SquareLED Studio Forte Bi-Color LED Bar
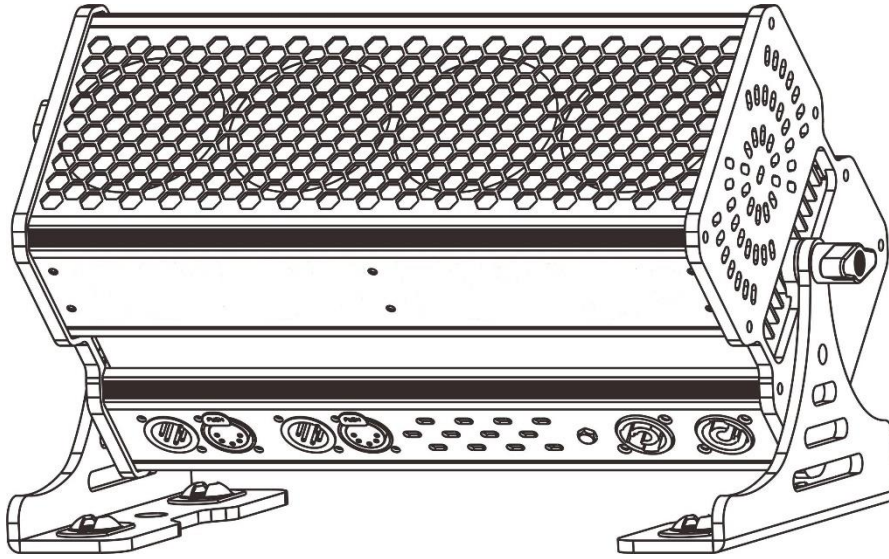

Multi-function spotlight

4*40W Cool / Warm White 2 IN 1

Instruction Manual

CE   RoHS

1 Understanding of Product

1.1 **Security Warning**

- When unpacking and before disposing of the carton, check if there is any transportation damage before using the product. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.
- Do not install the product or project the beam onto inflammable surfaces. Minimum distance is 5 M
  ⟩ 5M ⫰.
- The product is only intended for installation, operation and maintenance by qualified personnel. And read the user manual and labels on the lighting carefully before use.
- Product should install in a cool place. Keep away from the wall 50cm.
- Do not look directly at the lamp light (especially for epilepsy), so as not to cause damage to the eyes.
- Keep the optical system clean. Do not touch the LED lens with bare hands. Do not use any alcohol liquid or any other liquid to clean the optical system. Use medicinal absorbent cotton to clean it.
- Please do not attempt to dismantle and/or modify the product inner structure. Otherwise, would not provide 1 year of free warranty.
- Electrical connection must only be carried out by qualified personnel.
- Before installation, ensure that the voltage and frequency of power supply match the power requirement of the product.
- It is essential that each product is correctly earthed and that electrical installation conforms to all relevant standards.
- Do not connect this device to any other types of dimmer apparatus.
- Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- There is no user serviceable parts inside the product, do not open the housing and never operate the product with the cover removed.
- Place the unit where kids can't reach.

If you have any questions, don't hesitate to consult our dealer or manufacturer.

Important: Before any installation, maintenance and cleaning, please ensure that the power cut off!
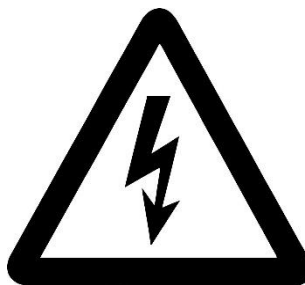
1.2 **Main Technical Parameters**

Power supply

- Rated Voltage: AC90~240V
- Rated Frequency: 50~60Hz ± 10%
- Rated Power: 150W

LED

- LED Type: 4pcs × 40 W CW high bright LED
- Color temperature: Warn white 2500~2700K, Cool white 6000~6500K
- Drive Current: 700mA
- Life: 50,000 hours

Control

- Control Protocol: International standard DMX-512 signal
- Channel Protocol: 6 kinds DMX control channel modes. 2CH, 3CH, 4CHA, 4CHB, 5CH and 6CH modes can be chosen
- Control Mode: DMX-512, auto, master-slave and static mode
- Auto effect: 2 kinds of auto effects

