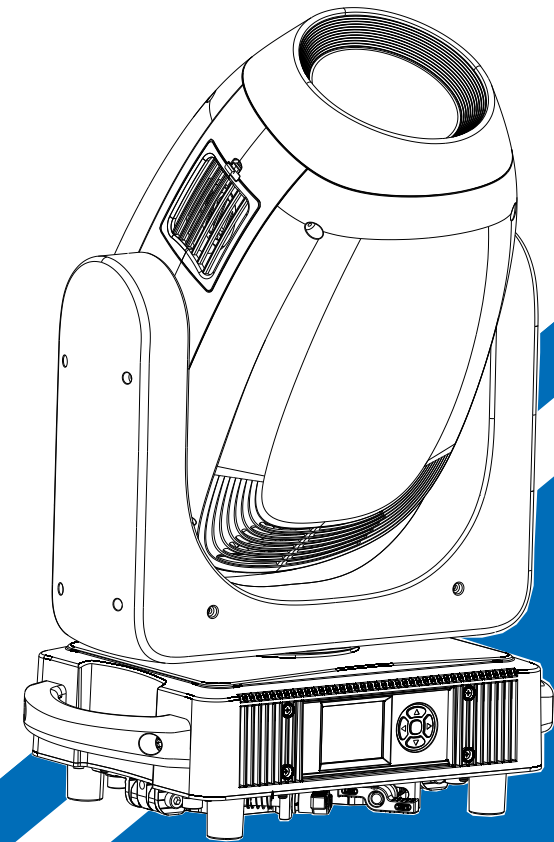


# LIGHT SKY

FLY DRAGON LIGHTING EQUIPMENT CO.,LTD

## SUPER SCOPE PRO



Web: [www.lightsky.com.cn](http://www.lightsky.com.cn)

Tel: 0086-20-61828288

Fax: 0086-20-61828188 Pc: 510820

E-mail: [flydragon@lightsky.com.cn](mailto:flydragon@lightsky.com.cn)

Address: No. 4, Jingneng Road 1,  
Huadu District, Guangzhou, China



**LIGHT SKY**



[WWW.LIGHTSKY.COM.CN](http://WWW.LIGHTSKY.COM.CN)

## User Manual

Please read the instruction carefully before use

## CONTENTS

1. Safety Instructions.....	2
2. Technical Specifications .....	5
2.1. Attachment And Size .....	7
3. Color/Gobo/Prism .....	10
3.1. Replacing Rotating Gobos .....	11
4. Control Panel .....	13
5. Connection and control .....	14
5.1. Power supply connection.....	14
5.2. DMX 512 Connection.....	15
6. How To Set The Unit .....	16
6.1. Main Function.....	16
6.2. Channel Setting.....	22
6.3. Address Setting.....	22
6.4. DMX 512 Configuration .....	23
7. Electrical Connection Diagram .....	26
8. Troubleshooting.....	27
9. Fixture Cleaning.....	29
10. Duty exonerative and copyright protectio.....	29

### **Congratulations on choosing our company product! We thank you for your custom.**

- ◆ Please keep in mind that this product, like other products of the company, adheres to the concept of people-oriented design and manufacture, and takes product quality as the foundation.
- ◆ We put the interests of customers first, and do our best to meet customer requirements.
- ◆ Please read this instruction manual carefully and keep it for future reference. In the case of fully understanding the product information, strictly abide by theUse the instruction manual to ensure that the product is installed, used and serviced correctly and safely.
- ◆ Our company is not responsible for any damage to lamps or other performance due to personal failure to follow the instructions during installation, use and maintenance.responsibility.
- ◆ Our company reserves the right to modify the manual at any time and without prior notice.

## 1.Safety Instructions



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

### WARNING

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

The following symbols are used to identify important safety information on the product and in this 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.
- The light source in this luminaire should be replaced by the manufacturer or its service agent or a similarly qualified person, always cut off the power supply before replacing the light source.
- 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 20cm 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°C. Maximum ambient temperature Ta: 40°C.  
Do not operate this product at a lower or higher temperature.
- Do not connect the device to any dimmer pack.
- When the lamp is running, do not place combustible objects next to it. The shortest distance between the device and inflammable and explosive objects or materials is 0.5m.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to 80°C. 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 3 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.

**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.

## 2. Technical Specifications

### OPTICAL

- Light source: 450W white LED module
- Zoom range: 4°- 53°
- Optical lens: coated with high anti-reflection coating, diameter 133mm
- Color temperature: 6500K
- Color rendering index:  $RA \geq 70$  /  $RA \geq 90$  (cut into high rendering index filter)
- Illuminance: 24000 Lux@10m
- Luminous flux: 20000 Lm
- Light source lifespan:  $\geq 20000H$

### COLOR

- CMY infinite color mixing
- CTO color temperature linear adjustment (3000K-6500K)
- 5 color chips + high-resolution finger + white light, can realize two-way color rainbow, two-color step-by-step gradient (linear movement), two-way rotation of color wheel, random color mode.

### PATTERN

- Rotating gobo wheel: 7 kinds of glass patterns + white circle, pluggable and replaceable, can realize rotation, flowing water, shaking effects, the outer diameter of the gobo is 22.9mm, and the inner diameter of the gobo is 15mm.
- Effect disc (water texture)+CTO color temperature linear adjustment, which can achieve flowing and shaking effects.
- Eight-direction cutting: 4 pieces of gratings can achieve fast and smooth cutting, and the eight cutting directions and angles can be controlled separately, each single piece can achieve complete light closure, and the entire cutting module can be rotated  $\pm 45^\circ$ .

### EFFECT

- Prism: 4 prism, capable of bidirectional rotation.
- Soft light effect: adjustable independent soft light effect.
- With electric aperture, 5-100% linear adjustment, with macro function and multi-effect change.
- Electronic dimming, 0-100% linear dimming, uniform light spot
- Electronic strobe speed is 1-25 times/second
- LED refresh rate: 1000Hz ~ 25KHz

### CONTROL

- Control channel: 33CH、36CH
- Protocol: standard DMX512 , RDM , ArtNet
- Data connection: three-core or five-core signal input/output
- Display: LCD liquid crystal screen

## **SOFTWARE**

- Software upgrade via USB or DMX interface
- Intelligent temperature control to ensure LED life

## **X, Y AXIS MOVEMENT**

- X axis: 540° 8bit/16bit precision scanning
- Y axis: 270° 8bit/16bit precision scanning

## **POWER AND POWER**

- Input voltage rangr: AC 100-240V ~ 50/60Hz
- Maximum power:620W
- Power factor: 0.98

## **SIZE AND WEIGHT**

- size: 442mm×262mm×648mm
- N.W: 26.3kg
- Carton packing (default): 490mm×365mm×755mm G.W: 32.1kg (include foldable clamp)
- Flycase Size(2 sets): 730mm×575mm×850mm G.W: 95.3 Kg

