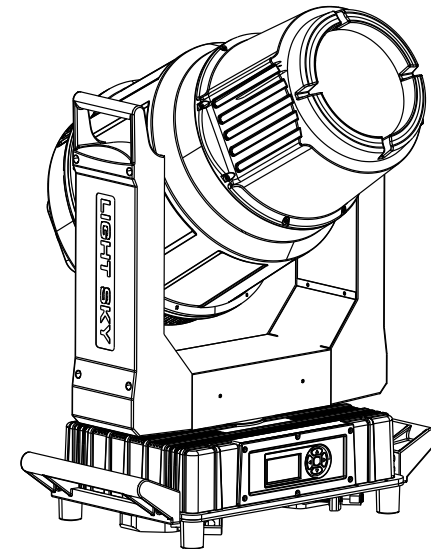


# **LiGHT SKY**

FLY DRAGON LIGHTING EQUIPMENT CO.,LTD



**LiGHT SKY**

Web: [www.lightsky.com.cn](http://www.lightsky.com.cn)

Tel: 0086-20-61828288

Fax: 0086-20-61828188 Pc: 510820

E-mail: [flydragon@lightsky.com.cn](mailto:flydragon@lightsky.com.cn)

Address: No. 4, Jingneng Road 1,  
Huadu District, Guangzhou, China



[WWW.LIGHTSKY.COM.CN](http://WWW.LIGHTSKY.COM.CN)

## **SHARK 400BSW**

### **USER MANUAL**

Please read these user manual carefully before use!

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

◆ Please keep in mind that this product, like other products of the company, adheres to the concept of people-oriented design and manufacture, and takes product quality as the foundation.

◆ We put the interests of customers first, and do our best to meet customer requirements.

◆ Please read this instruction manual carefully and keep it for future reference. In the case of fully understanding the product information, strictly abide by theUse the instruction manual to ensure that the product is installed, used and serviced correctly and safely.

◆ Our company is not responsible for any damage to lamps or other performance due to personal failure to follow the instructions during installation, use and maintenance.responsibility.

◆ Our company reserves the right to modify the manual at any time and without prior notice.

## SAFETY INFORMATION



Please read the instruction carefully which includes important information about the installation, usage and maintenance.

### WARNING

Please keep this User Manual for future consultation. If you sell the unit to another user, be sure that they also receive this manual.

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

|                                                                                                     |                                                                                      |                                                                                        |                                 |                                                                               |                                                                              |                                                                           |                                            |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------|
|                                                                                                     |                                                                                      |                                                                                        |                                 |                                                                               |                                                                              |                                                                           |                                            |
| <b>DANGER!</b><br>Safety hazard.<br>Risk of severe<br>injury or death.                              | <b>DANGER!</b><br>Refer to manual<br>before installing,<br>powering or<br>servicing. | <b>DANGER!</b><br>Hazardous<br>voltage. Risk<br>of severe or lethal<br>electric shock. | <b>Warning!</b><br>Fire hazard. | <b>Warning!</b><br>Burn hazard.<br>Hot surface.<br>Do not touch.              | <b>Warning!</b><br>Risk of eye<br>injury. Safety<br>glasses must<br>be worn. | <b>Warning!</b><br>Risk of hand injury.<br>Safety gloves<br>must be worn. | <b>Avoid direct<br/>eye contact</b>        |
|                                                                                                     |                                                                                      |                                                                                        |                                 |                                                                               |                                                                              |                                                                           |                                            |
| Applies only to<br>luminaires directly<br>mounted on<br>surfaces of<br>non-combustible<br>materials | Do not<br>discard<br>Trash can                                                       | Mark of<br>ground                                                                      | Replace all<br>shatter shields  | Take a short<br>distance from<br>the object to be<br>photographed<br>(meters) | Rated<br>maximum<br>ambient<br>temperature                                   | Do not point<br>the lens towards<br>the sun or<br>strong light            | Operation not<br>allowed during<br>runtime |

### Important:

**Damages caused by the disregard of this user manual are not subject to warranty.**

**The dealer will not accept liability for any resulting defects or problems.**

- Unpack and check carefully to ensure that there is no transportation damage before using the unit.
- Do install and operate by qualified operator.
- The light source in this luminaire should be replaced by the manufacturer or its service agent or a similarly qualified person, always cut off the power supply before replacing the light source.
- Do not allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.

- The unit must be installed in a location with adequate ventilation, at least 20cm from adjacent surfaces.
- Be sure that no ventilation slots is blocked, otherwise the unit will be overheated.
- Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature Ta: -20°C. Maximum ambient temperature Ta: 40°C.  
Do not operate this product at a lower or higher temperature.
- Do not connect the device to any dimmer pack.
- When the lamp is running, do not place combustible objects next to it. The shortest distance between the device and inflammable and explosive objects or materials is 0.5m.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to  $\leq 80^{\circ}\text{C}$ . do not touch the housing bare-handed during its operation.
- Avoid any flammable liquids, water or metal from entering the unit. once it happens, cut off the mains power immediately.
- Do not operate in a dirty or dusty environment. do clean the fixture regularly.
- Do not touch any wire during operation as there might be a hazard of electric shock.
- Avoid entanglement of the power cord with other wires.
- The minimum distance to objects/surface must be more than 12 meters.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- Do not open the housing as there are no user serviceable parts inside.
- Do not attempt to operate this unit if it becomes damaged. do not attempt any repairs yourself. Repairs carried out by unskilled people can lead to damage or malfunction.  
Please contact the nearest authorized technical assistance center if needed.

- Disconnect this product from its power source before servicing.
- Do use the original packaging if the device is to be transported.
- Avoid direct eye exposure to the light source while the product is on.
- Do not operate this product if you see damage on the housing, shields, or cables.  
Have the damaged parts replaced by an authorized technician at once.

**Installation:**

The fixture should be fixed on the clamp. Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always install a safety cable that can hold at least 12 times the weight of the fixture when installing.

Do install and operate by qualified operator. It must be installed in a place where there is out of the reach of people.

