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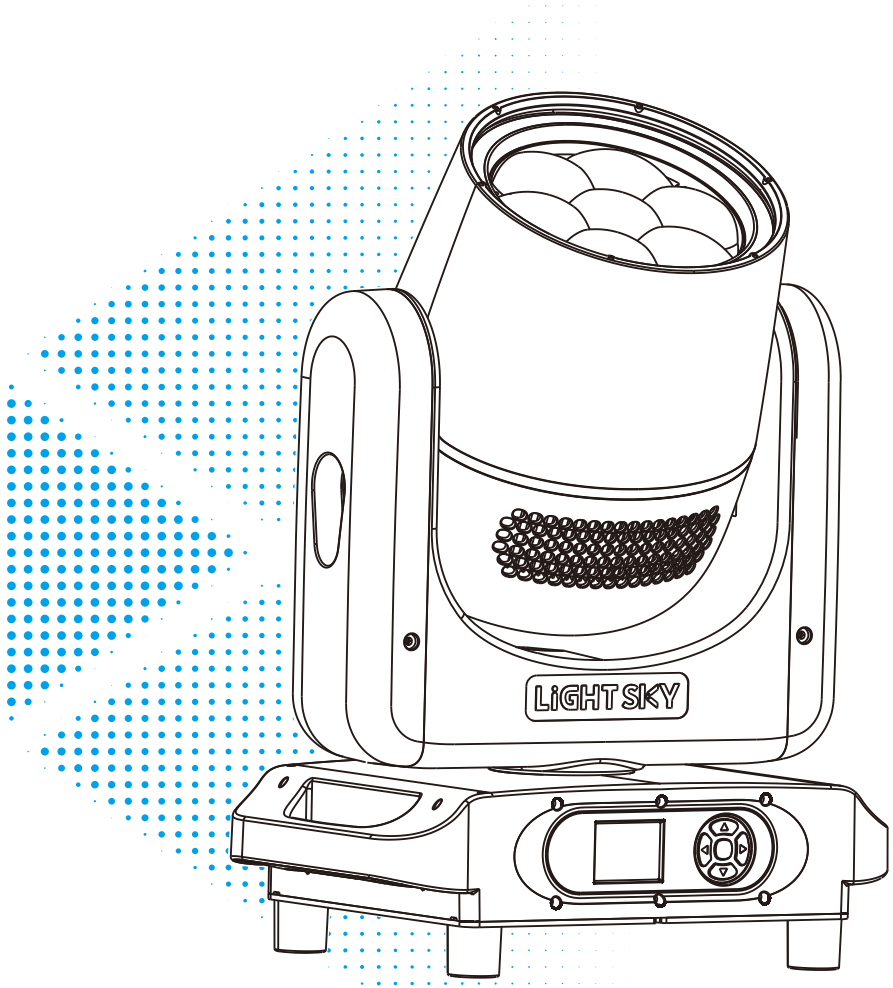


AQUAPEARL-MINI

User Manual

Please read the instruction carefully before use

CONTENTS

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:

WARNING! Safety hazard. Risk of severe injury or death.

WARNING! Refer to manual betore installing, powering or servicing.

WARNING! Hazardous voltage. Risk of severe or lethal electric shock.

WARNING! Fire hazard.

WARNING! Burn hazard. Hot surface.not touch.Do not touch

WARNING! Risk of eye injury.Safety glasses must be worn.

WARNING! Risk of hand injury.Safety gloves must be worn.

WARNING! Avoid direct eye contact

DANGER! Applies only to luiminaires directly mounted on surfaces of non-combustible materials

DANGER! Do not discard Trash can

DANGER! Mark of ground

DANGER! Replace all shatter shields

DANGER! Take a short distance from the object to be photographed (meters)

DANGER! Rated maximum ambient temperature

DANGER! Do not point the lens towards the sun or strong light

DANGER! 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 he light source.

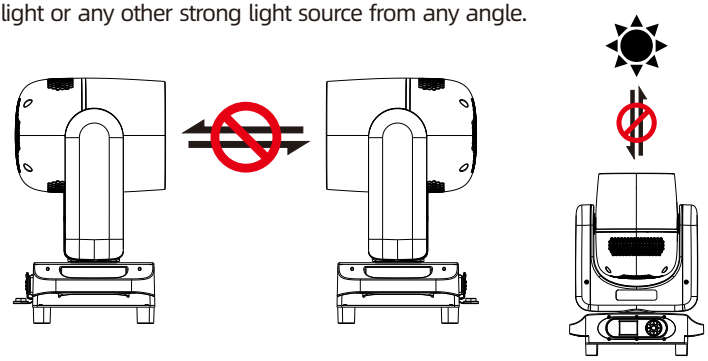
— Do not allow children to operate the fixture.

— 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: -10°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 80°C. Do not touch the housing bare-handedduring 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 xtended 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: 7×60W RGBW LED
- Beam angle: 4°~32°
- Spot angle: 5°~50°
- Color temperature: 2500K-10000K
- Whole lamp output illumination: 23500 lx@ 5 m
- Luminous flux:7100 lm
- LED source life expectancy: 20000 h

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 light source and has outstanding transformation effects.
- Front aperture: The front aperture can be controlled by a single point, and you can chase the flowing color effect at will.
- Effect macro: static effect macro and dynamic effect macro function.
- Dimming: Electronic dimming, providing four dimming curves+four dimming frequencies+four dimming speeds.
- Strobe: 1-25Hz electronic strobe and random strobe.

