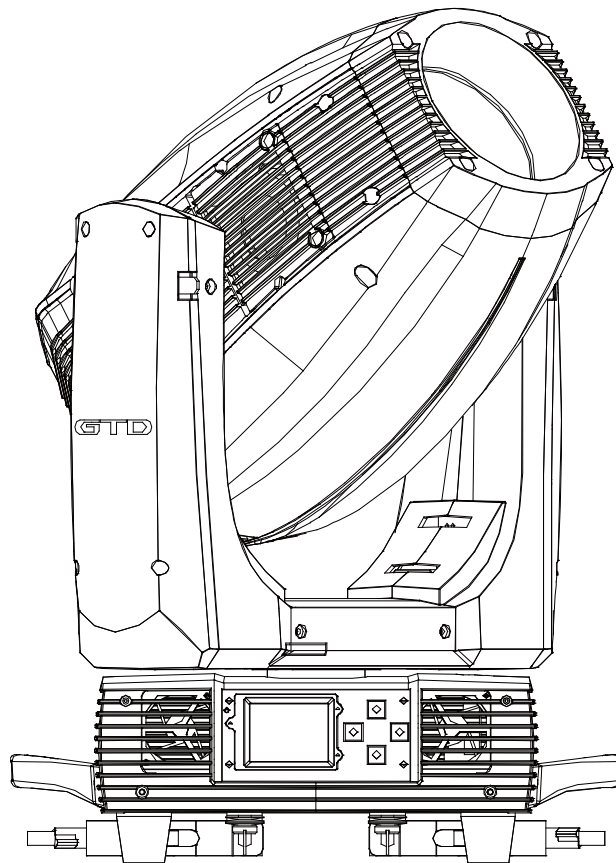


GTD



GTD-371C II BSW
371W II Moving Head
User Manual

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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.gtd-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.



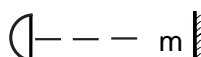
Only to direct mounting on non-combustible surfaces.



Indoors use only !



Replace all cracked glass shields.



Minimum distance to lighted objects.

$t_a \dots ^\circ\text{C}$ Maximum ambient temperature.

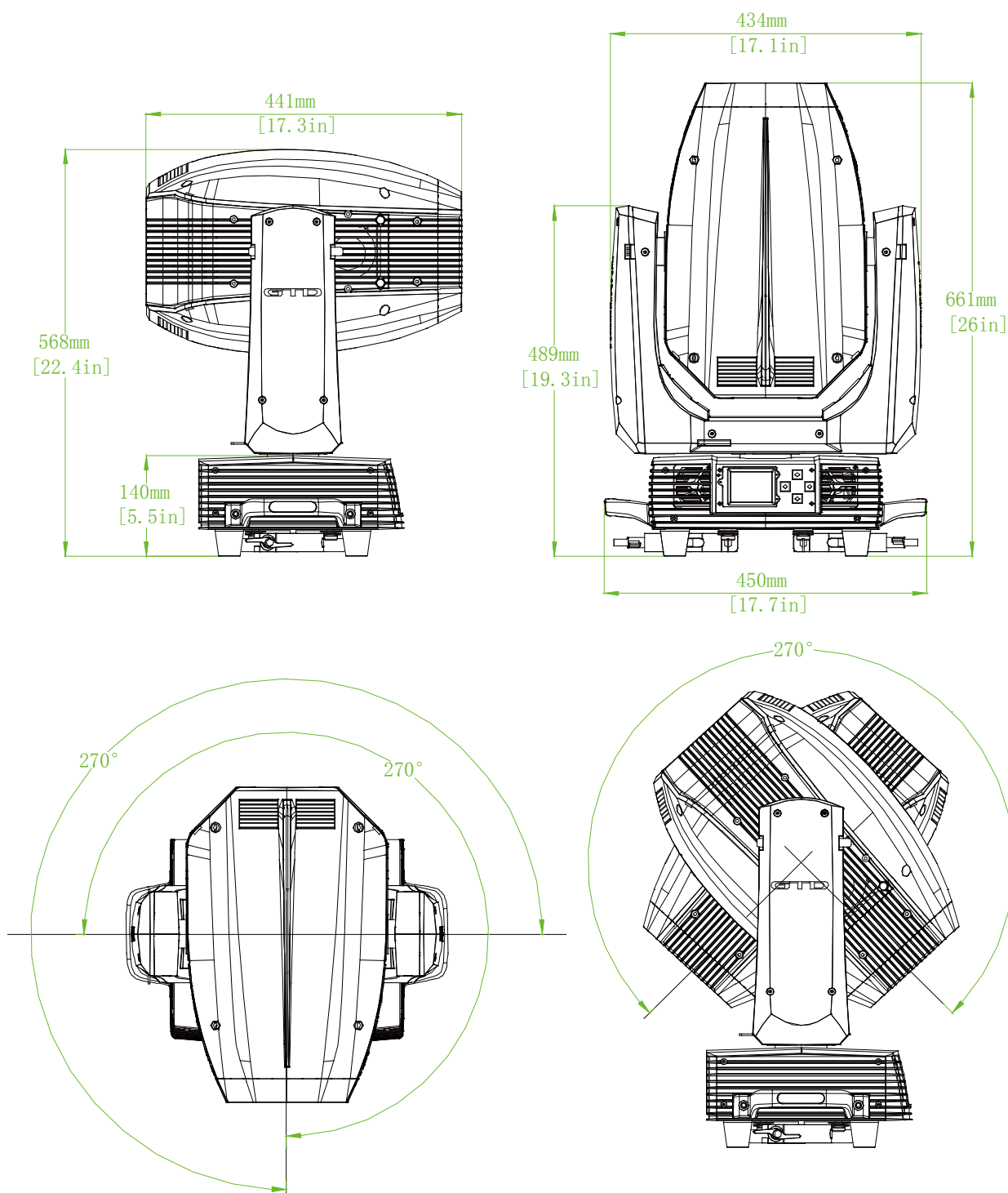
$t_c \dots ^\circ\text{C}$ Maximum temp of the external surface.

