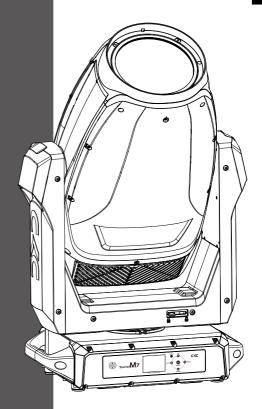


# **M7**



#### www.ckclighting.com



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.

#### **CKC LIGHTING CO.,LTD**

Addr.:335 Nansha Avenue, Tung Chung Town, Nansha District, Guangzhou City, China. TEL: (020)3920 4506 FAX: (020)3920 4631 WEB: www.ckclighting.com

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### **★** 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 IP66 and can be used both indoors and outdoors:
- 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 5m.



- 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.



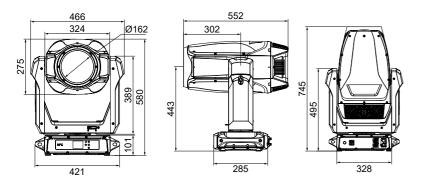
- The lighting fixtures work normally at -20 °C to 45 °C. When replacing any
  components or accessories in the equipment, ensure that the power is
  disconnected to prevent electric shock and injury;
- The maximum surface temperature of the lamp during operation can reach 84 °C , please do not touch it with bare hands.

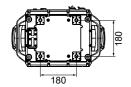


- The lighting fixtures must be installed in a sufficiently ventilated area, at least 0.5m away from adjacent surfaces, to ensure that no ventilation holes are blocked;
- Do not install the lighting fixtures directly on flammable objects;
- The minimum distance between all outer surfaces of the lamp and combustible materials is 0.5m.

#### 2. Product Introduction

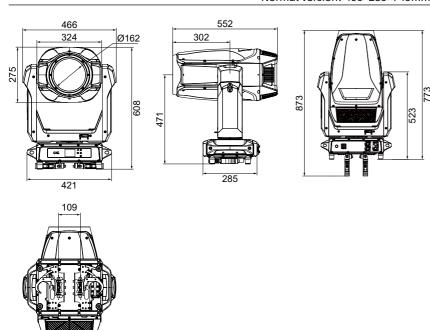
#### 2.1 Exterior dimensions of lighting fixtures





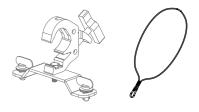
Normal version: 466×285×745mm

Integrated clamp version: 466×285×873mm



#### 2.2 Packaging accessories

	Name	QTY
	Omega bracket	2 PCS
Normal version	Clamp	2 PCS
	Safety cable	1 PCS
Integrated clamp version	Safety cable	1 PCS



#### 3. Main technical parameters of the equipment

Product execution standards: GB7000.1-2023,GB7000.217-2023, Q/YF-2017

#### • Electrical parameter

Rated input voltage: AC 100V-240V~ 50Hz/60Hz Rated power of the entire fixture: 1435W

Power factor: 0.99F Input Current: 6.14A 220V

#### Source lifespan >20000 hours

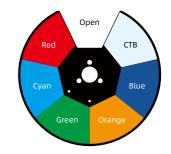
#### Color system

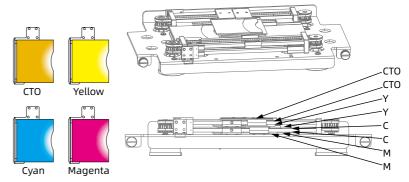
CCT: 6500K

CRI: Ra/72 (Hign brightness) Ra/95 (High CRI)

Color wheel: 6+1

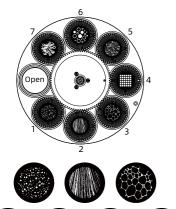
CMY+CTO

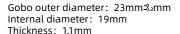


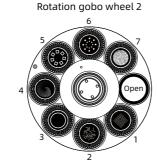


#### Gobo system

Rotation gobo wheel 1







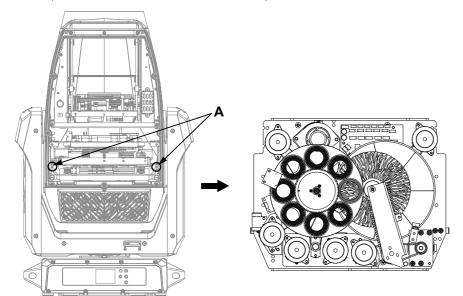


Gobo outer diameter: 23mm<sup>4</sup>2mm Internal diameter: 17mm Thickness: 1.1mm

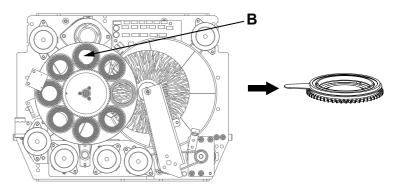
#### Gobo replace

1) Gobo wheel 1

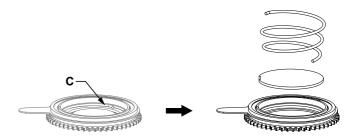
a). Remove the two screws at location **A**, unplug the power and signal adaptercables, and extract the Gobo component;



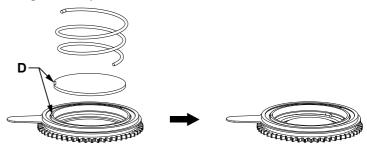
b). As shown in **B**, gently lift the driven wheel from the edge upwards from the front of the pattern plate and slowly pull it out to remove a single pattern seat;



