

STORMCHASER™



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1. GETTING STARTED

What's In The Box?

- 1 x StormChaser™
- 2 x Mounting brackets w/bolts
- This Lovely User Manual

Getting It Out Of The Box

Congratulations on purchasing one way cool, way flexible, way original LED strip light! Now that you've got your StormChaser™ (or hopefully, *Storm-Chasers!*), you should carefully unpack the box and check the contents to ensure that all parts are present and in good condition. If anything looks as if it has been damaged in transit, notify the shipper immediately and keep the packing material for inspection. Again, please save the carton and all packing materials. If a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Powering Up!

All fixtures must be powered directly off a switched circuit and **cannot be run off a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used solely for a 0% to 100% switch.**

AC Voltage Switch - Not all fixtures have a voltage select switch, so please verify that the fixture you receive is suitable for your local power supply. See the label on the fixture or refer to the fixture's specifications chart for more information. A fixture's listed current rating is its average current draw under normal conditions. Check the fixture or device carefully to make sure that if a voltage selection switch exists that it is set to the correct line voltage you will use.

Warning! Verify that the voltage select switch on your unit matches the line voltage applied. Damage to your fixture may result if the line voltage applied does not match the voltage indicated on the voltage selector switch. All fixtures must be connected to circuits with a suitable Ground (Earthing).

Getting A Hold Of Us

If something is wrong, just give us a call or send an email. We'll be happy to help, honest.

Blizzard Lighting
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414-395-8365
Email: support@blizzardlighting.com

SAFETY INSTRUCTIONS



Please read these instructions carefully. They include important information about the installation, usage and maintenance of this product.

- Please keep this User Guide for future use. If you sell the unit to someone else, be sure that they also receive this User Guide.
- ALWAYS make sure that you are connecting to the proper voltage, and that the line voltage you are connecting to is not higher than that stated on the decal or rear panel of the fixture.
- This product is intended for indoor use only.
- To prevent risk of fire or shock, do not expose fixture to rain or moisture.
- Make sure there are no flammable materials close to the unit while operating.
- The unit must be installed in a location with adequate ventilation, at least 20in (50cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- ALWAYS disconnect from the power source before servicing or replacing fuse and be sure to replace with same fuse size and type.
- ALWAYS secure fixture using a safety chain. NEVER carry the fixture by its cord. Use its carrying handles.
- DO NOT operate at ambient temperatures higher than 104°F (40°C).
- In the event of a serious operating problem, stop using the unit immediately. NEVER try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- NEVER connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.
- Avoid direct eye exposure to the light source while it is on.

Caution! There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact Blizzard Lighting at support@blizzardlighting.com.

2. MEET THE STORMCHASER™

CONTROL FEATURES

- Powered by 252 high power 10mm Red/Green/Blue/White LEDs
- Variable electronic strobe
- 4 DMX modes for ultimate control flexibility
- Super flexible design allows for use as an effect/chase light or as a 7-pixel RGBW display device
- Built-in color & chase macros via DMX
- Built-in auto & sound activated programs via master/slave & DMX

ADDITIONAL FEATURES

- Compact and lightweight (it kept its new year's resolution!)
- Lux: ~3,250 @ 1m
- Very low power consumption, high output
- IEC output for power link
- 4-button LED display on rear panel
- Static colors and RGBW color mixing

DMX Quick Reference - 31 Channel Mode

Channel	What It Does
1	DMX Mode Selection
2	Dimmer (0 <--> 100%)
3	Strobe (Slow <--> Fast)
4 -31	Individual Pixel Color Intensity

