

RAYZOR 360Z™

user manual

ELATION

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DOCUMENT VERSION

Please check www.elationlighting.com for the latest revision/update of this manual.

Date	Document Version	Software Version ≥	DMX Channel Modes	Notes
01/05/17	1.2	1U01: 2.0.1 2U01: 2.0.1 3U01: 2.0.1	20 / 26 / 32	Updated White Balance instructions.
02/01/17	1.3	NO Change	NO Change	Corrected Chase Patterns DMX value error.

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GENERAL INFORMATION

INTRODUCTION

Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! This fixture 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

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

BOX CONTENTS

- Omega Bracket
- 5pin DMX Cable
- powerCON TRUE1 Cable
- Safety Cable

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®.

ELATION SERVICE USA - Monday - Friday 8:00am to 5:00pm PST

Voice: 323-582-3322

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WARRANTY REGISTRATION

Please complete and mail in the enclosed warranty card or register online: <http://www.elationlighting.com/Login.aspx> to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support.



IMPORTANT NOTICE!

There are no user serviceable parts inside this unit. Do not attempt any repairs yourself; doing so will void your manufactures warranty. Damages resulting from modifications to this fixture and/or the disregard of safety and general user instructions found in this user manual void the manufactures warranty and are not subject to any warranty claims and/or repairs.

LIMITED WARRANTY

A. Elation Professional® hereby warrants, to the original purchaser, Elation Professional® products to be free of manufacturing defects in material and workmanship for a period of two years (730 days), and Elation Professional® product rechargeable batteries to be free of manufacturing defects in material and workmanship for a period of six months (180 days), from the original date of purchase. This warranty excludes discharge lamps and all product accessories. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

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

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

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

E. Elation Professional® reserves the right to make changes in design and/or performance 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 the products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty periods set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said periods have expired. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional® be liable for any loss and/or damage, direct and/or consequential, arising out of the use of, and/or the inability to use, this product.

G. This warranty is the only written warranty applicable to Elation Professional® products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

SAFETY INSTRUCTIONS AND GUIDELINES

This fixture is an extremely sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow all instructions and guidelines in this manual. The manufacturer of this device is not responsible for injury and/or damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform installation of this fixture and only the original rigging parts (omega brackets) included with this fixture should be used for installation. Any modifications to the fixture and/or the mounting hardware included will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.



PROTECTION CLASS 1 - FIXTURE MUST BE PROPERLY GROUNDED

DO NOT PLUG FIXTURE INTO A DIMMER PACK!



NEVER OPEN THIS FIXTURE WHILE IN USE!

UNPLUG POWER BEFORE SERVICING FIXTURE!

NEVER TOUCH FIXTURE DURING OPERATION, AS IT MAY BE HOT!

KEEP FLAMMABLE MATERIALS AWAY FROM FIXTURE!



INDOOR / DRY LOCATIONS USE ONLY!

DO NOT EXPOSE FIXTURE TO RAIN AND MOISTURE!



NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE!

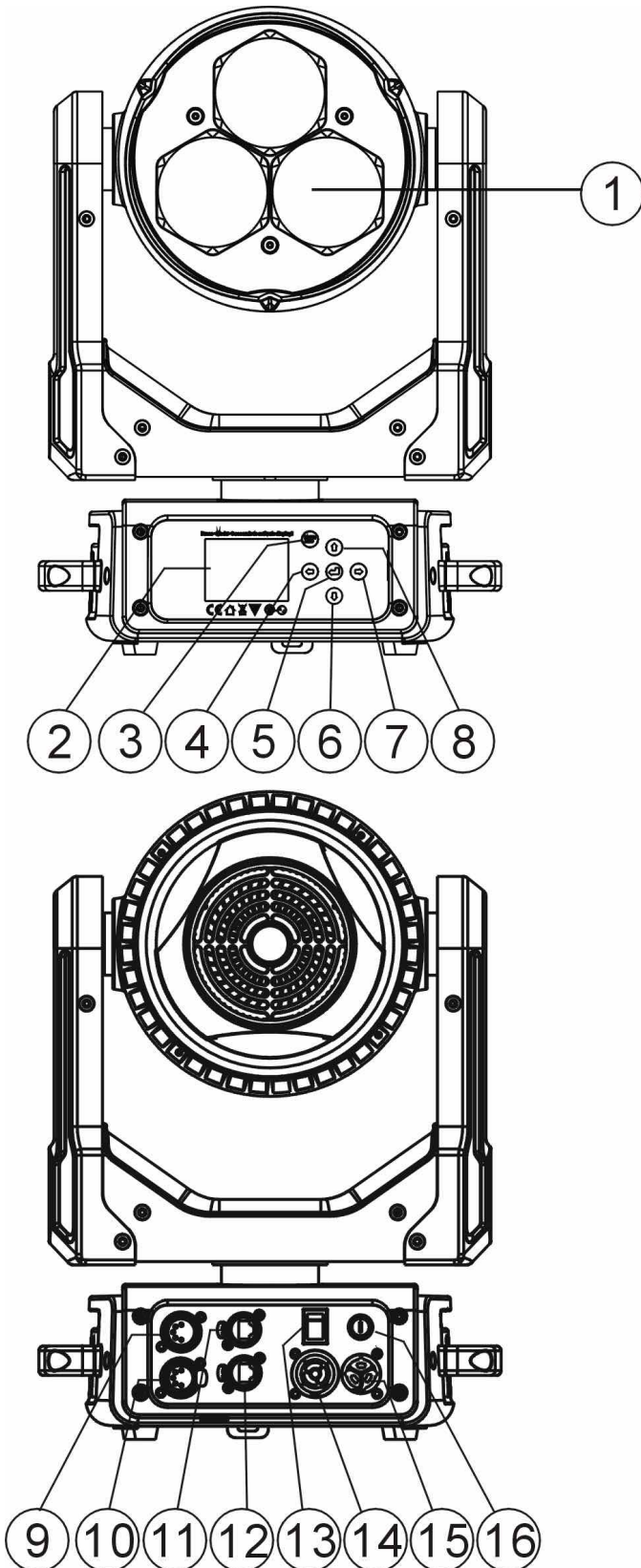
RETINA INJURY RISK - MAY INDUCE BLINDNESS!

SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK!

SAFETY INSTRUCTIONS AND GUIDELINES

- **DO NOT TOUCH** the fixture housing during operation. Turn OFF the power and allow approximately 15 minutes for the fixture to cool down before serving.
- **DO NOT** shake fixture, avoid brute force when installing and/or operating fixture.
- **DO NOT** operate fixture if the power cord has become frayed, crimped and/or damaged. If the power cord is damaged, replace it immediately with a new one of similar power rating.
- **DO NOT** block any air ventilation slots. All fan and air inlets must remain clean and never blocked. Allow approx. 6" (15cm) between fixture and other devices or a wall for proper cooling.
- When installing fixture in a suspended environment, always use mounting hardware that is no less than M10 x 25 mm, and always install fixture with an appropriately rated safety cable.
- Always disconnect fixture from main power source before performing any type of service and/or cleaning procedure. Only handle the power cord by the plug end, never pull out the plug by tugging the wire portion of the cord.
- During the initial operation of this fixture, a light smoke or smell may emit from the interior of the fixture. This is a normal process and is caused by excess paint in the interior of the casing burning off from the heat associated with the lamp and will decrease gradually over time.
- Consistent operational breaks will ensure the fixture will function properly for many years to come.
- Use the original packaging and materials to transport the fixture in for service.