## TECHNICAL INFORMATION

### OPTICS

- Light source: NSL400S USHIO
- Optical angle: Beam mode 2 ° -21 °, Spot mode 3 ° -42 °
- Optical lens: coated with high anti reflective film,  $\phi$ 160mm
- Color temperature: 6900K
- Color rendering index:  $Ra \geq 74$
- Illuminance: 236000 lux@10 rice
- Expected service life of light source: 1500H (data provided by the light source supplier)

### COLOUR

- Color: 14 color chips+white light, capable of achieving bidirectional color rainbow, dual color step gradient (linear movement), bidirectional rotation of color wheel, random color mode
- Color mixing system: independent CMY color mixing system, free color mixing

### PATTERN

- Fixed pattern: 11 patterns+white light+3 types of animations (animation effect patterns) with bi-directional shaking, animation, and flowing effects
- Activity pattern: 8+1 activity pattern disc, pluggable and replaceable, capable of bidirectional shaking and flowing effect, pattern size is  $\phi$  11, outer size is  $\phi$  15.9

### EFFECT

- 4 Prisms: 1 Beam Prism, 3 Pattern Prisms, Bidirectional Rotation, Independent Switching, Stackable
- Soft light effect: adjustable independent soft light effect
- Strobe: 0.5-9 times/second adjustable pulse flicker and random flicker
- Dimming: 0-100% linear adjustment
- Focusing: High precision electric focusing

### CONTROL AND PROGRAMMING

- Control channel: 28CH, please refer to the channel table for details
- Protocol: Standard DMX512 protocol and RDM protocol
- ArtNet protocol (optional)
- Data connection: Three core or five core signal input/output
- RJ45 interface (optional)
- Display: LCD screen
- Upgrade software through DMX signal

## **X/Y AXIS MOTION ANGLE**

- X-axis: 540 ° 8-bit/16bit precision scanning
- Y-axis: 250 ° 8-bit/16 bit precision scanning
- Reset function with automatic error correction
- Fixed lock: Y-axis lock

## **POWER SUPPLY AND POWER**

- Input voltage: AC 100-240V 50/60Hz
- Maximum power: 630W
- Power factor: 0.987
- Maximum current of lighting fixtures: 2.9A/220V, 6.3A/100V

## **DIMENSION**

- Product size: 509 × 320 × 754mm
- N.W.: 38.5kg
- Carton packaging (default): 810 × 580 × 395mm
- G.W.: 42.5kg

## **OTHER**

- Protection level: Ip66
- Work environment: - 20 °C ~ 40 °C

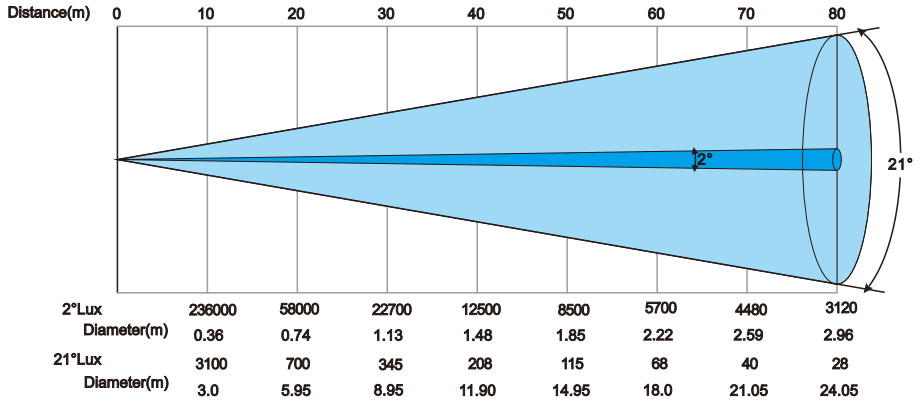
(Note: When the lamp is working in an environment below zero degrees Celsius and powered on, the bulb needs to be preheated for 30 minutes before resetting all functions of the lamp before it can be used normally.)

- Maximum surface temperature of lamp body: ≤ 80 °C

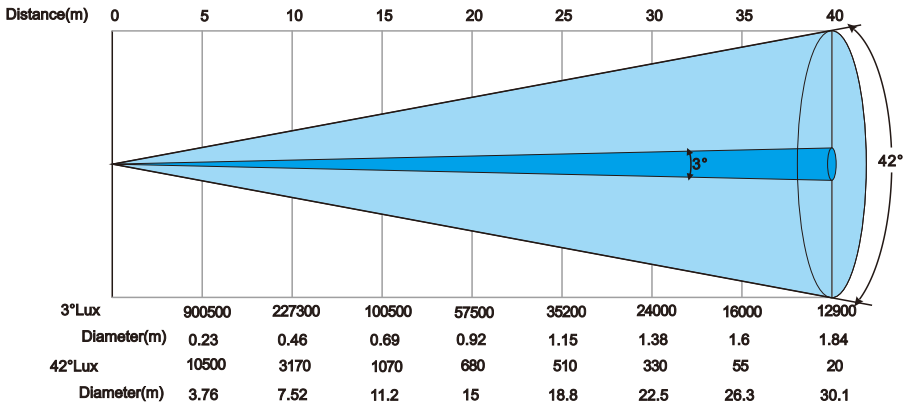
## **APPROVALS**

- The product implementation standard: GB/T 7000.1-2023 、 GB/T 7000.217-2023
- Approved certifications: CE、RoHs
- The product complies with the following EU directives:
- Low Voltage Directive 2014/35/EU . EMC Directive 2014/30/EU

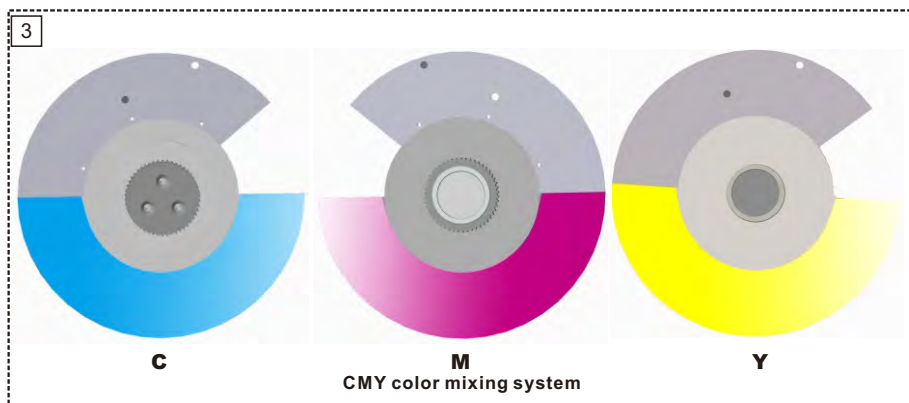
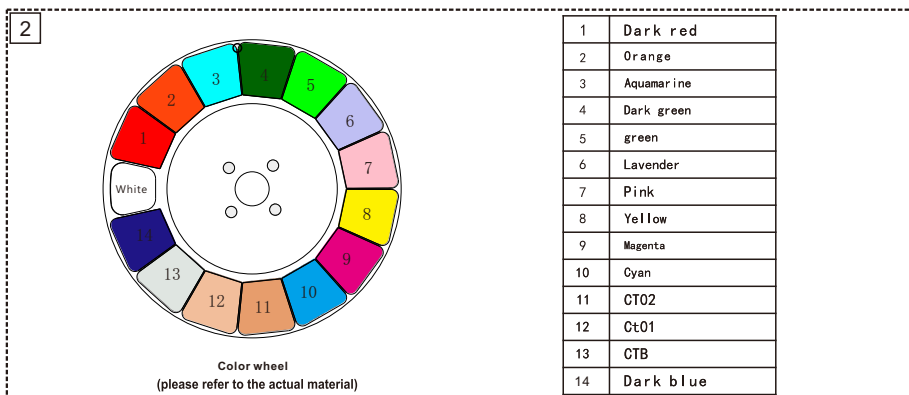
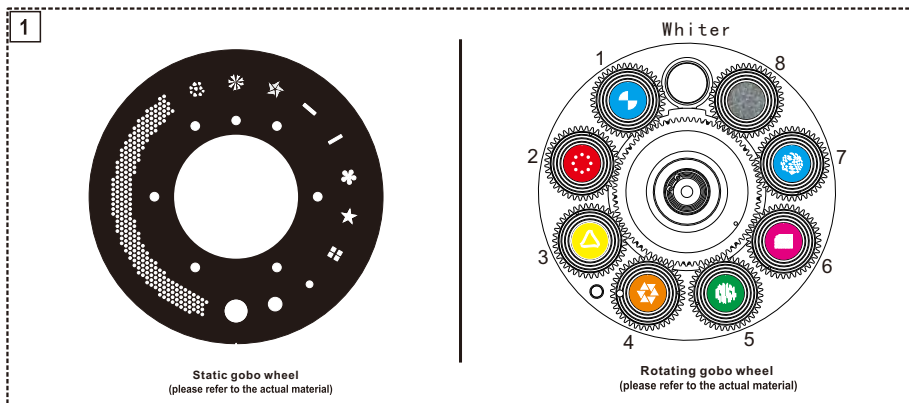
Distance, spot diameter and illumination diagram (Beam model)



