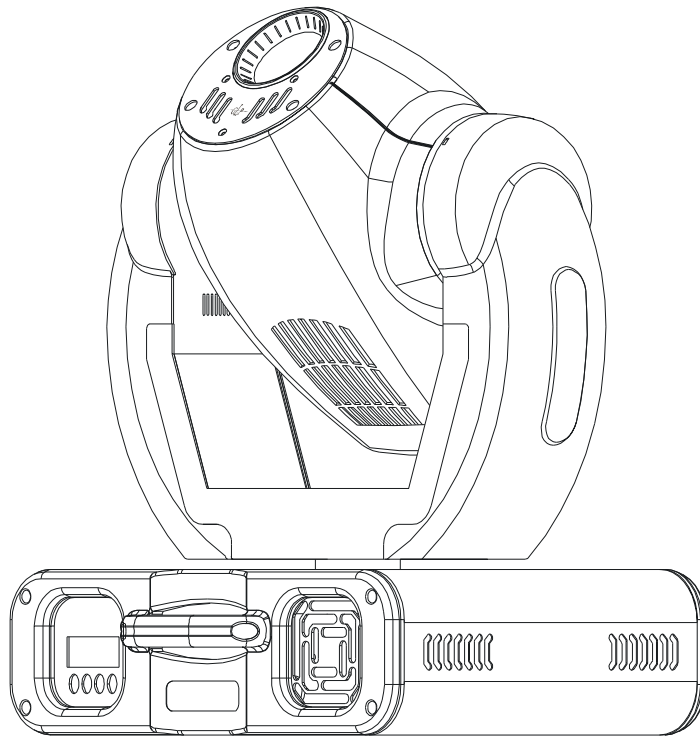




POWER SPOT 250

User Manual

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Power Spot 250™

INTRODUCTION: Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The Power Spot 250™, 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 Power Spot 250™ by Elation Professional®. Every Power Spot 250™ 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/

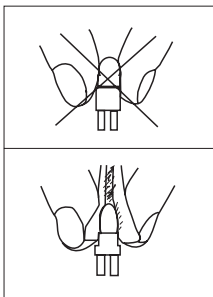
Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

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 Power Spot 250™ 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 customers expense. You may obtain a R.A. number by contacting customer support at (323) 582-3322, extension 170.



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 lens covers removed. The lens 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.

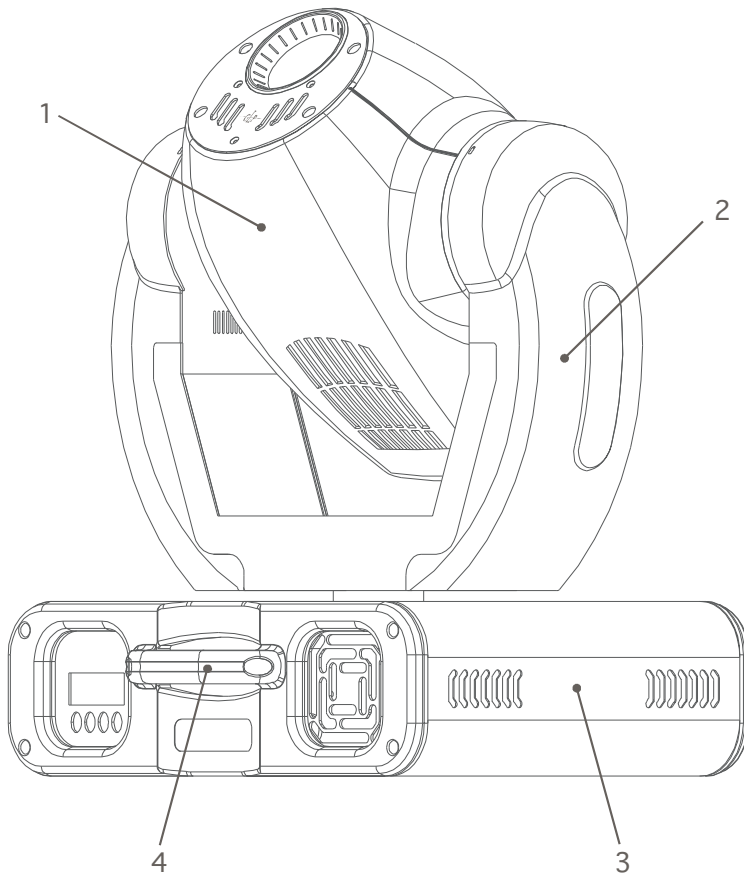
Safety Instructions



The Power SPOT 250™ 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.

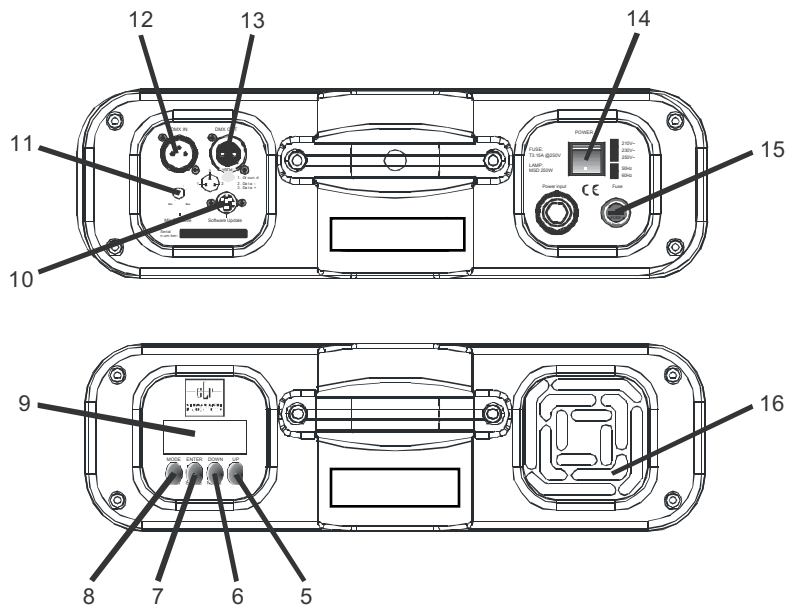
1. Always be sure that the fan and the air inlets remain clean and are never blocked. Allow about 6" (15cm) between this fixture and other devices or a wall to allow for proper cooling.
2. Never touch the fixture during normal operation. This can cause severe personal injuries and/or damage to the fixture.
3. Be sure to unplug the POWER SPOT 250™ 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 **POWER SPOT 250™**. 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 **POWER SPOT 250™** 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 unit to rain or moisture.
11. Do not attempt to operate this fixture if the power cord is frayed or damaged.

1. Fixture Layout



- 1. Lens Assembly
- 2. Arm
- 3. Base
- 4. Carrying Handles

- 5. Up Button
- 6. Down Button
- 7. Enter Button
- 8. Mode Button
- 9. LED Display
- 10. Firmware Connection
- 11. Microphone Sensitivity
- 12. DMX Input Jack
- 13. DMX Output Jack
- 14. Power On/Off Switch
- 15. Fuse Housing
- 16. Cooling Fan (air inlet)



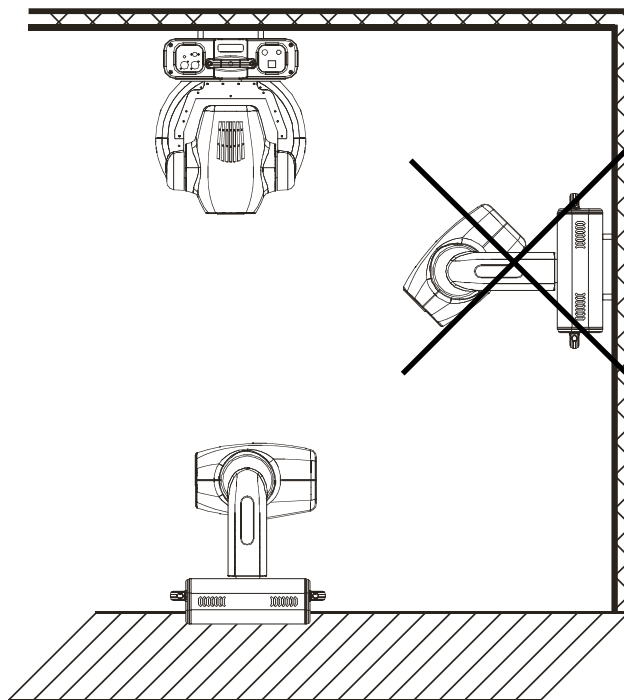
1. **Lens Assembly** - This high quality lens is a fully focusing. Focus the lens by manually turning the lens in a clockwise or counter-clockwise direction until the desired effect is achieved.
2. **Retaining Arm** – This Arm serves as a conduit for all electronic from the base to the lens assembly.
3. **Base** – The fixture base holds all main electronic for the fixture and provides a means to secure the fixture to wall or ceiling.
4. **Carrying Handles** - The includes built-in carrying handles. Be sure to always handle the fixture by the built-in handles. Never lift or carrying the fixture by head or yoke. Pulling on or transporting the fixture by moving head may severely damage the fixture and will void the fixture warranty.
5. **Up Button** - This button is used to scroll forward when navigating through the system menu.
6. **Down Button** - This button is used to scroll backwards when navigating through the system menu.
7. **Enter Button** - This button is used to select and confirm a function when working in the system menu.
8. **Mode Button** – This button is used to access the fixture's main system menu and programming functions.
9. **LED Display** – This display is detail the menu and operating functions.
10. **Firmware Connection** – This connection is designed to be used solely by a qualified technician to upgrade and test the fixture.
11. **Microphone** - This microphone receives external low frequencies to trigger the fixture in Sound-Active and Master/Slave mode.

