# ACME®

# BRIGHT

# CONTENTS

# 1. Safety Instructions



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

**WARNING**

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

**Important:**

**Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.**

- Unpack and check carefully to ensure that there is no transportation damage before using the unit.
- This product is for indoor use only. Use only in a dry location.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots is blocked, otherwise the unit will be overheated.
- Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature TA: 0℃. Maximum ambient temperature TA: 40℃. Do not operate this product at a lower or higher temperature.
- DO NOT connect the device to any dimmer pack.
- Keep flammable materials away from the fixture while operating to avoid fire hazard.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to 65℃. DO NOT touch the housing bare-handed during its operation.
- Avoid any flammable liquids, water or metal from entering the unit. Once it happens, cut off the mains power immediately.

- DO NOT operate in a dirty or dusty environment. DO clean the fixture regularly.

- DO NOT touch any wire during operation as there might be a hazard of electric shock.

- Avoid entanglement of the power cord with other wires.

- The minimum distance to objects/surface must be more than 0.5 meters.

- In the event of serious operating problem, stop using the unit immediately.

- Never turn on and off the unit time after time.

- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.

- DO NOT open the housing as there are no user serviceable parts inside.

- DO NOT attempt to operate this unit if it becomes damaged. DO NOT attempt any repairs yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.

- Disconnect this product from its power source before servicing.

- DO use the original packaging if the device is to be transported.

- Avoid direct eye exposure to the light source while the product is on.

- DO NOT operate this product if you see damage on the housing, shields, or cables. Have the damaged parts replaced by an authorized technician at once.

## 2. Technical Specifications

**Power Voltage:**

180-240V~ 50/60Hz

**Power Consumption:**

155W

**Light Source:**

36x12W RGBW LED

**Beam Angle:**

2°

**Dimmer/Shutter:**

Smooth dimmer from 0-100%; outstanding variable speed strobe effect

**Control:**

DMX Channel: 147/17/11/4/44/144 Channels

Control Mode: DMX512, RDM

Firmware Upgrade via DMX link

**Construction:**

Display: OLED display

Data In/Out: 3-pin XLR (5-pin XLR is optional)

Power In/Out: Power Connector in/out

Protection Rating: IP20

**Features:**

Compact design, light in weight

Multiple units can be split-jointed horizontally with connecting board

LED can be controlled pixel by pixel, delivering versatile effects

**Dimensions/ Weight:**

500x152x500mm, 12.6kgs

19.7"x6"x19.7"in, 27.8lbs
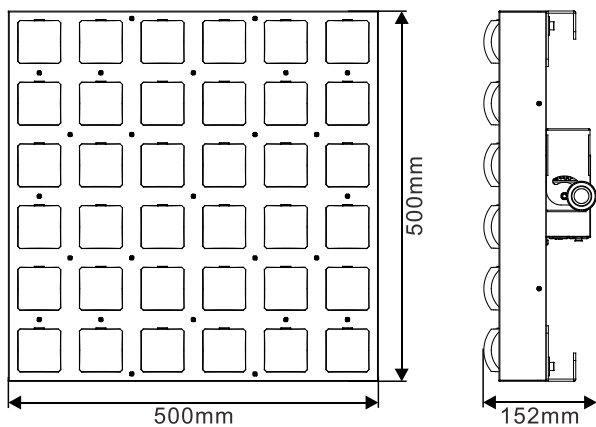


**Photometric Diagram:**
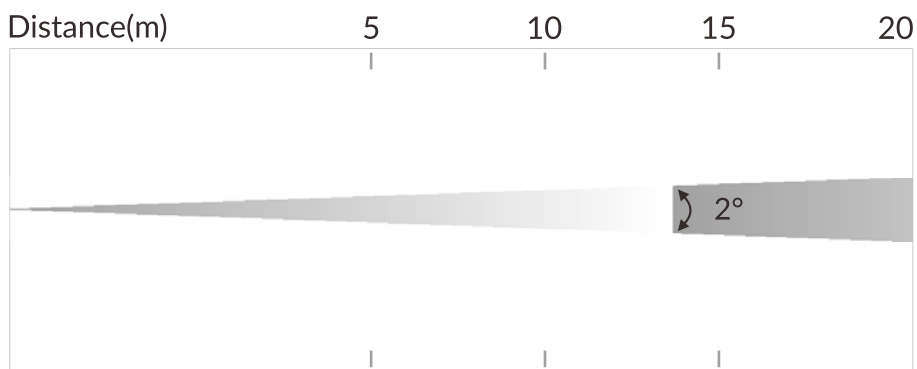


| Distance(m) | 5 | 10 | 15 | 20 |
|---|---|---|---|---|
| 2° R Lux | 1544 | 386 | 172 | 96.5 |
| 2° G Lux | 2064 | 516 | 229 | 129 |
| 2° B Lux | 512 | 128 | 57 | 32 |
| 2° W Lux | 5748 | 1437 | 639 | 359 |
| Diameter(m) | 0.17 | 0.35 | 1.05 | 1.4 |

# 3. Control Panel
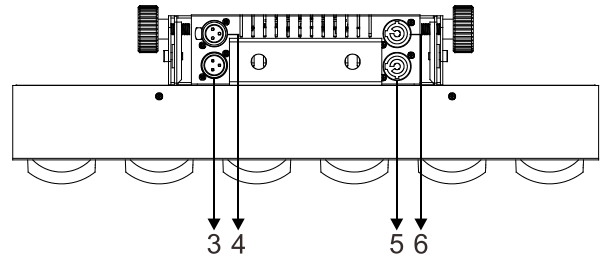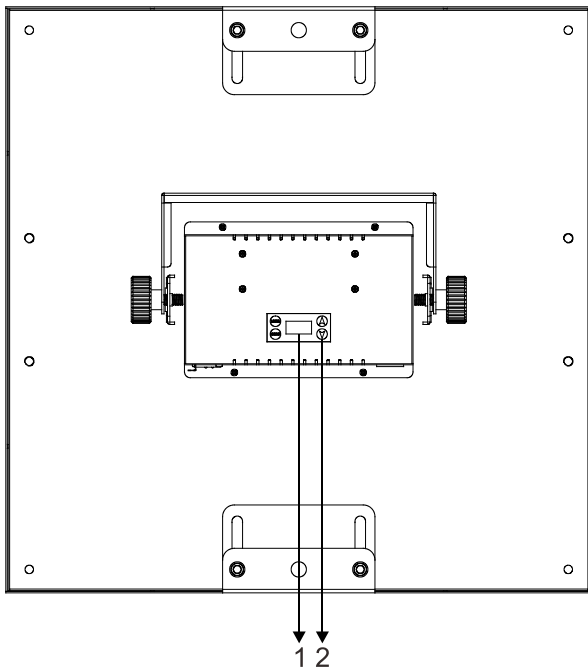


**1. Display:** To show the various menus and the selected function

**2. Button:**

| MENU | To enter into move backward or leave the menu |
|------|-----------------------------------------------|
| ▲ UP | To go backward to move up in the menu |
| ▼ DOWN | To go forward to move down in the menu |
| ENTER | To perform the desired functions |

**3. DMX IN:**

For DMX512 link, use 3-pin XLR cable to link the unit and DMX controller (5-pin XLR is optional)

**4. DMX OUT:**

For DMX512 link, use 3-pin XLR cable to link the next units (5-pin XLR is optional)

**5. POWERCON IN:** Connects to supply power

**6. POWERCON OUT:** Connects to the next fixture

# 4. Installation

The fixture should be fixed on the clamp. Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always install a safety cable that can hold at least 12 times the weight of the fixture when installing.

