CKC

V4

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CKC LIGHTING CO.,LTD

Before carrying out any installation, maintenance, or cleaning of the lighting fixtures, please confirm that the power has been cut off! Before using this fixture, please read this manual. Our company reserves the right to change product design and specifications without prior notice.

CONTENTS

★ Statement ★

■ This manual contains important information on safe use and installation. Please read it carefully and follow the requirements for operation and installation. Please keep this manual properly;

■ The equipment has good performance and complete packaging when it leaves the factory. The operator should strictly follow the warning items and operating instructions stated in the manual. Any malfunction or damage caused by misuse or neglect of the manual is not within the scope of our company's responsibility and warranty;

■ The relevant information in this manual is for reference only. All lighting products are subject to the actual product. Any changes will not be notified separately, and our company reserves the right of final interpretation.

1. Security Warning Information

Attention !

Please read the safety requirements information in this section carefully before installing, powering on, operating, or repairing the lighting fixtures.

● This product is for professional use and is not suitable for other purposes;

● After receiving the lighting fixtures, please check if the packaging is complete and unpack to check if the equipment has been damaged due to transportation. If there is any damage caused by transportation, please do not use this lamp and contact local technicians or manufacturers as soon as possible;

● When transporting again, please use the original packaging materials;

● If there is obvious damage to the machine casing, it should be replaced in a timely manner;

● When hanging lamps, it is necessary to verify that the hanging equipment can withstand more than 6 times the weight of the lamp. After installation, it is necessary to verify that the lamp cover and installation buckle are secure and undamaged. At the same time, a safety rope should be used as an auxiliary safety for the lamp and fixed on the truss;

● The light source inside this luminaire should be replaced by the manufacturer, its service agent, or a similarly qualified person;

● If you have any other questions about how to safely operate the equipment, please contact our technical personnel or call our service hotline;

● This product has a protection level of IP20 and is suitable for indoor use;

● Avoid direct external strong light shining on the lens, which may cause the lens to focus and burn out internal components.

● Lighting fixtures should be kept clean and avoid prolonged use in overheated or dusty environments to prevent contact with chemical liquids;

● When using the product, attention should be paid to avoiding serious or fatal injuries caused by fire, heat, electrical shock, and ultraviolet radiation. Before powering on or installing, read the instruction manual first. Follow the safety precautions for operation and pay attention to the warning signs on the instructions and equipment;

● Only professionals are allowed to install, operate, and maintain lighting fixtures, and strictly follow the procedures stated in the operating instructions.

● The eyes cannot directly look at the luminous object;

● Do not connect this device to any dimmer;

● If visible damage occurs to the protective casing, lens, and display screen on the lighting fixture, it is considered as damage to the point of loss;

● Please do not place any filters or other items at the light outlet, and do not replace non original parts;

● The minimum safe illumination distance of the lamp is 3m.

● Before installation, please confirm that the power supply voltage used matches the voltage indicated on the light fixture. Each lighting fixture should be properly grounded and electrically installed according to relevant standards;

● Please disconnect the power before repairing or cleaning the equipment;

● During the operation of the lighting fixtures, touching the wires is prohibited to prevent electric shock;

● If the external soft cable or wire of this lamp is damaged, the wire should be replaced by the manufacturer, its agent, or a similarly qualified person to avoid danger;

● Avoid flammable liquids, water, or metal conductors from entering the interior of the lamp to prevent electric shock or fire. If any foreign objects enter the lamp, immediately cut off the power supply;

● When multiple lamps are operated in series, the signal lines can be connected in multiple ways, but the power supply must be connected separately.

● The lighting fixtures work normally at -20 ℃ to 45 ℃ . When replacing any components or accessories in the equipment, ensure that the power is disconnected to prevent electric shock and injury;

● The maximum surface temperature of the lamp during operation can reach 68 ℃ , please do not touch it with bare hands.

● The lighting fixtures must be installed in a sufficiently ventilated area, at least 0.5m away from adjacent surfaces, to ensure that no ventilation holes are blocked;

● Do not install the lighting fixtures directly on flammable objects;

● The minimum distance between all outer surfaces of the lamp and combustible materials is 0.5m.

2. Product Introduction

2.1 Exterior dimensions of lighting fixtures

354
249
Ø135
223
397
498
387
90
362

456
250
233

637
432
270

141
180
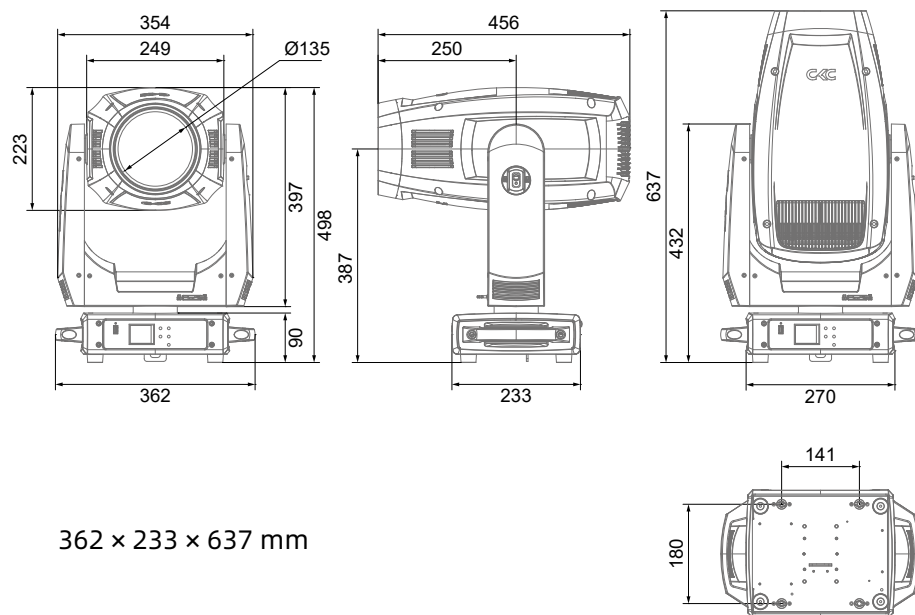
362 × 233 × 637 mm

2.2 Packaging accessories

Name	QTY
Omega bracket	2 PCS
Clamp	2 PCS
Safety cable	1 PCS
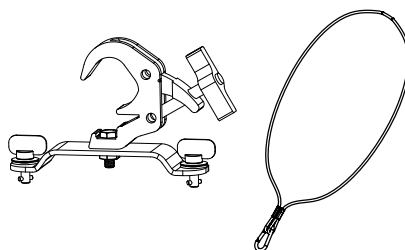
3. Main technical parameters of the equipment

