

LIGHT SKY[®]

FLY DRAGON LIGHTING EQUIPMENT CO.,LTD



F450 II

USER MANUAL

Please read these user manual carefully before use

LIGHT SKY[®]

Tel:0086-20-61828288

Fax:0086-20-61828188 Pc:510800

Web:www.lightsky.com.cn

E-mail: flydragon@lightsky.com.cn

asia@lightsky.com.cn

india@lightsky.com.cn

europa@lightsky.com.cn

latinamerica@lightsky.com.cn

middle-east@lightsky.com.cn

american@lightsky.com.cn

Address: No. 43, Yunfeng Road, Xiuquan Street,
Huadu District, Guangzhou, China



LIGHT SKY[®]



Contents

1. Safety information.....	2
2. Technical information.....	3
3. Attachment and body size	6
4. Installation and connecting.....	7
5. Control panel.....	9
6. Menu setting.....	10
7. Channel function.....	13
8. Circuit connecting diagram.....	22
9. Cleaning and maintenances.....	23
10. Troubleshooting.....	23
11. Duty exonerative and copyright protection.....	24

Congratulations on choosing our company product! We thank you for your custom.

◆ Please note that this product, as all the others in the rich my company range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.

◆ Carefully read this user manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

◆ My company disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this user manual, which must always accompany the fitting.

◆ My company reserves the right to modify the characteristics stated in this user manual at any time and without prior notice.

SAFETY INFORMATION

• Installation

Make sure all parts for fixing the projector are in a good state of repair.
Make sure the point of anchorage is stable before positioning the projector.
The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.
If the safety chain gets used, it needs to be replaced with a genuine spare.

• MINIMUM DISTANCE OF ILLUMINATED OBJECTS

The projector needs to be positioned so that the objects hit by the beam of light are at least 12 metres from the lens of the projector.

• Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.2 metres from every point on the surface of the fitting.

• Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.

• Maximum ambient temperature

Do not operate the fixture if the ambient temperature (T_a) exceeds 38°C.

• Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

• Connection to mains supply

Connection to the electricity mains must be carried out by a qualified electrical installer.
Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

Don't use the power cable when the insulation is damaged.

It must be the manufacturer or distributor or the professional person to change the damaged power cable in order to avoid any dangerous.

• Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 100°C.

• Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.
After switching off, do not remove any parts of the fitting, to avoid getting burnt for at least 30 minutes.
After this time the likelihood of the lamp exploding is virtually nil.

The fitting is designed to hold in any splinters produced by a lamp exploding. The lenses must be mounted and, if visibly Damaged, they have to be replaced with genuine spares.

• Lamp

The fitting mounts a high-pressure lamp that needs an external igniter. This igniter is fitted onto the apparatus.

-Carefully read the "operating instructions" provided by the lamp manufacturer.

-Immediately replace the lamp if damaged or deformed by heat.

• Battery

This product contains a rechargeable lead-acid battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.



t. 38°C



t. 100°C



The products referred to in this manual conform to the European Community Directives to which they are subject:

- Low Voltage 2014/35/EU
- Electromagnetic Compatibility 2014/30/EU

TECHNICAL INFORMATION

● **Lamp:**

Brand: NSL 450W USHIO

- Lamp power: 450W

- Colour temperature 6200K

- Average life 1200h

● **Motors:**

-12 Ultra-quiet motor

● **Inputs:**

-DMX 512

● **Color**

-14 colors+white

● **Gobo**

-white+11Gobo+3 animation range

● **Strobe**

-Double lens strobe(0.5-9 times/second)

● **Dimmer**

-0-100% linear adjustment

● **Prism**

-8 prism+16 double Prism + multi combination

● **Focus and Lens**

-High precision optical lens

● **Wash effect**

-Adjustable wash effects angle

● **IP set**

-Automatic charge battery, IP could be set without electricity.

● **Software upgrade**

-Insert USB upgrade software.

● **Wash effect**

-Adjustable wash effects angle

● **IP set**

-Automatic charging battery, IP could be set without electricity.

● **Features**

-Remote control lamp's switch function, display light and lamp's using time, automatically adjust cooling-fan's speed, Drop power when strobe lens.

● **IP20 protection rating**

- Protected against the entry of solid bodies larger than 12mm.

- No protection against the entry of liquids.

● **Safety Devices**

- Bipolar circuit breaker with thermal protection.

- Automatic break in power supply in case of overheating or failed operation of cooling system.

● **Cooling**

Forced ventilation with axial fans.

● **Structure**

Heat-proof plastic+module pressing alloy materials.

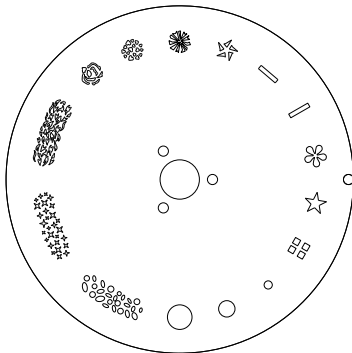
● **CE Marking**

- In conformity with the European Union Low Voltage.

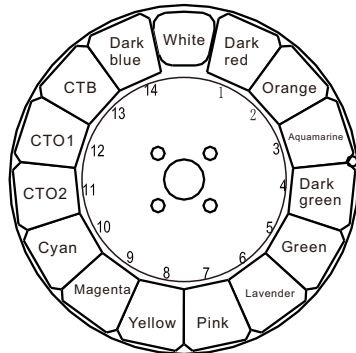
- Directive 2014/35/EU and Electromagnetic compatibility Directive 2014/30/EU.

● Two side handles for transportation.

● Device locking PAN and TILT mechanisms for transportation and maintenance.



