# 1 

## Oxygen



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## 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 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 50 cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked, otherwise the unit will be overheated.
- 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.
- Minimum ambient temperature TA: $0^{\circ} \mathrm{C}$. Maximum ambient temperature TA: $40^{\circ} \mathrm{C}$.
- DO NOT connect the device to any dimmer pack.
- During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to $50^{\circ} \mathrm{C}$. DO NOT touch the housing bare-handed during its operation.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut
off the mains power immediately.
- DO NOT operate in dirty or dusty environment, do clean fixtures regularly.
- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires together twist other cables.
- The minimum distance between light output and the illuminated surface must be more than 12 meters.
- Disconnect mains power before fuse replacement or servicing.
- Replace fuse only with the same type.
- 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 unit as there are no user serviceable parts inside.
- 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 if needed.
- Disconnect the mains power if the fixture is has not been used for a long time.
- DO use the original packing materials before transporting it again.
- DO NOT look directly at the light while the LED is on.
- DO NOT start on the unit without LED enclosure or when housing is damaged.


## Installation:

The fixture should be mounted via its Omega Quick Release Clamp 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 fixtures weight. Always use a safety cable that can hold 12 times of the weight of the fixture when installing.

The equipment must be installed by professionals. It must be installed in a place where is out of the reach of people and no one can pass by or under it.

## 2. Technical Specifications

## Power Voltage:

AC 100~240V, 50/60Hz
Power Consumption:
340W
Light Source:
7x40W RGBW LED

## Color Temperature:

2500-8000K
Zoom Range:
$6^{\circ} \sim 40^{\circ}$
Movement:
Pan: $540^{\circ}$
Tilt: $270^{\circ}$
Pan/Tilt Resolution: 16bit
Dimmer/Shutter:
Smooth dimming from 0-100\%; outstanding strobe effect with variable speed
Control:
DMX Channel: 17ß7 Channels
Protocols: DMX512, RDM
Firmware Upgrade via DMX link \& USB disk

## 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:
Pixel control, uniform RGBW color mixing and rainbow effect
Motorized liner zoom system
Compact design, small size, fast and silent operation

Dimension/Weight:
$216 \times 165 \times 343 \mathrm{~mm}, 5.3 \mathrm{kgs}$
8.5"x6.5"x13.5"in, 11.7lbs


Photometric Diagram

| Distance(m) | 5 | 10 | 15 | 20 |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |

3. Control Panel

4. Display:

To show the various menus and the selected function
2. Button:

| MENU | To enter into move backward or leave the menu |
| :--- | :--- |
| $\mathbf{A}$ UP | To go backward to move up in the menu |
| $\boldsymbol{\nabla}$ DOWN | To go forward to move down in the menu |
| ENTER | To perform the desired functions |

## 3. Firmware Upgrade:

Used to upgrade the fixture firmware
4. DMXIN:

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

## 5. DMX OUT:

DMX512 link, use 3-pin XLR cable to link the next units (5-pin XLR is optional)
6. POWER IN:

To connect to supply power

## 7. POWER OUT:

To connect to the next fixture

## 4. How To Set The Unit

### 4.1 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 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 one minute to exit menu mode. The main functions are shown below:


## DMX Settings

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

DMX Address
To select DMX Address, press the ENTER button to confirm. Use the UP/DOWN button to adjust the address from 001 to 496/476, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Channel Mode

To select Channel Mode, press the ENTER button to confirm. Use the UP/DOWN button to select Mode1 (17) or Mode2 (37), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute 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 Black Out(fixture blacks out if DMX signal stops) or Hold(fixture continues to obey the last command it received Via DMX if DMX signal stops), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fixture Settings

To select Fixture Settings, press the ENTER button to confirm, use the UP/DOWN button to select Pan Invert, Tilt Invert, P/T Feedback, Fan Mode, Dimmer Curve, Dimmer Speed or White Balance.