Product execution standards: GB7000.1-2015, GB7000.217-2008, Q/YF 1-2017

● Electrical parameter

Rated input voltage: AC 100V-240V~ 50Hz/60Hz
Rated power of the entire fixture: 600W
Power factor: 0.997F
Input Current: 2.586A 220V

● Source lifespan

≥ 20000 hours

● Color system

CCT: 6800K
CRI: 70
Color wheel: 8+1
CMY+CTO

Green
Light Blue
Yellow
Light Purple
Amber
Megenta
Red
Dark Blue

CYAN   MAGENTA   YELLOW   CTO
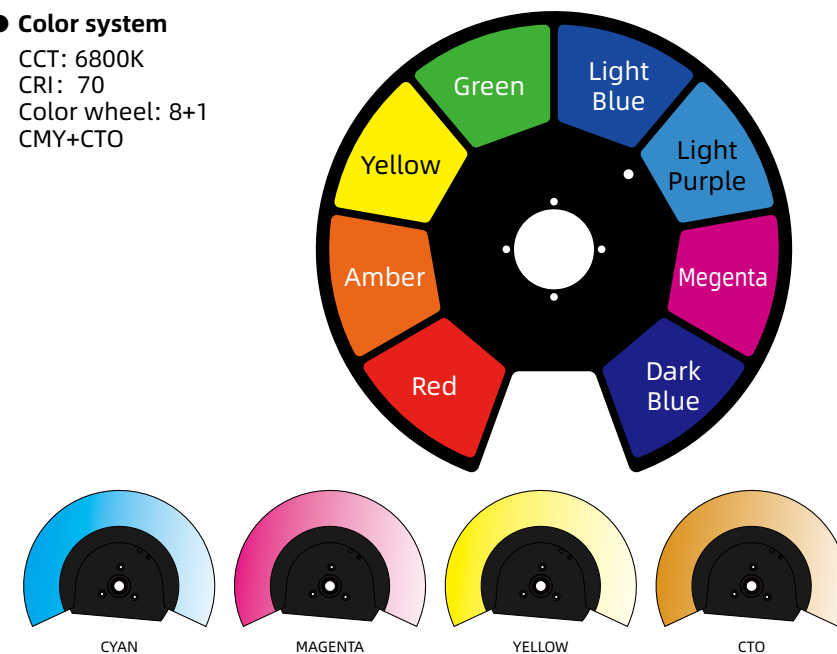
● Gobo system

Gobo outer diameter: 16.5mm $^{+0}_{-0.2}$ mm Internal diameter: 11.5mm
Thickness: 1.1mm

1   2   3   4
5   6   7
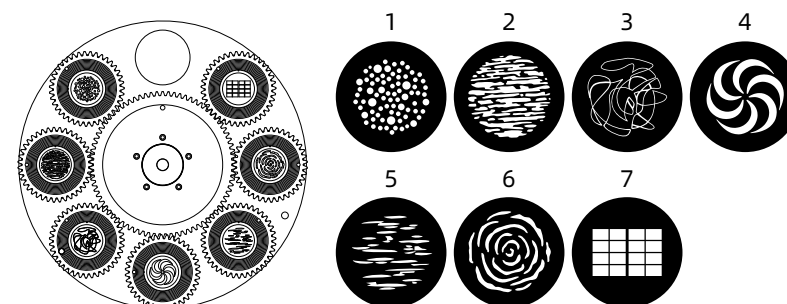
Gobo replace

1.Unscrew the two screws at location **A**, unplug the power cord at location **B**, and take out the Gobo component;

A

B

2.As shown in **C**, gently lift the driven wheel from the edge upwards from the front of the pattern plate and slowly pull it out to remove a single pattern seat;

C
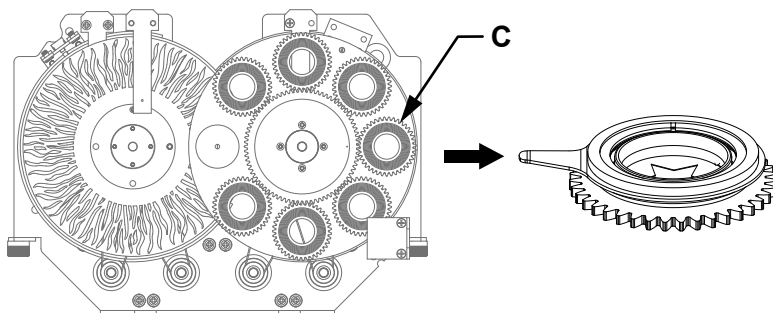
3.Use tweezers or other small grippers to remove the snap spring at point **D** (If the pattern piece is coated with glass glue for fixation, please use a professional cleaning agent to remove the glass glue before removing the snap spring to avoid damaging the gobo);
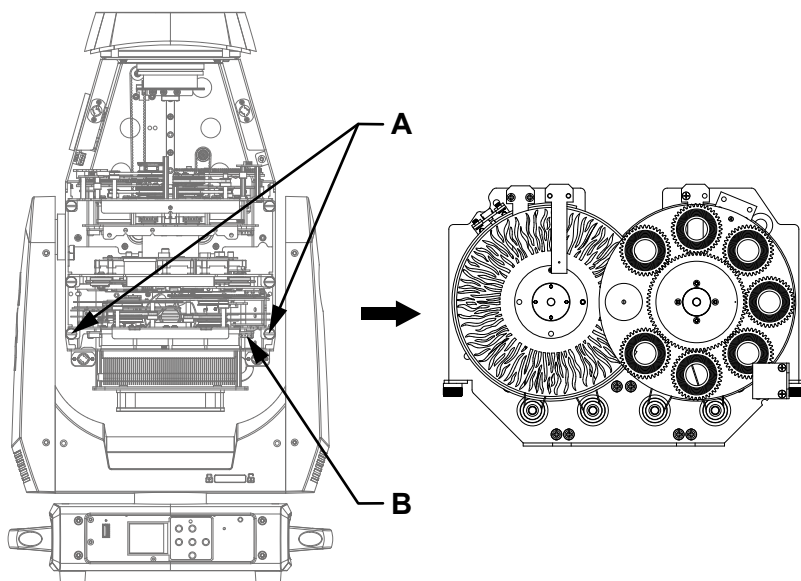
D
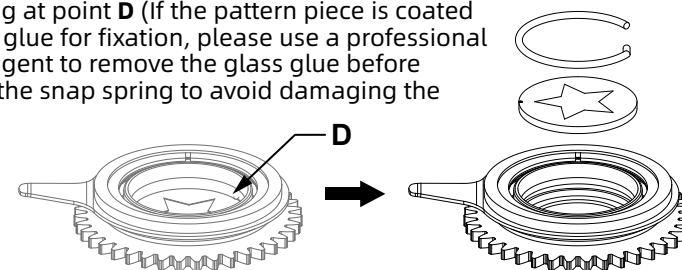
4.When assembling the Gobo, avoid touching it directly with your hands. Align the location of the Gobo's positioning point (**E**) with the positioning point **F** on the back of the driven wheel component (the coating surface of the Gobo should face the light source), and install the snap spring;

