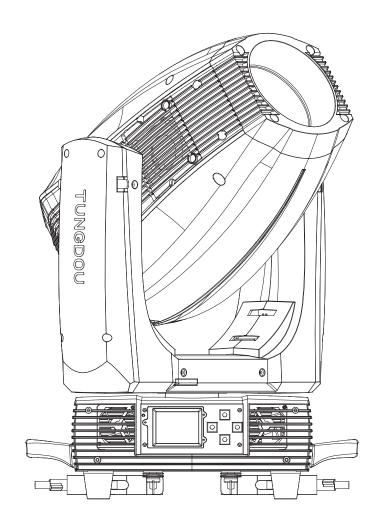
# **TUNGDOU**



TD-371 BSW
BEAM-SPOT -WASH
Moving Head
User Manual

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# 2. 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!

Do not expose fixture for rain and moisture.



Replace all cracked glass shields.

(|--- m|

Minimum distance to lighted objects.

ta...°C

Maximum ambient temperature.

tc...°C

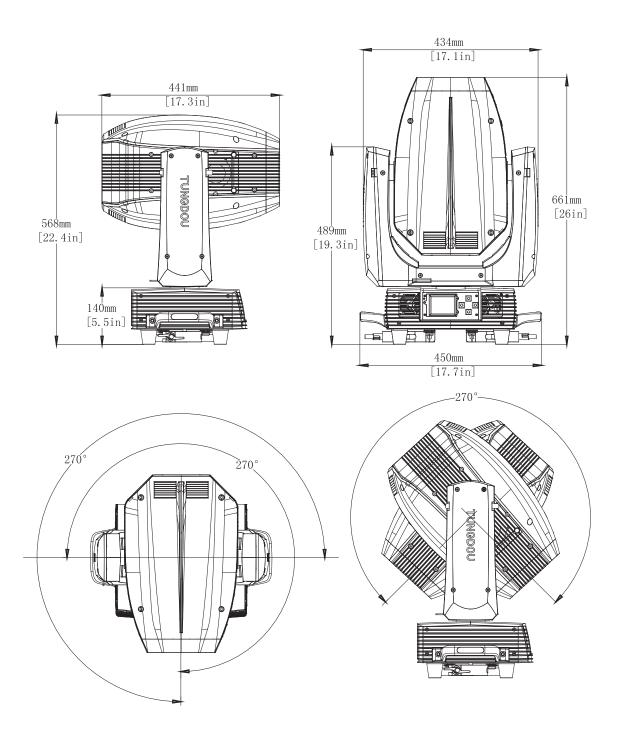
Maximum temp of the external surface.

# General quidelines

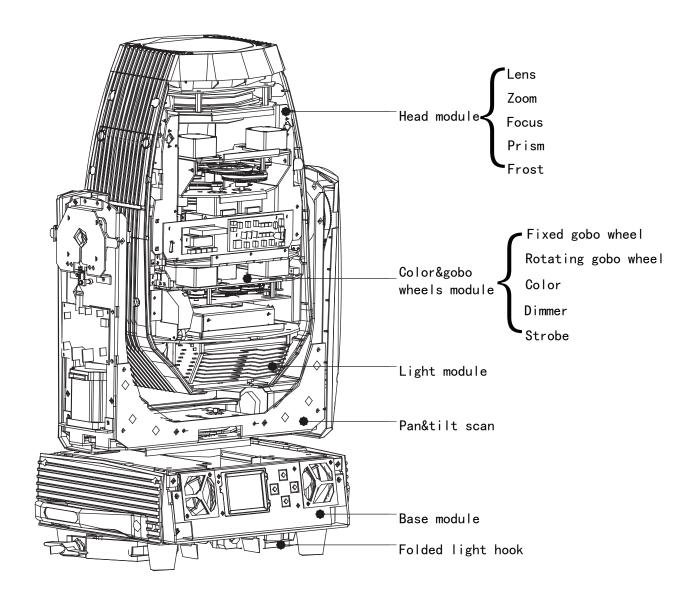
- · Never open this fixture while in use.
- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.
- This fixture is a professional light effect designed for INDOOR / DRY LOCATIONS ONLY on stage, in nightclubs, theatres,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

# 3. Production instructions

# 3.1 Diamension



### 3.2 Fixture overview



### 3.3 Accessories

Item	Qty	Unit	Remark				
User Manual	1	Pc					
3-pins signal line	1	Set					
Safety cable	1	Set	φ 5*60cm 7*19pc with hook Material: Steel				

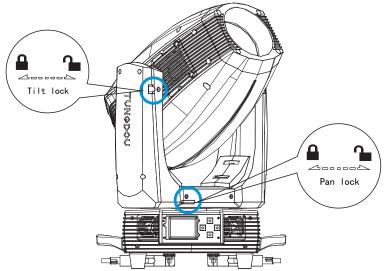
# 4. Packing and shipping

#### 4.1 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.



### 4.2 Unpacking



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.



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

### 4.3 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.

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.

