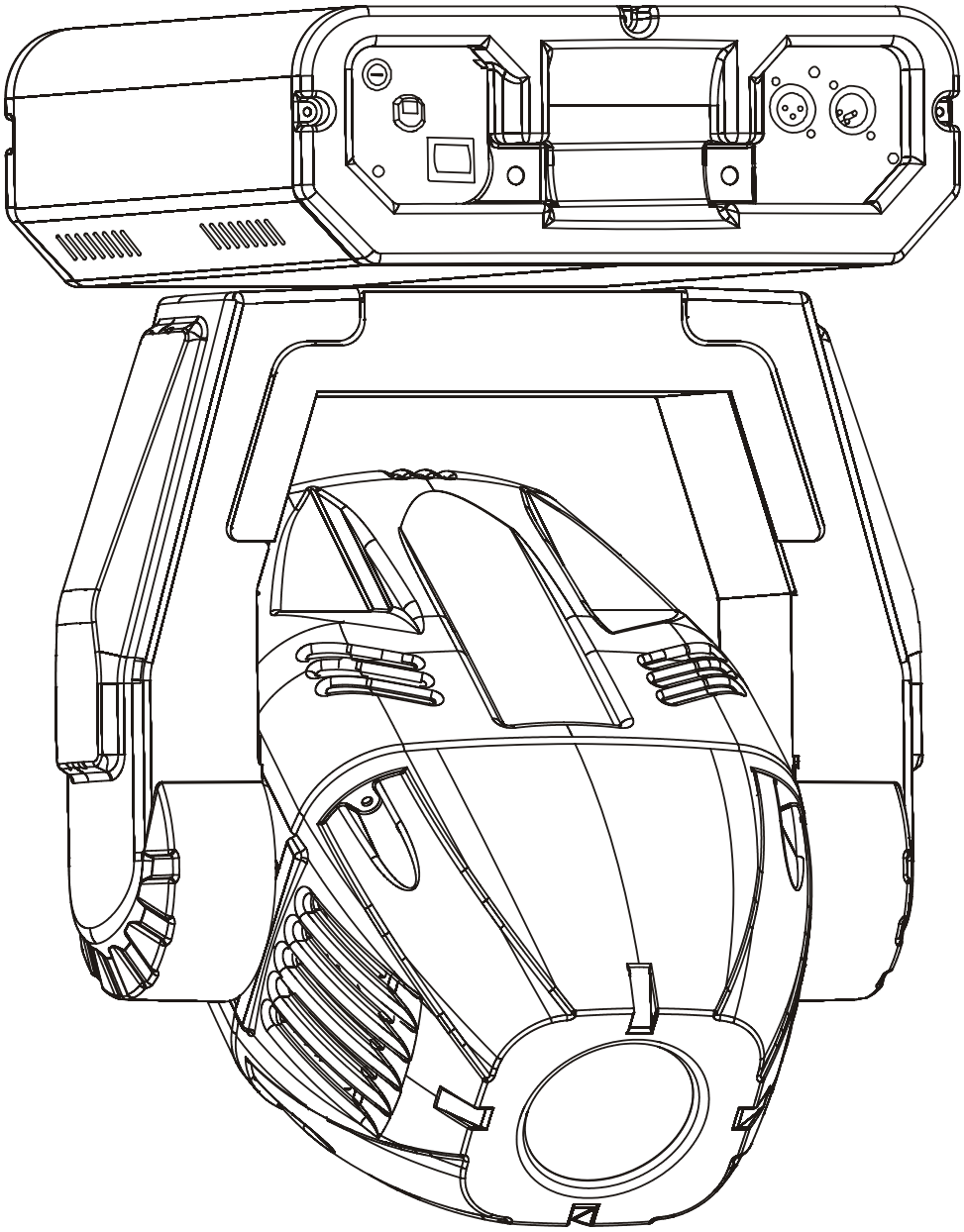
TRACKER SPOT 575



Information specifically for:

IL-TRACKER575S/1

PRO SERIES

CE

V1.3

This manual contains important information.
Please read before operating fixture.

⚠ *IMPORTANT INFORMATION* ⚠

Save original packing and documentation for warranty, service and return issues.

Limited Warranty: This warranty covers defects or malfunctions in this equipment. This warranty lasts for a period of one year from date of purchase. It is the owner's responsibility to provide invoices for proof of purchase, purchase date and dealer or distributor. If purchase date can not be provided, warranty period will start at manufacture date. It is the sole discretion of Techni-Lux to repair or replace parts or equipment. All shipping will be paid by purchaser. This warranty does not cover lamps, fuses, belts, power semiconductors, relays, cleaning, standard maintenance adjustments or normal wear items or any problem resulting from the following: improper wiring, incorrect voltage (including low or over voltage conditions and lightning), abuse, misuse, improper maintenance or an act of God or damage resulting from shipping. Warranty will be null and void if the product is altered, modified, misused, damaged, or subjected to unauthorized repairs. Lamps are covered by relevant manufacturer warranty. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Any liability for consequential and incidental damages is expressly disclaimed. No other warranty, expressed or implied is made. Techni-Lux liability in all events is limited to, and shall not exceed, the purchase price paid.

Returning equipment and Repairs: All returns must be accompanied by a Return Merchandise Authorization (RMA) number and sent pre-paid. Contact the dealer or Techni-Lux directly to obtain an RMA. The RMA number must be clearly listed on the shipping label. Due care must be exercised in packing all merchandise to be returned. All repairs must be accompanied by a written explanation of the claimed problem or error encountered. Techni-Lux is solely responsible for determining a product's eligibility for coverage under warranty. If returning for consideration of credit, all accessories and documentation, original protective material and cartons must be included and the equipment, packing and carton must be in new resalable condition. Credit for returned merchandise will be issued at the lowest current price and is subject to a restocking fee of 20%. No returns accepted on discontinued items. Techni-Lux is not responsible for merchandise damaged in transit and reserves the right to refuse any return that is damaged by the carrier, not accompanied by a Return Authorization Number (RMA#) or sent by freight collect.

Claims: All claims must be made within seven (7) days of receipt of merchandise. Any physical damage must be reported to carrier upon receipt of merchandise.

Please record the following information for future reference:

Model Number: IL-TRACKER575S/1

Serial Number: _____

Dealer: _____

Date of Purchase: _____

www.Techni-Lux.com
10779 Satellite Boulevard
Orlando, FL 32837
U.S.A.

Table of Contents

Specifications

Fixture Overview

- Pan range of movement: 530 degrees
- Tilt range of movement: 280 degrees
- High resolution 16 Bit Pan/Tilt movement for accurate positioning
- Pan/Tilt motor speed
- Consistent & auto correcting Pan/Tilt positioning
- Color wheel with 9 dichroic colors plus open
- Color wheel with continuous rotation for rainbow effect
- Additional color wheel with 9 dichroic colors plus open
- Remote lamp on and off
- Remote reset
- UV black light effect
- 3-facet rotating prism, variable speed in both directions
- Static effect/gobo wheel with 9 gobos plus open
- Gobo wheel with 6 rotating, indexable and interchangeable gobos plus open
- Gobo wheel with continuous rotation
- Remote selection of stepped zoom degrees: 15°, 18°, 22°
- Motorized focus
- Motorized iris
- Variable shutter for strobing effects and quick blackouts
- Motorized dimmer from 0 to 100%
- Control via DMX512 using 3 pin In/Out XLRs
- Uses 17 Channels of DMX
- Digital display for DMX addressing and fixture settings
- Ventilation via forced air
- Anti-reflective coated glass optics
- High efficiency parabolic glass reflector
- Lamp: CSR575/2SE or MSR575/2
- Luminous output: 49,000 Lux

Physical

Color	Black
Width	18 in (45.7cm)
Depth	18 in (45.7cm)
Height	27 in (68.6 cm)
Weight	91 lbs (41.3 kg)
Gross Weight	103 lbs (46.7 kg)

Lamp Source

Lamp Type	575w Metal Halide Discharge
Base	GX9.5
Lamps	GE - CSR575/2SE or Phillips - MSR575/2
Lamp Specs	575w, 1000 Hour, 7200°K Color Temp, 49000 Lumens
Ballast Type	Magnetic