Gobo Wheel
(please refer to the actual material)



Color Wheel
(please refer to the actual material)

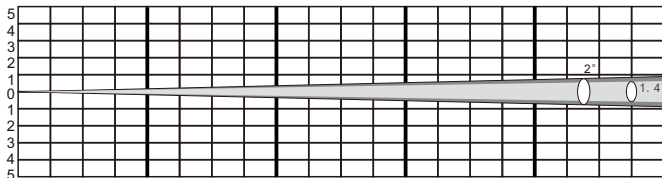
Distance, spot diameter and illumination diagram

Standard (2°)

USHIO NSL 450

Lamp total output: 26000 lumens

Lux(fc) 595000(55297) 141000(13104) 61000(5669) 34000(3160) 21000(1952)

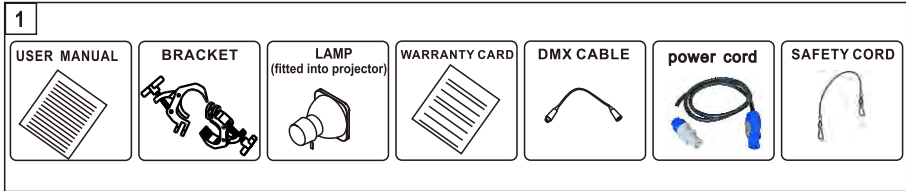


Distance m(ft in)	0m	10m (32'9")	20m (65'7")	30m (98'4")	40m (131'2")	50m (164')
Diameter 5% m (ft in)	0m	0.35m(1'2")	0.71m(2'4")	1.07m(3'6")	1.36m(4'6")	1.70m(5'7")
Diameter 50% m (ft in)	0m	0.25m(10")	0.5m(1'8")	0.75m(2'6")	1.0m(3'3")	1.2m(3'11")

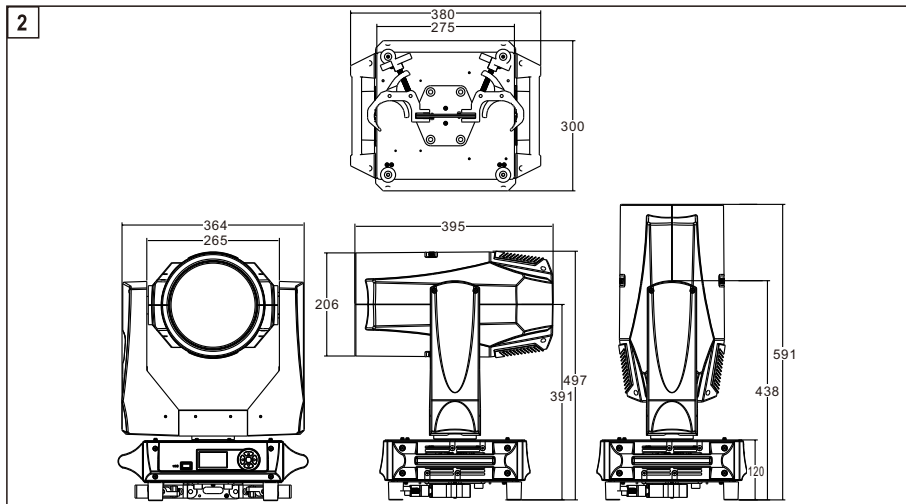
• Standard

Model	F450II
Lamp power	450W
Light power	600W
Voltage/Frequency	AC100V~240V 50/60Hz
N.W.	20.8kg
Size	380m×300mm×591mm
Box size	445m×365mm×670mm
G.W.	24.2kg
Flycase Size(2PCS)	820mm×535mm×800mm
G.W.	77.8kg
Channel	14CH/16CH/16CH PLUS
Led display	●
Built-in battery	●
X/Y Travel	540°/250°
X/Y Resolution	2.11°/0.98°
X/Y speed	2.7S/1.6S
Motor	12
Beam angle	0-2°
Color	14 color+1white
Strobe	●
Dimmer	●
Gobo	11 Gobo + 1 white + 3 animation range
Prism	8 Prism+16 double Prism+Prism combination
Prism rotation	●
Prism macro	●
Frost	●
Focus	●
Pan	●
Pan fine	●
Tilt	●
Tilt fine	●
Function	●
Reset	●
Lamp	●

