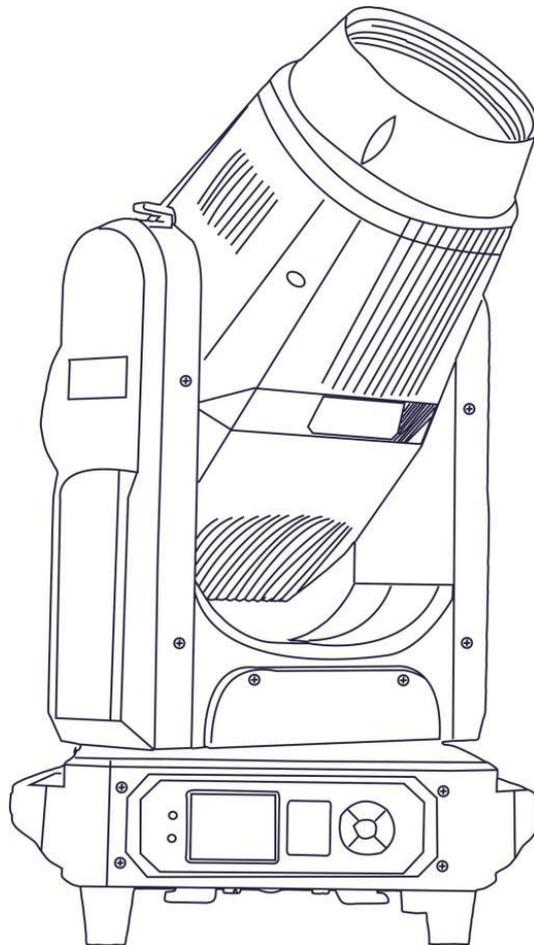


500W LED BSW MOVING HEAD

USER MANUAL



Please read this manual before operate the light

CONTENTS

| | |
|--|-------|
| Chapter 1 Installation and attention | 2 |
| 1.1 Maintenance | 2 |
| 1.2 Statement | 2 |
| 1.3 Safety Precaution | 2 |
| 1.4 Product Instruction | 2 |
| 1.5 Cable connection (DMX) | 3 |
| 1.6 Rigging (Optional) | 3 |
| Chapter 2 Pannel operation | 3 |
| 2.1 Brief | 5 |
| 2.2 Operation | 5 |
| 2.2.1 Operate light with touch or KEY | 5 |
| 2.2.2 Parameter value setting | 5 |
| 2.2.4 Sub Menu (Parameter) | 5 |
| 2.3 Operation and parameter instruction | 6 |
| 2.3.1 ADDR--> Address: Set DMX Address | 6 |
| 2.3.3 DISP-->DISPLAY: Set display | 7 |
| 2.3.4 TEST--> Test Mode | 8 |
| 2.3.6 STAT-->Status: View status | 9 |
| Chapter 3 Channel decription | 10 |
| 3.1 channel table | 10-13 |
| Chapter 4 Common faults and use attention | 14 |
| 1.Common fault handling | 14 |
| 2.Precautions for use | 14 |
| 3.Precautions for using RDM | 15 |

Chapter 1 Installation and attention

1.1 Maintenance

- To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
- Intermittently using will extend this item's service life.
- Please clear the fan ,fan net , and optical lens in order to keep good work state.
- Do not use the alcohol or any other organic solvent to wipe the shell.

1.2 Statement

The product has perfect performance and integrity packing. All users should be strictly complying with the warning and operating instructions as stated. Or we aren't in charge of any result by misusing. Any damage resulting by misuse is not within the Company's warranty. Any fault or problem caused by neglecting the manual is also not in the charge of dealers.

Note: All information is subject to change without prior notice.

1.3 Safety Precaution

- In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60degrees.
- Always mount this unit in safe and stable matter.
- Install or dismantle should operate by professional engineer.
- Using light source, the change rate of power voltage should be within $\pm 10\%$, If the voltage is too high, it will shorten the light's life; If it's not enough, will influence the effect.
- Please restart it 20 minutes later after turning off light , until full-cooling. Frequent switching will reduce the life span of light sources and bulbs; intermittent using will improve the life of bulbs and light sources.
- In order to make sure the product is used well, please read the Manual carefully.

