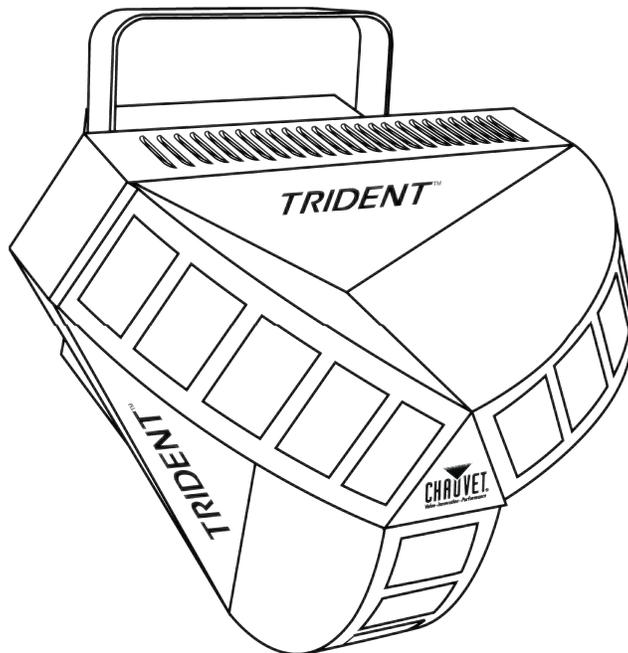


TRIDENT™

Snapshot

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

User Manual



3000 N 29th Ct, Hollywood, FL 33020 U.S.A.
(800) 762-1084 – (954) 929-1115
FAX (954) 929-5560
www.chauvetlighting.com

TABLE OF CONTENTS

1. BEFORE YOU BEGIN	3
WHAT IS INCLUDED.....	3
UNPACKING INSTRUCTIONS.....	3
MANUAL CONVENTIONS.....	3
ICONS.....	3
SAFETY INSTRUCTIONS.....	4
2. INTRODUCTION	5
FEATURES.....	5
PRODUCT OVERVIEW.....	6
3. SETUP	7
AC POWER.....	7
<i>Power Linking</i>	7
MOUNTING.....	7
<i>Orientation</i>	7
<i>Rigging</i>	7
4. OPERATING INSTRUCTIONS	8
CONFIGURING THE STARTING ADDRESS.....	8
DMX OPERATION.....	8
MASTER/SLAVE.....	8
STANDALONE OPERATION.....	9
<i>Automatic</i>	9
<i>Sound-Active</i>	9
<i>Custom Program</i>	9
DMX CHANNEL VALUES.....	10
DIP SWITCH VALUES.....	10
5. APPENDIX	11
DMX PRIMER.....	11
GENERAL MAINTENANCE.....	11
DATA CABLING.....	12
<i>DMX Data Cable</i>	12
<i>Cable Connectors</i>	12
FIXTURE LINKING.....	12
<i>3-Pin to 5-Pin Conversion Chart</i>	13
<i>Setting up a DMX Serial Data Link</i>	13
SETTING THE STARTING ADDRESS.....	14
GENERAL TROUBLESHOOTING.....	14
CONTACT US.....	14
RETURNS PROCEDURE.....	15
CLAIMS.....	15
TECHNICAL SPECIFICATIONS.....	16

1. BEFORE YOU BEGIN

What is included

- 1 x Trident™
- 1 x Power Cable
- 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.

Manual Conventions

CHAUVET® manuals use the following conventions to differentiate certain types of information from the regular text.

CONVENTION	MEANING
[10]	A DIP switch to be configured
<Menu>	A key to be pressed on the fixture's control panel
1~512	A range of values
50/60	A set of values of which only one can be chosen
Settings	A menu option not to be modified (for example, showing the operating mode/current status)
MENU > Settings	A sequence of menu options to be followed
ON	A value to be entered or selected

Icons

This manual uses the following icons to indicate information that requires special attention on the part of the user.

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

Safety Instructions



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

- Please keep this User Manual 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.
- The unit must be installed in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Always disconnect from power source before servicing or replacing fuse and be sure to replace with same fuse 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.
- 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.
- Never carry the fixture directly from the cord. Always use the hanging/mounting bracket.
- Avoid direct eye exposure to the light source while it is on.

