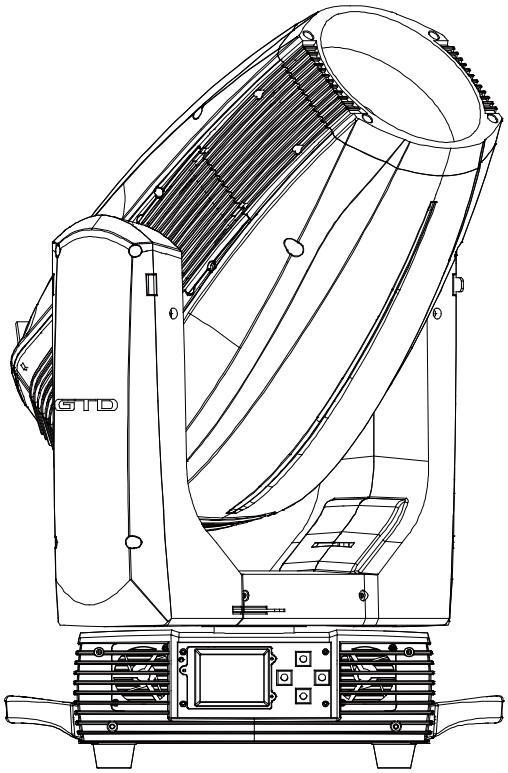

GTD-550 II BSW

BEAM-SPOT-WASH

Moving Head

User Manual

Thank you for choosing GTD-550 II BSW product. The product integrates beam, spot and wash effect in one body, with compact size and light weight. Modular structure design, simple disassembly, easy maintenance, new turbo cooling system ensure the light source works in a good environment. With OSRAM SIRIUS HRI 550W XL discharge lamp, combined with unique optical design, 14 times optical zoom and diffuser film, the beam effect is sharper, fuller and more penetrating. Also, it comes with linear adjustment of the brightness and the wash effect is soft and natural. With industry-leading 32-bit control system, combined with high-performance motor group, the fixture can run fast and accurately; RDM technology can realize remote setting of address code and other functions.The product is suitable for large and medium-size performance activities such as celebrations, press conferences and so on, providing best solutions for production companies!

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Table of contents

1.Safety instructions.....1

2.Product introductions.....3

2.1 Dimensions 3

2.2 Fixture overview 4

2.3 Accessories.....4

3.Packing and shipping.....5

3.1 Protection lock.....5

3.2 Unpacking.....5

3.3 Packing after use.....5

4.Installation.....6

4.1 Clamps installation.....6

4.2 Device installation.....6

4.3 Lamp fitting and adjustment.....7

5.Power / Control connection.....8

5.1 Power connection.....8

5.2 Control connection.....8

5.3 Testing.....8

6.Control panel.....9

6.1 Panel instruction.....9

7.Technical specification.....10

8.Gobos and colors.....13

8.1 Gobo specification.....13

8.2 Gobos.....13

8.3 Colors.....14

9.Menu structure.....15

10.DMX protocol.....18

11.System wiring diagram.....22

12.Maintenance and Troubleshooting.....23

12.1 Troubleshooting.....23

12.2 System wiring diagram.....23

13. Spare parts list.....27

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.

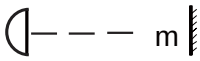
WARNING!

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.

ta. . . °C Maximum ambient temperature.

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

General guidelines⚠

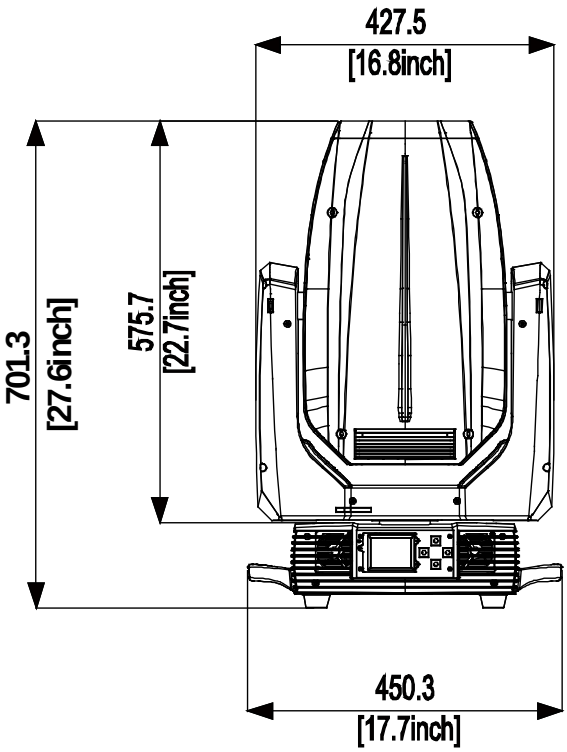
- Never open this fixture while in use.
- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.
- This fixture is a professional light effect designed for INDOOR / DRY LOCATIONS ONLY on stage, in nightclubs, theatres, etc.
- Minimum distance to lighted objects must be 49.21feet (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.

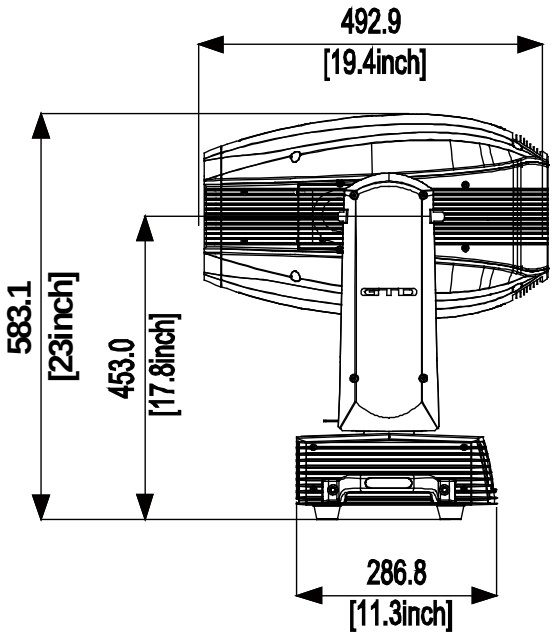
Certified safety cables must always be used when installing the fixture.

