

# **8250B**

# **User Manual**

Software Version 1.19

Revised 6/2003

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*INTRODUCTION:* Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The Power Wash 250B<sup>™</sup> 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 fixture. These instructions contain important information regarding safety during use and maintenance.

**UNPACKING:** Thank you for purchasing the Elation Professional® Power Wash 250B.™ Every Power Wash 250B™ has been thoroughly bench tested and has been shipped in perfect operating condition with the lamp installed and optimized. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for damage and be sure all accessories necessary to operate the fixture 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 fixture 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 questions should you encounter problems during your set up or initial operation. You may also visit our forum 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

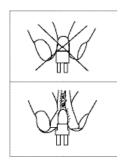
E-mail: <a href="mailto:support@ElationLighting.com">support@ElationLighting.com</a>

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

**Caution!** There are no user serviceable parts inside this fixture. 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 when ever possible.

WARRANTY REGISTRATION: The Power Wash 250B™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 prepaid 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 should also be included in the shipping container. If the fixture is under warranty, you must provide a copy of your proof of purchase invoice. 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.

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 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. Extreme caution should be used when operated this or any fixture fitted with a gas discharge lamp.

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

# 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.

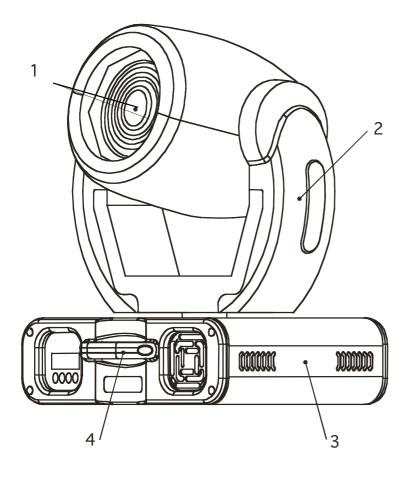
## V. Safety Instructions



The Power Wash 250B™ 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.

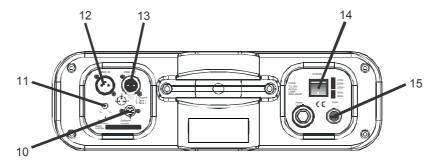
- 1. Always be sure that the fan and the air inlets remain clean and are never blocked. Allow about 6" (15cm) between this fixture and other devices or a wall to allow for proper cooling.
- 2. Never touch the fixture during normal operation. This can cause severe personal injuries and/or damage to the fixture.
- 3. Be sure to unplug the POWER WASH 250B™ from the power outlet before performing any service related issues.
- 4. Allow at least 30 minutes after disconnecting the AC before you open the **POWER WASH 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 WASH 250B™ without suited safety aids such as safety cables or clamps can increase the risk of damage and/or personal injury.
- 8. Qualified personnel should only perform installation.
- 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.

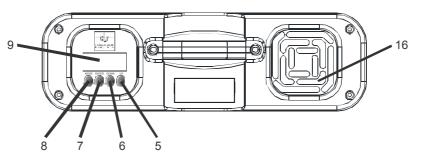
# 1. Features and Functions



- 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 Holder
- 16.Fan (air inlet)





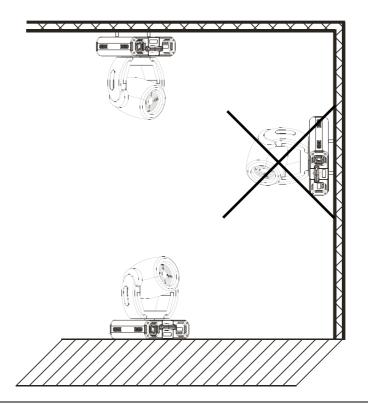
- Lens Assembly This high quality lens assembly is fully focusing. Focus the
  lens by loosening the locking screws mounted on the top and bottom of the
  head assembly. Then using the screws to grasp the lens assembly, slide the
  lens back and forth until the desired focus is achieved. Then tighten down on
  the locking screws to retaining your focus.
- 2. **Retaining Arm –** This Arm serves as a conduit for all electronic from the base to the head assembly.
- 3. **Base** The fixture base holds all the main electronics for the fixture and provides a means to secure the fixture to a wall or ceiling.
- 4. **Carrying Handles -** Be sure to always carry the fixture by the built-in handles. Never lift or carrying the fixture by the head or yoke. Pulling on or transporting the fixture by the head assembly 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 used to detail the menu and operating functions.
- 10. **Firmware Connection** This connection is 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 modes.