OVERVIEW



1. LED Lens Array
2. LCD Menu Function Display
3. MODE/ESC Button
4. ENTER Button
5. LEFT Button
6. DOWN Button
7. RIGHT Button
8. UP Button
9. DMX IN
10. DMX OUT
11. RJ45 Ethernet IN
12. RJ45 Ethernet OUT
13. Power Switch
14. powerCON TRUE1 OUT
15. powerCON TRUE1 IN
16. Fuse

INSTALLATION



FLAMMABLE MATERIAL WARNING

Keep fixture at least 5.0 feet (1.5m) away from any flammable materials, decorations, pyrotechnics, etc.



ELECTRICAL CONNECTIONS

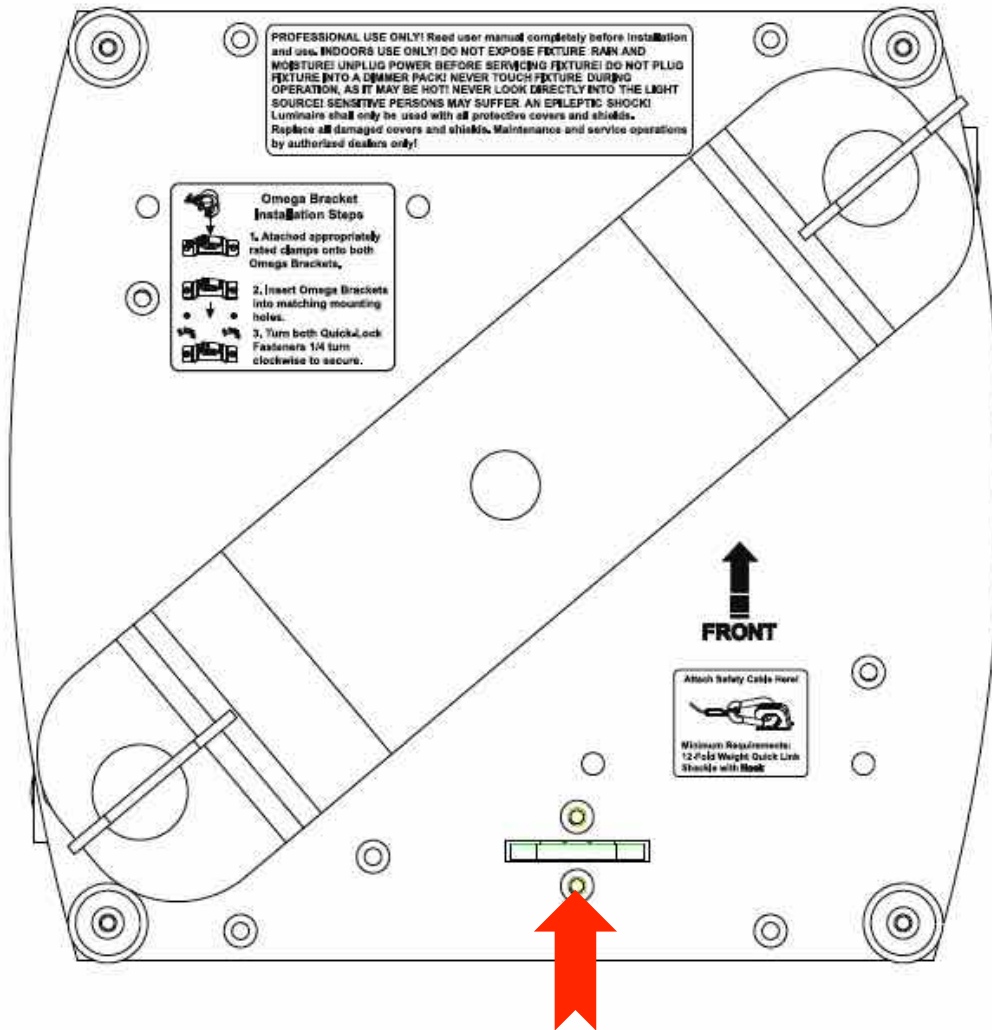
A qualified electrician should be used for all electrical connections and/or installations.

CAUTIONS

- For added protection, mount the fixture in areas outside walking paths, seating areas, or in areas where unauthorized personnel might reach the fixture.
- Ambient operating temperature range for this fixture is **14° to 113°F. (-10° to 45°C)**
Do not use the fixture under or above this temperature.
- Before mounting the fixture to any surface, make sure the installation area can hold a minimum point load of 10 times the weight of the fixture.
- Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.
- Never stand directly below the device when mounting, removing or servicing.

OMEGA BRACKET INSTALLATION

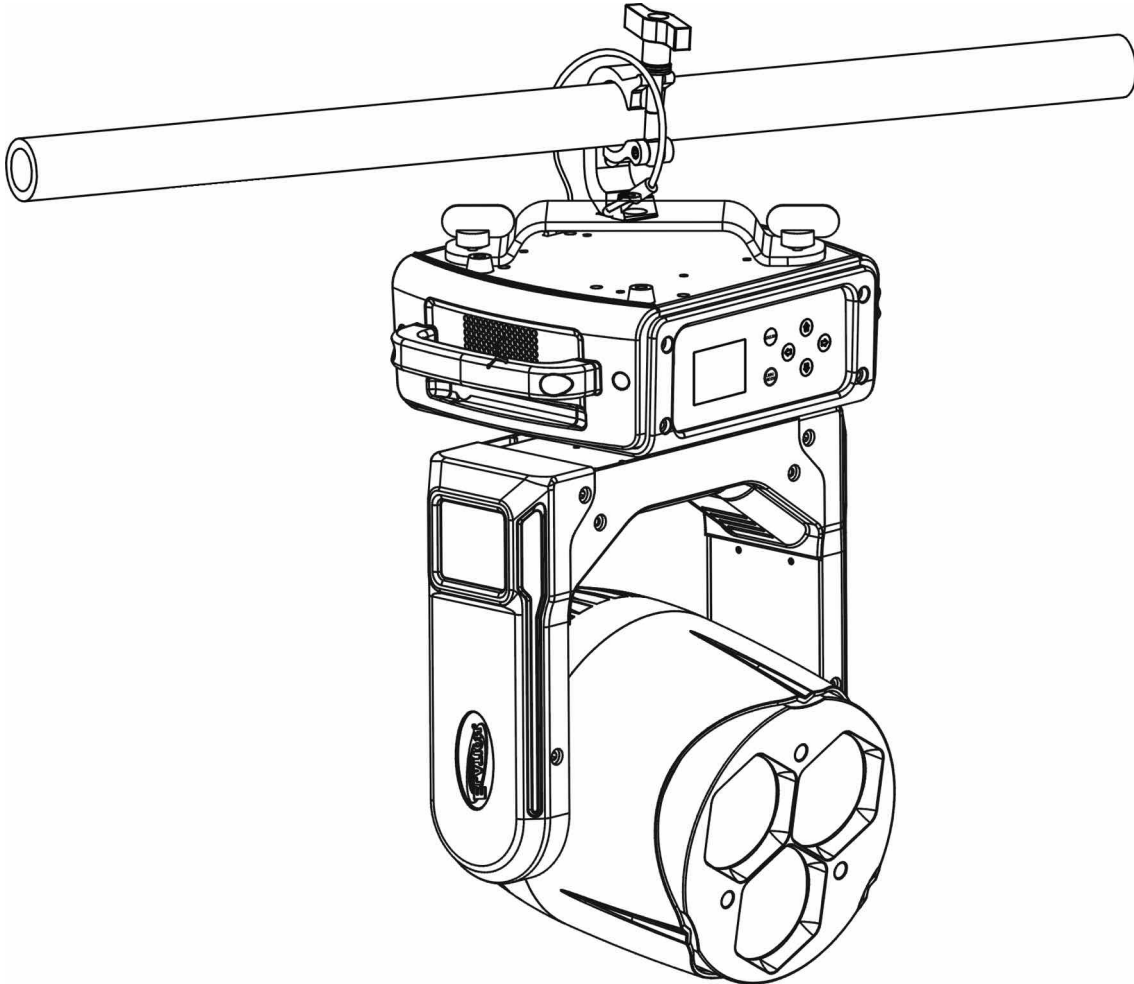
Insert the Omega Bracket into the matching holes on the bottom of the fixture. Secure the Omega Bracket to the fixture by turning each quick-lock fastener ¼ turn clockwise; making sure the fastener is completely locked.



