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P/N: 390709000062 Version: C

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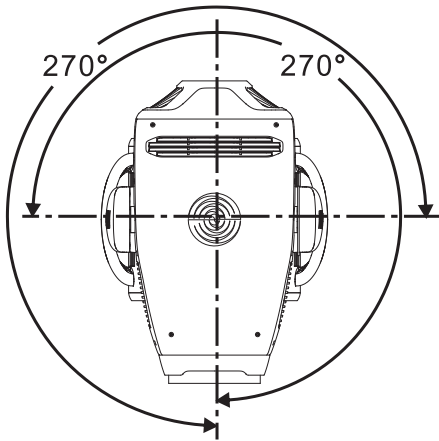
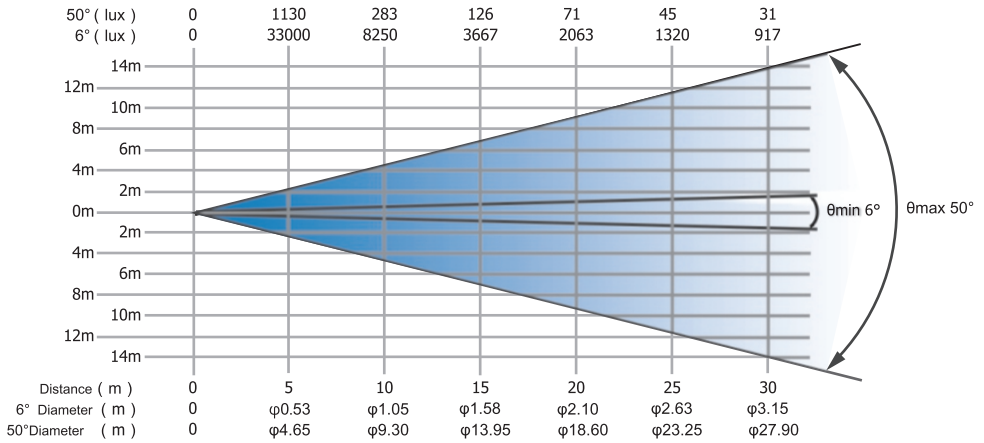
# 1/ Technical feature

Technical feature	FINE 600L/LB BSWF
Light source	600W LED module
Input voltage	100-240V~ 50/60Hz
Input current	8A
Input power	800W
Power factor	PF $\geq$ 0.98
Zoom range	6°~50°
CRI	Ra $\geq$ 90
Initial luminous flux	14000 lm
Efficiency	17 lm/W
Color system	CMY color mixing system + CTO system + 1 independent color wheel(8 color filters+white light)
Gobo system	1 rotating gobo wheel(7 pluggable gobos + white) + 1 fixed gobo wheel(9 gobos +white)
Cutting system	1 cutting system , 180° rotation
Effect	4-facet prism+1 frosted lenses + strobe + dimmer+electronic iris
Control channel	STD:32/16B:40/EXT:44
Pan	Pan=540°,Pan= 2.11°/step, Pan fine=0.008°
Tilt	Tilt =250°, Tilt=1.05°/step, Tilt fine=0.004°
Safety protection	Over current, over voltage and overheating protection
Control mode	DMX512/Wireless DMX (optional)
Work environment	0°C~40°C
Fixture dimension	400×310×728mm
Package dimension	673×525×855mm(flight case);865*440*500(carton)
Weight	Net weight: 29kg, Gross weight: 102.8kg(flight case)
Package	2pcs/flight case;1pcs/carton
IP rate	IP20

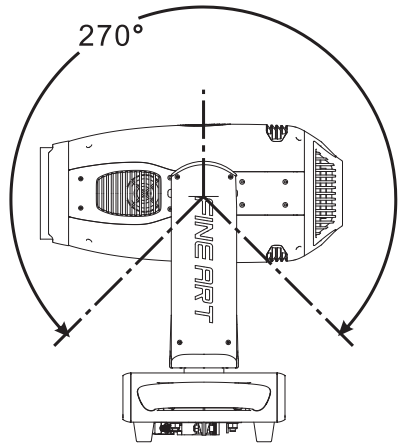
**Note:** The light source is not recommended to be replaced by user. Ask qualified maintenance personnel to replace the light source if any damage or overheat deformation.