CONTROL AND PROGRAMMING

- Control channel: 31CH, 55CH, 21CH, 35CH,28CH,please see the channel table for details.
- Control protocol: standard DMX512 protocol, RDM protocol,Art-Net protocol.
- Data connection: three-core or five-core signal input/output.
- Display: LCD screen

SOFTWARE

- Upgrade software through the DMX signal interface or USB interface (optional)
- Intelligent temperature control to ensure LED life

X/Y AXIS MOVEMENT ANGLE

- X-axis: 540° 8bit/16bit precision scanning
- Y-axis: 250° 8bit/16bit precision scanning
- Reset function with automatic error correction
- Fixed lock: Y-axis lock

POWER

- Input voltage: AC 100-240V 50/60Hz
- Maximum power: 480W
- Power factor: 0.9
- Maximum lamp current: 2.4A/220V； 4.8A/110V

SIZE AND WEIGHT

- Product size: 329×245×454mm
- Carton packaging (Default): 410×290×625mm
- N.W.: 12.3 kg G.W.: 15.7 kg

OTHERS

- IP rate: Ip66
- Working environment: -10℃~45℃
- Maximum surface temperature of the lamp body: 80℃
- Hook: Suitable for pipes with a diameter of 38-52 mm

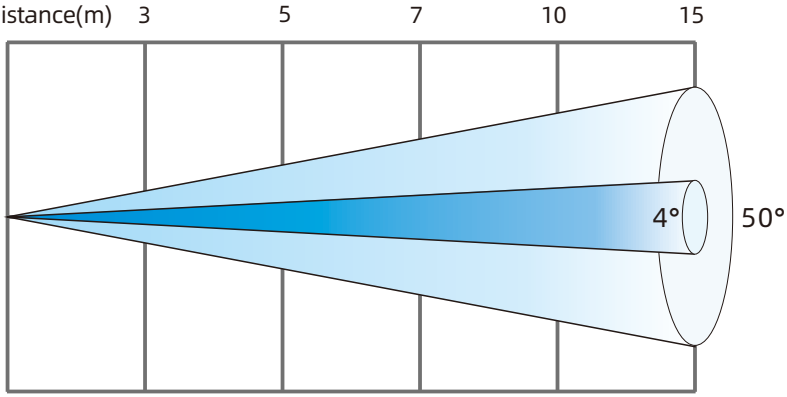
OPTIONAL ACCESSORIES / PACKAGING

- Flycase (4 sets): 850×660×725mm
- G.W.: 100.4 kg

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

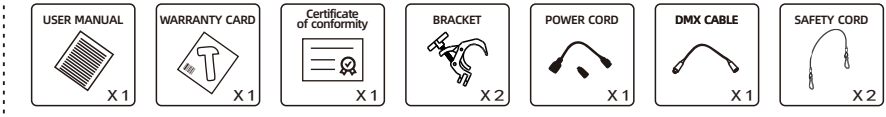
illumination diagram



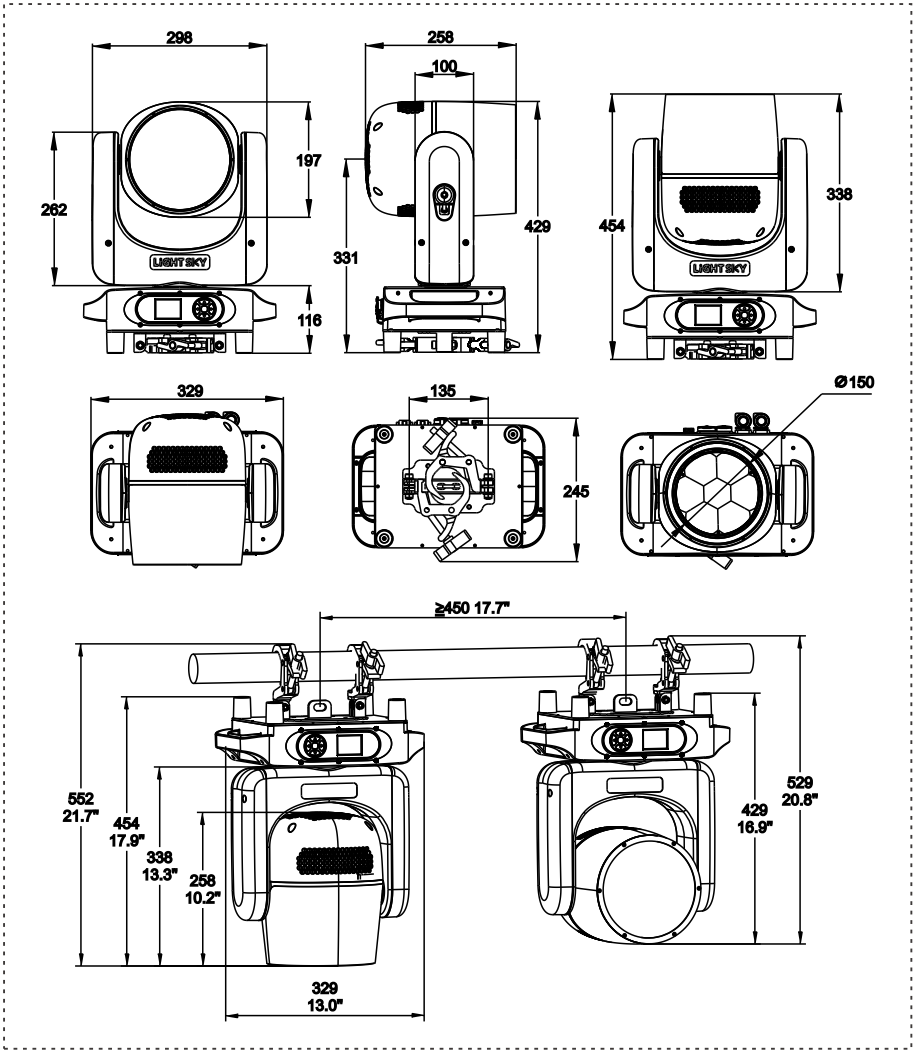
4° Lux R	10342	3723	1899	931	414
G	30478	10972	5598	2743	1219
B	4475	1611	822	403	179
W	36283	13062	6664	3266	1451
RGBW	65278	23500	11990	5875	2677
Diameter(m)	0.22	0.37	0.52	0.74	1.11
50° Lux R	383	138	70	35	15
G	1153	415	212	104	46
B	164	59	30	15	7
W	1353	487	248	122	54
RGBW	3142	1131	577	283	126
Diameter(m)	2.8	4.66	6.52	9.33	13.98

