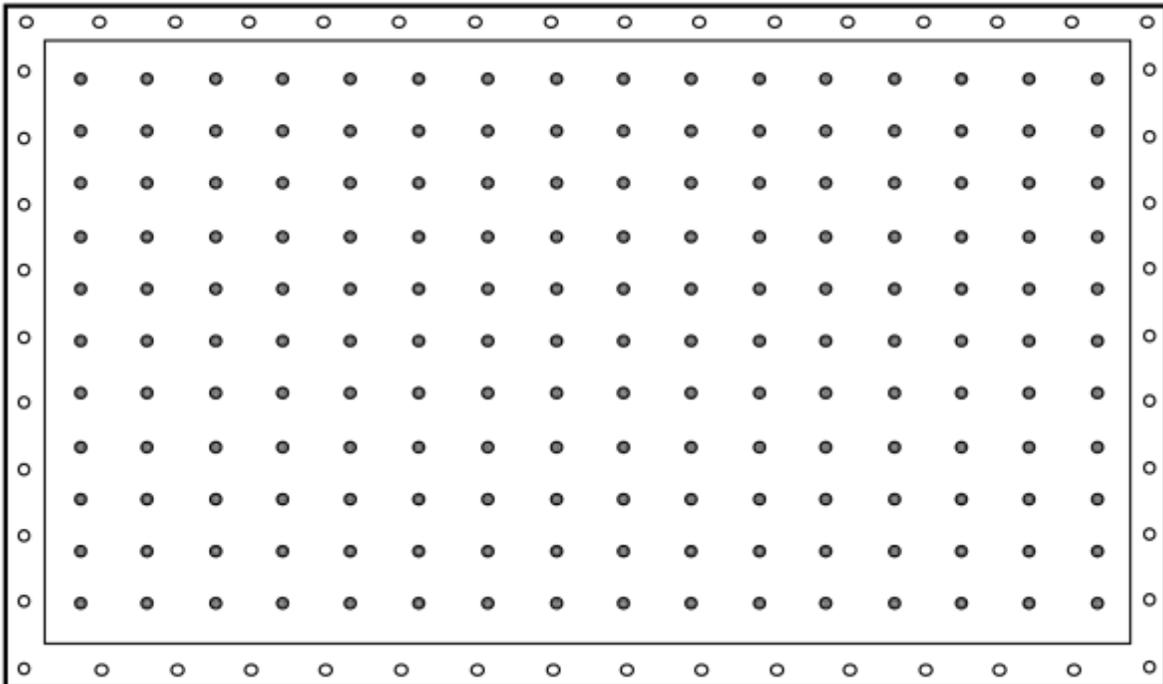


# ***MotionDrape***<sup>TM</sup> LED

***User Manual***



**CHAUVET**<sup>®</sup>

*Value • Innovation • Performance*

*It's Green Thinking*

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# 1. BEFORE YOU BEGIN

## What Is Included

- 1 x MotionDrape™ LED
- 1 x MotionDrape™ Controller
- 1 x Power Cord
- 1 x Signal Cable
- 1 x Carrying Bag
- Replacement LEDs
- Reusable Zip Ties (Tie Wraps)
- 1 x Warranty Card
- 1 x Quick Reference Guide

## Unpacking Instructions

Immediately upon receipt, carefully unpack this product and check the container to make sure you have received all the parts indicated above in good condition.

## Claims

If the container or the material inside the container (this product and any other accessory included) appears damaged from shipping, or shows signs of mishandling, notify the carrier immediately, not CHAUVET®, upon receipt of the damaged merchandise. Failure to do so in a timely manner may invalidate your claim with the carrier. In addition, retain the container and all the packing material for inspection.

For other issues such as missing components or parts, damage not related to shipping, or concealed damage, file a claim with CHAUVET® within seven (7) days of receiving the merchandise.

## Text Conventions

Convention	Meaning
1~512	A range of values
50/60	A set of values of which only one can be chosen
<b>Settings</b>	A menu option not to be modified
<b>Menu &gt; Settings</b>	A sequence of menu options to be followed
<ENTER>	A key to be pressed on the product's control panel
ON	A value to be entered or selected

## Icons

Icon	Meaning
	This paragraph contains critical installation, configuration, or operation information. Failure to comply with this information may render the product partially or completely inoperative, cause damage to the product, or cause harm to the user.
	This paragraph contains important installation or configuration information. Failure to comply with this information may prevent the product from functioning correctly.
	This paragraph reminds you of useful, although not critical, information.