12. **DMX Input Jack** – This jack is used to receive an incoming DMX signal or Master/Slave signal.
13. **DMX Output Jack** – This jack is used to transmit the incoming DMX signal to another DMX fixture, or transmit a Master/Slave signal to the next Power Wash 250™ in the chain. For best results in DMX or Master/Slave mode terminate this jack if it is the last fixture in the chain. See “Terminator” on page 14.
14. **Power Switch** – This switch is used to control main power to the fixture.
15. **Fuse Holder** – This housing stores a 6.3 amp (3.15 amp 220v) GMA protective fuse. Never defeat the fuse, the fuse is designed to protect the electronics in the event of severe power fluctuations. Always be sure to replace the fuse with an exact match as to the one being replaced, unless otherwise told to do so by an authorized Elation® service technician.
16. **Cooling Fan** - This fixture is equipped with a high velocity variable fan to aid in the cooling process. This fan is designed to vary its' velocity at different operating temperatures, to provide better cooling when the fixture reached higher operating temperatures associated with long usage. Be sure to never obstruct the cooling fan during normal usage. Also, be sure to keep this vent clean at all times. A blocked or malfunctioning cooling system may shorten lamp life and fixture reliability.

2. Preparation and Installation

2.1 Mounting

The POWER SPOT 250™ is fully operational in two different mounting positions, hanging upside down from a ceiling or set on a flat level surface. To avoid internal damage to the unit, **never mount the unit on its side** as illustrated below. Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.). Install a safety cable that can hold at least 10 times the weight of the fixture. Never use the carrying handles for secondary attachment.



Refer to regulations BGV C1 (formerly VBG 70) and DIN VDE 0711-217 for proper installation in Europe
To ensure proper installation, only qualified staff should attempt installation.

2.1.1 Clamps

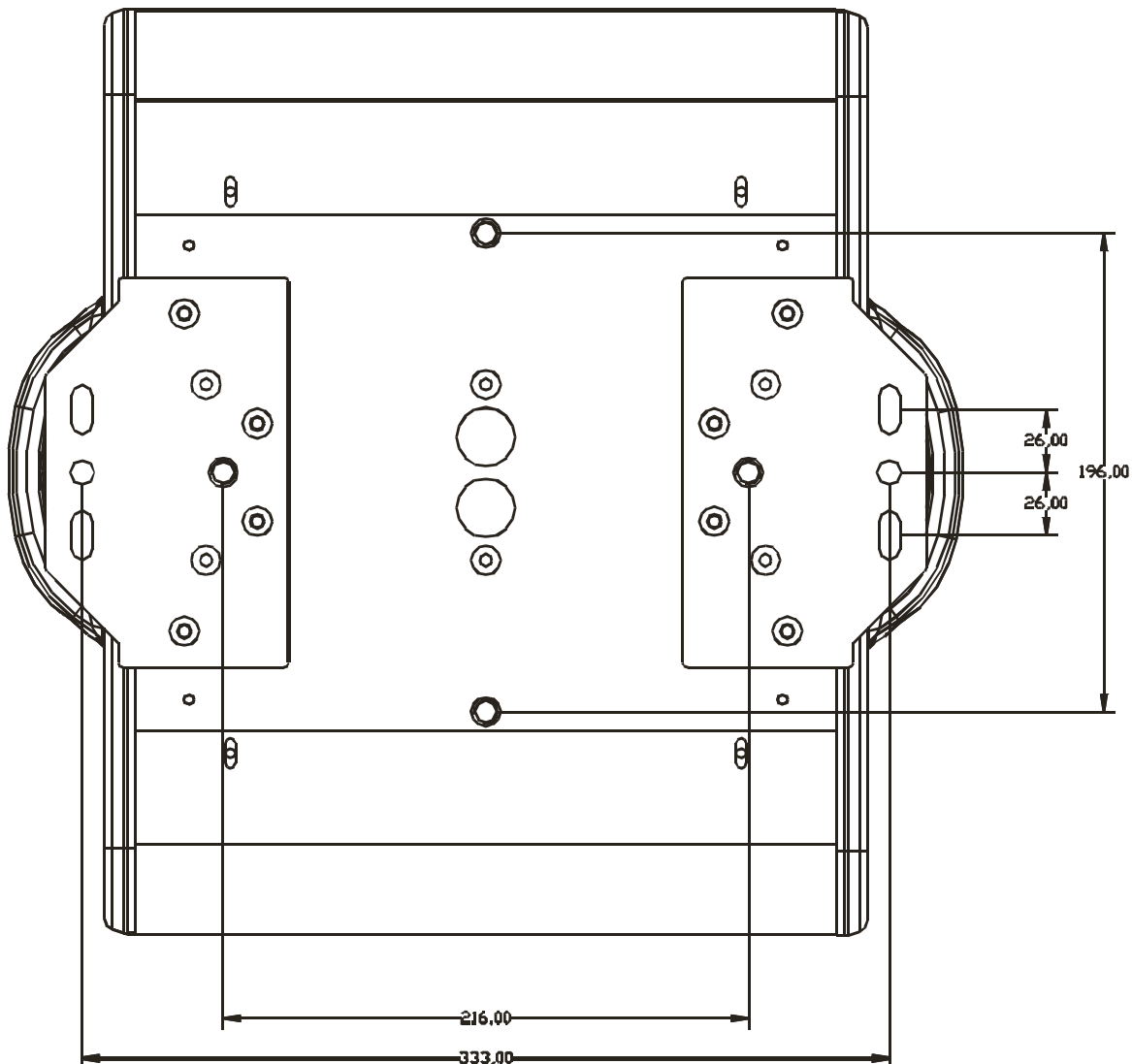
The **POWER SPOT 250™** has been designed to hold multiple clamps to the bottom of the unit in several different orientations. Always use an appropriately rated clamp to mount this unit to truss. Refer to the printed instructions on the bottom of the fixture for proper clamp installation.

2.1.2 Mounting plate

For a permanent installation of the **POWER SPOT 250™** in a non-truss installation you may use the optional mounting plate (secured to the bottom of the fixture) to secure the fixture to a ceiling. The plate accepts four M6x20 screws.

2.2 Secure the **POWER SPOT 250™**

Regardless of the rigging option you choose for your **POWER SPOT 250™** 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 underside of the fixture, be sure to use this point and never secure a safety cable to a carrying handle.



2.3 Connections

2.3.1 Power supply

115v ~ 50/60Hz AC (America's),

Connected load 500W $\Leftrightarrow$ 4.4 A (blind current compensation)

or 230V ~ 50Hz AC (EU),

Connected load 500W $\Leftrightarrow$ 2.2 A (blind current compensation)

Operating voltage is pre-selected at the factory and is not user selectable. Because line voltage may vary from venue to venue, you should be sure your fixture voltage matches that of the outlet. The voltage requirements for the fixture are clearly printed on the side panel near the power cord.

