

# Design LED 36MH

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## 1. GENERAL INFORMATION

**INTRODUCTION:** Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The Design LED 36MH™ 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 Design LED 36MH™ by Elation Professional®. Every Design LED 36MH™ has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your unit for damage and be sure all accessories necessary to operate the unit have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this unit to your dealer without first contacting customer support at the number listed below.

**CUSTOMER SUPPORT:** Elation Professional® provides a customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at [www.elationlighting.com](http://www.elationlighting.com) for any comments or suggestions. For service related issue please contact Elation Professional®. Service Hours are Monday through Friday 9:00 a.m. to 5:00 p.m. Pacific Standard Time.

Voice: (323) 582-3322

Fax: (323) 582-3108

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

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

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

**Caution!** There are no user serviceable parts inside this unit. Do not attempt any repairs

yourself, doing so will void your manufactures warranty.

*Elation Encourages Recycling: Please do not discard the shipping carton in the trash. Please recycle whenever possible.*

**WARRANTY REGISTRATION:** The Design LED 36MH™ 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.

**Never open this fixture while in use!**

This device falls under protection-class 1. Therefore it is essential that the device be grounded properly.

All electrical connections must performed by qualified personal.

Be sure the available voltage matches the voltage requirements of the unit.

Be sure the power cord is never crimped or damaged. If the power cord is damaged, replace it immediately with a new one of similar power rating.

Always disconnect from main power before performing any type of service or any cleaning procedure.

Only handle the power cord by the plug. Never pull out the plug by tugging the wire portion of the cord.

Please be aware that damages caused by manual modifications to the device are not subject to warranty.

## 2. SAFETY INSTRUCTIONS



The Design LED 36MH™ is an extremely sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow the guidelines in this manual. The manufacturer of this device will not accept responsibility for damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual.

1. Always be sure that the fan and the air inlets remain clean and are never blocked. Allow about 6" (15cm) between this fixture and other devices or a wall to allow for proper cooling.
2. Never touch the fixture during normal operation. This can cause severe personal injuries and/or damage to the fixture.
3. Be sure to unplug the DESIGN LED 36MH™ from the power outlet before performing any service related issues.
4. Lamp Replacement; Allow at least 30 minutes after disconnecting main power before you open the DESIGN LED 36MH™. To prevent personal injury, never touch the lamp if you are not absolutely sure it has cooled.
5. Never look directly into the lamp beam. You risk injury to your retina, which may induce blindness.
6. Be sure to track and record the lamp running time. The lamp should be changed at the end of the specified lamp life, regardless of lamp output. You may also have to change the lamp if it shows any deformations or damage. The same is with all glass components, color filters, lenses and mirrors.
7. For safe operation, follow the Installation guide described in chapter two of this manual. Operating the DESIGN LED 36MH™ without suited safety aids such as safety cables or clamps can increase the risk of damage and/or personal injury.
8. Installation should only be performed by qualified and certified personal.
9. When mounting this fixture, use only the original rigging parts included with this fixture. Any structural modification will void the original manufactures warranty and

may increase the risk of damage and/or personal injury.

10. To reduce the risk of fire or shock, do not expose this fixture to rain or moisture.
11. Do not attempt to operate this fixture if the power cord has become damaged or frayed.

**Important Notice:** Damages resulting from the disregard of safety and general user instructions found in this user manual are not subject to any warranty claims.



**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.

### 3. FEATURES

- Pan 540° / Tilt 265°
- Low power consumption
- Minimal heat emission
- Equipped with 36 one-watt LEDs: (12 red, 12 blue, 12 green)
- High quality Luxeon LEDs manufactured by Lumileds, USA
- 100,000 hours **RATED** LEDs
- Step-less, smooth RGB additive color mixing, 16.7 million colors (24bit)
- Preprogrammed colored macros
- Strobe-effect with a maximum flash rate of 18fps (white or color)
- 12 or 10 DMX-channel operation (16 or 8 bit operation)
- Flicker-free operation for television and film
- Brilliant light output
- 3 operation mode: DMX controlled, stand alone or sound activated (via internal microphone)
- Dimmer intensity from 0%~100%
- Control board with 4-digit display and foil-keyboard
- Digital display can be turned 180° to fit different installation position
- RDMX (Remote DMX addressing from any DMX console)
- Auto test for all functions
- Automatic Pan/Tilt Correction
- USITT DMX-512 Complaint
- Value of each DMX-channel can be displayed
- 8 User Assignable Program Presets - Internal Program: Edit and save programs to the incorporated EEPROM through the front control panel or external controller; you can save a maximum of 48 scenes, and run the saved programs by using the “run” menu on the front control panel

## 4. GENERAL GUIDELINES

This fixture is a professional lighting effect designed for use on stage, in nightclubs, in theatres, etc. Do not attempt operation or installation without a proper knowledge on how to so.

This fixture was designed for indoor use only, use of this product outdoors will void all warranties written or implied.

Although this fixture has not duty cycle, consistent operational breaks will ensure that the fixture will function properly for many years to come.

Do not shake the fixture around. Avoid brute force when installing or operating the device.

When choosing an installation location, please be sure the fixture will not be exposed to extreme heat, moisture, or dust. The minimum distance between the fixture and a wall or flat surface should be at least .5 meter (about 1.5ft).