Distance, spot diameter and illumination diagram (Spot model)

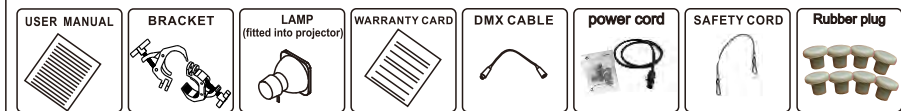






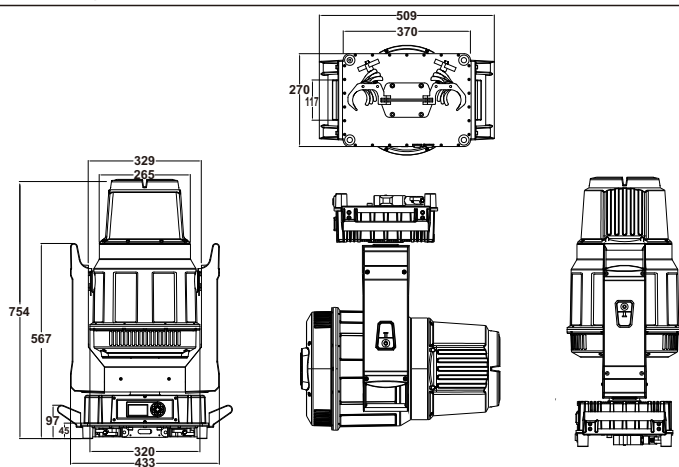
## ATTACHMENT AND BODY SIZE

1

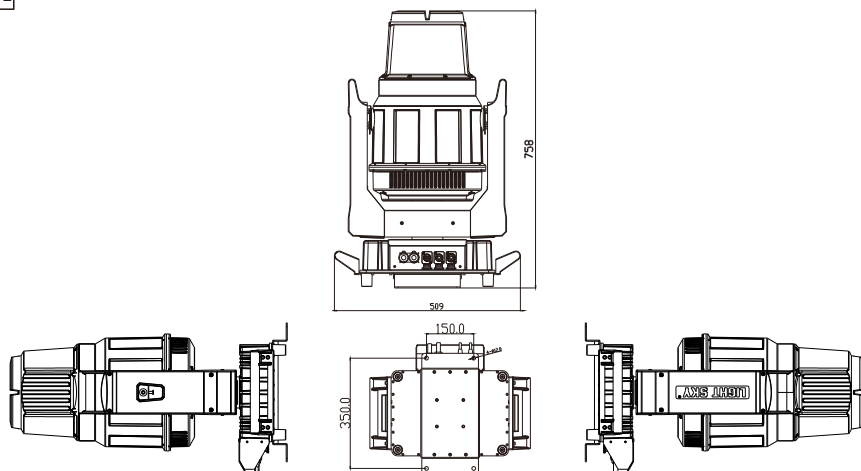


Attachment contents- Fig. 1

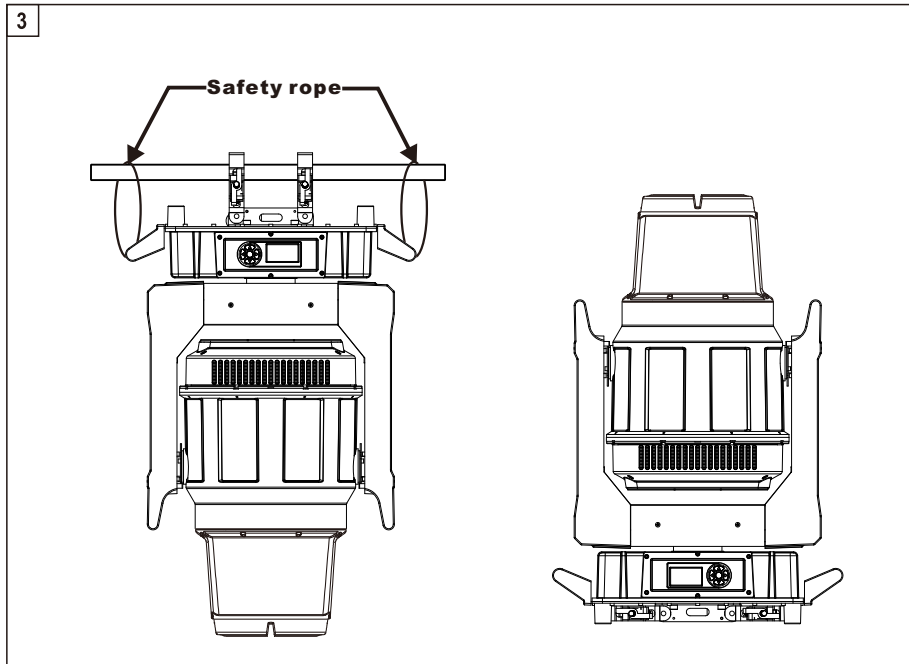
2-1



2-2



## INSTALLATION AND CONNECTING



Installing the projector- Fig. 3

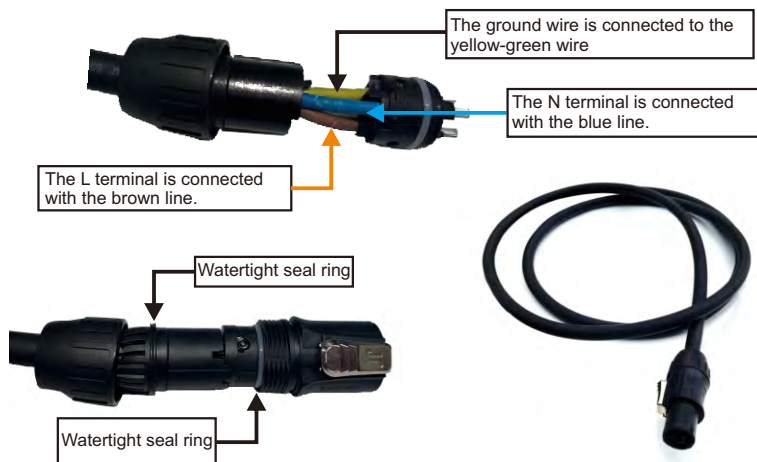
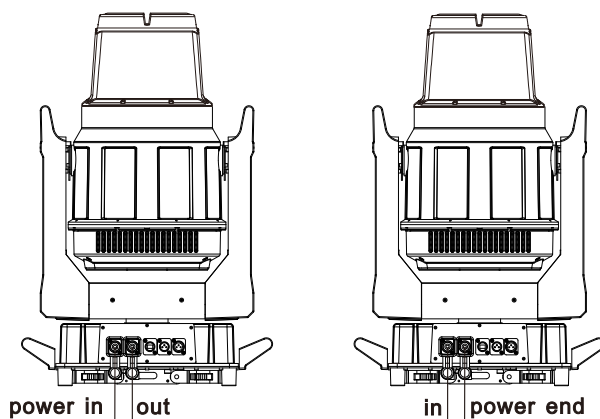
The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.  
**WARNING:**with the exception of when the projector is positioned on the floor, the safety rope must be fitted.  
This must be securely fixed to the support structure of the projector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

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.

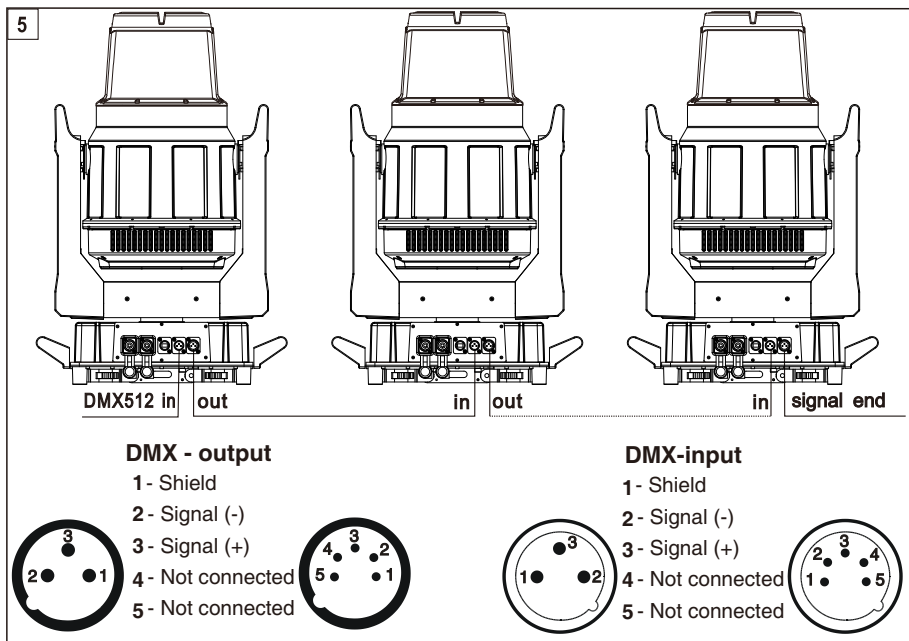
When suspending the fixture, ensure that the supporting structure and all hardware used can hold at least 10 times the weight of all the devices they support.