Optical System

- Dimming mode: Dimmer 0 means fast Linear dimming. Dimmer 1~8 stands for soft Non-linear dimming.
- Dimmer: From 0~100 linear dimming.
- refresh Frequency: 15KHz
- Dimming Curve: 4 dimming curves (Linear, Exponential, Logarithmic, S-Curve)
- Lens: Concentrated tilt Fresnel secondary optical lens
- Strobe: 1~20Hz
- Beam angle: 10* 22° (Different angles can be obtained by quickly changing the secondary optical lens)

Security

- Cooling System: Intelligent temperature control fan cooling mode
- Temperature Protection: 65℃
- Operating Environment: Indoor
- Working Temperature: -10°C～40°C

Physical

- Dimensions: 350 * 180 * 201.3 mm
- Weight: 3.85kg

    Surface treatment: High temperature black paint

- Housing color: Black (Can be customized)
- Connection: Signal cable IN/OUT, power cable IN/OUT.
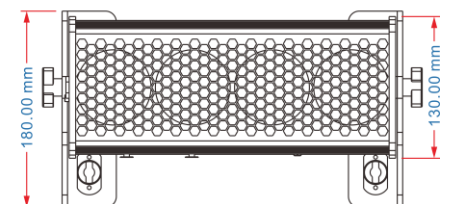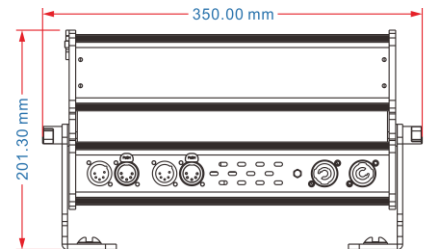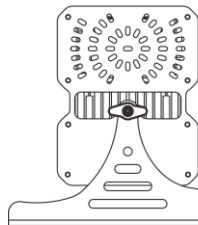
1.3 **Product Features**

Using the latest LED control technique, the newest intelligent LED light can realize intelligent operation and control through its special menu at the back. This product is designed for family party, wedding scene, small performances, DISCO and KTV, bars, ballrooms, nightclubs and various performance occasion. Its main features include:

1) SMT technology for control board and drive board make low failure rate.
2) Using concentrated tilt light Fresnel secondary optical lens makes color mixture more evenly and high brighter.
3) With many hardware optical fixtures.
4) Fast change secondary optical system design.
5) Static color Settings (STATIC).
6) The static power consumption of the control panel is 3W, and its efficiency will reach up to 97%
7) Refresh rate of the lamp is 15Khz, suitable for all kinds of high demand situations.
8) Linear dimming and nonlinear dimming (DIMMER).
9) 4 dimming curves.
10) 4 kinds fan operation mode (FAN).
11) White balance color setting (CAL).
12) Overheating automatic protection function (Reduce working current).
13) Liquid-crystal display screen.
14) 6 kinds DMX working mode.
15) Master-slave control, multi-units for synchronous control.

1.4 **Product Packing Information**

Following accessories are packed together with the product, please check them carefully upon unpacking.

Spare parts Name	QTY	Unit	Remark
JLW-160AW fixture	1	piece	
Hanger	2	pieces	
Hanger screw	2	pieces	
Omega bracket and quick-lock fasteners	2	pieces	
User's Manual	1	piece	
Power cable with plug	1	piece	

2 Product Installation

2.1 **Power Connection Method**

Please connect power as following ：

L（live wire）=brown wire

E（earth wire）=yellow/green double color wire

N（null line）=blue wire

When connecting power, ensure that the voltage and frequency of power supply match the power

requirement of the product.

This equipment is a class 1 protection equipment, therefore, the yellow-green double colors wire must be earthed correctly by qualified personnel. Before installation, ensure that the voltage and frequency of power supply match the power requirements of product. In power supply and voltage fluctuation large areas, we suggest you to use 110V or 230V or use voltage regulator to supply power. After electrical connection, this product will have a few seconds self-check action, self-check finished can be used.

Input / output power cable should be 1.5 square millimeter copper core.
**220V: 8 units may be connected in series.**
110V: 4 units may be connected in series.

Important: It is essential that Yellow/green double color wire is correctly earthed and that electrical installation conforms to all relevant standards.

