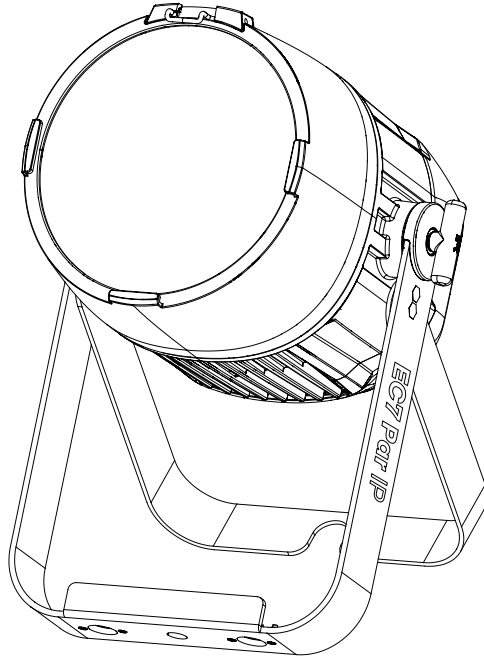




EC7 Par IP

USER MANUAL

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1. SAFETY INSTRUCTIONS



The product is packed in good condition before shipment. Operate the product according to the user manual. Failures caused by improper operation are not covered by the warranty.



Risk of electric shock during operation of electrical equipment. Do not touch electrical parts.



Do not look directly at the light source. It may cause eye injury.



To protect the environment, dispose of or recycle the product according to local regulations at the end of its service life.



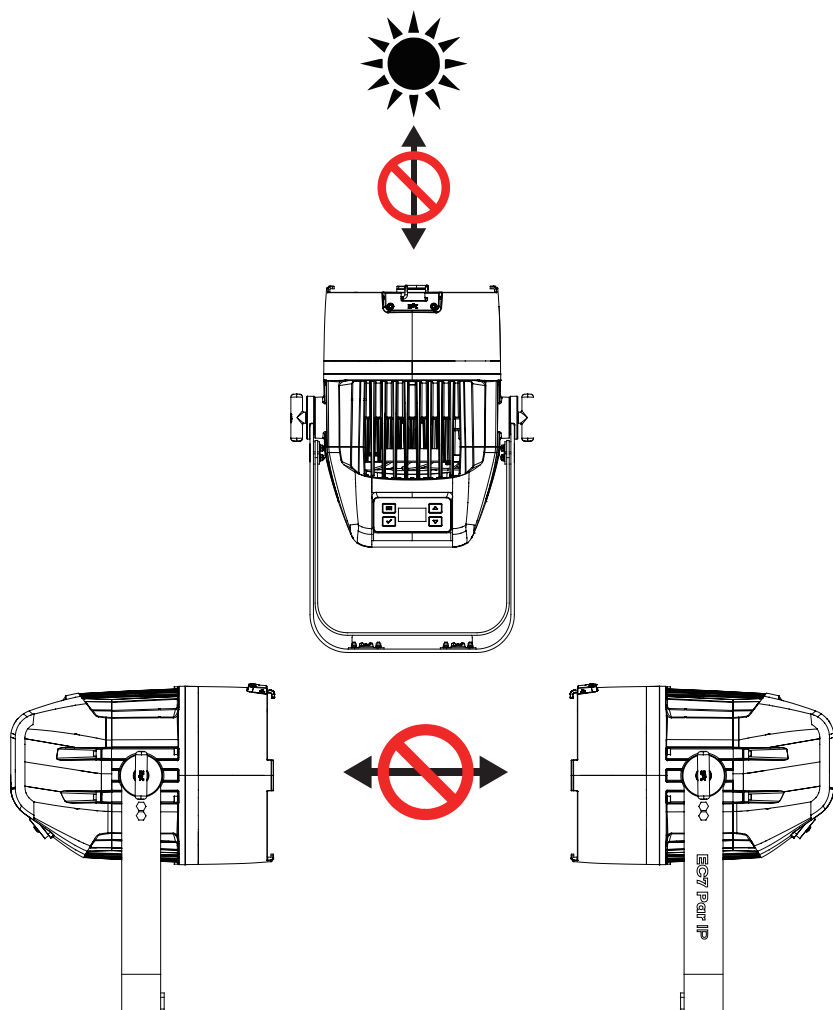
Warning: Replace any cracked protective shield.