# 2/ Photometric diagram

## ● PHOTOMETRIC



[Pan]



[Tilt]

# 3/ Control channel

## 3.1 Menu channel-Brief

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

### 3.2 DMX Control

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

Gobo1	8	8	8	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
				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
Fixture Control	32	40	40	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 Curve --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	-	-	41	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Color Time	-	-	42	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Beam Time	-	-	43	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data
Gobo Time	-	-	44	000~254	Slope Time from Fast to Slow
				255~255	Follow Cue Data

# 4/ Operation chart for the display panel function

MENU1	MENU2	MENU3	MENU4	(DEFAULT)
ADDRESS	001-XXX			001-040
Option	X Invert	OFF/ON		OFF
	Y Invert	OFF/ON		OFF
	XY SWAP	OFF/ON		OFF
	CHANNEL MODE	STD:32/16B:40/EXT:44		16B:40
	Lum Calibrate	0-100		100
	CCI Calibrate	0-100		0
	Dimming Control	OFF/ON		OFF
	Short Parth	OFF/ON		ON
	CMY Invert	OFF/ON		OFF
	CMY Curve	Curve L/Curve S		Curve S
	Dimm Curve	Opti/VRMS/Squa/Invs		Squa
	Cutting Mode	Mode1/Mode2		Mode1
	FAN Mode	Bost/Normal/Sile		Bost
	Exit			
SPEED SETTINGS	Pan/Tilt Speed	High/Fast/Normal/Slow		Fast
	Pan/Tilt Smooth	000-007		000
	Gobo/Color Speed	Normal/Slow		Fast
	Exit			
MANUAL CONTROL	Strobe	000-xxx		000
	Dimmer	000-xxx		000
	Dimmer fine	000-xxx		000
	Pan	000-xxx		000
	Pan fine	000-xxx		000
	Tilt	000-xxx		000
	Tilt fine	000-xxx		000
	Gobo1	000-xxx		000
	Gobo1 rotation	000-xxx		000
	Fixed gobo	000-xxx		000
	CMY cyan	000-xxx		000
	CMY magenta	000-xxx		000
	CMY yellow	000-xxx		000
	CTO	000-xxx		000
	Color wheel	000-xxx		000
	Prism	000-xxx		000
	Prism rotation	000-xxx		000
	Focus	000-xxx		000
	Zoom	000-xxx		000
	Frost	000-xxx		000
	Iris	000-xxx		000
	Blade1 position	000-xxx		000
	Blade1 angle	000-xxx		000
	Blade2 position	000-xxx		000
	Blade2 angle	000-xxx		000
	Blade3 position	000-xxx		000
	Blade3 angle	000-xxx		000
	Blade4 position	000-xxx		000
	Blade4 angle	000-xxx		000
	Cutting rotation	000-xxx		000
	Fixture control	000-xxx		000
Exit				

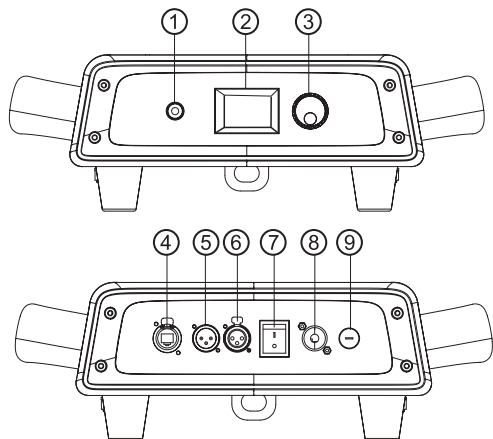
CALIBRATION	Pan	0000-XXX0	0000
	Tilt	0000-XXX0	0000
	Cyan	0000-XXX0	0000
	Magenta	0000-XXX0	0000
	Yellow	0000-XXX0	0000
	CTO	0000-XXX0	0000
	Color wheel	0000-XXX0	0000
	Zoom	0000-XXX0	0000
	Focus	0000-XXX0	0000
	Iris	0000-XXX0	0000
	Cutting rotation	0000-XXX0	0000
	Gobo1	0000-XXX0	0000
	Gobo1 rotation	0000-XXX0	0000
	Fixture Gobo	0000-XXX0	0000
	Prism	0000-XXX0	0000
	Prism rotation	0000-XXX0	0000
	Frost	0000-XXX0	0000
	Blade up 1	0000-XXX0	0000
	Blade up 2	0000-XXX0	0000
	Blade down 1	0000-XXX0	0000
Blade down 2	0000-XXX0	0000	
Blade right 1	0000-XXX0	0000	
Blade right 2	0000-XXX0	0000	
Blade left 1	0000-XXX0	0000	
Blade left 2	0000-XXX0	0000	
Exit			
DMX VALUES	Channel 01	000-xxx	000
	Channel 02	000-xxx	000
	Channel 03	000-xxx	000
	Channel 04	000-xxx	000
	Channel 05	000-xxx	000
	Channel 06	000-xxx	000
	Channel 07	000-xxx	000
	Channel 08	000-xxx	000
	Channel 09	000-xxx	000
	Channel 10	000-xxx	000
	Channel 11	000-xxx	000
	Channel 12	000-xxx	000
	Channel 13	000-xxx	000
	Channel 14	000-xxx	000
	Channel 15	000-xxx	000
	Channel 16	000-xxx	000
	Channel 17	000-xxx	000
	Channel 18	000-xxx	000
	Channel 19	000-xxx	000
	Channel 20	000-xxx	000
	Channel 21	000-xxx	000
	Channel 22	000-xxx	000
	Channel 23	000-xxx	000
	Channel 24	000-xxx	000
	Channel 25	000-xxx	000
	Channel 26	000-xxx	000
	Channel 27	000-xxx	000

