FOS technologies

FOS Hydor Profile

User's Manual

Table of contents

1. Safety instructions

Before using the fixture, read the latest version of the product user manual, paying particular attention to

the safety instructions. Please check www.FOS Technologies-lighting.com for the latest revision/update of the user manual.

The manufacture of this fixture, are not responsible for damages, resulting from misuse of this fixture, due to the disregard of the information printed in this user manual.

DANGER!

Hazardous voltage. Risk of lethal or severe electric shock

WARNING!

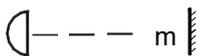Wear protective eyewear. Never look directly into the light source.

WARNING!

Burn hazard. Hot surface. Do not touch.

Only to direct mounting on non-combustible surfaces.

Replace all cracked glass shields.

Minimum distance to lighted objects.

ta...°C   Maximum ambient temperature.

tc...°C   Maximum temp of the external surface.

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General guidelines ⚠

- This product has a protection rating of IP66.

- Never open this fixture while in use.

- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.

- Minimum distance to lighted objects must be 16.4feet (5m).

- Maximum temp of the external surface 194˚F (90˚C).

- Maximum ambient temperature 113˚F (45˚C).

- Minimum distance of inflammable materials from the surface 1.6 feet (0.5m).

- Lamp should be changed if damaged or distorted in shape due to extreme heat.

- Cover, prism or OLED Menu Function Display with visible damages such as cracks or scratches must be replaced to ensure performance of the fixture.

- Disconnect the fixture from power before changing any parts or accessories.

- Basic insulation should be maintained between the controllable device and the product power supply.

- Make sure that the installation area can hold a minimum point load of 10 times the weight of all installed

- fixtures, clamps, cables, auxiliary equipment, etc. Check that the cover, clamps and locks are undamaged. Certified safety cables must always be used when installing the fixture.

- The fixture is only intended for installation, operation and maintenance by qualified professional. Instructions stated in the manual must be complied.

- The fixture must be kept in a well-ventilated place at least 50 cm away from any wall surface. Check if the fans or ventilation openings are unblocked.

- Broken or damaged cables and light source can only be fixed or changed by certified technicians, certified local distributors or the manufacturer to ensure operational safety.

- Do not stick filters or other materials onto the lens. Do not modify the fixture or install other than FOS TECHNOLOGIES manufactured parts.

- For questions regarding safety operation, please contact our technical personnel or call the service hotline +8620 61808296.

2. Production instructions

2.1 Dimension

2.2 Fixture overview

① Head module

② Prism module

③ Framing blade system

④ Gobos module

⑤ CMY

⑥ Lamp-holder assembiy

⑦ Pan-tilt frame

⑧ Base module
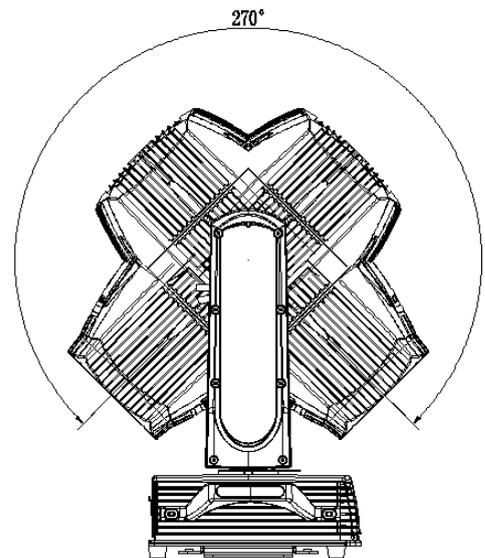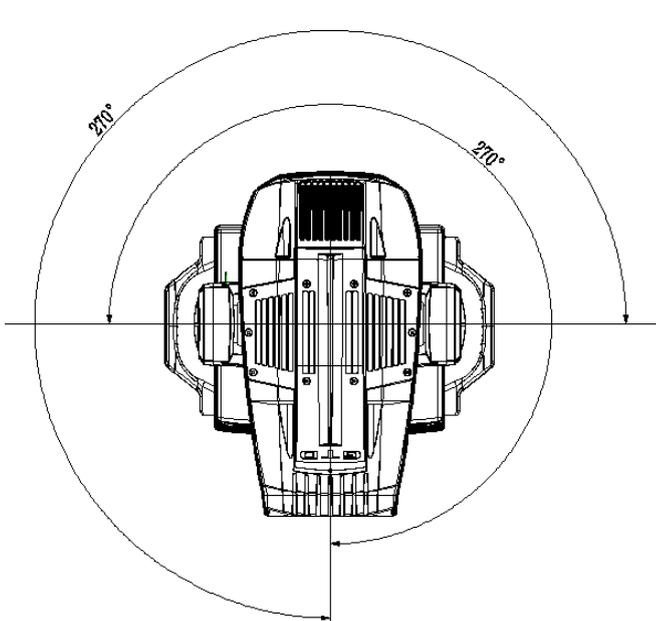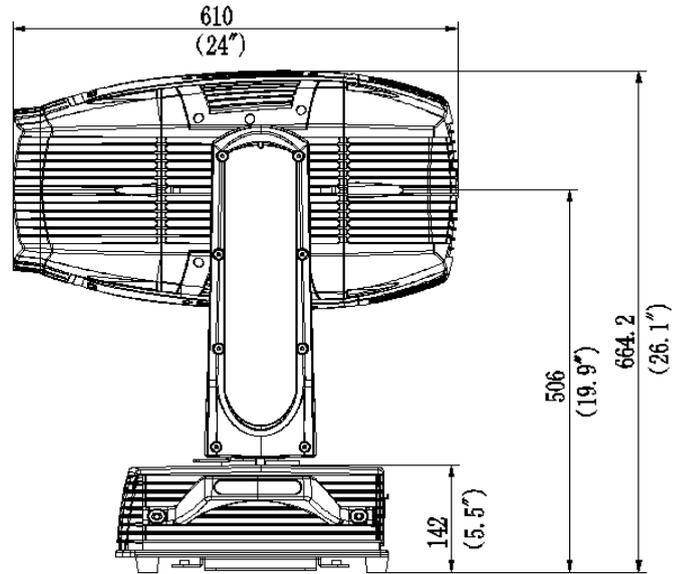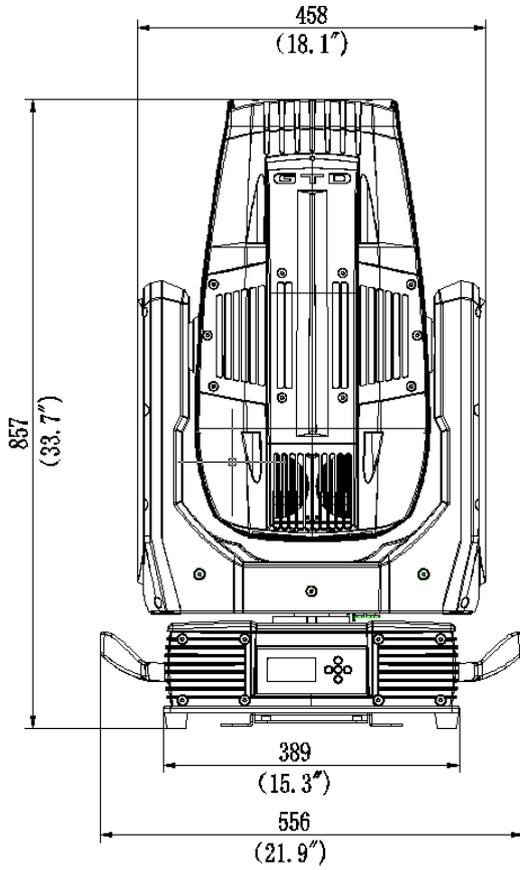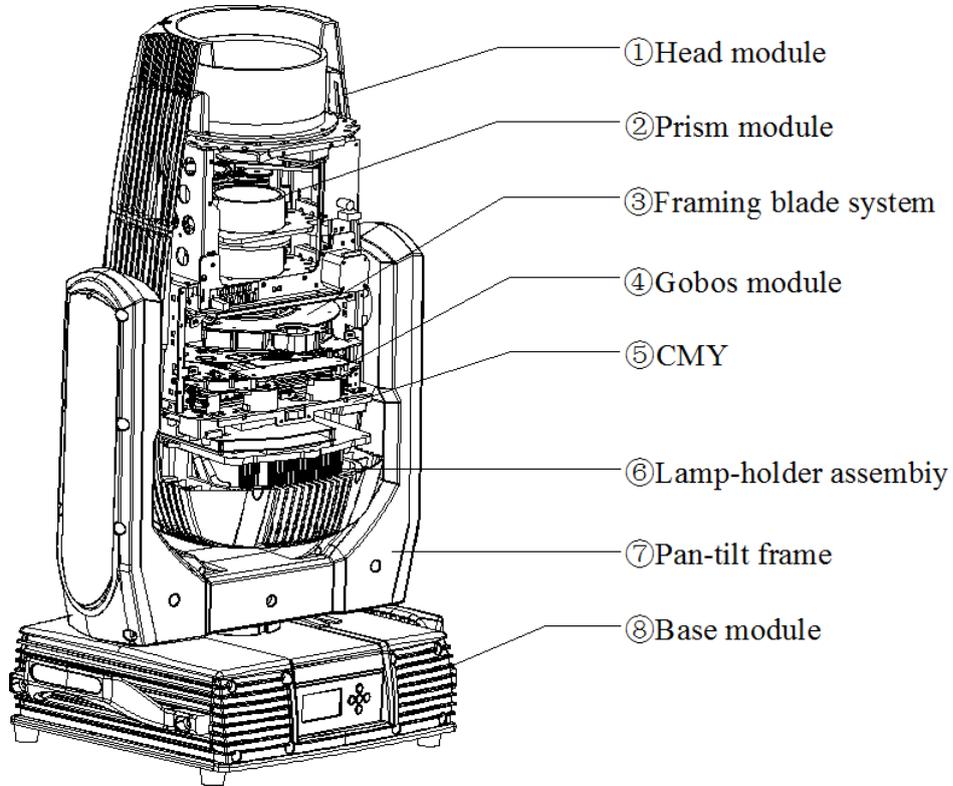
2.3 Accessories

