

RAYZOR Q12 ZOOM™

user manual

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DOCUMENT VERSION



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Date	Document Version	Software Version	DMX Channel Modes	Notes
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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! The **RAYZOR Q12 ZOOM™** has been designed to perform reliably for years when the guidelines in this booklet are followed. Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this unit. These instructions contain important information regarding safety during use and maintenance.

UNPACKING

Thank you for purchasing the **RAYZOR Q12 ZOOM™** by Elation Professional®. Every **RAYZOR Q12 ZOOM™** 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

- (2) Omega Brackets
- (1) 5pin DMX Cable
- (1) powerCON Cable
- (1) Safety Cable
- Manual & Warranty Card

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

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WARRANTY REGISTRATION

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

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



The **RAYZOR Q12 ZOOM™** 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.



This device falls under **PROTECTION CLASS 1**. It's essential this device be grounded properly. Only qualified personnel should perform all electrical connections.



KEEP THIS FIXTURE AWAY FROM RAIN AND MOISTURE!



UNPLUG POWER BEFORE SERVICING FIXTURE



NEVER TOUCH FIXTURE DURING OPERATION AS IT MAY BE HOT



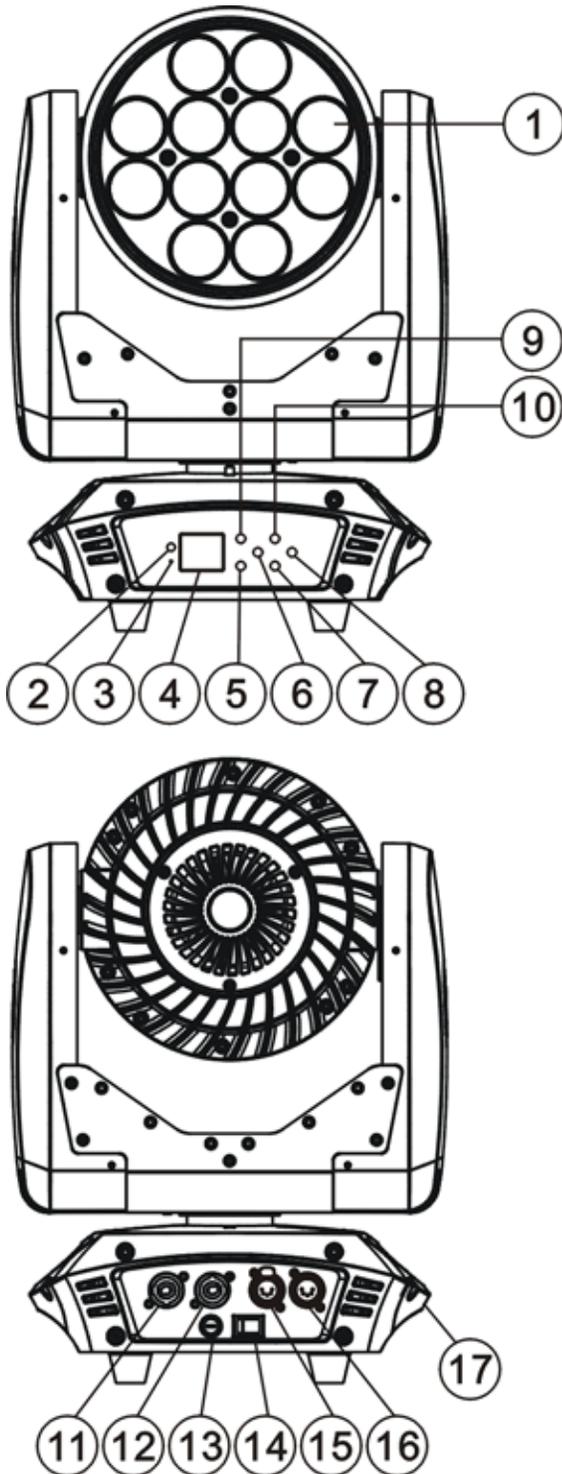
**NEVER LOOK DIRECTLY INTO THE LIGHT SOURCE
SENSITIVE PERSONS MAY SUFFER AN EPILEPTIC SHOCK**

- For proper operation, follow the **Installation** guidelines described in this manual. Only qualified and certified personnel should perform installation of this fixture and only the original rigging parts (brackets) included with this fixture should be used for installation. Any modifications will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.
- Never look directly into the light source of this fixture to prevent risk of injury to your retina, which may induce blindness. Those suffering from **EPILEPSY** should avoid looking directly into the light source of this unit at all times.
- The fan and air inlets must remain clean and never blocked. Allow approx. 6" (15cm) between this fixture and other devices or a wall for proper cooling.
- Always disconnect 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.
- Do not operate this 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.

GENERAL GUIDELINES

- **NEVER OPEN THIS FIXTURE WHILE IN USE!**
- During the initial operation of this fixture, a light smoke or smell may emit from the interior of the fixture. This is a normal process and is caused by excess paint in the interior of the casing burning off from the heat associated with the lamp and will decrease gradually over time.
- This fixture is a professional lighting effect designed for **INDOOR / DRY LOCATIONS ONLY** on stage, in nightclubs, theatres, etc.
- Please make sure there are **NO FLAMMABLE MATERIALS** close to the fixture while operating, to prevent any fire hazard.
- **Minimum** distance of inflammable materials from the surface **1.6 feet (0.5m)**.
- The fixture must be installed in a location with adequate ventilation, at least 1.5 feet (.5m) from adjacent surfaces. Be sure no air ventilation slots are blocked.
- **DO NOT** attempt installation and/or operation without knowledge how to do so.
- **DO NOT** allow operation by persons who are not qualified to operate this type of fixture. Most damages are the result of operations by nonprofessionals.
- Consistent operational breaks may ensure the fixture will function properly for many years to come.
- **DO NOT** shake fixture, avoid brute force when installing and/or operating fixture.
- Always install the fixture with an appropriate safety cable. When installing the fixture in a suspended environment, always use mounting hardware that is no less than M10 x 25 mm, also be sure the hardware is insert in the pre-arranged screw holes in the bracket of the fixture.
- Use the original packaging and materials to transport the fixture in for service.
- **DO NOT TOUCH** the housing bare-hand during its operation. Turn OFF the power and allow approximately 15 minutes for the fixture to cool down before replacing or serving.

