SWARM™

Snapshot

OK on Dimmer	🚫
Outdoor OK	🚫
Sound Activated	✓
DMX512	✓
Master/Slave	✓
Autoswitching Transformer	✓
Replaceable Fuse	✓
User Serviceable	🚫
Duty Cycle	🚫

USER MANUAL
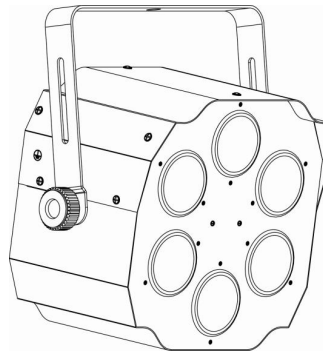
CHAUVET
Value · Innovation · Performance

TABLE OF CONTENTS

1. BEFORE YOU BEGIN

What is included

- ➢ 1 x Swarm™
- ➢ 1 x Power Cord
- ➢ 1 x Warranty Card
- ➢ 1 x User Manual

Unpacking Instructions

Immediately upon receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

AC Power

This fixture has an auto-switching power supply that can accommodate a wide range of input voltages. The only thing necessary to do before powering on the unit is to make sure the line voltage you are applying is within the range of accepted voltages. This fixture will accommodate between 100V and 240V AC 50-60 Hz. 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.

Warning! **All fixtures must be connected to circuits with a suitable Earth Ground.**

Safety Instructions

⚠️ Please read these instructions carefully, which includes important information about the installation, usage and maintenance of this product.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- 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.
- Always disconnect from power source before servicing or replacing lamp or fuse and be sure to replace with same lamp source.
- Secure fixture to fastening device using a safety chain.
- Maximum ambient temperature (Ta) is 104°F (40°C). Do not operate fixture at temperatures higher than this.
- 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.
- Do not daisy chain power to more than 12 units @ 120V and 20 units @ 230V.

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 CHAUVET at: 954-929-1115.***

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2. INTRODUCTION

Features

- 4-channel DMX-512 L-ED vivid, multi-colored effect
- 7 popular, programmable color combinations: red, green, blue, red/green, red/blue, green/blue, red/green/blue
- Adjustable strobe speed with any color combination
- Control motor direction and speed
- Built-in automated programs via master/slave or DMX
- Built-in sound activated programs via master/slave or DMX

ADDITIONAL FEATURES
- High-power, 3W (1,200mA) LEDs
- Additional power output: max 12 units @ 120V

DMX Channel Summary

CHANNEL	FUNCTION
1	Function
2	Run speed
3	Strobe
4	Rotation

Product Overview

LED
Display

Auto LED

Slave LED

DMX
LED

Enter
button

Sound
LED

Sound sensitivity
adjustment

DMX indicator
(flashing segment on
display)