General guidelines ⚠

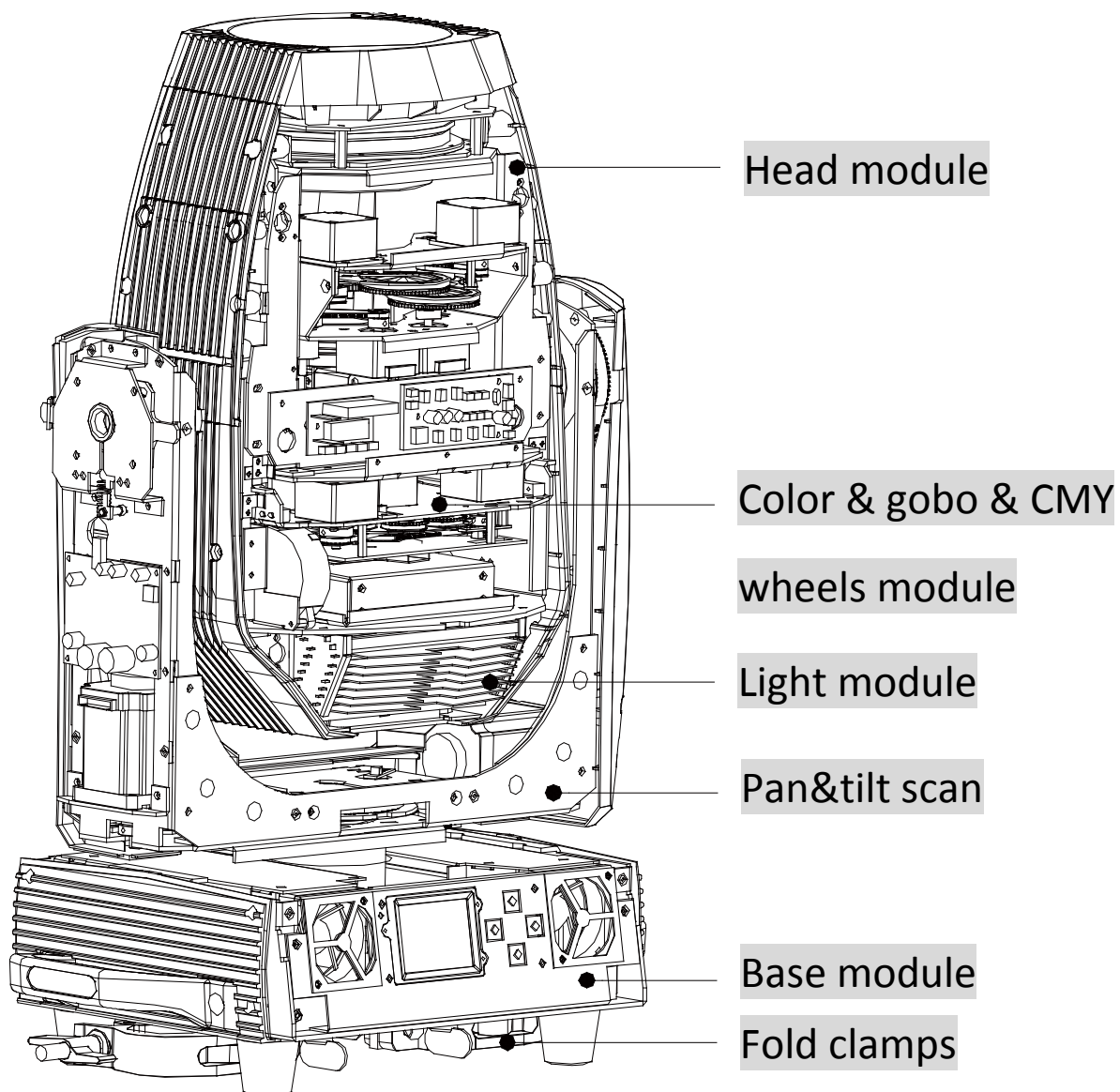
- Never open this fixture while in use.
- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.
- This fixture is a professional light effect designed for INDOOR / DRY LOCATIONS ONLY on stage, in nightclubs, theatres, etc.
- Minimum distance to lighted objects must be 49.21 feet (15m).
- Maximum temp of the external surface 248°F (120°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 LCD 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.
- This fixture uses discharge lamp. To avoid reducing the lamp's life, wait at least 15 minutes after powering off to allow the unit to cool down before handling.
- 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 GTD 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



2.3 Accessories

Item	Qty	Unit	Remark
User Manual	1	Pc	--
Clamps	2	Set	20-63mm
Safety cable	1	Pc	Φ5*60cm 7*19 pc with hook Material : Steel
3-pins signal line	1	Set	--

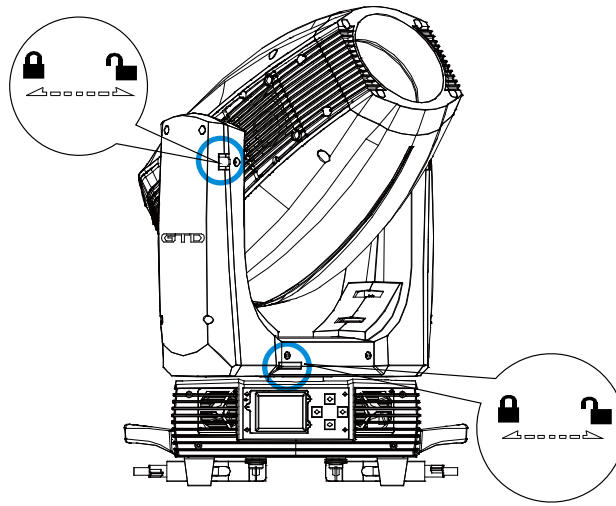
3. Packing and shipping

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

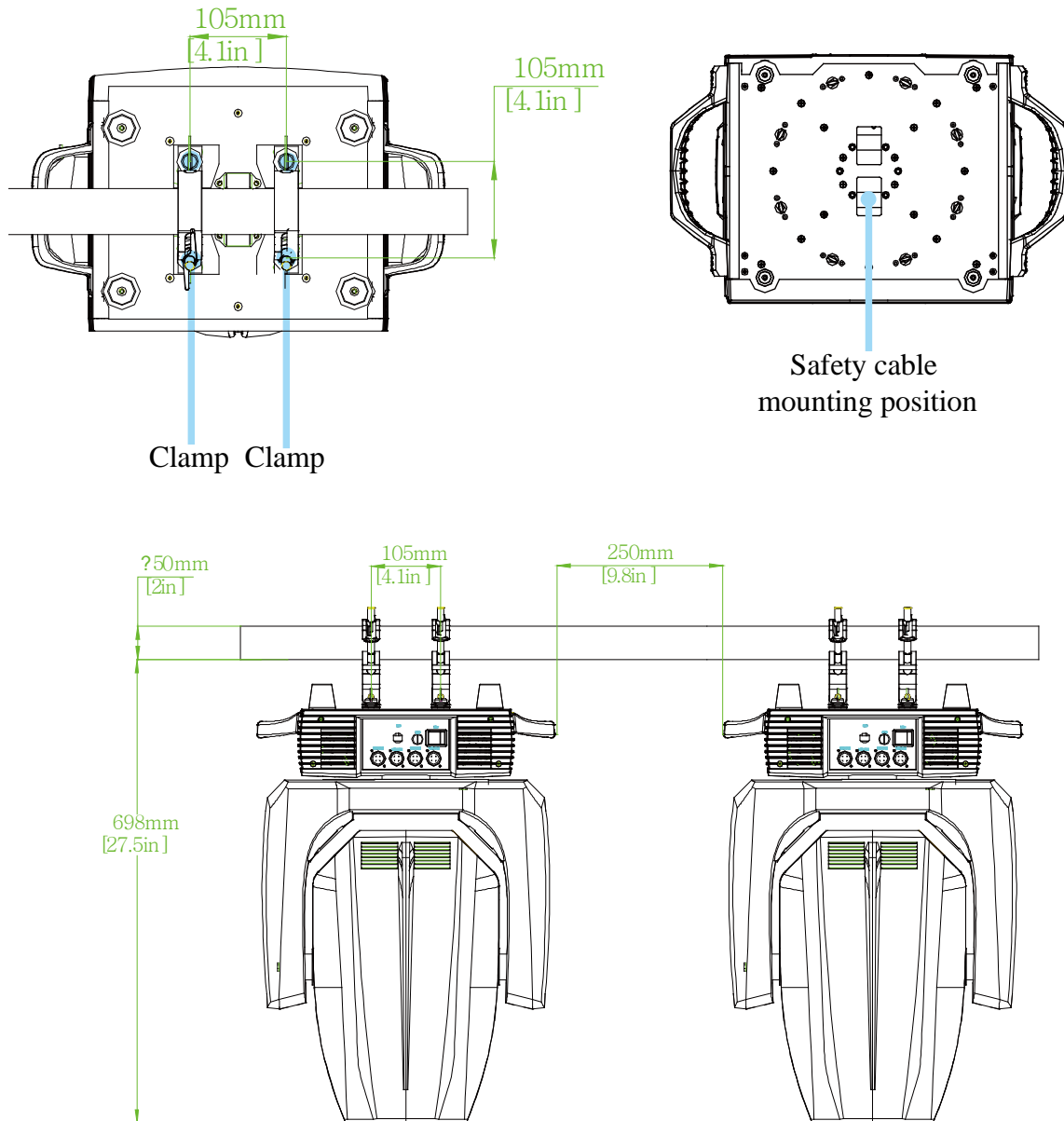
The fixture can be placed on the stage or mounted on the truss facing any direction. Attach the clamps to the mounting position on the base of the fixture.