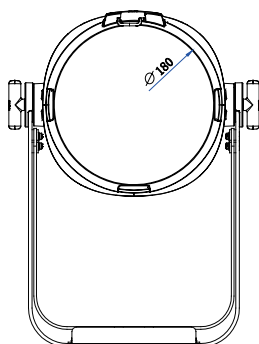
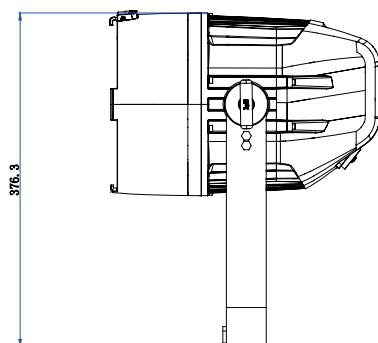
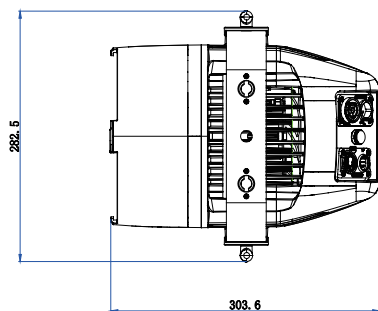
Minimum distance to illuminated objects: 0.5 m.

- The light source in this fixture shall be replaced by the manufacturer, its service agent, or a similarly qualified person. If the external flexible cable or cord of this fixture is damaged, it shall be replaced by the manufacturer, its service agent, or a qualified person to avoid danger.
- After receiving the fixture, unpack and check whether there is any damage caused during transport. If damage is found, do not use the fixture. Contact the supplier or manufacturer immediately.
- Install the fixture in a well-ventilated area. Keep it at least 50 cm away from walls and make sure the ventilation openings are not blocked.
- Do not open the fixture or repair it by yourself.
- Electrical connection must be carried out by qualified installers.
- Each fixture must be safely grounded. Electrical installation must comply with applicable standards.
- Do not use a power cable with damaged insulation. Do not place the power cable on other cables. Disconnect the power cable when the fixture is not in use or before cleaning. Do not pull hard on the plug or drag the power cable.
- There are no user-serviceable parts inside this fixture. Before operating the fixture, check that all parts are properly connected and all screws are secure.
- If you have any questions, contact the supplier or manufacturer in time.

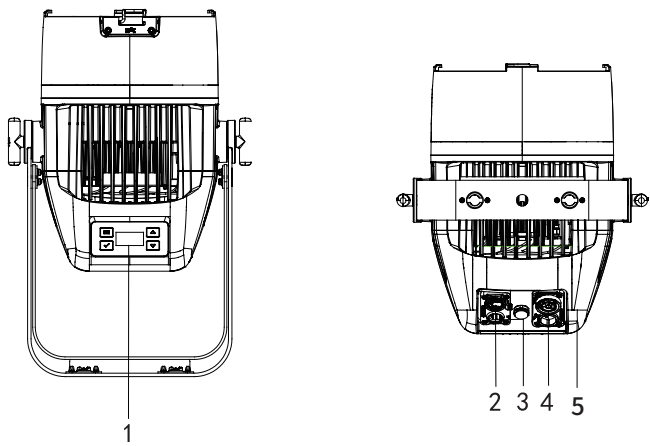
● Direct sunlight or any other strong light source that penetrates the front lens of lamp can cause serious internal damage. Do not expose the front lens of lamp to direct sunlight or any other strong light source at any angle during unpacking, installation, use, or when it is idle outdoors for an extended period of time. Do not aim beam of one fixture directly at another.



2. DIMENSIONS



3. OVERVIEW



1. LCD display

2. DMX In

3. DMX Out

4. Power In

5. Power Out

Display panel button function description

Control Panel	Illustration	Description	Function
	Menu	Enter Menu	Menu Operation
	Up	Confirm	Increase Numeric Value
	down	Scroll Down	Decrease Numeric Value
	Enter	Confirm	Save Setting

If you want to flip the display, hold UP + DOWN buttons for 3seconds to set display orientation.

