FINE 600L BSWF
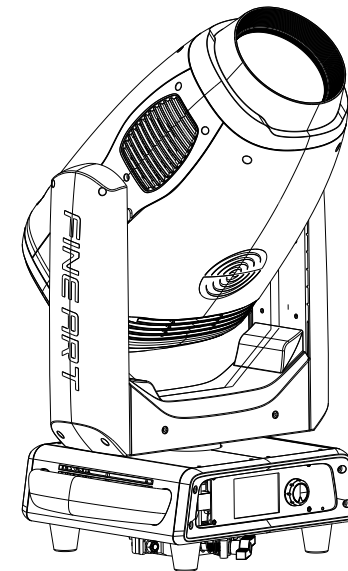# USER MANUAL

GUANGZHOU CHAIYI LIGHT CO.,LTD.

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GUANGZHOU CHAIYI LIGHT CO.,LTD.

★Read the user manual before installing or operating this product.★

Contents

Contents

★ Declaration

This product has passed the final check for both functionalities and package when delivered from the factory. All users should observe the instructions and pay attentions to the warnings covered by this manual. Unreasonable damages resulting from unintended operations or not heeding instructions covered by this manual will void the warranty. Specifications in this manual intend for reference only, the fixture delivered takes the priority. Any future modification pertaining to content of this manual, there will be no particular notifications. FINE ART reserves all copyrights. To obtain the latest information about software update, hardware and other files, please visit FINE ART website.

The following symbols are used to identify important safety information on the product and in this manual:

DANGER! Hazardous voltage. Risk of severe or lethal electric shock.	**DANGER!** Safety hazard. Risk of severe injury or death.	**DANGER!** Refer to manual before installing, powering or servicing.	**Warning!** Fire hazard.	**Warning!** Burn hazard. Hot surface. not touch. Do not touch.	**Warning!** Risk of eye injury. Safety glasses must be worn.	**Warning!** Risk of hand injury. Safety gloves must be worn.
Luminaires not suitable for direct mounting on normally flammable surfaces (suitableonly for mountingon non-combustible surfaces)	For indoor use only	Do not direct lens to sun ray or strong light!	Do not actuate during operation	Replace any cracked protective shield	Minimum distance from lighted objects (metres)	Rated maximum ambient temperature

1. Safety informaiton

After receiving the fixture, please unpack and check if there is any damage due to transportation. If any obvious damage or flaw is found, do not put it into use and contact the distributor or manufacturer as soon as possible.

This fixture is intended for professional use only.

Read this User Mannual before mounting and ennergizing the fixture. Observe the safety guideline and notice the warnings both in this User Mannual and on the fixture.
Yet any safety concerns not covered hereby, contact the distributor or service hot-line.

Protection against over heat

The fixture is intended for indoor application, its protection rating is IP20. The fixture should be kept dry and avoid working in presence of moisture, over-heat or heavy smokes.
The natural working temperature should be lower than 40 degrees. If the ambient temperature exceeds 40 degrees, please stop operating the unit immediately.

t_a=40℃

Protection against explosion

Shields, lenses and ultraviolet screens must be replaced if they have become visible damaged to such an extent that their effectiveness is impaired. Replace the lamp immediately if it becomes visually deformed, damaged or in any way defected.

Protection against injury due to falls

Do not lift or carry the fixture alone.
To inspect that the structure and the truss hooks are in good condition and can bear about 10 times the weight of the fixture.
Ensure the cover and all riggings are securely fastened, safety wire is necessary to use as a secondary attachment.
Block access below the working area and work from a stable platform while installing, servicing or moving the fixture.

Protection against electrical shock

All electrical connections must be performed by a qualified person with technical certificate.
Make sure that the mains power supply you use is up to local construction and electronic code regulation, the over-load protection reliable earthing is essential.

Each fixture must be grounded correctly, and be installed according to related regulation.
Disconnect the fixture from AC power before removing or installing any cover or part, including the lamp and fuses, and when not in use.
Do not expose the fixture to rain or moisture.

Protection against burning or fire

Please do not install the fixture onto combustible surface.
Do not attempt to bypass the thermostat switch or fuse.
Replace defective fuses with specified ratings only.

Keep flammable materials far away from the fixture. Minimum distance from the flammable materials is 0.5m.

Under the steady working state, the max temperature of exterior surface is 82℃, Please don't touch the moving head during movement.

The minimum distance between fixture and the lighted objects is 1.6m.
Ensure a minimum clearance of 0.1m around the cooling fans and ventilations.
Do not place any filter or other object onto the optical lens.
Allow the fixture to cool for at least 15 minutes before transit.
Do not revise the fixture or install any parts not from Guangzhou CHAI YI LIGHT Co.Ltd.

2.Product introduction

2. 1 Fixture profile dimension

389.6mm

728.1mm

690.2mm

309mm

399.2mm
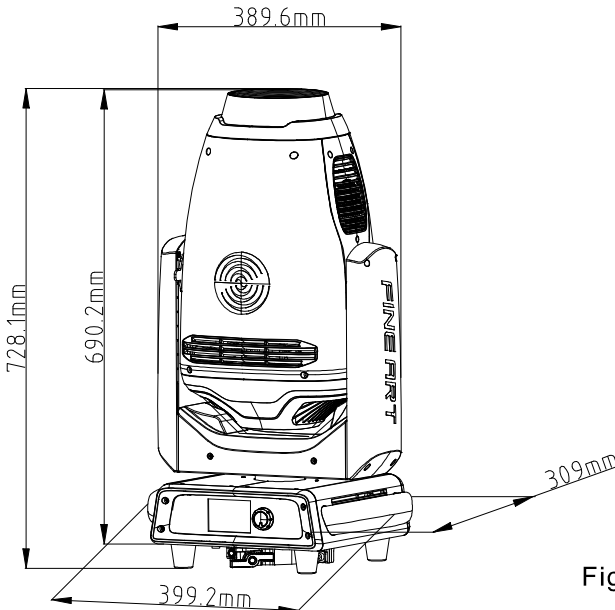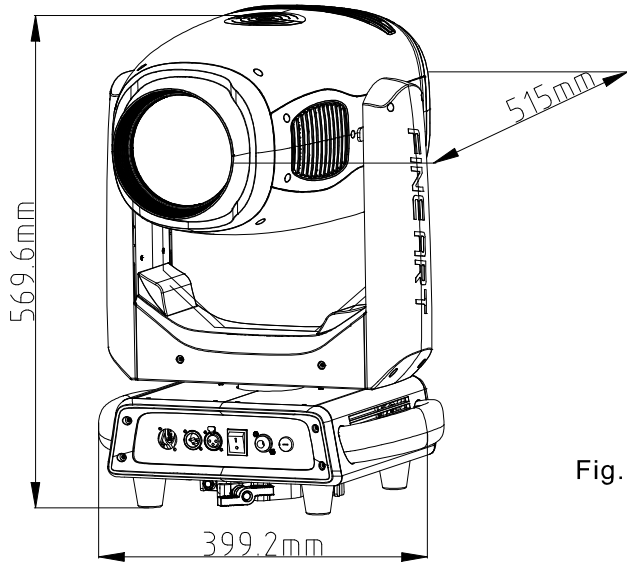
Fig. (2. 1-1)

Fig. (2. 1-2)

2. 2 Fixture introduction

Head cap

Focus module

Gobo module

CMY module

Fan cooling module

Arm module

Base module
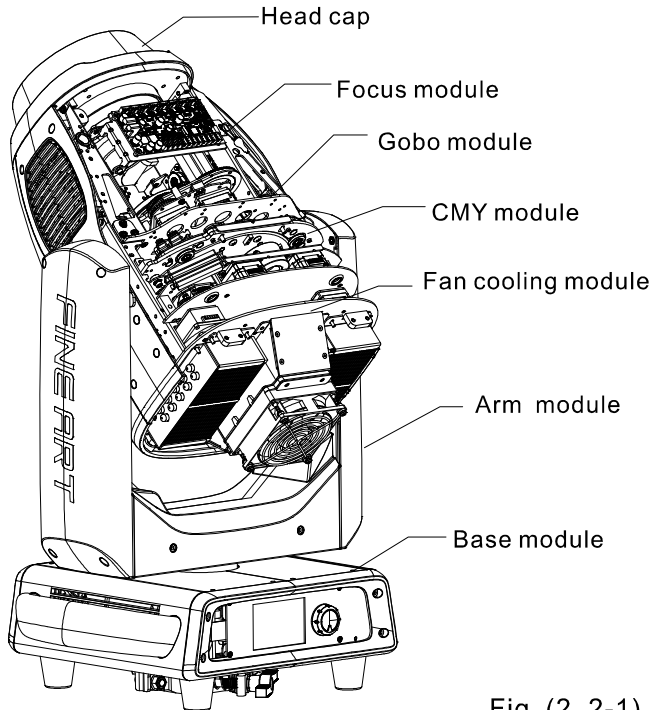
Fig. (2. 2-1)

3.Package & delivery

3. 1 Included items

FINE 600L PERF is packed with single flight case,Included items listed below (shown as table 3.1-1):

Accessories	QTY	UNIT
User manual	1	PCS
Warranty card	1	PCS
Suspension fasteners	2	SET
Signal cable	1	PCS
Safety wire	1	PCS
Fuse	2	PCS

Table 3.1-1

3.2 Transportation lock

For the ease of transit, the fixture is provided with the transportation lock with eight locking positions. As shown in Fig.3.2-1, the fixture is lock at middle locking position where in the beam axis is perpendicular to the yoke.