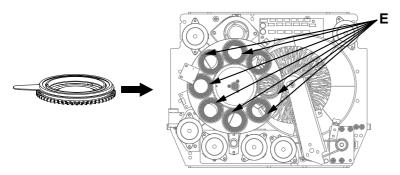
c). Use tweezers or other small grippers to remove the snap spring at point **C** (If the pattern piece is coated with glass glue for fixation, please use a professional cleaning agent to remove the glass glue before removing the snap spring to avoid damaging the gobo);



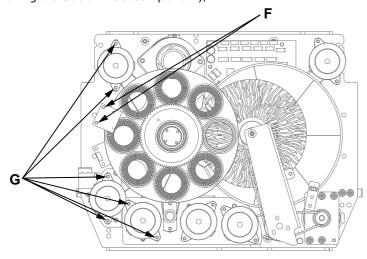
d). When assembling the gobo, avoid touching it directly with your hands. As shown in **D**, align the notch of the gobo with the recess of the driven wheel component (the coating surface of the gobo should face the light source);



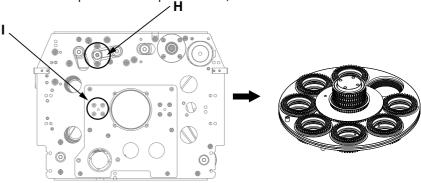
e). Insert the gobo holder into the drive wheel assembly, as shown in **E**, and reinstall the gobo holder in the order it was removed; The positioning point of the gobo holder should be aligned with the positioning point of the driving wheel; After installation, simply reinstall the gobo wheel component onto the light fixture.



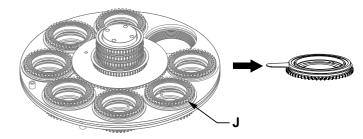
- 2) Gobo wheel 2
  - a). Unscrew the two screws on the front **F** of the gobo wheel component and remove the magnetic sensing plate; Loosen the 6 screws at point **G** and loosen the Gobo self rotating belt (to facilitate the next step of removing the Gobo wheel component);



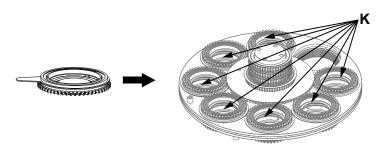
b). Reverse the components and loosen the 3 screws at **H** to loosen the belt; Unscrew the 4 screws at position **I** again to remove the gobo wheel component of the pattern disk;



c). As shown in **J**, gently lift the gobo holder from the edge of the gobo wheel 2 and slowly pull it out to remove a single gobo holder;



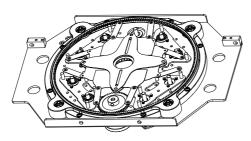
- d). Please refer to page 6 for the replacement method of Gobo;
- e). Insert the gobo wheel into the drive wheel assembly, as shown in **K**, and reinstall the gobo holder in the order it was removed;

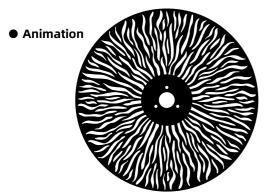


g). After installation, simply reinstall the gobo wheel component onto the light fixture.

#### Framing system

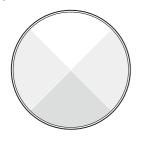
4 gratings achieve fast and smooth cutting, and the cutting direction and angle of each grating can be controlled separately. The single grating can achieve complete light closure, and the entire frame module can rotate ±95°





#### Prism system

4 prism+ 6 linear





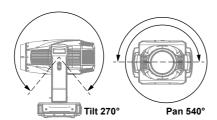
#### ● Pan/Tilt

#### Pan scan:

540° or 630° 8-bit/16bit recision scanning

Tilt scan:

270° 8-bit/16bit precision scanning



#### Optical system

Beam angel: 3.5 ~ 52° Source: 1000W CW LED

Output luminous flux: 43000 Lm (Hign brightness) 27000 Lm ( Hign CRI)

#### Control and programming

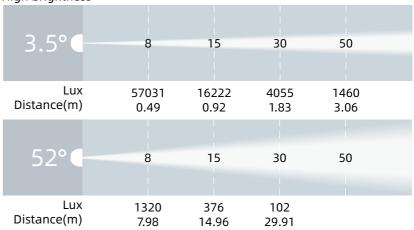
Control channel: 41CH/57CH

Protocol: DMX512, RDM, ArtNet/sACN

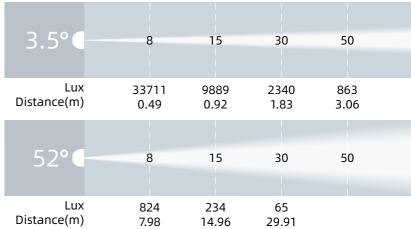
Data connect: 3 or 5 pin signal in/out, RJ45 in/out

#### • Illumination draw

High brightness



#### High CRI



#### Other effect function

Fast electronic strobe: 1~25Hz

Iris

Frost: Light frost+heavy frost

#### Other features and functions

Weight: 37.9 KG (Integrated light hook version)

36.9 KG (Normal version) Carton size: 92.5 × 58.5 × 48.5 cm

N.W: 45.3 KG (Integrated light hook version) / 44.3 KG (Normal version)

Flight case size:

96.6 × 60.6 × 54.2 cm(1PCS) N.W: 68.6 KG 105 × 64.8 × 85 cm(2PCS) N.W: 139 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.

