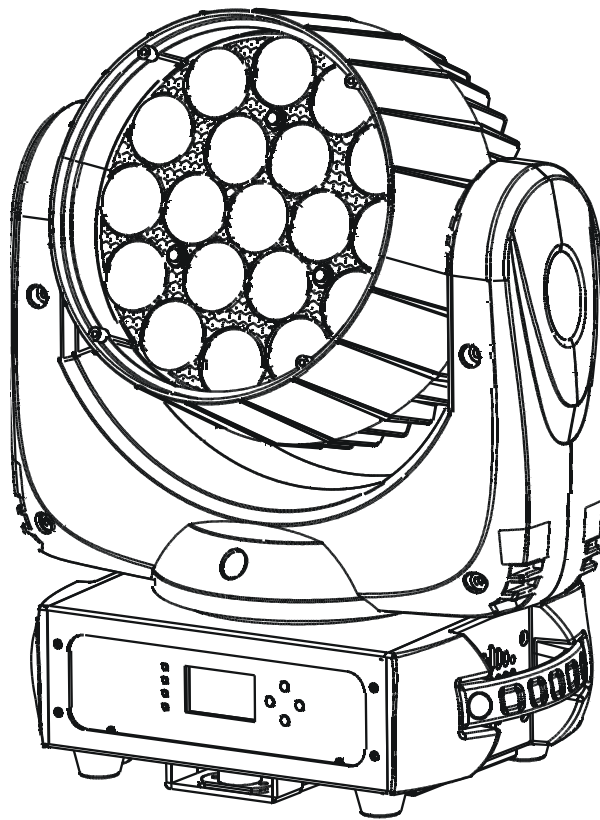


# @Lumen8



## Kudos 300ZS



**Order code: ELUM039**

**User Manual**

[www.prolight.co.uk](http://www.prolight.co.uk)

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## 1. Safety Instructions



### WARNING

Please read these instructions carefully, which include important information about the installation, usage and maintenance.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Unpack and check carefully there is no transportation damage before using the unit.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- The unit is for indoor use only. Use only in a dry location.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Disconnect main power before replacement or servicing.
- Make sure there are no flammable materials close to the unit while operating as it could present a fire hazard.
- Use safety cable when fixes this unit. DO NOT handle the unit by taking its head only, but always by taking its base.
- Maximum ambient temperature is  $T_a$ : 40 degrees. DO NOT operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85 degrees. DO NOT touch the housing bare-hand during its operation. Turn off the power and allow about 15 minutes for the unit to cool down before replacing or serving.
- In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorised technical assistance center. Always use the same type spare parts.
- DO NOT touch any wire during operation as high voltage might be causing electric shock.

**Warning:**

- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- DO NOT open the unit within five minutes after switching off.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- **LED RISK GROUP 2:** Risk of eye injury, Do not stare directly into the LED or view the LED with any form of magnification.
- Do not operate the fixture near stairways
- Provide advance notice that strobe lighting is in use
- Avoid extended periods of continuous flashing, particularly at frequencies of 10 to 20 flashes per second

**Caution:**

There are no user serviceable parts inside the unit. DO NOT open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact your nearest dealer.