Y axis safety lock
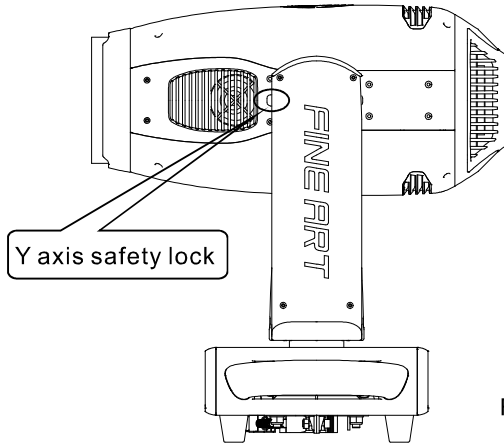
Fig. 3.2-1

3. 3 Fixture package

1. Before packaging, please disconnect the fixture from power supply and wait at least 15 minutes for cooling.
2. Remove dust buildup on the exterior surface, tight the transportation lock.
3. Pack the fixture with an inner bag, grasp both handles on the base and carefully upside down the fixture, and gently place it onto the intended mounting recesses within the road-case.

4. Pack the included accessories into the road-case.
5. Road-case stacking do not exceed 2 layers, upside down the
   road-case is not allowed.

3. 4 Unpacking

Notice: inspect the units upon reception. If there is any evident damage due to transit, do not use the units and notify FINEART local distributor or contact Guangzhou CHAIYI LIGHT Co.,ltd directly.

1. Open the road-case and unpack the inner bag.
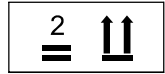2. One person on each side grabs the handle of the device, lifts the lamp out of the flight case, and then opens the upper cover and side cover of the flight case. Push the two hooks outwards to be perpendicular to the base, and lifts the lamp ditch to the lifting hanger. Tighten the dish-shaped nut of the lamp hook, and then raise the boom to the point where the lamp leaves the flight case, and push the flight case away.
3. Release the transportation lock before power up the fixture.

4.Installation

User must be termly check the fixture and its install materials, if you are nonqua-lified to check that, please contact the professional person. Wrong installation will will result in fatal hazard.

The fixture working ambient temperature are between 0℃-40℃, When ambient tem-perature over the range, don't operate the fixture. When the fixture are in installtion, alltion, teardown, remove or servicing, don't stand in under the fixture.
Operator must be insure the fixture are safely connected. The input power supply must match the specific type demanded by the fixture. Make sure the installation check annually by professional person.

4.1 Equipment installation

FINE 600L BSWF comes with an integrated hanging profile, which can be quickly and easily locked on the bracket, as shown in Figure (4.1-1) and Figure (4.1-2).
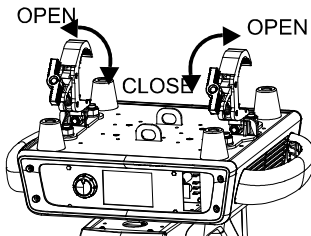
Fig.4.1-1 horizontal orientation   Fig.4.1-2 vertical orientation
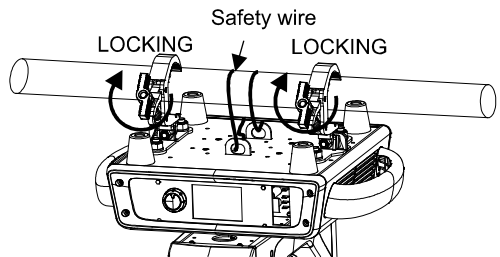
⚠ Warning The suspension must be completely locked and a safety rope must be put on to avoid safety accidents.

4.2 Light fixation

1. To inspect the truss hook/rigging are in good condition and can bear about 10times the weight of the light fixture. Be sure the truss or pipe construction can bear 10 times the weight of all equipments including lights, truss hooks, cables and accessories.
2. Turn the lamp hook to be perpendicular to the base.
3. Hook the lamp holder on the fixed bracket and lock the bracket.
4. If the truss can be lift automatic up and down, the light fixture can be lifted and hooked from flight case directly. When the lights equipments need to lift high, the working area below should have some barrier to ensure the installation works operated under safety condition. Finally suspend the fixture onto the truss and fasten clamps all and lift truss totally.
5. Connect a safety rope which can bear 10 times weight of the fixture, the attachment is designed to fit a clamp.
6. Check the transportation lock have been unlocked, Be sure there is no explosive or inflammable materials around the fixture in 0.5 meter around.

⚠️ Warning Two safety wire should attached to the hole on the mounting plate. Do not tie the safety wire to the handles instead.

safety wire
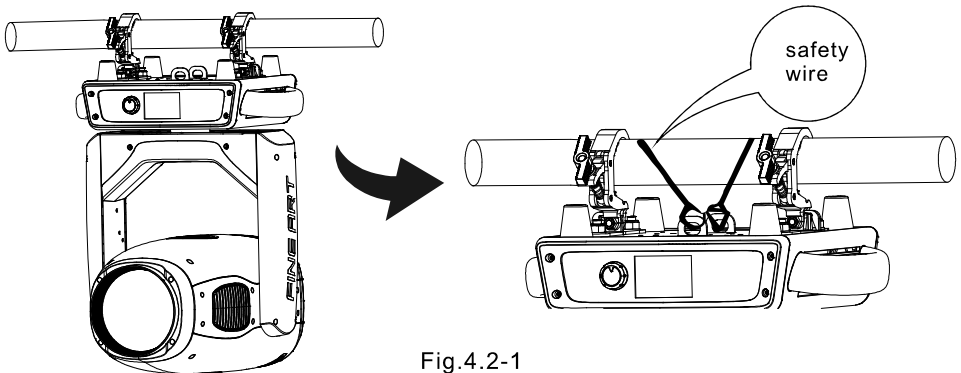
Fig.4.2-1

⚠️ Warning The fixtures must be placed upright, minimum spacing between each two fixtures in an array is 600mm, arrangement layout as shown in Fig.4.2-2.

600   600
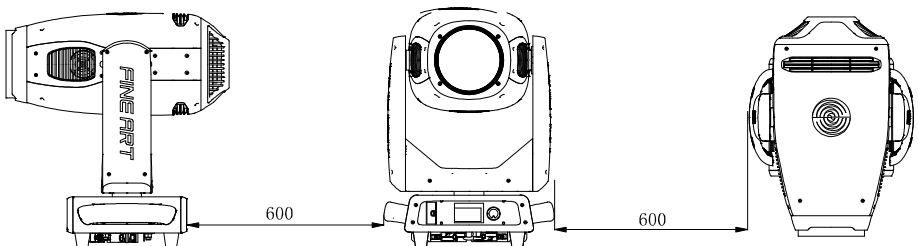
Fig. 4.2-2

4.3 Data link

Data linkage for the fixture may be provided by DMX512 connection, Ethernet connection, Ethernet/DMX512 connection and wireless linkage.

DMX512 connection

Note: The signal cable was type X connection.

Type X connection—if the external flexible cable or cord of this fixture is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or his service agent.

3-pin XLR connecters are provided for fixture DMX input and output. Pin 1 is for fearthing, pin2 is for minus signals, and pin 3 is for plus signals. To prevent and absorb the reflection and interference of the signals, each data link must be ended by a respective terminator.

3-pin XLR connector

Pin1: GND
Pin2: Signal(-)
Pin3: Signal(+)

Terminator

Terminator specification: a 120Ω plug-in resistor with rated power of 0.25W, soldered between pin 2 and pin 3 at the end of respective data link.