E

F
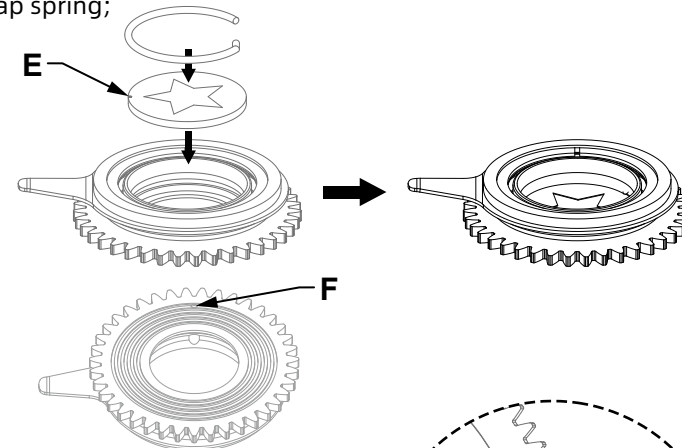
5.Insert the Gobo holder into the drive wheel assembly and reinstall it in the order it was removed; The positioning point F of the Gobo holder should be aligned with the positioning point G of the driving wheel; after installation, simply reinstall the Gobo holder component onto the fixture.

G   F
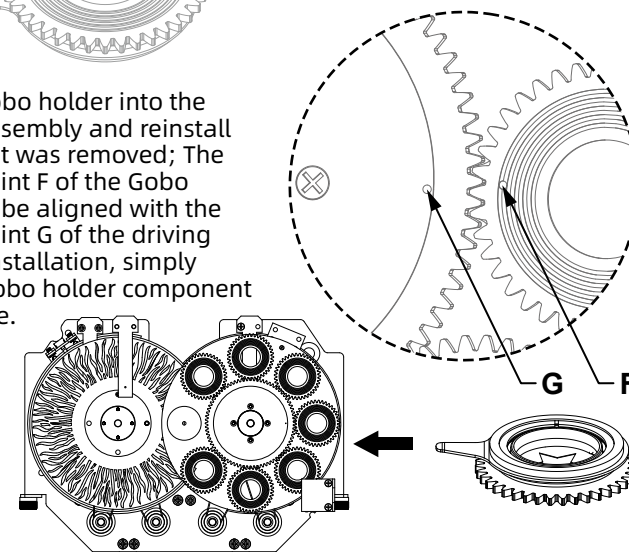
● **Framing system**

4 gratings achieve fast and smooth cutting, and the cutting direction and angle of each grating can be controlled separately. The single grating can achieve complete light closure, and the entire frame module can rotate ±50º
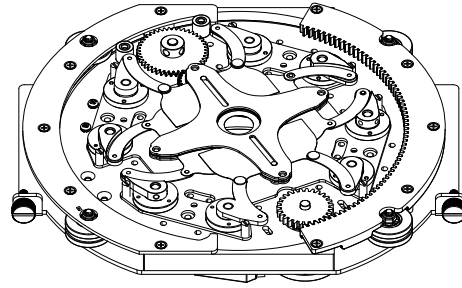
● **Animation**
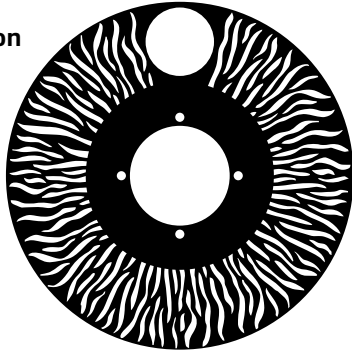
● **Prism system**

8 prism+ 6 linear
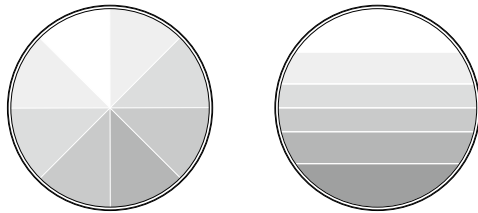
● **Pan/Tilt**

Pan scan:
540° or 630° 8-bit/16bit recision scanning
Tilt scan:
270° 8-bit/16bit precision scanning

Tilt 270°　　**Pan 540°**
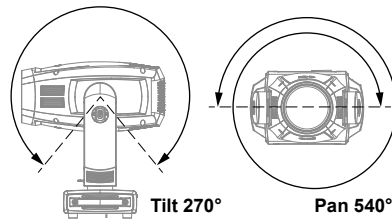
● **Control and programming**