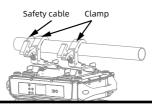
#### 4.2 Equipment packaging

- 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

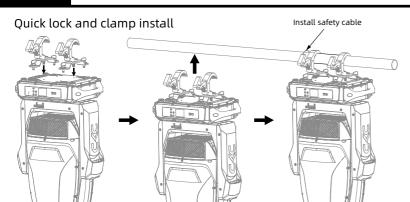
The lighting fixtures can be installed on the stage or on any direction of the truss, and the clamp can be quickly and easily locked onto the truss.

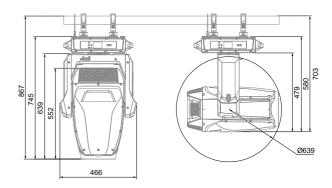




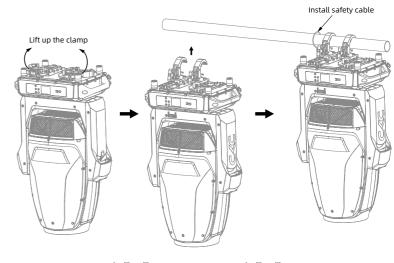
#### Waining!

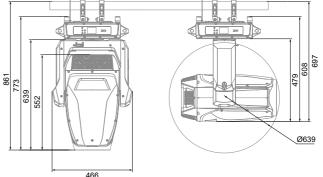
The lighting fixtures are divided into two versions: integrated light hook and normal. When using the integrated light hook version, the clamp is broken up and locked onto the truss. The normal version must use 2 clamps to secure the device and fasten it with a 1/4 rotation. Regardless of the version,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





#### Integrated clamp installion



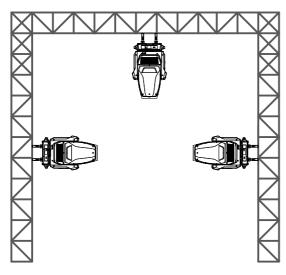


#### 5.2 Equipment installation

- 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 guick 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



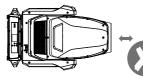


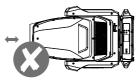


**Reminder:** External beam source may damage internal lighting fixtures

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.







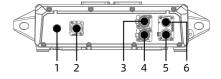
#### 6. Power, Signal connect

#### 6.1 Power and signal socket

#### Quik lock clamp version

1.Breathable valve 2.Power socket 3.RJ45 network in 4.RJ45 network out

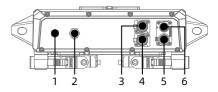
5.XLR female 6.XLR male



#### Integrated clamp version

1.Breathable valve 2.Power socket 3.RI45 network in 4.RI45 network out

5.XLR female 6.XLR male



#### 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/



**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

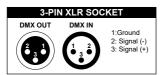
This product uses Powercon In/Out to connect power cable. Due to power limitations, a 2mm power cable can drive up to 1 fixtures at 220V.



#### Waining!

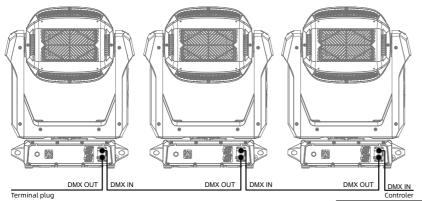
- Do not connect too many fixtures or overload a single power cord:
- Do not use power cords with damaged insulation layers, and do not place power cords on other wires;
- When the fixture is not in use or cleaned, please unplug the power cord; Do not forcefully unplug or drag the power cord directly.

#### 6.3 Signal connect



RJ-45 SOCKET			
SOCKET	PLUG		
12345678	87654321	1:TD+ 2: TD- 3: RX+ 4: N.A.	7: N.A.

The lighting fixtures are equipped with standard DMX XLR and RJ-45 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.



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 or 5 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).



#### 7. Control panel

#### 7.1 Panel Introduction



- NFC chip, set various parameters of the lighting fixtures through a mobile app;
- Adopting a 2.8 "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... скс Ethernet Reset Fixture Check Temp Check LedTemp: xxx℃ HeadTemp: xxx℃ Tourist M7 Motor Reset

Please Wai	Please Wait				
	Dmx Presets	A001~AXXX			
SET	User Mode	Standard (41CH) Extend (57CH)			
	Network	Net Protocol	ArtNet/sACN		
		No DMX Mode	Black/Hold/Auto		
		P.Reverse	ON/OFF		
		T.Reverse	ON/OFF		
	Status	Pan Degree	630/540		
		Feedback	ON/OFF		
		Move.Speed	Speed 1~ 4		
		Hibernation	OFF, 01M~99M, 15M		
	Fixture ID	Service PIN	Password=XXX		
		Universe	000~255		
		IP Address	2.XXX.XXX.XXX		
		Mask Address	255.XXX.XXX.XXX		
	Net Switch	ON/OFF			
	Dim Mode	Standard Stage TV			
		Architectural Theatre			
	Temp. C/F	Celsius Fahrenheit			