- 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 250B<sup>™</sup> 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 7 amp (3.15 amp 220v) GMA protective fuse. Never defeat the fuse, the fuse is designed to protect the electronics in the event of sever 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. Please note; when the fixture orginally ships from the factory we included a 6.3 amp fuse. This fuse may safely be replaced with a 7 amp fuse.
- 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. Installation

# 2.1 Mounting

The **POWER WASH** 250B™ is fully operational in two different mounting positions, hanging upside 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 (former 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

Secure two clamps to the bottom of the **POWER WASH 250B™** to mount the fixture to truss. Refer to the printed instructions on the bottom of the fixture for proper clamp installation.

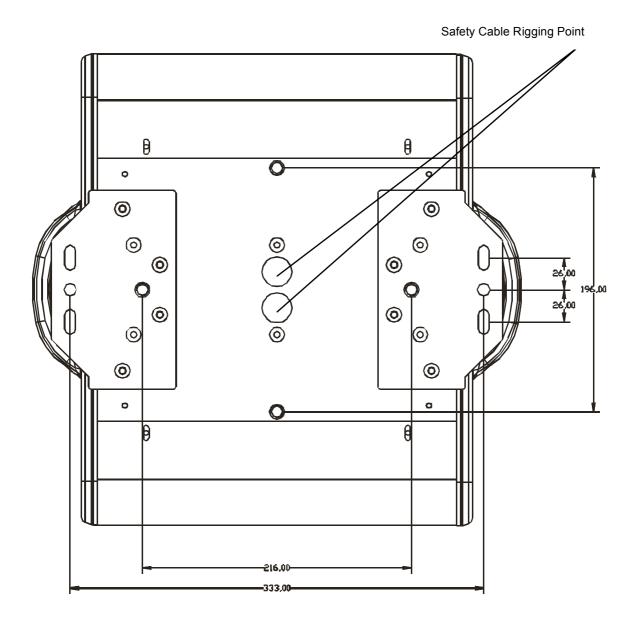
#### 2.1.2 Mounting plate

For a permanent installation of the **POWER WASH 250B™** in a non-truss

installation you can use the optional mounting plate (secured to the bottom of the fixture) to secure the fixture to a ceiling or a wall. The plate uses four M6x20 screws.

# 3.2 Securing the POWER WASH 250™

Regardless of the rigging option you choose for your **POWER WASH 250B™** 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.



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#### 3.3 Connections

#### 3.3.1 Power supply

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

Connected load 500W <=> 4.4 A (blind current compensation)

or 230V  $\sim$  50Hz AC (EU),

Connected load 500W <=> 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.

#### 3.3.2 DMX-512

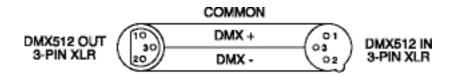
3-Pin XLR Input/Output. [+] = Pin 3 / [-] = Pin 2 / [Ground] = Pin 1

- **3.4 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 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" terminal). 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.
- 3.5 Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation):

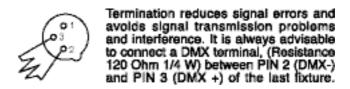
  The Power Wash 250B™ can be controlled via DMX-512 protocol. The Power Wash 250B™ is a 14 channel DMX fixture. The DMX address is set electronically using the controls on the side panel of the fixture. Your fixture and your DMX

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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 daisy chained 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.



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

# 3.9 Fuse Requirements

The **POWER WASH 250B™** electronic system is protected by a 5x20 mm external fuse. 115V / T 6.3A (US model) or 230V / T 3.15A (EU model).

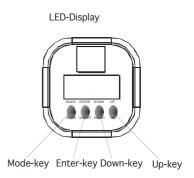
The fuse requirements are clearly printed on the side of the fixture.

# **WARNING:**

- · Always disconnect main power before changing a 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.