DMX VALUES	Channel 28	000-xxx	000
	Channel 29	000-xxx	000
	Channel 30	000-xxx	000
	Channel 31	000-xxx	000
	Channel 32	000-xxx	000
	Channel 33	000-xxx	000
	Channel 34	000-xxx	000
	Channel 35	000-xxx	000
	Channel 36	000-xxx	000
	Channel 37	000-xxx	000
	Channel 38	000-xxx	000
	Channel 39	000-xxx	000
	Channel 40	000-xxx	000
	Channel 41	000-xxx	000
	Channel 42	000-xxx	000
	Channel 43	000-xxx	000
	Channel 44	000-xxx	000
	Channel 45	000-xxx	000
	Channel 46	000-xxx	000
	Channel 47	000-xxx	000
Channel 48	000-xxx	000	
PASSWORD	Exit	000-xxx	000
	Code 01	000-xxx	000
	Code 02	000-xxx	000
	Code 03	000-xxx	000
	Code 04	000-xxx	000
	Code 05	000-xxx	000
	Code 06	000-xxx	000
	Code 07	000-xxx	000
	Code 08	000-xxx	000
	Code 09	000-xxx	000
	Code 10	000-xxx	000
	Code 11	000-xxx	000
	Code 12	000-xxx	000
	Code 13	000-xxx	000
	Code 14	000-xxx	000
	Code 15	000-xxx	000
	Code 16	000-xxx	000
PERSONALITY	Exit		
	Display	Keep/60s	60s
	Display Intensity	10-100	100
	Display Invert	OFF/ON	OFF
	Language	Chinese/English	Chinese
	Receive Mode	DMX/WDMX/ANET/ADMX/ SACN	DMX
	Universe	000-255	000
	IP Address.A	002	002
	IP Address.B	168	168
	IP Address.C	000	000
	IP Address.D	002	002
	Load Config 1	Load/Save	Load
	Load Config 2	Load/Save	Load
	Load Factory Settings	Load/Save	Load
	Renew program	OFF/ON	OFF
Wireless Unlink	OFF/ON	OFF	

PERSONALITY	Fixture Type	600L	
	Sleep Mode	OFF/ON	OFF
	Error prompt	OFF/ON	OFF
	Error code	00	00
	SACN	001	001
	Exit		
INFORMATION	Power On Time	xxxx	0000
	Lamp On Time	xxxx	0000
	Dimming Time	xxxx	0000
	Manufacturer ID	05EF	05EF
	Device ID	62908262	XXXXXXXX
	Device ID	Vx.xx	Vx.xx
	Panel Temp	xxx xxx	xxx xxx
	Panel Fan	xxxx xxxx	xxxx xxxx
	XY Ver	Vx.xx	Vx.xx
	XY Temp	xxx(X & Y drive board) xxx(LED light)	xxx xxx
	XY Fan	xxxx xxxx	xxxx xxxx
	1:SP Ver	Vx.xx	Vx.xx
	1:SP Temp	xxx xxx	xxx xxx
	1:SP Fan	xxxx xxxx	xxxx xxxx
	2:SP Ver	Vx.xx	Vx.xx
	2:SP Temp	xxx xxx	xxx xxx
	2:SP Fan	xxxx xxxx	xxxx xxxx
	3:SP Ver	Vx.xx	Vx.xx
	3:SP Temp	xxx xxx	xxx xxx
	3:SP Fan	xxxx xxxx	xxxx xxxx
	4:YUN Board Ver	Vx.xx	Vx.xx
	4:YUN Board Sts	xxxx xxxx	xxxx xxxx
	DN	xxxx xxxx	xxxx xxxx
ICCID	xxxx xxxx	xxxx xxxx	
IMEI	xxxx xxxx	xxxx xxxx	
Exit			
SENSOR MONITOR	Pan	Norm/Error	Norm
	Tilt	Norm/Error	Norm
	Cyan	Norm/Error	Norm
	Magenta	Norm/Error	Norm
	Yellow	Norm/Error	Norm
	CTO	Norm/Error	Norm
	Color wheel	Norm/Error	Norm
	Zoom	Norm/Error	Norm
	Focus	Norm/Error	Norm
	Iris	Norm/Error	Norm
	Cutting rotation	Norm/Error	Norm
	Gobo1	Norm/Error	Norm
	Gobo1 rotation	Norm/Error	Norm
	Fixture Gobo	Norm/Error	Norm
	Prism	Norm/Error	Norm
Prism rotation	Norm/Error	Norm	
Exit			
RESET	Exec/Canc		Canc
Test Sequence	Stop/PT/Effect/All		Stop
Exit			

