Waterfall 250 Pro

Rev. 12/28/05

www.elationlighting.com

Contents

1. GENERAL INFORMATION

INTRODUCTION: Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The Waterfall 250 Pro,™ has been designed to perform reliably for years when the guidelines in this booklet are followed. Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this unit. These instructions contain important information regarding safety during use and maintenance.

UNPACKING: Thank you for purchasing the Waterfall 250 Pro™ by Elation Professional®. Every Waterfall 250 Pro™ has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your unit for damage and be sure all accessories necessary to operate the unit have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this unit to your dealer without first contacting customer support at the number listed below.

CUSTOMER SUPPORT: Elation Professional® provides a customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.elationlighting.com for any comments or suggestions. For service related issue please contact Elation Professional®. Service Hours are Monday through Friday 9:00 a.m. to 5:00 p.m. Pacific Standard Time.

Voice: (323) 582-3322

Fax: (323) 582-3108

E-mail: support@elationlighting.com
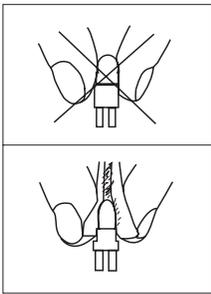
Forum: www.ElationLighting.com/forum

Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

Caution! There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty.

Please do not discard the shipping carton in the trash. Please recycle whenever possible.

WARRANTY REGISTRATION*:* The Waterfall 250 Pro™ carries a two year (730 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support at (323) 582-3322.

 DISCHARGE LAMP WARNING*:* This fixture is fitted with a discharge lamp, which is highly susceptible to damage if improperly handled. Never touch the lamp with your bare hands, as the oil from your hands will shorten lamp life. Also, never move the fixture until the lamps have had ample time to cool. Remember, lamps are not covered under warranty conditions.

This fixture emits intense UV radiation, which is harmful to the eyes and skin. The intense luminance of the lamp can cause severe damage to the retina. Never operate this fixture with the protective covers removed, these covers have been specially designed to shield against UV radiation.

Epileptic Warning: *Those suffering from epilepsy should avoid looking directly into the lamp at all times.*

Avoid switching the fixture on and off repeatedly in short intervals, as this will reduce lamp life and intensity.

To achieve the intensity associated with discharge lamps, these lamps use a gas sealed in a high-pressure environment to emit a brilliant output. Due to the high pressure involved with the construction of the lamp, the lamp may explode during prolonged extensive use. This risk is increased with age; added care is encouraged when dealing with older lamps. Thus, lamp

should always be replaced at the end of their recommended duty cycle. Extreme caution should be used when operated this or any fixture fitted with a gas discharge lamp.

Never open this fixture while in use!

During the initial operation of this fixture, a light smoke or smell may emit from the interior of the fixture. This is a normal process and is caused by excess paint in the interior of the casing burning off from the heat associated with the lamp and will decrease gradually over time.

This device falls under protection-class I. Therefore it is essential that the device be grounded properly.

All electrical connections must performed by qualified personal.

Be sure the available voltage matches the voltage requirements of the unit.

Be sure the power cord is never crimped or damaged. If the power cord is damaged, replace it immediately with a new one of similar power rating.

Always disconnect from main power before performing any type of service or any cleaning procedure.

Only handle the power cord by the plug. Never pull out the plug by tugging the wire portion of the cord.

Please be aware that damages caused by manual modifications to the device are not subject to warranty.

2. SAFETY INSTRUCTIONS

> ⚠️ The Waterfall 250 Pro™ is an extremely sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow the guidelines in this manual. The manufacturer of this device will not accept responsibility for damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual.

1. Always be sure that the fan and the air inlets remain clean and are never blocked. Allow about 6" (15cm) between this fixture and other devices or a wall to allow for proper cooling.

2. Never touch the fixture during normal operation. This can cause severe personal injuries and/or damage to the fixture.

3. Be sure to unplug the WATERFALL 250 PRO™ from the power outlet before performing any service related issues.

4. Lamp Replacement; Allow at least 30 minutes after disconnecting main power before you open the WATERFALL 250 PRO™. To prevent personal injury, never touch the lamp if you are not absolutely sure it has cooled.

5. Never look directly into the lamp beam. You risk injury to your retina, which may induce blindness.

6. Be sure to track and record the lamp running time. The lamp should be changed at the end of the specified lamp life, regardless of lamp output. You may also have to change the lamp if it shows any deformations or damage. The same is with all glass components, color filters, lenses and mirrors.

7. For safe operation, follow the Installation guide described in chapter two of this manual. Operating the WATERFALL 250 PRO™ without suited safety aids such as safety cables or clamps can increase the risk of damage and/or personal injury.

8. Installation should only be performed by qualified and certified personal.

9. When mounting this fixture, use only the original rigging parts included with this fixture. Any structural modification will void the original manufactures warranty and

may increase the risk of damage and/or personal injury.

10. To reduce the risk of fire or shock, do not expose this fixture to rain or moisture.

11. Do not attempt to operate this fixture if the power cord has become damaged or frayed.

Important Notice: Damages resulting from the disregard of safety and general user instructions found in this user manual are not subject to any warranty claims.