2.2 DMX Connection Method

● **As this this fixture's DMX signal cable connection is Parallel connection, please don't more than 15 units. If the signal cable is over 60m between the DMX512 controller and fixture or between two fixtures, then a DMX signal amplifier is needed.**

2.2.1 When set the DMX512 channel mode is 6CH, as below:

XLR   3-pin
Cable:

Pin#	Function
1	Ground (Screen)
2	Data Minus
3	Data Plus
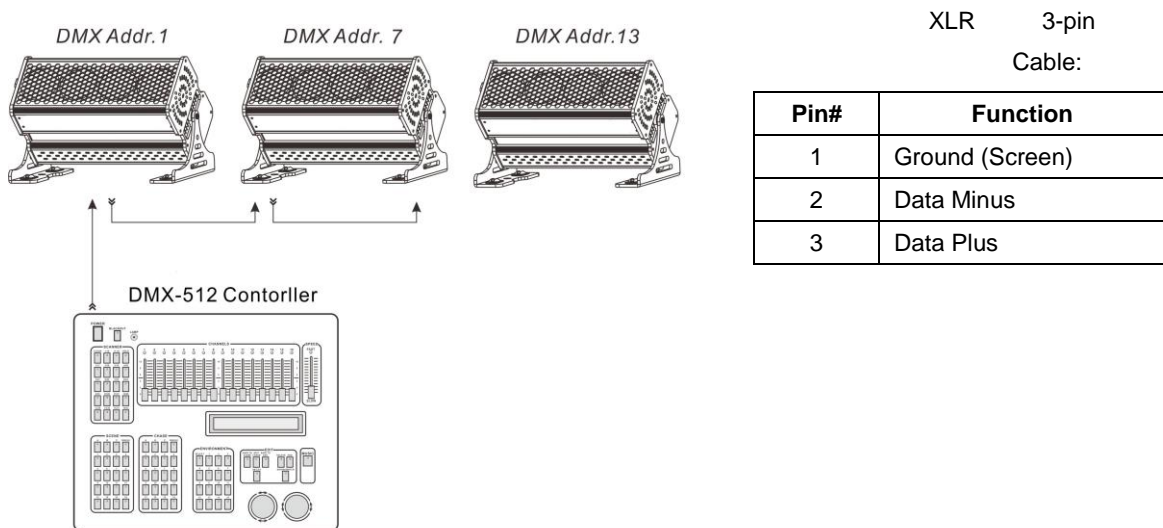
❖ The DMX interface of lamp needs be connected to the DMX controller.

❖ Since 6CH has 6 channels, the address code with 6 increment increasing progressively (e.g., 1,7,13,19...).

❖ Every DMX address code can be reused as needed.

❖ DMX address code can be any data between 001 to 512.

2.3 Mounting and Installation

Cautions: For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas were the fixture might be reached by unauthorized personnel.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

Never stand directly below the device when mounting, removing, or servicing the fixture from a periodic safety inspection of all installation material and the fixture. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.

Be sure to complete all rigging and installation procedures before connecting the main power cord to the appropriate wall outlet.

Clamp Mounting: The Color Force series provides two unique Omega Brackets assembly that integrates the bottom of the base. See the illustration below.
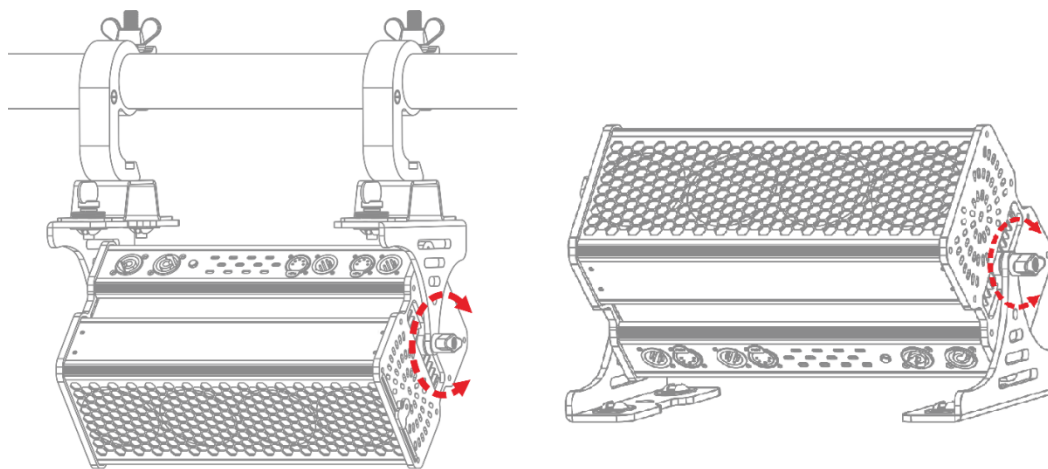
2.4 Lamp Placement and Direction of Illumination