# 5/ The control panel


## 5.1 Control panel introduction



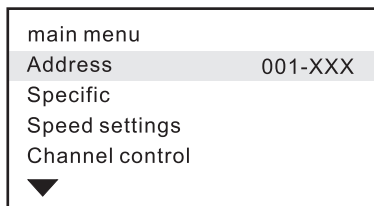
- 1.Exit button
- 2.LCD display
- 3.Function button(Enter)
- 4.Ethernet terminal(optional)
- 5.DMX in
- 6.DMX out
- 7.Mains switch
- 8.Power in
- 9.Fuse

Figure(5.1-1)

## 5.2 Control panel Operation introduction

1. Mains switch: It's power off when turning the mains switch to "O". And it's power on when turning the mains switch to "I".
- 2.Exit button+Function button: quit modification or return to upper menu.
3. Press  function button to enter the main menu interface for menu operation.

### Main Menu Interface



**Note:** Indicate the selected menu items in the menu interface. If you are sure to enter this menu, please press the runner to confirm. That is to say, enter the next menu and continue editing. If this menu option is not set in the entry address, the menu can be paged by rotating the runner.

Fig.(5.2-1)

### 4. Jog wheel:

Press down the jog wheel: enter an item/save the present value. Holds for a few more second, it will return to upper menu.

Clockwise rotate: scroll down the page/increase the parameter value.

Counterclockwise rotate: scroll up the page/decrease the parameter value.

Press the jog wheel for 2s: return to previous menu.

Long Press the jog wheel: return to the main menu.

If there no operation in 2minutes in the menu, which means to return to the original menu.

### 5. LED signal indication

DMX512 signal input: The LED light is on and the dot appears on the right side of the address code.

# 6/ Production feature explanation

## 6.1 Gobo system

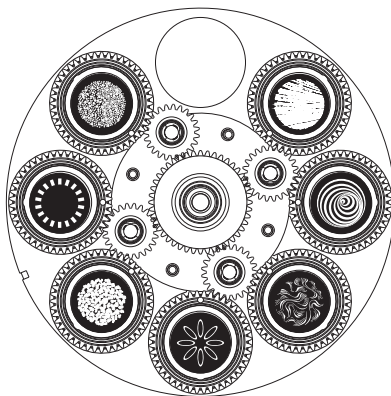
### ■ Gobo specification

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

Rotating gobo	
Material	High boron glass
Thickness	1. 1mm
Outer diameter	$\varnothing 25.9+0/-0.2\text{mm}$ ( $\varnothing 18\text{mm}$ for pattern diameter)

### ■ Gobo wheel

1 rotating gobo wheel with 7 glass gobos(6.1-1).



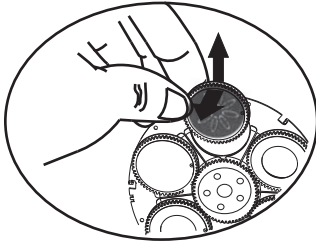
rotating gobo wheel (6.1-1).

### ■ Gobo replacement



Warning

1. If the equipment is powered off, it must be cooled for 15 minutes before replacement.
  2. For the best effect, please use the original factory pattern, do not use other patterns.
1. Pick the spring ring and gobos, place the new gobo, and then replace the spring ring in the slot as follows(6.1-2).
  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 inclined that needs to be replaced

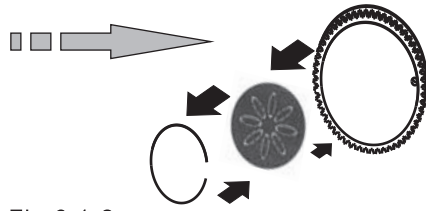


Fig.6.1-2

Align the gobo with the narrow ring of the spring

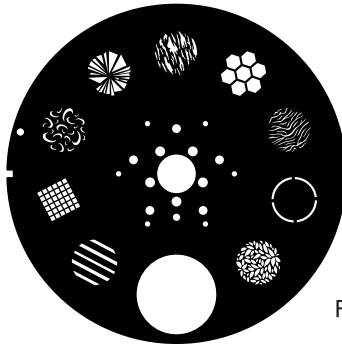


Notice!