## Pan Invert

To select Pan Invert, press the ENTER button to confirm. Use the UP/DOWN button to select No(normal) or Yes(pan invert), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Tilt Invert

To select Tilt Invert, press the ENTER button to confirm. Use the UP/DOWN button to select No(normal) or Yes(tilt invert), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## P/T Feedback

To select P/T Feedback, press the ENTER button to confirm. Use the UP/DOWN button to select Off(Pan or tilt's position will not feedback while out of step) or On(Feedback while pan/tilt out of step), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fan Mode

To select Fan Mode, press the ENTER button to confirm. Use the UP/DOWN button to select Auto(Fan mode keep auto mode) or Silent(Fan mode keep silent mode), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## 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 one minute to exit menu mode.

## Dimmer Modes

##  <br> DMX \%

Optically Linear


DMX \%
Square Law



DMX \%

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(Fast Speed) or Smooth(Slow Speed), press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute 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, Red2, Green2, Blue2 ......Red7, Green7, Blue7, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute 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, Display Warning or Fixture Language.

Display Invert
To select Display Invert, press the ENTER button to confirm, present mode will blink on the display, use the UP/DOWN button to select Off or On, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Temperature Unit
To select Temperature Unit, press the ENTER button to confirm, present mode will blink on the display, use the UP/DOWN button to select ${ }^{\circ} \mathrm{C}$ or ${ }^{\circ} \mathrm{F}$, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Display Warning

To select Display Warning, press the ENTER button to confirm, present mode will blink on the display, use the UP/DOWN button to select Off or On, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fixture Language

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

## Auto Test

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

## Manual Test

To 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 Pan, Pan Fine, Tilt, Tilt Fine, Zoom, Spe. Func., Dimmer, Shutter, Red, Green, Blue, White, CTO, Color and Pixel, press the ENTER button to confirm, then use the UP and 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 one minute.
(All channels value will become 0 after exiting Manual Test menu)

## Information

To select Information, press the ENTER button to confirm, use the UP/DOWN button to select Temperature, Fan State, Fixture Use Hour, LED Use Hour, Upgrade File or Firmware Version.

## Temperature

To select Temperature, press the ENTER button to confirm, fixture temperature will show on the display, press the MENU button to exit.

## Fan State

To select Fan State, press the ENTER button to confirm, present mode will blink on the display, use the UP/DOWN button to select Head or Base, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Fixture Use Hour

To 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, LED use hour will show on the display, press the MENU button to exit.

## Upgrade File

To select Upgrade File, press the ENTER button to confirm, upgrade file will show on the display, press the MENU button to exit.

## Firmware Version

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

## Reset Functions

To select Reset Functions, press the ENTER button to confirm, use the UP/DOWN button to select Pan/Tilt Reset, Effect Reset or All Reset.

Pan/Tilt Reset
To select Pan/Tilt Reset, press the ENTER button to confirm. Use the UP/DOWN button to select No or Yes, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Effect Reset

To select Effect Reset, press the ENTER button to confirm. Use the UP/DOWN button to select No or Yes, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## All Reset

To select All Reset, press the ENTER button to confirm. Use the UP/DOWN button to select No or Yes, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.

## Factory Restore

To 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 restore), 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 DMX 512 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 (17/37 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.
Select the PAN INVERT menu and the fixture will run the pan invert mode.
Select the TILT INVERT menu and the fixture will run the tilt invert mode.
Select the RESET DEVICE menu, the WARM RESET/COLD RESET option will be displayed. When WARM RESET is selected, the fixture will start a warm reset, and exit when COLD RESET is selected.

### 4.2 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 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.


## Pan

Enter offset mode, Select Pan, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from -128 to 127, press the ENTER button to store. Press the MENU button to exit.

## Tilt

Enter offset mode, Select Tilt, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from -128 to 127, press the ENTER button to store. Press the MENU button to exit.