Linear   Square   Inv-Square   Inv-Square   S-Curve
Function Frequency Inv-Square S-Curve Frequency 1200Hz/3600Hz/10KHz/15KHz/20KHz/25KHz  CRI Mode Standard High CRI 6500K CTO Mode 6000K
Function   Frequency   1200Hz/3600Hz/5000Hz/10KHz/15KHz/20KHz/25KHz
Function         Frequency         1200Hz/3600Hz/5000Hz/10KHz/15KHz/20KHz/25KHz           CRI Mode         Standard High CRI           6500K         6000K
CRI Mode Standard High CRI 6500K CTO Mode 6000K
CRI Mode High CRI 6500K CTO Mode 6000K
6500K CTO Mode 6000K
CTO Mode 6000K
3000K
CTB MODE ON
OFF OFF
Auto
Head Fan High
Fan Set Low
Auto
Base Fan High
Low
Backlight 01~60m
Flip Display OFF/ON
LCD.Set Key Lock OFF/ON
DispFlash OFF/ON
Language English/Chinese
Channel Value PAN
Disp.Set Slave Set Slave1,Slave2,Slave3
Auto.Prog Master / Alone
DFSE OFF/ON
All
Reset.M Pan&Tilt
Other
Test.Chan PAN
Test Panel.Ctrl. PAN =XXX
rest Panet.cut.
-Password-
Calibrate   PAN (Password=50)
:
Current
Total Time
Time.Info Last Time
Timer PIN(Password=50)
Clear Last(ON/OFF)
LED Temp: xxx℃
Temp. Info Head Temp: xxx°C
Base Temp: xxx°C
Cool Fan1:xxxx RPM
Infomation Fan Speed Cool Fan2: xxxx RPM
Cool Fan3: xxxx RPM

Humi.Info	HeadHumi: xxx %
Hullil.iiilo	BaseHumi: xxx %
Error. Info	Pan,Tilt
Model. Info	Tourist M7
	1U V1.0.X
	2U V1.0.X
	3U V1.0.X
	4U V1.0.X
Software.V	5U V1.0.X
	6U V1.0.X
	7U V1.0.X
	8U V1.0.X
	9U V1.0.X

#### 8. DMX channel table:

ST.	EX.	Function	Values	
1	1	Pan	000 - 255 Pan Movement (540/630)	
2	2	Pan fine	000 - 255 Pan Fine	
3	3	Tilt	000 - 255 Tilt Movement (270)	
4	4	Tilt fine	000 - 255 Tilt Fine	
			Pan Continuous Rotation:	
		Pan Continuous	0 - 127 No function	
5	5	Rotation	128-189 Pan clockwise from fast to slow	
		Rotation	190-193 No rotation	
			194-255 Pan counter-clockwise from slow to fast	
6	6	Dimmer	000-255 Intensity 0 to 100%	
7	7	Dimmer fine	000-255 Dimmer Intensity Fine	
			Shutter, Strobe:	
			000-031 Shutter closed	
			032-063 Shutter open	
			064-095 Strobe Slow to fast	
8	8	Strobe functions	096-127 Shutter open	
			128-159 Pulse effect Slow to fast	
			160-191 Shutter open	
			192-223 Random strobe Slow to fast	
			224-255 Shutter open	
9	9	Cyan	000-255 0% to 100%	
	10	Cyan Fine	000-255 0% to 100%	
10	11	Magenta	000-255 0% to 100%	
	12	Magenta Fine	000-255 0% to 100%	
11	13	Yellow	000-255 0% to 100%	
	14	Yellow Fine	000-255 0% to 100%	
12	15	СТО	000-255 0% to 100%	
	16	CTO Fine	000-255 0% to 100%	

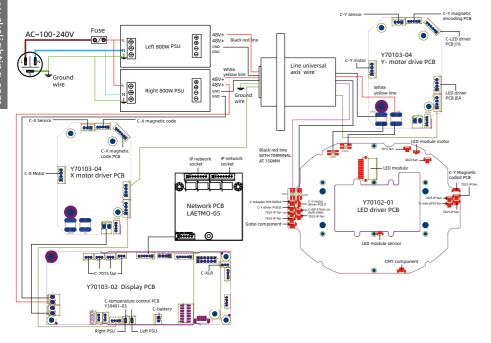
			Color Wheel:		
			000-005 Color off (open)		
			006-104 Open → Color1Color6 → Open		
			105-110 Open		
			111-120 Deep Red		
			121-130 Medium Blue		
			131-140 Deep Green		
13	17	Colour Wheel	141-150 Amber		
			51-160 Deep Blue		
			61-170 CTB		
			171-192 Color off (open)		
			193-223 Color Wheel rot. Fast -> Slow , CW		
			224-224 Color Wheel rot. Stop		
			225-255 Color Wheel rot. Slow ->Fast, CCW		
14	18	Colour Wheel Fine	000-255 0% to 100%		
			Rotanting Gobos1:		
			000-005 Open		
			006-016 Gobo 1		
1			017-027 Gobo 2		
			028-038 Gobo 3		
			039-049 Gobo 4		
			050-060 Gobo 5		
			51-071 Gobo 6		
			072-082 Gobo 7		
			083-097 Gobo 1 shake (slow-fast)		
15	19	GoboWheel 1	098-112 Gobo 2 shake (slow-fast)		
			113-127 Gobo 3 shake (slow-fast)		
			128-142 Gobo 4 shake (slow-fast)		
			143-157 Gobo 5 shake (slow-fast)		
			158-172 Gobo 6 shake (slow-fast)		
			173-187 Gobo 7shake (slow-fast)		
			188-192 Open		
			193-223 Gobo Wheel rot. Fast -> Slow, CW		
			224-224 Gobo Wheel rot. Stop		
			225-255 Gobo Wheel rot. Slow -> Fast, CCW		
1,	20	Caba 1 Batatia	Rotanting Gobo Index:		
16	20	Gobo 1 Rotation	000-005 Gobo1 Rot. Off		
			006-128 Gobo Position 0° 540°		
			129-191 Gobo Rotation, Fast -> Slow, CW		
			192-192 Gobo Rotation Stop		
17	71	Cobo 1 Dotation fire	193-255 Gobo Rotation, Slow -> Fast, CCW		
17	21	GODO I KOTATION TINE	000-255 Gobo indexing fine		
			Rotanting Gobos2:		
			000-005 Open 006-016 Gobo 1		
1			ו טעטט טוט-טטט		

