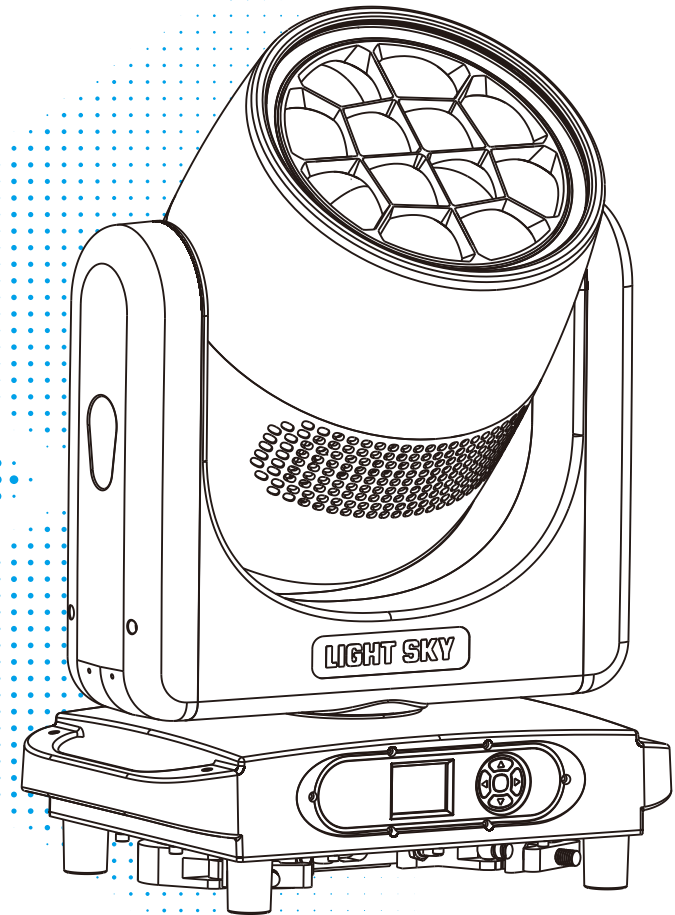


# LIGHT SKY

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



## AQUAPEARL-SMART User Manual

Please read the instruction carefully before use

Fly Dragon Lighting Equipment Co., Ltd.

Add : NO.4 JINGNENG ROAD 1, HUADU DISTRICT, GUANGZHOU, CHINA.  
Tel : 020-61828288 Fax : 020-61828188 Postal Code : 510820  
Email : flydragon@lightsky.com.cn



Social Media



LIGHT SKY Wechat

# CONTENTS

1. Safety Instructions .....	2
2. Technical Specifications .....	5
2.1. Attachment And Size .....	8
3. Connection and control .....	9
3.1. Power supply connection .....	9
3.2. DMX 512 Connection .....	10
3.3. Control Panel .....	11
4. How To Set The Unit .....	12
4.1. Main Function .....	12
4.2. Address Setting .....	14
4.3. DMX 512 Configuration .....	15
5. Electrical Connection Diagram .....	21
6. Troubleshooting .....	22
7. Fixture Cleaning .....	24
8. Duty exonerative and copyright protectio .....	24

**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



**WARNING**

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

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:

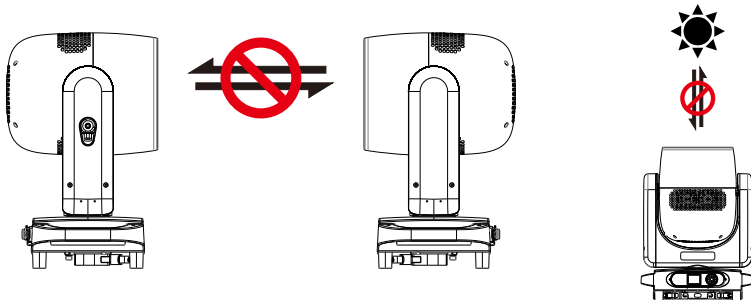
<b>WARNING!</b> Safety hazard. Risk of severe injury or death.	<b>WARNING!</b> Refer to manual before installing, powering or servicing.	<b>WARNING!</b> Hazardous voltage. Risk of severe or lethal electric shock.	<b>WARNING!</b> Fire hazard.	<b>WARNING!</b> Burn hazard. Hot surface, not touch. Do not touch	<b>WARNING!</b> Risk of eye injury. Safety glasses must be worn.	<b>WARNING!</b> Risk of hand injury. Safety gloves must be worn.	<b>WARNING!</b> Avoid direct eye contact
<b>DANGER!</b> Applies only to luminaires directly mounted on surfaces of non-combustible materials	<b>DANGER!</b> Do not discard Trash can	<b>DANGER!</b> Mark of ground	<b>DANGER!</b> Replace all shatter shields	<b>DANGER!</b> Take a short distance from the object to be photographed (meters)	<b>DANGER!</b> Rated maximum ambient temperature	<b>DANGER!</b> Do not point the lens towards the sun or strong light	<b>DANGER!</b> Operation not allowed during runtime

### 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 50cm from adjacent surfaces.
- Be sure that no ventilation slots is blocked, otherwise the unit will be overheated.

- Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature Ta: -20°C. Maximum ambient temperature Ta: 45°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 1 m.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to 55°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 distance between the luminaire and the irradiated surface shall be greater than 3 meters.
- Do not shine light directly into another fixture's lens. Intense beam can damage internal components.
- Direct sunlight or any other strong light beam penetrating the front lens of the luminaire can cause severe internal damage. During unpacking, installation, operation, and extended idle periods outdoors, it is prohibited to expose the front lens of the luminaire to beams of direct sunlight or any other strong light source from any angle.



- 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 luminaire must be securely fastened to the quick-lock hook with screws to prevent vibration or slipping during operation. The supporting structure must be able to withstand 6 times the weight of the luminaire. Additionally, a safety cable must be installed that can endure 30 free-fall drops from 300mm without failure. Installation should only be performed by qualified professionals, and the luminaire must be mounted in an area inaccessible to unauthorized personnel or away from pedestrian traffic.

