

# RAYZOR Q12™

user manual 1.0

©2013 ELATION PROFESSIONAL all rights reserved. Information, specifications, diagrams, images, and instructions herein are subject to change without notice. ELATION PROFESSIONAL logo and identifying product names and numbers herein are trademarks of ELATION PROFESSIONAL. Copyright protection claimed includes all forms and matters of copyrightable materials and information now allowed by statutory or judicial law or hereinafter granted. Product names used in this document may be trademarks or registered trademarks of their respective companies and are hereby acknowledged. All non-ELATION brands and product names are trademarks or registered trademarks of their respective companies.

ELATION PROFESSIONAL and all affiliated companies hereby disclaim any and all liabilities for property, equipment, building, and electrical damages, injuries to any persons, and direct or indirect economic loss associated with the use or reliance of any information contained within this document, and/or as a result of the improper, unsafe, insufficient and negligent assembly, installation, rigging, and operation of this product.

**Elation Professional USA** | 6122 S. Eastern Ave. | Los Angeles, CA. 90040

323-582-3322 | 323-832-9142 fax | [www.elationlighting.com](http://www.elationlighting.com) | [info@elationlighting.com](mailto:info@elationlighting.com)

**Elation Professional B.V.** | Junostraat 2 | 6468 EW Kerkrade, Netherlands

+31 45 546 85 66 | +31 45 546 85 96 fax | [www.elationlighting.eu](http://www.elationlighting.eu) | [info@elationlighting.eu](mailto:info@elationlighting.eu)

## CONTENTS

General Information	4
Warranty	6
Safety Instructions	7
General Guidelines	8
Features & Fixture Overview	9
Installation	11
Understanding DMX	14
Fixture Menu	18
DMX Channel Values	40
LED Groups	42
Error Message	43
Snoot & Diffusion Filter Installation	44
Cleaning and Maintenance	45
Technical Specifications	46
Optional Accessories	50

## GENERAL INFORMATION

### INTRODUCTION

Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! **The RAYZOR Q12™** 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™** by Elation Professional®. Every **RAYZOR Q12™** 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

- (1) powerCON Power Cable
- (1) 5-Pin XLR Cable
- (1) Omega Bracket (Holder)
- (1) Safety Cable
- Manual & Warranty Card



### MANUAL UPDATES

Please check [www.elationlighting.com](http://www.elationlighting.com) for the latest revision/update of this manual.



## **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](http://www.elationlighting.com) for any comments or suggestions. For service related issue please contact Elation Professional®. Service Hours are Monday through Friday 8:00 a.m. to 5:00 p.m. Pacific Standard Time.

**Voice: 323-582-3322**

**Fax: 323-832-9142**

E-mail: [support@elationlighting.com](mailto:support@elationlighting.com)

Forum: [www.ElationLighting.com/forum](http://www.ElationLighting.com/forum)

## **WARRANTY REGISTRATION**

The **RAYZOR Q12™** carries a two year (730 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support at 323-582-3322.

## **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.**

## 2-YEAR LIMITED WARRANTY

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

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

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

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

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

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

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

## SAFETY INSTRUCTIONS



The **RAYZOR Q12™** 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 is grounded properly, and only qualified personnel perform all electrical connections.



### CAUTION!

Never touch the device during operation!  
The housing may heat up



### CAUTION!

Never look directly into the light source,  
as sensitive persons may suffer an epileptic shock.



### CAUTION!

Keep this device away from rain and moisture !



### CAUTION!

Unplug mains lead before opening the housing.

- For proper operation, follow the **Installation** guidelines described on page **11** of this manual. Only qualified and certified personnel should perform installation of this fixture and only the original rigging parts (brackets, holders, clamps, safety cables) included with this fixture should be used for installation. Any modifications will void the original manufactures 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.

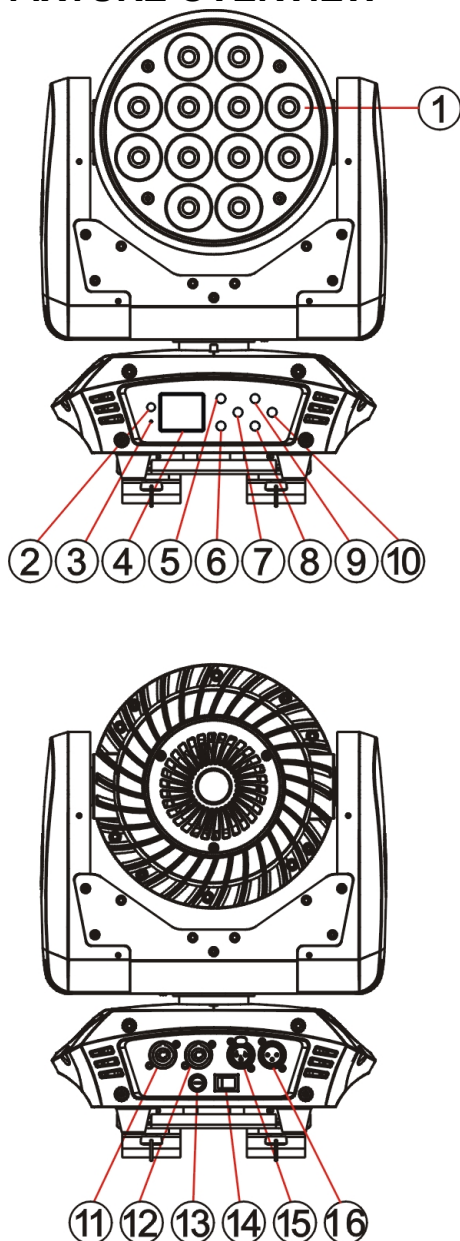
## GENERAL GUIDELINES

- 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 use on stage, in nightclubs, theatres, etc. Do not attempt installation and/or operation without proper knowledge of how to do so.
- Do not permit operation by persons who are not qualified for operating this type of theatrical fixture. Most damages are the result of operations by nonprofessionals.
- If this fixture is exposed to extreme temperatures due to environmental changes, do not power the fixture on until it has reached room temperature. Condensation could damage the fixture.
- 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 the device.
- When choosing an installation location, please be sure this fixture will not be exposed to extreme heat, moisture, and/or dust. The minimum distance between this fixture and other devices or wall and/or flat surface should be at least 0.5 meter (1.5 ft).
- When using quick release “**OMEGA**” **Cam-Lock** system, be sure the four quick lock fasteners are locked in the quick lock holes correctly.
- 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 base of the fixture.
- Please use the original packaging and materials to transport the fixture in for service.

## FEATURES

The new **Rayzor Q12™** features (12) 15W Quad Color RGBW LEDs with up to 100,000 hour average life, high speed 16-bit resolution movement, color mixing, rainbow effect, 7° beam and 14° field angles, 6 zone chase effects, 8 auto program chase effects, flicker free operation for TV and Film, 5pin DMX connections, full color 180° reversible LCD menu display with 6 button touch control panel with battery backup for menu display power, and a multi-voltage universal auto switching power supply (100-240v). Optional accessories for the **Rayzor Q12™** include a snoot lens cover and diffusion filter holder.

## FIXTURE OVERVIEW



- 1: LED Lens Assembly
- 2: DC Switch
- 3: Microphone
- 4: LCD Menu Control Display
- 5: MODE/ESC Button
- 6: ENTER Button
- 7: LEFT Button
- 8: DOWN Button
- 9: UP Button
- 10: RIGHT Button
- 11: Power IN
- 12: Power OUT
- 13: Fuse
- 14: Power Switch
- 15: 5-Pin DMX OUT
- 16: 5-Pin DMX IN

1. **LED Assembly** – RGBW Quad LEDs comprise the LED assembly.
2. **DC Switch** – Controls menu and display power when disconnected from main power.
3. **Microphone** – Captures external low frequency sounds to trigger the unit in Sound Active mode. Designed to capture low frequency sounds only, tapping on the microphone and/or high-pitched sounds may not trigger unit.
4. **LCD Menu Control Display** – Full color LCD animated menu display.
5. **MODE/ESC Button** – Used to access the menu functions and exit the current command.
6. **ENTER Button** – Used to enter into or lock a certain menu function.
7. **LEFT Button** – Used to toggle through the menu display.
8. **DOWN Button** – Used to toggle down or back through the menu functions and settings.
9. **UP Button** – Used to toggle forward through the menu functions and settings.
10. **RIGHT Button** – Used to toggle through the menu display.
11. **Power IN** – Power connection (powerCon) to power source
12. **Power OUT** – Power connection (powerCon) to daisy chain to another unit.
13. **Fuse Holder Assembly** – Houses ST 250v T3.15a GMA safety fuse. Always replace with an exact match unless otherwise specified by an authorized Elation Service Technician. Using a fuse other than that specified could seriously damage the unit and may void the manufactures warranty.
14. **Power Switch** – Used to power the unit ON or OFF.
15. **5-Pin DMX OUT** – Sends incoming DMX signal to the next fixture in the DMX chain via a female 5-pin XLR jack.
16. **5-Pin DMX IN** – Accepts incoming DMX signal via a male 5-pin XLR jack.

