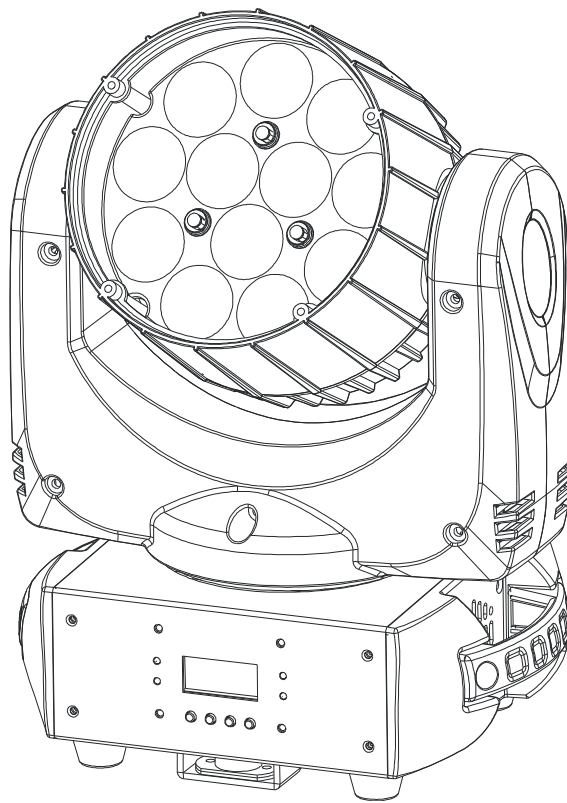


CORE



COUGAR 12Z

User Manual

Please read the instruction carefully before using

CONTENTS

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1. Safety Instructions



WARNING

Please read carefully the instruction, which includes important information about the installation, usage and maintenance.



DANGER!
Safety hazard.
Risk of severe injury or death.



DANGER!
Hazardous voltage. Risk of lethal or severe electric shock.



WARNING!
Fire hazard.



WARNING!
LED light emission. Risk of eye injury.



WARNING!
Burn hazard. Hot surface. Do not touch.



WARNING! Refer to user manual.

- 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.
- Please 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.
- Please disconnect main power before replacement or servicing.

- Please make sure there are no flammable materials close to the unit while operating as it is fire hazard.
- Please 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 Ta: 40°C. DO NOT operate it where the temperature is higher than this.
- Unit surface temperature may reach up to 85°C. 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 authorized 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.

For 230V 50Hz power supply, maximum fixtures that can be connected on one power cable is 8;

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.

Installation:

The unit should be mounted via its screw holes on the bracket. 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 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

- ◇ Compact design, fast and powerful LED moving beam wash
- ◇ DMX512 Control with 14/15 channels mode
- ◇ Perfect strobe with smooth dimming 0~100%
- ◇ Outstanding color macro effect
- ◇ LCD display for easy navigation
- ◇ Low heat with long life span for fixture and LEDs