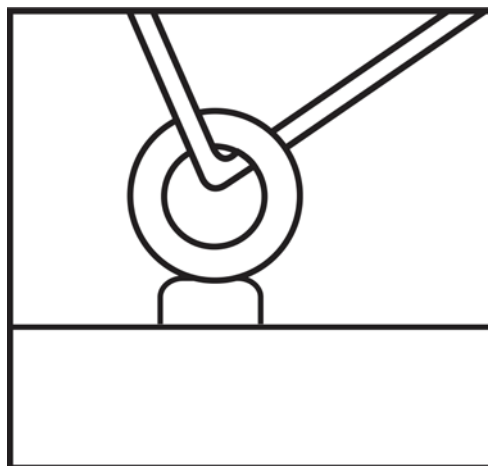
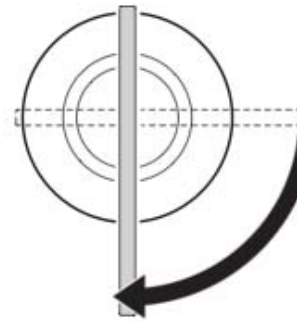
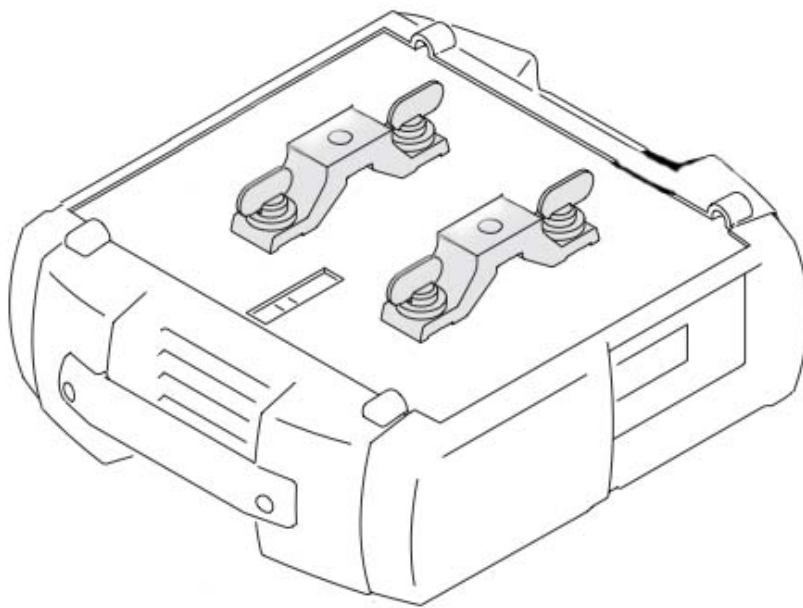
If using a 240V - 50Hz power supply, DO NOT connect in series more than 11 units; use another main supply for the next 11 fixtures.

If using a 120V - 60Hz power supply, DO NOT connect in series more than 5 units; use another main supply for the next 5 fixtures.

**Installation:**

The unit should be mounted via omega bracket (see below). Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. And make sure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

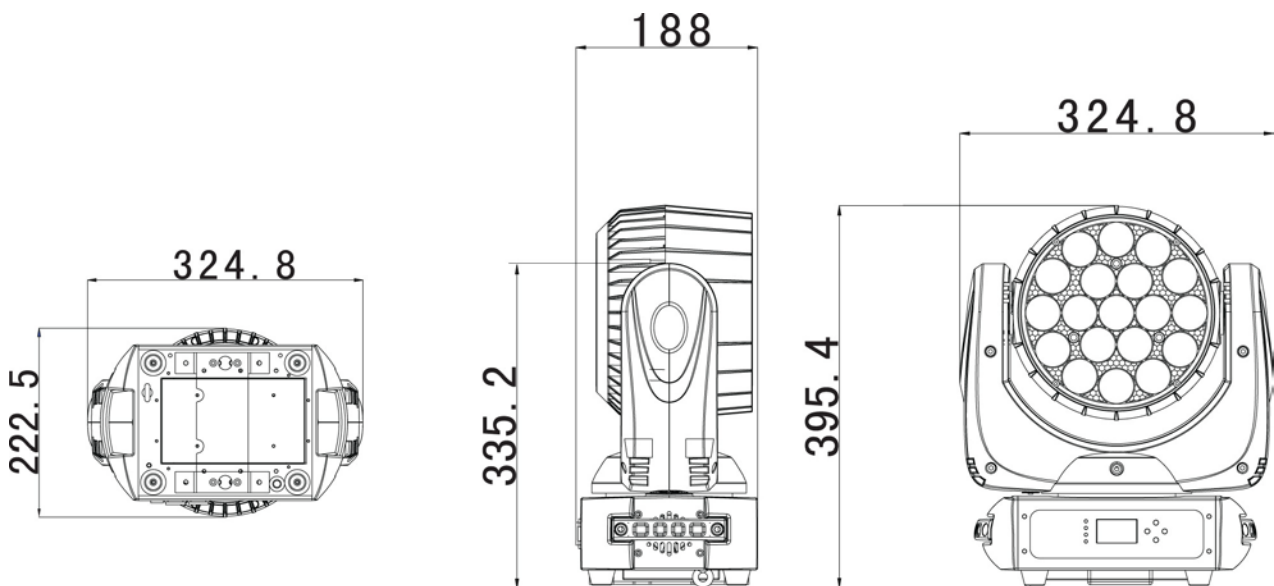
The equipment must be fixed by the professionals. And it must be fixed at a place where is out of the touch of people and has no one pass by or under it.