Item	Qty	Unit	Remark
User Manual	1	Pc	--
Clamps	2	Set	02A+21A 42-52mm Load weight 200KG
Safety cable	2	Pc	Φ5*60cm 7*19 pc with hook　Material：Steel
3-pins signal line	1	Set	--
Power cord	1	Set	1.5m 2.5mm^2

3. Packing and shipping

3.1 Protection lock

Pan and tilt locks are equipped to ensure safe transportation.

PAN: 4 lock positions are located evenly on the Pan.

TILT: 5 lock positions are located on left and right side of the Tilt with the third one in the center.
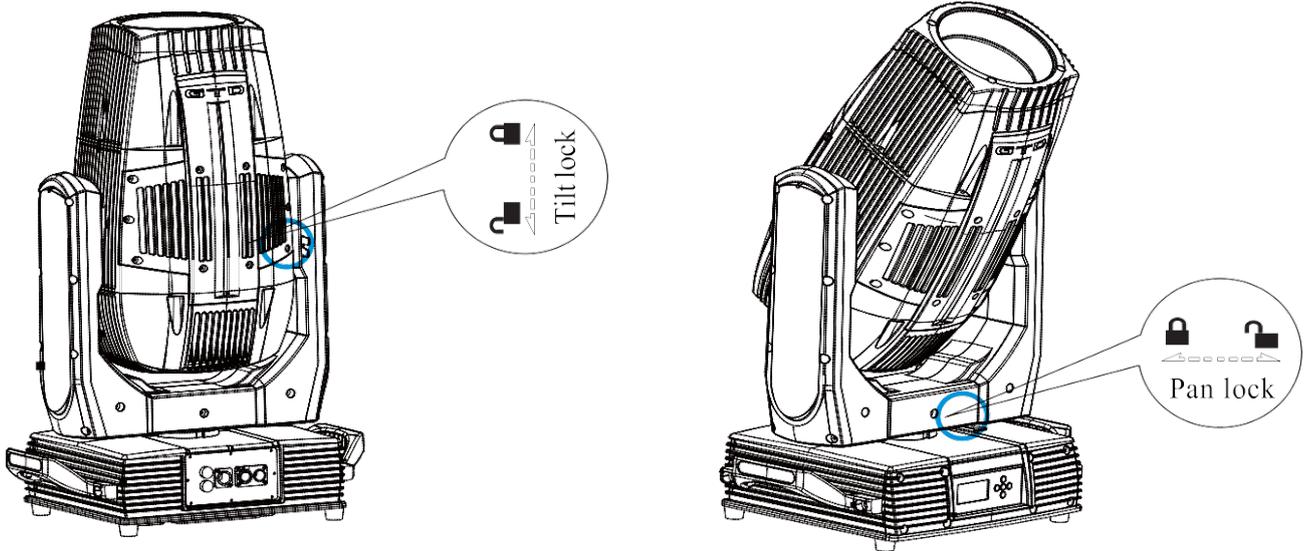
3.2 Unpacking

Notes

All products are quality controlled and checked for any faults before they are dispatched to customers. If the fixture is damaged during delivery, the customer must notify the shipper and manufacturer to file a damage insurance claim. Photographic evidence of the damage must be provided.

Flight-Case： Open the cover of the flight-case and remove the plastic packing bags. Hold the handles of the fixture firmly and take it out carefully.

Cardboard box： Open the box and take out the whole set of packaging foam which contains both the fixture and its accessories. Remove the foam from the top, put away the accessories, and then take out the fixture wrapped in the plastic bag.

Notes

Check if the pan and tilt are unlocked before connecting the fixture to power.

3.3 Packing after use

1. Switch off the fixture and wait for at least 5 minutes before disconnecting it from AC power. Cool down the fixture for at least 15 minutes before packing.

2. Lock pan and tilt.

3. Flight case: Wrap the fixture in plastic bags. Hold it by the handles, and then carefully place it inside the flight case along with all the accessories. Close the cover. Only 3 layers are allowed when piling up the flight cases. Do not upside down.

4. Cardboard box: Wrap the fixture in plastic bags. Put it in the packaging foam along with all the accessories.

Place the other set of packaging foam on top then carefully put it inside the cardboard box.

4. Installation

4.1 Clamps installation

The fixture can be placed on the stage or mounted on the truss facing any direction. Attach the clamps to the mounting position on the base of the fixture.

Warning : Use two clamps when mounting the fixture. Turn the screws attached to each clamp a 1/4 turn clockwise to lock. Always remember to use the safety cable which goes through the mounting hole on the base. Do not attach the safety cable on the handle.

4.2 Device installation

1. Make sure there is no damage on the clamps or safety cables before installation.

2. The clamp is mounted on the chassis of the fixture. Horizontally insert the clamp into the mounting holes of the chassis. Fasten the clamp tightly by a 1/4 turn clockwise. Fix another clamp in the same way.