◇Ideal for stage, theatre, TV studio, rental and discotheques

Input Voltage: AC 100V~240V, 50/60Hz

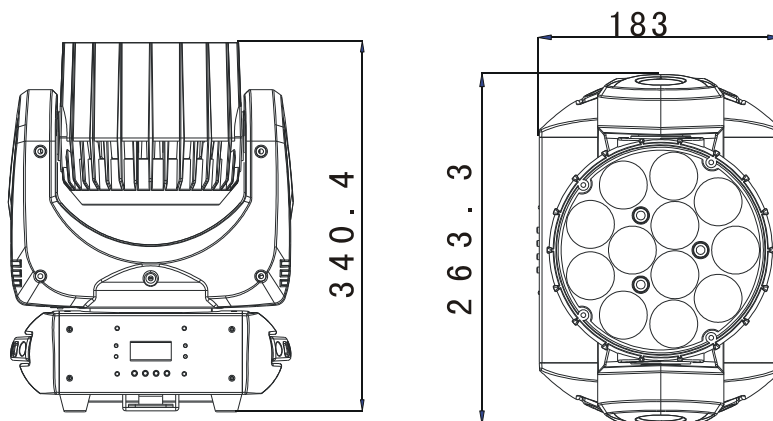
Power Consumption: 198W

LED Sources: OSRAM OSTAR RGBW 12 × 10W LED

Beam Angel: 10°~60°

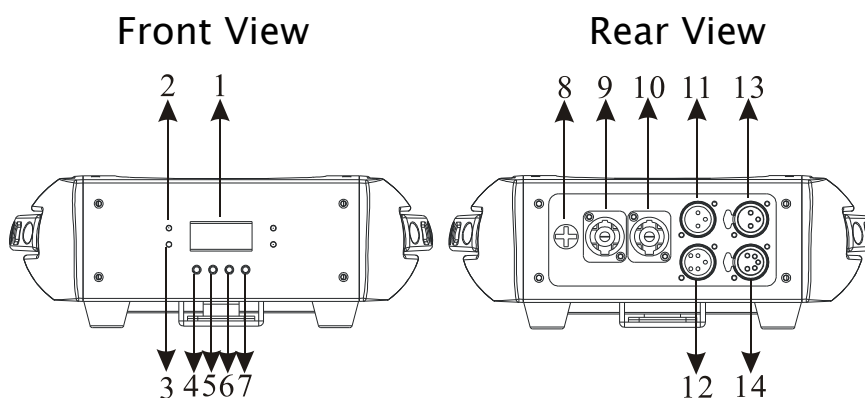
Dimension: 263.3×183×340.4mm

Weight: 7.5Kgs



3. How To Set The Unit

3.1 Control panel



1. Display:

To show the various menus and the selected functions

LED:

| | | |
|-----------------|----|-------------------|
| 2. POWER | On | Power On |
| 3. DMX | On | DMX input present |

Button:

| | |
|-----------------|--|
| 4.MENU | To select the programming functions |
| 5.DOWN | To go backward in the selected functions |
| 6. UP | To go forward in the selected functions |
| 7. ENTER | To confirm the selected functions |

8. Fuse(T 6.3A):

Protect the unit from damage of the over-current.

9. POWERCON IN:

Connect to a socket (AC 100~240V, 50/60Hz) via the supplied mains cable.

10. POWERCON OUT:

Connect to supply power to the next unit.

11 DMX IN (3-pin XLR):

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

12 DMX IN (5-pin XLR):

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

13. DMX OUT (3-pin XLR):

For DMX512 link, use 3-pin XLR cable to link the next unit.