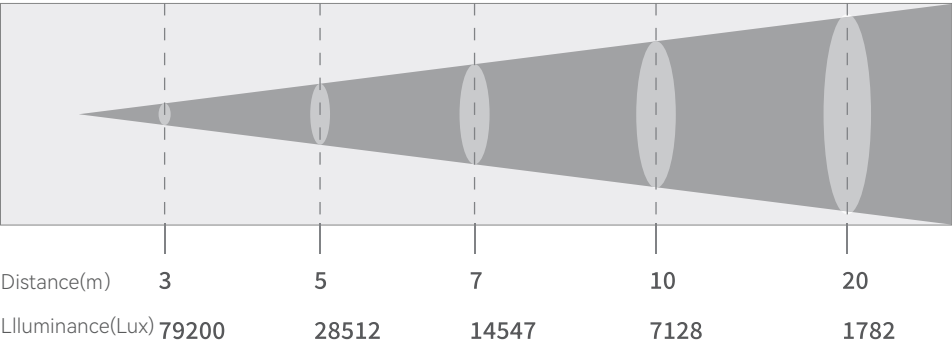
4. LITHING PARAMETERS

4.1 Technical parameters

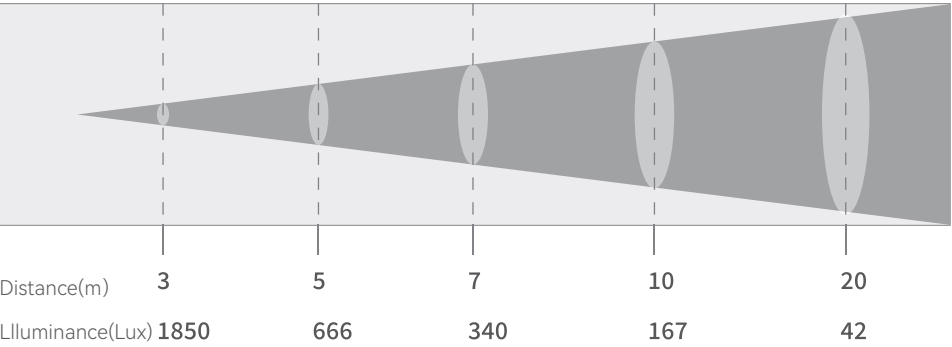
Specification of EC7 Par IP	
PHOTOMETRICS	
Light Source	RGBWW4in1 LED: 31.6W*7
CCT	2800-10000k
Lux	68000lux @3M
CRI	Ra ≥ 90, R9 ≥ 90
Main Wavelength	R:626nm G:526nm B:453nm WW:581nm
Peak Wavelength	R:638nm G:520nm B:448nm WW:600nm
TM-30-15rg/rf	WW:96/83 2800K:106/93 3200K:106/93 4000K:106/93 5600K:106/91 6500K:106/90 8000K:104/90
Life Span	30000H
Beam Angle	4.3°~ 51°
FEATURE	
Pan Movement	\
Tilt Movement	360° (Manual)
Color System	RGBW
Strobe	1 ~ 30Hz
Dimmer	4 dimming curves, 0 ~ 100% linear dimming
CONTROL	
Channel	CTC/RGBW 8bit/RGBW 16bit/Basic/Standard/Advanced/HSV
Display	1.3 inch OLED screen
Frequency	600Hz,1.2KHz,4KHz,6KHz,25KHz,2KHz
POWER	
Mains	100 ~ 240VAC,50 ~ 60Hz V1DC37.1V*6.2A=230W,V2DC22.5V*0.85A=19.1W
Consumption	Static: 253W@230V ; 260W@120V
Power Connection	linking up to 8pcs@230V, 4pcs@120V
DMX Connection	linking up to 32pcs
Power factor	0.99@120V 0.99@230V
Ambient	-20°~ 45°
PHYSICAL	
Dimension	376.3*303.6*282.5mm
Weight	6.6KG
IP rating	IP66
Cooling	low noise waterproof fan
Housing	Die-cast magnesium alloy