DMX Quick Reference - 10/7 Channel Mode

Channel	What It Does (10-ch.)	Channel	What It Does (7-ch.)
1	DMX Mode Selection	1	DMX Mode Selection
2	Dimmer (0 <--> 100%)	2	Dimmer (0 <--> 100%)
3	Strobe (Slow <--> Fast)	3	Strobe (Slow <--> Fast)
4	Pixel 1 Global Intensity	4	Global Red Intensity
5	Pixel 2 Global Intensity	5	Global Green Intensity
6	Pixel 3 Global Intensity	6	Global Blue Intensity
7	Pixel 4 Global Intensity	7	Global White Intensity
8	Pixel 5 Global Intensity	--	--
9	Pixel 6 Global Intensity	--	--
10	Pixel 7 Global Intensity	--	--

DMX Quick Reference - 2 Channel Mode

Channel	What It Does
1	Built-in Programs
2	Speed Control

Figure 1: The StormChaser™ Pin-Up Picture

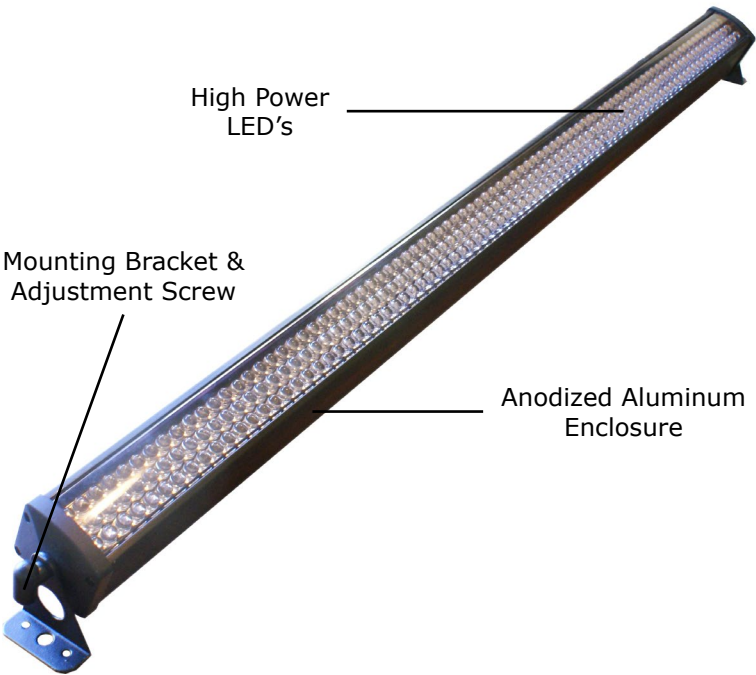
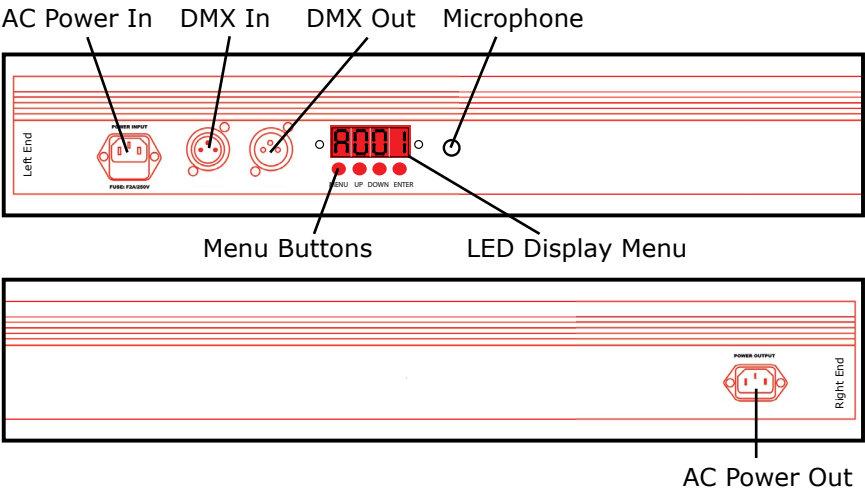


Figure 2: The Rear Connections



3. SETUP



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

Fuse Replacement

With a philips head screwdriver, unscrew the fuse holder from its housing. Remove the damaged fuse from its holder and replace with exact same type fuse. Insert the fuse holder back in its place and reconnect power.