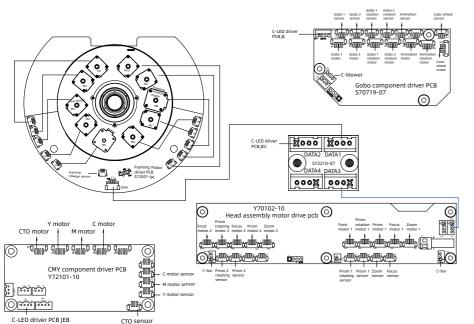
			017-027 Gobo 2		
			028-038 Gobo 3		
			039-049 Gobo 4		
			050-060 Gobo 5		
			061-071 Gobo 6		
			072-082 Gobo 7		
			083-097 Gobo 1 shake (slow-fast)		
18	22	GoboWheel 2	098-112 Gobo 2 shake (slow-fast)		
			113-127 Gobo 3 shake (slow-fast)		
			128-142 Gobo 4 shake (slow-fast)		
			143-157 Gobo 5 shake (slow-fast)		
			158-172 Gobo 6 shake (slow-fast)		
			173-187 Gobo 7 shake (slow-fast)		
			188-192 Open		
			193-223 Gobo Wheel rot. fast ->Slow, CW		
			224-224 Gobo Wheel rot. Stop		
			225-255 Gobo Wheel rot. Slow -> fast, CCW		
			Rotanting Gobo 2 Index:		
			000-005 Gobo1 Rot. Off		
10	23	Gobo 2 Rotation	006-128 Gobo Position 0° 540°		
'"	23	GODO 2 ROLATION	129-191 Gobo Rotation, Fast -> Slow, CW		
			192-192 Gobo Rotaion Stop		
			193-255 Gobo Rotation, Slow -> Fast, CCW		
20	24	Gobo 2 Rotation fine	000-255 Gobo indexing fine		
21	25	Zoom	000-255 narrow to wide		
	26	Zoom fine	000-255 narrow to wide		
22	27	Focus	000-255 0% to 100%		
	28	Focus fine	000-255 0% to 100%		
			Iris:		
			000-191 Open - Close		
			192-207 Pulse up, slow -> fast		
23	29	Iris	208-223 Pulse dowm, slow -> fast		
			224-239 Random effect, slow -> fast		
			240-255 Fast Up-Fast Down slow -> fast		
			Prism1 PrismWheel:		
24	30	Prism1	000-005 no Prism		
			006-255 Prism 1		
			Prism 1 rotation:		
			000-005 Prism Rot. Off		
25	31	Prism1 rotation	006-128 Prism Position		
-	۱ ر	. Home rotation	129-191 Prism Rotation, Fast -> Slow, CW		
			192-192 Prism Rotation Stop		
			193-255 Prism Rotation, Slow -> Fast, CCW		