# 5.Installation

## 5.1 Clamps installation

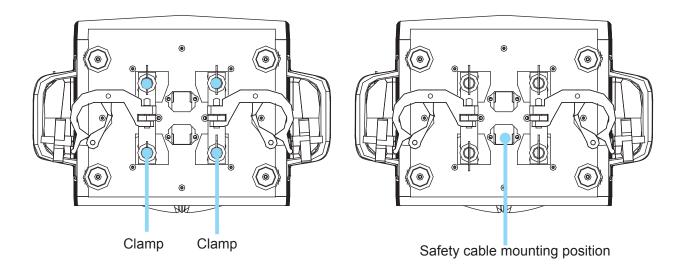
The fixture can be placed on the stage or mounted on the truss facing any direction. Attach the clamps to the mounting position on the base of the fixture.

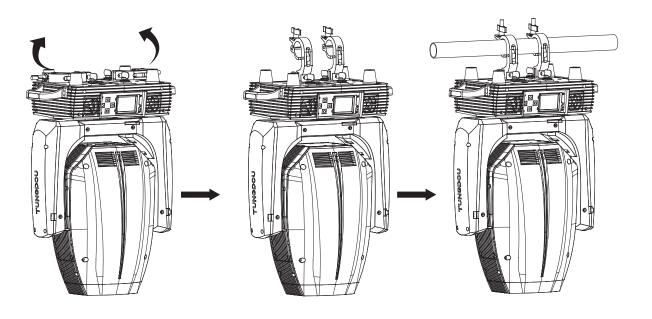
#### Warning

Use two clamps when mounting the fixture. Turn the screws attached to each clamp a 1/4 turn clock—wise 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.

#### 5.2 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.



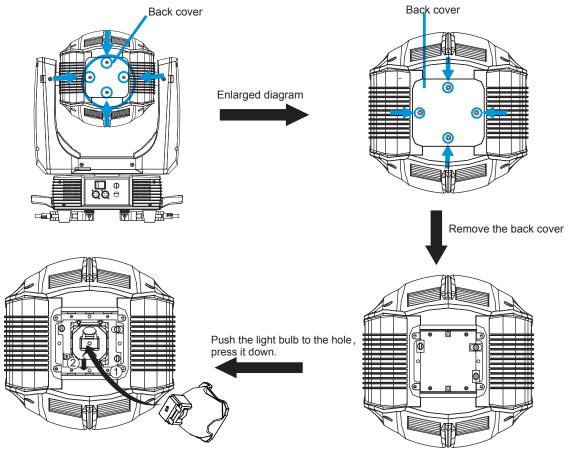


### 5.3 Lamp fitting and adjustment

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 placed in the mounting bracket, observe whether the bulb is placed correctly and the



• Note

The fixture is equipped with Spec SIRIUS HRI 371W, which is featured with high efficiency and short-arc characteristic, such as a stable 7000K color-temperature and average lifespan of 1500hrs.



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.

# 6.Power/ Control connection

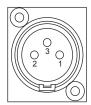
#### 6.1 Power connection

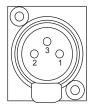
Connection method:

- 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.

#### 6.2 Control connection

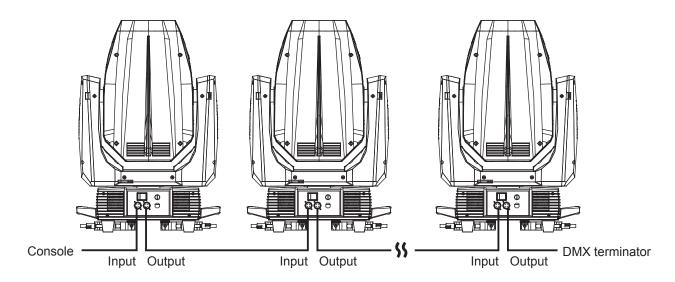
The fixture has 3-pin XLR connectors for DMX data input and output as shown below. Connection between the console and fixture, and between fixtures must be made with 2 core screened DMX signal cable. Maximum connecting distance of signal cable is 150 meters. Additional DMX512 signal-amplifier is recommended 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 XLR connector with a  $\frac{1}{4}$  W and  $\frac{1}{200}$  resistor between the pin 2 and pin 3) as shown below:

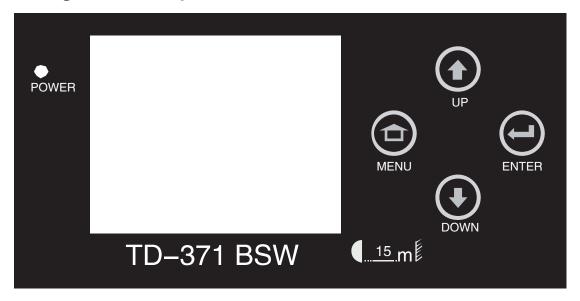


### 6.3 Testing

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

# 7. Control panel

## 7.1 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

# 8. Technical specification

### Optical

Light source: Spec SIRIUS HRI 371W Expected average lifetime: 1500 h Color temperature correction: 7000K

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

CRI: Ra≥80

Total Luminous: 13500 lumen

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

Prism: 1 pc tip 8-facet prism, 1 pc flat 8-facet prism, control the effect independently, make double

concentric effect when combine two prism

#### Gobo

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

Fixed gobo wheel: 9 gobos + open, CW/CCW rotation, variable speed

Gobo outside diameter: 14.4 mm
Max. Image diameter: 6 mm
Max. Thickness: 1.1 mm
Gobo material: metal

#### Color

Color wheel: 11 colors + open, split color, CW/C CW rotation, "Rainbow effect" in both directions

#### Electrical

Power input, nominal: AC 200-240V, 50/60Hz

Max. Power consumption: 555W, max current: 2.7A, PF: 0.997

Power supply unit: Auto-ranging electronic SMPS

Main fuse: 10A Ballast: Electronic

AC power: Neutrik powerCon

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

# Control and programming

Control channels (DMX): 19/16/22

Protocol: DMX-512

Display: Graphic LCD backlit

# Physical / Installation

Weight: 27.9Kg (61lbs.)

