



User Manual

Please read the instruction carefully before use

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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 50cm 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° C. Maximum ambient temperature TA: 40° C.
- DO NOT connect the device to any dimmer pack.
- 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 75℃. 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 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 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 10 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:

85W

Light Source:

12x8W RGBW LED

Beam Angle:

16°

Field Angle:

27°

Control:

DMX channel: 10/8/5/4 Channel

Protocols: 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:

Outstanding color mixing effect

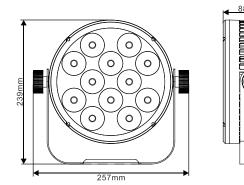
Compact design, small size

Smooth dimming from 0-100%

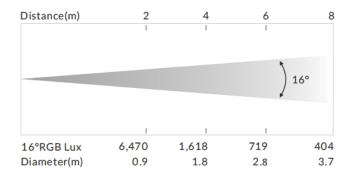
Multiple units can be split-jointed horizontally with buckle design

Dimension/Weight:

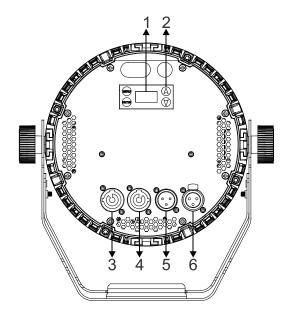
257x88x239mm, 3.3kgs 10.1"x3.5"x9.4"in, 7.3lbs



Photometrics Diagram:



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. POWERCON IN: To connect to supply power

4. POWERCON OUT: To connect to the next fixture

5. DMX IN:

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

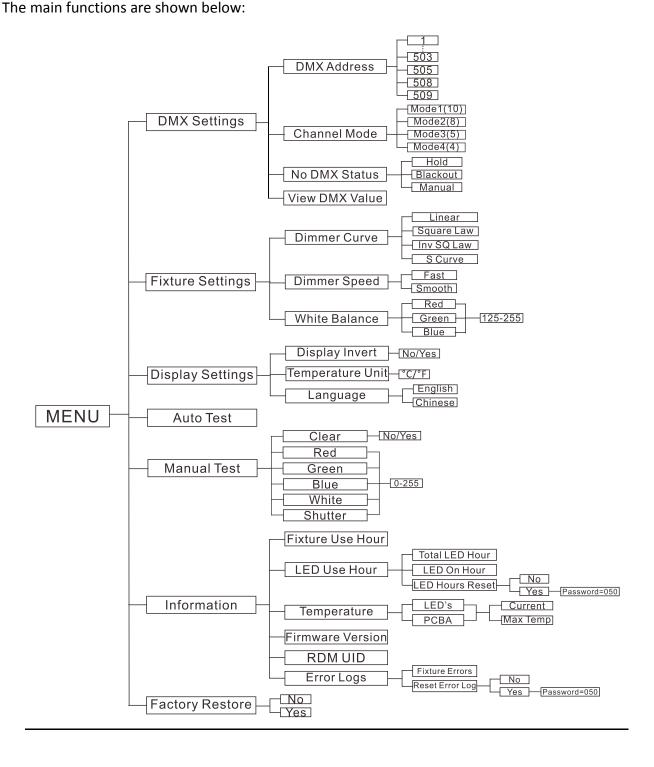
6. DMX OUT:

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

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 30 seconds to exit menu mode.



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 Status** 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 **503/505/508/509**, 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(10)**, **Mode2(8)**, **Mode3(5)** or **Mode4(4)**, 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 Status

To select **No DMX Status**, 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.

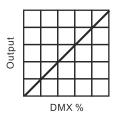
Fixture Settings

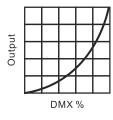
To select **Fixture Settings**, press the **ENTER** button to confirm, use the **UP/DOWN** button to select **Dimmer Curve**, **Dimmer Speed** or **White Balance**.

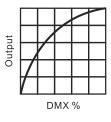
Dimmer Curve

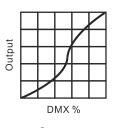
To select **Dimmer Curve**, press the **ENTER** button to confirm. Use the **DOWN/UP** button to select **Linear, Square Law, Inv SQ Law** or **S Curve**, press the **ENTER** button to store. Press the **MENU** button back to the last menu or let the unit idle 30 seconds to exit menu mode.

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** or **Blue**, press the **ENTER** button to store. Use the **UP/DOWN** button to adjust the value from **125** to **255**, 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 $^{\circ}$ C or $^{\circ}$ F, 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.

Auto Test

To 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

To select Manual Test, press the ENTER button to confirm, use the UP/DOWN button to select Clear, Red, Green, Blue, White or Shutter, press the ENTER button to confirm, use the UP/DOWN button to adjust the value from 0 to 255, 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.

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. To 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 confirm. To 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's** or **PCBA**, press the **ENTER** button to confirm, fixture's current temperature and max temperature of the LED or PCBA 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 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 (10/8/5/4 channel).

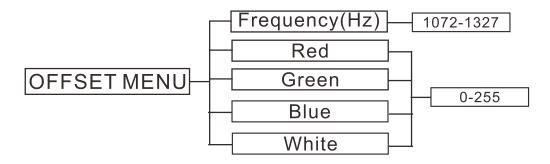
Select the DMX PERSONALITY DESCRIPTION menu to display the current channel mode of the fixture.

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

Select the 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.