FIXTURE OVERVIEW



1. LED Array
2. DC Switch
3. Microphone
4. LCD Menu Function Display
5. ENTER Button
6. LEFT Button
7. DOWN Button
8. RIGHT Button
9. MODE/ESC Button
10. UP Button
11. powerCON IN
12. powerCON OUT
13. Fuse
14. Power Switch
15. 5pin DMX OUT
16. 5pin DMX IN
17. Carrying Handle(s)

FIXTURE INSTALLATION



FLAMMABLE MATERIAL WARNING

Keep fixture at least 5.0 ft (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.

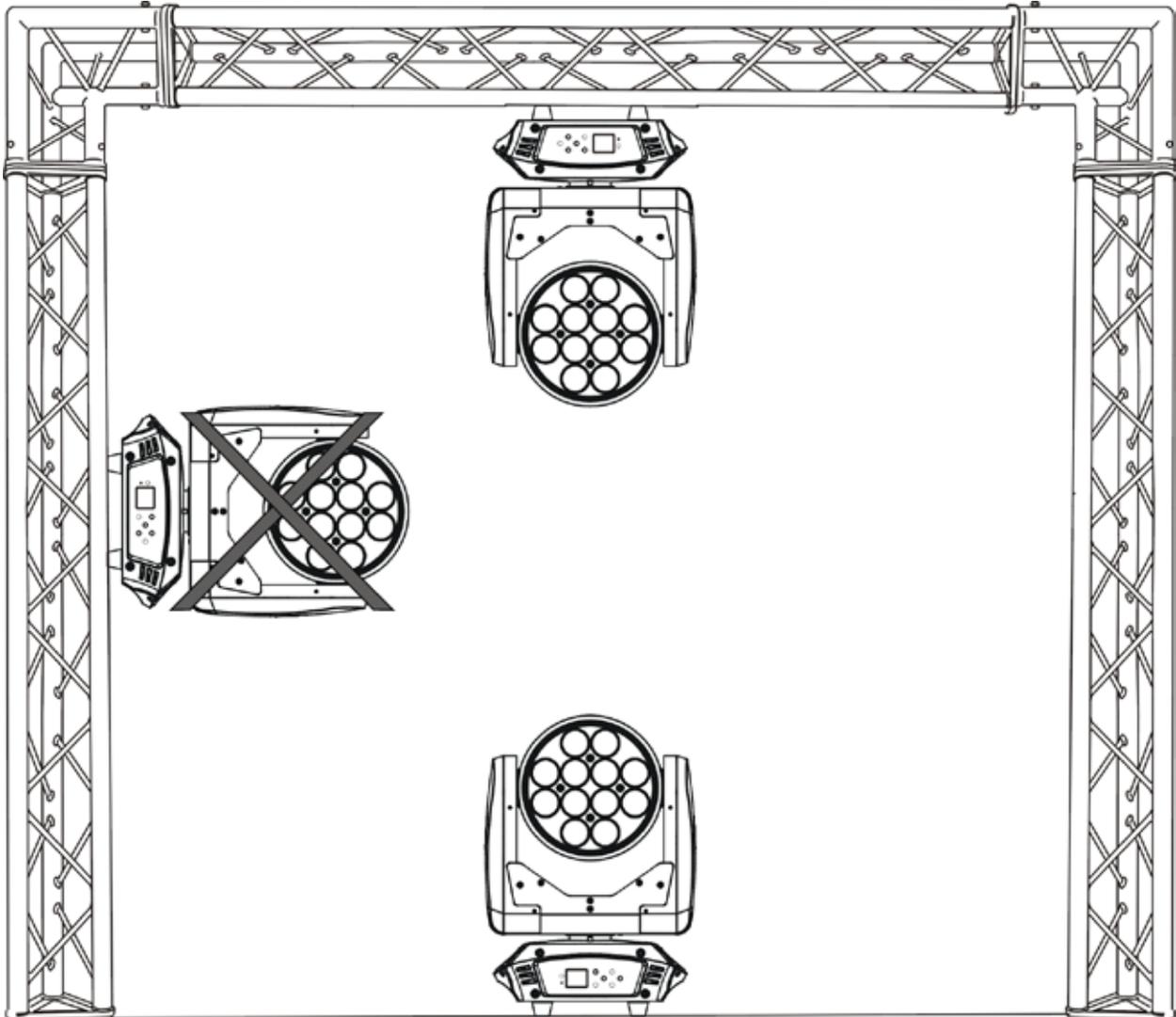


CAUTIONS

- 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. **(230 lbs / 104 kg)**
- 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.

MOUNTING POINTS

- Overhead mounting requires extensive experience, including amongst others calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device. 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 as illustrated below.