Fig. 4.3-1
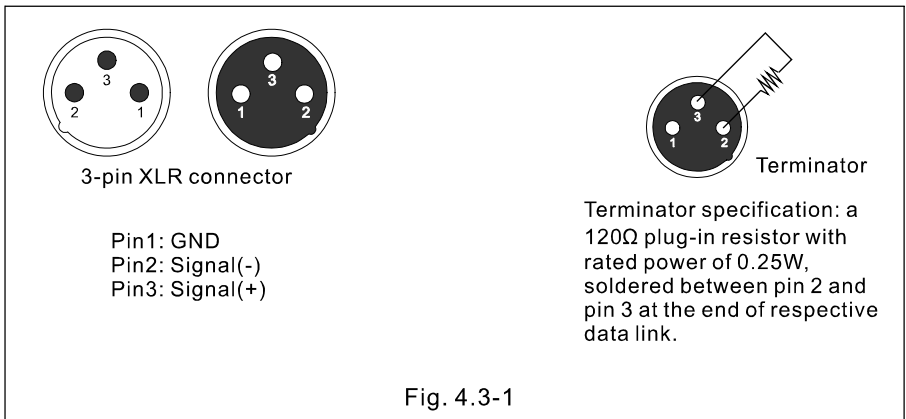
Connect the 3-pin output of a lighting controller to the 3-pin input of a first fixture on the link, then connect the 3-pinn output of the said first fixture to the 3-pin input of a second fixture. Similarly, repeat the above connection step and end the data link with a plug-in terminator. Shown as Fig. 4.3-2 below.

| Controller | IN PUT | OUT PUT | IN PUT | OUT PUT | IN PUT | OUT PUT | Terminator |

Fig. 4.3-2
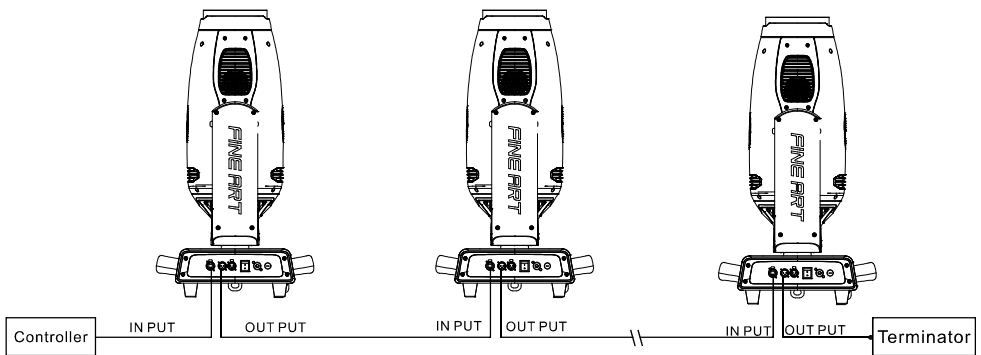
If long-distance data transfer occurs, a DMX512 signal amplifier is necessary. The added amplifier is inserted between the lighting controller and the first fixture on the basis of a normal data link.

Notice:
1. No more than one signal input or output can occur in one fixture.
2. Don't split a data link via output ports on the fixture, use a DMX512 signal amplifier instead, if necessary.
3. Use only shielded-pair cables, and standard microphone cable is not reliable for long-distance data transfer.

Ethernet connection
1. The data communication is provided with ART-NET protocol, thus the controlling utilities used in the lighting controller or PC must support such protocol.
   Art-Net is a kind of 10 base T Ethernet protocol derived from TCP/IP. It allows transmission of enormous DMX512 data over normative network. The maximum transferring speed can reach 10Mb/s.
2. The fixture is provided with 8-pin RJ-45 connector for internet input. Please use class 5 cables and standard RJ-45 connector for internet connection, Shown as Fig. 4.3-3.

RJ-45 socket
1 2 3 4 5 6 7 8

1: TD+   5: Not connected
2: TD-   6: RX-
3: RX+   7: Not connected
4: Not connected 8: Not connected

RJ-45 plug
8 7 6 5 4 3 2 1

Fig. 4.3-3
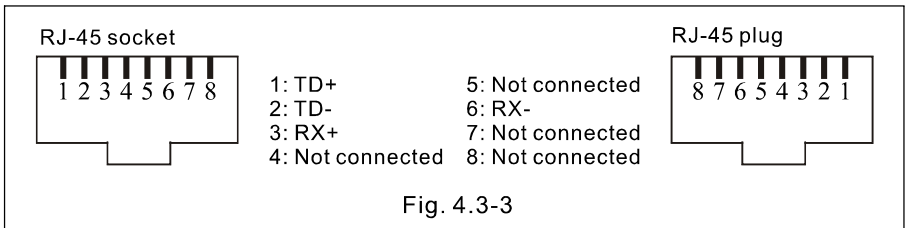
3. Ethernet setting
   (a) Ethernet receiving mode setup:
       "Personality"→"Receive Mode"→"ENET"
   (b) IP address setup:
       "Personality"→"IP Address A"→"002, 010"
                     →"IP Address B"→"xxx (000-255)"
                     →"IP Address C"→"xxx (000-255)"
                     →"IP Address D"→"xxx (000-255)"
       Type A IP address is configured as default addresses.
   (c) Ethernet node (universe) setup:
       "Personality"→"Universe"→"xxx(000 - 255)"
4. Ethernet connection layout, shown as Fig. 4.3-4.

Art-Net   Art-Net   Art-Net   Art-Net

HUB

Fig. 4.3-4
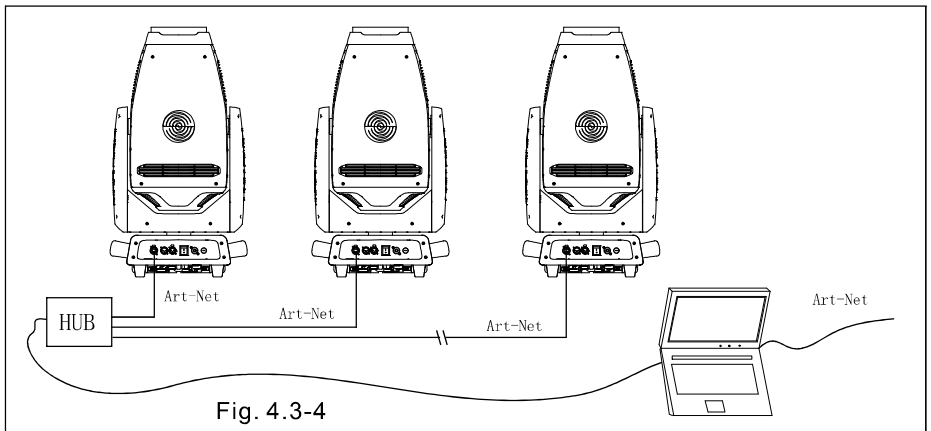
Notice: If a fixture directly connected to a PC without using a hub or a LAN, the should be crossed connection.

Ethernet/DMX512 connection

The first fixture in the serial link, which is directly connected to the Ethernet network, should be such that the "fixture receiving mode" is set as "ENET→DMX". The rest fixtures in the link should be set as "DMX" receiving mode. Then connect the output of the said first fixture to the input of a next fixture. Similarly, repeat the above connection till the DMX data link is completed. Shown as Fig. 4.3-5.

Art-Net   OUT PUT   IN PUT   OUT PUT   IN PUT   OUT PUT   Terminator

HUB

Art-Net   OUT PUT   IN PUT   OUT PUT   IN PUT   OUT PUT   Terminator
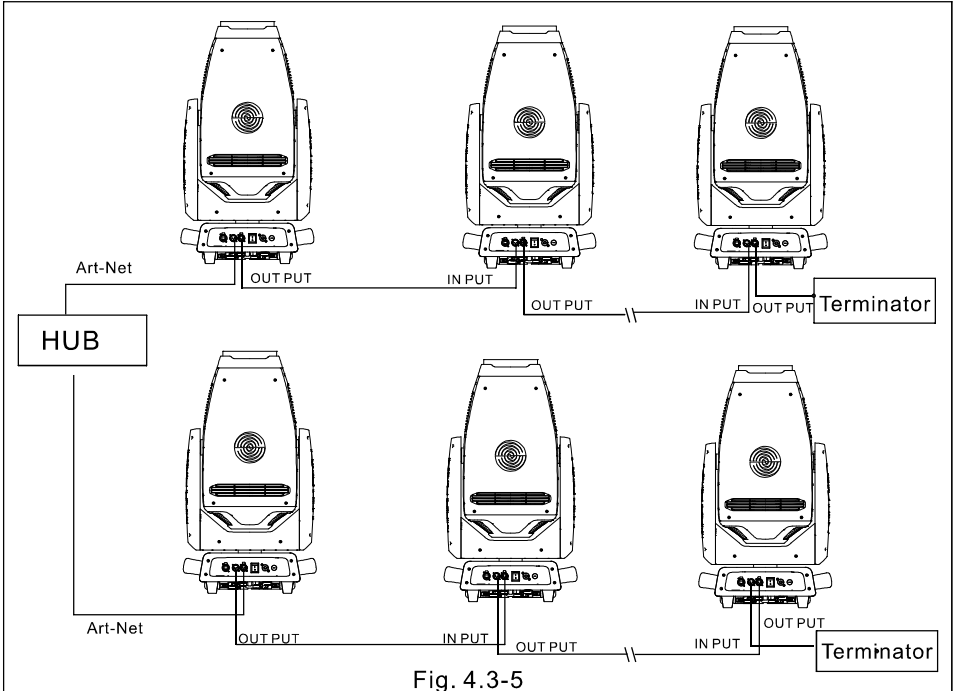
Fig. 4.3-5

Notice: apply a plug-in terminator to end the DMX data link.