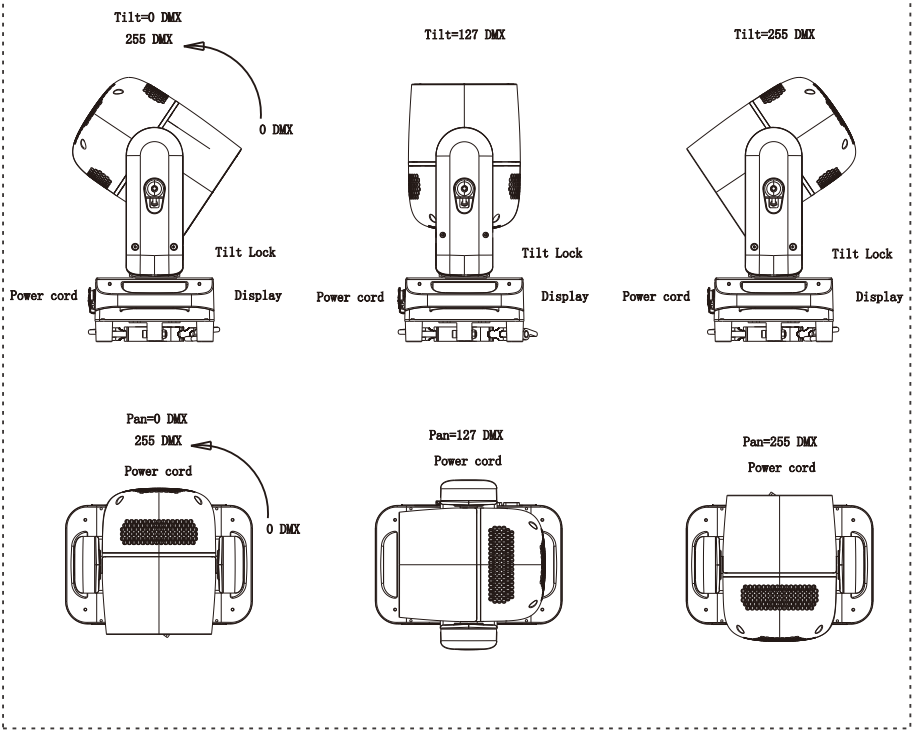
2.1.Attachment And Size

Attachment contents-Fig.1



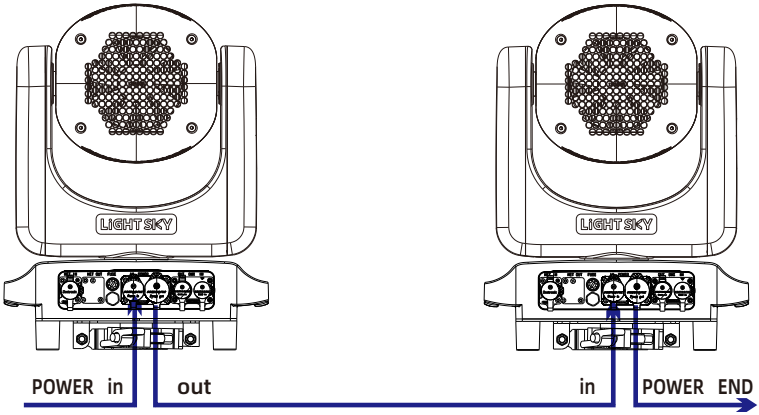
Size-Fig.2 (Unit:mm)