SAFETY CABLE RIGGING POINT

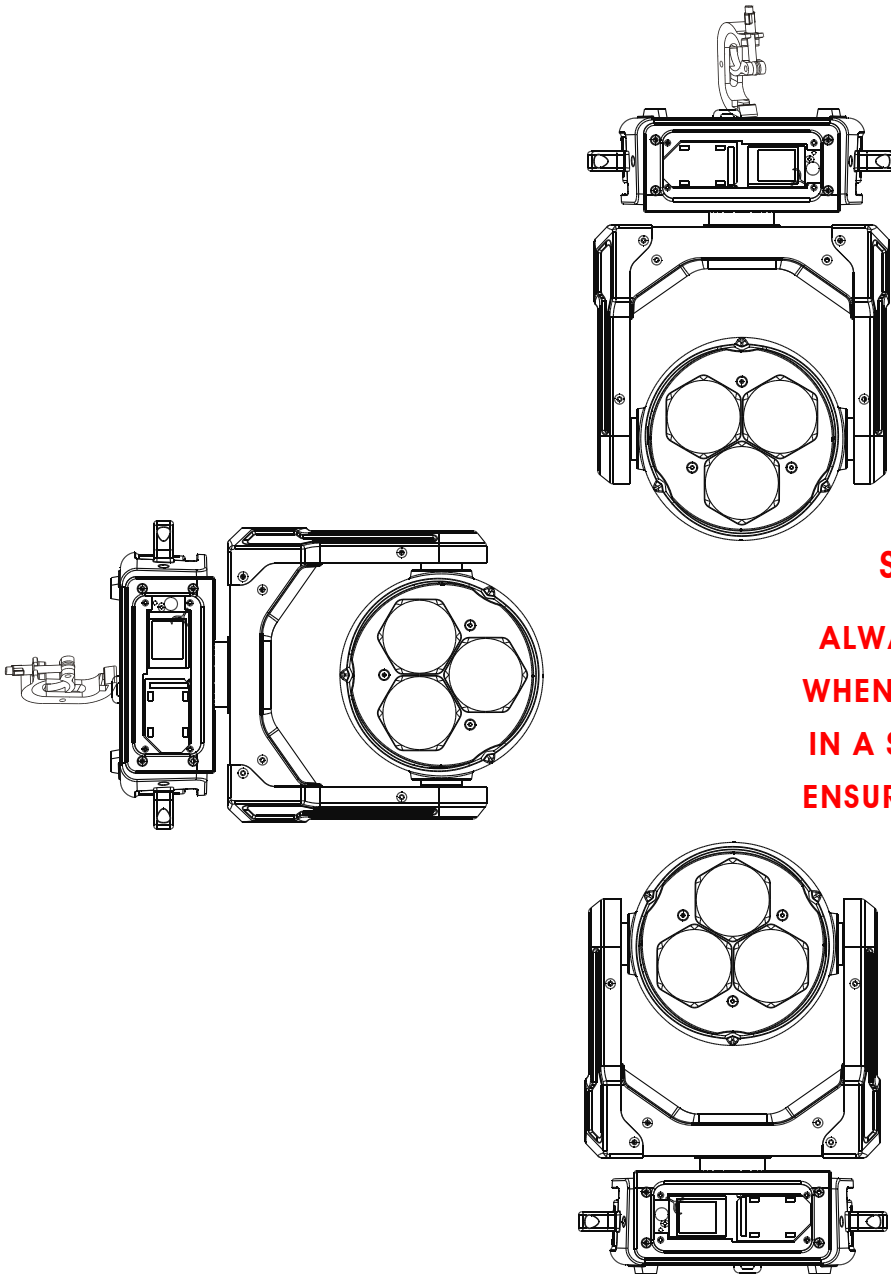
CLAMP INSTALLATION

The fixture provides a unique mounting bracket assembly that integrates the bottom of the base. (See illustration below) When mounting fixture to truss, be sure to secure an appropriately rated professional grade rigging clamp to the included **Omega Bracket** using an M10 screw fitted through the center hole of the **Omega Bracket**. The fixture provides a built-in rigging point for a **Safety Cable** on the mounting bracket assembly. Be sure to only use the designated rigging point for the safety cable and never secure a safety cable to a carrying handle.



RIGGING

Overhead rigging requires extensive experience, including amongst others calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury. Fixture is fully operational in the specific mounting positions illustrated below.



S A F E T Y C A B L E

**ALWAYS ATTACH A SAFETY CABLE
WHENEVER INSTALLING THIS FIXTURE
IN A SUSPENDED ENVIRONMENT TO
ENSURE THE FIXTURE WILL NOT DROP
IF THE CLAMP FAILS.**

POWER LINKING

Max number of **RAYZOR 360Z™** units power linked together:

3 units @120V | 6 units @240V

- ▶ **NOTE: USE CAUTION WHEN POWER LINKING OTHER FIXTURES TO RAYZOR 360Z™ AS THE POWER CONSUMPTION OF OTHER LIGHTING FIXTURES WILL VARY!**

ART-NET CONNECTION

When connecting fixture to a network switch to control multiple devices, a **Gigabit Ethernet Switch** that supports **IGMP (Internet Group Management Protocol)** is required. Using a **Gigabit Ethernet Switch** that does not support **IGMP** can cause erratic behavior of all connected devices to the switch.

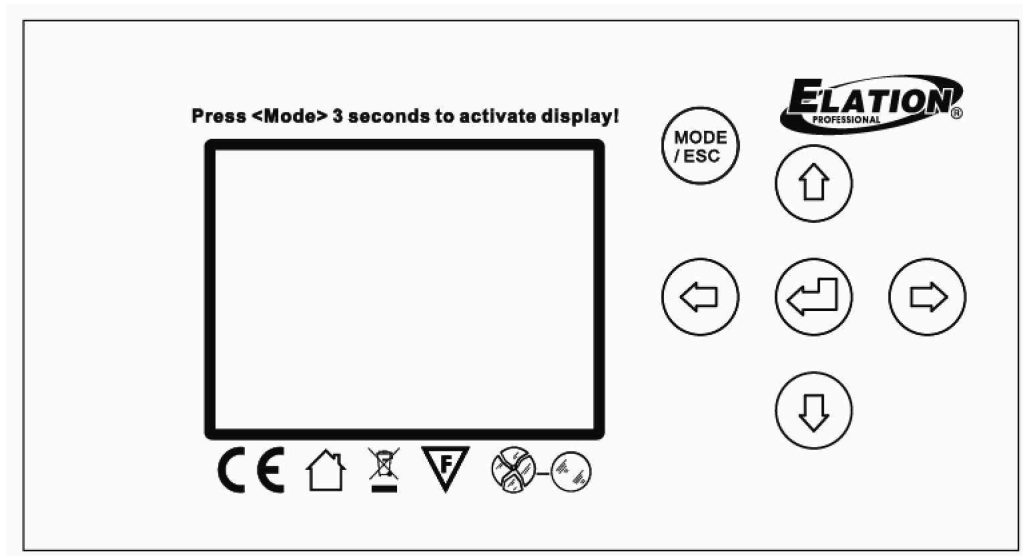
Click link below for more information about IGMP.

https://en.wikipedia.org/wiki/Internet_Group_Management_Protocol

SYSTEM MENU

The fixture includes an easy to navigate system menu. The control panel (see image below) located on the front of the fixture, provides access to the main system menu and is where all necessary system adjustments are made to the fixture. During normal operation, pressing **MODE/ESC** button 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**, **DOWN**, **RIGHT**, and **LEFT** buttons. Once you reach a field that requires adjusting, press the **ENTER** button to activate that field and use the **UP** and **DOWN** buttons to adjust the field. Pressing the **ENTER** button once more will confirm your setting. You may exit the main menu at any time without making any adjustments by pressing the **MODE/ESC** button.