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)

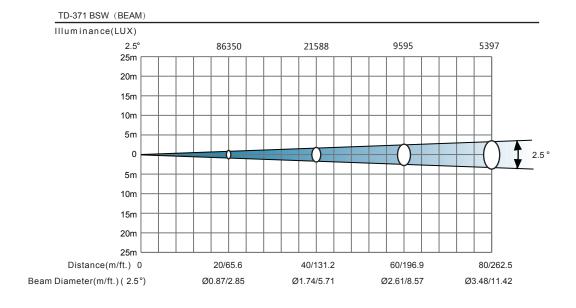
Cooling: Active fan Humidity: ≤85%

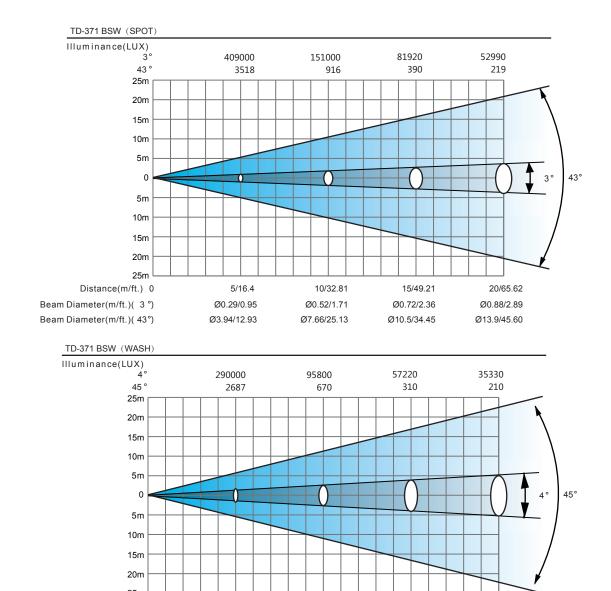
## Certification and Safety

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

Safety: EN 60598-2-17:1989/A2:1991

#### Photometric





#### Other features

Distance(m/ft.) 0

50% Beam Diameter(m/ft.)(4°)

10% Beam Diameter(m/ft.)(4°)

50% Beam Diameter(m/ft.)( 45°)

10% Beam Diameter(m/ft.)( 45°)

• 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.

10/32.81

Ø0 34/1 11

Ø0 78/2 56

Ø3.82/12.53

Ø9.26/30.38

15/49.21

Ø0 38/1 25

Ø0 80/2 62

Ø6.31/20.70

Ø13.1/42.98

20/65.62

Ø0 50/1 64

Ø0 98/3 22

Ø8.04/26.38

Ø16.4/53.81

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

5/16.4

Ø0 16/0 52

Ø0 33/1 08

Ø2.11/6.92

Ø4.14/13.58

- 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

# 9. Gobos and colors

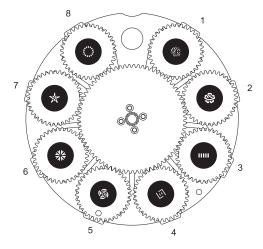
### 9.1 Gobo specification

All patterns are made onto the metal gobos, and can be customized according to user's requirement. The customized size is as below:

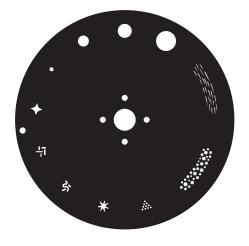
Gobo material	Outer dimension	Effective dimension	Thickness
Metal gobo	¢ 14.4 mm	¢ 6 mm	0.5mm
Note: Metal Gobo			

#### 9.2 Gobos

- One rotating gobo wheel: 8 interchangeable gobos + open, indexing, CW/CCW rotation, variable speed
- One fixed gobo wheel: 9 gobos + open, CW/CCW rotation, variable speed



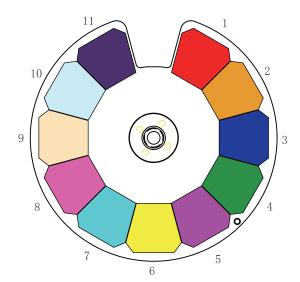
Rotating gobo wheel



Fixed gobo wheel

#### 9.3 Colors

One color wheel: 11 colors + open, split color, CW/CCW rotation, "Rainbow effect" in both directions



- 1: Red
- 2: Organge
- 3: Blue
- 4: Green
- 5: Magenta
- 6: Yellow
- 7: Cyan blue
- 8: Pink
- 9: CTO
- 10: CTB
- 11: UV