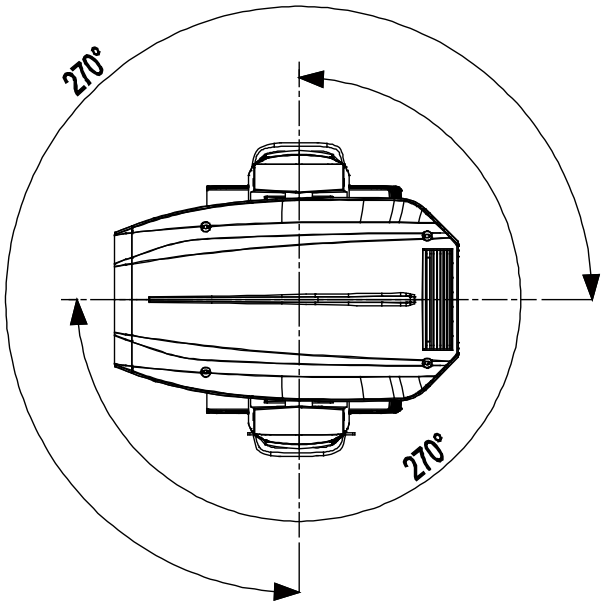
- The fixture is only intended for installation, operation and maintenance by qualified professional. Instructions stated in the manual must be complied.
- The fixture must be kept in a well-ventilated place at least 50 cm away from any wall surface. Check if the fans or ventilation openings are unblocked.
- 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.

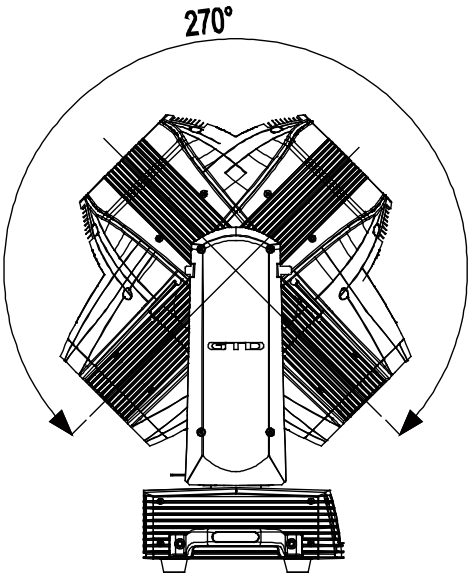
2. Production instructions

2.1 Diamension

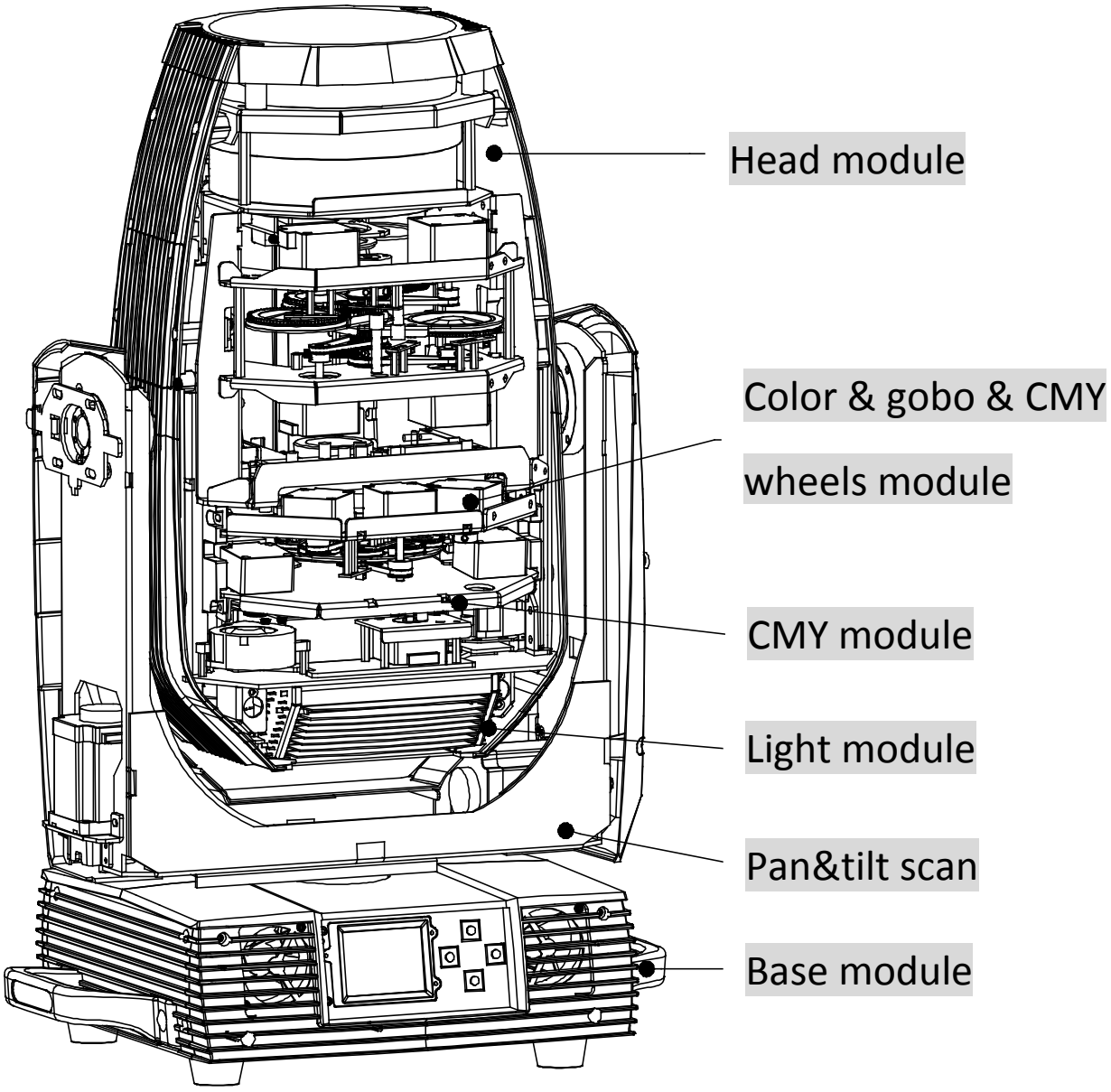








2.2 Fixture overview



2.3 Accessories

Item	Qty	Unit	Remark
User Manual	1	Pc	-
Safety cable	1	Set	φ5*60cm 7*19pc with hook Material：Steel
3-pins signal line	1	Set	-