3. Check if pan and tilt are unlocked before connecting the unit to AC power.
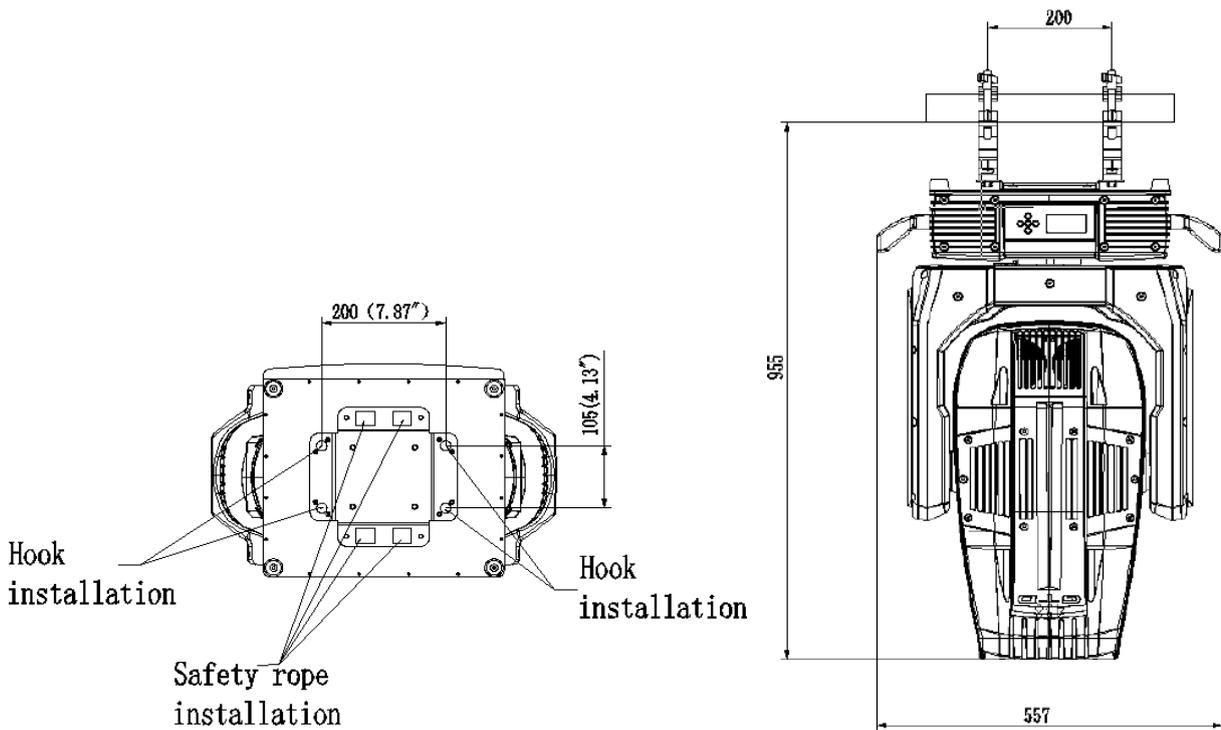
5. Power/ Control connection

5.1 Power connection

Connection method:

- L (Live) Brown wire

- E (Earth) Yellow / Green bi-color wire

- N (Neutral) Blue wire

- The voltage and frequency of the power source must be in compliance with the ones marked on the fixture. It is strongly recommended that each fixture are to be connected to the power source separately so that they can be switched on / off individually.

5.2 Control connection

The fixture has 3-pin XLR connectors for DMX data input and output as shown below. Connection between the console and fixture, and between fixtures must be made with 2 core screened DMX signal cable. Maximum connecting distance of signal cable is 150 meters. Additional DMX512 signal-amplifier is recommended for longer distance

DMX 512

1：Ground

2：—

3：+
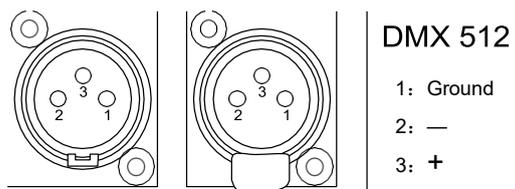
Connect the Console's DMX OUTPUT to the first fixture's DMX INPUT, then the first fixture's DMX OUTPUT to the second fixture's DMX INPUT and so on. It is recommended not to connect more than 32 units on a single DMX universe. On the last fixture's output connect a DMX terminator. (The terminator is a 3-pin XLR connector with a 1/4W and 120Ω resistor between the pin 2 and pin 3) as shown below:
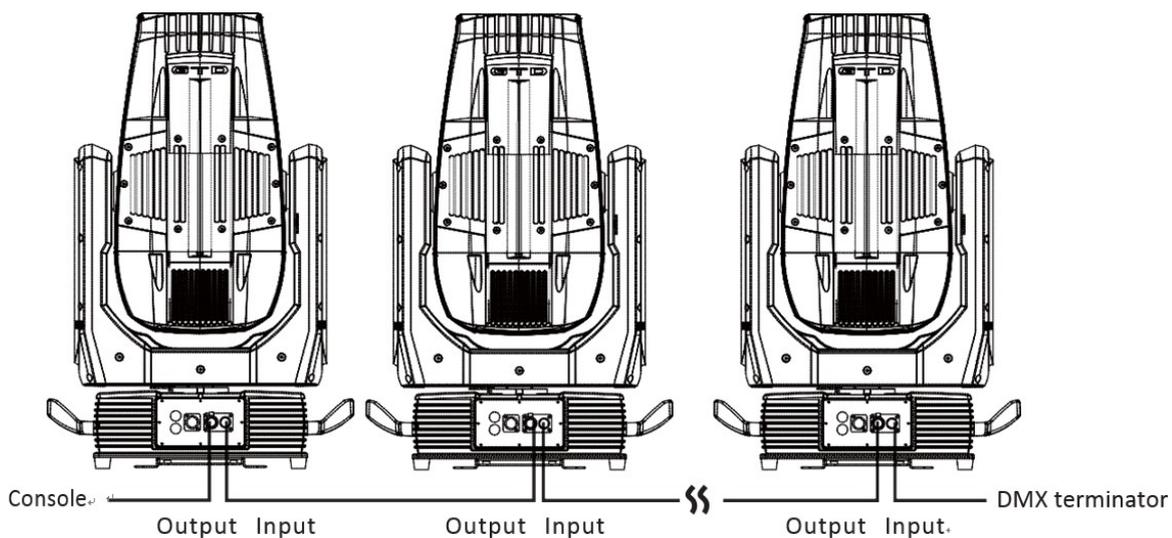
5.3 Testing

Connect the fixture to AC power. Check if the lamp is on and the fixture is independently controllable before putting into operation.

6. Control panel

6.1 Panel instruction
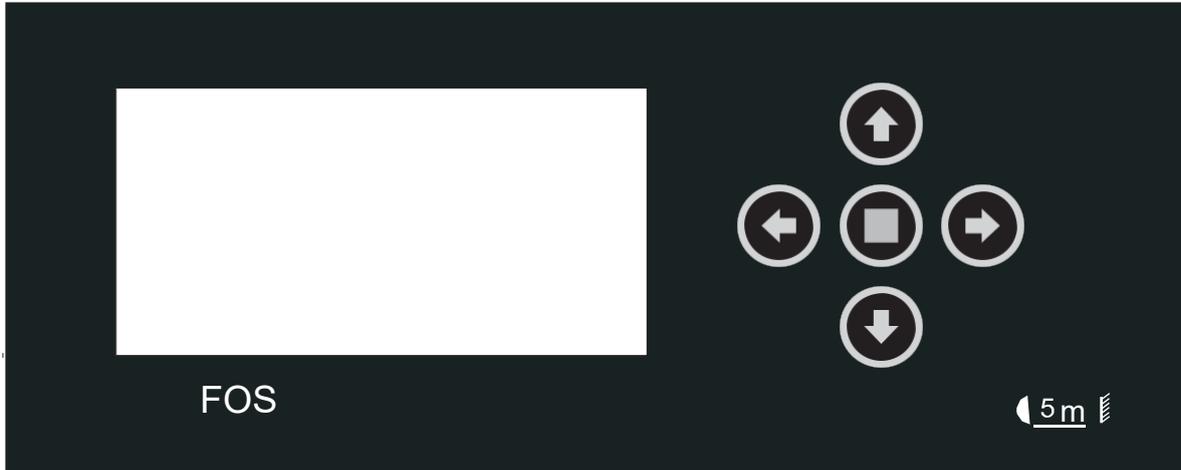
- The control panel features touch-sensitive buttons and OLED digital display for quick and easy setup of address code and functions menu.