Multi-function Spotlight series are built with lenses that optimize the beam spread when used on a wall wash or cyclorama. The side with square diffuse near-field micro lenses should be adjacent to the wall or cyclorama. The side with hexagonal far-field micro lenses is indicated should be facing away from the wall or cyclorama. See the illustration below.
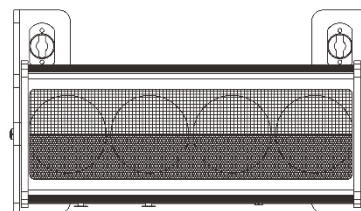

Note: The direction of light can be changed by changing the direction of the lenses.

2.5 Quickly Changing Lenses or Hardware fixtures

Multi-function Spotlight series have the functions of quick changing lenses and hardware fixture. Various ideal spot light effects can be achieved by changing lenses. There are two kinds of optical hardware fixtures present different aesthetic feeling for your choice. Using the lock catch type installment, may with ease disassemble. Rotate the lock catch on side plate by counterclockwise 90 degrees to facilitate the replacement of various lenses. See the illustration below.
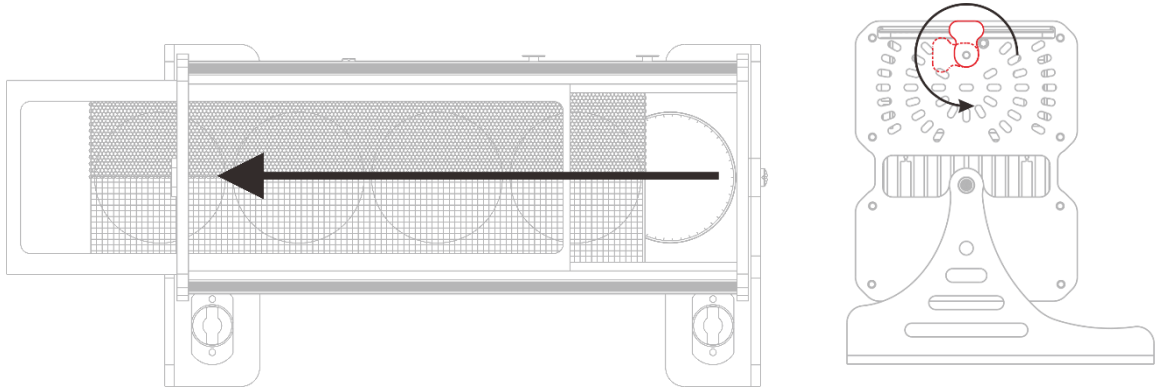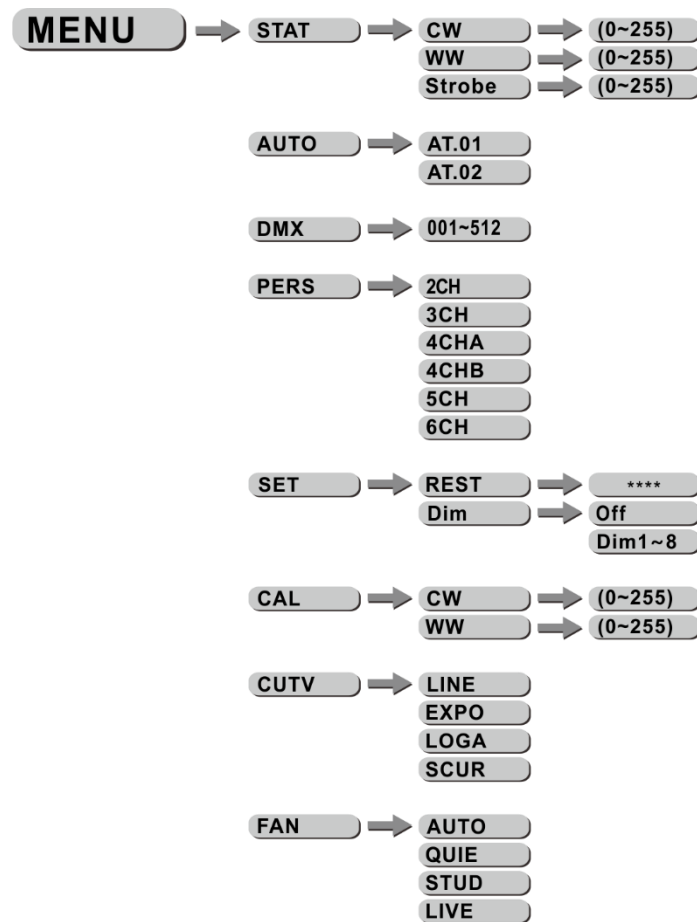

