AtmosFear HEX JET

blizzard LIGHTING

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1. GETTING STARTED

What's In The Box?

- 1 x AtmosFEAR® Hex Jet LED Fog Machine
- 1 x Remote Control
- An Ever-So-Handy Power Cord
- This Lovely User Manual

Getting It Out Of The Box

Congratulations! Your audiences will soon be blown away and erupt with excitement when they feast their eyes upon the powerful pyrotechnic-like RGBAW+UV colored fog effects of the mighty AtmosFEAR® Hex Jet! Now that you're the proud owner of a AtmosFEAR® Hex Jet (or hopefully, Hex Jets!), 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, please just visit our website at www.blizzardlighting.com 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.

Attention:

To keep your AtmosFEAR® Hex Jet in good working order please remember to:

- **Use only water-based, non-toxic fog fluid.**
- **Keep the machine clean.**
- **Turn the power off before adding fog fluid.**
- **Turn the power off when not in use.**

And also...

- 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 visit our support website at: www.blizzardlighting.com/tickets.

2. MEET THE ATMOSFEAR® HEX JET

MAIN FEATURES:

- RGBAW+UV color mixing via 12x 15W 6-in-1 LEDs
- Strong, upward ejecting 1,500 watt fog machine
- Variable electronic dimming & strobe
- Built-in color & chase macros via DMX
- Built-in automated programs via master/slave
- RGBAW+UV color mixing ability in standalone mode
- IR remote control included
- Built-in timer
- Rugged and well-built (It hits the gym regularly)
- 3-pin male input and 3-pin female output
- IEC power input connector

DMX Quick Reference (10-Channel Mode)

Ch.	Value	What it does
1	000 <--> 255	Fog Control - On/Off
2	000 <--> 255	Red Intensity (0% <--> 100%)
3	000 <--> 255	Green Intensity (0% <--> 100%)
4	000 <--> 255	Blue Intensity (0% <--> 100%)
5	000 <--> 255	Amber Intensity (0% <--> 100%)
6	000 <--> 255	White Intensity (0% <--> 100%)
7	000 <--> 255	UV Intensity (0% <--> 100%)
8	000 <--> 255	Strobe (slow <--> fast)
9	000 <--> 255	Auto Mode (No Fog) Color Snap (slow <--> fast)
10	000 <--> 255	Auto Mode (No Fog) Color Fade (slow <--> fast)

6-Button Remote Control Features

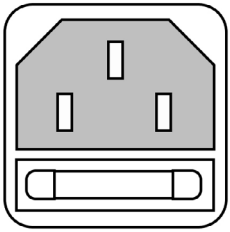
Ch.	What it does
1	Auto - Press to turn on, press again to change the speed (1-10).
2	Color - Press to cycle through its built-in static colors.
3	Fade - Press to turn on + adjust the fade speed (1-10).
4	Interval Fog - Press to turn on/off the interval fog timer.
5	Strobe - Press to start strobe, press again for speed (1-10).
6	Cancel (Stop)

3. SETUP

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

Fuse Replacement

With a flat head screwdriver, wedge the fuse holder out of 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 AtmosFEAR® Hex Jets

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 units on a serial data link determines the number of units the data link can support.

Units on a serial data link must be daisy chained in one single line. Also, connecting more than 32 units 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 units on a serial data link is 32.

Data/DMX Cabling

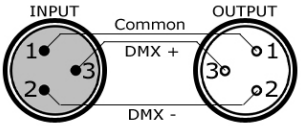
To link units together you'll need data cables. You should use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

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

2-conductor twisted pair plus a shield
Maximum capacitance between conductors – 30 pF/ft.
Maximum capacitance between conductor & shield – 55 pF/ft.
Maximum resistance of 20 ohms / 1000 ft.
Nominal impedance 100 – 140 ohms

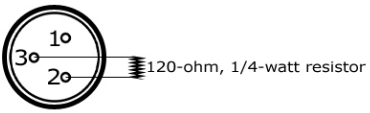
Cable Connectors

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



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

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



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

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

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

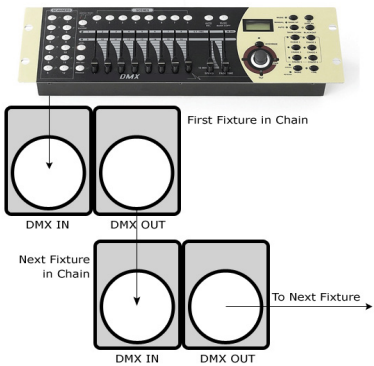
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
DMX Data (-)	Pin 2	Pin 2
DMX Data (+)	Pin 3	Pin 3
Not Used.	No Connection.	No Connection.
Not Used.	No Connection.	No Connection.

Take It To The Next Level: Setting Up DMX Control

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

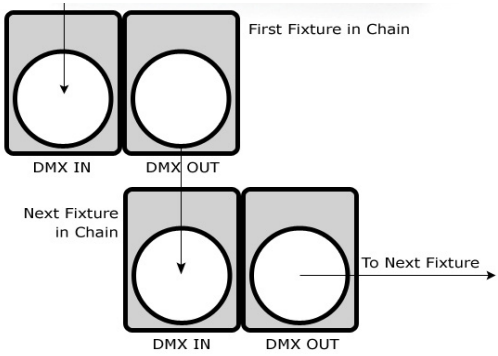
Step 2: Connect the female connector of the DMX cable to the first fixture's male connector (input). *Note:* It doesn't matter which fixture address is the first one connected. We recommend connecting the fixtures in terms of their proximity to the controller, rather than connecting the lowest fixture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