# 10.Menu structure

	371 BSW – Menu Structure
Revision: A	Valid from firmware version: 1.0

_evel 1	Level 2	Level 3	Level 4	Info
Run setting	Address Setting	Address: 001~ XXX		Setting the DMX address
	Value Display	Pan, All, No		Display the channel value
	Auto-Program	Master/Alone		Run auto program in master or slave
	IP Setting	192.168.xxx.xxx		Setting ARTNET network address
	Mask Address	255.255.255.xxx		Setting ARTNET subnet address
	SysID Setting	xxx		Setting Device ID
	Time Info	This Time	XXXXXX Hour	Since power on time
		Total Time	XXXXXX Hour	Product total run time
		Last Time	XXXXXX Hour	Last product run time
		Lamp On Time	XXXXXX Hour	Lamp on time
		Lamp Off Time	XXXXXX Minute	Lamp close time
		Last Time Code	Password: xxx(88)	Clear last time password
Device Info		Clear Last Time	Yes/No	Clear last time
Device IIIIo		Lamp Time Code	Password: xxx(111)	Clear lamp time password
		Clear Lamp Time	Yes/No	
	T			Clear lamp time
	Temperature	Body Temperature	XXX 'C/'F	Body temperature
	Fans Info	NO/		
	Err Info	No Err/		
	Software Version	XX RDM Code0032-xxxxxx		The software version and RDM code
Lamp Control	Lamp On/Off	On/Off		Open lamp
	Power On Lamp	Enable/Disable		Power on open lamp
	On	Enable/Disable		Console open lamp
	Console Lamp On	Enable/Disable		Console close lamp
	Console Lamp Off	20~79, 45'C /68~174 , 113'F		Open lamp below temperature
	Lamp On Temp.	80~139, 130'C/176~282,266'F		Close lamp above temperature
Custom	1	Console Set Addr	Enable /Disable	·
System	Status Setting		Enable/Disable	Address can be changed by console
Setting		No Signal Status	Off/Hold/Auto/Music	The status while no signal
		Pan Reverse	Enable/Disable	Pan Reverse
		Tilt Reverse	Enable/Disable	Tilt Reverse
		Pan Scan Degree	360/540	Pan Scan Degree
		Scan Feedback	Enable/Disable	Scan Feedback
		Standby Time	Disable/1~20 Min, 30	Standby time
	Fan Speed	Smart Control		Auto fans speed
	T dil Opcod	High Speed		Fans high speed
		Low Speed		Fans low speed
	Dianlay Catting	·	1~80 Min/Disable	
	Display Setting	Backlight Time		Backlight off time
		Keyboard Lock	Enable/Disable	Press <menu> 3s to unlock</menu>
		Brightness Set	15%~100% 80%	Brightness Set
		Language	Chinese/English	Change the language
		Auto Screen Set	on/off/Auto	Screen display upside down
	Temperature Unit	Celsius		Temperature unit
		Fahrenheit		
	Value Default	Pan	Pan =XXX	The default value
	Wireless Dev	Wireless Off		Wireless off
		Wireless On		Wireless on
		Wireless Trans.		Wireless transfer DMX data to another
		Wireless Reset		Wireless reset
	Discours Marks			
	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			strobe motor reset
	Other Reset			other motor reset
Channel	Test Mode	Pan		Every channel test
Adjust			Dec. VOC	
Aujust	Manual Mode	Pan	Pan =XXX	Manual control
		:	:	
	Adjust Mode	Input Password	Password=XXX(99)	The password of adjust mode
	i e	İ	I	1
		Pan	Pan=XXX	Fixed all begin position

17GTD Lighting

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

<sup>\*</sup>Settings hightlighted in light grey are default values

# 11.DMX protocol

# TD-371 BSW DMX Protocol Revision: A Valid from firmware version: 1.0

### DMX protocol - Standard [19 channels]

DMX mode Standard (19ch)	Name	DMX	value	DMX percentage		Function	Default DMX Value
, ,		0	31	0.0%	12.2%	Closed	
		32	63	12.5%	24.7%	Open	
1	Strobe/Shutter	64	127	25.1%	49.8%	Synchronous strobe from slow to fast	0(0%)
•	Otrobo/Oriditor	128	159	50.2%	62.4%	Open	0(0%)
		160	223	62.7%		Random strobe from slow to fast	
		224	255	87.8%	100.0%	Open	
2	Intensity	0	255	0.0%	100.0%	No light → Full light	0(0%)
3	,	0	65535	0.0%		Intensity fade, fine (LSB)	, ,
		0	17	0.0%	6.7%	Open Color 4	_
		18	27	7.1%	10.6%	Color 1	_
		28	37 47	11.0%	14.5%	Color 2	_
		38		14.9%	18.4%	Color 4	_
		48 58	57 67	18.8% 22.7%	22.4% 26.3%	Color 4 Color 5	_
			1	26.7%	30.2%		
		68 78	77 87	30.6%	34.1%	Color 6 Color 7	
4	Color wheel	88	97	34.5%	38.0%	Color 8	0(0%)
7	Color Wricer	98	107	38.4%	42.0%	Color 9	0(070)
		108	117	42.4%	45.9%	Color 10	
		118	127	46.3%	49.8%	Color 11	
		110	127			Color1 continous rotation CW from	
		128	187	50.2%	73.3%	Islow to fast	
		188	195	73.7%	76.5%	Stop	_
		196	255	76.9%	100.0%	Color1 continous contrarotation CCW from slow to fast	1
		0	17	0.0%	6.7%	Open gobo	
		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	
-	Coho whool (otatio)	65	71	25.5%	27.8%	Gobo 2 shake	0/00/\
5	Gobo wheel (static)	72	78	28.2%	30.6%	Gobo 3 shake	0(0%)
		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 contrarotation CCW from slow to fast	
		0	15	0.0%	5.9%	Open gobo	
		16	22	6.3%	8.6%	Gobo 1	
		23	29	9.0%	11.4%	Gobo 2	
e	Dotation asks who s	30	36	11.8%	14.1%	Gobo 3	0(00()
6	Rotating gobo wheel	37	43	14.5%	16.9%	Gobo 4	0(0%)
		44	50	17.3%	19.6%	Gobo 5	
		51	57	20.0%	22.4%	Gobo 6	
	1	58	64	22.7%	25.1%	Gobo 7	1