Control channel：38CH/52CH
Protocol：DMX512, RDM
Data connect：3 pin signal in/out

● **Illumination draw**

3°

| | 5 | 10 | 15 | 20 |

| Lux | 92800 | 22800 | 10311 | 5800 |
| Distance(m) | 0.26 | 0.52 | 0.79 | 1.05 |

53°

| | 5 | 10 | 15 | 20 |

| Lux | 1060 | 347 | 118 | |
| Distance(m) | 4.99 | 9.97 | 14.96 | |
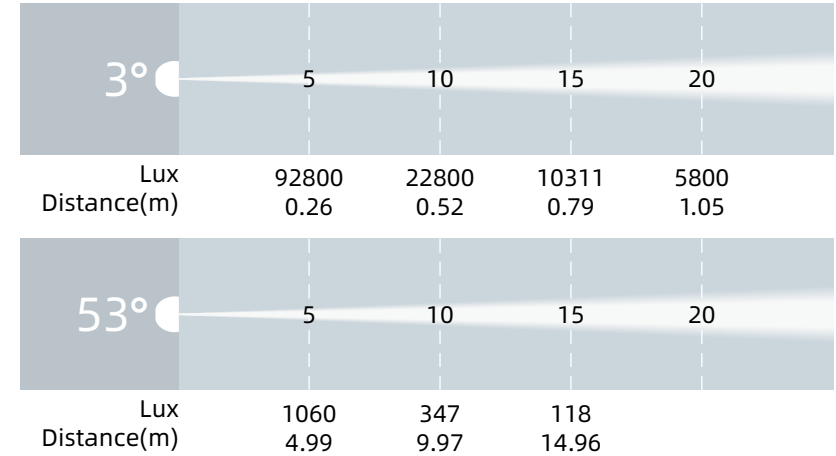
● **Other effect function**

Fast electronic strobe：1~25Hz　　　　Frost：Light frost+heavy frost
LED refresh frequency：1200Hz-25KHz　Iris

● **Other features and functions**

Weight：38.4 KG
Carton size: 88 × 57.5 × 48.5 cm　　　N.W: 46.2 KG
Flight case size: 70.8 × 61.5 × 87.5 cm　N.W: 97 KG

4. Packaging and transportation

4.1 Disassemble packaging

⚠ Notice：After receiving the fixture, please unpack and check for any damage caused by transportation. If there is any damage caused by transportation, please do not use this fixture and contact the local technical personnel or manufacturer as soon as possible.

4.2 Equipment packaging

1). Disconnect the power supply before packaging the lighting fixtures to allow them to cool completely;
2). Flight cases can only be stacked in two layers and are not allowed to be reversed.

5. Installation Requirements Explanation

5.1 Clamp install

The lighting fixtures can be installed on the stage or on any direction of the truss, and the clamp can be quickly and easily locked onto the truss.

Safety cable   Clamp
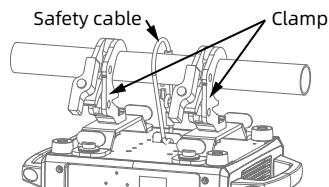
Waining !

The lighting fixtures are divided into two versions: integrated light hook and normal. When using the integrated light hook version, the clamp is broken up and locked onto the truss. The normal version must use 2 clamps to secure the device and fasten it with a 1/4 rotation. Regardless of the version, one safety rope must be added and connected to the base hole, but be careful not to connect it to the handling handle.

Quick lock and clamp install

Install safety cable

141
587
608
498
397
747
637
536
R265
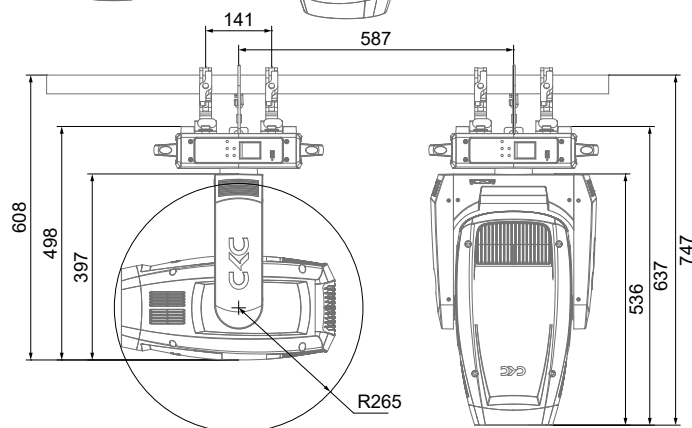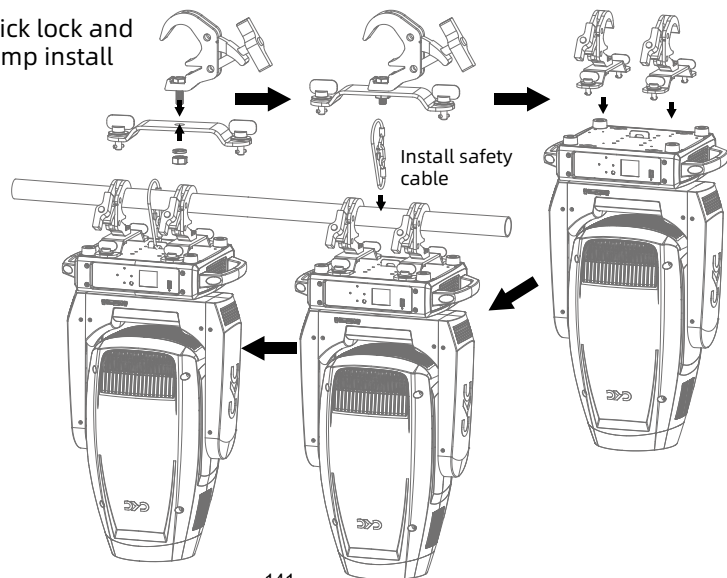
5.2 Equipment installation

1). Before installation, it is necessary to verify that the lamp hook and safety rope are not damaged, and that the installation object can withstand 6 times the total weight of the lamp and cable accessories;

2). Install the quick lock clamp on the base of the lamp body. Insert the clamp horizontally into the mounting hole of the base, rotate it clockwise 1/4 turn to lock it, and install the second clamp using the same method (the shape of the clamp should be based on the actual product).

