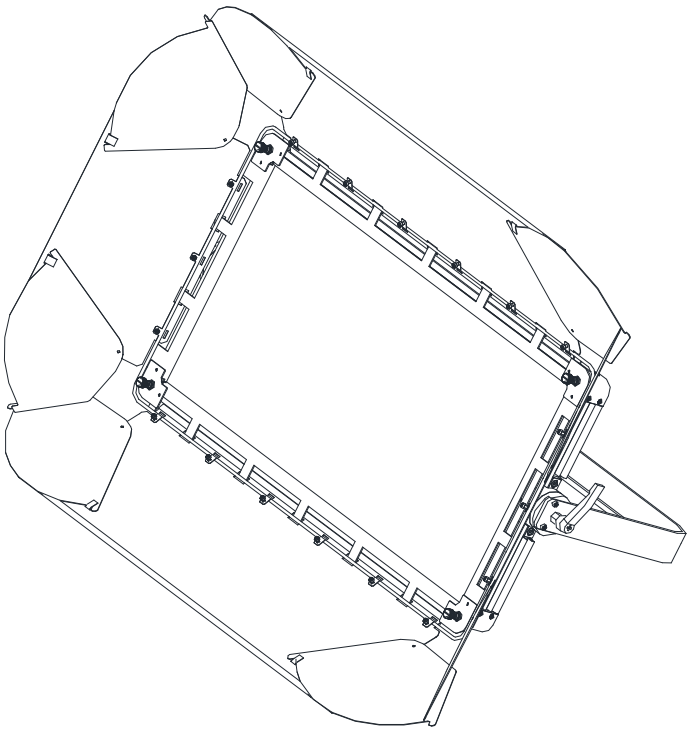

GTD–LP200 C

Moving Head

User Manual

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Guangzhou GTD Culture & Technology Group Co.,Ltd. | 27 Fu Yuan Yi Road, Guangzhou 510805, P.R.China
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Contents

1. Safety instructions

Before using the fixture, read the latest version of the product user manual, paying particular attention to the safety instructions. Please check www.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!

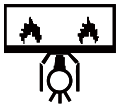
Hazardous voltage. Risk of lethal or severe electric shock

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.

m Minimum distance to lighted objects.

ta. . . °C Maximum ambient temperature.

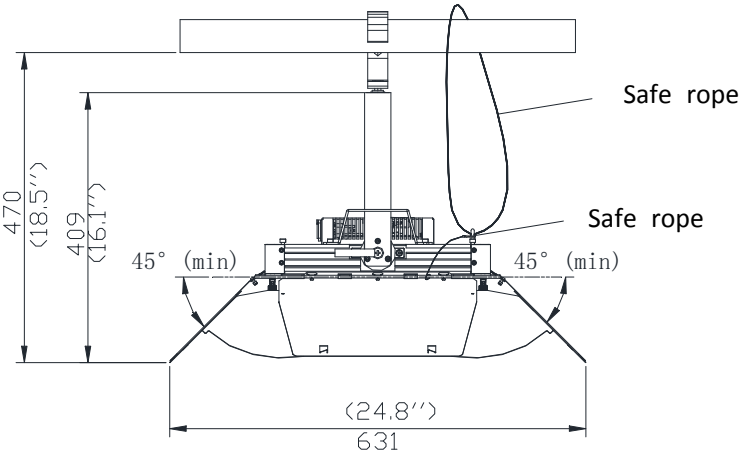
tc. . . °C Maximum temp of the external surface.