## 2. Technical Specifications

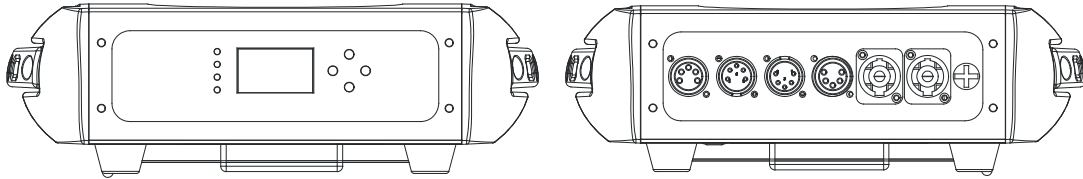
- Extremely small, fast and powerful LED moving beam.
- DMX Channels: 8/14
- Operation modes: DMX512, Master/Slave
- Great built-in lighting shows under Master/Slave mode
- Blue LCD display for easy navigation
- Perfect for stage, theatre, TV studio, rental and discotheque

<b>Voltage:</b>	AC 100V~240V, 50/60Hz
<b>Power consumption:</b>	245W
<b>LED:</b>	19 x 10W RGBW LED
<b>Dimension:</b>	324.8 x 188 x 395.4mm
<b>Weight:</b>	9.2Kgs
<b>Beam Angle:</b>	10 degrees – 60 degrees



### 3. How To Set The Unit

#### 3.1 Control panel



**Display:** To show the various menus and the selected functions

**LED:**

POWER	ON	Power On
NULL		No function
NULL		No function
DMX	ON	DMX input present

**Button:**

MENU	To select the programming functions
DOWN	To go backward in the selected functions
UP	To go forward in the selected functions
ENTER	To confirm the selected functions

**DMX input:**

For DMX512 link, use 3/5-pin XLR cable to link the unit together.

**DMX output:**

For DMX512 link, use 3/5-pin XLR cable to link the unit together.

**Mains input:**

Connect to mains power supply. Power input is via Neutrik® Powercon® “A” inlet (blue)

Do not connect to dimmer channels.

**Mains output:**

Connect to mains power supply to the next unit. Power output is Via Neutrik® Powercon® “B” outlet (grey).