2.3.2 DMX-512

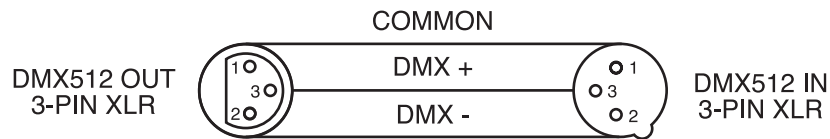
3-Pin XLR Input/Output. [+] = Pin 3 / [-] = Pin 2 / [Ground] = Pin 1

2.4 DMX-512: DMX is short for Digital Multiplex. This is a universal protocol used by most lighting and controller manufactures as a form of communication between intelligent fixtures and controllers. A DMX controller sends DMX data instructions from the controller to the fixture. DMX data is sent out as serial data that travels from fixture to fixture via the DATA "IN" and DATA "OUT" XLR terminals located on all DMX fixtures (most controllers only have a DATA "OUT" terminals). DMX Linking: DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. Therefore, the first fixture controlled by the controller could be the last fixture in the chain. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that fixture, no matter where it is located in the DMX chain.

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

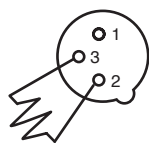
The **POWER SPOT 250™** can be controlled via DMX-512 protocol. The **POWER SPOT 250™** is a 15 channel DMX fixture. The DMX address is set electronically

using the controls on the side panel of the fixture. Your fixture and your DMX controller require a standard 3-pin XLR connector for data input and data output (Figure Below). If you are making your own cables, be sure to use standard two conductor shielded cable (This cable may be purchased at almost all professional sound and lighting stores). Your cables should be made with a male and female XLR connector on either end of the cable. Also remember that DMX cable must be daisychained and can not be split



2.6 Notice: 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.

2.7 Special Note: Line Termination. 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 which 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 (ADJ part number Z-DMX/T) will decrease the possibilities of erratic behavior.



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.

2.8 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 chart below 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

2.9 Fuse Requirements

The **POWER SPOT 250's** electronic system is protected by a 5x20 mm external fuse. 115V / T 6.3A (US model) or 230V / T 3.15A (EU model).

The fuse requirements are clearly printed on the side of the fixture.

WARNING:

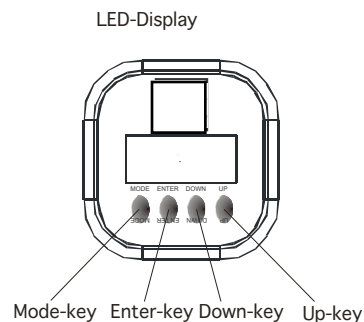
- **Always disconnect main power before changing the fuse!**
- **Always replace with the exact same type fuse unless otherwise specified by an authorized Elation® service technician. Replacing with anything other than the specified part can severely damage your fixture and will void your manufactures warranty.**

2.10 Transportation and Handling

The **POWER SPOT 250™** comes with two carrying handles built into the base. Always transport the fixture by these handles. Never lift or carry the **POWER SPOT 250™** by the yoke (head assembly) this can seriously damage the unit.

3. Fixture Menu

The control panel located on the side of the fixture allows you to access the main menu and make all necessary adjustments to the **POWER SPOT 250™**. During normal operation, tapping the “**MODE**” key once will access the fixture’s main menu. Once in the main menu you can navigate through the different functions and access the sub-menus with the **Up** and **Down** buttons. Once you reach a field that requires adjusting, tap the **ENTER** button to activate that field and use the **UP** and **Down** button to adjust the field. Tapping the **Enter** button once more will confirm your setting. Once a setting is saved the LED will briefly readout **OK** to confirm a new setting has been made and locked into memory. You may exit the main menu at any time without making any adjustments by tapping the **MODE** button.



			DISCRIPTION
Level 1	Level 2	Level 3	
0001			Indicate the Staring DMX address
TEST			Activates the fixtures self test mode
AUDI	ASLW		Activates Sound-Active mode (slow)
	AFST		Activates Sound-Active mode (fast)
	MSTR		Runs fixture as “MASTER” for Audio, Master-Slave mode
	SVPT		Runs fixture as “SLAVE” for Audio, Master-Slave mode
	SIZE		Room size adjustment (NORM-BIG-MIDL-SMAL) – This adjustment is only functional when operating the fixture in Sound-Active mode and makes adjustments to the pan and tilt to coincide with a rooms approximated dimensions
LAMP			Manually switches the lamp “on” and “off”
RESE			Resets the fixture’s pan, tilt, and internal wheels
TIME	POWR		Displays the total fixture running time (non destructible)
	LA1		Displays a lamps running time (erasable) – Reset this reading after every lamp change to keep an accurate account of a lamps running time
	LA2		Displays the total lamp running time (non destructible)
RPAN			Reverses the Pan movements
RTILT			Reverses the Tilt movements
MODE	GDMX		Default DMX mode, (Elation, American DJ, GLP)
	MDMX		Martin DMX mode
	HDMX		Highend Systems DMX mode
SPEC	MANU		Manual drive of all device functions
		PAN	Pan, Channel 1
		TILT	Tilt, Channel 3
		COLO	Color, Channel 5
		GOGO	Gobo, Channel 6
		GROT	Gobo Rotation, Channel 7
		PRIS	Prism, Channel 8

	<i>SHUT</i>	Shutter, Channel 9
	<i>DIMR</i>	Dimmer, Channel 10
	<i>FOCU</i>	Focus, Channel 11
	<i>SPEC</i>	Special Functions, Channel 12
	<i>SPEED</i>	Speed, Channel 14
	<i>LASR</i>	Laser, Channel 15
<i>LAAU</i>		Automatic lamp start
<i>DMX I</i>		Switch off lamp via DMX
<i>DISP</i>	<i>ON</i>	Reed out actual DMX-values
	<i>REV</i>	Display On/Off
		This function will flip the display read out 180°
<i>TEMP</i>		Display the fixture's internal temperature
<i>FANS</i>	<i>HIGH</i>	Maximum cooling fan velocity
	<i>REG</i>	Automatic cooling fan control
	<i>LOOF</i>	Low cooling fan speed → lamp off
	<i>LOHI</i>	Low cooling fan speed → automatic
<i>ADJU</i>	<i>CODE</i>	Access the calibration menu with technician code (for authorized person only)
	<i>XXXX</i>	
	<i>COLO</i>	Calibration of the color wheel
	<i>BSPR</i>	Calibration of the beam shape
	<i>CLRE</i>	Settings in the internal memory (technician only)
	<i>ARES</i>	Adjust - Reset
	<i>FACC</i>	Must read <i>ON</i> . Protected by a code
<i>DFSE</i>		Resets all the fixture functions to the factory default values
<i>FEE</i>		Pan/Tilt feedback (error correction) On/Off
<i>EFLG</i>		Fault corrections

3.1 Setting/Changeinh the DMX - Address

After applying power to the **POWER SPOT 250™** the LED will display the fixture's current DMX address immediately after the reset sequence. If the fixture is not receiving a DMX signal the display will flash continuously.



To set or adjust a DMX address, please follow the procedure below:

1. Switch on the **POWER SPOT 250™** and wait for the fixture reset process to finished ('**RESE**' will flash in the LED while fixture is in reset mode).
2. Press the **Mode** button to access the main menu. Toggle through the menu by pressing the **Up** and **Down** buttons until the display shows **1001**. Tap the enter button to make changes to the address, the current three digit address will immediately begin to flash.
3. While the current three-digit address is flashing, use the **Up** and **Down** buttons to select adjust the address. Lock your new address into by pressing the **Enter** button. After the new address has been successfully stored into the fixture's memory the LED will briefly readout **OK**.

The DMX address is non-destructible and will remain in the fixture's memory even when the power has been switched off. Memory is backed-up and retained by an internal power source with a five year shelf life.

3.2 Test Program



The **Test** Program engages the fixture's internal test mode. This function runs a complete test procedure of all functions. Press **Enter** to launch the self-test or the **Mode** button to cancel.

3.3 The Audio Program



The **Audio** menu allows you to run a stand-alone audio program. This program can run either fast (**AFST**) or slow (**ASLW**); Fast (**AFST**): When running in "fast" mode every

sound impulse will trigger a new step. (*RSLW*): When running in You may run several fixtures together at once to achieve a synchronized light show running to sound in a Master/Slave configuration. To run in a Master/Slave.

3.4 Lamp On/Off



This function allows you to manually control the lamp operation. Access the lamp function in the main menu and use the use the **Up** and **Down** buttons to toggle between lamp *ON* and lamp *OFF*. Press the **Enter** button to confirm the operation or the **Mode** button to cancel and return to the main menu. (The lamp *OFF* command will only functions if and when the shutter is closed at the same time).