#### 3 The Menu Field -

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 WASH 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.



	Level	Level	Level	DISCRIPTION
	1	2	3	
•	100 i			Indicate the Staring DMX address
	TEST			Activates the fixtures self test mode
	AU]] I	ASLW		Activates Sound-Active mode (slow)
		AF5T		Activates Sound-Active mode (fast)
		MSTR		Runs fixture as "MASTER" for Audio, Master-Slave mode
		5VPT		Runs fixture as "SLAVE" for Audio, Master-Slave mode
				Room size adjustment (NORM-BIG-MIDL-SMAL) - This
		51 <i>ZE</i>		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 dimensions
ſ	LAMP			Manually switches lamp "on" and "off"
	RESE			Resets the fixture's pan, tilt, and internal wheels
<u>ط</u>	TIME	POWR		Displays the total fixture running time (non destructible)
DOWN - UP	TIME			Displays a lamps running time (erasable) – Reset this
Σ		LAI		reading after every lamp change to keep an accurate
Ŏ		<b>G</b>		account of a lamps running time
<b>↓</b> .		LA2		Displays the total lamp running time (non destructible)
•	FCOL			Manually activates a continuous color wheel scroll
	RPAN			Reverses the Pan movements
	RTLT			Reverses the Tilts movements
	SPEC .	MANU		Manual drive of all device functions
			PAN	Pan Position, Channel 1
			TILT	Tilt Position, Channel 3
			COLO	Color Wheel, Channel 5
			SHUT	Shutter, Channel 9
			]] I MR	Dimmer, Channel 10
	i		SPEC	Special Functions, Channel 12
		LAAU		Automatic lamp start
		<b>ILOF</b>		Switch off lamp via DMX
		]MXI	7 00	Reed out actual DMX-values
		])   SP	1 ON	Display On/Off

	RE V
TEMP	
FRNS	нібн
	REG
	LOOF
	LOHI
A]JU	COJE
	XXXX
	COLO
	CLRE
	FRCC
	ARES
]FSE	
FEEI	
EFL6	

# 3.1 Adjust the DMX- Address [ ]00 |

After applying power to the **POWER WASH 250B™** the LED will display the fixture's current DMX address. 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 WASH 250B™** and wait for the fixture reset process to finished ('*RE5E*' 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 **IDD** I. 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 **D**K.

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 The Test Program [TE5T]

TEST

The **Test** Program launched 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 [AU]] /

The **Audio** menu allows you to run a stand-alone audio program. This program can run either fast (*RFSI*) or slow (*RSLW*); Fast (*RFSI*): When running in "fast" mode <u>every sound</u> 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 [LAMP]



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 DP and lamp DFF. Press the Enter button to confirm the operation or the Mode button to cancel and return to the main menu. (The lamp DFF command will only functions if and when the shutter is closed at the same time).

# 3.5 Reset [RE5E]

RESE

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 (*R51* will readout in the display).

# 3.6 Running time [TIME]

TIME

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

POWR	Total fixture running time (non destructible).		
	Lamp running time (erasable). Press and hold down the <b>Up</b> and <b>Down</b> buttons together for three seconds to reset this function.		
LA 2	Total lamp running time (non destructible).		

#### 3.7 Continuous Color Wheel (F[0L)

FCOL

This function changes the color wheel operation from continuous to step. Continuous allows you to micro step the color wheel, which allows for split colors. The step function will only the color wheel to step directly from one color to another color, this function will not allow split coloring.

#### 3.8 Invert Pan Movement (RPAN)



This function allows you to invert all pan movements. Use the **Up** and **Down** buttons to turn this function **U**\(\textit{III}\) and **UFF**. Press the **Enter** button to accept the change or the **Mode** button to cancel and return to the main menu.

#### 3.9 Invert Tilt Movement (RTLT)



This function allows you to invert all tilt movements. Use the **Up** and **Down** buttons to turn this function  $\mathcal{D}\mathcal{D}$  and  $\mathcal{D}FF$ . Press the **Enter** button to accept the change or the **Mode** button to cancel and return to the main menu.