3 Operation Method

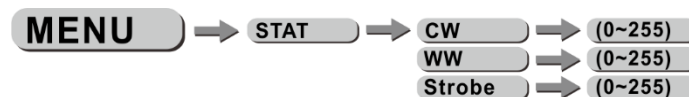## 3.1 Back panel functions introduction

MENU ENTER UP DOWN

- ❖ MENU：Menu button/return button, enter the menu selection interface or previous menu.
- ❖ ENTER：Confirmation button, used to confirm the selected function.
- ❖ UP/DOWN：Upward/downward select function or Parameter increment / decrement.

3.2 Menu Overview

3.3 Static Color Settings (Static)

- Press【MENU】to find【STATIC】menu and press【ENTER】to enter static color setting.
- Press【ENTER】button to select【CW】or【WW】or【STROBE】3 kinds of channel modes
- Press【UP/DOWN】button to select the color and brightness you needed.
- Press【MENU】button to return to the menu, the selected parameters will be automatically saved.
- After setting lighting fixture's static color, restart the lighting fixture's power supply. The setting was preserved. Exit menu, static color setting will be removed.

Note: When entered this sub-menu, the fixture will automatically be set to the data status sent by the master, and the one user operating to be the master and other fixtures linked (by DMX cable) are slaves. At this time, please disconnect the DMX512 signal sent from the consoles.

3.4 **Automatic Programming Setting (AUTO)**

MENU ➡ AUTO ➡ AT.01 / AT.02

- Find【AUTO】menu and press【ENTER】to enter automatic programming setting.
- Press【UP/DOWN】button to select【AT.01~02】2 kinds of auto-program. Press【ENTER】to confirm your setting.
- After setting lighting fixture's automatic operation, restart the lighting fixture's power supply. The setting was preserved. Exit menu, automatic operation setting will be removed.

Note: When entered this sub-menu, the fixture will automatically be set to the data status sent by the master, and the one user operating to be the master and other fixtures linked (by DMX cable) are slaves. At this time, please disconnect the DMX512 signal sent from the consoles.

3.5 **DMX Address Settings (DMX Address)**

MENU ➡ DMX ➡ 001~512

- Press【MENU】to find【DMX Address】menu and press【ENTER】to enter address code setting.
- Press【UP/DOWN】button to select DMX address code.
- Press【ENTER】to confirm or【MENU】to exit. The setting will be automatically saved.

3.6 **DMX Channel Mode Design (PERS)**

MENU ➡ PERS ➡ 2CH / 3CH / 4CHA / 4CHB / 5CH / 6CH
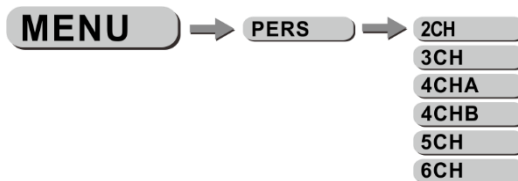
- Find【PERS】menu and press【ENTER】to enter DMX channel mode setting.
- Press【UP/DOWN】button to select【2CH, 3CH……】6 kinds DMX channel modes.
- Press【ENTER】to confirm or【MENU】to exit. The setting will be automatically saved.