Environmental

Maximum ambient temperature	105°F (40°C)
Maximum exterior surface temperature	176°F (80°C)
Minimum distance to flammable surface	3.3ft (1m)
Minimum distance to illuminated surface	4ft (1.2m)

Electrical

Factory Setting	120v 60Hz
Selectable Voltages	100v / 115v / 208v / 220v @ 50 or 60Hz
Rated Power	850W, 7A @ 120v
Fuses	15A Time Delay (Slow) Size: ¼" x 1¼"

Control

Protocol	USITT DMX512 (1990)
Channels	17
Pan / Tilt Resolution	16 bit
Data I/O	3 Pin XLR (Cannon)
Modes	Master / Slave / DMX

Optics

Reflector	High efficiency Dichroic coated Parabolic
Lenses	Anti-reflective coated
Zoom	15°, 18°, 22° Stepped, Selectable Focus Correction

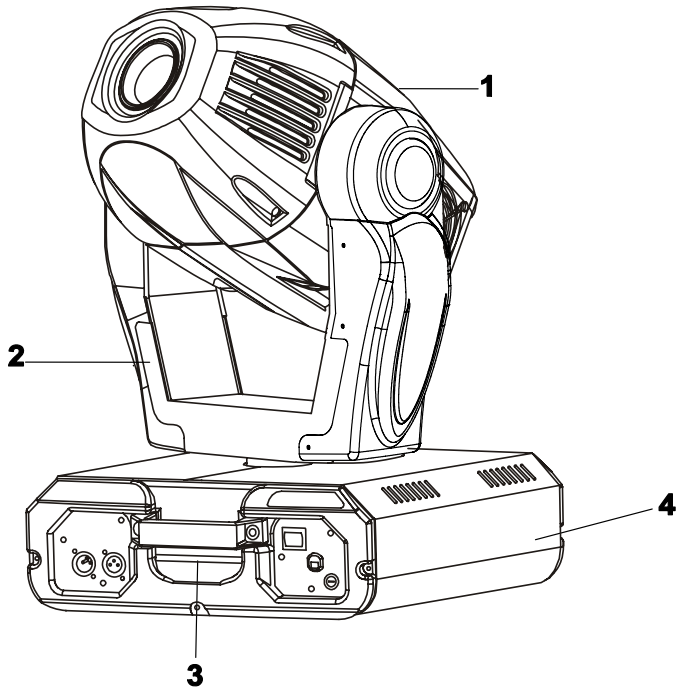
Gobo / Color Size

Gobo	Outside Diameter	1.06" (26.9mm)
	Image Diameter	0.91" (23mm)
	Thickness Max	0.138" (3.5mm)

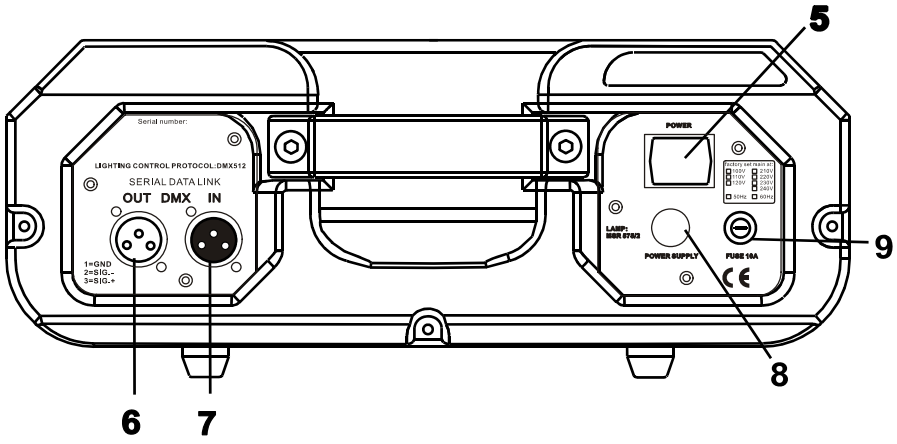
Rigging

Position	Floor or Truss mount
Orientation	Any
Mounting Points	2
Clamp Orientation	0°, 90°, 180°, 270°
Safety Point	Eye Bolt

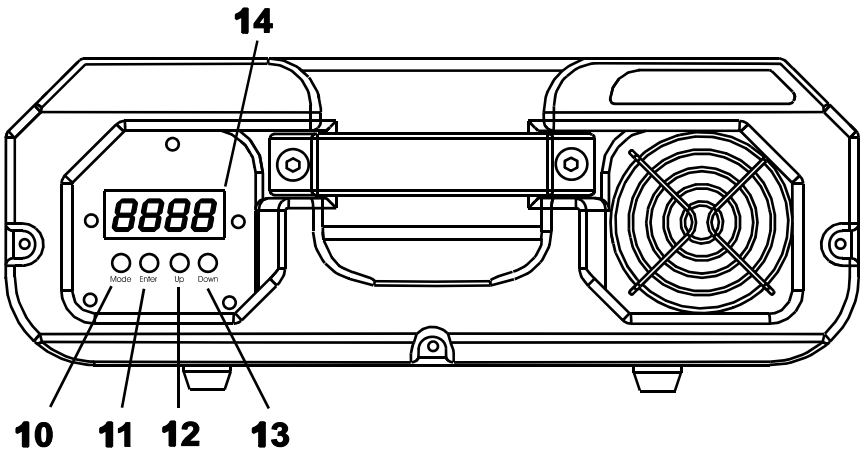
Unit Parts



1 - Moving head
2 - Yoke
3 - Carry handles
4 - Base



Rear panel:
5 -Power switch
6 -DMX output
7- DMX input
8- Power cord
9- Fuse holder



Front panel:
10 - Mode-button
11 - Enter-button
12 - Up-button
13- Down-button
14 - Display

Unpacking

Immediately upon receipt, carefully unpack and inspect the fixture to verify that all parts are present and have been received in good condition. If any parts appear damaged from shipping or the shipping carton shows signs of mishandling, retain all packing material for inspection and notify the shipper immediately. Save all original packing and carton. In the event that the merchandise is to be returned, the original carton and packing must be used. The customer will be billed for a new carton and packing if merchandise is received without the original carton and packing. The plastic bag shipped with the fixture can be used to keep the fixture clean if stored or installed in a temporarily dusty environment. Do not operate fixture with plastic bag in place.

Save Shipping Materials

The packing and carton are designed to provide the fixture with protection during shipping. Save original packing and documentation for warranty, service and return issues. Additional charges will be applied to return items not received in original or incomplete packing.

Claims

Physical damage must be reported to the Freight Carrier or Shipping Company upon receipt of merchandise. Damage incurred in shipping is the responsibility of the Freight Carrier or Shipping Company. It is the customer's obligation in the event that merchandise is received damaged caused by shipping to notify the Freight Carrier or Shipping Company immediately. All other claims not related to damage incurred during shipping must be made to the Dealer or Distributor within 7 (seven) days of receiving merchandise.

Returns

Returned merchandise must be sent prepaid, in the original packing with a Return Merchandise Authorization number (RMA) clearly listed on the shipping label. Items sent by Freight Collect or without a RMA number will be refused. Call your sales person and request a RMA prior to shipping. Be prepared to provide the model number, serial number and a brief description of the nature of the return. Shipping damage resulting from inadequate packaging is the customer’s responsibility. Customer will be charged additional shipping charges to return products received in non original packing and or cartons.

Power

Do not apply power to the fixture until input voltage setting and power source are verified. For protection against electric shock, fixture must be connected to suitable earth ground. Make sure fixture is cool and disconnected from power mains before any service.