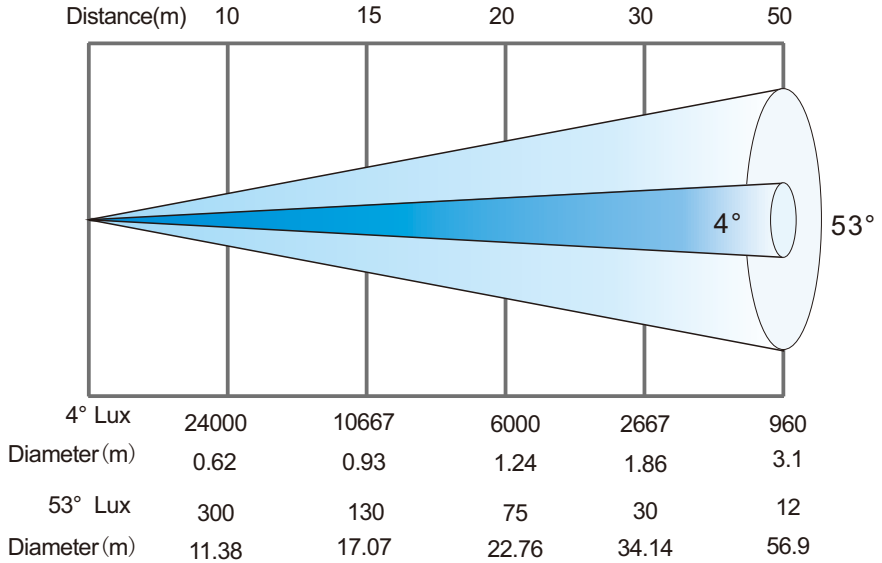
## **OTHER**

- Protection class: IP20
- Working environment: 0℃ ~ 40℃
- Maximum surface temperature of the lamp body: 80℃
- Maximum lamp current: 6.2A/110V; 3.1A/220V

## **APPROVALS**

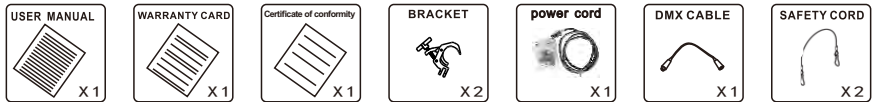
- The product implementation standard: GB 7000.1-2015 GB7000. 217-2008
- Approved certifications: CE、RoHs
- The product complies with the following EU directives:
- Low Voltage Directive 2014/35/EU . EMC Directive 2014/30/EU

## illumination diagram



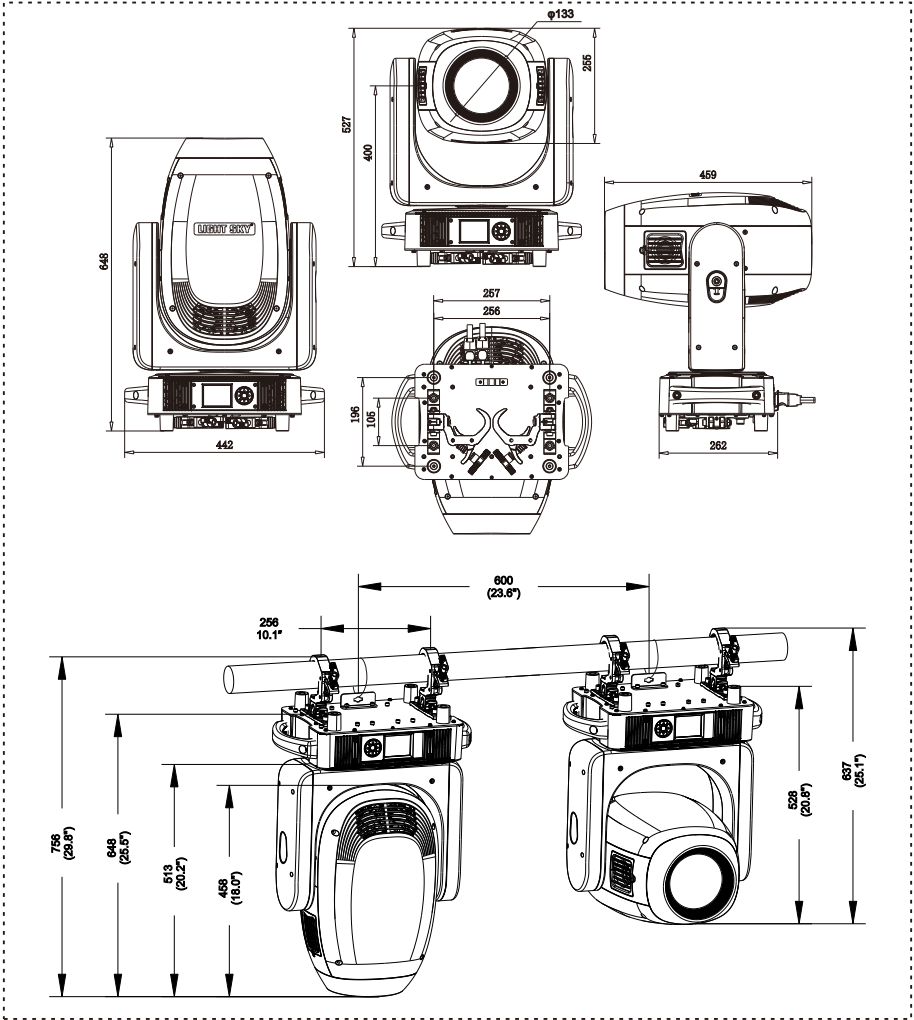
### 2.1.Attachment And Size

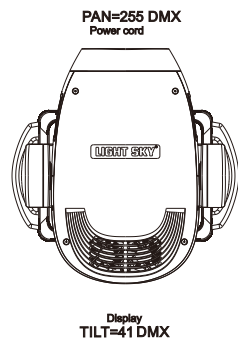
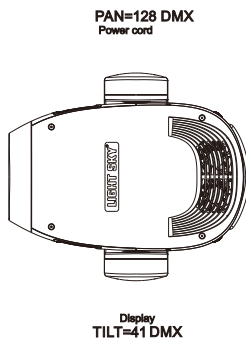
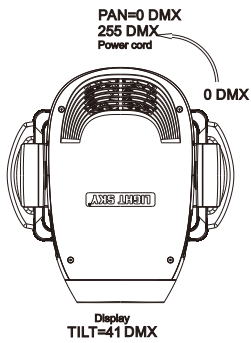
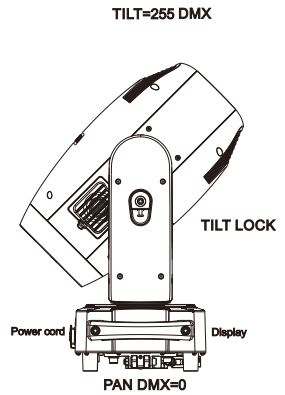
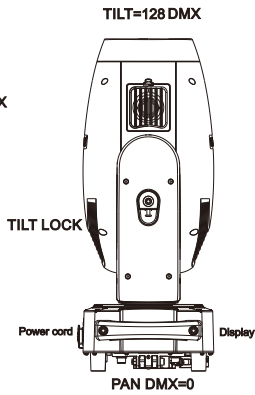
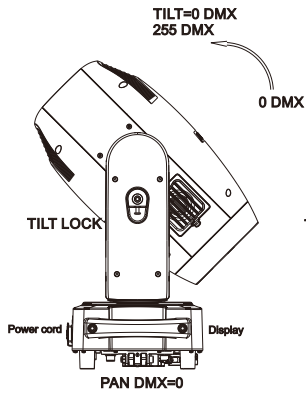
Attachment contents-Fig.1





