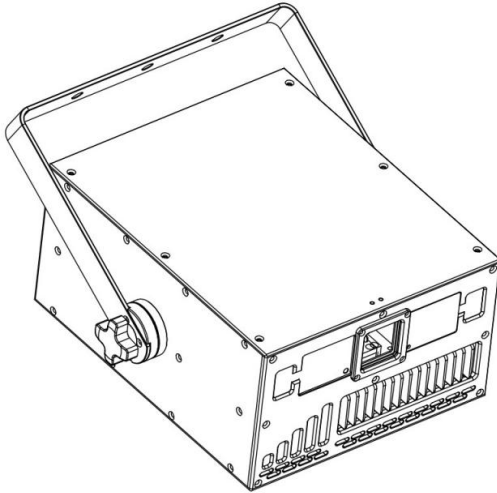


# USER MANUAL



## ANIMATION STAGE LIGHT

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Please read this manual carefully before using the product

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## **1.Safety Guidance**

Thank you for choosing our products. For your safety, please read this manual carefully before operation. This manual includes installation and use information.

The equipment is packaged in good condition when leaving the factory.

Please operate according to the user manual. The machine failure caused by man-made reasons is not covered by the warranty.

1. When using the product, please open the light and check it carefully to ensure that there is no damage caused by transportation..
  2. Don't let children operate this machine.
  3. Use safe ropes when fixing the equipment, and hold up the bottom when moving the light.
  4. The equipment must be installed in a well-ventilated place .
  5. Ensure that the ventilation holes are unobstructed to avoid overheating when the light is running.
  6. Before operation, make sure that the power supply voltage matches the power supply voltage required by the equipment.
  7. Please ground the conductor to prevent electric shock.
  8. In case of fire, do not place combustible items next to light when they are running.
  9. Please carefully check whether the power cord is damaged before turning on the light. If it is damaged, replace it immediately.
- To avoid electric shock or fire, avoid flammable liquid, water, metal and other electrical conductors entering the light. If any body enters the light, please cut off the power supply immediately .
9. Avoid operating the light in a dirty and dusty environment, and clean and maintain the light regularly.

11. Do not touch the wire when the light is running to prevent electric shock.
12. Avoid entanglement of the power cord with other wires.
13. Do not open the light housing without authorization
14. Please cut off the power when the light is not used for a long time or for maintenance.
15. Do not look directly at the light when it is running.

## **2.Packing List**

This series of products are packed in standard carton, air carton is optional, please read this manual carefully before using. Follow operating rules to avoid damage to light or bodily injury. Please handle the products carefully after receiving them, and check whether the products are damaged during transportation. Open the cover of the box, take out the relevant accessories in the box, take out the light, and place the lamp on a horizontal table to facilitate related operations. Note: Do not squeeze plastic parts to avoid breakage or distortion. Check the parts as follows:

Stage light 1pc    cable 1pc    manual 1pc

## **3.Installation Notes**

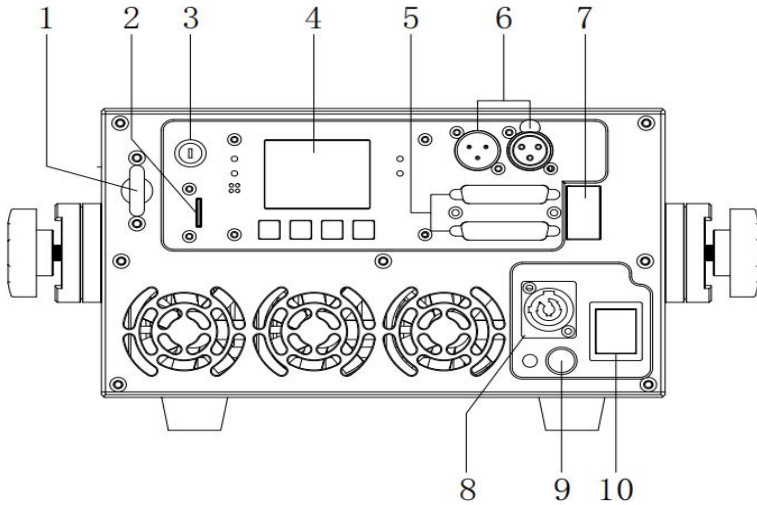
1. When install this equipment please make sure there's no flammable surfaces (decorated things, etc) within at least 2.5M and maintain minimum distance of 0.5M from the equipment to the walls.
2. Before installation, please confirm whether the power supply voltage you are using matches the voltage marked by the light.