4



Connecting to the mains supply ---Fig 4

- The stage lighting delivers a three-core waterproof plug.
- The stage lighting power supply can not be more than 2pcs pre line.
- 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 everything is working normally.



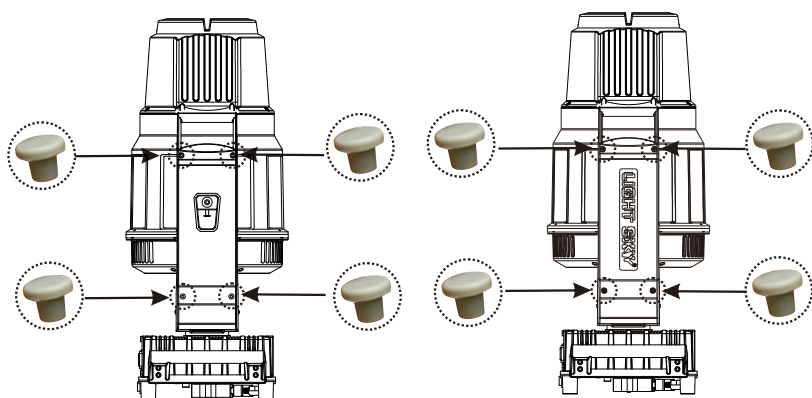
**Connecting to the control signal line (DMX) - Fig. 5**

© 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' control signal output or input by using the 3 or 5-pin XLR plug 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 communication cable is 2-core screened cable  $75\Omega$  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  $120\Omega$   $1/2W$  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.

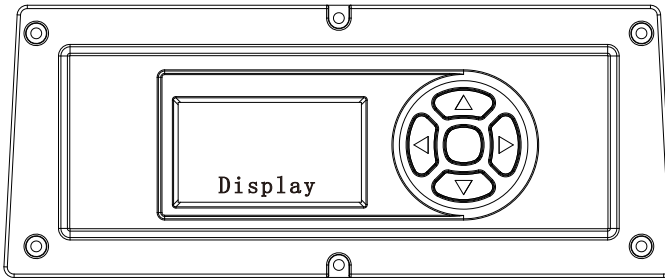
6



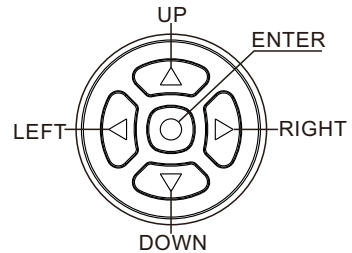
Please install the rubber plug before use.