4.2 PHOTOMETRICS

Beam Angle4.3°



Beam Angle 51°



5 Menu

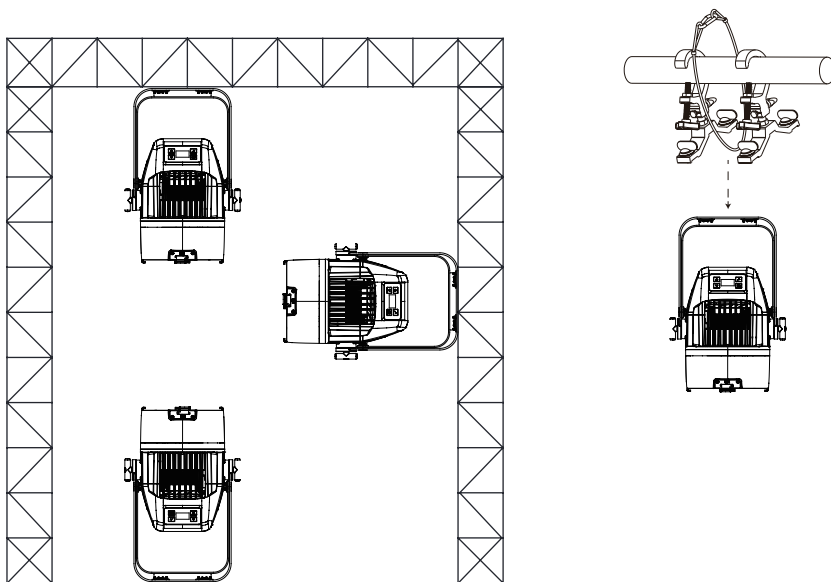
Main Menu	Menu level 2	Menu level 3	Menu level 4	Menu level 5	Default
DMX Address	<001>				1
DMX Channel	CTC				Standard
	RGBW 8bit				
	RGBW 16bit				
	Basic				
	Standard				
	Advanced				
	HSV				
Static	Zoom	Zoom	<0~255>		<000>
	Virtual Color Wheel	C3050-Md Yellow	Dimmer	<0~255>	C3050-Md Yellow Dimmer <255>
		C3040-Lt Yellow			
					
					
	Color Temperature	C4570-Blue Green	Dimmer Tint	<0~255> <-25~25>	2800K Dimmer <255> Hue <0>
		2800K			
		2900K			
		3000K			
		3100K			
		3200K			
					
					
		5300K			
		5400K			
		5500K			
		5600K			
		5700K			
		6000K			
		6500K			
		7000K			
		7500K			
		8000K			
		8500K			
		9000K			
		9500K			
		10000K			
	Manual Color Mixer	Red	<0~255>		<255>
		Green	<0~255>		<255>
		Blue	<0~255>		<255>
		Lime	<0~255>		<255>
Auto Show	Zoom	Zoom	<0~255>		<000>
	Auto 1	Speed			Auto 1 Speed 100
	Auto 2				
	Auto 3				
	Auto 4				
	Auto 5				
Red Shift	On				Off
	Off				
Master/Slave	Master				Slave
	Slave				

Dimmer Curve	S Curve				Linear
	Linear				
	Square				
	Inverse Square				
Dimmer Mode	Off				Off
	Dimmer 1				
	Dimmer 2				
	Dimmer 3				
Color Calibration	Off				Off
	User Calibration	Red	<125~255>		
		Green	<125~255>		
		Blue	<125~255>		
		White	<125~255>		
	Factory Calibration				
LED Frequency	600Hz				1200Hz
	1200 Hz				
	2000 Hz				
	4000 Hz				
	6000 Hz				
	25KHz				
Fan Mode	Auto				Auto
	On				
	Off				
	Silent				
Back Light	10S				2min
	30S				
	2min				
	Always On				
Key Lock	On				On
	Off				
Information	Fixture Hours	0~65535H			
	Led Hours	0~65535H			
	DISP-V1.0				
	LED-V1.0				
	UID	030F0C100001			
Factory Reset	No				No
	Yes				

6. INSTALLATION

6.1 Installation instructions and precautions

6.1.1 Installation instruction



The fixture meets IP66 protection rating and is designed for indoor and outdoor events. This means it provides the following protection:

1. Dust protection. Dust cannot enter the fixture in large quantities or affect normal operation.
2. Water-spray protection. Water sprayed from any direction will not damage the equipment.

The equipment must be installed by professionals. It must be installed outside walkways and seating areas, or away from any area where unauthorized persons can touch the fixture by hand. Do not stand directly under the fixture during installation, removal, or maintenance.

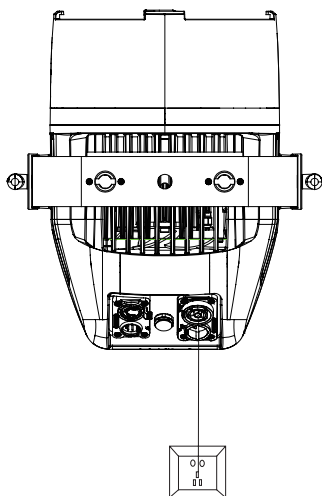
When installing the fixture, make sure it is securely fixed to prevent shaking or falling during operation. The load-bearing structure must support 10 times the weight of the fixture without deformation. A safety cable must be used during installation. The safety cable must support 12 times the weight of the fixture and prevent the fixture from falling if the clamp fails.