ATTACHMENT AND BODY SIZE

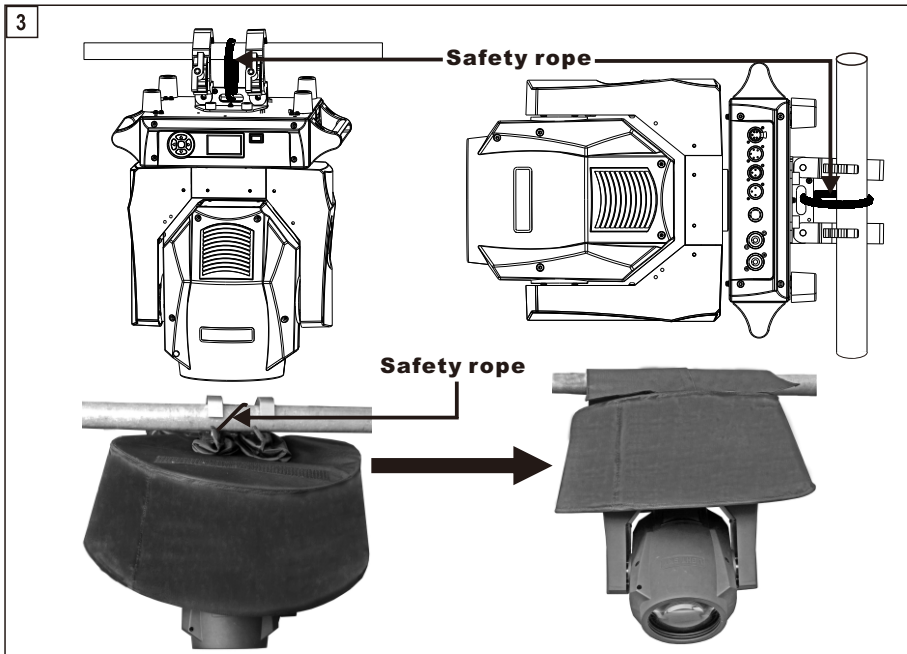


Attachment contents- Fig. 1



Body Size---Fig 2

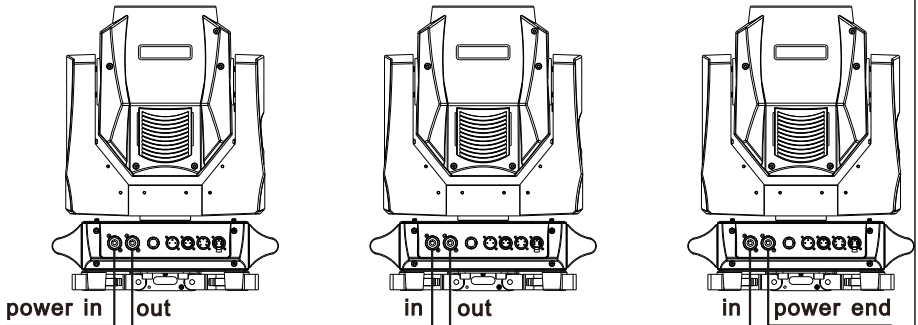
INSTALLATION AND CONNECTING



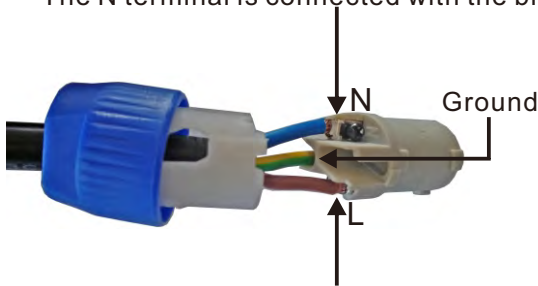
Installing the projector- Fig. 3

The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.
WARNING:with the exception of when the projector is positioned on the floor, the safety rope must be fitted.
This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.

4



The N terminal is connected with the blue line.



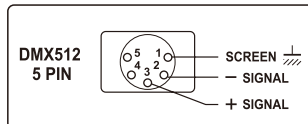
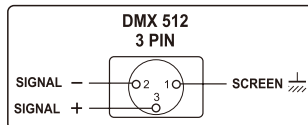
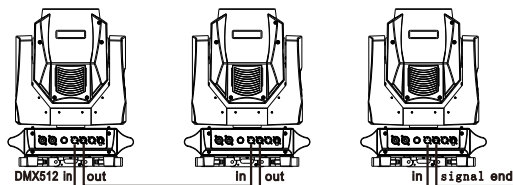
The L terminal is connected with the brown line.



Connecting to the mains supply ---Fig 4

- The items can't be more than 2pcs under series.
- connection to the electricity mains must be carried out by a qualified electrical installer.
- After doing the above operation and making sure all the devices had been installed with natural operate, press the power switch to check whether every -thing is working normally.

5

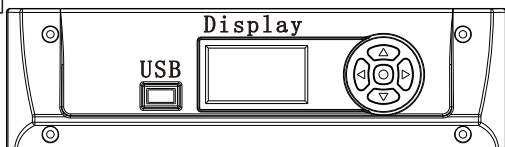


Connecting to the control signal line (DMX) - Fig. 5

- ◎ Please use the round 3 or 5-pin XLR plugs & sockets offered by menu factory to connect the first projector's output to the second projector's input and connect the second projector's output to the third projector's input. And in the same way for the rest, eventually connect the last projector's output, all the projectors are together.
- ◎ The projectors's control signal output or input by using the 3 or 5-pin XLR pug and socket. If need to lengthen the communication cable, please make sure the both side of 3 or 5-pin plug is one to one (one to one, two to two, three to three). Otherwise, the communication cable will be interrupted. The communicate cable is 2-cord screened cable 75Ω resistance with each core is at least a 0.5mm diameter. (**Caution:** All the inside leading wire of 3 or 5-pin XLR plug couldn't touch each other or plinth).
- ◎ Recommend to use the DMX signal terminator for the installation to avoid the electronic noise damage the digital control signal. Simply speaking, DMX terminator is an XLR connector with a 120Ω 1/2W resistor connected across pin 2 and 3. Which is then plugged into the output socket on the last projector in the chain. Refer to the connection.

CONTROL PANEL

6



- Up arrowhead: page up
- Down arrowhead: page down
- Left arrowhead: reduce
- Right arrowhead: increase
- Enter: OK function
- Exit: in the choice screen

Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display (please refer to the actual material):



MENU SETTING(V1.0)

Main menu		I menu		II menu		III menu		
DMX Address	→	Address : 001-512						
Information	→	Lamp hours	→	Total**** (h)				
				Lamp open**** (h)				
		Temperature	→	Board : ***. *				
		RDM UID	→	Undistributed				
		Fan speed/Voltag	→			Fan1: **. *V		
						Fan2: **. *V		
						Fan1: ****RPM		
						Fan2: **** RPM		
						Fan3 : ****RPM		
		DMX live	→		→	1.Colour (***)		
						2.Shutter (***)		
						3.Dimmer (***)		
						4.Gobo (***)		
						5.Prism (***)		
						6.PrismRota. (***)		
						7.PrismMacro (***)		
						8.Frost (***)		
						9.Focus (***)		
						10.Pan (***)		
						11.Pan Fine (***)		
						12.Tilt (***)		
						13.Tilt Fine (***)		
						14.Function (***)		
15.Reset (***)								
16.LampControl (***)								
System version	→			XY:V*. **				
				10M:V*. **				
				DIS Board : V*. **				
Return(ESC)								
Channel mode	→			Standard(16CH)				
				Simple(14CH)				
				16CH PLUS				
				OFF				
				ON				