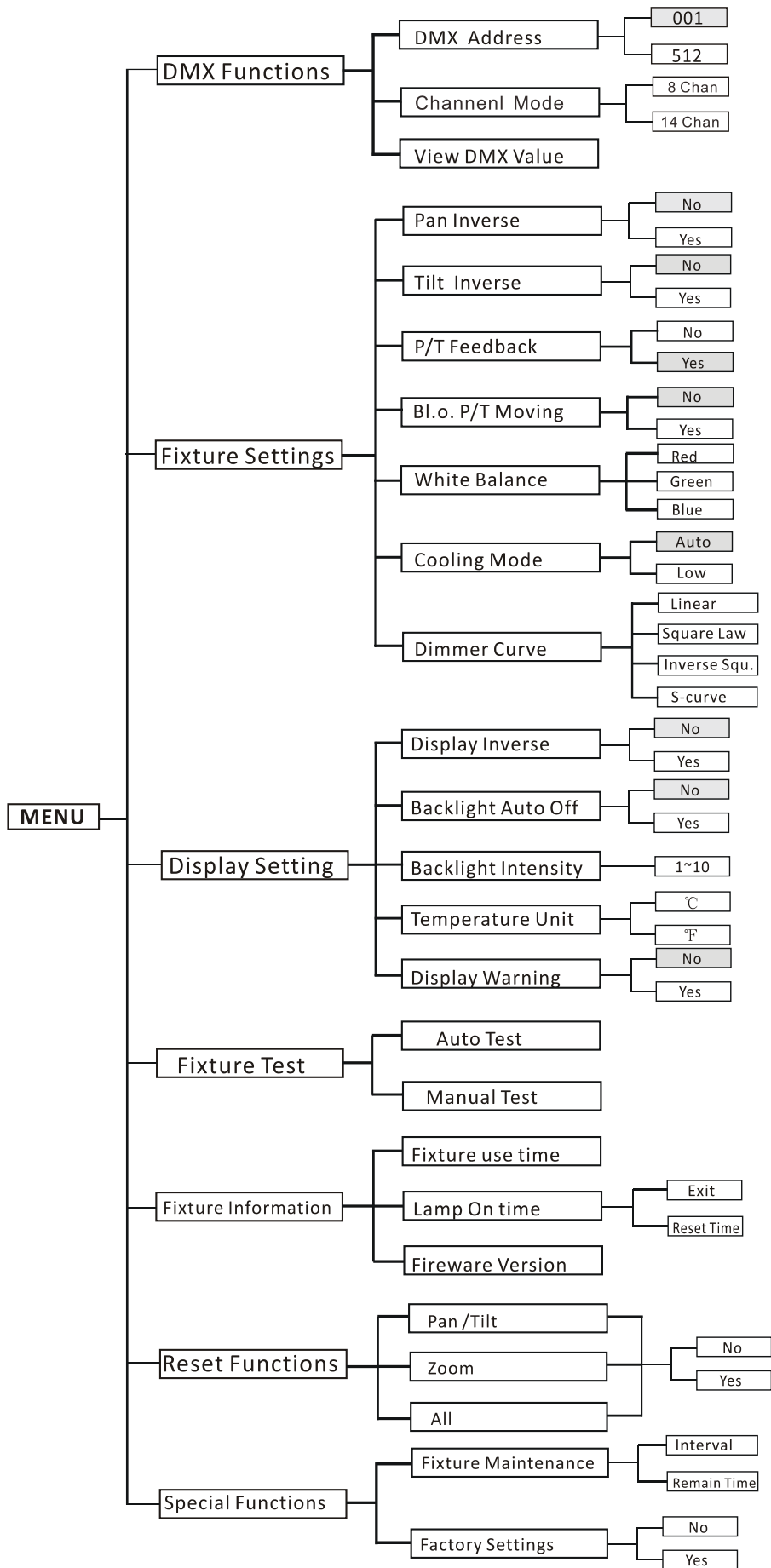
**Fuse: (T 6.3A)** Protect the unit from damage of the over current.

### **3.2 Main Function**

To select any of the given functions, press the **MENU** button up to when the required one is showing on the display. Select the function by **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the mode. Once the required mode has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

The main functions are showing below:





## ***DMX Functions***

Enter MENU mode, select ***DMX Functions***, press ENTER button to confirm, use UP and DOWN button to select ***DMX Address*** or ***View DMX Value***.

### **DMX Address**

Select ***DMX Address***, press ENTER button to confirm, the present address will blink on the display, use UP and DOWN button to adjust the address from **1** to **512**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **Channel Mode**

Select ***Channel Mode***, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **8 Chan** or **10 Chan**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **View DMX Value**

Select ***View DMX Value***, press ENTER button to confirm. Channel function and its value will show on the display, use UP and DOWN button to view other DMX value. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## **Fixture Setting**

Enter MENU mode, select ***Fixture Setting***, press ENTER button to confirm, then use UP and DOWN button to select ***Pan Inverse, Tile Inverse, P/T Feedback, BL.O. P/T Moving or White Balance, Cooling Mode and Dimmer Curve.***

### **Pan Inverse**

Select ***Pan Inverse***, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (pan inverse), press

ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **Tilt Inverse**

Select **Tilt Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (tilt inverse), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **P/T Feedback** — Pan/Tilt Feedback