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.

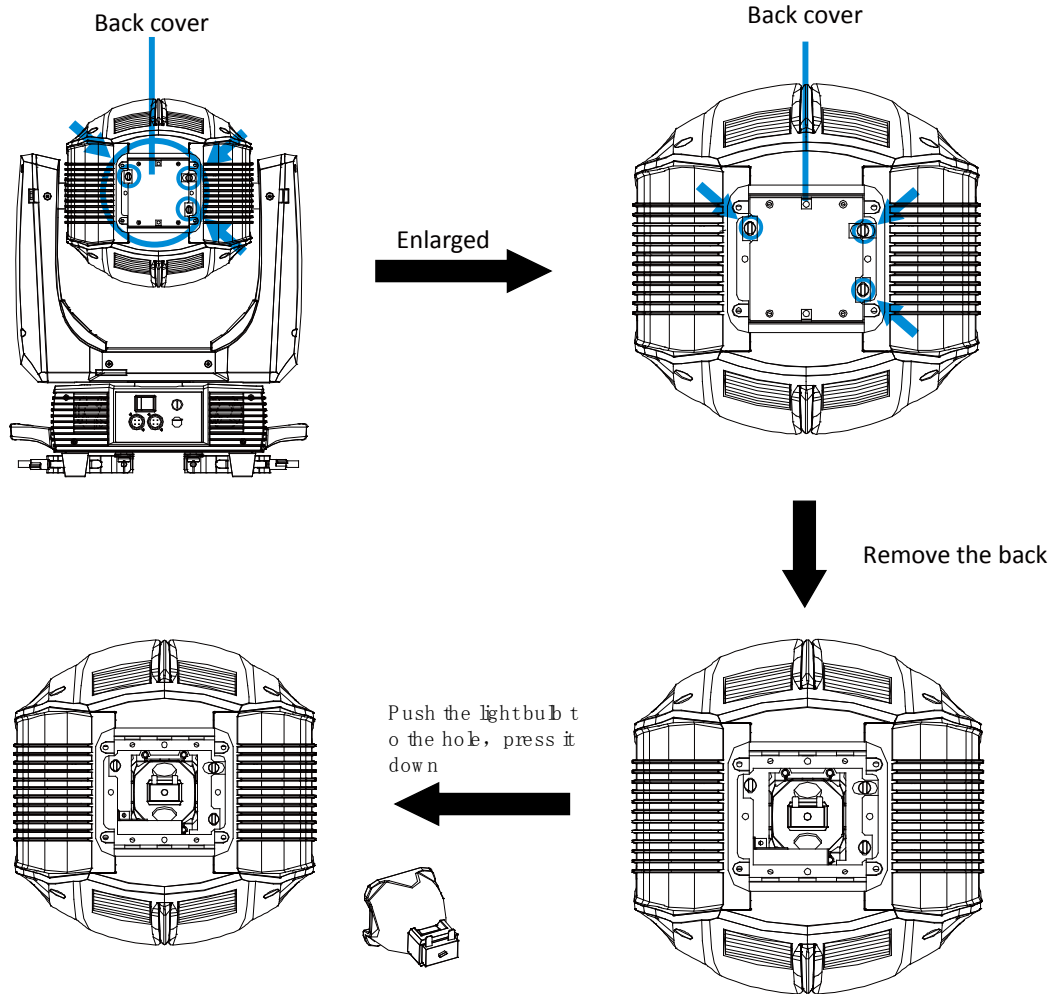
4.2 Device installation

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.



4.3 Lamp fitting and adjustment

1. Disconnect the fixture from AC power. Cool down the fixture. Set the Tilt lock in a horizontal position.
2. Use a flathead screwdriver to loosen the back cover. Remove the lamp by anticlockwise rotating and pull it out.
3. Push the light bulb to the hole on the reflector. Rotate 1/4 turn clockwise until it is securely fastened.
4. Observe the outlet of the reflector when pushing.
5. After fixing the lamp, install the back cover.



⚠ Note

The fixture is equipped with Metal Halide 371W short arc discharge lamp, which is featured with high efficiency and short-arc characteristic, such as a stable 7400K color-temperature and average lifespan of 1500h.

⚠ Note

1. Fitting another type of lamp will cause potential damage to the fixture. Change the lamp before it reaches its lifespan. Read the guidelines in the package carefully when fixing the lamp.
2. To avoid any impact on the beam, do not touch the bulb with your bare hands. The lamp must be kept clean with the use of the clean paper contained in its package

5. Power/ Control connection

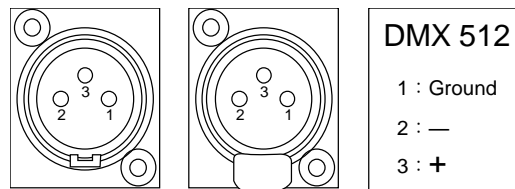
5.1 Power connection

Connection method:

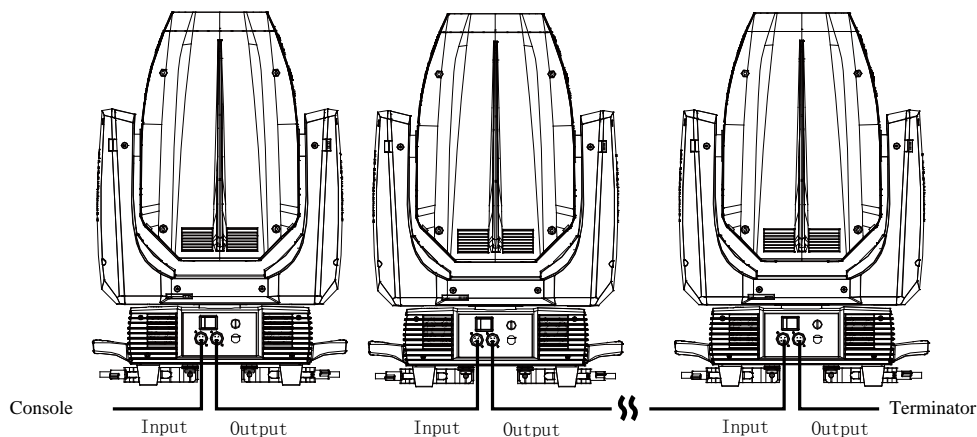
- L (Live) Brown wire
- E (Earth) Yellow / Green bi-color wire
- N (Neutral) Blue wire
- The voltage and frequency of the power source must be in compliance with the ones marked on the fixture. It is strongly recommended that each fixture are to be connected to the power source separately so that they 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



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 1/2W and 120Ω resistor between the pin 2 and pin 3) as shown below:

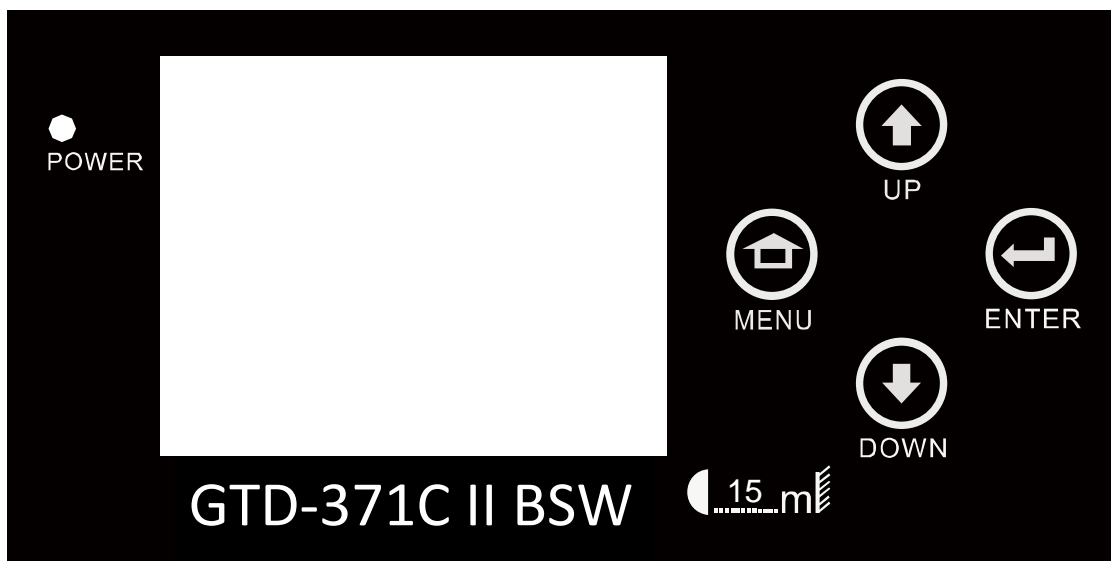


5.3 Testing

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 LCD digital display for quick and easy setup of address code and functions menu.
- Press UP or DOWN to view or select the function menu.
- Press ENTER to choose a function and enter into corresponding sub menu. Each menu represents a specific function of the fixture.
- Press ENTER to select the specific function and save the changes or enter into the submenu, then press UP or DOWN to change the value of the selected function (increase or decrease).
- Press MENU to return to the previous menu or exit.
- LED indicators:
Power on: RED power LED indicator on

7. Technical specification

- **Optical**

Light source: Spec SIRIUS HRI 371W

Expected average lifetime: 1500 h

Color temperature correction: 7500K

Zoom: BEAM 0°~2.5° SPOT 3°~ 43° WASH 4°~ 45°

CRI : Ra≥80

Focus: High-precision glass lenses, electronic linear HD focus

Prism: 1 pc tip 16-facet prism , 1 pc Symmetry facet prism, prisms can be controlled independently ,
or can be combined to make abundant beam effects

Frost: 1-independent frost effect

- **Gobo**

Rotating gobo wheel: 8 interchangeable gobos + open, indexing, CW/CCW rotation, variable speed

Fixed gobo wheel: 6 gobos + open , CW/CCW rotation, variable speed

Gobo outside diameter: 14.4mm

Max. Image diameter: 6mm

Max. Thickness: 0.5mm

Gobo material: metal

- **Color**

Color wheel: 2 Colors wheel , 8 colors, split color and linear color shifting

CMY: CMY linear infinity color mixing , with built-in macros

CTO: CTO linear color temperature adjusting, 7500K~2700K

- **Electrical**

Power input, nominal: AC 100-240V ~50/60Hz

Max. Power consumption: 503.1W, max current: 5.083A, PF: 0.996

Power supply unit: Auto-ranging electronic SMPS

Main fuse: 250V/15A

Ballast: Electronic

Power input: Self-contained power cord

DMX data input/output: Chassis 3-pin (in/out)

- **Control and programming**

Control channels (DMX): 24/23/32

Protocol: DMX-512 RDM

Display: LCD

- **Physical / Installation**

Weight: 27.9Kg (61.5lbs.)