3. Make sure that the ventilation fan and exhaust passage are not blocked by other equipment or decorative materials, such as newspapers, tablecloths, curtains, etc.
4. The equipment should be fixedly installed. To ensure the stability of its installation point, at least a load-bearing structure that can withstand more than ten times the weight of the product.
5. For safety reasons, this machine should be connected to a main socket with a ground wire.

#### **4. Technical Parameter**

1. Rated voltage: AC100-240V,50/60Hz
2. Power consumption (10W) : 250W@230V
3. Power consumption (15W) : 260W@230V
4. Color: single color, RGB
5. DMX512 channel: 5CH/17CH/18CH/27CH/28CH/53CH
6. Control mode: Sound/ Auto/ DMX512/ ILDA/ master-slave/ SD card
7. Cooling requirements: Intelligent air cooling system
8. Operating temperature: 0°C - 35°C
9. Working environment: indoor
10. N.W./G.W. (2 in1) : 11.45KG/28KG
11. 2 in1 Package size: 48\*43\*47.5CM

## 5.Light Control Panel



| NO. | Interface  |
|-----|--|
| 1   | Safety rope to secure the ring                         |
| 2   | SD card  |
| 3   | safe lock  |
| 4   | Menu display window                                    |
| 5   | DB25 ILDA interface (IN/OUT)                           |
| 6   | XLR Caron 3 core DMX-512 interface (IN/OUT)            |
| 7   | RJ45- ILDA interface                                   |
| 8   | Power input, connect to the external grid power supply |
| 9   | fuse holder  |
| 10  | Power  |

| Indicator light (color) |   |
|-------------------------|---|
| Power LED (Green)       | OFF: No power on  |
|                         | Steady on: Power LED  |
| WORK (Red)              | OFF/Steady on: Device system exception                              |
|                         | Flash: The device system runs properly                              |
|                         | Flash quickly: The device safety electronic lock is not opened      |
| DMX (Green)             | OFF: no DMX512 signal   |
|                         | Steady on: received DMX512 signal                                   |
|                         | Flash: received DMX512 signal and output also                       |
| ILDA LED (Blue)         | OFF: No external ILDA signal detected                               |
|                         | Steady on: ILDA switch is turned on or external signal is connected |
|                         | Flash: The external ILDA signal is detected and the light output    |

## **6. Light Setting**

Turn on the device, press the MENU button to ENTER the menu mode, press the ENTER button to enter the selected function, then use the UP/DOWN button to select the required function, and press the Enter button to confirm. To return to the main MENU press the Menu button. The main functions are as follows:

## 6.1 Touch screen menu list as following

| Menu           | Secondary Menu | Third Menu     |   |   |               |
|----------------|----------------|----------------|---|---|---------------|
| Operation mode | Dmx-512        | DMX address    | (1-512)   |   |               |
|                |                | Channel Mode   | 5/17/18/27/28/53CH<br>( Default: 27CH)  |   |               |
|                |                | RDM            | No/Yes  |   |               |
|                |                | View DMX Value | Change according to the selected channel mode (such as 27CH channel value display 1-27) |   |               |
|                | Play mode      | Show           |   | Show1-Scene effects,<br>Show 2- beam effects<br>Show 3- Special effects,<br>Show 4-animation loops<br>Animations can be played individually |               |
|                |                |                | Master/slave  | ON/OFF  |               |
|                |                |                | Sound State   | ON/OFF  |               |
|                |                |                | Sound Sense   | 0-100   |               |
|                |                |                | SD Card   | Play Mode   | ONE/SORT/LOOP |
|                |                |                |   | Page  | 1-8           |
|                | Cue            | 1-48           |   |   |               |
|                | Sound State    | Off/On         |   |   |               |
|                | Sound Sense    | 0-100          |   |   |               |
|                | Test mode      | Test mode      | Enable output   | ON/OFF  |               |
|                |                |                | Test pattern  | map1 to map 6   |               |