DO install and operate by qualified operator. It must be installed in a place where there is out of the reach of people.

**1. Installation parallel to the plane**

As shown in the figure, fix the clamp (B) on the hanger of the fixture by using screws and nuts (A) and lock the clamp (B) on the truss.
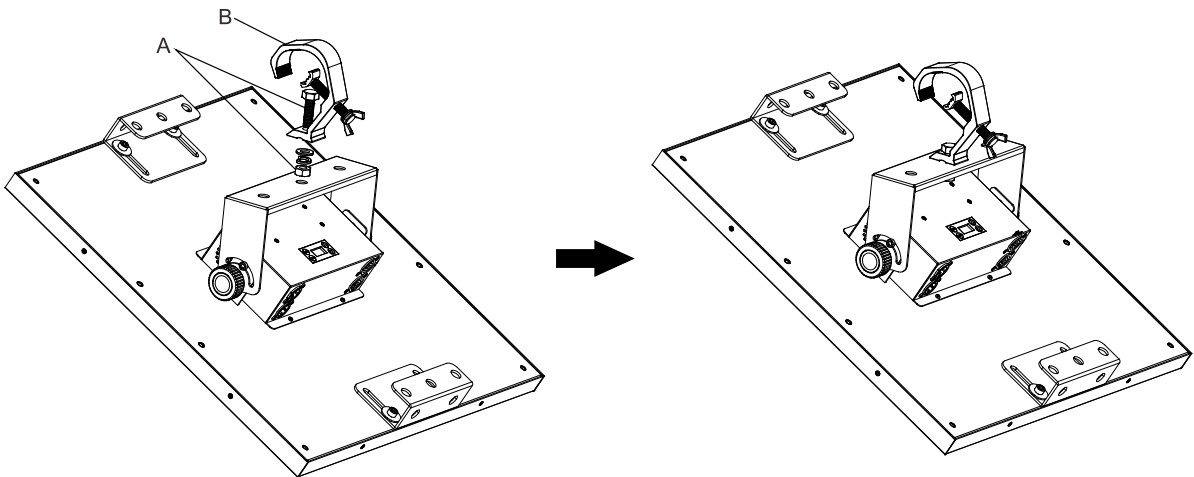


**2. Installation vertical to the plane**

As shown in the figure, fix the clamp (C) on the splicing plate (A) of the fixture by using screws and nuts (B) and lock the clamp (C) on the truss.
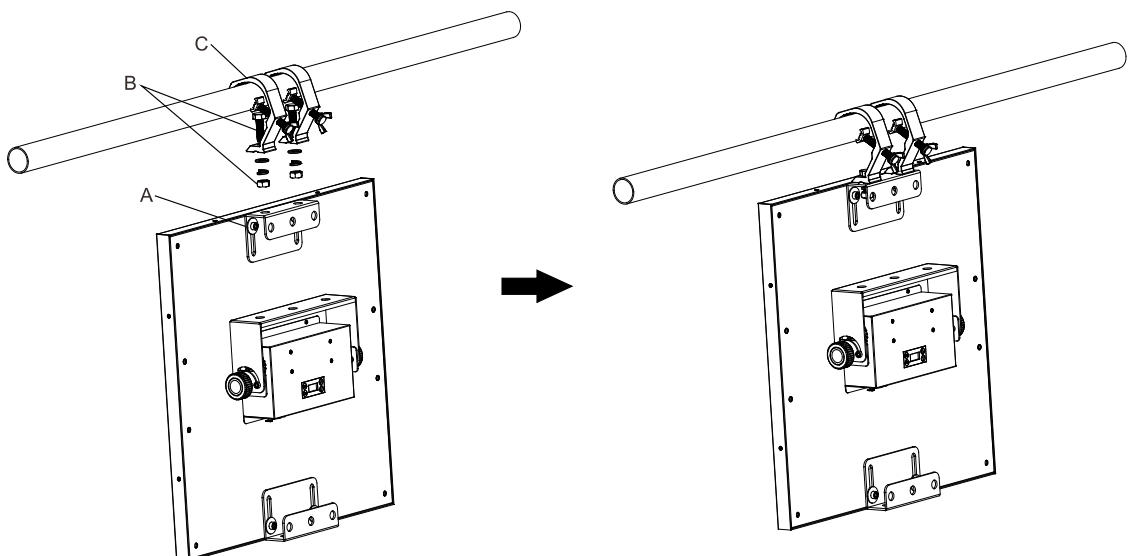
## 3. Multi-machine assembly

As shown in the figure, loosen the screws (A) of the splicing plate of the fixture. Then join the fixtures together in pairs and move the splicing plate, tighten the screws and fix them on the two fixtures; Fix the connecting plate (B) on the four corners of the fixtures by using screws and nuts so that the fixtures are spliced and fastened to each other; Fix the clamp (D) on the splicing plate of the fixture by using screws and nuts (C) and lock the clamp (D) on the truss.
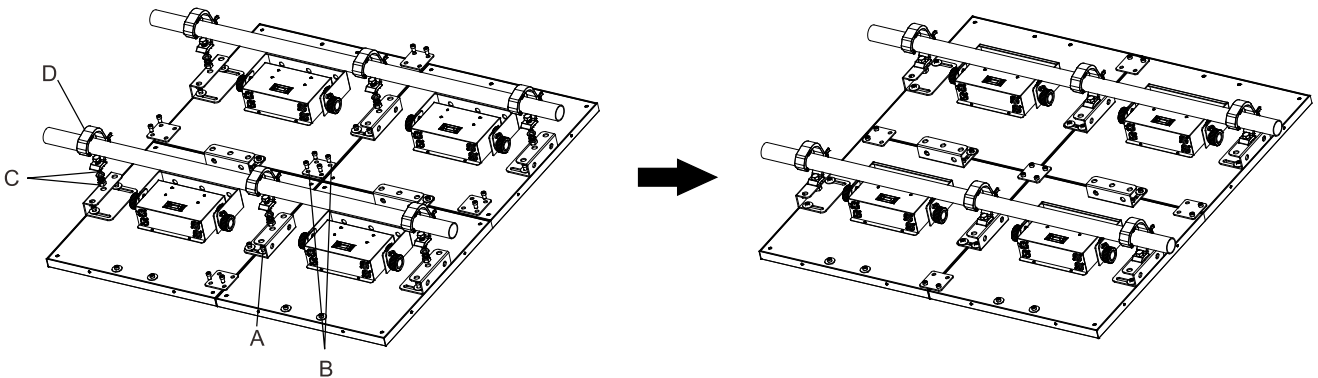