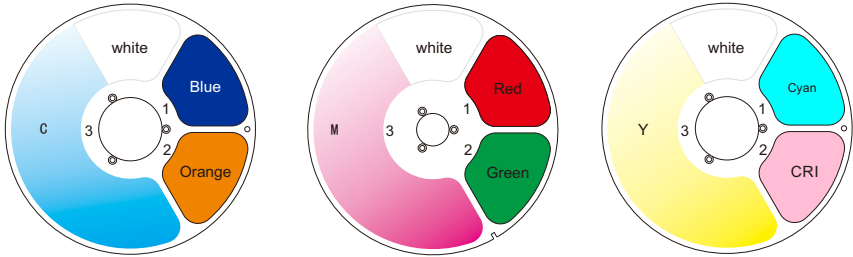
Size-Fig.2



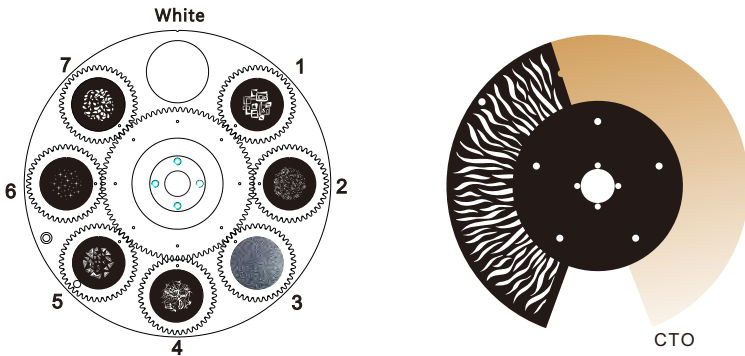


### 3. Color/Gobo/Prism

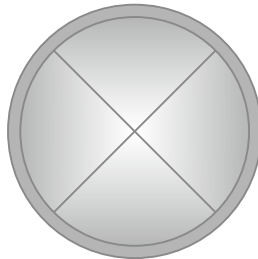
#### CMY-color wheel



#### Pattern-Effect disc

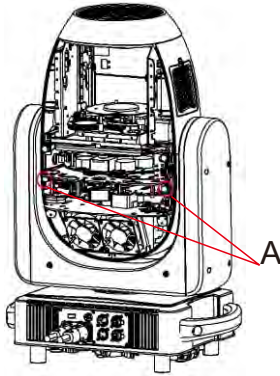


#### Prism

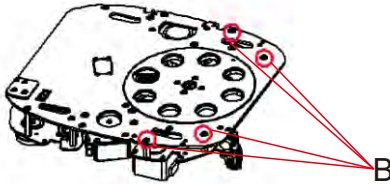


### 3.1.Replacing Rotating Gobos

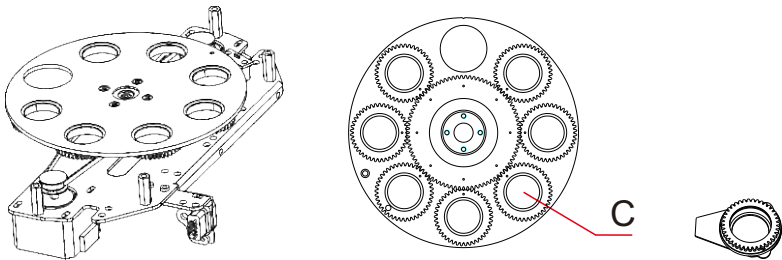
1.Use a screwdriver to unscrew the two screws at [A] to take out the pattern color module assembly.



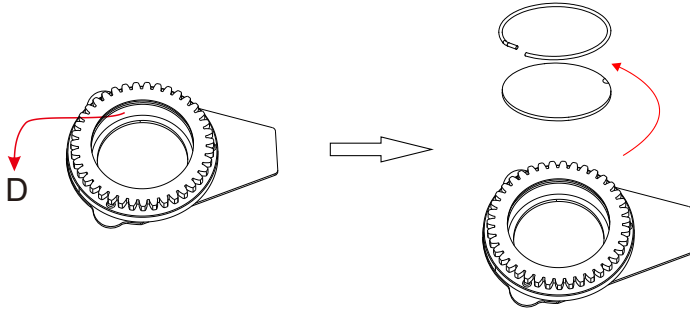
2. Remove the four screws at 【 B 】 and then remove the rotating pattern plate.



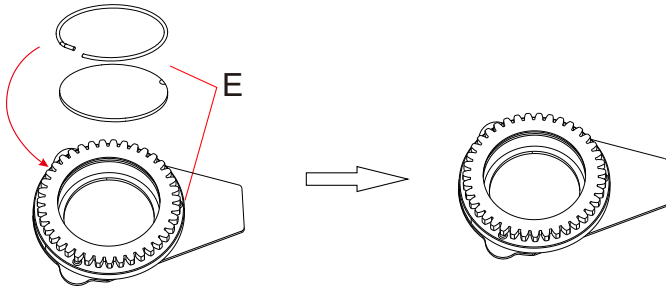
3. As shown in 【 C 】 , gently lift the pattern piece from the edge of the moving wheel on the back of the pattern disc and slowly pull it out to remove a single pattern piece;



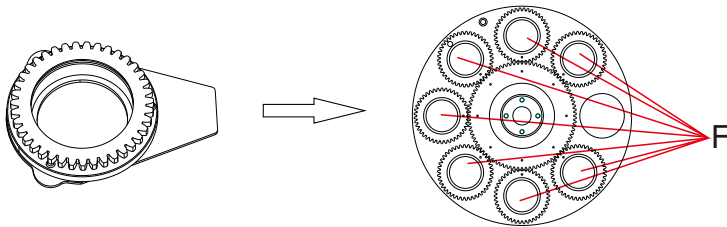
4. Use tweezers or other small gripping objects to remove the snap ring at 【 D 】 (if the pattern sheet is coated with glass glue for fixation, please use a professional cleaning agent to remove the glass glue before removing the snap ring to avoid damaging the pattern sheet).



5. When assembling the pattern sheet, avoid touching it directly with your hands, and as shown in [E], the coated surface of the pattern sheet should face the light source.