# 3.10 Special Functions (SPEC)



This menu option accesses several special features and function of the **POWER WASH 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 (MANU)



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
PAN	<i>000 - 255</i>
TILT	000 - 255
COLO	<i>000 - 255</i>
SHUT	000 - 255
]] I MR	000 - 255
<b>35PR</b>	000 - 255
SPEC	000 - 255

Remark
Pan Position
Tilt Position
Color wheel (fixed colors)
Shutter / Strobe function (the lamp strikes at DMX 255 if dimmer is "open" = DMX 255)
Dimmer
Beam shape + Frost
Lamp Off, Reset,

# 3.10.2 Lamp On automatically (LARU)

LAAU

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: **O**? is the default setting for this function

# 3.10.3 Lamp Off via DMX []LOF]

**JLOF** 

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  $\mathcal{D}\mathcal{D}$  and  $\mathcal{D}FF$ . Turn this function on to allow DMX switching. Press **Enter** to confirm or **Mode** to cancel and return to the menu.

#### 3.10.4 DMX Readout []MXI]



This function will use the LED to readout the DMX values of each channel received by the fixture. Use the **Up** and **Down** buttons to select desired channel and press **Enter** to read its value.

Function	Value
PAN	0 - 255
TILT	0 - 255
COLO	0 - 255
SHUT	0 - 255
]] I MR	0 - 255
MOVE	0 - 255
SPEC .	0 - 255

Remark
Pan Position
Tilt Position
Color wheel (fixed colors)
Shutter / Strobe function
Dimmer
Movements
Lamp Off, Reset,

# 3.10.5 Display []] 15P]

]] I SP

Use this function to choose between different display indications. Use the **Up** and **Down** buttons to toggle between the two different display modes.

Press Enter to confirm or Mode to cancel and return to the menu.

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

# 3.10.6 Fixture Temperature [TEMP]

TEMP

This function allows you to read out the actual fixture operating temperature. Press the **Enter** button to confirm 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 (FRNS)

FANS

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

ніБн	The cooling fan works continuously at max. speed.
REG	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.
LOOF	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.
LOHI	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 [AIJU]

AJJU

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
COLO	- 99 - + 99
CLRE	Adjustments in the internal circuit.
FREE Must read On	
ARES	Adjust- Reset

Remark
Color wheel
Authorized Personal
only. Refer to the Service manual
Service manual

# 3.10.9 Default Settings [IF5E]

JF5E

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  $\mathcal{DK}$ , then return to the previous function. The chart below details the factory defaults.

Function	Display
DMX Address	<b>1</b> 100 i
Pan reverse	RPAN
Tilt reverse	RTLT
Automatic lamp on	LAAU
Lamp on via DMX	<b>ILOF</b>
Display	]) I SP
Cooling fan	FANS
Feedback	FEE]

Default Settings			
10	J00 I		
חם	OFF ✓		
חם	0FF		
חם	OFF ✓		
on ✓	0F	F	
] On ✓			
HIGH REG ✓	LOOF LOHI		
on ✓	0F	F	

# 3.10.10 Feedback [FEE]]

FEEI

The **POWER WASH 250B™** 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 Correction of faults [EFL]]

**EFLG** 

(These functions are reserved for authorized technicians only)

# 3.11 Error and Information Messages

HEAT	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
LAER	ignite the lamp after 5 minutes.  After two unsuccessful lamp ignition attempts the display will readout <i>LRER</i> . This means the lamp could be damaged, the lamp is missing, the fixture is overheating, or there could be a failure on the igniter or ballast.
OTMP	This error message informs you the fixture was overheating and the protective relay switched 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.
RSER	This message informs you one of the fixtures function was unable to reset properly (magnetic sensor, stepping motor, driver on the PCB, cables, etc.). Repair the defect and start the fixture again.