Wireless transmission (optional)

1. Customer might choose wireless edition fixture which supports wireless data transmission. Wireless signal control is pretty reliable within a 225m radius empty space, thus no need for physical connection for data transmission. All has to be done is to set up corresponding addresses.
2. 2.4GHz worldwide free frequency band available in wireless control. Such huge frequency band favors users with variable band options.
   (a) Wireless receiving mode setup:
       "Personality"→"Receive Mode"→"WDMX"
   (b) Press emitter button to search preset address within a fixture. When it's done, remotely control a fixture through a controller, Shown as Fig. 4.3-6.

   Notice:
   1. Emitter location: Distribute the antenna higher than any barrier on floor as possible.
   2. Antenna direction: Emitting antenna points to receiving antenna.

3. Antenna position: Keep away from EMI source as possible, such as WLAN antenna.

Controlled Fixture

Wireless Transceiver

Console
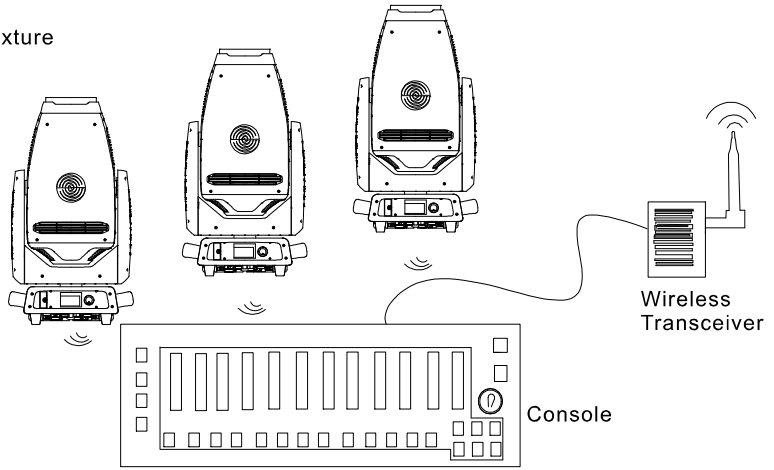
Fig.4.3-6

5.AC power supply

5.1 Fuses

Power supply and fuses' type and rating:

Power	Fuse
AC100-240V	15A 6×30 (Main fuse)

Table 5.1-1

5.2 Power connection

Notice: Type X attachment for power supply connection. Method of attachment of the cable or cord such that any replacement can only be made by the manufacturer, his service agent or similarly qualified person.

The person must have the relevant qualification to connect the power supply. The AC power voltage shall be suitable to the lamp provided with over-loading or creepage protection.

1. Connecting the equipment to the power supply, do not connect to silicon box system, or else, it will destroy the equipment. The fixture is provided with standard 3-pin socket. Please according to table 5.2-1 connect to power supply, Yellow/ green line must be earthed. If you still have any question to the installation, please consultant with the experienced electrician.

2. When power is supplied, put the base switch to the position "I".

Color	Wire	Mark
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	⏚

Table 5.2-1

6.Lamp

6.1 Lamp Introduction

FINE 600L BSWF comes with 550w white led module with long life pan,low power consumption. And it will decrease the cost of power consumption and the lamp exchange compared to the halide lamp computer light.

Fig.6.1-1
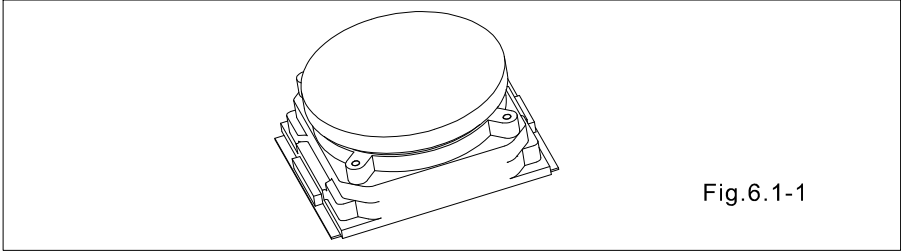
⚠ Warning

1. Don't use other types of lamps instead of the intended ones, other-wise safety hazards or damages to the fixture may arise.
2. To reduce the risk of lamp shattering, replace a used lamp when it reaches its expected service life.
3. Do not use a defected or fissured lamp.
4. Do not disconnect the power supply in working, or will damage the lamp.

7.Control panel

7.1 Control panel introduction

Shown in Fig.7.1-1:

1. LCD screen
3. Ethernet terminal
5. Power swith
7. Fuse

2. Function button (Confirm button)
4. DMX terminal
6. Power line

Fig. 7.1-1
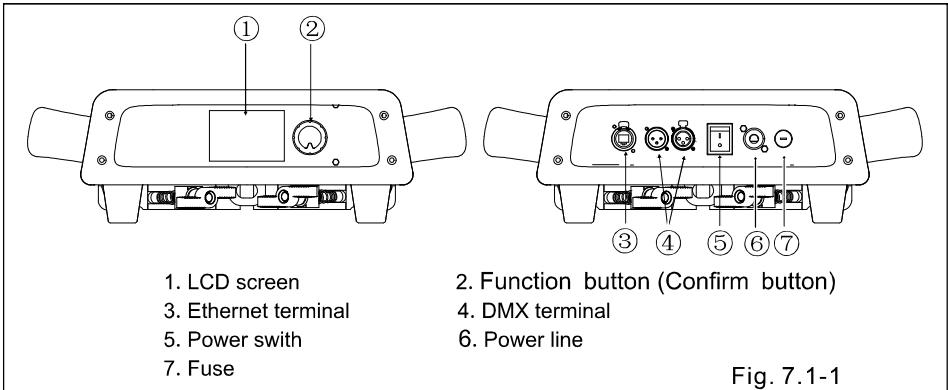
7.2 Control panel operational introduction

1 .It's power off when turning the main switch to "O". And it's power on when turning the main switch to "I".

2 .press the button to motivate the inner battery then the light will be started, and enter to the main menu for the menu operation.(the menu as the followed fig)

Main Menu Interface

Address Maual control Option

Test Advanced option Message
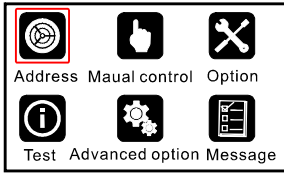
Notice: After entering the menu, the chosen menu is in grey color. Press relative function button to confirm (or by clicking "confirmation" button), then the user can enter in the next menu to edit the value. The user can scroll the function button to the next page (or by choosing up/down).enter the menu interface and show the choosed menu item, if the press the button to confirm the menu, then enter the next menu, and continues to audit, if do not enter the "address ", the rotate the wheel to page turning. shows the next sub-menu, there are some functions to choose and then adjust the parameter.

3. Menu rotate wheel operation:
   Press the rotating button for the "menu choice" " menu exchange" " confirm menu".
   Rotate the button clockwise: Scroll down menu to select the cursor /increase /modify the value. Rotate the button anticlockwise: Scroll up menu to select the cursor /decrease/modify the value.
   If there is no operation in 2 minutes in the menu, which means to return to the original menu.
4. LED signal indication
   DMX 512 signal input: long light indication, the address value will express the round spot on the right.
   Ethernet signal input: light flash, the address value will express the round spot on the right.
5. Fan Control
   When used in theatre and places of the environment temperature is low, you can choose to silent mode.