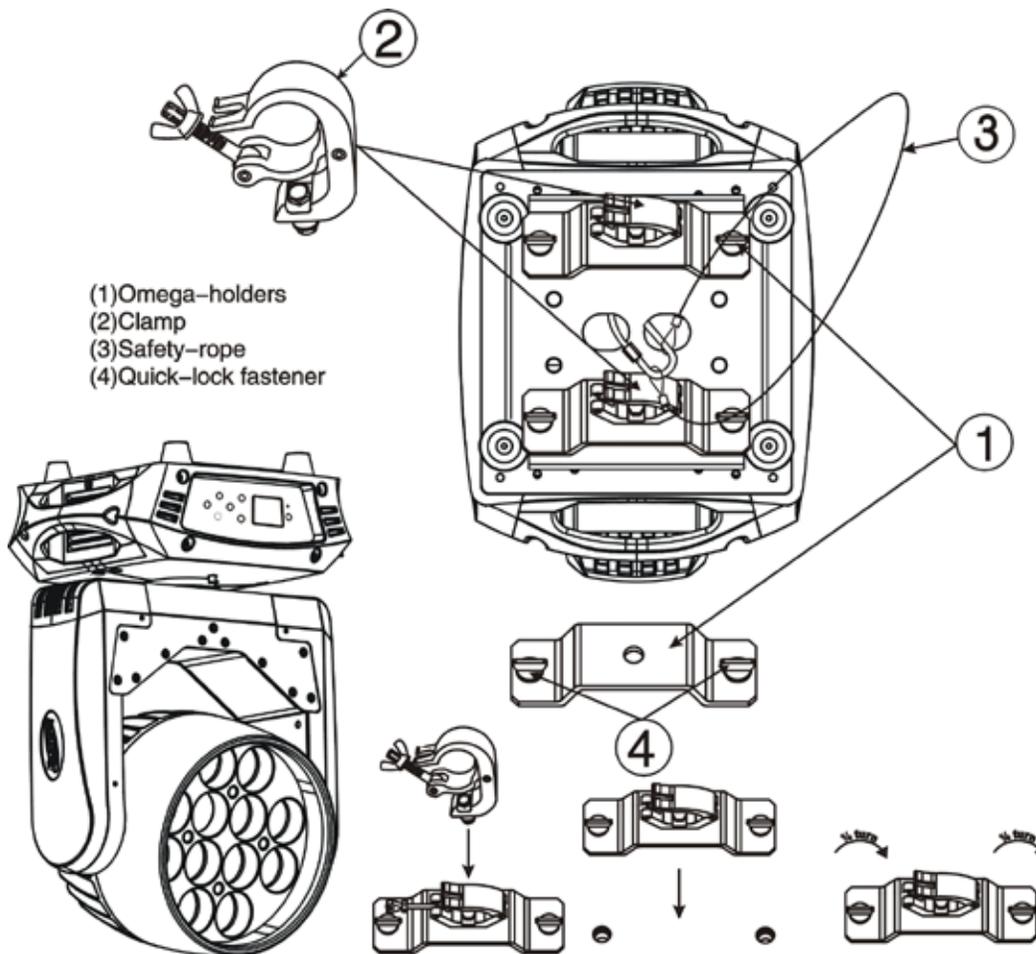


SAFETY CABLE

Always use a Safety Cable whenever installing this fixture in a suspended environment to ensure the fixture will not drop if the clamp fails.

CLAMP MOUNTING

The **RAYZOR Q12 ZOOM™** provides a unique mounting bracket assembly that integrates the bottom of the base, the included **Omega Brackets (x2)** and safety cable rigging point in one unit (see the illustration below). When mounting this fixture to truss be sure to secure an appropriately rated clamps to the included omega brackets using a M10 screw fitted through the center hole of the **Omega Bracket**. Be sure to attach the included **Safety Cable** to the fixture using the safety cable rigging point integrated in the base assembly.



SECURING

Regardless of the rigging option you choose for your **RAYZOR Q12 ZOOM™** always be sure to secure your fixture with a safety cable. The fixture provides a built-in rigging point for a safety cable on the hanging bracket as illustrated above. Be sure to only use the designated rigging point for the safety cable and never secure a safety cable to a carrying handle.

UNDERSTANDING DMX

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. DMX allows all makes and models of different manufactures to be linked together and operate from a single controller. This is possible as long as all the fixtures and the controller are DMX compliant. A DMX controller sends the DMX data instructions to the fixture allowing the user to control the different aspects of an intelligent light. DMX data is sent out as serial data that travels from fixture to fixture via data "IN" and data "OUT" XLR terminals located on the fixtures (most controllers will only have output jacks).

DMX LINKING

To ensure proper DMX data transmission, always use proper DMX cables and a terminator. When using several DMX fixtures try to use the shortest cable path possible. Never split a DMX line with a "Y" style connector. The order in which the fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a starting DMX address of 1 may be placed anywhere in the DMX chain, at the beginning, at the end, or anywhere in the middle. The DMX controller knows to send data assigned to address 1 to that fixture no matter where it is located in the DMX chain. The **RAYZOR Q12 ZOOM™** can be controlled via DMX-512 protocol and the DMX address is set via the control menu.

DATA CABLE (DMX Cable) REQUIREMENTS (For DMX and Master/Slave Operation)

Your fixture and your DMX controller require a standard 3pin or 5pin XLR connector for data input and data output (see figure below). If you are making your own cables, be sure to use two conductor, shielded digital DMX cable rated at 120 ohms; this cable is designed for DMX transmission and may be purchased from your Elation dealer or at most professional lighting retailers. Your cables should be made with a male and female XLR connector on either end of the cable. Also, remember that a DMX line must be daisy chained and cannot be split, unless using an approved DMX splitter such as **Elation's Opto Branch 4™, Opto Branch 8™, or DMX-Branch/4™**.

DMX Output
3-Pin XLR Socket



DMX Input
3-Pin XLR Socket



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

DMX Output
5-Pin XLR Socket



DMX Input
5-Pin XLR Socket



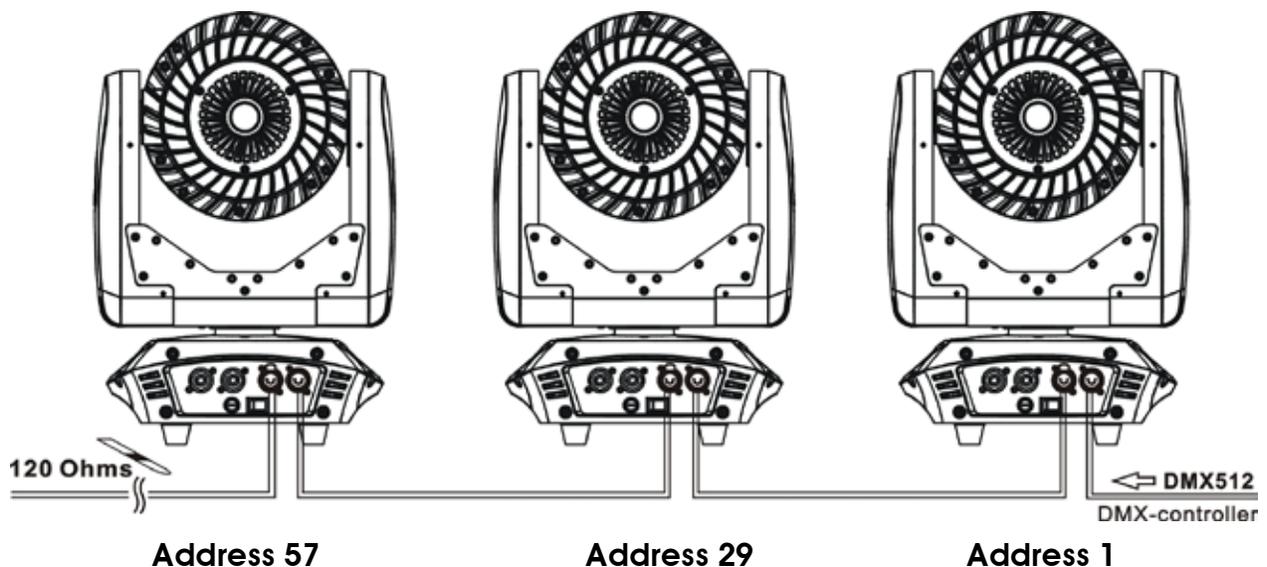
1: Ground
2: Data (-)
3: Data (+)
4: Open
5: Open



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 outer casing. Grounding the shield could cause a short circuit and erratic behavior.