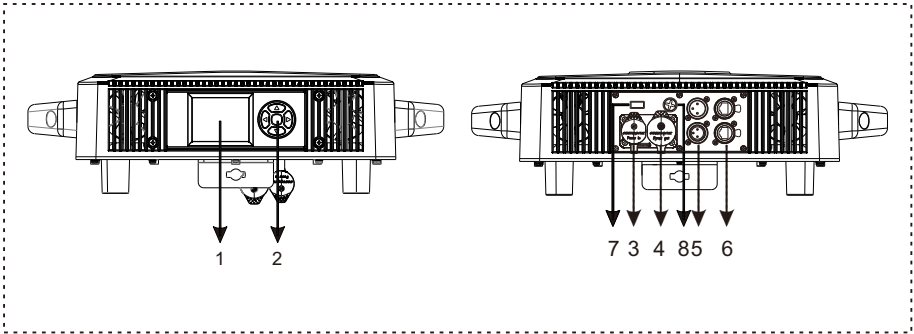


6. Insert the pattern piece from the driving wheel into the driving wheel assembly, as shown in 【 F 】 When positioning the pattern piece from the concave point of the driving wheel, it must face the center of the driving wheel



7. After installation, simply install the pattern disk component back onto the lamp.

## 4. Control Panel



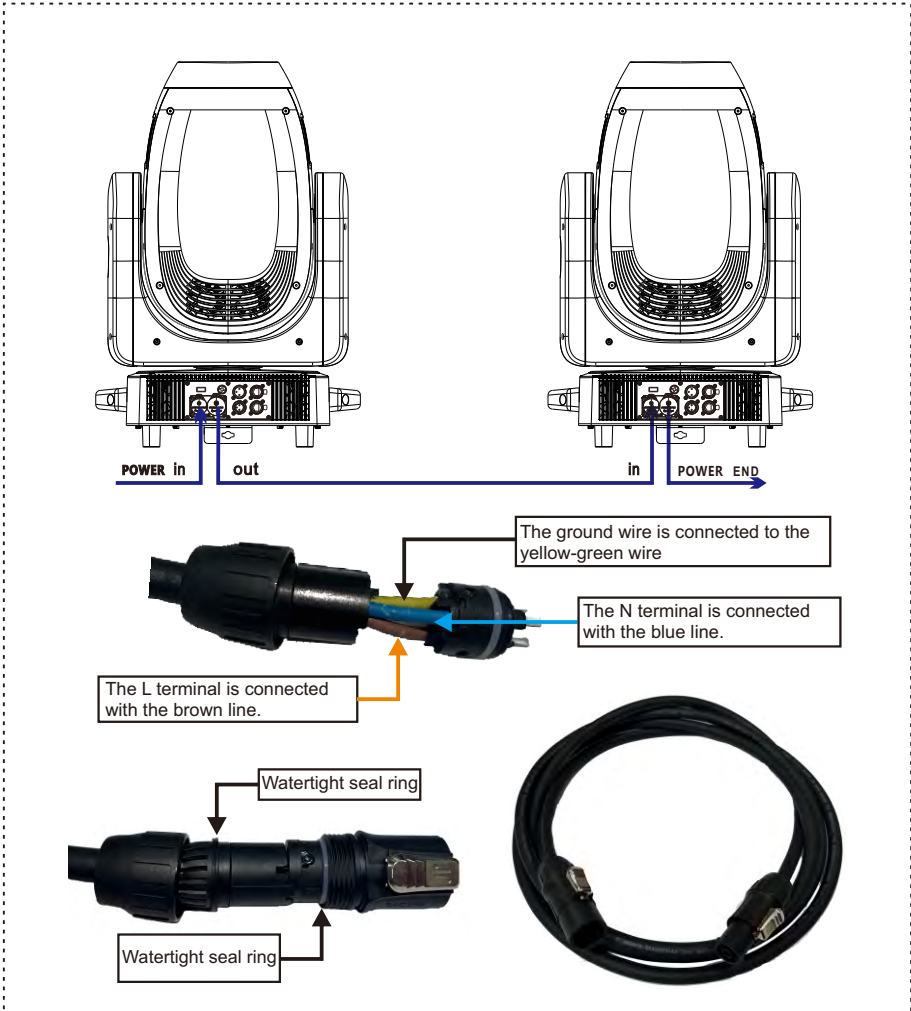
1. Display: To show the various menus and the selected function.
2. Button:

●	OK confirmation key
▲	UP
▼	DOWN
◀	To the left
▶	To the right

3. Socket version power input: connect the power supply.
4. Power output: Connect the lamp power output adapter.
5. DMX input/output: Used for DMX512 connection, use 3/5 core XLR signal cable to connect console and lamps, And input/output DMX signal.
6. Art-net: The information of the lamp can be transmitted to the main controller through the network cable, and the lamp can be controlled through RJ45 (optional).
7. Firmware upgrade: Used to upgrade the fixture's firmware.
8. Fuse holder: Used for the bottom box battery pack power supply display board when not powered on. (Note: In the case of air transportation, the lighting fixtures will require disassembly of fuses for shipment, and they must be installed by themselves upon receipt.)

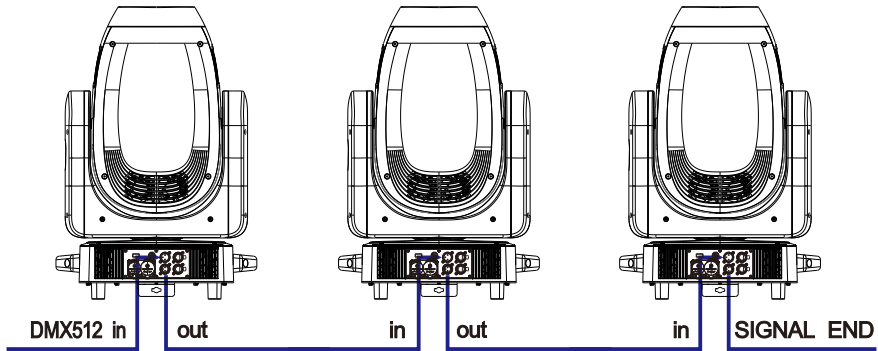
## 5.Connection and control

### 5.1.Power supply connection

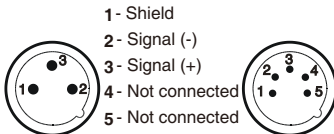


- The bus connecting the power supply must be installed by a qualified professional technician.
- After completing all the above operations and ensuring that it is installed, you can power on the lamp to operate.

## 5.2.DMX 512 Connection

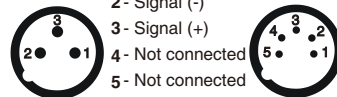


### DMX-input



- 1- Shield
- 2- Signal (-)
- 3- Signal (+)
- 4- Not connected
- 5- Not connected

### DMX - output



- 1- Shield
- 2- Signal (-)
- 3- Signal (+)
- 4- Not connected
- 5- Not connected

1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 1200hm 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.