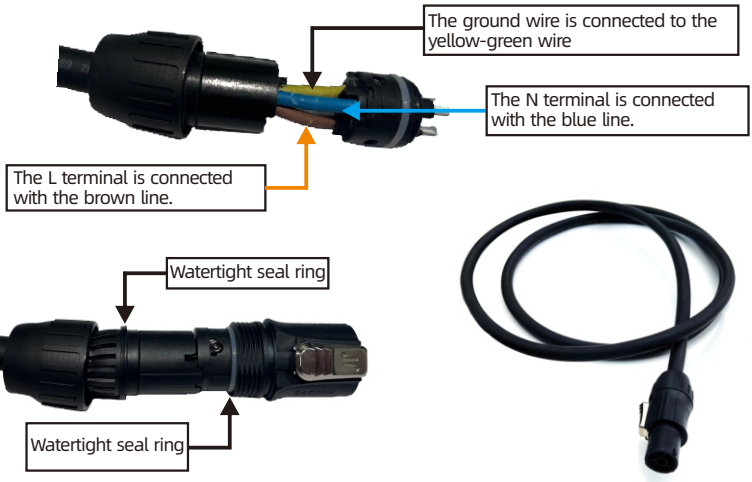



Tilt=0 DMX
255 DMX
0 DMX
Tilt Lock
Power cord
Display
Tilt=127 DMX
Tilt Lock
Power cord
Display
Tilt=255 DMX
Tilt Lock
Power cord
Display
Pan=0 DMX
255 DMX
Power cord
0 DMX
Pan=127 DMX
Power cord
Pan=255 DMX
Power cord

3.Connection and control

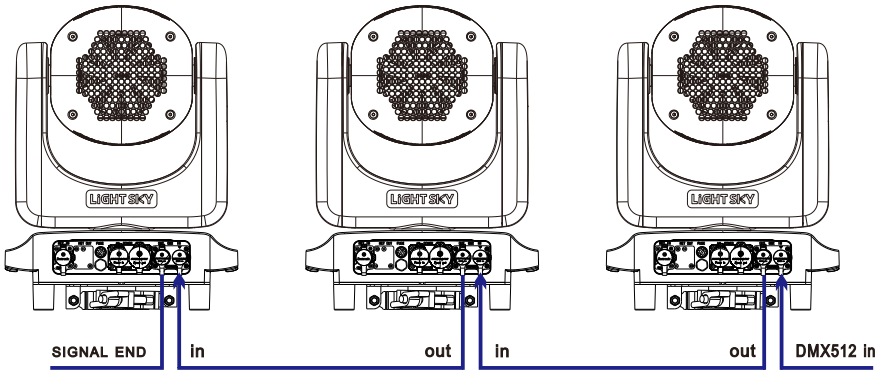
3.1.Power supply connection





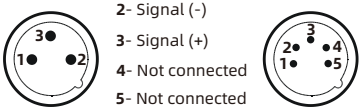
- The bus connecting the power supply must be installed by a qualified professional technician.
- After completing all the above operations and ensuring that it is installed, you can power on the lamp to operate.

3.2.DMX 512 Connection



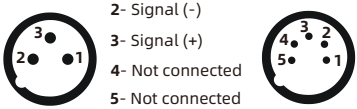
DMX-input

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



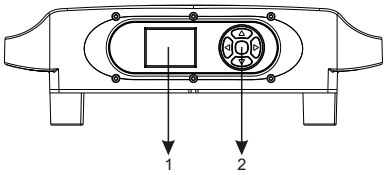
DMX - output

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 120 Ω 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.

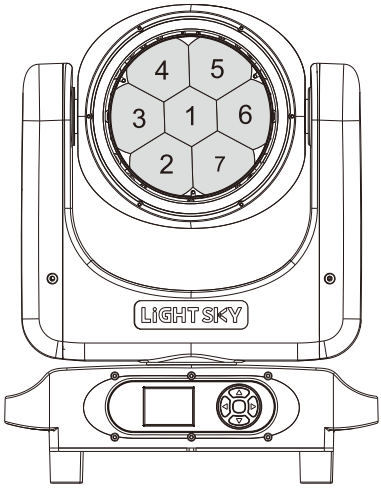
3.3.Control Panel



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

Main menu	I menu	II menu	III menu	Note
DMX Address	Address	1-512		
	Channel	31CH (Default)		
		55CH		
		21CH		
		35CH		
		28CH		
	State	Black (Default)		
		Hold		
	InputMode	DMX (Default)		This menucan only be displayed whenthe artnet module is connected.
		ARTNET		
Information	Time	Total Power Time		
		Power Time		
		Total Light Time		
		Light time		
	Temperature	Head Temp		
	Fan Info.	HeadFan1Vol		
		HeadFan2Vol		
		HeadFan1Sp		
		BaseFanVol		
		BaseFan1Sp		
	Fixture state	1.MCU(XY)***		
		2.MCU(ZOOM) ***		
		3.MCU(LED1) ***		
		4.MCU(LED2) ***		
		5.Pan ***		
		6.Tilt ***		
		7.Zoom ***		
		8.ZoomRot***		
		9.HeadFan1***		
		10.BaseFan1***		
	RDM UID	3888：xxxxxxxx		
	DMX Live	DMX		
	Software	1.Display Ver. Vxxx		
		2.XY Ver. Vxxx		
		3.Zoom Ver. Vxxx		
		4.LED1 Ver. Vxxx		
		5.LED2 Ver. Vxxx		
Personal	Dimmer&Fan Setting	Dimmer Curve	Linear	
			Square (Default)	
			I - Square	
			Scurve	
		Led Hz	1800Hz (Default)	
			3600Hz	
			7200Hz	
			25000Hz	
		Dimmer Speed	Normal (Default)	
			Smooth1	
			Smooth2	
			Smooth3	
		Fan Mode	HighOutput	
			Standard (Default)	
			Silent	
	PanTilt Setting	Pan Invert	OFF(Default)/ON	
		Tilt Invert	OFF(Default)/ON	