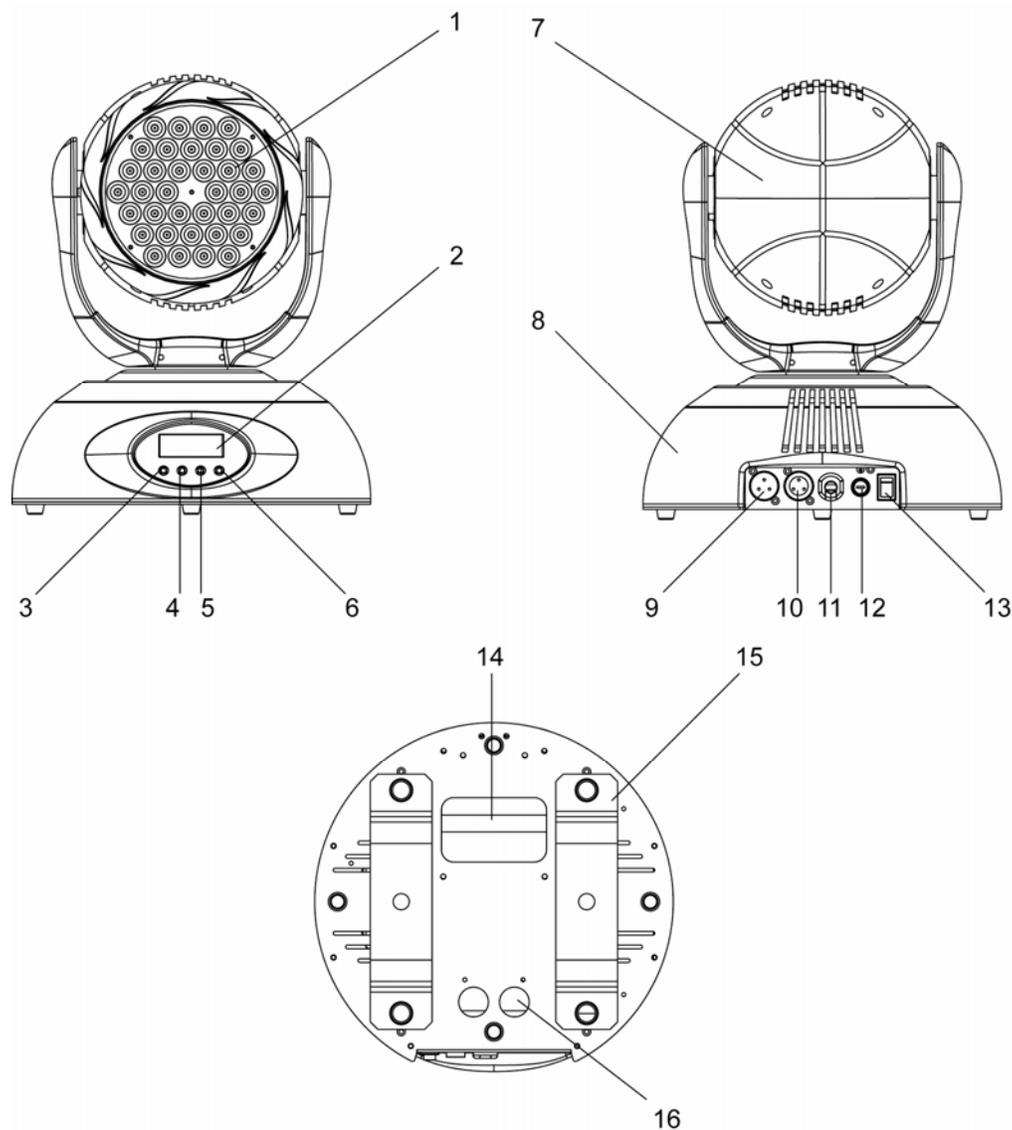
Always install the fixture with an appropriate safety cable. When installing the fixture in a suspended environment always be to use mounting hardware no less than M10 x 25 mm, also be sure the hardware is insert in the pre-arranged mounting holes in the “Omega” clamp (see page 14).

When using the quick release “Omega” cam-lock system, be sure the four quick lock fasteners are locked in the quick lock mounting points properly.

Do not attempt to operate this fixture until you have familiarized yourself with its functions.

Do not permit operation by persons not qualified for operating this type of theatrical fixture; most damages are the result of operations by persons unfamiliar with this type of product.

## 5. FIXTURE OVERVIEW



- 1) LED LENS ASSEMBLY – 36 One-watt Lumileds LED's by Luxeon rated at 100,000 hours (12 red, 12 green, 12 blue).
- 2) LED MENU DISPLAY – Four segment LED menu display, details all menu functions.
- 3) MODE/ESC BUTTON – This button is used to access and exit the fixture's on-board menu system.
- 4) UP BUTTON – This button is used to scroll forward when navigating through the fixture's menu system.
- 5) DOWN BUTTON – This button is used to scroll backwards when navigating through

the fixture's menu system.

- 6) ENTER BUTTON – This button is used to select and confirm a menu function.
- 7) HEAD FAN ASSEMBLY – This fan is used to cool the internal temperature of the head assembly.
- 8) BASE ASSEMBLY – The main base holds the majority of the electronics and logic boards. The base also provides a means to securely mount the fixture to the floor or ceiling.
- 9) DMX INPUT JACK – This 3-pin XLR jack is receives an incoming DMX signal from a DMX controller.
- 10) DMX OUTPUT JACK – This 3-pin XLR jack sends a DMX signal to another DMX fixture. For best results this jack should be terminated if it is the last fixture in a DMX daisy chain (see DMX termination on page XX).
- 11) POWER CONNECTION – This cable provides main power to your fixture. Always be sure to use a properly grounded power cable. If this cable ever becomes frayed or damaged this cable should be replaced immediately by a qualified technician.
- 12) FUSE HOLDER – This housing holds a 2A/250v GMA fuse and is designed to protect the electronics in the event of severer power fluctuations. Never defeat this fuse. In the event of fuse failure, always be sure to replace with an exact match fuse unless other wise specified by an authorized Elation Professional technician.
- 13) POWER SWITCH – This switch controls main power to the unit (if I have to tell you that, you probably should not be using this fixture!).
- 14) TRANSPORT HANDLE – This fixture contains a build-in carrying handle be sure to always transport this fixture by the handle and never by grasping the head or yoke assembly.
- 15) OMEGA CLAMP – This system allows a quick and efficient means to secure a clamp to the unit. To attach a clamp to the unit, attach a clamp that is rated to handle the weight of the unit to your omega clamp. After a clamp has been attached to the omega clamp, attach the cam locks to the designated position on the bottom of your unit. Lock the cam locks into position by turning the wing nuts 90°.
- 16) SAFETY CABLE RIGGING POINT –The fixture provides a built-in rigging point for a safety cable on the underside of the fixture, be sure to use this point and never secure a safety cable to a carrying handle.

## 6. MOUNTING AND INSTALLATION

**Caution:** For added protection mount the fixtures in areas outside of walking paths, seating areas, or areas where the fixture might be reached by unauthorized personnel.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

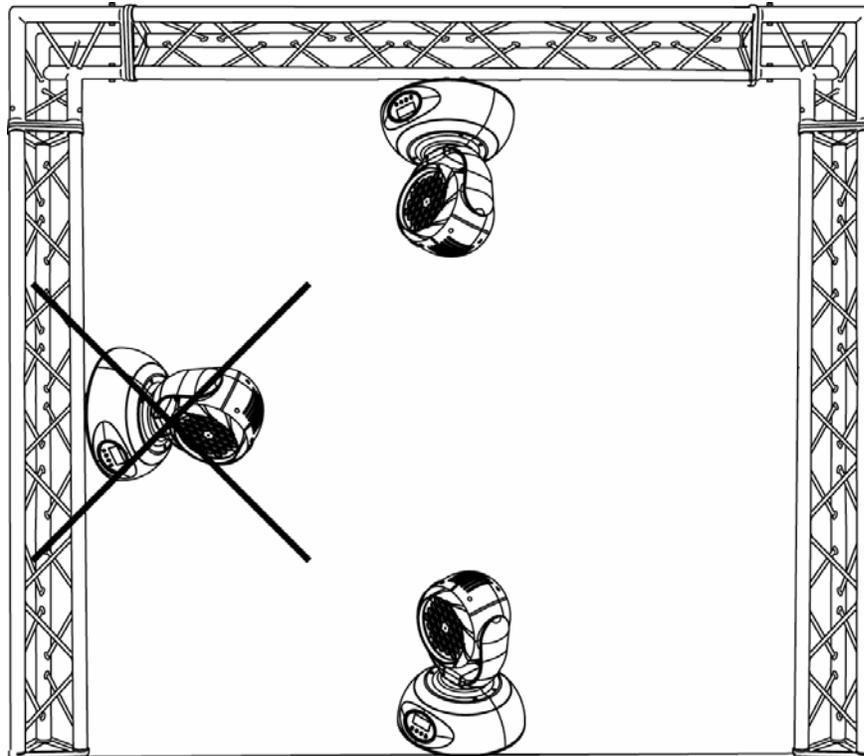
To avoid injury, never stand directly below the device when mounting, removing, or servicing the fixture.