	CAUTION!
⚠	Never touch the device during operation! The housing may heat up
⚠	CAUTION! Never look directly into the light source, as sensitive persons may suffer an epileptic shock.

3. FEATURES

- 3 operation mode:
  - DMX controlled,
  - Stand alone
  - Sound activated
- 8 colors plus white (including UV filter), with two direction rainbow effect
- User selectable color change (mode 1: full colors, mode 2: split-colors)
- Rotating gobo wheel with 3 rotating gobos plus open, all gobos can be easily replaceable and gobo indexing (3 Glass Gobos, 2 Beam Reducers, 2 Color Filters)
- Frost Filter
- Strobe effect: 0~13 flashes per second or random strobe
- Bright Phillips MSD 250/2 Lamp (250w / 8500K / 3000Hrs / 18,000Lm)
- Dimmer intensity from 0%~100%
- User Selectable Power Supply (Internal)
- Control board with 4-digit display and foil-keyboard
- Digital display can be turned 180° to fit different installation position
- RDMX (Remote DMX addressing from any DMX console)
- Auto test for all functions
- Automatic Pan/Tilt Correction
- Glass Dichroic Reflector for Even Lamp Output
- Anti-Reflective Coated Lenses
- USITT DMX-512 Complaint
- Value of each DMX-channel can be displayed
- Electronic Focus via DMX
- 8 User Assignable Program Presets - Internal Program: Edit and save programs to the incorporated EEPROM through the front control panel or external controller; you can save a maximum of 48 scenes, and run the saved programs by using the "run" menu on the front control panel

4. GENERAL GUIDELINES

This fixture is a professional lighting effect designed for use on stage, in nightclubs, in theatres, etc. Do not attempt operation or installation without a proper knowledge on how to so.

This fixture was designed for indoor use only, use of this fixture outside will void manufactures warranty.

Consistent operational breaks may ensure that the fixture will function properly for many years to come.

Do not shake the fixture around. Avoid brute force when installing or operating the device.

While choosing an installation location, please be sure that the fixture will not be exposed to extreme heat, moisture or dust. The minimum distance between the fixture and a wall or flat surface should be at least .5 meter (about 1.5ft).

Always install the fixture with an appropriate safety cable. When installing the fixture in a suspended environment always be to use mounting hardware no less than M10 x 25 mm, also be sure the hardware is insert in the pre-arranged screw holes in the base of the fixture.

When using the quick release "Omega" cam-lock system, be sure the four quick lock fasteners are locked in the quick lock holes correctly.

Do not attempt to operate this fixture until you have familiarized yourself with its functions.

Do not permit operation by persons not qualified for operating this type of theatrical fixture, most damages are the result of operations by nonprofessionals.

Please use the original packaging to transport the fixture in for service.

5. LAMP INSTALLATION INSTRUCTIONS

Installing or replacing the lamp

<table>
<tr>
<td>⚡</td>
<td>CAUTION!
Only install the lamp with the device unplugged from the mains.</td>
</tr>
<tr>
<td>⚠</td>
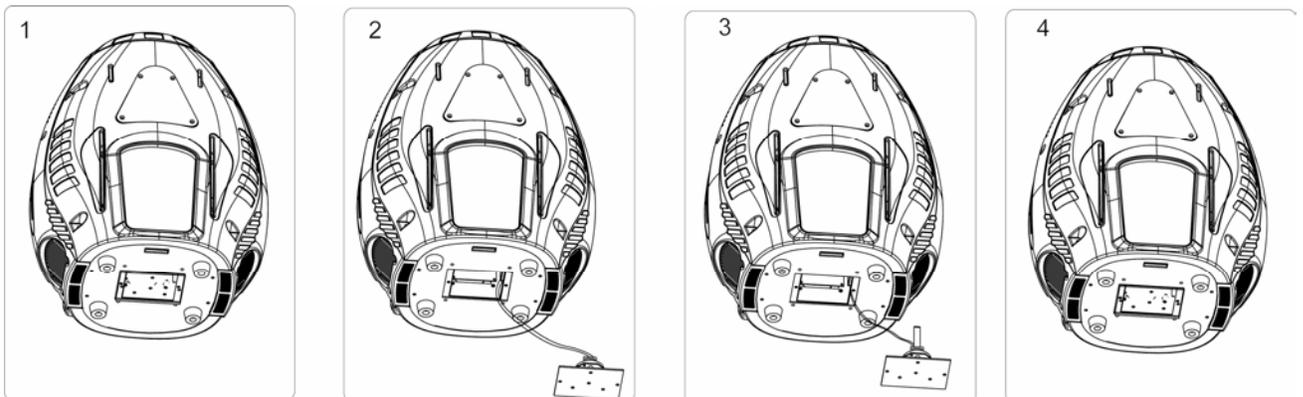<td>CAUTION!
The lamp has to be replaced when it is damaged or deformed.</td>
</tr>
</table>

Before replacing the lamp, be sure the unit has had ample time to cool. To avoid injury to yourself never touch the lamp when it is hot.

During the installation of the discharge lamp do not touch the glass portion of the bulb with your bare hands. Always use a cloth to handle the lamps during insertion and removal.

Do not install lamps with a higher wattage than that specified by the manufacture, they generate higher temperatures than which the device is designed to cool and may explode.