## 2. Technical Specifications

### OPTICS

- Light source: 12 × 40W RGBW LED
- Beam angle: 3.6 °~40 °
- Spot angle: 5 °~50 °
- Color temperature: 2500K-10000K
- Illuminance: 38000 lx @ 5 m
- Luminous flux: 7100 lm
- Average lifespan of light source: 20000h

### EFFECT

- Color Mixing System: Uniform RGBW Color Mixing System and Rainbow Effect.
- Zoom system: linear electric zoom.
- Single point control: The light source supports independent control of a single element, with outstanding transformation effects.
- Front aperture: The front aperture can be controlled at a single point, allowing for free pursuit of flowing color changing effects.
- Effect macros: static effect macros and dynamic effect macros functions.
- Dimming: Electronic dimming, providing four dimming curves+four dimming frequencies+four dimming speeds.
- Strobe: 1-30Hz electronic strobe and random strobe.

### CONTROL AND PROGRAMMING

- Control channels: standard 28CH, 40CH, 72CH, 35CH, see channel table for details
- Control protocols: Standard DMX512 protocol, RDM protocol, Art-Net protocol, sACN protocol
- Data connection: Three core or five core signal input/output
- Display: LCD screen

### SOFTWARE

- Upgrade software through DMX signal interface
- Upgrade software via USB interface (optional)
- Intelligent temperature control ensures LED lifespan

### X/Y AXIS MOTION ANGLE

- X-axis: 540 ° (8-bit/16bit precision scanning)
- Y-axis: 270 ° (8-bit/16bit precision scanning)
- Reset function with automatic error correction
- Fixed lock: Y-axis lock

**POWER**

- Input voltage: AC 100-240V 50/60Hz
- Maximum power: 560W
- Power factor: 0.996
- Maximum current of the lamp: 2.43A/220V, 5.0A/110V

**DIMENSION**

- Product size: 397 × 280 × 539mm
- N.W.: 21.1 kg
- Carton packaging (default): 470 × 350 × 670mm
- G.W.: 25.3 kg

**OTHER**

- Protection level: Ip66
- Working environment: -20 °C~45 °C
- Maximum surface temperature of lamp body: 55 °C
- Hook: Suitable for pipes with a diameter of 40-60 mm.

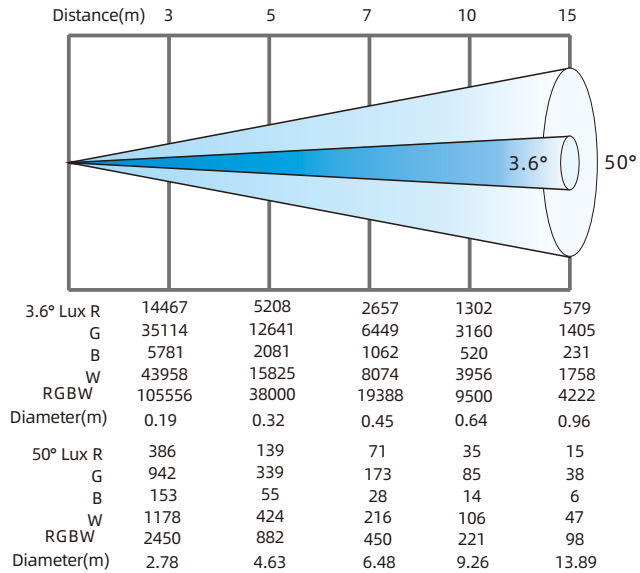
**OPTIONAL ACCESSORIES / PACKAGING**

- Flycase Size(2 unit ): 720 × 520 × 745 mm
- G.W.: 81kg

**APPROVALS**

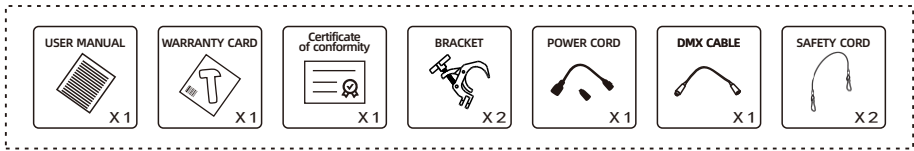
- The product implementation standard: IEC 60598-1、IEC 60598-2-17
- Approved certifications: CE、RoHs
- The product complies with the following EU directives:  
Low Voltage Directive 2014/35/EU . EMC Directive 2014/30/EU