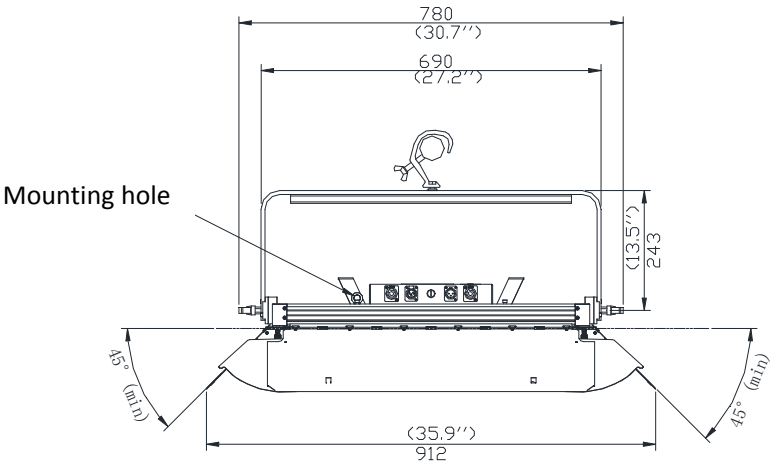
⚠ General guidelines

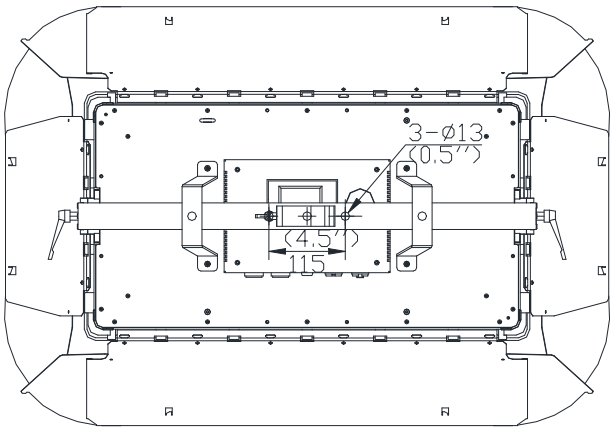
- The protection rating of this product IP20.
- Never open this fixture while it is in use.
- The fixture should be kept clean. DO NOT operate the fixture in extreme heat or dusty environments. Avoid contact with chemical liquid.
- Minimum distance to lighted objects must be 3.28feet (1m).
- Maximum temp of the external surface 158˚F (70˚C).
- Maximum ambient temperature 113˚F (45˚C).
- Minimum distance of inflammable materials from the surface 1.64 feet (0.5m).
- Lamp should be replaced 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. Make sure 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. Avoiding reduce the lamp's life, wait at least 15 minutes after powering off to allow the unit to cool down before handling.
- To ensure operational safety, broken or damaged cables and light source can only be fixed or replaced by certified technicians, certified local distributors or the manufacturer.
- 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 +862061808296.

2. Production instructions

2.1 Dimensions







2.3 Accessories

Item	Qty	Unit	Remark
User Manual	1	Pc	--
LED Clamps	1	Set	117*80*24 ¢ 50*10KG
Safety cable	1	Pc	ϕ3*80cm& ϕ1*15cm with hook Material：Steel
3-pins signal line	1	Set	5m
Power line	1	Pc	1.5m*2.0mm2

3. Packing and shipping

3.1 Unpacking

⚠ **Notes**

All products are quality controlled before they 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.

Cardboard box(specification：840*485*185 mm)： Open the box and take out the whole set of packaging foam which are contained 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.

Flight–Case(specification: 920*544*658mm)： Uncover the flight-case and remove the plastic packing bags. Hold the handles of the fixture firmly and take it out carefully.

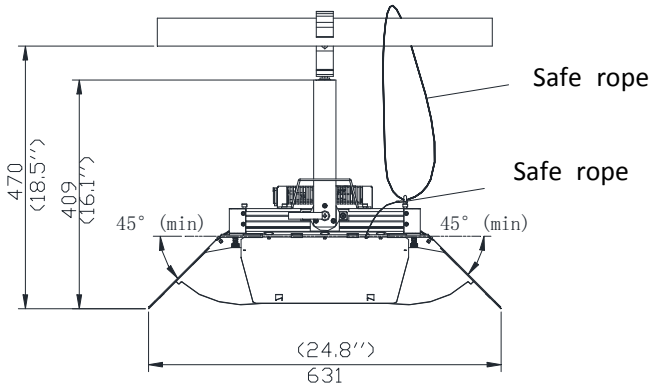
3.2 Packing after use

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. Flight case: Wrap the fixture in plastic bags. Gripping the handle and then place it in the flight case along with all the accessories carefully. Close the cover lid. The wrap page are not allowed over 2 layers. Do not upside down.
3. 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 put it carefully in the cardboard box.