Select **P/T Feedback**, press ENTER button to confirm, present mode will blink on the display, press UP/DOWN button to select **No** (Pan or tilt's position will not feedback while out of step) or **Yes** (Feedback while pan/tilt out of step), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **BL.O. P/T Moving** — Blackout while pan/tilt moving

Select **BL.O. P/T Moving**, Press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal while pan/tilt moving) or **Yes** (blackout while pan/tilt moving), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **White Balance**

Select **White Balance**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Red**, **Green** or **Blue**, Once selected, press ENTER button, then use UP and DOWN button to adjust the value from 125 to 255, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

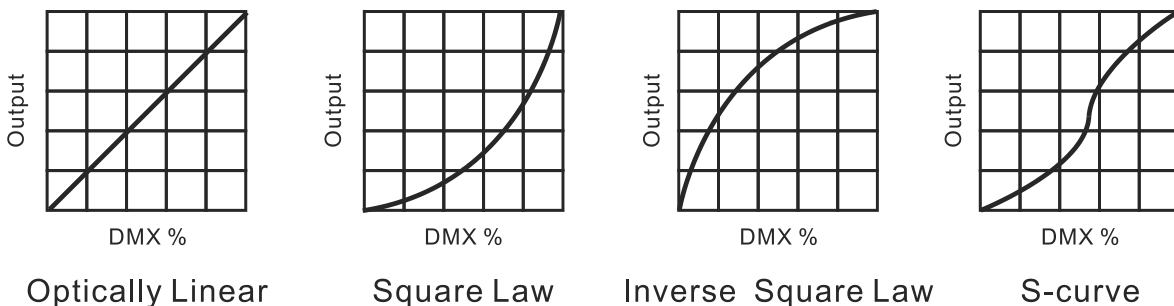
### **Cooling Mode**

Select **Cooling Mode**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Auto** or **Low**, Once selected, press the ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### Dimming Curves

Select Dimmer curve, press the ENTER button to confirm, present mode will blink on the display. Use the DOWN and UP button to select the **Mode1** or **Mode 2** or **Mode 3** or **Mode 4** mode. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Hold and press the MENU button about one second or wait for one minute to exit the menu mode.

### Dimmer Modes



#### **Mode 1 (Optically Linear):**

The increase in light intensity appears to be linear as DMX value is increased.

#### **Mode 2 (Square Law):**

Light intensity control is finer at low levels and coarser at high levels.

#### **Mode 3 (Inverse Square Law):**

Light intensity control is coarser at low levels and finer at high levels.

#### **Mode 4 (S-cure):**

Light intensity control is finer at low levels and high levels and coarser at medium levels.

## Display Setting

Enter MENU mode, select **Display Setting**, press ENTER button to confirm, use UP and DOWN button to select **Display Inverse**, **Backlight Auto Off**, **Backlight Intensity**, **Temperature unit** or **Display Warning**.

### Display Inverse

Select **Display Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal display) or **Yes** (inverse display), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### Backlight Auto Off

Select **Backlight Auto Off**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (display always on) or **Yes** (display goes off one minute after exiting menu mode), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### Backlight Intensity

Select **Backlight Intensity**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust backlight intensity from **1** (dark) to **10** (bright), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### Temperature Unit

Select **Temperature Unit**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **°C** or **°F**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **Display Warning**

Select **Display Warning**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (Normal) or **Yes** (display will show the error warning when the unit went wrong). Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **Fixture Test**

Enter MENU mode, select **Fixture Test**, press ENTER button to confirm, use UP and DOWN button to select **Auto Test** or **Manual Test**

#### **Auto Test**

Select **Auto Test**, press ENTER button to confirm, the unit will run built-in programs to automatically test pan, tilt, color, gobo, shutter, dimmer, prism, red, green, blue, white, CTC, frost, focus, and lamp on/off. Press MENU button back to the last menu or exit menu mode after auto test.

#### **Manual Test**

Select **Manual Test**, press ENTER button to confirm, the present channel will show on the display, use Up and DOWN button to select channel, press ENTER button to confirm, then use UP and DOWN button to adjust the value, press ENTER button to store, the fixture will run as the channel value indicates. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.