## 5. How To Set The Unit

## 5.1 Main Function

Turn on the unit, press the MENU button into menu mode, and press the UP/DOWN button until the required function is shown on the monitor. Select the function by pressing the ENTER button. Use the UP/DOWN button to choose the submenu, press the ENTER button to store and automatically return to the last menu. Press the MENU button or let the unit idle 30 seconds to exit menu mode.

The main functions are shown below:

MENU

**DMX Settings**
- DMX Address
  - 1
  - 366
  - 496
  - 502
  - 509
  - 469
  - 369
- Channel Mode
  - Mode1(147)
  - Mode2(17)
  - Mode3(11)
  - Mode4(4)
  - Mode5(44)
  - Mode5(144)
- No DMX State
  - Hold
  - Blackout
  - Manual
- View DMX Value

**Fixture Settings**
- Dimmer Curve
  - Linear
  - Square Law
  - Inv SQ Law
  - S Curve
- Dimmer Speed
  - Fast
  - Smooth
- White Balance
  - Red
  - Green
  - Blue → 125-255
  - Red1
  - Blue36

**Display Settings**
- Display Invert → No/Yes
- Temperature Unit → °C/°F
- Language
  - English
  - Chinese

**Fixture Test**
- Auto Test
- Manual Test
  - Mode → Mode1
  - Clear → No/Yes
  - Red1
  - Green1
  - Blue1
  - White1 → 0-255
  - Red2
  - White36
  - • • •
    - Mode → Mode2
    - Clear → No/Yes
    - Red
    - Green
    - Blue
    - White
    - Color → 0-255
    - Mode
    - Effect
    - Strobe
    - Dimmer

**Information**
- Fixture Use Hour
- LED Use Hour
  - Total LED Hour
  - LED On Hour
  - LED Hours Reset
    - No
    - Yes → Password=050
- Temperature → LED
  - Current
  - Max Temp
- Firmware Version
- RDM UID
- Error Logs
  - Fixture Errors
  - Reset Error Log
    - No
    - Yes → Password=050

**Factory Restore**
- No
- Yes

## DMX Settings

To select **DMX Settings,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **DMX Address, Channel Mode, No DMX State** or **View DMX Value.**

### DMX Address

To select **DMX Address**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to adjust the address from **001** to **366/496/502/509/469/369**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

### Channel Mode

To select **Channel Mode**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Mode1(147), Mode2(17), Mode3(11), Mode4(4), Mode5(44)** or **Mode6(144)**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

### No DMX State

To select **No DMX State**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Hold**(fixture continues to obey the last command it received Via DMX if DMX signal stops), **Blackout**(fixture blacks out if DMX signal stops), or **Manual**(the fixture will automatically read the DMX value in the "Manual Test" menu for operation after selecting this mode), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

### View DMX Value

To select **View DMX Value**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to view the DMX channel value. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

## Fixture Settings

To select **Fixture Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Dimmer Curve, Dimmer Speed** or **White Balance.**

### Dimmer Curve

To select **Dimmer Curve**, press the **ENTER** button to confirm. Use the **DOWN/UP** button to select **Linear, Square Law, Inv SQ Law** or **S Curve**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

## Dimmer Modes



| Optically Linear | Square Law | Inverse Square Law | S-curve |

**Optically Linear:** The increase in light intensity appears to be linear as DMX value is increased.

**Square Law:** Light intensity control is finer at low levels and coarser at high levels.

**Inverse Square Law:** Light intensity control is coarser at low levels and finger at high levels.

**S-Curve:** Light intensity control is finger at low levels and high levels and coarser at medium levels.

### Dimmer Speed

To select **Dimmer Speed**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Fast** or **Smooth**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

### White Balance

To select **White Balance**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Red, Green, Blue, Red1, Green1, Blue1……** or **Red36, Green36, Blue36,** press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

## Display Settings

To select **Display Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Display Invert, Temperature Unit** or **Language.**

### Display Invert

Select **Display Invert**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP/DOWN** button to select **No** (normal display) or **Yes** (invert display), press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

### Temperature Unit

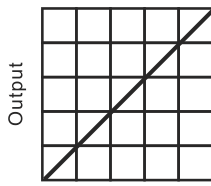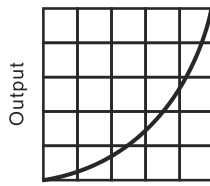Select **Temperature Unit**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select ℃ or ℉, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.
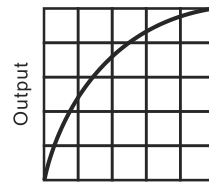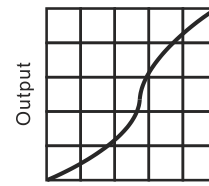
**Language**

Select **Language**, press the **ENTER** button to confirm, present mode will blink on the display, use the **UP**/**DOWN** button to select **English** or **Chinese**. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

## *Fixture Test*

To select **Fixture Test**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **Auto Test** or **Manual Test**

**Auto Test**

Select **Auto Test**, press the **ENTER** button to confirm, the unit will run built-in programs to automatically test its functions. Press the **MENU** button back to the last menu or exit menu mode after auto test.

**Manual Test**

Select **Manual Test**, press the **ENTER** button to confirm, the present channel will show on the display, use the **UP**/**DOWN** button to select channel, press the **ENTER** button to confirm, then use the **UP**/**DOWN** button to adjust the value, press the **ENTER** button to store, the fixture will run as the channel value indicates. Press the **MENU** button back to the last menu or exit menu mode idling 30 seconds.

(The fixture will return to the previous DMX state after exiting Manual Test menu and the Manual Test parameters will be automatically saved after power off and restart.)