## Zoom

Enter offset mode, Select Zoom, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from - 128 to 127, 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 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red2

Enter offset mode, Select Red2, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red3

Enter offset mode, Select Red3, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red4

Enter offset mode, Select Red4, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red5

Enter offset mode, Select Red5, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red6

Enter offset mode, Select Red6, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Red7

Enter offset mode, Select Red7, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 28 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green1

Enter offset mode, Select Green1, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green2

Enter offset mode, Select Green2, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green3

Enter offset mode, Select Green3, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green4

Enter offset mode, Select Green4, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green5

Enter offset mode, Select Green5, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green6

Enter offset mode, Select Green6, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Green7

Enter offset mode, Select Green7, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue1

Enter offset mode, Select Blue1, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue2

Enter offset mode, Select Blue2, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue3

Enter offset mode, Select Blue3, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue4

Enter offset mode, Select Blue4, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue5

Enter offset mode, Select Blue5, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue6

Enter offset mode, Select Blue6, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## Blue7

Enter offset mode, Select Blue7, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 20 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White1

Enter offset mode, Select White1, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White2

Enter offset mode, Select White2, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White3

Enter offset mode, Select White3, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White4

Enter offset mode, Select White4, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White5

Enter offset mode, Select White5, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White6

Enter offset mode, Select White6, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## White7

Enter offset mode, Select White7, press the ENTER button to confirm, the present position will blink on the display, use the UP/DOWN button to offset the value from 23 to 1000, press the ENTER button to store. Press the MENU button to exit.

## 5. Control By Universal DMX Controller

### 5.1 DMX512 Connection



1. At last unit, the DMX cable has to be terminated with a terminator. Solder a $120-\mathrm{ohm} 1 / 4 \mathrm{~W}$ 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 cannot be branched or split to a " $\gamma$ " 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.
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 0-511 (usually $0 \& 1$ are equal to 1 ).
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.

## . 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 blinking 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 idling let the unit idle one minute to exit menu mode.

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

| Channel mode | Unit 1 <br> Address | Unit 2 <br> Address | Unit 3 <br> Address | Unit 4 <br> Address |
| :---: | :---: | :---: | :---: | :---: |
| 17 channels | 1 | 18 | 35 | 52 |
| 37 channels | 1 | 38 | 75 | 112 |

### 5.3 DMX512 Configuration

Please refer to below configurations to control the fixtures

## 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 5 seconds, then the corresponding function will take into effect.

17 Channels (Mode 1):

| CHANNEL |  | FALUE |
| :---: | :---: | :---: |
| $\mathbf{1}$ | $000-255$ | PANCTION <br> $0^{\circ} \rightarrow 540^{\circ}$ |
| $\mathbf{2}$ | $000-255$ | PAN FINE |
| $\mathbf{3}$ | $000-255$ | TILT <br> $0^{\circ} \rightarrow 270^{\circ}$ |
| $\mathbf{4}$ | $000-255$ | TILT FINE |
| $\mathbf{5}$ | $000-255$ | ZOOM <br> Narrow $\rightarrow$ Wide |
| $\mathbf{6}$ | $000-255$ | DIMMER <br> $0 \% \rightarrow 100 \%$ |