Main menu	I menu	II menu	III menu	Note
		P/T Rectify	OFF/ON (Default)	
	Display Setting	Language	EN (Default) /ZH	
		Disp. Backlight	OFF/ ON (Default)	
		Disp. Direction	Forward (Default)/ Reverse	
		Dis.Blink	OFF/ ON	
	ZoomMode Setting	Beam (Default)		
		Standard		
	Artnet Setting	IP Address	***.***.***.***	This menucan only be displayed whenthe artnet module is connected.
		Mask Address	***.***.***.***	
		Net Address	0-127	
		Sub Net Address	0-15	
		Universe Address	0-15	
Manual Control	Channel control	1.Pan *** ...		
	Reset	PanTilt		
		Head Module		
		All		
Service	Calibration	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 ***		
		.....		
		29.Red7 ***		
		30.Green7 ***		
		31.Blue7 ***		
		32.White7 ***		
	Factory Reset	NO/ YES		
	Reset Timers	1.Total Power Time	NO/YES	
		2.Total Light Time	NO/YES	
		1.Power Time	NO/YES	
		2.Light Time	NO/YES	
	Developer			
	Firmware update			
Language	EN/ZH			
Test	Test PanTilt			
	Test Head Module			
	Test All			
Rotate Display				

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
31 CH	1	32	63	94
55 CH	1	56	111	166
21 CH	1	22	43	64
35 CH	1	36	71	106
28 CH	1	29	57	85

4.3.DMX 512 Configuration

31 Channel	55 Channel	DMX	Function	Note
1	1	0-255	**Pan positioning**	
2	2	0-255	**Fine Pan positioning**	
3	3	0-255	**Tilt positioning**	
4	4	0-255	**Fine Tilt positioning**	
5	5		**Function (Hold 3s)**	
		0-25	No function	
		26-30	Reset Head	
		31-35	Reset Pan&Tilt	
		36-40	Reset All	
		41-49	No function	
		50-59	Fan HighOutput mode	
		60-69	Fan Standard mode	
		70-79	Fan Silent mode	
		80-84	Dis.Blink off	
		85-89	Dis.Blink on	
		90-94	Zoom Beam mode	
		95-99	Zoom Standard mode	
		100-104	Disp.Backlight off	
		105-109	Disp.Backlight on	
		110-114	Disp. Direction Forward	
		115-119	Disp. Direction Reverse	
		120-129	No function	
		130-139	Pan invert on	
		140-149	Pan invert off	
		150-159	Tilt invert on	
		160-169	Tilt invert off	
		170-177	LED frequency 1.8kHz	
		178-185	LED frequency 3.6kHz	
		186-193	LED frequency 7.2kHz	
		194-199	LED frequency 25kHz	
		200-204	Dimmer curve linear	
		205-209	Dimmer curve square	
		210-214	Dimmer curve inv - square	
		215-219	Dimmer curve "S"	
		220-224	Dimmer Normal	
		225-229	Dimmer Smooth 1	
		230-234	Dimmer Smooth 2	
		235-239	Dimmer Smooth 3	
		240-255	No function	
6	6	0-255	**Zoom**	
7	7		**ZoomRot**	
		0-127	ZoomRot indexing	
		128-190	ZoomRot CW fast to slow	
		191-192	Stop	
		193-255	ZoomRot CCW slow to fast	
8	8	0-255	**Dimmer**	
9	9	0-255	**Dimmer Fine**	
10	10		**Strobe**	
		0-9	Strobe open	
		10-49	Slow closing , Fast opening, slow → fast	
		50-89	Fast closing , Slow opening, Slow → Fast	
		90-119	Slow closing , Slow open, Slow → Fast	
		120-179	Random strobe,Slow → Fast	
		180-249	Synchronous strobe,slow → fast	
		250-255	Strobe open	
11	\	0-255	**Red 0 to 100%**	
12	\	0-255	**Green 0 to 100%**	
13	\	0-255	**Blue 0 to 100%**	
14	\	0-255	**White 0 to 100%**	
\	11	0-255	**Red1**	
\	12	0-255	**Green1**	
\	13	0-255	**Blue1**	
\	14	0-255	**White1**	
\	15	0-255	**Red2**	