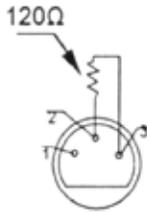
DMX-512 CONTROLLER CONNECTION

Connect the provided XLR cable to the female XLR output of your controller and the other side to the male XLR input of the **RAYZOR Q12 ZOOM™**. The diagram below illustrates a typical DMX-512 connection when the fixture is in the **28 Channel Extended Mode**. You can chain multiple panels together through serial linking. The cable that should be used is two conductor, shielded DMX cable with XLR input and output connectors. Always be sure daisy chain your in and out data connections, never split or "Y" your DMX connections unless you are using an approved DMX splitter such as **Elation's Opto Branch 4™, Opto Branch 8™, or DMX-Branch/4™**.



DMX-512 CONNECTION WITH DMX TERMINATOR

A DMX terminator should be used in all DMX lines especially in longer runs. The use of a terminator may avoid erratic behavior in your DMX line. A terminator is a 120 ohm 1/4 watt resistor that is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This fixture is inserted in the female XLR connector of the last fixture in your daisy chain to terminate the line. Using a line terminator will decrease the possibilities of erratic behavior.



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

5pin XLR DMX CONNECTORS

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

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

DMX ADDRESSING

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

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

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

In the case of the **RAYZOR BEAM Q12 ZOOM™**, when in the **28 Channel Extended Mode** you should set the starting DMX address of the first unit to 1, the second unit to 29 (1 + 28), the third unit to 57 (29 + 28), and so on.

Note: During start-up the **RAYZOR Q12 ZOOM™** will automatically detect whether a DMX data signal is being received or not. If DMX data signal is being received, the display will show "**Addr=XXX**" (**XXX** representing the actual DMX address). If the fixture is not receiving a DMX signal the display will flash. If your fixture is connected to a DMX controller and the display is flashing (not receiving a DMX signal), please check the following:

- The 3pin or 5pin XLR input plug (cable with DMX signal from controller) is not connected or is not inserted completely into the DMX input jack of the fixture.
- The DMX controller is switched off or defective.
- The DMX cable or connector is defective.
- A DMX terminator has been inserted into the last fixture in your DMX chain.

FIXTURE MENU

ON-BOARD SYSTEM MENU

The **RAYZOR Q12 ZOOM™** comes with an easy to navigate system menu. The next section will detail the functions of each command in the system menu.

LCD MENU CONTROL PANEL

The control panel (see image below) located on back of the fixture allows you to access the main menu and make all necessary adjustments to the **RAYZOR Q12 ZOOM™**. 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.



ELATION© RAYZOR Q12 ZOOM™ SYSTEM MENU					
Specifications are subject to change without any prior written notice.					
MAIN MENU	SUB MENU	OPTIONS / VALUES (Default Settings in BOLD)		DESCRIPTION	
FUNCTION	Set DMX Address	A001~AXXX		DMX Address Setting	
	DMX Value	ALL.....		DMX Value Display	
	Slave Mode	Slave1, Slave2, Slave3		Slave Setting	
	Auto Program	Master / Alone		Auto Program	
	Sound Control	Master / Alone		Sound Control	
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	Timer Password 038	
		Clean Last Run	ON / OFF	Clear Fixture Last Run Time	
	Temperature Info	Head Temperature	XXX C° / F°	Temperature in Fixture Head	
Software Version	Vx.x.x		Software Version		
PERSONALITY	Status Settings	Address via DMX	ON/OFF	Address Via DMX	
		No DMX Status	Close/ Hold /Auto/Music	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	
		Movement Speed	Speed 1 ~ 4	Movement Mode Select	
		Mic Sensitivity	0~99%	Sensitivity Of Mic	
		Hibernation	OFF, 01M~99M, 15M	Stand By Mode	
	Service Setting	Password	Password=XXX		Service Password 050
		RDM PID	XXXXXX		RDM PID Code
	Fans Control	Auto , High, Low		Fans Speed Setting	
	Display Setting	Shutoff Time	02~60m 05m	Display Shut Off Time	
		Display Reverse	ON/ OFF	Display Reverse 180°	
		Key Lock	ON/ OFF	Key Lock	
		Disp Flash	ON/OFF	Display Flash	
	Temperature C/F	Celsius/Fahrenheit		Temperature Switch Between C° / F°	
	Initial Status	PAN =XXX		Initial Effect Position	
	Dimmer Modes	Standard, Stage, TV, Architectural, Theatre		Dimmer Mode Settings	
	Reset Default	ON/OFF		Restore Factory Settings	
Reset Function	Reset All			Reset All Motors	
	Reset Pan/Tilt			Reset Pan/Tilt	
	Reset Zoom			Reset Zoom	
Effect Adjust	Test Channel	AUTO		Test Functions	
	Manual Control	AUTO =XXX,		Fine Adjustments	
	Calibrate Values	Calibrate Password		Password 050	
PAN, TILT, ZOOM		Calibrate/Adjust Effects			

ELATION® RAYZOR Q12 ZOOM™ SYSTEM MENU				
Specifications are subject to change without any prior written notice.				
MAIN MENU	SUB MENU	OPTIONS / VALUES (Default Settings in BOLD)		DESCRIPTION
User Mode Set	User Mode	Stand Mode		DMX Channel Modes
		Basic Mode		
		Extend Mode		
		User Mode A		User Defined Channel Assignment
		User Mode B		
	User Mode C			
	Edit User Mode	Max Channel = XX		Edits User Defined Channel Assignments
PAN = CH01				
Edit Program	Select Programs	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 = SCxx	Program In Loop
		Program 10	Step 64 = SCxx	Save and Exit
	Edit Scenes	Scene 001	Pan, Tilt,	Save and Automatically Return
		~ Scene 250	--Fade Time-- --Scene Time--	Manual Scenes Edit
			Input By Outside	Stores Scenes via Ext DMX Console
	Record Controller	XX~XX		Automatic Scenes Recorder

FUNCTION - Set DMX Address

Define desired DMX address via the Control Panel.

FUNCTION - DMX Value

Display DMX 512 value of each channel.

FUNCTION - Slave Mode

Define fixture slave mode (**Slave1, Slave2, Slave3**).