| 7 | 000-255 | DIMMER FINE |
| :---: | :---: | :---: |
| 8 | $\begin{aligned} & 000-007 \\ & 008-015 \\ & 016-131 \\ & 132-139 \\ & 140-181 \\ & 182-189 \\ & 190-231 \\ & 232-239 \\ & 240-247 \\ & 248-255 \end{aligned}$ | SHUTTER <br> Close <br> Open <br> Strobe effect slow to fast Open <br> Fast close slow open, slow to fast Open <br> Fast open slow close, slow to fast Open <br> Random strobe effect, slow to fast Open |
| 9 | 000-255 | $\begin{gathered} \text { Red1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 10 | 000-255 | $\begin{gathered} \text { Green1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 11 | 000-255 | $\begin{gathered} \text { Blue1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 12 | 000-255 | White1 $0 \% \rightarrow 100 \%$ |
| 13 | 000 $001-004$ $005-009$ $010-013$ $014-018$ $019-022$ $023-027$ $028-031$ $032-036$ $037-040$ $041-045$ $046-049$ $050-054$ $055-058$ $059-063$ $064-067$ $068-072$ $073-076$ $077-081$ $082-085$ $086-090$ $091-094$ $095-099$ $100-103$ $104-108$ | Linear CTO Null 8000 K 7900 K 7800 K 7700 K 7600 K 7500 K 7400 K 7300 K 7200 K 7100 K 7000 K 6900 K 6800 K 6700 K 6600 K 6500 K 6400 K 6300 K 6200 K 6100 K 6000 K 5900 K 5800 K 5700 K |


|  | 109-112 | 5600K |
| :---: | :---: | :---: |
|  | 113-117 | 5500K |
|  | 118-121 | 5400K |
|  | 122-126 | 5300K |
|  | 127-130 | 5200K |
|  | 131-135 | 5100K |
|  | 136-139 | 5000K |
|  | 140-144 | 4900K |
|  | 145-148 | 4800K |
|  | 149-153 | 4700K |
|  | 154-157 | 4600K |
|  | 158-162 | 4500K |
|  | 163-166 | 4400K |
|  | 167-171 | 4300K |
|  | 172-175 | 4200K |
|  | 176-180 | 4100K |
|  | 181-184 | 4000K |
|  | 185-189 | 3900K |
|  | 190-193 | 3800K |
|  | 194-198 | 3700K |
|  | 199-202 | 3600K |
|  | 203-207 | 3500K |
|  | 208-211 | 3400K |
|  | 212-216 | 3300K |
|  | 217-220 | 3200K |
|  | 221-225 | 3100K |
|  | 226-229 | 3000K |
|  | 230-234 | 2900K |
|  | 235-238 | 2800K |
|  | 239-243 | 2700K |
|  | 244-247 | 2600K |
|  | 248-255 | 2500K |
| 14 |  | Color Macro |
|  | 000-007 | NULL |
|  | 008-011 | Color1 |
|  | 012-015 | Color2 |
|  | 016-019 | Color3 |
|  | 020-023 | Color4 |
|  | 024-027 | Color5 |
|  | 028-031 | Color6 |
|  | 032-035 | Color7 |
|  | 036-039 | Color8 |
|  | 040-043 | Color9 |
|  | 044-047 | Color10 |
|  | 048-051 | Color11 |
|  | 052-055 | Color12 |
|  | 056-059 | Color13 |


|  | 060-063 | Color14 |
| :---: | :---: | :---: |
|  | 064-067 | Color15 |
|  | 068-071 | Color16 |
|  | 072-075 | Color17 |
|  | 076-079 | Color18 |
|  | 080-083 | Color19 |
|  | 084-087 | Color20 |
|  | 088-091 | Color21 |
|  | 092-095 | Color22 |
|  | 096-099 | Color23 |
|  | 100-103 | Color24 |
|  | 104-107 | Color25 |
|  | 108-111 | Color26 |
|  | 112-115 | Color27 |
|  | 116-119 | Color28 |
|  | 120-123 | Color29 |
|  | 124-127 | Color30 |
|  | 128-131 | Color31 |
|  | 132-135 | Color32 |
|  | 136-165 | Rotate CW Fast to Slow |
|  | 166-195 | Rotate CCW Slow to Fast |
|  | 196-205 | Red $\rightarrow$ Green Fast to Slow |
|  | 206-215 | Red $\rightarrow$ Blue Fast to Slow |
|  | 216-225 | Red $\rightarrow$ White Fast to Slow |
|  | 226-235 | Green $\rightarrow$ Blue Fast to Slow |
|  | 236-245 | Green $\rightarrow$ White Fast to Slow |
|  | 246-255 | Blue $\rightarrow$ White Fast to Slow |
| 15 |  | Pixel |
|  | 000-003 | Open |
|  | 004-007 | Pattern 1 |
|  | 008-011 | Pattern 2 |
|  | 012-015 | Pattern 3 |
|  | 016-019 | Pattern 4 |
|  | 020-023 | Pattern 5 |
|  | 024-027 | Pattern 6 |
|  | 028-031 | Pattern 7 |
|  | 032-035 | Pattern 8 |
|  | 036-039 | Pattern 9 |
|  | 040-043 | Pattern 10 |
|  | 044-047 | Pattern 11 |
|  | 048-051 | Pattern 12 |
|  | 052-055 | Pattern 13 |
|  | 056-059 | Pattern 14 |
|  | 060-063 | Pattern 15 |
|  | 064-067 | Pattern 16 |
|  | 068-071 | Pattern 17 |
|  | 072-075 | Pattern 18 |