1960   1974   1985	Standard				ח	MX		Default
65   71   25.5%   27.8%   Gobo 8   72   78   Gobo 8   72   78   85   31.0%   33.3%   Gobo 2 shake   66   92   33.7%   36.1%   Gobo 3 shake   67   99   99   36.5%   33.8%   Gobo 4 shake   67   67   600   50   50   600   50   50   600   50   5		Name	DMX	value			Function	
Rotating gobo wheel   1			65	71	25.5%		Gobo 8	
Rotating gobo wheel   93								
8								
Rotating gobo wheel   107   113   20,94   41,6%   30,00 6 shake								
Rotating gobo wheel   107   113   42 (0%   44.3%   47.1%   47.1%   47.1%   60ho 7 shake   14.1   121   127   47.5%   48.8%   60ho 8 shake   128   187   50.2%   73.3%   176.5%   50ho 9 shake   128   187   50.2%   73.3%   176.5%   50ho wheel continous rotation CW from slow to fast   60ho verteel continous contrarotation CW from slow to fast   60ho rotation positioning gobo wheel 1   188   195   73.7%   76.5%   60ho rotation positioning gobo wheel 1   188   195   73.7%   76.5%   60ho continous contrarotation CCW from slow to fast   60ho rotation positioning gobo wheel 1   196   255   76.9%   100.0%   60ho continous contrarotation CCW from slow to fast   60ho rotation positioning gobo wheel 1   198   255   76.9%   100.0%								ł
Notating good wheel   144   120   144   7%   47.1%   630b 7 shake   121   127   47.5%   49.8%   630b 8 shake   630b wheel continous rotation CW   188   195   73.7%   76.5%   630b wheel continous contrarotation CW   630b wheel continous con								
121   127   47,5%   48,8%   60bo 8 shake   188   195   73,7%   76,5%   196   255   76,9%   100,0%   196   255   76,9%   100,0%   128   187   50,2%   73,3%   60bo wheel continous contrarotation   128   187   50,2%   73,3%   60bo wheel continous contrarotation   128   187   50,2%   73,3%   60bo continous contrarotation   188   195   73,7%   76,5%   50bo   196   255   76,9%   100,0%   60bo continous contrarotation   188   195   73,7%   76,5%   50bo   196   255   76,9%   100,0%   60bo continous contrarotation   128   187   100,0%   122   128   187   128   1	6	Rotating gobo wheel						0(0%)
128								
188   195   73.7%   76.5%   Stop   Gob wheel continous contrarotation   CW from slow to fast   CW from slow to							Gobo wheel continous rotation CW	
The content of the			188	195	73.7%	76.5%	Stop	
The first plate 2 rotation   128   187   50.2%   73.3%   1			196	255	76.9%	100.0%		
128   187   50.2%   73.3%   16 tast   188   195   73.7%   76.5%   180			0	127	0.0%	49.8%		
180   199   73.7%   76.9%   100.0%	7						to fast	0(0%)
196    255    76.9%   100.0%   round   roun	,		188	195	73.7%	76.5%		0(070)
9   Zoom		_	196				from slow to fast	
10								
11	9	Zoom						0(0%)
11	10	Prism plate1						0(0%)
11								
11								
Prism plate Flourish   188   195   73.7%   76.5%   Stop   Prism continous contrarotation CCW   from slow to fast   100.0%   100.0%   Prism continous contrarotation CCW   from slow to fast   100.0%			128	187	50.2%	73.3%		0 (00()
12	11	Prism plate 1 rotation	188	195	73.7%	76.5%		0(0%)
12			196	255			Prism continous contrarotation CCW	
13	12	Driem plata 2	0	31	0.0%	12.2%	Off	0/0%)
13	12	Filsiii piate 2	32	255	12.5%	100.0%	Prism On	0(0 %)
13			0	127	0.0%	49.8%		
188	13	Prism plate2 rotation					slow to fast	0(0%)
14		Thom platez retation	188	195	73.7%	76.5%		0(070)
14							from slow to fast	
15	14	Frost						0(0%)
Tilt								,
Tilt		Pan						0(0%)
18								
19   0.0%   3.5%   No function		Tilt						46(18.0%)
10								
30   39   11.8%   15.3%   Color wheel half color switch								
40			20	29	7.8%	11.4%	Close light after 5 seconds	
Special controls   Special con								
Special controls   60								
To   To   To   To   To   To   To   To								
Special controls   80							Ť	
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								
19 Special controls  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							Ť	
Special controls								
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	19	Special controls						0(0%)
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								
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				139	51.0%	54.5%	Built-in program 2	
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								
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								
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								
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								
200       209       78.4%       82.0%       Built-in program 9         210       219       82.4%       85.9%       Built-in program 10								
210 219 82.4% 85.9% Built-in program 10								