FUNCTION - Auto Program

Define fixture mode (**Master or Alone**) for running Auto Programs. Select desired internal programs under "**Select Program**", set the number of steps under "**Edit Program**", and edit individual scenes under "**Edit Scenes**".

FUNCTION - Sound Control

Define fixture mode (**Master or Alone**) for running Auto Programs via sound activation, default is **Master**.

INFORMATION - Time Information - Current Time

Displays fixture run time from last power ON.

The counter is reset after each time the fixture is powered OFF.

INFORMATION - Time Information - Total Run Time

Displays fixture total run time.

INFORMATION - Time Information - Last Run Time

Displays fixture run time for a given period of time (i.e. rental period).

This counter can be reset.

INFORMATION - Time Information - LastRun Password

Display the fixture timer password. **(038)**

INFORMATION - Time Information - Clear Last Run

Resets the last run time of the fixture.

INFORMATION - Temperature Information - Head Temperature

Displays temperature of the fixture.

INFORMATION - Software Version

Displays software version of the fixture.

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 - Status Settings - No DMX Status

Define how fixture operates if NO DMX signal is detected.

PERSONALITY - Status Settings - Pan Reverse

When ON, all PAN movements are reversed (inverted).

PERSONALITY - Status Settings - Tilt Reverse

When ON, all TILT movements are reversed (inverted).

PERSONALITY - Status Settings – Pan Degree

Select desired maximum degree of the Pan movement.

PERSONALITY - Status Settings - Feedback

When ON, the fixture automatically performs PAN / TILT correction in the event either one is disrupted during normal operation.

PERSONALITY - Status Settings – Movement Speed

Select desired Movement Speed.

PERSONALITY - Status Settings – Mic Sensitivity

Select desired Microphone Sensitivity.

PERSONALITY - Status Settings – Hibernation

Select desired Hibernation time.

PERSONALITY – Service Setting - Password

Displays the service setting password. **(050)**

PERSONALITY – Service Setting - RDM PID

RDM (Remote Device Management)

PERSONALITY – Fans Control

Select desired Fan setting.

PERSONALITY - Display Setting – Shutoff Time

Define how many minutes before the LCD Menu display will automatically shut OFF.

PERSONALITY - Display Setting – Display Reverse

When ON, the LCD Menu display by is rotated (inverted) 180°.

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 - Display Setting – Disp Flash

When ON, the LCD Menu display will flash consistently.

PERSONALITY – Temperature C/F

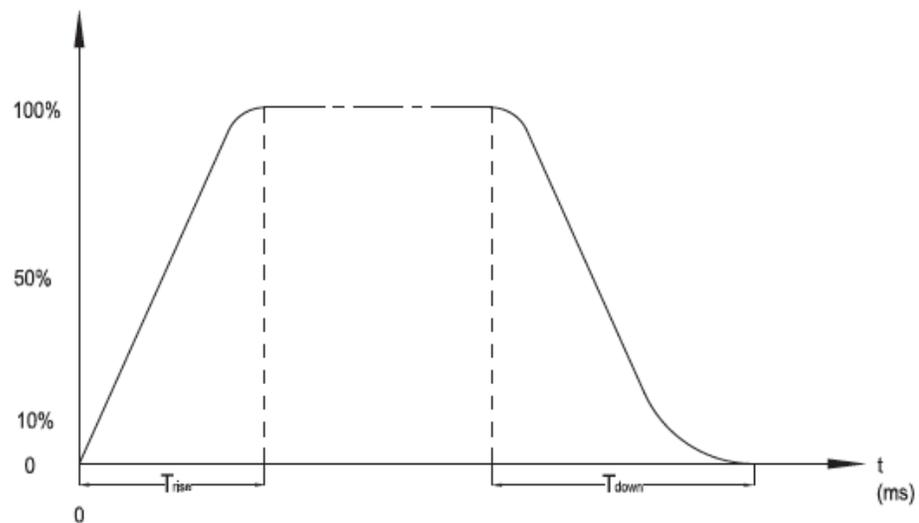
Define how fixture displays internal temperature (Celsius or Fahrenheit).

PERSONALITY – Initial Status

Create custom PAN/TILT and Effect settings and save as a custom Home Position.

PERSONALITY – Dimmer Modes

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



Ramp Effect	OS (Fade Time)		1S (Fade Time)	
	T_{rise} (ms)	T_{down} (ms)	T_{rise} (ms)	T_{down} (ms)
Standard	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

When ON, all factory settings are restored.

RESET FUNCTION - Reset ALL

Reset ALL internal motors to Home Position.

RESET FUNCTION - Reset PAN and TILT

Reset only PAN and TILT motors to Home Position.

RESET FUNCTION - Reset ZOOM

Reset only ZOOM motor to Home Position.

EFFECT ADJUST – Test Channel

Select and auto test each channel function independently from the DMX controller.

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 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 – User Mode

Select operating mode, which includes DMX Channel and User defined modes.

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 – Select Program

Select one of the (10) user defined internal Auto Programs.

EDIT PROGRAM – Edit Program

Edit any of the (10) user defined internal Auto Programs.

EDIT PROGRAM – Edit Scenes

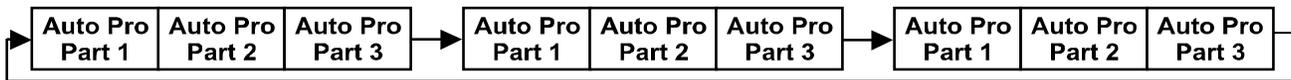
Edit any of the scenes of the internal Auto Programs.

EDIT PROGRAM – Record 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 of.
- 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

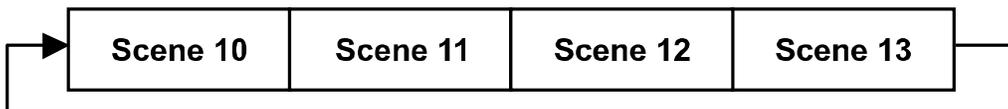
Auto Pro Part 1 is Program 2

Auto Pro Part 2 is Program 3

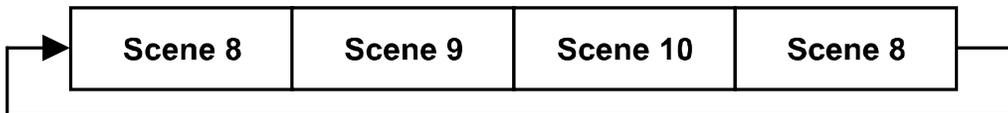
Auto Pro Part 3 is Program 6

The 3 Slave groups run the Auto Program in certain time segments, as shown below:

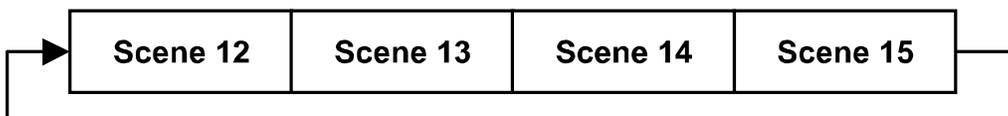
Part 1:



Part 2:



Part 3:



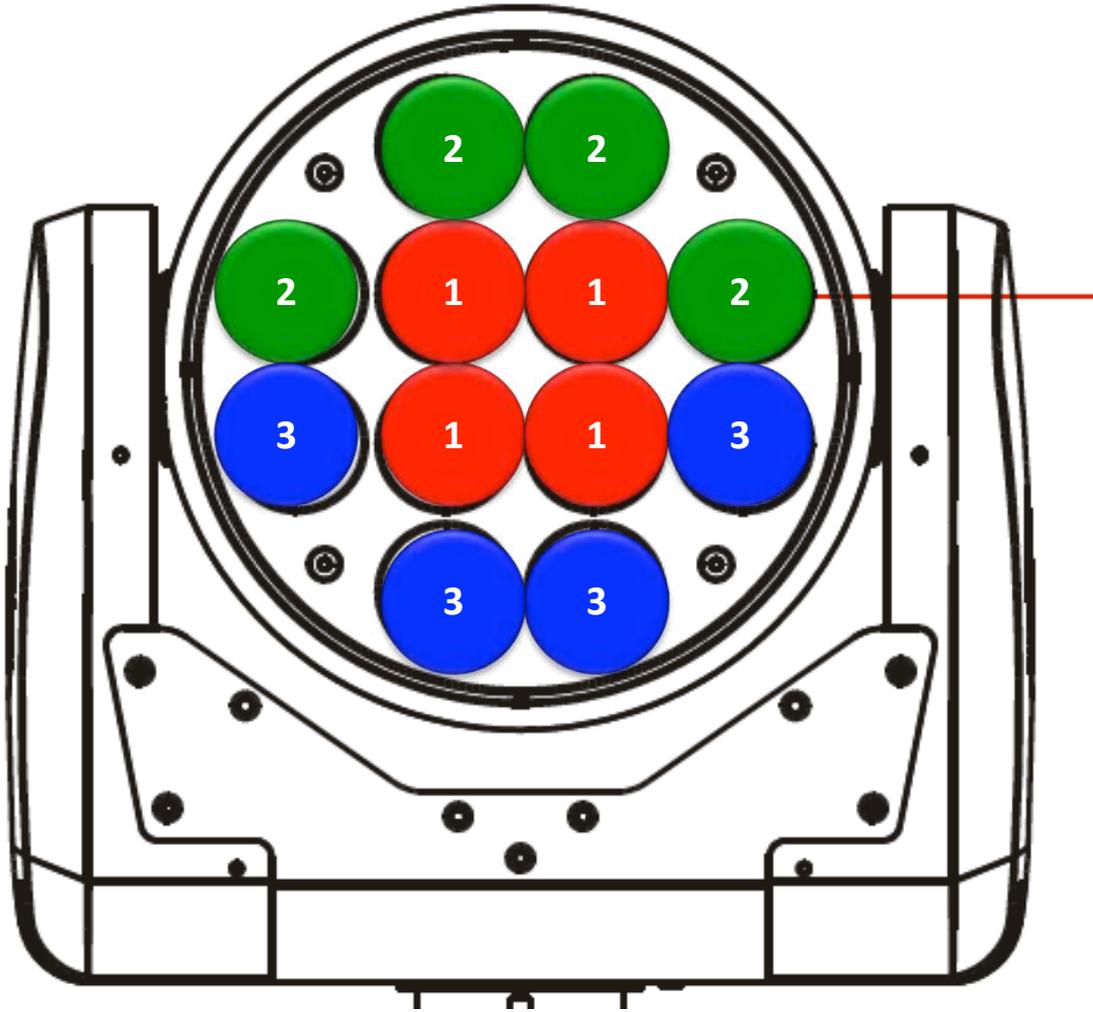
DMX CHANNEL FUNCTIONS AND VALUES

ELATION® RAYZOR Q12 ZOOM™				
DMX Channel Values / Functions (28 DMX Channels)				
Specifications are subject to change without any prior written notice.				
*Position of LED GROUPS 2 and 3 depends on the orientation of the fixture head.				
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	PAN Movement FINE Adjustment
2	3	3		TILT MOVEMENT [8 BIT]
			0-255	TILT Movement
	4	4		TILT MOVEMENT [16 BIT]
			0-255	TILT Movement FINE Adjustment
3	5			RED LED - All Groups [1-3]
			0-255	Red (0-Black - 255-100%)
4	6			GREEN LED - All Groups [1-3]
			0-255	Green (0-Black - 255-100%)
5	7			BLUE LED - All Groups [1-3]
			0-255	Blue (0-Black - 255-100%)
6	8			WHITE LED - All Groups [1-3]
			0-255	White (0-Black - 255-100%)
7	9	5		SHUTTER, STROBE
			0-31	LEDs OFF
			32-63	LEDs ON
			64-95	Strobe Effect SLOW to FAST
			96-127	LEDs ON
			128-159	Pulse Effect In Sequences SLOW to FAST
			160-191	LEDs ON
			192-223	Random Strobe Effect SLOW to FAST
224-255	LEDs ON			
8	10	6		DIMMER INTENSITY
			0-255	Dimmer Intensity 0 to 100%
9	11	7		DIMMING MODES
			0-31	STANDARD
			32-63	STAGE
			64-95	TV
			96-127	ARCHITECTURAL
			128-159	THEATRE
			160-255	Default to Fixture Setting
10	12	8		ZOOM
			0-255	ZOOM Adjustment from MIN to MAX
	13	9		ZOOM FINE INDEXING
0-255			FINE ZOOM Adjustment	