## Document Information

The information and specifications contained in this document are subject to change without notice. CHAUVET® assumes no responsibility or liability for any errors or omissions that may appear in this manual. CHAUVET® reserves the right to update the existing document or to create a new document to correct any errors or omissions.

You can download the latest version of this document from [www.chauvetlighting.com](http://www.chauvetlighting.com).

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Author	Date	Editor	Date
A. Diaz	8/26/11	B. Pillow	8/29/11

## Product at a Glance

Use on Dimmer	⊘	Auto Programs	✓
Outdoor Use	⊘	Auto-ranging Power Supply	✓
Sound Activated	✓	Replaceable Fuse	✓
DMX	✓	User Serviceable	⊘
Master/Slave	✓	Duty Cycle	⊘

## Safety Notes

Please read the following Safety Notes carefully before working with this product. They include important safety information about its installation, usage, and maintenance.



- Always connect this product to a grounded circuit to avoid the risk of electrocution.
- Always disconnect this product from the power source before cleaning it or replacing the fuse.
- Avoid direct eye exposure to the light source while the product is on.
- Make sure the power cord is not crimped or damaged.
- Never disconnect this product from power cord by pulling or tugging on the cord.
- Make sure there are no flammable materials close to the unit while operating.
- Do not touch this product's housing when operating because it may be very hot.



- Always make sure that the voltage of the outlet to which you are connecting this product is within the range stated on the decal or rear panel of the product.
- This product is for indoor use only! (IP20) To prevent risk of fire or shock, do not expose this product to rain or moisture.
- Always install this product in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces.
- Be sure that no ventilation slots on the unit's housing are blocked.
- Never connect this product to a dimmer.
- Make sure to replace the fuse with another of the same type and rating.
- Never carry this product from the power cord or any moving part.
- The maximum ambient temperature (Ta) is 104° F (40° C). Do not operate this product at higher temperatures.
- In the event of a serious operating problem, stop using the unit immediately.
- Never try to repair this product. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center.



- **This product is NFPA certified fire retardant material.**

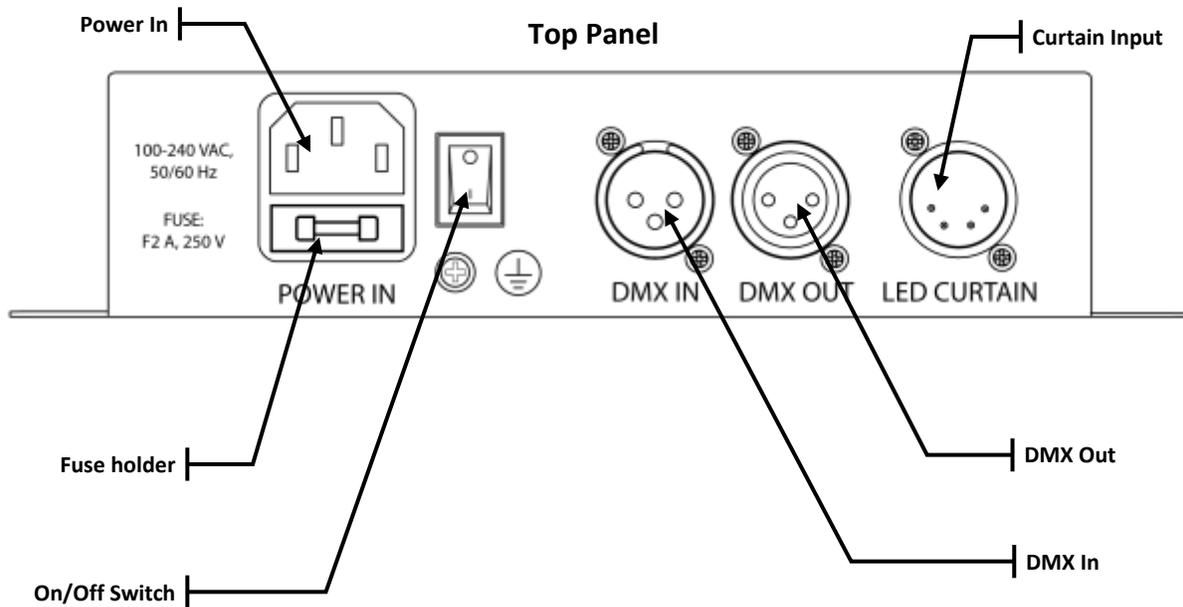
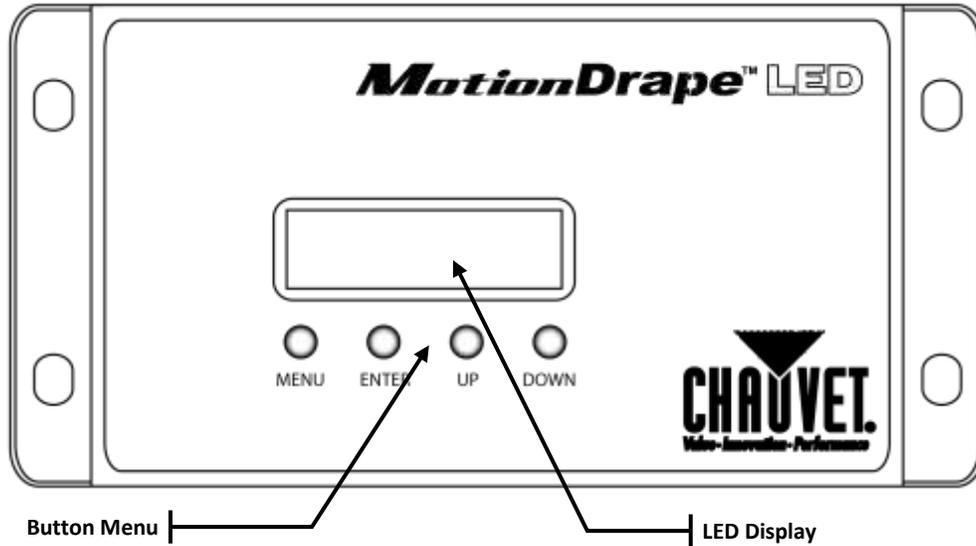