IP rating: IP20

Material: Aluminum, steel, plastic

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

- **Dynamic effects**

Pan/Tilt movement: 540°/270°

Iris: Motorized adjustable iris, wide range of variable pulse effects

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

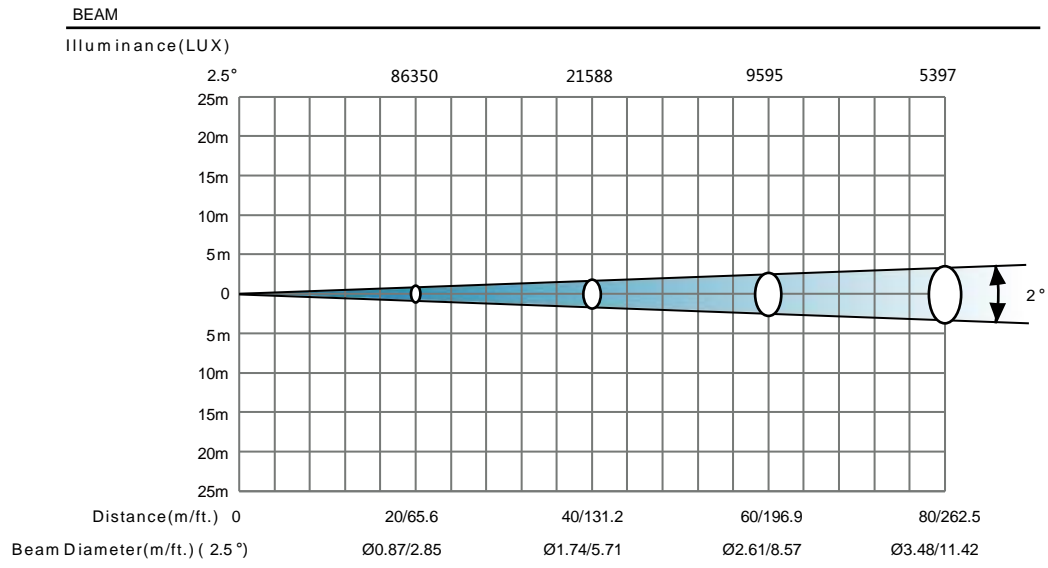
Humidity: ≤85%

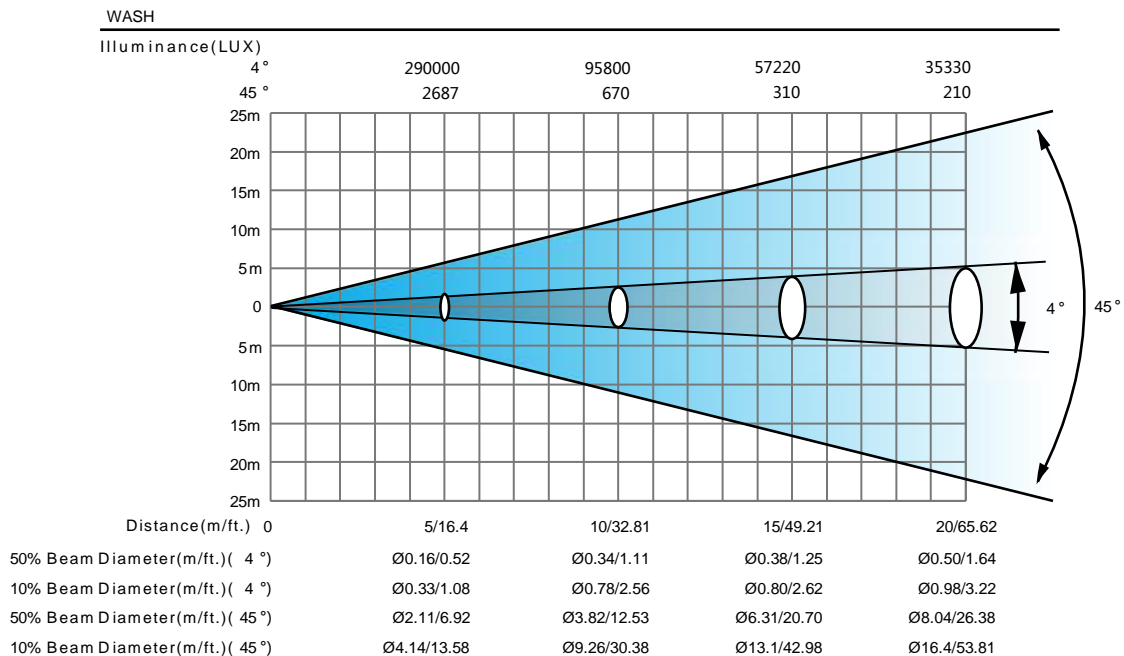
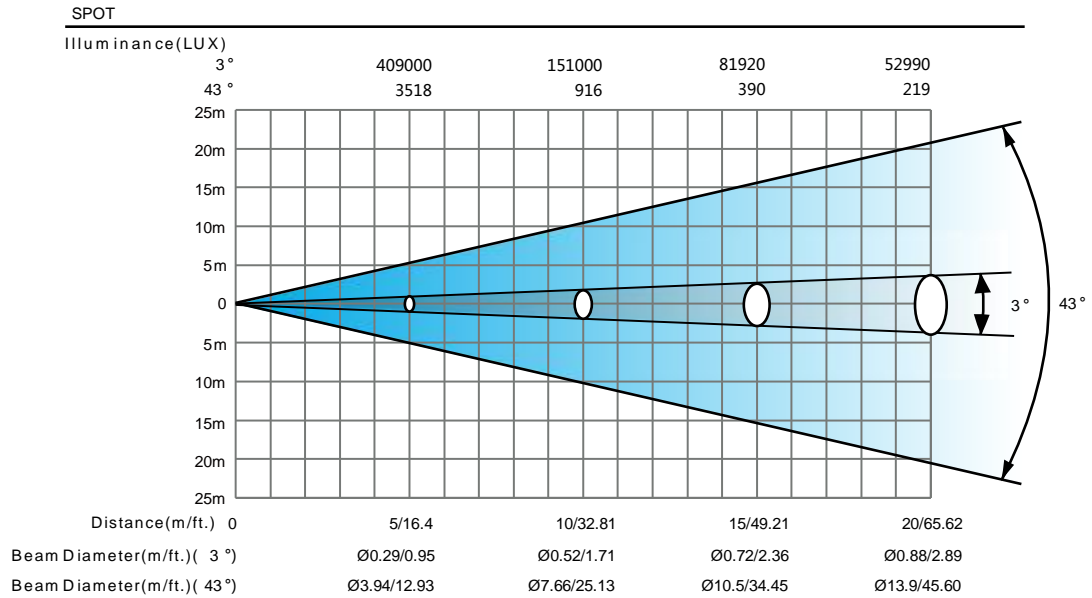
- **Certification and Safety**

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 7000.217-200811

- **Photometric**





● **Other teatures**

- 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 LCD interface without power connection

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.

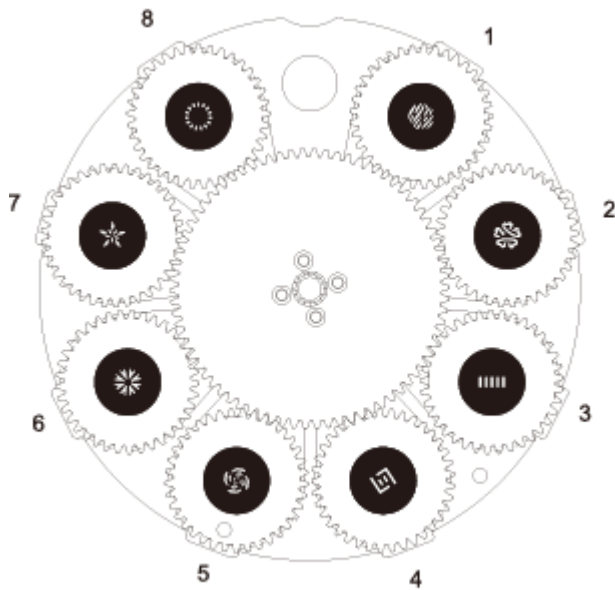
The customized size is as below:

Gobo material	Outer dimension	Effective dimension	Thickness
metal gobo	Φ14.4mm	Φ6mm	0.5mm
Gobo material: metal			