Installation Procedure:

1. Lay the fixture on its' back and remove the two Phillips screws labeled "A" and "B" found on the bottom plate of the fixture.

2. Gently pull out the lamp/socket assembly to access the lamp.

3. Gently remove the old lamp by grasping it by the ceramic base.

4. Carefully insert the new lamp into the socket (Only use a MSD 250/2 GY9.5 lamp or equivalent). Please remember there is only one way to insert the lamp and the lamp should fit completely in the lamp socket.

5. Once the lamp has been inserted into the socket, gently slide the socket assembly back into place and secure with the two Phillips screws.

6. Always be sure to optimize the lamp after lamp replacement.

⚠️ **CAUTION!**
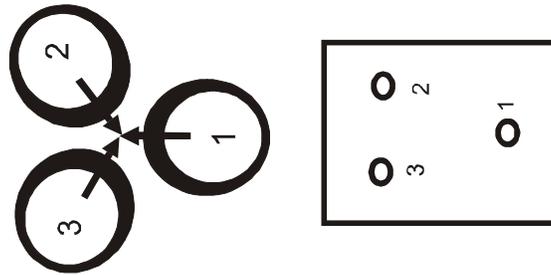Do not operate this device with open cover

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Lamp Optimization

The lamp orientation and optimization must be adjusted after every lamp change. This procedure centers the lamp in the reflector. Proper optimization will increase lamp life and ensure a bright crisp output. Improper optimization may add a yellow tint to the lamp output and reduce intensity. The minimum deviation amount is 1.0mm. Running the fixture within a lower deviation can cause damage to the lamp and/or lens.

The **Waterfall 250 Pro™** lamp holder is aligned at the factory. However, due to slight imperfections in all lamps, fine adjustments will improve light performance. Please follow the procedure below for proper lamp optimization:

1. Using either a DMX controller or the control panel on the unit (see "SPOT" in the fixture menu on page 33), strike the lamp and focus the light on a flat surface (beam open, white, no gobo, no effect).

2. Center the hot-spot (the brightest part of the beam) using the 3 adjustment screws labeled 1, 2, and 3 as illustrated on the next page. Turn one screw at a time to drag the hot-spot diagonally across the projected image. If you cannot detect a hot-spot, adjust the lamp until the light is even.

3. To reduce a hot-spot, pull the lamp in by turning all three screws clockwise a 1/4-turn

at a time until the light is evenly distributed.

4. If the light is brighter around the edge than it is in the center, or if light output is low, the lamp is too far back in the reflector. "Push" the lamp out by turning each of the adjustment screws (**"1, 2, 3")** counterclockwise turn until the light is bright and evenly distributed.

Please remember that a MSD 250/2 lamp is not a hot-restrike lamp therefore, you must wait approximately 15 minutes before you can attempt to strike the lamp once it has been turned off.

6. MOUNTING AND INSTALLATION

Cautions:

For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas were the fixture might be reached by unauthorized personal.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

Never stand directly below the device when mounting, removing, or servicing the fixture.

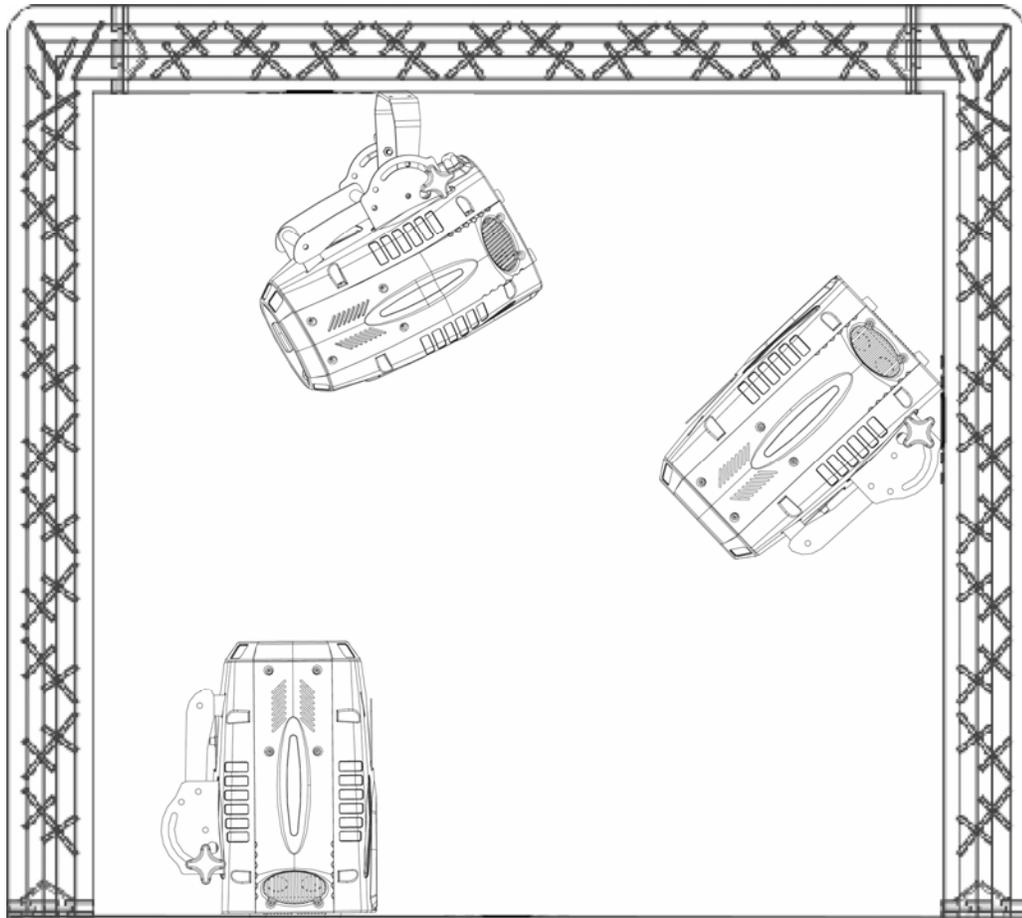| ⚠	**CAUTION!** Before taking into operation for the first time, the installation has to be approved by an expert.