### illumination diagram

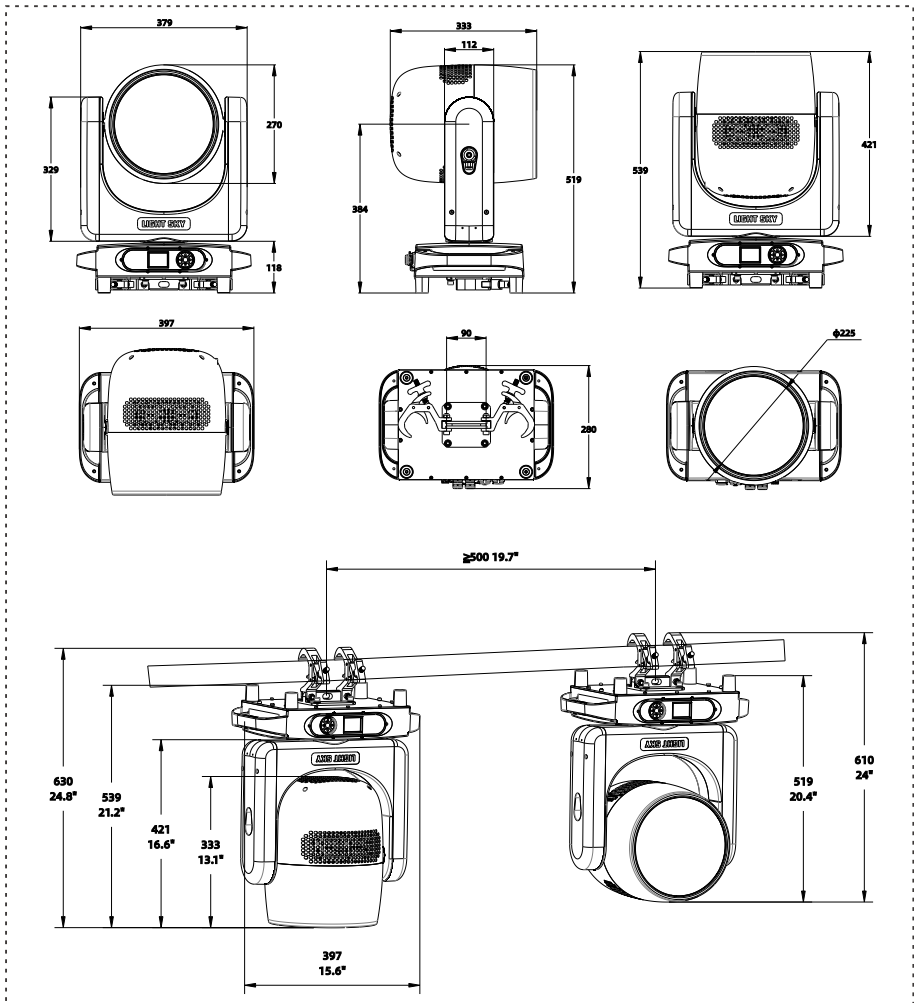


## 2.1.Attachment And Size

Attachment contents-Fig.1

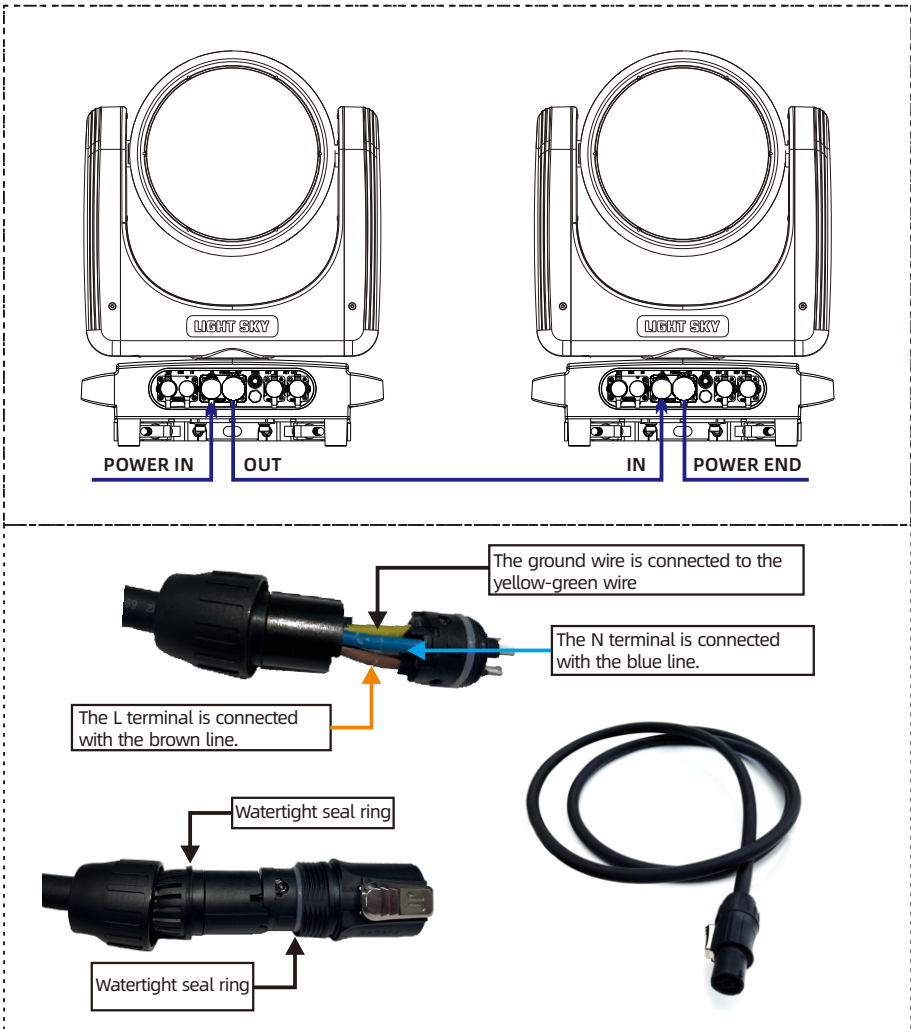


Size-Fig.2 (Unit:mm)