## *Information*

To select **Information**, press the **ENTER** button to confirm, use the **UP**/**DOWN** button to select **Fixture Use Hour, LED Use Hour,Temperatue, Firmware Version, RDM UID** or **Error Logs.**

**Fixture Use Hour**

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

**LED Use Hour**

To select **LED Use Hour**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Total LED Hour, LED On Hour** or **LED Hours Reset**, press the **ENTER** button to store. Select **LED Hours Reset**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No** or **Yes**, press the **ENTER** button to store. Select **Yes**, press the **ENTER** button to confirm, use the **UP/DOWN** button to set the password **050** to reset the LED hours, press the **ENTER** button to store. Press the **MENU** button back to the last menu or exit menu mode let the unit idle 30 seconds.

**Temperature**

Select **Temperature**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **LED**, press the **ENTER** button to confirm, the current temperature and max temperature of the unit will show on the display, press the **MENU** button to exit.

**Firmware Version**

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

**RDM UID**

Select **RDM UID**, press the **ENTER** button to confirm, RDM UID will show on the display, press the **MENU** button back to exit.

**Error Logs**

Select **Error Logs**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **Fixture Errors** or **Reset Error Log**, press the **ENTER** button to store. Select **Reset Error Log**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to select **No** or **Yes**, press the **ENTER** button to store. Select **Yes**, press the **ENTER** button to confirm. Use the **UP/DOWN** button to set the password **050**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

## *Factory Restore*

Select **Factory Restore,** press the **ENTER** button to confirm, use the **UP/DOWN** button to select **No** (normal) or **Yes** (the fixture will reset to factory settings), press **ENTER** button to store. Press the **MENU** button to exit.

## *RDM FUNCTIONS*

Select the MANUFACTURER menu to display the manufacturer of the fixture.

Select the SOFTWARE VERSION menu and the program version number of the fixture will be displayed.

Select the DMX START ADDRESS menu to change the DMX512 address (001-512).

Select the DEVICE MODEL DESCRIPTION menu to display the model of the fixture.

Select the DEVICE LABEL menu to change the model of the fixture.

Select the DMX PERSONALITY menu to set the channel mode of the fixture (147/17/11/4/44/144 channel).

Select the DMX PERSONALITY DESCRIPTION menu to display the current channel mode of the fixture.

Select the DEVICE HOURS menu to display the running time of the fixture.

## 5.2 Home Position Adjustment

Press the MENU button into menu mode, then press the ENTER button for about 3 seconds into offset mode to adjust the home position. Select the function by pressing the ENTER button. Use the UP/DOWN button to choose the submenu, press the ENTER button to store and automatically return to the last menu. Press MENU button to exit.
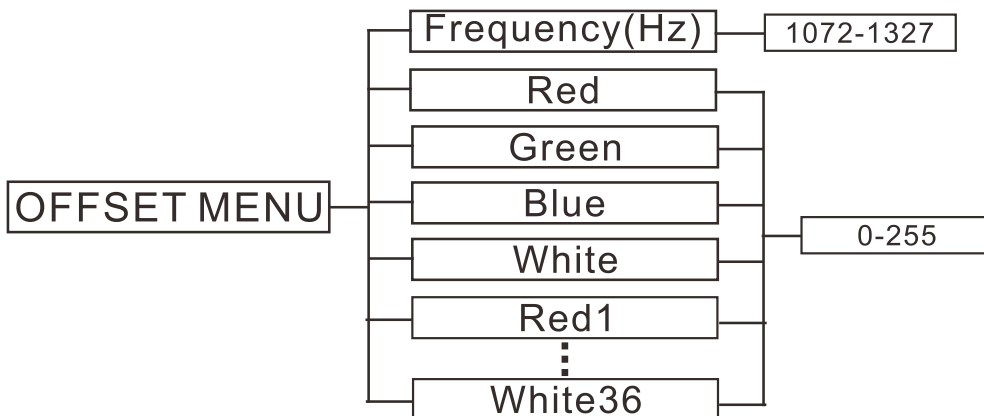


**Frequency(Hz)**

Enter offset mode, select **Frequency(Hz)**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 1072 to 1327, press the **ENTER** button to store. Press the **MENU** button to exit.

**Red**

Enter offset mode, select **Red**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

**Green**

Enter offset mode, select **Green**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

**Blue**

Enter offset mode, select **Blue**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

**White**

Enter offset mode, select **White**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

**Red1**

Enter offset mode, select **Red1**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

……

**White 36**

Enter offset mode, select **White 36**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

## 6. Control By Universal DMX Controller

## 6.1 DMX512 Connection
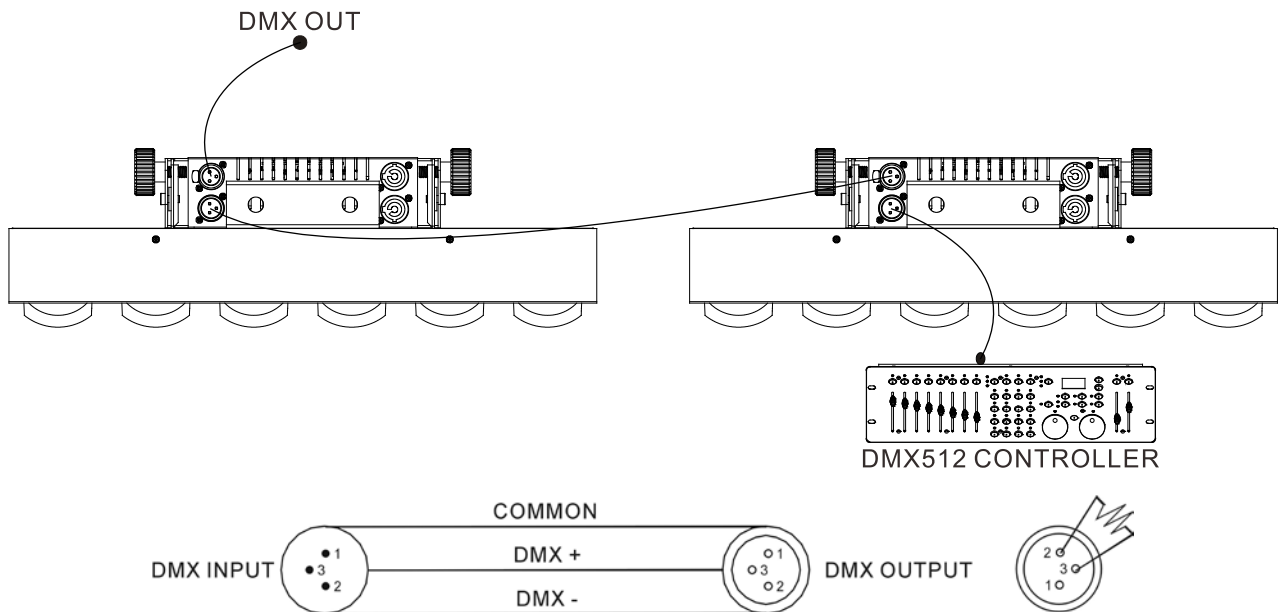


1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.