- Press the left key to enter the menu, press again to exit the menu, press the up and down keys to select the menu setting item, and press the right key to confirm the setting item. Press the up and down keys to adjust the value of the setting item, then press the right key to confirm, and press the left key to exit the menu setting item successively until exiting the menu.

- Press up and down to set the address, left to exit, right to confirm.

- Middle key (reserved).

- Key Panel Indicator Diagram：
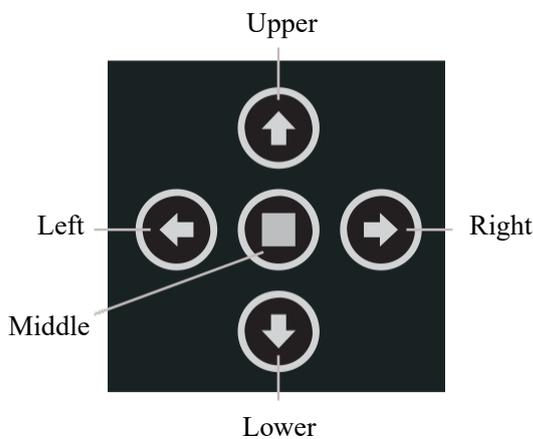
7. Technical specification

- **Optical**

  Light source: LED   730W

  Expected average lifetime: 20000 h

  Color temperature correction: 7000K

  Total luminous flux: 35000Lm

  Color rendering index: ≥90Ra

  Zoom: 5° -45°

  Spot uniformity：≥80%

  Focus: multi-point focus, focus from5 meters to infinity tracking s

  Prism: 1-facet prism，CW/CCW rotation, variable speed

  Frost: 1-independent frost effect

- **Gobo**

  Rotating gobo wheel: 6 interchangeable gobos, CW/CCW rotation, variable speed

  Fixed gobo wheel: 7 gobos + open，CW/CCW rotation, variable speed

  Gobo outside diameter: 27mm

  Max. Image diameter: 22mm

  Max. Thickness: 3.5mm

  Gobo material: Glass

- **Color**

  CTO: 7000K-2700K

  C、M、Y: linear infinity color mixing

  Color wheel: 6 colors + open, split color, CW/C CW rotation, "Rainbow effect" in both directions

- **Electrical**

  Power input, nominal: AC 110-240V 50/60Hz

  Max. Power consumption: 1111W, max current: 11.3A, PF: ≧0.99

  Power supply unit: Wide Voltage switching power supply

  Main fuse: 250V/15A

  Power input: NEUTRIK socket (input/output)

  DMX data input/output: Chassis 3-pin XLR waterproof socket

- **Control and programming**

  Control channels (DMX): 37/33/52

  Protocol: DMX-512 RDM

  Display: OLED

- **Physical / Installation**

Weight: 55Kg (121.25lbs.)

IP rating: IP66

Material: Aluminum, steel, plastic

Mounting points: Four quarter-turn locking points + attachment points for safety wire

- **Dynamic effects**

  Pan/Tilt movement: 540˚/270˚

  Strobe: 1-25Hz, synchronized, pulse effects

  Dimmer: 0-100%, mechanical dimming

- **Thermal**

  Operating range: 5˚F to 113˚F (-15˚C to +45˚C)

  Startup range: -13˚F to 113˚F (-25˚C to +45˚C)

  Storage range: -40˚F to 140˚F (-40˚C to +60˚C)

  Cooling: Active fan

- **Certification and Safety**

  EMC: EN 55103-1:2009, EN 55103-2:2009, EN 61000-3-2:2006+A2:2009, EN 61000-3-3:2013,
  GB/T 17743-2007, GB 17625.1-2012

  Safety: EN 60598-2-17:1989/A2:1991, GB 7000.1-2015, GB 7000.217-2008

- **Photometric**
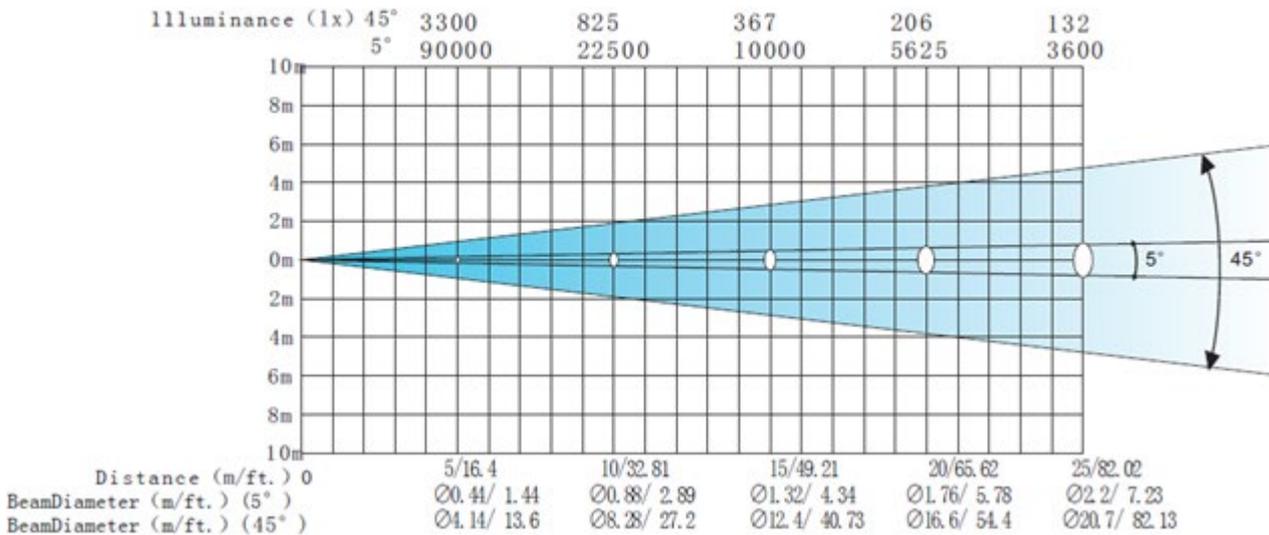
● **Other features**

➢ Enhanced stability of the fixture due to the wide input voltage AC/DC switching power supply which both reduces the impact of power and voltage fluctuations, and removes the restriction of voltage and frequency variations in different countries.

➢ Automatic energy saving: when the shutter or CMY is closed, power consumption will be reduced automatically with the photoelectric tracking induction technology.

➢ Sleep mode: uses the most advanced technology to remotely activate sleep mode. When the fixture is disconnected from signal, the sleep mode is enabled automatically to make it more stable and safer. Sleep time can be customized.

➢ Power setting: built-in continuous rechargeable battery, allowing setting functional data via OLED interface without power connection.

➢ Communication: DMX wired transmission, RDM two way control technology, upgrade software easily with DMX cable.

➢ Dissipate heat: With wind direction drainage and temperature intelligent momitoring technology, it can automatically adjust the heat dissipation system and effectively control the bulb temperature according to the start, use, close and other states of the lamp, and the temperature of different positions of the lamp.

8. Gobos and colors

8.1 Gobo specification

All patterns are made onto the metal gobos, and can be customized according to user's requirement.