|           |   |   |  |
|-----------|---|---|--|
|           |   | Brightness  | 0-255  |
|           |   | Master size   | 0-255  |
|           |   | Light Color   | RGB/R/G/B  |
|           |   | Invert X  | No/Yes   |
|           |   | Invert Y  | No/Yes   |
|           | ILDA mode   | ILDA Mode<br>ILDA   | Off/On (Turn on ILDA and only receive ILDA signal. The device will not emit light when running in other shows) |
| User mode | Value setting (CH1-CH28 can customize the value of each channel of the fixture) | The program has a built-in console, restore the factory settings and save the data, such as clearing the data, press the reset option |  |
| Advanced  | Projector   | Master size   | 0-255  |
|           |   | X Scale   | 0-255  |
|           |   | Y Scale   | 0-255  |
|           |   | Invert X  | No/Yes   |
|           |   | Invert Y  | No/Yes   |
|           |   | Swap XY   | No/Yes   |
|           | Color   | Lamp house  | RGB/Single   |
|           |   | Red   | 0-255  |
|           |   | Green   | 0-255  |
|           |   | Blue  | 0-255  |

|          |                |                       |   |
|----------|----------------|-----------------------|---|
|          |                | Brightness            | 0-255   |
|          | Scan           | Scan kpps             | 15K-40K<br>( the lower the K number, the more flashing the pattern will appear, and the playback effect will be out of sync if the device K number is different.) |
|          |                | Scan-safety<br>ON/OFF | ON/OFF<br>( ON: It will turn off when there's only one beam light )   |
| Display  | Language       | 中文/EN                 | displays Chinese and English options  |
|          | LCD Invert     | ON/OFF                | 180° rotation of the screen   |
|          | Screensaver    | 30-120                | 30s to 120s   |
| Defaults | Defaults Reset | ON/OFF                |   |
|          | Factory Init   |                       | Used by factory technicians   |
| Survey   | X Scan Error   | No/Yes                | The X/Y scanner motor is stuck in a certain position and an error occurs, and the device will not emit light in any   |
|          | Y Scan Error   | No/Yes                |   |

|             |               |  |   |
|-------------|---------------|--|---|
|             |               |  | mode  |
|             | SD card Error | No/Yes                                   | The reason for the error is that the control board is not powered on or the chip is broken or there is a problem with the signal line |
|             | CPU Version   | GUI Hdw Ver                              |   |
|             |               | GUI Sfw Ver                              |   |
|             |               | MVC Hdw Ver                              | The reason for the error is that the control board is not powered on or the chip is broken or there is a problem with the signal line |
| MVC Sfw Ver |               |  |   |
| SysInfo     | Operational   | Current device mode                      |   |
|             | Channel Num   | Current device channel                   |   |
|             | DMX address   | Current device dmx address               |   |
|             | Scene version | Current device effect version            |   |
|             | Animation Ver | Current device Animation effect          |   |
|             | Temperature   | Current device house current device temp |   |

## DMX-512

Select the DMX-512 and press ENTER to confirm. The current DMX address will be displayed on the screen. There are 6 channel modes: 5CH/17CH/18CH/27CH/28CH/53CH.

Use the UP/DOWN button to select addresses from 001 to 512, and press ENTER to save the Settings. Press the MENU button to return to the previous menu.

### **Show mode**

Select show mode and press ENTER to confirm. The current mode will be displayed on the display screen. Use the UP/DOWN button to select four modes: fast rhythm, medium rhythm, slow rhythm and animation effect. Press ENTER button to save, and press MENU button to return to the upper-level menu.