5.3 Hanging Installation Diagram
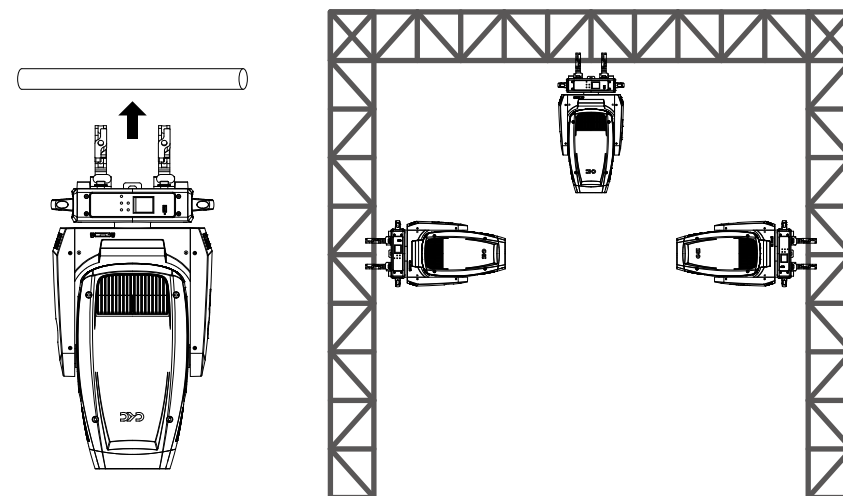
Reminder: External beam source may damage internal lighting fixtures

External beams from direct sunlight, lighting fixtures, and lasers that are directly focused onto the casing or penetrate the lens to illuminate the interior of the fixture may cause damage to the components. This is a common issue with all lighting fixtures and does not occur alone with CKC products. Although there is no way to completely prevent this problem from occurring, following the following guidelines can prevent potential damage.

When unpacking, installing, using, and stopping the operation of the lighting fixtures, please do not expose the transparency of the fixtures the mirror is exposed to direct sunlight, other lighting fixtures, or laser beams,Do not directly focus the beam of this device onto another lighting fixture.
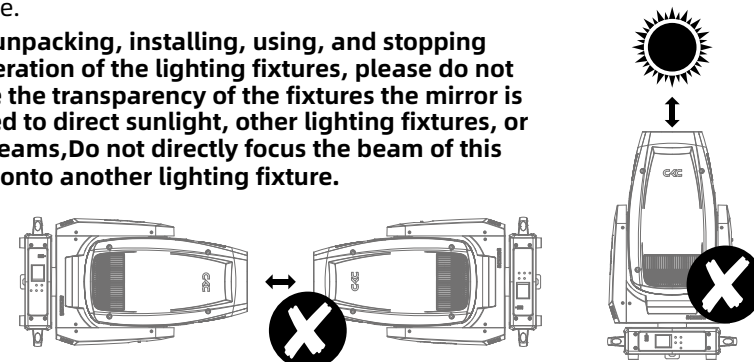
6. Power、Signal connect

6.1 Power and signal socket

1.Fuse holder

2.Power input

3.Power output

4.3 Pin DMX input

5.5 Pin DMX input

6.3 Pin DMX output

7.5 Pin DMX output

1 2 3 4 5 6 7
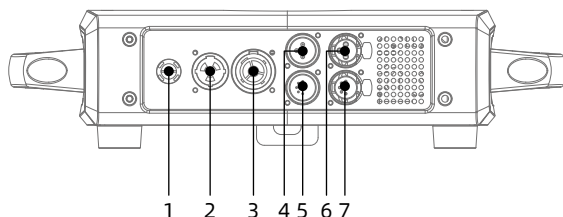
6.2 Power connect
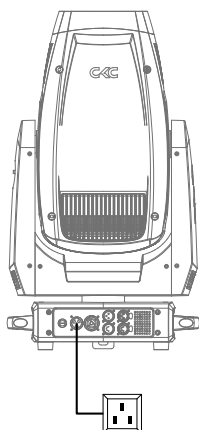
Connection method:

L(live wire) - brown wire

E(Ground wire) - yellow/green dual color line

N(Zero Line) - Blue Line

When connecting the power supply, please note that the voltage and frequency of the power supply must match the voltage and frequency marked on the light fixture. When multiple fixtures are used simultaneously, it is recommended to connect the power supply of each fixture separately, so that each fixture can be individually controlled for power on/off.

Attention: When connecting the power supply, the ground wire (yellow/green dual color wire) must be safely grounded and comply with all relevant electrical installation standards.

Power In

This product uses Powercon In/Out to connect power cable. Due to power limitations, a 2mm power cable can drive up to 4 fixtures at 220V and up to 1 fixture at 110V.

Waining !

▪ Do not connect too many fixtures or overload a single power cord;

▪ Do not use power cords with damaged insulation layers, and do not place power cords on other wires;

▪ When the fixture is not in use or cleaned, please unplug the power cord; Do not forcefully unplug or drag the power cord directly.

6.3 Signal connect

3-PIN XLR SOCKET

DMX OUT   DMX IN

1:Ground
2: Signal (-)
3: Signal (+)

5-PIN XLR SOCKET

DMX OUT   DMX IN

1:Ground
2: Signal (-)
3: Signal (+)
4: N.A.
5: N.A.
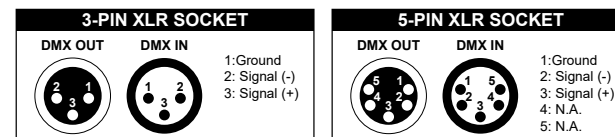
The lighting fixtures are equipped with standard DMX XLR input and output sockets. Please use DMX512 shielded twisted pair signal cables or Category 5 or above network twisted pair cables for connection. The typical connection distance for DMX signal lines is 150 meters. When transmitting signals over long distances, a DMX512 signal amplifier must be added.