- Keep this User Manual for future consultation. If you sell this product to another user, be sure that they also receive this document.

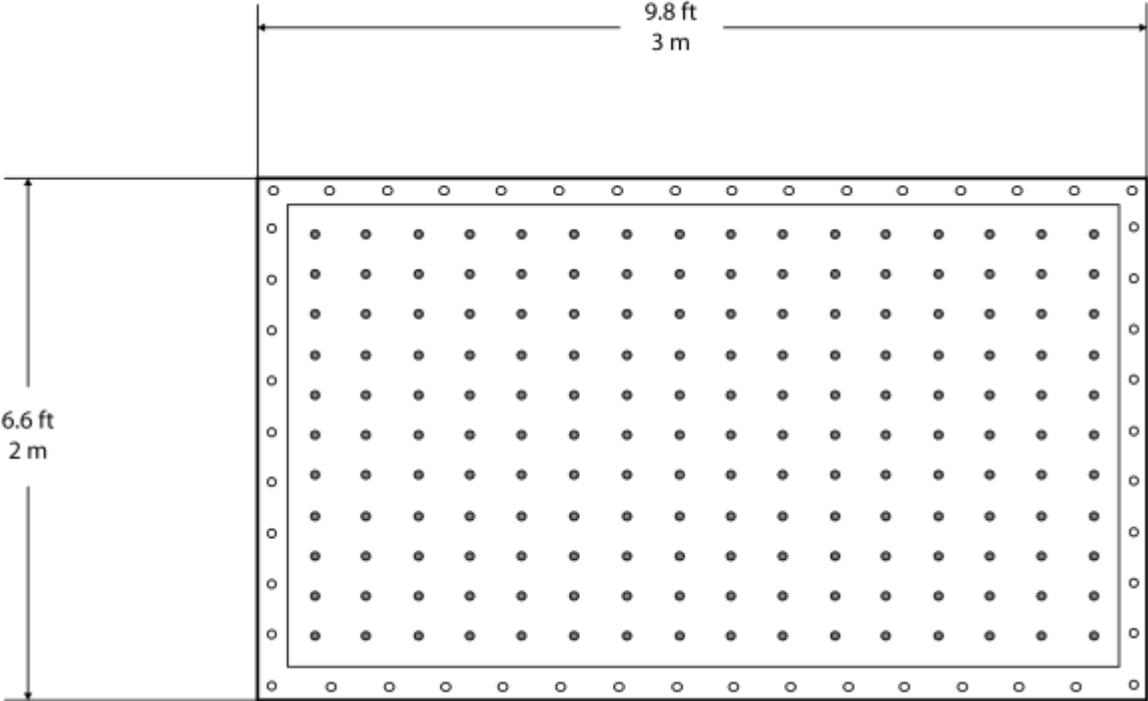
## 2. INTRODUCTION

### Product Overview

Front Panel



# Product Dimensions



## 3. SETUP

**AC Power** This product has an auto-ranging power supply and can work with an input voltage range of 100~240 VAC, 50/60 Hz.