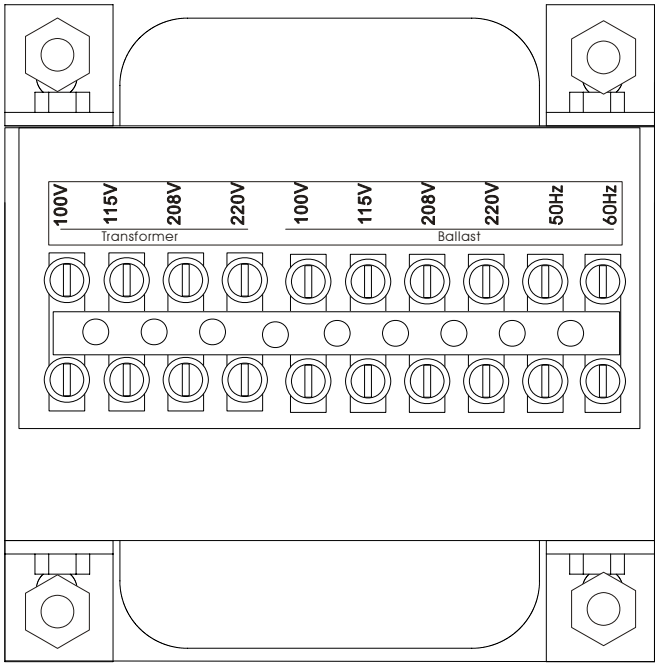
The listed current rating is its average current draw under normal conditions. All fixtures must be powered directly from a switched circuit. This fixture cannot be run on a rheostat or dimmer circuit even if used solely for a 0% to 100% switching. Before applying power to a fixture, check that the fixture's input voltage matches the power source voltage. Consult a qualified electrician if there are any concerns about proper connection to power.

Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

Voltage Selection

Make sure fixture is cool and disconnected from power mains before any service.

This fixture ships from the factory set for 115v 60Hz operation unless otherwise specified or marked. Before accessing the Transformer Connection, make sure fixture is cool and physically disconnected from power mains. Remove the metal cover that extends across the base from the Power Input to the Display. It is held by 9 Phillips screws. Two connections must be moved to adjust input voltage and one must be moved to adjust Line Frequency.



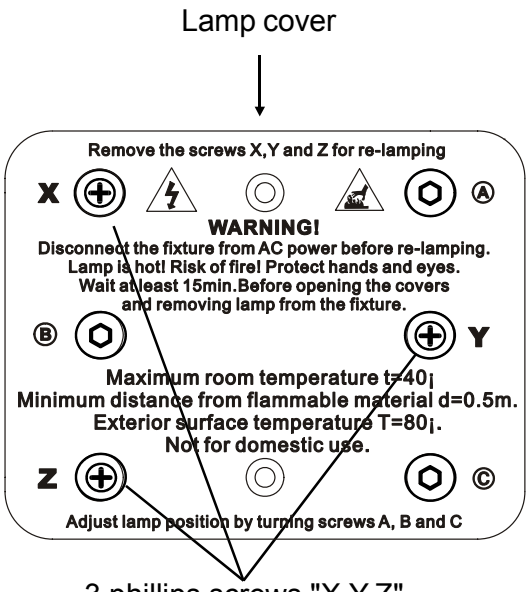
Lamp

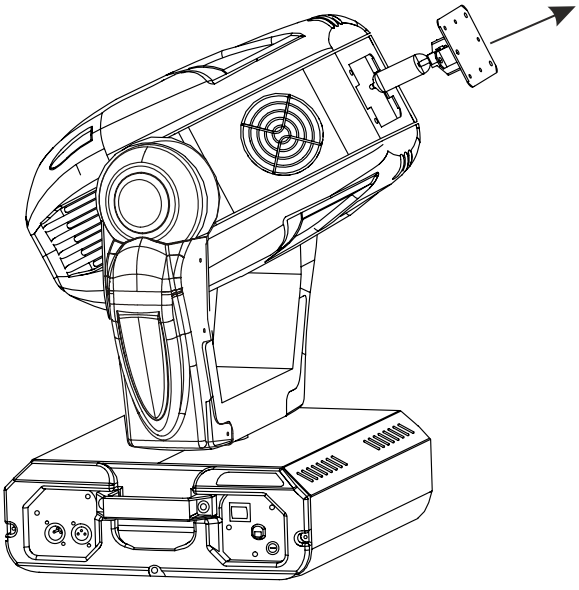
Make sure fixture is cool and disconnected from power mains before any service.
Do not touch the lamp glass with bare fingers. Wear eye protection when handling lamp.

When operating, always allow the lamp to cool at least 5 minutes before attempting to re-strike the lamp. Not doing so can cause damage to the fixture and lamp. This fixture uses a 575w Metal Halide Discharge lamp. Either a CSR575/2SE from GE or a MSR575/2 from Phillips can be fitted. Both lamps have an average rated life of 1000 hours. The lamp manufacturer determines the rated lamp life under specific test conditions. Factors such as the number of strikes, lamp orientation, line voltage and lamp temperature all affect the actual number of hours a lamp will operate. Lamp temperature is the most controllable and with routine cleaning and maintenance, can be kept in the optimal range to allow the maximum possible life. As Discharge lamps age, the glass envelope becomes weaker increasing the chance of failure due to the high internal pressures. Rupture could result in damage to the fixture and/or injure people nearby. Lamp manufacturers state operating a lamp beyond its rated number of hours constitutes a considerable risk for lamp rupture. Lamp manufacturers recommend lamps be replaced once the rated life of a lamp has been reached.

Lamp Installation

1. Physically disconnect fixture from power mains.
2. Locate the Lamp Cover. Do not proceed until the Lamp Cover is cool to touch.
3. Remove the 3 fastening screws labeled X, Y and Z.
4. Carefully draw out Lamp Cover and lamp. Remove old lamp (if installed). Never handle lamps with bare hands. Dispose of lamp properly.





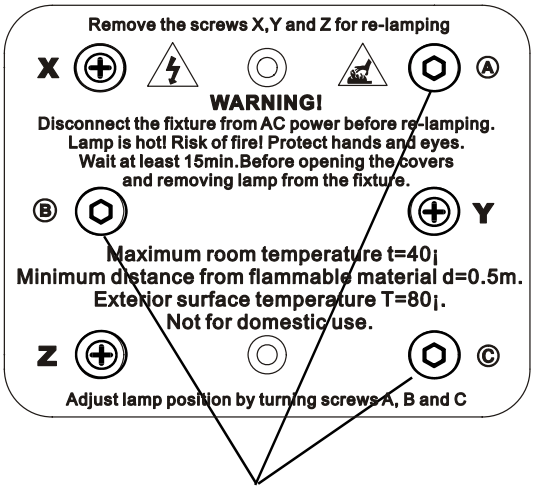
Do not operate this fixture with opened housing-cover!

5. Insert new lamp into socket. Ensure lamp is properly seated.
6. Carefully replace Lamp Cover and lamp. Ensure that lamp wires are not pinched or in contact with the lamp when the Lamp Cover is fully installed.
7. Replace the 3 fastening screws labeled X, Y and Z.

Lamp Alignment

Due to slight variations between lamps it may be necessary to perform fine adjustments to remove excessively dark or bright spots in the output field. The lamp holder is aligned at the factory, large adjustments to the alignment will not be necessary. Excessively bright spots can damage optical components.