2. Connect the unit together in a "daisy chain" by XLR plug cable from the output of the unit to the input of the next unit. The cable can only be used in series and cannot be connected in parallel. 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.

3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units' power is disconnected.

4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 1-512.

5. The end of the DMX 512 system should be terminated to reduce signal errors.

6. 3 pin XLR connectors are more popular than 5 pins 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 (+), Pin4, Pin5 not used.

## 6.2 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 the MENU button to enter menu mode, select DMX Settings, press the ENTER button to confirm, use the UP/DOWN button to select DMX Address, press the ENTER button to confirm, the present address will blink in the display, use the UP/DOWN button to adjust the address from 001 to 512, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle 30 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 |
|---|---|---|---|---|
| 147 channels | 1 | 148 | 295 | 442 |
| 17 channels | 1 | 18 | 35 | 52 |
| 11 channels | 1 | 12 | 23 | 34 |
| 4 channels | 1 | 5 | 9 | 13 |
| 44 channels | 1 | 45 | 89 | 133 |
| 144 channels | 1 | 145 | 289 | 433 |

## 6.3 DMX512 Configuration

Please control the fixture by referring to the configurations below

**Attentions:**

1. The unit will maintain the last condition until reset if you cut-off the DMX signal.

2. For the channel Function, keep the value for about 3 seconds, then the corresponding function will take into effect.

**147 Channels (Mode 1):**

| CHANNEL | VALUE | FUNCTION |
|---|---|---|
| 1 | 000-255 | **RED1**<br>0%→100% |
| 2 | 000-255 | **GREEN1**<br>0%→100% |
| 3 | 000-255 | **BLUE1**<br>0%→100% |
| 4 | 000-255 | **WHITE1**<br>0%→100% |
| 5 | 000-255 | **RED2**<br>0%→100% |
| 6 | 000-255 | **GREEN2**<br>0%→100% |
| 7 | 000-255 | **BLUE2**<br>0%→100% |
| 8 | 000-255 | **WHITE2**<br>0%→100% |
| …… | …… | …… |
| 141 | 000-255 | **RED36**<br>0%→100% |
| 142 | 000-255 | **GREEN36**<br>0%→100% |
| 143 | 000-255 | **BLUE36**<br>0%→100% |
| 144 | 000-255 | **WHITE36**<br>0%→100% |
| 145 | 000-007<br>008-015<br>016-131<br>132-139<br>140-181<br>182-189<br>190-231<br>232-239<br>240-247<br>248-255 | **STROBE**<br>Close<br>Open<br>Strobe from Slow to Fast<br>Open<br>Fast Close Slow Open<br>Open<br>Fast Open Slow Close<br>Open<br>Random Strobe<br>Open |
| 146 | 000-255 | **DIMMER**<br>0%→100% |
| 147 | 000-255 | **DIMMER FINE** |

**17 Channels (Mode 2):**

| CHANNEL | VALUE | FUNCTION |
|---|---|---|
| **1** | 000-255 | **RED (RING 1)**<br>0%→100% |
| **2** | 000-255 | **GREEN (RING 1)**<br>0%→100% |
| **3** | 000-255 | **BLUE (RING 1)**<br>0%→100% |
| **4** | 000-255 | **WHITE (RING 1)**<br>0%→100% |
| **5** | 000-255 | **RED (RING 2)**<br>0%→100% |
| **6** | 000-255 | **GREEN (RING 2)**<br>0%→100% |
| **7** | 000-255 | **BLUE (RING 2)**<br>0%→100% |
| **8** | 000-255 | **WHITE (RING 2)**<br>0%→100% |
| **9** | 000-255 | **RED (RING 3)**<br>0%→100% |
| **10** | 000-255 | **GREEN (RING 3)**<br>0%→100% |
| **11** | 000-255 | **BLUE (RING 3)**<br>0%→100% |
| **12** | 000-255 | **WHITE (RING 3)**<br>0%→100% |
| **13** | | **COLOR MACRO** |
| | 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 |
| | 180-201 | Clockwise Rotation, Fast to Slow |
| | 202-207 | Stop |
| | 208-229 | Counter-clockwise Rotation, Slow to Fast |
| | 230-234 | Open |
| | 235-239 | Random Color: Fast |
| | 240-244 | Random Color: Medium |
| | 245-249 | Random Color: Slow |
| | 250-255 | Open |
| **14** | | **STROBE** |
| | 000-007 | Close |
| | 008-015 | Open |
| | 016-131 | Strobe from Slow to Fast |
| | 132-139 | Open |
| | 140-181 | Fast Close Slow Open |
| | 182-189 | Open |
| | 190-231 | Fast Open Slow Close |
| | 232-239 | Open |
| | 240-247 | Random Strobe |
| | 248-255 | Open |
| **15** | | **DIMMER** |
| | 000-255 | 0%→100% |
| **16** | 000-255 | **DIMMER FINE** |
| **17** | | **SPECIAL FUNCTION** |
| | 000-029 | Null |
| | 030-039 | Dimmer Curve Linear |
| | 040-049 | Dimmer Curve Square Law |
| | 050-059 | Dimmer Curve Inv SQ Law |
| | 060-069 | Dimmer Curve S |

| | | |
|---|---|---|
| | 070-079 | Null |
| | 080-089 | Null |
| | 090-099 | Null |
| | 100-109 | Null |
| | 110-119 | Null |
| | 120-129 | Null |
| | 130-139 | Null |
| | 140-179 | Null |
| | 180-189 | Dimmer Speed Fast |
| | 190-199 | Dimmer Speed Smooth |
| | 200-209 | Null |
| | 210-219 | Null |
| | 220-229 | Null |
| | 230-255 | Null |