## INSTALLATION



### CAUTION!

Please consider the GB7000.15/EN60598-2-17 and the other respective national norms during the installation. The installation must only be carried out by a qualified person.



### CAUTION!

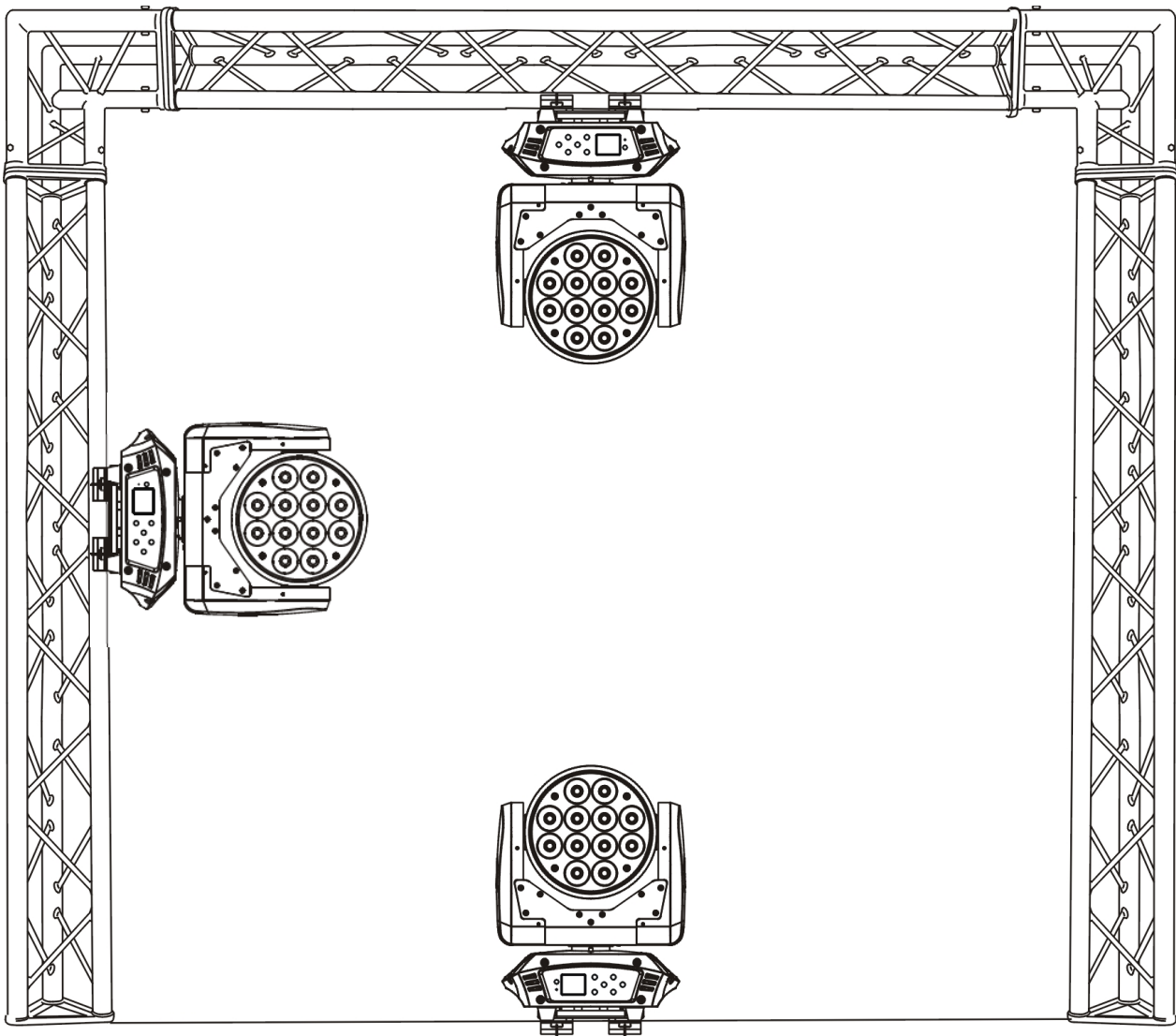
The electric connection must only be carried out by a qualified electrician.

## CAUTIONS

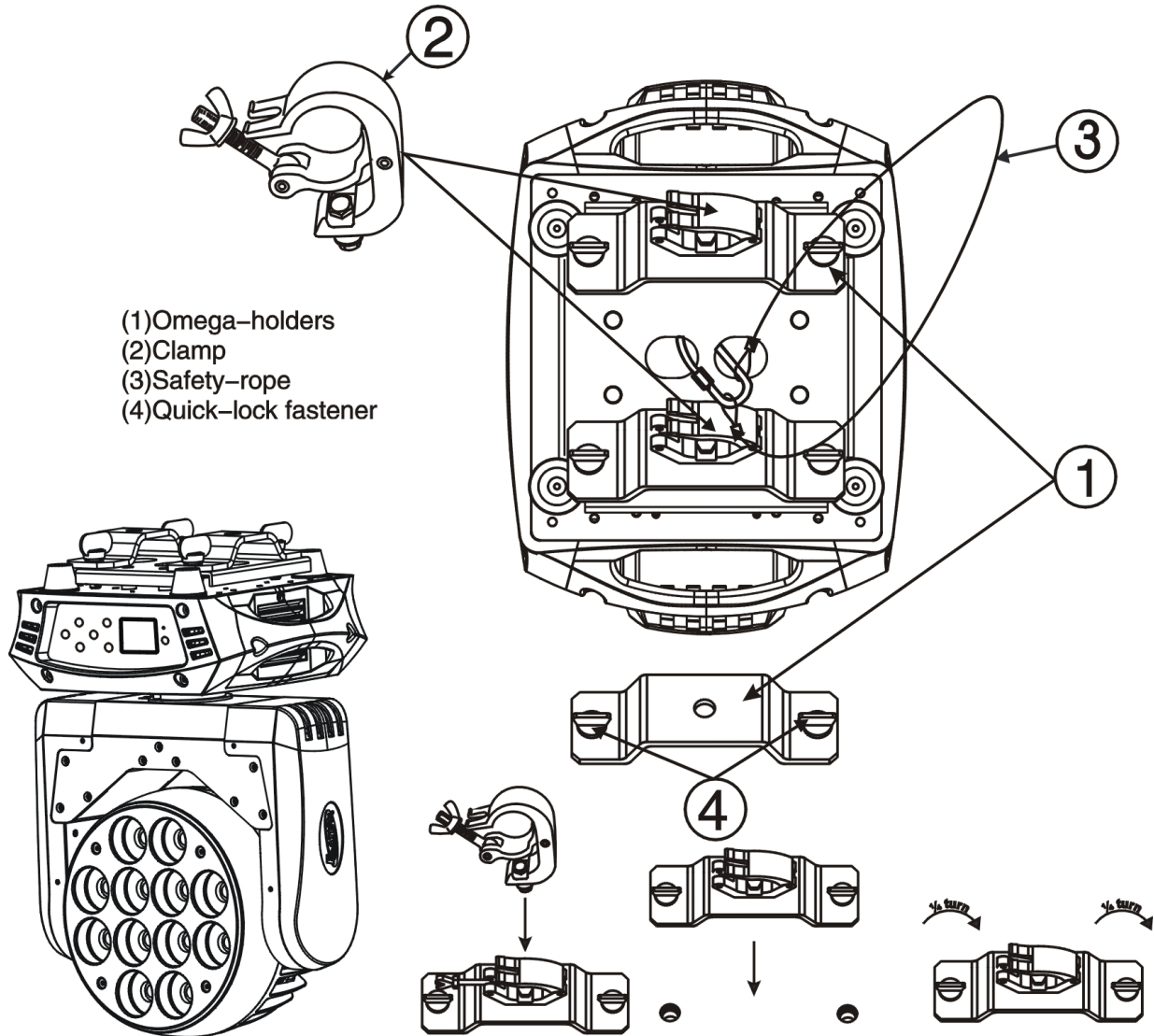
- Recommended ambient temperature for this fixture is between **14°F to 113°F (-10°C to 45°C)**. Do not use the fixture under or above this temperature.
- For added protection, mount the fixture in areas outside walking paths, seating areas, or in areas where unauthorized personnel might reach the fixture.
- 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. **(95 kgs / 210 lbs)**
- Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.
- Never stand directly below the device when mounting, removing or servicing the fixture.

## 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.
- Be sure the fixture is kept at least 0.5m (1.5 feet) away from any flammable materials (decoration etc.).