Main menu	I menu	II menu	III menu	
Personal	P/T invert	Pan invert	→ OFF ON	
		Tilt invert	→ OFF ON	
	Display	Language	→ English (英文) Chinese (中文)	
		Back Light	→ Open Auto close(15s)	
		Reversal	→ Normal Rota.180	
		Backlight blink	→ ON OFF	
		Return(ESC)		
	Return(ESC)			
	Manual control	Channel control	1.Colour (***)	
			2.Shutter (***)	
3.Dimmer (***)				
4.Gobo (***)				
5.Prism (***)				
6.PrismRota. (***)				
7.PrismMacro (***)				
8.Frost (***)				
9.Focus (***)				
10.Pan (***)				
11.Pan Fine (***)				
12.Tilt (***)				
13.Tilt Fine (***)				
14.Function (***)				
15.Reset (***)				
16.LampControl (***)				
Return(ESC)				
Reset		System reset		
		Pan/Tilt reset		
		Head motor reset		
		Test P/T	STEP ***	

Main menu	I menu	II menu	III menu	
	Test	Test effect	→ STEP ***	
		Test all	→ STEP ***	
		Return(ESC)		
	Return(ESC)			
Service	Error list			
	Clean error	Keep		
		Clean		
	Calibration	Pan	000-255	
		Tilt	000-255	
		Dimmer1	000-255	
		Dimmer2	000-255	
		Focus1	000-255	
		Focus2	000-255	
		Colour	000-255	
		Stat.Gobo	000-255	
		Prism1	000-255	
		Prism2	000-255	
		PrismRota.	000-255	
		Frost	000-255	
		Return(ESC)		
	Factory	Default		
		Time clean		→ 上电时间 亮灯时间
		Developer		
		Firmware update		
		WIFI ON/OFF		
		Return(ESC)		
	Fan mode	Standard mode		
3000-4000M				
4000-5500M				
	Return(ESC)			
Lamp	Off			
	On			
Language	English/英文			
	Chinese/中文			
Reversal	Normal			
	Rota.180			

CHANNEL FUNCTION(V1.0)

CHANNEL table (standard 16CH)

Channe	DMX	Percentage	Function
1	Colour		
	0-4	0-1.56	White
	5-8	1.96-3.14	White+Red
	9-12	3.53-4.71	Red
	13-17	5.10-6.67	Red+Orange
	18-21	7.06-8.24	Orange
	22-25	8.63-9.80	Orange+Aquamarine
	26-29	10.2-11.4	Aquamarine
	30-34	11.8-13.3	Aquamarine+Green
	35-38	13.7-14.9	Green
	39-42	15.3-16.5	Green+Light Green
	43-46	16.9-18.0	Light Green
	47-51	18.4-20.0	Light Green+Lavender
	52-55	20.4-21.6	Lavender
	56-59	22.0-23.1	Lavender+Pink
	60-63	23.5-24.7	Pink
	64-68	25.1-26.7	Pink+Yellow
	69-72	27.0-28.2	Yellow
	73-76	28.6-29.8	Yellow+Magenta
	77-81	30.2-31.8	Magenta
	82-85	32.2-33.3	Magenta+Cyan
	86-89	33.7-34.9	Cyan
	90-93	35.3-36.5	Cyan+CT02
	94-98	36.9-38.4	CT02
	99-102	38.8-40.0	CT02+CT01
	103-106	40.4-41.6	CT01
	107-110	42.0-43.1	CT01+CTB
111-115	43.5-45.1	CTB	
116-119	45.5-46.7	CTB+Dark Blue	
120-123	47.1-48.2	Dark Blue	
124-127	48.6-49.8	Dark Blue+White	
128-191	50.2-74.9	CCW, Fast→Slow Rotation	
192-255	75.3-100	CW, Slow→Fast Rotation	
2	Strobe		
	0-3	0-1.2	Closed
	4-103	1.6-40.4	Slow-Fast Strobe
	104-107	40.8-42.0	Open
	108-157	42.4-61.6	Pulsation slow-fast, fast off, slow open
	158-207	62.0-81.2	Pulsation slow-fast, fast open, slow off
	208-212	81.6-83.1	Open
	213-251	83.5-98.4	Random Slow-Fast Strobe
	252-255	99.8-100	Open

Channe	DMX	Percentage	Function
3	0-255	0-100	Dimmer
4	GOBO		
	0-3	0-1.2	White
	4-7	1.6-2.7	Gobo1
	8-11	3.1-4.3	Gobo2
	12-15	4.7-5.9	Gobo3
	16-19	6.3-7.5	Gobo4
	20-23	7.8-9.0	Gobo5
	24-27	9.4-10.6	Gobo6
	28-31	11.0-12.2	Gobo7
	32-35	12.5-13.7	Gobo8
	36-39	14.1-15.3	Gobo9
	40-43	15.7-16.9	Gobo10
	44-47	17.3-18.4	Gobo11
	48-51	18.8-20.0	Gobo12
	52-55	20.4-21.6	Gobo13
	56-59	22.0-23.1	Gobo14
	60-73	23.5-28.6	Gobo1 Shake Slow-Fast Speed
	74-87	29.0-34.1	Gobo2 Shake Slow-Fast Speed
	88-101	34.4-39.6	Gobo3 Shake Slow-Fast Speed
	102-115	40.0-45.1	Gobo4 Shake Slow-Fast Speed
	116-129	45.5-50.6	Gobo5 Shake Slow-Fast Speed
	130-143	51.0-56.1	Gobo6 Shake Slow-Fast Speed
	144-157	56.5-61.6	Gobo7 Shake Slow-Fast Speed
	158-171	62.0-67.1	Gobo8 Shake Slow-Fast Speed
172-185	67.5-72.6	Gobo9 Shake Slow-Fast Speed	
186-199	72.9-78.0	Gobo10 Shake Slow-Fast Speed	
200-213	78.4-83.5	Gobo11 Shake Slow-Fast Speed	
214-227	83.9-89.0	Gobo12 Shake Slow-Fast Speed	
228-241	89.4-94.5	Gobo13 Shake Slow-Fast Speed	
242-255	94.9-100	Gobo14 Shake Slow-Fast Speed	
5	Prism		
	0-63	0-24.7	Unused Range
	64-127	25-49.8	Prism1
	128-191	50.2-74.9	Prism2
	192-255	75.3-100	Prism1+Prism2
6	Prism Rotation		
	0	0	Unused Range
	1-63	0.4-24.7	0-180° rotation
	64-127	25.1-49.8	CCW, Fast → Slow
	128-191	50.2-74.9	CW, Slow → Fast