1.4 Product Instruction

Input voltage: AC90V-240V/ 50Hz-60HZ

Light source specification: LED 500W module

Light source life: 20000 hours

Channel mode: 23 /25CH

Pan/Tilt: 540°/270°,16bit precision scan, electronic error correction

Dimming system: 0-100% linear adjustment

Focusing system: linear adjustment from 4 meters to 50 meters

Frost system: 1 independent frost effect, soft and natural light spot

Zoom angle: 3.5-50 degrees

High-speed strobe: 0-30 times/second, adjustable

Color: 8 colors + white light

Color mixing system: linear CMY+CTO color mixing system

Fixed gobo: 11 fixed gobos + white light

Rotating gobo: 7 glass gobos+ white light, each glass pattern can be independently forward and backward

Prism: standard 8 facet prisms and 6 facet prisms, each prism can be independently rotate forward and backward

Macro function: console reset function, self-propelled mode, master-slave mode

Display: 2.8-inch touch screen+ key operation, bilingual operating system, can reverse 180° display

Control signal: international standard DMX512. With RDM function, online software upgrade is available, dial address codes

Net weight: 23KG

Product size: 38*27*67CM

Carton packing size: 75*36*47CM/PC

Weight (carton): 27KG

Flight case packing size: 101*48*79CM/2PCS

Weight (flight case): 86KG/2PCS

1.5 Cable connection (DMX)

Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 120Ohm characteristic impedance, 22-24AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted in to the last projector with a resistance of 120Ohm (minimum 1/4 W) between terminals 2 and 3.

IMPORTANT: The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

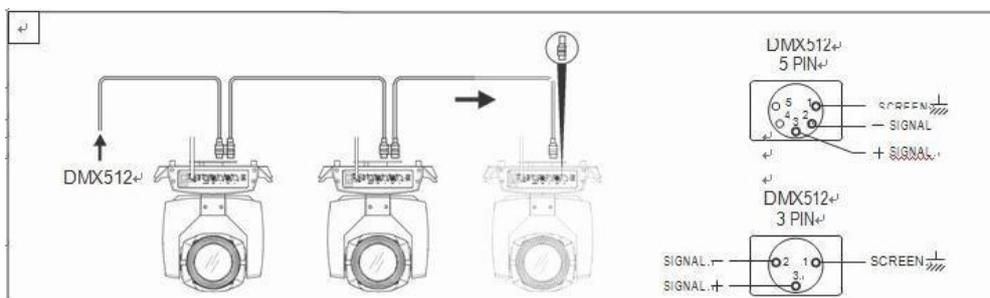


Figure 1 DMX Cable connection

1.6 Rigging (Optional)

This equipment can be positioned and fixed by light source in every direction of the stage.

Locking system makes it easy to fasten to the bracket.

Attention! Two light sources is needed to fix the equipment. Every light source is locked by

fastener of 1/4 kind. Fastener can only be locked clockwise.

Attention! Fasten a safety string to the additional hole of side aluminum piece. The secondary accessory can not hang on the delivery handle. Nip the equipment on bracket.

- Check if rigging light source (not including the one inside) damaged or not? If stand ten times weight as the equipment. Make sure the architecture can stand ten times weight as all the equipments, light sources, wirings and other additional fixtures.
- Screws for light source must be fixed firmly. Take one M12 screw (Grade 8.8 or higher) to light source bracket, and then screw the nuts.
- Level the two hanging points at the bottom of light source. Insert fastener to the bottom, lock the two levers by 1/4 rotating clockwise; then install another light source.
- Install on safety string which stands at least ten times weight as equipment. Terminal of the accessory is designed for light sources.
- Make sure pan/tilt lock unlocked or not. Keep the distance more than 1M from equipment to flammable material or lighting source.

Chapter 2 Panel operation

2.1 Brief

The light panel diagram show as Figure 3, Left area is TFT Displayer, support touch, and right area is KEY, both of touch and KEY can operate light and setting.

Display & operation just like 'Android operation system', touch the item will set or modify setting.

Note: Prevent damage the touch or TFT displayer, Can not use sharp objects chick displayer.