Connecting A Bunch of StormChaser™ Fixtures

You will need a serial data link to run light shows using a DMX-512 controller or to run shows on two or more fixtures set to sync in master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Fixtures on a serial data link must be daisy chained in one single line. Also, connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

The maximum recommended cable-run distance is 500 meters (1640 ft). The maximum recommended number of fixtures on a serial data link is 32 fixtures.

Data/DMX Cabling

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

For instance, Belden© 9841 meets the specifications for EIA RS-485 applications. Standard microphone cables will "probably" be OK, but note that they cannot transmit DMX data as reliably over long distances. In any event, the cable should have the following characteristics:

2-conductor twisted pair plus a shield

Maximum capacitance between conductors – 30 pF/ft.

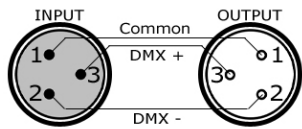
Maximum capacitance between conductor & shield – 55 pF/ft.

Maximum resistance of 20 ohms / 1000 ft.

Nominal impedance 100 – 140 ohms

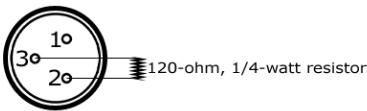
Cable Connectors

Cables must have a male XLR connector on one end and a female XLR connector on the other end. (Duh!)



A Word on Termination: DMX is a resilient communication protocol, however errors still occasionally occur. Termination reduces signal errors, and therefore best practices include use of a terminator in all circumstances. If you are experiencing problems with erratic fixture behavior, especially over long signal cable runs, a terminator may help improve performance.

To build your own DMX Terminator:
Obtain a 120-ohm, 1/4-watt resistor,
and wire it between pins 2 & 3 of the
last fixture. They are also readily
available from specialty retailers.



CAUTION: Do not allow contact between the common and the fixture’s chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

3-Pin??? 5-Pin??? Huh?!?

If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. They are widely available over the internet and from specialty retailers. If you’d like to build your own, the chart below details a proper cable conversion:

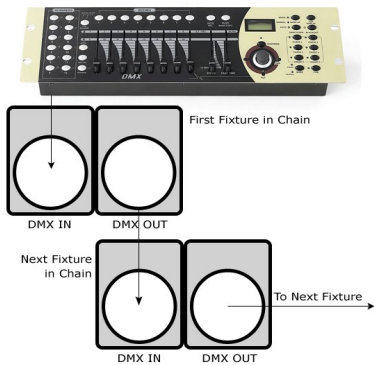
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
DMX Data (-)	Pin 2	Pin 2
DMX Data (+)	Pin 3	Pin 3
Not Used.	No Connection.	No Connection.
Not Used.	No Connection.	No Connection.

Take It To The Next Level: Setting Up DMX Control

Step 1: Connect the male connector of the DMX cable to the female connector (output) on the controller.

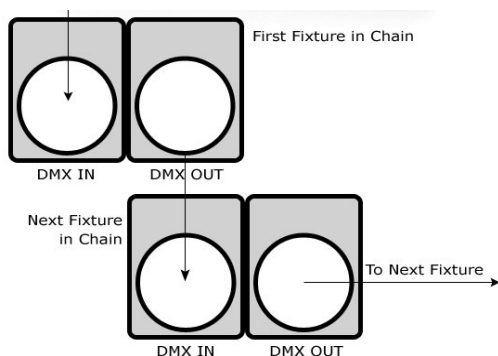
Step 2: Connect the female connector of the DMX cable to the first fixture’s male connector (input). *Note:* It doesn’t matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture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

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



Fixture Linking (Master/Slave Mode)

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



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

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

Mounting & Rigging

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

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

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

- When selecting installation location, take into consideration lamp replacement access (if applicable) and routine maintenance.
- Safety cables **MUST ALWAYS** be used.
- Never mount in places where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation.