14. DMX OUT (5-pin XLR):

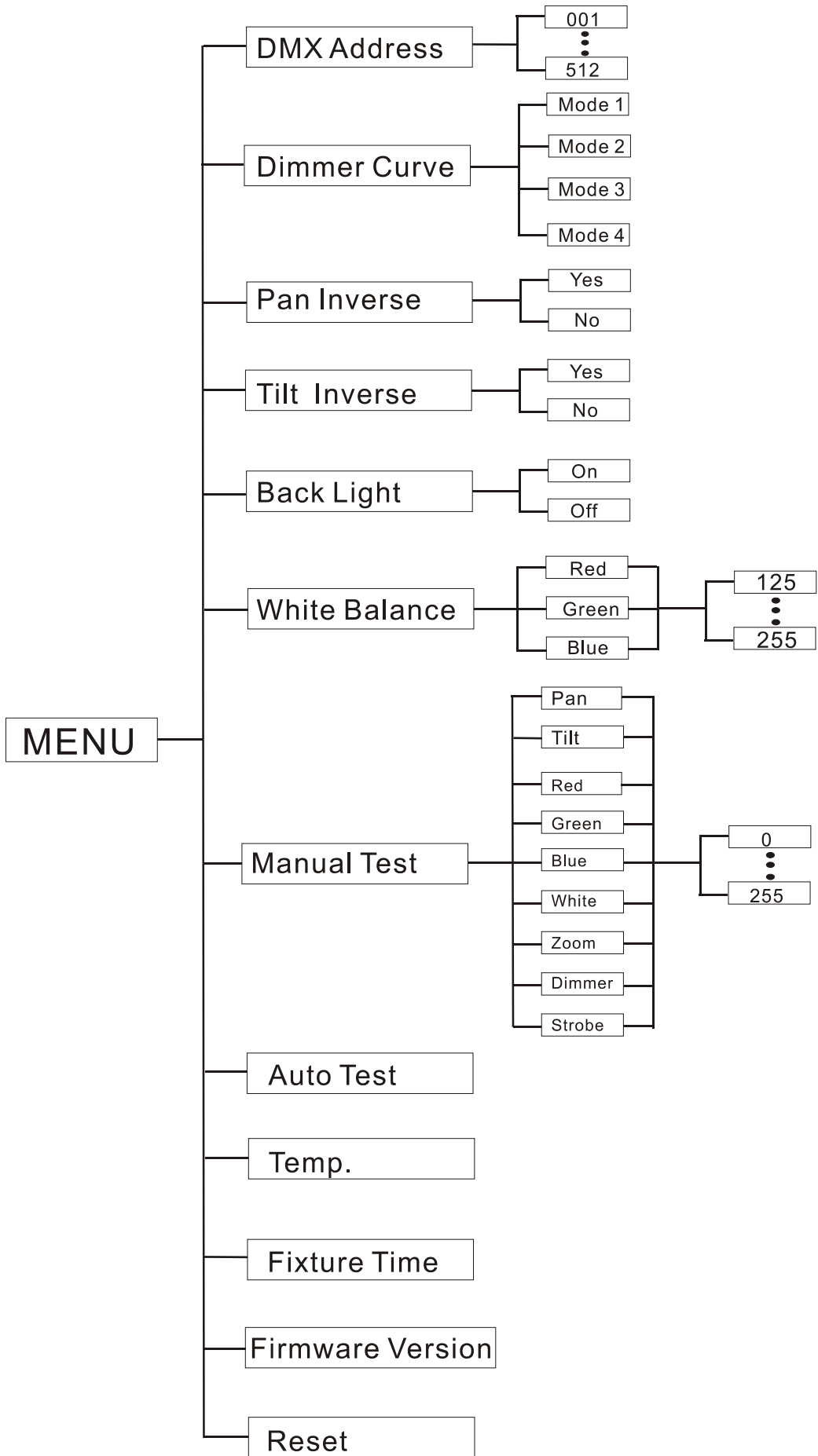
For DMX512 link, use 5-pin XLR cable to link the next unit.

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 the **ENTER** button and the display will blink. Use the **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:

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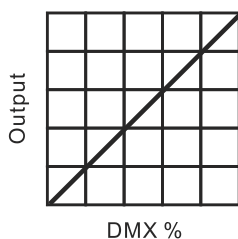
DMX Address

Select **DMX Address**, press the **ENTER** button to confirm, the present address will blink on the display. Use the **UP** and **DOWN** button to adjust the address from **1** to **512**. Once the address 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.

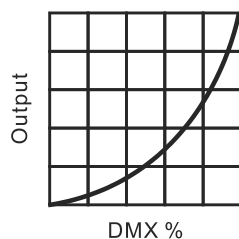
Dimmer curve

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 **Mode 1**, **Mode 2**, **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.

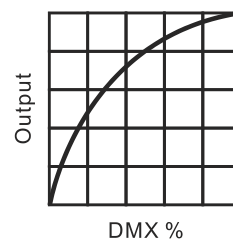
Dimmer Modes



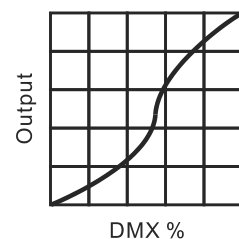
Optically Linear



Square Law



Inverse Square Law



S-curve

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.

Pan Inverse

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

Tilt Inverse

Select **Tilt Inverse**, press the **ENTER** button to confirm, present mode will blink on the display. Use the **DOWN** and **UP** button to select the **Yes** (tilt inversion) or **No** (normal) 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.

Back Light

Select **Back Light**, press the **ENTER** button to confirm, present mode will blink on the display. Use the **DOWN** and **UP** button to select the **On** (LED on) or **Off** (LED off) 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.

White Balance

Select **White Balance**, press the **ENTER** button to confirm, present mode will blink on the display. Use the **DOWN** and **UP** button to select the **Red** or **Green**, **Blue**. Once the mode has been selected, press the **ENTER** button to setup, use the **DOWN** and **UP** button to adjust the value (125~255). Once selected, press the **ENTER** button to setup, 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.