- ▶ **NOTE:** To access the LCD Menu Control Display via the internal battery, press and hold the **MODE/ESC** button for 3 seconds. The LCD Menu Control Display will shut **OFF** automatically about 1 minute from the last button press.



ELATION® RAYZOR 360Z™ SYSTEM MENU

Features are subject to change without any prior written notice.

[Supports Software Versions: ≥ 2.0.1](#)

MAIN MENU	SUB MENU	OPTIONS / VALUES (Default Settings in BOLD)		
FUNCTION	Set DMX Address	001 ~xxx		DMX Address Setting
	DMX Value	ALL.....		DMX Value Display
	Slave Mode	Slave1, Slave2, Slave3		Slave Setting
	Auto Program	Master / Alone		Auto Program
INFORMATION	Time Information	Current Time	XXXX (Hours)	Fixture Run Time From Power ON
		Total Run Time	XXXX (Hours)	Fixture Total Run Time
		Last Run Time	XXXX (Hours)	Clear Fixture Last Run Time
		LastRun Password	Password=XXX	Password 038
		Clear Last Run	ON / OFF	Reset Fixture Last Run Time
	Temperature Info	Head Temperature	XXX C° / F°	Temperature in Fixture Head
	Ethernet IP	XXX . XXX . XXX . XXX XXX . XXX . XXX . XXX	XXX . XXX . XXX . XXX	IP Address
	Fan Speed	FAN1:xxx RPM		Displays Fan Speed RPM
	Software Version	1U01: - 3U01: Vx.x.x		Software Versions
Error Info	Error Record 1 ~ Error Record 10		Displays Last 10 Error Codes	
PERSONALITY	Status Settings	Address via DMX	ON/OFF	Address Via DMX
		No DMX Status	Hold /Close Shutter/ Auto Program	Auto Run If No DMX
		Pan Reverse	ON/ OFF	Pan Reverse Movement
		Tilt Reverse	ON/ OFF	Tilt Reverse Movement
		Pan Degree	630/ 540	Pan Degree Select
		Feedback	ON/OFF	Movement Feedback
		Hibernation	OFF, 01M~99M, 15M	Stand By Mode
	Service Setting	Password	Password= 050	Service Password
		RDM PID	XXXXX	RDM PID Code
		Ethernet IP	XXX . XXX . XXX . XXX	Ethernet IP
		Ethernet Mask IP	XXX . XXX . XXX . XXX	Ethernet Mask IP
		Clear Err. Info	ON/ OFF	Clear Error Code History
	Fans Control	Auto , Low, High		Set Fan Speed
	Display Setting	Shutoff Time	02~60m 05m	Display Shut Off Time
		Flip Display	ON/ OFF	Flip/Invert Display 180°
		Key Lock	ON/ OFF	Key Lock
		Disp Flash	ON/OFF	Display Flashes When No DMX Signal
	Temperature C/F	Celsius/ Fahrenheit		Temperature Switch Between C° / F°
	Initial Status	PAN =XXX		Initial Effect Position
	Dimmer Modes	Standard , Stage, TV, Architectural, Theatre		
	Select Signal	DMX Only		DMX Only
		Art-Net on IP2		Elect Art-Net IP02
		Art-Net on IP10		Elect Art-Net IP010
		sACN		sACN Protocol
	Set Universe	000 - 255		Set Art-Net Universe
	Refresh	1200 , 900-1500, 2500, 4000, 5000, 10000, 15000, 20000, 25000 (Hz)		Set Refresh Rate
	Gamma	2.0, 2.2 , 2.4, 2.6, 2.8		Set Gamma Value
	Reset Default	ON/ OFF	Password 011	Restore Factory Settings NOTE: Saved White Balance Erased!

ELATION© RAYZOR 360Z™ SYSTEM MENU

Features are subject to change without any prior written notice.

[Supports Software Versions: ≥ 1.1.4](#)

MAIN MENU	SUB MENU	OPTIONS / VALUES (Default Settings in BOLD)		DESCRIPTION	
Reset Function	Reset All			Reset All Motors	
	Reset Pan&Tilt			Reset Pan/Tilt	
	Reset Zoom			Reset Zoom	
Effect Adjust	Test Channel	PAN		Test function	
	Manual Control	PAN =XXX,		Fine Adjustments	
	Calibration	Calibration Password		Password 050	
User Mode Set	User Mode	Standard Mode		DMX Channel Modes	
		Basic Mode			
		Extended Mode			
		User Mode A		User Defined Channel Assignment	
		User Mode B			
	User Mode C				
	Edit User Mode	Edit User Mode A		Max Channel = XX	Edits User Defined Channel Assignments
Edit User Mode B		PAN = CH01			
Edit User Mode C					
Edit Program	Select Program	Auto Pro Part1 = Program 1~10 (Program 1)		Select Programs To Be Run	
		Auto Pro Part2 = Program 1~10 (Program 2)			
		Auto Pro Part3 = Program 1~10 (Program 3)			
	Edit Program	Program 1		Program Test	Testing Program
		:		Step 01=SCxxx	Program In Loop
		Program 10		Step 64=SCxxx	Save and Exit
	Edit Scenes	Scene 001		Pan,Tilt,.....	Save and Automatically Return
		~		--Fade Time--	Manual Scenes Edit
		Scene 250		--Scene Time--	
Rec. Controller	XX~XX		Input By Outside	Stores Scenes via Ext DMX Console	
				Automatic Scenes Recorder	

PERSONALITY - Status Settings - Address Via DMX

When ON, define the desired DMX address via an external controller.

1. Connect the fixture to the external controller and power ON.
2. Set the DMX value of **Channel 1** on the controller to **(7)**.
3. Set the DMX value of **Channel 2** on the controller to **(7)** or **(8)**.
 When set to **(7)**, the DMX address can be set between **(1)** and **(255)**.
 When set to **(8)**, the DMX address can be set between **(256)** and **(511)**.
4. Using **Channel 3** on the controller set the desired DMX address of the fixture.

Example 1: If the desired DMX address is **57**, set **Channel 1** to a value of **(7)**, set **Channel 2** to a value of **(7)**, and then set **Channel 3** to a value of **(57)**.

Example 2: If the desired DMX address is **420**, set **Channel 1** to a value of **(7)**, set **Channel 2** to a value of **(8)**, and then set **Channel 3** to a value of **(164)**.
 (256+164=420)

5. After setting **Channel 3** to the desired DMX address value, wait for approximately 20 seconds for the fixture to complete the address reset function.