**11 Channels (Mode 3):**

| CHANNEL | VALUE | FUNCTION |
|---|---|---|
| **1** | | **RED** |
| | 000-255 | 0%→100% |
| **2** | | **GREEN** |
| | 000-255 | 0%→100% |
| **3** | | **BLUE** |
| | 000-255 | 0%→100% |
| **4** | | **WHITE** |
| | 000-255 | 0%→100% |
| **5** | | **COLOR MACRO** |
| | 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 | |
| | 180-201 | Clockwise Rotation, Fast to Slow | |
| | 202-207 | Stop | |
| | 208-229 | Counter-clockwise Rotation, Slow to Fast | |
| | 230-234 | Open | |
| | 235-239 | Random Color: Fast | |
| | 240-244 | Random Color: Medium | |
| | 245-249 | Random Color: Slow | |
| | 250-255 | Open | |
| **6** | | **MODE** | |
| | 000-047 | Blackout | |
| | 048-095 | Line Effect (see channel 7-1) | |
| | 096-135 | Number 1 to 9 (see channel 7-2) | |
| | 136-175 | Letter A to Z (see channel 7-3) | |
| | 176-215 | Letter a to z (see channel 7-4) | |
| | 216-255 | Blackout | |
| **7-1** | | **LINE EFFECT** | |
| | 000-007 | No Function | |
| | 008-015 | Effect 01 | |
| | 016-023 | Effect 02 | |
| | 024-031 | Effect 03 | |
| | 032-039 | Effect 04 | |
| | 040-047 | Effect 05 | |
| | 048-055 | Effect 06 | |
| | 056-063 | Effect 07 | |
| | 064-071 | Effect 08 | |
| | 072-079 | Effect 09 | |
| | 080-087 | Effect 10 | |
| | 088-095 | Effect 11 | |
| | 096-103 | Effect 12 | |

| | | |
|---|---|---|
| | 104-111 | Effect 13 |
| | 112-119 | Effect 14 |
| | 120-127 | Effect 15 |
| | 128-135 | Effect 16 |
| | 136-143 | Effect 17 |
| | 144-151 | Effect 18 |
| | 152-159 | Effect 19 |
| | 160-167 | Effect 20 |
| | 168-175 | Effect 21 |
| | 176-183 | Effect 22 |
| | 184-191 | Effect 23 |
| | 192-199 | Effect 24 |
| | 200-207 | Effect 25 |
| | 208-215 | Effect 26 |
| | 216-223 | Effect 27 |
| | 224-231 | Effect 28 |
| | 232-239 | Effect 29 |
| | 240-247 | Effect 30 |
| | 248-255 | Effect 31 |
| **7-2** | | **NUMBER 1 to 9** |
| | 000-025 | No Function |
| | 026-048 | Number-0 |
| | 049-071 | Number-1 |
| | 072-094 | Number-2 |
| | 095-117 | Number-3 |
| | 118-140 | Number-4 |
| | 141-163 | Number-5 |
| | 164-186 | Number-6 |
| | 187-209 | Number-7 |
| | 210-232 | Number-8 |
| | 233-255 | Number-9 |
| **7-3** | | **LETTER A to Z** |
| | 000-021 | No Function |
| | 022-030 | Letter-A |
| | 031-039 | Letter-B |
| | 040-048 | Letter-C |
| | 049-057 | Letter-D |
| | 058-066 | Letter-E |
| | 067-075 | Letter-F |
| | 076-084 | Letter-G |
| | 085-093 | Letter-H |
| | 094-102 | Letter-I |
| | 103-111 | Letter-J |
| | 112-120 | Letter-K |
| | 121-129 | Letter-L |
| | 130-138 | Letter-M |
| | 139-147 | Letter-N |

| | 148-156 | Letter-O |
|---|---|---|
| | 157-165 | Letter-P |
| | 166-174 | Letter-Q |
| | 175-183 | Letter-R |
| | 184-192 | Letter-S |
| | 193-201 | Letter-T |
| | 202-210 | Letter-U |
| | 211-219 | Letter-V |
| | 220-228 | Letter-W |
| | 229-237 | Letter-X |
| | 238-246 | Letter-Y |
| | 247-255 | Letter-Z |
| **7-4** | | **LETTER a to z** |
| | 000-021 | No Function |
| | 022-030 | Letter-a |
| | 031-039 | Letter-b |
| | 040-048 | Letter-c |
| | 049-057 | Letter-d |
| | 058-066 | Letter-e |
| | 067-075 | Letter-f |
| | 076-084 | Letter-g |
| | 085-093 | Letter-h |
| | 094-102 | Letter-i |
| | 103-111 | Letter-j |
| | 112-120 | Letter-k |
| | 121-129 | Letter-l |
| | 130-138 | Letter-m |
| | 139-147 | Letter-n |
| | 148-156 | Letter-o |
| | 157-165 | Letter-p |
| | 166-174 | Letter-q |
| | 175-183 | Letter-r |
| | 184-192 | Letter-s |
| | 193-201 | Letter-t |
| | 202-210 | Letter-u |
| | 211-219 | Letter-v |
| | 220-228 | Letter-w |
| | 229-237 | Letter-x |
| | 238-246 | Letter-y |
| | 247-255 | Letter-z |
| **8** | | **STROBE** |
| | 000-007 | Close |
| | 008-015 | Open |
| | 016-131 | Strobe from Slow to Fast |
| | 132-139 | Open |
| | 140-181 | Fast Close Slow Open |
| | 182-189 | Open |

| | 190-231 | Fast Open Slow Close |
| --- | --- | --- |
| | 232-239 | Open |
| | 240-247 | Random Strobe |
| | 248-255 | Open |
| **9** | | **DIMMER** |
| | 000-255 | 0%→100% |
| **10** | 000-255 | **DIMMER FINE** |
| **11** | | **SPECIAL FUNCTION** |
| | 000-029 | Null |
| | 030-039 | Dimmer Curve Linear |
| | 040-049 | Dimmer Curve Square Law |
| | 050-059 | Dimmer Curve Inv SQ Law |
| | 060-069 | Dimmer Curve S |
| | 070-079 | Null |
| | 080-089 | Null |
| | 090-099 | Null |
| | 100-109 | Null |
| | 110-119 | Null |
| | 120-129 | Null |
| | 130-139 | Null |
| | 140-179 | Null |
| | 180-189 | Dimmer Speed Fast |
| | 190-199 | Dimmer Speed Smooth |
| | 200-209 | Null |
| | 210-219 | Null |
| | 220-229 | Null |
| | 230-255 | Null |

**4 Channels (Mode 4):**

| CHANNEL | VALUE | FUNCTION |
| --- | --- | --- |
| **1** | | **RED** |
| | 000-255 | 0%→100% |
| **2** | | **GREEN** |
| | 000-255 | 0%→100% |
| **3** | | **BLUE** |
| | 000-255 | 0%→100% |
| **4** | | **WHITE** |
| | 000-255 | 0%→100% |