### ***Mounting***

The DESIGN LED 36MH™ is fully operational in two different mounting positions, hanging upside-down from a ceiling, or set on a flat level surface (see illustration on next page). To avoid internal damage to the unit, **never mount the unit on its side in a permanent installation** as illustrated on the next page. This could cause excessive stress on the motors and damage the unit. Be sure this fixture is kept at least 0.5m away from any flammable materials (decoration etc.). Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

*Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.*



### ***Mounting points***

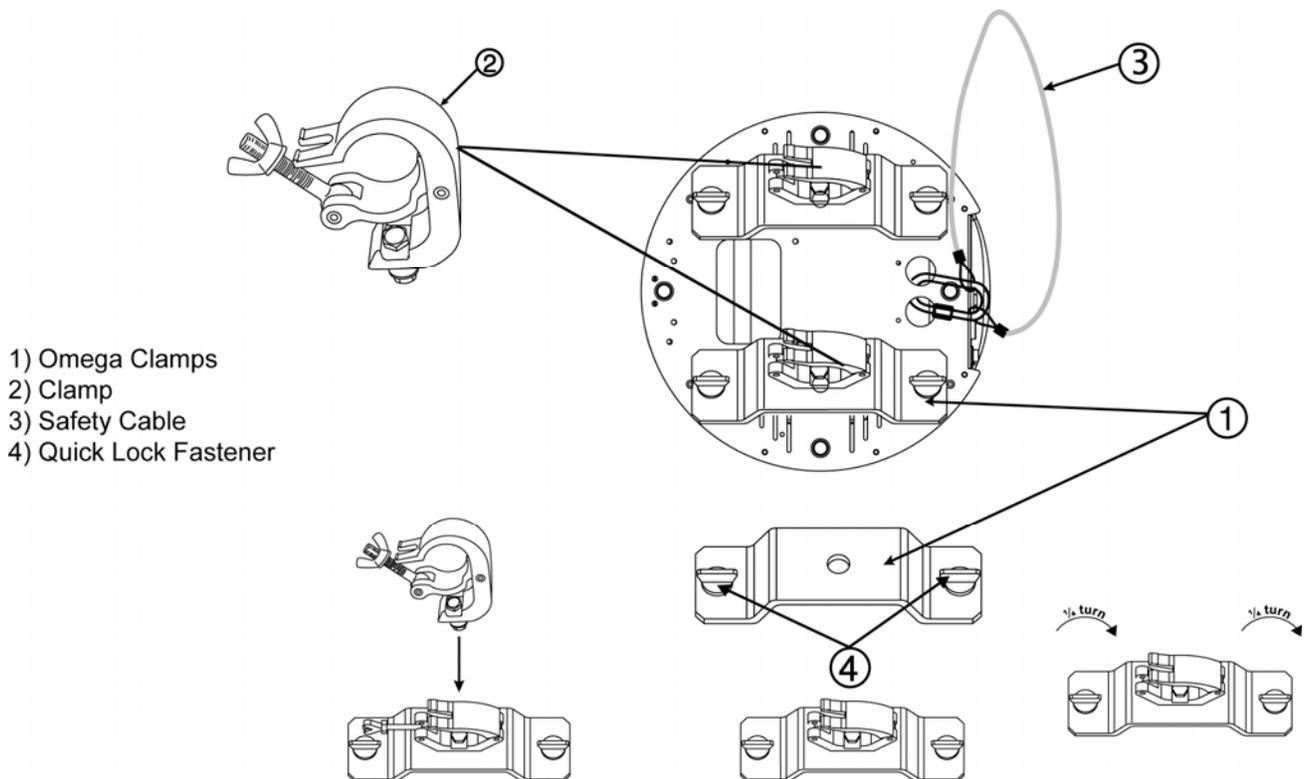
Overhead mounting requires extensive experience, including amongst others calculating working load limits, a fine knowledge of the installation material being used, and periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.



**CAUTION!**  
Be sure all electrical connections are performed by a qualified electrician.

## Clamp Mounting

The Design LED 36MH™ provides a unique mounting bracket assembly that integrates the hanging yoke as well as the safety cable rigging point in one unit (see the illustration on next page). When mounting this fixture to truss be sure to secure an appropriately rated clamp to the hanging yoke using a M10 screw fitted through the center hole of the hanging yoke. As an added safety measure be sure to attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the bracket assembly



## Securing the DESIGN LED 36MH™

Regardless of the rigging option you choose for your DESIGN LED 36MH™ 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 (3). Be sure to only use the designated rigging point for the safety.

## 7. UNDERSTANDING DMX

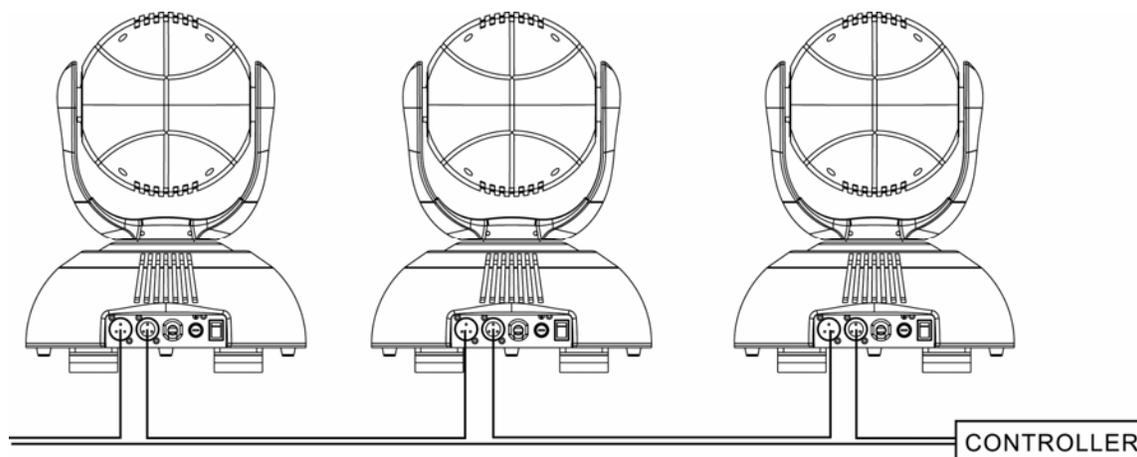
### ***Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation):***

Your fixture and your DMX controller require a standard 3-pin XLR connector for data input and data output (see figure below). Be sure to only use properly rated DMX cables for DMX operation and not standard audio cables. If you are constructing your own cables be sure to use two conductor shielded digital cable rated at a 120 ohms (this cable can be purchased at almost all professional sound and lighting stores). Your cables should be made with a male and female 3-pin XLR connector on either end of the cable.