## CONTROL PANEL

7



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)

8



DMX:  
001 DMXAddress



Information



Personal



Manual control



Service



Lamp



Language



Reversal

## MENU SETTING(V1.0)

| Main menu     | I menu           | II menu             | III menu |
|---------------|------------------|---------------------|----------|
| DMX Address → | Address :001-512 |                     |          |
| Information → | Total Time       | → Power :****(h)    |          |
|               |                  | Lamp ON :****(h)    |          |
|               | Lamp Hours       | → Total :****(h)    |          |
|               |                  | Lamp Open :****(h)  |          |
|               | Temperature      | → E-ballast:000.0   |          |
|               |                  | Out Temp            |          |
|               |                  | In Temp :000.0      |          |
|               | RDM UID          | → *****             |          |
|               | Fan speed/Voltag | 1. L Fan :**, *V    |          |
|               |                  | 2. Out Fan :**, *V  |          |
|               |                  | 3. In Fan :**, *V   |          |
|               |                  | 4. L Fan :****R     |          |
|               |                  | → 5. OutFan1 :****R |          |
|               |                  | 6. OutFan2 :****R   |          |
|               |                  | 7. OutFan3 :****R   |          |
|               |                  | 8. In Fan1 :****R   |          |
|               |                  | 9. In Fan2 :****R   |          |
|               | DMX Live         | 1. Pan ***          |          |
|               |                  | 2. Pan Fine ***     |          |
|               |                  | 3. Tilt ***         |          |
|               |                  | 4. Tilt Fine ***    |          |
|               |                  | 5. Functions ***    |          |
|               |                  | 6. Dimmer ***       |          |
|               |                  | 7. Shutter ***      |          |
|               |                  | 8. Cyan ***         |          |
|               |                  | 9. Magenta ***      |          |
|               |                  | 10. Yellow ***      |          |
|               |                  | 11. Colour ***      |          |
|               |                  | 12. StaticGobo ***  |          |
|               |                  | 13. Rot Gobo ***    |          |
|               |                  | → 14. Gobo Rot ***  |          |
|               |                  | 15. Prism 1 ***     |          |
|               |                  | 16. Prism1 Rot ***  |          |
|               |                  | 17. Prism 2 ***     |          |
|               |                  | 18. Prism2 Rot ***  |          |
|               |                  | 19. PrismMacro ***  |          |
|               |                  | 20. Macro Rot. ***  |          |
|               |                  | 21. Frost ***       |          |
|               |                  | 22. Zoom ***        |          |
|               |                  | 23. Zoom Fine ***   |          |
|               |                  | 24. Focus ***       |          |
|               |                  | 25. Focus Fine ***  |          |
|               |                  | 26. Focus 2 ***     |          |
|               |                  | 27. AutoFocus ***   |          |
|               |                  | 28. Effect Mac      |          |
|               | System Version   | XY :V*, **          |          |
|               |                  | Gobo : V*, **       |          |
|               |                  | → CMYCMY : V*, **   |          |
|               |                  | Fan : V*, **        |          |
|               |                  | Prism : V*, **      |          |
|               |                  | Display : V*, **    |          |
|               | Return(ESC)      |                     |          |



| Main menu      | I menu          | II menu            | III menu                  |
|----------------|-----------------|--------------------|---------------------------|
| Personal       |                 |                    |                           |
|                | Auto lamp on    | → OFF<br>ON        |                           |
|                | P/T invert      | Pan invert         | → OFF<br>ON               |
|                |                 | Tilt invert        | → OFF<br>ON               |
|                |                 | Return(ESC)        |                           |
|                | Display         | Language           | → English<br>Chinese      |
|                |                 | Back Light         | → Open<br>Auto close(15s) |
|                |                 | Reversal           | → Normal<br>Rota. 180     |
|                |                 | Backlight blink    | → ON<br>OFF               |
|                |                 | Return(ESC)        |                           |
|                | Return(ESC)     |                    |                           |
| Manual control | Channel control | 1. Pan ***         |                           |
|                |                 | 2. Pan Fine ***    |                           |
|                |                 | 3. Tilt ***        |                           |
|                |                 | 4. Tilt Fine ***   |                           |
|                |                 | 5. Functions ***   |                           |
|                |                 | 6. Dimmer ***      |                           |
|                |                 | 7. Shutter ***     |                           |
|                |                 | 8. Cyan ***        |                           |
|                |                 | 9. Magenta ***     |                           |
|                |                 | 10. Yellow ***     |                           |
|                |                 | 11. Colour ***     |                           |
|                |                 | 12. StaticGobo *** |                           |
|                |                 | 13. Rot Gobo ***   |                           |
|                |                 | 14. Gobo Rot ***   |                           |
|                |                 | 15. Prism 1 ***    |                           |
|                |                 | 16. Prism1 Rot *** |                           |
|                |                 | 17. Prism 2 ***    |                           |
|                |                 | 18. Prism2 Rot *** |                           |
|                |                 | 19. PrismMacro *** |                           |
|                |                 | 20. Macro Rot. *** |                           |
|                |                 | 21. Frost ***      |                           |
|                |                 | 22. Zoom ***       |                           |
|                |                 | 23. Zoom Fine ***  |                           |
|                |                 | 24. Focus ***      |                           |
|                |                 | 25. Focus Fine *** |                           |
|                |                 | 26. Focus 2 ***    |                           |
|                |                 | 27. AutoFocus ***  |                           |
|                |                 | 28. Effect Mac     |                           |
|                |                 | Return(ESC)        |                           |
|                | Reset           | System reset       |                           |
|                |                 | Pan/Tilt reset     |                           |
|                |                 | Gobo reset         |                           |
|                |                 | Color reset        |                           |
|                |                 | Dimmer reset       |                           |
|                |                 | Zoom reset         |                           |

| Main menu | I menu | II menu            | III menu   |
|-----------|--------|--------------------|------------|
|           | Test   | Effects reset      |            |
|           |        | Return (ESC)       |            |
|           |        | Test P/T           | → STEP *** |
|           |        | Test effect        | → STEP *** |
|           |        | Test all           | → STEP *** |
|           |        | Return (ESC)       |            |
| Service   | →      | Return (ESC)       |            |
|           |        | Error list         | →          |
|           |        | Clean error        | →          |
|           |        | Keep List          |            |
|           |        | Empty List         |            |
|           |        | Pan 000-255        |            |
|           |        | Tilt 000-255       |            |
|           |        | Dimmer 000-255     |            |
|           |        | NC/NC 000-255      |            |
|           |        | Focus 000-255      |            |
|           |        | Zoom 000-255       |            |
|           |        | Colour 000-255     |            |
|           |        | Gobo 000-255       |            |
|           |        | Prism 1 000-255    |            |
|           |        | Prism 2 000-255    |            |
|           |        | NC/NC 000-255      |            |
|           |        | Frost 000-255      |            |
|           |        | Cyan 000-255       |            |
|           |        | Magenta 000-255    |            |
|           |        | Yellow 000-255     |            |
|           |        | Rota. Gobo 000-255 |            |
|           |        | Return (ESC)       |            |
|           |        | Load default       |            |
|           |        | Reset timers       |            |
|           |        | Developer          |            |
|           |        | Firmware update    |            |
|           |        | Return (ESC)       |            |
|           |        | return (ESC)       |            |
| Lamp      | →      | Off                |            |
|           |        | On                 |            |
| Language  | →      | English            |            |
|           |        | Chinese            |            |
| Reversal  | →      | Normal             |            |
|           |        | Rota. 180          |            |