**44 Channels (Mode 5):**

| CHANNEL | VALUE | FUNCTION |
|---|---|---|
| 1 | 000-255 | **LED1**<br>0%→100% |
| 2 | 000-255 | **LED2**<br>0%→100% |
| 3 | 000-255 | **LED3**<br>0%→100% |
| 4 | 000-255 | **LED4**<br>0%→100% |
| 5 | 000-255 | **LED5**<br>0%→100% |
| 6 | 000-255 | **LED6**<br>0%→100% |
| 7 | 000-255 | **LED7**<br>0%→100% |
| 8 | 000-255 | **LED8**<br>0%→100% |
| 9 | 000-255 | **LED9**<br>0%→100% |
| 10 | 000-255 | **LED10**<br>0%→100% |
| 11 | 000-255 | **LED11**<br>0%→100% |
| 12 | 000-255 | **LED12**<br>0%→100% |
| 13 | 000-255 | **LED13**<br>0%→100% |
| 14 | 000-255 | **LED14**<br>0%→100% |
| 15 | 000-255 | **LED15**<br>0%→100% |
| 16 | 000-255 | **LED16**<br>0%→100% |
| 17 | 000-255 | **LED17**<br>0%→100% |
| 18 | 000-255 | **LED18**<br>0%→100% |
| 19 | 000-255 | **LED19**<br>0%→100% |

| | | |
|---|---|---|
| **20** | | **LED20** |
| | 000-255 | 0%→100% |
| **21** | | **LED21** |
| | 000-255 | 0%→100% |
| **22** | | **LED22** |
| | 000-255 | 0%→100% |
| **23** | | **LED23** |
| | 000-255 | 0%→100% |
| **24** | | **LED24** |
| | 000-255 | 0%→100% |
| **25** | | **LED25** |
| | 000-255 | 0%→100% |
| **26** | | **LED26** |
| | 000-255 | 0%→100% |
| **27** | | **LED27** |
| | 000-255 | 0%→100% |
| **28** | | **LED28** |
| | 000-255 | 0%→100% |
| **29** | | **LED29** |
| | 000-255 | 0%→100% |
| **30** | | **LED30** |
| | 000-255 | 0%→100% |
| **31** | | **LED31** |
| | 000-255 | 0%→100% |
| **32** | | **LED32** |
| | 000-255 | 0%→100% |
| **33** | | **LED33** |
| | 000-255 | 0%→100% |
| **34** | | **LED34** |
| | 000-255 | 0%→100% |
| **35** | | **LED35** |
| | 000-255 | 0%→100% |
| **36** | | **LED36** |
| | 000-255 | 0%→100% |
| **37** | | **COLOR MACRO** |
| | 000-009 | Open |
| | 010-014 | LEE 164-Flame Red |
| | 015-019 | LEE 135-Deep Gold Amber |
| | 020-024 | LEE 778-Millennium Gold |
| | 025-029 | LEE 021-Gold Amber |
| | 030-034 | LEE 105-Orange |

| | | |
|---|---|---|
| | 035-039 | LEE 179-Chrome Orange |
| | 040-044 | LEE 104-Deep Amber |
| | 045-049 | LEE 100-Spring Yellow |
| | 050-054 | LEE 088-Lime Green |
| | 055-059 | LEE 738-JAS Green |
| | 060-064 | LEE 122-Fern Green |
| | 065-069 | LEE 089-Moss Green |
| | 070-074 | LEE 139-Primary Green |
| | 075-079 | LEE 124-Dark Green |
| | 080-084 | LEE 116-Medium Blue Green |
| | 085-089 | LEE 118-Light Blue |
| | 090-094 | LEE 353-Lighter Blue |
| | 095-099 | LEE 117-Steel Blue |
| | 100-104 | LEE 202-Half CT Blue |
| | 105-109 | LEE 201-Full CT Blue |
| | 110-114 | LEE 161-State Blue |
| | 115-119 | LEE 200-Double CT Blue |
| | 120-124 | LEE 132-Medium Blue |
| | 125-129 | LEE 079-Just Blue |
| | 130-134 | LEE 120-Deep Blue |
| | 135-139 | LEE 071-Tokyo Blue |
| | 140-144 | LEE 181-Congo Blue |
| | 145-149 | LEE 194-Surprise Pink |
| | 150-154 | LEE 345-Fuchsia Pink |
| | 155-159 | LEE 328-Follies Pink |
| | 160-164 | LEE 332-Special Rose Pink |
| | 165-169 | LEE 157-Pink |
| | 170-174 | LEE 790-Moroccan Pink |
| | 175-179 | Open |
| | 180-201 | Clockwise Rotation, Fast to Slow |
| | 202-207 | Stop |
| | 208-229 | Counter-clockwise Rotation, Slow to Fast |
| | 230-234 | Open |
| | 235-239 | Random Color: Fast |
| | 240-244 | Random Color: Medium |
| | 245-249 | Random Color: Slow |
| | 250-255 | Open |
| **38** | | **BACKGROUND COLOR MACRO** |
| | 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 |

27B

| | | |
|---|---|---|
| | 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 |
| | 180-201 | Clockwise Rotation, Fast to Slow |
| | 202-207 | Stop |
| | 208-229 | Counter-clockwise Rotation, Slow to Fast |
| | 230-234 | Open |
| | 235-239 | Random Color: Fast |
| | 240-244 | Random Color: Medium |
| | 245-249 | Random Color: Slow |
| | 250-255 | Open |
| **39** | | **MODE** |
| | 000-047 | Blackout |
| | 048-095 | Line Effect (see channel 40-1) |
| | 096-135 | Number 1 to 9 (see channel 40-2) |
| | 136-175 | Letter A to Z (see channel 40-3) |
| | 176-215 | Letter a to z (see channel 40-4) |
| | 216-255 | Blackout |
| **40-1** | | **LINE EFFECT** |
| | 000-007 | No Function |
| | 008-015 | Effect 01 |
| | 016-023 | Effect 02 |
| | 024-031 | Effect 03 |
| | 032-039 | Effect 04 |

| | | |
|---|---|---|
| | 040-047 | Effect 05 |
| | 048-055 | Effect 06 |
| | 056-063 | Effect 07 |
| | 064-071 | Effect 08 |
| | 072-079 | Effect 09 |
| | 080-087 | Effect 10 |
| | 088-095 | Effect 11 |
| | 096-103 | Effect 12 |
| | 104-111 | Effect 13 |
| | 112-119 | Effect 14 |
| | 120-127 | Effect 15 |
| | 128-135 | Effect 16 |
| | 136-143 | Effect 17 |
| | 144-151 | Effect 18 |
| | 152-159 | Effect 19 |
| | 160-167 | Effect 20 |
| | 168-175 | Effect 21 |
| | 176-183 | Effect 22 |
| | 184-191 | Effect 23 |
| | 192-199 | Effect 24 |
| | 200-207 | Effect 25 |
| | 208-215 | Effect 26 |
| | 216-223 | Effect 27 |
| | 224-231 | Effect 28 |
| | 232-239 | Effect 29 |
| | 240-247 | Effect 30 |
| | 248-255 | Effect 31 |
| | | **NUMBER 1 to 9** |
| | 000-025 | No Function |
| | 026-048 | Number-0 |
| | 049-071 | Number-1 |
| | 072-094 | Number-2 |
| | 095-117 | Number-3 |
| **40-2** | 118-140 | Number-4 |
| | 141-163 | Number-5 |
| | 164-186 | Number-6 |
| | 187-209 | Number-7 |
| | 210-232 | Number-8 |
| | 233-255 | Number-9 |
| | | **LETTER A to Z** |
| | 000-021 | No Function |
| | 022-030 | Letter-A |
| | 031-039 | Letter-B |
| **40-3** | 040-048 | Letter-C |
| | 049-057 | Letter-D |
| | 058-066 | Letter-E |
| | 067-075 | Letter-F |