## SECURING

- Secure the clamp to the bracket using a M12 screw fitted through the  $\Phi 13$  center hole.
- Insert the  $\frac{1}{4}$  Turn Twist Locks of the first Omega bracket into the respective holes on the bottom of the device. Tighten the Twist Locks a  $\frac{1}{4}$  turn clockwise.
- Install the second Omega bracket on the top of the device in the same way.
- Pull a safety cable through the holes on the bottom of the base and over the trussing system or a safe installation.

**Notice: This step is very important to ensure the fixture will not drop out by the damage of the clamp.**

## 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™** can be controlled via DMX-512 protocol. The **RAYZOR Q12™** is a 64-channel DMX fixture. The DMX address is set electronically using the controls on the LCD menu.

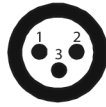
### DATA CABLE (DMX Cable) REQUIREMENTS (For DMX and Master/Slave Operation)

Your fixture and your DMX controller require a standard 3-pin or 5-pin 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 the Elation Opto Branch 4™ or DMX Branch/4™.

DMX Output  
3-Pin XLR Socket



DMX Input  
3-Pin XLR Socket

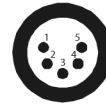


- 1: Ground
- 2: Data (-)
- 3: Data (+)


DMX Output  
5-Pin XLR Socket



DMX Input  
5-Pin XLR Socket



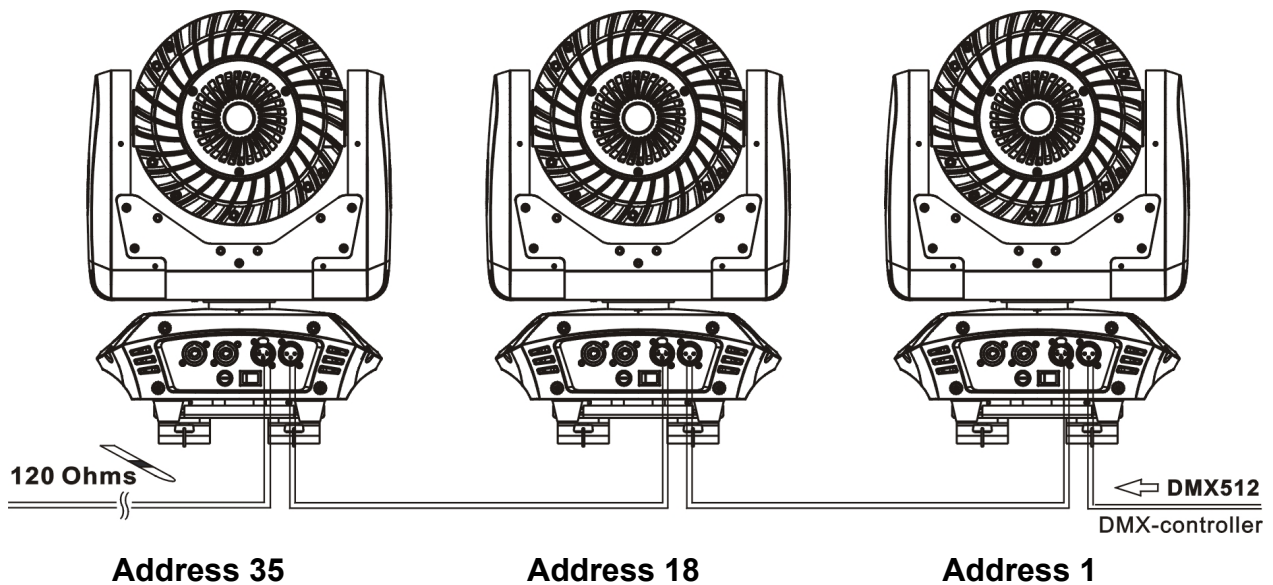
- 1: Ground
- 2: Data (-)
- 3: Data (+)
- 4: Open
- 5: Open



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.

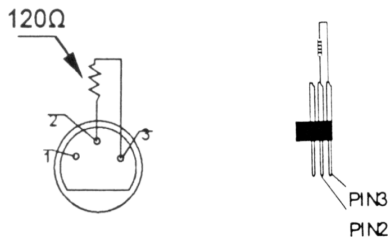
### DMX-512 CONTROLLER CONNECTION

Connect the provided XLR cable to the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the **RAYZOR Q12™** (Please refer to the diagram below.). 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 the Elation Opto Branch 4™ 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 (Elation part: DMX T PACK)* 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.

### 5-Pin XLR DMX CONNECTORS

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

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

## 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 Q12™**, when in Extended 37 Channel mode (default can also be set to Basic 15 Channel and Standard 17 Channel modes), you should set the starting DMX address of the first unit to 1, the second unit to 38 (37 + 1), the third unit to 75 (37 + 38), the fourth unit to 112 (37 + 75) and so on.

**Note:** During start-up the **RAYZOR Q12™** 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 3-PIN or 5-PIN 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™** 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™**. During normal operation, tapping the **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, tap the **ENTER** button to activate that field and use the **UP** and **Down** buttons to adjust the field. Tapping the **ENTER** button once more will confirm your setting. You may exit the main menu at any time without making any adjustments by tapping the **MODE/ESC** button.

**NOTE:** To access the LCD Menu Control Display via the internal battery, press and hold the **DC SWITCH** button for 2 seconds. The LCD Menu Control Display will shut **OFF** automatically about 1 minute from the last button press. To shut **OFF** the LCD Menu Control Display immediately, set "**Reset Default**" menu option to "**ON**" in the "**Personality**" menu and tap **ENTER** button to confirm your selection.



RAYZOR Q12™ SYSTEM MENU				*Default Settings Shaded
<b>FUNCTION</b>	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		Music Control
<b>INFORMATION</b>	Time Information	Current Time	XXXX(Hours)	Power On Running Time
		Total Run Time	XXXX(Hours)	Fixture Running Time
		Last Run Time	XXXX(Hours)	Fixture Last Times Clear
		Timer Password	Password=XXX	Timer Password <b>038</b>
	Clear Last Run	ON/OFF	Clear Fixture Last time	
	Temperature Info	Head Temperature		Temperature In The Head
	Software Version	V1.0.....		Software Version
<b>PERSONALITY</b>	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	630/540offset/ <b>540</b>	Pan Degree Select 1, 2, 3
		Tilt Degree	<b>270</b> /240	Tilt Degree Select 1, 2
		Feedback	ON/OFF	Movement Feedback
		Movement Speed	<b>Speed 1</b> ~ 4	Movement Mode Select
		Mic Sensitivity	0-99%	Sensitivity of Microphone
	Hibernation	OFF, 01M~99M, <b>15M</b>	Stand By Mode	
Service Setting	Password	Password=XXX		Service Password = <b>050</b>
	RDM PID	<b>xxxxxx</b>		RDM PID Code
Fans Control	Auto			Fans Speed Select
	High			
	Low			
Display Setting	Shutoff Time	02~60m <b>05m</b>	Display Shut Off Time	
	Flip Display	ON/OFF	Display Reverse 180°	
	Key Lock	ON/OFF	Key Lock	
	Display Flash	ON/OFF	Display Flashes If No DMX	
Temperature C/F	<b>Celsius</b>		Temperature Switch	
	Fahrenheit		Between °C or °F	
Initial Status	PAN = <b>XXX</b>		Initial Effect Position	
Reset Default	ON/OFF		Restore Factory Settings	

<b>RESET FUNCTION</b>	Reset All Reset Pan/Tilt		Reset All Settings Reset Pan/Tilt Settings	
<b>EFFECT ADJUST</b>	Test Channel	Auto Program, PAN, PAN-Fine, TILT, TILT-Fine, Move Speed, Strobe, Dimmer, Red-1, Green-1, Blue-1, White-1, Red-2, Green-2, Blue-2, White-2, Red-3, Green-3, Blue-3, White-3, Red-4, Green-4, Blue-4, White-4, Color Macro, Color Preset, Color Mode, Chase Patter, Chase Speed		Test Functions
	Manual Control	Auto Program, PAN, PAN-Fine, TILT, TILT-Fine, Move Speed, Strobe, Dimmer, Red-1, Green-1, Blue-1, White-1, Red-2, Green-2, Blue-2, White-2, Red-3, Green-3, Blue-3, White-3, Red-4, Green-4, Blue-4, White-4, Color Macro, Color Preset, Color Mode, Chase Patter, Chase Speed		Fine Adjustment of Functions (0-255)
	Calibration	-Password- PAN TILT	Password=XXX (0-255) (0-255)	Password = <b>050</b> Fine Adjustment of PAN Fine Adjustment of TILT
<b>USER MODE SETTING</b>	User Mode	<b>Stand Mode</b> Basic Mode Extend Mode User Mode A User Mode B User Mode C		Select DMX & User Modes
	Edit User Mode A Edit User Mode B Edit User Mode C	Max Chanel, Auto Program, PAN, PAN-Fine, TILT, TILT-Fine, Move Speed, Strobe, Dimmer, Red-1, Green-1, Blue-1, White-1, Red-2, Green-2, Blue-2, White-2, Red-3, Green-3, Blue-3, White-3, Red-4, Green-4, Blue-4, White-4, Color Macro, Color Preset, Color Mode, Chase Patter, Chase Speed		Preset User Modes