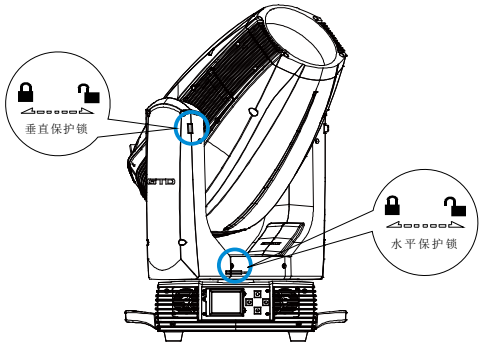
3. Packing and shipping

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（Specifications：790*522*825mm，2Pc/Boxs）

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（Specifications：560*510*662mm，1Pc/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

⚠ 注意

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

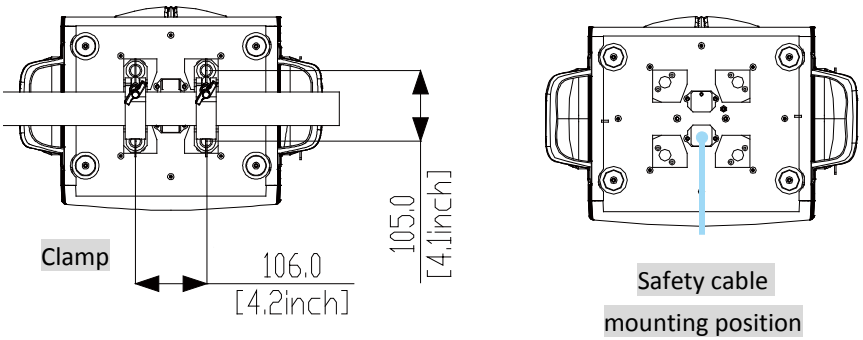
Use two clamps when mounting the fixture. Turn the screws attached to each clamp a 1/4 turn clockwise to lock. Always remember to use the safety cable which goes through the mounting hole on the base. Do not attach the safety cable on the handle.

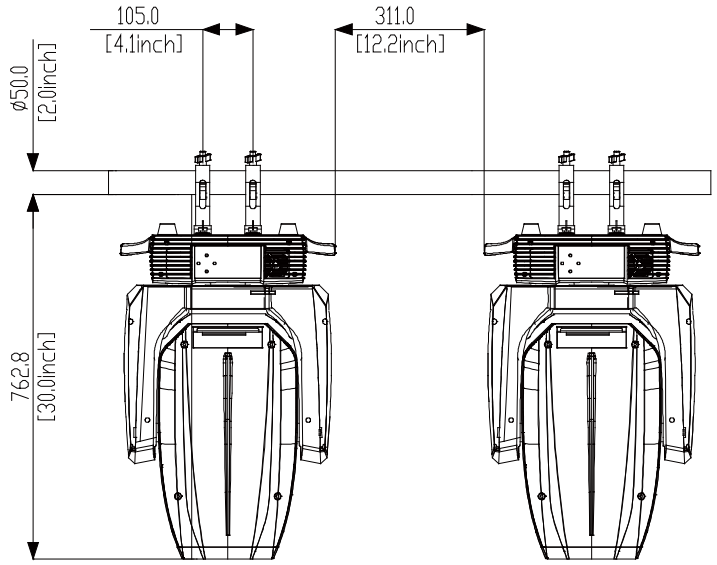
4.2 Device installation

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

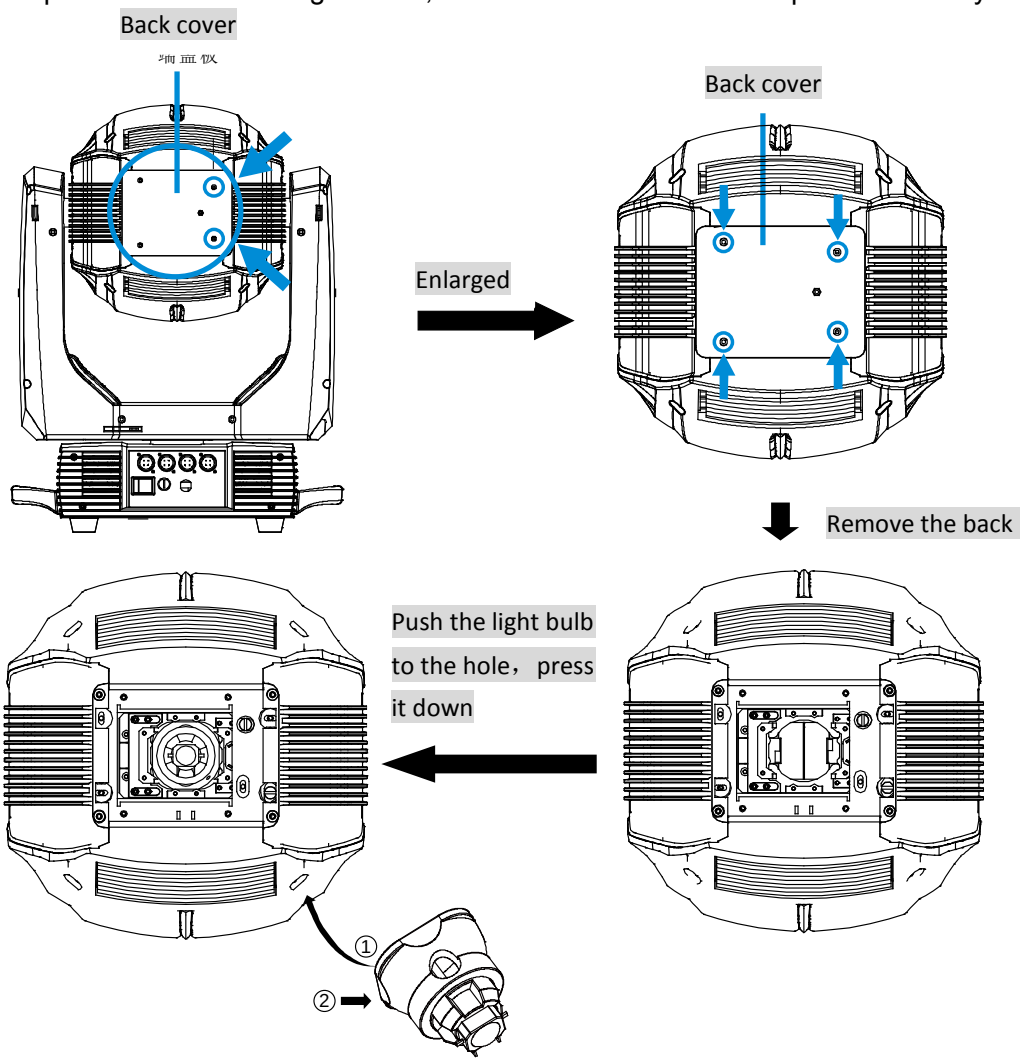
1. Disconnect the fixture from AC power. Cool down the fixture. Set the Tilt lock in a horizontal position.