## **6.How To Set The Unit**

### **6.1.Main Function**

After powering on, press OK to enter the preset menu interface, and use the left/right keys to select: DMX settings, device information, personal settings, manual, test equipment, and service options.

#### **① DMX settings**

Enter the Preset Menu interface, select the DMX Settings function, and use the Up/Down keys to select the ② level menu: address code, channel mode, input mode, status.

#### **② Address**

Select the Address Code function, press OK to enter the lower-level menu, press the Up/Down keys to select and set the address code (001~512) of the lamp according to the current channel mode, and press Left/Right to fine-tune the address code. Press OK to confirm the settings and return to the previous menu.

#### **② Channel mode**

Select the Channel Mode function, press the OK key to enter the lower-level menu, and press the Up/Down keys to select the channel mode of the lamp: Standard (33) (default), Extended (36). Press OK to confirm the selection, press left/right to return to the previous menu.

#### **② Input mode**

Select the Input Mode function, press OK to enter the lower-level menu, and press the Up/Down keys to select the channel mode of the lamp: DMX 512 (default), Artnet. Press OK to confirm the selection, press left/right to return to the previous menu.

#### **② Status**

Select the status function, press the OK key to enter the lower-level menu, and press the up/down keys to select the channel mode of the lamp: lights out (default), hold. Press OK to confirm the selection, press left/right to return to the previous menu.

#### **① Info**

Enter the Preset Menu interface, select the Device Information function, and use the Up/Down keys to select the ② level menu: device time, device temperature, fan information, RDM information, device channel, version information, fan information.

#### **② Fixture times**

Select the device time function, press OK to enter the lower-level menu, and you can view the device: power-on time (H), lighting time, and total time. Press the left/right key to return to the previous menu.

#### **② Temperatures**

Select the Device Temperature function, press OK to enter the lower-level menu, and you can view the device: LED temperature (°C), driver board temperature (°C). Press the left/right key to return to the previous menu.

## ② RDM info

Select the RDM address function, press OK to enter the lower-level menu, and view the device: RDM address information. Press OK key or left/right key to return to the previous menu.

## ② DMX live

Select the Device Channel function and press OK to enter the lower-level menu, where you can view the device: channel information in the current channel mode. Press the up/down keys to view the current DMX value information of each channel, and press the left/right keys to return to the upper menu.

## ② Version info

Select the version information function, press OK to enter the lower-level menu, and you can view the version information of the equipment: display board, XY board, LED module, pattern module, cutting module, and zoom module. Press the left/right key to return to the previous menu.

## ② Fan Info

Select the Fan Information function and press OK to enter the lower-level menu. You can select: the status of the air inlet fan, air outlet fan, air inlet fan 1, air inlet fan 2, air outlet fan 1, air outlet fan 2, pattern fan, cutting fan, and head fan. Press OK to return to the previous menu.

## ① Personal

Enter the Preset Menu interface, select the Personal Settings function, use the Up/Down keys to select the ② level menu: XY axis, fan mode, display settings, dimming curve, LED frequency setting, press OK key to enter the lower level menu.

## ② Pan/Tilt

Select the XY axis function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: X-axis reverse, Y-axis reverse, press the OK key to confirm the selection and enter the lower-level menu, or press the left/right key to return to the upper level menu.

## ③ Pan invert

Select the X-axis reverse function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: off (default), on, press the OK key to confirm the selection, press the left/right key to return to the upper-level menu.

## ③ Tilt invert

Select the Y-axis reverse function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: off (default), on, press the OK key to confirm the selection, press the left/right key to return to the upper-level menu.

## ② Fan mode

Select the Display Settings function, press the up/down keys to select: Hight Brightness , Silent (default) , Super Silent, press the OK key to confirm the selection and enter the lower-level menu.

## ② Display

Select the Display Settings function, press the up/down keys to select: language selection, backlight time, backlight adjustment, screen rotation, press the OK key to confirm the selection and enter the lower-level menu.

## ③ Language

Select the Language Selection function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: English(default), Chinese , press the OK key to confirm the selection, press the left/right key to return to the upper-level menu.

## ③ Backlight time

Select the backlight time function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: always on, automatic (30S) (default), press the OK key to confirm the selection, press the left/right key to return to the upper-level menu.

## ③ Intensity

Select the backlight adjustment function, press OK to enter the lower-level menu, you can use the left/right keys to adjust the screen brightness, adjustment range: 0-100 (default: 50) press OK to confirm the selection and return to the upper-level menu.

## ③ Rotation

Select the screen rotation function, press the OK key to enter the lower-level menu, you can use the up/down keys to select: normal, rotate 180 degrees, automatic (default), press the OK key to confirm the selection, press the left/right key to return to the upper-level menu.

## ① Manual

Select the manual function, press the OK key to enter the lower-level menu, press the up/down keys to select: manual control, reset, press the OK key to confirm the selection and enter the lower-level menu.

## ② Manual Control

Select the manual control function, press the OK button to enter the lower-level menu, press the up/down button to select each channel of the current channel mode, press the left/right button to manually adjust and control the DMX value of each channel from 0 to 255, press the OK button Return to the previous menu, and at the same time the lamp is reset to its just-turned-on state.

## ② Reset

Select the reset function and press the OK key to enter the lower-level menu. You can use the up/down keys to select: machine reset, XY reset, pattern reset, color reset, cutting reset, zoom reset, effect reset. Press the OK key to confirm and execute the selection. Reset the command and return to the previous menu, or press the left/right keys to return to the previous menu only.

### ① Test

Select the test equipment function, press the OK key to enter the lower-level menu, press the up/down keys to select: all tests, X Y test, head test, press the OK key to confirm the selection, and enter the test interface to start executing the selected test command, press Press left/right to end the test and return to the previous menu.

### ① Service

Select the Service Options function, press the Up/Down keys to select: lamp status, calibration, factory settings, press the OK key to confirm the selection and enter the lower-level menu.

### ② Fixture state

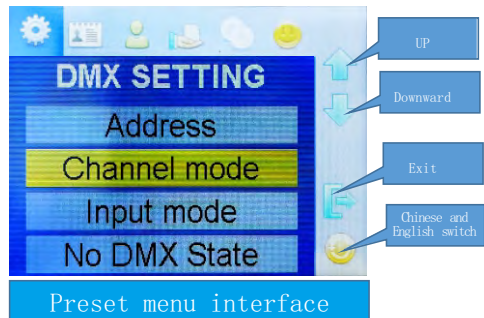
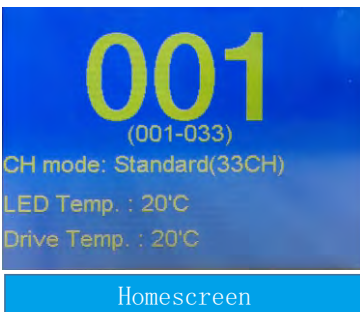
Select the lamp status function and press OK to enter the lower-level menu. You can use the up/down keys to view: memory chip, angle sensor, horizontal encoder, vertical encoder, horizontal, vertical, zoom, focus, cyan, magenta, yellow , rotating pattern, pattern rotation, dynamic disk, cutting, cutting rotation, aperture, prism, fog and other functions status, press the left/right key to return to the upper menu.