Microphone

DMX out

Mode
button

DMX in

Down
button

Power link
out

Up
button

Fuse holder

Safety cable
eyebolt

Power in

Bracket

Bracket
adjustment knob
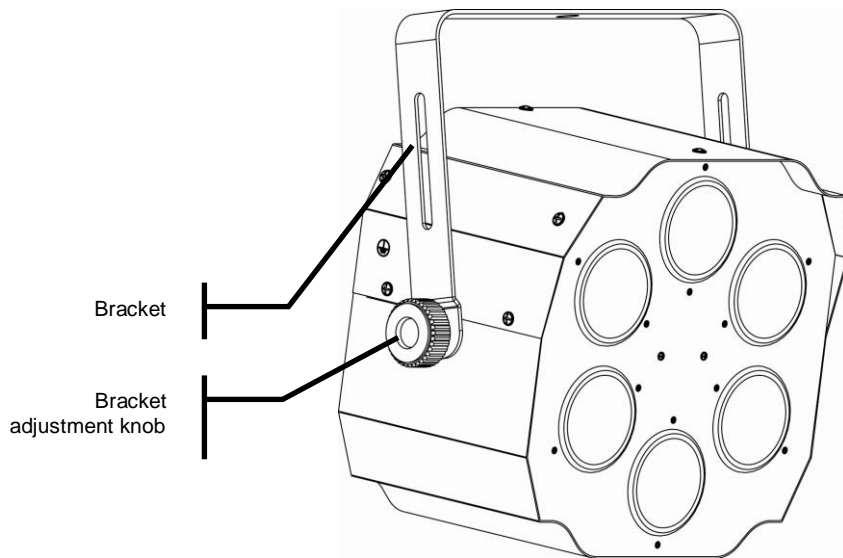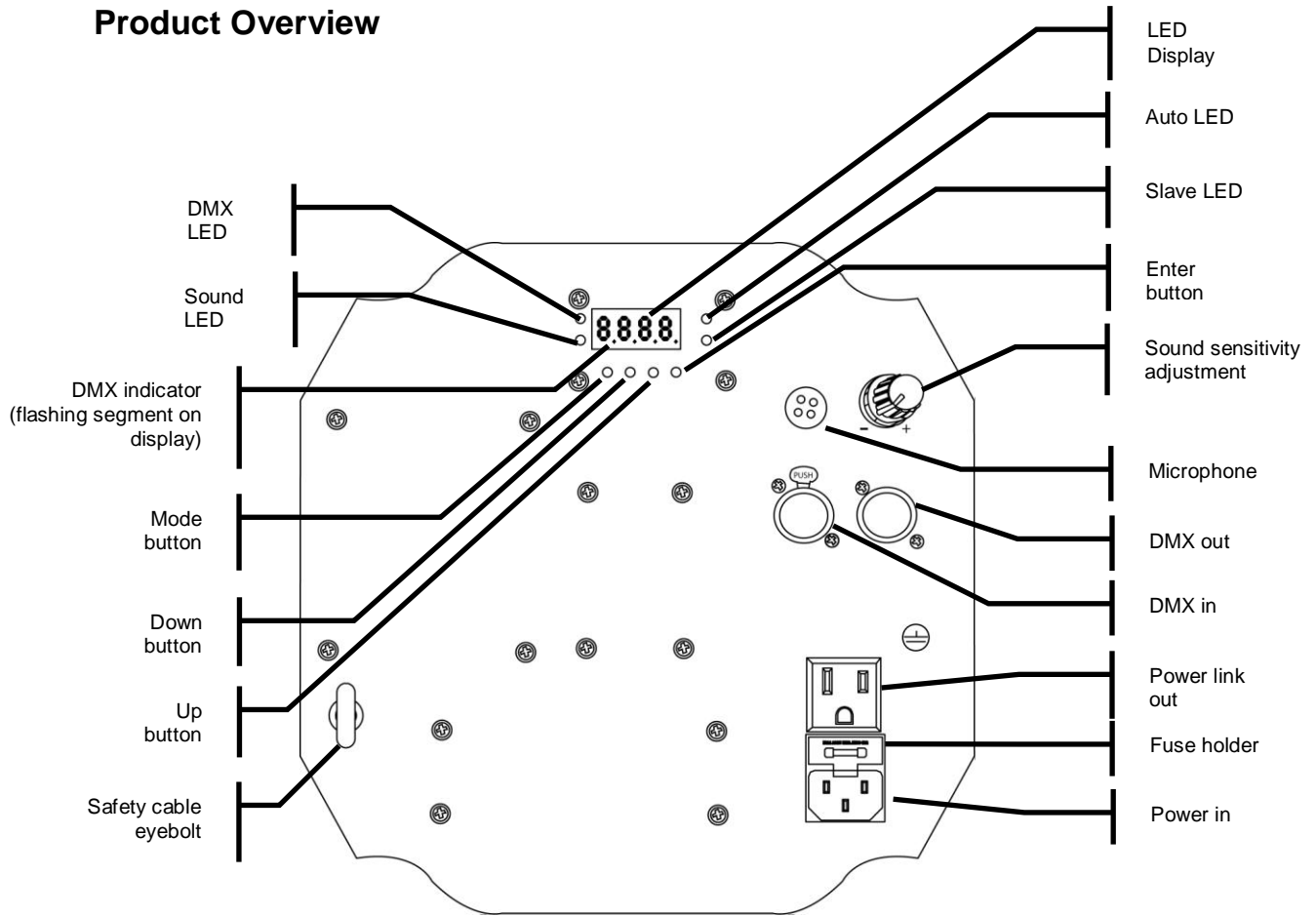
3. SETUP