Figure 3 Panel diagram

2.2 Operation

2.2.1 Operate light with touch or KEY

- The left area is TFT Displayer and touch, click item or value with finger will to complete operation of set light setting(parameters) or view light state.
- The right area is 4 KEY, As auxiliary input interface, if disable touch function,, the KEY can be choose to set the parameter.

2.2.2 Parameter value setting

- **Modify value:** Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.
- **Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but haven't saved;
- **Save Value:** Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

2.2.4 Sub Menu (Parameter)

Chick item of main menu, enter corresponding sub menu, shown in Figure 6, total 6 sub menu, includes class of parameter and status:

- **ADDRESS:** Set light DMX address.
- **WORKMOD:** Set light work mode, master or slave mode when in auto run mode.
- **DISPLAY:** Set display parameter, eg. select language.
- **TEST:** Used for test light, modify DMX channel data to test function, the corresponding

function of reference channel function table.

- ADVANCE: Set light running parameter.
- STATUS: view light current status.

| | | | | |
|----------|-----------------|----------|---------------|---------|
| Address | DMX Ctrl | Address | 语言 | English |
| WorkMode | Auto Run | WorkMode | Screen saver | Mode 3 |
| Display | Sound Ctrl | Display | Screen Rot | Auto |
| Scene | Scene Mode Auto | Scene | DMX Indicate | Mode3 |
| Advanced | M/S Choose Auto | Advanced | Screen Light | 010 |
| Status | | Status | Touch Enable | ON |
| Escape | | Escape | Touch Rectify | |

| | | | | | |
|----------|---------------|------|----------|-----------------|-----|
| Address | Scene Select | 1 | Address | Pan Invert | OFF |
| WorkMode | Scene Time | 0.0s | WorkMode | Tilt Invert | OFF |
| Display | Control Mode | OFF | Display | P/T Rectify | ON |
| Scene | 01. Pan | 000 | Scene | Pan Offset | 010 |
| Advanced | 02. Pan Fine | 000 | Advanced | Tilt Offset | 010 |
| Status | 03. Tilt | 000 | Status | Data hold | ON |
| Escape | 04. Tilt Fine | 000 | Escape | Factory Setting | |

| | | |
|----------|----------------|-------|
| Address | Stepper info | |
| WorkMode | Error Logging | |
| Display | Fixture Status | |
| Scene | Version | H2.12 |
| Advanced | Light time | 24:00 |
| Status | Total time | 24:00 |
| Escape | | |

Figure 6 Parameter menu

2.3 Operation and parameter instruction

Via following operation, enter sub menu(parameter menu) shown in Figure 6

- In main menu, click 1/6 function button into corresponding parameter menu.
- In sub menu(page), click main item on the left side of display, can shift to corresponding sub menu(page) quickly.

2.3.1 ADDR--> Address: Set DMX Address

Click and select the "ADDR", can enter the page of DMX address setting, range from 1 to 512, the address code shouldn't is not greater than (512- channels quantity), otherwise the light will not be controlled. Following is the operation:

Enter the page of DMX address, as shown in Figure 7, click the blank area in right side of display will pop-up diglog as in Fig. 4, modify value, then click 'ENTER' to confirm and save DMX address code.

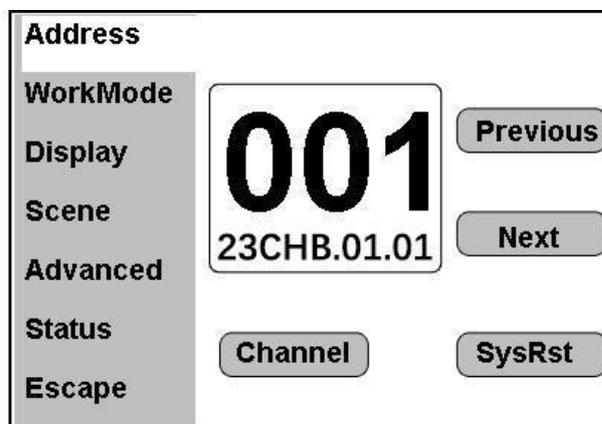


Figure 7 page of DMX Address

2.3.2 MODE--> Work Mode: Set Light work mode

Enter the page of 'Work Mode' as shown in Figure 8 and modify setting. Can set light work mode, control light source and DMX channel mode.