# 4. Operation

Operating Modes: The Power Wash 250B™ 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<sub>®</sub> Show Designer 2.<sup>™</sup>

- **4.1** *Universal DMX Control:* This function allows you to use a universal DMX-512 controller such as the LSC® DMX Operator II<sup>™</sup> or LSC® Show Designer 2<sup>™</sup> 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 Wash<sup>™</sup> uses 14 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.
- 4.1.1 Use the controller's faders to control the various DMX fixture traits. This will allow you to create your own programs.
- 4.1.2 Follow the instruction on page 18 to set the DMX address.
- 4.1.3 For longer cable runs (more than a 100 feet) be sure to use a **terminator** on the last fixture.
- 4.1.4 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 AUD! 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 51ZE function allows you to choose a the approximate size of the room (NDRM, 1815, M13L, SMRL). 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 frequiencies 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	0255	00FF	0100
2) PAN-fine	Low- Pos High- Pos + 2.1° (16 Bit)		0255	00FF	0100
3) Tilt-coarse	0 285°	min. 1.8 s	0255	00FF	0100
4) Tilt-fine	Low- Pos High- Pos + 1.1° (16 Bit)		0255	00FF	0100
5) Color*	open (fast)	Chaser from color to	03	0003	0,2
5, 55.5.	color 1, Brilliant Blue (fast)	color max. 140 BPM	47	0407	1,8
	color 2, Blue (fast)	→ 0,43 s	811	080B	3,3
	color 3, Blue Purple (fast)	,	1215	0C0F	4,9
	color 4, Pink (fast)		1619	1013	6,5
	color 5, Orange (fast)		2023	1417	8,0
	color 6, Italian Blue (fast)		2427	181B	9,6
	color 7, Turquoise (fast)		2831	1C1F	11,2
	color 8, Jade (fast)		3235	2023	12,7
	color 9, CTB 001 (fast)		3639	2427	14,3
	color 10, CTO 02 (fast)		4043	282B	15,9
	color 11, Red (fast)		4447	2C2F	17,5
	open (fast)		4863	303F	19,0
	open (slow)	Chaser from color to	6467	4043	25,3
	color 1, Brilliant Blue (slow)	color max. 70 BPM	6871	4447	26,9
	color 2, Blue (slow)	→ 0,86 s	7275	484B	28,4
	color 3, Blue Purple (slow)		7679	4C4F	30,0
	color 4, Pink (slow)		8083	5053	31,6
	color 5, Orange (slow)		8487	5457	33,1
	color 6, Italian Blue (slow)		8891	585B	34,7
	color 7, Turquoise (slow)		9295	5C5F	36,3
	color 8, Jade (slow)		9699	6063	37,8
	color 9, CTB 001 (slow)		100103	6467	39,4
	color 10, CTO 02 (slow)		104107	686B	41,0
	color 11, Red (slow)		108111	6C6F	42,5
	open (slow)	ratio 4.4 to read the	112.127	707F	44,1
	color rotation, slow-fast, CW	min. 1.4 turns/h	128191	80BF	5075
	color rotation, fast-slow, CCW Audio color chaser slow	max. 2.9 turns/sec. each 4 <sup>th</sup> sound impulse	192253	C0FD	7698
	Audio color chaser slow	→ new color	254	FE	99
	Audio color chaser fast	each sound impulse  → new color	255	FF	100
6) Shutter	Shutter closed		015	000F	06
	Random Strobe (different pattern)		1631	101F	711,9
	Strobe Pulse effect , slow - fast	min. frequency 0,7 Hz	3247	202F	1212,9
	Strobe effect, slow - fast	max. frequency 10 Hz	48239	30EF	1393
	Shutter open		240255	F0FF	94100
	Lamp ON (ignition)		254255	FEFF	99100
7) Dimmer	Dimmer closed (0%)		03	03	01
	Dimmer 1%99%	movement time 0,3 Sec.	4251	4FB	298
	Dimmer open (100%)		252255	FCFF	99100
8) Special	No function		015	000F	06
	Audio CMY chaser slow		1623	1017	79
	Audio CMY chaser fast		2431	181F	1012
	Rotating color chaser		3263	203F	1324
	Color chaser C / C+1		6479	404F	2531
	slow – fast				