<b>EDIT PROGRAM</b>	Select Program	Auto Pro Part1 = Program 1 ~ 10 <b>Program 1</b> Auto Pro Part2 = Program 1 ~ 10 <b>Program 2</b> Auto Pro Part3 = Program 1 ~ 10 <b>Program 3</b>		Select Programs To Be Run
	Edit Program	Program 1 ~ Program 10	Pro. Test, Step 01 – Step 64	Testing Program Program In Loop Save And Exit
	Edit Scenes	Scene 001 ~ Scene 125	Auto Program, PAN, PAN-Fine, TILT, TILT-Fine, Move Speed, Strobe, Dimmer, Red (1-4), Green (1-4), Blue 1-4), White (1-4), Color Macro, Color Preset, Color Mode, Chase Patter, Chase Speed, Fade Time, Scene Time, Input By Output	Save And Automatically Return Manual Scenes Edit
	Record Controller	XX~XX		Automatic Scenes Recorder

### **FUNCTION - Set DMX Address**

Adjust the desired DMX address via the Control Panel.

1. Tap **MODE/ESC** to access the main menu and tap **ENTER**.
2. Tap the **UP/DOWN** until “**Set DMX Address**” is displayed and tap **ENTER**.
3. Current DMX address is displayed (**001-496**), tap the **UP/DOWN** to select desired DMX address (**001-496**) and **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **FUNCTION - DMX Value**

Display the DMX 512 value of each channel.

1. Tap **MODE/ESC** to access the main menu and tap **ENTER**.
2. Tap **UP/DOWN** until “**DMX Value**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired “**DMX Value**” and **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return the main menu.

### **FUNCTION - Slave Mode**

Define the fixture as a slave.

1. Tap **MODE/ESC** to access the main menu and tap **ENTER**.
2. Tap **UP/DOWN** until “**Slave Mode**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode (“**Slave1, Slave2, Slave3**”) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **FUNCTION - Auto Program**

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

1. Tap **MODE/ESC** to access the main menu and tap **ENTER**.
2. Tap **UP/DOWN** until “**Auto Program**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode (“**Master**,” “**Alone**”) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **FUNCTION – Sound Control**

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

1. Tap **MODE/ESC** to access the main menu and tap **ENTER**.
2. Tap **UP/DOWN** until “**Sound Control**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode (“**Master**” or “**Alone**”) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu

**INFORMATION - Time Information - Current Time**

Display the run time of the fixture from last power ON.

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

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Information”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** buttons until **“Time Information”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Current Time”** is displayed, tap **ENTER** and **“XXXXXh”** (Hours) is displayed.
4. Tap **MODE/ESC** to return to the main menu.

**INFORMATION - Time Information - Total Run Time**

Display the total running time of the fixture.

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Information”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Time Information”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Total Run Time”** is displayed, tap **ENTER** and **“XXXXXh”** (Hours) is displayed.
4. Tap **MODE/ESC** to return to the main menu.

**INFORMATION - Time Information - Last Run Time**

Display last the running time of the lamp.

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Information”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Time Information”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Last Run Time”** is displayed, tap **ENTER** and **“XXXXXh”** (Hours) is displayed.
4. Tap **MODE/ESC** to return to the main menu.

### **INFORMATION - Time Information - LastRun Password**

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

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Information**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Time Information**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until “**LastRun Password**” is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select 3-digit password and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **INFORMATION - Time Information - Clear Last Run**

Clear the last run time of the fixture, default is **OFF**.

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Information**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Time Information**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until “**Clear Last Run**” is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (“**ON**” or “**OFF**”) and tap **ENTER** to confirm selection. **NOTE:** A correct password must be entered in the “**LastRun Password**” menu in order to clear last run time.
5. Tap **MODE/ESC** to return to the main menu.

### **INFORMATION - Temperature Information - Head Temperature**

Display the temperature of the fixture, default is **Fahrenheit**.

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Information**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** buttons until “**Temperature Info**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** buttons until “**Head Temp**” is displayed and tap **ENTER**.
4. Tap **ENTER** and “**XXX**” (degrees) °C/ °F is displayed.
5. Tap **MODE/ESC** to return to the main menu.

### **INFORMATION - Software Version**

Display the software version of the fixture.

1. Tap **MODE/ESC** to access main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Information**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Software Version**” is displayed and tap **ENTER**.
3. The display will show “**VX.X**” (software version #)
4. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings - Address Via DMX**

Adjust the desired DMX address via an external controller, default is **ON**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Personality**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Status Settings**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until “**Address Via DMX**” is displayed and tap **ENTER**.
6. Tap **UP/DOWN** to select desired mode (“**ON**” or “**OFF**”) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings - No DMX Status**

Fixture runs in Auto Run if no DMX signal is detected. Options include (**Hold/Close Shutter/Music Control/Auto Program**), default is **Hold**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Personality**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Status Settings**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until “**No DMX Status**” is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**Hold/Close Shutter/Music Control/Auto Program**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings - Pan Reverse**

Reverse the Pan movement, default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Pan Reverse”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings - Tilt Reverse**

Reverse the Tilt movement, default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Tilt Reverse”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings – Pan Degree**

Select desired maximum degree of the Pan movement, default is **540°**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Pan Degree”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“Pan 540”**, **“Pan 540-90offset”**, **“Pan 630”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings – Tilt Degree**

Select desired maximum degree of the Tilt movement, default is **Tilt 270°**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Tilt Degree”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“Tilt 270”**, **“Tilt 240”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings - Feedback**

Select desired Feedback switch setting of the Pan / Tilt movement, default is **ON**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Feedback”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings – Movement Speed**

Select desired Movement Speed, default is **Speed 1**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Movement Speed”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“Speed 1”**, **“Speed 2”**, **“Speed 3”**, **“Speed 4”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings – Mic Sensitivity**

Select desired Microphone Sensitivity from 0% to 99%, default is **70%**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Mic Sensitivity”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired value (**“00%”, to “99%”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Status Settings – Hibernation**

Select desired Hibernation time, default is **15m**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Status Settings”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Hibernation”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired value (**“OFF”, “01m” to “99m”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Service Setting - Password**

The Password is **(050)**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Service Setting”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Password”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select 3-digit password and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.



## **PERSONALITY - Service Setting - RDM PID**

With this function you can call up various submenus via RDM.

This device is RDM ready. RDM stands for "remote device management" and makes remote control of devices connected to the 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 fixture is installed in a remote area. RDM ready and conventional DMX devices can be operated in one DMX line. The RDM protocol sends 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.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until "**Personality**" is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until "**Service Setting**" is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until "**RDM PID**" is displayed and tap **ENTER**.
4. Tap **MODE/ESC** to return to the main menu.

## **PERSONALITY – Fans Control**

Select desired Fan setting, default is **Auto**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until "**Personality**" is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until "**Fans Control**" is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode ("**Auto**", "**Low**", "**High**") and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Display Setting – Shutoff Time**

Shut off the Control Panel display after 02 to 60 minutes, default is **05** minutes.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Display Setting”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Shut off Time”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select time (**02-60**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Display Setting – Display Reverse**

Rotate (Flip) the Control Menu Panel display by 180°, default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Display Setting”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Display Reverse”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY - Display Setting – Key Lock**

Lock the Control Panel buttons automatically after exiting main menu for 15 seconds.

Unlock by keeping the **MODE/ESC** button pressed for 3 seconds. Default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Display Setting”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Key Lock”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY – Display Setting - Disp Flash**

Control Panel display will flash if no DMX is signal is detected, default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Display Setting”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** until **“Disp Flash”** is displayed and tap **ENTER**.
4. Tap **UP/DOWN** to select desired mode (**“ON”** or **“OFF”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY – Temperature C/F**

Display the temperature in Celsius or Fahrenheit, default is **Fahrenheit**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Temperature C/F”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode (**“Celsius”** or **“Fahrenheit”**) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY – Initial Status**

Display the initial effect position for DMX functions.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Personality”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Initial Status”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired function (**“Auto Program”**, **“PAN”**, **“PAN-Fine”**, **“TILT”**, **“TILT-Fine”**, **“Move Speed”**, **“Strobe”**, **“Dimmer”**, **“Red(1-4)”**, **“Green(1-4)”**, **“Blue(1-4)”**, **“White(1-4)”**, **“Color Macro”**, **“Color Preset”**, **“Color Mode”**, **“Color Patter”**, **“Chase Speed”**) and tap **ENTER** to confirm selection
4. Tap **UP** to select desired position (**“0-255”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **PERSONALITY – Reset Default**

Restore factory settings function (**ON** or **OFF**), the default is **OFF**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Personality**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Reset Default**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode (“**ON**” or “**OFF**”) and tap **ENTER** to confirm selection.