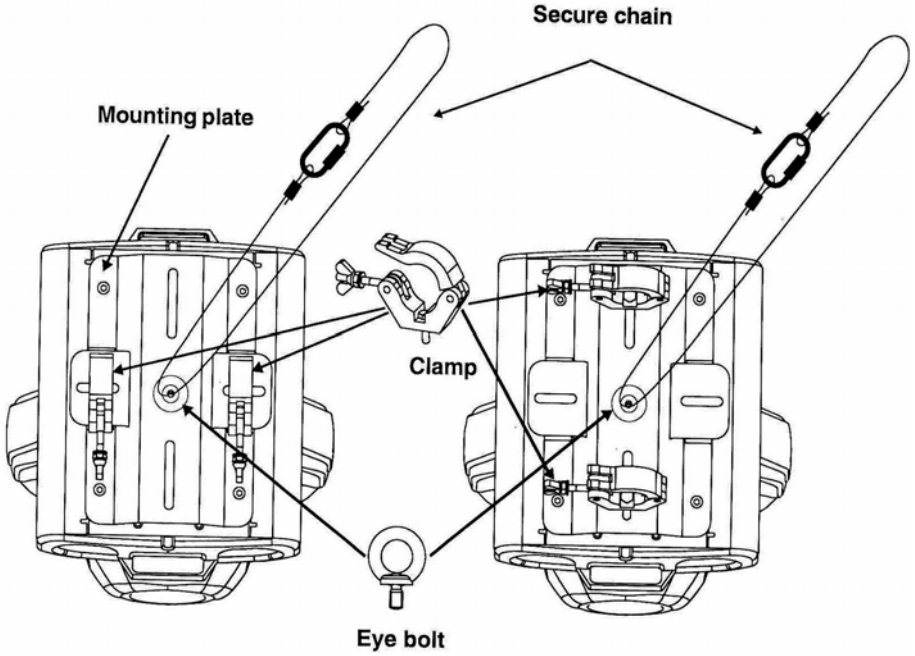
1. Apply power to the fixture.
2. Using a controller, strike the lamp with shutter and dimmer to 100% and project an open white beam on a flat neutral colored surface.
3. Center the bright spot of the beam using the Adjustment Screws A, B and C.
4. After centering the bright spot of the beam, turn each Adjustment screw ¼ turn either all clock wise or all counter clock wise until the projected beam is as evenly bright as possible.



3 adjustment screws "A,B,C"

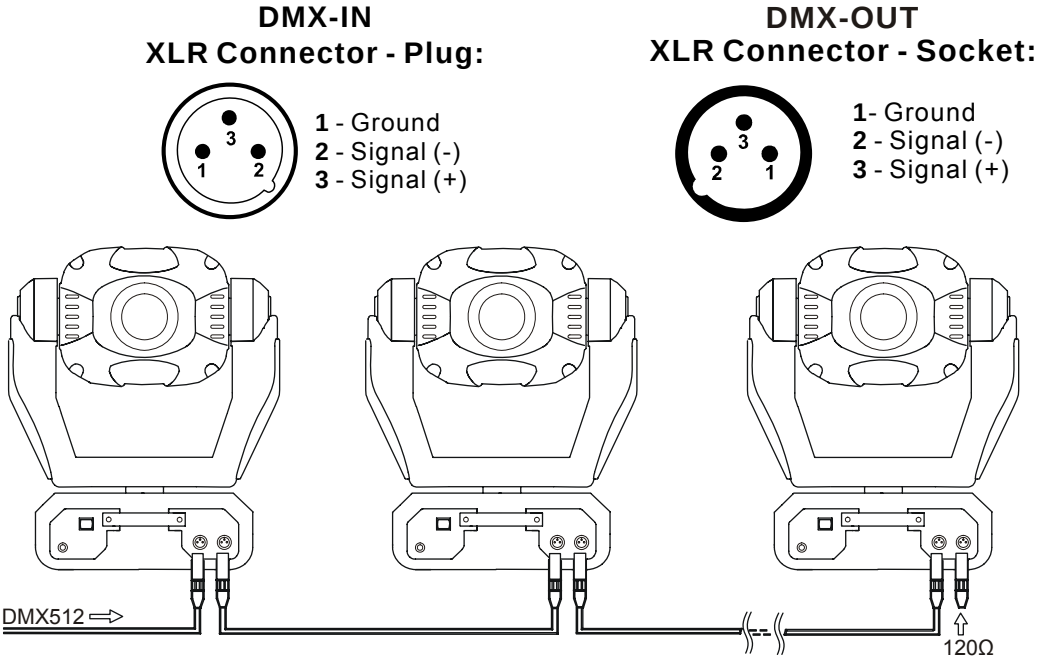
Mounting

Always consult a qualified professional when rigging. This fixture may be placed on any flat surface or truss that is capable of safely supporting the weight. When selecting a mounting position, take into consideration access for routine maintenance. This fixture may be mounted in any position provided there is adequate room for movement and ventilation. Mount the fixture securely using two mounting clamps and a safety cable. An Eye Bolt is provided for safety attachment. Safety cables must always be attached to the fixture. Do not use handles as secondary mounting points. Do not mount in a place where the fixture will be exposed to rain, high humidity, extreme temperature changes or restricted ventilation. Do not obstruct the vents or fans. Keep fixture a minimum of 3.3ft (1m) from flammable materials.



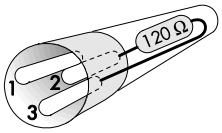
Data Link DMX-512

For data, this fixture uses 3 pin XLR (Cannon) type connectors and shielded twisted pair cable approved for EIA-422/EIA485 use. Fixtures are connected in Daisy Chain topography with only one data source and no branching is allowed. Systems using 5 pin DMX interfaces can be accommodated by purchasing 3-to-5 pin adapters or building adapter cables.



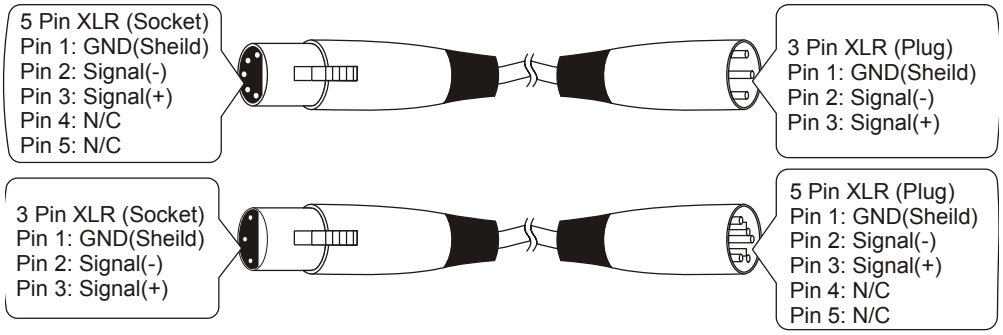
Data Terminator

A Data Terminator can be connected to the DATA OUT connection of the last fixture to reduce the effects of noise in the signal; it is not required for all installations. To make a Data Terminator, connect a 120-ohm ¼ watt resistor across pin 2, Data Negative (S-) and pin 3, Data positive (S+). A qualified technician can determine if a Data Terminator is needed.



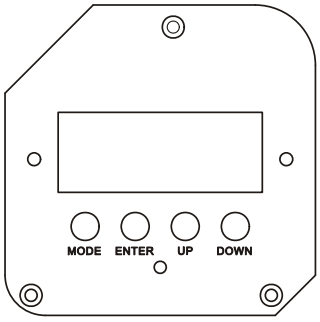
Adapter 5-to-3 pin

Numbers designating each pin can be found on connectors. Converting between the two XLR types is done in a pin-to-pin fashion. Connect the shields to pin 1, then connect pin 2 to pin 2 and pin 3 to pin 3. This is true for converting either 5 to 3 pin or 3 to 5 pin regardless of either connector's gender. Pins 4 and 5 are not used on the 5 pin XLR connectors.



Control Panel Menu

Use the fixture's Control Panel to access the Control Menu. The MODE Key moves between options, UP/DOWN selects the Action of the option and ENTER confirms the selection. Settings are stored and recalled on subsequent power cycles.



Mode	*Function*	*Action*
PAN	Pan movement direction Invert	No = Not Inverted Yes = Inverted
tiLt	Tilt movement direction Invert	No = Not Inverted Yes = Inverted
Addr	DMX Start Address	Selectable 1 to 512
rESt	Fixture Reset	No = Default Yes = Initiate Reset
COL1	Color Wheel 1 Movement Mode	No = Stepped Change Yes = Linear Change
COL2	Color Wheel 2 Movement Mode	No = Stepped Change Yes = Linear Change
GOBO	Gobo Wheel Movement Mode	No = Stepped Change Yes = Linear Change
run	Working mode	OFF = DMX-512 mode PrG = Automatic Demo
LAMP	Lamp ON/OFF	On = Lamp on Off = Lamp off

Start Address

The Start Address of a fixture is set using the "Addr" mode in the Control Panel Menu. Consult the manual of the system's DMX512 controller to select a desirable addressing scheme before addressing fixtures. Each fixture connected to the DMX-512 data link requires a Start Address to indicate the first DMX channel containing data designated for that fixture, see DMX-512 Background. Valid Start Addresses range from 1 to 512. Fixtures requiring more than one channel for control will read subsequent channels up to the total number of channels required. A fixture requiring five (5) channels of DMX, set to a Start Address of eleven (11), would read data from channels: 11 and 12, 13, 14, 15. The next logical Start Address would be channel 16. Because all fixtures see the same data, fixtures may be set to any address without concern to order in the DMX-512 chain or physical location. Choose a Start Address so the channels used do not overlap with other fixtures. In some cases, it may be desirable to set two or more same type fixtures to the same Start Address. In this case, the fixtures will be slaved together and respond to the same data.