Display panel operational function detail

| MENU1	MENU2	MENU3	MENU4	(DEFAULT)
1 ADDRESS	1 DMX512 ADD	001-XXX		001-040
	2 CHANNEL MODE	STD:32/16B:40/EXT:44		16B:40
	3 SIGNAL MODE	DMX512/WirelessDMX/Ethernet/NET-DMX		DMX512
	4 EXIT			
2 MANUAL	1 RESET	CANCEL/ACTION		CANCEL
	2 REPAIR	CANCEL/ACTION		CANCEL
	3 CHANNEL CTRL	1 Strobe	000-xxx	0
		2 Dimmer	000-xxx	0
		3 Dimmer Fine	000-xxx	0
		4 Pan	000-xxx	0
		5 Pan Fine	000-xxx	0
		6 Tilt	000-xxx	0
		7 Tilt Fine	000-xxx	0
		8 Gobo1	000-xxx	0
		9 Gobo1 Rot	000-xxx	0
		10 Gobo1 Rot Fine	000-xxx	0
		11 Fixed Gobo	000-xxx	0
		12 Reserved	000-xxx	0
		13 Cyan	000-xxx	0
		14 Magenta	000-xxx	0
		15 Yellow	000-xxx	0
		16 CTO	000-xxx	0
		17 Color	000-xxx	0
		18 Color Macro	000-xxx	0
		19 Prism	000-xxx	0
		20 Prism Rot	000-xxx	0
		21 Focus	000-xxx	0
		22 Focus Fine	000-xxx	0
		23 Zoom	000-xxx	0
		24 Zoom Fine	000-xxx	0
		25 AutoFocus Distance	000-xxx	0
		26 AutoFocus Adjustment	000-xxx	0
		27 Frost	000-xxx	0

		28 Iris	000-xxx	000
		29 Frame1 Position	000-xxx	000
		30 Frame1 Angle	000-xxx	000
		31 Frame2 Position	000-xxx	000
		32 Frame2 Angle	000-xxx	000
		33 Frame3 Position	000-xxx	000
		34 Frame3 Angle	000-xxx	000
		35 Frame4 Position	000-xxx	000
		36 Frame4 Angle	000-xxx	000
		37 Frame Rotation	000-xxx	000
		38 Frame Macro	000-xxx	000
		39 CRI/R9	000-xxx	000
		40 Fixture Control	000-xxx	000
		41 EXIT		
	4 EXIT			
3 SPECIFIC	1 X REVERSE	OFF/ON		OFF
	2 Y REVERSE	OFF/ON		OFF
	3 XY SWAP	OFF/ON		OFF
	4 XY SPEED	SLOW/NORMAL/FAST		NORMAL
	5 DIMMER CURVE	PARA-CURVE/LINEAR CURVE/S-CURVE/R_PARA-CURVE		PARA-CURVE
	6 CMY REVERSE	OFF/ON		OFF
	7 CMY CURVE	S CURVE/PARA-CURVE		S CURVE
	8 SHORTEST	ON/OFF		ON
	9 XY ENCODER	ON/OFF		ON
	10 SHELD MODE	OFF/ON		OFF
	11 BEAM SPEED	EFFECT Time 1/2/3		EFFECT Time 1
	12 FAN CONTROL	FORCE/QUITE		FORCE
	13 PANEL REV	OFF/ON		OFF
	14 PANEL TOUCH	OFF/ON		OFF
	15 SLEEP MODE	OFF/ON		OFF
	16 POWER SELECT	NORMAL/SUPER/THEATRE		NORMAL
	17 B_L MODE	DELAY OFF/LIGHT		DELAY OFF
	18 EXIT			
4 TEST	1 NO ACT	RUN/STOP		RUN
	2 XY AUTO	STOP/RUN		STOP
	3 BEAM AUTO	STOP/RUN		STOP
	4 FIXTURE DEMO	STOP/RUN		STOP
	5 EXIT			
5 ADVANCED	1 CODE	CODE01	0000-XXXX	0
		CODE02	0000-XXXX	0
		CODE03	0000-XXXX	0
		CODE04	0000-XXXX	0
		EXIT		
	2 OFFSET	00 Pan Offset	0000-XXX0	0
		01 Tilt Offset	0000-XXX0	0
		02 Cyan Offset	0000-XXX0	0
		03 Magent Offset	0000-XXX0	0
		04 Yellow Offset	0000-XXX0	0
		05 CTO Offset	0000-XXX0	0
		06 Color Offset	0000-XXX0	0
		07 C-Render Off	0000-XXX0	0
		08 Zoom Offset	0000-XXX0	0
		09 Focus Offset	0000-XXX0	0
		10 Iris Offset	0000-XXX0	0
		11 Frame Offset	0000-XXX0	0
		12 Gobo1 Offset	0000-XXX0	0
		13 G1_Rot Offset	0000-XXX0	0
		14 FixGoboOffset	0000-XXX0	0
		15 Prism1 Offset	0000-XXX0	0
		16 Prism1Rot Off	0000-XXX0	0
		17 Frost1 Offset	0000-XXX0	0
		18 Frame Up1 Off	0000-XXX0	0
		19 Frame Up2 Off	0000-XXX0	0
		20 FrameDown1Off	0000-XXX0	0
		21 FrameDown2Off	0000-XXX0	0
		22 Frame Left 1	0000-XXX0	0
		23 Frame Left 2	0000-XXX0	0
		24 Frame Right 1	0000-XXX0	0
		25 Frame Right 2	0000-XXX0	0

		31 EXIT		
	3 FIXTURE MODE	**F600L-BSWF**		F600L-BSWF
	4 PANEL DIM	003-007		3
	5 LANGUAGE	English/中文		English
	6 DEFAULT SET	CANCEL/ACTION		CANCEL
	7 UNIVERSE	0000-0016		0
	8 TIME CLEAR	CANCEL/ACTION		CANCEL
	9 WDMX UNLINK	CANCEL/ACTION		CANCEL
	10 SERVER CLR	CANCEL/ACTION		CANCEL
	11 EXIT			
6 INFORM	1 POWER TIME	xxxx.x		0
	2 LAMP ON TIME	xxxx.x		0
	3 BODY TEMP	xxx xxx		000 000
	4 XY BOARD TEMP	xxx xxx		000 000
	5 DRIVER1 TEMP	xxx xxx		000 000
	6 DRIVER2 TEMP	xxx xxx		000 000
	7 DRIVER3 TEMP	xxx xxx		000 000
	8 BODY FAN SPED	xxxx xxxx xxxx xxxx		0000 0000 0000 0000
	9 XY BOARD FAN	xxxx xxxx		0000 0000 0000 0000
	10 DRIVER1 FAN	xxxx xxxx		0000 0000 0000 0000
	11 DRIVER2 FAN	xxxx xxxx		0000 0000 0000 0000
	12 DRIVER3 FAN	xxxx xxxx		0000 0000 0000 0000
	13 PANEL VER	xxxxxxxx		F1KLPX.XX
	14 XY BOARD VER	xxxxxxxx		F6BLXxxxx
	15 DRIVER1 VER	xxxxxxxx		F6BLSxxxx
	16 DRIVER2 VER	xxxxxxxx		F6BLSxxxx
	17 DRIVER3 VER	xxxxxxxx		F6BLSxxxx
	18 RESET STATUS	00 Pan Reset	FAIL/OK	
		01 Tilt Reset	FAIL/OK	
		02 Cyan Reset	FAIL/OK	
		03 Magent Reset	FAIL/OK	
		04 Yellow Reset	FAIL/OK	
		05 CTO Reset	FAIL/OK	
		06 Color Reset	FAIL/OK	
		07 Zoom Reset	FAIL/OK	
		08 Focus Reset	FAIL/OK	
		09 Frame Reset	FAIL/OK	
		10 Gobo1 Reset	FAIL/OK	
		11 Gobo1 Rot Reset	FAIL/OK	
		12 FixedGoboReset	FAIL/OK	
		13 Prism Reset	FAIL/OK	
		14 PrismRot Rst	FAIL/OK	
		15 Exit	FAIL/OK	
	19 CHANNEL LEVEL	LEVEL01	000-xxx	0
		LEVEL02	000-xxx	0
		LEVEL03	000-xxx	0
		LEVEL04	000-xxx	0
		LEVEL05	000-xxx	0
		LEVEL06	000-xxx	0
		LEVEL07	000-xxx	0
		LEVEL08	000-xxx	0
		LEVEL09	000-xxx	0
		……	000-xxx	0
		LEVEL57	000-xxx	0
		LEVEL58	000-xxx	0
		LEVEL59	000-xxx	0
		LEVEL60	000-xxx	0
		LEVEL61	000-xxx	0
		LEVEL62	000-xxx	0
		LEVEL63	000-xxx	0
		EXIT		
	20 EXIT			