2. INTRODUCTION

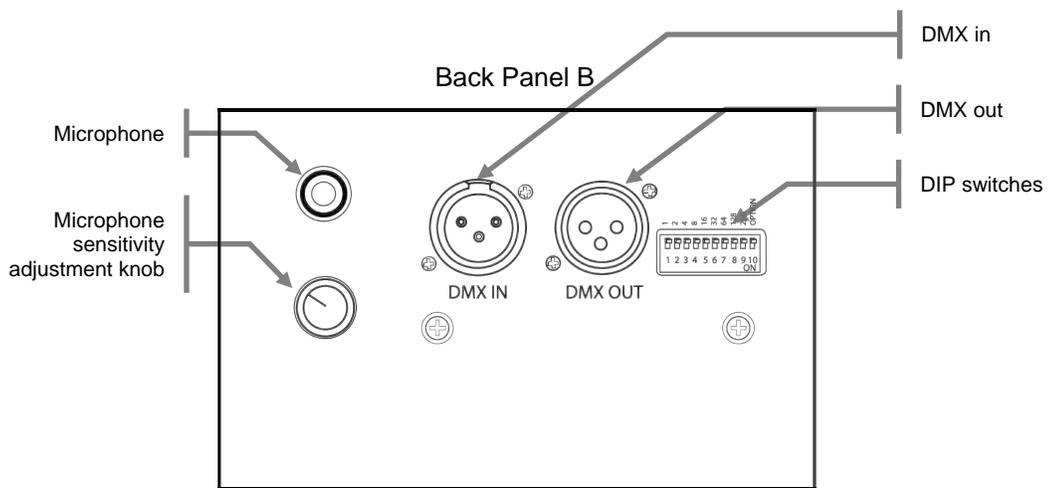
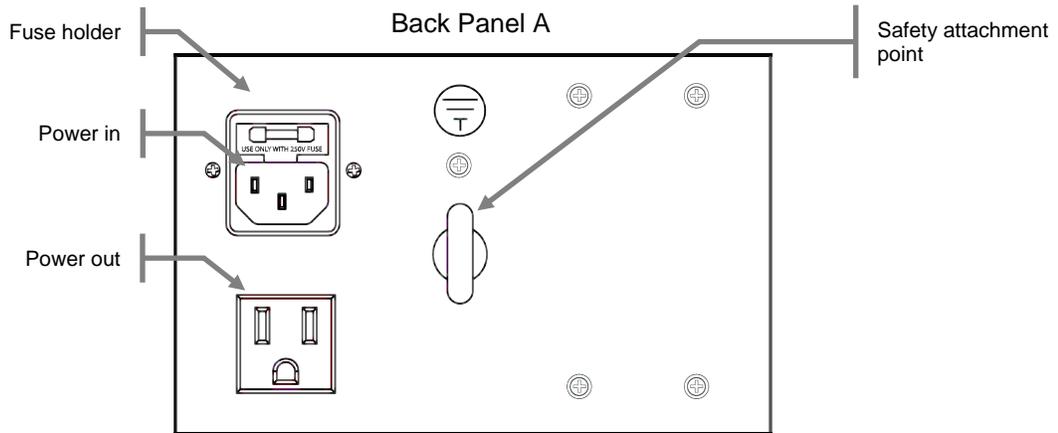
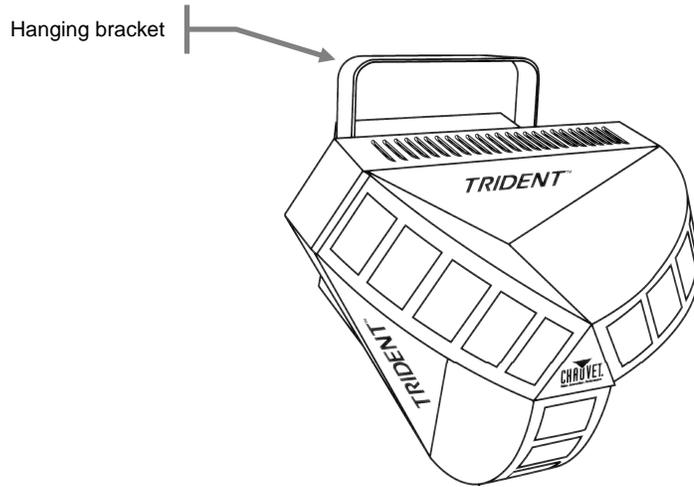
Features