3.7 **Function Settings (SET)**

MENU ➡ SET ➡ REST / Dim ➡ **** / Off / Dim1~8

- Find【SET】menu and press【ENTER】to enter function setting.
- Press【UP/DOWN】button for selection,【REST】restore factory settings,【DIM】dimming mode setting.
- Parameters upload and restore factory settings require a password to enter. The password is【UP + DOWM + UP + DOWM + ENTER】.
- 【REST】restore factory settings, enter the password correctly, function settings and parameters will restore the factory settings.
- 【DIM】dimming mode setting,【OFF】means non-linear dimming closed,【DIM1~8】means 8 kinds of non-dimming speed optional.
- Press【ENTER】to confirm or【MENU】to exit. The setting will be automatically saved.

Restore factory settings parameters:

1. DMX = OFF	2. PERS = 10CH
3.CUTV = LINE	4. FAN = AUTO

3.8 **White Balance Setting (CAL)**

MENU ➡ CAL ➡ CW ➡ (0~255)
WW ➡ (0~255)

● Find【CAL】menu and press【ENTER】to enter white balance setting.

● Press【ENTER】button to select 【CW】,【WW】.

● Press【UP/DOWN】button to adjust the selected color parameters.

● Press【ENTER】to confirm or【MENU】to exit. The setting will be automatically saved.

3.9 **Dimming Curve Settings (Curve)**

● Press【MENU】to find【Curve】menu and press【ENTER】to enter dimming curve setting.

● Press【UP/DOWN】button to select 【LINE】,【EXPO】,【LOGA】or【SCUR】4 kinds of dimming curve.

● Press【MENU】button to return to the menu, the selected parameters will be automatically saved.

DIMMER CURVES

linear — exponential — logarithmic — S-curve (Light intensity vs DMX value)
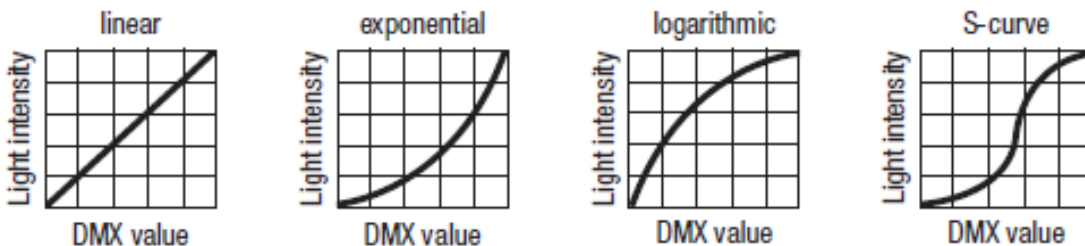
3.10 **Fan Function Settings (Fan)**

MENU ➡ FAN ➡ AUTO
QUIE
STUD
LIVE
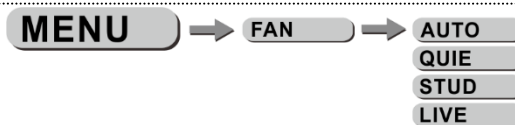
● Press【MENU】to find【Fan】menu and press【ENTER】to enter fan function setting.

● Press【UP/DOWN】button to select【ATUO】for auto running,【QUIE】is mute function, fan closed, the total power decreased by 30%,【STUD】the fan runs at medium speed. 【LIVE】the fan runs at high speed.

● Press【MENU】button to return to the menu, the selected parameters will be automatically saved.

3.11 **Temperature control protection State**

● When the temperature of the LED bead plate more than 65℃, the light fixture begin slowly to reduce the working current, to protect the LED lamp bead is not damaged by high temperature heat aging.

● When the temperature of the LED bead plate lower than 65℃, the light fixture begins slowly to rise working current, until restore to the normal working current.