|  | 076-079 | Pattern 19 |
| :---: | :---: | :---: |
|  | 080-083 | Pattern 20 |
|  | 084-087 | Pattern 21 |
|  | 088-091 | Pattern 22 |
|  | 092-095 | Pattern 23 |
|  | 096-099 | Pattern 24 |
|  | 100-103 | Pattern 25 |
|  | 104-107 | Pattern 26 |
|  | 108-111 | Pattern 27 |
|  | 112-115 | Pattern 28 |
|  | 116-119 | Pattern 29 |
|  | 120-123 | Pattern 30 |
|  | 124-127 | Pattern 31 |
|  | 128-131 | Pattern 32 |
|  | 132-135 | Pattern 33 |
|  | 136-139 | Pattern 34 |
|  | 140-143 | Pattern 35 |
|  | 144-147 | Pattern 36 |
|  | 148-151 | Pattern 37 |
|  | 152-155 | Pattern 38 |
|  | 156-159 | Pattern 39 |
|  | 160-163 | Pattern 40 |
|  | 164-167 | Pattern 41 |
|  | 168-171 | Pattern 42 |
|  | 172-175 | Pattern 43 |
|  | 176-179 | Pattern 44 |
|  | 180-183 | Pattern 45 |
|  | 184-187 | Pattern 46 |
|  | 188-191 | Pattern 47 |
|  | 192-195 | Pattern 48 |
|  | 196-199 | Pattern 49 |
|  | 200-203 | Pattern 50 |
|  | 204-207 | Pattern 51 |
|  | 208-211 | Pattern 52 |
|  | 212-215 | Pattern 53 |
|  | 216-219 | Pattern 54 |
|  | 220-223 | Pattern 55 |
|  | 224-227 | Pattern 56 |
|  | 228-231 | Pattern 57 |
|  | 232-235 | Pattern 58 |
|  | 236-239 | Pattern 59 |
|  | 240-243 | Pattern 60 |
|  | 244-247 | Random(Pattern 1-7) |
|  | 248-251 | Pattern 61 |
|  | 252-255 | Open |
| 16 | 000-031 | Pixel Rotating NULL |


|  | 032-091 | Rotate CW, fast to slow |
| :---: | :---: | :---: |
| NULL |  |  |
|  | $102-101$ | Rotate CCW, slow to fast |
|  | $162-255$ | NULL |
|  |  | Function |
|  | $000-079$ | Null |
|  | $080-089$ | Dimmer Smooth |
|  | $090-099$ | Dimmer Fast |
| 17 | $100-139$ | Null |
|  | $140-149$ | Pan/Tilt Reset |
|  | $150-159$ | Zoom Reset |
|  | $160-199$ | Null |
|  | $200-209$ | Reset All |
|  | Null |  |
|  |  |  |
|  |  |  |