### **RESET FUNCTION**

Reset fixture function (**Reset ALL** or **Reset Pan^Tilt**).

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Reset Function**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** to select desired mode (**Reset ALL** or **Reset Pan^Tilt**) and tap **ENTER** to confirm selection.

### **EFFECT ADJUST – Test Channel**

Test each DMX function.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Effect Adjust**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Test Channel**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired function (“**Auto Program**”, “**PAN**”, “**PAN-Fine**”, “**TILT**”, “**TILT-Fine**”, “**Move Speed**”, “**Strobe**”, “**Dimmer**”, “**Red(1-4)**”, “**Green(1-4)**”, “**Blue(1-4)**”, “**White(1-4)**”, “**Color Macro**”, “**Color Preset**”, “**Color Mode**”, “**Color Patter**”, “**Chase Speed**”) and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### **EFFECT ADJUST – Manual Control**

Adjust the lamp more easily. All effects will be canceled, the shutter opens and the dimmer intensity will be set to 100 %. With the individual functions, you can focus the light on a flat surface (wall) and perform the fine lamp adjustment.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Effect Adjust”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Manual Control”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired function (**“Auto Program”**, **“PAN”**, **“PAN-Fine”**, **“TILT”**, **“TILT-Fine”**, **“Move Speed”**, **“Strobe”**, **“Dimmer”**, **“Red(1-4)”**, **“Green(1-4)”**, **“Blue(1-4)”**, **“White(1-4)”**, **“Color Macro”**, **“Color Preset”**, **“Color Mode”**, **“Color Patter”**, **“Chase Speed”**) and tap **ENTER** to confirm selection.
4. Tap **UP** to select desired value (**“0-255”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **EFFECT ADJUST – Calibration**

Adjust PAN and TILT to desired positions, password is **050**. NOTE: A correct password must be entered in the **“-Password-”** menu in order to access PAN and TILT adjustment menu items.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until **“Effect Adjust”** is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until **“Calibration”** is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired function (**“PAN”** or **“TILT”**) and tap **ENTER** to confirm selection.
4. Tap **UP** to select desired value (**“0-255”**) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu

## USER MODE SETTING

Select different channels list by different sequence.

For example, after the user enter this manual, if select Auto Program = CH 22, means in this User's mode, the "Dimmer" is in Channel 16.

### USER MODE SETTING – User Mode

Create user defined channel orders, the default is **Stand Mode**.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until "**User Mode Set**" is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until "**User Mode**" is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode ("**Stand Mode**", "**Basic Mode**", "**Extend Mode**", "**User Mode A**", "**User Mode B**", "**User Mode C**") and tap **ENTER** to confirm selection.
4. Tap **MODE/ESC** to return to the main menu.

### USER MODE SETTING – Edit User Mode (A, B, C)

Adjust the rest user defined channel order.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until "**User Mode Set**" is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** to select desired user ("**Edit User Mode A**", "**Edit User Mode B**", "**Edit User Mode C**") is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired mode ("**Max Channel**", "**Auto Program**", "**PAN**", "**PAN-Fine**", "**TILT**", "**TILT-Fine**", "**Move Speed**", "**Strobe**", "**Dimmer**", "**Red(1-4)**", "**Green(1-4)**", "**Blue(1-4)**", "**White(1-4)**", "**Color Macro**", "**Color Preset**", "**Color Mode**", "**Color Patter**", "**Chase Speed**") and tap **ENTER** to confirm selection.
4. Tap **UP/DOWN** to select desired channel ("**None**", "**01Ch-17Ch**") and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **EDIT PROGRAM – Select Program**

Select Auto Programs, default for Auto Pro Part1 is “**Program 1**”, for Auto Pro Part2 is “**Program 2**”, and for Auto Pro Part3 is “**Program 3**”.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Edit Program**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Select Program**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired Auto Program Part (“**Auto Pro Part1**”, “**Auto Pro Part2**”, “**Auto Pro Part3**”) and tap **ENTER** to confirm selection.
4. Tap **UP/DOWN** to select desired Program number (“**Program 1**” - “**Program 10**”) and tap **ENTER** to confirm selection.
5. Tap **MODE/ESC** to return to the main menu.

### **EDIT PROGRAM – Edit Program**

Edit the internal programs.

1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Edit Program**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Edit Program**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired Program number (“**Program 1**” - “**Program 10**”) and tap **ENTER** to confirm selection.
4. Tap **UP/DOWN** to select desired test or step (“**Pro. Test**”, “**Step 01**” – “**Step 64**”) and tap **ENTER** to confirm selection.
5. Tap **UP/DOWN** to select desired scene (“**Sc001**” – “**Sc250**” or “**End**”) and tap **ENTER** to confirm selection.
6. Tap **MODE/ESC** to return to the main menu.

### **EDIT PROGRAM – Edit Scenes**

Edit the scenes of the internal programs.

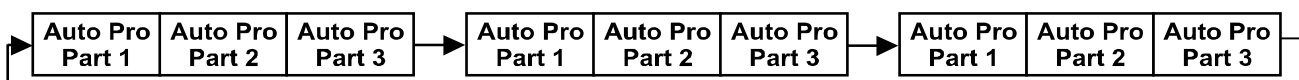
1. Tap **MODE/ESC** to access the main menu, tap **UP/DOWN/LEFT/RIGHT** until “**Edit Program**” is highlighted and tap **ENTER**.
2. Tap **UP/DOWN** until “**Edit Scenes**” is displayed and tap **ENTER**.
3. Tap **UP/DOWN** to select desired Scene number (“**Scene 001**” - “**Scene 250**”) and tap **ENTER** to confirm selection.
4. Tap **UP/DOWN** to select desired function (“**Auto Program**”, “**PAN**”, “**PAN-Fine**”, “**TILT**”, “**TILT-Fine**”, “**Move Speed**”, “**Strobe**”, “**Dimmer**”, “**Red(1-4)**”, “**Green(1-4)**”, “**Blue(1-4)**”, “**White(1-4)**”, “**Color Macro**”, “**Color Preset**”, “**Color Mode**”, “**Color Patter**”, “**Chase Speed**”, “**Fade Time**”, “**Secne Time**”, “**Input By Out**”) and tap **ENTER** to confirm selection.
5. Tap **UP/DOWN** to select desired position (“**0-255**”) and tap **ENTER** to confirm selection.
6. Tap **MODE/ESC** to return to the main menu.

### **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 Program**

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**”.



## **EDIT PROGRAM – Record Controller – Working With Built-In Program**

### **[continued]**

To start an Auto Program proceed as follows:

#### **1. Slave Setting**

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

#### **2. Automatic Program Run**

- Select “**Function Mode**” by turning on the encoder.
- Press the **ENTER** button to confirm.
- Select “**Auto Program**” by turning on the encoder.
- Press the **ENTER** button to confirm.
- Turn the encoder to select “**Master**” or “**Alone**”. The selection “**Alone**” means Stand Alone-mode and “**Master**” that the device is defined as master.
- Press the **ENTER** button to confirm.
- Press the **MODE/ESC** button in order to return to the main menu.

#### **3. Program selection for Auto Pro Part**

- Select “**Edit Program**” by turning the encoder.
- Press the **ENTER** button to confirm.
- Select “**Select Programs**” by turning the encoder.
- Press the **ENTER** button to confirm.
- Turn the encoder to select “**Auto Pro Part 1**”, “**Auto Pro Part 2**” or “**Auto Pro Part 3**”, and thus 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 the **ENTER** button to confirm.
- Press the **MODE/ESC** button in order to return to the main menu.

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

### **4. Program Selection for Edit Program**

- Select “**Edit Program**” by turning the encoder.
- Press the **ENTER** button to confirm.
- Select “**Edit Program**” by turning the encoder.
- Press the **ENTER** button to confirm.
- Turn the encoder to select the desired program. With this function you can edit specific scenes into a specific program.
- Press the **ENTER** button to confirm.
- Press the **MODE/ESC** button in order to return to the main menu.

### **5. Automatic Scene Recording**

- Select “**Edit Program**” by turning the encoder.
- Press the **ENTER** button to confirm.
- Select “**Edit Scenes**” by turning the encoder.
- Turn the encoder to select the desired scene numbers. You can program a maximum number of 250 scenes.
- Press the **ENTER** button to confirm.
- Press the **MODE/ESC** button in order to return to the main menu.