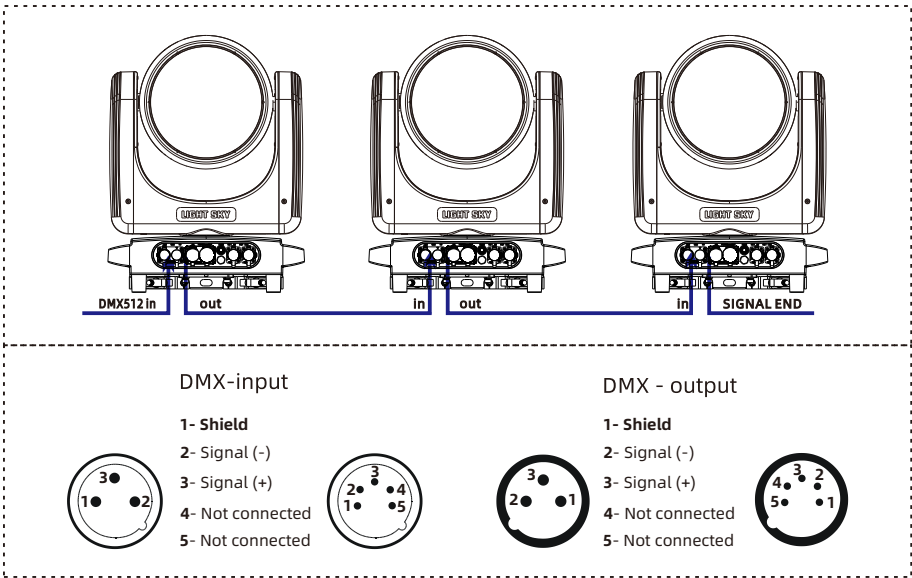
### 3.Connection and control

#### 3.1.Power supply connection



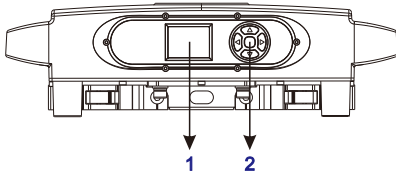
- The bus connecting the power supply must be installed by a qualified professional technician.
- After completing all the above operations and ensuring that it is installed, you can power on the lamp to operate.

## 3.2.DMX 512 Connection



1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120  $\Omega$  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.

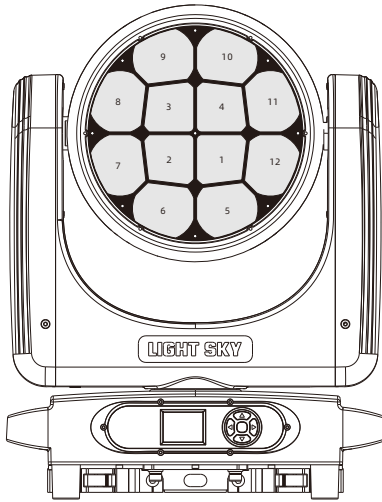
### 3.3.Control Panel



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

2.Button:

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



**Light source control sequence**

## 4.How To Set The Unit

### 4.1.Main Function

The lamp is powered on. When the system initialization and lamp reset are completed, and the standby interface is displayed on the display screen, press OK to enter the preset menu interface. The main functions are as follows:

Main menu	I menu	II menu	III menu	Note	
Dmx Setting	1.Address	001-512 28CH 40CH 72CH 35CH			
	2.Channel	Black (Default) Hold			
	3.State	DMX (Default) Art-Net sACN		This menu can only be displayed when the Art-Net module is connected.	
	4.InputMode	OFF/ON (Default)			
	5.DMXAddressLock				
Information	1.Time	Total Power Time ***H			
		Power Time ***H			
		Total Light Time ***H			
		Light time ***H			
	2.Temperature	Head Temp ****C			
		LedFanVol ***V			
		LedFan1Sp ***R			
		LedFan2Sp ***R			
		LedFan3Sp ***R			
		LedFan4Sp ***R			
		LedFan5Sp ***R			
		BaseFanVol ***V			
		BaseFan1Sp ***R			
	3.Fan Information	BaseFan2Sp ***R			
		MCU(XY) ***			
		MCU(ZOOM) ***			
		MCU(LED1) ***			
		MCU(LED2) ***			
		MCU(LED3) ***			
		Pan ***			
		Tilt ***			
		Zoom ***			
		Zoom Rot ***			
		LedFan1 ***			
		LedFan2 ***			
		LedFan3 ***			
	LedFan4 ***				
LedFan5 ***					
BaseFan1 ***					
BaseFan2 ***					
4.Fixture Status	3888:*****				
	1.Pan ***				
	2.PanFine ***				
5.RDM UID	3.....				
	1.Display Ver. Vxxx				
	2.XY Ver. Vxxx				
	3.ZOOM Ver. Vxxx				
	4.LED1 Ver. Vxxx				
	5.LED2 Ver. Vxxx				
	6.LED3 Ver. Vxxx				
6.DMX Live	1.Pan ***				
	2.PanFine ***				
7.Software	3.....				
	1.Display Ver. Vxxx				
	2.XY Ver. Vxxx				
	3.ZOOM Ver. Vxxx				
	4.LED1 Ver. Vxxx				
	5.LED2 Ver. Vxxx				
1.Dimmer&Fan Setting	1.Dimmer Curve	Linear (Default) Square I-Square S-Curve			
	2.Dimmer Freq	1800HZ 3600HZ 7200HZ (Default) 25000HZ			

Main menu	I menu	II menu	III menu	Note	
Personality		3.Dimmer Speed	Normal (Default) Smooth 1 Smooth 2 Smooth 3		
		4.Fan Mode	High Output Standard (Default) Silent		
	2.PanTilt Setting	1.Pan Invert		OFF/ON	
		2.Tilt Invert		OFF/ON	
		3.P/T Rectify		OFF/ON	
	3.Display Setting	4.P/T Mode		Normal (Default) Fast Precise	
		1.Language		EN (Default)/ZH	
		2.Dis.Backlight.		OFF (Default)/ON	
		3.Dis.Direction		Forward (Default)/Reverse	
	4.Artnet Setting	4.Dis.Blink		OFF/ON (Default)	
		IP Address		***.***.***.***	This menu can only be displayed when the Art-Net module is connected.
		Mask Address		***.***.***.***	
		Universe Address		0-32767	
		sACN Universe Address		1-63999	
		DHCP		OFF (Default)/ON	
Ethernet To DMX		OFF (Default)/ON			
Manual	1.Channel	1.Pan ***			
		2.Pan Fine ***			
	3.....				
2.Reset	1.PanTilt				
	2.Head Module				
	3.All				
Service	1.Calibrate	1.Pan ***			
		2.Tilt ***			
		3.Zoom ***			
		4.Zoom Rot ***			
		5.Red1 ***			
		6.Green1 ***			
		7.Blue1 ***			
		8.White1 ***			
		9.Red2 ***			
		10.Green2 ***			
		11.Blue2 ***			
		12.White2 ***			
	.....				
	49.Red12 ***				
	50.Green12 ***				
51.Blue12 ***					
52.White12 ***					
2.Factory Reset	Password : 1111		NO/YES		
3.Reset timers	Password : ****		1.Total Power Time 2.Total Light Time	NO/YES	
			1.Power Time 2.Light time	NO/YES	
4.Developer					
5.Firmware update					
Language	EN				
	ZH				
Test	1.Test PanTilt	Running:Step ***/****			
	2.Test Head Module	Running:Step ***/****			
	3.Test All	Running:Step ***/****			
Display Rotate	Normal				
	Rotate 180				

## 4.2.Address Setting

Enter MENU, select the DMX setting function, select the address code setting, press the OK button to confirm, the current DMX address will be displayed on the display. Use the up/down buttons to select addresses 001~512, and press the OK button to save. Press the OK button to return to the previous menu.