To determine the power requirements for this product (circuit breaker, power outlet, and wiring), use the current value listed on the label affixed to the product's back panel, or refer to the product's specifications chart. The listed current rating indicates the product's average current draw under normal conditions.



**Always connect this product to a protected circuit (circuit breaker or fuse), making sure that it has an appropriate electrical ground to avoid the risk of electrocution or fire.**



**Never connect this product to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.**

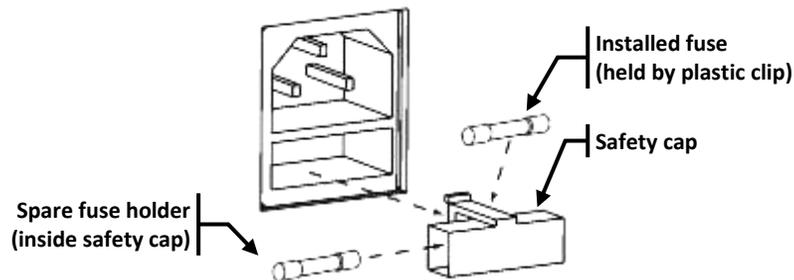
### **Fuse Replacement**

Follow the instructions below to change the fuse, if necessary.



**Disconnect this product from the power outlet before replacing the fuse.**

1. Wedge the tip of a flat head screwdriver into the slot of the fuse holder and pry out of its housing.
2. Remove the blown fuse from its holder and replace with a fuse of the exact same type and rating.
3. Insert the fuse holder back into place, and reconnect power.



**This product ships with no spare fuse. The safety cap does have room for a spare.**



**Always replace a blown fuse of the same type and rating.**

---

## Mounting

Before mounting this product, read and follow the safety recommendations indicated in the *Safety Notes* section (page 2 of this manual).

## Orientation

The MotionDrape™ LED may be mounted in any position; however, make sure adequate ventilation is provided around the product.

## Rigging

Before deciding on a location for this product, always make sure that it will be easy to access the unit for maintenance and programming purposes.

Make sure that the structure onto which you are mounting this product can support its weight. Please see the *Technical Specifications* section of this manual for weight information.

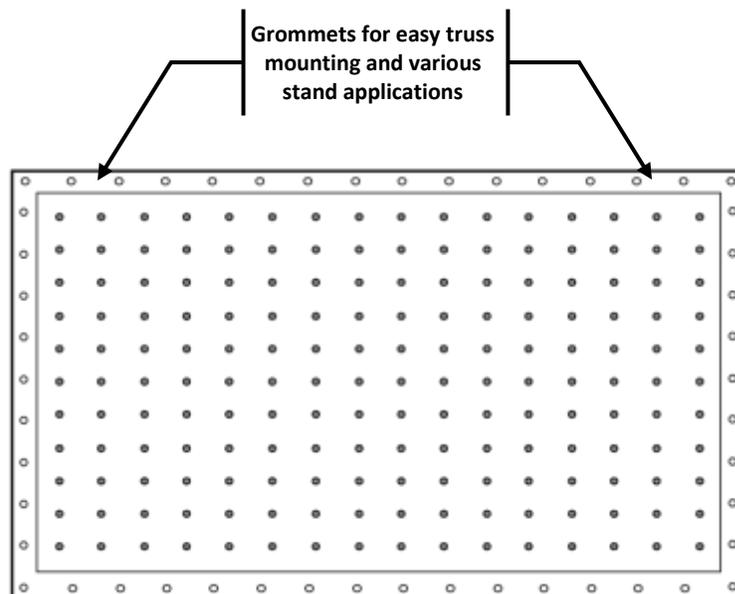
Mount the product securely to a rigging point, whether an elevated platform or a truss.

Reusable zip ties (tie wraps) are provided with the MotionDrape™ LED for quick and easy mounting.



**This product can be used with the CHAUVET® CH-31 portable truss or any similar portable trussing system.**

Mounting Diagram



## 4. OPERATION

### Control Panel Operation

To access the control panel functions, use the four buttons located underneath the display. Please refer to the Product Overview (page 5) to see the buttons location on the control panel.