Example Select Start Addresses for 4 fixtures each requiring 17 channels of DMX. Since these are the first fixtures added to the system, the first unit will be set to Start Address=1. This fixture occupies DMX channels 1 thru 17. The next DMX channel available for a Start Address is found by adding the previous fixture's Start Address to its channel requirement: 1+17=18. DMX channel 18 is the next available Start Address. In this example, to maximize channel usage no empty channels are left between fixtures so the second Start Address is set to DMX channel 18. The second fixture occupies DMX channels 18 thru 34. Repeat the process for the remaining two fixtures: 18+17=35 and 35+17=52. Therefore, the four 17 channel fixtures have Start Addresses of 1, 18, 35 and 52. Repeat the technique once more for the first free channel in the system, 52+17=69. Channels 69 thru 512 are available for expansion of the system.

DMX-512 Channels

The Tracker 575 Spot requires 17 channels of DMX.

Channel	***Function***
1	Pan Coarse Movement
2	Pan Fine Movement
3	Tilt Coarse Movement
4	Tilt Fine Movement
5	Movement Speed Pan/Tilt
6	Control Reset/Lamp
7	Focus
8	Color Wheel 1
9	Color Wheel 2
10	Prism
11	Fixed Gobo Wheel
12	Rotating Gobo Wheel
13	Gobo Rotation & Index
14	Iris
15	Zoom
16	Shutter
17	Dimmer

CH 1-4 : Pan / Tilt Movement

The Pan and Tilt motors use a position feedback system. If the position of either is disturbed, the fixture will correct automatically. The Pan and Tilt Menu Modes can be used to alter the default direction of movement. Movement speed is either automatically determined by the fixture or manually set using Channel 5 Pan/Tilt Movement Speed. Pan range is 530° of movement. Tilt range is 280° of movement.

CH 1 – Pan Coarse Movement (530°)	
CH 2 – Pan Fine Movement	
CH 3 – Tilt Coarse Movement (280°)	
CH 4 – Tilt Fine Movement	
DMX Value	***Function***
0 – 255	Movement - Minimum to Maximum

CH 5 : Movement Speed Pan/Tilt

When set to zero (0) the fixture automatically determines the Pan/Tilt speed. Other values are used to set the movement speed manually.

CH 5 – Movement Speed Pan/Tilt	
DMX Value	***Function***
0	Auto Speed
1-255	Fixed Speed - Fast to Slow

CH 6 : Control Reset/Lamp

Fixture reset and Lamp On/Off control is accessed from a single channel. The "No Function" values provide buffer zones between functions and are not values to which the channel should be set. In the case of noisy faders or unintentional movement, the buffers will prevent slight variations in value to toggle Lamp states or start a fixture Reset.

CH 6 – Control Reset/Lamp	
DMX Value	***Function***
0-127	No Function
128-139	RESET then Lamp ON (3 second delay)
140-229	No Function
230-239	Lamp OFF (3 second delay)
240-255	No Function

CH 7 : Focus

Adjusts the focus of the projected image. When using both Gobo wheels, varying the Focus can create many interesting effects.

CH 7 – Focus	
DMX Value	***Function***
0-255	Focus – Near to Far

CH 8 : Color Wheel 1

Color Wheel 1 holds 9 solid colors. Bi-Color and Color Scroll effects can also be set and used in conjunction with Color Wheel 2 to create many color combinations.

CH 8 – Color Wheel 1	
DMX Value	***Function***
0-9	Open
10-19	Open/Red
20-29	Red
30-39	Red/Yellow
40-49	Yellow
50-59	Yellow/Magenta
60-69	Magenta
70-79	Magenta/Green
80-89	Green
90-99	Green/Orange
100-109	Orange
110-119	Orange/Blue
120-129	Blue
130-139	Blue/Pink
140-149	Pink
150-159	Pink/UV-Blacklight
160-169	UV-Blacklight
170-179	UV-Blacklight/Deep Orange
180-189	Deep Orange
190-199	Deep Orange/Open
200-255	Rainbow Color Scroll – Slow to Fast

CH 9 : Color Wheel 2

Color Wheel 2 holds 7 solid colors plus CTO and CTB color shifts. Bi-Color effects can be set and used in conjunction with Color Wheel 1 to create many color combinations.

CH 9 – Color Wheel 2	
DMX Value	***Function***
0-12	Open
13-25	Open / Lt. Red
26-38	Lt. Red
39-51	Lt. Red / Lt. Yellow
52-64	Lt. Yellow
65-77	Lt. Yellow / Lt. Purple
78-90	Lt. Purple
91-103	Lt. Purple / Lt. Green
104-116	Lt. Green
117-129	Lt. Green / Lt. Orange
130-142	Lt. Orange
143-155	Lt. Orange / Blue
156-168	Blue
169-181	Blue / Lt. Blue
182-194	Lt. Blue
195-207	Lt. Blue / CTO (3200°K)
208-220	CTO (3200°K)
221-233	CTO (3200°K) / CTB (6000°K)
234-246	CTB (6000°K)
247-255	CTB (6000°K) / Open

CH 10 : Prism

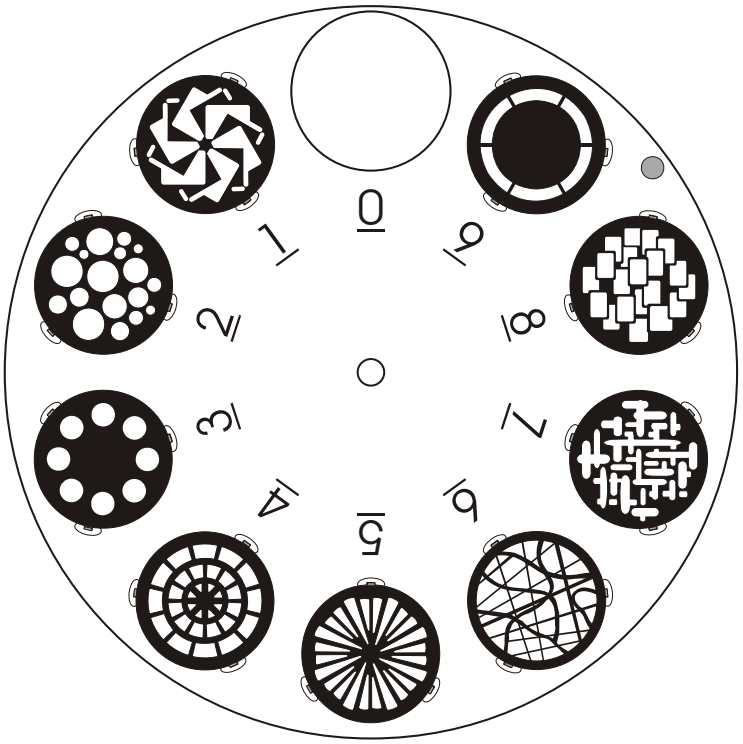
The Prism effect uses a 3 facet prism to create multiple beams. The effect can be rotated in either direction at variable speeds.

CH 10 – Prism	
DMX Value	***Function***
0-4	Open
5-127	Prism w/ Rotation – CW, Slow to Fast
128-132	Prism w/o Rotation
133-255	Prism w/ Rotation – CCW, Slow to Fast

CH 11 : Fixed Gobo Wheel

The Fixed Gobo Wheel contains 9 fixed gobos. In addition to the variable Vibrate and Gobo Scroll modes, using both Gobo wheels and varying the Focus can create many interesting effects.