3.5 Reset



This function will rest and return all motors to the home position. Access the reset function in the main menu and press the Enter button to engage the reset function (*RST* will readout in the display).

3.6 Running Time (lamp/unit)



This menu function will read out three different fixture running times.

<i>POWR</i>	Fixture running time (non destructible). Total running time logged by the unit.
<i>LA 1</i>	Lamp running time (erasable). Press and hold down the Up and Down buttons together for three seconds to reset this function.
<i>LA 2</i>	Lamp running time (non destructible). Total lamp hours logged by the unit

3.7 Invert Pan Movement



This function allows you to invert all pan movements. Use the **Up** and **Down** buttons to turn this function **ON** and **OFF**. Press the **Enter** button to accept the change or the **Mode** button to cancel and return to the main menu.

3.8 Invert Tilt Movement



This function allows you to invert all tilt movements. Use the **Up** and **Down** buttons to turn this function **ON** and **OFF**. Press the **Enter** button to accept the change or the **Mode** button to cancel and return to the main menu.

3.9 DMX Mode



This function allows you to choose between three different DMX operating modes. This feature manipulates the DMX channel orientation to simulate the operating mode of other manufactures. This allows the inner activity between the Power Spot 250 and other 250 units by different manufactures. The default setting for this unit is **GEN** (Generic; Elation Professional, American DJ and GLP). Refer to the chart below for a list of the different DMX channel orientations.

DMX	Generic - Mode [GEN]	Martin - Mode [MDM]	Highend Systems - Mode [HDM]
1	Pan (coarse)	Shutter, Strobe, Lamp On/Off, Reset, Spec.	Pan (coarse)
2	Pan (fine)	Dimmer	Pan (fine)
3	Tilt (coarse)	Color, Color rotation	Tilt (coarse)
4	Tilt (fine)	Gobo, Gobo rotation	Tilt (fine)
5	Color	Gobo wheel rotation	Color wheel effect/rotation
6	Gobo	Focus	Color
7	Gobo positioning/rotation	Prism, Prism rotation	Gobo effect

8	Prism, Prism rotation	Pan (coarse)	Gobo 1 (rotating)
9	Shutter	Pan (fine)	Gobo 1 rotation
10	Dimmer	Tilt (coarse)	Effect wheel
11	Focus	Tilt (fine)	Effect wheel rotation
12	Special	Speed Pan/Tilt	Focus
13	Movement	Effect, Speed	Iris
14	Speed Pan/Tilt	---	Shutter
15	Laser	---	Dimmer
16	---	---	Speed
17	---	---	Macros
18	---	---	Special

3.10 Special Functions



This menu option accesses several special features and function of the **POWER SPOT 250™**. The **SPEC** sub-menu consists of several sub-menus. Navigation details of the special functions and their sub-menus are as followed:

3.10.1 Manual Drive



This feature allows you to drive all the unit's functions manually for use in an environment that requires a static position (no movements), determining focus points, or testing. Use the **Up** and **Down** buttons to select the function you wish to adjust, then use the **Enter** button to accept your selection. Now adjust the values with the **Up** and **Down** buttons and use the **Enter** button to lock in your value. Use the **Mode** button to cancel at any time.

Function	Value	Remark
<i>PAN</i>	<i>000 - 255</i>	Pan Position
<i>TILT</i>	<i>000 - 255</i>	Tilt Position
<i>COLO</i>	<i>000 - 255</i>	Color wheel
<i>GOBO</i>	<i>000 - 255</i>	Gobo wheel
<i>GROT</i>	<i>000 - 255</i>	Gobo rotation
<i>PRIS</i>	<i>000 - 255</i>	Prism rotation

<i>SHUT</i>	<i>000 - 255</i>	Shutter / Strobe function (the lamp strikes at DMX 255 if dimmer is "open" = DMX 255)
<i>DIMR</i>	<i>000 - 255</i>	Dimmer
<i>FOCU</i>	<i>000 - 255</i>	Focus
<i>SPEC</i>	<i>000 - 255</i>	Lamp Off, Reset, ...
<i>SPEED</i>	<i>000 - 255</i>	Speed Pan/Tilt

3.10.2 Lamp On (automatic lamp strike)



This function automatically strikes lamp when main power is turned on. If you would prefer to strike the lamp through a DMX controller you must turn this function off. To toggle between **OFF** and **ON** use the **Up** and **Down** buttons. Use the **Enter** button to confirm your setting.

Please note: **ON** is the default setting for this function.

3.10.3 Lamp Off via DMX



This function allows the lamp to be switched off through a DMX controller. To enable this function use the **Up** and **Down** buttons to toggle between **ON** and **OFF**. Turn this function "ON" to allow DMX switching. Use the **Enter** button to accept your selection or the **Mode** button to cancel and return to the menu.

3.10.4 DMX Input



This function will display the DMX value of a channel in the LED as the fixture receives it. Use the **Up** and **Down** buttons to select desired channel and press **Enter** to read its value.

Function	Value	Remark
<i>PAN</i>	0 - 255	Pan Position
<i>TILT</i>	0 - 255	Tilt Position
<i>COLO</i>	0 - 255	Color wheel
<i>GOBO</i>	0 - 255	Gobo wheel
<i>GROT</i>	0 - 255	Gobo rotation
<i>PRIS</i>	0 - 255	Prism wheel
<i>SHUT</i>	0 - 255	Shutter / Strobe function
<i>DIMR</i>	0 - 255	Dimmer
<i>FOCU</i>	0 - 255	Focus
<i>SPEC</i>	0 - 255	Lamp Off, Reset, ...
<i>MOVE</i>	0 - 255	Movement
<i>SPEED</i>	0 - 255	Speed Pan/Tilt

3.10.5 Display



Use this function to choose between different display indications. Use the Up/Down-keys to select desired function and press Enter to confirm or Mode to cancel and return to the menu.

<i>ON</i>	Display On/Off (If you've chosen <i>OFF</i> , the display will go out within 15 seconds after the last input. The next key touch will reactivate the display).
<i>REV</i>	Turn around the display

3.10.6 Fixture Temperature



This function allows you to read out the actual fixture operating temperature. Press the **Enter** button to select this function or the **Mode** to button to cancel and return to the main menu. Normal operating temperature should range between 85°C and 95°C. Operating temperatures between 96°C and 104°C are considered critical. Temperatures above 105°C will send the fixture into protect mode and automatically switch the lamp off, the lamp will remain off until

internal temperature drops below 95°C.

3.10.7 Fan Control



By using this function you can choose between 4 types of fan speed operations. Use the **Up** and **Down** buttons to select the desired fan setting, then press **Enter** to accept your setting or press the **Mode** button to cancel and return to the menu. The chart below will detail the different fan settings:

<i>HIGH</i>	The cooling fan works continuously at max. speed.
<i>REG</i>	This is the default fan setting. In this setting an internal thermal sensor constantly monitors the internal operating temperature and regulates the fan speed to coincide with the internal temperature.
<i>LOOF</i>	This function is designed for environments that require low ambient noise. In this setting the fan will operate at the lowest speed. When the maximum internal intolerable operating temperature is reached the lamp will automatically shut off.
<i>LOHI</i>	In this setting the fan will operate at the lowest speed. When the maximum internal intolerable operating temperature is reached the fan will automatically switch from low to high speed.

3.10.8 Adjustments and Calibrations



With this function you can adjust and calibrate the positions of the different wheels and other motors. This feature is reserved for a service technician and is sometimes required after a service or repair work.

This function requires a service code only available to authorized service technicians.

Use the **Up** and **Down** buttons to select the function that requires calibration and press the **Enter** button to confirm the adjustment or the **Mode** button to cancel and return to the menu. Use the **Up** and **Down** buttons to set the adjustment values and confirm once more with the **Enter** button or use the

Mode button to cancel the operation.

Function	Value	Remark
<i>COLO</i>	- 99 - + 99	Color wheel
<i>GOTO</i>	- 99 - + 99	Gobo wheel
<i>PRIS</i>	- 99 - + 99	Prism wheel
<i>SHT1</i>	- 99 - + 99	Shutter 1
<i>SHT2</i>	- 99 - + 99	Shutter 2
<i>CLRE</i>	Adjustments in the internal circuit.	

3.10.9 Default Settings



This function is used to restore all the factory default settings and presets. Press the **Enter** button to confirm this operation or the **Mode** button to cancel and return to the menu. When this operation is selected the LED will briefly readout **OK**, then return to the previous function. The chart below details the factory defaults.