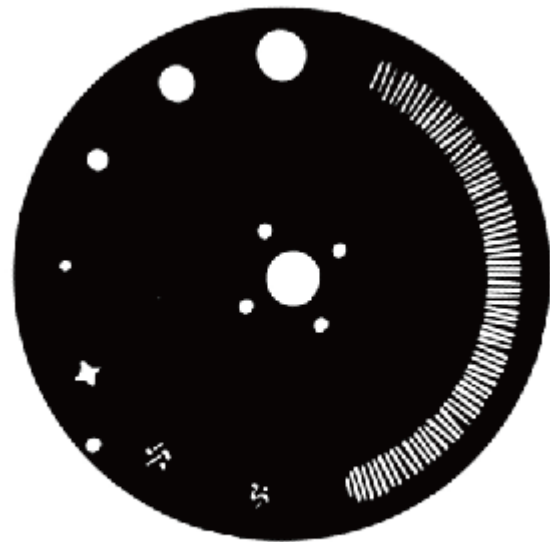
8.2 Gobos

One rotating gobo wheel: 8 interchangeable gobos + open, indexing, CW/CCW rotation, variable speed

One fixed gobo wheel: 6 gobos + open, CW/CCW rotation, variable speed



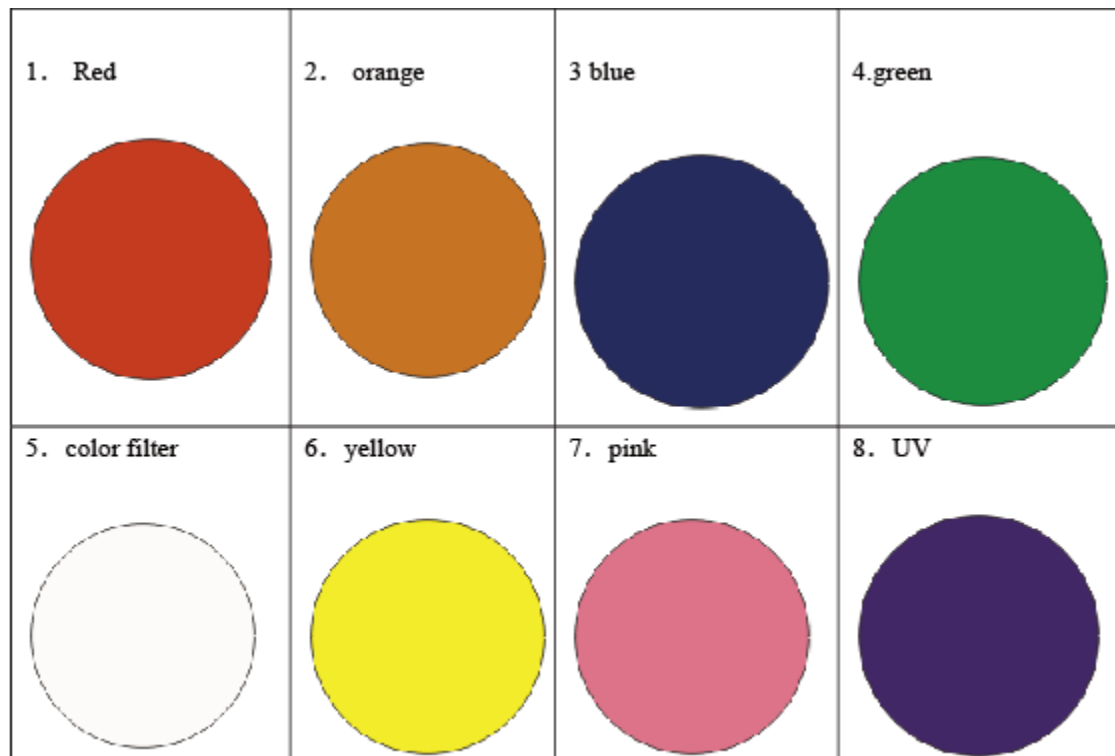
Rotating gobo wheel



Fixed gobo wheel

8.3 Colors

Two color wheel: 8 colors, split color, CW/CCW rotation, "Rainbow effect" in both directions



9. Menu structure

Level 1	Level 2	Level 3	Level 4	Info
Run setting	Address Setting Value Display Auto-Program IP Setting Mask Address SysID Setting	Address: 001~ XXX Pan, All, No Master/Alone 192.168.xxx.xxx 255.255.255.xxx xxx		Setting the DMX address Display the channel value Run auto program in master or slave Setting ARTNET network address Setting ARTNET subnet address Setting Device ID
Device Info	Time Info	This Time Total Time Last Time Lamp On Time Lamp Off Time Last Time Code Clear Last Time Lamp Time Code Clear Lamp Time	XXXXXX Hour XXXXXX Hour XXXXXX Hour XXXXXX Hour XXXXXX Minute Password: xxx(88) Yes/No Password: xxx(111) Yes/No	Since power on time Product total run time Last product run time Lamp on time Lamp close time Clear last time password Clear last time Clear lamp time password Clear lamp time
	Temperature	Body Temperature	XXX 'C/'F	Body temperature
	Fans Info	NO/...		
	Err Info	No Err/...		
	Software Version	XX RDM Code0951-xxxxxx		The software version and RDM code

Lamp Control	Lamp On/Off	On/Off		Open lamp	
	Power On Lamp On	Enable/Disable		Power on open lamp	
	Console Lamp On	Enable/Disable		Console open lamp	
	Console Lamp Off	Enable/Disable		Console close lamp	
	Lamp On Temp. Lamp Off Temp.	20~79, 45°C /68~174 , 113°F 80~139, 130°C/176~282,266°F		Open lamp below temperature Close lamp above temperature	
System Setting	Status Setting	Console Set Addr No Signal Status Pan Reverse Tilt Reverse Pan Scan Degree Scan Feedback Standby Time	Enable/Disable Off/Hold/Auto/Music Enable/Disable Enable/Disable 360/540 Enable/Disable Disable/1~20 Min, 30	Address can be changed by console The status while no signal Pan Reverse Tilt Reverse Pan Scan Degree Scan Feedback Standby time	
	Fan Speed	Smart Control High Speed Low Speed		Auto fans speed Fans high speed Fans low speed	
	Display Setting	Backlight Time Keyboard Lock Brightness Set Language Auto Screen Set	1~80 Min/Disable Enable/Disable 15%~100% 80% Chinese/English on/off/Auto	Backlight off time Press <menu> 3s to unlock Brightness Set Change the language Screen display upside down	
	Temperature Unit	Celsius Fahrenheit		Temperature unit	
	Value Default	Pan.....	Pan =XXX	The default value	
	Wireless Dev	Wireless Off Wireless On Wireless Trans. Wireless Reset		Wireless off Wireless on Wireless transfer DMX data to another Wireless reset	
	Dimmer Mode	M0:...~M5:... M1		Dimmer mode select	
	Restore Default	Restore/Cancel		Restore to default value	
	Motor Reset	System Reset			System reset
		Scan Reset			Pan and tilt motor reset
Color Reset				color motor reset	
Gobo Reset				gobo motor reset	