### **SD card mode**

Select the SD card playing mode and press ENTER to confirm. The current mode will be displayed on the screen. Use the UP/DOWN button to select four modes: circular play, voice-activated trigger, directory, and file. Press ENTER button to save, and press MENU button to return to the upper-level menu.

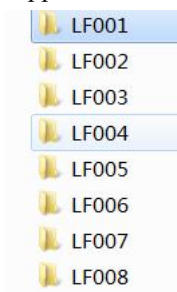
**SD card playback Settings:** The local system can read SD card 8 fixed folders, each folder can read 48 pattern files, pattern file format (.ild) format files. The UP and DOWN buttons can be used to select pattern files. If loop playback is set to ON, the whole SD folder is played in loop mode. (Selecting a single file name is invalid.) If you want to select a single file name to play, you need to return to loop playback and set to OFF. The UP and DOWN buttons can be used to select the mode to trigger the playback of the pattern file. ON is triggered by voice control, and OFF is automatically triggered

Insert the SD card into the lamp and select the SD card mode through the UP and DOWN buttons, or use the console to press the channel operation, you can play the SD card files. In the SD card mode, you can select folders and files through the UP and DOWN buttons to find the files you need, or use the

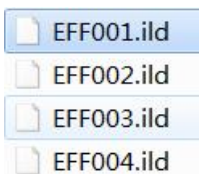
console to operate to find the files you need. When selecting the SD card mode on the lamp, there are 3 modes (ONE for single FILE playback, FILE for single folder for ALL files playback, and all for the whole SD card file playback).

### **SD card file:**

1. Create a folder in the root directory of the SD card. Only eight folders are supported, as shown in the following figure:



2. Put the standard (.ild) file in the folder you want to put in. Note: The file name can be self-named.



3. Folder playing order & folder content playing order:

When files in a single folder are played, they are played in the order in which they are copied to the SD, that is, the principle of "copy first, play first". If you need to change the play order, you can only copy the files in the order you need.

The entire SD card is played according to the fixed folder number (cyclic file F008 from LF001 to LF8) and in copy order.

| SD card folders correspond to English and Chinese names |                   |                   |
|---|-------------------|-------------------|
| file  | English name(EN)  | Chinese name (CH) |
| LF001   | Animals           | 动物                |
| LF002   | Abstracts1        | 简单几何              |
| LF003   | Abstracts2        | 抽象几何              |
| LF004   | Music+Dancers     | 音乐&跳舞             |
| LF005   | People+Characters | 人物&特性             |
| LF006   | Themes            | 主题                |
| LF007   | Logos+Text        | Logo&文本           |
| LF008   | Shows             | 表演                |

### **Test mode**

Select the test mode and press ENTER to confirm. The current mode will be displayed on the display screen. Use UP/DOWN button to select the test mode and test patterns . Press ENTER button to start and to check whether there is any problem with the light. press MENU button to return to the upper-level menu.

### **ILDA mode**

Select ILDA mode, press ENTER button to confirm, the current mode will be displayed on the display screen, press "ENTER" button, use UP, DOWN button to select off/on. The default is off, open ILDA only receives external signals, other mode operation will not work. Press ENTER to save, and press MENU to return to the previous menu.

### **User mode**

Select User mode and press ENTER to confirm. The current mode will be displayed on the display. 1 channel ~28 channels, press ENTER to confirm. Select the value of 0~255 through the UP and DOWN buttons, set the next

channel setting by pressing the DOWN button, and set the light through the operation of the numerical effect (set data in user mode: Restore factory setting data unchanged, such as clear data press reset option) Press ENTER button to save, press MENU button to return to the previous menu.

### **Master Set**

Select master set, press touch ●ENTER button to confirm, by touching ▲UP, ▼DOWN button select target 1-6 /projection setting/color setting/Scanner setting, set the Settings Press touch ●ENTER button to save, press touch MENU button to return to the previous level menu.