Button	Function
<MENU>	Press to find an operation mode or to back out of the current menu option
<ENTER>	Press to activate a menu option or a selected value
<UP>	Press to scroll up the list of options or to find a higher value
<DOWN>	Press to scroll down the list of options or to find a lower value

### Menu Map

Mode	Programming Steps		Description
<i>Version</i>	<b>Software Version</b>		Shows the software version number
<i>Automatic</i>	<b>NO</b>		Disables unit's auto mode function
	<b>YES</b>		Enables unit's auto mode function
<i>Sound</i>	<b>NO</b>		Disables unit's sound mode function
	<b>YES</b>		Enables unit's sound mode function
<i>DMX Mode</i>	<b>NO</b>		Disables unit's DMX512 mode function
	<b>YES</b>	<b>1~512</b>	Enables unit's DMX512 mode and sets starting address
<i>Speed</i>	<b>1~9</b>		Selects how fast the auto mode program runs
<i>Program</i>	<b>1~30</b>	<b>NO</b>	Disables numbered program running in sequence in auto or sound mode
		<b>YES</b>	Enables numbered program running in sequence in auto or sound mode

### Configuration (DMX)

Set this product in DMX mode to control it with a DMX controller.

1. Connect this product to a suitable power outlet.
2. Turn this product on.
3. Connect a DMX cable from the DMX output of the DMX controller to the DMX input socket of this product.

### Starting Address

When selecting a starting DMX address, always consider the number of DMX channels the selected DMX mode uses. If you choose a starting address that is too high, you could restrict the access to some of the product's channels.

The MotionDrape™ LED uses up to 8 DMX channels in its 8-channel DMX mode, which defines the highest configurable address to **505**.

If you are not familiar with the DMX protocol, you may refer to the *DMX Primer* section in the *Technical Information* chapter.

To select the starting address, do the following:

1. Press <MENU> repeatedly until **Dmx512** shows on the display.
2. Press <ENTER>.
3. Press <UP> to select **Yes** in the menu.
4. Press <ENTER>. **Address** should appear on the screen.
5. Use <UP> or <DOWN> to select the starting address.
6. Press <ENTER>.

---

## Configuration (Standalone)

Set this product in one of the standalone modes to control it without a DMX controller.

1. Connect this product to a suitable power outlet.
2. Turn this product on.



**Never connect a product that is operating in any standalone mode, whether Static, Automatic, or Sound to a DMX string connected to a DMX controller. This is because products in standalone mode may transmit DMX signals that could interfere with the DMX signals from the controller.**

### ***Sound Active Mode***

To enable the Sound Active mode, do the following:

1. Press **<MENU>** repeatedly until **Sound** shows on the display.
2. Press **<ENTER>**.
3. Use **<UP>** or **<DOWN>** to select **Yes**.
4. Press **<ENTER>**.
5. Turn the music on until the product responds to the beat of the music.



**The product will only respond to low frequencies of the music (bass and drums).**

### ***Automatic Mode***

To enable the Automatic Mode, follow the instructions below:

1. Press **<MENU>** repeatedly until **Automatic** shows on the display.
2. Press **<ENTER>**.
3. Use **<UP>** or **<DOWN>** to select **Yes**.
4. Press **<ENTER>**.

