magenta (- red) Blue
--	--	8	10	15	16	28	000 <-> 010 011 <-> 020 021 <-> 030 031 <-> 040 041 <-> 050 051 <-> 060 061 <-> 070 071 <-> 080 081 <-> 090 091 <-> 255	Dimming Mode Default (as set in the control panel) Linear curve Square law curve Inverse square law curve S-curve Linear curve (smooth) Square law curve (smooth) Inverse square law curve (smooth) S-curve (smooth) Default (as set in the LED menu)

Rate and Duration Details

DMX Value	Rate (ms)	Freq. (Hz)	Dur. (ms)	DMX Value	Rate (ms)	Freq. (Hz)	Dur. (ms)
0	OPEN	0	3	42	360	2.78	129
1	OPEN	0	6	43	350	2.86	132
2	OPEN	0	9	44	336	2.98	135
3	OPEN	0	12	45	330	3.03	138
4	OPEN	0	15	46	320	3.13	141
5	OPEN	0	18	47	315	3.17	144
6	3500	0.29	21	48	310	3.23	147
7	3500	0.29	24	49	305	3.28	150
8	2320	0.43	27	50	300	3.33	153
9	2320	0.43	30	51	290	3.45	156
10	1760	0.57	33	52	284	3.52	159
11	1760	0.57	36	53	280	3.57	162
12	1400	0.71	39	54	275	3.64	165
13	1400	0.71	42	55	270	3.7	168
14	1160	0.86	45	56	264	3.79	171
15	1160	0.86	48	57	255	3.92	174
16	1000	1	51	58	250	4	177
17	1000	1	54	59	245	4.08	180
18	880	1.14	57	60	240	4.17	183
19	880	1.14	60	61	237	4.22	186
20	760	1.32	63	62	234	4.27	189
21	740	1.35	66	63	231	4.33	192
22	720	1.39	69	64	227	4.41	195
23	700	1.43	72	65	224	4.46	198
24	640	1.56	75	66	220	4.55	201
25	600	1.67	78	67	217	4.61	204
26	580	1.72	81	68	214	4.67	207
27	570	1.75	84	69	211	4.74	210
28	560	1.79	87	70	208	4.81	213
29	540	1.85	90	71	205	4.88	216
30	500	2	93	72	200	5	219
31	490	2.04	96	73	197	5.06	222
32	480	2.08	99	74	195	5.13	225
33	460	2.17	102	75	192	5.19	228
34	440	2.27	105	76	190	5.26	231
35	430	2.33	108	77	187	5.33	234
36	420	2.38	111	78	185	5.41	237
37	410	2.44	114	79	182	5.48	240
38	400	2.5	117	80	180	5.56	243
39	390	2.56	120	81	178	5.62	246
40	384	2.6	123	82	176	5.68	249
41	376	2.66	126	83	174	5.75	252

Rate and Duration Details (continued)