⚠️ Disconnect the power cord before replacing a fuse and always replace with the same type fuse. ⚠️

Fuse Replacement

1. With a flat head screwdriver, wedge the fuse holder out of its housing.

2. Remove the damaged fuse from its holder and replace with exact same type fuse.

3. Insert the fuse holder back in its place and reconnect power.

The fuse is located inside this compartment. Remove using a flat head screwdriver.

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows on two or more fixtures set to a 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.
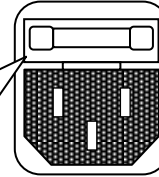
Important: **Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard no more than 32 devices should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.**

Maximum recommended serial data link distance: 500 meters (1640 ft.)
Maximum recommended number of fixtures on a serial data link: 32 fixtures

Data Cabling

To link fixtures together you must obtain data cables. You can purchase CHAUVET-certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.
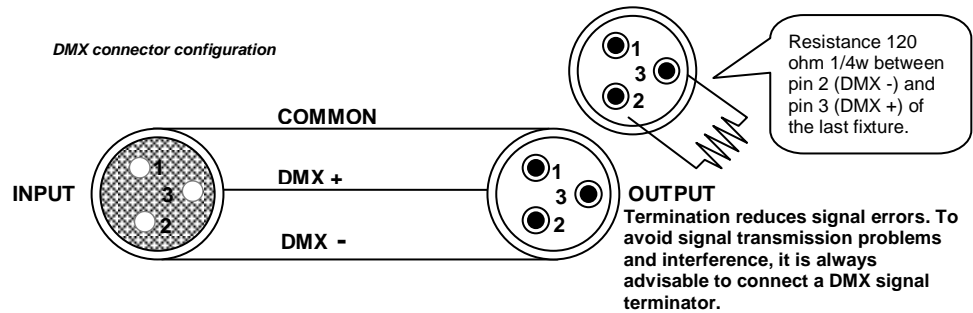
DMX DATA CABLE

Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable must have the following characteristics:

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

CABLE CONNECTORS

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.

DMX connector configuration

COMMON

DMX +

DMX -

INPUT

OUTPUT

Resistance 120 ohm 1/4w between pin 2 (DMX -) and pin 3 (DMX +) of the last fixture.

Termination reduces signal errors. To avoid signal transmission problems and interference, it is always advisable to connect a DMX signal terminator.

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 TO 5-PIN CONVERSION CHART

Note! **If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. CHAUVET Model No: DMX5M, or DMX5F.**
The chart below details a proper cable conversion:

3 PIN TO 5 PIN CONVERSION CHART

| Conductor	3 Pin Female (output)	5 Pin Male (Input)
Ground/Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Do not use		Pin 4
Do not use		Pin 5

Setting up a DMX Serial Data Link

1. Connect the (male) 3 pin connector side of the DMX cable to the output (female) 3 pin connector of the controller.

2. Connect the end of the cable coming from the controller which will have a (female) 3 pin connector to the input connector of the next fixture consisting of a (male) 3 pin connector.

3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.

CHAUVET Certified DMX Data Cables

Order Code	Description
DMX1.5	DMX Cable 1.5m/4.9ft
DMX4.5	DMX Cable 4.5m/14.8ft
DMX10	DMX Cable 10m/32.8ft

Universal DMX Controller

DMX OUT   DMX IN
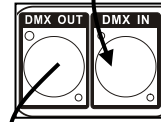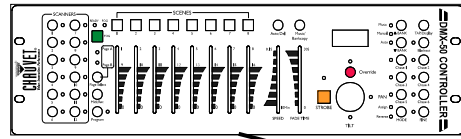
This drawing provides a general illustration of the DMX Input/Output panel of a lighting fixture.