This fixture can be fully operated in three installation positions: upside-down hanging, placement on a flat horizontal surface, or side mounting. Always install and use a safety cable for protection to prevent accidental damage or personal injury if the clamp fails.

6.1.2 Hanging installation

1. Keep the fixture away from flammable materials, such as decorative materials, during installation. Maintain a distance of at least 0.5 m.
2. For hanging installation, a safety cable must be installed. The safety cable must support at least 10 times the weight of the fixture.
3. For hanging installation, the mounting device used to fix the fixture must support at least 10 times the weight of the fixture.
4. As shown in the diagram, the safety cable must pass through the safety cable hole of the fixture and the mounting structure. Make sure the structure connected to the fixture is secure.

6.2 POWER CONNECTION



Power connection instructions



Power In

This product uses a Powercon in single connection power cord
Note: Due to power reasons, a 2.5mm² power cord can only support up to 8 units (230V)



Warning

Do not connect too many fixtures to one power cable or overload the cable.

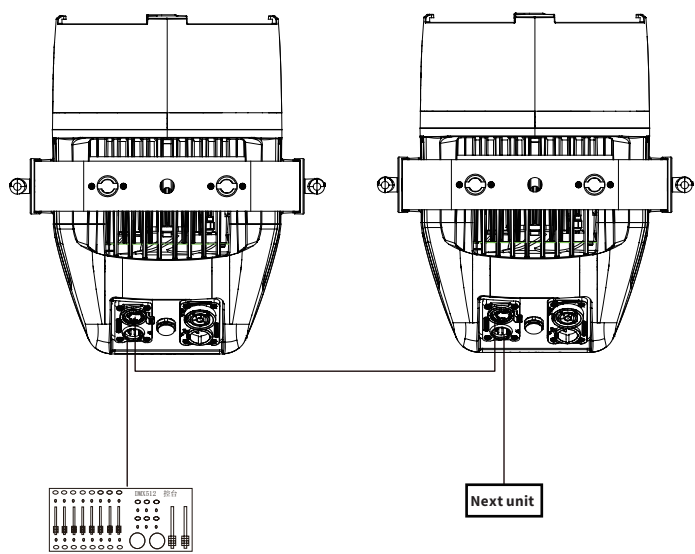
Do not use a power cable with damaged insulation. Do not place the power cable on other cables.

Disconnect the power cable when the fixture is not in use or before cleaning.

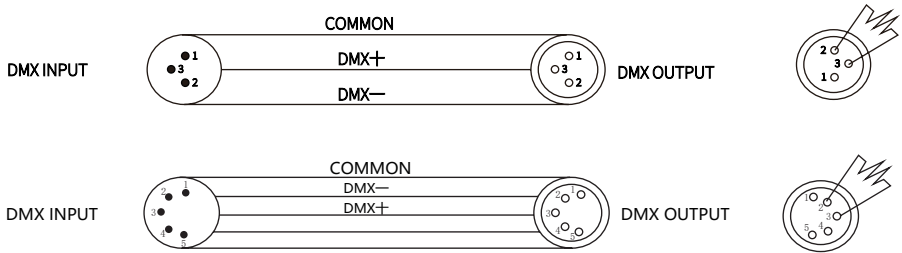
Do not pull hard on the plug or drag the power cable.

6.3 SIGNAL CONNECTION

DMX Connection



DMX CONNECTION INSTRUCTIONS



- To reduce signal errors and avoid signal attenuation and interference during transmission, a 120-ohm, 1/4 W resistor can be connected between pin 2 and pin 3 of the DMX output of the last fixture.
- Connect fixtures with XLR signal cables. Connect one end to the output port of one fixture and the other end to the input port of the next fixture.
- Signal cables must be connected in series only. Do not connect them in parallel.
- DMX512 signal transmission speed is high. Damaged signal cables, poor soldering, or poor contact may affect signal transmission and cause the system to shut down.
- When the power of one unit is disconnected, the DMX input and output are bypassed to maintain continuity of the DMX line.
- Each fixture must have an address code so that it can receive information from the console.
- A terminator must be installed at the end of the DMX512 system to reduce signal transmission errors.

DMX Address code setting

MODE	Allocation	Address of 1st fixture	Address of 2st fixture	Address of 3st fixture	Address of 4st fixture
14CH	001-014	001	015	029	043

(Refer to the figure above) The number of lamps added after the 4th one; the address code is based on the channel, and so on.