26   32   Prism2   000-005 no Prism   006-255 Prism 2				PrismWhee2:		
27 33   Prism2 rotation	26	22	Dricm?			
Prism2 rotation:	20	ا 22				
27   33   Prism2 rotation						
27   33   Prism2 rotation   129-191 Prism Rotation, Fast -> Slow, CW   192-192 Prism Rotation, Fast -> Slow, CW   192-192 Prism Rotation, Slow -> Fast, CCW   193-255 Prism Rotation, Slow -> Fast, CCW   28   34						
129-191 Prism Rotation, Fast -> Slow, CW   192-192 Prism Rotation, Fast -> Slow, CW   192-192 Prism Rotation Stop   193-255 Prism Rotation, Slow -> Fast, CCW   192-192 Prism Rotation, Slow -> Fast, CCW   193-255 Prism Rotation, Slow -> Fast, CCW   193-255 Prism Rotation, Slow -> Fast, CCW   100%   200-255 0% to 100%   200-255 0% - 100%						
192-192 Prism Rotation Stop   193-255 Prism Rotation, Slow -> Fast, CCW   193-255 Prism Rotation, Slow -> Fast, CCW   28 34   Frost1   000-255 0% to 100%	27	33	Prism2 rotation			
193-255 Prism Rotation, Slow -> Fast, CCW						
28   34				•		
29   35						
Animation1:  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 31 37 Blade 1A 000-255 0% - 100% 38 Blade 1A fine 000-255 0% - 100% 39 Blade 1B 000-255 0% - 100% 30 Blade 2A fine 000-255 0% - 100% 31 41 Blade 2A 000-255 0% - 100% 32 Blade 2B fine 000-255 0% - 100% 33 41 Blade 2B 000-255 0% - 100% 34 43 Blade 2B 000-255 0% - 100% 35 45 Blade 3A 000-255 0% - 100% 36 47 Blade 3B 000-255 0% - 100% 37 49 Blade 4A 000-255 0% - 100% 38 51 Blade 4A 000-255 0% - 100% 38 51 Blade 4A 000-255 0% - 100%		_				
30   36   Effect Wheel   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, CW to CCW   225-255 Animation Snap.   slow to fast, CW to CCW   225-255 Animation Snap.   slow to fast, CW to CCW   38   Blade 1A   000-255 0% - 100%   slow to fast, CW to CCW   39   Blade 1B   000-255 0% - 100%   slow to fast, CW to CCW   30   Blade 1B   000-255 0% - 100%   slow to fast, CW to CW   slow to fast, CW to CCW   slow to fa	29	35	Frost2	000-255 0% to 100%		
30 36   Effect Wheel				Animation1:		
Second Part				000-005 Animation Off		
Second Part				006-063 Animation indexing		
30   36   Effect Wheel				064-094 Animation Rotation		
10   36				fast to slow, CW		
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, CCW   225-255 Animation Snap.   slow to fast, CW to CCW   38   Blade 1A fine   000-255 0% - 100%   38   Blade 1B   000-255 0% - 100%   39   Blade 1B   000-255 0% - 100%   30   Blade 1B fine   000-255 0% - 100%   31   Blade 2A   000-255 0% - 100%   32   39   Blade 1B   000-255 0% - 100%   33   41   Blade 2A   000-255 0% - 100%   34   Blade 2A   fine   000-255 0% - 100%   34   43   Blade 2A   fine   000-255 0% - 100%   34   43   Blade 2B   000-255 0% - 100%   35   45   Blade 3A   000-255 0% - 100%   36   47   Blade 3B   000-255 0% - 100%   36   47   Blade 3B   000-255 0% - 100%   36   47   Blade 3B   000-255 0% - 100%   37   49   Blade 4A   000-255 0% - 100%   38   51   Blade 4B   000-255 0%	30	36	Effect Wheel	095-096 No rotation		
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 31 37 Blade 1A 000-255 0% - 100% 38 Blade 1A fine 000-255 0% - 100% 39 Blade 1B 000-255 0% - 100% 30 Blade 1B fine 000-255 0% - 100% 31 40 Blade 2A 000-255 0% - 100% 32 41 Blade 2A 000-255 0% - 100% 33 41 Blade 2B 000-255 0% - 100% 34 43 Blade 2B 000-255 0% - 100% 35 45 Blade 3A 000-255 0% - 100% 36 47 Blade 3B 000-255 0% - 100% 37 49 Blade 4A 000-255 0% - 100% 38 51 Blade 4A 000-255 0% - 100% 38 51 Blade 4B 000-255 0% - 100%				097-127 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   225-255 Animation Snap.   slow to fast, CW to CCW   38				slow to fast, 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   225-255 Animation Snap.   slow to fast, CW to CCW   38   Blade 1A   000-255 0% - 100%   38   Blade 1B   000-255 0% - 100%   39   Blade 1B   000-255 0% - 100%   40   Blade 1B fine   000-255 0% - 100%   40   Blade 2A   000-255 0% - 100%   42   Blade 2A   000-255 0% - 100%   42   Blade 2A   000-255 0% - 100%   34   43   Blade 2B   000-255 0% - 100%   35   45   Blade 3A   000-255 0% - 100%   36   47   Blade 3A   000-255 0% - 100%   36   47   Blade 3B   000-255 0% - 100%   36   47   Blade 3B   000-255 0% - 100%   37   49   Blade 4A   000-255 0% - 100%   38   51   Blade 4B   000-255 0% - 100%   38   51   Blade 5B   000-255 0% - 100%   38   51   Blade 5B   000-255 0%						
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 31 37 Blade 1A 000-255 0% - 100% 38 Blade 1A fine 000-255 0% - 100% 39 Blade 1B 000-255 0% - 100% 40 Blade 1B fine 000-255 0% - 100% 31 41 Blade 2A 000-255 0% - 100% 32 Blade 2A fine 000-255 0% - 100% 33 41 Blade 2B 000-255 0% - 100% 34 43 Blade 2B 000-255 0% - 100% 35 Blade 3A 000-255 0% - 100% 36 47 Blade 3B 000-255 0% - 100% 37 49 Blade 4A 000-255 0% - 100% 38 51 Blade 4B 000-255 0% - 100% 38 51 Blade 4B 000-255 0% - 100%				slow to fast, CW to CCW		
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  31 37 Blade 1A 000-255 0% - 100%  38 Blade 1A fine 000-255 0% - 100%  30 Blade 1B 000-255 0% - 100%  40 Blade 1B fine 000-255 0% - 100%  41 Blade 2A 000-255 0% - 100%  42 Blade 2A fine 000-255 0% - 100%  44 Blade 2B 000-255 0% - 100%  45 Blade 3A 000-255 0% - 100%  46 Blade 3A fine 000-255 0% - 100%  47 Blade 3B 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  48 Blade 4A 000-255 0% - 100%  50 Blade 4A fine 000-255 0% - 100%  38 51 Blade 4B 000-255 0% - 100%						
192-193 No rotation 194-224 Animation Snap. slow to fast, CCW 225-255 Animation Snap. slow to fast, CW to CCW  31 37 Blade 1A 000-255 0% - 100% 38 Blade 1A fine 000-255 0% - 100% 32 39 Blade 1B 000-255 0% - 100% 40 Blade 1B fine 000-255 0% - 100% 33 41 Blade 2A 000-255 0% - 100% 42 Blade 2A fine 000-255 0% - 100% 34 43 Blade 2B 000-255 0% - 100% 35 45 Blade 3A 000-255 0% - 100% 36 47 Blade 3B 000-255 0% - 100% 36 48 Blade 3B fine 000-255 0% - 100% 37 49 Blade 4A 000-255 0% - 100% 38 51 Blade 4B 000-255 0% - 100%				·		
194-224 Animation Snap.   slow to fast, CCW   225-255 Animation Snap.   slow to fast, CW to CCW   225-255 Animation Snap.   slow to fast, CW to CCW   31 37   Blade 1A   000-255 0% - 100%   38   Blade 1A fine   000-255 0% - 100%   39   Blade 1B   000-255 0% - 100%   40   Blade 1B fine   000-255 0% - 100%   41   Blade 2A   000-255 0% - 100%   42   Blade 2A   000-255 0% - 100%   43   Blade 2B   000-255 0% - 100%   44   Blade 2B   000-255 0% - 100%   45   Blade 3A   000-255 0% - 100%   46   Blade 3A   000-255 0% - 100%   46   Blade 3A fine   000-255 0% - 100%   48   Blade 3B fine   000-255 0% - 100%   37   49   Blade 4A   000-255 0% - 100%   38   51   Blade 4B   000-255 0% - 100%   38   51   Blade 5B   000-255 0% - 100%   38   38   51   Blade 5B   000-255 0% - 100%				·		