PERSONALITY – Service Setting - Password (050)

► **NOTE:** The Service Password MUST be entered in order to access the following menus: **RDM PID, Ethernet IP, Ethernet IP Mask, and Clear Err. Info.**

PERSONALITY – Service Setting - RDM PID

Select various submenus via RDM. RDM stands for "Remote Device Management", which provides the ability to control the device remotely while connected to a DMX-bus. ANSI E1.20-2006 by ESTA specifies the RDM standard as an extension of the DMX512 protocol. Manual settings like adjusting the DMX starting address are no longer needed. This is especially useful when the device is installed in a remote area.

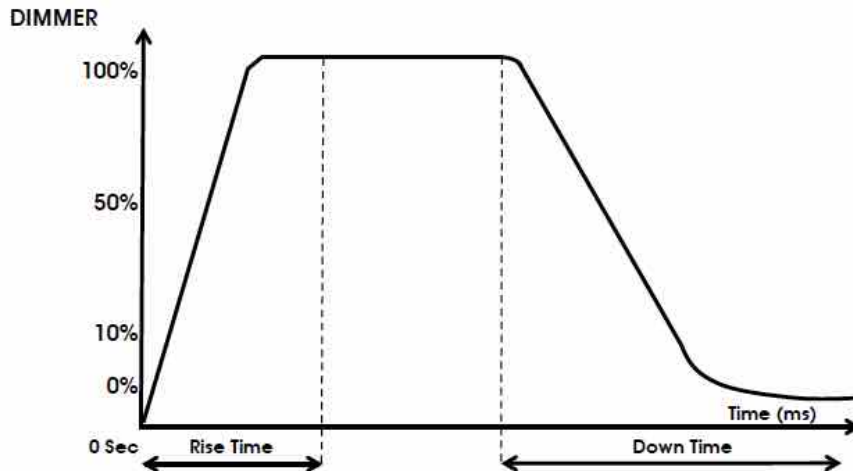
RDM ready and conventional DMX devices can be operated in one DMX line. The RDM protocol sends its own packages in the DMX512 data feed and does not influence conventional devices. If DMX splitters are used and RDM control is to be used, these splitters must support RDM. The number and type of RDM parameters depend on the RDM controller being used.

PERSONALITY - Display Setting – Key Lock

When ON, Control Panel buttons lock automatically after exiting main menu for 15 seconds. To unlock, keep **MODE/ESC** button pressed for 3 seconds.

PERSONALITY - Dimming Modes

Select desired DIMMER MODE (**Standard, Stage, TV, Architectural, Theatre**).



Dimming Curve Ramp Effect	0 sec Fade Time		1 sec Fade Time	
	Rise Time (ms)	Down Time (ms)	Rise Time (ms)	Down Time (ms)
Standard (default)	0	0	0	0
Stage	780	1100	1540	1660
TV	1180	1520	1860	1940
Architectural	1380	1730	2040	2120
Theatre	1580	1940	2230	2280

PERSONALITY - Reset Default (011)



ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION.

NOTE: SAVED WHITE BALANCE IS ERASED AFTER A RESET IS PERFORMED.

This function restores all fixture settings to the factory default settings. The password is **011** and must be entered each time a reset is performed.

EFFECT ADJUST – Test Channel

Auto test each individual channel function independently from the DMX control board.

EFFECT ADJUST – Manual Control

Select and manually test and fine adjust each individual channel function independently from DMX control board. This function will center PAN and TILT motors and set dimmer to 100%. PAN and TILT functions will still operate if the fixture needs to be positioned to a flat clear surface. With the individual functions, you can focus the light on a flat surface (wall) and perform fine adjustments.

EFFECT ADJUST – Calibration



ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION.

This function allows small adjustments to be made to the Pan, Tilt, and Zoom movements to compensate for wear or in the event a sensor has been knocked slightly out of place. Because improper use of this function can result in undesired operation this function has been password protected. The password is **050** and must be entered each time the calibration menu function is entered. Because calibration is an extremely delicate procedure, instructions on performing this action are left out of this manual. For a first time calibrator, please contact our customer support team for step-by-step instructions.

USER MODE SET – Edit User Mode

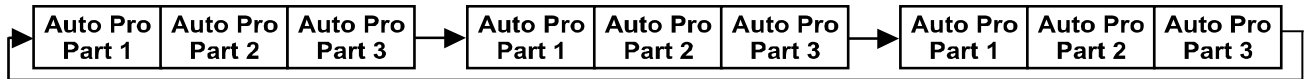
Create user defined channel orders allowing the fixture to match the channel order of other fixtures on the market for easier operation. A total of three user modes may be configured: User Mode A, User Mode B, and User Mode C.

EDIT PROGRAM – Rec. Controller

The fixture features an integrated DMX-recorder by which you can transmit the programmed scenes from your DMX-controller to the moving head. Adjust the desired scene numbers via the encoder (from – to). When you call up the scenes at your controller, they will automatically be transmitted to the moving head.

EDIT PROGRAM – Record Controller – Working With Built In Programs

A Master unit can send up to 3 different data groups to the Slave units, i.e. a Master unit can start 3 different Slave units, which run 3 different programs. The Master unit sends the 3 program parts in a continuous loop.



The Slave unit receives data from the Master unit according to the group which the Slave unit was assigned to. If e.g. a Slave unit is set to “**Slave 1**” in the menu “**Set to Slave**”, the Master unit sends “**Auto Program Part 1**” to the Slave unit.

If set to “**Slave 2**”, the Slave unit receives “**Auto Program Part 2**”.

To start an Auto Program proceed as follows:

1. Slave Setting

- Select “**Function Mode**”.
- Press **ENTER** to confirm.
- Select “**Set to Slave**”.
- Press **ENTER** to confirm.
- Select “**Slave 1**”, “**Slave 2**” or “**Slave 3**”.
- Press **ENTER** to confirm.
- Press **MODE/ESC** in order to return to the main menu.

2. Automatic Program Run

- Select “**Function Mode**”.
- Press **ENTER** to confirm.
- Select “**Auto Program**”.
- Press **ENTER** to confirm.
- Select “**Master**” or “**Alone**”.
- Press **ENTER** to confirm.
- Press **MODE/ESC** in order to return to the main menu.

EDIT PROGRAM – Record Controller – Working With Built-In Program [continued]

3. Program Selection for Auto Pro Part

- Select “**Edit Program**”.
- Press **ENTER** to confirm.
- Select “**Select Programs**”.
- Press **ENTER** to confirm.
- Select “**Auto Pro Part 1**”, “**Auto Pro Part 2**” or “**Auto Pro Part 3**”, and select which Slave program is to be sent. Selection “**Part 1**” means, that the Slave unit runs the same program as the master units.
- Press **ENTER** to confirm.
- Press **MODE/ESC** in order to return to the main menu.

4. Program Selection for Edit Program

- Select “**Edit Program**”.
- Press **ENTER** to confirm.
- Select “**Edit Program**”.
- Press **ENTER** to confirm.
- Select the desired program to edit specific scenes into a specific program.
- Press **ENTER** to confirm.
- Press **MODE/ESC** in order to return to the main menu.

5. Automatic Scene Recording

- Select “**Edit Program**”.
- Press **ENTER** to confirm.
- Select “**Edit Scenes**”.
- Select desired scene numbers. A maximum of 250 scenes can be programmed.
- Press **ENTER** to confirm.
- Press **MODE/ESC** in order to return to the main menu.