#### **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

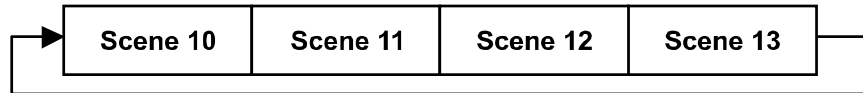
Auto Pro Part 2 is Program 3

Auto Pro Part 3 is Program 6

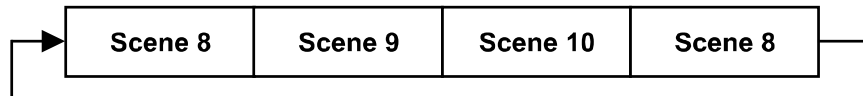
## **EDIT PROGRAM – Record Controller – Working With Built-In Program [continued]**

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

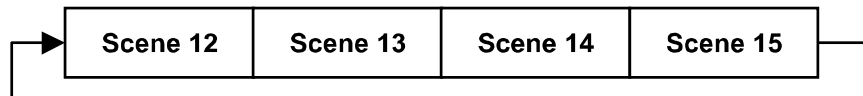
**Part 1:**



**Part 2:**



**Part 3:**



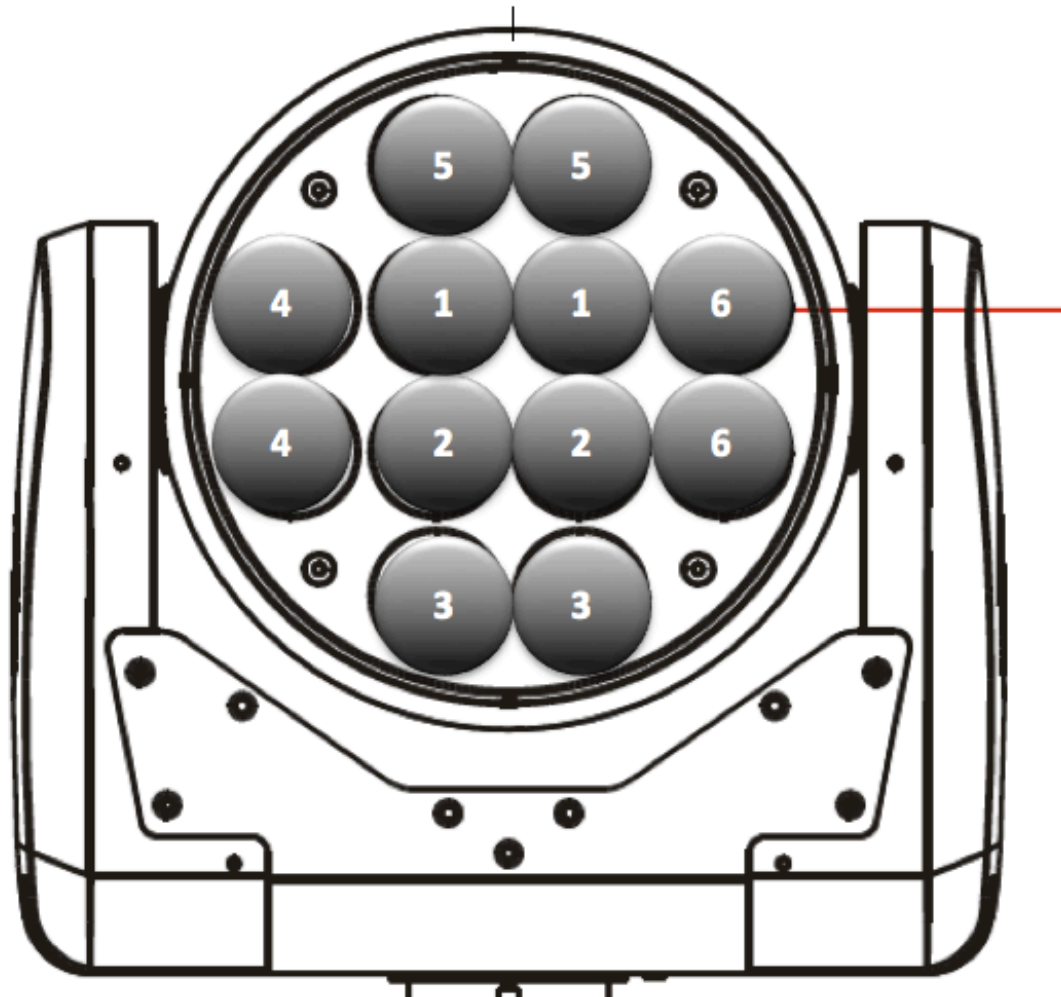
## DMX CHANNEL FUNCTIONS AND VALUES

SKU# RAY512 - DMX Channel Values / Functions (37 DMX Channels)				
Specifications are subject to change without any prior written notice.				
MODE / CHANNEL			VALUE	FUNCTION
STAND	BASIC	EXTEND		
1	1	1		<b>PAN MOVEMENT [8 Bit]</b>
			0-255	PAN Movement
2		2		<b>PAN MOVEMENT [16 Bit]</b>
			0-255	Fine Control Of PAN Movement
3	2	3		<b>TILT MOVEMENT [8 Bit]</b>
			0-255	TILT Movement
4		4		<b>TILT MOVEMENT [16 Bit]</b>
			0-255	Fine Control Of TILT Movement
5	3	5		<b>SPEED PAN/TILT MOVEMENT</b>
			0-225	Max To Min Speed
			226-235	Blackout By Movement
			236-255	NO Function
6	4			<b>RED LED - All Groups [1-6]</b>
			0-255	Red (0-Black - 255-100%)
7	5			<b>GREEN LED - All Groups [1-6]</b>
			0-255	Green (0-Black - 255-100%)
8	6			<b>BLUE LED - All Groups [1-6]</b>
			0-255	Blue (0-Black - 255-100%)
9	7			<b>WHITE LED - All Groups [1-6]</b>
			0-255	White (0-Black - 255-100%)
		13		<b>RED LED - Group [1]</b>
			0-255	Red (0-Black - 255-100%)
		14		<b>GREEN LED - Group [1]</b>
			0-255	Green (0-Black - 255-100%)
		15		<b>BLUE LED - Group [1]</b>
			0-255	Blue (0-Black - 255-100%)
		16		<b>WHITE LED - Group [1]</b>
			0-255	White (0-Black - 255-100%)
		17		<b>RED LED - Group [2]</b>
			0-255	Red (0-Black - 255-100%)
		18		<b>GREEN LED - Group [2]</b>
			0-255	Green (0-Black - 255-100%)
		19		<b>BLUE LED - Group [2]</b>
			0-255	Blue (0-Black - 255-100%)
		20		<b>WHITE LED - Group [2]</b>
			0-255	White (0-Black - 255-100%)
		21		<b>RED LED - Group [3]</b>
			0-255	Red (0-Black - 255-100%)
		22		<b>GREEN LED - Group [3]</b>
			0-255	Green (0-Black - 255-100%)
		23		<b>BLUE LED - Group [3]</b>
			0-255	Blue (0-Black - 255-100%)
		24		<b>WHITE LED - Group [3]</b>
			0-255	White (0-Black - 255-100%)
		25		<b>RED LED - Group [4]</b>
			0-255	Red (0-Black - 255-100%)
		26		<b>GREEN LED - Group [4]</b>
			0-255	Green (0-Black - 255-100%)
		27		<b>BLUE LED - Group [4]</b>
			0-255	Blue (0-Black - 255-100%)
		28		<b>WHITE LED - Group [4]</b>
			0-255	White (0-Black - 255-100%)
		29		<b>RED LED - Group [5]</b>
			0-255	Red (0-Black - 255-100%)
		30		<b>GREEN LED - Group [5]</b>
			0-255	Green (0-Black - 255-100%)