Channel	Function			Time and Value	DMX	HEX	%
	Color chaser	C / C+2			8095	505F	3237
	slow - fast						
	PAN/Tilt chaser slow			96111	606F	3843	
	PAN/Tilt chas	ser fast			112127	707F	4450
	Lamp OFF				230249	E6F9	9297
	(only if shutt	ter is close	d)!				
	Reset				250255	FAFF	98100
9) Movement	No movemen	nt			0	00	0
,	Movement	Size	Phase				
	PAN	1	0°		0101	0101	0,5
		1	90°		0203	0203	1,0
		1	180°		0405	0405	1,7
		1	270°		0607	0607	2,5
	PAN	2	0°		0809	0809	3,3
		2	90°		1011	0A0B	4,1
		2	180°		1213	0C0D	4,9
		2	270°		1415	0E0F	5,7
	PAN	3	0°		1617	1111	6,5
		3	90°		1819	1213	7,3
		3	180°		2021	1415	8,0
		3	270°		2223	1617	8,8
	PAN	4	0°		2425	1819	9,6
		4	90°		2627	1A1B	10,4
		4	180°		2829	1C1D	11,2
		4	270°		3031	1E1F	12
	TILT		size / phase	see also PAN	3263	203F	1325
				see also PAN	6495	405F	2637
	PAN / TILT (i	nverse)	size / phase	see also PAN	96127	607F	3850
	Circle	,	size / phase	see also PAN	128159	809F	5162
	Circle (invers	e)	size / phase	see also PAN	160191	A0BF	6375
	lying eight	,	size / phase	see also PAN	192223	C0DF	7687
	random move	ement	size see als	o PAN	224255	E0FF	88100
10) Speed	Pan/Tilt relat	ive moveme	ent		015	000F	06
Pan/Tilt	Pan/Tilt_slow - fast		Pan Min. 530° = 200 s	16255	10FF	7100	
	Use this ch	annel 14)	also for the	Pan Max. 530° = 2.65 s			
				Tilt Min. 285° = 110 s			
	13).		· 	Tilt Max. 285° = 1.8 s			
Lamp ON	Shutter open				254255	FF FF	99 100

Lamp ON	Shutter open	254255	FEFF	99100
II AMID UFF	Channel 12 ( min. 3 sec. ) (only if shutter is closed, channel 9 = 015)	230249	E6F9	9297

<sup>\*</sup> Be sure the "FLOL" function is set to ' $D\Omega$ ' to control the color wheel continuously. This function will allow split colors.

# 6. Service and Maintenance

### 6.1 Lamp Change

To ensure a smooth operation, please follow these instructions carefully.

# Safety Guidelines

- Always disconnect main power prior to performing any service procedure!
- Caution: Always replace with the exact same type lamp, unless otherwise specified by an authorized Elation® service technician. Replacing with anything other than the specified part can damage your fixture and will void your manufactures warranty.
- **Warning:** If you continue to blow lamps, STOP using the fixture. Contact customer support for further instructions, you may have to return the unit for service. Continuing to use the fixture may cause serious damage.
- Always allow ample time for the fixture to cool (approximately 20 minutes) before attempting a lamp change.
- Never handle lamp with your bare hands as the oils from your skin may damage the lamp
- Be sure to review all lamp handling and safety procedures on page 6 before attempting any lamp service.

# 6.2 Removing the Lamp

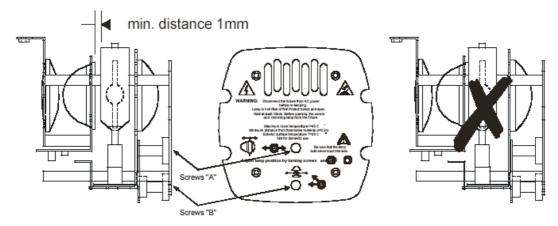
- 6.2.1 Be sure the unit is disconnected from it's main power supply.
- 6.2.2 Remove the 3 retaining Phillips screws that secure the lamp cover to fixture chasis.
- 6.2.3 Once the lamp cover is free, expose the lamp by gently pull out the lamp socket assembly.
- 6.2.4 Gently remove the old lamp from 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 handleing 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 reassembing 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 Besure to reset the lamp running time (see page 19).

#### 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 WASH 250B™** lamp holder is aligned at the factory. However, due to slight imperfections in all lamps, fine adjustments may improve light performance. Please follow this procedure:

- 6.3.1 Strike the lamp (for example in the **LAMP** menu) 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

Attention: Be sure that the minimum distance between the lamp and lens is more then 1.0mm. If it is less then this distance, the lens has higher probability of shattering.