## CHANNEL FUNCTION(V1.0)

| Channel | DMX       | Percentage | Function                                     |  |
|---------|-----------|------------|----------------------------------------------|--|
| 1       | 0-255     | 0-100      | Pan                                          |  |
| 2       | 0-255     | 0-100      | Pan Fine                                     |  |
| 3       | 0-255     | 0-100      | Tilt                                         |  |
| 4       | 0-255     | 0-100      | Tilt fine                                    |  |
| 5       |           |            | Function                                     |  |
|         | 0-9       |            | Reserved (0=default)                         |  |
|         | 10-14     |            | Reserved                                     |  |
|         | 15-19     |            | Reserved                                     |  |
|         | 20-24     |            | Reserved                                     |  |
|         | 25-29     |            | Reserved                                     |  |
|         |           |            |                                              |  |
|         | 30-34     |            | Reserved                                     |  |
|         | 35-39     |            | Reserved                                     |  |
|         | 40-44     |            | Reserved                                     |  |
|         | 45-49     |            | Reserved                                     |  |
|         | 50-54     |            | Reserved                                     |  |
|         | 55-59     |            | Reserved                                     |  |
|         | 60-64     |            | Reserved                                     |  |
|         | 65-69     |            | Reserved                                     |  |
|         | 70-74     |            | Reserved                                     |  |
|         | 75-79     |            | Reserved                                     |  |
|         | 80-84     |            | Reserved                                     |  |
|         | 85-89     |            | Reserved                                     |  |
|         | 90-94     |            | Reserved                                     |  |
|         | 95-99     |            | Reserved                                     |  |
|         | 100-101   |            | Reserved                                     |  |
|         | 102-103   |            | Reserved                                     |  |
|         | 104-105   |            | Reserved                                     |  |
|         | 106-107   |            | Reserved                                     |  |
|         | 108-119   |            | Reserved                                     |  |
|         | 120-124   |            | Reserved                                     |  |
|         | 125-129   |            | Reserved                                     |  |
|         | 130 - 139 |            | Lamp On                                      |  |
|         | 140 - 149 |            | Pan/Tilt reset                               |  |
|         | 150 - 159 |            | Colour system reset                          |  |
|         | 160 - 169 |            | Gobo wheels reset                            |  |
|         | 170 - 179 |            | Dimmer/Shutter reset                         |  |
|         | 180 - 189 |            | Zoom/focus/frost/prism wheels reset          |  |
|         | 190 - 199 |            | Effect wheel reset                           |  |
|         | 200 - 209 |            | Total reset                                  |  |
|         | 210 - 229 |            | Reserved                                     |  |
|         | 230 - 239 |            | Lamp Off                                     |  |
|         | 240 - 244 |            | Reserved                                     |  |
|         | 245 - 249 |            | Reserved                                     |  |
|         | 250 - 255 |            | Reserved                                     |  |
| 6       |           |            | Dimmer intensity                             |  |
|         | 0 - 255   |            | Dimmer intensity from 0% to 100% (0=default) |  |
| 7       |           |            | Shutter/ strobe                              |  |
|         | 0 - 31    |            | Shutter closed                               |  |
|         | 32 - 63   |            | Shutter open (32=default)                    |  |
|         | 64 - 95   |            | Strobe-effect from slow to fast              |  |
|         | 96 - 127  |            | Shutter open                                 |  |
|         | 128 - 143 |            | Opening pulse in sequences from slow to fast |  |

| Channel | DMX       | Percentage | Function                                                  |  |
|---------|-----------|------------|-----------------------------------------------------------|--|
|         | 144 – 159 |            | Closing pulse in sequences from fast to slow              |  |
|         | 160 – 191 |            | Shutter open                                              |  |
|         | 192 – 223 |            | Random strobe-effect from slow to fast                    |  |
|         | 224 – 255 |            | Shutter open, Full lamp power                             |  |
| 8       |           |            | Cyan                                                      |  |
|         | 0 – 255   |            | Cyan from min. saturation --> full cyan (0=default)       |  |
| 9       |           |            | Magenta                                                   |  |
|         | 0 – 255   |            | Magenta from min. saturation --> full magenta (0=default) |  |
| 10      |           |            | Yellow                                                    |  |
|         | 0 – 255   |            | Yellow from min. saturation --> full yellow (0=default)   |  |
|         |           |            |                                                           |  |
| 11      |           |            | Colour wheel                                              |  |
|         |           |            | Continual positioning                                     |  |
|         | 0-4       |            | White                                                     |  |
|         | 5-8       |            | White+Red                                                 |  |
|         | 9-12      |            | Red                                                       |  |
|         | 13-16     |            | Red+Orange                                                |  |
|         | 17-20     |            | Orange                                                    |  |
|         | 21-24     |            | Orange+Aquamarine                                         |  |
|         | 25-28     |            | Aquamarine                                                |  |
|         | 29-32     |            | Aquamarine+Green                                          |  |
|         | 33-36     |            | Green                                                     |  |
|         | 37-40     |            | Green+Light Green                                         |  |
|         | 41-44     |            | Light Green                                               |  |
|         | 45-48     |            | Light Green+Lavender                                      |  |
|         | 49-52     |            | Lavender                                                  |  |
|         | 53-56     |            | Lavender+Pink                                             |  |
|         | 57-60     |            | Pink                                                      |  |
|         | 61-64     |            | Pink+Yellow                                               |  |
|         | 65-68     |            | Yellow                                                    |  |
|         | 69-72     |            | Yellow+Magenta                                            |  |
|         | 73-76     |            | Magenta                                                   |  |
|         | 77-80     |            | Magenta+Cyan                                              |  |
|         | 81-84     |            | Cyan                                                      |  |
|         | 85-88     |            | Cyan+CTO 260                                              |  |
|         | 89-92     |            | CTO 260/CTO2                                              |  |
|         | 93-96     |            | CTO 260+CTO 190/CTO2+CTO1                                 |  |
|         | 97-100    |            | CTO 190/CTO1                                              |  |
|         | 101-104   |            | CTO 190+CTB 8000/CTO1+CTB                                 |  |
|         | 105-108   |            | CTB 8000/CTB                                              |  |
|         | 109-112   |            | CTB 8000+Blue                                             |  |
|         | 113-116   |            | Blue                                                      |  |
|         | 117-120   |            | Blue+White                                                |  |
|         | 121 – 181 |            | Forwards rainbow effect from fast to slow                 |  |
|         | 182 – 188 |            | No rotation                                               |  |
|         | 189 – 249 |            | Backwards rainbow effect from slow to fast                |  |
|         | 250 – 255 |            | Auto random colour selection from fast to slow            |  |
|         |           |            | Static gobo wheel                                         |  |
|         | 0-3       |            | White                                                     |  |