EDIT PROGRAM – Record Controller – Working With Built-In Program [continued]

Example:

Program 2 includes scenes: 10, 11, 12, & 13

Program 4 includes scenes: 8, 9, & 10

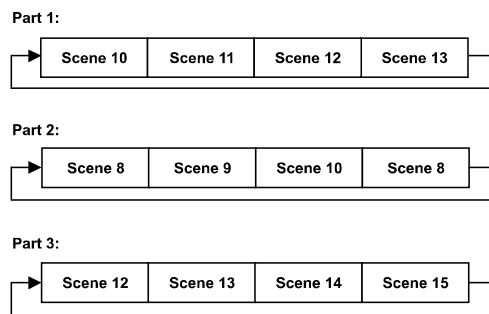
Program 6 includes scenes: 12, 13, 14, & 15

Auto Pro Part 1 is Program 2

Auto Pro Part 2 is Program 3

Auto Pro Part 3 is Program 6

The 3 Slave groups run the Auto Program in certain time segments. (See diagram below)



WHITE BALANCE SETTING

This feature provides the ability to individually adjust the maximum dimmer intensity for each LED color (Red, Green, Blue, White, Amber, Cyan, U.V.) and store these values as a White Balance preset. This can be a useful tool when the output intensity of a group of same model fixtures with varying usage times, needs to be calibrated to match as much as possible. Once a new White Balance preset is saved to the fixture, the maximum dimmer intensity values cannot be changed until the White Balance preset is updated, erased or restored to the factory default setting.

1. Set ALL DMX channels to zero (0) then set the **SPECIAL FUNCTIONS** channel (CH20 in Basic Mode, CH26 in Stand Mode, CH32 in Extend Mode) to DMX value of (91-93) **EDIT and SAVE WHITE BALANCE ENABLED.**
2. Set the **COLOR MODE - WHITE BALANCE** channel (CH18 in Basic Mode, CH24 in Stand Mode, CH30 in Extend Mode) to DMX value of (190-254) **EDIT and SAVE WHITE BALANCE Setting.**
3. Adjust each LED color channel to the desired intensity level (0-255).
4. Set the **COLOR MODE - WHITE BALANCE** channel (CH18 in Basic Mode, CH24 in Stand Mode, CH30 in Extend Mode) to DMX value of (255) **SAVE New WHITE BALANCE Setting** to Fixture(s).
5. To save a new White Balance preset, repeat steps 1-4 above.

DMX CHANNEL FUNCTIONS AND VALUES

ELATION® RAYZOR 360Z™				
DMX Channel Values / Functions (32 DMX Channels)				
Supports Software Versions: ≥ 2.0.1				
Features are subject to change without any prior written notice.				
<i>*Rotation direction (Clockwise or Counterclockwise) of effects depends on orientation of the fixture head and Pan/Tilt settings.</i>				
MODE / CHANNEL			VALUE	FUNCTION
BASIC	STAND	EXTEND		
1	1	1		PAN MOVEMENT [8 BIT]
			0-255	PAN Movement
	2	2		PAN FINE MOVEMENT [16 BIT]
			0-255	Fine Control of PAN Movement
2	3	3		TILT MOVEMENT [8 BIT]
			0-255	TILT Movement
	4	4		TILT MOVEMENT [16 BIT]
			0-255	Fine Control of TILT Movement
3	5	5		PAN CONTINUOUS MOVEMENT
			0-127	NO FUNCTION
			128-189	PAN Clockwise from FAST to SLOW
			190-193	NO Rotation
			194-255	PAN Counter-Clockwise from SLOW to FAST
4	6	6		TILT CONTINUOUS MOVEMENT
			0-127	NO FUNCTION
			128-189	TILT Clockwise from FAST to SLOW
			190-193	NO Rotation
			194-255	TILT Counter-Clockwise from SLOW to FAST
5	7			RED [ALL LEDs]
			0-255	Red (0-Black - 255-100%)
	8			RED FINE [ALL LEDs]
			0-255	Red FINE Adjustment
6	9			GREEN [ALL LEDs]
			0-255	Green (0-Black - 255-100%)
	10			GREEN FINE [ALL LEDs]
			0-255	Green FINE Adjustment
7	11			BLUE [ALL LEDs]
			0-255	Blue (0-Black - 255-100%)
	12			BLUE FINE [ALL LEDs]
			0-255	Blue FINE Adjustment
8	13			WHITE [ALL LEDs]
			0-255	White (0-Black - 255-100%)
	14			WHITE FINE [ALL LEDs]
			0-255	White FINE Adjustment

ELATION® RAYZOR 360Z™
DMX Channel Values / Functions (32 DMX Channels)

Supports Software Versions: ≥ 2.0.1

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**Rotation direction (Clockwise or Counterclockwise) of effects depends on orientation of the fixture head and Pan/Tilt settings.*

MODE / CHANNEL			VALUE	FUNCTION
BASIC	STAND	EXTEND		
		7		RED [LED 1]
			0-255	Red (0-Black - 255-100%)
		8		GREEN [LED 1]
			0-255	Green (0-Black - 255-100%)
		9		BLUE [LED 1]
			0-255	Blue (0-Black - 255-100%)
		10		WHITE [LED 1]
			0-255	White (0-Black - 255-100%)
		11		RED [LED 2]
			0-255	Red (0-Black - 255-100%)
		12		GREEN [LED 2]
			0-255	Green (0-Black - 255-100%)
		13		BLUE [LED 2]
			0-255	Blue (0-Black - 255-100%)
		14		WHITE [LED 2]
			0-255	White (0-Black - 255-100%)
		15		RED [LED 3]
			0-255	Red (0-Black - 255-100%)
		16		GREEN [LED 3]
			0-255	Green (0-Black - 255-100%)
		17		BLUE [LED 3]
			0-255	Blue (0-Black - 255-100%)
		18		WHITE [LED 3]
			0-255	White (0-Black - 255-100%)
9	15	19		COLOR MACROS
			0-7	NO FUNCTION
			8-39	From RED to YELLOW
			40-71	From YELLOW to GREEN
			72-103	From GREEN to CYAN
			104-135	From CYAN to BLUE
			136-167	From BLUE to MAGENA
			168-199	From MAGENTA to RED
			200-231	From RED to WHITE
232-255	Corssfading Colors from SLOW to FAST			
10	16	20		COLOR PRESETS
			0-9	NO FUNCTION
			10-50	WHITE 2700K
			51-91	WHITE 3200K
			92-132	WHITE 4300K
			133-173	WHITE 5600K
			174-214	WHITE 6500K
			215-255	WHITE 8000K
11	17	21		COLOR PRESETS DIMMER
			0-255	Dimmer 100 to 0%

ELATION® RAYZOR 360Z™
DMX Channel Values / Functions (32 DMX Channels)

Supports Software Versions: ≥ 2.0.1

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**Rotation direction (Clockwise or Counterclockwise) of effects depends on orientation of the fixture head and Pan/Tilt settings.*