### ② Adjust

Select the calibration function, press the OK button to enter the lower-level menu, press the up/down button to select each channel of the current channel mode, press the OK button to enter the lower-level menu, press the left/right button to manually fine-tune the DMX of each channel from 0~255 value (default 128), press OK to confirm and return to the upper menu.

### ② Factory

Select the Factory Settings function and press OK to enter the lower-level menu. You can use the up/down keys to select: factory reset, clear time, software upgrade, and logo selection. Press OK to enter the lower-level menu. Note that the functions under this menu require a password to proceed to the next step.



Main menu	I menu	II menu	III menu	IV menu	
DMX SETTING	Address	→ 1-512			
	→ Channel mode	→ Standard (33)			
		→ Extended (36)			
	Input mode	→ DMX 512			
State	→ Artnet				
	→ Black				
Info	Fixture times	→ Power on time	0 - 99999H		
		→ LED on time	0 - 99999H		
		All time	0 - 99999H		
	Temperatures	→ LED TEMP			
		→ Drive TEMP			
	RDM info	→ UID:0x3888XXXXXX			
	→ DMX live	→ 1.Pan		0 - 255	
		→ 2.Pan fine		0 - 255	
		→ 3.....		0 - 255	
	Version info	→ Display		VX.XXX	
		→ Pan/Tilt		VX.XXX	
		→ LED module		VX.XXX	
		→ Gobo module		VX.XXX	
		→ Blade module		VX.XXX	
Fan Info	→ Zoom module		VX.XXX		
	→ InFan Voltage				
	→ OutFan Voltage				
	→ InFan1				
	→ InFan2				
	→ OutFan1				
Person	Pan/Tile	→ Pan invert	OFF		
		ON			
	Fan mode	→ Tilt invert	OFF		
		ON			
Display	→ Hight Brightness				
	→ Silent				
	→ Super Silent				
	→ Language	→ English			
		→ Chinese			
→ Always					
→ Backlight time		Auto (30S)			
Art-Net	→ Intensity	0 - 100			
	→ Normal				
	→ Rotate 180				
	→ Auto				
Dimmer Curve	→ IP Address	xxx.xxx.xxx.xxx			
	→ Mask Address	xxx.xxx.xxx.xxx			
	→ Net Address	xxx.xxx.xxx.xxx			
	→ Sub Net Address	xxx.xxx.xxx.xxx			
	→ Universe Address	xxx			
Led Preq Set	→ Linear				
	→ Square 1(Default)				
	→ Square 2				
Led Preq Set	→ SCurve				
	→ 1000 Hz				
	→ 3600 Hz (Default)				
	→ 7200 Hz				
		→ 25000 Hz			

Main menu	I menu	II menu	III menu	IV menu		
Manual	Manual Control	1. Pan	0 - 255			
		→ 2. Pan fine	→ 0 - 255			
		3. ....	0 - 255			
	Reset	Total reset				
		Pan/Tilt reset				
		Gobo reset				
		→ Color reset				
		Profile reset				
		Focus reset				
		Effect reset				
Test	Test all	Testing				
	→ Test pan/tilt	→ Testing				
	Test effects	Testing				
Service	Fixture state	Memory IC	OK/Reset/Error			
		Angle Sensor	OK/Reset/Error			
		Pan Encoder	OK/Reset/Error			
		Tilt Encoder	OK/Reset/Error			
		Pan	OK/Reset/Error			
		Tilt	OK/Reset/Error			
		Zoom	OK/Reset/Error			
		Focus	OK/Reset/Error			
		Cyan	OK/Reset/Error			
		→ Magenta	→ OK/Reset/Error			
		Yellow	OK/Reset/Error			
		RotGobo	OK/Reset/Error			
		GoboRot	OK/Reset/Error			
		Animation	OK/Reset/Error			
		Frame	OK/Reset/Error			
		FrameRot	OK/Reset/Error			
		Iris	OK/Reset/Error			
		Prism	OK/Reset/Error			
		Frost	OK/Reset/Error			
	Adjust	→ Pan	→ 0 - 255			
		Tilt	→ 0 - 255			
		.....	0 - 255			
	Factory	Factory Reset	→ YES / NO			
		Reset timers	Reset power on timers	→ YES/NO	YES/NO	
			Reset led timers	→ YES/NO	YES/NO	
			Reset all timers	→ YES/NO	YES/NO	
		Update	Simple update	Display	→ Pan/Tilt	Display
				...	→ ...	...
			Whole update	ALL	→ ALL	ALL
				Display	→ Pan/Tilt	Display
		Logo select	...	→ ...	...	
			...	→ ...	...	
	...		→ ...	...		
	...		→ ...	...		

## 6.2.Channel Setting

Enter the MENU menu, select the Personal Settings function, select the channel mode, press the OK button to confirm, you can use the up and down keys to select:33 channels (default), 36channels, Press the OK key to enter the selection confirmation and return to the previous menu.

## 6.3.Address Setting

Enter MENU, select the DMA setting function, select the address code setting, press the OK button to confirm, and the current DMA address will be displayed in the On screen display. Use the up/down buttons to select addresses 001-512, press the OK button to save the current address code, and return to the previous menu level.