The customized size is as below:

Gobo material	Outer dimension	Effective dimension	Thickness
Glass gobo	Φ27mm	Φ22mm	3.5mm
Gobo material: Glass			

8.2 Gobos

One rotating gobo wheel: 6 interchangeable gobos + open, indexing, CW/CCW rotation, variable speed

One fixed gobo wheel: 7 gobos + open, CW/CCW rotation, variable speed
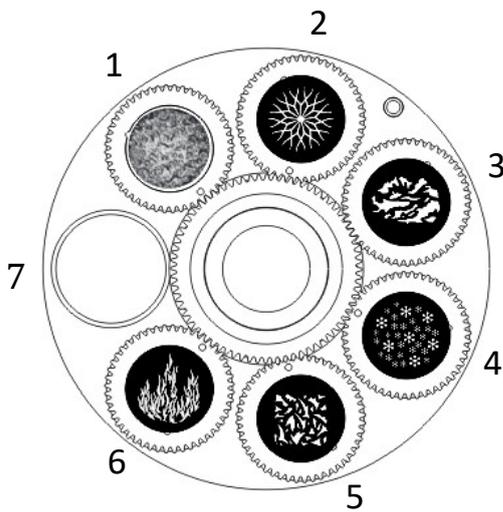
Rotating gobo wheel
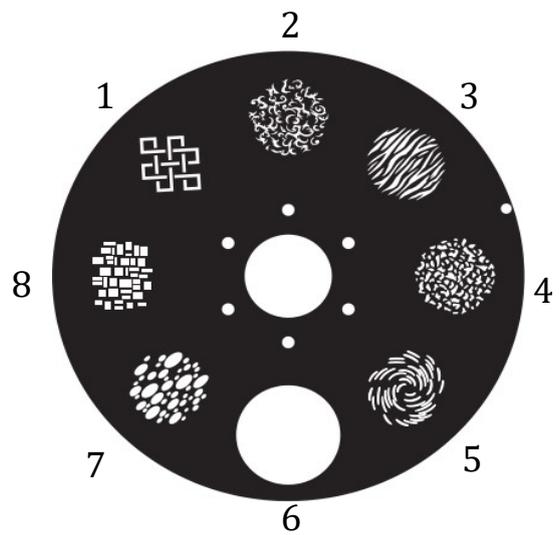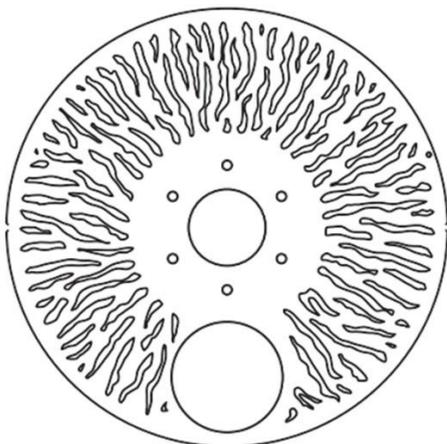
Fixed gobo wheel

8.3 Colors

One color wheel: 6 colors + open, split color, CW/CCW rotation, "Rainbow effect" in both directions

1: Epiphany

2: Red

3: Orange

4: Green

5: Yellow

6: Blue

7:Open

CMY/CTO

C

Y

M

CTO
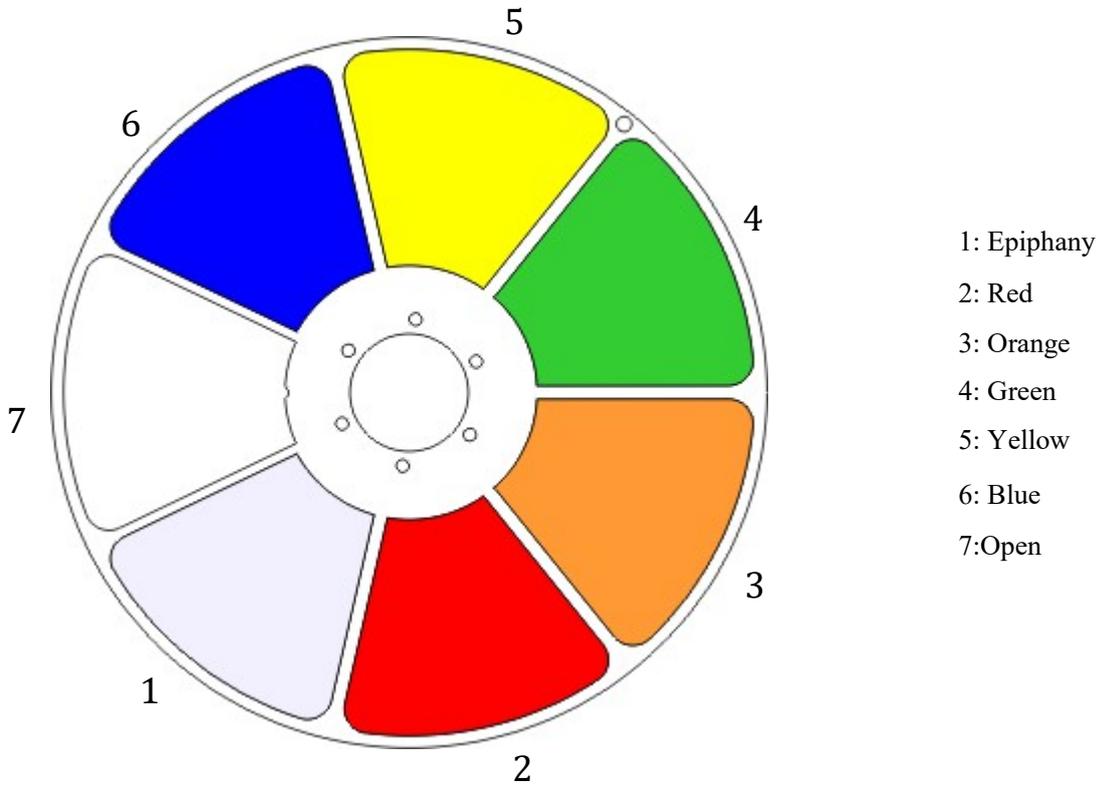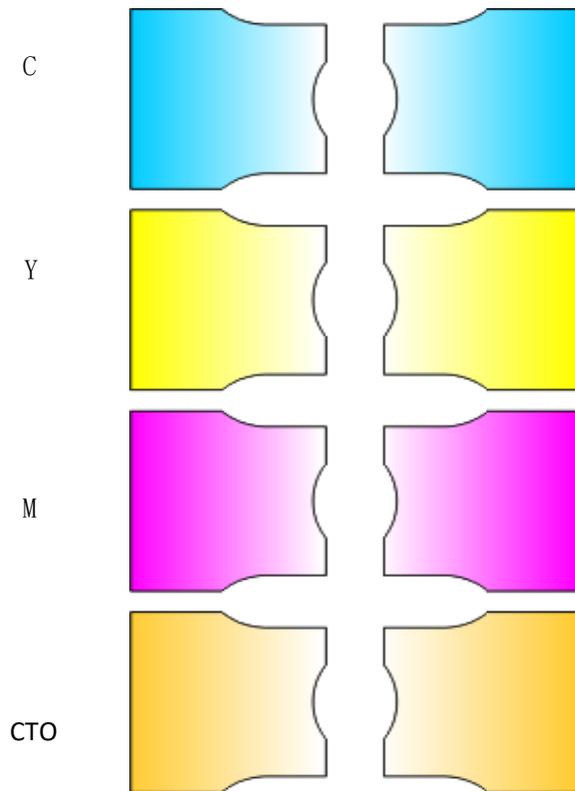
Cutting effect
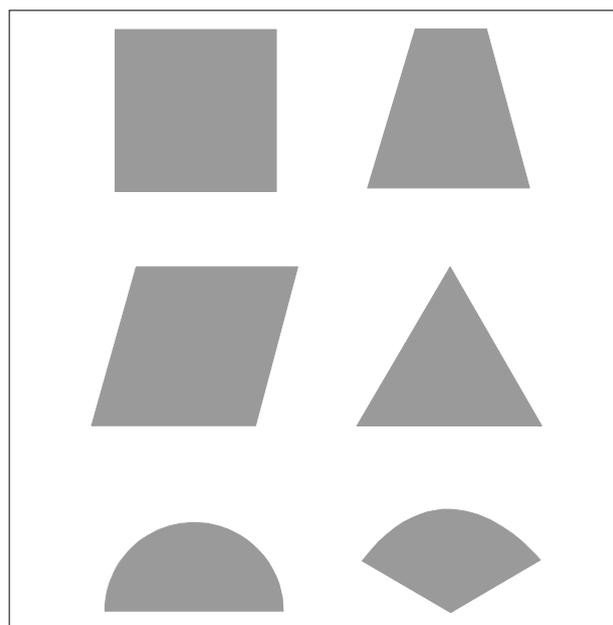
9. Menu structure