The white side should be faced with the light source when installing the color filters.

### Gobo replacement

1 Fixed gobo wheel with 9 gobos(6.1-3).



Fig(6.1-3).

## 6.2 Color system

### Color filter

The color filter is composed of 8 fixed colors. If using the color filter in conjunction with the gobo filter, you can create a colorful gobo effect.

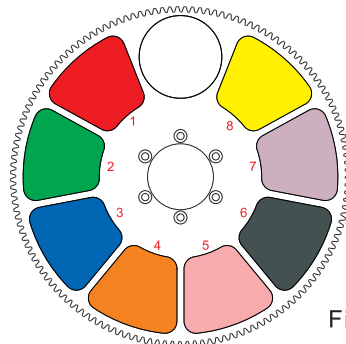


Fig.6. 2-1

Tips: The coating side should be faced with the lamp if installing the color filters.



### 6.3 CMY color mixing

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.

### 6.4 Gobo effect

one 4-facet prism, one frost, bidirectional rotating 4-facet prism.

### 6.5 CTO color temperature correction

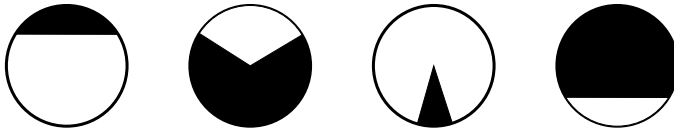
Gradient CTO color temperature 6200K-2800K.

### 6.6 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.

### 6.7 Cutting system

With synchronous gear wheel, the whole wheel is available for 180° rotation movement meanwhile the light spot can be cut into kinds of shapes when the blades move in & move out interlacement controlled by designed cutting system. As shown in (Fig.6.6-1) and (Fig.6.6-2)



Linear shape pictures (6.7-1)



Blading pictures(6.7-2)

# 7/ Routine maintenance

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

**Notice:** Excessive dust, smoke fluid and particulate buildup will degrade performance and cause over heating or damage to the fixture that is not covered by the warranty.

**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, or compressed air.

# 8/ Safety information

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



**DANGER!**  
Safety hazard.  
Risk of severe injury or death.



**DANGER!**  
Refer to manual before installing, powering or servicing.



**DANGER!**  
Hazardous voltage. Risk of severe or lethal electric shock.



**Warning!**  
Fire hazard.



**Warning!**  
Burn hazard. Hot surface. Do not touch.



**Warning!**  
Risk of eye injury. Safety glasses must be worn.



**Warning!**  
Do not stare at the bulb which is still on.



**Warning!**  
Risk of hand injury. Safety gloves must be worn.



Replace any cracked protective shield.



Minimum distance from lighted objects is 1.6m.



For indoor use only.



Do not direct lens to sun ray or strong light!



Do not actuate during operating.



Luminaires not suitable for direct mounting on normally flammable surfaces (suitable only for mounting on non-combustible surfaces)

$t_c \dots ^\circ C$

The surface's temperature is 71°C.

$t_a \dots C$

Rated maximum ambient temperature is 40°C.



## Protection against explosion

Protection screen must be replaced if they have become visible damaged to such an extent that their effectiveness is impaired.



## Protection against burning or fire

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

# 9/ Product Connection

## 9.1 Included items

The product is packed with flight case. One single standard flight case carries 2 fixtures, Included items listed below (shown as table 9.1-1):

Accessories	QTY	UNIT
Safety wire	1	PCS
Fuse	1	PCS
Signal cable	1	PCS
User manual	1	PCS
Warranty card	1	PCS
Certificate	1	PCS

Table(9.1-1)

## 9.2 Power Connection

Power supply and fuses' type and rating:

Power	Fuse
100-240V~	10A 6X30


Table(9.2-1)

**Notice:** Type Y 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.

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 9.2-2 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.

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

Table(9.2-2)

### 9.3 Signal Connection

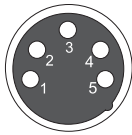
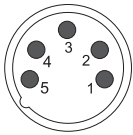
Date linkage for the fixture may be provided by DMX512 connection, Ethernet connection(optional), Ethernet/DMX512 connection(optional) and wireless transmission(optional).

#### DMX connection

**Note:** The signal cable was type X connection.

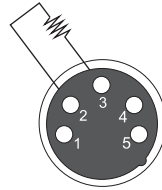
Type X connection—if the external flexible cable or cord of this fixture is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or his service agent.

3-pin or 5 pin XLR connectors are provided for fixture DMX input and output. Pin 1 is for earthing, pin 2 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.