4. OPERATING ADJUSTMENTS

The Control Panel

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

<MENU>

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

<UP>

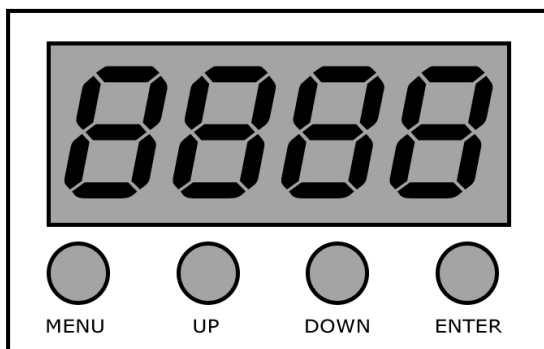
Scrolls through menu items and numbers in ascending order.

<DOWN>

Scrolls through menu items and numbers in descending order.

<ENTER>

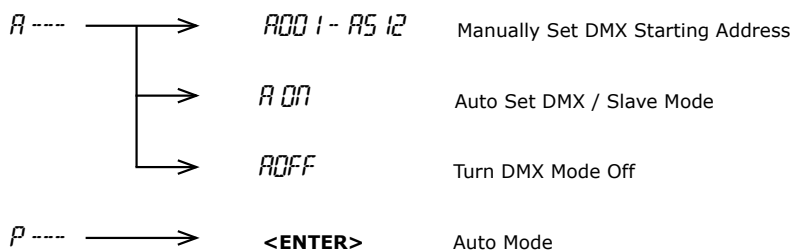
Is used to select and confirm/store the current selection.



The Control Panel LED Display shows the menu items you select from the menu map on pages 11 & 12. 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>**.

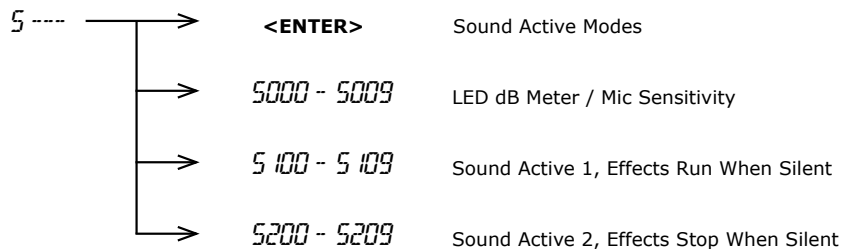
Press the **<MENU>** button repeatedly until you reach the desired menu function. Use the **<UP>** and **<DOWN>** buttons to navigate the menu options. Press the **<SAVE>** button to select the menu function currently displayed, or to enable a menu option. To return to the previous option or menu without changing the value, press the **<MENU>** button.

Control Panel Menu Structure



Auto Modes: There are 10 banks that contain 2 automated pixel effects each. The <UP> button scrolls through the banks (1st & 2nd digits) on the LED control panel menu, and the <DOWN> button adjusts speed (3rd & 4th digits).		<i>P400 - P409</i>	Pixel Effect 9
		<i>P410 - P419</i>	Pixel Effect 10
		<i>P500 - P509</i>	Pixel Effect 11
		<i>P510 - P519</i>	Pixel Effect 12
<i>P000 - P009</i>	Pixel Effect 1	<i>P600 - P609</i>	Pixel Effect 13
<i>P010 - P019</i>	Pixel Effect 2	<i>P610 - P619</i>	Pixel Effect 14
<i>P100 - P109</i>	Pixel Effect 3	<i>P700 - P709</i>	Pixel Effect 15
<i>P110 - P119</i>	Pixel Effect 4	<i>P710 - P719</i>	Pixel Effect 16
<i>P200 - P209</i>	Pixel Effect 5	<i>P800 - P809</i>	Pixel Effect 17
<i>P210 - P219</i>	Pixel Effect 6	<i>P810 - P819</i>	Pixel Effect 18
<i>P300 - P309</i>	Pixel Effect 7	<i>P900 - P909</i>	Pixel Effect 19
<i>P310 - P319</i>	Pixel Effect 8	<i>P910 - P919</i>	Pixel Effect 20

Sound Active Modes: In the sound active mode settings, first there's a dB meter that you can adjust the mic sensitivity 0-9. Then, there are two Sound Active modes that contain 10 effects each. The **<UP>** button scrolls through the dB meter & sound active modes (**1st & 2nd digits**) on the LED control panel menu, and the **<DOWN>** button adjusts its program (**3rd & 4th digits**).