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

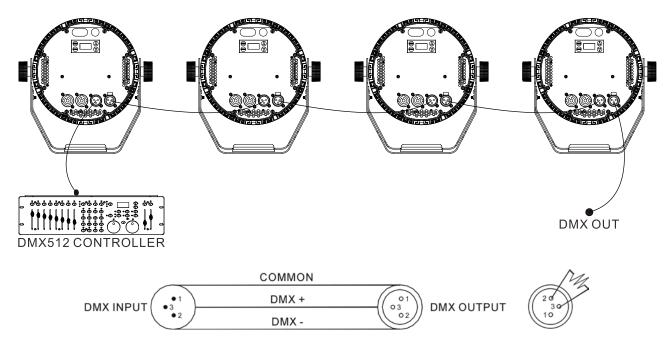
Enter offset mode, select **Blue**, press the **ENTER** button to confirm, the present position will blink on the display, use the **UP/DOWN** button to offset the value from 0 to 255, press the **ENTER** button to store. Press the **MENU** button to exit.

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.

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-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 cannot be 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.
- 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.

5.2 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 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
10 channels	1	11	21	31
8 channels	1	9	17	25
5 channels	1	6	11	16
4 channels	1	5	9	13

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 3 seconds, then the corresponding function will take into effect.

10 Channels (Mode 1):

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

	000-255	0%→100%	
	230 233		
		STROBE	
	000-007	Close	
	008-015	Open	
	016-131	Strobe from Slow to Fast	
	132-139	Open	
5	140-181	Slow Open Fast Close	
	182-189	Open	
	190-231	Fast Open Slow Close	
	232-239	Open	
	240-247	Random Strobe	
	248-255	Open	
6		DIMMER	
· ·	000-255	0%→100%	
7	000-255	DIMMER FINE	
		СТО (8000К-2500К)	
	000	Close	
	001-004	8000K	
	005-009	7900К	
	010-013	7800K	
	014-018	7700K	
	019-022	7600K	
	023-027	7500K	
	028-031	7400K	
	032-036	7300K	
	037-040	7200K	
	041-045	7100K	
	046-049	7000K	
	050-054	6900K	
	055-058	6800K	
8	059-063	6700K	
	064-067	6600K	
	068-072	6500K	
	073-076	6400K	
	077-081	6300K	
	082-085	6200K	
	086-090	6100K	
	091-094	6000K	
	095-099	5900K	
	100-103	5800K	
	104-108	5700K	
	109-112	5600K	
	113-117	5500K	
	118-121	5400K	
	122-126	5300K	

	T	
	127-130	5200K
	131-135	5100K
	136-139	5000K
	140-144	4900K
	145-148	4800K
	149-153	4700K
	154-157	4600K
	158-162	4500K 4500K
	163-166	
		4400K
	167-171	4300K
	172-175	4200K
	176-180	4100K
	181-184	4000K
	185-189	3900К
	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	2900К
	235-238	2800K
	239-243	2700K
	244-247	2600K
	248-255	2500K
	ì	COLOR MACRO
	000-009	Open
	010-014	LEE 790-Moroccan Pink
	015-014	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
9	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
		LEE 201-Full CT Blue
	080-084	
	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
		FUNCTION
	000-029	No Function
	030-039	Dimmer Curve: Linear
	040-049	Dimmer Curve: Square Law
	050-059	Dimmer Curve: Inv SQ Law
	060-069	Dimmer Curve: S Curve
10	070-099	No Function
10	100-109	Led Frequency Setting Enable
	110-119	Led Frequency Setting Disable
	120-199	No Function
	200-209	Reset All
	210-219	Dimmer Speed: Fast
	220-229	Dimmer Speed: Smooth
	230-255	No Function

8 Channels (Mode 2):

CHANNEL	VALUE	FUNCTION
1		RED
1	000-255	0%→100%
2		GREEN
	000-255	0%→100%
3		BLUE
	000-255	0%→100%
4		WHITE
	000-255	0%→100%
		STROBE
	000-007	Close
	008-015	Open
	016-131	Strobe from Slow to Fast
	132-139	Open
5	140-181	Slow Open Fast Close
	182-189	Open
	190-231	Fast Open Slow Close
	232-239	Open
	240-247	Random Strobe
	248-255	Open
6		DIMMER
0	000-255	0%→100%
7	000-255	DIMMER FINE
		FUNCTION
	000-029	No Function
	030-039	Dimmer Curve: Linear
	040-049	Dimmer Curve: Square Law
	050-059	Dimmer Curve: Inv SQ Law
	060-069	Dimmer Curve: S Curve
	070-099	No Function
8	100-109	Led Frequency Setting Enable
	110-119	Led Frequency Setting Disable
	120-199	No Function
	200-209	Reset All
	210-219	Dimmer Speed: Fast
	220-229	Dimmer Speed: Smooth
	230-255	No Function

5 Channels (Mode 3):

VALUE	FUNCTION
	RED
000-255	0%→100%
	GREEN
000-255	0%→100%
	BLUE
000-255	0%→100%
	WHITE
000-255	0%→100%
	STROBE
000-007	Close
008-015	Open
016-131	Strobe from Slow to Fast
132-139	Open
140-181	Slow Open Fast Close
182-189	Open
190-231	Fast Open Slow Close
232-239	Open
240-247	Random Strobe
248-255	Open
	000-255 000-255 000-255 000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247

4 Channels (Mode 4):

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

6. Error Information

1. LED Tem. Error

Check if the temperature detecting board is normal.

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

Check if the lead of the temperature detecting board is installed in place or disconnected.

2. LED Too Hot Off

When the fixture temperature reaches 80 $^{\circ}$ C, it will automatically turn off to protect the fixture.

3. LED Timeout Use

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 and no light

- 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. Check DMX connectors, cables to see if they are linked properly.
- 2. 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 DMX 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.

Innovation, Quality, Performance