Channe	DMX	Percentage	Function
6	192-207	75.3-81.2	Slow → Fast Rotation, 90 degrees back and forth
	208-223	81.6-87.5	Slow → Fast Rotation, 180 degrees back and forth
	224-239	87.8-93.7	Slow → Fast Rotation, 270 degrees back and forth
	240-255	94.1-100	Slow → Fast Rotation, 360 degrees back and forth
7	Prism Macro		
	0-15	0-5.9	Unused Range
	16-55	6.3-21.6	From fast to slow, 8 prism free switch
	56-95	22.0-37.3	From fast to slow, 16 prism free switch
	96-135	37.6-52.9	From fast to slow, 8 prism+16 prism at the same time free switch
	136-175	53.3-68.6	8 prism + 16 prism to free switch from fast to slow
	176-215	69.0-84.3	16 prism + 8 prism to free switch from fast to slow
216-255	84.7-100	From fast to slow, 8 prism and the 16 prism interlock switch	
8	0-255	0-100	Frost
9	0-255	0-100	Focus
10	0-255	0-100	Pan
11	0-255	0-100	Pan Fine
12	0-255	0-100	TILT
13	0-255	0-100	TILT Fine
14	0-255	0-100	Unused Range
15	Reset		
	0-25	0-9.8	Unused Range
	26-76	10.2-29.8	Effect Reset
	77-127	30.2-49.8	PAN/TITL Reset
128-255	50.2-100	Complete Reset	
16	Lamp control		
	0-25	0-9.8	Unused Range
	26-100	10.2-39.2	Lamp OFF
	101-255	39.6-100	Lamp ON

CHANNEL table (steamline 14CH)

Channe	DMX	Percentage	Function
1	Colour		
	0-4	0-1.56	White
	5-8	1.96-3.14	White+Red
	9-12	3.53-4.71	Red
	13-17	5.10-6.67	Red+Orange
	18-21	7.06-8.24	Orange
	22-25	8.63-9.80	Orange+Aquamarine
	26-29	10.2-11.4	Aquamarine
	30-34	11.8-13.3	Aquamarine+Green
	35-38	13.7-14.9	Green
	39-42	15.3-16.5	Green+Light Green
	43-46	16.9-18.0	Light Green
	47-51	18.4-20.0	Light Green+Lavender
	52-55	20.4-21.6	Lavender
	56-59	22.0-23.1	Lavender+Pink
	60-63	23.5-24.7	Pink
	64-68	25.1-26.7	Pink+Yellow
	69-72	27.0-28.2	Yellow
	73-76	28.6-29.8	Yellow+Magenta
	77-81	30.2-31.8	Magenta
	82-85	32.2-33.3	Magenta+Cyan
	86-89	33.7-34.9	Cyan
	90-93	35.3-36.5	Cyan+CT02
	94-98	36.9-38.4	CT02
	99-102	38.8-40.0	CT02+CT01
103-106	40.4-41.6	CT01	
107-110	42.0-43.1	CT01+CTB	
111-115	43.5-45.1	CTB	
116-119	45.5-46.7	CTB+Dark Blue	
120-123	47.1-48.2	Dark Blue	
124-127	48.6-49.8	Dark Blue+White	
128-191	50.2-74.9	CCW, Fast→Slow Rotation	
192-255	75.3-100	CW, Slow→Fast Rotation	
2	Strobe		
	0-3	0-1.2	Closed
	4-103	1.6-40.4	Slow-Fast Strobe
	104-107	40.8-42.0	Open
	108-157	42.4-61.6	Pulsation slow-fast, fast off, slow open
	158-207	62.0-81.2	Pulsation slow-fast, fast open, slow off
	208-212	81.6-83.1	Open
	213-251	83.5-98.4	Random Slow-Fast Strobe
	252-255	99.8-100	Open

Channe	DMX	Percentage	Function
3	0-255	0-100	Dimmer
4	GOBO		
	0-3	0-1.2	White
	4-7	1.6-2.7	Gobo1
	8-11	3.1-4.3	Gobo2
	12-15	4.7-5.9	Gobo3
	16-19	6.3-7.5	Gobo4
	20-23	7.8-9.0	Gobo5
	24-27	9.4-10.6	Gobo6
	28-31	11.0-12.2	Gobo7
	32-35	12.5-13.7	Gobo8
	36-39	14.1-15.3	Gobo9
	40-43	15.7-16.9	Gobo10
	44-47	17.3-18.4	Gobo11
	48-51	18.8-20.0	Gobo12
	52-55	20.4-21.6	Gobo13
	56-59	22.0-23.1	Gobo14
	60-73	23.5-28.6	Gobo1 Shake Slow-Fast Speed
	74-87	29.0-34.1	Gobo2 Shake Slow-Fast Speed
	88-101	34.4-39.6	Gobo3 Shake Slow-Fast Speed
	102-115	40.0-45.1	Gobo4 Shake Slow-Fast Speed
	116-129	45.5-50.6	Gobo5 Shake Slow-Fast Speed
	130-143	51.0-56.1	Gobo6 Shake Slow-Fast Speed
	144-157	56.5-61.6	Gobo7 Shake Slow-Fast Speed
	158-171	62.0-67.1	Gobo8 Shake Slow-Fast Speed
	172-185	67.5-72.6	Gobo9 Shake Slow-Fast Speed
	186-199	72.9-78.0	Gobo10 Shake Slow-Fast Speed
200-213	78.4-83.5	Gobo11 Shake Slow-Fast Speed	
214-227	83.9-89.0	Gobo12 Shake Slow-Fast Speed	
228-241	89.4-94.5	Gobo13 Shake Slow-Fast Speed	
242-255	94.9-100	Gobo14 Shake Slow-Fast Speed	
5	Prism		
	0-63	0-24.7	Unused Range
	64-127	25-49.8	Prism1
	128-191	50.2-74.9	Prism2
	192-255	75.3-100	Prism1+Prism2
6	Prism Rotation		
	0	0	Unused Range
	1-63	0.4-24.7	0-180° rotation
	64-127	25.1-49.8	CCW, Fast → Slow
	128-191	50.2-74.9	CW, Slow → Fast