| | | |
|-----------------|-------------------|-------------|
| Address | DMX Ctrl | |
| WorkMode | Auto Run | |
| Display | Sound Ctrl | |
| Scene | Scene Mode | Auto |
| Advanced | M/S Choose | Auto |
| Status | | |
| Escape | | |

Figure 8 page of work mode

- ◆ **DMX Control:** Choose to set DMX Mode
- ◆ **Auto Run:** Choose to set Auto Mode
- ◆ **Sound Control:** Choose to set Sound Mode
- ◆ **M/S Choose:** Available just in 'AUTO RUN' or 'SOUND Ctrl' mode.
ON--> Master. (Data will be send to other slave light source immediatly.)
OFF--> Slaver. (NOT send data to other light source via DMX Cable). (**Default**)
- ◆ **Light Switch:**
ON--> Turn on the light,
OFF--> Turn off the light.
- ◆ **Channel Qty:** Light support 2 DMX Channel mode: sample or extend
Simple --> 16CH. (**Default**)
Expand--> 20CH (or null)

2.3.3 DISP-->DISPLAY: Set display

Light support 2 language, rotation display , Enter page as shown in Figure9 to set parameter following:

| | | |
|-----------------|----------------------|----------------|
| Address | 语言 | English |
| WorkMode | Screen saver | Mode 3 |
| Display | Screen Rot | Auto |
| Scene | DMX Indicate | Mode3 |
| Advanced | Screen Light | 010 |
| Status | Touch Enable | ON |
| Escape | Touch Rectify | |

Figure9 page of display

- ◆ **Language:** English / 中文.
- ◆ **Screen Saver:** when panel is idle (these is no operation in 10 second), displayer will enter saver status.
OFF--> No screen saver.
Mode1--> Power-saving mode, turn off the display.

Mode2--> Displays the current address.

Mode3--> Displays the icon and the current working mode.(Default)

◆ **Screen Rotation: To turning display.**

ON--> Normal display.(Default)

OFF--> 180° turning display.

◆ **Touch enable:** Disable or enable touch function,.

ON--> Enable touch function.(Default)

OFF--> Disable touch function.

◆ **Touch adjust:** Adjust touch function. Normally, not enter this item.

2.3.4 TEST--> Test Mode

Enter the page as shown in Figure 10, Light will into test mode, in this mode, the light does not receive the data for DMX controller:

| | | |
|-----------------|----------------------|-------------|
| Address | Scene Select | 1 |
| WorkMode | Scene Time | 0.0s |
| Display | Control Mode | OFF |
| Scene | 01. Pan | 000 |
| Advanced | 02. Pan Fine | 000 |
| Status | 03. Tilt | 000 |
| Escape | 04. Tilt Fine | 000 |

Figure 10 page of Test

- ◆ **PAN:** range for 0 to 255;
- ◆ **TILT:** range for 0 to 255;
- ◆ **FOCUS:** range for 0 to 255;
- ◆ **COLOR:** range for 0 to 255;
- ◆ **GOBO:** range for 0 to 255;
- ◆ **PRISM:** range for 0 to 255;
- ◆ **FROST:** range for 0 to 255;
- ◆ **STROBE:** range for 0 to 255;

2.3.5 ADVA-->Advanced: Set light run parameter

Enter the page as shown in Figure 10, set the parameter of light:

| | | |
|-----------------|------------------------|------------|
| Address | Pan Invert | OFF |
| WorkMode | Tilt Invert | OFF |
| Display | P/T Rectify | ON |
| Scene | Pan Offset | 010 |
| Advanced | Tilt Offset | 010 |
| Status | Data hold | ON |
| Escape | Factory Setting | |

.Figure 11 page of run parameter

- ◆ **Pan Invert: Reverse PAN move**
OFF--> Pan Normal move.(Default)
ON--> Reverse PAN move.
- ◆ **Tilt Invert: Reverse TILT move**
OFF--> Tilt Normal move.(Default)
ON--> Reverse Tilt move.
- ◆ **P/T Rectify: Disable or enable position rectify function.**
OFF--> Disable P/T rectify
ON--> Enable P/T rectify-(Default)
- ◆ **Pan Offset:** Set PAN original position. **Default: 10**
- ◆ **Tilt Offset:** Set TILT original position. **Default: 10**
- ◆ **light source when:**
Power ON--> Turn on the light source when power on.(Default)
Rst Done--> Turn on the light source after reset.
Manual--> Manually turn on the light source.
- ◆ **Data hold:**
OFF--> When no DMX signal,return to middle position.(Default)
ON--> When no DMX signal,stop in the final position.
- ◆ **Factory Setting:** Restore all parameter to factory setting.