- 3-channel DMX-512 LED centerpiece
- Individual control of red, green and blue
- Variable electronic strobe in any color combination
- Back-and-forth motor effect with variable speed
- Static colors with or without DMX controller

Additional Features

- Built-in automated programs
- Built-in sound activated programs
- Tri-color LEDs (2,550 mA total)
- Additional power output: max 26 units

Product Overview



3. SETUP

AC Power

This fixture runs on 100~240 VAC, 50/60 Hz. Before powering on the unit, make sure the line voltage to which you are connecting it is within the range of accepted voltages.



Always connect the fixture to a switched circuit. Never connect the fixture to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used only as a 0 to 100% switch.

To determine the power requirements for a particular fixture, see the label affixed to the back plate of the fixture or refer to the fixture's specifications chart. A fixture's listed current rating indicates its average current draw under normal conditions.



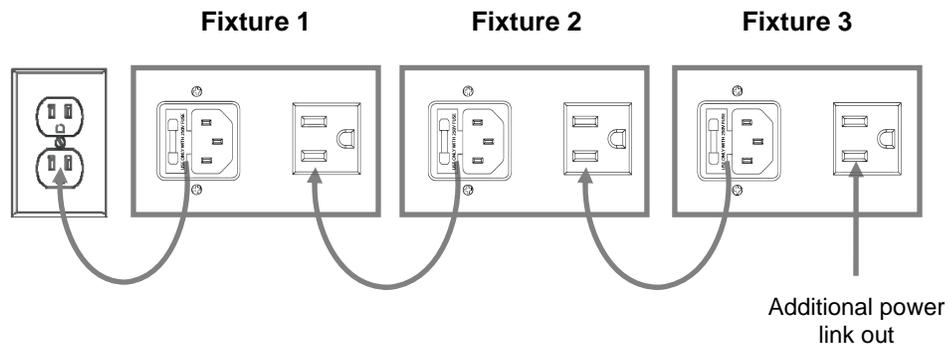
Always connect the fixture to a circuit with a suitable electrical ground.

Power Linking

This fixture contains power linking via the edison outlet located next to the power input cable. Please see the diagram below for further explanation.



The maximum quantity of fixtures that may be linked is 26.



Mounting

Orientation

The Trident™ may be mounted in any safe position, provided there is adequate room for ventilation.

Rigging

Be sure that the structure can support the weight of the fixture. Please see the "Technical Specifications" section of this manual for a detailed weight listing. Mount the fixture securely. This may be done with a screw, nut and bolt, or a hanging clamp. The hole in each bracket is 13 mm in size. When rigging consider routine maintenance and control panel access. Please see the following steps for installation.

- If the power link out is intended to be used with multiple fixture, take into account the length of each power cable, and mount the fixtures close enough to one another to accommodate for this.
- When aiming the fixture, you may use the bracket adjustment knobs (2x). Loosen each knob, adjust to the desired angle, and then tighten both knobs by turning clockwise. Do not use tools for this step, as it may cause damage.
- Safety cables must always be used.

4. OPERATING INSTRUCTIONS

Configuring the Starting Address

Each fixture requires a starting address from 1~512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the starting address. For example, a fixture that uses seven DMX channels and is addressed to start on DMX channel 100, will read data from channels: 100, 101, 102, 103, 104, 105 and 106. Choose the starting addresses for each fixture so that the channels used do not overlap. In addition, you should note the starting address selected for future reference.

The Trident™ fixture uses 3 DMX channels. If this is your first time using DMX, we recommend reading the “DMX Primer” section in the “Appendix”.

DMX Operation

This is the operating mode which will allow for control with an external DMX controller. You must set the starting address for this mode. If this is your first time using DMX, then it is recommended that you refer to the “DMX Primer” section in the “Appendix” of this manual.

1. Plug the fixture into power.
2. Connect DMX cable(s) to controller.
3. Turn DIP switch [10] to the ON position.
4. Use DIP switches 1~9 to set the starting address.

Master/Slave

This is the operating mode which will allow 1 fixture to act as the “master” and control all of the other “slave” fixtures. You must set both the master and the slave(s) fixtures to the correct mode for this operation. They must also be connected using DMX cables, in a daisy chain fashion.