***Please note; this is not the same as audio microphone cable. Audio cable has a different resistance rating.***

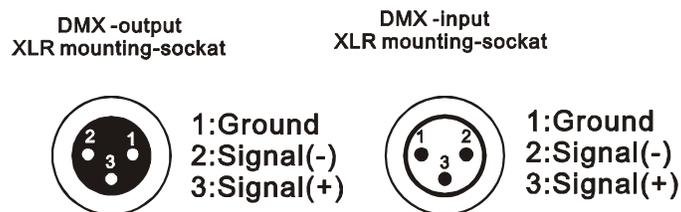


*Be sure to follow the above figure when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.*



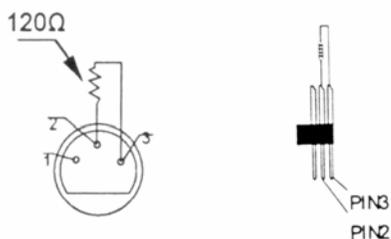
## DMX-512 control connection

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 moving head (Please refer to the diagram on the previous page). You can link multiple DMX fixtures together through DMX cables as illustrated on the previous page. Always be sure to 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

Although a DMX line may operate normally without one, we always recommend the use of a terminator on the last fixture to avoid erratic behavior. 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 -). A DMX Terminator is inserted in the female XLR connector of the last fixture in your DMX chain. Using a cable terminator (Elation part number Z-DMX/T) will decrease the possibilities of erratic behavior. In instances where a DMX splitter is used, you must be sure to terminate all open lines. For example if using an Elation DMX Branch/4™ with four line outputs you must be sure to 4 DMX terminators, one for each output.



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.

<b>3-Pin XLR to 5-Pin XLR Conversion</b>		
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

### ***Fixture 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 head 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 you 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 Design LED 36MH™, which is a 12 channel fixture(default setting), you should set the starting DMX address of the first unit to 1, the second unit to 13 (12 + 1), the third unit to 25 (12 + 13), and so on.

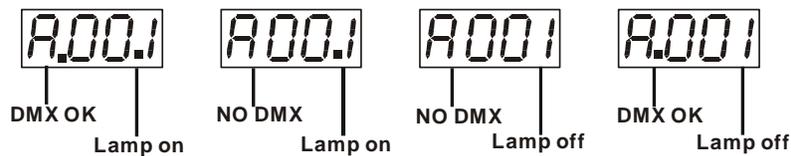
**Note:** During start-up the Design LED 36MH™ will automatically detect whether a DMX data signal is being received or not. If DMX data signal is being received, the display will show "**A.XXX**" (**XXX** representing the actual DMX address). If the fixture is not receiving a DMX signal the display will flash "**A.XXX**" (**XXX** representing the actual DMX address).

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 XLR plug (cable with DMX signal from controller) is not connected or is not inserted completely into the DMX input jack.
- 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.

## 8. DISPLAY LED INDICATORS

The Design LED 36MH™ has two LED indicators on the display. These indicators are designed to give a quick visual indication of the fixtures' status. The illustration below details the functionality of the LED indicators.



The first LED indicators represents DMX signal:

- If the indicators is on a clean DMX signal is present
- If the indicator is off there is no DMX signal present

The second LED indicator represents lamp condition:

- If the indicator is on the lamp is struck and in working condition
- If the LED indicator is off the lamp has not struck, has been turned off, or is bad.

## 9. FIXTURE MENU

**On-Board System Menu:** The DESIGN LED 36MH™ comes with an easy to navigate system menu. This next section will detail the functions of each command in the system menu.

**LED Control Panel:** The control panel located on the top, front of the fixture allows you to access the main menu and make all necessary adjustments to the **Design LED 36MH™**. During normal operation, tapping the “**MODE/ESC**” key once will access the fixture’s main menu. Once in the main menu you can navigate through the different functions and access the sub-menus with the **Up** and **Down** buttons. Once you reach a field that requires adjusting, tap the **ENTER** button to activate that field and use the **UP** and **Down** button to adjust the field. Tapping the **Enter** button once more will confirm your setting. Once a setting is saved the LED will briefly readout **PASS** to confirm a new setting has been made and locked into memory. You may exit the main menu at any time without making any adjustments by tapping the **MODE/ESC** button.

**MODE/ESC Button** - To access the main menu locate the MODE/ESC button on the front of the unit. Press this button to activate the system menu. Tap the UP button until you reach the function you wish to change. When you reach the function you wish to change tap the ENTER button once to select that menu function. When a function is selected the menu will begin to flash, use the UP or DOWN button to change the function. Once your changes are made tap the ENTER button yet again to lock the change in the system menu. To exit without making any changes tap the MODE/ESC button.

### ***Default settings shaded.***

0	ADDR	A001~A511		Indicate the starting DMX address. Set all slave units to A001 in Master-Slave mode.
1	TEST	T-01~T-XX		Automatically test all function
2	AUDI	MSTR		Runs fixture as a master unit for audio Master-Slave mode.

		ALON			Runs fixture as a single unit for Stand-Alone operation.
3	RESE	ALL	ON/OFF		Resets all motors and returns fixture to the home position.
		SCAN	ON/OFF		Resets only the pan and tilt motors.
4	TIME	LIFE	0000~9999		Displays the total fixture running time.
		LAMP	0000~9999		Displays a lamps running time.
		CLMP	ON/OFF		Clear lamp running time.
5	RPAN	ON/OFF			Reverses the pan movements.
6	RTL T	ON/OFF			Reverses the tilt movements.
7	FINE	ON/OFF			Changes modes between 16 bit and 8 bit operation.
8	DISP	VALU	D-XX D-00 (DXXX)		LED display will detail the DMX value of each channel during normal operation.
		D ON	ON/OFF		Turns off LED display after 2 minutes of non-use
		FLIP	ON/OFF		This function will reverse the LED display by 180° for hanging operation.
9	SPEC	RDMX	ON/OFF		Allows a user to change the DMX address remotely from a DMX console.
		SPOT	ON/OFF		Lamp optimization.
		DFSE	ON/OFF		Resets all the fixture functions to factory settings.
		FEED	ON/OFF		Pan and tilt feedback (error correction) on/off
		VER	V1.0~V9.9		Displays the fixture's current software version
10	EDIT	STEP	S-01 ~S-48		Sets the amount of steps in the user program.
		SCXX	C-01	01 XX (00~FFH)	Edit each of the channel settings (values) for the selected scene.
			C-12	12 XX (00~FFH)	
		TIME	I - XX (01~FFH)		Adjust the hold time of each scene in the user program.
		CEDT	ON/OFF		Allows the programmer to edit the user program via any external DMX controller.
RUN	ON/OFF		Program test		

## **Main Menu Functions**

### **1. ADDRESS MENU**

**Addr** - **A001 - A511** (Value) - This is where you set the fixtures DMX address.

#### **Setting/Changing the DMX Address**

After applying power to the DESIGN LED 36MH™ the LED will display the fixture's current DMX address immediately after the reset sequence. If the fixture is not receiving a DMX signal the display will flash continuously. To set or adjust a DMX address, please follow the procedure below:

1. Switch on the DESIGN LED 36MH™ and wait for the fixture reset process to finished.
2. Press the Mode/Esc button to access the main menu. Toggle through the menu by pressing the Up and Down buttons until the display shows A001. Tap the enter button to make changes to the address, the current three digit address will immediately begin to flash.
3. While the current three-digit address is flashing, use the Up and Down buttons to adjust the address. Lock your new address into the unit's memory by pressing the Enter button. After the new address has been successfully stored into the fixture's memory the LED will briefly readout PASS.