DMX IN   DMX OUT   DMX IN   DMX OUT   DMX IN   DMX OUT

Console   Terminal plug
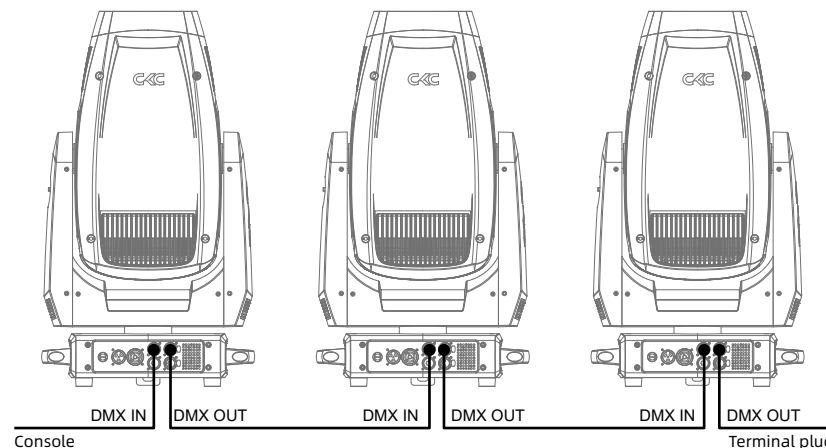
Connect a shielded twisted pair signal cable from the DMX output port of the controller to the DMX input port of the first device, and from the DMX output port of the first device to the DMX input port of the second device, and so on, until all the lamps are connected. Then install a terminal plug on the last 3 pin socket of each connected lamp output. (Weld a 4/1W, 120 Ω resistor between the 2 and 3 pins of a 3 or 5 core pin XLR plug).

3P

120Ω

2
1   3

PIN 2   PIN 3

5P

120Ω

3
2   4
1   5

PIN 2   PIN 3
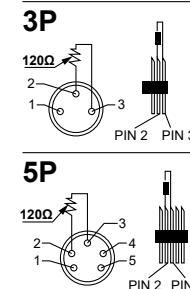
7. Control panel

7.1 Panel Introduction

FLASH DRIVE

AURORA Profile

MODE   UP

LEFT   ENTER   RIGHT

DOWN

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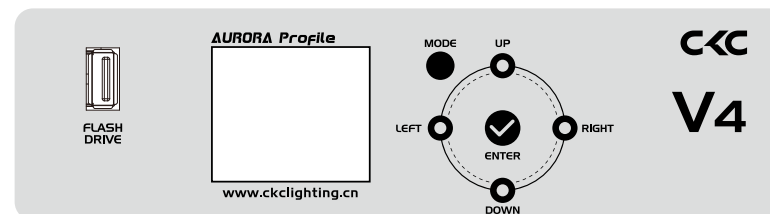
● Adopting a 1.8 "LCD display screen, the operation panel is equipped with a rechargeable battery, which can enter the menu to set address codes and make other settings without powering on;

● Press the MODE key to view or modify the lighting function settings, and press the UP, DOWN, LEFT, and RIGHT keys to select the function menu;

● Press the ENTER key to confirm your selected function menu, which will take you to the corresponding sub menu in the menu. Each menu item represents a specific function of the lighting fixture (as shown in the table below);

● Press the ENTER key to save your modifications or enter a submenu, and press the UP or DOWN key to modify values (increase or decrease values); Press the MODE key to return to the previous menu or exit.

● Press the MODE key to return to the previous menu or exit.

7.2、System menu

Note: The gray color block is the default setting value

Software Update
Please Wait...
CKC
V4
Temperature Check
LED Temp xxxC
Base Temp xxxC
Motor Reset
Please Wait...

Receive	Set Address	A001-XXX	
User Mode	User Mode	Standard Extend User A User B User C	
	Edit A Edit B Edit C	Max Channel PAN :	
	Status	No DMX Mode P.Reverse T. Reverse Pan Degree Feedback Move.Speed Hibernation	Black/Hold/Auto ON/OFF ON/OFF 630/540 ON/OFF Speed 1~ 4 OFF, 01M~99M
	Dim Mode	Standard Stage TV Architectur Theatre	

Function	Temp. C/F	Celsius Fahrenheit	
	Dim Curve	Linear/Square /I-Square/S-Curve	
	Frequency	900Hz/1000Hz/1100Hz/1200Hz/1300Hz/1400Hz/ 1500Hz/2500Hz/4000Hz/5000Hz/10KHz/15KHz/ 20KHz/25KHz	
	Fan.Set	Head Fan	Auto Silent High
	LCD.Set	Backlight Flip Display Key Lock DispFlash	02~60m <05m> ON/OFF ON/OFF ON/OFF
	Disp.Set	Chan.Value Slave Set Auto.Prog	PAN...... Slave1,Slave2 Master / Alone
	DFSE	ON/OFF	
	USB Update	OFF/ON	
Info	Time.Info	Current Time(Hours) Total Time(Hours) Last Time(Hours) Timer PIN(Password=050) Clear Last (ON/OFF)	
	Temp. Info	Head： xxxF/C Base： xxxF/C	
	Fan Speed	LED :xxxxRPM Gobo :xxxxRPM Head :xxxxRPM Base xxxxRPM	
	Error. Info	Pan,Tilt.....	
	Model. Info	V4	
	Software.V	1U:V1.x.x 2U:V1.x.x 3U:V1.x.x 4U:V1.x.x 5U:V1.x.x 6U:V1.x.x 7U:V1.x.x 8U:V1.x.x	
Test	Reset.Motor	A11/Pan&Tilt/Head	
	Test.Channel	PAN	
	Panel.Ctrl.	PAN =XXX :	
	Calibrate	-Password-(050) PAN、Tilt...	