Function	Display	Default Settings			
DMX Address	<i>1001</i>	<i>1001</i>			
Pan reverse	<i>RPAN</i>	<i>ON</i>	<i>OFF</i> ✓		
Tilt reverse	<i>RTLT</i>	<i>ON</i>	<i>OFF</i> ✓		
Automatic lamp on	<i>LAAU</i>	<i>ON</i>	<i>OFF</i> ✓		
Lamp on via DMX	<i>1LOF</i>	<i>ON</i> ✓	<i>OFF</i>		
Display	<i>DISP</i>	<i>1 ON</i> ✓			
Cooling fan	<i>FANS</i>	<i>HIGH</i>	<i>REG</i> ✓	<i>LOOF</i>	<i>LOHI</i>
Feedback	<i>FEED</i>	<i>ON</i> ✓	<i>OFF</i>		

3.10.10 Feedback "APC"



The POWER SPOT 250™ is equipped with "APC," automatic position correction. This function automatically corrects the Pan and Tilt movement should the unit lose step or is obstructed and forced to lose step. Press the **Enter** button to access the sub-menu. Use the **Up** and **Down** buttons to toggle

between “ON” and “OFF” and confirm once more with the **Enter** button or use the **Mode** button to cancel the operation.

3.10.11 Error and Fault Corrections



(These functions are reserved for authorized technicians only)

3.11 Error and Information Messages

<i>HEAT</i>	This message appears if you try to switch on the lamp within 5 minutes after having switched off (lamp too hot). The message will appear on the display if the lamp doesn't ignite within 20 seconds. The fixture will store this command and automatically ignite the lamp after 5 minutes.
<i>LAER</i>	After the ignition of the lamp was two times not successful the display will show <i>LAER</i> . That means the lamp could be damaged or even missed, the fixture is overheating or there could be a failure on the igniter or ballast. Switch off the power supply and solve the possible problem.
<i>OTMP</i>	This error message informs you that the fixture was overheating and that the relay switches off the lamp. Please look for possible reasons (fan faulty, air in/outlets blocked or very dirty, lamp broken or very old, too high ambient temperature. Switch off the power supply and solve the possible problem.
<i>RSEF</i>	This message informs you that one of the fixture function wasn't able to do its reset correct (magnetic sensor, stepping motor, driver on the PCB, cables, etc.). Repair the defect and start the fixture again.

4. Operation

Operating Modes: *The Power Spot 250™ can operate in three different modes. This next section will detail the differences in the operating modes.*

- **Stand alone mode** - The fixture will react to sound, chasing through the built-in programs.
- **Master/Slave mode** - You can daisy chain up to 16 fixtures together to get a synchronized light show without the need of an external controller. The fixtures will react to sound chasing to synchronized light show.
- **DMX control mode** - This function will allow you to control each individual fixtures traits with a standard DMX-512 controller such as the LSC® Show Designer 2.

4.1 Universal DMX Control: This function allows you to use a universal DMX-512 controller such as the LSC® DMX Operator II™ or LSC® Show Designer 2™ to control head movement, the color wheel, the shutter (strobe), and all other DMX traits. A DMX controller allows you to create unique programs tailored to your individual needs. The Power Spot 250™ uses 15 DMX channels. See page 27 for detailed description of the DMX traits. To control your fixture in DMX mode, follow the set-up procedures on pages 13-15 as well as the set-up specifications that are included with your DMX controller. Use the controller's faders to control the various DMX fixture traits. This will allow you to create your own programs.

4.1.1 Follow the instruction on page 18 to set the DMX address.

4.2.2 For longer cable runs (more than a 100 feet) be sure to use a terminator on the last fixture.

4.2.3 For help operating in DMX mode consult the manual included with your DMX controller.

4.2 Stand-Alone Operation (Sound Active): This mode allows a single fixture to run to the beat of the music. Only use this mode when running a single fixture, or when running several fixtures as individuals.

4.2.1 Mount your fixture in a secure and stable manner.

4.2.2 Access the main menu and select the AUDI function, this will give you access to the audio submenu. See page 16 for the menu breakdown.

- 4.2.3** In the audio submenu choose the audio chase speed, fast or slow. Slow (ASLW) will trigger the chase sequence to every two beats, while fast (AFST) will trigger the chase impulse every beat. See page 16 for more details.
- 4.2.4** Be sure the Master (MSTR) function is switched “ON,” and the SVPT function is switched “OFF.”
- 4.2.5** Choose your room size. The size function allows you to choose a the approximate size of the room (NORM, BIG, MIDL, SMAL). The built-in programs will automatically adjust to your slection to optimize light output for your room.
- 4.2.6** Use the sound sensitivity knob on the side control panel to make the unit more or less sensative to sound. Turning the knob in clockwise direction will make the unit more sensetive to sound, while turning the knob counter-clockwise will make the unit less sensetive to sound. Note: This unit will react to the low frequenciies of a sound source, tapping on the fixture or high pitched sound may not trigger the fixture.
- 4.3 Master-Slave Operation (Sound Active):** This function will allow you to link up to 16 fixtures together and operate without a controller. The fixtures will be sound activated. In Master-Slave operation one fixture will act as the controlling fixture and the others will react to the controlling fixtures programs. Any fixture can act as a Master or as a Slave.
- 4.3.1** Using standard XLR microphone cables, daisy chain your fixtures together via the XLR connector on the rear of the fixtures. Remember the Male XLR connector is the input and the Female XLR connector is the output. The first fixture in the chain (master) will use the female XLR connector only - The last fixture in the chain will use the male XLR connector only. For longer cable runs we suggest a terminator at the last fixture.
- 4.3.2** Follow the same procedures listed in the previous Stand-Alone section. With two exceptions; Be sure the first unit in the chain is selected as the “master” (MSTR) is turned on in the audio submenu. All other fixtures must be in “slave” mode (SVPT) turned on in the audio submenu.

5. DMX CHANNEL SELECTION (DMX PROTOCOL)

Channel	Function	Time and Value	DMX	HEX	%
1) PAN - Coarse	0 - 530°	Min. 2.65 s	0-255	00-FF	0-100
2) PAN – Fine	High- Pos -. High- Pos + 2,1° (16 Bit)		0-255	00-FF	0-100
3) TILT - Coarse	0 - 285°	Min. 1.8 s	0-255	00-FF	0-100
4) TILT – Fine	High- Pos ... High- Pos + 1,1° (16 Bit)		0-255	00-FF	0-100
5) Color	Open (fast)	Maximum Color Sweep from Color to Color = 140 BPM => 0.43s	0-1	00-01	0,2
	Open / color 1 (fast)		2-3	02-03	1,0
	Color 1 (fast)		4-5	04-05	1,8
	Color 1 / color 2 (fast)		6-7	06-07	2,5
	Color 2 (fast)		8-9	08-09	3,3
	Color 2 / color 3 (fast)		10-11	0A-0B	4,1
	Color 3 (fast)		12-13	0C-0D	4,9
	Color 3 / color 4 (fast)		14-15	0E-0F	5,7
	Color 4 (fast)		16-17	10-11	6,5
	Color 4 / color 5 (fast)		18-19	12-13	7,3
	Color 5 (fast)		20-21	14-15	8,0
	Color 5 / color 6 (fast)		22-23	16-17	8,8
	Color 6 (fast)		24-25	18-19	9,6
	Color 6 / color 7 (fast)		26-27	1A-1B	10,4
	Color 7 (fast)		28-29	1C-1D	11,2
	Color 7 / color 8 (fast)		30-31	1E-1F	12,0
	Color 8 (fast)		32-33	20-21	12,7
	Color 8 / color 9 (fast)		34-35	22-23	13,5
	Color 9 (fast)		36-37	24-25	14,3
	Color 9 / color 10 (fast)		38-39	26-27	15,1
	Color 10 (fast)		40-41	28-29	15,9
	Color 10 / color 11 (fast)		42-43	2A-2B	16,7
	Color 11 (fast)		44-45	2C-2D	17,5
	Color 11 / open (fast)		46-47	2E-2F	18,2
	Open (fast)		48-63	30-3F	19,0
	Open (slow)	Maximum Color Sweep from Color to Color = 70 BPM => 0.86s	64-65	40-41	25,3
	Open / color 1 (slow)		66-67	42-43	26,1
	Color 1 (slow)		68-69	44-45	26,9
	Color 1 / color 2 (slow)		70-71	46-47	27,6
	Color 2 (slow)		72-73	48-49	28,4
	Color 2 / color 3 (slow)		74-75	4A-4B	29,2
	Color 3 (slow)		76-77	4C-4D	30,0
	Color 3 / color 4 (slow)		78-79	4E-4F	30,8
	Color 4 (slow)		80-81	50-51	31,6
	Color 4 / color 5 (slow)		82-83	52-53	32,4
	Color 5 (slow)		84-85	54-55	33,1
	Color 5 / color 6 (slow)		86-87	56-57	33,9
	Color 6 (slow)		88-89	58-59	34,7
	Color 6 / color 7 (slow)		90-91	5A-5B	35,5
	Color 7 (slow)		92-93	5C-5D	36,3
	Color 7 / color 8 (slow)		94-95	5E-5F	37,1
	Color 8 (slow)		96-97	60-61	37,8