| Channel | DMX     | Percentage | Function                                        |  |
|---------|---------|------------|-------------------------------------------------|--|
| 12      | 4-7     |            | Gobo1                                           |  |
|         | 8-11    |            | Gobo2                                           |  |
|         | 12-15   |            | Gobo3                                           |  |
|         | 16-19   |            | Gobo4                                           |  |
|         | 20-23   |            | Gobo5                                           |  |
|         | 24-27   |            | Gobo6                                           |  |
|         | 28-31   |            | Gobo7                                           |  |
|         | 32-35   |            | Gobo8                                           |  |
|         | 36-39   |            | Gobo9                                           |  |
|         | 40-43   |            | Gobo10                                          |  |
|         | 44-47   |            | Gobo11                                          |  |
|         |         |            | <i>Shaking gobos from slow to fast</i>          |  |
|         | 48-60   |            | Gobo1 Shake Slow-Fast Speed                     |  |
|         | 61-73   |            | Gobo2 Shake Slow-Fast Speed                     |  |
|         | 74-86   |            | Gobo3 Shake Slow-Fast Speed                     |  |
|         | 87-99   |            | Gobo4 Shake Slow-Fast Speed                     |  |
|         | 100-112 |            | Gobo5 Shake Slow-Fast Speed                     |  |
|         | 113-125 |            | Gobo6 Shake Slow-Fast Speed                     |  |
|         | 126-138 |            | Gobo7 Shake Slow-Fast Speed                     |  |
|         | 139-151 |            | Gobo8 Shake Slow-Fast Speed                     |  |
|         | 152-164 |            | Gobo9 Shake Slow-Fast Speed                     |  |
|         | 165-177 |            | Gobo10 Shake Slow-Fast Speed                    |  |
|         | 178-190 |            | Gobo11 Shake Slow-Fast Speed                    |  |
|         | 191-207 |            | Effect Shake Slow-Fast Speed                    |  |
|         | 208-226 |            | Forwards gobo wheel rotation from fast to slow  |  |
|         | 227-230 |            | No rotation                                     |  |
|         | 231-249 |            | Backwards gobo wheel rotation from slow to fast |  |
|         | 250-255 |            | Auto random gobo selection from fast to slow    |  |
| 13      |         |            | Rotating gobo wheel                             |  |
|         |         |            | /index - set indexing on channel 14             |  |
|         | 0       |            | Open/Hole (0=default)                           |  |
|         | 1-8     |            | Hole (flat field)                               |  |
|         | 9-21    |            | Gobo 1                                          |  |
|         | 22-34   |            | Gobo 2                                          |  |
|         | 35-47   |            | Gobo 3                                          |  |
|         | 48-60   |            | Gobo 4                                          |  |
|         | 61-73   |            | Gobo 5                                          |  |
|         | 74-86   |            | Gobo 6                                          |  |
|         | 87-99   |            | Gobo 7                                          |  |
|         | 100-112 |            | Gobo 8                                          |  |
|         |         |            | <i>Shaking gobo from slow to fast</i>           |  |
|         |         |            | Index - set indexing on channel 14              |  |
|         | 113-125 |            | Gobo 1                                          |  |
|         | 126-138 |            | Gobo 2                                          |  |
|         | 139-151 |            | Gobo 3                                          |  |
|         | 152-164 |            | Gobo 4                                          |  |
|         | 165-177 |            | Gobo 5                                          |  |
|         | 178-190 |            | Gobo 6                                          |  |
|         | 191-203 |            | Gobo 7                                          |  |
|         | 204-216 |            | Gobo 8                                          |  |
|         | 217-249 |            | Open/hole                                       |  |

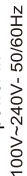
| Channel | DMX       | Percentage | Function                                            |  |
|---------|-----------|------------|-----------------------------------------------------|--|
|         | 250-255   |            | Auto random gobo selection from fast to slow        |  |
| 14      |           |            | Rot. gobo indexing and rotation                     |  |
|         | 0 - 127   |            | Gobo indexing                                       |  |
|         | 128 - 187 |            | Forwards gobo rotation from fast to slow            |  |
|         | 188-195   |            | No rotation                                         |  |
|         | 196 - 255 |            | Backwards gobo rotation from slow to fast           |  |
| 15      |           |            | Prism wheel 1                                       |  |
|         |           |            | This wheel is blocked If Rotating gobo wheel >0 DMX |  |
|         | 0-3       |            | Open position/hole (0=default)                      |  |
|         |           |            | Index - set indexing on channel 16                  |  |
|         | 4-15      |            | Prism 3 - 6-facet linear                            |  |
|         | 16-27     |            | Prism 2 - 4-facet 12° circular                      |  |
|         | 28-39     |            | Prism 1 - 8-facet 12° circular                      |  |
|         |           |            | Rotation - set rotation on channel 16               |  |
|         | 40-51     |            | Prism 3 - 6-facet linear                            |  |
|         | 52-63     |            | Prism 2 - cylindrical                               |  |
| 16      | 64-75     |            | Prism 1 - 8-facet 12° circular                      |  |
|         | 76-255    |            | Raw DMX                                             |  |
|         |           |            | Prism wheel 1 indexing/rotation                     |  |
|         |           |            | Prism indexing - set position on channel 15         |  |
|         | 0 - 255   |            | Prism 1 indexing                                    |  |
|         |           |            | Prism 1 rotation - set position on channel 15       |  |
|         | 0-3       |            | No rotation                                         |  |
|         | 4-34      |            | Slow → Fast, 90° Rotating back and forth            |  |
|         | 35-65     |            | Slow → Fast, 180° Rotating back and forth           |  |
|         | 66-96     |            | Slow → Fast, 270° Rotating back and forth           |  |
| 17      | 97-127    |            | Slow → Fast, 360° Rotating back and forth           |  |
|         | 128-188   |            | Forwards prism rotation from fast to slow           |  |
|         | 189-194   |            | No rotation (128=default)                           |  |
|         | 195-255   |            | Backwards prism rotation from slow to fast          |  |
|         |           |            | Prism wheel 2                                       |  |
|         | 0-3       |            | Open position/hole (0=default)                      |  |
|         |           |            | Index - set indexing on channel 18                  |  |
|         | 4-15      |            | Prism - 8-facet 18° circular                        |  |
|         |           |            | Rotation - set rotation on channel                  |  |
|         | 16-27     |            | Prism - 8-facet 18° circular                        |  |
| 18      | 28-255    |            | Raw DMX                                             |  |
|         |           |            | Prism wheel 2 indexing/rotation                     |  |
|         |           |            | Prism indexing - set position on channel 17         |  |
|         | 0-255     |            | Prism indexing                                      |  |
|         |           |            | Prism rotation-set position on channel 17           |  |
|         | 0         |            | No rotation                                         |  |
|         | 4-34      |            | Slow → Fast, 90° Rotating back and forth            |  |
|         | 35-65     |            | Slow → Fast, 180° Rotating back and forth           |  |
|         | 66-96     |            | Slow → Fast, 270° Rotating back and forth           |  |
|         | 97-127    |            | Slow → Fast, 360° Rotating back and forth           |  |