2. Remove the bulb: Use a screwdriver to loosen 4 screws in the back cover1 and remove the bulb plate1,

remove the back cover2 with the same method. Unplug the connected line in bulb, press the top of the bulb down, so that can remove the bulb directly.

3. Install the bulb: Press the bulb into the elastic port, push the light bulb to the hole and plug in the bulb cable, install the back cover1&2.

4. When the bulb is p ng bracket, observe whether the bulb is placed correctly and the



Note ⚠

The fixture is equipped with Spec OSRAM SIRIUS HRI 550W XL, which is featured with high efficiency and short-arc characteristic, such as a stable 7500K color-temperature and average lifespan of 1500hrs

Note

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.

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

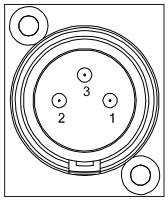
5.1 Power connection

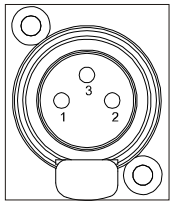
Connection method:

- 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.

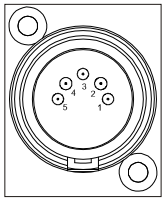
5.2 Control connection

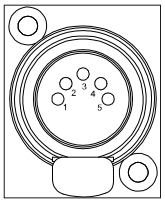
The fixture has 3-pin & 5-pin XLR connectors for DMX data input and output as shown below. Connection between the console and fixture, and between fixtures must be made with 2 core screened DMX signal cable. Maximum connecting distance of signal cable is 150 meters. Additional DMX512 signal-amplifier is recommended for longer distance。





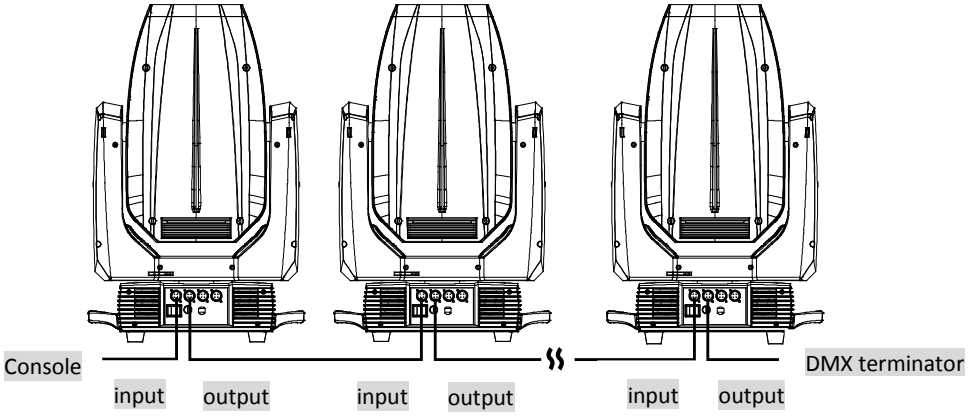
DMX 512
1：Ground
2：—
3：+





DMX 512
1：Ground 2：—
3：+ 4:Obligate
5: Obligate

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 & 5-pin XLR connector with a ¼ W 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 Using the control panel

- 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: SIRIUS HRI 550W XL

Expected average lifetime: 1500 h

Color temperature correction: 7500K

Zoom: BEAM 0° -2.5° / SPOT 3° -40° / WASH 5° -45°

CRI：Ra≥85

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

Prism: 1 pc tip 16-facet prism，1 pc Symmetry facet prism, control the effect independently, make double concentric effect when combine two prism

Softening effect: 1 pc Softening Mirror，After softening, the light spot is soft and natural

- **Gobo**

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

Fixed gobo wheel: 10 gobos + open，CW/CCW rotation, variable speed

Effect gobo wheel: 1 pc effect gobo wheel

Gobo outside diameter: 14.4 mm

Max. Image diameter: 9mm

Max. Thickness: 1.1mm

Gobo material: Glass

- **Color**

Color wheel: 12 colors + open, split color, CW/C CW rotation, “Rainbow effect” in both directions

- **Electrical**

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

Max. Power consumption: 769W, max current: 7.6A, PF: 0.997

Power supply unit: Auto-ranging electronic SMPS

Main fuse: 10A

Ballast: Electronic

Power input: Self-contained power cord

DMX data input/output: Chassis 3-pin & 5-pin (in/out)

- **Control and programming**

Control channels (DMX): 27/24/34

Protocol: DMX-512 RDM

Display: Graphic LCD backlit

- **Physical / Installation**

Weight: 30Kg (66lbs.)

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**

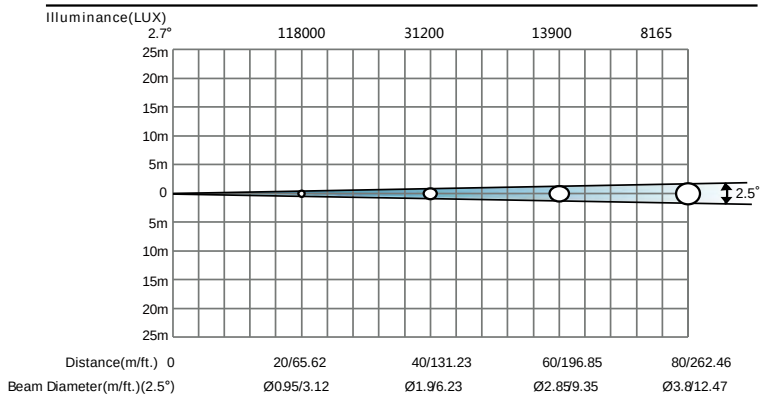
EMC: EN 55103-1:2009, EN 55103-2:2009, EN 61000-3-2:2006+A2:2009, EN 61000-3-3:2013,