31 Channel	55 Channel	DMX	Function	Note
\	16	0-255	Green2	
\	17	0-255	Blue2	
\	18	0-255	White2	
\	19	0-255	Red3	
\	20	0-255	Green3	
\	21	0-255	Blue3	
\	22	0-255	White3	
\	23	0-255	Red4	
\	24	0-255	Green4	
\	25	0-255	Blue4	
\	26	0-255	White4	
\	27	0-255	Red5	
\	28	0-255	Green5	
\	29	0-255	Blue5	
\	30	0-255	White5	
\	31	0-255	Red6	
\	32	0-255	Green6	
\	33	0-255	Blue6	
\	34	0-255	White6	
\	35	0-255	Red7	
\	36	0-255	Green7	
\	37	0-255	Blue7	
\	38	0-255	White7	
15	39	 0-2 3-255	CCT 10000k - 2500k No function 10000k - 2500k	
16	40	 0-9 10-99 100-199 200-255	EffectMacro No function Static Effect Chase Effect No function	
17	41	 0-125 126-129 130-255	EffectSpeed CWfast to slow Stop CCWslow to fast	
18	42	 0-255	EffectFade Fade	
19	43	 0-255	DimmerBack	
20	44	 0-9 10-49 50-89 90-119 120-179 180-249 250-255	StrobeBack Strobe closed Slow closing , Fast opening, slow → fast Fast closing , Slow opening, Slow → Fast Slow closing , Slow open, Slow → Fast Random strobe,Slow → Fast Synchronous strobe,slow → fast Strobe open	
21	45	 0-255	Red of Back Color (for Program)	
22	46	 0-255	Green of Back Color (for Program)	
23	47	 0-255	Blue of Back Color (for Program)	
24	48	 0-255	White of Back Color (for Program)	
25	49	0-255	RingDimmer	
26	50	0-255 0-9 10-49 50-89 90-119 120-179 180-249 250-255	RingStrobe Strobe closed Slow closing , Fast opening, slow → fast Fast closing , Slow opening, Slow → Fast Slow closing , Slow open, Slow → Fast Random strobe,Slow → Fast Synchronous strobe,slow → fast Strobe open	

31 Channel	55 Channel	DMX	Function	Note
27	51	0-255	**RingRed 0 to 100%**	
28	52	0-255	**RingGreen 0 to 100%**	
29	53	0-255	**RingBlue 0 to 100%**	
30	54		**RingEffect**	
		0-9	No function	
		0-255	RingEffect	
31	55		**RingSpeed**	
		0-125	CWfast to slow	
		126-129	Stop	
		130-255	CCWslow to fast	

21 Channel	DMX	Function	Note
1	0-255	**Red 0 to 100%**	
2	0-255	**Red Fine 0 to 100%**	
3	0-255	**Green 0 to 100%**	
4	0-255	**Green Fine 0 to 100%**	
5	0-255	**Blue 0 to 100%**	
6	0-255	**Blue Fine 0 to 100%**	
7	0-255	**White 0 to 100%**	
8	0-255	**White Fine 0 to 100%**	
9	 0-2 3-255	**CCT 10000k - 2500k** No function 10000k - 2500k	
10	 0-19 20-192 193-202 203-212 213-222 223-232 233-242 243-252 253-255	**Macro Color** No function Macro Color Color wheel change speed from fast to slow Color wheel change speed from fast to slow Color wheel change speed from fast to slow Color wheel change speed from fast to slow Rainbow color speed from slow to fast Rainbow color speed from slow to fast Rainbow color speed from slow to fast	
11	 0-9 10-49 50-89 90-119 120-179 180-249 250-255	**Strobe** Strobe open Slow closing , Fast opening, slow → fast Fast closing , Slow opening, Slow → Fast Slow closing , Slow open, Slow → Fast Random strobe,Slow → Fast Synchronous strobe,slow → fast Strobe open	
12	0-255	**Dimmer**	
13	0-255	**Dimmer Fine**	
14	0-255	**Pan positioning**	
15	0-255	**Fine Pan positioning**	
16	0-255	**Tilt positioning**	
17	0-255	**Fine Tilt positioning**	
18	0-255	**Zoom**	
19	0-255	**Color Crossfade**	Channel compatibility, currently without functionality
20	 0-1 2-3 4-7 8-9 10-102 103-105 106-120 121-130 131-140 141-150 151-160 161-170 171-180 181-255	**Function (Hold 3s)** No function Fan HighOutput mode Fan Standard mode Fan Silent mode No function No function No function No function LED frequency 25kHz No function LED frequency 7.2kHz LED frequency 3.6kHz LED frequency 1.8kHz No function	
21	 0-25 26-70 77-127 128-255	**Reste** No function Reset Head Reset Pan&Tilt Reset All	

35 Channel	DMX	Function	Note
1	0-255	**Red 0 to 100%**	
2	0-255	**Red Fine 0 to 100%**	
3	0-255	**Green 0 to 100%**	
4	0-255	**Green Fine 0 to 100%**	
5	0-255	**Blue 0 to 100%**	
6	0-255	**Blue Fine 0 to 100%**	
7	0-255	**White 0 to 100%**	
8	0-255	**White Fine 0 to 100%**	
9	 0-2 3-255	**CCT 10000k - 2500k** **No function** **10000k - 2500k**	
10	 0-19 20-192 193-202 203-212 213-222 223-232 233-242 243-252 253-255	**Macro Color** No function Macro Color Color wheel change speed from fast to slow Color wheel change speed from fast to slow Color wheel change speed from fast to slow Color wheel change speed from fast to slow Rainbow color speed from slow to fast Rainbow color speed from slow to fast Rainbow color speed from slow to fast	
11	 0-9 10-49 50-89 90-119 120-179 180-249 250-255	**Strobe** Strobe open Slow closing , Fast opening, slow → fast Fast closing , Slow opening, Slow → Fast Slow closing , Slow open, Slow → Fast Random strobe,Slow → Fast Synchronous strobe,slow → fast Strobe open	
12	0-255	**Dimmer**	
13	0-255	**Dimmer Fine**	
14	0-255	**Pan positioning**	
15	0-255	**Fine Pan positioning**	
16	0-255	**Tilt positioning**	
17	0-255	**Fine Tilt positioning**	
18	 0-1 2-3 4-7 8-9 10-102 103-105 106-120 121-130 131-140 141-150 151-160 161-170 171-180 181-255	**Function(Hold 3s)** No function Fan HighOutput mode Fan Standard mode Fan Silent mode No function No function No function No function LED frequency 25kHz No function LED frequency 7.2kHz LED frequency 3.6kHz LED frequency 1.8kHz No function	
19	 0-25 26-70 77-127 128-255	**Reste** No function Reset Head Reset Pan&Tilt Reset All	