⚠	**CAUTION!** When installing the device, make sure there is no highly inflammable material within a distance of min. 0,5m

Mounting

The WATERFALL 250 PRO™ is fully operational in three different mounting positions, hanging upside-down from a ceiling, side mounted, or set on a flat level surface (see illustration below). Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.). Always use and install the supplied safety cable as a safety measure to prevent accidental damage in the event of a clamp.

⚠	**Refer to regulations BGV C1 (formerly VBG 70) and DIN VDE0711-217 for proper installation in Europe To ensure proper installation, only qualified staff should attempt installation.**

Mounting points

Overhead mounting requires extensive experience, including amongst others calculating working load limits, a fine knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.
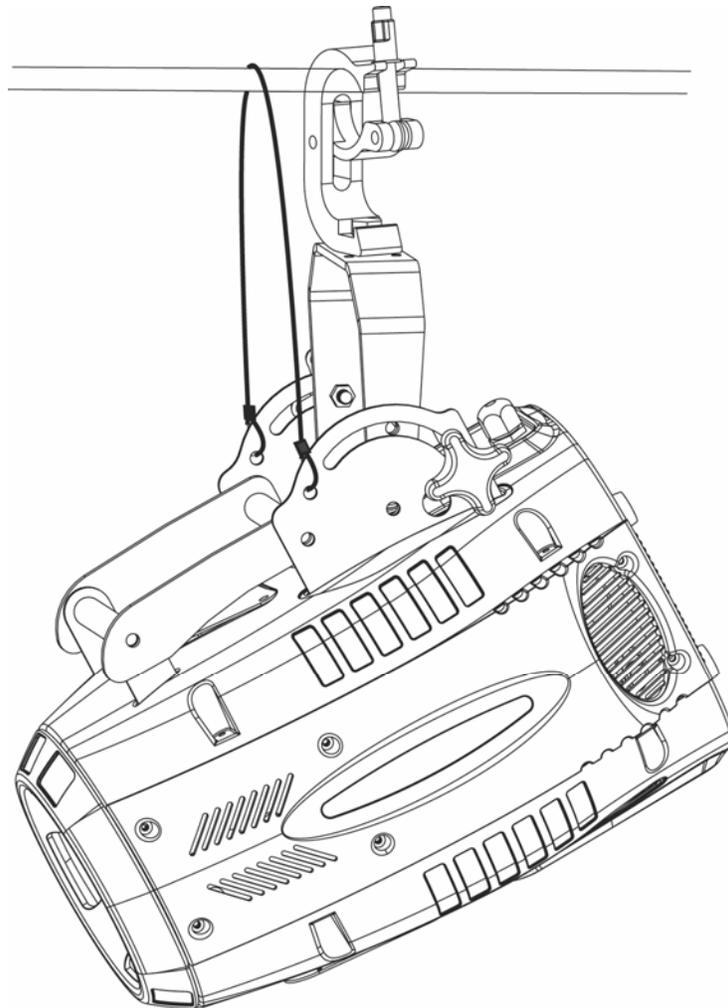
⚠ **CAUTION!**
The electric connection must only be carried out by a qualified electrician.

Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.

Clamp Mounting

The Waterfall 250 Pro™ provides a unique mounting bracket assembly that integrates the hanging yoke as well as the safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamp to the hanging yoke using a M10 screw fitted through the center hole of the hanging yoke. As an added safety measure be sure to attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the bracket assembly