2.3.6 STAT-->Status: View status

Enter the page as shown in Figure 12:

| | | |
|-----------------|------------------------|------------|
| Address | Pan Invert | OFF |
| WorkMode | Tilt Invert | OFF |
| Display | P/T Rectify | ON |
| Scene | Pan Offset | 010 |
| Advanced | Tilt Offset | 010 |
| Status | Data hold | ON |
| Escape | Factory Setting | |

Figure 12 page of status

- ◆ **Work Mode:** Show the current working mode.
- ◆ **Address:** Show the current address.
- ◆ **Version:** Show the version of the light source.
- ◆ **Elapse:** Working hours after turn on.
- ◆ **Total:** Cumulative hours of operation

Chapter 3 Channel description

3.1 Channel table

| 23CH | 25CH | FUNCTION | VALUE | DESCRIPTION |
|------|------|-----------|---------|---|
| CH1 | CH1 | PAN | 0-255 | 0-540 Degrees |
| CH2 | CH2 | PAN FINE | 0-255 | 0-2 Degrees |
| CH3 | CH3 | TILT | 0-255 | 0-270 Degrees |
| CH4 | CH4 | TILT FINE | 0-255 | 0-1 Degree |
| CH5 | CH5 | P/T SPEED | 0-255 | From fast to slow |
| CH6 | CH6 | DIMMER | 0-255 | 0-100% Dimmer |
| CH7 | CH7 | STROBE | 0-3 | Dark |
| | | | 4-103 | Pulse strobe slow to fast |
| | | | 104-107 | Open |
| | | | 108-155 | Gradual strobe slow to fast |
| | | | 156-207 | Random strobe slow to fast |
| | | | 208-212 | Open |
| | | | 213-251 | Random strobe slow to fast |
| | | | 252-255 | Open |
| CH8 | CH8 | COLOR | 0-127 | Linear colour |
| | | | 128-131 | Red |
| | | | 132-135 | Green |
| | | | 136-139 | Dark Blue |
| | | | 140-143 | Orange |
| | | | 144-147 | Peach Red |
| | | | 148-151 | Yellow |
| | | | 152-155 | Light Blue |
| | | | 156-159 | Purple Pink |
| | | | 160-163 | White+Red |
| | | | 164-167 | Red+Green |
| | | | 168-171 | Green+Dark Blue |
| | | | 172-175 | Dark Blue+Orange |
| | | | 176-179 | Orange+Peach Red |
| | | | 180-183 | Peach Red+Yellow |
| | | | 184-187 | Yellow+Light Blue |
| | | | 188-191 | Light Blue+Purple Pink |
| | | | 192-220 | Forward water effect from fast to slow |
| | | | 221-225 | Stop |
| | | | 226-255 | Backward water effect from slow to fast |

| | | | | |
|---------|---|------------|---------|--|
| CH9 | CH9 | CTO | 0-255 | CTO |
| CH10 | CH10 | C | 0-255 | C |
| CH11 | CH11 | M | 0-255 | M |
| CH12 | CH12 | Y | 0-255 | Y |
| CH13 | CH13 | FIXED GOBO | 0-4 | White |
| | | | 5-9 | Gobo1  |
| | | | 10-14 | Gobo2  |
| | | | 15-19 | Gobo3  |
| | | | 20-24 | Gobo4  |
| | | | 25-29 | Gobo5  |
| | | | 30-34 | Gobo6  |
| | | | 35-39 | Gobo7  |
| | | | 40-44 | Gobo8  |
| | | | 45-49 | Gobo9  |
| | | | 50-54 | Gobo10  |
| | | | 55-59 | Gobo11  |
| | | | 60-64 | Shake White Light |
| | | | 65-69 | Shake slow to fast Gobo2  |
| | | | 70-74 | Shake slow to fast Gobo3  |
| | | | 75-79 | Shake slow to fast Gobo4  |
| | | | 80-84 | Shake slow to fast Gobo5  |
| | | | 85-89 | Shake slow to fast Gobo6  |
| | | | 90-94 | Shake slow to fast Gobo7  |
| | | | 95-99 | Shake slow to fast Gobo8  |
| | | | 100-104 | Shake slow to fast Gobo9  |
| 105-109 | Shake slow to fast Gobo10  | | | |