| Channel | DMX     | Percentage | Function                                                        |  |
|---------|---------|------------|-----------------------------------------------------------------|--|
|         | 128-188 |            | Forwards prism rotation from fast to slow                       |  |
|         | 189-194 |            | No rotation (128=default)                                       |  |
|         | 195-255 |            | Backwards prism rotation from slow to fast                      |  |
| 19      |         |            | Pattern selection                                               |  |
|         |         |            |                                                                 |  |
|         | 0-3     |            | Open position/hole (0=default)                                  |  |
|         |         |            | Index - set indexing on channel 20                              |  |
|         | 4-14    |            | Prism macro Index 1                                             |  |
|         | 15-25   |            | Prism macro Index 2                                             |  |
|         | 26-36   |            | Prism macro Index 3                                             |  |
|         | 37-47   |            | Prism macro Index 4                                             |  |
|         | 48-58   |            | Prism macro Index 5                                             |  |
|         | 59-69   |            | Prism macro Index 6                                             |  |
|         | 70-80   |            | Prism macro Index 7                                             |  |
|         |         |            | Rotation - set rotation on channel 20                           |  |
|         | 81-91   |            | Prism macro rotation 1                                          |  |
|         | 92-102  |            | Prism macro rotation 2                                          |  |
|         | 103-113 |            | Prism macro rotation 3                                          |  |
|         | 114-124 |            | Prism macro rotation 4                                          |  |
|         | 125-135 |            | Prism macro rotation 5                                          |  |
|         | 136-146 |            | Prism macro rotation 6                                          |  |
|         | 147-157 |            | Prism macro rotation 7                                          |  |
|         | 158-168 |            | Prism macro rotation 8                                          |  |
|         | 169-179 |            | Prism macro rotation 9                                          |  |
|         | 180-190 |            | Prism macro rotation 10                                         |  |
|         | 191-255 |            | Raw DMX                                                         |  |
| 20      |         |            | Pattern rotation and indexing                                   |  |
|         |         |            | The channels are blocked: Prism Wheel 1/2, Prism Wheel 1/2 rot. |  |
|         |         |            | Pattern indexing - set position on channel 19                   |  |
|         | 0 - 255 |            | Pattern indexing                                                |  |
|         |         |            | Pattern rotation - set position on channel 19                   |  |
|         | 0       |            | No rotation                                                     |  |
|         | 1-127   |            | Forwards pattern rotation from fast to slow                     |  |
|         | 128     |            | No rotation (128=default)                                       |  |
|         | 129-255 |            | Backwards pattern rotation from slow to fast                    |  |
| 21      |         |            | Frost                                                           |  |
|         | 0-19    |            | Open (0=default)                                                |  |
|         | 20-128  |            | 100% Light Frost                                                |  |
|         | 129-169 |            | Pulse closing from slow to fast                                 |  |
|         | 170-210 |            | Pulse opening from fast to slow                                 |  |
|         | 211-255 |            | Ramping from fast to slow                                       |  |
| 22      |         |            | Zoom                                                            |  |
|         | 0 - 255 |            | Zoom from max. to min.beam angle (128=default)                  |  |
| 23      |         |            | Zoom - fine                                                     |  |
|         | 0 - 255 |            | Fine zooming (0=default)                                        |  |
| 24      |         |            | Focus                                                           |  |
|         | 0 - 255 |            | Continuous adjustment from far to near (128=default)            |  |
| 25      |         |            | Focus Fine                                                      |  |
|         | 0 - 255 |            | Fine focusing (0=default)                                       |  |

| Channel | DMX     | Percentage | Function                                                                                                        |  |
|---------|---------|------------|-----------------------------------------------------------------------------------------------------------------|--|
| 26      |         |            | Focus2 AutoFocus on channel 27                                                                                  |  |
|         | 0-255   |            | AutoFocus                                                                                                       |  |
| 27      |         |            | Autofocus (priority & distance selection)                                                                       |  |
|         |         |            | Select desired distance and effect on which you need to focus and use "Focus2" channel (26) to focus the image. |  |
|         | 0-15    |            | Autofocus Off                                                                                                   |  |
|         | 16-55   |            | 10 metres                                                                                                       |  |
|         | 56-95   |            | 15 metres                                                                                                       |  |
|         | 96-135  |            | 20 metres                                                                                                       |  |
|         | 136-175 |            | 30 metres                                                                                                       |  |
|         | 176-215 |            | 40 metres                                                                                                       |  |
|         | 216-255 |            | 50 metres                                                                                                       |  |
| 28      |         |            | Effect Macro                                                                                                    |  |
|         | 0-15    |            | Reserved                                                                                                        |  |
|         | 16-25   |            | Effect 1                                                                                                        |  |
|         | 26-35   |            | Effect 2                                                                                                        |  |
|         | 36-45   |            | Reserved                                                                                                        |  |
|         | 46-55   |            | Reserved                                                                                                        |  |
|         | 56-65   |            | Reserved                                                                                                        |  |
|         | 66-75   |            | Reserved                                                                                                        |  |
|         | 76-85   |            | Reserved                                                                                                        |  |
|         | 86-95   |            | Reserved                                                                                                        |  |
|         | 96-105  |            | Reserved                                                                                                        |  |
|         | 106-115 |            | Reserved                                                                                                        |  |
|         | 116-125 |            | Reserved                                                                                                        |  |
|         | 126-135 |            | Reserved                                                                                                        |  |
|         | 136-145 |            | Reserved                                                                                                        |  |
|         | 146-155 |            | Reserved                                                                                                        |  |
|         | 156-165 |            | Reserved                                                                                                        |  |
|         | 166-175 |            | Reserved                                                                                                        |  |
|         | 176-185 |            | Reserved                                                                                                        |  |
|         | 186-195 |            | Reserved                                                                                                        |  |
|         | 196-205 |            | Reserved                                                                                                        |  |
|         | 206-215 |            | Reserved                                                                                                        |  |
|         | 216-225 |            | Reserved                                                                                                        |  |
|         | 226-235 |            | Reserved                                                                                                        |  |
|         | 236-245 |            | Reserved                                                                                                        |  |
|         | 246-255 |            | Reserved                                                                                                        |  |



## 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 maintain 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.

## TROUBLESHOOTING

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.
  - Please check if the switch of the temperature is damaged.
- Check the bottom box driver board "WK" socket if the resistance 0 between the two line.

### ■ 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.

■ **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  $75\ \Omega$ )
- ◎ 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 responsed 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.