**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
33 CH	1	34	67	100
36 CH	1	37	73	109

## 6.4.DMX 512 Configuration

Please control the fixture by referring to the configurations below

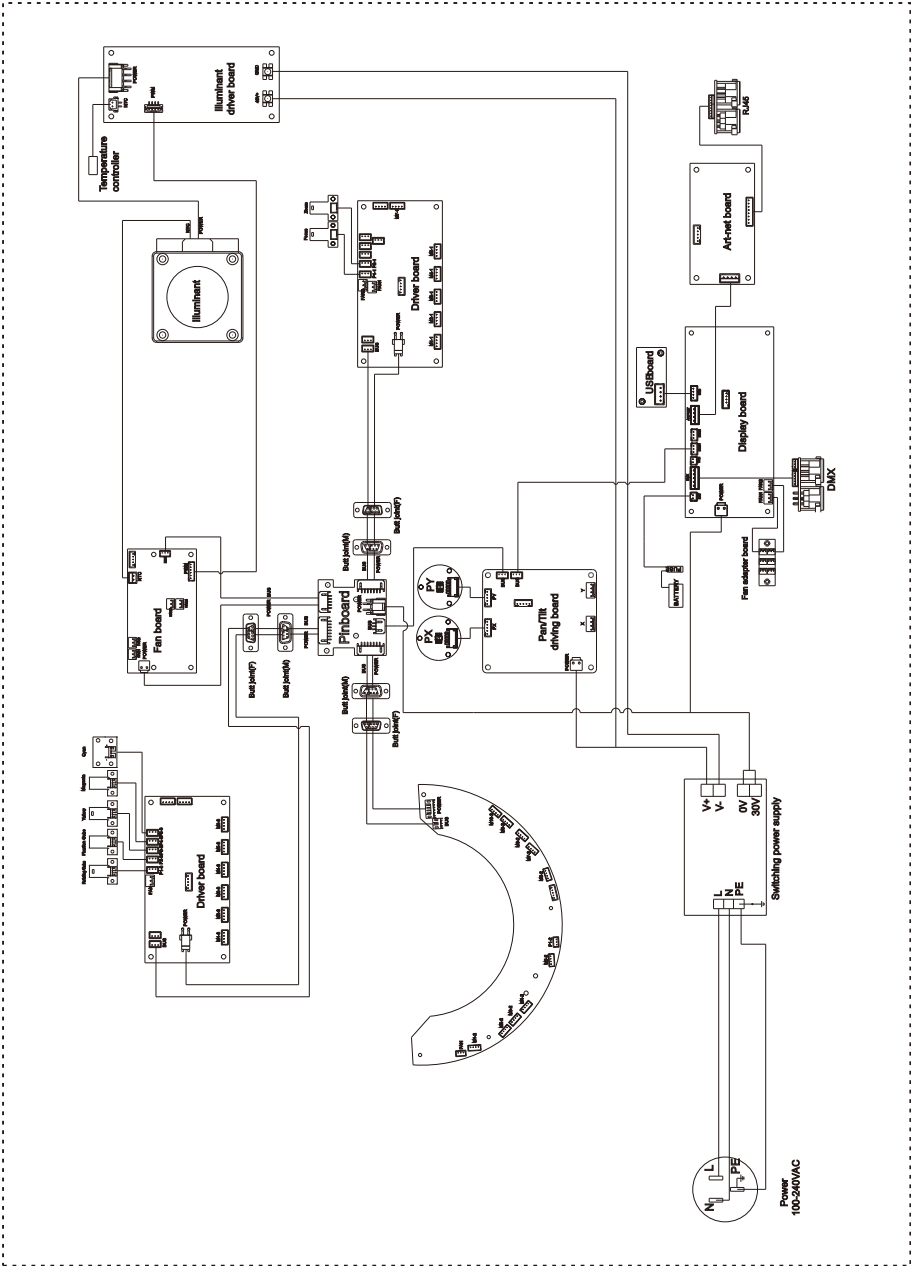
33 Channel	36 Channel	DMX	Function	Note
1	1	0--255	<b>Pan positioning</b>	
2	2	0--255	<b>Fine Pan positioning</b>	
3	3	0--255	<b>Tilt positioning</b>	
4	4	0--255	<b>Fine Tilt positioning</b>	
/	5	0--255	<b>Speed pan/tilt</b>	
5	6	0--9 10--19 20--29 30--39 40--49 50--59 60--69 70--79 80--89 90--99 100--109 110--119 120--129 130--139 140--149 150--159 160--169 170--177 178--185 186--193 194--199 200--204 205--209 210--214 215--219 220--229 230--239 240--255	<b>DeviceSet(Hold 3s)</b> No function Fan high speed Fan auto speed Fan slow speed Reset Pan&Tilt Reset CMY Reset Gobo Reset Frame Reset Head Reset other(except P&T) Reset All No function No function Pan invert on Pan invert off Tilt invert on Tilt invert off LED frequency 1kHz LED frequency 3.6kHz LED frequency 7.2kHz LED frequency 25kHz Dimmer curve linear Dimmer curve square1 Dimmer curve square2 Dimmer curve "S" Dimmer fast Dimmer smooth No function	
6	7	0--255	<b>Cyan</b>	
7	8	0--255	<b>Magenta</b>	
8	9	0--255	<b>Yellow</b>	
9	10	0--5 6--23 24--41 42--59 60--77 78--95 96--113 114--133 134--194 195--255	<b>Virtual ColorWheel</b> CMY enable Red Green Blue Orange Light blue CRI CMY enable Virtual Colorwheel CW slow to fast Virtual Colorwheel CCW fast to slow	
		0--9 10--19 20--29 30--39 40--49	<b>RotgoboWheel</b> Open RotGobo1 RotGobo 2 RotGobo 3 RotGobo 4	



33 Channel	36 Channel	DMX	Function	Note
10	11	50--59 60--69 70--79 80--87 88--95 96--103 104--111 112--119 120--127 128--135 136--139 140--194 195--249 250--255	RotGobo 5 RotGobo 6 RotGobo 7 RotGobo1shake,slow to fast RotGobo2shake,slow to fast RotGobo3shake,slow to fast RotGobo4shake,slow to fast RotGobo5shake,slow to fast RotGobo6shake,slow to fast RotGobo7shake,slow to fast Open RotGoboWheel CW fast to slow RotGoboWheel CCW slow to fast Random Gobo	
11	12	0--127 128--189 190--193 194--255	<b>GoboRot</b> GoboRot indexing 0°-- 360° RotGobo CW fast to slow Stop RotGobo CCW slow to fast	
12	13	0--255	CTO	
13	14	0 --127 128--255	Effect wheel Animation index Animation rotation	
14	15	0--255	<b>BladeA position1</b>	
15	16	0--255	<b>BladeA position2</b>	
16	17	0--255	<b>BladeB position1</b>	
17	18	0--255	<b>BladeB position2</b>	
18	19	0--255	<b>BladeC position1</b>	
19	20	0--255	<b>BladeC position2</b>	
20	21	0--255	<b>BladeD position1</b>	
21	22	0--255	<b>BladeD position2</b>	
22	23	0--255	<b>Frame Rot</b>	
23	24	0 --10 11--20 21 --30 31 --40 41 --50 51 --60 61 --70 71 --80 81 --255	<b>Framing Macro</b> No function Square Rectangle Triangle Trapezoid Sector Semi-circle Parallelogram No function	
24	25	0--127 128--159 160--191 192--255	<b>Lris</b> LrisIndexing Slow close fast open ; slow--fast Fast close slow open; slow--fast Slow close slow open ;slow--fast	
		0--9 10--63 64--127	<b>Prism&amp;PrismRot</b> Prism out Prism In & indexing Forwards prism rotation from slow to fast	

33 Channel	36 Channel	DMX	Function	Note
25	26	128--191	Backwards prism rotation from fast to slow	
		192--207	Prism flickered 90°	
		208--223	Prism flickered 180°	
		224--239	Prism flickered 270°	
		240--255	Prism flickered 360°	
26	27	0--255	<b>Frost</b>	
27	28	0--255	<b>Focus8bit</b>	
/	29	0--255	<b>FocusFine16bit</b>	
28	30	0--255	<b>Zoom8bit</b>	
/	31	0--255	<b>ZoomFine16bit</b>	
29	32	0--9	<b>Strobe</b> Strobe closed	
		10--19	Strobe open	
		20--68	Normal strobe effect slow to fast	
		69--79	Strobe open	
		80--128	Pulse strobe	
		129--139	Strobe open	
140--188	Random strobe			
189--255	Strobe open			
30	33	0--255	<b>Dimmer</b>	
31	34	0--255	<b>Dimmer Fine</b>	
32	35	0--127	<b>Auto Focus</b> Auto Focus Disable	
		128--158	10m Auto Focus Enable	
		159--190	15m Auto Focus Enable	
		191--225	20m Auto Focus Enable	
		226--255	30m Auto Focus Enable	
33	36	0--255	<b>Auto FocusFine</b>	

# 7. Electrical Connection Diagram



## 8. Troubleshooting

The following are common faults of lamps and corresponding solutions. Faults that cannot be repaired by yourself should be handled by professionally qualified personnel. Disconnect the power supply to the lamp during maintenance!