8. Technical feature

8.1 Production feature explanation

OPTICAL SYSTEM

Light Source: 550W LED module
The diameter of optical lens: 140mm
Zoom Range: 6° ~ 50°
Ra: 90
Luminous flux 14000lm
Luminous efficiency 171m/w

COLOR SYSTEM

CMY infinite color mixing
CTO linear adjustment
8 color filters + white light

GOBO SYSTEM

1 rotating gobo wheel with 7 gobos, in bidirectional rotation way
1 fixed gobo wheel with 9 gobos

FRAMING SYSTEM

1 set of full directional framing system, support 180° rotation

EFFECTS

1 bidirectional rotatable 4-facet prism
1 independent frost filter
Fast electronic strobe
Fast electronic iris, 5-100 % linear adjustment

MOVEMENT PARAMETER

Pan 540°, Tilt 270°
Pan and Tilt use photoelectric position reset system, automatically error correction

CONTROL AND PROGRAMMING

Control channel: 32(standard) /40(16 bit)/ 44(extended) 3 channel modes
Protocol: Standard DMX512, Optional: Art-net Ethernet Control Protocol, wireless DMX512
Menu display: 16 million colors, 3.5-inch LCD color touch screen, resolution 320×240dots;
(or 3.5 "LCD black and white display, resolution 128×64dots;)
Chinese and English can be switched freely, the font can be reversed 180° display
Optional touch-type and contactless roller operation mode

8. Technical feature

8.1 Production feature explanation

ELECTRIC CONTROL TECHNOLOGY

Upgrade software through DMX data cord, convenient and quick;

Self-rechargeable buffer battery, edit menu available when power off;

Power automatically reduced when light closed, energy saving and

environmental protection;

Intelligent fan control;

DMX channel level monitoring;

Inquiry by LCD screen;

RDM bidirectional data transmission function;

POWER SUPPLY

100-240V~, 50/60Hz

Rated power: 800W@100V

PF≧0.98

DIMENSION AND WEIGHT

Fixture Dimension: 400mm×310mm×728mm

Package Dimension: 800mm×567mm×950mm

Net Weight: 29kg (fixture)

Gross Weight: 73.8kg
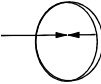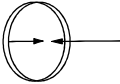
PACKAGE

2sets/flight case

1 set/carton

IP RATE

IP20

9.Function introduction

9. 1 Gobo specification

All designs can use circular glass patter n and metal pattern , for the best effect , please use the original factory pattern, do not use other patterns.

rotate gobo Outer diameter: 25.9+0/-0.2mm Largest pattern diameter: 18mm Thickness: 1.1mm
Material: high boron glass

Coating: dichroic

Coating	non-coating
If the object supporting one side of the coating, then there is no gap between the object and the reflector, and can not see the rear edge penetrate the coating.	If the object supporting one side of the non-coating, then there is the gap between the object and the reflector, and will see the rear edge penetrate the non-coating.

The thickness of the glass gobo and the color filter is 1.1mm, if install the gobo, there should be the joint ring to avoid shake and shed.

There should be the high-temperature glass glue Pls stick with the high-temperature glass glue if the thickness of the gobo exceed the standard thickness.

9.2 Gobo replacement

1. Cooling the fixture for 15 minutes after power off
2. Rotate and lock the fixture head, the open the body plastic cover, rotate the gobo wheel to the idea location, and the pick up the gobo wheel as follows.

Glass gobo replacement

1. Pick the spring ring and gobos, place the new gobo, and then replace the spring ring in the slot as follows (9.2-1)
2. Place the gobo wheel under the 2 pieces of Shrapnel clips of corresponding installing hole, and then push the wheel to the original place, or you can use the screwdriver or some other similar tools to pry up the shrapnel clips.

Pick up the gobo that you want to replace inclined

Align the gobo with the narrow ring of the spring

Fig. 9.2-1
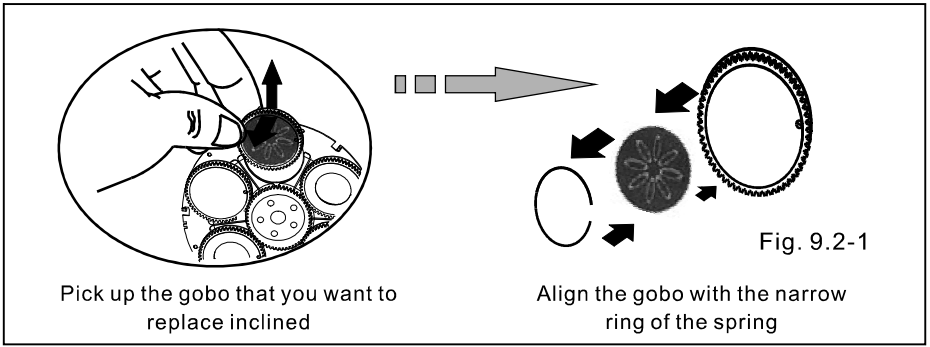
⚠ **Warning** If place the gobos, the coating side should face with the upholder, the non-coating face with with the spring, then the coating will not be destroyed by the installed spring, it is better for the flat of the concavo convex gobos face with the spring.
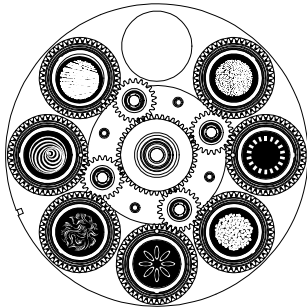
9.3 Gobo wheel

1 gobo wheel with 6 glass gobos and one with 4 glass gobos, the rotatable gobo wheel with 2 metal gobo and 1 fixed gobo wheel with 9 gobos.

rotating gobo wheel Fig 9.3-1
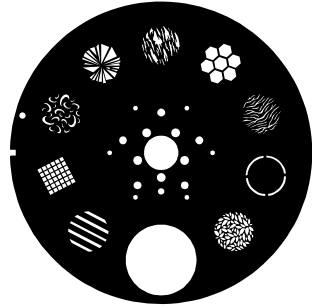
fixed gobo wheel Fig 9.3-2

9.4 Color system

● Color filter

The color fliter is composed of 7 fixed colors, the light designer can choose the his wanted color and create the perfect light effect, if use the color filters with the gobos, the light effect will be better, and you can create the colorful gobo effect.

Color wheel Fig. 9.4-1

9.5 CMY color mixing

Color mixing system uses continuous dichroic filters with cyan,magenta and yellow color filters,it utilizes color mix losing luster principle that can remove color from white,three filters superposed to black,each two colors mixed to another color.
The fixture uses the new-design and simple CMY color system, with the infinite color mixing,
The CMY system occupies less space, changes colors faster, runs smoother, but causes less power.

9.6 Gobo effect

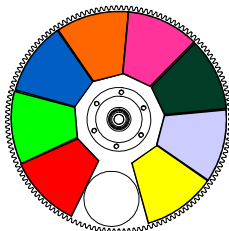1 4-facet prism, 1 diffusefilm, bidirectional rotating 4-facet prism.

9.7CTO color temperature correction

Gradient CTO color temperature 6500k-2800k.

9.8Dimmer

Electric dimmer, 0-100% linear dimmer, even light spot.

9.9 Iris

5-100 % fast electronic iris adjustment with macro function and multi effect changes, the speed of the iris channels can be changed from fast to slow or slow to fast.

9.10 Pan and tilt scanning

pan 540°, tilt 270°, 16 bit
speed of the pan/tilt (fast , normal , slow), choose the speed from the speed setting.

9.11 Focus and zoom

zoom lens from6°-50°, the focus lens can project from 2m to infinite.

9.12 Cutting system

The blades will be driven by 8pcs of stepper motors with the transmission belt in the whole plate in order to do the 90°rotation. And every two stepper motors will drive 1 blade to do the forward to backwards movement in the light beam hole, when 4 pcs of the blades are interlaced with the movement, then the light spot will be cut for all kinds of shapes.
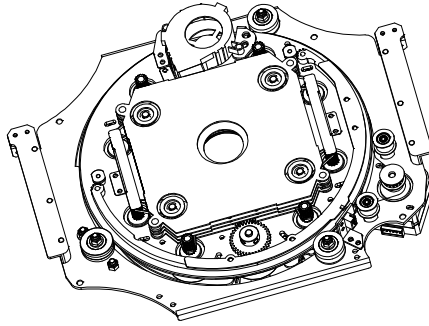
Fig. 9.12-1

 Fine 600L BSWF has the auto cutting system for the images, the light beam will be cut by the blades for the square, rhombus, triangle and other shapes with angle. And the edge will make the light for the shape, which is useful for the stage setting. In addition to that, all the cutting system can do the 180°rotation, and the system will do the shapes as follows (9. 12-2 and 9. 12-3) with the precise control.