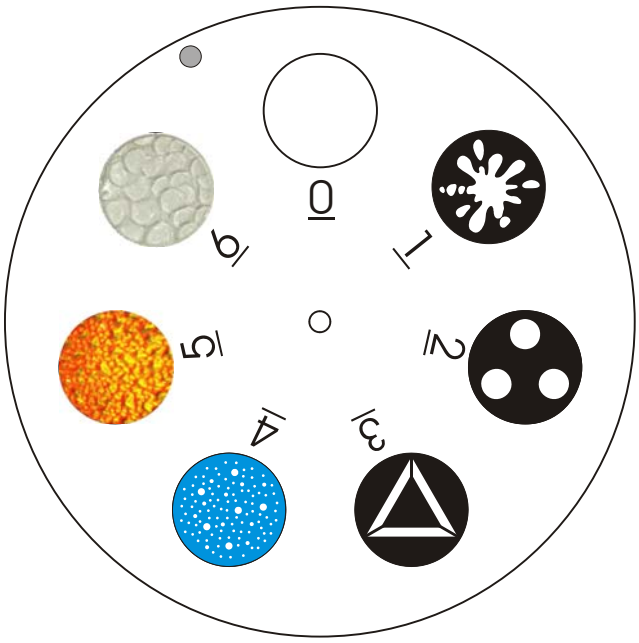
CH 11 – Fixed Gobo Wheel	
DMX Value	***Function***
0-9	Open
10-19	Fixed Gobo 1
20-29	Fixed Gobo 2
30-39	Fixed Gobo 3
40-49	Fixed Gobo 4
50-59	Fixed Gobo 5
60-69	Fixed Gobo 6
70-79	Fixed Gobo 7
80-89	Fixed Gobo 8
90-99	Fixed Gobo 9
100-111	Fixed Gobo 1 Vibrate - Slow to Fast
112-123	Fixed Gobo 2 Vibrate - Slow to Fast
124-135	Fixed Gobo 3 Vibrate - Slow to Fast
136-147	Fixed Gobo 4 Vibrate - Slow to Fast
148-159	Fixed Gobo 5 Vibrate - Slow to Fast
160-171	Fixed Gobo 6 Vibrate - Slow to Fast
172-183	Fixed Gobo 7 Vibrate - Slow to Fast
184-195	Fixed Gobo 8 Vibrate - Slow to Fast
196-207	Fixed Gobo 9 Vibrate - Slow to Fast
208-255	Fixed Gobo Scroll - Slow to Fast



CH 12 : Rotating Gobo Wheel

The Rotating Gobo Wheel contains 6 replaceable gobos, 3 metal and 3 glass. The Gobo Rotation & Index channel controls the position and rotation of the gobos. Using both Gobo wheels and varying the Focus can create many interesting effects.

CH 12 – Rotating Gobo Wheel	
DMX Value	***Function***
0-36	Open
37-73	Rotating Gobo 1 (Metal)
74-110	Rotating Gobo 2 (Metal)
111-147	Rotating Gobo 3 (Metal)
148-184	Rotating Gobo 4 (Glass – Blue Field Random Dots)
185-221	Rotating Gobo 5 (Glass – Fire Texture Dichroic)
222-255	Rotating Gobo 6 (Glass – Clear Texture)



CH 13 : Gobo Rotation & Index

Rotating gobos can be rotated in either direction or indexed to a fixed orientation.

CH 13 – Gobo Rotation & Index	
DMX Value	***Function***
0-40	Indexed – 0 to 540°
41-158	Rotation – Slow to Fast
159-255	Rotation Reverse – Slow to Fast

CH 14 : Iris

The Iris allows the diameter of the beam to be reduced.

CH 14 – Iris	
DMX Value	***Function***
0-255	Beam aperture – Large to Narrow

CH 15 : Zoom

The three step zoom feature of this fixture has two modes. The Focus Correction mode will make adjustments to help keep the image in focus when changing beam angles. The No Focus Correction mode will not adjust the focus when changing beam angles.

CH 15 – Zoom	
DMX Value	***Function***
0-32	15° Beam Angle – No Focus Correction
33-65	18° Beam Angle – No Focus Correction
66-98	22° Beam Angle – No Focus Correction
99-127	No Effect
128-170	15° Beam Angle – Focus Correction
171-213	18° Beam Angle – Focus Correction
214-255	22° Beam Angle – Focus Correction

CH 16 : Shutter

The Shutter functions in three modes. Standard Strobe Effect where the shutter Opens/Closes at a fixed rate. Pulse Strobe Effect where the Open and Close speeds are different. Random Strobe Effect runs the shutter at irregular intervals.

CH 16 – Shutter	
DMX Value	***Function***
0-31	Closed (Black Out)
32-63	Open
64-95	Strobe Effect - Slow to Fast
96-131	Pause in current position
132-159	Pulse Strobe Effect - Slow to Fast
160-191	Pause in current position
192-223	Random Strobe Effect
224-255	Open

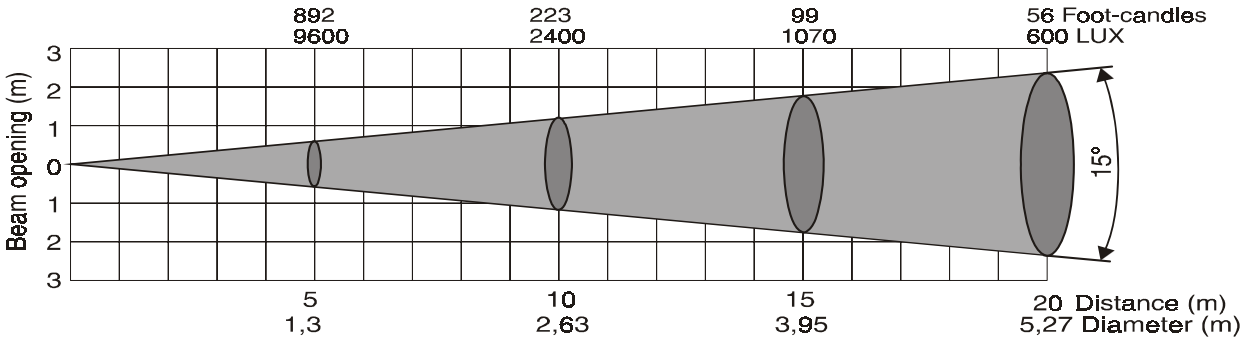
CH 17 : Dimmer

The dimmer is used to vary the intensity of the beam from full open to dark.

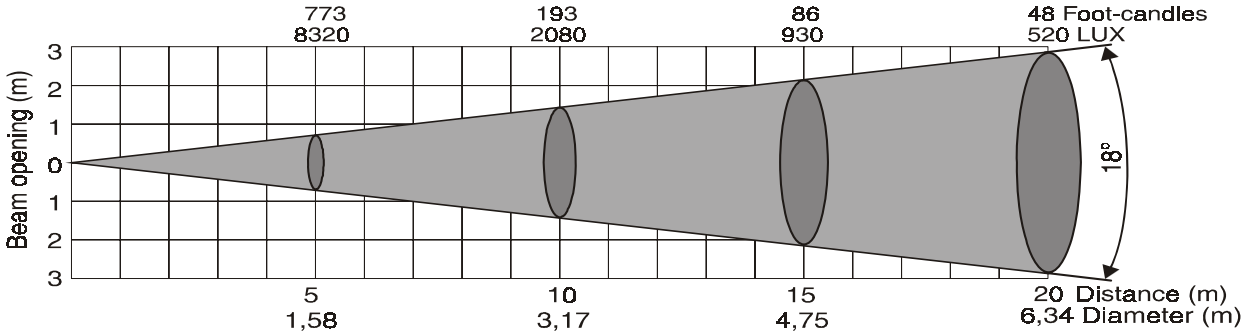
CH 17 – Dimmer	
DMX Value	***Function***
0-255	Intensity - Dark to Full Open