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Channel	Function	Time and Value	DMX	HEX	%
	Color 8 / color 9 (slow)		98-99	62-63	38,6
	Color 9 (slow)		100-101	64-65	39,4
	Color 9 / color 10 (slow)		102-103	66-67	40,2
	Color 10 (slow)		104-105	68-69	41,0
	Color 10 / color 11 (slow)		106-107	6A-6B	41,8
	Color 11 (slow)		108-109	6C-6D	42,5
	Color 11 / open (slow)		110-111	6E-6F	43,3
	Open slow		112-127	70-7F	44,1
	Color Scroll, Slow - Fast, CW	Min. 1.4 turns/h	128-191	80-BF	50-75
	Color Scroll, Fast - Slow, CCW	Max. 2.9 turns/sec.	192-253	C0-FD	76-98
	Audio color chaser slow	Every 4 th sound impulse = New color	254	DE	99
	Audio color chaser fast	Every sound impulse = New color	255	FF	100
6) Gobo	Gobo 1 (open, fast)	Maximum Gobo Sweep from Gobo to Gobo = 100 BPM → 0.6s	0-7	0-7	0-2,9
	Gobo 2 (fast)		8-15	8-F	3-5,9
	Gobo 3 (fast)		16-23	10-17	6-8,9
	Gobo 4 (fast)		24-31	18-1F	9-11,9
	Gobo 5 (fast)		32-39	20-27	12-14,9
	Gobo 6 (fast)		40-47	28-2F	15-17,9
	Gobo 7 (fast)		48-55	30-37	18-20,9
	Gobo 1 (open, fast)		56-63	38-3F	21-23
	Gobo 1 (open, slow)	Maximum Gobo Sweep from Gobo to Gobo = 40 BPM → 1.51s	64-71	40-47	24-26,9
	Gobo 2 (slow)		72-79	48-4F	27-29,9
	Gobo 3 (slow)		80-87	50-57	30-33,9
	Gobo 4 (slow)		88-95	58-5F	34-36,9
	Gobo 5 (slow)		96-103	60-67	37-39,9
	Gobo 6 (slow)		104-111	68-6F	40-42,9
	Gobo 7 (slow)		112-119	70-77	43-45,9
	Gobo 1 (open, slow)		120-127	78-7F	46-49
	Gobo rotation, slow-fast, CW	Min. 1.4 turns/h	128-191	80-BF	50-75
	Gobo rotation, fast-slow, CCW	Max. 1.0 turns/sec.	192-253	C0-FD	76-98
	Audio gobo chase, slow	Every 4 th sound impulse = new gobo	254	FE	99
	Audio gobo chase, fast	Every sound impulse = new gobo	255	FF	100
7) Gobo Position/ Rotation	Gobo position 0 -. 540°		0-131	00-7F	0-50
	Gobo rotation, slow-fast, CW	Min. 2,0 turns/h	132-191	80-BF	51-75
	Gobo rotation, fast-slow, CCW	Max. 3,8 turns/sec.	192-253	C0-FD	76-100
	Audio gobo rotation, slow	Every 4 th sound impulse = new position	254	FE	99
	Audio gobo rotation, fast	Every sound impulse = new position	255	FF	100
8) Prism	Prism swing out		0-5	00-02	0-2
	Prism position 0 -. 540°		6-129	00-7F	0-50
	Prism rotation, slow-fast, CW	Min. 1,6 turns/h	130-191	80-BF	51-75
	Prism rotation, fast-slow, CCW	Max. 4,4 turns/sec.	192-253	C0-FD	76-100
	Audio prism rotation, slow	Every 4 th sound impulse = new prism	254	FE	99
	Audio prism rotation, fast	Every sound impulse = new prism	255	FF	100
9) Shutter	Shutter closed		0-15	00-0F	0-6

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Channel	Function			Time and Value	DMX	HEX	%
	Random Strobe (different pattern)				16-31	10-1F	7-11,9
	Strobe Pulse effect, slow - fast			Min. frequency 0.7 Hz	32-47	20-2F	12-12,9
	Strobe effect, slow - fast			Max. frequency 10 Hz	48-239	30-EF	13-93
	Shutter open (lamp start)				240-255	F0-FF	94-100
10) Dimmer	Dimmer closed (0%)				0-3	0-3	0-1
	Dimmer 1%-99%			Movement time 0,3 sec.	4-251	4-FB	2-98
	Dimmer open (100%)				252-255	FC-FF	99-100
11) Focus	In – Out (Near – Far)			Full distance 1.5 sec.	0-255	0-FF	0-100
12) Special	no function				0-15	00-0F	0-6
	Gobo-seesaw +/- 10° slow – fast			3,5 moves / min. up to 60 moves / max.	16-31	10-1F	7-12
	Gobo-seesaw +/- 20° slow – fast			3,5 moves / min. up to 60 moves / max.	32-47	20-2F	13-18
	Gobo-seesaw +/- 30° slow – fast			3,5 moves / min. up to 60 moves / max.	48-63	30-3F	19-24
	Color-chaser C / C+1 slow – fast			0,7 BPS -. 2,3 BPS => 1,43 s -. 0,43 s	64-79	40-4F	25-31
	Color-chaser C / C+2 slow – fast			0,7 BPS -. 2,0 BPS => 1,43 s -. 0,5 s	80-95	50-5F	32-37
	Audio Pan / Tilt slow			Every 4 th sound impulse = new position	96-111	60-6F	38-43
	Audio Pan / Tilt fast			Every sound impulse = new position	112-127	70-7F	44-50
	No function				128-249	80-F9	50-97
	Lamp OFF (hold position for 3 sec.)				230-249	6E-9F	92-97
	Reset				250-255	FA-FF	98-100
13) Movement	No Movement				0	00	0
	Movement	Size	Phase				
	PAN	1	0°		01-01	01-01	0,5
		1	90°		02-03	02-03	1,0
		1	180°		04-05	04-05	1,7
		1	270°		06-07	06-07	2,5
	PAN	2	0°		08-09	08-09	3,3
		2	90°		10-11	0A-0B	4,1
		2	180°		12-13	0C-0D	4,9
		2	270°		14-15	0E-0F	5,7
	PAN	3	0°		16-17	11-11	6,5
		3	90°		18-19	12-13	7,3
		3	180°		20-21	14-15	8,0
		3	270°		22-23	16-17	8,8
	PAN	4	0°		24-25	18-19	9,6
		4	90°		26-27	1A-1B	10,4
		4	180°		28-29	1C-1D	11,2
		4	270°		30-31	1E-1F	12
	TILT			size / phase see also PAN	32-63	20-3F	13-25
	PAN / TILT			size / phase see also PAN	64-95	40-5F	26-37
	PAN / TILT (inverse)			size / phase see also PAN	96-127	60-7F	38-50
	Circle			size / phase see also PAN	128-159	80-9F	51-62
	Circle (inverted)			size / phase see also PAN	160-191	A0-BF	63-75
	Figure Eight			size / phase see also PAN	192-223	C0-DF	76-87
	Random Movements			size see also PAN	224-255	E0-FF	88-100

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Channel	Function	Time and Value	DMX	HEX	%
14) Speed	Pan/Tilt relative movement		0-15	00-0F	0-6
Pan/Tilt	Pan/Tilt, Slow - Fast This channel controls both the Pan and Tilt speeds. This channel will also control the speed of all the built-in movements activated through channel 13.	Pan min. 530° = 200s Pan max. 530° = 2.65s Tilt min. 285° = 110s Tilt max. 285° = 1.8s	16-255	10-FF	7-100
15) Laser	Laser Off Laser Strobe, Sow – Fast Laser On		0-15 16-239 240-255		0-6 7-96 97-100
Lamp ON	Shutter open		240-255	F0-FF	94-100
Lamp OFF	Channel 12 (min. 3 sec.) (Only if shutter is closed, channel 9 = 0 -15)		230-249	6E-9F	92-97

6. Lamp Replacement

For a proper and safe lamp change, please read this chapter carefully and follow all instructions.