5-pin XLR connector

Pin1: GND  
Pin2: Signal(-)  
Pin3: Signal(+)  
Pin4: Empty  
Pin5: Empty



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.(9.3-1)

Connect the fixtures with Max 11 pieces. Make sure to insert the “signal in” terminal in the last connecting fixture. shown in Figure9.3-2.

**Note:** Make sure the fixture vertically upwards when it is placed horizontally, the safe distance between two adjacent fixtures must be  $\geq 600\text{mm}$ .

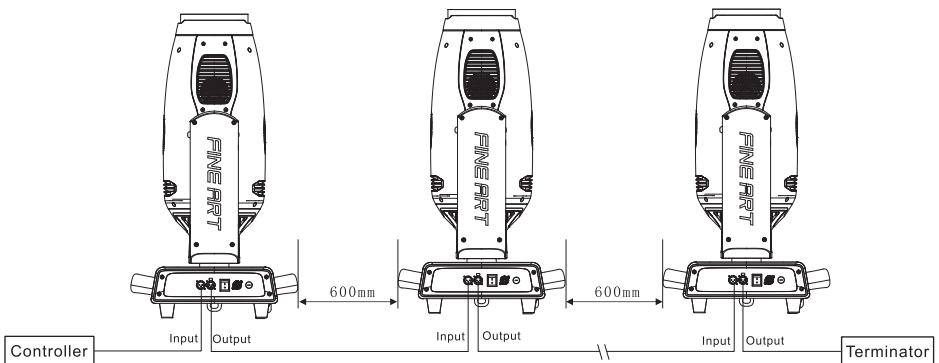


Fig.(9. 3-2)

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.

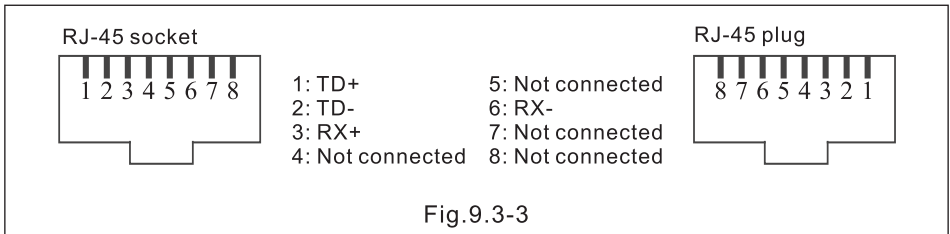


### Notice!

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 (optional)

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.9.3-3.



### 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.9.3-4.

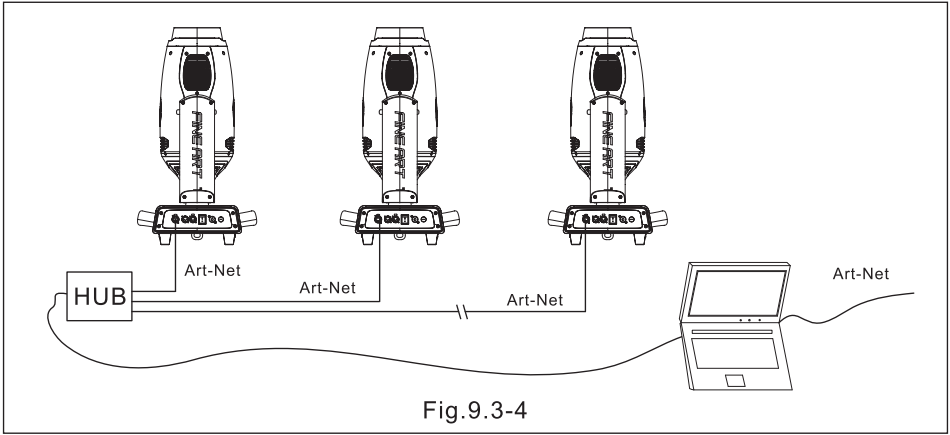


Fig.9.3-4

### Ethernet/DMX512 connection (optional)

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. 9.3-5.