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
28 CH	1	29	57	85
40 CH	1	41	81	121
72 CH	1	73	145	217
35 CH	1	36	71	106

## 4.3.DMX 512 Configuration

Please control the fixture by referring to the configurations below

28 Channel	40 Channel	72 Channel	35CH (Compatibility Channel)	DMX	FUNCTION	
1	1	1	14	0-255	Pan	Angle: 0-540°, Maximum Speed:2.485
2	2	2	15	0-255	Pan Fine	
3	3	3	16	0-255	Tilt	Angle: 0-270°, Maximum Speed:1.355
4	4	4	17	0-255	Tilt Fine	
5	5	5	18	0-25	Special functions No Function	
				26-30	Zoom Reset(Disabled for 35CH mode)	
				31-40	P/T Reset(Disabled for 35CH mode)	
				41-50	Fixture Reset(Disabled for 35CH mode)	
				51-55	Fan mode: Standard	
				56-60	Fan mode: High Output	
				61-65	Fan mode: Silent	
				66-70	No Function	
				71-75	Display blink on	
				76-80	Display blink off	
				81-85	Display on	
				86-90	Display off	
				91-95	Pan invert on	
				96-100	Pan invert off	
				101-105	Tilt invert on	
				106-110	Tilt invert off	
				111-115	Dimmer frequency:1800HZ	
116-120	Dimmer frequency:3600HZ					
121-125	Dimmer frequency:7200HZ					
126-130	Dimmer frequency:25000HZ					
131-135	Dimmer curve: Linear					
136-140	Dimmer curve: Square					
141-145	Dimmer curve: Inv-square					
146-150	Dimmer curve: S-Curve					
151-155	Dimmer speed:Normal					
156-160	Dimmer speed:Smooth 1					
161-165	Dimmer speed:Smooth 2					
166-170	Dimmer speed:Smooth 3					
171-175	XY Normal mode					
176-180	XY Fast mode					
181-185	XY Precise mode					
186-255	No Function					
/	/	/	19	0-25	Reset No Function	Only available in 35CH mode
				26-70	Zoom Reset	
				77-127	P/T Reset	
				128-255	Fixture Reset	
6	6	6	20	0-255	Zoom	
7	7	7	21	0-127	Zoom Rotation Lens Angle 0-90°	Effective only when Channel 6 ZOOM < 66 Angle:0-90° Speed: 65→0 RPM
				128-190	CW Rotation speed Fast to slow	
				191-192	Stop rotation	
				193-255	CCW Rotation speed,slow to fast	
8	8	8	12	0-255	Dimmer from 0% to 100% (0=default)	
9	9	9	13	0-255	Dimmer Fine from 0% to 100% (0=default)	
10	10	10	11	0-9	Shutter No Function	
				10-49	Slow closing , Fast opening , slow → fast	1→25 HZ
				50-89	Fast closing , Slow opening , Slow → Fast	1→25 HZ
				90-119	Slow closing , Slow open , Slow → Fast	1→25 HZ
				120-179	Random strobe,Slow → Fast	1→25 HZ
				180-249	Synchronous strobe,slow → fast	1→25 HZ
				250-255	Shutter open	
				0-4	Macro No Function	
				5-19	CCT	
				20	LEE 002 Rose Pink	
				21	LEE 004 Medium Bastard Amber	
				22	LEE 007 Pale Yellow	
				23	LEE 008 Dark Salmon	
				24	LEE 009 Pale Amber Gold	
				25	LEE 010 Medium Yellow	
				26	LEE 013 Straw Tint	
				27	LEE 015 Deep Straw	
				28	LEE 017 Surprise Peach	
				29	LEE 020 Medium Amber	
				30	LEE 022 Dark Amber	