4. Installation

4.1 Device installation

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



5. Power/ Control connection

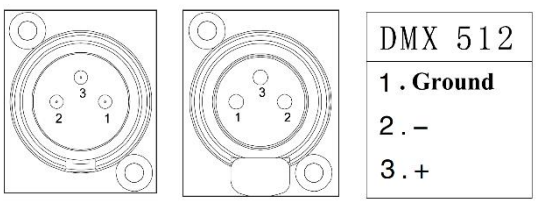
5.1 Power connection

Connection method:

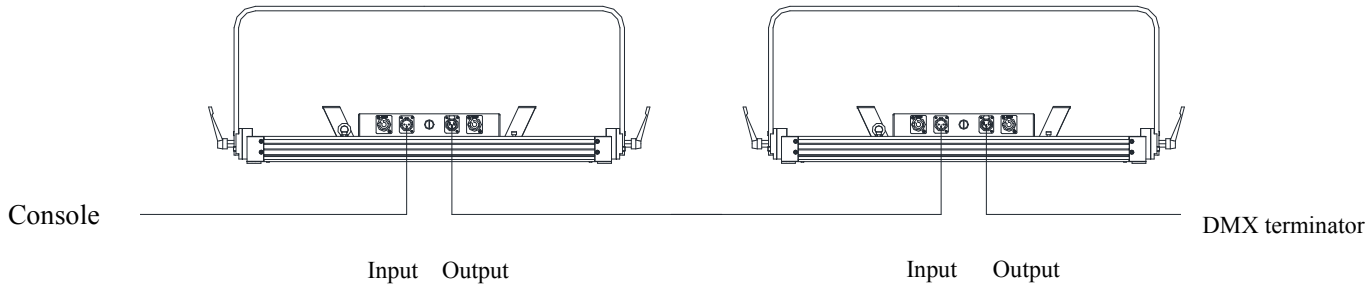
- L (Live) Brown wire
- E (Earth) Yellow / Green bi–color wire
- N (Neutral) Blue wire
- The voltage and frequency of the power source must be in compliance with the ones marked on the fixture. It is strongly recommended that each fixture are to be connected to the power source separately so that they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

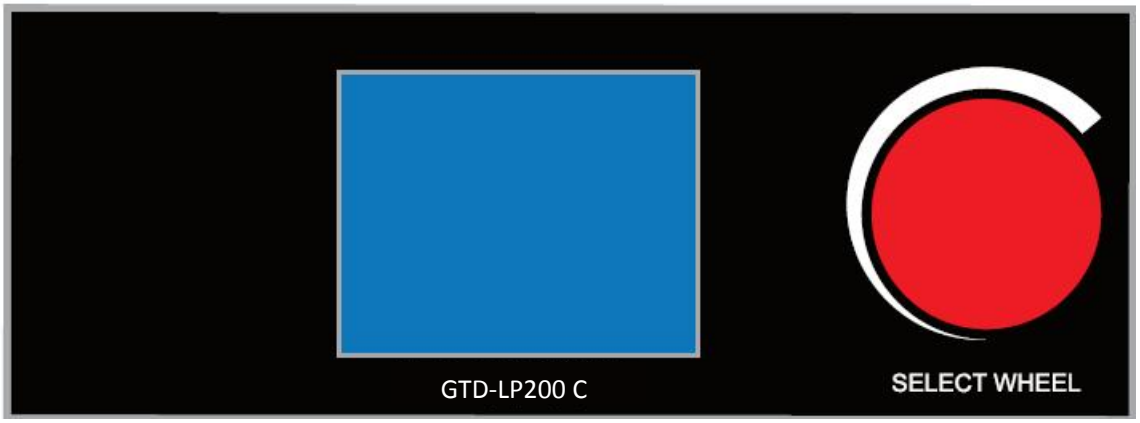


5.3 Testing

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.
- Switch the button can select the function menu.

7. Technical specification

- **Optical**

  Light source: LED RGB 1W

  Expected average lifetime: 50000 h

  Color temperature correction: 3200K–6500K

  Lumens: 8372 lm

  Beam：110° （10%）、55° （50%）

  CRI：Ra > 90

- **Electrical**

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

  Max. Power consumption: 233W

  Max current: 2.6A, PF: ≥0.94

  Power supply unit: wide range electronic SMPS

  Main fuse: 6.3A

  Power input: Self-contained power cord

  DMX data input/output: Chassis 3-pin

- **Control and programming**

  Control channels (DMX): 6CH/10CH

  Protocol: DMX-512 RDM

  Display: LCD display

- **Physical / Installation**

  Weight: 10 Kg

  IP rating: IP20

  Material: Aluminum, iron, plastic

  Mounting points: fixed folding lamp hook + attachment points for safety wire

- **Dynamic effects**

  Strobe: 1-25Hz, strobe randomly, pulse randomly, strobe synchronously and asynchronously