(All channels value will become 0 after exiting Manual Test menu)

### **Fixture Information**

Enter MENU mode, select **Fixture Information**, press ENTER button to confirm, use UP and DOWN button to select **Fixture use time**, **Lamp on time** or **Firmware Version**.

#### **Fixture use time**

Select **Fixture Use Time**, press ENTER button to confirm, fixture use time will show on the display, press MENU button to exit.

### **Lamp on time**

Select **Lamp on time**, press ENTER button to confirm, lamp on time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or **Reset Time**, press ENTER button to confirm. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.

### **Firmware Version**

Select **Firmware Version**, press ENTER button to confirm, firmware version will show on the display, press MENU button back to exit.

## **Reset Functions**

Enter MENU mode, select **Reset Function**, press ENTER button to confirm, use UP and DOWN button to select **Pan/Tilt, Zoom** or **All**.

### **Pan/Tilt** — Reset Pan/Tilt

Select **Pan/Tilt**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset pan and tilt to their home positions) or **No**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

### **Zoom** — Reset Zoom

Select **Zoom**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset **Zoom** to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

### **All** — Reset All

Select **All**, press ENTER button to confirm, use UP and DOWN button to select **Yes**

(the unit will run built-in program to reset all motors to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

## Special Functions

Enter MENU mode, select **Special Functions**, press ENTER button to confirm, use UP and DOWN button to select **Fixture Maintenance** or **Factory Setting**.

### Fixture Maintenance

Select **Fixture Maintenance**, press ENTER button to confirm, use UP and DOWN button to select **Interval** or **Remain Time**.

### Interval

Select **Interval**, press ENTER button to confirm, the interval time will show on the display. Press MENU button to exit.

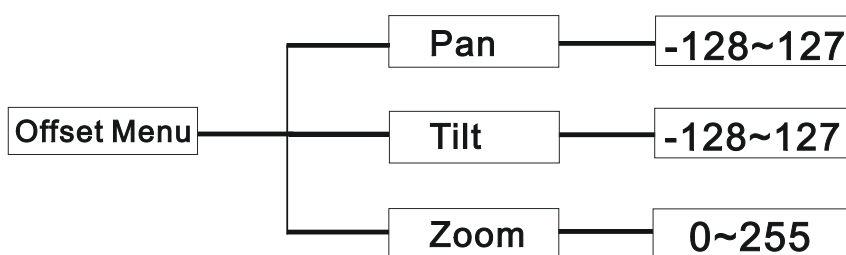
### Remain Time

Select **Remain Time**, press ENTER button to confirm, the remaining time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or **Reset time**, press MENU button to exit.

### Factory Setting

Select **Factory Setting**, press ENTER button to confirm, the fixture will reset to factory settings and exit menu mode.