Channe	DMX	Percentage	Function
6	192-207	75.3-81.2	Slow → Fast Rotation, 90 degrees back and forth
	208-223	81.6-87.5	Slow → Fast Rotation, 180 degrees back and forth
	224-239	87.8-93.7	Slow → Fast Rotation, 270 degrees back and forth
	240-255	94.1-100	Slow → Fast Rotation, 360 degrees back and forth
7	Prism Macro		
	0-15	0-5.9	Unused Range
	16-55	6.3-21.6	From fast to slow, 8 prism free switch
	56-95	22.0-37.3	From fast to slow, 16 prism free switch
	96-135	37.6-52.9	From fast to slow, 8 prism+16 prism at the same time free switch
	136-175	53.3-68.6	8 prism + 16 prism to free switch from fast to slow
	176-215	69.0-84.3	16 prism + 8 prism to free switch from fast to slow
216-255	84.7-100	From fast to slow, 8 prism and the 16 prism interlock switch	
8	0-255	0-100	Frost
9	0-255	0-100	Focus
10	0-255	0-100	Pan
11	0-255	0-100	Pan Fine
12	0-255	0-100	TILT
13	0-255	0-100	TILT Fine
14	Function		
	0-25	0-9.8	Unused Range
	26-30	10.2-11.8	Effect Reset
	31-35	12.2-13.7	PAN/TITL Reset
	36-40	14.1-15.7	Complete Reset
	41-180	16.1-70.6	Unused Range
	181-200	71.0-78.4	Lamp OFF
	201-220	78.8-86.3	Unused Range
221-255	86.7-100	Lamp ON	

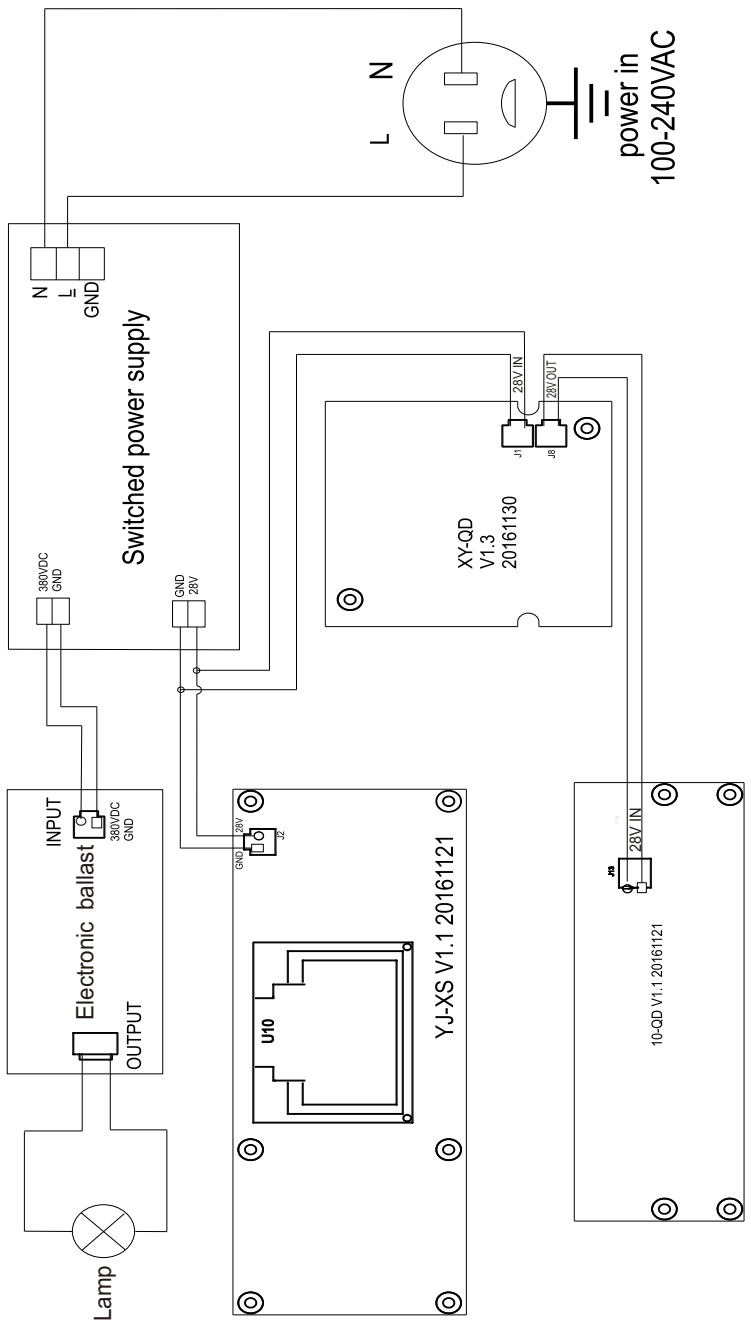
Channel table (16CH PLUS)