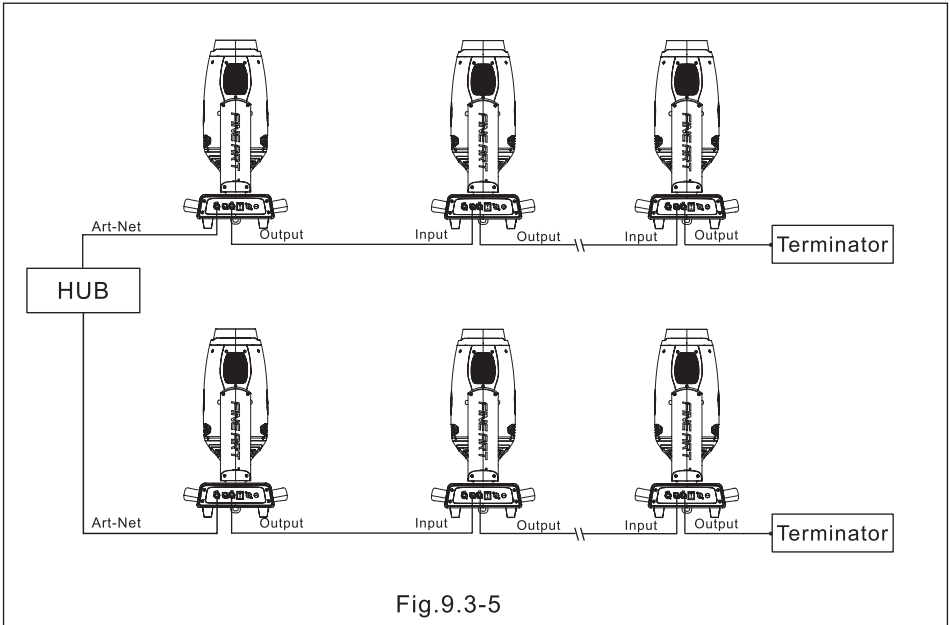


Fig.9.3-5

**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.9.3-3.

### 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.

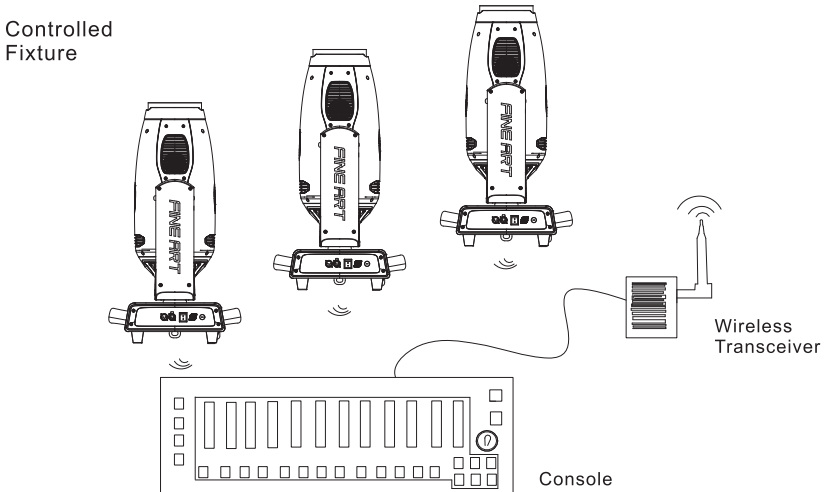


Fig.9.3-6



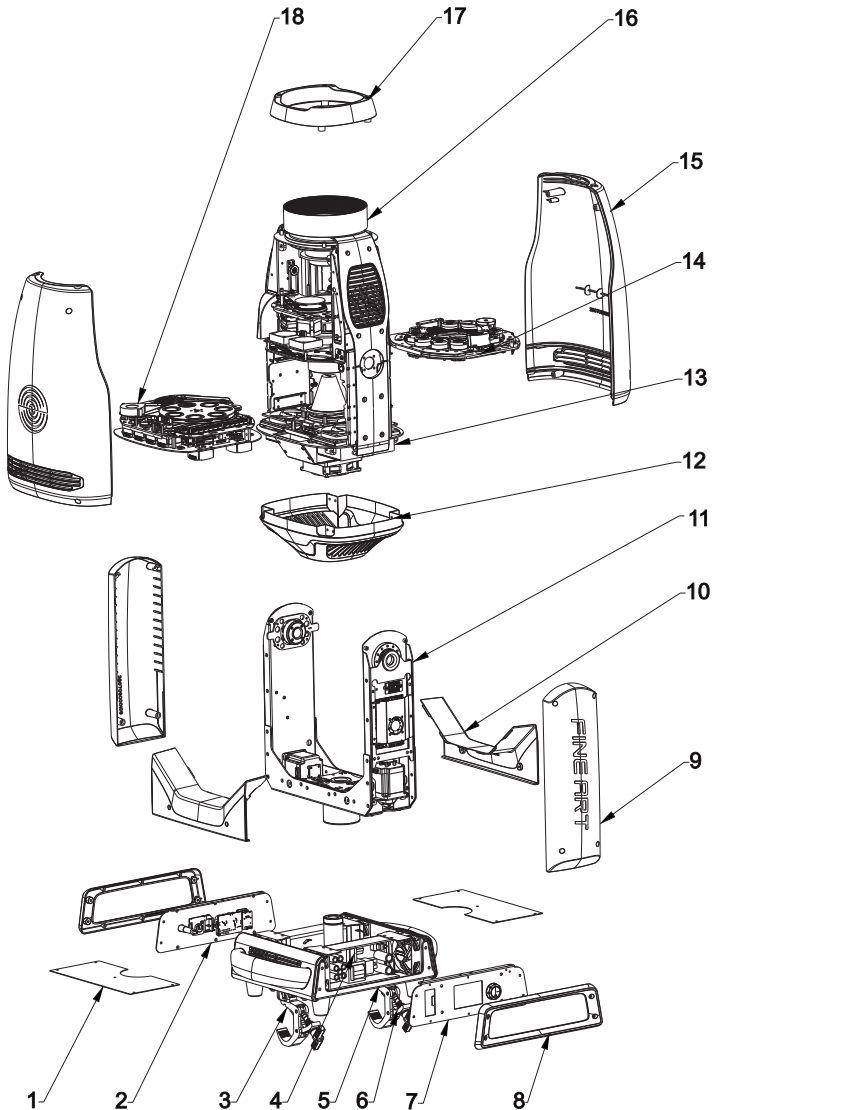
# 10/

Parts code

NO.	Item	Specification	Ording index
1	Light Source	FINE 600L BSWF	280202000313
2	Light Source	FINE 600LB BSWF	280202000314
3	Display Board	—	330397100181
4	8-CH GOBO Drive Board	—	330395100095
5	XY-axis Drive Board	—	330395100087
6	10-CH Cutting Drive Board	—	330395100200
7	5-CH Focus Drive Board	—	330709100021
8	4-CH LED Drive Board	—	330709100022
9	Y-axis Hall Boar	—	330711100046
10	X-axis Hall Boar	—	330386100001
11	XY-axis Optocoupler Board	—	330390100007
12	Power Supply	850W	330001200056
13	XY-axis Motor	60SHE5017CZ-30B01	140103000041
14	X-axis Belt	—	350201000608
15	Y-axis Belt	—	350201000610
16	LED Cooling Fan 1	AGE08015B24H-J30F	150101000128
17	LED Cooling Fan 2	PE92252B1-000C-G99	150101000114
18	Base Cooling Fan	PE92252B1-000C-G99	150101000112
19	LED Drive Board Cooling Fan	MF50152V1-1000C-A99	150101000111
20	Power Switch	—	299901010006
21	Fuse	10A $\Phi$ 6.35X31.8	309905000011
22	Display Screen	2.0-inch black and white screen	280802000057
23	Outer Lens	$\phi$ 141*51	200709000085
24	4-Face Prism	—	200709000050
25	Diffusefilm	10°	350709000014

26	Cutting Assembly	—	170709000478
27	Fix Gobo Wheel	—	190140000003
28	Gobo1	φ25.9, pattern diameter:φ18	190259000008
29	Gobo2	φ25.9, pattern diameter:φ18	190259000009
30	Gobo3	φ25.9, pattern diameter:φ18	190259000010