4 Control Channel

4.1 RGB Control Channel Mode

4.1.1 2CH Mode

Channel	Control function	Detail description	DMX Data
1	Cool white	Dimming from 0~100%	0~255
2	Warm white	Dimming from 0~100%	0~255

4.1.2 4CHA Mode

Channel	Control function	Detail description	DMX Data
1	Cool white	Dimming from 0~100%	0~255
2	Cool white 16bit	Dimming from 0~100%	0~255
3	Warm white	Dimming from 0~100%	0~255
4	Warm white 16bit	Dimming from 0~100%	0~255

4.1.3 3CH Mode

Channel	Control function	Detail description	DMX Data
1	Overall dimmer	Dimming from 0~100%	0~255
2	Cool white	Dimming from 0~100%	0~255
3	Warm white	Dimming from 0~100%	0~255

4.1.4 4CHB Bit Mode

Channel	Control function	Detail description	DMX Data
1	Overall dimmer	Dimming from 0~100%	0~255
2	Cool white	Dimming from 0~100%	0~255
3	Warm white	Dimming from 0~100%	0~255
4	NO FUNCTION	CCT	0~9
	2700K		10~19
	3000K		20~29
	3500K		30~39
	4000K		40~49
	4500K		50~59
	5000K		60~69
	5500K		70~79
	6000K		80~89
	2700K~6000K		90~255

4.1.5 5CH Mode

Channel	Control function	Detail description	DMX Data
1	Overall dimmer	Dimming from 0~100%	0~255
2	Cool white	Dimming from 0~100%	0~255
3	Warm white	Dimming from 0~100%	0~255
4	NO FUNCTION	CCT	0~9
	2700K		10~19
	3000K		20~29
	3500K		30~39
	4000K		40~49
	4500K		50~59
	5000K		60~69
	5500K		70~79
	6000K		80~89
	2700K~6000K		90~255
5	NO FUNCTION	STROBE	0~15
	Normal strobe (from slow to fast)		16~215
	Random strobe		216~255

4.1.6 6CH Mode

Channel	Control function	Detail description	DMX Data
1	Overall dimmer	Dimming from 0~100%	0~255
2	Cool white	Dimming from 0~100%	0~255
3	Warm white	Dimming from 0~100%	0~255
4	NO FUNCTION	CCT	0~9
	2700K		10~19
	3000K		20~29
	3500K		30~39
	4000K		40~49
	4500K		50~59
	5000K		60~69
	5500K		70~79
	6000K		80~89
	2700K~6000K		90~255
5	NO FUNCTION	STROBE	0~15
	Normal strobe (from slow to fast)		16~215
	Random strobe		216~255
6	NO FUNCTION	Dimming speed adjustment	0~9
	Linear dimming speed (DIM=OFF)		10~34
	Non-linear dimming speed 1 (DIM=1)		35~59
	Non-linear dimming speed 2 (DIM=2)		60~84

Non-linear dimming speed 3 (DIM=3)	85~109
Non-linear dimming speed 4 (DIM=4)	110~134
Non-linear dimming speed 5 (DIM=5)	135~159
Non-linear dimming speed 6 (DIM=6)	160~184
Non-linear dimming speed 7 (DIM=7)	185~209
Non-linear dimming speed 8 (DIM=8)	210~255

5 Maintenance

5.1 **Product Maintenance**

In order to make device work promptly, maintenance is always important. The environment is hash outdoors, or if the product is idle for a long time, damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on its LED lens cover, fan vents and housing. So it should be cleaned to maintain an optimum light output and at the same time to prevent it from corrupted by acid gas. Cleaning frequency depends on the environment in which the fixture operates. Soft cloth and typical glass cleaning products should be used for cleaning. It is recommended to clean product at least one every 20 days.

Friendly notice: Please do not use any organic solvent, e.g. alcohol to clean housing of the apparatus, lest cause damage.

5.2 **Trouble Shooting**

Problems	Action
The product doesn't switch on	Power connection is not correct--Re-connect it.
	Power supply is damaged or abnormal. Call a qualified personnel to fix it.
	Control section is damaged. Call a qualified personnel to fix it.
	Connection of internal circuitry is not correct. Call a qualified personnel to fix it.
The product can turn on, but LEDs do not emit light and are out of control	DMX address is wrongly setting up. Resetting it according to instruction book.
	DMX Signal wrongly connected. Connect it correctly according to instruction book.
	Control section is damaged. Call a qualified personnel to fix it.
The beam appears dim	The product is too hot. Take ventilation measures to make it cool.

Remark: This product warranty for one year. We provide pay-needed maintenance service after the warranty. But because of natural and man-made disasters or improper operation caused damage not under warranty range!