6.1 Safety Regulations

- Pull out the main plug!
- Wait min. 20 minutes after the last operation to cool down the fixture.
- Don't touch the bulb of the lamp with bare fingers (this can cause damages).
- Before you put the POWER SPOT 250™ into operation close the casing, otherwise your retina can be hurt!

6.2 Lamp Change

6.2.1 Be sure the unit is disconnected from it's main power supply.

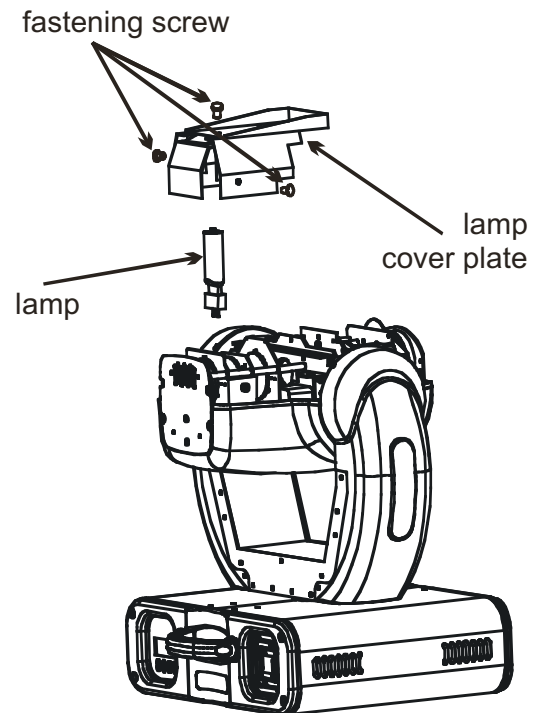
6.2.2 Remove the upper shell of the protective cover by removing the 4 retaining Phillips screws, 2 located on the front and 2 located on the rear of the head.

6.2.3 Once the outer cover has been removed, expose the lamp by removing the lamp cover plate. Remove the lamp cover plate by unscrewing 3 thumb screws. Refer to the illustration on the left.

6.2.4 Gently remove the old lamp from it's socket. If the old lamp has exploded be sure to remove all of the old lamp fragments to prevent damage to the internal components.

6.2.5 Replace the lamp with an approved replacement type. Be sure to follow all the lamp handling procedures included with your new lamp. Never handle the new lamp with your bare hands, the oils from your skin may damage the lamp. *Always replace with the lamp with a lamp that meets the original lamp specification, failure to do so may damage the unit and will void your manufactures warranty.*

6.2.6 Before reassembling the unit, be sure to adjust the lamp distance from the main



lens. The optimum distance between the lamp and the lens is between 1.0-1.5 mm. Use the optimization screws located on the outer socket casing marked [A] to make this adjustment.

6.2.7 Reassemble the unit in reverse order.

6.2.8 Be sure to reset the lamp running time (see page 19).

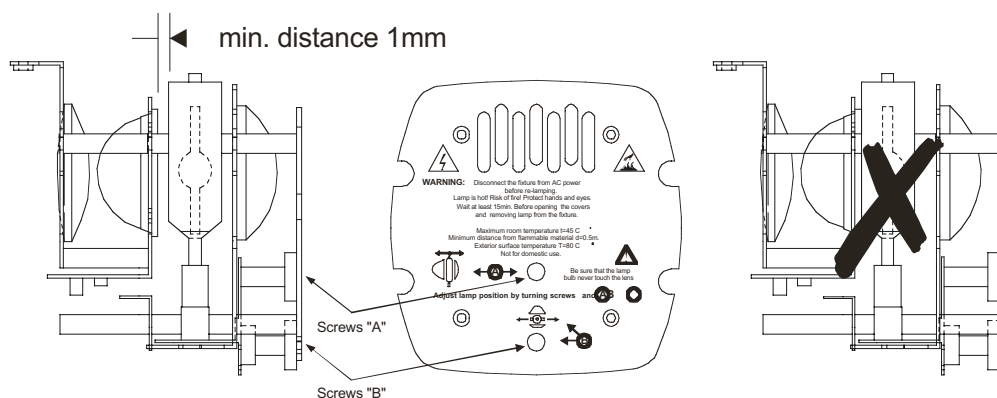
6.2.9 Follow the procedures in the next section to properly optimize the lamp.

Attention:

Be sure the lamp is securely seated in the lamp socket. Also pay close attention to the lamp orientation, optimum distance between the lamp and the lens should range between 1.0 - 1.5 mm. Failure to comply with this warning may cause excessive heat build-up that may cause the internal lens to crack.

6.3 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 **POWER SPOT 250™** lamp holder is aligned at the factory. However, due to slight imperfections in all lamps, fine adjustments may improve light performance. Please follow the procedures below to properly fine-tune the lamp orientation:

- 6.3.1 Strike the lamp (through the internal menu functions or with a DMX controller) and wait a while until full intensity of the lamp.
- 6.3.2 Using either a DMX controller or the control panel on the unit, strike the lamp and focus the light on a flat surface.(beam open, white, no gobo, no effects).
- 6.3.3 Center the hot-spot (the brightest part of the beam) using the 3 adjustment screws. 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.
- 6.3.4 To reduce a hot-spot, pull the lamp in by turning all three screws clockwise 1/4-turn at a time until the light is evenly distributed.
- 6.3.5 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 the screws

NOTICE: Be sure the minimum distance between the lamp and lens is at least 1.0mm. If the distance between the lamp and lens is less than 1.0mm, the lens may shatter due to excessive heat built-up.

7. Fuse Replacement

Caution: *Always replace with the exact same type fuse, unless otherwise specified by an authorized Elation® service technician. Replacing with anything other than the specified part can damage your unit and will void your manufactures warranty.*

Warning: *If you continue to blow fuses, STOP using the fixture. Contact customer support for further instructions, you may have to return the unit for servicing. Continuing to use the unit may cause serious damage.*

Fuse Replacement: Locate and remove the unit's power cord from the main power supply. Once the cord has been removed located the fuse holder located on the side panel of the near the power. Using a flat-head screwdriver remove the fuse holder from its' housing. Gently pull out the bad fuse and discard of it properly and replace with an exact match. Reassemble in reverse order.

8. Changing/Replacing Gobos

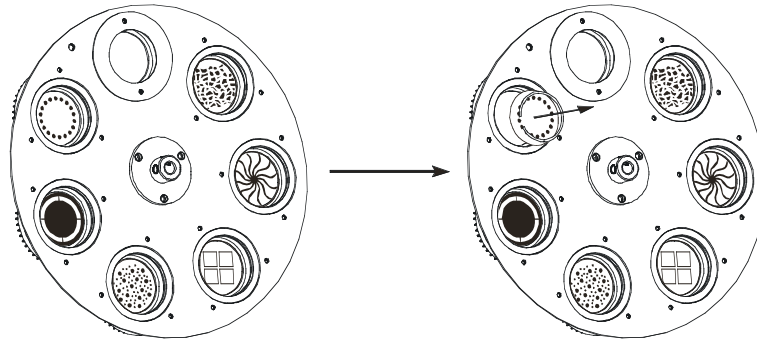
The POWER SPOT 250™ is fitted with a standard size gobo wheel that accepts gobos with an outside diameter of 27mm and a viewable image size of 23mm. Glass or steel gobos may be used. Please follow the safety procedures and installation below for proper and pain gobo exchange

Safety Regulations

- Pull out the main plug!
- If the unit was recently in operation, be sure to allow a minimum of 20 minutes to cool before opening the unit.
- To avoid eye injury and reduce exposure to UV radiation always be sure to replace the protective outside casing before attempting operation.