Manual Test

Select **Manual Test**, press the **ENTER** button to confirm, present mode will blink on the display. Use the **DOWN** and **UP** button to select the **Pan / Tilt / Red / Green / Blue / White / Zoom / Dimmer** or **Strobe**. Once you find a function or a color you

wish to test, press the **ENTER** button, use the **DOWN** and **UP** button to adjust the values (0~255). Once finished the test, press the **ENTER** button to save, 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.

Auto Test

Select **Auto Test**, press the **ENTER** button and the unit will run self-test by built-in program. To go back to the functions press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode. (When select Auto Test, the fixture will keep testing until a button is pressed.)

Temp.

Select **Temp.**, press the **ENTER** button and the display will show the temperature of the unit. To go back to the functions press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

Fixture Time

Select **Fixture Time**, press the **ENTER** button and the display will show the number of working hours of the unit. To go back to the functions press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

Firmware Version

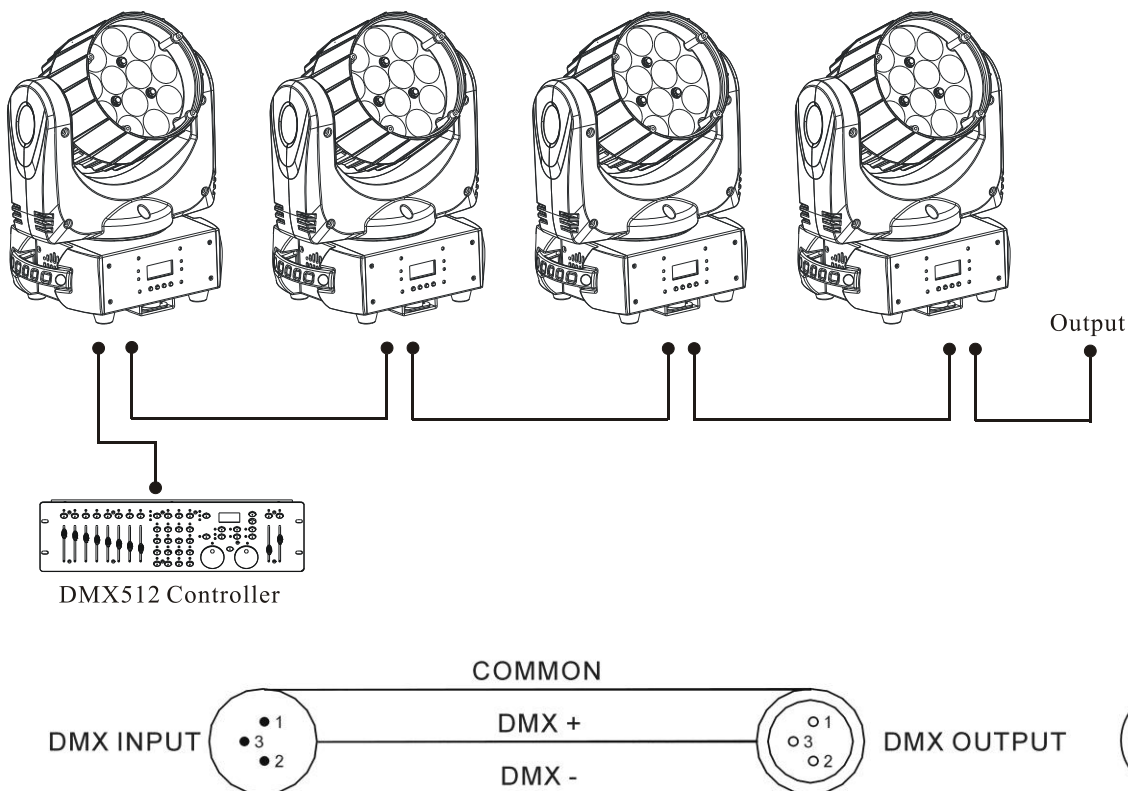
Select **Firmware version**, press the **ENTER** button and the display will show the version of software of the unit. To go back to the functions press the **MENU** button again. Hold and press the **MENU** button about one second or wait for one minute to exit the menu mode.