# 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. Maintenance and Cleaning the POWER WASH 250B™

It is absolutely essential that the fixture is kept clean and that dust, dirt, smoke, and fogfluid residues do not built up on or within the fixture. This will reduce the risk of premature lamp life failure and will prevent a significant reduction in lamp output. 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.

# 8.1 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!

# 8.2 Cleaning Frequency (rule-of-thumb)

Section	Interval	Procedure
Outside optic	Weekly	soft cloth and glass cleaning fluid
Color filter	Monthly	soft cloth and glass cleaning fluid
Beam shape	Monthly	soft cloth and glass cleaning fluid
Dimmer/Shutter	Yearly	vacuum cleaner, airbrush, etc.
Fan and air channel	Monthly	vacuum cleaner, airbrush, etc.
Reflector	Yearly	soft cloth and glass cleaning fluid
Lamp	Never	
Moveable parts	Yearly	suitable fatty oil

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:

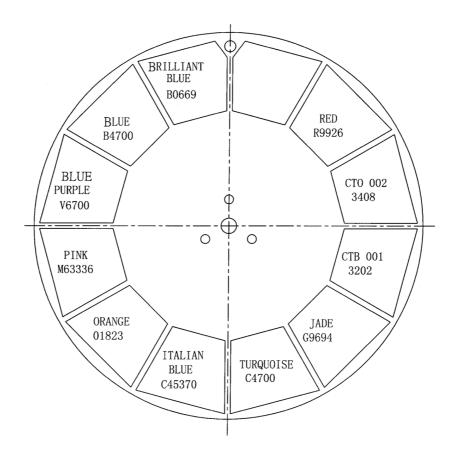
- Never allow optical parts come into contact with oil, dirt, or grime.
- Allow all parts to dry completely before attempt operation.
- <u>Never</u> clean the aspheric lens with water or other cleaners. The lens should be changed at the first sign of ware, usually in about 1 2 years (lens will begin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

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

- 1. Always disconnect main power before attempting any service related issues!
- 2. Allow ample time for the lamp to cool (at least 20 minutes) before performing any cleaning procedures.
- 3. Open and remove the upper half of the projector by loosening the 4 retaining Phillips screws. Two on the front side and 2 on the backside of the head.
- 4. Follow the chart above to complete the service procedures.
- 5. Replace the shell and tighten the 4 retaining screws.

Be sure the cover has been replaced and all the parts have completely dried before attempting operation.

# 9. Power Wash Color Wheel Orientation:



# 10. Technical Specification

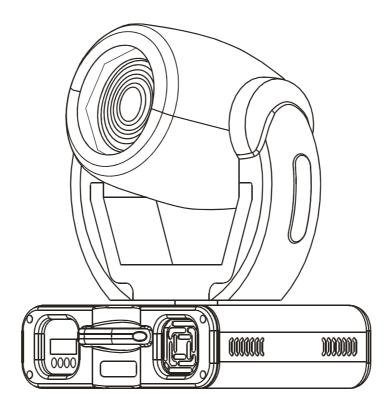
Power supply				
Power consumption 500 Watt (blind current compensated)				
EU - model	AC 230V / 50 Hz~			
Fuse protection	T3.15A, 250V, 5x20 mm (fine-wire fuse)			
US - model	AC 115V / 60 Hz~			
Fuse protection	T6.3A, 115V, 5x20 mm (fine-wire fuse)			
Lamp				
Type 1	MSD 230V/250W, socket GY-9.5			
Type 2	MSD 230V/200W, socket GY-9.5			
Optical system				
Aluminum reflector				
Fresnell lens 150mm				
Color				
9 dichroic filter plus white	9 dichroic filter plus white 1x CTC 5600k, 1x CTC 3300k			
Mechanically adjustable Beam angel 8°-22°				
Shutter / Strobe / Dimmer				
Strobe effect, variable in s	peed 1 – 10 flashes per second			
Continuously mechanical of	dimmer 0 - 100%			
Controlling				
Standard DMX-512, 3 pole	e XLR; [+] = Pin 3 [-] = Pin 2 [Ground] = Pin 1.			
The DMX addressing start	s 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, 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 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



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