| | | |
|---|---|---|
| | 076-084 | Letter-G |
| | 085-093 | Letter-H |
| | 094-102 | Letter-I |
| | 103-111 | Letter-J |
| | 112-120 | Letter-K |
| | 121-129 | Letter-L |
| | 130-138 | Letter-M |
| | 139-147 | Letter-N |
| | 148-156 | Letter-O |
| | 157-165 | Letter-P |
| | 166-174 | Letter-Q |
| | 175-183 | Letter-R |
| | 184-192 | Letter-S |
| | 193-201 | Letter-T |
| | 202-210 | Letter-U |
| | 211-219 | Letter-V |
| | 220-228 | Letter-W |
| | 229-237 | Letter-X |
| | 238-246 | Letter-Y |
| | 247-255 | Letter-Z |
| | | **LETTER a to z** |
| | 000-021 | No Function |
| | 022-030 | Letter-a |
| | 031-039 | Letter-b |
| | 040-048 | Letter-c |
| | 049-057 | Letter-d |
| | 058-066 | Letter-e |
| | 067-075 | Letter-f |
| | 076-084 | Letter-g |
| | 085-093 | Letter-h |
| | 094-102 | Letter-i |
| | 103-111 | Letter-j |
| | 112-120 | Letter-k |
| **40-4** | 121-129 | Letter-l |
| | 130-138 | Letter-m |
| | 139-147 | Letter-n |
| | 148-156 | Letter-o |
| | 157-165 | Letter-p |
| | 166-174 | Letter-q |
| | 175-183 | Letter-r |
| | 184-192 | Letter-s |
| | 193-201 | Letter-t |
| | 202-210 | Letter-u |
| | 211-219 | Letter-v |
| | 220-228 | Letter-w |
| | 229-237 | Letter-x |
| | 238-246 | Letter-y |

| | 247-255 | Letter-z |
|---|---|---|
| **41** | | **STROBE** |
| | 000-007 | Close |
| | 008-015 | Open |
| | 016-131 | Strobe from Slow to Fast |
| | 132-139 | Open |
| | 140-181 | Fast Close Slow Open |
| | 182-189 | Open |
| | 190-231 | Fast Open Slow Close |
| | 232-239 | Open |
| | 240-247 | Random Strobe |
| | 248-255 | Open |
| **42** | | **DIMMER** |
| | 000-255 | 0%→100% |
| **43** | 000-255 | **DIMMER FINE** |
| **44** | | **SPECIAL FUNCTION** |
| | 000-029 | Null |
| | 030-039 | Dimmer Curve Linear |
| | 040-049 | Dimmer Curve Square Law |
| | 050-059 | Dimmer Curve Inv SQ Law |
| | 060-069 | Dimmer Curve S |
| | 070-079 | Null |
| | 080-089 | Null |
| | 090-099 | Null |
| | 100-109 | Null |
| | 110-119 | Null |
| | 120-129 | Null |
| | 130-139 | Null |
| | 140-179 | Null |
| | 180-189 | Dimmer Speed Fast |
| | 190-199 | Dimmer Speed Smooth |
| | 200-209 | Null |
| | 210-219 | Null |
| | 220-229 | Null |
| | 230-255 | Null |

**144 Channels (Mode 6):**

| CHANNEL | VALUE | FUNCTION |
|---|---|---|
| 1 | 000-255 | **RED1**<br>0%→100% |
| 2 | 000-255 | **GREEN1**<br>0%→100% |
| 3 | 000-255 | **BLUE1**<br>0%→100% |
| 4 | 000-255 | **WHITE1**<br>0%→100% |
| 5 | 000-255 | **RED2**<br>0%→100% |
| 6 | 000-255 | **GREEN2**<br>0%→100% |
| 7 | 000-255 | **BLUE2**<br>0%→100% |
| 8 | 000-255 | **WHITE2**<br>0%→100% |
| …… | …… | …… |
| 141 | 000-255 | **RED36**<br>0%→100% |
| 142 | 000-255 | **GREEN36**<br>0%→100% |
| 143 | 000-255 | **BLUE36**<br>0%→100% |
| 144 | 000-255 | **WHITE36**<br>0%→100% |

## 7. Error Information

**Error codes are shown continuously in the display when the fixture fails and they will not disappear until the fixture is repaired.**

**1. Led Temp. Error**

Check whether the temperature detecting board is normal.

Check whether the components of the temperature detecting board are damaged.

Check whether the lead on the temperature detecting board is installed in place or disconnected.

**2. LED Too Hot Off**

When the fixture temperature reaches 70℃, it will automatically turn off to protect the fixture.

**3. LED Timeout Use**

## 8. Troubleshooting

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

**A. The unit does not work and no light**

1.   Check the connected power.

2.   Measure the voltage.

3.   Check the power indicator to see whether it can be lit up or not.

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

1.   Check whether the DMX connectors and the DMX cables are connected correctly.

2.   Check whether the DMX address is correctly set.

3.   If the intermittent DMX signal problem occurs, check whether the XLR socket and the signal cable are well connected.

4.   Try it with another DMX controller.

5.   Check whether the DMX cables run near or alongside to the high-voltage cables, which may damage or interfere with the signal circuit.

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

1.   The stepper motor might be damaged or the cable connected to the PCB might be broken.

2.   The motor's drive IC on the PCB might be out of condition.

## 9. Fixture Cleaning

It is absolutely essential that the fixture is kept clean to ensure the maximum light-output and allow the fixture to function reliably throughout its life. The fixture must be cleaned regularly to avoid dust, dirt and smoke-fluid residues building up on or within the fixture. The cleaning frequency depends on the application environment. Clean the fixture immediately if the dust enters it to avoid damage to the optical lens due to excessive dust.

• A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should solvents be used.

• Always dry the parts carefully.

• Clean the external optical lens at least every 20 days.

**Innovation, Quality, Performance**