Manual Color Adjustment:

Allows adjustment of color balance. These settings are global, they will effect all modes.

r255	→	r000 - r255	Red Custom Color Adjustment
g255	→	g000 - g255	Green Custom Color Adjustment
b255	→	b000 - b255	Blue Custom Color Adjustment
w255	→	w000 - w255	White Custom Color Adjustment

1.) Use the **<MENU>** and **<UP/DOWN>** button to select *r---* (Red Level), *g---* (Green Level), *b---* (Blue Level), or *w---* (White Level). Using the **<UP/DOWN>** buttons, select the maximum level for each color between *x000-x255* (000=off), then hit **<ENTER>** to confirm.

Slave Mode

1.) To set the fixture as a slave unit, navigate to *R---*, and hit **<ENTER>**. Use the **<UP/DOWN>** buttons to navigate to *R 01*. Press the **<ENTER>** button to confirm your choice.

DMX Mode

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

1.) The default starting DMX address for the fixture is *R001* on the LED readout. To select a different starting DMX address, use the **<UP/DOWN>** buttons to select the starting address you wish to use, and press the **<ENTER>** button to confirm your choice.

2.) To select which channel mode you would like to use, set the value of DMX Channel 1 as desired.

DMX Values In-Depth (2-Channel Mode)

Ch.	Channel Value	Does...
1	000 <-> 010	Mode No Function 7 Channel Mode 31 Channel Mode 10 Channel Mode
	011 <-> 042	
	043 <-> 084	
	085 <-> 127	
	128 <-> 191	2 Channel Mode Effect Chase #1 Effect Chase #2 Effect Chase #3 Effect Chase #4 Effect Chase #5 Effect Chase #6 Effect Chase #7 Effect Chase #8 Effect Chase #9 Effect Chase #10 Effect Chase #11 Effect Chase #12 Effect Chase #13 Effect Chase #14 Effect Chase #15 Effect Chase #16 (All Chases Cycle)
	128 <-> 131	
	132 <-> 135	
	136 <-> 139	
	140 <-> 143	
	144 <-> 147	
	148 <-> 151	
	152 <-> 155	
	156 <-> 159	
	160 <-> 163	
	164 <-> 167	
	168 <-> 171	
	172 <-> 175	
	176 <-> 179	
	180 <-> 183	
	184 <-> 187	
	188 <-> 191	
	192 <-> 255	Sound Active Mode
2	000 <-> 255	Speed

DMX Values In-Depth (7/10/31 Channel Mode)

Channel	Channel Value	7 Channel	10 Channel	31 Channel
1	000 <-> 010 011 <-> 042 043 <-> 084 085 <-> 127 128 <-> 191 192 <-> 255	Mode No Function 7 Channel Mode 31 Channel Mode 10 Channel Mode 2 Channel Mode Sound Active Mode		
2	000 <-> 255	Dimmer (0 <-> 100%)		
3	000 001 <-> 255	Strobe No Function Strobe (Slow <-> Fast)		
4	000 <-> 255	Global Red Intensity	Pixel 1 Global Intensity	Pixel 1 Red Intensity
5	000 <-> 255	Global Green Intensity	Pixel 2 Global Intensity	Pixel 1 Green Intensity
6	000 <-> 255	Global Blue Intensity	Pixel 3 Global Intensity	Pixel 1 Blue Intensity
7	000 <-> 255	Global White Intensity	Pixel 4 Global Intensity	Pixel 1 White Intensity
8	000 <-> 255	N/A	Pixel 5 Global Intensity	Pixel 2 Red Intensity
9	000 <-> 255	N/A	Pixel 6 Global Intensity	Pixel 2 Green Intensity
10	000 <-> 255	N/A	Pixel 7 Global Intensity	Pixel 2 Blue Intensity
11	000 <-> 255	N/A	N/A	Pixel 2 White Intensity
...	...	...	...	...
28	000 <-> 255	N/A	N/A	Pixel 7 Red Intensity
29	000 <-> 255	N/A	N/A	Pixel 7 Green Intensity
30	000 <-> 255	N/A	N/A	Pixel 7 Blue Intensity
31	000 <-> 255	N/A	N/A	Pixel 7 White Intensity