GB/T 17743-2007, GB 17625.1-2012

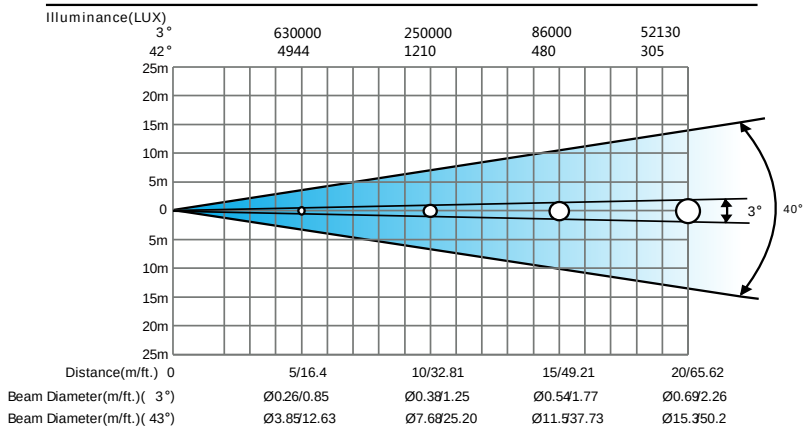
Safety: EN 60598-2-17:1989/A2:1991, GB 7000.1-2015, GB 7000.217-200811

Photometric :

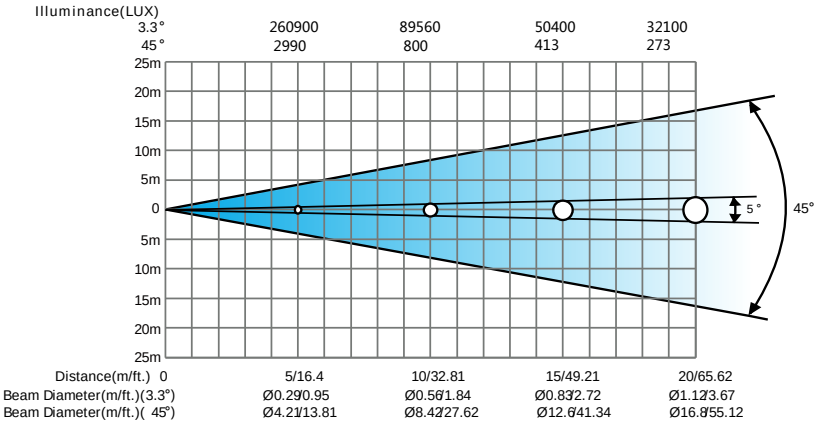
GTD-550 II BSW（BEAM）



GTD-550 II BSW（SPOT）



GTD-550 II BSW（WASH）



- **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 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.

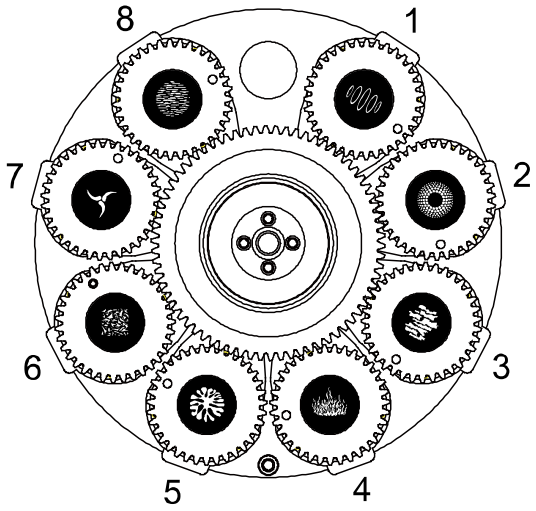
The customized size is as below:

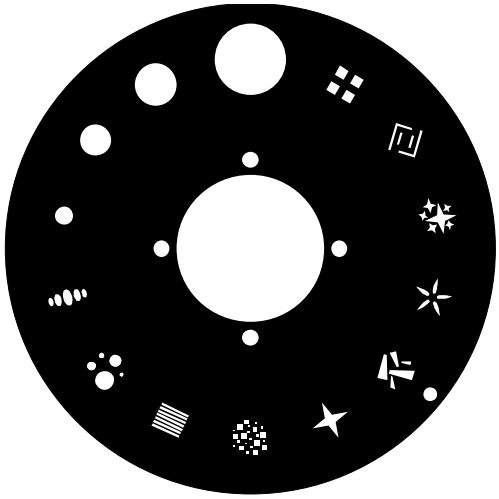
Gobo material	Outer dimension	Effective dimension	Thickness
Glass gobo	Φ14.4mm	Φ9	1.1mm
Gobo material：Glass			

8.2 Gobos

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

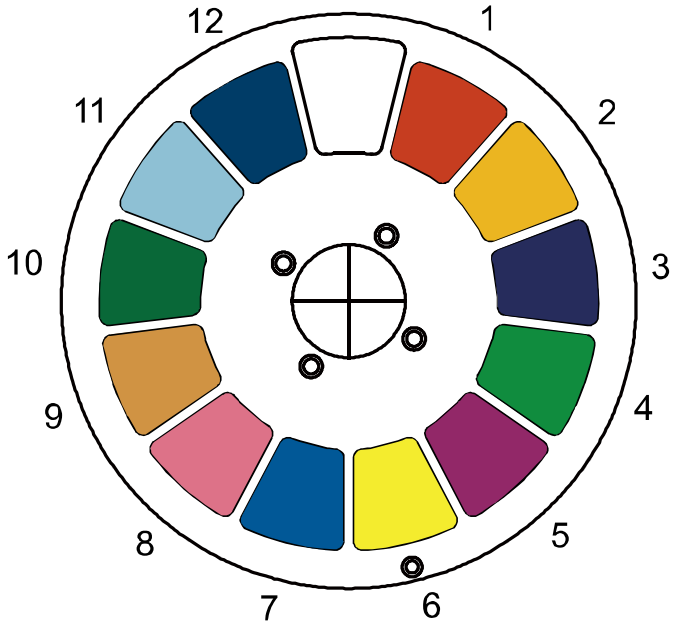
One fixed gobo wheel: 12 gobos + open, CW/CCW rotation, variable speed





8.3 Colors

One color wheel: 12 colors + open, split color, CW/CCW rotation,“Rainbow effect”in both directions