Reset

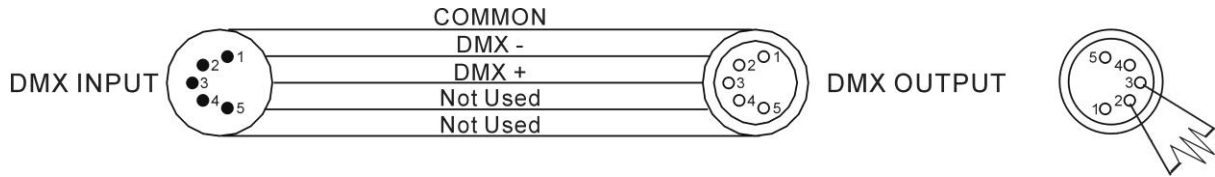
Select **Reset**, press the **ENTER** button and all channels of the unit will return to their standard position.,

4. Control By Universal DMX Controller

4.1 DMX 512 Connection



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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. 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 the *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 001 to 512, press the **ENTER** button to save.

Press the **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 |
|--------------|-------------------|-------------------|-------------------|-------------------|
| 14 channels | 1 | 15 | 29 | 43 |
| 15 channels | 1 | 16 | 31 | 46 |

4.3 DMX 512 Configuration

14 Channels Mode:

| CHANNEL | VALUE | FUNCTION |
|---------|-------------------------------|--|
| 1 | | DIMMER |
| | 000-255 | 0%~100% |
| 2 | | STROBE |
| | 000-019 | Closed |
| | 020-024 | Open |
| | 025-064 | Strobe 1 (fast →slow) |
| | 065-069 | Open |
| | 070-084 | Strobe 2: opening pulse (fast →slow) |
| | 085-089 | Open |
| | 090-104 | Strobe 3: closing pulse (fast →slow) |
| | 105-109 | Open |
| | 110-124 | Strobe 4: random strobe (fast →slow) |
| | 125-129 | Open |
| | 130-144 | Strobe 5: random opening pulse (fast →slow) |
| | 145-149 | Open |
| | 150-164 | Strobe 6: random closing pulse (fast →slow) |
| | 165-169 | Open |
| | 170-184 | Strobe 7: burst pulse (fast →slow) |
| | 185-189 | Open |
| | 190-204 | Strobe 8: random burst pulse (fast →slow) |
| | 205-209 | Open |
| | 210-224 | Strobe 9: sine wave (fast →slow) |
| 225-229 | Open | |
| 230-244 | Strobe 10: burst (fast →slow) | |
| 245-255 | Open | |
| 3 | 000-255 | PAN |
| 4 | 000-255 | PAN FINE |
| 5 | 000-255 | TILT |
| 6 | 000-255 | TILT FINE |
| 7 | 000-255 | PAN/TILT SPEED (000 = fast, 255 = slow) |
| 8 | 000-255 | RED (0% → 100%) |
| 9 | 000-255 | GREEN (0% → 100%) |

| | | |
|-----------|---------------------------|------------------------------------|
| 10 | 000-255 | BLUE (0% → 100%) |
| 11 | 000-255 | WHITE (0% → 100%) |
| 12 | | COLOR WHEEL EFFECT |
| | 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 |

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| | | |
|-----------|---------|---|
| | 180-201 | Clockwise, fast → slow |
| | 202-207 | Stop (this will stop wherever the color is at the time) |
| | 208-229 | Counter-clockwise, slow → fast |
| | 230-234 | Open |
| | | Random color |
| | 235-239 | Fast |
| | 240-244 | Medium |
| | 245-249 | Slow |
| | 250-255 | Open |
| 13 | 000-255 | ZOOM (000 = 60° , 255 = 10°) beam |
| 14 | | RESET |
| | 000-009 | No function |
| | 010-014 | Reset entire fixture |
| | 015-255 | No function |