## DMX Channel Assignments and Values

<b>8-CH</b>	<b>Channel</b>	<b>Function</b>	<b>Value</b>	<b>Setting</b>
1	Dimmer	000 ⇔ 007	No function	
		008 ⇔ 255	0~100%	
2	Strobe	000 ⇔ 010	No function	
		011 ⇔ 255	0~100%	
3	Red	000 ⇔ 255	0~100%	
4	Green	000 ⇔ 255	0~100%	
5	Blue	000 ⇔ 255	0~100%	
6	Programs 1-15	000 ⇔ 015	No function	
		016 ⇔ 031	Falling Star	
		032 ⇔ 047	Diagonal Color Bands	
		048 ⇔ 063	Color Pattern Chase	
		064 ⇔ 079	Inward Arrow (L-R)	
		080 ⇔ 095	Color Stack	
		096 ⇔ 111	Multi-Color Freeway	
		112 ⇔ 127	Color Wave (L-R)	
		128 ⇔ 143	Color Wave (R-L)	
		144 ⇔ 159	Color Bar Chase (L-R)	
		160 ⇔ 175	Color Bar Chase (R-L)	
		176 ⇔ 191	Windmill	
		192 ⇔ 207	Fan	
		208 ⇔ 223	Whirlpool	
		224 ⇔ 239	Falling Snow	
240 ⇔ 255	Multi Box Frenzy			
7	Programs 16-30	000 ⇔ 015	No function	
		016 ⇔ 031	Center Burst	
		032 ⇔ 047	Outer Burst	
		048 ⇔ 063	EQ Effect	
		064 ⇔ 079	Rolling Color	
		080 ⇔ 095	Horizontal Stacking	
		096 ⇔ 111	Inner Zone	
		112 ⇔ 127	Outer Zone	
		128 ⇔ 143	Diamond Spread	
		144 ⇔ 159	Single Diamond Squeeze	
		160 ⇔ 175	Follow The Leader	
		176 ⇔ 191	Crisscross	
		192 ⇔ 207	X-Factor	
		208 ⇔ 223	Double Diamond Squeeze	
		224 ⇔ 239	Red X Factor	
240 ⇔ 255	Multicolor Rain			
8	Speed	000 ⇔ 255	0~100%	

# 5. TECHNICAL INFORMATION

## General Troubleshooting

Symptom	Possible Cause(s)	Possible Action(s)
<b>General low light intensity</b>	Dirty LEDs	Clean the MotionDrape™ LED drape regularly
<b>One LED in an LED group failed</b>	Faulty (shorted) LED	Replace faulty LED
<b>All the LEDs in a group failed</b>	Faulty (open) LED	Replace faulty LED
	Faulty LED cable	Replace faulty LED cable
	Faulty LED driver	Replace faulty LED Driver box
<b>Single MotionDrape™ LED controller: All LEDs in a drape failed</b>	Faulty LED driver box	Replace faulty LED Driver box
	Faulty drape output cable	Repair or replace faulty cable
	Faulty MotionDrape™ LED controller	Replace MotionDrape™ LED controller
<b>Multiple MotionDrape™ LED controllers: All LEDs on a controller failed</b>	Faulty MotionDrape™ LED controller	Replace MotionDrape™ LED controller
	If using DMX connection, wrong DMX address on the corresponding controller	Set the starting DMX address correctly
	If using proprietary serial link, wrong Master/Slave setting on the corresponding controller	Set the starting Master/slave mode correctly
	MotionDrape™ LED controller not powered	Check power to the MotionDrape™ LED controller
	Faulty DMX cable	Repair or replace faulty cable
<b>Breaker/Fuse keeps blowing</b>	Excessive circuit load	Check total load placed on the electrical circuit
	Short circuit along the power wires	Check for a short in the electrical wiring (internal and/or external)
<b>MotionDrape™ LED controller does not power up</b>	No power	Check for power on Mains
	Faulty or lose power cord	Check power cord
	Faulty internal power supply	Replace internal power supply
<b>Product is not responding to DMX</b>	Wrong DMX addressing	Check DMX controller and product addressing
	Wrong polarity on the controller	Check polarity switch settings on the controller
	Lose or damaged cables	Check DMX and signal patch cables
	Faulty Main PCB	Replace Display PCB
<b>Loss of signal on some MotionDrape™ LED controllers</b>	Non compatible signal patch cables	Use only compatible cables
	Bouncing signals	Install terminator as suggested
	Long cable / Low level signal	Do not exceed maximum recommended length
	Too many products	Install an optically coupled DMX splitter after unit #32.
	Interference from AC wires	Keep DMX and signal patch cables separated from power cables or black lights



**If you still experience problems after trying the above solutions, contact CHAUVET® Technical Support.**

## Contact Procedure

In case you need to return a product or request support, follow the procedure below:

- If you live in the US, contact CHAUVET® World Headquarters (see below).
- If you live in the UK or Ireland, contact CHAUVET® Europe Ltd.(see below).
- If you live in any other country, DO NOT contact CHAUVET®. Instead, contact your distributor of record. Refer to our Web site for contact details of distributors outside the US, United Kingdom, or Ireland.

## CHAUVET® Contact Information

### World Headquarters

CHAUVET®

#### General Information

Address: 5200 NW 108th Avenue  
Sunrise, FL 33351  
Voice: (954) 929-1115  
Fax: (954) 929-5560  
Toll free: (800) 762-1084

#### Technical Support

Voice: (954) 929-1115 (Press 4)  
Fax: (954) 756-8015  
Email: tech@chauvetlighting.com

#### World Wide Web

[www.chauvetlighting.com](http://www.chauvetlighting.com)

### United Kingdom & Ireland

CHAUVET® Europe Ltd.