1: Red 2: Orange 3: Blue 4: Green 5: Magenta 6: Yellow

7: Cyan 8: Pink 9: Golden Yellow 10: Dark Green 11: CTB 12 : UV

9. Menu structure

Level 1	Level 2	Level 3	Level 4	Info
1.Run setting	1.Address Setting 2.Value Display 3.Auto-Program 4.IP Setting 5.Mask Setting 6.SysID Setting	Address: 001~ XXX Pan ……，All，Off Master /Slave 192.168.xxx.xxx 255.255.255.xx xxx		Setting the DMX address Display the channel value Run auto program in master or slave Setting the Artnet IP Address Setting the Network Mask Setting the system id
2.Device Info	1.Time Info	1.This Time 2.Total Time 3.Last Run Hours 4.Lamp On Hours 5.Lamp Off Hours 6.Time Password 7.Clear Last Run 8.Lamp Time Password 9.Clear Lamp Time	XXXXXX Hour XXXXXX Hour XXXXXX Hour XXXXXX Hour XXXXXX Minute Password: XXX Yes/No Password: XXX 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
	2.Temperature	Temperature1	XXX ’C/’F	Body temperature
	3.Fans Info.	Normal xxx/Fault/NO...		Show fans’ status
	4.Err Inf	No/...		Show this device’s status
	5.Software Version	Software V1.0 RDM Co 0951-xxxxxx		The software version
3.Lamp Control	1.Lamp On or Off 2.Automatic La-On	On/Off Enable/Disable		Open lamp Power on open lamp

	3. Lamp On Via DMX 4. Lamp Off Via DMX 5.Lamp On Temp. 6.Lamp Off Temp.	Enable/Disable Enable/Disable 20~79, 45'C /68~174 , 113'F 80~139, 130'C/176~282,266'F		Console open lamp Console close lamp Open lamp below temperature Close lamp above temperature
4.System Setting	1.Status Setting	1.Console Set Addr 2.No Signal Status 3.Pan Reverse 4.Tilt Reverse 5.Pan Scan Degree 6.Scan Feedback 7.Standby Time	Enable/Disable Off/Hold/Auto/Music Enable/Disable Enable/Disable 360/540 Enable/Disable Disable/1~20~99 Min	Address can be changed by console The status while no signal Pan Reverse Tilt Reverse Pan Scan Degree Scan Feedback Standby time
	2.Fan Speed	1.Smart Control 2.High Speed 3.Low Speed		Auto fans speed Fans high speed Fans low speed
	3.Display Setting	1.Backlight Time 2.Keyboard Lock 3.Brightness Set 4.Language Select 5.Auto Screen Set	1~80 Min/Disable Enable/Disable 15~100% 80% Chinese/English Off/On/Auto	Backlight off time Press <menu> 3s to unlock Back lightness of screen Change the language Screen change Setting
	4.Temperature Unit	Celsius Fahrenheit		Temperature unit
	5.Value Default	Pan……	Pan =XXX	The default value after power on
	6.Wireless Dev	Wireless Off Wireless On Wireless Trans. Wireless Reset		Wireless off Wireless on Wireless transfer DMX data to another Wireless reset
	7.Restore Default	Yes/No		Restore to default value
5.Reset	1.System Reset 2.Scan Reset 3.ColorReset 4.Gobo Reset			System reset Pan and tilt motor reset Color motor reset All gobo motor reset

	5.Strobe Reset 6.Other Reset			Strober motor reset All other motor reset
6.Channel Adjust	1.Test Mode	Pan……		Every channel test
	2.Manual Mode	Pan **:**	Pan =XXX **:**	Manual control
	3.Adjust Mode	Input Password Pan **:**	Password=XXX Pan=XXX **:**	The password of adjust mode Fixed all begin position
	4.Focus Mode	Input Password Static Gobo Rotate Gobo	Password=XXX Static Gobo=XXX Rotate Gobo=XXX	The password of adjust mode Fixed focus begin position when gobo cut in
7.Channel Setting	1.Channel Mode	Standard Mode Basic Mode Extended Mode Custom Mode A Custom Mode B Custom Mode C		Standard channel mode Basic channel mode Extended channel mode Custom channel mode A Custom channel mode B Custom channel mode C
	2.Set Custom Mode1 3.Set Custom Mode2 4.Set Custom Mode3	Max Channel Pan **:**	Channel = XX Pan = CH01 **:**	Change the channel order
8.Program Edit	1.Select Prog.	1.Program Unit 1	Auto-Program 1 ~10	Choose build-in program for slave 1
		2.Program Unit 2	Auto-Program 1 ~ 10	Choose build-in program for slave 2
		3.Program Unit 3	Auto-Program 1 ~ 10	Choose build-in program for slave 3
	2.Program Edit	Auto-Program1 **:** Auto-Program10	Run Step 1=Scene xxx Step 8=Scene xxx	Choose the scene for program 1 : Choose the scene for program 10
	3.Scene Edit	Scene Edit:001-250	Pan,……Pan=xxx Scene Time=xxx Input By Console	Edit the channel DMX Edit the scene time Get scene DMX form console
	4.Record Scene	Start Scene: XX	Start Scene: XX End Scene: XX	Record scene form console

*Settings hightlighted in light grey are default values

10. DMX Protocol

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Basic	Extended							
1	1	1	Strobe/Shutter	0	31	0%	12%	Closed	0(0%)
				32	63	13%	25%	Open	
				64	127	25%	50%	Synchronous strobe from slow to fast	
				128	159	50%	62%	Open	
				160	223	63%	87%	Random strobe from slow to fast	
				224	255	88%	100%	Open	
2	2	2	Intensity	0	255	0%	100%	No light ➔ Full light	0(0%)
		3		0	255	0%	100%	Intensity fade, fine (LSB)	
3	3	4	Cyan	0	255	0%	100%	White ➔ Full cyan	0(0%)
		5		0	255	0%	100%	Cyan fade, fine (LSB)	
4	4	6	Magenta	0	255	0%	100%	White ➔ Full magenta	0(0%)
		7		0	255	0%	100%	Magenta fade, fine (LSB)	
5	5	8	Yellow	0	255	0%	100%	White ➔ Full yellow	0(0%)
		9		0	255	0%	100%	Yellow fade, fine (LSB)	
6	6	10	CMY color macro	0	15	0%	6%	CMY color macro off	0(0%)
				16	135	6%	53%	CMY synchronous color from slow to fast	
				136	255	53%	100%	CMY random color from slow to fast	
7	7	11	CTO	0	255	0%	100%	White ➔ Full cyan	0(0%)
		12		0	255	0%	100%	CTO fade, fine (LSB)	
8	8	13	High color index	0	127	0%	50%	Open	