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

### **2. TEST MENU**

**TEST** - **T-01 - T-XX** (Test) - Tests the functions of each channel. There are 12 DMX channels and all except channels can be tested. To enter the test menu follow the procedure below:

1. Access the main menu.
2. Tap the UP button until "TEST" is displayed, press ENTER.
3. The display will show T-01. You can now press the up button and test the different

channels. For example: If you press the up button until “T-03” is displayed, the unit will test the color channel, changing the color one by one and show the rainbow effect with different speeds.

4. Press MODE/ENTER or EXIT to exit.

### 3. **AUDIO MENU -**

**AUDI**

**MSTR** (Master) – Runs fixture in audio mode as a master unit in Master-Slave mode.

**ALON** (Alone) – Runs fixture in audio mode as a single unit in Stand-Alone operation.

**MSTR** - This feature is used to run the internal preset programs in AUDIO mode in a Master/Slave configuration. Follow the procedure below for Master-Slave operation:

1. Access the main menu.
2. Tap the UP or DOWN button until “AUDI” is displayed, press ENTER.
3. Tap the UP or DOWN button until “MSTR” is displayed, press ENTER.
4. Press MODE/ESC to return to the main menu.
5. Set the DMX address to 001 for all slave units.

**ALON** – This feature is used to run the internal preset programs in AUDIO mode in a Stand-Alone configuration (single fixture mode). Follow the procedure below for Stand-Alone operation:

1. Access the main menu.
2. Tap the UP or DOWN button until “AUDI” is displayed, press ENTER.
3. Tap the UP or DOWN button until “ALON” is displayed, press ENTER.
4. Press MODE/ESC to return to the main menu.

### 4. **RESE (RESET) MENU -**

**rESE**

**ALL** - Resets all the motors in the unit.

**SCAN** - Resets the Pan and Tilt motors.

**ALL****ALL**

- When you activate this reset function, the fixture will begin to reset all motors.

1. Access the main menu.
2. Tap the UP button until “RESE” is displayed, press ENTER.
3. Tap the UP button until “ALL” is displayed, press ENTER.
4. The display will show “ON/OFF”. Press the UP button to select “ON” to reset the color motor.
5. Press ENTER to confirm
6. Press MODE/ESC to return to the main menu.

**SCAN****SCAN**

- When you activate this reset function, the fixture will only reset the Pan and Tilt motors.

1. Access the main menu.
2. Tap the UP button until “RESE” is displayed, press ENTER.
3. Tap the UP button until “SCAN” is displayed, then press ENTER to confirm.
4. The display will show “ON/OFF”. Press the UP button to select “ON” to reset the color motor. Press ENTER to confirm.
5. Press MODE/ESC to return to the main menu.

**5. TIME MENU -****TIME**

**LIFE** - Displays the fixtures total running time.

**LAMP** - Displays the lamp running time.

**CLMP** - Clears the lamp running time.

**LIFE****LIFE**

- With this function you can display the total running time of the fixture.

1. Access the main menu.
2. Tap the UP button until “TIME” is displayed, press ENTER.

3. Tap the UP button until “LIFE” is displayed, press ENTER.
4. Press MODE/ESC to return to the main menu.

## LAMP

**LAMP**

- With this function you can display the running time of the lamp.

1. Access the main menu.
2. Tap the UP button until “TIME” is displayed, press ENTER.
3. Tap the UP button until “LAMP” is displayed, press ENTER.
4. Press MODE/ESC to return to the main menu.

## CLMP

**CLMP**

- With this function you can clear the running time of the lamp. Note: ***Please clear the lamp time every time you replace the lamp.***

1. Access the main menu.
2. Tap the UP button until “TIME” is displayed, press ENTER.
3. Tap the UP button until “CLMP” is displayed, press ENTER.
4. Press MODE/ ENTER, the display will show “ON/OFF”.
5. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

## 6. RPAN MENU

**RPAN**

- This menu function will reverse the mirror PAN movements.

1. Access the main menu.
2. Tap the UP button until “RPAN” is displayed, press ENTER.
3. The display will show “ON/OFF”.
4. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
5. Press ENTER to confirm.
6. Press MODE/ESC to return to the main menu.

## 7. **RTL T MENU**

**RTL T** - This menu function will reverse the mirror TILT movements.

1. Access the main menu.
2. Tap the UP button until “RTL T” is displayed, press ENTER.
3. The display will show “ON/OFF”.
4. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
5. Press ENTER to confirm.
6. Press MODE/ESC to return to the main menu.

## 8. **FINE MENU**

**FINE** - This menu item switches between 16 bit (fine) and 8 bit (coarse) modes. When this function is turned on the fixture will operate in 16 bit (fine) mode. When functioning in 16 bit mode the fixture will use 16 DMX channels, when the 16bit function is turned off the fixture will use 14 DMX channels. To access the Fine menu follow the procedure below:

1. Access the main menu.
2. Tap the UP button until “FINE” is displayed, press ENTER.
3. The display will show “ON/OFF”.
4. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
5. Press ENTER to confirm.
6. Press MODE/ESC to return to the main menu.

## 9. **DISPLAY MENU**

**DISP** - This menu function will control the various on-board display features.

**VALU** **VALU** – This function will display the DMX value of each channel as it is adjusted through the use of a DMX console.

1. Access the main menu.

2. Tap the UP button until “DISP” is displayed.
3. Press ENTER, the display will show “VALU”.
4. Press ENTER, once again “d-00” will be displayed.
5. Press ENTER to confirm.
6. Press MODE/ESC to return to the main menu.



**D ON** – This function will turn the display off after the has gone two seconds without any menu activity.

1. Access the main menu.
2. Tap the UP button until “DISP” is displayed.
3. Press ENTER, the display will show “VALU”.
4. Tap the UP button until ”D-ON” is displayed and tap the ENTER button.
5. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.



**FLIP** – This function will reverse the display readout buy 180°.

1. Access the main menu.
2. Tap the UP button until “DISP” is displayed.
3. Press ENTER, the display will show “VALU”.
4. Tap the UP button until ”FLIP” is displayed and tap the ENTER button.
5. Press the UP button to select “ON” to activate this function, or “OFF” to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

**10. SPEC MENU** – *This menu option access all the special functions listed below.*

**RDMX** - Allows DMX address to be changed via and external DMX controller.

**DFSE** (Default) - Resets the unit to all default settings.

**FEED** - This function turn the DMX correction feature “ON” (default) or “OFF.”

**VER** (Version) - Displays the software version.

## RDMX



This function allows the DMX address to remotely be adjusted from a DMX console. This setting requires special settings for both the controller and the fixture. RDMX is on by default. Follow the procedure listed below to access the RDMX functions:

### **Fixture Settings:**

1. Access the main menu.
2. Tap the UP button until "SPEC" is displayed, press ENTER.
3. Tap the UP button until "RDMX" is displayed, press ENTER.
4. The display will show "ON/OFF."
5. Press the UP button to display "ON" to activate this function, or "OFF" to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