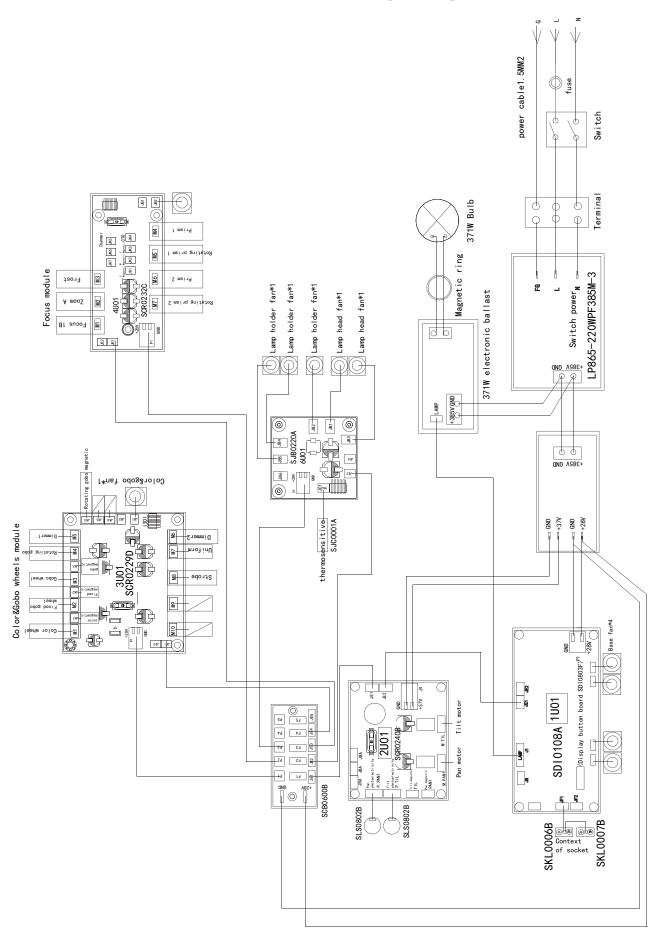
DMX mode Simplified (16ch)	Name	DMX	value	_	MX entage	Function	Default DMX Value	
		0	31	0.0%	12.2%	Closed		
		32	63	12.5%	24.7%	Open		
1	Strobe/Shutter	64	127	25.1%	49.8%	Synchronous strobe from slow to fast	0(0%)	
		128	159	50.2%	62.4%	Open	0(0,0)	
		160	223	62.7%	87.5%	Random strobe from slow to fast		
2	Intonoity	224	255	87.8%	100.0%	Open	0/00/ )	
2	Intensity	0	255 17	0.0%	100.0% 6.7%	No light → Full light Open	0(0%)	
		18	27	7.1%	10.6%	Color 1		
		28	37	11.0%	14.5%	Color 2		
		38	47	14.9%	18.4%	Color 3		
		48	57	18.8%	22.4%	Color 4		
		58	67	22.7%	26.3%	Color 5		
		68	77	26.7%	30.2%	Color 6		
		78	87	30.6%	34.1%	Color 7		
3	Color wheel	88	97	34.5%	38.0%	Color 8	0(0%)	
		98	107	38.4%	42.0%	Color 9		
		108	117	42.4%	45.9%	Color 10		
		118	127	46.3%	49.8%	Color 11		
		128	187	50.2%	73.3%	Color1 continous rotation CW from		
						fast to slow		
		188	195	73.7%	76.5%	Stop		
		196	255	76.9%	100.0%	Color1 continous rotation CCW from		
		0	17	0.0%	6.7%	Slow to fast Open gobo		
		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		
4	Gobo wheel (static)	65	71	25.5%	27.8%	Gobo 2 shake	0(0%)	
		72 79	78 85	28.2% 31.0%	30.6% 33.3%	Gobo 3 shake 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		
		0	15	0.0%	5.9%	Open gobo		
		16	22	6.3%	8.6%	Gobo 1		
		23	29	9.0%	11.4%	Gobo 2		
		30	36	11.8%	14.1%	Gobo 3		
F	Dotating gobo wheel	37	43	14.5%	16.9%	Gobo 4	0/09/3	
5	Rotating gobo wheel	44 51	50 57	17.3%	19.6%	Gobo 5	0(0%)	
		51 58	57 64	20.0%	22.4% 25.1%	Gobo 6 Gobo 7		
		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	†	
					/ -		·	