## 3.3 Home Position Adjust

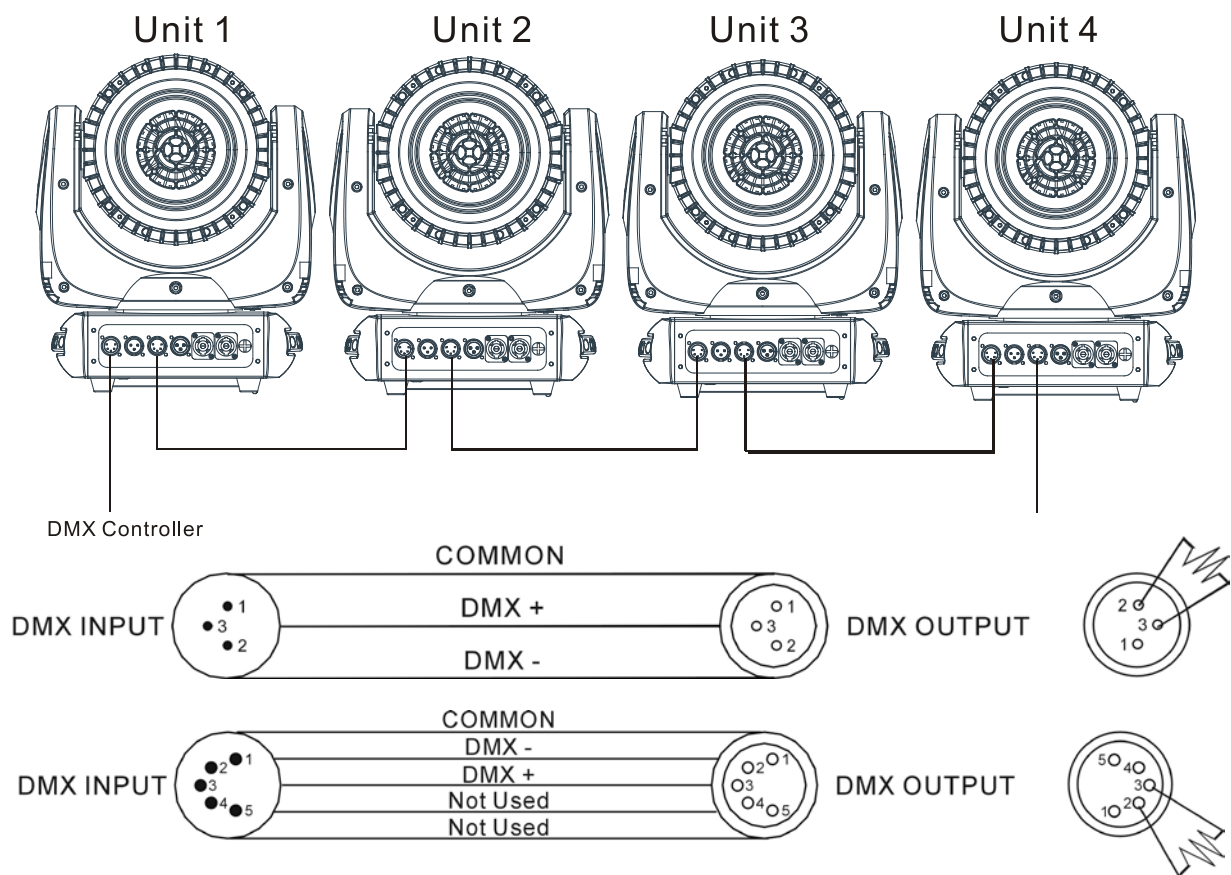




In the main functions, hold **Enter** button for at least 3 seconds into offset mode, use **DOWN** and **UP** button up to chose **Pan Offset**, **Tilt Offset** or **Zoom Offset**, pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to adjust the home position of the Pan, Tilt or Zoom, Once the position has been selected, press the **ENTER** button to setup, to go back to the functions without any change press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

## 4. Control By Universal DMX Controller

### 4.1 DMX 512 Connection



1. If you using a controller with 5 pins DMX output, you need to use a 5 to 3 pin adapter-cable.
2. At last unit, the DMX cable has to be terminated with a terminator (3-pin, CABL90), (5-pin, CABL90). Solder a 120 ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.

3. Connect the unit together in a `daisy chain` by XLR plug from the output of the unit to the input of the next unit. The cable can not branched or split to a `Y` cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
4. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.
5. Each lighting unit needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
6. The end of the DMX 512 system should be terminated to reduce signal errors.
7. 3 pin XLR connectors are more popular than 5 pin XLR.
  - 3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
  - 5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin 4/Pin 5: Not used.

## 4.2 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press **MENU** button to enter menu mode, select **DMX Functions**, press **ENTER** button to confirm, use **UP** and **DOWN** button to select **DMX Address**, press **ENTER** button to confirm, the present address will blink on the display, use **UP** and **DOWN** button to adjust the address from 0 to 512, press **ENTER** button to store. Press **MENU** button back to the last menu or let the unit idle 7 seconds to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units:

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
8 channels	1	9	17	25

14 channels	1	15	29	43
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### 4.3 DMX 512 Configuration

8 channel mode (Mode 1):