MODE / CHANNEL			VALUE	FUNCTION
BASIC	STAND	EXTEND		
12	18	22		SHUTTER, STROBE
			0-31	Shutter CLOSED (LEDs OFF)
			32-63	Shutter OPEN (LEDs ON)
			64-95	Strobe Effect SLOW to FAST
			96-127	Shutter OPEN (LEDs ON)
			128-159	Pulse Effect In Sequences
			160-191	Shutter OPEN (LEDs ON)
			192-223	Random Strobe Effect SLOW to FAST
13	19	23		DIMMER INTENSITY
			0-255	Dimmer 0 to 100%
		24		DIMMER INTENSITY FINE
			0-255	Dimmer FINE Adjustment
14	20	25		DIMMER MODES
			0-20	Standard
			21-40	Stage
			41-60	TV
			61-80	Architectural
			81-100	Theatre
		101-255	Default to Setting on Fixture	
15	21	26		MOTORIZED ZOOM
			0-255	ZOOM Adjustment from SMALL to BIG
		27		MOTORIZED ZOOM FINE
			0-255	ZOOM FINE Adjustment
16	22	28		CHASE PATTERNS
			0-10	NO FUNCTION (LEDs OFF)
			11-40	Chase 1
			41-70	Chase 2
			71-100	Chase 3
			101-130	Chase 4
			131-160	Chase 5
			161-190	Chase 6
			191-220	Chase 7
		221-255	Chase 8	
17	23	29		CHASE PATTERN SPEED
			0-255	*Counterclockwise Chase Speed FAST to SLOW
18	24	30		COLOR MODE - WHITE BALANCE
			0-189	NO FUNCTION
			190-254	EDIT a New WHITE BALANCE Setting
			255	SAVE New WHITE BALANCE Setting to Fixture(s)
				*NOTE: DMX VALUE of 91-93 MUST FIRST BE SELECTED ON CH20 (Basic), CH26 (Stand), or CH32 (Extend) TO ENABLE FEATURE.
19	25	31		PAN / TILT MOVEMENT SPEED
			0-225	MAX to MIN Speed
			226-235	Blackout by Movement
			236-255	NO FUNCTION

ELATION® RAYZOR 360Z™
DMX Channel Values / Functions (32 DMX Channels)

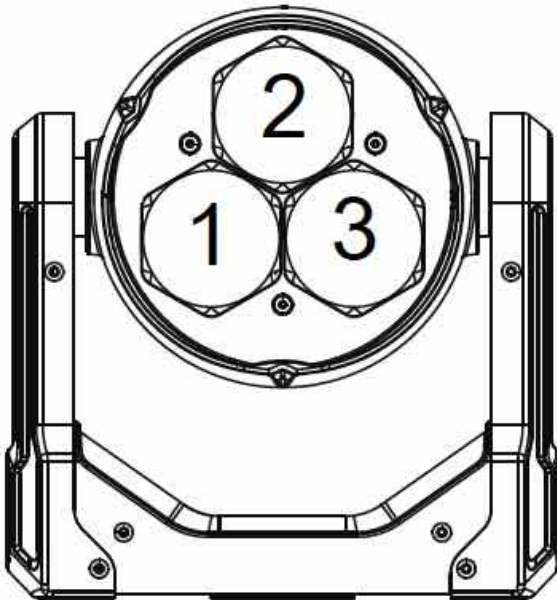
Supports Software Versions: ≥ 2.0.1

Features are subject to change without any prior written notice.

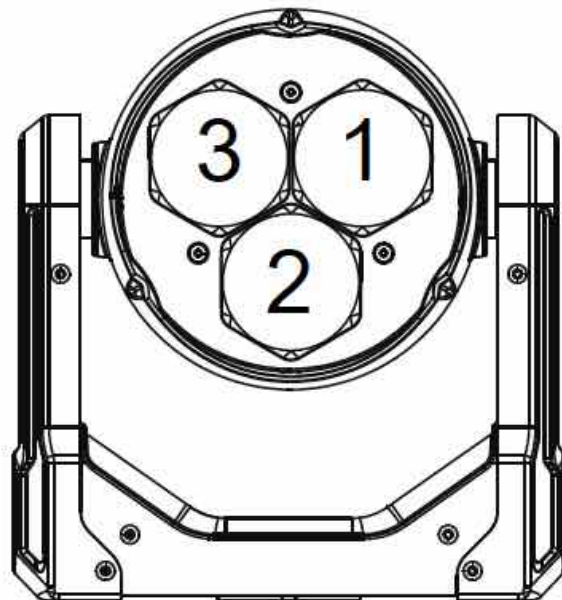
**Rotation direction (Clockwise or Counterclockwise) of effects depends on orientation of the fixture head and Pan/Tilt settings.*

MODE / CHANNEL			VALUE	FUNCTION
BASIC	STAND	EXTEND		
20	26	32		SPECIAL FUNCTIONS / INTERNAL PROGRAMS
			0-79	Color Change Normal
			80-84	ALL MOTOR RESET
			85-87	SCAN MOTOR RESET
			88-90	NO FUNCTION
			91-93	EDIT and SAVE WHITE BALANCE ENABLED
			94-96	NO FUNCTION
			97-99	OTHER MOTORS RESET
			100-119	Internal Program 1 (Scene1-8)
			120-139	Internal Program 2 (Scene 9-16)
			140-159	Internal Program 3 (Scene 17-24)
			160-179	Internal Program 4 (Scene 25-32)
			180-199	Internal Program 5 (Scene 33-40)
			200-219	Internal Program 6 (Scene 41-48)
			220-239	Internal Program 7 (Scene 49-56)
			240-255	NO FUNCTION

LED PIXEL CONTROL



LCD CONTROL DISPLAY



LCD CONTROL DISPLAY



Pixel control depends on PAN/TILT position of head.

ERROR CODES

When power is applied, the unit will automatically enter a **“Reset/Test”** mode. This mode brings all the internal motors to a home position. If there is an internal problem with one or more of the motors an error code will flash in the display in the form of **“XXer”** where as XX will represent a function number. For example, when the display shows **“0Er”** it means there is some type of error with the Pan motor. If there are multiple errors during the start-up process they will all flash in the display. For example: if the fixtures has errors on **Channel 1, 2, and 5** all at the same time, you will see the error message **“01Er”, “02Er”, and “05Er”** flash repeated 5 times.

If an error does occur during the initial start-up procedure the fixture will self-generate a second reset signal and try to realign all the motors and correct the errors. If the error persists after a second attempt a third attempt will be made. If after a third attempt all the errors have not been corrected the fixture will make the following determinations:

- **3 or More Errors** - The fixture cannot function properly with three or more errors therefore the fixture will place itself in a stand-by mode until subsequent repairs can be made.
- **Less Than 3 Errors** - The fixture has less than 3 errors; therefore most other functions will work properly. The fixture will attempt to operate normally until the errors can be correct by a technician. The errors in question will remain flashing in the display as a reminder of internal errors.

**ELATION® RAYZOR 360Z™
ERROR CODES**

Error Codes are subject to change without any prior written notice.

ERROR CODE	DESCRIPTION
PAN	The PAN movement is not located in the default position after the reset. This message will appear after a fixture reset if the magnetic-indexing circuit malfunctions (sensor failed or magnet is missing) or there is a motor failure (defective motor or a defective motor IC drive on the main PCB). This error may also be displayed if the head/yoke was blocked during a reset function.
TILT	The TILT movement is not located in the default position after the reset. This message will appear after a fixture reset if the magnetic-indexing circuit malfunctions (sensor failed or magnet is missing) or there is a motor failure (defective motor or defective motor IC drive on main PCB). This error may also be displayed if the head was blocked during a reset function.
ZOOM	The Zoom movement is not located in the default position after the reset. This message will appear after the reset of the fixture reset if the magnetic-indexing circuit malfunctions (sensor failed or magnet is missing) or there is a stepper motor failure (defective motor or defective motor IC drive on main PCB).

CLEANING AND MAINTENANCE



CLEANING

Frequent cleaning is recommended to insure proper function, optimized light output, and an extended life. The frequency of cleaning depends on the environment in which the fixture operates: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the fixture's optics.

- Clean the external lens surface at least every 20 days with a soft cloth to avoid dirt/debris accumulation.
- Never use alcohol, solvents, or ammonia based cleaners.

MAINTENANCE

Regular inspections are recommended to insure proper function and extended life. There are no user serviceable parts inside this fixture, please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from your local Elation dealer.