Simplified	Name	DMX	value		MX	Function	Default DMX
(16ch)			T		entage		Value
		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	
_	Dotating gobo whool	114	120	44.7%	47.1%	Gobo 7 shake	0(0%)
5	Rotating gobo wheel	121	127	47.5%	49.8%	Gobo 8 shake	0(0%)
		128	187	50.2%	73.3%	Gobo wheel continous rotation CW	
		188	195	73.7%	76.5%	from slow to fast Stop	
		100	255	13.170	70.5%	Gobo wheel continous rotation CCW	
		196	255	76.9%	100.0%	from slow to fast	
		0	127	0.0%	49.8%	Gobo rotation positioning	
			187			Gobo continous rotation CW from slow	
	Gobo	128	107	50.2%	73.3%	to fast	
6	rotating/positioning	188	195	73.7%	76.5%	Stop	0(0%)
	gobo wheel 1		255			Gobo continous rotation CCW from	
		196		76.9%	100.0%	slow to fast	
7	Focus	0	255	0.0%	100.0%	Near → Far	0(0%)
8	Zoom	0	255	0.0%		Near → Far	0(0%)
9		0	31	0.0%	12.2%	Off	0(0%)
9	Prism plate1	32	255	12.5%	100.0%	Prism On	0(0%)
		0	127	0.0%	49.8%	Prism indexed	
		400	187	E0 20/	72.20/	Prism continous rotation CW from	
10	Driam plate 1 retation	128		50.2%	73.3%	slow to fast	0/00/ )
10	Prism plate 1 rotation	188	195	73.7%	76.5%	Stop	0(0%)
		106	255	76.00/	100.00/	Prism continous rotation CCW from	
		196		76.9%	100.0%	slow to fast	
11	Driam plata 2	0	31	0.0%	12.2%	Off	0(0%)
11	Prism plate 2	32	255	12.5%	100.0%	Prism On	0(0%)
		0	127	0.0%	49.8%	Prism indexed	
		128	187	50.2%	73.3%	Prism continous rotation CW from	
12	Prism plate2 rotation	120			73.370	slow to fast	0(0%)
12	1 113111 platez Totation	188	195	73.7%	76.5%	Stop	0(070)
		196	255	76.9%	100.0%	Prism continous rotation CCW from	
		130				slow to fast	
13	Frost	0	31	0.0%	12.2%	Off	0(0%)
		32			100.0%		,
14	Pan	0	255	0.0%	100.0%	Pan	0(0%)
15	Tilt	0	255	0.0%	100.0%	Tilt	46(18.0%)
		0	9	0.0%	3.5%	No function	
		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	
	ļ	100	109	39.2%	42.7%	All strobe motor reset after 5 seconds	
16	Special controls	110	119	43.1%	46.7%	Other motor reset after 5 seconds	0(0%)
		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	
	ľ	160	169	62.7%	66.3%	Built-in program 5	
	ľ	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	
l l							
		210 220	219 255	82.4% 86.3%	85.9% 100.0%	Built-in program 10 Reserved	

DMX mode Extended (22ch)	Name	DMX	value		MX entage	Function	Default DMX Value	
		0	31	0.0%	12.2%	Closed		
		32	63	12.5%	24.7%	Open		
1	Strobe/Shutter	64	127	25.1%	49.8%	Synchronous strobe from slow to fast	0(0%)	
		128	159	50.2%	62.4%	Open		
		160	223	62.7%	87.5%	Random strobe from slow to fast		
2		224 0	255 255	87.8% 0.0%	100.0% 100.0%	Open No light → Full light		
3	Intensity	0	65535	0.0%		Intensity fade, fine (LSB)	0(0%)	
		0	17	0.0%	6.7%	Open		
		18	27	7.1%	10.6%	Color 1		
		28	37	11.0%	14.5%	Color 2		
		38	47	14.9%	18.4%	Color 3		
		48	57	18.8%	22.4%	Color 4	_	
		58 68	67 77	22.7% 26.7%	26.3% 30.2%	Color 5 Color 6	_	
		78	87	30.6%	34.1%	Color 7	_	
4	Color wheel	88	97	34.5%	38.0%	Color 8	0(0%)	
-		98	107	38.4%	42.0%	Color 9	- (- / - /	
		108	117	42.4%	45.9%	Color 10		
		118	127	46.3%	49.8%	Color 11		
		128	187	50.2%	73.3%	Color1 continous rotation CW from		
						fast to slow		
		188	195	73.7%	76.5%	Stop	_	
		196	255	76.9%	100.0%	Color1 continous rotation CCW from slow to fast		
		0	17	0.0%	6.7%	Open gobo		
		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 46	45 49	16.5% 18.0%	17.6% 19.2%	Gobo 7 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		
5	Gobo wheel (static)	65	71	25.5%	27.8%	Gobo 2 shake	0(0%)	
	Gobo Wilcer (Statie)	72	78	28.2%	30.6%	Gobo 3 shake	0(070)	
		79	85	31.0%	33.3%	Gobo 4 shake	_	
		86 93	92 99	33.7%	36.1%	Gobo 5 shake	_	
		100	106	36.5% 39.2%	38.8% 41.6%	Gobo 6 shake Gobo 7 shake	_	
1		107	113	42.0%	44.3%	Gobo 8 shake	1	
		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		
			40-			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		
		0	15	0.0%	5.9%	Open gobo		
		16	22	6.3%	8.6%	Gobo 1	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		
	Deteting asks who st	44	50	17.3%	19.6%	Gobo 5	0(00()	
6	Rotating gobo wheel	51 50	57 64	20.0%	22.4%	Gobo 6	0(0%)	
		58 65	64 71	22.7% 25.5%	25.1% 27.8%	Gobo 7 Gobo 8	1	
		72	78	28.2%	30.6%	Gobo 1 shake	1	
		79	85	31.0%	33.3%	Gobo 2 shake	1	
1		86	92	33.7%	36.1%	Gobo 3 shake		
		93	99	36.5%	38.8%	Gobo 4 shake		