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



Fixture Linking (Master/Slave Mode)

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



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

4. OPERATING ADJUSTMENTS

Control Panel Menu Structure:

<FUNC>

Function	Value	What it does
Dmx512.ADD	001-512	Sets the DMX starting address
Interval_Time	001s-100s	Sets the countdown timer between fog blasts in seconds
Duration_Time	01s-20s	Sets the duration time of fog blasts for each set Interval Time
Color_Mode	01-32	32 Color Modes
Auto_Mode	Speed: 01-10	Auto run speed (slow <--> fast)
Strobe_Mode	Speed: 01-10	Strobe speed (slow <--> fast)
LED_Dimmer	000%-100%	Dimmer
Fade_Mode	Speed: 01-10	Fade speed (slow <--> fast)

<UP>
Scrolls through menu items and numbers in ascending order.

<DOWN>
Scrolls through menu items and numbers in descending order.

<TIMER>
Press this button to start the fogger countdown timer. The timer settings are found in the control panel menu.

Interval Time: Sets the length of time in seconds between fog blasts. The settings for this are found in the control panel menu by pressing the function button until the display reads **Interval Time**. Use the **<UP/DOWN>** buttons to choose the number of seconds between blasts of fog anywhere between 1-100 seconds. Press the **<FUNC>** button to return to the main menu.

Duration Time: You can now set the fog blast duration by pressing the **<FUNC>** button repeatedly until the menu display reads **Duration Time**. Use the **<UP/DOWN>** buttons to choose the number of seconds each blast of fog occurs, anywhere between 1-20 seconds.

<VOLUME>
Press this button to for continual fog. The LEDs will also run its currently set programs. Press the **<VOLUME>** button again to abort.

<MANUAL>
Press and hold the **<MANUAL>** button down for continual fog and full on white light. Letting go of the button will stop the process.

5. APPENDIX

A Quick Lesson On DMX

DMX covers (and is an abbreviation for) Digital MultipleXed signals. It is the most common communications standard used by lighting and related stage equipment.

DMX provides up to 512 control "channels" per data link. Each of these channels was originally intended to control lamp dimmer levels. You can think of it as 512 faders on a lighting console, connected to 512 light bulbs. Each slider's position is sent over the data link as an 8-bit number having a value between 0 and 255. The value 0 corresponds to the light bulb being completely off while 255 corresponds to the light bulb being fully on.

DMX data is transmitted at 250,000 bits per second using the RS-485 transmission standard over two wires. As with microphone cables, a grounded cable shield is used to prevent interference with other signals.

There are five pins on a DMX connector: a wire for ground (cable shield), two wires for "Primary" communication which goes from a DMX source to a DMX receiver, and two wires for a "Secondary" communication which goes from a DMX receiver back to a DMX source. Generally, the "Secondary" channel is not used so data flows only from sources to receivers. Hence, most of us are most familiar with DMX-512 as being employer over typical 3-pin "mic cables," although this does not conform to the defined standard.

DMX is connected using a daisy-chain configuration where the source connects to the input of the first device, the output of the first device connects to the input of the next device, and so on. The standard allows for up to 32 devices on a single DMX link.

Each receiving device typically has a means for setting the "starting channel number" that it will respond to. For example, if two 6-channel fixtures are used, the first fixture might be set to start at channel 1 so it would respond to DMX channels 1 through 6, and the next fixture would be set to start at channel 7 so it would respond to channels 7 through 12.

Troubleshooting

Symptom	Solution
Fixture Auto-Shut Off	Check the fan in the fixture. If it is stopped or moving slower than normal, the unit may have shut itself off due to high heat. This is to protect the fixture from overheating. Clear the fan of obstructions, or return the unit for service.
Beam is Dim	Check optical system and clean excess dust/grime. 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 Speed Too Fast/Slow	Check to ensure proper setup of speed adjustment.
No Power	Check fuse, AC cord and circuit for malfunction.
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).

Keeping Your AtmosFEAR® Hex Jet As Good As New

The LED fogger you have received is a rugged, tough piece of professional 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 Instructions:

1.) You should follow these instructions after approximately 40 hours of use.
2.) Take off the nozzle before heating the fog machine, and clean the nozzle with straight vinegar.
3.) To clean the tank, pour in and run a solution of 80% distilled water and 20% white vinegar through the machine. When empty turn off the machine.
4.) Wait for it to cool down, re-install the nozzle, and you can now add more fluid to prepare for its next use.

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/tickets, 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	20 in (510 mm)
Width	14.7 in (375 mm)
Height	9.8 in (250 mm)
Weight	21 lb (9.6 kg)
Power	
Operating Voltage	AC 110-240VAC, 50/60 Hz
Power Consumption	1,500 watts
Power Factor	.63
Fluid Consumption	45,000 CUF/MIN
Light Source	
LED	12* 15-watt RGBAW+UV LEDs
Optical	
Beam Angle	25° Beam Angle
Thermal	
Max. Operating Temp.	104 degrees F (40 degrees C) ambient
Operation/Capacity/Consumption	
Warm-up Time	10 min.
Tank Capacity	2.5L
Control	
Protocol	USITT DMX-512
DMX Channels	10-Channel
Input	3-pin XLR Male
Output	3-pin XLR Female
Other Operating Modes	Standalone, Master/Slave, IR Remote Control
Other Information	
Behind every girls selfie is approximately 47 nearly identical photos that just didn't cut it.	
Warranty	2-year limited warranty, does not cover mal-function caused by damage to LEDs.

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