28 Channel	40 Channel	72 Channel	35CH (Compatibility Channel)	DMX	FUNCTION
			31	LEE 025	Sunset Red
			32	LEE 026	Bright Red
			33	LEE 036	Medium Pink
			34	LEE 048	Rose Purple
			35	LEE 058	Lavender
			36	LEE 063	Pale Blue
			37	LEE 068	Sky Blue
			38	LEE 071	Tokyo Blue
			39	LEE 075	Evening Blue
			40	LEE 088	Lime Green
			41	LEE 089	Moss Green
			42	LEE 090	Dark Yellow Green
			43	LEE 101	Yellow
			44	LEE 103	Straw
			45	LEE 104	Deep Amber
			46	LEE 105	Orange
			47	LEE 106	Primary Red
			48	LEE 107	Light Rose
			49	LEE 108	English Rose
			50	LEE 109	Light Salmon
			51	LEE 110	Middle Rose
			52	LEE 111	Dark Pink
			53	LEE 113	Magenta
			54	LEE 115	Peacock Blue
			55	LEE 117	Steel Blue
			56	LEE 118	Light Blue
			57	LEE 119	Dark Blue
			58	LEE 121	LEE Green
			59	LEE 122	Fern Green
			60	LEE 124	Dark Green
			61	LEE 126	Mauve
			62	LEE 127	Smokey Pink
			63	LEE 128	Bright Pink
			64	LEE 131	Marine Blue
			65	LEE 132	Medium Blue
			66	LEE 134	Golden Amber
			67	LEE 135	Deep Golden Amber
			68	LEE 137	Special Lavender
			69	LEE 138	Pale Green
			70	LEE 139	Primary Green
			71	LEE 140	Summer Blue
			72	LEE 141	Bright Blue
			73	LEE 142	Pale Violet
			74	LEE 143	Navy Blue
			75	LEE 144	No Colour Blue
			76	LEE 147	Apricot
			77	LEE 148	Bright Rose
			78	LEE 151	Gold Tint
			79	LEE 152	Pale Gold
			80	LEE 153	Pale Salmon
			81	LEE 154	Pale Rose
			82	LEE 156	Chocolate
			83	LEE 157	Pink
			84	LEE 158	Deep Orange
			85	LEE 161	Slate Blue
			86	LEE 162	Bastard Amber
			87	LEE 164	Flame Red
			88	LEE 165	Daylight Blue
			89	LEE 170	Deep Lavender
			90	LEE 172	Lagoon Blue
			91	LEE 174	Dark Steel Blue
			92	LEE 176	Loving Amber
			93	LEE 179	Chrome Orange
			94	LEE 180	Dark Lavender
			95	LEE 181	Congo Blue
			96	LEE 183	Moonlight Blue
			97	LEE 192	Flesh Pink
			98	LEE 194	Surprise Pink
			99	LEE 195	Zenith Blue
			100	LEE 196	True Blue
			101	LEE 197	Alice Blue
			102	LEE 198	Palace Blue

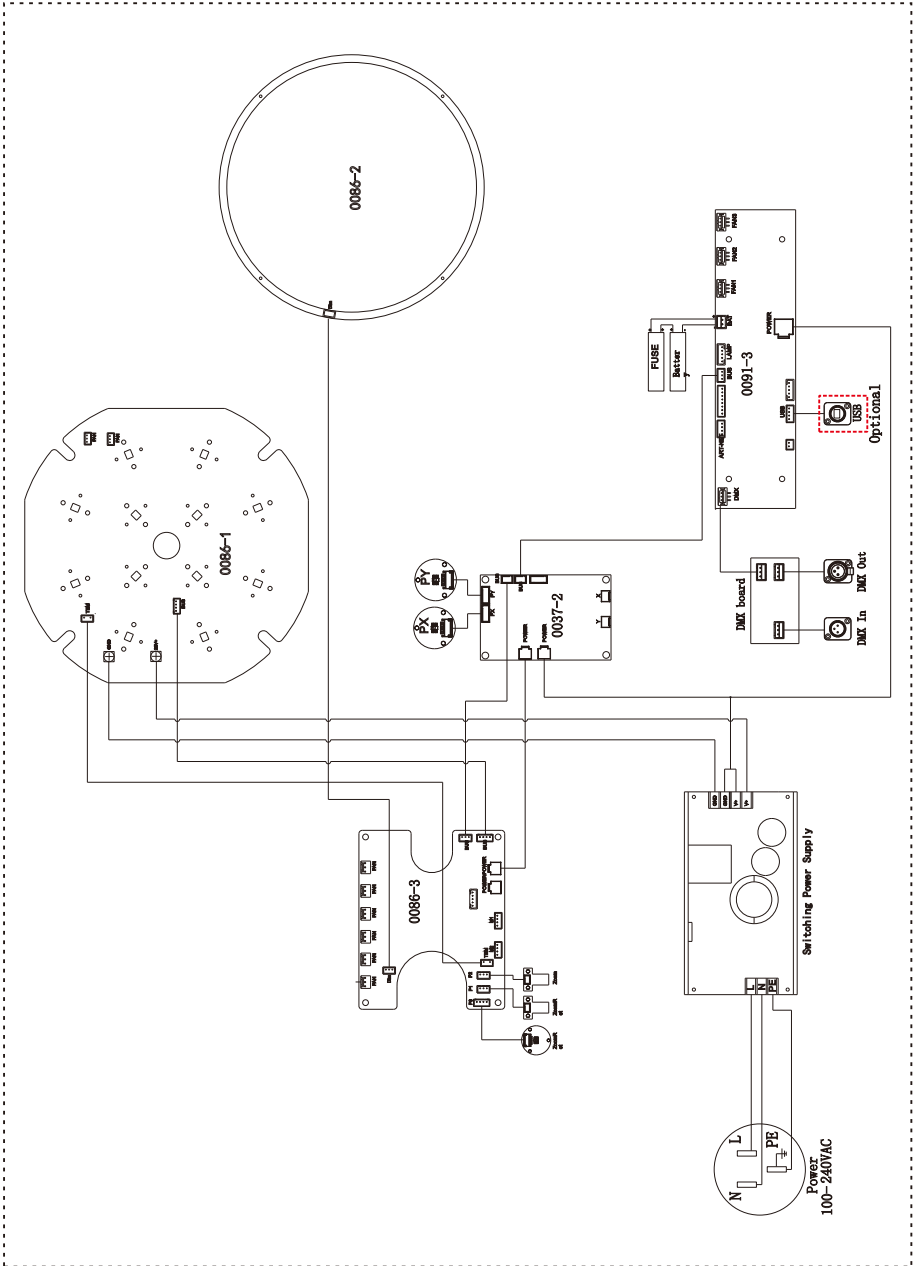
28 Channel	40 Channel	72 Channel	35CH (Compatibility Channel)	DMX	FUNCTION
11	11	11	/	103	LEE 199 Regal Blue
				104	LEE 200 Double CTB
				105	LEE 201 Full CTB
				106	LEE 202 Half CTB
				107	LEE 203 Quarter CTB
				108	LEE 204 Full CTO
				109	LEE 205 Half CTO
				110	LEE 206 Quarter CTO
				111	LEE 207 Full CTO + .3 ND
				112	LEE 208 Full CTO + .6 ND
				113	LEE 212 LCT Yellow (Y1)
				114	LEE 213 White Flame Green
				115	LEE 219 LEE Fluorescent Green
				116	LEE 230 Super Correction LCT Yellow
				117	LEE 232 Super Correction W.F. Green
				118	LEE 236 HMI (to Tungsten)
				119	LEE 237 CID (to Tungsten)
				120	LEE 238 CSI (to Tungsten)
				121	LEE 241 LEE Fluorescent
				122	LEE 242 LEE Fluorescent
				123	LEE 243 LEE Fluorescent
				124	LEE 244 LEE Plus Green
				125	LEE 245 Half Plus Green
				126	LEE 247 LEE Minus Green
				127	LEE 248 Half Minus Green
				128	LEE 249 Quarter Minus Green
				129	LEE 281 Three Quarter CTB
				130	LEE 283 One and a Half CTB
				131	LEE 285 Three Quarter CTO
				132	LEE 286 One and a Half CTO
				133	LEE 287 Double CTO
				134	LEE 322 Soft Green
				135	LEE 323 Jade
				136	LEE 327 Forest Green
				137	LEE 328 Follies Pink
				138	LEE 332 Special Rose Pink
				139	LEE 343 Special Medium Lavender
				140	LEE 345 Fuchsia Pink
				141	LEE 352 Glacier Blue
				142	LEE 353 Lighter Blue
				143	LEE 354 Special Steel Blue
				144	LEE 363 Special Medium Blue
				145	LEE 366 Cornflower
				146	LEE 441 Full CT Straw
				147	LEE 442 Half CT Straw
				148	LEE 444 Eighth CT Straw
				149	LEE 500 Double New Colour Blue
				150	LEE 501 New Colour Blue (Robertson Blue)
				151	LEE 502 Half New Colour Blue
				152	LEE 504 Waterfront Green
				153	LEE 505 Sally Green
				154	LEE 506 Marlene
				155	LEE 507 Madge
				156	LEE 508 Midnight Maya
				157	LEE 525 Argent Blue
				158	LEE 550 ALD Gold
				159	LEE 604 Full CT Eight Five
				160	LEE 650 Industry Sodium
				161	LEE 651 HI Sodium
				162	LEE 652 Urban Sodium
				163	LEE 700 Perfect Lavender
				164	LEE 701 Provence
				165	LEE 702 Special Pale Lavender
				166	LEE 703 Cold Lavender
				167	LEE 704 Lily
				168	LEE 706 King Fals Lavender
				169	LEE 708 Cool Lavender
				170	LEE 709 Electric Lilac
				171	LEE 710 Spir Special Blue
				172	LEE 711 Cold Blue
				173	LEE 712 Bedford Blue
				174	LEE 714 Elysian Blue