### **Controller Settings:**

1. Set the DMX value of channel 1 to a value of 7.
2. Set the DMX value of channel 2 to a value of 7 or 8. When channel 2 is set to "7" you can adjust the starting address between 1 and 255. When set to "8" you can adjust the starting address between 256 and 511.
3. Use channel 3 to set your desired DMX starting address. **For example:** If you want to set the starting address to 57, set channel 1 to a value of "7," set channel 2 to a value of "7" and use channel 3 to set your address to 57 by selecting a channel value of 57. Example 2: If you want to set the starting address to 420, set channel 1 to a value of "7," channel 2 to "8" and channel 3 to "164" (256+164=420).
4. **Wait for approximately 20 seconds for the unit to complete the address reset function.**

## DFSE



- With this function you can restore the factory default settings of the fixture. All

settings will be set back to the default values. Any edited scenes will be lost. When restoring the factory settings the unit must be set to the address that the unit was in when you started editing. ***When you confirm this function, the fixture will begin to reload the original factory settings.***

1. Access the main menu.
2. Tap the UP button until “SPEC” is displayed, press ENTER.
3. Tap the UP button until “DFSE” is displayed, press ENTER.
4. The display will show “ON/OFF.”
5. Press the UP button to display “ON” to activate this function, or “OFF” to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

## FEED

- Use this function to activate the pan/tilt error correction.

1. Access the main menu.
2. Tap the UP button until “SPEC” is displayed, press ENTER.
3. Tap the UP button until “FEED” is displayed, press ENTER.
4. The display will show “ON/OFF.”
5. Press the UP button to display “ON” to activate this function, or “OFF” to deactivate this function.
6. Press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

## VER



- Use this function to display the Software version of the unit.

1. Access the main menu.
2. Tap the UP button until “SPEC” is displayed, press ENTER.
3. Tap the UP button until “VER” is displayed, press ENTER.
4. The display will show “V-1.0,” the display may also show, “V-2.0,” “V-9.9” etc.
5. Press ENTER or MODE/ESC to exit.

## 11. EDIT MENU

**Edit** - This menu item allows you to write a program into the fixture's internal memory (EEPROM) via the control panel or via an external DMX controller.

**STEP** (S-01 - S-48) – This set the total amount of scenes in the user program. There is a maximum of 48 scenes available.

**SCXX** (SC01 – SC48) - These are the scenes that are stored in your program. There are a total of 48 scenes. C-01 ~ C-12 (Channel 1 ~ Channel 12) – Represents the total fixture channels for each scene that can be edited.

**TIME** (Time) - Running time of the entire program.

**CEDT** - Edit program using a external controller.

**RUN** – Program test mode.

CEDT- Records scenes automatically from any external DMX controller and stores them inside the fixtures built-in memory. These scenes can then be recalled without the use of an external controller.

1. Access the main menu.
2. Tap the UP or DOWN buttons until "EDIT" is displayed, then press ENTER.
3. Tap the UP or DOWN buttons until "REC" is displayed, then press ENTER.
4. After entering the REC function the display will read "RE.XX," where as "XX" represents the scene number in the internal memory to which the scene will be stored.
5. Press the UP or DOWN buttons to select the desired scene number.
6. When you reach the scene number you wish to store the scene to, press ENTER to confirm and lock the scene into the fixture's memory.
7. Press MODE/ESC to return to the main menu.

### STEP

**STEP** - With this function you can program the number of steps in your individual

## Program.

1. Access the main menu.
2. Tap the UP button until “EDIT” is displayed, press ENTER.
3. Tap the UP button until “STEP” is displayed, press ENTER.
4. The display shows “S-01,” this indicates the first step of your program. You can call up to 48 scenes in “Run.” For example; if “S-05” is displayed, it means that the scene will “RUN” the first 5 scenes you saved in “Edit.”
5. Press ENTER to save and MODE/ESC to exit.

## SC01



This function allows you to choose the total number of scenes in your internal program.

1. Access the main menu.
2. Tap the UP button until “EDIT” is displayed, press ENTER.
3. Tap the UP button until “SC01” is displayed.
4. The display indicates “SC01,” this stands for the first scene of your program. You may recall up to 48 scenes. For example, if you choose “SC05,” and then select the “Run” function, the first 5 scenes you saved in “Edit” mode will run.
5. Press ENTER to save and MODE/ESC to exit.

## Editing procedure 1: Using the control board only.

1. Access the main menu.
2. Tap the UP button until “EDIT” is displayed and press ENTER.
3. The display will show “SC-01”, this stands for the scene number. For example, “SC-01” is displayed, it means you will be editing scene 1, press ENTER. You can change the scene number by tapping the UP button.
4. Press ENTER, the display will show “C-01,” this represents the channel number. If “C-01” is displayed, you will be editing the fixture’s channel 1 value of the selected scene, press ENTER. You can change the channel number by tapping the UP button.
5. The display will show the DMX value for the channel that is being edited. It will be displayed as “11XX,” it stands for Channel 11 of the editing scene, the DMX value

is “XX.”

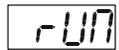
6. Adjust the DMX value by tapping the UP button, until you get the expected effect for this channel.
7. Press ENTER to enter the editing of the other channels of the scene.
8. Repeat steps 5-8, until you finish setting all the DMX values for all the channels of this scene, each scene can have 16 channels maximum.
9. Once all the channels are completed, the display will begin to flash “TIME,” this indicates the time needed to run this scene.
10. Press ENTER to edit the time needed, the display shows “TXXX”, “XXX” represents the time needed to run this scene. For example, “T002” means scene 1 needs 0.4 seconds to run, “T-15” means this scene needs 3.0 seconds to run.  
Note: “XX” is always 0.2 seconds not one second.
11. Adjust the time needed by tapping the UP button.
12. Press ENTER to save the settings for the scene you are editing, the display will change to the next scene automatically.
13. Repeat steps 3-12 to edit other scenes, you can edit and save 48 scenes maximum.
14. Press MODE/ESC to exit and save your edited scene into the fixtures internal memory. The number of steps can be defined under “EDIT” and the scenes can be called up under “Run.” To run the scenes see page 30.

### **Editing procedure 2:** Using an external controller.

1. Call up the first scene in your controller now.
2. Select “SC01” by pressing the UP or DOWN buttons.
3. Press MODE/ESC, the display shows “SC01”.
4. Press MODE/ESC, the display shows “C-01”.
5. Select “CEDT” by pressing the UP or DOWN buttons.
6. Press MODE/ESC, the display shows “OFF”.
7. Press UP, the display will read “ON”.
8. Press MODE/ESC, the display shows “SC02”. You successfully downloaded the first scene.
9. Adjust the Step-time as described above.

10. Call up the second scene in your controller now.
11. Repeat steps 5-11 until all desired scenes are downloaded.
12. Press MODE/ESC to exit. The number of steps can be defined under “STEP” and the scenes can be called up under “RUN.”

## RUN



- This function allows you to “RUN” the user-installed program. You can set the number of steps under Step (S-01- S-48). You can edit the individual scenes under Edit.

1. Access the main menu.
2. Tap the UP button until “EDIT” is displayed, press ENTER.
3. Tap the UP button until “RUN” is displayed, press ENTER.
4. “AUTO” is displayed. If you press the UP button it will show “SOUN”. Select which one you want to activate, and press ENTER.
5. Press UP, to select “ALON” or “NAST”. Which mean stand alone, and master/slave mode.
6. Select a mode, and press ENTER to confirm.
7. Press MODE/ESC to return to the main menu.