Please refer to the following points during routine inspections:

- A detailed electric check by an approved electrical engineer every three months, to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Loose screws may fall out during normal operation resulting in damage or injury as larger parts could fall.
- Check for any deformations on the housing, color lenses, rigging hardware and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for dust to enter into the fixture. Damaged rigging points or unsecured rigging could cause the fixture to fall and seriously injure a person(s).
- Electric power supply cables must not show any damage, material fatigue or sediments. Never remove the ground prong from the power cable.

TECHNICAL SPECIFICATIONS

SOURCE

(3) 60W Osram™ RGBW LEDs
50,000 Hour Average Lamp Life*

*May vary depending on several factors including but not limited to:
Environmental Conditions, Power/Voltage, Usage Patterns (On-Off Cycling), Control, and Dimming.

EFFECTS

8° - 77° Beam Angle Zoom
Full Pixel Control
Color Preset Macros
Linear Color Temperature Presets (2,700 - 8,000K)
Electronic Strobe (1-25 fps)
Linear Dimming 0-100% + Selectable Dimming Curves

COLOR

RGBW
Even and Smooth Color Mixing

CONTROL / CONNECTIONS

(3) DMX Channel Modes (20 / 26 / 32)
Adjustable Refresh Rate (900-1500, 2500, 4000, 5000, 10000, 15000, 20000, 25000 (Hz)
Adjustable Gamma Brightness (2.0, 2.2, 2.4, 2.8)
RDM (Remote Device Management)
6 Button Touch Control Panel
Full Color 180° Reversible LCD Menu Display
8 / 16 Bit Resolution Adjustable Pan/Tilt Movement
360° Continuous Pan/Tilt Movement
5pin DMX In/Out
RJ45 Ethernet In/Out (Art-NET, sACN)
powerCON TRUE1 Power In/Out

SIZE / WEIGHT

Length: 11.0" (280.6mm)
Width: 7.9" (199.5mm)
Vertical Height: 16.6" (422.1mm)
Weight: 17.0 lbs. (7.7 kg)

ELECTRICAL / THERMAL

AC 100-240V - 50/60Hz
300W Max Power Consumption
14°F to 113°F (-10°C to 45°C)

APPROVALS / RATINGS

CE | RoHs | IP20

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

PHOTOMETRIC DATA

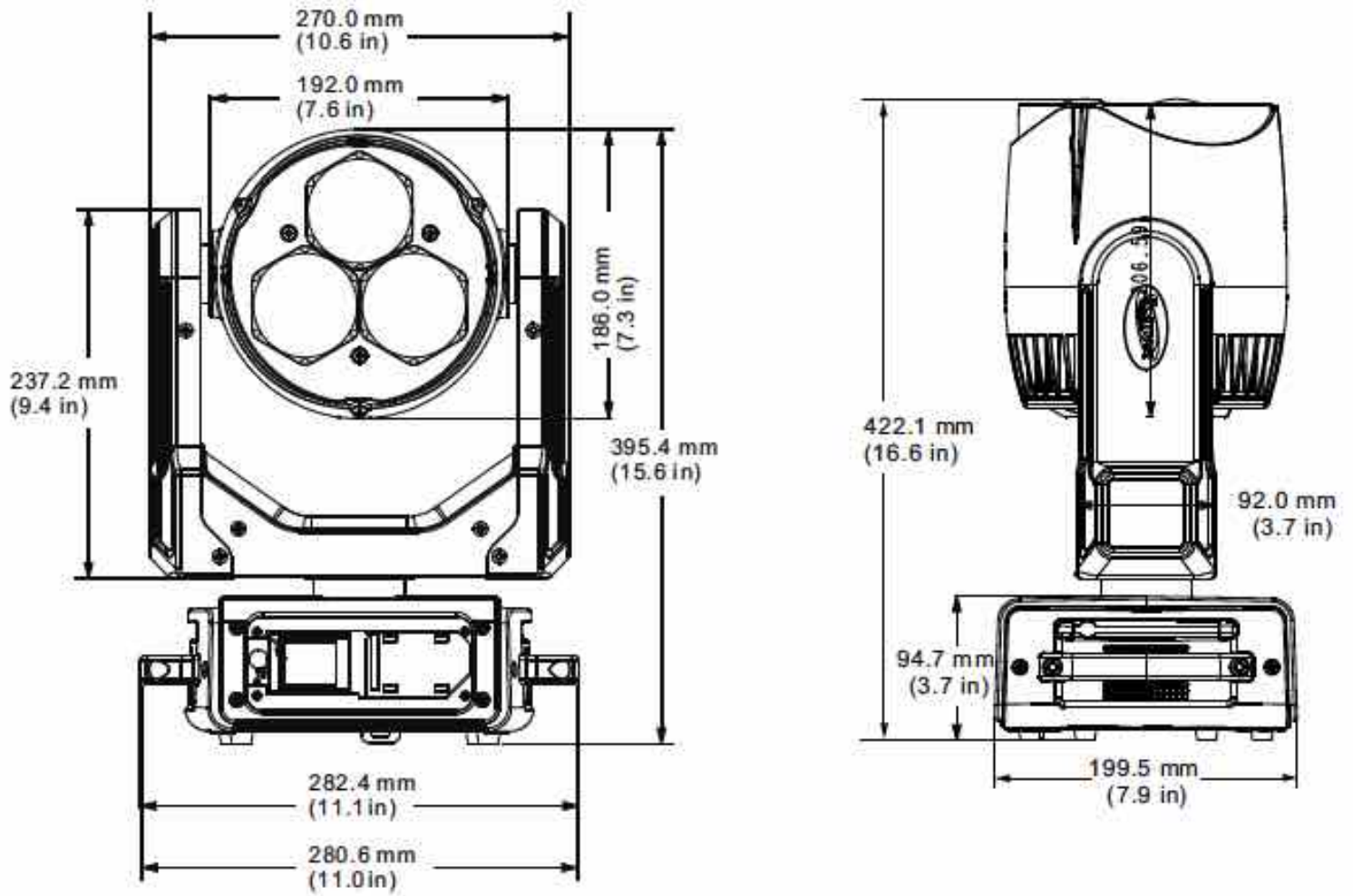
MIN ZOOM - 8° Beam Diameter

	2 m	6.6 ft	5 m	16.4 ft	7.5 m	24.6 ft
	0.35	1.1	0.7	2.3	1.05	3.4
	lux	fc	lux	fc	lux	fc
RED	4,214	391	995	92	418	39
GREEN	10,540	979	2,547	237	1,126	105
BLUE	1,290	120	310	29	139	13
WHITE	15,530	1,443	3,802	353	1,675	156
FULL ON	28,020	2,603	6,490	603	2,880	268

MAX ZOOM - 77° Beam Diameter

	2 m	6.6 ft	5 m	16.4 ft	7.5 m	24.6 ft
	3.95	13.0	7.91	26.0	11.87	0.0
	lux	fc	lux	fc	lux	fc
RED	96	9	26	2	13	0
GREEN	224	21	59	5	30	0
BLUE	28	3	8	1	4	0
WHITE	309	29	87	8	44	0
FULL ON	545	51	153	14	78	0

DIMENSIONAL DRAWINGS



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

OPTIONAL ACCESSORIES

ORDER CODE	ITEM
TRIGGER CLAMP	Heavy Duty Wrap Around Hook Style Clamp
*** pending ***	Road Case For RAYZOR 360Z™
EWDMXSYSTEM	Wireless DMX System (1 Transmitter, 1 Receiver)
AC5PDMX5PRO	5 ft. (1.5m) 5pin PRO DMX Cable
CAT6PRO5	5 ft. (1.5m) CAT6 EtherCON Cable
NEU088	3 ft. (1m) powerCON TRUE1 Power Link Cable
	Additional Cable Lengths Available