8 Channels Mode							
Ch 1	Ch 2	Ch 3	Ch 4	Ch 5	Ch 6	Ch 7	Ch 8
Pan	Tilt	Zoom	Red	Green	Blue	White	Dimmer
255   540° 0   0°	255   22° 0   0°	255   10° 0   60°	255   100% 0   0%	255   100% 0   0%	255   100% 0   0%	255   100% 0   0%	255   100% 0   0%

14 channel mode(Mode 2):

14 Channels						
Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7
Pan	Pan Fine	Tilt	Tilt Fine	P/T Speed	Reset	Dimmer
255   540° 0   0°	255   0	255   220° 0   0°	255   0	255   Slow 0   Fast	015-255 No function  010-014 Reset all  000-009 No function	255   100% 0   0%
Ch8		Ch9	Ch10	Ch11	Ch12	
Shutter		Beam Red	Beam Green	Beam Blue	Beam White	
245-255 open 230-244 burst 225-229 open 210-224 sine wave 205-209 open 190-204 random burst pulse 185-189 open 170-184 burst pulse 165-169 open 150-164 random closing pulse 145-149 open 130-144 random opening pulse 125-129 open 110-124 random strobe 105-109 open 090-104 closing pulse 085-089 open 070-084 opening pulse 065-069 open 025-064 strobe 020-024 open 000-019 closed		255   100% 0   0%	255   100% 0   0%	255   100% 0   0%	255   100% 0   0%	

Color wheel effect	
Ch 13	000-009   Open
	010-014   LEE 790 - Moroccan pink
	015-019   LEE 157 - pink
	020-024   LEE 332 - Special rose pink
	025-029   LEE 328 - Follies pink
	030-034   LEE 345 - Fuchsia pink
	035-039   LEE 194 - Surprise pink
	040-044   LEE 181 - Congo blue
	045-049   LEE 071 - Tokyo blue
	050-054   LEE 120 - Deep blue
	055-059   LEE 079 - Just blue
	060-064   LEE 132 - Medium blue
	065-069   LEE 200 - Double CT blue
	070-074   LEE 161 - State blue
	075-079   LEE 201 - Full CT blue
	080-084   LEE 202 - Half CT blue
	085-089   LEE 117 - Steel blue
	090-094   LEE 353 - Lighter blue
	095-099   LEE 118 - Light blue
	100-104   LEE 116 - Medium blue green
	105-109   LEE 124 - Dark green
	110-114   LEE 139 - Primary green
	115-119   LEE 089 - Moss green
	120-124   LEE 122 - Fern green
	125-129   LEE 738 - JAS green
	130-134   LEE 088 - Lime green
	135-139   LEE 100 - Spring yellow
	140-144   LEE 104 - Deep amber
	145-149   LEE 179 - Chrome orange
	150-154   LEE 105 - Orange
	155-159   LEE 021 - Gold amber
	160-164   LEE 778 - Millennium gold
	165-169   LEE 135 - Deep gold amber
	170-174   LEE 164 - Flame red
	175-179   Open
Color wheel rotation effect	
180-201   Clockwise, fast to slow	
202-207   Stop (this will stop wherever the color is at the time)	
208-229   Counter-clockwise, slow to fast	
230-234   Open	
Random color	
235-239   Fast	
240-244   Medium	
245-249   Slow	
250-255   Open	
Ch 14	Zoom
	000-255  →  → 

## **5. Troubleshooting**

**Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:**

### **A. The unit does not work, no light and the fan does not work**

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED.

### **B. Not responding to DMX controller**

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.
6. Ensure all DMX cables are in good working order.
7. Each DMX chain must be terminated (CABL89 or CABL90)

### **C. One of the channels is not working well**

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

## **6. Fixture Cleaning**

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimise light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

## Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55103-1: 2009 ; EN55103-2: 2009; EN62471: 2008;  
EN61000-3-2: 2006 + A1:2009 + A2:2009; EN61000-3-3: 2008.

&

Harmonized Standard

EN60598-2-17:1989 + A2:1991; EN60598-1:2008+ A11: 2009  
Safety of household and similar electrical appliances  
Part 1: General requirements

**English**



### ***Correct Disposal of This Product (Waste Electrical & Electronic Equipment)***

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.