ELATION® RAYZOR Q12 ZOOM™				
DMX Channel Values / Functions (28 DMX Channels)				
Specifications are subject to change without any prior written notice.				
<i>*Position of LED GROUPS 2 and 3 depends on the orientation of the fixture head.</i>				
MODE / CHANNEL			VALUE	FUNCTION
BASIC	STAND	EXTEND		
11	14	10		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 MAGENTA
			168-199	From MAGENTA to RED
			200-231	From RED to WHITE
			232-255	RANDOM From SLOW to FAST
12	15	11		COLOR PRESETS
			0-10	NO Function
			11-20	WHITE 2,700K
			21-30	WHITE 3,200K
			31-40	WHITE 4,300K
			41-50	WHITE 5,600K
			51-60	WHITE 6,500K
			61-70	WHITE 8,000K
			71-100	BLUE / RED
			101-130	BLUE / GREEN
			131-160	GREEN / RED
			161-190	RED / BLUE
			191-220	GREEN / BLUE
221-255	RED / GREEN			
13	16	12		COLOR MODE
			0-189	NO Function
			190-254	EDIT a New WHITE Balance
			255	SAVE a New WHITE Balance
14	17	13		CHASE MACROS
			0-10	NO Function
			11-40	Chase Macro 1
			41-70	Chase Macro 2
			71-100	Chase Macro 3
			101-130	Chase Macro 4
			131-160	Chase Macro 5
			161-190	Chase Macro 6
			191-220	Chase Macro 7
221-255	Chase Macro 8			
15	18	14		CHASE MACRO SPEED
			0-225	FAST to SLOW

ELATION® RAYZOR Q12 ZOOM™			
DMX Channel Values / Functions (28 DMX Channels)			
Specifications are subject to change without any prior written notice.			
*Position of LED GROUPS 2 and 3 depends on the orientation of the fixture head.			
MODE / CHANNEL			FUNCTION
BASIC	STAND	EXTEND	
		15	RED LED - Group [1]
		0-255	Red (0-Black - 255-100%)
		16	GREEN LED - Group [1]
		0-255	Green (0-Black - 255-100%)
		17	BLUE LED - Group [1]
		0-255	Blue (0-Black - 255-100%)
		18	WHITE LED - Group [1]
		0-255	White (0-Black - 255-100%)
		19	RED LED - Group [2]*
		0-255	Red (0-Black - 255-100%)
		20	GREEN LED - Group [2]*
		0-255	Green (0-Black - 255-100%)
		21	BLUE LED - Group [2]*
		0-255	Blue (0-Black - 255-100%)
		22	WHITE LED - Group [2]*
		0-255	White (0-Black - 255-100%)
		23	RED LED - Group [3]*
		0-255	Red (0-Black - 255-100%)
		24	GREEN LED - Group [3]*
		0-255	Green (0-Black - 255-100%)
		25	BLUE LED - Group [3]*
		0-255	Blue (0-Black - 255-100%)
		26	WHITE LED - Group [3]*
		0-255	White (0-Black - 255-100%)
16	19	27	PAN / TILT MOVEMENT SPEED
		0-225	PAN / TILT MAX to MIN Speed
		226-235	Blackout by Movement
		236-255	NO Function
17	20	28	LAMP ON/OFF, RESET, INTERNAL PROGRAMS
		0-79	Normal
		80-84	ALL Motor Reset
		85-87	SCAN Motor Reset
		88-90	NO Function
		91-93	SAVE WHITE Balance Enabled
		94-96	NO Function
		97-99	ZOOM Motor Reset (After 8 Seconds)
		100-119	Internal Program 1
		120-139	Internal Program 2
		140-159	Internal Program 3
		160-179	Internal Program 4
		180-199	Internal Program 5
		200-219	Internal Program 6
		220-239	Internal Program 7
		240-255	SOUND Control (Scene of Program 1)

LED GROUPS



ERROR CODES

When power is applied, the fixture automatically enters 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 **“Err channel is XX”** where as **XX** will represent a specific function. The display may show one or multiple error codes. For example, when the display shows **“Err Channel is Pan Movement”**, it means the Pan Yoke is not in the home position. If there are multiple errors at the same time, you may see the error messages **“Err Channel is Pan Movement”**, **“Err Channel is Tilt Movement”** flash for 2 times.

If errors 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 any errors persist 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.

PAN- Movement Er (PAN-Yoke Movement Error)

This message will appear after the reset of the fixture if the yoke’s magnetic-indexing circuit malfunction (sensor failed or magnet missing) or the stepping-motor is defective (or its driving IC on the main PCB). The PAN- movement is not located in the default position after the reset.

TILT- Movement Er (TILT-Head Movement Error)

This message will appear after the reset of the fixture if the head’s magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor is defective (or its driving IC on the main PCB). The TILT- movement is not located in the default position after the reset.

CLEANING AND MAINTENANCE



C A U T I O N

Disconnect power before cleaning or 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 3 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.
- 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).
- Inspect all moving parts and make sure there are no signs of wear and rotate/move without imbalances.
- Electric power supply cables must not show any damage, material fatigue or sediments. Never remove the ground prong from the power cable.

TECHNICAL SPECIFICATIONS

FEATURES

Compact and Fast Zoom Wash LED Illuminare
13° - 29° Motorized Zoom
RGBW Color Mixing and Color Macros
Variable Color Temperatures (2,700K - 8,000K)
Variable Dimming Modes
Multiple Pixel Zone Control and Chase Effects
RDM - Remote Device Management
Flicker Free Operation for Broadcast TV and FILM

SOURCE

(12) 15W Quad Color RGBW LEDs
100,000 Hour Average LED Life

EFFECTS

Multiple Pixel Zone Control
Color Macro and Chase Effects
Strobe: 1-18fps
Dimming: 0% - 100%
Variable Dimming Modes

COLOR

RGBW Color Mixing
Variable Color Temperatures (2,700K - 8,000K)

CONTROL / CONNECTIONS

(3) DMX Channel Modes (17 / 20 / 28)
RDM (Remote Device Management)
6 Button Touch Control Panel
Full Color 180° Reversible LCD Menu Display
16 Bit 3-Phase Motors
8 / 16 Bit Resolution Adjustable Movement
5pin DMX In/Out
powerCON Power In/Out

SIZE / WEIGHT

Length: 11.9" (302mm)
Width: 8.4" (214mm)
Vertical Height: 17.1" (434)
Weight: 23.0 lbs. (10.4 kg)