8. DMX channel table:

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38CH	52CH	Function	Values
1	1	Pan	000 – 255 0% to 100%
2	2	Pan fine	000 – 255 0% to 100%
3	3	Tilt	000 – 255 0% to 100%
4	4	Tilt fine	000 – 255 0% to 100%
5	5	Dimmer	000 – 255 0% to 100%
6	6	Dimmer fine	000 – 255 0% to 100%
7	7	Strobe	000 – 031 No function (shutter closed)
			032 – 063 No action, shutter open
			064 – 095 Strobe slow to fast
			096 – 127 No action, shutter open
			128 – 159 Slow to fast pulse effect
			160 – 191 No action, shutter open
			192 – 223 Slow to fast random strobe
			224 – 255 No action,shutter open
8	8	Cyan	000 – 255 0% to 100%
	9	Cyan fine	000 – 255 0% to 100%
9	10	Magenta	000 – 255 0% to 100%
	11	Magenta fine	000 – 255 0% to 100%
10	12	Yellow	000 – 255 0% to 100%
	13	Yellow fine	000 – 255 0% to 100%
11	14	CTO	000 – 255 0% to 100%
	15	CTO fine	000 – 255 0% to 100%
12	16	Colour Wheel	000 – 000 Color off (open)
			001 – 011 Open / Red
			012 – 022 Red
			023 – 033 Red / Amber
			034 – 044 Amber
			045 – 055 Amber / Yellow
			056 – 066 Yellow
			067 – 077 Yellow / Green
			078 – 088 Green
			089 – 099 Green / Light Blue
			100 – 110 Light Blue
			111 – 121 Light Blue / Light Purple
			122 – 132 Light Purple
			133 – 143 Light Purple / Megenta
			144 – 154 Megenta
			155 – 165 Megenta / Dark Blue
			166 – 176 Dark Blue
			177 – 188 Dark Blue / Open
			189 – 192 Open
			193 – 223 Color Wheel rot. fast -> slow, fwd
			224 – 224 Color Wheel rot. stop
			225 – 255 Color Wheel rot. slow -> fast, bwd
13	17	Gobo Wheel 1	000 – 013 Open
			014 – 030 Gobo 1
			031 – 047 Gobo 2
			048 – 064 Gobo 3
			065 – 081 Gobo 4
			082 – 098 Gobo 5
			099 – 115 Gobo 6
			116 – 132 Gobo 7
			133 – 159 Open
			160 – 162 Gobo Shake 1 (slow -> fast)
			163 – 165 Gobo Shake 2 (slow -> fast)
			166 – 168 Gobo Shake 3 (slow -> fast)
			169 – 171 Gobo Shake 4 (slow -> fast)
			172 – 174 Gobo Shake 5 (slow -> fast)
			175 – 177 Gobo Shake 6 (slow -> fast)
			178 – 180 Gobo Shake 7 (slow -> fast)
			181 – 191 Open
			192 – 223 Gobo Wheel rotation fast -> slow, fwd
			224 – 224 Gobo Wheel rotation Stop
			225 – 255 Gobo Wheel rotation slow -> fast, bwd
14	18	Gobo 1 Rotation	000 – 128 Gobo position 0° ... 540°
			129 – 191 Gobo rotation, fast -> slow, fwd
			192 – 192 Gobo rotation stop
			193 – 255 Gobo rotation, slow -> fast -> , bwb
15	19	Gobo1 Rotation fine	000 – 255 Gobo indexing fine
16	20	Zoom	000 – 255 Narrow to wide
	21	Zoom fine	000 – 255 Narrow to wide
17	22	Focus	000 – 255 0% to 100%
18	23	Focus fine	000 – 255 0% to 100%
19	24	Iris	000 – 191 Max. diameter to Min.diameter
			192 – 212 Pulse opening fast to slow
			213 – 233 Pulse closing slow to fast
			234 – 254 Random effect, slow -> fast
			255 – 255 Fast opening to Fast closing

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20	25	Prism 1	000 - 005 Prism Off
			006 - 255 Prism 1
21	26	Prism 1 Rot	000 - 128 Prism1 position 0° ... 540°
			129 - 191 Prism1 rotation, fast -> slow, fwd
			192 - 192 Prism1 rotation Stop
			193 - 255 Prism1 rotation, slow -> fast , bwd
22	27	Prism 2	000 - 005 Prism Off
			006 - 255 Prism 2
23	28	Prism 2 Rot	000 - 128 Prism2 position 0° ... 540°
			129 - 191 Prism2 rotation, fast -> slow, fwd
			192 - 192 Prism2 rotation Stop
			193 - 255 Prism2 rotation, slow -> fast , bwd
24	29	Frost soft	000 - 255 0% to 100%
25	30	Frost heavy	000 - 255 0% to 100%
26	31	Animation	000 - 005 Animation Off
			006 - 063 Animation indexing
			064 - 094 Animation Rotation fast to slow，CW
			095 - 096 No rotation
			097 - 127 Animation Rotation slow to fast，CCW
			128 - 158 Animation Rotation slow to fast，CW to CCW
			159 - 160 No rotation
			161 - 191 Animation Snap. fast to slow，CW
			192 - 193 No rotation
			194 - 224 Animation Snap. slow to fast，CCW
			225 - 255 Animation Snap. slow to fast，CW to CCW
27	32	Blade 1A	000 - 255 0% to 100%
	33	Blade 1A fine	000 - 255 0% to 100%
28	34	Blade 1B	000 - 255 0% to 100%
	35	Blade 1B fine	000 - 255 0% to 100%
29	36	Blade 2A	000 - 255 0% to 100%
	37	Blade 2A fine	000 - 255 0% to 100%
30	38	Blade 2B	000 - 255 0% to 100%
	39	Blade 2B fine	000 - 255 0% to 100%
31	40	Blade 3A	000 - 255 0% to 100%
	41	Blade 3A fine	000 - 255 0% to 100%
32	42	Blade 3B	000 - 255 0% to 100%
	43	Blade 3B fine	000 - 255 0% to 100%
33	44	Blade 4A	000 - 255 0% to 100%
	45	Blade 4A fine	000 - 255 0% to 100%
34	46	Blade 4B	000 - 255 0% to 100%
	47	Blade 4B fine	000 - 255 0% to 100%