Photometric Charts

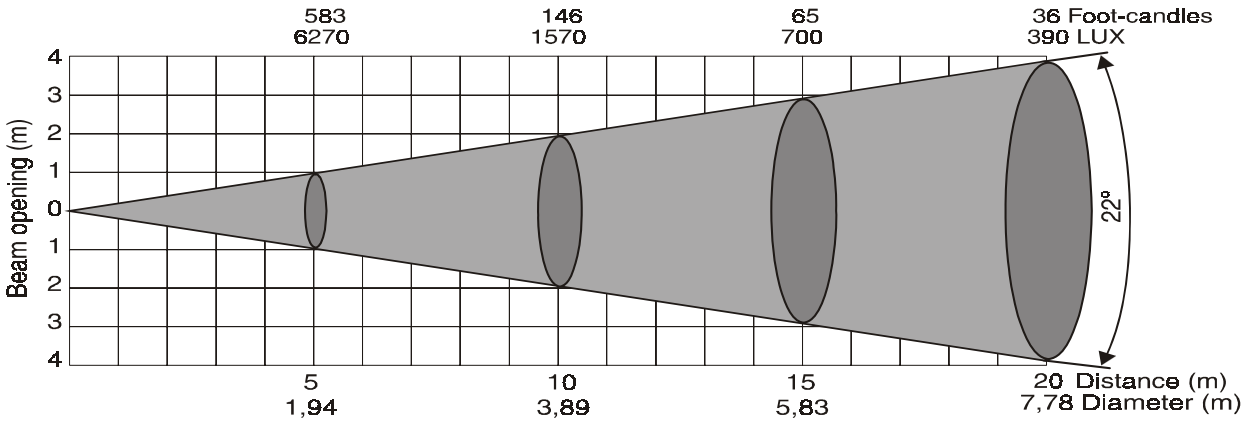
15° radiation angle



18° radiation angle



22° radiation angle

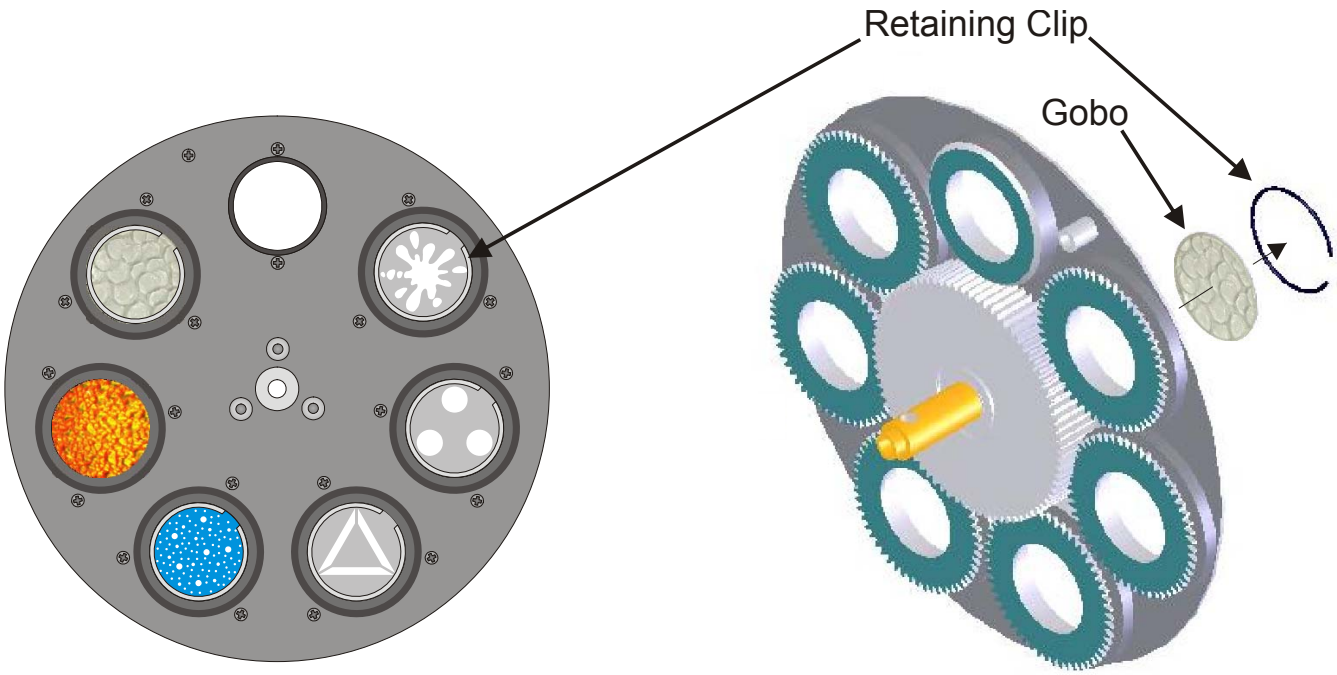


Installing Gobos

Make sure fixture is cool and disconnected from power mains before any service.
Do not touch gobos with bare fingers.

Care must be used when removing and replacing individual rotating gobos. Take precautions not to scratch or damage either the glass or metal gobos. The use of cotton gloves will keep finger prints off of gobos.

1. Remove fixtures covers to gain access to the gobo wheel. Physically rotate the Rotating Gobo wheel to gain access to the selected gobo.
2. Locate the Retaining Clip that secures the gobo in the rotating bearing. Pull the ends of the clip toward the center of the bearing unit it releases from the retaining groove and can be withdrawn.
3. Carefully remove the spring and gobo.
4. Place the new gobo in the bearing. If the gobo is a textured effect, install the smooth side toward the lamp. If the gobo is a dichroic (glass litho), install with the coated side away from the lamp. To find the coated side, place a pointed object such as a small screw driver or pen against one side of the gobo. View at an angle such that the reflection of the pointed object can be seen on the surface of the gobo. The reflection will appear to meet the object on the coated side (place toward lamp) and on the uncoated side there will appear to be a slight gap between the reflection and the object.
5. Replace the clip making sure it is securely seated in the retaining groove. Be careful not to scratch gobos when reinstalling the Retaining Clip.
6. Clean finger prints from the gobo using a soft lint free cloth or tissue and either Isopropyl or Denatured Alcohol.



DMX-512 Background

DMX-512 is a digital data transmission standard developed by the United States Institute for Theater Technology (USITT). It is designed to enable control of lighting equipment, originally dimmers. DMX deals solely with the formatting of data for transmission and does not dictate how the data is created or used.

Under DMX, signals are transmitted in much the same way a computer modem transmits data. The Data, divided in to channels, is "Framed" using a start bit, high (1), eight data bits and finally, two stop bits, both high (1). DMX uses no parity to check the integrity of the signal. Instead, DMX relies on the ultra low probability of an error occurring in the same place when the data is resent. The rate at which data is sent is fixed at 250k bps, almost four and a half times faster that a 56k modem. This speed allows all data on a DMX chain to be updated more than 44 times every second.

The transmitted data follows a specific format. DMX allows for 512 channels each with eight data bits, giving each channel the possibility of 256 values. When a data "Packet" is sent, all channels are transmitted one after another. Even if the data on a specific channel has not been changed, it must be sent. In a packet, a "start code" of all zeros is sent before the data to identify the signal as a Standard DMX transmission. This start code is transparent to the user and is handled by the controller.

The physical signals are transmitted using a twisted pair of wires and a common shield, a configuration called Balanced. The controller and all receiving equipment are connected using a “Daisy Chain" connection. The signal is jumped from the controller to a piece of DMX equipment. From there, the signal is jumped to the next piece of equipment and so on until the last piece of equipment is connected. No branches are allowed and the signal does not come back to the controller. The final piece of equipment will have only one cable connection. As a result, all equipment connected to the chain will see exactly the same signal whether it is first or last. When connecting equipment, no particular attention needs to be paid to the order in which the equipment is connected. Depending on the conditions and equipment, a line terminator may be required. If there is any question, in most circumstances the addition of a terminator will not degrade the signal. To make a terminator, add a 120-ohm resistor between the Signal Data Negative and Signal Data Positive pins of a connector in the last piece of equipment in the chain.

The DMX Standard calls for connections between DMX compatible equipment to be made using 5 pin XLR connectors. However, it is common to see fixtures with 3 pin XLR connectors as these types of balanced or “Lo-Z” cables are common in the audio industry. In either case, pin numbers are the same and carry the same signals.