31	Gobo4	φ25.9, pattern diameter:φ18	190259000011
32	Gobo5	φ25.9, pattern diameter:φ18	190259000012
33	Gobo6	φ25.9, pattern diameter:φ18	190259000013
34	Gobo7	φ25.9, pattern diameter:φ18	190259000014
35	Yellow Filter	45.4x40.4	220709000009
36	Blackish Green Filter	45.4x40.4	220709000041
37	Blue Filter	45.4x40.4	220709000042
38	Green Filter	45.4x40.4	220709000043
39	Red Filter	45.4x40.4	220709000090
40	Orange Filter	45.4x40.4	220709000091
41	Light Purple Filter	45.4x40.4	220709000092
42	Pink Filter	45.4x40.4	220709000093
43	CMY-Cyan Filter 0°	55X60	220709000074
44	CMY-Cyan Filter 45°	55X60	220709000097
45	CMY-Yellow Filter 0°	55X60	220709000101
46	CMY-Yellow Filter 45°	55X60	220709000100
47	CMY-CTO Filter 0°	55X60	220709000072
48	CMY-CTO Filter 45°	55X60	220709000094
49	CMY-Magenta Filter 0°	55X60	220709000073
50	CMY-Magenta Filter 45°	55X60	220709000096

Attached 1: Fixture Exploded drawing



- |                             |                                 |                       |
|-----------------------------|---------------------------------|-----------------------|
| 1. Base cover               | 7. Base panel module            | 13. Cooling module    |
| 2. Base panel module        | 8. Front and rear cover of base | 14. Cutting module    |
| 3. Folding light hook left  | 9. Arm bracket                  | 15. Body cover        |
| 4. Power switching supply   | 10. Arm pan cover               | 16. Focus lens module |
| 5. Base module              | 11. Arm module                  | 17. Head cover        |
| 6. Folding light hook right | 12. Lower body cover            | 18. Gobo module       |