Securing the WATERFALL 250 PRO™

Regardless of the rigging option you choose for your WATERFALL 250 PRO™ always be sure to secure your fixture with a safety cable. The fixture provides a built-in rigging point for a safety cable on the hanging bracket as illustrated above. Be sure to only use the designated rigging point for the safety cable and never secure a safety cable to a carrying handle.
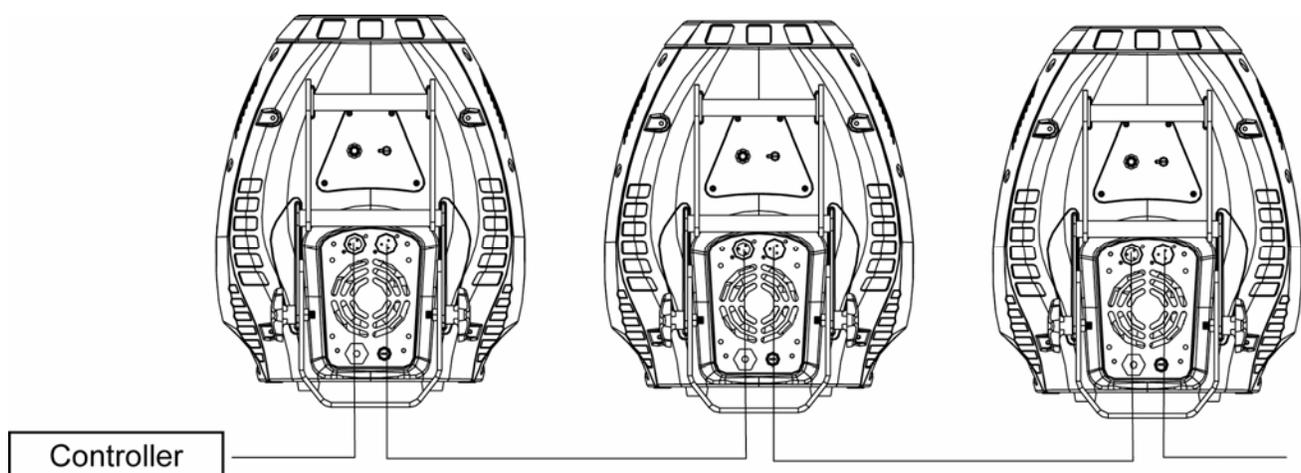
7. UNDERSTANDING DMX

Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation):

Your fixture and your DMX controller require a standard 3-pin XLR connector for data input and data output (see figure below). If you are constructing your own cables be sure to use two conductor shielded digital cable rated at a 120 ohms (this cable can be purchased at almost all professional sound and lighting stores). Your cables should be made with a male and female 3-pin XLR connector on either end of the cable.
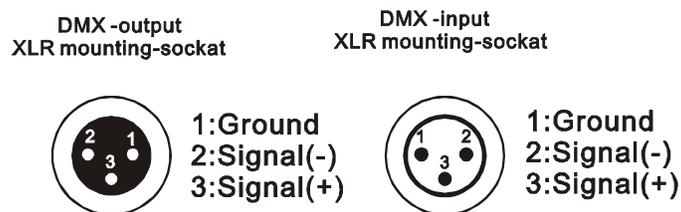

Be sure to follow the above figure when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.
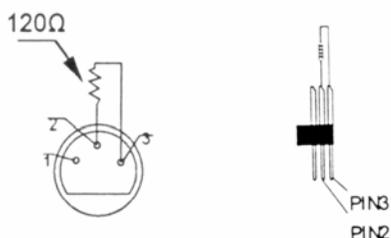
DMX-512 control connection

Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the moving head (Please refer to the diagram below.). You can chain multiple moving heads together through serial linking. The cable needed should be two conductor, shielded cable with XLR input and output connectors. Always be sure daisy chain your in and out data connections, never split or "Y" your DMX connections unless you are using an approved DMX splitter such as the Elation Opto Branch 4™ or DMX Branch/4™.

DMX -output
XLR mounting-sockat

DMX -input
XLR mounting-sockat

1:Ground
2:Signal(-)
3:Signal(+)

1:Ground
2:Signal(-)
3:Signal(+)

DMX-512 connection with DMX terminator

When longer runs of cable are used, you may need to use a terminator on the last fixture to avoid erratic behavior. A terminator is a 90-120 ohm 1/4 watt resistor that is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This fixture is inserted in the female XLR connector of the last fixture in your daisy chain to terminate the line. Using a cable terminator (Elation part number Z-DMX/T) will decrease the possibilities of erratic behavior.

120Ω

PIN3
PIN2

Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

5-Pin XLR DMX Connectors. Some manufactures use 5-pin XLR connectors for DATA transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The following chart details

a proper cable conversion.

3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Pin 4 - Do Not Use
Not Used		Pin 5 - Do Not Use

Fixture DMX addressing;

All fixtures should be given a DMX starting address when using a DMX controller, so the correct fixture responds to the correct control signal. This digital starting address is the channel number from which the fixture starts to "listen" to the digital control information sent out from the DMX controller. The allocation of this starting DMX address is achieved by setting the correct DMX address on the digital display located on the head of the fixture.

You can set the same starting address for all fixtures or a group of fixtures, or set different address for each individual fixture. Be advised that setting all you fixtures to the same DMX address will subsequently control all fixtures in the same fashion, in other words, changing the settings of one channel will affect all the fixtures simultaneously.

If you set each fixture to a different DMX address, each unit will start to "listen" to the channel number you have set, based on the quantity of control channels (DMX channels) of each fixture. That means changing the settings of one channel will only affect the selected fixture.

In the case of the Waterfall 250 Pro™, which is a 7 channel fixture, you should set the starting DMX address of the first unit to 1, the second unit to 8 (7 + 1), the third unit to 15 (7 + 8), and so on.

Note: During start-up the Waterfall 250 Pro™ will automatically detect whether a DMX data signal is being received or not. If DMX data signal is being received, the display will show

"A.XXX" (XXX representing the actual DMX address). If the fixture is not receiving a DMX signal the display will flash **"A.XXX" (XXX** representing the actual DMX address).