37 Channels (Mode 2):

| CHANNEL | VALUE | FUNCTION |
| :---: | :---: | :---: |
| 1 | 000-255 | $\underset{0^{\circ} \rightarrow 540^{\circ}}{\text { PAN }}$ |
| 2 | 000-255 | PAN FINE |
| 3 | 000-255 | $\underset{\substack{\text { TILT } \\ 0^{\circ} \rightarrow 270^{\circ}}}{ }$ |
| 4 | 000-255 | TILT FINE |
| 5 | 000-255 | ZOOM <br> Narrow $\rightarrow$ Wide |
| 6 | 000-255 | $\begin{gathered} \text { DIMMER } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 7 | 000-255 | DIMMER FINE |
| 8 | $\begin{aligned} & 000-007 \\ & 008-015 \\ & 016-131 \\ & 132-139 \\ & 140-181 \\ & 182-189 \\ & 190-231 \\ & 232-239 \\ & 240-247 \\ & 248-255 \end{aligned}$ | ShutterCloseOpenStrobe effect slow to fastOpen Fast open slow close, slow to fastOpen <br> Fast close slow open, slow to fast <br> Open <br> Random strobe effect, slow to fast <br> Open |
| 9 | 000-255 | $\begin{gathered} \text { Red1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |


| 10 | 000-255 | $\begin{gathered} \text { Green1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| :---: | :---: | :---: |
| 11 | 000-255 | $\begin{gathered} \text { Blue1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 12 | 000-255 | $\begin{gathered} \hline \text { White1 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 13 | 000-255 | $\begin{gathered} \text { Red2 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 14 | 000-255 | $\begin{gathered} \hline \text { Green2 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 15 | 000-255 | $\begin{gathered} \text { Blue2 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 16 | 000-255 | $\begin{gathered} \text { White2 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 17 | 000-255 | $\begin{gathered} \hline \text { Red3 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 18 | 000-255 | $\begin{gathered} \text { Green3 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 19 | 000-255 | $\begin{gathered} \text { Blue3 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 20 | 000-255 | $\begin{gathered} \text { White3 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 21 | 000-255 | $\begin{gathered} \hline \text { Red4 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 22 | 000-255 | $\begin{gathered} \text { Green4 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 23 | 000-255 | $\begin{gathered} \text { Blue4 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 24 | 000-255 | $\begin{gathered} \hline \text { White4 } \\ 0 \% \rightarrow 100 \% \\ \hline \end{gathered}$ |
| 25 | 000-255 | $\begin{gathered} \text { Red5 } \\ 0 \% \rightarrow 100 \% \\ \hline \end{gathered}$ |
| 26 | 000-255 | $\begin{gathered} \text { Green5 } \\ 0 \% \rightarrow 100 \% \\ \hline \end{gathered}$ |
| 27 | 000-255 | $\begin{gathered} \hline \text { Blue5 } \\ 0 \% \rightarrow 100 \% \\ \hline \end{gathered}$ |
| 28 | 000-255 | $\begin{gathered} \text { White5 } \\ 0 \% \rightarrow 100 \% \\ \hline \end{gathered}$ |
| 29 | 000-255 | $\begin{gathered} \text { Red6 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 30 | 000-255 | $\begin{gathered} \text { Green6 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 31 | 000-255 | $\begin{gathered} \text { Blue6 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |


| 32 | 000-255 | $\begin{gathered} \text { White6 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| :---: | :---: | :---: |
| 33 | 000-255 | $\begin{gathered} \text { Red7 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 34 | 000-255 | $\begin{gathered} \text { Green7 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 35 | 000-255 | $\begin{gathered} \text { Blue7 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 36 | 000-255 | $\begin{gathered} \text { White7 } \\ 0 \% \rightarrow 100 \% \end{gathered}$ |
| 37 | $\begin{aligned} & 000-079 \\ & 080-089 \\ & 090-099 \\ & 100-139 \\ & 140-149 \\ & 150-159 \\ & 160-199 \\ & 200-209 \\ & 210-255 \end{aligned}$ | Function Null Dimmer Smooth Dimmer Fast Null Pan/Tilt Reset Zoom Reset Null Reset All Null |