#### General Information

Address: Unit 1C  
Brookhill Road Industrial Estate  
Pinxton, Nottingham, UK  
NG16 6NT  
Voice: +44 (0)1773 511115  
Fax: +44 (0)1773 511110

#### Technical Support

Email: [uktech@chauvetlighting.com](mailto:uktech@chauvetlighting.com)

#### World Wide Web

[www.chauvetlighting.co.uk](http://www.chauvetlighting.co.uk)



**If you live outside the US, United Kingdom, or Ireland, contact your distributor of record and follow their instructions on how to return CHAUVET® products to them. Visit our Web site for contact details.**

## Returning Products to CHAUVET®

Call the corresponding CHAUVET® Tech Support office and request a Return Merchandise Authorization (RMA) number before shipping the product. Be prepared to provide the model number, serial number, and a brief description of the cause for the return.

You must send the merchandise prepaid, in its original box, and with its original packing and accessories. CHAUVET® will not issue call tags.

Clearly label the package with the RMA number. CHAUVET® will refuse any product returned without an RMA number.



**DO NOT write the RMA number directly on the box. Instead, write it on a properly affixed label.**

Before sending the product, clearly write the following information on a piece of paper and place it inside the box:

- Your name
- Your address
- Your phone number
- The RMA number
- A brief description of the problem

Be sure to pack the product properly. Any shipping damage resulting from inadequate packaging will be your responsibility. As a suggestion, proper UPS packing or double-boxing is always a safe method to use.



**CHAUVET® reserves the right to use its own discretion to repair or replace returned product(s).**

## DMX Primer

The USITT DMX512-A data transmission protocol (DMX, from now on) is based on the EIA-485 standard and it has 512 channels (001 to 512). This system requires a controller (DMX controller), one or more DMX compatible products, and a DMX circuit (also known as “DMX universe”) to link the products to the controller.

Depending on their complexity and features, DMX compatible products may require from one to more than 30 DMX channels to operate. Some DMX products have multiple operation modes (also known as “personalities”), each with its own number of channels and controllable parameters.

### Starting Address

In the DMX system, the controller sends DMX data to each product based on the product’s starting address. The starting address is the number of the DMX channel (001 to 512) assigned to the product’s first control channel (Channel 1). When assigning starting addresses to multiple products, it is critical to ensure that no starting address is already in use by another product to prevent channels from overlapping. Otherwise, the affected products may operate erratically.

For instance, a user has two DMX compatible products. Product “A” has four channels and product “B” has six channels. If the user configures the starting address of product “A” to “001”, channels 001 through 004 on the DMX controller will control product “A”. This means that the user should assign the starting address of product “B” to “005” or higher. For a starting address of “005”, the DMX controller would use channels 005 to 010 to control product “B”.

It is possible to control multiple products of the same type by assigning each one of them the same starting address. In this case, all the products would respond in unison (synchronized) to the signals from the DMX controller.

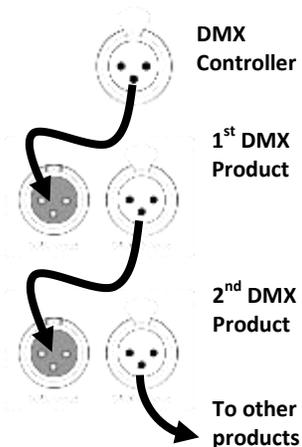
### Product Linking (Daisy Chain)

DMX compatible products receive the control signals from the DMX controller through the DMX cables. Each product has a DMX In and a DMX Out connector. The figure to the right illustrates how the products link to each other using multiple segments of DMX cable in a sequential format called “daisy chain”.

The order in which the products connect to the DMX controller is irrelevant because all products receive the same DMX signals and they only respond to them based on their individual starting addresses. However, it is important to notice that the connections between products should always be as short and direct as possible.

To ensure the integrity of the DMX signal, follow the recommendations of the EIA-485 standard:

- The maximum recommended cable length is 500 m (1,640 feet).
- The maximum recommended number of products on the same daisy chain is 32.



**Connecting more than 32 products on one daisy chain without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.**

## DMX Cabling

The DMX protocol requires using special data cables to accommodate for the high speed digital signals it uses. Despite their apparent similarities, data cables are electrically different from standard microphone cables because they can carry high frequency digital signals and have better protection against electromagnetic interference. You can purchase CHAUVET® certified DMX cables directly from a dealer/distributor or make your own DMX cable.