<b>ELATION® RAYZOR Q12™</b> <b>SKU# RAY512 - DMX Channel Values / Functions (37 DMX Channels)</b> <small>Specifications are subject to change without any prior written notice.</small>				
MODE / CHANNEL			VALUE	FUNCTION
STAND	BASIC	EXTEND		
		31	0-255	<b>BLUE LED - Group [5]</b> Blue (0-Black - 255-100%)
		32	0-255	<b>WHITE LED - Group [5]</b> White (0-Black - 255-100%)
		33	0-255	<b>RED LED - Group [6]</b> Red (0-Black - 255-100%)
		34	0-255	<b>GREEN LED - Group [6]</b> Green (0-Black - 255-100%)
		35	0-255	<b>BLUE LED - Group [6]</b> Blue (0-Black - 255-100%)
		36	0-255	<b>WHITE LED - Group [6]</b> White (0-Black - 255-100%)
10	8	6		<b>SHUTTER, STROBE</b>
			0-31	Shutter CLOSED
			32-63	NO Function (Shutter OPEN)
			64-95	Strobe Effect SLOW to FAST
			96-127	NO function (Shutter OPEN)
			128-159	Pulse Effect In Sequences
			160-191	NO Function (Shutter OPEN)
			192-223	Random Strobe Effect SLOW to FAST
224-255	NO Function (Shutter Open)			
11	9	7	0-255	<b>DIMMER INTENSITY</b> Intensity 0 to 100%
12	10	8	0-7	NO Function
			8-255	Color Macro SLOW To FAST
13	11	9	0-10	NO Function
			11-20	White 2700k
			21-30	White 3200k
			31-40	White 4300k
			41-50	White 5600k
			51-60	White 6500k
			61-70	White 8000k
			71-100	Blue [Groups 1,2], Red [Groups 3,4,5,6]
			101-130	Blue [Groups 1,2], Green [Groups 3,4,5,6]
			131-160	Green [Groups 1,2], Red [Groups 3,4,5,6]
			161-190	Red [Groups 1,2], Blue [Groups 3,4,5,6]
			191-220	Green [Groups 1,2], Blue [Groups 3,4,5,6]
			221-255	Red [Groups 1,2], Green [Groups 3,4,5,6]
14	12	10		<b>COLOR MODE</b>
			0-189	NO Function
			190-254	Edit A New White Balance
		255	Store A New White Balance	
15	13	11		<b>CHASE MACROS</b>
			0-10	LED OFF
			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			

ELATION® RAYZOR Q12™			
SKU# RAY512 - DMX Channel Values / Functions (37 DMX Channels)			
Specifications are subject to change without any prior written notice.			
MODE / CHANNEL			FUNCTION
STAND	BASIC	EXTEND	
16	14	12	<b>CHASE SPEED</b>
			0-255 FAST To SLOW
17	15	37	<b>RESET INTERNAL PROGRAMS</b>
			0-79 Normal
			80-84 All Motor Reset
			85-87 NO Function
			88-90 NO Function
			91-93 Store White Balance Enabled
			94-96 NO Function
			97-99 NO Function
			100-119 Internal Program 1 (Scene 1 - 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 Music Control (Scene Of Program 1)

## LED GROUPS



## ERROR MESSAGE

When the fixture is powered ON, it goes through a motor reset program first before it is ready. The display may show “**Err channel is XX**” if there are problems with one or more channels. “**XX**” stands for channel 1, 2, 3, 4, 5, and 6, which has the testing sensor for positioning. For example, when the display shows “**Err channel is Pan movement**”, it means there is some error in channel 1. If there are errors on channel 1, channel 3, channel 6 at the same time, you may see the error messages, “**Err channel is Pan movement**”, “**Err channel is Tilt movement**”, “**Err channel is red led**”, flash 2 times, and then the fixture will go through a second motor reset program. If the error messages remain after performing 2 motor resets, only the channels that have errors will not work properly, all other channels will work normally.

Please contact **Elation Professional**® Customer Support for service.

Service Hours are Monday through Friday 8:00 a.m. to 5:00 p.m. Pacific Standard Time.

**Voice: 323-582-3322**

**Fax: 323-832-9142**

E-mail: [support@elationlighting.com](mailto:support@elationlighting.com)

Forum: [www.ElationLighting.com/forum](http://www.ElationLighting.com/forum)

### **PAN - Movement Er** (PAN-yoke movement error)

This message will appear after completing the motor reset if the PAN movement is not located in the default position after the reset. This error can happen if the yoke’s magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepper-motor or its driving IC on the main PCB is defective or fails.

### **TILT- movement Er** (TILT-head movement error)

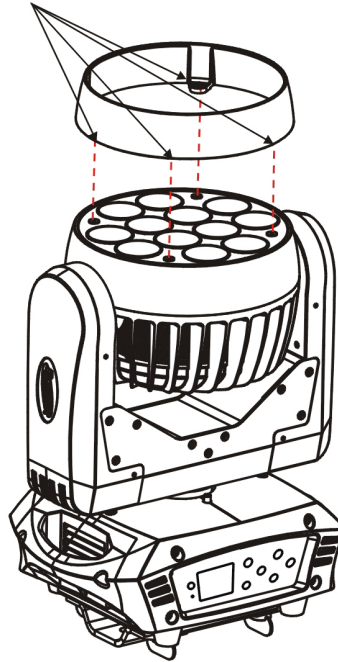
This message will appear after completing the motor reset if the TILT movement is not located in the default position after the reset. This error can happen if the head’s magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the stepping-motor or its driving IC on the main PCB is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

## SNOOT & DIFFUSION FILTER INSTALLATION

### SNOOT (SKU# RAY512-SNOOT)

To install place on top of Lens assembly and fix four screws as shown in diagram below.

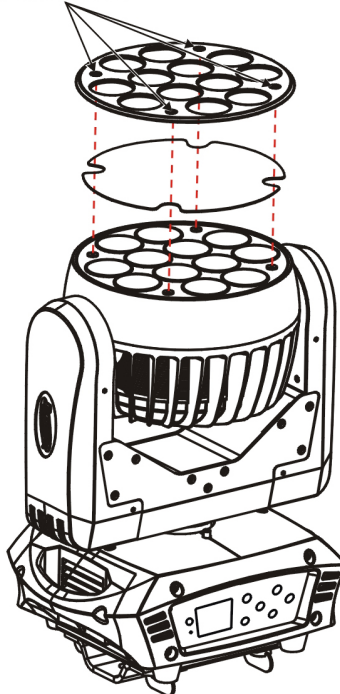
Fix four screws



### DIFFUSION FILTER (SKU# RAY512-SNOOT)

To install place on top of Lens assembly and fix four screws as shown in diagram below.

Fix four screws





## CLEANING AND MAINTENANCE



### CAUTION!

Disconnect from mains before starting maintenance operation.

### CLEANING

Frequent cleaning is recommended to insure proper function and an extended fixture life.

- Clean each LED lens weekly to avoid weakness of light due to dust accumulation.
- Clean fan weekly to avoid dust accumulation.
- Use a moist, lint-free cloth. Never use alcohol or solvents.

### MAINTENANCE

Regular inspections are recommended to insure proper function and an 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. Lose 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

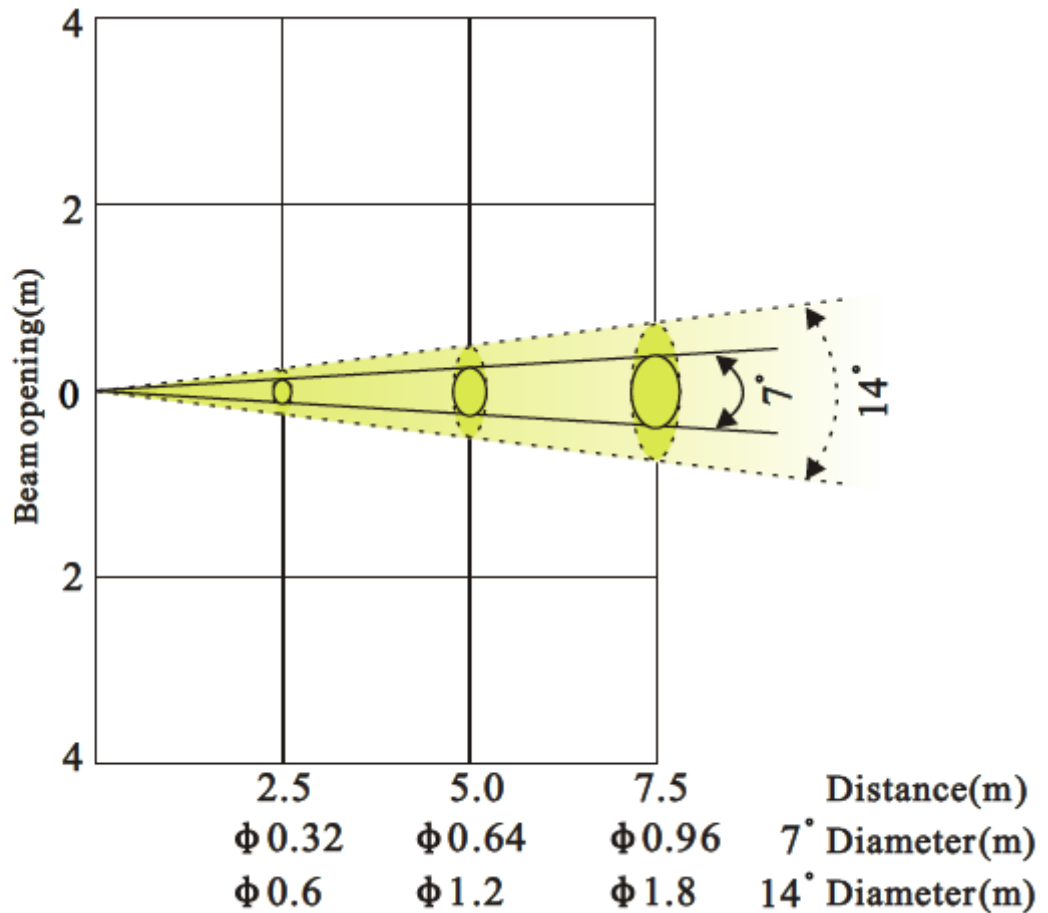
<b>ELECTRICAL / THERMAL</b>	
<b>Voltage Requirements</b>	AC 100 ~240V / 50Hz~60Hz
<b>Fuse Protection</b>	ST 240v T31.5a
<b>Power Consumption</b>	240 Watts
<b>Ambient Operating Temperature</b>	14°F to 113°F (-10°C to 45°C)
<b>LIGHT SOURCE</b>	
<b>Type</b>	12 x 15W QUAD COLOR RGBW LEDs
<b>Life Time</b>	100,000 Rated Hours <small>*May vary depending on several factors including but not limited to: Environmental Conditions, Power/Voltage, Usage Patterns (On-Off Cycling), Control, and Dimming.</small>
<b>PHOTOMETRIC DATA</b>	
7° Beam ~ 14° Field Angles	
<b>COLOR MIXING</b>	
RGBW Additive Color Mixing, 16.7 Million Color Possibilities	
<b>STROBE / DIMMER</b>	
Variable Speed Strobe 1 - 18 Flashes Per Second	
0-100% Dimmer	
<b>DMX CHANNELS</b>	
15 (Basic), 17 (Standard), 37 (Extended)	
<b>DMX DRIVE</b>	
USITT DMX-512, 5-pin XLR; [+] = Pin 3, [-] = Pin 2, [Ground] = Pin 1. Starting DMX [001].	
<b>PAN / TILT</b>	
<b>Pan Movement</b>	540° / 630° / 540° - 90° Offset
<b>Tilt Movement</b>	265°
<b>SIZE / WEIGHT</b>	
<b>Dimensions</b>	11.7 (L) x 8.5 (W) x 15.7 inches (H- Head Vertical) 295.5 (L) x 214 (W) x 397 mm (H- Head Vertical) 15.6 inches / 396 mm (H-Head Horizontal with Snoot)
<b>Weight (net)</b>	21 lbs / 9.5kgs
<b>RATINGS</b>	
<b>IP RATINGS</b>	IP20