If your fixture is connected to a DMX controller and the display is flashing (not receiving a DMX signal), please check the following:

- The 3 PIN XLR plug (cable with DMX signal from controller) is not connected or is not inserted completely into the DMX input jack.
- The DMX controller is switched off or defective.
- The DMX cable or connector is defective.
- A DMX terminator has been inserted into the last fixture in your DMX chain.

9. FIXTURE MENU

10. DMX Channel Traits:

The chart below details the channel layout for 7 DMX channels.

%	1 Wheel 1	2 Wheel 2	3 Color	4 Focus	5 Dimming	6 Dimmer Rate	7 Auto Program
100%						Dimmer rate fast to slow	Program 8
							Program 7
							Program 6
75%			Multicolor 2			Max	Program 5
	Stop	Stop	Multicolor 1				Program 4
50%							Program 3
							Program 2
25%							Program 1
							All motor reset
					Min		Split Color Capable
0%	No Rotation	No Rotation					Normal

CHANNEL 1: *Wheel 1 Rotation*

CHANNEL 2: *Wheel 2 Rotation*

CHANNEL 3: *Color Wheel*

CHANNEL 4: *Focus (Near to Far)*

CHANNEL 5: *Intensity (Output)*

CHANNEL 6: *Dimmer Speed*

CHANNEL 7: *Special Functions*

DMX channel function and values:

Channel 1 - Wheel 1:

0	No rotation
1-127	Clockwise rotation from fast to slow
128	No rotation
129-255	Counter-clockwise rotation from slow to fast

Channel 2 - Wheel 2:

0	No rotation
1-127	Clockwise rotation from fast to slow
128	No rotation
129-255	Counter-clockwise rotation from slow to fast

Channel 3 - Color Wheel:

0--14	White
15-29	Red
30-44	Blue
45-59	Green
60-74	Yellow
75-89	Aqua
90-104	Multicolor1
105--127	Multicolor2
128-193	Clockwise color scroll from fast to slow
194-199	No rotation
200-255	Counter-clockwise color scroll from slow to fast

Channel 4- Focus:

0-255	Continuous adjustment from far to near

Channel 5- Dimmer (Intensity):

0-255	Intensity 0 to 100%

Channel 6- Dimmer (Speed):

0-255   Dimmer rate fast to slow

Channel 7 - Special Functions:

0-19   Color change normal
20-39   Color change to any position (split colors enable)
40-99   All motor reset
100-119   Auto Program 1
120-139   Auto Program 2
140-159   Auto Program 3
160-179   Auto Program 4
180-199   Auto Program 5
200-219   Auto Program 6
220-239   Auto Program 7
240-255   Auto Program 8

12. CLEANING AND MAINTENANCE

The following points have to be considered during the inspection:

1. Be sure all screws and fasteners are securely tightened at all times. Lose screws may fall out during normal operation resulting in damage or injury as larger parts could fall.

2. There must not be any deformations on the housing, color lenses, rigging hardware and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for UV radiation leakage. Damaged rigging points or unsecured rigging could cause the unit to fall and serious injure a person.

3. All mechanical parts and motors should not show any traces of serious wear and should rotate freely.

4. Electric power supply cables must not show any damage, material fatigue or sediments. Never remove the ground prong from the power cable.

Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

	CAUTION!
	Disconnect from mains before starting maintenance operation.

We recommend a frequent cleaning of the device. Please use a moist, lint- free cloth. Never use alcohol or solvents.

There are no user serviceable parts inside this fixture with the exception of the lamp. Please refer all other service issues to an authorized Elation service technician.

Should you need any spare parts, please order genuine parts from your local dealer.

13. 2-YEAR LIMITED WARRANTY

A.   Elation Professional® hereby warrants, to the original purchaser, Elation Professional® products to be free of manufacturing defects in material and workmanship for a period of two years, (730 days) from the date of purchase. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B.   For warranty service, send the product only to the Elation Professional® factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation Professional® will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, Elation Professional® shall have no liability what so ever for loss of or damage to any such accessories, nor for the safe return thereof.

C.   This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which Elation Professional® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professional® factory unless prior written authorization was issued to purchaser by Elation Professional®; if the product is damaged because not properly maintained as set forth in the instruction manual.