15 Channels Mode:

| CHANNEL | VALUE | FUNCTION |
|----------|---|---|
| 1 | | DIMMER |
| | 000-255 | 0%~100% |
| 2 | | STROBE |
| | 000-019 | Closed |
| | 020-024 | Open |
| | 025-064 | Strobe 1 (fast →slow) |
| | 065-069 | Open |
| | 070-084 | Strobe 2: opening pulse (fast →slow) |
| | 085-089 | Open |
| | 090-104 | Strobe 3: closing pulse (fast →slow) |
| | 105-109 | Open |
| | 110-124 | Strobe 4: random strobe (fast →slow) |
| | 125-129 | Open |
| | 130-144 | Strobe 5: random opening pulse (fast →slow) |
| | 145-149 | Open |
| | 150-164 | Strobe 6: random closing pulse (fast →slow) |
| | 165-169 | Open |
| | 170-184 | Strobe 7: burst pulse (fast →slow) |
| | 185-189 | Open |
| 190-204 | Strobe 8: random burst pulse (fast →slow) | |

| | | |
|----------|---------|--|
| | 205-209 | Open |
| | 210-224 | Strobe 9: sine wave (fast →slow) |
| | 225-229 | Open |
| | 230-244 | Strobe 10: burst (fast →slow) |
| | 245-255 | Open |
| 3 | 000-255 | PAN |
| 4 | 000-255 | PAN FINE |
| 5 | 000-255 | TILT |
| 6 | 000-255 | TILT FINE |
| 7 | 000-255 | PAN/TILT SPEED (000 = fast, 255 = slow) |
| | | PAN/TILT MACRO |
| | 000-007 | Off |
| | 008-015 | Macro 1 |
| | 016-023 | Macro 2 |
| | 024-031 | Macro 3 |
| | 032-039 | Macro 4 |
| | 040-047 | Macro 5 |
| | 048-055 | Macro 6 |
| | 056-063 | Macro 7 |
| | 064-071 | Macro 8 |
| | 072-079 | Macro 9 |
| | 080-087 | Macro 10 |
| | 088-095 | Macro 11 |
| | 096-103 | Macro 12 |
| 8 | 104-111 | Macro 13 |
| | 112-119 | Macro 14 |
| | 120-127 | Macro 15 |
| | 128-135 | Macro 16 |
| | 136-143 | Macro 17 |
| | 144-151 | Macro 18 |
| | 152-159 | Macro 19 |
| | 160-167 | Macro 20 |
| | 168-175 | Macro 21 |
| | 176-183 | Macro 22 |
| | 184-191 | Macro 23 |
| | 192-199 | Macro 24 |
| | 200-207 | Macro 25 |
| | 208-215 | Macro 26 |
| | 216-223 | Macro 27 |

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| | | |
|-----------|-------------------------|-----------------------------|
| | 224-231 | Macro 28 |
| | 232-239 | Macro 29 |
| | 240-247 | Macro 30 |
| | 248-255 | Macro 31 |
| 9 | 000-255 | RED (0% → 100%) |
| 10 | 000-255 | GREEN (0% → 100%) |
| 11 | 000-255 | BLUE (0% → 100%) |
| 12 | 000-255 | WHITE (0% → 100%) |
| 13 | | COLOR WHEEL EFFECT |
| | 000-009 | Open |
| | 010-014 | LEE 790 – Moroccan Pink |
| | 015-019 | LEE 157 – Pink |
| | 020-024 | LEE 332 – Special Rose Pink |
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| | 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 → slow |
| | 202-207 | Stop (this will stop wherever the color is at the time) |
| | 208-229 | Counter-clockwise, slow → fast |
| | 230-234 | Open |
| | | Random color |
| | 235-239 | Fast |
| | 240-244 | Medium |
| | 245-249 | Slow |
| | 250-255 | Open |
| 14 | 000-255 | ZOOM (000 = 60° , 255 = 10°) beam |
| | | RESET |
| 15 | 000-009 | No function |
| | 010-014 | Reset entire fixture |
| | 015-255 | No function |

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.

C. Some units don't respond to the easy controller

1. You may have a break in the DMX cabling. Check the LED for the response of the master/ slave mode signal.
2. Wrong DMX address in the unit. Set the proper address.

6. Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize 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

EN60598-1:2008 + All:2009; EN60598-2-17:1989 + A2:1991;

EN62471:2008; EN62493: 2010

Safety of household and similar electrical appliances

Part 1: General requirements

CORE THE HEART OF LIGHTING