Linear shape pictures (9.12-2)

Blading pictures(9. 12-3)

10.Light control channel

10.1 Menu control channel

Channel	STND	16BT	EXTN
1	Strobe	Strobe	Strobe
2	Dimmer	Dimmer	Dimmer
3	Dimmer Fine	Dimmer Fine	Dimmer Fine
4	Pan	Pan	Pan
5	Pan Fine	Pan Fine	Pan Fine
6	Tilt	Tilt	Tilt
7	Tilt Fine	Tilt Fine	Tilt Fine
8	Gobo1	Gobo1	Gobo1
9	Gobo1 Rot	Gobo1 Rot	Gobo1 Rot
10	Fixed Gobo	Gobo1 Rot Fine	Gobo1 Rot Fine
11	Reserved	Fixed Gobo	Fixed Gobo
12	Cyan	Reserved	Reserved
13	Magenta	Cyan	Cyan
14	Yellow	Magenta	Magenta
15	CTO	Yellow	Yellow
16	Color	CTO	CTO
17	Prism	Color	Color
18	Prism Rot	Color Macro	Color Macro
19	Focus	Prism	Prism
20	Zoom	Prism Rot	Prism Rot
21	Frost	Focus	Focus
22	Iris	Focus Fine	Focus Fine
23	Frame1 Position	Zoom	Zoom
24	Frame1 Angle	Zoom Fine	Zoom Fine
25	Frame2 Position	AutoFocus Distance	AutoFocus Distance
26	Frame2 Angle	AutoFocus Adjustment	AutoFocus Adjustment
27	Frame3 Position	Frost	Frost
28	Frame3 Angle	Iris	Iris
29	Frame4 Position	Frame1 Position	Frame1 Position
30	Frame4 Angle	Frame1 Angle	Frame1 Angle

31	Frame Rotation	Frame2 Position	Frame2 Position
32	Fixture Control	Frame2 Angle	Frame2 Angle
33		Frame3 Position	Frame3 Position
34		Frame3 Angle	Frame3 Angle
35		Frame4 Position	Frame4 Position
36		Frame4 Angle	Frame4 Angle
37		Frame Rotation	Frame Rotation
38		Frame Macro	Frame Macro
39		CRI/R9	CRI/R9
40		Fixture Control	Fixture Control
41			Pan-tilt Time
42			Color Time
43			Beam Time
44			Gobo Time

10. 2 DMX channel

Specific	STND	16BT	EXTN	Value	Function
Strobe	1	1	1	000~005	Closed
				006~010	Open
				011~105	Strobe at linearly variable frequency from slow to fast(0~20Hz)
				106~110	Open
				111~179	Thunder Strobe from slow to fast
				180~185	Open
				186~253	Random Strobe
				254~255	Open
Dimmer	2	2	2	000~255	0%->100%
Dimmer Fine	3	3	3	000~255	0%->100%
Pan	4	4	4	000~255	Movement positioning from 0° to 540°
Pan Fine	5	5	5		
Tilt	6	6	6	000~255	Movement positioning from 0° to 252°
Tilt Fine	7	7	7		
Gobo1	8	8	8	000~008	Open
				009~017	Gobo1
				018~026	Gobo2
				027~035	Gobo3
				036~044	Gobo4
				045~053	Gobo5
				054~062	Gobo6
				063~071	Gobo7
				072~091	Gobo1 shake from slow to fast
				092~111	Gobo2 shake from slow to fast
				112~131	Gobo3 shake from slow to fast
				132~150	Gobo4 shake from slow to fast
				151~170	Gobo5 shake from slow to fast
				171~190	Gobo6 shake from slow to fast
				191~209	Gobo7 shake from slow to fast
				210~231	Continuous gobo wheel clockwise rotation from fast to slow
				232~233	Stop
				234~255	Continuous gobo wheel counter-clockwise rotation from slow to fast
Gobo1 Rot	9	9	9	000~127	0°~360°
				128~190	Continuous gobo wheel clockwise rotation from fast to slow
				191~192	Stop
				193~255	Continuous gobo wheel counter-clockwise rotation from slow to fast
Gobo1 Rot Fine	-	10	10		
Fixed Gobo	10	11	11	000~008	Open
				009~015	Gobo1
				016~022	Gobo2
				023~029	Gobo3
				030~036	Gobo4
				037~043	Gobo5
				044~050	Gobo6
				051~057	Gobo7
				058~064	Gobo8
				065~071	Gobo9
				072~086	Gobo1 shake from slow to fast
				087~101	Gobo2 shake from slow to fast
				102~117	Gobo3 shake from slow to fast
				118~133	Gobo4 shake from slow to fast
				134~148	Gobo5 shake from slow to fast
				149~163	Gobo6 shake from slow to fast
				164~178	Gobo7 shake from slow to fast
				179~194	Gobo8 shake from slow to fast

Function				DMX	Description
				195~209	Gobo9 shake from slow to fast
				210~231	Continuous gobo wheel clockwise rotation from fast to slow
				232~233	Stop
				233~255	Continuous gobo wheel counter-clockwise rotation from slow to fast
Reserved	11	12	12	000~255	Reserved
Cyan	12	13	13	000~255	0%->100% Linear Cyan movement
Magenta	13	14	14	000~255	0%->100% Linear Magenta movement
Yellow	14	15	15	000~255	0%->100% Linear Yellow movement
CTO	15	16	16	000~255	0%->100%
Color	16	17	17		Linear Movement
				000~119	From Open to (6th Color+Open) Linearity Movement
				14	Color1 (Red)
				28	Color2 (Green)
				40	Color3 (Blue)
				52	Color4 (Magenta)
				66	Color5 (Pink)
				80	Color6 (Light Green)
				92	Color7 (Lavender)
				106	Color8 (Yellow)
				120~120	Open
					Full Color
				121~124	Color1 (Red)
				125~129	Color2 (Green)
				130~133	Color3 (Blue)
				134~138	Color4 (Magenta)
				139~142	Color5 (Pink)
				143~147	Color6 (Light Green)
				148~151	Color7 (Lavender)
				152~156	Color8 (Yellow)
				157~160	Open
					Continuous Rotation
				161~200	Continuous color wheel clockwise rotation from fast to slow
				201~203	Stop
				204~243	Continuous color wheel counter-clockwise rotation from slow to fast
					random full color
				244~247	Fast
				248~251	Medium
				252~255	Slow
Color Macro	-	18	18	000~255	Reserved
Prism	17	19	19	000~138	Open
				139~255	Prism Inserted
Prism Rot	18	20	20	000~127	0°~360°
				128~190	Continuous gobo wheel clockwise rotation from fast to slow
				191~192	Stop
				193~255	Continuous gobo wheel counter-clockwise rotation from slow to fast
Focus	19	21	21	000~255	Infinity -> Near
Focus Fine	-	22	22		
Zoom	20	23	23	000~255	Narrow beam -> Wide beam
Zoom Fine	-	24	24		
AutoFocus Distance	-	25	25	000~005	AutoFocus Off
				006~031	Reserved
				032~057	8 meters
				058~083	12 meters
				084~109	16 meters
				110~255	Reserved
AutoFocus Adjustment	-	26	26	000~127	Focus Fine -
				128~128	Stop
				129~255	Focus Fine +