D.   This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up. During the period specified above, Elation Professional® will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Elation Professional® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professional®. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that
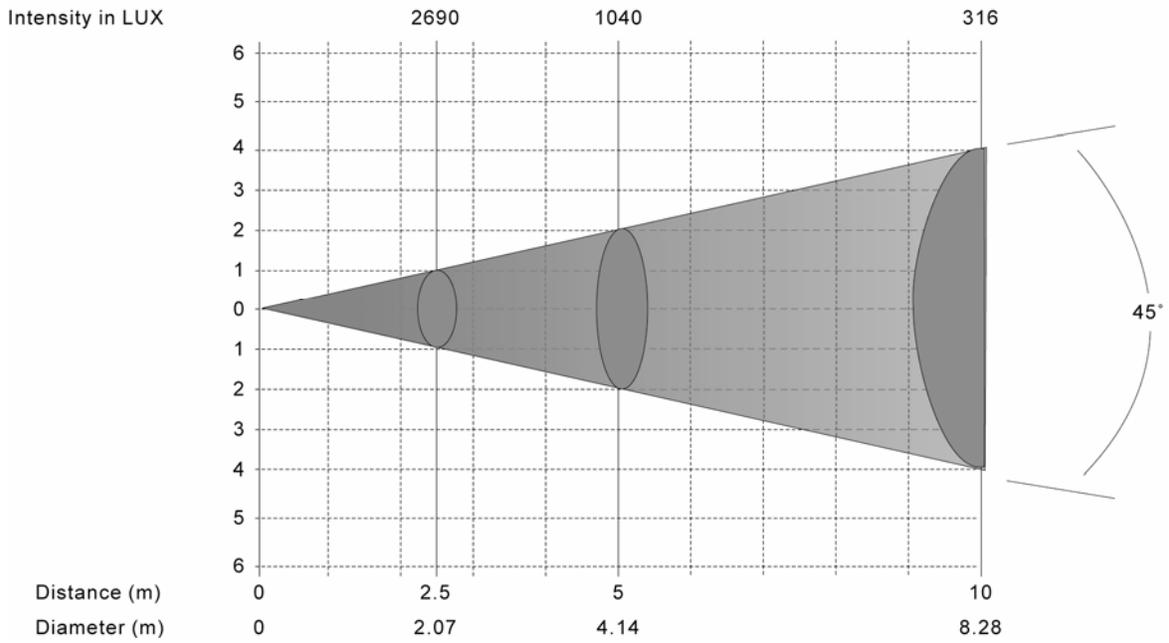
effect.

E.   Elation Professional® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

F.   No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. The consumer's and or Dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional® be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.
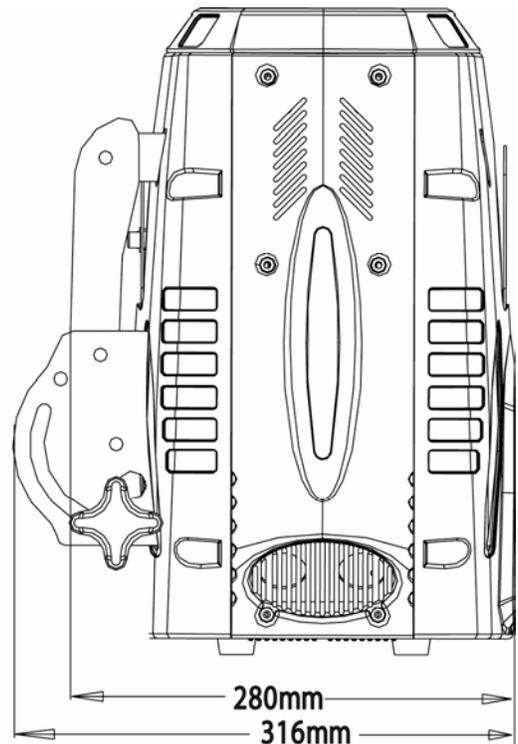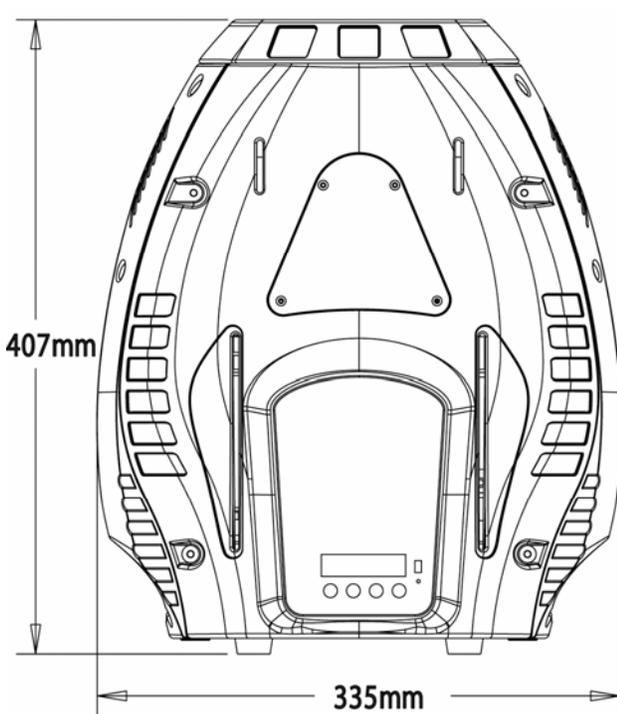
G.   This warranty is the only written warranty applicable to Elation Professional® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.
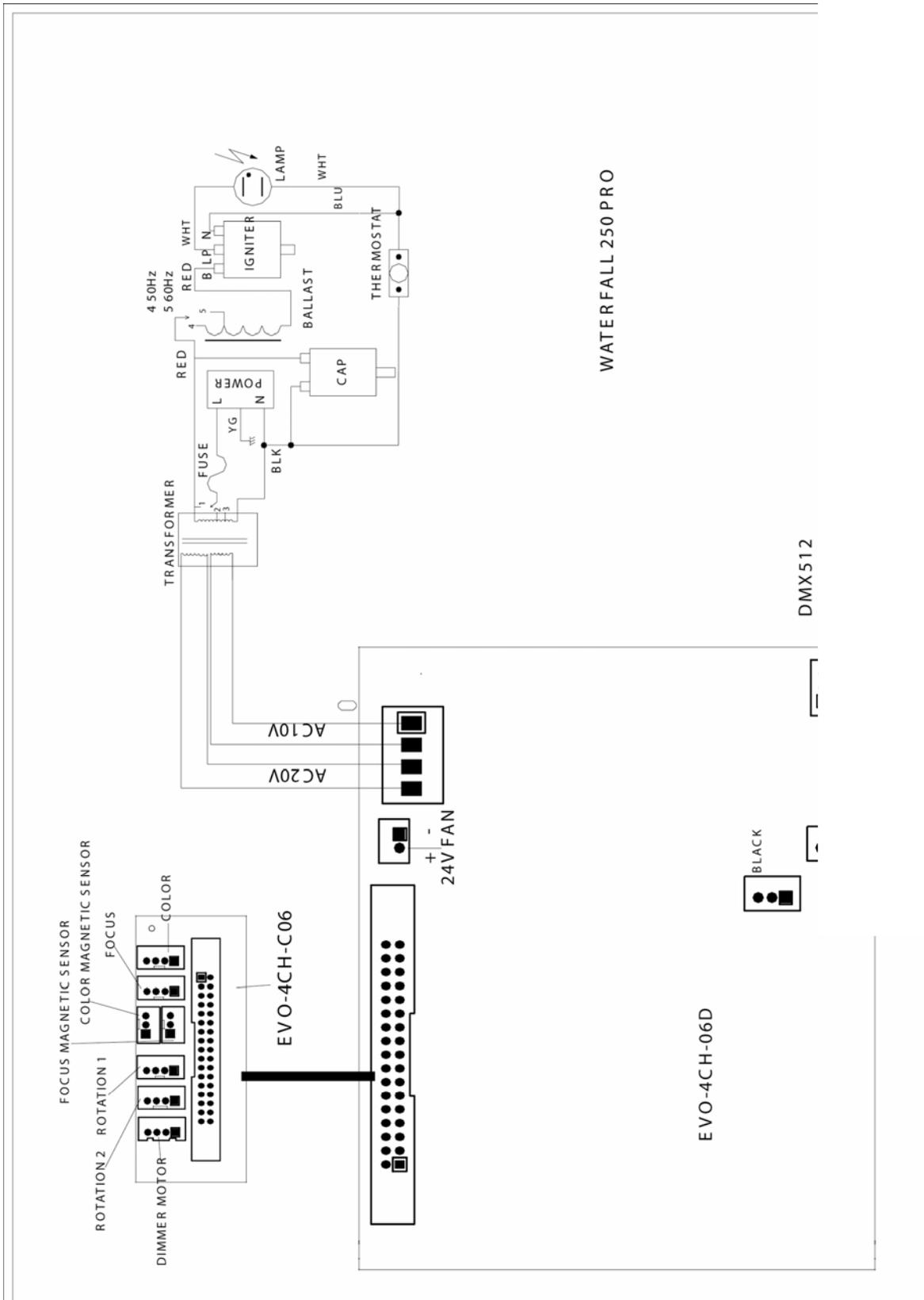
14. Photometric Data:

Maximum beam angle 45˚

Intensity in LUX		2690	1040		316
Distance (m)	0	2.5	5		10
Diameter (m)	0	2.07	4.14		8.28

15. Dimensional Drawings:

407mm

335mm

280mm

316mm

16. CIRCUIT SCHEMATIC

17. TECHNICAL SPECIFICATIONS

Power supply:	
Power consumption	_98VAC, 50Hz;□120VAC, 50Hz;□208VAC, 50Hz; □220VAC, 50Hz;□230VAC, 50Hz;□240VAC, 50Hz; *or* □ 98VAC,60Hz; □ 120VAC,60Hz; □ 208VAC,60Hz; □ 220VAC,60Hz; □ 230VAC,60Hz;□240VAC,60Hz;
Fuse protection	120V = 6A/250V, GMA (5x20mm fine-wire fuse) 220V = 3A/250V, GMA (5x20mm fine-wire fuse)

Lamp:	
Type	MSD 250/2 (Phillips)
Life time	3000 Hrs
Color temperature	8500˚ K
Luminous flux	18.000 lm

Optical system:
Parabolic glass reflector
19° standard objective (optional 30°)
Lens anti-reflex

Color:
8 dichroic filter plus white, half-color compatible

Gobos:
3 interchangeable rotating gobos plus "open", (3 Glass Gobos, 2 Beam Reducers, 2 Color Filters)
Gobo outside diameter 27 mm, image size 23 mm
Gobo thickness: glass = 1 mm, steel = 0.15 mm

Shutter / Strobe / Dimmer:
Strobe- effect with variable speed 1 - 13 flashes per second
Continuously mechanical dimmer 0 - 100%

Focus:
Motor driven focus from near to far away

DMX Channels:
7

Drive:
Standard DMX-512, 3 pole XLR; [+] = Pin 3   [-] = Pin 2   [Ground] = Pin 1. Starting DMX [001].

Weights and measures:	
Dimensions	42cm (W) x 42cm (L) x 52cm (H) ~ Packing Dimensions 41cm (H) x 34cm (W) x 32cm (D) ~ Unit Dimensions (Vertical)
Weight (net)	18Kgs / 40Lbs

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

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DMX51

FAN