| | | | | | | | |
|------|------|----------------------|---------|--|--|---------|--|
| | | | 110-127 | Gobo11  | | | |
| | | | 128-190 | Backward water effect from fast to slow | | | |
| | | | 191-192 | Stop | | | |
| | | | 193-255 | Forward water effect from slow to fast | | | |
| CH14 | CH14 | ZOOM | 0-255 | From big to small | | | |
| CH15 | CH15 | FOCUS | 0-255 | From far to near | | | |
| | CH16 | FOCUS FINE | 0-255 | Focus fine | | | |
| CH16 | CH17 | ROTATING GOBO | 0-9 | White | | | |
| | | | 10-19 | Gobo 1  | | | |
| | | | 20-29 | Gobo 2  | | | |
| | | | 30-39 | Gobo 3  | | | |
| | | | 40-49 | Gobo 4  | | | |
| | | | 50-59 | Gobo 5  | | | |
| | | | 60-69 | Gobo 6  | | | |
| | | | 70-79 | Gobo 7  | | | |
| | | | 80-89 | Shake slow to fast Gobo1  | | | |
| | | | 90-99 | Shake slow to fast Gobo2  | | | |
| | | | 100-109 | Shake slow to fast Gobo3  | | | |
| | | | 110-119 | Shake slow to fast Gobo4  | | | |
| | | | 120-129 | Shake slow to fast Gobo5  | | | |
| | | | 130-139 | Shake slow to fast Gobo6  | | | |
| | | | 140-149 | Shake slow to fast Gobo7  | | | |
| | | | | | | 150-200 | Forward water effect from fast to slow |
| | | | | | | 201-205 | Stop |
| | | | 206-255 | Backward water effect from slow to fast | | | |
| CH17 | CH18 | GOBO AUTOROTATION | 0-127 | 0-360 degrees | | | |
| | | | 128-190 | Rotate forward fast to slow | | | |
| | | | 191-192 | Stop | | | |
| | | | 193-255 | Rotate backward slow to fast | | | |

| | | | | |
|------|------|--------------------------------|---------|-----------------------------------|
| | CH19 | GOBO FINE | 0-255 | GOBO fine |
| CH18 | CH20 | 8 FACET PRISMS | 0-127 | None |
| | | | 128-255 | Insert 8 facet prisms |
| CH19 | CH21 | 8 FACET PRISMS AUTOROTATION | 0-127 | 0-360 degrees |
| | | | 128-187 | Rotate forward fast to slow |
| | | | 188-195 | Stop |
| | | | 196-255 | Rotate backward slow to fast |
| CH20 | CH22 | 6 FACET PRISMS | 0-127 | None |
| | | | 128-255 | Insert 6 facet prisms |
| CH21 | CH23 | 6 FACET PRISMS AUTOROTATION | 0-127 | 0-360 degrees |
| | | | 128-187 | Rotate forward fast to slow |
| | | | 188-195 | Stop |
| | | | 196-255 | Rotate backward slow to fast |
| CH22 | CH24 | FROST | 0-127 | None |
| | | | 128-255 | Frost |
| CH23 | CH25 | RESET | 0-209 | None |
| | | | 210-215 | Reset XY motor over 4 seconds |
| | | | 216-219 | None |
| | | | 220-235 | Reset Effect motor over 4 seconds |
| | | | 236-239 | None |
| | | | 240-255 | Reset all after 4 seconds |

Chapter 4 Common faults and use attention

1. Common fault handling

The light source contains professional components such as microcomputer circuit board and high-voltage power supply. For your safety and product life, non-professionals should not disassemble the light source and related accessories without authorization.