	Strobe Reset Other Reset			strobe motor reset 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
	Focus Mode	Input Password Pan :	Password=XXX(99) Pan=XXX :	The password of adjust mode Fixed all begin position
Channel Setting	Channel Mode	Standard Mode Simplified Mode Extended Mode Custom Mode A Custom Mode B Custom Mode C		Standard channel mode Simplified channel mode Extended channel mode Custom channel mode A Custom channel mode B Custom channel mode C
	Set Custom Mode1 Set Custom Mode2 Set Custom Mode3	Max Channel Pan :	Channel = XX Pan = CH01 :	Change the channel order
Program Edit	Select Group	Program Unit 1 Program Unit 2 Program Unit 3	Auto-Program 1 ~10 Auto-Program 1 ~10 Auto-Program 1 ~10	Choose build-in program for slave 1 Choose build-in program for slave 2 Choose build-in program for slave 3
	Program Edit	Auto-Program1 : Auto-Program10	Program Test Step 1=Scene xxx Step 64=Scene xxx	Test the auto program The start scene of the program The end scene of the program
	Scene Edit	Scene Edit:001-250	Pan,..... (Pan=xxx) Scene T: (=xxxS) Rec. Outside	Edit the channel DMX Edit the scene time Get scene DMX form console
	Record Scene	Scene XX->XX		Record scene form console

10. DMX Protocol

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Simplified	Standard							
1	1	1	Strobe/Shutter	0	31	0.0%	12.2%	Closed	0(0%)
				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 è Full light	0(0%)
		3		0	255	0.0%	100.0%	Intensity fade, fine (LSB)	
3	3	4	Cyan	0	255	0.0%	100.0%	White è Full cyan	0(0%)
		5		0	255	0.0%	100.0%	Cyan fade, fine (LSB)	
4	4	6	Magenta	0	255	0.0%	100.0%	White è Full magenta	0(0%)
		7		0	255	0.0%	100.0%	Magenta fade, fine (LSB)	
5	5	8	Yellow	0	255	0.0%	100.0%	White è Full yellow	0(0%)
		9		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	0(0%)
				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	CTO1	0	31	0.0%	12.2%	CTO Off	0(0%)
				32	255	12.5%	100.0%	CTO On	
		12	CTO2	0	31	0.0%	12.2%	CTO Off	0(0%)
				32	255	12.5%	100.0%	CTO On	
8	8	13	Color wheel	0	15	0.0%	5.9%	Open	0(0%)

				16	29	6.3%	11.4%	Color 1
				30	43	11.8%	16.9%	Color 2
				44	57	17.3%	22.4%	Color 3
				58	71	22.7%	27.8%	Color 4
				72	85	28.2%	33.3%	Color 5
				86	99	33.7%	38.8%	Color 6
				100	113	39.2%	44.3%	Color 7
				114	127	44.7%	49.8%	Color 8
				128	187	50.2%	73.3%	Color continous rotation CW from fast to slow
				188	195	73.7%	76.5%	Stop

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Simplified	Standard							
8	8	13	Color wheel	196	255	76.9%	100.0%	Color continous rotation CCW from slow to fast	
9	9	14	Gobo wheel (static)	0	17	0.0%	6.7%	Open gobo	0(0%)
				18	21	7.1%	8.2%	Gobo 1	
				22	25	8.6%	9.8%	Gobo 2	
				26	29	10.2%	11.4%	Gobo 3	
				30	33	11.8%	12.9%	Gobo 4	
				34	37	13.3%	14.5%	Gobo 5	
				38	41	14.9%	16.1%	Gobo 6	
				42	45	16.5%	17.6%	Gobo 7	
				46	49	18.0%	19.2%	Gobo 8	
				50	53	19.6%	20.8%	Gobo 9	
				54	57	21.2%	22.4%	Open gobo	
				58	64	22.7%	25.1%	Gobo 1 shake	
				65	71	25.5%	27.8%	Gobo 2 shake	
				72	78	28.2%	30.6%	Gobo 3 shake	
				79	85	31.0%	33.3%	Gobo 4 shake	
				86	92	33.7%	36.1%	Gobo 5 shake	
				93	99	36.5%	38.8%	Gobo 6 shake	
				100	106	39.2%	41.6%	Gobo 7 shake	
				107	113	42.0%	44.3%	Gobo 8 shake	
114	120	44.7%	47.1%	Gobo 9 shake					
121	127	47.5%	49.8%	Open gobo					
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	0	15	0.0%	5.9%	Open gobo	0(0%)
				16	22	6.3%	8.6%	Gobo 1	
				23	29	9.0%	11.4%	Gobo 2	
				30	36	11.8%	14.1%	Gobo 3	
				37	43	14.5%	16.9%	Gobo 4	
				44	50	17.3%	19.6%	Gobo 5	
				51	57	20.0%	22.4%	Gobo 6	