  Dimmer: 0-100%, electronic linear dimming

- **Thermal**

  - Operating range: -13˚F - 113˚F (-25˚C - 45˚C)
  - Storage range: -40˚F - 140˚F(-40˚C - 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,

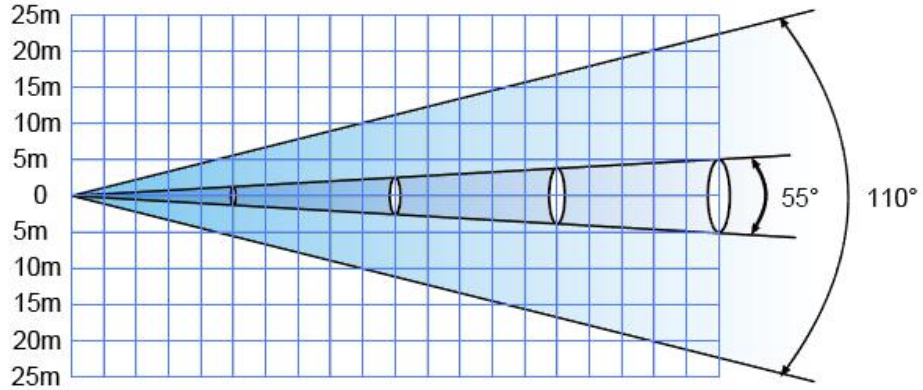
GB/T 17743-2007, GB 17625.1-2012

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

- **Photometric**

illuminance (LUX)

R	270	91	60	29
G	522	171	99	47
B	103	40	27	11
F	523	166	103	51



Distance (m) 0	2.5	5	7.5	10
55°beam distance (50%)	Ø 3.6	Ø 7.2	Ø 10.8	Ø 14.4
110°beam distance (10%)	Ø 7.25	Ø 14.5	Ø 21.75	Ø 29

- **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 activate sleep mode remotely. 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.
- Communications Design： DMX wired/wireless transmission, bidirectional–control technology, upgrade the software quickly and conveniently by using DMX cable.

8. Menu structure

Level 1	Level 2	Level 3	Level 4	Info
1.Run setting	Address:001~ XXX			Setting the DMX address
2.Device Info	1.Time Info	1.Since power on 2.Total Time 3.Return	XXXXXX Hour XXXXXX Hour	Since power on time Product total run time
	2.Temperature	XXX ’C/’F		Body temperature
	3.Fan1.Fans Info.	Normal/Fault/No		Show fans’ status
	4.Software Version	X.X		The software version
	5.Return			Return to the previous menu
3.System Setting	1.Status Setting	1.No Signal Status 2.Standby Time 3.Return	Off/Hold/Auto Disable/1~120Min,30	The status while no signal Standby time Return
	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.Key Lock 3.Lightness 4.Language 5.Screen auto 6.Return	1~80 Min/Disable Enable/Disable 15~100% 80% Chinese/English off/on	Backlight off time Press <menu> 3s to unlock Back lightness of screen Change the language Screen change Setting Return to the previous menu
	4.Temperature Unit	Celsius Fahrenheit		Temperature unit
	5.Value Default	1.Dimmer 2.Dimmer_F 3.Red 4.Red_F 5.Green 6.Green_F 7.Blue 8.Blue_F	1.Dimmer =XXX 2.Dimmer_F =XXX 3.Red =XXX 4.Red_F =XXX 5.Green =XXX 6.Green_F =XXX 7.Blue =XXX 8.Blue_F =XXX	The default value

		9.Raibow 10.ColorTemp. 11.Return	9.Raibow =XXX 10.ColorTemp. =XXX	
	6.Restore Default	Yes/No		Restore to default value
	7.Select Device	- Password- XXX(xx)	1. GTD LP200 C	Select the model of the device
	8.Return			
4.Reset	1.System Reset 2.Return			System reset
5.Channel Adjust	1.Manual Mode	1.Dimmer 2.Dimmer_F 3.Red 4.Red_F 5.Green 6.Green_F 7.Blue 8.Blue_F 9.Raibow 10.ColorTemp. 11.Return	1.Dimmer =XXX 2.Dimmer_F =XXX 3.Red =XXX 4.Red_F =XXX 5.Green =XXX 6.Green_F =XXX 7.Blue =XXX 8.Blue_F =XXX 9.Raibow =XXX 10.ColorTemp. =XXX	Dimmer
	2.Channel Mode	1.Basic Mode 2.Standard Mode		Basic Mode Standard Mode
	3.Return			
6.Return				Return to the previous menu