Run setting	DMX Address Setting Value Display Auto-Program	Address 001~ XXX strobe…… King equipment/stand-alone		Setting the DMX address Display the channel value Run auto program in master or slave
Device Info	Time Info	Total Time Last Time Last Time Code Bulb time Lamp Time Code	XXXX H XX:XX Password: XXX XXXX H Password: XXX	Product total run time Last product run time Clear last time password(XXX) Camp life Clear lamp time password (XXX)
	Temperature	Temperature 1 XXX℃/℉		
	Fan information	Blower1 XXXXX rpm Blower2 XXXXX rpm Waterproof fan 1 XXXXX rpm Waterproof fan 2 XXXXX rpm960		
	False information	Reset error		
	System information	Firmware version Software version Hardware version		Equipment Control Systerm Information
System Setting	Status Setting	Console Set Addr No Signal Status Pan Reverse Tilt Reverse Scan auto reset	Enable/Disable Off/Hold/Auto/Music Enable/Disable Enable/Disable Enable/Disable	Address can be changed by The status while no signal Pan Reverse Tilt Reverse Automatic reset after manual scan
	Fan Speed	Smart Control High Speed Low Speed		Auto fans speed Fans high speed Fans low speed
	Display Setting	Backlight Time Key Lock Show Reverse Languagev	1~59M，5M Enable/Disabl Auto/Positive/reverse English/Chinese	Backlight off time Press <menu> 3s to unlock Display direction switch Change the language
	Temperature Unit	Celsius Fahrenheit		Temperature unit
	Restore Default	Restore/Cancel		Restore to default value
	Dimming modw	Slow Dimming Fast Dimming		Slow Dimming Fast Dimming

Reset	System Reset Scan Reset ColorReset Gobo Reset Strobe Reset Framingblade Rest Other Reset			System reset Pan and tilt motor reset Color motor reset All gobo motor reset Strober motor reset Framing blade motor rest All other motor reset
Channel Adjust	Test Mode	Pan……		Every channel test
	Manual Mode	Pan:……	Pan = XXX:	Manual control
	Adjust Mode	Input Password Pan:	Password = XXX(99) Pan = XXX:	The password of adjust mode Fixed all begin position
Channel Mode	Channel mode selection	Standard Mode/Basic Mode/Extended Mode		Standard Mode Basic Mode Extended Mode

⚠

Note：Settings hightlighted in light grey are default values.

10. DMX Protocol

Standard Mode	Basic Mode	Extended Mode	Name	DMX Value		DMX percentage		Function
1	1	1	Strobe/Shutter	0	31	0.0%	12.2%	Closed
				32	63	12.5%	24.7%	Open
				64	127	25.1%	49.8%	Synchronous strobe from slow to fast
				128	159	50.2%	62.4%	Open
				160	223	62.7%	87.5%	Random strobe from slow to fast
				224	255	87.8%	100.0%	Open
2	2	2	Intensity	0	255	0.0%	100.0%	No light → Full light
		3	Intensity fade, fine (LSB)	0	255	0.0%	100.0%	Intensity fade
3	3	4	Cyan	0	255	0.0%	100.0%	White → Full cyan
		5	Cyan fade, fine (LSB)	0	255	0.0%	100.0%	Cyan fade, fine (LSB)
4	4	6	Magenta	0	255	0.0%	100.0%	White → Full magenta
		7	Magenta fade, fine (LSB)	0	255	0.0%	100.0%	Magenta fade, fine (LSB)
5	5	8	Yellow	0	255	0.0%	100.0%	White → Full yellow
		9	Yellow fade, fine (LSB)	0	255	0.0%	100.0%	Yellow fade, fine (LSB)
6	6	10	CMY color macro	0	15	0.0%	5.9%	CMY color macro off
				16	135	6.3%	52.9%	CMY synchronous color from slow to fast
				136	255	53.3%	100.0%	CMY random color from slow to fast
7	7	11	Color temperature (CTO)	0	255	0.0%	100.0%	Color temperature CTO 0～100%
		12	Color temperature (CTO)16BIT	0	255	0.0%	100.0%	Color temperature fade, fine (LSB) CTO from 0～100%
8	8	13	Color wheel (6+1)	0	19	0.0%	7.5%	Open
				20	37	7.8%	14.5%	Color 1
				38	55	14.9%	21.6%	Color 2
				56	73	22.0%	28.6%	Color 3
				74	91	29.0%	35.7%	Color 4
				92	109	36.1%	42.7%	Color 5
				110	127	43.1%	49.8%	Color 6
				128	187	50.2%	73.3%	Color1 continuous rotation CW from fast to slow
				188	195	73.7%	76.5%	Stop
				196	255	76.9%	100.0%	Color1 continuous rotation CCW from slow to fast

Standard Mode	Basic Mode	Extended Mode	Name	DMX Value		DMX percentage		Function
9	9	14	Gobo wheel (7+1)	0	15	0.0%	5.9%	Open gobo
				16	23	6.3%	9.0%	Gobo 1
				24	31	9.4%	12.2%	Gobo 2
				32	39	12.5%	15.3%	Gobo 3
				40	47	15.7%	18.4%	Gobo 4
				48	55	18.8%	21.6%	Gobo 5
				56	63	22.0%	24.7%	Gobo 6
				64	71	25.1%	27.8%	Gobo 7
				72	79	28.2%	31.0%	Gobo 1 shake
				80	87	31.4%	34.1%	Gobo 2 shake
				88	95	34.5%	37.3%	Gobo 3 shake
				96	103	37.6%	40.4%	Gobo 4 shake
				104	111	40.8%	43.5%	Gobo 5 shake
				112	119	43.9%	46.7%	Gobo 6 shake
				120	127	47.1%	49.8%	Gobo 7 shake
				128	187	50.2%	73.3%	Gobo wheel continous rotation CW from slow to fast
				188	195	73.7%	76.5%	Stop
				196	255	76.9%	100.0%	Gobo wheel continous rotation CCW from slow to fast
10	10	15	Rotating gobo wheel (6+1)	0	7	0.0%	2.7%	Open gobo
				8	17	3.1%	6.7%	Gobo 1
				18	27	7.1%	10.6%	Gobo 2
				28	37	11.0%	14.5%	Gobo 3
				38	47	14.9%	18.4%	Gobo 4
				48	57	18.8%	22.4%	Gobo 5
				58	67	22.7%	26.3%	Gobo 6
				68	77	26.7%	30.2%	Gobo 1 shake
				78	87	30.6%	34.1%	Gobo 2 shake
				88	97	34.5%	38.0%	Gobo 3 shake
				98	107	38.4%	42.0%	Gobo 4 shake
				108	117	42.4%	45.9%	Gobo 5 shake
				118	127	46.3%	49.8%	Gobo 6 shake
				128	187	50.2%	73.3%	Gobo wheel continous rotation CW from slow to fast
				188	195	73.7%	76.5%	Stop
				196	255	76.9%	100.0%	Gobo wheel continous rotation CCW from slow to fast