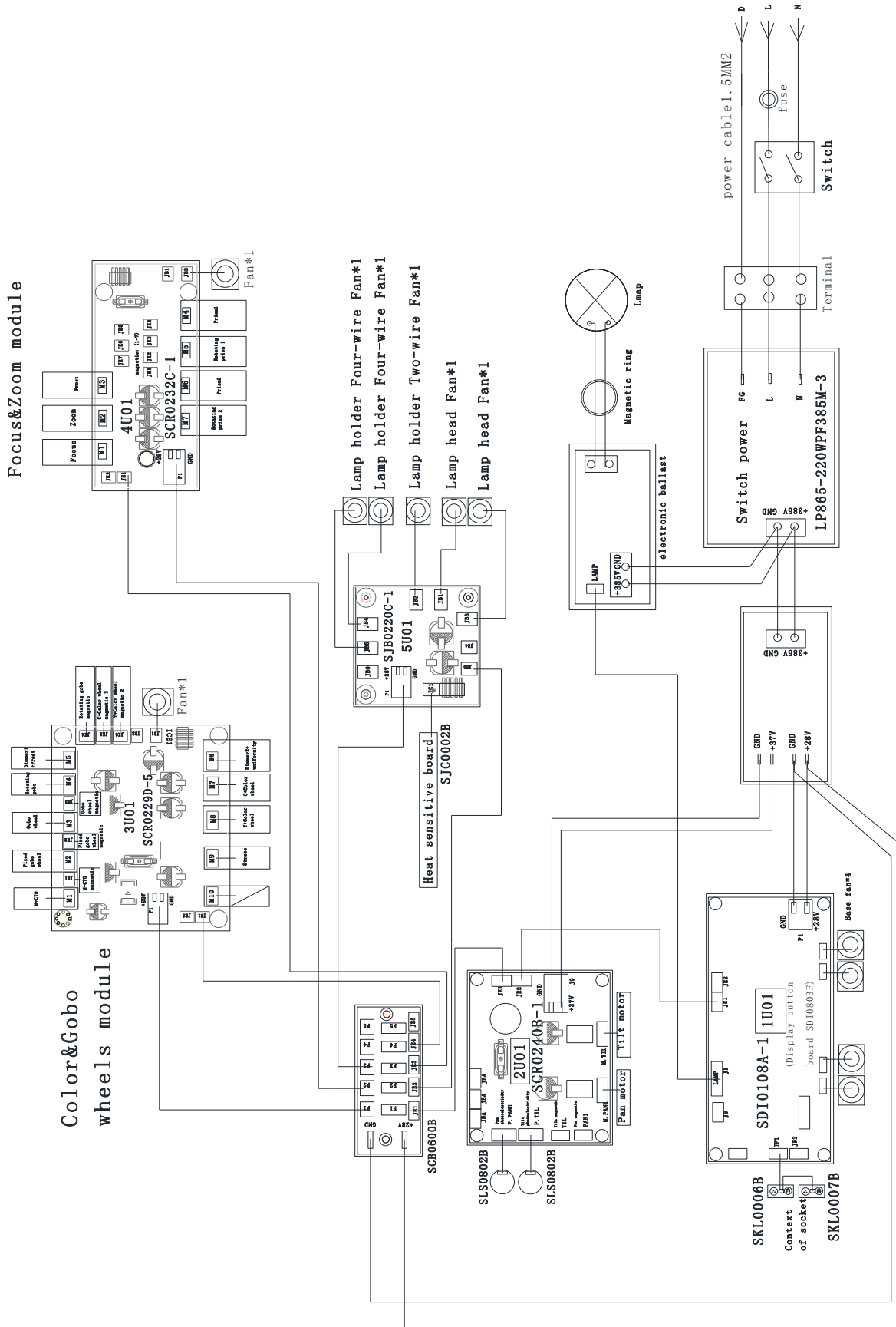
DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Simplified	Standard							
10	10	15	Rotating gobo wheel	58	64	22.7%	25.1%	Gobo 7	0(0%)
				65	71	25.5%	27.8%	Gobo 8	
				72	78	28.2%	30.6%	Gobo 1 shake	
				79	85	31.0%	33.3%	Gobo 2 shake	
				86	92	33.7%	36.1%	Gobo 3 shake	
				93	99	36.5%	38.8%	Gobo 4 shake	
				100	106	39.2%	41.6%	Gobo 5 shake	
				107	113	42.0%	44.3%	Gobo 6 shake	
				114	120	44.7%	47.1%	Gobo 7 shake	
				121	127	47.5%	49.8%	Gobo 8 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	
11	11	16	Gobo rotating/positioning gobo wheel 1	0	127	0.0%	49.8%	Gobo rotation positioning	0(0%)
				128	187	50.2%	73.3%	Gobo continous rotation CW from slow to fast	
				188	195	73.7%	76.5%	Stop	
				196	255	76.9%	100.0%	Gobo continous rotation CCW from slow to fast	
				17	0	255	0.0%	100.0%	
12	12	18	Focus	0	255	0.0%	100.0%	Near ðFar	0(0%)
		19		0	255	0.0%	100.0%	Focus, fine (LSB)	
13	13	20	Zoom	0	255	0.0%	100.0%	Near ðFar	0(0%)
		21		0	255	0.0%	100.0%	Zoom, fine (LSB)	

14	14	22	Prism plate1	0	31	0.0%	12.2%	Off	0(0%)
				32	255	12.5%	100.0%	Prism On	
15	15	23	Prism plate 1 rotation	0	127	0.0%	49.8%	Prism indexed	0(0%)
				128	187	50.2%	73.3%	Prism continous rotation CW from slow to fast	
				188	195	73.7%	76.5%	Stop	
				196	255	76.9%	100.0%	Prism continous rotation CCW from slow to fast	
16	16	24	Prism plate 2	0	31	0.0%	12.2%	Off	0(0%)
				32	255	12.5%	100.0%	Prism On	

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Simplified	Standard							
17	17	25	Prism plate2 rotation	0	127	0.0%	49.8%	Prism indexed	0(0%)
				128	187	50.2%	73.3%	Prism continous rotation CW from slow to fast	
				188	195	73.7%	76.5%	Stop	
				196	255	76.9%	100.0%	Prism continous rotation CCW from slow to fast	
18	18	26	Frost	0	31	0.0%	12.2%	Off	0(0%)
				32	255	12.5%	100.0%	On	
19	19	27	Pan	0	255	0.0%	100.0%	Pan	0(0%)
20		28		0	255	0.0%	100.0%	Pan, fine (LSB)	
21	20	29	Tilt	0	255	0.0%	100.0%	Tilt	46(18.0%)
22		30		0	255	0.0%	100.0%	Tilt, fine (LSB)	
23	21	31	Scan speed	0	255	0.0%	100.0%	Scan speed from slow to fast	0(0%)
24	22	32	Special controls	0	9	0.0%	3.5%	No function	0(0%)
				10	19	3.9%	7.5%	Open light after 5 seconds	
				20	29	7.8%	11.4%	Close light after 5 seconds	
				30	39	11.8%	15.3%	Color wheel half color switch	
				40	49	15.7%	19.2%	Color wheel random positioning	
				50	59	19.6%	23.1%	Reserved	
				60	69	23.5%	27.1%	Reset all motor after 5 seconds	
				70	79	27.5%	31.0%	Scan motor reset after 5 seconds	
				80	89	31.4%	34.9%	All color motor reset after 5 seconds	
				90	99	35.3%	38.8%	All gobo motor reset after 5 seconds	
				100	109	39.2%	42.7%	All strobe motor reset after 5 seconds	
				110	119	43.1%	46.7%	Other motor reset after 5 seconds	
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




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 GTD Lighting.

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

 Notes: 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.

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 areplacement 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	Choose the channel mode in “Channel setting >

Problem	Possible Cause	Suggested Correction
	Mode”of the fixture.	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	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary
	Whether the function of the relay board is intact, whether the signal is normal or not.	Repair or replace.
	Shorted leads between ballast and the lamp	Replace components as required.
	Incorrect ballast output.	Check ballast output to determine if it conforms to lamp requirements. If voltage and current do not stabilize in five to ten minutes warm-up time, ballast output is incorrect and adjustment should be made. Check capacitor wiring,if visibly available, to determine if capacitors are properly wired.
	Incorrect triggers output.	Replace triggers.
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 morestable 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	Possible Cause	Suggested Correction
		problem and replace components as required
	Thermostat damaged.	Replace.
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 wheel and 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.
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	Follow the instructions stated in this user

Problem	Possible Cause	Suggested Correction
	gobo wheel or color whee	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

Name	P/N	Qty	Notes
Lamp	1306030018A	1	OSRAM SIRIUS HRI 371W
Electronic ballast	1412020013A	1	371W
Switch power	1412050059A	1	LP730-220WPF380M-3/730W-3803728
Display	5809010450A	1	GTD-380C II BSW-101J10 0108A-1
Scan board	5809010451A	1	GTD-380C II BSW-201010 SCR0240B
Motor drive board3	5809010452A	1	GTD-380C II BSW-301010 SCR0229D
Motor drive board4	5809010453A	1	GTD-380C II BSW-401010 SCR0232C
Motor drive board5	5809010454A	1	GTD-380C II BSW-501M10 SJB0220C



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