8.1 Installing/Replacing Gobos

- 8.1.1 Always be sure to disconnect the main power supply before attempting any service.
- 8.1.2 Remove the upper shell of the protective cover by removing the 4 retaining Phillips screws, 2 located on the front and 2 located on the rear of the head.
- 8.1.3 Once the outer cover has been removed, rotate the gobo wheel to a position that allows easy access to the gobo you want to replace. Using a small flat-head screwdriver, gently pry out the gobo retaining spring.
- 8.1.4 Replace the gobo and reinsert the retaining spring to secure the new gobo in place. Be sure the retaining spring is insert properly to avoid damage to the wheel.
- 8.1.5 Reassemble the POWER SPOT 250™ in reverse order.



Special Notice:

If you use glass gobos, the non-vaporized side must be fitted towards the lamp direction.

9. Maintenance and Cleaning the POWER SPOT 250™

It is absolutely essential that the fixture is kept clean and dust, dirt and smoke-fluid residues do not built-up on the surface or within the fixture. Otherwise the fixture's light output could be significantly reduced. Regular cleaning will not only ensure the maximum light output, but will also allow the fixture to function reliable throughout its life.

A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

The inside optical system should be maintained only by authorized persons. Please contact Elation professionals for recommendation associated with internal cleaning procedures.

9.1 Safety Regulations

- **Always disconnect main power before attempting any service related issues!**
- Allow ample time for the lamp to cool (at least 20 minutes) before performing any cleaning procedures.
- Never attempt operation with any of the protective covers removed!

9.2 Cleaning Frequency (rule-of-thumb)

The contamination of the fixture depends on the environment details. Therefore no general guidelines can be given. From this it follows that the intervals are only suggestions from our practice experience.

Position	Interval	In this way
Outside optic	Weekly	Soft cloth and glass cleaner
Color filter	Monthly	Soft cloth and glass cleaner
Gobos	Yearly	Vacuum cleaner, airbrush, etc.
Glass gobos	Monthly	Soft cloth and glass cleaner
Prism	Monthly	Soft cloth and glass cleaner
Dimmer/Shutter	Yearly	Vacuum cleaner, airbrush, etc.
Inside lens	Monthly	Soft cloth <u>no</u> glass cleaner
Fan and air channel	Monthly	Vacuum cleaner, airbrush, etc.
Reflector	Never	
Lamp	Never	
Moveable parts	Yearly	Suitable Lubricant

The above chart is a recommended cleaning schedule only. Cleaning frequency

depends on the environment in which the fixture operates (I.E. smoke, fog residue, dust, dew). In clubs that observe heavier use, we recommend cleaning on a more frequent basis. Periodic cleaning will ensure fixture longevity and crisp lamp output.

Attention:

1. **Never** allow optical parts come into contact with oil, dirt, or grime.
2. **Allow all parts to dry completely before attempt operation.**
3. **Never** clean the aspheric lens with water or other cleaners. The lens should be changed at the first sign of ware, usually in about 1 – 2 years (lens will begin to look cloudy). For lens replacement please contact Elation technical support.

9.3 Cleaning the Optical System (recommended for authorized personal only)

- 9.3.1 Always disconnect main power before attempting any service related issues!***
- 9.3.2 Allow ample time for the lamp to cool (at least 20 minutes) before performing any cleaning procedures.***
- 9.3.3 Open and remove the upper half of the projector by loosening the 4 retaining Phillips screws. Two located on the front and 2 located on the rear of the head.***
- 9.3.4 Follow the chart above to complete the service procedures.***
- 9.3.5 Replace the shell and tighten the 4 retaining screws.***
- 9.3.6 Be sure the cover has been replaced and all the parts have completely dried before attempting operation.***

10. Technical Specification

Power supply	
Power consumption	500 Watt (blind current compensated)
EU-model	AC 230V / 50 Hz~
Fuse protection	T3,15A, 250V, 5x20 mm (fine-wire fuse)
US-model	AC 115V / 60 Hz~
Fuse protection	T6,3A, 115V, 5x20 mm (fine-wire fuse)
Lamp	
Type 1	MSD 230V/250W, socket GY-9,5
Type 2	MSD 230V/200W, socket GY-9,5
Optical system	
Parabolic reflector	
Doubles condenser lens	
15° standard objective (optional 12° or 18°)	
Lens anti-reflex	
Color	
11 dichroic filter plus white	
Gobos	
6 exchangeable standard gobos plus open	
Gobo outside diameter 27 mm, image size 23 mm	
All gobos rotating and positioning	
Shutter / Strobe / Dimmer	
Strobe- effect with variable speed 1 - 10 flashes per second	
Continuously mechanical dimmer 0 - 100%	
Prism	
Rotating 3-face prism, rotating and variable in speed	
Focus	
Motor driven focus from near to far away	
Drive	
Standard DMX-512, 3 pole XLR; [+] = Pin 3 [-] = Pin 2 [Ground] = Pin 1. The DMX- addressing starts at the DMX- address [001].	
Pan / Tilt	
Pan- movement	530° in max. 2,65 seconds, 16 bit resolution
Tilt- movement	280° in max. 1,68 seconds, 16 bit resolution
Weights and measures	
Width of the base	380 mm
Length of the base	380 mm
height (head vertical)	500 mm
Weight (net)	22,2 kg
Weight (gross)	24,6 kg

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

2 YEAR (730 DAYS) LIMITED WARRANTY

A. Elation Professionals® hereby warrants, to the original purchaser, Elation Professionals® 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 Professionals® 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 Professionals® 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 Professionals® shall have no liability whatsoever for loss of or damage to any such accessories, or 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 Professionals® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professionals® factory unless prior written authorization was issued to purchaser by Elation Professionals®; 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 Professionals® 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 Professionals® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professionals®. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.

E. Elation Professionals® 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 Professionals® 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 Professionals® 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 Professionals® products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

H. Lamps are not covered under this or any other warranty either written or implied.

LASER WARNING LABELS

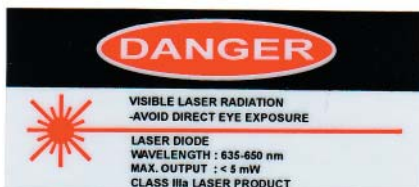


CAUTION: When installing the Power Spot 250™ be sure it is mounted in a manner that prevents the audience from looking directly into the laser beam. Mount the unit in a manner that prevents the laser beam from striking the audience.

AVOID EXPOSURE

Laser light is emitted from this aperture

"DANGER -Laser radiation when open. AVOID DIRECT EYE EXPOSURE." For Class IIIa accessible laser radiation with an irradiance greater than $25 \times 10^{-3} \text{ Wcm}^{-2}$



This Laser product complies with the CDRH/BRH radiation performance standards. 21 CFR Subchapter J.

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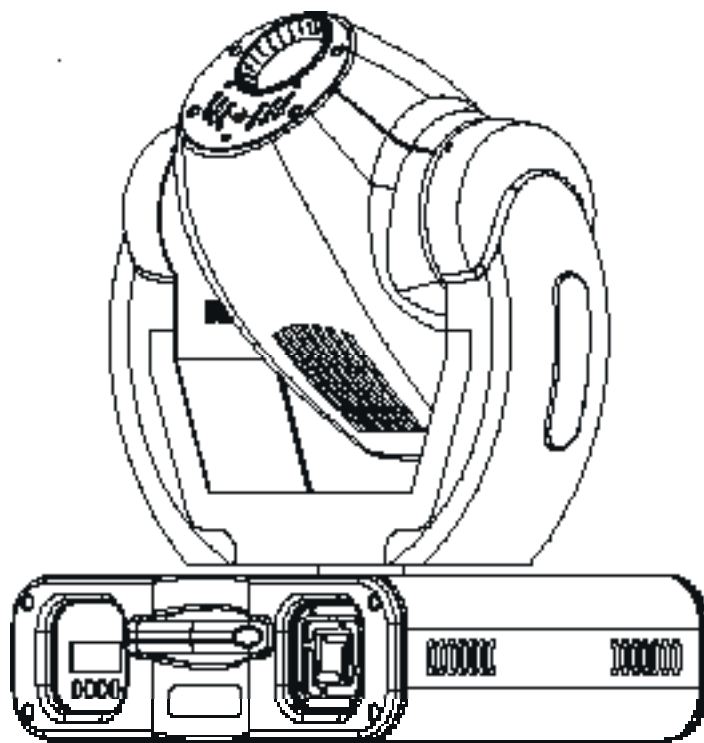
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©Elation Professional®
A Division of the American DJ™ Group of Companies
4295 Charter Street
Los Angeles, CA. 90058
U.S.A.
323-582-3322 / 323-582-3108 Fax
web: www.ElationLighting.com / e-mail:
info@ElationLighting.com