35 Channel	DMX	Function	Note
20	0-255	**Zoom**	
		ZoomRot	
	0-127	ZoomRot indexing	
21	128-190	ZoomRot CW fast to slow	90->0 RPM
	191-192	Stop	
	193-255	ZoomRot CCW slow to fast	0-90 RPM
22	0-255	**Shape Seletion**	
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**	Channel compatibility, currently without functionality
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**	

28 Channel	DMX	Function	Note
1	0-255	Pan positioning	Angle: 0-540° Maximal: 2.44S
2	0-255	Fine Pan positioning	
3	0-255	Tilt positioning	Angle: 0-250° Maximal: 1.17S
4	0-255	Fine Tilt positioning	
5		Function (Hold 3s)	
	0-25	No function	
	26-30	Reset Head	
	31-35	Reset Pan&Tilt	
	36-40	Reset All	
	41-49	No function	
	50-59	Fan HighOutput mode	
	60-69	Fan Standard mode	
	70-79	Fan Silent mode	
	80-84	Dis.Blink off	
	85-89	Dis.Blink on	
	90-94	Zoom Beam mode	
	95-99	Zoom Standard mode	
	100-104	Disp.Backlight off	
	105-109	Disp.Backlight on	
	110-114	Disp. Direction Forward	
	115-119	Disp. Direction Reverse	
	120-129	No function	
	130-139	Pan invert on	
	140-149	Pan invert off	
	150-159	Tilt invert on	
	160-169	Tilt invert off	
	170-177	LED frequency 1.8kHz	
	178-185	LED frequency 3.6kHz	
	186-193	LED frequency 7.2kHz	
	194-199	LED frequency 25kHz	
	200-204	Dimmer curve linear	
	205-209	Dimmer curve square	
	210-214	Dimmer curve inv-square	
	215-219	Dimmer curve "S"	
	220-224	Dimmer Normal	
	225-229	Dimmer Smooth 1	
	230-234	Dimmer Smooth 2	
	235-239	Dimmer Smooth 3	
	240-255	No function	
6	0-255	Zoom	
7		ZoomRot	
	0-127	ZoomRot indexing	
	128-190	ZoomRot CW fast to slow	90->0 RPM
	191-192	Stop	
	193-255	ZoomRot CCW slow to fast	0-90 RPM
8	0-255	Dimmer	
9	0-255	Dimmer Fine	
10		Strobe	
	0-9	Strobe open	
	10-49	Slow closing , Fast opening, slow → fast	0.5-12HZ
	50-89	Fast closing , Slow opening, Slow → Fast	0.5-12HZ
	90-119	Slow closing , Slow open, Slow → Fast	0.5-12HZ
	120-179	Random strobe,Slow → Fast	1-25HZ
	180-249	Synchronous strobe,slow → fast	1-25HZ
	250-255	Strobe open	
		Macro	
	0-4	No Function	
	5-19	CCT	
	20	LEE 002 Rose Pink	
	21	LEE 004 Medium Bastard Amber	
	22	LEE 007 Pale Yellow	