6.4 DMX Chart

Function	Value	Description	CTC	RGBW 8bit	RGBW 16bit	Basic	Standard	Advanced	HSV
Dimmer	000-255	0~100%	1		1	1	1	1	
Dimmer Fine	000-255	0~100%			2		2	2	
Red	000-255	0~100%		1	3	2	3	3	
Red Fine	000-255	0~100%			4		4	4	
Green	000-255	0~100%		2	5	3	5	5	
Green Fine	000-255	0~100%			6		6	6	
Blue	000-255	0~100%		3	7	4	7	7	
Blue Fine	000-255	0~100%			8		8	8	
White	000-255	0~100%		4	9	5	9	9	
White Fine	000-255	0~100%			10		10	10	
Shutter	000-010 011-255	No function Shutter slow to fast				9	11	11	
CTC	000-009	No Function	3			6	12	12	
	010-015	10000K - 9500K							
	015-020	9500K - 9000K							
	020-025	9000K - 8500K							
	025-030	8500K - 8000K							
	030-035	8000K - 7500K							
	035-040	7500K - 7000K							
	040-045	7000K - 6500K							
	045-050	6500K - 6400K							
	050-055	6400K - 6300K							
	055-060	6300K - 6200K							
	060-065	6200K - 6100K							
	065-070	6100K - 6000K							
	070-075	6000K - 5900K							
	075-080	5900K - 5800K							
	080-085	5800K - 5700K							
	085-090	5700K - 5600K							
	090-095	5600K - 5500K							
	095-100	5500K - 5400K							
	100-105	5400K - 5300K							
	105-110	5300K - 5200K							
	110-115	5200K - 5100K							
	115-120	5100K - 5000K							
	120-125	5000K - 4900K							
	125-130	4900K - 4800K							
	130-135	4800K - 4700K							
	135-140	4700K - 4600K							
	140-145	4600K - 4500K							
	145-150	4500K - 4400K							
	150-155	4400K - 4300K							
	155-160	4300K - 4200K							
	160-165	4200K - 4100K							
	165-170	4100K - 4000K							
	170-175	4000K - 3900K							
	175-180	3900K - 3800K							
	180-185	3800K - 3700K							
	185-190	3700K - 3600K							
	190-195	3600K - 3500K							
	195-200	3500K - 3400K							
	200-205	3400K - 3300K							
	205-210	3300K - 3200K							
	210-215	3200K - 3100K							
	215-220	3100K - 3000K							
	220-225	3000K - 2900K							
	225-230	2900K - 2800K							
	230-255	2800K							
Tint	000-126 127-128 129-255	-25~0 0 0~25	4			7	13	13	
CTC Crossfade	000-255	0~100%				8	14	14	

Colour Swatchbook (If there is a "crossfade" channel, please set it to 255 in order to use it)	000-005	No Function						
	006-013	C3050-Md Yellow						
	014-021	C3040-Lt Yellow						
	022-028	C3240-Amb Yellow						
	029-035	C2340-VLt Amber						
	036-043	C2040-Lt Amber						
	044-051	C2050-Md Amber						
	052-059	C2060-Dk Amber						
	060-067	C1050-Lt Red						
	068-075	C1080-Md Red						
	076-083	C1020-NC Pink						
	084-091	C1030-Md Pink						
	092-099	C1630-Dk Pink						
	100-107	C1250-Md Red Amber						
	108-115	C1060-Dk Red Amber						
	116-121	C1650-Magenta						
	122-130	C6170-Dk Magenta	2				15	15
	131-138	C6020-Lt Lavender						
	139-146	C5030-Lt Blue						
	147-154	C5020-VLt Blue						
	155-162	C5430-Lt Blue2						
	163-170	C5070-Blue						
	171-178	C5050-Md Blue						
	179-186	C5060-Dk Blue						
	187-194	C5690-Indigo						
	195-202	C5080-VdK Blue						
	203-210	C5081-VdK Blue2						
	211-218	C4370-Yel Green						
	219-226	C4070-Green						
	227-234	C4550-Turquoise						
	235-242	C4560-Aqua						
	243-250	C4570-Blue Green						
	251-255	No Function						
Colour Effects	000-010	No Function						
	011-060	Effects 1						
	061-110	Effects 2						
	111-160	Effects 3						
	161-210	Effects 4						
	211-255	Effects 5 (Effects1-4)						
Colour Effects rate	000-255	Effects rate slow to fast						
							17	