DMX Value	Rate (ms)	Freq. (Hz)	Dur. (ms)	DMX Value	Rate (ms)	Freq. (Hz)	Dur. (ms)
84	172	5.81	255	170	83	11.98	513
85	170	5.88	258	171	82	12.12	516
86	168	5.95	261	172	82	12.12	519
87	166	6.02	264	173	81	12.27	522
88	164	6.1	267	174	81	12.27	525
89	162	6.17	270	175	80	12.42	528
90	160	6.25	273	176	80	12.42	531
91	158	6.33	276	177	79	12.56	534
92	156	6.41	279	178	79	12.56	537
93	154	6.49	282	179	78	12.69	540
94	152	6.58	285	180	78	12.69	543
95	151	6.62	288	181	78	12.69	546
96	150	6.67	291	182	77	12.89	549
97	149	6.71	294	183	77	12.89	552
98	148	6.76	297	184	76	13.02	555
99	147	6.8	300	185	76	13.02	558
100	146	6.85	303	186	76	13.02	561
101	145	6.9	306	187	75	13.23	564
102	144	6.94	309	188	75	13.23	567
103	142	7.04	312	189	74	13.37	570
104	140	7.14	315	190	74	13.37	573
105	138	7.25	318	191	74	13.37	576
106	136	7.35	321	192	73	13.59	579
107	134	7.46	324	193	73	13.59	582
108	132	7.58	327	194	72	13.74	585
109	130	7.69	330	195	72	13.74	588
110	128	7.81	333	196	72	13.74	591
111	127	7.87	336	197	71	13.97	594
112	126	7.94	339	198	71	13.97	597
113	125	8	342	199	70	14.12	600
114	124	8.06	345	200	70	14.12	603
115	123	8.13	348	201	70	14.12	606
116	122	8.2	351	202	69	14.37	609
117	121	8.26	354	203	69	14.37	612
118	120	8.33	357	204	69	14.37	615
119	119	8.4	360	205	68	14.56	618
120	118	8.47	363	206	68	14.56	621
121	117	8.55	366	207	68	14.56	624
122	116	8.62	369	208	67	14.75	627
123	115	8.7	372	209	67	14.75	630
124	114	8.77	375	210	67	14.75	633
125	113	8.85	378	211	66	14.95	636
126	112	8.93	381	212	66	14.95	639
127	111	9.01	384	213	66	14.95	642
128	110	9.09	387	214	66	14.95	645
129	109	9.17	390	215	65	15.22	648
130	109	9.17	393	216	65	15.22	651
131	109	9.17	396	217	65	15.22	654
132	109	9.17	399	218	64	15.43	657
133	108	9.22	402	219	64	15.43	660
134	108	9.22	405	220	64	15.43	663
135	107	9.3	408	221	63	15.65	666
136	107	9.3	411	222	63	15.65	669
137	106	9.39	414	223	63	15.65	672
138	106	9.39	417	224	63	15.65	675
139	105	9.48	420	225	62	15.95	678
140	105	9.48	423	226	62	15.95	681
141	104	9.57	426	227	62	15.95	684
142	104	9.57	429	228	61	16.18	687
143	103	9.71	432	229	61	16.18	690
144	102	9.8	435	230	61	16.18	693
145	101	9.9	438	231	60	16.42	696
146	100	10	441	232	60	16.42	699
147	99	10.1	444	233	60	16.42	702
148	98	10.2	447	234	60	16.42	705
149	97	10.31	450	235	59	16.95	708
150	96	10.42	453	236	58	17.24	711
151	95	10.53	456	237	57	17.54	714
152	94	10.64	459	238	56	17.86	717
153	93	10.75	462	239	55	18.18	720
154	92	10.87	465	240	54	18.52	723
155	91	10.99	468	241	53	18.87	726
156	90	11.11	471	242	52	19.23	729
157	89	11.17	474	243	51	19.61	732
158	89	11.17	477	244	50	20	735
159	88	11.3	480	245	49	20.41	738
160	88	11.3	483	246	48	20.83	741
161	87	11.43	486	247	47	21.28	744
162	87	11.43	489	248	46	21.74	747
163	86	11.56	492	249	45	22.22	750
164	86	11.56	495	250	44	22.73	753
165	85	11.7	498	251	43	23.26	756
166	85	11.7	501	252	42	23.81	759
167	84	11.83	504	253	41	24.39	762
168	84	11.83	507	254	40	25	765
169	83	11.98	510	255	40	25	768

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.

Troubleshooting

Symptom	Solution
Fixture Auto-Shut Off	Check the fans in the fixture. If 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 fans of obstructions, or return the unit for service.
No Light Output	Check to ensure fixture is operating under correct mode.
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
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).

Keeping Your Cyc Out™ 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.blizzardlighting.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.

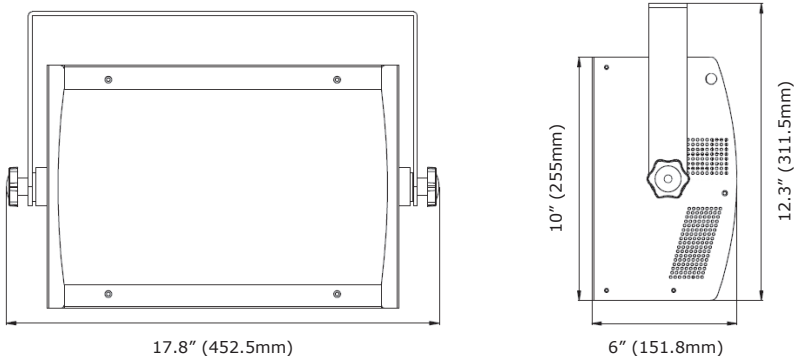
Tech Specs!

Weight & Dimensions	
Width	17.8 inches (452.5 mm)
Depth	6 inches (151.8 mm)
Height	10 inches (255 mm)
Weight	16.3 lbs (7.4 kg)
Power	
Operating Voltage	100-264VAC, 47-63 Hertz
Power Consumption	663W, 5.8A, PF: .99
Light Source	
LED	256 x (64* R/G/B/W) 3W LEDs
Optical	
Beam Angle	60 degrees
Luminous Intensity	2,076 Lux @ 2m 376 Lux @ 5m
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Control	
Protocol	USITT DMX-512
DMX Channels	4/5/8/10/15/16/28-channel
Input/Output	3/5-pin XLR Male/Female
Other Operating Modes	Standalone, Master/Slave Mode
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 power-CON® are registered trademarks of Neutrik AG.

Dimensional Drawings





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