35	48	Blade Rotation	000 - 255 0% to 100%
	49	Blade Rotation fine	000 - 255 0% to 100%
36	50	Pan/Tilt Speed	000 - 255 Pan/Tilt Fast -> Slow
37	51	Dim Mode	000 - 020 Standard
			021 - 040 Stage
			041 - 060 TV
			061 - 080 Architectural
			081 - 100 Theatre
			101 - 255 Default to Unit Setting
38	52	Device settings	000 - 005 No function
			006 - 007 Blackout while P/T moving on
			008 - 009 Blackout while P/T moving off
			010 - 011 Blackout while wheels moving on
			012 - 013 Blackout while wheels moving off
			014 - 041 No function
			042 - 043 Invert Pan on (hold 3s)
			044 - 045 Invert Pan off (hold 3s)
			046 - 047 Invert Tilt on (hold 3s)
			048 - 049 Invert Tilt off (hold 5s)
			050 - 051 Pan Angle 540° (hold 3s)
			052 - 053 Pan Angle 630° (hold 3s)
			054 - 101 No function
			102 - 103 Fan Constant Low (hold 3s)
			104 - 105 Fan Constant Auto (hold 3s)
			106 - 107 Fan Constant High (hold 3s)
			108 - 163 No function
			164 - 165 Dimmer Curve Linear (hold 3s)
			166 - 167 Dimmer Curve Square (hold 3s)
			168 - 169 Dimmer Curve Inv-Square(hold 3s)
			170 - 171 Dimmer Curve S-Curve (hold 3s)
			172 - 221 No function
			222 - 223 Reset Pan / Tilt (hold 3s)
			224 - 233 No function
			234 - 235 Reset Head complete (hold 3s)
			236 - 237 Reset all functions (hold 3s)
			250 - 255 No function

9. Control circuit diagram

AC~100-240V   FUSE
Groud wire
700W PSU
48V+
48V+
GND
GND

C-S72210-07 adapter PCB
C-6015 fan
C-LED
JEA
S72210-05C
C-CMY component
C-1225 fan
C-case fan

LADMX-06
S72102-04
S72205-02 dispaly pcb
Display battery power

Horizontal magnetic encoder PCB
Vertical magnetic encoder PCB
Horizontal sensor PCB
Vertical sensor PCB
X Y motor driver PCB S72210-04
X Horizontal motor
Y Vertical motor

M10 M9 M8 M7 M6 M1 M2 M3 M4 M5
Sensor
CH1
S72210-06

Y sensor
Gobo revolution
Gobo rotation
C-sensor
C motor
Gobo rotation
C-LED driver PCB JEA
Gobo rotation
Y motor
Gobo component S72210-01

M motor
Animation
Animation sensor
Color wheel sensor
CTO sensor
M sensor
CTO
Color wheel

DATA2 DATA1
S72210-07
DATA4 DATA3
C-LED driver PCB JEB

Zoom sensor   Focus sensor   C-blower
S72704-06
S72704-05
Linear sensor
Zoom   Focus
Heavy frost Linear
Prism component S72210-01
Linear rotation
Prism component

Prism
Light frost
Prism sensor
Prism rotation sensor
Linear rotation sensor

10. Regular maintenance

10.1 Cleaning and maintenance

Lighting fixtures require daily cleaning and maintenance, and their service life largely depends on the operating environment and standards. If you have any questions, please consult our technical engineers for advice. Maintenance and repair work not included in this book should be entrusted to our qualified technical engineers.

⚠ **Attention!** Damage caused by dust, e-liquid, or other reasons, as well as abnormal use, is not covered by the warranty.

⚠ **Waining !**
Before opening any lid, disconnect the power supply. Cleaning optical components requires gentle wiping as the coating surface is prone to scratching. Do not use damaging liquids or hard objects , as they may damage the plastic or coating surface.

● When the lens is cracked or otherwise damaged, it should be replaced in a timely manner;

● When the brightness significantly decreases, the LED may have reached its expiration date and should be replaced in a timely manner;

● When the fixture cannot start, please check if the fixture power fuse is blown. If it is blown, a fuse of the same specification must be used for installation;

● The fixture is equipped with a temperature protection device. When the temperature is too high, the protection device will automatically reduce power.

● When this situation occurs, please check whether the fan is running normally, whether the fan and fan mesh are clogged with dust, identify the fault and repair it before starting the fixture. Please note that only qualified technicians are allowed to carry out maintenance work;

● To maintain smooth movement of the focusing lens, it is recommended to lubricate the guide rail of the focusing lens every three months. Excellent and high-temperature resistant lubricating grease should be used, and excessive grease should not be used as it can easily dirty adjacent components.

10.2 Fault analysis and handling

Fault description	Analysis	Processing method
No action after power on	Check if the power switch is turned on	Turn on
	Check if the fuse is blown	Replace
	Check if the output of PSU is normal	Detecting voltage
	Check if poor contact in the internal circuit	Reconnect
Uncontrolled lighting fixtures	Check if the DMX signal cable is connected correctly (If there is no signal, the display screen will flash)	Reconnect or replace
	Check if the address code is correct and if the DMX mode of the lighting fixture matches the settings	Reconfirm
	The main control PCB is damaged	Replace

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	LED aging or damage	Replace
Not bright	Power PCB malfunction	Check/ Replace
	Loose or poor contact of the circuit	Reconnect
	PSU malfunction	Replace
Automatically turn off or dim the lights	LED aging	Replace
	Damaged cooling fan or abnormal wind speed	Replace
	Check the power output of the fan	Check/ Replace
	The temperature control switch is damaged	Replace
Gobo wheel misalignment or abnormal control	Poor contact of motor wire	Reconnect
	Corresponding motor drive board malfunction	Refixed
	Misalignment or magnetic damage between the magnetic tube and the positioning magnet	Adjust/Replace
	Motor malfunction	Replace
Weak light efficiency and uneven light spot	LED aging	Replace
	LED not centered with the lens	Adjust LED
	The optical mirror has accumulated dust or stains	Clean
	The optical mirror is damaged	Replace
Impure color	Weakening of light efficiency	Replace led PCB
	The color filter has accumulated dust or stains	Clean
	The color filter has been demolded or damaged	Replace
Gobo is unclear	The optical mirror has accumulated dust or stains	Clean
	The optical mirror is damaged	Replace

	Check if the fan leads are installed properly or disconnected	Re connect
Head or base fan stops rotating	Check if the fan is damaged	Replace
	Check if there are any other interfering objects within the operating range of the fan	Adjust

⚠️ **Attention!** The above analysis is for abnormal reference only. Non professionals are not allowed to disassemble and repair the machine

Head fan

Cooling fan

Fan component

Base fan