Standard	Name	DMX	value		MX	Function	Default
(22ch)	Name		value		entage		DMX Value
		100	106	39.2%	41.6%	Gobo 5 shake	
		107	113	42.0%	44.3%	Gobo 6 shake	ļ
		114 121	120 127	44.7% 47.5%	47.1% 49.8%	Gobo 7 shake Gobo 8 shake	
6	Rotating gobo wheel		187			Gobo wheel continous rotation CW	0(0%)
	33	128		50.2%	73.3%	from slow to fast	
		188	195	73.7%	76.5%	Stop	]
		196	255	76.9%	100.0%	Gobo wheel continous rotation CCW	
			10-			from slow to fast	
		0	127	0.0%	49.8%	Gobo rotation positioning	
	Gobo	128	187	50.2%	73.3%	Gobo continous rotation CW from slow to fast	
7	rotating/positioning	188	195	73.7%	76.5%	Stop	0(0%)
	gobo wheel 1		255			Gobo continous rotation CCW from	(0,0)
	Ĭ	196		76.9%	100.0%	slow to fast	
8		0	65535	0.0%	100.0%	Gobo rotation/positioning, fine (LSB)	
9	Focus	0	255	0.0%	100.0%	Near → Far	0(0%)
10 11		0	65535 255	0.0%	100.0% 100.0%	Focus, fine (LSB) Near → Far	` '
12	Zoom	0	65535	0.0%		Zoom, fine (LSB)	0(0%)
		0	31	0.0%	12.2%	Off	
13	Prism plate1	32	255	12.5%	100.0%	Prism On	0(0%)
		0	127	0.0%	49.8%	Prism indexed	
			187			Prism continous rotation CW from	
		128	101	50.2%	73.3%	slow to fast	0.(00()
14	Prism plate 1 rotation	188	195	73.7%	76.5%	Stop	0(0%)
			255			Prism continous rotation CCW from	
		196		76.9%	100.0%	slow to fast	
4.5	Dela sa salata O	0	31	0.0%	12.2%	Off	0(00()
15	Prism plate 2	32	255	12.5%	100.0%	Prism On	0(0%)
		0	127	0.0%	49.8%	Prism indexed	
		100	187	50.00/	72.20/	Prism continous rotation CW from	
16	Prism plate2 rotation	128		50.2%	73.3%	slow to fast	0(0%)
16	Prism pialez rolalion	188	195	73.7%	76.5%	Stop	0(0%)
		196	255	76.9%	100.0%	Prism continous rotation CCW from	
						slow to fast	
17	Frost	0	31	0.0%	12.2%	Off	0(0%)
		32	255	12.5%	100.0%	On	- ( )
18	Pan	0	255		100.0%		0(0%)
19		0	65535			Pan, fine (LSB)	` ′
20 21	Tilt	0	255	0.0%	100.0%		46(18.0%)
		0	65535 9	0.0%	100.0% 3.5%	Tilt, fine (LSB) No function	
		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	1
		40	49	15.7%	19.2%	Color wheel random positioning	
		50	59	19.6%	23.1%	Reserved	1
		60	69	23.5%	27.1%	Reset all motor after 5 seconds	1
		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	1
		90	99	35.3%	38.8%	All gobo motor reset after 5 seconds	1
		100	109	39.2%	42.7%	All strobe motor reset after 5 seconds	
22	Special controls	110	119	43.1%	46.7%	Other motor reset after 5 seconds	0(0%)
1	'	120	129	47.1%	50.6%	Built-in program 1	] ` ´
1		130	139	51.0%	54.5%	Built-in program 2	]
1		140	149	54.9%	58.4%	Built-in program 3	
1		150	159	58.8%	62.4%	Built-in program 4	
1		160	169	62.7%	66.3%	Built-in program 5	
1		170	179	66.7%	70.2%	Built-in program 6	
1		180	189	70.6%	74.1%	Built-in program 7	
1		190	199	74.5%	78.0%	Built-in program 8	
1		200	209	78.4%	82.0%	Built-in program 9	
1		210 220	219	82.4%	85.9%	Built-in program 10	
			255	86.3%	100 0%	Reserved	Ī

# 12.System wiring diagram



# 13. Maintenance and Troubleshooting

#### 13.1 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.



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.

# 13.2 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.

Problem	Possible Cause	Suggested Correction
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 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.
	Thermostat damaged.	Replace.
	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.
Shaking, wrong position, and out of	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.
control gobo wheel	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.
	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary.
Decreased brightness, uneven pattern projections	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.
	Normal end of lamp life.	Test the lamp in an adjacent fixture which is known to be operating properly and then replace as necessary.
Wrong color	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.

# 14.Spare parts list

Name	P/N	Qty	Notes
Swtichi power	1412050074A	1	ETS650-3853728P AC:200~240V, DC:385V, 37V, 28V
Electronic ballast	1412020013A	1	371W S
Bulb	1306030018A	1	OSRAM SIRIUS HRI 371W
Display	5802020067A	1	0108A-1
Scan board	5802913057B	1	0240B-1 SCR0240B 4 pin 1 (8412)
Motor drive board3	5809010375A	1	TD-371 BSW-301010 SCR0229B/ 0229B-3
Motor drive board4	5809010376A	1	TD-371 BSW-401010 SCR0232B/0232B-1
Fan drive board	5809010377A	1	TD-371BSW - 501M10 SJB0220A/ 0220A-1
Adapter board 0600B-1	5801063001B	1	SCB0600B 8 Pin



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