***Settings hightlighted in light grey are default value**

9. DMX Protocol

Basic

DMX mode Basic (6ch)	Name	DMX value		DMX percentage		Function	Default DMX Value
1	Intensity	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
2	Red	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
3	Green	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
4	Blue	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
5	Rainbow Function	0	9	0.0%	3.5%	No function	0(0%)
		10	39	3.9%	15.3%	Rainbow scene 1	
		40	71	15.7%	27.8%	Rainbow scene 2	
		72	103	28.2%	40.4%	Rainbow scene 3	
		104	135	40.8%	52.9%	Rainbow scene 4	
		136	167	53.3%	65.5%	Rainbow scene 5	
		168	199	65.9%	78.0%	Rainbow scene 6	
		200	231	78.4%	90.6%	Rainbow scene 7	
		232	255	91.0%	100.0%	Rainbow flow from slow to fast	
6	Color temperature	0	21	0.0%	8.2%	No function	0(0%)
		22	34	8.6%	13.3%	3200K	
		35	47	13.7%	18.4%	3400K	
		48	60	18.8%	23.5%	3600K	
		61	73	23.9%	28.6%	3800K	
		74	86	29.0%	33.7%	4000K	
		87	99	34.1%	38.8%	4200K	
		100	112	39.2%	43.9%	4400K	
		113	125	44.3%	49.0%	4600K	
		126	138	49.4%	54.1%	4800K	
		139	151	54.5%	59.2%	5000K	
		152	164	59.6%	64.3%	5200K	

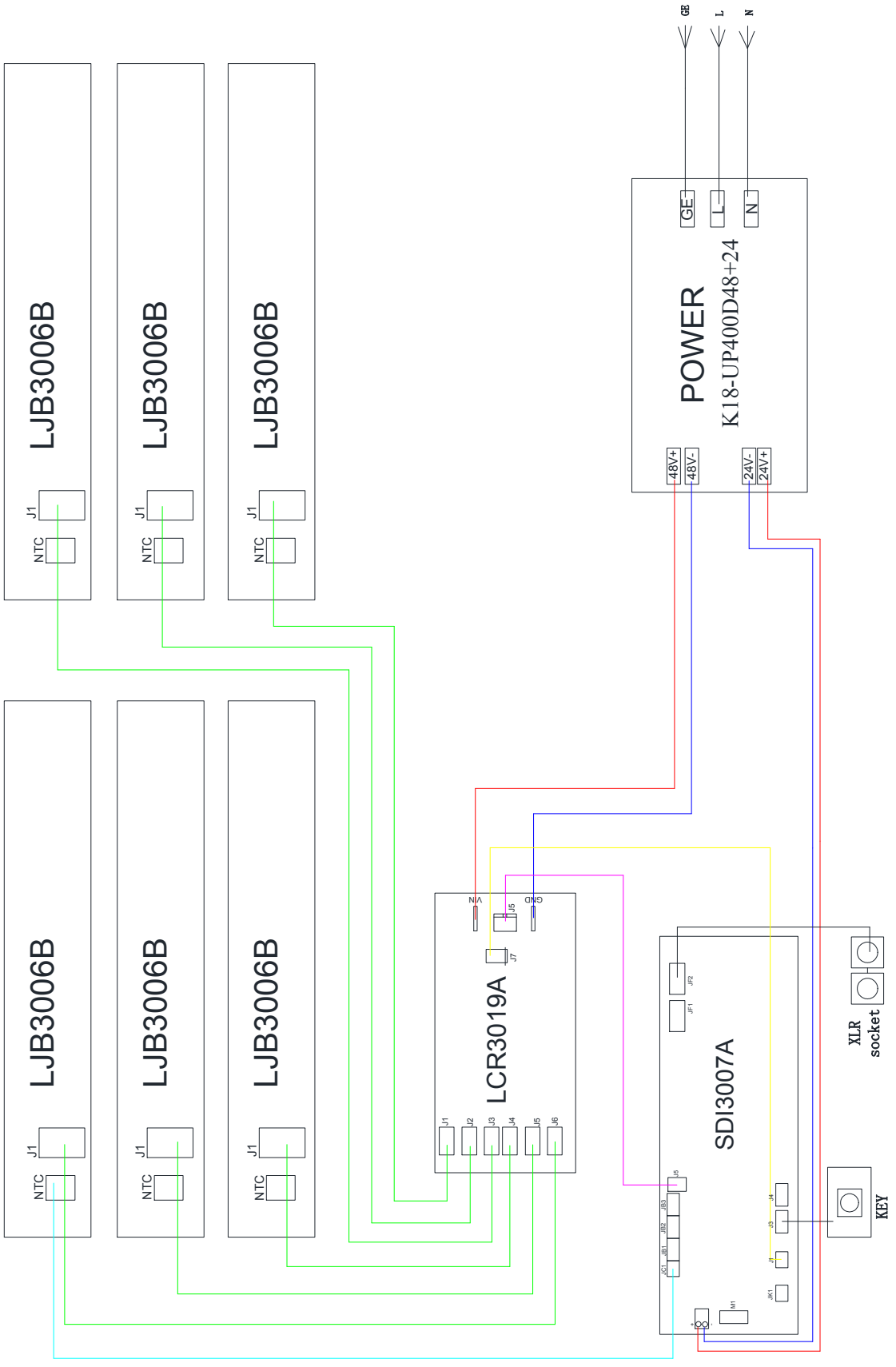
		165	177	64.7%	69.4%	5400K	
		178	190	69.8%	74.5%	5600K	
		191	203	74.9%	79.6%	5800K	
		204	216	80.0%	84.7%	6000K	
		217	229	85.1%	89.8%	6200K	
		230	242	90.2%	94.9%	6400K	
		243	255	95.3%	100.0%	6500K	