Channe	DMX	Percentage	Function
1	Colour		
	0-4	0-1.56	White
	5-8	1.96-3.14	White+Red
	9-12	3.53-4.71	Red
	13-17	5.10-6.67	Red+Orange
	18-21	7.06-8.24	Orange
	22-25	8.63-9.80	Orange+Aquamarine
	26-29	10.2-11.4	Aquamarine
	30-34	11.8-13.3	Aquamarine+Green
	35-38	13.7-14.9	Green
	39-42	15.3-16.5	Green+Light Green
	43-46	16.9-18.0	Light Green
	47-51	18.4-20.0	Light Green+Lavender
	52-55	20.4-21.6	Lavender
	56-59	22.0-23.1	Lavender+Pink
	60-63	23.5-24.7	Pink
	64-68	25.1-26.7	Pink+Yellow
	69-72	27.0-28.2	Yellow
	73-76	28.6-29.8	Yellow+Magenta
	77-81	30.2-31.8	Magenta
	82-85	32.2-33.3	Magenta+Cyan
	86-89	33.7-34.9	Cyan
	90-93	35.3-36.5	Cyan+CT02
	94-98	36.9-38.4	CT02
	99-102	38.8-40.0	CT02+CT01
	103-106	40.4-41.6	CT01
107-110	42.0-43.1	CT01+CTB	
111-115	43.5-45.1	CTB	
116-119	45.5-46.7	CTB+Dark Blue	
120-123	47.1-48.2	Dark Blue	
124-127	48.6-49.8	Dark Blue+White	
128-191	50.2-74.9	CCW, Fast→Slow Rotation	
192-255	75.3-100	CW, Slow→Fast Rotation	
2	Strobe		
	0-3	0-1.2	Closed
	4-103	1.6-40.4	Slow-Fast Strobe
	104-107	40.8-42.0	Open
	108-157	42.4-61.6	Pulsation slow-fast, fast off, slow open
	158-207	62.0-81.2	Pulsation slow-fast, fast open, slow off
	208-212	81.6-83.1	Open
	213-251	83.5-98.4	Random Slow-Fast Strobe
	252-255	99.8-100	Open

Channe	DMX	Percentage	Function
3	0-255	0-100	Dimmer
4	GOBO		
	0-3	0-1.2	White
	4-7	1.6-2.7	Gobo1
	8-11	3.1-4.3	Gobo2
	12-15	4.7-5.9	Gobo3
	16-19	6.3-7.5	Gobo4
	20-23	7.8-9.0	Gobo5
	24-27	9.4-10.6	Gobo6
	28-31	11.0-12.2	Gobo7
	32-35	12.5-13.7	Gobo8
	36-39	14.1-15.3	Gobo9
	40-43	15.7-16.9	Gobo10
	44-47	17.3-18.4	Gobo11
	48-51	18.8-20.0	Gobo12
	52-55	20.4-21.6	Gobo13
	56-59	22.0-23.1	Gobo14
	60-69	23.5-27.0	Gobo1 Shake Slow-Fast Speed
	70-79	27.4-31.0	Gobo2 Shake Slow-Fast Speed
	80-89	31.4-34.9	Gobo3 Shake Slow-Fast Speed
	90-99	35.3-38.9	Gobo4 Shake Slow-Fast Speed
	100-109	39.3-42.7	Gobo5 Shake Slow-Fast Speed
	110-119	43.1-46.6	Gobo6 Shake Slow-Fast Speed
	120-129	47.0-50.5	Gobo7 Shake Slow-Fast Speed
	130-139	50.9-54.5	Gobo8 Shake Slow-Fast Speed
	140-149	54.9-58.4	Gobo9 Shake Slow-Fast Speed
	150-159	58.8-62.3	Gobo10 Shake Slow-Fast Speed
	160-169	62.7-66.2	Gobo11 Shake Slow-Fast Speed
	170-179	66.7-70.2	Gobo12 Shake Slow-Fast Speed
	180-189	70.6-74.1	Gobo13 Shake Slow-Fast Speed
	190-199	74.5-78.0	Gobo14 Shake Slow-Fast Speed
200-225	78.4-88.2	Fast-Slow Rotation	
226-229	88.6-89.8	Stop	
230-255	90.2-100	Slow-Fast Rotation	
5	Prism		
	0-63	0-24.7	Unused Range
	64-127	25-49.8	Prism1
	128-191	50.2-74.9	Prism2
	192-255	75.3-100	Prism1+Prism2

Channe	DMX	Percentage	Function
6	Prism Rotation		
	0	0	Unused Range
	1-63	0.4-24.7	0-180° rotation
	64-127	25.1-49.8	CCW, Fast → Slow
	128-191	50.2-74.9	CW, Slow → Fast
	192-207	75.3-81.2	Slow → Fast Rotation, 90 degrees back and forth
	208-223	81.6-87.5	Slow → Fast Rotation, 180 degrees back and forth
	224-239	87.8-93.7	Slow → Fast Rotation, 270 degrees back and forth
	240-255	94.1-100	Slow → Fast Rotation, 360 degrees back and forth
7	Prism Macro		
	0-15	0-5.9	Unused Range
	16-55	6.3-21.6	From fast to slow, 8 prism free switch
	56-95	22.0-37.3	From fast to slow, 16 prism free switch
	96-135	37.6-52.9	From fast to slow, 8 prism+16 prism at the same time free switch
	136-175	53.3-68.6	8 prism + 16 prism to free switch from fast to slow
	176-215	69.0-84.3	16 prism + 8 prism to free switch from fast to slow
	216-255	84.7-100	From fast to slow, 8 prism and the 16 prism interlock switch
8	0-255	0-100	Frost
9	0-255	0-100	Focus
10	0-255	0-100	Pan
11	0-255	0-100	Pan Fine
12	0-255	0-100	TILT
13	0-255	0-100	TILT Fine
14	0-255	0-100	Unused Range
15	Reset		
	0-25	0-9.8	Unused Range
	26-76	10.2-29.8	Effect Reset
	77-127	30.2-49.8	PAN/TITL Reset
	128-255	50.2-100	Complete Reset
16	Lamp control		
	0-25	0-9.8	Unused Range
	26-100	10.2-39.2	Lamp OFF
	101-255	39.6-100	Lamp ON