Control (Hold 3 Seconds)	000-007	No Function							
	008-015	Dimmer Reset							
	016-023	Red Shift: ON							
	024-031	Red Shift: OFF							
	032-039	Dimmer: S-Curve							
	040-047	Dimmer: Linear							
	048-055	Dimmer: Square							
	056-063	Dimmer: Inverse Square							
	064-071	Dimmer Mode: Off							
	072-079	Dimmer Mode: 1							
	080-087	Dimmer Mode: 2							
	088-095	Dimmer Mode: 3							
	096-103	Fan Auto							
	104-111	Fan On							
	112-119	Fan Off	5	5	11	10	16	18	4
	120-127	Fan Silent							
	128-135	Calibration Off							
	136-143	User Calibration							
	144-151	Factory Calibration							
	152-159	PWM Frequency 600Hz (Hold 3S)							
	160-167	PWM Frequency 1200Hz (Hold 3S)							
	168-172	PWM Frequency 2000Hz (Hold 3S)							
	173-177	PWM Frequency 4000Hz (Hold 3S)							
	178-182	PWM Frequency 6000Hz (Hold 3S)							
	183-187	PWM Frequency 25000Hz (Hold 3S)							
	188-192	Motor Reset							
	193-197	No Function							
	198-200	No Function							
	201-220	No Function							
	221-255	No Function							
Zoom	000-255	0~100%	6	6	12	11	17	19	5
Hue	000-255	0~100%							1
Saturation	000-255	0~100%							2
Value	000-255	0~100%							3

7.Errors

Number	Error Message	Reasons	Actions
1	CTR1-XY Error	1、LED driver PCB damaged 2、firmware fail to upgrade	1、Replace LED driver PCB 2、Re-upgrade firmware
2	Zoom Reset Fail	1、Hall element PCB damaged 2、LED driver PCB damaged	1、Replace hall element PCB 2、Replace LED driver PCB
3	Temperature Error	1、The cable is loosen 2、LED driver PCB damaged	1、Re-connect the cable 2、Replace LED driver PCB

8.TROUBLESHOOTING

No.	Fault Symptom	Common Cause	Solution
1	Fixture does not power on	1. Fuse blown	1. Replace with a fuse of the same specification
		2. No voltage input or output from power supply	2. Replace the power supply
		3. POWERCON power socket damaged	3. Replace the power socket
2	No DMX signal / not controlled	1. DMX signal port damaged	1. Replace the DMX signal port
		2. Main board abnormal	2. Replace the main board
		3. DMX signal cable fault	3. Replace the signal cable
		4. Fixture DMX address does not match the console address setting	4. Check or reset the address code
3	Beam offset, out of focus, insufficient brightness	1. Optical assembly loose	1. Tighten the optical parts
		2. Lamp not installed in place	2. Recalibrate lamp concentricity
		3. Lens dirty	3. Clean the optical parts
4	Equipment overheating / automatic protection	1. Fan damaged	1. Replace the fan
		2. Air vent blocked	2. Clear the air vent
		3. Driver board abnormal	3. Replace the driver board
5	Light source not on / lamp ignition failure (Lamp, ballast, switching power supply: measurement by non-professionals is prohibited)	1. Lamp damaged	1. Replace with an original lamp
		2. Lamp igniter fault	2. Replace the lamp igniter
		3. No voltage output from power supply	3. Replace the power supply
		4. LED driver board abnormal	4. Replace the LED driver board
6	CMY/CTO reset error	1. Positioning magnet on CMY/CTO color wheel detached or damaged	1. Replace the positioning magnet
		2. CMY/CTO color wheel Hall sensor abnormal	2. Replace the Hall sensor
		3. CMY/CTO color wheel belt loose	3. Adjust belt tension
		4. CMY/CTO color wheel motor abnormal	4. Replace the motor
		5. CMY/CTO color wheel PCB abnormal	5. Replace the PCB
		6. Poor contact or disconnection of plug leads between the CMY/CTO color wheel Hall sensor and PCB	6. Repair or replace the plug leads
7	Focus / zoom reset error	1. Positioning magnet for focus/zoom detached or damaged	1. Replace the positioning magnet
		2. Focus/zoom Hall sensor abnormal	2. Replace the Hall sensor
		3. Focus/zoom belt loose	3. Adjust belt tension
		4. Focus/zoom motor abnormal	4. Replace the motor
		5. Focus/zoom PCB abnormal	5. Replace the PCB
		6. Poor contact or disconnection of plug leads between the focus/zoom motor and PCB	6. Repair or replace the plug leads

9. MAINTENANCE

Regular cleaning is important for the service life and performance of the fixture. Accumulation of dust, dirt, smoke particles, and haze fluid residue will reduce light output and heat dissipation.