Standard Mode	Basic Mode	Extended Mode	Name	DMX Value		DMX percentage		Function
11	11	16	Gobo rotating/positioning gobo wheel	0	127	0.0%	49.8%	Gobo rotation positioning
				128	187	50.2%	73.3%	Gobo continuous rotation CW from slow to fast
				188	195	73.7%	76.5%	Stop
				196	255	76.9%	100.0%	Gobo continuous rotation CCW from slow to fast
12		17	Gobo rotation/positioning, fine (LSB)	0	255	0.0%	100.0%	Gobo rotation/positioning, fine (LSB)
13	12	18	Framing blade 1 (up)	0	255	0.0%	100.0%	Framing, Big → Small
		19	Framing blade 1 (up) ,fine tunning	0	255	0.0%	100.0%	Framing blade 1 (up) ,fine tunning
14	13	20	Framing blade 2 (up)	0	255	0.0%	100.0%	Framing, Big → Small
		21	Framing blade 2 (up) ,fine tunning	0	255	0.0%	100.0%	Framing blade 2 (up) ,fine tunning
15	14	22	Framing blade 1 (down)	0	255	0.0%	100.0%	Framing, Big → Small
		23	Framing blade 1 (down) ,fine tunning	0	255	0.0%	100.0%	Framing blade 1 (down) ,fine tunning
16	15	24	Framing blade 2 (down)	0	255	0.0%	100.0%	Framing, Big → Small
		25	Framing blade 2 (down) ,fine tunning	0	255	0.0%	100.0%	Framing blade 2 (down) ,fine tunning
17	16	26	Framing blade 1(left)	0	255	0.0%	100.0%	Framing, Big → Small
		27	Framing blade 1(left) ,fine tunning	0	255	0.0%	100.0%	Framing blade 1(left) ,fine tunning
18	17	28	Framing blade 2(left)	0	255	0.0%	100.0%	Framing, Big → Small
		29	Framing blade 2(left) ,fine tunning	0	255	0.0%	100.0%	Framing blade 2 (left) ,fine tunning
19	18	30	Framing blade 1 (right)	0	255	0.0%	100.0%	Framing, Big → Small
		31	Framing blade 1 (right) ,fine tunning	0	255	0.0%	100.0%	Framing blade 1 (right) ,fine tunning
20	19	32	Framing blade 2 (right)	0	255	0.0%	100.0%	Framing, Big → Small

Standard Mode	Basic Mode	Extended Mode	Name	DMX Value		DMX percentage		Function
		33	Framing blade 2 (right) ,fine tunning	0	255	0.0%	100.0%	Framing blade 2 (right) ,fine tunning
21	20	34	Framing blade rotation	0	255	0.0%	100.0%	Framing blade rotation
		35	Framing blade rotation,fine tunning	0	255	0.0%	100.0%	Framing blade rotation,fine tunning
22	21	36	Framing blade speed control	0	255	0.0%	100.0%	Framing speed, fast→ slow
23	22	37	Iris	0	255	0.0%	100.0%	Open-Closed
24	23	38	Iris macro function	0	31	0.0%	12.2%	Closed
24	23	38	Iris macro function	32	63	12.5%	24.7%	Synchronous opening pluse, fast→ slow
				64	95	25.1%	37.3%	Synchronous closing pluse, slow→ fast
				96	127	37.6%	49.8%	Random opening pluse slow→ fast
				128	159	50.2%	62.4%	Random closing pluse fast→ slow
				160	191	62.7%	74.9%	Iris with strobe
				192	255	75.3%	100.0%	Maximum Iris
25	24	39	Focus	0	255	0.0%	100.0%	Near→ Infinity
26		40	Focus 16Bit	0	255	0.0%	100.0%	Focus, fine tunning
27	25	41	Zoom	0	255	0.0%	100.0%	Small→Maximum beam
		42	Zoom 16Bit	0	255	0.0%	100.0%	Zoom, fine tunning
28	26	43	Prism	0	31	0.0%	12.2%	Off
				32	255	12.5%	100.0%	On
29	27	44	Prism rotation position	0	127	0.0%	49.8%	Prism rotation position
				128	187	50.2%	73.3%	CCW rotation, slow→ fast
				188	195	73.7%	76.5%	Stop
				196	255	76.9%	100.0%	Prism CW rotation, slow→ fast
30	28	45	Frost	0	255	0.0%	100.0%	Frost, shallow → deep
31	29	46	Effect Wheel	0	127	0.0%	49.8%	off
				128	255	50.2%	100.0%	Effect Wheel CW rotation, slow→ fast
32	30	47	Pan	0	255	0.0%	100.0%	Pan scanning
33		48	Pan 16Bit	0	255	0.0%	100.0%	Pan scanning, fine tunning
34	31	49	Tilt	0	255	0.0%	100.0%	Tilt scanning

Standard Mode	Basic Mode	Extended Mode	Name	DMX Value		DMX percentage		Function
35		50	Tilt 16Bit	0	255	0.0%	100.0%	Tilt scanning, fine tunning
36	32	51	Pan/Tilt speed	0	255	0.0%	100.0%	fast→ slow
37	33	52	Special control	0	29	0.0%	11.4%	No function
				30	39	11.8%	15.3%	Color wheel dichroic switch
				40	49	15.7%	19.2%	Color wheel arbitrary positioning
				50	59	19.6%	23.1%	No function
				60	69	23.5%	27.1%	Reset entire motors after 5 sec
				70	79	27.5%	31.0%	Reset Pan/Tilt motors after 5 sec
				80	89	31.4%	34.9%	Reset all color-wheels' motors after 5 sec
				90	99	35.3%	38.8%	Reset all gobo motors after 5 sec
				100	109	39.2%	42.7%	Reset all framing motors after 5 sec
				110	119	43.1%	46.7%	Reset other motor reset after 5 sec
				120	129	47.1%	50.6%	Built-in program 1
				130	139	51.0%	54.5%	Built-in program 2
				140	149	54.9%	58.4%	Built-in program 3
				150	159	58.8%	62.4%	Built-in program 4
				160	169	62.7%	66.3%	Built-in program 5
				170	179	66.7%	70.2%	Built-in program 6
				180	189	70.6%	74.1%	Built-in program 7
				190	199	74.5%	78.0%	Built-in program 8
				200	209	78.4%	82.0%	Built-in program 9
				210	219	82.4%	85.9%	Built-in program 10
				220	255	86.3%	100.0%	Reserved

11. System wiring diagram

F10 II Profile -1

F10 II Profile -2

FOS technologies

J5 J8 Prism.ROT
JK1 JK4 SMS8004D-1

Focus J6 J13 Prism
SMS8004D-2 JK2 JK5 SMS8004D-1 J9 M6

Zoom J7 J14 Prism.ROT

SMS8004D-2 JK3 JK6

Prism J10 M5

SCR8014A 3U

Frost J11 M4

Focus2 J12 M3

JE1 Zoom J15 M2

J2

JE1

28V Focus1 J16 M1

J3

J4

JE
In J7 J8 J9 J10 J11 J12

Power
In J2 J3 J4 J5 J6

J1

SCB8005A

2X SMS8004D-1
2X SLS0802C

J8 J7 J6

P.Til P.PanTil J5
Pan

J10

PAN
MOTO **SCR8005B 2U**

J9

TIL
MOTO JE1 J3 JE2 J4

M6
M5 M7 Iris
M4 J5 J8 Blade
Blade. U
P
1

J9
M3 B
D
R
2

ISP1

J10 B
P
M8

SCR8012B 5U

J14 B
M2 B
M1 J13 Fan 28V
JE1
J2
JE1

Blad
e.L2
J12
Blade M9
.Dn1 J11
28V M10
J1

JE1 Flame
SMS8004D-1 J13 JK5
Color
JK4
SMS8004D J5
GOBO Fixed
JE1 J2 Fixed
GOBO GOBO GOBO.ROT Color Flame GOBO .ROT GOBO
J1 28V J8 J7 J6

J3 J4 J14 J12 J11 J10 J9 JK1 JK2 JK3
M1 M2 M3 M4 M5 共用SMS8005A
SMS8004D-1

J12 M4 J13 M3 J14 M2 J15 M1

M C Y CTO

SMS8004D-2
Y JE1 J2 28V J1
J10 J11 CTO
JK3 JK4 SMS8004D-2 Fan2 J4

J8 J9 C M SMS8004D-2 **SCR8 010A 6U**
JK1 JK2 SMS8004D-2

26

Fan1 J3

LCR8
003B
7U

28V

J1   J2

JE
In

28V
In

28V
In

48V
In

LED1

J5   LED2   J6

JE
J9

Fan
LED   Fan1 Fan2   28V

J12   J10 J8   J   -   -   48V+   48V+

J11   J4   J3   J2   J1

12. Maintenance and Troubleshooting

12.1 Cleaning and maintenance

It is required that the fixture should be kept clean and well maintained to ensure its reliability. Its lifespan mainly depends on the working environment and proper operation. Should you have any questions, please consult a technical engineer of FOS TECHNOLOGIES Lighting.