DMX OUT   DMX IN
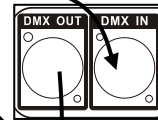
Continue the link

Master/Slave Fixture Linking

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.

Often, the setup for Master-Slave and Standalone operation requires that the first fixture in the chain be initialized for this purpose via settings in the control panel. Secondarily, the fixtures that follow may also require a slave setting. Please consult the "Operating Instructions" section in this manual for complete instructions for this type of setup and configuration.

Slave   Slave   Master

DMX OUT   DMX IN   DMX OUT   DMX IN   DMX OUT   DMX IN
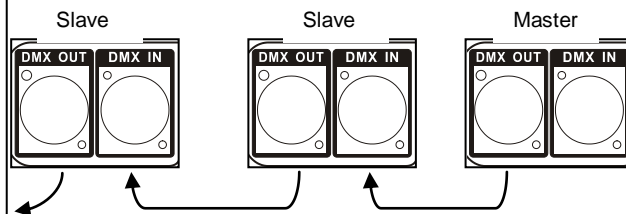
Mounting

ORIENTATION

This fixture may be mounted in any safe position.

RIGGING

Mount the fixture using, a suitable "C" or "O" type clamp. 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 fuse replacement 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.

Hanging Clamp
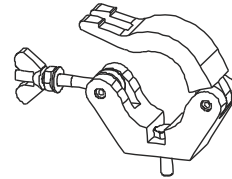
Note!
Clamp is sold separately.
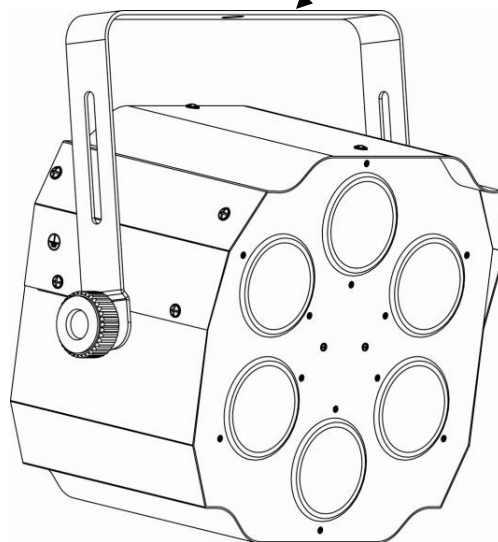
4. OPERATING INSTRUCTIONS

Navigating the Control Panel

Access control panel functions using the four panel buttons located directly underneath the LED Display.

Button	Function
\<MODE\>	Used to access the menu or to return to a previous menu option
\<DOWN\>	Scrolls through menu options in descending order
\<UP\>	Scrolls through menu options in ascending order
\<ENTER\>	Used to select and store the current menu or option within a menu

The Control Panel LED Display shows the menu items you select from the menu map. 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 map and menu options. Press the **\<ENTER\>** button to access 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 **\<MODE\>** button.

Menu Functions

MENU OPTION	SUB-MENU OPTION	DESCRIPTION
Snd		**Sound active mode:** Sets the fixture to run automatically by sound. Use the knob to adjust the sound sensitivity
AUTO		**Auto mode:** Sets the fixture to run on automatic programs
	S001-S100	Speed adjustments from fast **(S001)** to slow **(S100)** when running in Auto mode
S:2		**DMX mode:** Sets the fixture to run via a DMX controller (mode shown by **d001-dS:2** on display)
	A001-AS:2	Sets the DMX starting address in DMX mode

Operation

Stand-Alone Mode (Sound-Active, Auto):

Sound active

This mode allows a single unit to run to the beat of the music.

1)   Press the **<MODE>** button, until **Snd** is displayed.