28 Channel	40 Channel	72 Channel	35CH (Compatibility Channel)	DMX	FUNCTION	
				175	LEE 715 Cabana Blue	
				176	LEE 716 Mikkel Blue	
				177	LEE 719 Colour Wash Blue	
				178	LEE 721 Berry Blue	
				179	LEE 722 Bray Blue	
				180	LEE 723 Virgin Blue	
				181	LEE 724 Ocean Blue	
				182	LEE 725 Old Steel Blue	
				183	LEE 727 QFD Blue	
				184	LEE 728 Steel Green	
				185	LEE 729 Scuba Blue	
				186	LEE 736 Twickenham Green	
				187	LEE 738 JAS Green	
				188	LEE 742 Bram Brown	
				189	LEE 744 Dirty White	
				190	LEE 747 Easy White	
				191	LEE 748 Seedy Pink	
				192	LEE 763 Wheat	
					Color Effect	
				193-202	Color wheel change speed from fast to slow	
				203-212	Color wheel change speed from fast to slow	
				213-222	Color wheel change speed from fast to slow	
				223-232	Color wheel change speed from fast to slow	
				233-242	Rainbow color speed from slow to fast	
				243-252	Rainbow color speed from slow to fast	
				253-255	Rainbow color speed from slow to fast	
12	12	12	/	0-2	No Function	
				3-255	CCT color 10000K-2500K	10000K-2500K
				3	10000K	10000K
				23	9500K	9500K
				43	9000K	9000K
				63	8500K	8500K
				83	8000K	8000K
				103	7500K	7500K
				120	7000K	7000K
				135	6500K	6500K
				150	6000K	6000K
				162	5600K	5600K
				180	5000K	5000K
				195	4500K	4500K
				210	4000K	4000K
				219	3700K	3700K
				225	3500K	3500K
				234	3200K	3200K
				240	3000K	3000K
				249	2700K	2700K
				255	2500K	2500K
13	13	13	/	0-7	Static LED Effect	
				8-149	No Function	
				150-255	Static Scene1-142	142 scenes
					No Function	
14	14	14	/	0-7	Move LED Effect	
				8-111	No Function	
				112-127	Dynamic scene 1-51(2 dmx for every scene)	51 scenes
				128-255	Random scene	
					No Function	
15	15	15	/	0-126	Move LED Effect Speed	
				127-128	Forwards move led effect speed from fast to slow	
				129-255	Stop	
					Backwards move led effect speed from slow to fast	
16	16	16	/	0-255	Move LED Effect Delay	
					Move LED effect delay from fast to slow	
17	17	17	/	0-1	Background Color	
				2-255	No Function	
					Color for background	
18	18	18	/	0-255	Background Dimmer	
					Background dimmer from 0% to 100% (0=default)	
19	19	/	1	0-255	Red (0%-100%)	
/	/	/	2	0-255	Red Fine (0%-100%)	
20	20	/	3	0-255	Green (0%-100%)	
/	/	/	4	0-255	Green Fine(0%-100%)	