Standard

DMX mode Standard (10ch)	Name	DMX value		DMX percentage		Function	Default DMX Value
1	Intensity	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
2		0	65535	0.0%	100.0%	Intensity fade, fine (LSB)	
3	Red	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
4		0	65535	0.0%	100.0%	Intensity fade, fine (LSB)	
5	Green	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
6		0	65535	0.0%	100.0%	Intensity fade, fine (LSB)	
7	Blue	0	255	0.0%	100.0%	No light ➔ Full light	0(0%)
8		0	65535	0.0%	100.0%	Intensity fade, fine (LSB)	
9	Rainbow Function	0	9	0.0%	3.5%	No function	0(0%)
		10	39	3.9%	15.3%	Rainbow scene 1	
		40	71	15.7%	27.8%	Rainbow scene 2	
		72	103	28.2%	40.4%	Rainbow scene 3	
		104	135	40.8%	52.9%	Rainbow scene 4	
		136	167	53.3%	65.5%	Rainbow scene 5	
		168	199	65.9%	78.0%	Rainbow scene 6	
		200	231	78.4%	90.6%	Rainbow scene 7	
		232	255	91.0%	100.0%	Rainbow flow from slow to fast	

10	Color temperature	0	21	0.0%	8.2%	No function	0(0%)
		22	34	8.6%	13.3%	3200K	
		35	47	13.7%	18.4%	3400K	
		48	60	18.8%	23.5%	3600K	
		61	73	23.9%	28.6%	3800K	
		74	86	29.0%	33.7%	4000K	
		87	99	34.1%	38.8%	4200K	
		100	112	39.2%	43.9%	4400K	
		113	125	44.3%	49.0%	4600K	
		126	138	49.4%	54.1%	4800K	
		139	151	54.5%	59.2%	5000K	
		152	164	59.6%	64.3%	5200K	
		165	177	64.7%	69.4%	5400K	
		178	190	69.8%	74.5%	5600K	
		191	203	74.9%	79.6%	5800K	
		204	216	80.0%	84.7%	6000K	
		217	229	85.1%	89.8%	6200K	
		230	242	90.2%	94.9%	6400K	
		243	255	95.3%	100.0%	6500K	

10. System wiring diagram



11. Maintenance and Troubleshooting

11.1 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.

11.2 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.

Problem	Possible Cause	Suggested Correction
	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 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,

Problem	Possible Cause	Suggested Correction
		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.
	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	Replace the worn-off, damaged or deformed

Problem	Possible Cause	Suggested Correction
	coating wearing off, damages or deformation	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.

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