2)   Press the **<ENTER>** button to confirm your selection.

- Use the audio sensitivity knob on the back of the unit to make the unit more or less sensitive in Sound active mode. Turning the knob counterclockwise decreases the sensitivity; turning the knob clockwise increases the sensitivity.

- The unit will react to the low frequencies of music via the internal microphone in sound active mode.

Auto

1)   Press the **<MODE>** button, until is **AUTO** is displayed for automatic mode.

2)   Press the **<ENTER>** button to confirm your selection.

3)   Adjust the speed as needed from the display. Use the **<UP>** and **<DOWN>** buttons until the desired speed is selected (**S001-S100**) (001=fast, 100=slow).

4)   Press the **<ENTER>** button to confirm your selection.

Master/Slave Mode (Master Sound, Master Auto):

This mode will allow you to link up to 32 units together without a controller.

1)   Use standard DMX cables to daisy chain your units together via the DMX connector on the rear of the units. For longer cable runs we suggest a terminator at the last fixture.

2)   Choose a unit to function as the Master. Press the **<MODE>** button until **Snd** or **AUTO** is displayed.

3)   Press the **<ENTER>** button to confirm your selection.

4)   The unit must be the first unit in line. Then simply chain the units together using DMX cable.

5)   Then, set the slave units to DMX mode **(S:2)** at starting address **d001** (see section on DMX Mode).

DMX Mode

This mode allows the unit to be controlled by any universal DMX controller. If you are unfamiliar with DMX, please read the DMX Primer in the Appendix section of this manual.

1) Press the **<MODE>** button until **5:2** is displayed on the LED display.

2) Press the **<ENTER>** button.

3) Use the **<UP>** and **<DOWN>** buttons to set the DMX starting address.

4) Press the **<ENTER>** button to save the setting.

- *Note:* ***When the fixture is receiving DMX signal, the DMX indicator will begin flashing on the display. See the drawing on page 6 for the location of the indicator.***

DMX Channel Values

CHANNEL	VALUE	FUNCTION
1		**Function**
	000 ⇔ 009	Blackout
	010 ⇔ 019	Red
	020 ⇔ 029	Green
	030 ⇔ 039	Blue
	040 ⇔ 049	Green/Blue
	050 ⇔ 059	Red/Blue
	060 ⇔ 069	Red/Green
	070 ⇔ 079	Red/Green/Blue
	080 ⇔ 139	Single color chase
	140 ⇔ 199	Multi color chase
	200 ⇔ 224	Automatic fast
	225 ⇔ 249	Automatic slow
	250 ⇔ 255	Sound active
2		**Run speed** (when CH.1 is between 080 ⇔ 199)
	000 ⇔ 255	Slow ⇔ Fast
3		**Strobe**
	000 ⇔ 004	No function
	005 ⇔ 254	Strobe: slow ⇔ fast
	255 ⇔ 255	Strobe to sound
4		**Rotation**
	000 ⇔ 004	No function
	005 ⇔ 127	Clockwise rotation: slow ⇔ fast
	128 ⇔ 133	Stop
	134 ⇔ 255	Counterclockwise rotation: slow ⇔ fast

SETTING THE STARTING ADDRESS

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a "start address" from 1 to 512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that uses 6 DMX channels and was addressed to start on DMX channel 100, would read data from channels: 100, 101, 102, 103, 104, and 105. Choose start addresses so that the channels used do not overlap, and note the start address selected for future reference.

If this is your first time addressing a fixture using the DMX-512 control protocol, we suggest jumping to the Appendix Section and reading the heading "DMX Primer". It contains very useful information that will help you understand its use.

General Troubleshooting

Symptom	Solution(s)
Breaker/Fuse keeps blowing	Check total load placed on device
Chase is too slow	Check users manual for speed adjustment
Device has no power	Check for power on Mains. Check device's fuse
Fixture is not responding	Check DMX settings for correct addressing Check DMX cables Check polarity switch settings Check DMX indicator on LED display segment
Fixture is on but there is no movement to the audio	Make sure you have the correct audio mode on the display Adjust sound sensitivity knob
Light will not come on after power failure	Check fuse
Loss of signal	Use only DMX cables Install terminator Note: Keep DMX cables separated from power cables or black lights.
No light output	Call service technician

If you still have a problem after trying the above solutions, please contact CHAUVET Technical Support at the location below.