Master Settings:

1. Using the DIP switches, set the master fixture to one of the following modes: custom, automatic, or sound-activated.

Slave Settings:

1. Turn DIP switch [10] to the ON position.
2. Turn DIP switches 1~9 to the OFF position.



Do not connect a DMX controller to the daisy chain for this operation.



Only one fixture may be set to master in the DMX daisy chain.

Standalone Operation

Automatic

This fixture has a preprogrammed chase. This is accessed via the DIP switches. Please see the instructions below for further explanation.

1. Plug the fixture into power.
2. Turn DIP switch [8] to the ON position.
3. Turn all other DIP switches to the OFF position.



Do not connect a DMX controller to the daisy chain for this operation.

Sound-Active

This fixture has a preprogrammed sound triggered chase. This is accessed via the DIP switches, and the speed may be adjusted using the audio adjustment knob. Please see the instructions below for further explanation.

1. Plug the fixture into power.
2. Turn DIP switch [9] to the ON position.
3. Turn all other DIP switches to the OFF position.



Do not connect a DMX controller to the daisy chain for this operation.

Custom Program

This fixture has individual control over each of the following functions via DIP switches: color, strobe, and motor rotation. These functions may be combined in any combination. Please see the instructions below for further explanation.

1. Plug the fixture into power.
2. Turn DIP switches [8] ~ [10] to the OFF position.
3. DIP switches [1] ~ [3] control the color. These may be combined.
4. DIP switches [4] ~ [6] control the strobe speed. Only 1 of these may be selected at a time. Turning them all to the OFF position allows the color to remain on constant.
5. DIP switch [7] controls the motor rotation. Turning this to the ON position will cause the motor to rotate CW/CCW at a preset speed. This may not be altered.



Do not connect a DMX controller to the daisy chain for this operation.

DMX Channel Values

CHANNEL	VALUE	FUNCTION
1	000 ⇔ 004	Color Selection (no dimming) Blackout
	005 ⇔ 028	Red
	029 ⇔ 056	Green
	057 ⇔ 084	Blue
	085 ⇔ 112	Green/Blue
	113 ⇔ 140	Red/Blue
	141 ⇔ 168	Red/Green
	169 ⇔ 197	Red/Green/Blue
	198 ⇔ 224	3-color chase
	225 ⇔ 255	7-color chase
2	000 ⇔ 004	Strobe No function
	005 ⇔ 255	Strobe (slow ⇔ fast)
3	000 ⇔ 127	Rotation Indexing
	128 ⇔ 255	Rotate (fast to slow)

DIP Switch Values

FUNCTIONS	DIP SWITCHES	NOTES & DESCRIPTION
Red	1	Combine these DIP switches to trigger simultaneously
Green	2	
Blue	3	
Strobe (slow)	4	Only 1 of these may be selected at a time
Strobe (medium)	5	
Strobe (fast)	6	
Motor	7	ON = bi-directional rotation
Automatic	8	Overrides DIP switches 1-6
Sound-activated	9	Overrides DIP switches 1-6
DMX /Slave	10	DMX mode/Slave mode activation

5. APPENDIX

DMX Primer

There are 512 channels in a DMX connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 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+).

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 lamp life and increased mechanical wear. Be sure to power off fixture before conducting maintenance.

- Unplug fixture from power.
- Use a vacuum or air compressor and a soft brush to remove dust collected on external vents.
- 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 and/or mirrors 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 surroundings can cause greater accumulation of dirt on the unit's optics. Clean with soft cloth using normal glass cleaning fluid. Clean the external optics at least every 20 days. Clean the fixture at least every 30/60 days.



Always dry the parts carefully after cleaning them.



Never spin a fan using compressed air.

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.

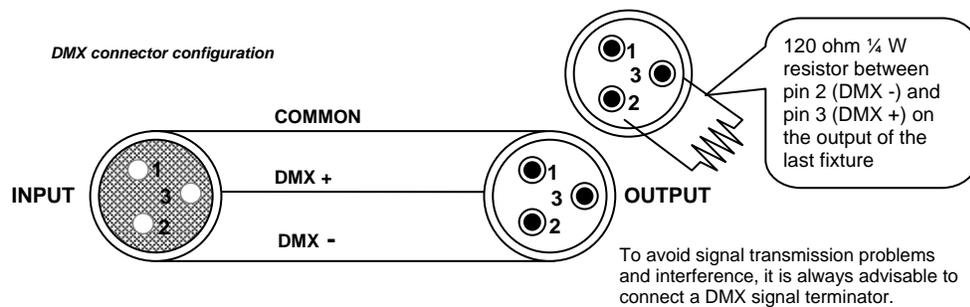
DMX Data Cable

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:

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

Cable Connectors

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



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.