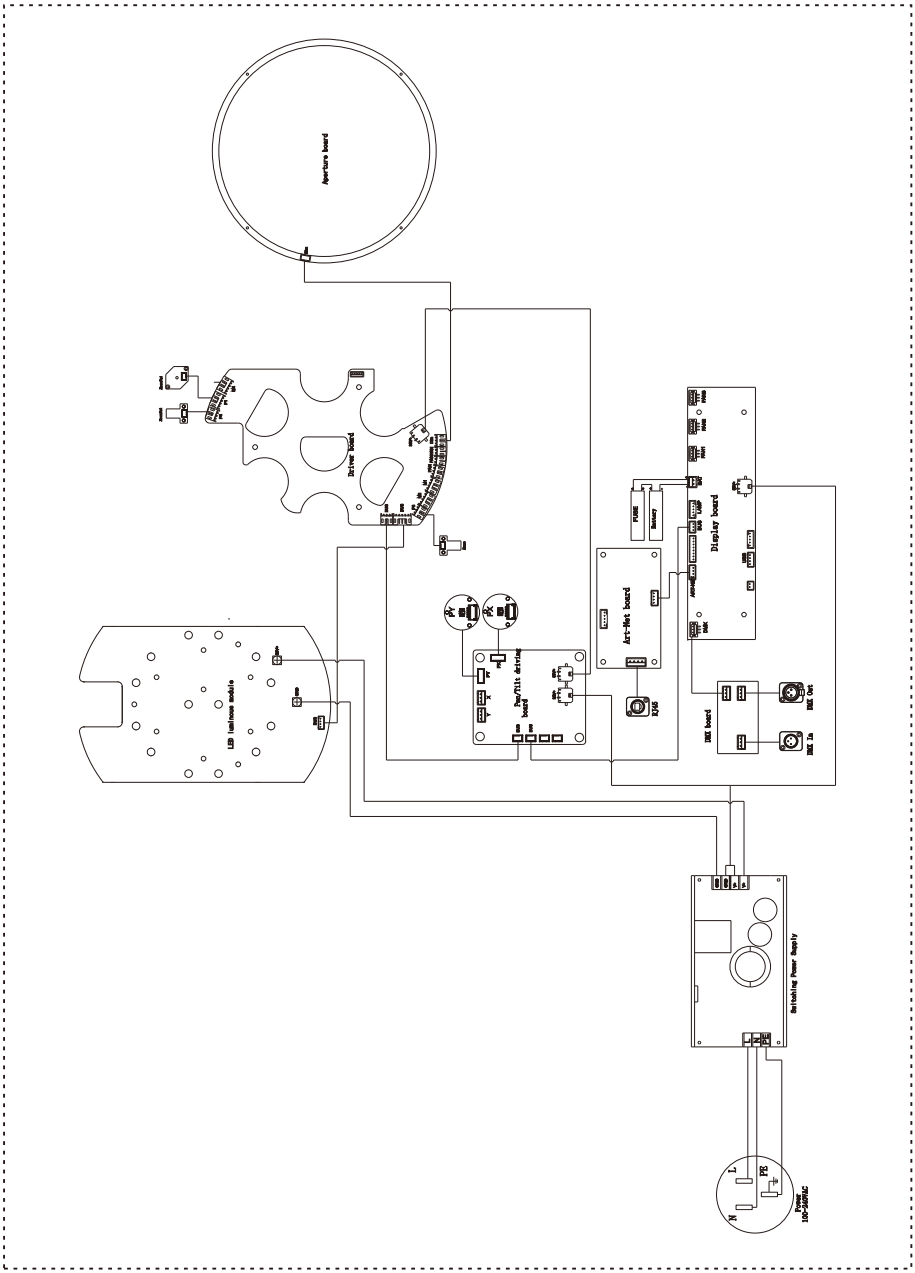
28 Channel	DMX	Function	Note
	23	LEE 008 Dark Salmon	
	24	LEE 009 Pale Amber Gold	
	25	LEE 010 Medium Yellow	
	26	LEE 013 Straw Tint	
	27	LEE 015 Deep Straw	
	28	LEE 017 Surprise Peach	
	29	LEE 020 Medium Amber	
	30	LEE 022 Dark Amber	
	31	LEE 025 Sunset Red	
	32	LEE 026 Bright Red	
	33	LEE 036 Medium 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 Pale 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	

28 Channel	DMX	Function	Note
	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	
	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	
11	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 MediumBlue	

28 Channel	DMX	Function	Note
	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	
	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	
		CCT	
	0-2	No Function	
	3-255	CCT color 10000K-2500K	10000K - 2500K
	3	10000K	

28 Channel	DMX	Function	Note
12	23	9500K	
	43	9000K	
	63	8500K	
	83	8000K	
	103	7500K	
	120	7000K	
	135	6500K	
	150	6000K	
	162	5600K	
	180	5000K	
	195	4500K	
	210	4000K	
	219	3700K	
	225	3500K	
	234	3200K	
	240	3000K	
	249	2700K	
	255	2500K	
13		Static LED Effect	
	0-7	No Function	
	8-97	Static Scene1-45	45 scenes
	98-255	No Function	
14		Move LED Effect	
	0-7	No Function	
	8-107	Dynamic scene 1-50(2 dmxfor every scene)	50 scenes
	108-255	No Function	
15		Move LED Effect Speed	
	0-125	Forwards moveled effect speed from fast to slow	
	126-129	Stop	
	130-255	Backwards moveled effect speed from slow to fast	
16		Move LED Effect Delay	
	0-255	Move LED effect delay from fast to slow	
17		Background Color	
	0-1	No Function	
	2-255	Color for background	
18		Background Dimmer	
	0-255	Background dimmer from 0% to 100% (0=default)	
19	0-255	Red (0% -100%)	
20	0-255	Green (0% -100%)	
21	0-255	Blue (0% -100%)	
22	0-255	White (0% -100%)	
23	0-255	LED ring Dimmer from 0% to 100% (0=default)	
24	0-255	LED ring RED (0%-100%)	
25	0-255	LED ring GREEN(0%-100%)	
26	0-255	LED ring BLUE (0%-100%)	
27		**LED ring Effect Macro**	
	0-9	Shutter open	
	10-19	Shutter closed	
	20-39	Strobe speed from slow to fast	1->25 HZ
	40-255	Effect Macro	
28		LED ring Effect Speed	
	0-125	Forwards moveled effect speed from fast to slow	
	126-129	Stop	
	130-255	Backwards moveled effect speed from slow to fast	

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 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 75Ω), 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.

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 and the internal optical lens every 30 days.

CAUTION ! ! !

Disconnect from mains before starting maintenance operation.

8.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.
- 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.