⚠**Notes**

Damage resulted from dust, smoke, oil or improper use is not covered by warranty.

⚠**Warning**

Disconnect the fixture from AC power, and let it cool down for at least 15 minutes before opening the housing. Make sure to use a soft cloth to clean the optical components, and be careful, as the coating is easily scratched. Do not use any organic solvent such as alcohol to clean the reflector mirror, dichroic color filters or housing of the fixture.

- If the lens is cracked or otherwise damaged, replace it immediately.

- If the lamp becomes damaged or deformed in any way it must be replaced.

- If the light from the lamp appears dim, this normally indicates that it is reaching the end of its life span and should be changed at once. Aged lamps run to the extremity of their life might explode.

- If fixture does not function, check the fuse on the power socket of the fixture. Replace the fuse of the same specification if it is blown.

- The fixture is equipped with thermal-protection device that will switch off the lamp in case of overheating. If this happens, please check that the fans are not blocked, and clean them if they are dirty. Check whether the fans are operational. If not, call a qualified technician. Troubleshoot and correct the problem before switching on the fixture again. Any maintenance work should only be carried out by qualified technicians.

- To ensure the continuous rotation of the rotating gobos and linear motion of the focus lens, it is recommended that the bearings on the rotating gobos and the 2 shafts for the focus system are lubricated periodically, preferably every 3-6 months. Use only high quality, high-temperature resistant grease. When lubricating the bearings, a syringe with a fine needle is the best way to grease the bearings around each gobo. Be aware not to use too much grease, and stain the parts around.

12.2 Troubleshooting

Problem	Possible Cause	Suggested Correction
No response after connected to A/C power	Power switch not turned on.	Turn on power switch.
	Take out the fuse and check if it is blown.	Locate the blown fuse. Remove the broken fuse. Insert a replacement fuse of the correct amperage.
	Abnormal A/C input (A/C power socket, power cables, luminaire power socket).	Replace AC power socket and power cables, and then adjust power socket for proper connection.
	No DC voltage from switching power supply.	Check if the switching power supply has DC voltage output. Replace the switching power supply.
No response or wrong response to the commands of the control system	DMX cables disconnected from fixture's DATA IN connector.	Connect DMX cable to the fixture's DATA IN connector.
	Open circuit or short circuit fault in the DMX cables.	Replace DMX cables as required.
	Wrong DMX address for the fixture in the control system.	Ensure the address in "Run setting > Address Setting > Address" of the fixture is consistent with the address in the control system.
	Misuse in "Channel setting > Channel Mode" of the fixture.	Choose the channel mode in "Channel setting > Channel Mode" of the fixture as required by the user.
	Malfunctioning of DMX cannon input/output connectors. No input/output voltage to the main control board of the fixture.	Troubleshooting the DMX XLR signal plate of the fixture, replace the main control board of the fixture.
The lamp does not start when switch is turned on	The main control board PWM signal no output.	Replace themain control board or repair
	The drive plate LED+ / LED- no output or overload, poor contact of line interface.	Reconnect the terminal,replace the drive board.
	Whether the service life of LED reaches the limit,whether the welding is poor,and whether the heat dissipation performance is poor.	Repair and replace the LED light source or the whole aluminum base plate,and eliminate the cooling system fault.
The lamp is off unexpected	The fixture is in sleep mode.	Should the fixture is not in active use for "standby time", the sleep mode is enabled automatically to make it more stable and safer, sleep time can be customized.
	Lamp has been operating: cool down time insufficient.	Environmental conditions such as extreme temperatures will have the fixture stop working, the lamps will require a period of time to cool and re-establish optimum starting conditions. Restart time varies with the degree of ventilation built into it, ambient temperature, and draft conditions.
	Overheat ballast resulting in premature failure or damaged ballast.	The ballast incorporate internal automatic-resetting thermal protection, which deactivates the ballast should it overheat. Normal operation resumes once the ballast has cooled sufficiently. Burned-out or failing lamps, or high temperatures in or around the fixture, can cause the ballast to overheat, so we need solve the problem and replace components as required.
Shaking, wrong position, and out of control gobo wheel	No function the connector between gobo wheel motor and drive, loose, damaged, or broken cables connecting the gobo wheeland drive.	Reconnect the gobo wheel motor to the drive, and replace cables as required.
	The gobo wheel motor's drive IC on the PCB might be out of condition.	Replace the drive having the same software version as required.
	Dislocated magnetic tube and positioning magnet, or damaged magnetic tube.	Calibrate the position of the magnetic tube to the positioning magnet, and replace magnetic tube as required.
	Shaking motor, wrong rotation angle, losing step or damaged motor.	Replace the motor as required.

Problem	Possible Cause	Suggested Correction
Problem	**Possible Cause**	**Suggested Correction**
Decreased brightness, uneven pattern projections	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary.
	The midline of the lamp is not aligned with the center point of the effect assembly (consisting of the rotating gobo wheel, static gobo wheel, color wheel, strobe, prism, and frost), focus module, and object lens.	Reinstall the lamp. Adjust the lamp position until the midline of the lamp is aligned with the center point of the effect assemblies (consisting of the rotating gobo wheel, static gobo wheel, color wheel, strobe, prism, frost, the focus adjusting module, and the object lens).
	Excessive dusts or smudges on the effect assembly, focus module and objective lens.	Follow the instructions stated in this user manual to clean the effect assembly, focus module and objective lens.
	Damaged or deformed effect assembly, focus module or objective lens.	Replace the damaged or deformed components.
Wrong color	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary.
	Excessive dusts or smudges on the rotating gobo wheel or color wheel.	Follow the instructions stated in this user manual to clean the rotating gobo wheel or color wheel.
	Rotating gobo wheel, color wheel with coating wearing off, damages or deformation.	Replace the worn-off, damaged or deformed rotating gobo wheel and color wheel.
Non-clear shape	Excessive dusts or smudges on the rotating gobo wheel or color wheel.	Follow the instructions stated in this user manual to clean the rotating gobo wheel or color wheel.
	Excessive dusts or smudges on the focus module or objective lens.	Follow the instructions stated in this user manual to clean the focus module or objective lens.
	Damaged or deformed focus module or objective lens.	Replace the damaged or deformed focus module or objective lens.

13. Spare parts list

Item	P/N	Qty	Notes
F10 II PROFILE Display(SDI8003C)	5809210107A	1	FOS TECHNOLOGIES-F10 II PROFILE-101A10 SDI8003C
Scan board(SCR8005B-1)	5809210166A	1	FOS TECHNOLOGIES-F10 II PROFILE-201A10 SCR8005B
Focusing amplification motor drive board (SCR8014A-1)	5809210157A	1	FOS TECHNOLOGIES-F10 II PROFILE-301A10 SCR8014A
Pattern motor drive board (SCR8015B-1)	5809210159A	1	FOS TECHNOLOGIES-F10 II PROFILE-401A10 SCR8015B
Cutting motor drive board (SCR8012B-1)	5809210158A	1	FOS TECHNOLOGIES-F10 II PROFILE-501A10 SCR8012B
CMY motor drive board（SCR8010A-1）	5809210160A	1	FOS TECHNOLOGIES-F10 II PROFILE-601A10 SCR8010A
LED drive board（LCR8003B-1）	5809210161A	1	FOS TECHNOLOGIES-F10 II PROFILE-701A10 LCR8003B
Power Supply	1412050085	1	EDS1200-4828P 48V 18A/28V 12A

GTD

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