1. The bulb does not light up (except LED light source)

Possible cause: The bulb is not completely cooled, or the bulb has reached the end of its life, the treatment is as follows:

- Due to abnormal operation, the bulb is not completely cooled down, so let the light source body cool down for more than 10 minutes to make the inside completely return to normal state, and then turn on the power again.;
- Check whether the bulb has reached the end of its life, and replace it with a new one;
- Check whether the bulb and the lighter circuit are leaking, falling off, or having poor contact;
- Replace with a new lighter.

2. The light beam appears dim

Possible cause: The bulb has been used for a long time or the light path is not clean, the treatment is as follows:

- Check whether the bulb has reached the end of its life, and replace it with a new one;
- Check whether the optical components or bulbs are clean, and whether there is dust on the bulbs and other optical components. Regular cleaning and maintenance of the bulbs and components in the light sources are required.

3. Fuzzy pattern projection

- Check whether the electronic focus channel value is suitable for the current projection distance.

4. The light sources work intermittently

Possible cause: The internal circuit enters the protection state, and the treatment is as follows:

- Check whether the fan is operating normally or whether it is dirty, causing the internal temperature of the light source to rise;
- Check whether the internal temperature control switch is closed;
- Check whether the bulb has reached the end of its service life, and replace it with a new one.

5. After the light source is reset normally, it does not accept the control of the console

Possible cause: signal line failure or abnormal light source parameter setting, the treatment is as follows:

- Check the start address code and check the connection of the DMX signal line (whether the signal line cable is intact, and whether the connection of the head is loose);
- Add signal amplifier, add 120 ohm terminal resistance; can't start

Possible cause: bad power line, the treatment is as follows:

- Check whether the fuse on the power input socket is fused, replace the fuse;
- light sources have poor line contact due to vibration during -distance transportation
- Check the input power, computer board and other pllongug-in devices.

2. Precautions for use

- Check whether the local power supply meets the requirements of the rated voltage of the product, and the leakage protector, over current protector, etc. meet the requirements of the load;
- Do not use power cords with damaged insulation, and do not overlap power cords with other wires;
- The light source adopts strong air cooling, which is easy to accumulate dust. It must be

cleaned once a month, especially the heat dissipation vent, otherwise it will be blocked by the accumulation of dust, resulting in poor heat dissipation and abnormalities in the light source.

- When installing the light source, the fixing screws must be fastened, with safety cables, and regular inspections;
- When installing and positioning the luminaire, keep a minimum distance of 10 meters between any point on the surface of the luminaire and any flammable and explosive object, and the distance from the irradiated object is 2.5 meters. Please do not install the luminaire directly on the surface of combustible materials.;
- It is recommended that the continuous working time of the light source should not exceed 10 hours, and the interval between continuous starting of the light source should not be less than 10 minutes, otherwise it will not be triggered normally due to the light source overheating protection;
- The closing time using the on-off valve should not exceed 5 minutes. If you need to close the light for a long time, you should use the console (lighting control channel) to turn off the light.;
- In order to ensure that multiple luminaires better comply with the scene effect, the luminaire should not be in the unfinished current scene all the time, that is, start the next scene action, it is best not to exceed 3 minutes in this state to ensure that multiple luminaires can run simultaneously;
- During use, if there is an abnormality in the light source, stop using the light source in time to prevent other malfunctions.

3. Precautions for using RDM

RDM is an extended version of the DMX512-A protocol. It is a remote device management protocol. The traditional DMX512 protocol communication is one-way communication. The protocol is based on the RS-485 bus. RS-485 is a time-sharing multi-point, half-duplex protocol. Only allowed at the same time One port is the output of the host, so, pay attention to the following points when using RDM:

- To use a console or host device that supports the RDM protocol host;
- To use a two-way signal amplifier, the traditional one-way signal amplifier is not suitable for the RDM protocol, because the RMD protocol requires feedback data, and the use of a one-way amplifier will block the returned data, resulting in the search for light sources and lanterns;
- All light sources must be set to DMX mode to ensure that there is only one host on the signal line;
- A 120ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is relatively long, the use of differential signals will be more stable when the signal line is relatively long, which is conducive to the quality of communication;

When it appears that the light source accepts DMX control, but cannot search for the light source by RDM, first check the signal amplifier, and then check whether there is a bad connection between the 2 and 3 lines of the signal line.