Frost	21	27	27	000~001	Open
				002~255	Frost Linearity Movement Inserted
Iris	22	28	28	000~131	Open->Closed
				132~151	Iris pulsation from slow to fast speed
				152~171	Iris pulsation from slow to fast speed with fast closing
				172~191	Iris pulsation from slow to fast speed with fast opening
				192~255	Reserved
Frame1 Position	23	29	29	000~255	Out -> In
Frame1 Angle	24	30	30	000~255	Angle- --> Parallel --> Angle+
Frame2 Position	25	31	31	000~255	Out -> In
Frame2 Angle	26	32	32	000~255	Angle- --> Parallel --> Angle+
Frame3 Position	27	33	33	000~255	Out -> In
Frame3 Angle	28	34	34	000~255	Angle- --> Parallel --> Angle+
Frame4 Position	29	35	35	000~255	Out -> In
Frame4 Angle	30	36	36	000~255	Angle- --> Parallel --> Angle+
Frame Rotation	31	37	37	000~255	From 0° -> 180° rotation
Frame Macro	-	38	38	000~009	None
				010~019	Square
				020~029	Rectangle
				030~039	Triangle
				040~049	Rhombus
				050~059	Trapezium
				060~255	Reserved
CRI/R9	-	39	39	000~005	None
				006~010	CRI Inserted\R9-70
				011~015	CRI Inserted\R9-80
				016~020	CRI Inserted\R9-90
				021~255	Reserved
Fixture Control	32	40	40	000~009	None
				010~014	Entire Fixture Reset, staying in this range for 5 seconds.
				015~029	Effects Reset, staying in this range for 5 seconds.
				030~034	Pan/Tilt Reset, staying in this range for 5 seconds.
				035~049	Reserved
				050~054	Led Module Out Frequency 1.2KHz --3s
				055~059	Led Module Out Frequency 2.4KHz --3s
				060~064	Led Module Out Frequency 12KHz --3s
				065~069	Led Module Out Frequency 24KHz --3s
				070~074	S-curve Dimmer curve --3s
				075~079	Square Law Dimming curve --3s
				080~084	Inverse Square Law Dimming curve --3s
				085~089	Linear Dimming Cuve --3s
				090~124	Reserved
				125~129	High light Mode (LED Out Power) --3s
				130~134	Standard Mode (LED Out Power-- default setting) --3s
				135~139	Theater Mode (LED Out Power) --3s
				140~144	CMY S curve(-- default setting) --3s
				145~149	CMY parabola --3s
				150~255	Reserved
Pan-tilt Time	-	39	41	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Color Time	-	40	42	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Beam Time	-	41	43	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Gobo Time	-	42	44	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data

11.Routine maintenance

11.1 Clean & Maintenance

This fixture requires routine cleaning. The service life depends on the operating environment heavily. Please kindly contact GUANG ZHOU CHAI YI LIGHT CO, LTD for more maintenance information not included in this user's manual.

Warning: *Please unplug the fixture before you open any covers.*

Cleaning
Optical components should be cleaned carefully and lightly. Coating face is easily damaged, do not use harmful solvent so as to avoid damage to plastic parts or coating parts.

Cleaning optical components
1. Switch off the fixture and keep it cool completely, then open the cover.
2. Clean the floats by dust collector or compressed.
3. Use cotton paper without smell or cotton cloth soaked with the water, distilled water to wipe the granular thing, don't wipe the surface, float things should be blown away by the pressure gas.
4. Use the cotton cloth or cotton paper without smell soaked with isopropyl alcohol to remove the smoke and other residues. A commercial glass cleaner may be used, but residues must be removed with distilled water. Clean with a slow circular motion from center to edge. Dry with a clean, soft and lint-free cloth or compressed air.
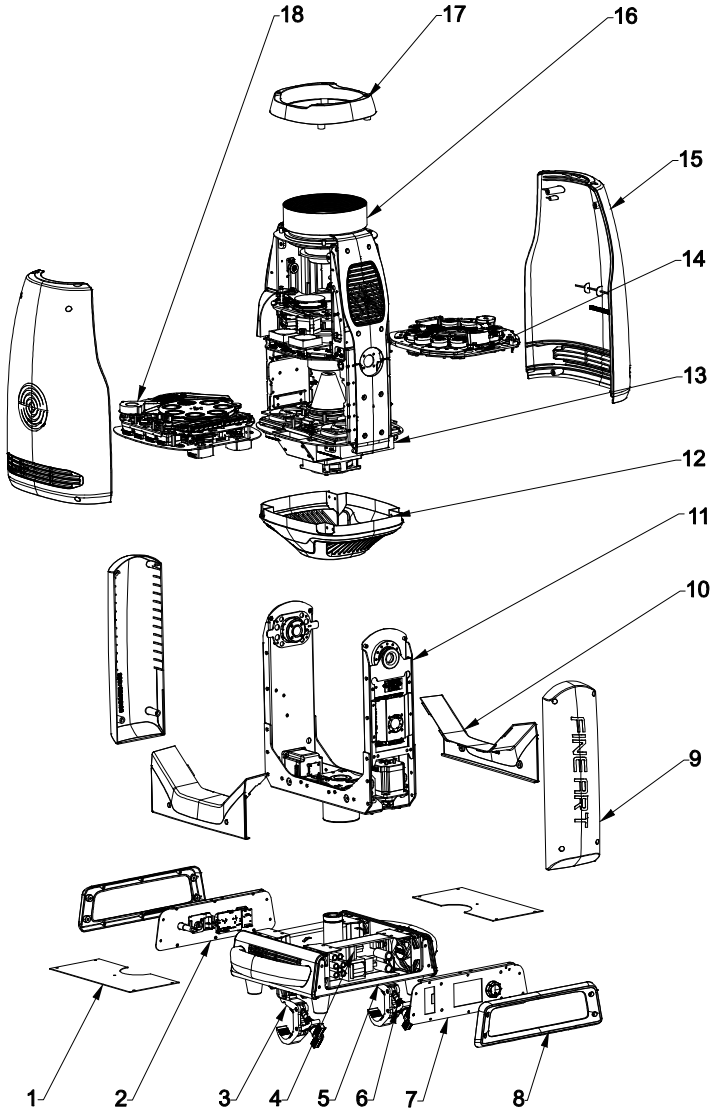
Cleaning fan and air vents
Remove dust from the fans and air vents with a soft brush, cotton paper, vacuum.

Attention: *the over-dust, smoky, and improper destructions are not included in the warranty.*

12. Parts Code

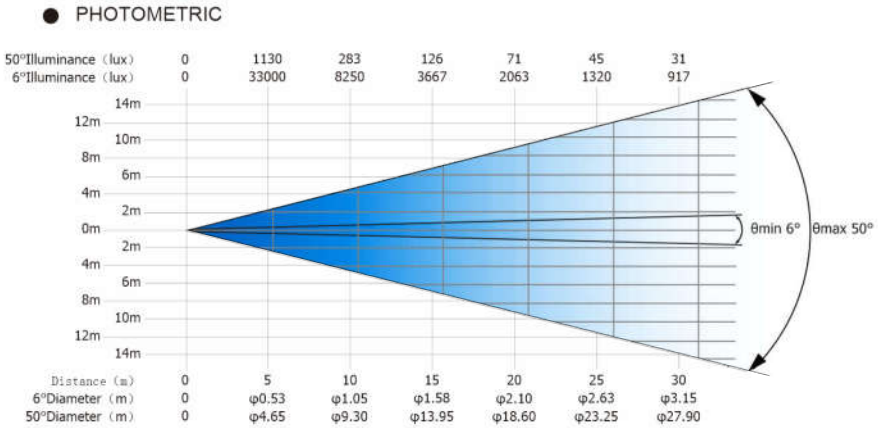| Item	Specification	Ordering index
Switch Power	28V/48/850W	330001200056
10 ch Cutting drive board	—	330395100200
4ch drive board	—	330709100018
Whitelight highlighting light source module	—	280202000220
6ch electricmotors drive board	—	330709100021
XY-axis drive board	—	330395100087
Fuse box	R3-44 250V 15A	309904063005
Fuse	20A 6X30	300302000029
10°diffusefilm	—	350709000014
4 facet prism	—	200709000046
Outer lens	—	200709000085
Zoom lens	—	200709000086
Focus lens	—	200709000086
DC glue axial fan	MF50151V1-B00C-G99	150102000046
dual power switch	MK brand, 250V, 16A	299901010006

Attached 1: Fixture exploded drawing

1.Base cover
2.Base panel module
3.folding light hook left
4.Power switching supply
5.base module
6.folding light hook right

7.base panel module
8.front and rear
 cover of basebase
9.arm bracket
10.arm Pan cover
11.arm module
12.lower body cover

13.Rear body module
14.cutting module
15.Body cover
16.Focus lens module
17.Head cover
18.Gobo moduler

Attached 2: Light output and beam angle range
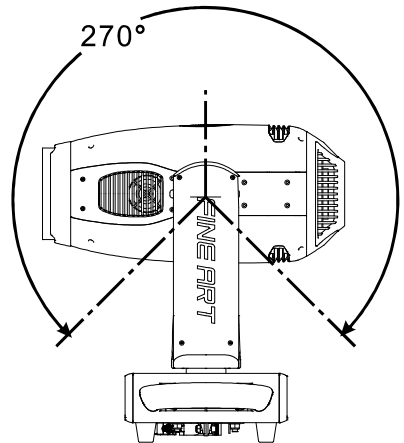
♦♦FINE 600L BSWF luminous intensity diagram

♦♦pan/tilt scan

♦[Tilt]

♦[pan]