### ● The light source is not bright

- Check that a suitable light source is installed for the luminaire.
- Check whether the power supply connection of the lamp or the control switch is in poor contact.
- Check whether the light source has reached the end of its service life or is damaged, and replace it with a high-quality light source of the same specification.
- Measure whether the power supply is insufficient.
- Check whether the light source has not cooled down completely due to abnormal operation. Let the lamp cool down for more than 15 minutes to allow the light source to cool down. After returning to the normal start-up range, turn the power on again and it can be used normally.
- Check whether the DMX512 controller sends a command to turn on the light source.
- Check whether the light source and trigger circuit are disconnected or defective.
- Check whether the wiring terminals on the internal trigger are in poor contact and tighten the plug.
- Check the "Fan Speed and Voltage" in the "Basic Information" menu to see if the speed of FAN1/FAN2/FAN3 is above 500RPN. If it is below 500RPM, the light source will not light up. Replace the fan with the same specification.
- Check whether the over-temperature protection temperature switch inside the lamp is damaged. Go to the menu "Basic Information" and select "Equipment Temperature" to check - whether the temperature measuring plate shows that the temperature is too high or there is no temperature display.

### ● The beam appears dim and uneven

- The light source may have reached the end of its service life and does not emit enough light. Replace it with a light source of the same specification.
- Check whether there is dust accumulated in the optical part and clean it.
- Measure whether the power supply is insufficient.
- Finely adjust the screw device used to change the height of the lamp until the ideal light is achieved. Enter the menu "Service Options" and select "Calibration" to enter color and pattern adjustment, which can be adjusted to the center.

### ● The projected image is blurry

- Check whether the DMX512 controller channel value corresponding to the electronic focus system is suitable for the current projection distance.
- Check whether the mechanical part of the focusing system is stuck, remove the dust and add antifreeze and temperature-resistant lubricating oil.

### ● The light source of the lamp works intermittently

- Check whether the fan is running normally or is blocked by dust and paper debris.
- Check whether the inlet and outlet cooling air vents are blocked by dust.
- Check whether the lamp has reached the end of its service life.

- Check whether the power supply is insufficient, and whether the power switch and wiring are in poor contact or aging.

- Check whether the over-temperature protection temperature switch inside the lamp is damaged.

● **Although it emits light, the lamp does not accept instructions from the controller**

- Check whether the digital start address value and function options of the lamp are correct.

- Check whether the connection of the communication control line is correct. The communication line is too long or has been interrupted.

- Check whether the control equipment fails and whether the signal amplifier connected in series fails.

- Check whether the communication line is too long or if other devices interfere with each other.

- Optimize wiring, shorten the length of control signal lines, and route high-voltage and low-voltage lines separately

- Add signal amplifier isolator.

- The signal line is made of high-quality shielded twisted pair (impedance characteristic is  $75\Omega$ ), and the signal terminal resistor is connected at the end of the lamp.

- Check that the circuit board communication IC or CPU is burned out because the bulb performs an abnormal operation when it is not completely cooled, causing the instantaneous ultra-high voltage leakage generated by the trigger, and replace the PCB board.

● **The lamp cannot be started**

- Check whether the power supply parameters match the lamps.

- Check whether the fuse at the light fixture's power input is blown.

- Check that the lamp has poor contact or falls off due to extrusion deformation, vibration of internal parts, moisture, etc. during long-distance transportation.

- Check whether the internal wires and connectors of the lamp are desoldered or loose.

- Check whether the electrical components of the lamp (such as power switch, transformer, ballast, capacitor, varistor, filter, power supply PCB board, motor control PCB board, etc.) are loose, short-circuited, burned out, etc.

● **Some functions of the lamp cannot accept controller instructions**

- Check whether the control device sends correct action instructions for these functions.

- Check whether the mechanical parts corresponding to these functions are loose or deformed.

- Check whether the motor sockets corresponding to these functions are loose or the corresponding driver chips are burned out.

- Check whether the motor wires corresponding to these functions are broken at the corners.

- Check whether the motors corresponding to these functions are damaged.

● **During operation, the X or Y direction of the lamp does not move normally**

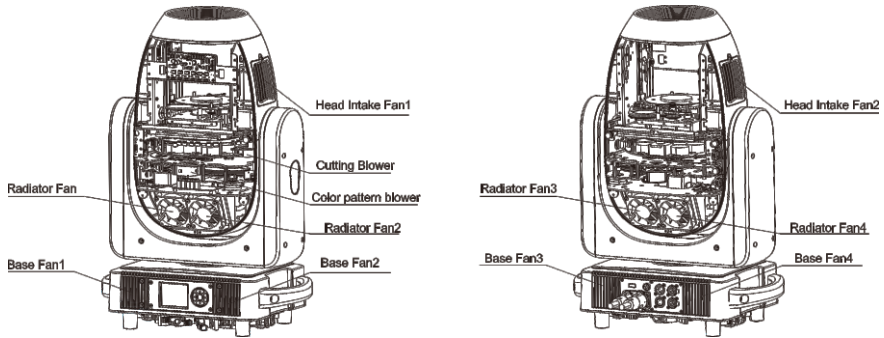
- Click the previous step to check one by one.

- Check whether the corresponding drive belts in the X and Y directions of the lamp are detached or broken.

- Check whether the data feedback receiver (photoelectric sensor) corresponding to the X and Y directions in the lamp is damaged.

- Restart the computer and reset it once.

## The position of each fan of the fixture:



## 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 and the internal optical lens every 30 days.

## CAUTION ! ! !

**Disconnect from mains before starting maintenance operation.**

## 10. Duty exonerative and copyright protectio

- \* Light source belongs to consumption products, not within the scope of warranty.
- \* The manufacturer shall not bear any responsibility for any damage caused by failure to operate in accordance with this instruction.
- \* All the information in this manual shall be interpreted by the manufacturer.
- \* All the information in this manual shall not be copied without permission.
- \* The data contained in this statement are subject to change in the future without prior notice.