ELECTRICAL / THERMAL

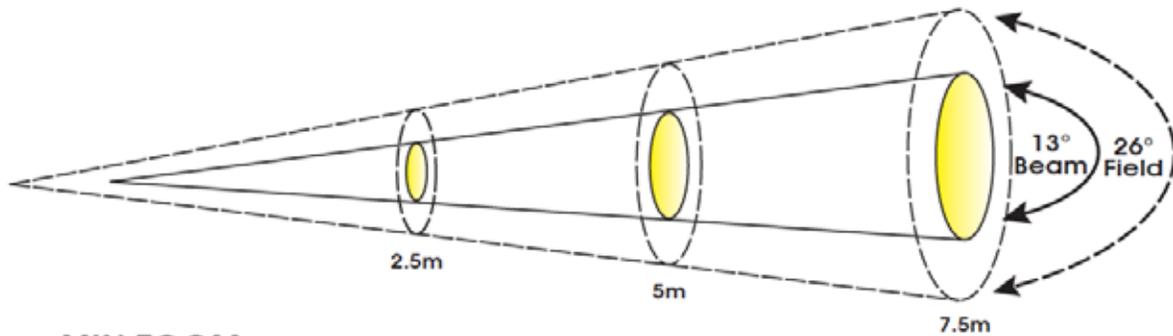
AC 100-240V - 50/60Hz
200W Max Power Consumption
-13°F to 113°F (-25°C to 45°C)

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.

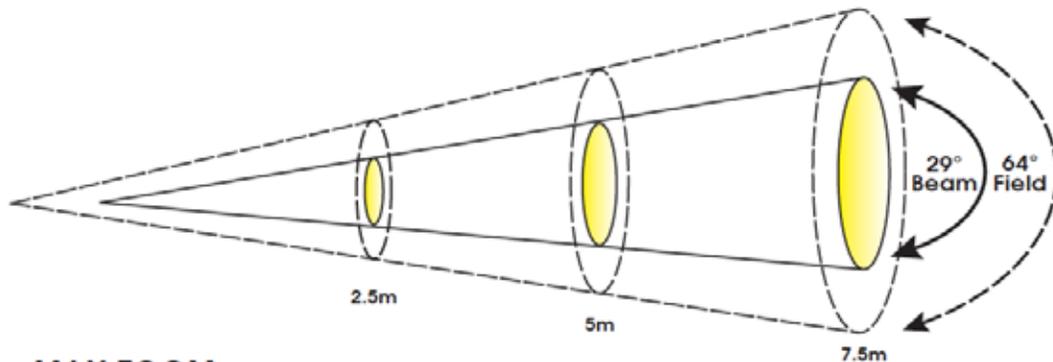
PHOTOMETRIC DATA



MIN ZOOM

	m	ft	m	ft	m	ft
Distance	2.5	8.2	5	16.4	7.5	24.6
13° Beam Diameter	0.55	1.8	1.1	3.6	1.65	5.4
26° Field Diameter	1.15	3.8	2.3	7.5	3.45	11.3

Photometrics	lux	fc	lux	fc	lux	fc
RED LEDs	1,150	107	345	32	153	14
GREEN LEDs	2,650	246	730	68	327	30
BLUE LEDs	250	23	73	7	36	3
WHITE LEDs	3,200	297	871	81	390	36
FULL ON	5,680	528	1,477	137	660	61



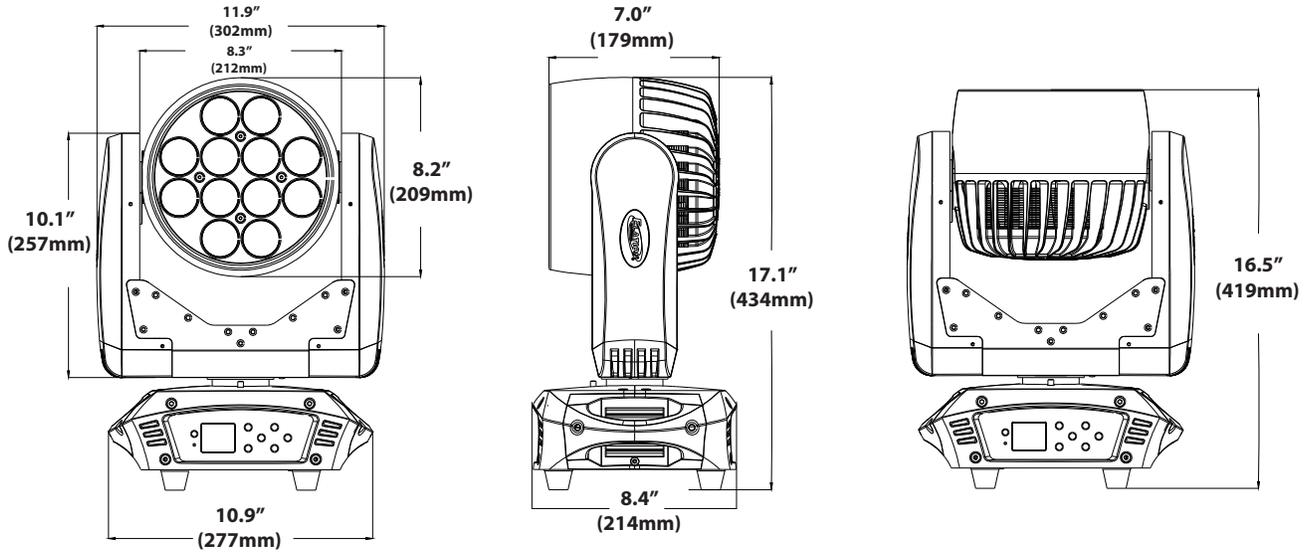
MAX ZOOM

	m	ft	m	ft	m	ft
Distance	1	3.3	2	6.6	3	9.8
29° Beam Diameter	1.3	4.3	2.6	8.5	3.9	12.8
64° Field Diameter	3.1	10.2	6.2	20.3	9.3	30.5

Photometrics	lux	fc	lux	fc	lux	fc
RED LEDs	173	16	45	4	21	2
GREEN LEDs	389	36	101	9	48	4
BLUE LEDs	43	4	11	1	6	1
WHITE LEDs	470	44	120	11	57	5
FULL ON	806	75	210	20	99	9

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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
EWDMXSYSTEM	Wireless DMX System (1 Transmitter, 1 Receiver)
EWDMXT	Wireless DMX Transmitter
EWDMXR	Wireless DMX Receiver
PLC3	3' (1m) powerCON PRO Link Cable
PLC6	6' (1.8m) powerCON PRO Link Cable
AC5PDMX5PRO	5 ft. (1.5m) 5pin PRO DMX Cable
AC5PDMX10PRO	10 ft. (3m) 5pin PRO DMX Cable
	Additional Cable Lengths Available