Technical Support

Address: Service Dept.
3000 N 29th Ct, Hollywood, FL 33020 (U.S.A.)
Support (Email): tech@chauvetlighting.com
Telephone: (954) 929-1115 - (Press 4)
Fax: (954) 929-5560 - (Attention: Service)
Website: http://www.chauvetlighting.com

Contact Us

World Wide

General Information   CHAUVET
3000 North 29th Court
Hollywood, FL 33020
voice: 954.929.1115
fax: 954.929.5560
toll free: 800.762.1084

Technical Support   CHAUVET
3000 North 29th Court
Hollywood, FL 33020
voice: 954.929.1115 **(Press 4)**
fax: 954.929.5560 **(Attention: Service)**

5. APPENDIX

DMX Primer

There are 512 channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is where the DATA OUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data positive (S+). CHAUVET carries 3-pin XLR DMX compliant cables, DMX-10 (33'), DMX-4.5 (15') and DMX-1.5 (5')

General Maintenance

To maintain optimum performance and minimize wear fixtures should be cleaned frequently. Usage and environment are contributing factors in determining frequency. As a general rule, fixtures should be cleaned at least twice a month. Dust build up reduces light output performance and can cause overheating. This can lead to reduced LED life and increased mechanical wear. Be sure to power off fixture before conducting maintenance.

Unplug fixture from power. Use a soft brush to remove dust collected on external components. Clean all glass when the fixture is cold with a mild solution of glass cleaner or Isopropyl Alcohol and a soft lint free cotton cloth or lens tissue. Apply solution to the cloth or tissue and drag dirt and grime to the outside of the lens. Gently polish optical surfaces until they are free of haze and lint.

The cleaning of external optical lenses must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics. Clean with soft cloth using normal glass cleaning fluid. Always dry the parts carefully. Clean the external optics at least every 20 days.

Returns Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Merchandise Authorization Number (RMA #). Products returned without an RMA # will be refused. Call CHAUVET and request RMA # prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. CHAUVET reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: **If you are given an RMA #, please include the following information on a piece of paper inside the box:**

1) Your name
2) Your address
3) Your phone number
4) The RMA #
5) A brief description of the symptoms

Claims

Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise. It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Any other claim for items such as missing component/part, damage not related to shipping, and concealed damage, must be made within seven (7) days of receiving merchandise.

Technical Specifications

WEIGHT & DIMENSIONS
Length .... 7.6 in (194 mm)
Width .... 11.8 in (302 mm)
Height .... 12.5 in (319 mm)
Weight ....8.2 lbs (3.7 kg)

POWER
Autoswitching.. 100-240VAC 50/60Hz
Fuse (external)..F1A 250V
Power Consumption .... 20W (0.3A) max @ 120V
Inrush Power... 0.2A @ 120V
Power Consumption .... 14W (0.2A) max @ 230V
Inrush Power... 0.2A @ 230V
Power Output .... 12 units max @ 120V, 20 units max @ 230V

LIGHT SOURCE
LED ....3 x 3W 1,200mA (1 Red, 1 Green, 1 Blue) 50,000hrs

RANGE
Coverage angle ....71°

THERMAL
Maximum ambient temperature ....104°F (40°C)

CONTROL & PROGRAMMING
Data input.. locking 3-pin XLR male socket
Data output .... locking 3-pin XLR female socket
Data pin configuration...pin 1 shield, pin 2 (-), pin 3 (+)
Protocols ....DMX-512 USITT
DMX Channels.. 4

ORDERING INFORMATION
Swarm™ ....SWARM

WARRANTY INFORMATION
Warranty..2-year limited warranty