Circuit connecting diagram



CLEANING AND MAINTENANCES

- In order to ensure the projector could work normally. It should be kept clean always. It is recommended that the fans and ventilation in let should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. Do not use any type of solvent on dichroic colour filters. It will damage the projector.
- Suggestion: The continue usage of the light don't exceed 4 hours. Or it will shorter the usage of the lamp. Please use the alternative operation to solve this problems.
- Please disconnect the power supply when begin to maintenance or takedown the light. Please let the parts cool down 10 minute at least then begin to install. If need to replace the lamp, please wait 10 minute again at least to let the lamp cool down completely or which maybe burned down.
- Please inspect the lens or other moving parts timing and keep them clear and static. If find anything damaged or looseness, must change a lamp or fix the lamp in order to avoid the accident.
- The light use the strong cool system. It is easy for the dirty to be collected. Please do clear the hot-sak one time two week at least.
- After you use the light, please check the intake place whether there are some wastepaper, please clean it up, or the windmill will break down and causing fire.

TROUBESHOOTING

It is recommended some solution for some normal trouble shooting. Any unsolved problems should always be handle by the professional person. Disconnect the power supply before maintenance the light.

■ Lamp off:

- Please check if install the suitable lamp.
- Please check the connection of the power supply or switch is ok.
- Please check whether the lamp will reach the end of their life can explode, please replace a same description lamp.
- Please measure if the power supply is enough.
- Please check if the operation is correct. Please wait 30 minutes at least till the lamp cool down enough, then could the connect the power supply, which could be normal work.
- Please check whether the DMX 512 controller pass the "turn on" order.
- Please check the connection of the trigger circuit is loose contact.
- Please check whether the connected point of the trigger point is loose contact, faster the connect cable.
- Check menu "information" → fan speed/voltag → fan1, fan2, fan3", Whether the fan speed in 500RPM above, below 500RPM the lamp does not light, replace with the specifications of the fan.
- Please check if the switch of the temperature is damaged.
- Enter the menu "information" select "temperature" to see whether the temperature display board is too high or no temperature display.

■ The light beam is dark, not inhomogeneous:

- When the lamp is to the usage life, the light is not enough, please change a new one for the same description.
- Please check the reflector parts is dirty. Keep them clear.
- Please measure if the power supply is enough.
- Small adjusting is suitable for change height or screw system till get a ideal light beam.
- Enter the menu "service options" to choose "calibration" to enter the "Color" and "Gobo" adjustment, the center can be modulated.

■ **The light shadow is fogging:**

- ⊙ Please check the data on the DMX 512 controller is suitable for the electric focus.
- ⊙ Please check the mechanical parts is jamming. After cleaning, please add some temperature -durable juice.

■ **The light works interruptly:**

- ⊙ Please check if the fan works normally or mote clogging.
- ⊙ Please check whether the abstract heat have the mote clogging.
- ⊙ Please check if the lamp is to the usage life.
- ⊙ Please check if the power supply is enough, the connection of the power supply or the circuit are good.
- ⊙ Please check if the switch of the sup-temperature is good.

■ **Though the light is lighting, but it couldn't accept the control order:**

- ⊙ Please check the start code address and the function option are correct.
- ⊙ Please check whether the communicate control cable is on good connection or the cable is too long or interrupt.
- ⊙ Please check the control system is not valid, check the signal amplifier of chain connected is valid.
- ⊙ Please check whether the communicate cable is too long or the other equipment is mutually conjugate.
- ⊙ Please arrange the wire well, shorter the signal cable, put the high voltage cable and low voltage cable separately.
- ⊙ Add the signal amplify isolator.
- ⊙ Signal cable is used the excellent screening doublet (Resistance 75 Ω)
- ⊙ The end of the light end and the end resistance.
- ⊙ When the lamp don't cool down enough but do the incorrect operation will let the trigger up to super-high voltage leak. It will damage the electric circuit and communicate IC or CPU. Under this condition, please change the PCB board.

■ **the light can't move:**

- ⊙ Please check if the power supply is suitable for the light voltage data.
- ⊙ Please check the fuse of input voltage is defective.
- ⊙ Please check the light if they are deforming, inside parts is broken, become wet...etc will lead the loose contact.
- ⊙ Please check if the inside lead wire and the connector is loose.
- ⊙ Please check the electric parts (such as the switch, transformer, ballast, electric capacity, piezoresistor, filter, PCB board, controller to motor) is short-circuit or burn down.

■ **Part of the projector couldn't be responsled to the controlling order:**

- ⊙ Please check the order is correct to the moving.
- ⊙ Please check the mechanical part is deformation or loose.
- ⊙ Please check the function to the motor socket is loose or drive chip is burn down.
- ⊙ Please check the wire of the motor is cut at zig point.
- ⊙ Please check these function to the motor is damaged.

■ **On working, the pan & tilt couldn't work normally:**

- ⊙ Please check according to the above step by step.
- ⊙ Please check the belt of the X, Y is broken.
- ⊙ Please check the X/Y direction data to the receiver is damage.
- ⊙ Re-projector reset.

DUTY EXONERATIVE AND COPYRIGHT PROTECTION

- ⊙ The lamp belongs to consumption products that is not guarantee to keep it in good repair.
- ⊙ Any products broken that didn't according to the instruction is not guarantee to keep it in good repair.
- ⊙ The commentary for all the instruction belongs to the supplier in final.
- ⊙ No authorize can't copy.
- ⊙ The information in this manual may be changed in the future, the company reserve the right to change the data without any advise.