THE CLEANING INTERVAL VARIES GREATLY ACCORDING TO THE OPERATING ENVIRONMENT. THEREFORE, NO EXACT CLEANING INTERVAL CAN BE SPECIFIED. ENVIRONMENTAL FACTORS THAT MAY REQUIRE FREQUENT CLEANING INCLUDE:

- Use of smoke machines or haze machines.
- High airflow rate, such as near air-conditioning vents.
- Airborne dust, such as dust from stage effects, building structures, decorations, or outdoor environments.

If one or more of these factors are present, check whether cleaning is required within the first few hours of operation. Check frequently afterwards. This process helps determine the cleaning requirement for the specific situation.

OBSERVE THE FOLLOWING POINTS WHEN CLEANING THE FIXTURE:

- Clean in a clean, dry, and well-lit area.
- Wipe gently only. Use a soft, lint-free cloth moistened with water or mild detergent solution. Do not use alcohol, solvents, or abrasives under any circumstances. Take special care when cleaning optical components. Optical surfaces are fragile and easily scratched.

CLEANING PROCESS



Warning

DISCONNECT THE POWER BEFORE OPENING ANY COVER.

Wipe optical parts gently to avoid scratching the coated surface. Do not use destructive solvents, as they may damage plastic or coated surfaces.

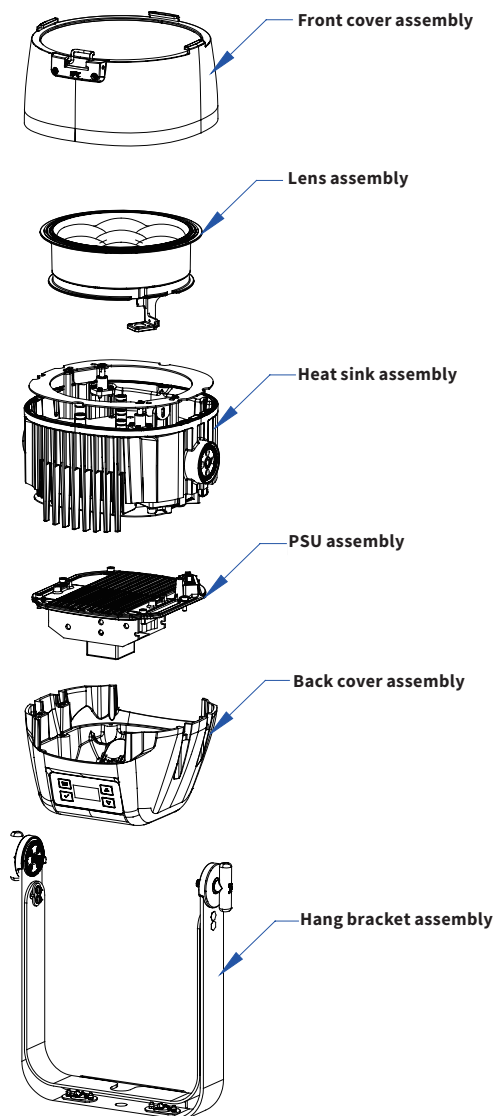
CLEANING OPTICAL COMPONENTS:

1. Disconnect the power, allow the fixture to cool completely, and open the cover.
2. Use a vacuum cleaner or compressed air blower to gently remove dust and loose particles.
3. Use odorless tissue or a cotton cloth moistened with clean water or distilled water to remove particles. Do not rub the surface. Use compressed air to blow away loose particles.
4. Use a cotton cloth or odorless tissue moistened with isopropyl alcohol to remove smoke residue and other residue. Glass cleaner may also be used, but residue must be removed with distilled water. Wipe in circular motions from the center to the edges, then dry with a soft cotton cloth.

Cleaning Fans and Air Vents

Use a soft brush, tissue, air vacuum cleaner, or compressed air blower to remove dust from fans and air vents.

10. EXPLODED VIEW





EKINC.

Address: NO.55 Zhongzhun Road, Cuiheng New District, Zhongshan City, Guangdong Province

Phone: 0086 (0760) 88280099

www.eklights.com