				128	255	50%	100%	High color index	
9	9	14	Color wheel	0	7	0%	3%	Open	0(0%)
				8	17	3%	7%	Color 1	
				18	27	7%	11%	Color 2	
				28	37	11%	15%	Color 3	
				38	47	15%	18%	Color 4	
				48	57	19%	22%	Color 5	
				58	67	23%	26%	Color 6	
				68	77	27%	30%	Color 7	
				78	87	31%	34%	Color 8	
				88	97	35%	38%	Color 9	
				98	107	38%	42%	Color 10	
				108	117	42%	46%	Color 11	
				118	127	46%	50%	Color 12	

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Basic	Extended							
9	9	14	Color wheel	128	187	50%	73%	Color continous rotation CW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Color continous rotation CCW from slow to fast	
10	10	15	Gobo wheel (static)	0	7	0%	3%	Open	0(0%)
				8	12	3%	5%	Gobo 1	
				13	17	5%	7%	Gobo 2	
				18	22	7%	9%	Gobo 3	
				23	27	9%	11%	Gobo 4	
				28	32	11%	13%	Gobo 5	
				33	37	13%	15%	Gobo 6	
				38	42	15%	16%	Gobo 7	
				43	47	17%	18%	Gobo 8	
				48	52	19%	20%	Gobo 9	
				53	57	21%	22%	Gobo 10	
				58	62	23%	24%	Gobo 11	
				63	67	25%	26%	Gobo 12	
				68	72	27%	28%	Gobo 1 shake	
				73	77	29%	30%	Gobo 2 shake	
				78	82	31%	32%	Gobo 3 shake	
				83	87	33%	34%	Gobo 4 shake	
				88	92	35%	36%	Gobo 5 shake	
				93	97	36%	38%	Gobo 6 shake	

				98	102	38%	40%	Gobo 7 shake	
				103	107	40%	42%	Gobo 8 shake	
				108	112	42%	44%	Gobo 9 shake	
				113	117	44%	46%	Gobo 10 shake	
				118	122	46%	48%	Gobo 11 shake	
				123	127	48%	50%	Gobo 12 shake	
				128	187	50%	73%	Gobo wheel continous rotation CW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Gobo wheel continous rotation CCW from slow to fast	
11	11	16	Rotating gobo wheel 1	0	7	0%	3%	Open gobo	0(0%)
				8	12	3%	5%	Gobo 1	
				13	17	5%	7%	Gobo 2	
				18	22	7%	9%	Gobo 3	

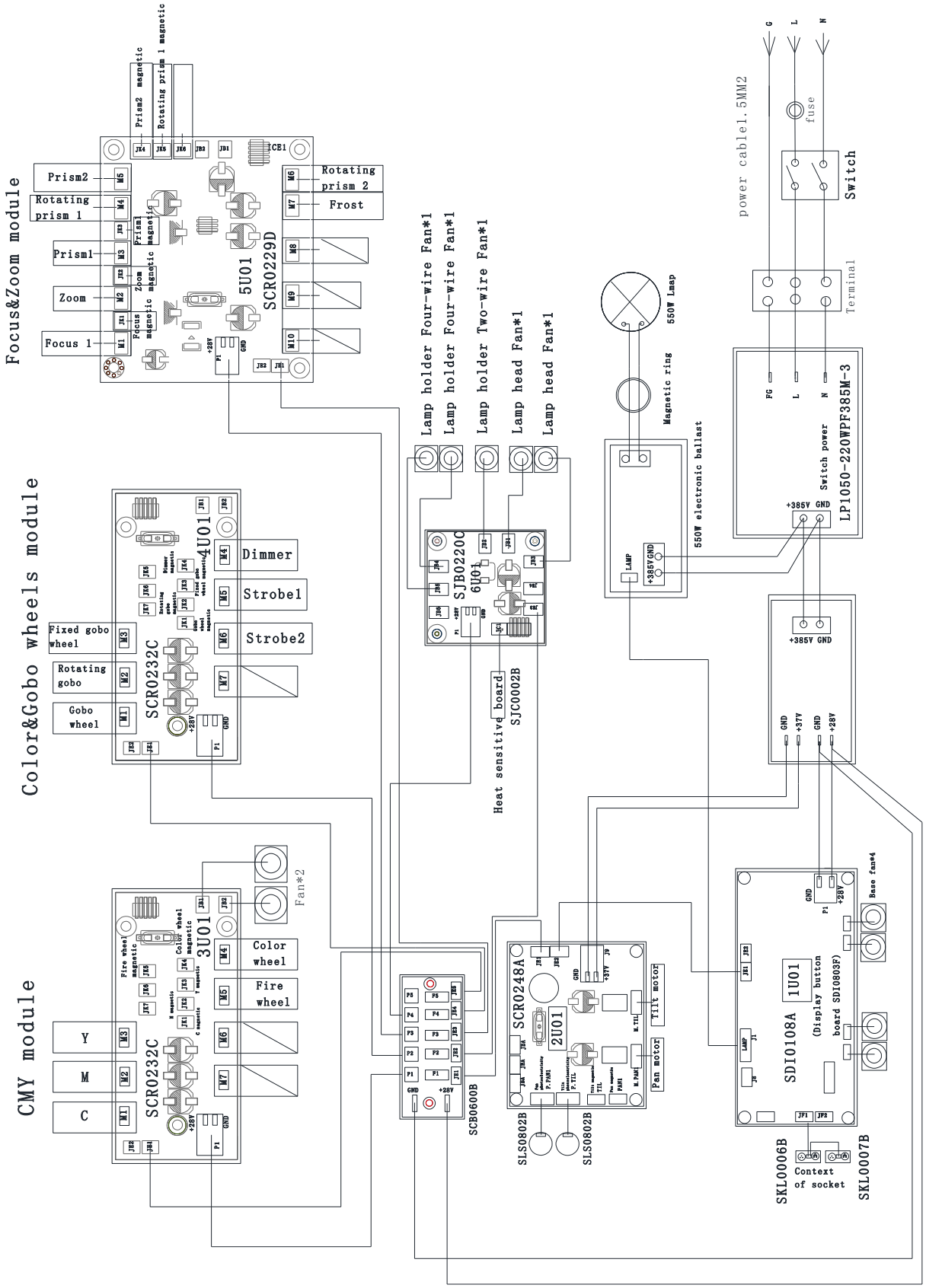
DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Basic	Extended							
19	18	26	Prism2	0	31	0%	12%	Off	0(0%)
				32	255	13%	100%	On	
20	19	27	Prism2 rotation	0	127	0%	50%	Prism2 rotation/positioning	0(0%)
				128	187	50%	73%	Prism2 continous rotation CW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Prism2 continous rotation CCW from slow to fast	
21	20	28	Frost	0	255	0%	100%	Frost shallow to deep	0(0%)
22	21	29	Pan	0	255	0%	100%	Pan	0(0%)
23		30		0	255	0%	100%	Pan, fine (LSB)	
24	22	31	Tilt	0	255	0%	100%	Tilt	46(18.0%)
25		32		0	255	0%	100%	Tilt, fine (LSB)	
26	23	33	Scan speed	0	255	0%	100%	Scan speed from slow to fast	0(0%)
27	24	34	Special controls	0	9	0%	4%	No function	0(0%)
				10	19	4%	7%	Open light after 5 seconds	
				20	29	8%	11%	Close light after 5 seconds	
				30	39	12%	15%	Color wheel half color switch	
				40	49	16%	19%	Color wheel random positioning	
				50	59	20%	23%	Blade motor reset after 5 seconds	
				60	69	24%	27%	Reset all motor after 5 seconds	
				70	79	27%	31%	Scan motor reset after 5 seconds	
				80	89	31%	35%	All color motor reset after 5 seconds	
				90	99	35%	39%	All gobo motor reset after 5 seconds	