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX 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.



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 fixtures 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 m (1640 ft)
Maximum recommended number of fixtures on a serial data link: 32

3-Pin to 5-Pin Conversion Chart

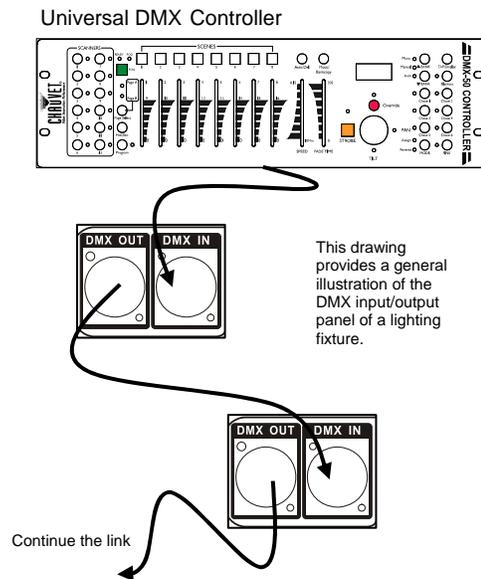


If you use a controller with a 5-pin DMX output connector, you will need to use a 5-pin to 3-pin adapter. The chart below details a proper cable conversion:

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
Not used		Pin 4
Not used		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



Setting the Starting Address

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a start address from 1–512. 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 six 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 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	POSSIBLE CAUSE(S)	POSSIBLE ACTION(S)
Breaker/Fuse keeps blowing	<ul style="list-style-type: none"> Excessive circuit load Short circuit along the power wires 	<ul style="list-style-type: none"> Check total load placed on the electrical circuit. Check for a short in the electrical wiring (internal and/or external)
Device does not power up	<ul style="list-style-type: none"> No power Loose power cord 	<ul style="list-style-type: none"> Check for power on power outlet Check power cord
Fixture is not responding to DMX	<ul style="list-style-type: none"> Wrong DMX addressing Damaged DMX cables Wrong polarity settings on the controller Loose DMX cables Faulty DMX interface Faulty Main PCB 	<ul style="list-style-type: none"> Check Control Panel and unit addressing Check DMX cables Check polarity switch settings on the controller Check cable connections Replace DMX input Replace Main PCB
Loss of signal	<ul style="list-style-type: none"> Non DMX cables Bouncing signals Long cable / Low level signal Too many fixtures Interference from AC wires 	<ul style="list-style-type: none"> Use only DMX compatible cables Install terminator as suggested Install amplifier right after fixture with strong signal Install an optically coupled DMX splitter after unit #32 Keep DMX cables separated from power cables or black lights



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

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**)

World Wide Web

www.chauvetlighting.com

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 Merchandize Authorization Number (RMA #). Products returned without the RMA # will be refused. Call CHAUVET® and request an 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 pack fixture properly; any shipping damage resulting from inadequate packaging is the customer's 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 product(s).



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..... 10.5 in (269 mm)
Width 12.1 in (308 mm)
Height 13.7 in (348 mm)
Weight 8 lbs (3.6 kg)

POWER

Auto-ranging Power Supply..... 100~240 VAC, 50/60 Hz
Power Consumption @ 120 VAC, 60 Hz..... 16 W (0.3 A) max, 0.1 A inrush
Power Consumption @ 230 VAC, 50 Hz..... 16 W (0.2 A) max, 0.2 A inrush
Power output 26 units max
Fuse..... F 2 A, 250 V

LIGHT SOURCE

LED..... 2, 3 W (850 mA x3) 50,000 hrs

PHOTO OPTIC

Coverage Angle..... 155°

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 3

ORDERING INFORMATION

Trident™..... TRIDENT

WARRANTY INFORMATION

Warranty 2-year limited warranty