Slow to fast, CCW   225-255 Animation Snap.   slow to fast, CW to CCW   225-255 Animation Snap.   slow to fast, CW to CCW   31 37   Blade 1A   000-255 0% - 100%   38   Blade 1A fine   000-255 0% - 100%   39   Blade 1B   000-255 0% - 100%   40   Blade 1B fine   000-255 0% - 100%   41   Blade 2A   000-255 0% - 100%   42   Blade 2A   000-255 0% - 100%   43   Blade 2B   000-255 0% - 100%   44   Blade 2B   000-255 0% - 100%   45   Blade 3A   000-255 0% - 100%   46   Blade 3A   000-255 0% - 100%   46   Blade 3A fine   000-255 0% - 100%   48   Blade 3B fine   000-255 0% - 100%   37   49   Blade 4A   000-255 0% - 100%   38   51   Blade 4B   000-255 0% - 100%   38   51   Blade 3B   000-255 0				192-193 No rotation		
225-255 Animation Snap. slow to fast, CW to CCW  31 37 Blade 1A 000-255 0% - 100%  38 Blade 1A fine 000-255 0% - 100%  30 Blade 1B 000-255 0% - 100%  40 Blade 1B fine 000-255 0% - 100%  31 41 Blade 2A 000-255 0% - 100%  42 Blade 2A fine 000-255 0% - 100%  44 Blade 2B 000-255 0% - 100%  44 Blade 2B 000-255 0% - 100%  46 Blade 3A 000-255 0% - 100%  46 Blade 3A 000-255 0% - 100%  48 Blade 3B 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  50 Blade 4A 000-255 0% - 100%  50 Blade 4A fine 000-255 0% - 100%  38 51 Blade 4B 000-255 0% - 100%				'		
Slow to fast, CW to CCW						
31       37       Blade 1A       000-255 0% - 100%         38       Blade 1A fine       000-255 0% - 100%         32       39       Blade 1B       000-255 0% - 100%         40       Blade 1B fine       000-255 0% - 100%         33       41       Blade 2A       000-255 0% - 100%         42       Blade 2A fine       000-255 0% - 100%         34       43       Blade 2B 000-255 0% - 100%         44       Blade 2B fine       000-255 0% - 100%         35       45       Blade 3A 000-255 0% - 100%         46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B 000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A 000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B 000-255 0% - 100%						
38       Blade 1A fine       000-255 0% - 100%         32       39       Blade 1B       000-255 0% - 100%         40       Blade 1B fine       000-255 0% - 100%         33       41       Blade 2A       000-255 0% - 100%         42       Blade 2A fine       000-255 0% - 100%         34       43       Blade 2B       000-255 0% - 100%         44       Blade 2B fine       000-255 0% - 100%         35       45       Blade 3A       000-255 0% - 100%         46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B       000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A       000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B       000-255 0% - 100%						
32 39 Blade 1B 000-255 0% - 100%  40 Blade 1B fine 000-255 0% - 100%  33 41 Blade 2A 000-255 0% - 100%  42 Blade 2A fine 000-255 0% - 100%  34 43 Blade 2B 000-255 0% - 100%  44 Blade 2B fine 000-255 0% - 100%  35 45 Blade 3A 000-255 0% - 100%  46 Blade 3A fine 000-255 0% - 100%  36 47 Blade 3B 000-255 0% - 100%  38 Blade 3B fine 000-255 0% - 100%  39 Blade 4A 000-255 0% - 100%  30 Blade 4A 000-255 0% - 100%  31 Blade 4A 000-255 0% - 100%  32 Blade 4A 000-255 0% - 100%  33 Blade 4A fine 000-255 0% - 100%	31					
40       Blade 1B fine       000-255 0% - 100%         33       41       Blade 2A       000-255 0% - 100%         42       Blade 2A fine       000-255 0% - 100%         34       43       Blade 2B       000-255 0% - 100%         44       Blade 2B fine       000-255 0% - 100%         35       45       Blade 3A       000-255 0% - 100%         46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B       000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A       000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B       000-255 0% - 100%						
33 41 Blade 2A 000-255 0% - 100%  42 Blade 2A fine 000-255 0% - 100%  34 43 Blade 2B 000-255 0% - 100%  44 Blade 2B fine 000-255 0% - 100%  35 45 Blade 3A 000-255 0% - 100%  46 Blade 3A fine 000-255 0% - 100%  36 47 Blade 3B 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  37 49 Blade 4A 000-255 0% - 100%  50 Blade 4A fine 000-255 0% - 100%  38 51 Blade 4B 000-255 0% - 100%	32					
42       Blade 2A fine       000-255 0% - 100%         34       43       Blade 2B       000-255 0% - 100%         44       Blade 2B fine       000-255 0% - 100%         35       45       Blade 3A       000-255 0% - 100%         46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B       000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A       000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B       000-255 0% - 100%						
34 43 Blade 2B 000-255 0% - 100%  44 Blade 2B fine 000-255 0% - 100%  35 45 Blade 3A 000-255 0% - 100%  46 Blade 3A fine 000-255 0% - 100%  36 47 Blade 3B 000-255 0% - 100%  48 Blade 3B fine 000-255 0% - 100%  37 49 Blade 4A 000-255 0% - 100%  50 Blade 4A fine 000-255 0% - 100%  38 51 Blade 4B 000-255 0% - 100%	33					
44       Blade 2B fine       000-255 0% - 100%         35       45       Blade 3A       000-255 0% - 100%         46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B       000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A       000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B       000-255 0% - 100%						
35 45 Blade 3A 000-255 0% - 100% 46 Blade 3A fine 000-255 0% - 100% 36 47 Blade 3B 000-255 0% - 100% 48 Blade 3B fine 000-255 0% - 100% 37 49 Blade 4A 000-255 0% - 100% 50 Blade 4A fine 000-255 0% - 100% 38 51 Blade 4B 000-255 0% - 100%	34					
46       Blade 3A fine       000-255 0% - 100%         36       47       Blade 3B       000-255 0% - 100%         48       Blade 3B fine       000-255 0% - 100%         37       49       Blade 4A       000-255 0% - 100%         50       Blade 4A fine       000-255 0% - 100%         38       51       Blade 4B       000-255 0% - 100%						
36     47     Blade 3B     000-255 0% - 100%       48     Blade 3B fine     000-255 0% - 100%       37     49     Blade 4A     000-255 0% - 100%       50     Blade 4A fine     000-255 0% - 100%       38     51     Blade 4B     000-255 0% - 100%	35	_				
48     Blade 3B fine     000-255 0% - 100%       37     49     Blade 4A     000-255 0% - 100%       50     Blade 4A fine     000-255 0% - 100%       38     51     Blade 4B     000-255 0% - 100%						
37     49     Blade 4A     000-255 0% - 100%       50     Blade 4A fine     000-255 0% - 100%       38     51     Blade 4B     000-255 0% - 100%	36	_				
50         Blade 4A fine         000-255 0% - 100%           38         51         Blade 4B         000-255 0% - 100%						
38 51 Blade 4B 000-255 0% - 100%	37					
		50				
52   Blade 4B fine	38	51	Blade 4B			
		52	Blade 4B fine	000-255 0% - 100%		