DMX mode			Name	DMX value		DMX percentage		Function	Default DMX Value
Standard	Basic	Extended							
11	11	16	Rotating gobo wheel 1	23	27	9%	11%	Gobo 4	
				28	32	11%	13%	Gobo 5	
				33	37	13%	15%	Gobo 6	
				38	42	15%	16%	Gobo 7	
				43	47	17%	18%	Gobo 8	
				48	57	19%	22%	Gobo 1 shake	
				58	67	23%	26%	Gobo 2 shake	
				68	77	27%	30%	Gobo 3 shake	
				78	87	31%	34%	Gobo 4 shake	
				88	97	35%	38%	Gobo 5 shake	
				98	107	38%	42%	Gobo 6 shake	
				108	117	42%	46%	Gobo 7 shake	
				118	127	46%	50%	Gobo 8 shake	
				128	187	50%	73%	Gobo wheel continous rotation CW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Gobo wheel continous rotation CCW from slow to fast	
12	12	17	Gobo rotating positioning gobo wheel 1	0	127	0%	50%	Gobo rotation/positioning	0(0%)
				128	187	50%	73%	Gobo continous rotation CCW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Gobo continous rotation CW from slow to fast	
13		18		0	255	0%	100%	Gobo rotation/positioning, fine (LSB)	
14	13	19	Effect wheel rotation (Fire)	0	31	0%	12%	Off	0(0%)
				32	127	13%	50%	Effect Wheel indexed	
				128	255	50%	100%	Continous rotation from slow to fast	
15	14	20	Focus	0	255	0%	100%	Near è Far	0(0%)
		21		0	255	0%	100%	Focus, fine (LSB)	
16	15	22	Zoom	0	255	0%	100%	Narrow è Wide	0(0%)
		23		0	255	0%	100%	Zoom, fine (LSB)	
17	16	24	Prism1	0	31	0%	12%	Off	0(0%)
				32	255	13%	100%	On	
18	17	25	Prism1 rotation	0	127	0%	50%	Prism1 rotation/positioning	0(0%)
				128	187	50%	73%	Prism1 continous rotation CW from slow to fast	
				188	195	74%	76%	Stop	
				196	255	77%	100%	Prism1 continous rotation CCW from slow to fast	

				100	109	39%	43%	All strobe motor reset after 5 seconds	
				110	119	43%	47%	Other motor reset after 5 seconds	
				120	129	47%	51%	Built-in program 1	
				130	139	51%	55%	Built-in program 2	
				140	149	55%	58%	Built-in program 3	
				150	159	59%	62%	Built-in program 4	
				160	169	63%	66%	Built-in program 5	
				170	179	67%	70%	Built-in program 6	
				180	189	71%	74%	Built-in program 7	
				190	199	75%	78%	Built-in program 8	
				200	209	78%	82%	Built-in program 9	
				210	219	82%	86%	Built-in program 10	
				220	255	86%	100%	Reserved	

*Settings hightlighted in light grey are default values

11. System wiring diagram


Focus&Zoom module
Prism2
Rotating prism 1
Prism1
Zoom
Focus 1
Rotating prism 2
Frost
5U01
SCR0229D
Color&Gobo wheels module
Dimmer
Strobe1
Strobe2
Fixed gobo wheel
Rotating gobo
Gobo wheel
4U01
SCR0232C
CMY module
Y
M
C
Color wheel
Fire wheel
3U01
Fan*2
Lamp holder Four-wire Fan*1
Lamp holder Four-wire Fan*1
Lamp holder Two-wire Fan*1
Lamp head Fan*1
Lamp head Fan*1
SJB0220C
6U01
Heat sensitive board
SJC0002B
SCB0600B
SCR0248A
2U01
Tilt motor
Pan motor
SLS0802B
SLS0802B
550W Lamp
Magnetic ring
550W electronic ballast
power cable1.5MM2
fuse
Switch
Terminal
LP1050-220WPF385M-3
Switch power
+385V GND
SDI0108A
1U01
(Display button board SDI0803F)
Base fan*4
SKL0006B
Context of socket
SKL0007B

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

Problem	Possible Cause	Suggested Correction
		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	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

Problem	Possible Cause	Suggested Correction
		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 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

Problem	Possible Cause	Suggested Correction
		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
	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.
		Replace the drive having the same software

Problem	Possible Cause	Suggested Correction
	The gobo wheel motor's drive IC on the PCB might be out of condition.	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).

Problem	Possible Cause	Suggested Correction
	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 whee	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

Problem	Possible Cause	Suggested Correction
		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
Switch power	1412050082A	1	LP1050-220WPF385-3 AC:90-264Vac,DC:385V，37V，28V
Electronic ballast	1412020017A	1	OSRAM 550W XL
Lamp	1306030019A	1	OSRAM SIRIUS HRI 550W XL
Display	5809010379A	1	550II BSW-101J10 Display 0108A-1/ button 0803F-1
Scan board	5809010380C	1	550II BSW-201010 SCR0248A
Motor drive board3	5809010381A	1	550II BSW-301O10 SCR0232C
Motor drive board4	5809010382A	1	550II BSW-401010 SCR0232C
Motor drive board5	5809010383A	1	550II BSW-501010 SCR0229D

Fan drive board	5809010384B	1	550II BSW-601M10 SJB0220C

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