## 10. DMX CHANNEL TRAITS

The chart below details the channel layout for 12 DMX channels (default).

*In 8bit mode the “Pan Fine” and “Tilt Fine” channels are not used, thus converting the fixture into a 10-channel DMX fixture.*

%	1 Pan	2 Pan High Resolution	3 Tilt	4 Tilt High Resolution	5 Movement Speed	6 RAINBOW	7 RED	8 GREEN	9 BLUE	10 Strobe	11 Internal Program	12 General dimming
100%					NO FUNCTION						Program 8	
75%					BLACKOUT BY MOVEMENT						Program 7	
50%					Max	CROSSFADING COLOURS					Program 6	
25%					Min	RAINBOW COLOURS					Program 5	
0%					Moving speed ↑ Max	NO FUNCTION					Program 4	
											Program 3	
											Program 2	
											Program 1	
											MOTOR RESET	
											NO FUNCTION	

CHANNEL 1: Pan Movement (max. 540°)

CHANNEL 2: 16bit Pan Movement (pan fine)

CHANNEL 3: Tilt Movement (max. 265°)

CHANNEL 4: 16bit Tilt Movement (tilt fine)

CHANNEL 5: Speed Control (Pan/Tilt movement, blackout selection)

CHANNEL 6: Rainbow Control (Built-in color macros)

CHANNEL 7: Red Control

CHANNEL 8: Green Control

CHANNEL 9: Blue Control

CHANNEL 10: Strobe Control (0~13Hz, Variable, Random, Pulse)

CHANNEL 11: Special (Auto program control and motor reset)

CHANNEL 12: Dimmer Control

**DMX channel function and values (12 Channel Mode):****Channel 1 - PAN movement 8bit :**

<b><u>Channel 2 – Pan fine</u></b>		

**Channel 3 - TILT movement 8bit :**

<b><u>Channel 4 – Tilt fine</u></b>		

**Channel 5 - Speed pan/tilt movement:**

0-225	Max to min speed	
226-235	Blackout by movement	
236-245	No function	
246-255	No function	

**Channel 6 - Rainbow:**

0-7	No function	
8-220	Rainbow colors	
221-255	Crossfading colors from slow to fast	

**Channel 7 - Red :**

0-255	Red (0-Black, 255-100% Red)	

**Channel 8 - Green:**

0-255	Green (0-Black, 255-100% Green)	

**Channel 9 - Blue:**

0-255	Blue (0-Black, 255- 100% Blue)	

**Channel 10 – reset, internal programs:**

0-79	Normal	
80-84	All motor reset	
85-87	Scan motor reset	
88-99	No function	
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	Auto program by music	
<b>Channel 11 - Strobe:</b>		
0	No function (shutter open)	
1-95	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)	
<b>Channel 12 - General dimming (option 1)</b>		
0-255	Dimming (1%-100%)	

**DMX channel function and values (10 Channel Mode):****Channel 1 - PAN movement 8bit :**

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**Channel 2 - TILT movement 8bit :**

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**Channel 3 - Speed pan/tilt movement:**

0-225	Max to min speed	
226-235	Blackout by movement	
236-245	No function	
246-255	No function	

**Channel 4 - Rainbow:**

0-7	No function	
8-220	Rainbow colors	
221-255	Crossfading colors from slow to fast	

**Channel 5 - Red :**

0-255	Red (0-Black, 255-100% Red)	

**Channel 6 - Green:**

0-255	Green (0-Black, 255-100% Green)	

**Channel 7 - Blue:**

0-255	Blue (0-Black, 255- 100% Blue)	

**Channel 8 – reset, internal programs:**

0-79	No function	
80-84	All motor reset	
85-87	Scan motor reset	
88-99	No function	
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	Auto program by music	

<b>Channel 9 - Strobe:</b>		
0	No function (shutter open)	
1-95	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)	
<b>Channel 10 - General dimming (option 1)</b>		
0-255	Dimming (1%-100%)	

## 11. ERROR CODES:

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

If an error does occur during the initial start-up procedure the fixture will self-generate a second reset signal and try to realign all the motors and correct the errors, if the error persists after a second attempt a third attempt will be made.

If after a third attempt all the errors have not been corrected the fixture will make the following determinations: 1) 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. 2) 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 corrected by a technician. The errors in question will remain flashing in the display as a reminder of internal errors.

### **01Er** – PAN movement error:

The yoke is not located in the default position after start-up or after a reset command. This message will appear after a fixture reset if the pan-yoke’s magnetic-indexing circuit malfunctions (sensor failed or magnet is missing) or there is a stepper motor failure (defective motor or a defective motor IC drive on the main PCB).

### **03Er** – TILT movement error:

The head is not located in the default tilt position after start-up or after a reset command. This message will appear after a fixture reset if the tilt magnetic-indexing circuit malfunctions

(sensor failed or magnet is missing) or there is a stepper motor failure (defective motor or a defective motor IC drive on the main PCB).

## 12. CLEANING AND MAINTENANCE

Please refer to the following points during normal inspection:

1. Be sure all screws and fasteners are securely tightened at all times. Loose screws may fall out during normal operation resulting in damage or injury as larger parts could fall.
2. There must not be 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 motor assemblies. Damaged rigging points or unsecured rigging could cause the unit to fall and seriously injure a person.
3. All mechanical parts and motors should not show any traces of serious wear and should rotate freely.
4. Electric power supply cables must not show any damage, material fatigue or sediments. Never remove the ground prong from the power cable.

*Further instructions depending on installation and usage have to be adhered to by a skilled installer and any safety problems should be addressed before attempting operation.*

We recommend frequent cleaning of the device; this will ensure operational longevity and crisp light output. When cleaning, please use a moist, lint-free cloth. Never use alcohol or solvents.

There are no user serviceable parts inside this. Please refer all other service related issues to an authorized Elation service technician.

Should you decide to service the fixture yourself please order genuine Elation parts directly from Elation.