If you choose to make your own DMX cable, you must use a data-grade cable such as the Belden 9841, which has the following electrical characteristics:

Type:	shielded, 2-conductor twisted pair
Maximum capacitance between conductors:	30 pF/ft
Maximum capacitance between conductor and shield:	55 pF/ft
Maximum resistance:	20 ohms/1000 ft
Nominal impedance:	100~140 ohms

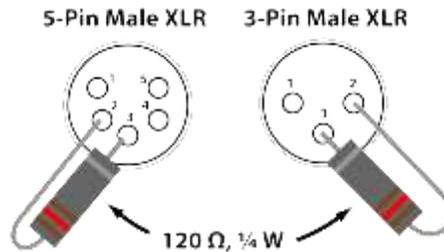
## DMX Connectors

Each DMX cable must have a male XLR connector on one end and a female XLR connector on the other end. The DMX protocol indicates that the XLR connectors must have five pins. However, most lighting products use the 3-pin XLR connector. The pin assignment of the 3-pin and 5-pin XLR connectors in a DMX cable is as follows:

Signal	Male Plug		Female Plug			Signal
	3-Pin	5-Pin	5-Pin	3-Pin		
Common	1	1	1	1	1	Common
Data -	2	2	2	2	2	Data -
Data +	3	3	3	3	3	Data +
Not used		4	4			Not used
Not used		5	5			Not used

You can use the above table to create a 3-pin/3-pin cable, a 5-pin/5-pin cable, or a 3-pin to 5-pin adapter.

The DMX daisy chain uses a terminator to reduce signal transmission problems, especially with long cables. The terminator consists of either a 3-pin or 5-pin XLR male plug with a 120 Ω, ¼ W resistor connected to the wire side of pins 2 and 3, as shown below.



The terminator plug connects to the DMX Out socket of the last DMX product in the daisy chain.



**Do not allow the common wire of the DMX cable to touch the product's chassis ground. This could cause a ground loop, which may affect your products' performance. Test all DMX cables with an ohmmeter to verify the correct polarity of the wires, and to make sure that they are not touching the shield or each other.**

## 6. TECHNICAL SPECIFICATIONS

<b>Dimensions and Weight</b>	<b>Length (Drape)</b>	<b>Width (Drape)</b>	<b>Height (Drape)</b>	<b>Weight (Drape)</b>
	9.8 ft (118 in) 3 m (3000 mm)	0.6 in (15 mm)	6.6 ft (78.7 in) 2 m (2000 m)	9.8 lbs (4.4 kg)
	<b>Length (Control Box)</b>	<b>Width (Control Box)</b>	<b>Height (Control Box)</b>	<b>Weight (Control Box)</b>
	9.6 in (243 mm)	5.3 in (135 mm)	2 in (50 mm)	1.8 lbs (0.8 kg)
<b>Note:</b> Dimensions in inches and feet rounded to the nearest decimal digit.				
<b>Power</b>	<b>Power Supply Type</b>	<b>Range</b>	<b>Voltage Selection</b>	
	Switching (internal)	100~240 V, 50/60 Hz	Auto-ranging	
	<b>Parameter</b>	<b>120 V, 60 Hz</b>	<b>230 V, 50 Hz</b>	
	Consumption	51 W	54 W	
	Operating	0.4 A	0.2 A	
	Fuse	F 2 A, 250 V	F 2 A, 250 V	
	<b>Power I/O</b>	<b>US/Worldwide</b>	<b>UK/Europe</b>	
	Power input connector	IEC	IEC	
	Power output connector	Edison	IEC	
	Power Cord plug	Edison (US)	Local plug	
<b>Light Source</b>	<b>Type</b>	<b>Quantity</b>	<b>Lifespan</b>	
	LED	176	50,000 hours	
<b>Thermal</b>	<b>Maximum External Temp.</b>	<b>Cooling System</b>		
	104° F (40° C)	Convection		
<b>DMX</b>	<b>I/O Connectors</b>	<b>Connector Type</b>	<b>Channel Range</b>	
	3-pin XLR	Sockets	8	
<b>Ordering</b>	<b>Product Name</b>	<b>Item Code</b>	<b>Item Number</b>	
	MotionDrape™ LED	15090388	MOTIONDRAPELED	