#### **Projector setting:**

Select scan setting, press touch ●ENTER button to confirm, the current mode will be displayed on the display, use touch ▲UP, ▼DOWN button to select, target 1-6 (light outlet setting), the overall size setting, set the overall size of the pattern; X axis size setting, set the horizontal size of the pattern; Y-axis size setting, set the vertical size of the pattern; The X axis is reversed, and the horizontal direction of the pattern is reversed. The Y-axis is reversed, and the vertical direction of the pattern is reversed. XY axis replacement pattern horizontal and vertical directions swap; Pattern X-axis offset; Pattern Y-axis offset, Press the Touch ●ENTER button to save, and press the Touch MENU button to return to the upper-level menu.

#### **Color setting:**

Select the color setting, press the touch ●ENTER button to confirm, the current mode will be displayed on the display, use the touch ▲UP, ▼DOWN button to select, target 1-6 (light outlet setting), color selection, set the pattern to full color or single green; Red light brightness, set the lamp red light brightness; Green brightness, set the luminaire green brightness; Blue light brightness, set the blue light brightness of the lamp, the overall brightness of

the light source, set the total brightness of the lamp; Press the Touch ●ENTER button to save, and press the Touch MENU button to return to the upper-level menu.

### **Scanner setting:**

Select Scanner setting, press touch ●ENTER button to confirm, the current mode will be displayed ON the display, use touch ▲UP, ▼DOWN button to select, Scanner protection ON/OFF (open, a separate beam of light will close the light) press touch ●ENTER button to save, press touch MENU button to return to the previous level of menu.

### **Display**

Select display Settings, press touch ●ENTER button to confirm, the current mode will be displayed on the display screen, use touch ▲UP, ▼DOWN button to select: Chinese /EN Settings (the interface displays Chinese and English options), screen reverse Settings (screen 180° rotation) press touch ●ENTER button to save, Screen saver, setting 30s to 120s, press touch MENU button to return to the previous level of menu.

### **Survey**

Select Survey, press ENTER button to confirm, the current mode will be displayed on the display screen, use the voice control sensitivity of 000 to 100 (default 80), restore the factory Settings, set the parameters to the factory initial Settings (channel mode value, user mode value, DMX512 address and display language are unchanged) press ENTER button to save. Press the MENU button to return to the previous menu.

### **Sysinfo**

Select SysInfo, press the touch ●ENTER button to confirm, the current mode will be displayed on the display, use the touch ▲UP, ▼DOWN button to check: the galvanometer XY axis reset error (X/Y galvanometer motor stuck

in a certain position will report an error, no light will be generated in any mode of the device); Communication error: ON error /OFF normal (the reason for the error is that the control board is not powered on or the chip is bad or the signal line is faulty); Check whether the CPU version information is displayed and the hardware control version is read (the reason why the control board cannot read it is that the control board is not powered on or the chip is bad or the signal cable is faulty). After checking, press the MENU button to return to the upper-level menu.

Device information: Select the device information, press the touch ●ENTER button to confirm, the current mode will be displayed on the display screen, use the touch ▲UP, ▼DOWN button to view the system information

Operation mode: the working mode of the current luminaire,

channel mode: the channel mode of the current device,

Address code: the working address of the current luminaire,

effect version: the effect version played by the current device,

device temperature: the internal temperature of the device, press and touch the MENU button to return to the upper menu after viewing.

## **7. Light Control mode**

①512 control mode:

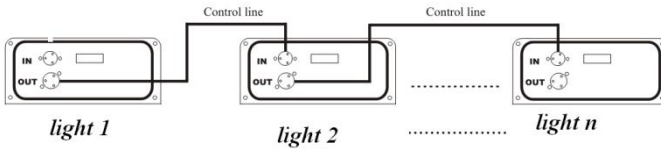
MX512 address code, the lamp will receive standard DMX512 signal.

② Master/slave mode:

Host - In the main menu, press UP and DOWN to enter the menu of "System Settings"/Host Settings as a check mark (default is a cross), then the lamp is the host. Press ENTER button to save, and press MENU button to return to the previous menu.