28 Channel	40 Channel	72 Channel	35CH (Compatibility Channel)	DMX	FUNCTION	
21	21	/	5	0-255	Blue (0%-100%)	
/	/	/	6	0-255	Blue Fine (0%-100%)	
22	22	/	7	0-255	White (0%-100%)	
/	/	/	8	0-255	White Fine (0%-100%)	
/	23	/	/	0-255	Color1	
/	24	/	/	0-255	Color2	
/	25	/	/	0-255	Color3	
/	26	/	/	0-255	Color4	
/	27	/	/	0-255	Color5	
/	28	/	/	0-255	Color6	
/	29	/	/	0-255	Color7	
/	30	/	/	0-255	Color8	
/	31	/	/	0-255	Color9	
/	32	/	/	0-255	Color10	
/	33	/	/	0-255	Color11	
/	34	/	/	0-255	Color12	
/	/	19	/	0-255	Red1 (0%-100%)	
/	/	20	/	0-255	Green1 (0%-100%)	
/	/	21	/	0-255	Blue1 (0%-100%)	
/	/	22	/	0-255	White1 (0%-100%)	
/	/	23	/	0-255	Red2 (0%-100%)	
/	/	24	/	0-255	Green2 (0%-100%)	
/	/	25	/	0-255	Blue2 (0%-100%)	
/	/	26	/	0-255	White2 (0%-100%)	
/	/	27	/	0-255	Red3 (0%-100%)	
/	/	28	/	0-255	Green3 (0%-100%)	
/	/	29	/	0-255	Blue3 (0%-100%)	
/	/	30	/	0-255	White3 (0%-100%)	
/	/	31	/	0-255	Red4 (0%-100%)	
/	/	32	/	0-255	Green4 (0%-100%)	
/	/	33	/	0-255	Blue4 (0%-100%)	
/	/	34	/	0-255	White4 (0%-100%)	
/	/	35	/	0-255	Red5 (0%-100%)	
/	/	36	/	0-255	Green5 (0%-100%)	
/	/	37	/	0-255	Blue5 (0%-100%)	
/	/	38	/	0-255	White5 (0%-100%)	
/	/	39	/	0-255	Red6 (0%-100%)	
/	/	40	/	0-255	Green6 (0%-100%)	
/	/	41	/	0-255	Blue6 (0%-100%)	
/	/	42	/	0-255	White6 (0%-100%)	
/	/	43	/	0-255	Red7 (0%-100%)	
/	/	44	/	0-255	Green7 (0%-100%)	
/	/	45	/	0-255	Blue7 (0%-100%)	
/	/	46	/	0-255	White7 (0%-100%)	
/	/	47	/	0-255	Red8 (0%-100%)	
/	/	48	/	0-255	Green8 (0%-100%)	
/	/	49	/	0-255	Blue8 (0%-100%)	
/	/	50	/	0-255	White8(0%-100%)	
/	/	51	/	0-255	Red9 (0%-100%)	
/	/	52	/	0-255	Green9 (0%-100%)	
/	/	53	/	0-255	Blue9 (0%-100%)	
/	/	54	/	0-255	White9 (0%-100%)	
/	/	55	/	0-255	Red10 (0%-100%)	
/	/	56	/	0-255	Green10 (0%-100%)	
/	/	57	/	0-255	Blue10 (0%-100%)	
/	/	58	/	0-255	White10 (0%-100%)	
/	/	59	/	0-255	Red11 (0%-100%)	
/	/	60	/	0-255	Green11 (0%-100%)	
/	/	61	/	0-255	Blue11 (0%-100%)	
/	/	62	/	0-255	White11 (0%-100%)	
/	/	63	/	0-255	Red12 (0%-100%)	
/	/	64	/	0-255	Green12 (0%-100%)	
/	/	65	/	0-255	Blue12 (0%-100%)	
/	/	66	/	0-255	White12 (0%-100%)	
23	35	67	/	0-255	LED ring Dimmer from 0% to 100% (0=default)	
24	36	68	/	0-255	LED ring RED (0%-100%)	
25	37	69	/	0-255	LED ring GREEN (0%-100%)	
26	38	70	/	0-255	LED ring BLUE (0%-100%)	
					<b>LED ring Effect Macro</b>	
				0-9	Shutter open	
				10-19	Shutter closed	
				20-39	Strobe speed from slow to fast	
27	39	71	/			1→25 HZ

28 Channel	40 Channel	72 Channel	35CH (Compatibility channel)	DMX	FUNCTION	
				40-255 40-68 69-255	Effect Macro Dynamic scene 1-15 with user colors(2 dmx for every Dynamic scene 1-63 with auto colors(3 dmx for every	15 scenes 63 scenes
28	40	72	/	0-126 127-128 129-255	LED Effect Speed Forwards move led effect speed from fast to slow Stop Backwards move led effect speed from slow to fast	
/	/	/	22	0-255	Shape Selection	Channel compatible , no functionality
/	/	/	23	0-255	Shape Speed	
/	/	/	24	0-255	Shape Fade	
/	/	/	25	0-255	Shape R	
/	/	/	26	0-255	Shape G	
/	/	/	27	0-255	Shape B	
/	/	/	28	0-255	Shape W	
/	/	/	29	0-255	Shape Dimmer	
/	/	/	30	0-255	Background Dimmer	
/	/	/	31	0-255	Shape Transition	
/	/	/	32	0-255	Shape Offset	
/	/	/	33	0-255	Foreground Strobe	
/	/	/	34	0-255	Background Strobe	
/	/	/	35	0-255	Background Select	

## 5. Electrical Connection Diagram



## 6. 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 if the DMX512 controller has enabled the dimming channel.
  - Check if the internal terminal connections are loose, and securely fasten the plugs.
- 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.
- 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.
- 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, 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 corresponding to the X and Y directions in the lamp is damaged.
  - Restart the computer and reset it once.

## 7. 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 .



### **CAUTION ! ! !**

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

## 8. Duty exonerative and copyright protection

- 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.
- The manufacturer reserves the right of final interpretation for all information in this manual. For any questions, please refer to the official website.
- 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.