The display effect of each pattern in 15th channel of channel 17 is as follows:

| * | * | \% | \% | - | (3) | * | (8) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (4) | - | Q | - | - | 0 | \% | - |
| - | \% | - | - | - | - | - | - |
| (4) | 2 | - | - | - | * | (8) |  |
| - | - | - | - | $\checkmark$ | 4 | - | * |
| $\geqslant$ | * | * | - | $\checkmark$ | - | - | 4 |
| $\theta$ | * | - | - | $\pm$ | - | - | - |
| 8 | 4 | - | d | 0 | * | * |  |

## 6. Error Information

## 1. Pan Reset Error

Check if the position of the pan mounting magnetic steel falls off or is damaged.
Check if there are other interference items in the pan operating range.
Check if the pan Hall elements is damaged.
Check if the pan Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the pan motor is damaged.
Check if there is any damage to the circuit of the pan motor drive board.

## 2. Pan Encoder Error

Check if the pan encoder is damaged.
Check if the pan encoder is in poor contact with the lead of the PCB board or disconnected.
3. Tilt Reset Error

Check if the position of the tilt mounting magnetic steel falls off or is damaged.
Check if there are other interference items in the tilt operating range.
Check if the tilt Hall elements is damaged.
Check if the tilt Hall elements is in poor contact with the lead of the PCB board or disconnected.
Check if the tilt motor is damaged.
Check if there is any damage to the circuit of the tilt motor drive board.
4. Tilt Encoder Error

Check if the tilt encoder is damaged.
Check if the tilt encoder is in poor contact with the lead of the PCB board or disconnected.
5. CPU-B/C/D Error

Check whether the 485 (DATA) leads on the PCB board are install in place or disconnected.
Check whether the 485 (DATA) lead is disconnected.
Check whether the relevant signal circuit 485 (DATA) on the PCB-B/C/D board is damaged.
6. BaseFan/HeadFan cannot start

Check if basefan/headfan is not running

## 7. BaseFan/HeadFan cannot stop

Check if the basefan/headfan is still running when the temperature drops to $37^{\circ} \mathrm{C}$.
8. BaseFan/HeadFan speed too fast

Check if the basefan/headfan is out of order.
9. BaseFan/HeadFan speed too slow

Check if the basefan/headfan is out of order.

## 10. Zoom Reset Fail

Check if the position of the zoom mounting magnetic steel falls off or is damaged.
Check if there are other interference items in the zoom operating range.
Check if the zoom Hall elements is damaged.
Check if the zoom Hall elements is in poor contact with the lead of the PCB board or disconnected.

Check if the zoom motor is damaged.
Check if there is any damage to the circuit of the zoom motor drive board.

## 11. LED Temp. Error

Check if the temperature test is normal.
Check if the components of the temperature detecting board are damaged.
Check if the lead of the temperature detecting board is disconnected.

## 12. Led Temp. Too High

Check if the fan is working properly.
Check if the fan speed is normal.
Check if the ambient temperature is abnormal.

## 7. 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 connect power.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

## B. Not responding to DMX controller

1. $D M X$ LED should be on. If not, check $D M X$ connectors, cables to see if they are linked 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 to see if the $D M X$ cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

## 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.

## 8. 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 and use normal glass to clean liquid.
- 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 2014/30/EU.

EN 55032: 2015; EN IEC 61000-3-2: 2019; EN 61000-3-3: 2013; EN 55035: 2017.

## \&

Harmonized Standard

EN 60598-1:2015 + A1: 2018; EN 60598-2-17: 2018; EN 62493: 2015
Safety of household and similar electrical appliances
Part 1: General requirements and tests
Part 2: Particular requirements