Pin 1 - Signal Common (Shield)
Pin 2 - Signal Data Negative
Pin 3 - Signal Data Positive
Pin 4 - (not used)
Pin 5 - (not used)

Maintenance

Make sure fixture is cool and disconnected from power mains before any service.
Do not touch the lamp glass with bare fingers. Wear eye protection when handling lamp

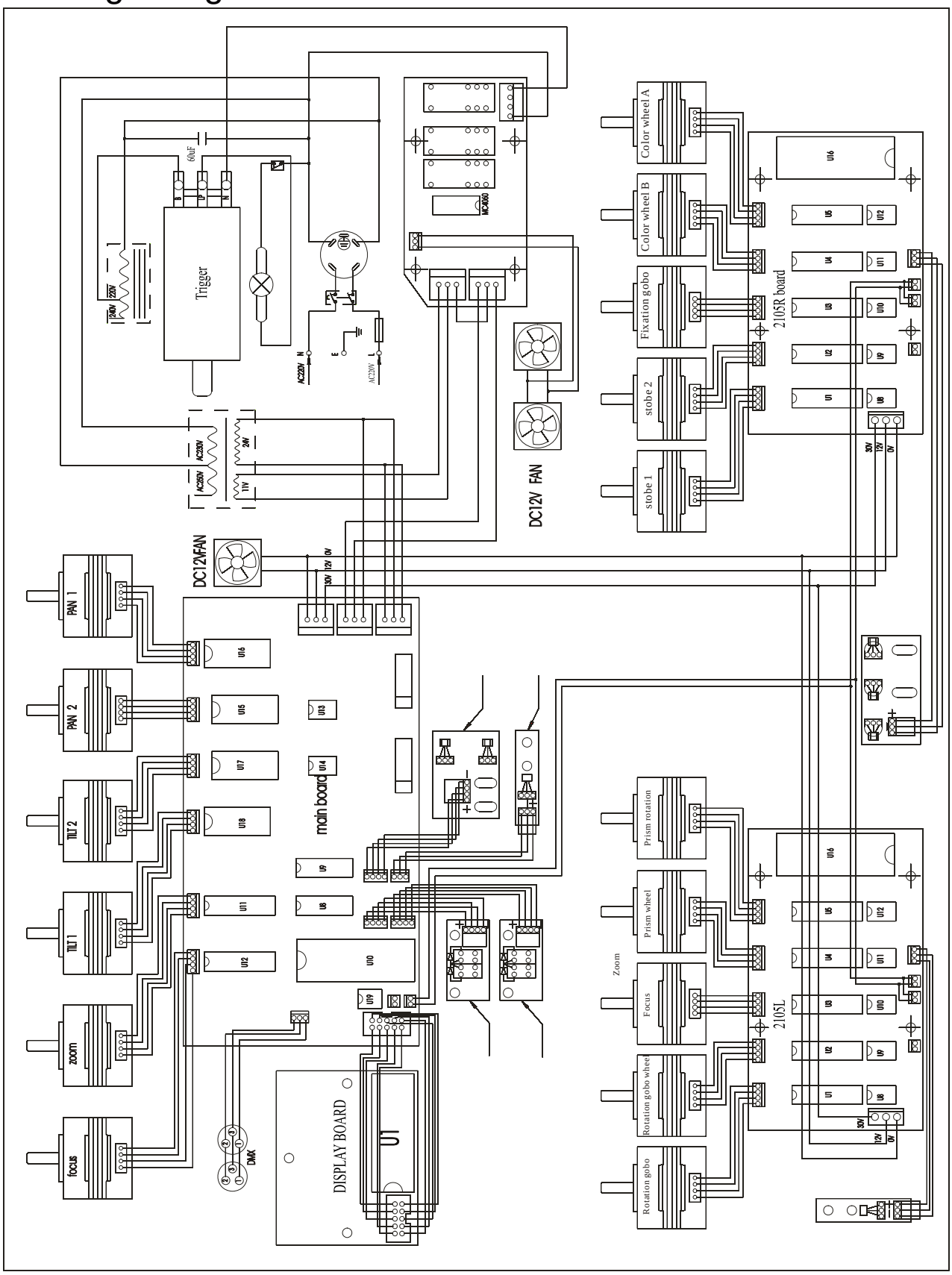
Weekly operating hours and environmental conditions will establish how often the fixtures need cleaning. Fixtures should be cleaned and inspected at least once a month to maintain optimum performance. Accumulation of dust and fog residue increases heat build up, can lead to malfunctions, overheating and reduction in maximum light output. This condition may cause undue stress on electronics, mechanical elements, reduce lamp life, fixture life and over all performance. Before conducting any maintenance, disconnect fixture from power mains.

1. Disconnect fixture from power mains.
2. Use a vacuum with a soft brush to remove dust collected on external vents and internal components. If using an air compressor, use low pressures and extreme care to prevent damaging any internal parts or effects.
3. Vacuum dust buildup from fan intakes and check that all fans function correctly.
4. Clean all optical elements when the fixture is cold. Use a soft lint free cotton cloth or tissue and either Isopropyl or Denatured Alcohol. Any cleaner approved for coated eyeglass lenses will also work. Do not use any cleaner containing ammonia.
5. Inspect clamps and safety cables to ensure fixture is secure and safe.

Troubleshooting

Symptom	Possible Cause / Solution
No Power	Check for power on mains
	Check power switch
	Check main fuse and fuse holder
No response to DMX	Check data cables
	Check Start Address
	Check that fixture isn't in the Demo mode
Incorrectly responds to DMX (Diagnostic technique for DMX issues: Set suspect fixture's Start Address the same as a correctly functioning fixture. If both units then function correctly, issue is programming)	Check Start Address
	Check for overlapping addresses
	Check fixture set up (Pan/Tilt Invert…)
	Check Data cables (faults and proper wiring)
No Lamp Power	Bad or end of life lamp
	Check DMX value for Control/Reset Lamp Channel
	Inspect fixture light path and verify no effects are blocking beam
	Remove from DMX and check to see if lamp can be struck from Control Panel
	Over temperature error – Tun Lamp off and allow fixture to cool then attempt to restrike the lamp. If this is the case, check all fans.
Erratic operation	See "Incorrectly responds to DMX"
	Check for properly wired DMX cables
	Check for broken wires inside unit
	Check for damaged Data transceiver IC.
An effect wheel doesn't go to correct position	Check sensor and magnet
	Check belts (if applicable)
	Check motor with no power, should be able to move easily.

Wiring Diagram



Accessory Items

Order Code	Description
LCSR575/2SE-G	Replacement Lamp GE CSR575/2, 575w, 1000 Hours, 7200K
LMSR575/2-P	Replacement Lamp Phillips MSR575/2, 575w, 1000 Hours, 7200K
CLAMP-MEGA/B	Clamp-Mega Black - Heavy Duty
CLAMP-CBHALF	Coupler Half Cheeseborough
SAFETYCABLE1	Safety Cable Silver 30”
SAFETYCABLE2	Safety Cable Black 30”
SAFETYCABLE3	Safety Cable Black 18”
SAFETYCABLE4	Safety Cable Silver 18”
CA-XLR3/1	Pre-made 1’ 3-pin XLR Cable
CA-XLR3/5	Pre-made 5’ 3-pin XLR Cable
CA-XLR3/10	Pre-made 10’ 3-pin XLR Cable
CA-XLR3/20	Pre-made 20’ 3-pin XLR Cable
CA-XLR3/50	Pre-made 50’ 3-pin XLR Cable
CA-XLR3/100	Pre-made 100’ 3-pin XLR Cable
CO-XLR3M	XLR Connector 3-pin Male
CO-XLR3F	XLR Connector 3-pin Female
CO-XLR5M	XLR Connector 5-pin Male
CO-XLR5F	XLR Connector 5-pin Female
CO-XLRTERM3	XLR 3 Pin Data Terminator
CO-XLR3MTO5F	XLR 3 Pin Male to 5 Pin Female Adapter
CO-XLR5MTO3F	XLR 5 Pin Male to 3 Pin Female Adapter