### 13. 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.

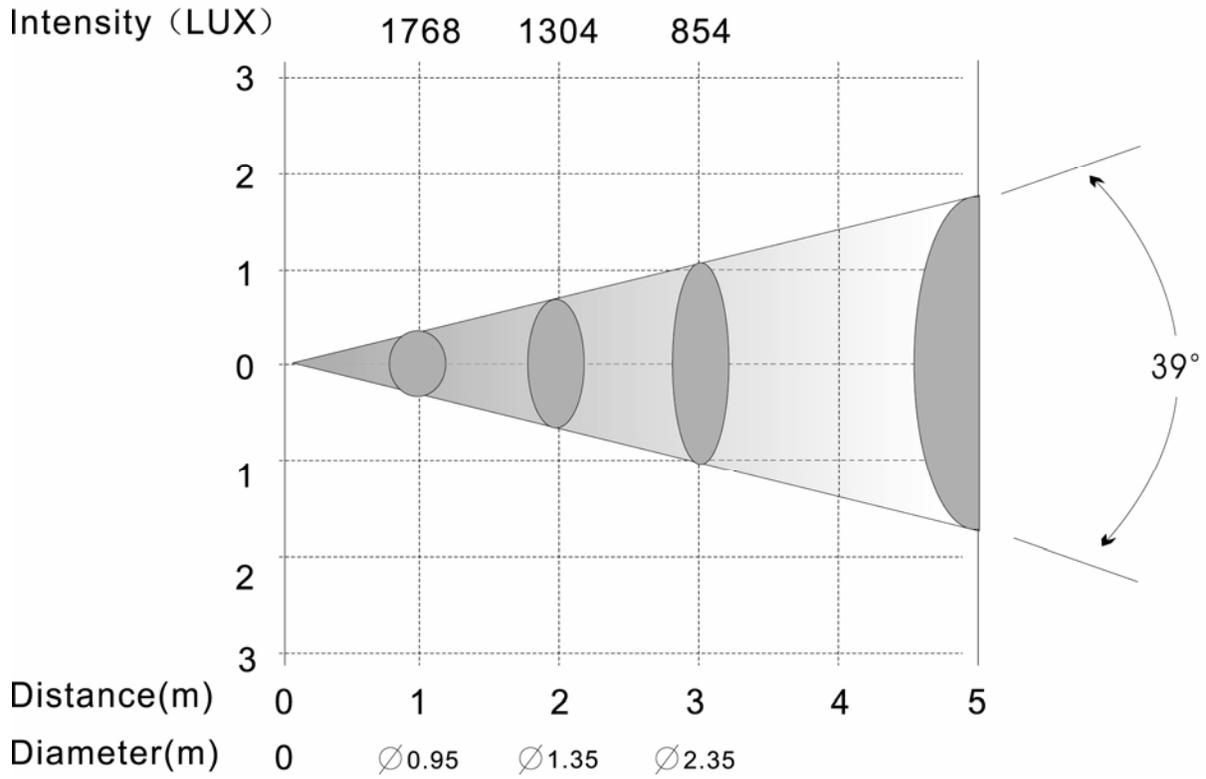
E. Elation Professional® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

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.

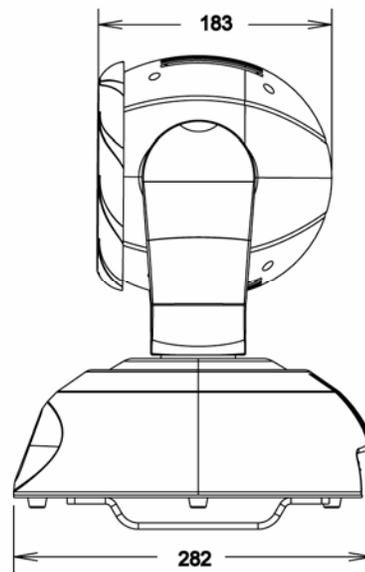
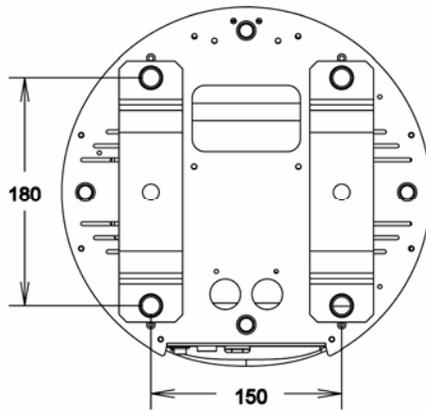
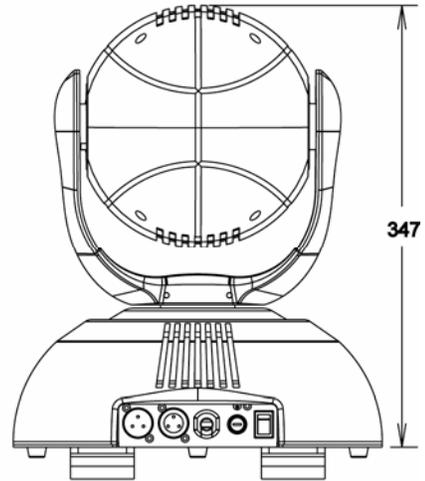
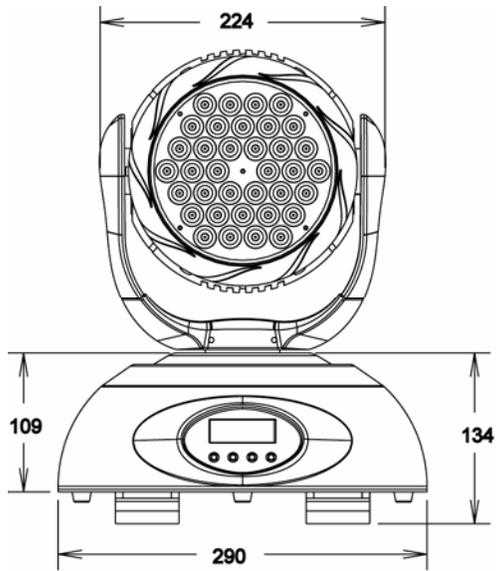
G. This warranty is the only written warranty applicable to Elation Professional® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

14. PHOTOMETRIC DATA:

Beam angle 39°



15. DIMENSIONAL DRAWINGS:



## 17. TECHNICAL SPECIFICATIONS

<b>Power supply</b>	
<b>Power consumption</b>	_98VAC, 50Hz; □120VAC, 50Hz; □208VAC, 50Hz; □220VAC, 50Hz; □230VAC, 50Hz; □240VAC, 50Hz; <b>or</b> □ 98VAC,60Hz; □ 120VAC,60Hz; □ 208VAC,60Hz; □ 220VAC,60Hz; □230VAC,60Hz; □240VAC,60Hz;
<b>Power Consumption</b>	135w
<b>Fuse protection</b>	120V = 2A/250V, GMA (5x20mm fine-wire fuse) 220V = 2A/250V, GMA (5x20mm fine-wire fuse)
<b>Lamp</b>	
<b>Type</b>	36 x 1w Lumileds LEDs
<b>Life time</b>	100,000 Hrs Rated
<b>Color</b>	
12 x Red LEDs ~ 12 Green LEDs ~ 12 Blue LEDs	
<b>Strobe / Dimmer</b>	
Strobe-effect with variable speed 1 - 18 flashes per second	
Continuously mechanical dimmer 0 - 100%	
<b>DMX Channels</b>	
12 (16bit – default) <b>or</b> 10 (8bit – user selectable)	
<b>Drive</b>	
Standard DMX-512, 3 pole XLR; [+] = Pin 3    [-] = Pin 2    [Ground] = Pin 1. Starting DMX [001].	
<b>Pan / Tilt</b>	
<b>Pan- movement</b>	<b>540° in max. 2.0 seconds, 16 bit resolution</b>
<b>Tilt- movement</b>	<b>265° in max. 1.5 seconds, 16 bit resolution</b>
<b>Weights and measures</b>	
<b>Dimensions</b>	<b>29cm (W) x 28.2cm (L) x 34.7cm (H) ~ Head vertical</b>
<b>Weight (net)</b>	<b>9.5Kgs / 20Lbs</b>

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

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