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

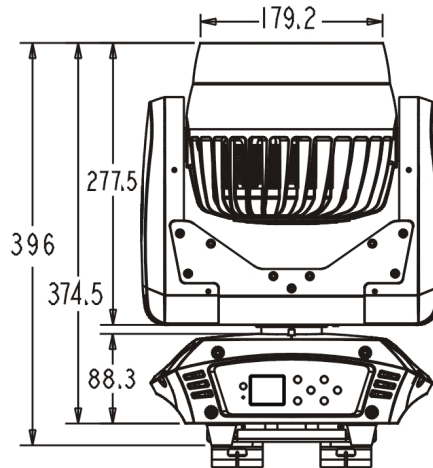
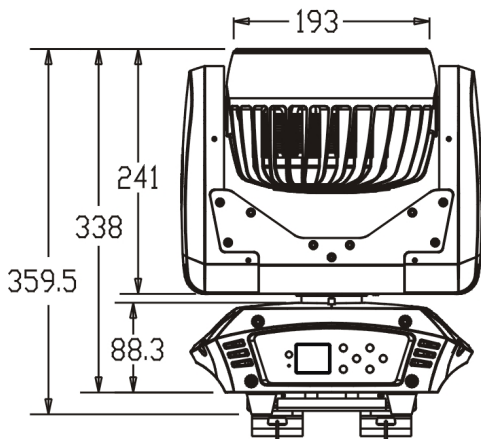
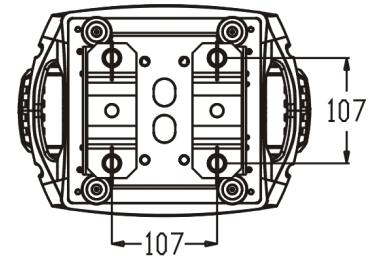
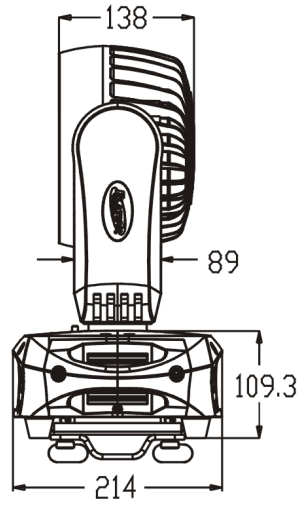
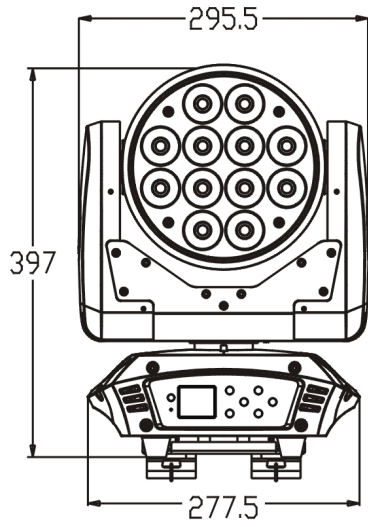
## PHOTOMETRIC DATA

Min Beam Angle 7°  
 Max Field Angle 14°

Intensity LUX	RED	3573	1136	480
	GREEN	8588	2448	1105
	BLUE	1280	350	186
	WHITE	12560	3581	1633
	FULL	21320	5840	2668



**DIMENSIONAL DRAWINGS (millimeters)**

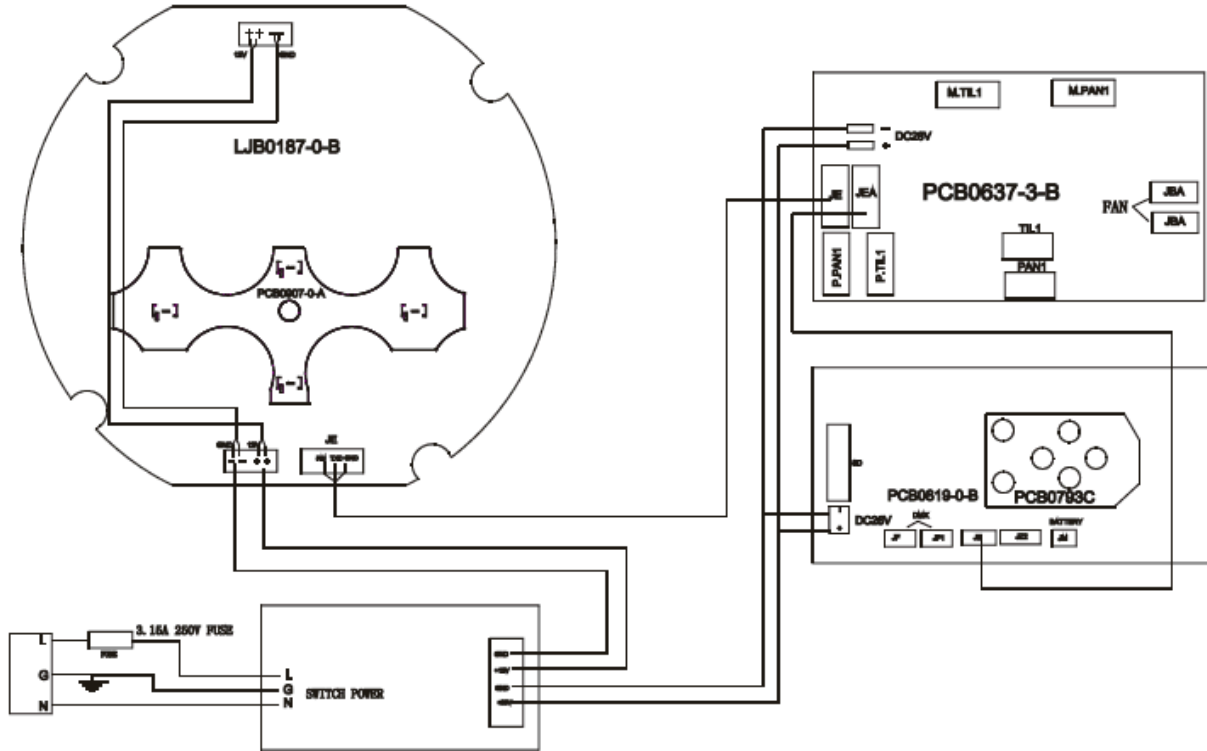


**Gel holder**

**Front snoot**

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

**CIRCUIT SCHEMATIC**



## OPTIONAL ACCESSORIES

<b>ORDER CODE</b>	<b>ITEM DESCRIPTION</b>
RAY512-SNOOT	Snoot Lens Cover
RAY512-GFH	Diffusion Filter Holder