Troubleshooting

Symptom	Solution
Beam is Dim	Check optical system and clean excess dust/grime. Also ensure that the 220V/110V switch is in the correct position, if applicable.
No Light Output	Check to ensure fixture is operating under correct mode, IE sound active/auto/DMX/Etc., if applicable. Contact service for more information.
Chase 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
Slow Movement	Verify that 220V/110V switch is in the correct position, if applicable. Also check that speed channels are set appropriately.
No Response to Audio	Verify that the fixture is in "Sound Active" mode. Adjust Audio Sensitivity, If Applicable.
Fixture Not Responding / Responding Erratically	Make sure all connectors are seated properly and securely. Use Only DMX Cables. Install a Terminator. Check all cables for defects. Reset fixture(s).
Fixture Moving On Its Own	Verify proper mode of operation. Is the fixture in "Auto" mode?

If your problem isn't listed, or if problems persist, please contact support: support@blizzardlighting.com.

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.

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.

Keeping Your StormChaser™ As Good As New

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.

Common sense and taking care of your fixtures will be the single biggest thing you can do to keep them running at peak performance and let you worry about designing a great light show, putting on a great concert, or maximizing your client's satisfaction and "wow factor." That's what it's all about, after all!

Returns (Gasp!)

We've taken a lot of precautions to make sure you never even have to worry about sending a defective unit back, or sending a unit in for service. But, like any complex piece of equipment designed and built by humans, once in a while, something doesn't go as planned. If you find yourself with a fixture that isn't behaving like a good little fixture should, you'll need to obtain a Return Authorization (RA).

Don't worry, this is easy. Just send an email to support@blizzardlighting.com, and we'll issue you an RA. Then, you'll need to send the unit to us using a trackable, pre-paid freight method. We suggest using USPS Priority or UPS. Make sure you carefully pack the fixture for transit, and whenever possible, use the original box & packing for shipping.

When returning your fixture for service, be sure to include the following:

- 1.) Your contact information (Name, Address, Phone Number, Email address).
- 2.) The RA# issued to you
- 3.) A brief description of the problem/symptoms.

We will, at our discretion, repair or replace the fixture. Please remember that any shipping damage which occurs in transit to us is the customer's responsibility, so pack it well!

Shipping Issues

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

Tech Specs!

Weight & Dimensions	
Length	42.3 inches (1074.4 mm)
Width	2.5 inches (63.5 mm)
Height	2.5 inches (63.5 mm)
Weight	3.6 lbs (1.6 kg)
Power	
Operating Voltage	100-230VAC, 50-60 Hertz
Fuse	2A 250V
Power Consumption	30W
Light Source	
LED	252x10mm, .5W (63x Each Red, Green, Blue, White), 100,000 hours.
Optical	
Beam Angle	30 degrees
Luminous Intensity	~3,250 Lux @ 1m
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Control	
Protocol	USITT DMX-512
DMX Channels	2/7/10/31 (User Selectable)
Input	3-pin XLR Male
Output	3-pin XLR Female
Other Operating Modes	Standalone, Master/Slave, Sound Active
Coolness Factor	
Leventy Billion Percent	
Warranty	2-year limited warranty, does not cover malfunction caused by damage to LED's.



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