39	53	Shape Rotation	000-255 Rotation from 0 to 120°	
	54	Shape Rotation Fine	000-255 0% - 100%	
	55	Pan/Tilt Speed	000-255 Pan/Tilt Fast -> Slow	
			Dimmer Mode:	
			000-020 Standard	
			021-040 Stage	
40	56	Set dimmer Mode	041-060 TV	
			061-080 Architectural	
			081-100 Theater	
			101-255 Default to U nit Setting	
			Device settings:	
			000-005 No function	
			006-010 On Display Backlight	
			011-015 OFF Display Backlight	
			016-020 Invert Pan on (Hold 3s)	
			021-025 Invert Pan off (Hold 5s)	
			026-030 Invert Tilt on (Hold 3s)	
			031-035 Invert Tilt off (Hold 5s)	
			036-040 Fan Auto (Hold 3s)	
			041-045 Fan Silent (Hold 3s)	
			046-050 Fan high (Hold 3s)	
			051-055 Linear Dimmer Curve (hold 3s)	
			056-060 Square Dimmer Curve (hold 3s)	
			061-065 Inv-Square Dimmer Curve (hold 3s)	
			066-070 S- Dimmer Curve (hold 3s)	
			071-075 Led Freq. 1200 Hz (hold 3s)	
			076-080 Led Freq. 3600 Hz (hold 3s)	
41	57	Device settings	081-085 Led Freq. 5000 Hz (hold 3s)	
			086-090 Led Freq. 10.000 Hz (hold 3s)	
			091-095 Led Freq. 15.000 Hz (hold 3s)	
			096-100 Led Freq. 20.000 Hz (hold 3s)	
			101-105 Led Freq. 25.000 Hz (hold 3s)	
			106-110 P/T motor reset(hold 3s)	
			111-115 Other motor reset(hold 3s)	
			116-120 All motor reset(hold 3s)	
			121-125 Standard Mode	
			126-130 High CRI	
			131-135 6500K(default)	
			136-140 6000K	
			141-145 3000K	
			146-150 Gobo CTB auto On(Hold 3s)	
			151-155 Gobo CTB auto Off(Hold 3s)	
			156-160 Factory Default(Hold 3s)	
			161-255 No function	

#### 9. Control circuit diagram





#### 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
	Check if the power switch is turned on	Turn on
No action after	Check if the fuse is blown	Replace
power on	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
Not bright	LED aging or damage	Replace
	Power PCB malfunction	Check/ Replace
	Loose or poor contact of the circuit	Reconnect
	PSU malfunction	Replace
Automatically turn	LED aging	Replace
	Damaged cooling fan or abnormal wind speed	Replace
off or dim the lights	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
	Weakening of light efficiency	Replace led PCB
Impure color	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	
Head or base fan stops rotating	Check if the fan leads are installed properly or disconnected	Re connect	
	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