Slave - In the main MENU, press UP and DOWN to enter the menu of

"System Settings"/Slave machine set to cross (default is cross), press Menu button to return to the menu of "DMX Address". DMX address set to 001.

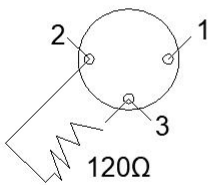
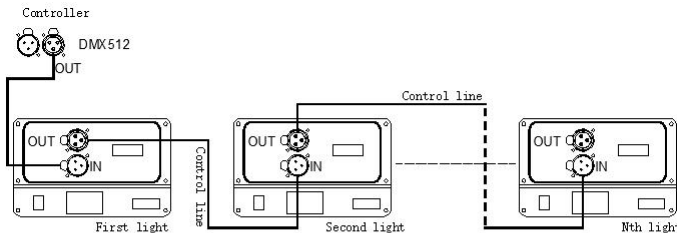


### ③ Automatic mode

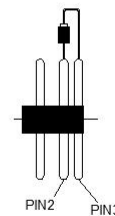
When the lamp does not receive the external signal, the equipment can choose to run automatically.

## 8. DMX512 Control

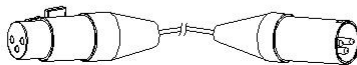
### 8.1 DMX512 Connect



DMX loop plug connection connect a 120Ω resistor between pin 2 and pin 3 of the XLR plug and plug it into the DMX output socket of the last light fixture.



3 core socket  
PIN 1: GND (SCREEN)  
PIN 2: Signal (-)  
PIN 3: Signal (+)



3 core plug  
PIN 1: GND (SCREEN)  
PIN 2: Signal (-)  
PIN 3: Signal (+)

1. In order to reduce signal errors and avoid signal weakening or interference during transmission, a 120Ω resistance loop can be inserted between the 2 cores and the 3 cores of the DMX output terminal of the last machine.

2. Connect the lamp with XLR signal, one end is connected to the output port of the lamp, and the other end is connected to the input port of the next lamp. XLR signal lines can only be used in series, not in parallel. DMX512 signal transmission speed is very fast. Damage to the signal line, weak welding, poor contact, etc., will affect the signal transmission and cause the system to shut down.

3. When a unit of machine power disconnects, DMX output or input connection is bypassed, in order to maintain the DMX line and connectivity.

4. Each lamp must have an address code, which can receive the information sent by the console, ranging from 1 to 512.

5. The terminal of the DMX512 system needs to be equipped with a terminator to reduce signal transmission errors.

6. The 3-pin XLR connector is more common than the 5-pin XLR:

3 pin XLR: PIN1: GND, PIN2: - Signal, PIN3: + Signal

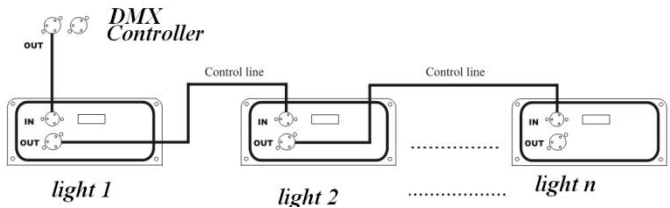
5 pin XLR: PIN1: GND, PIN2: - Signal, PIN3: + Signal, PIN4/PIN5: No USE

## 8.2 DMX512 channel setting:

Press the MENU button to enter the menu mode, select the system setting/channel mode (5CH), select the channel mode you need, and press the ENTER key to confirm.

Connect the XLR control line from the DMX output of the controller to the DMX input of each luminance, and so on until all the luminance are connected, and then connect the loop plug to the signal output of the last

luminance to complete the connection, as following :



When using any controller, each device must have its own address code. So, if the address of the first lamp is set to 1 and the address code of the second light is set to 6/18/19/28/29/54 and the address code of the first light is set to 1 plus 5/17/18/27/28/53 channels, the third lamp is set to 11/35/37/55/57/107CH. And so on (this setting also needs to be determined according to different console, now only according to the general convention).

Specific dmx-512 signal control mode address code switch settings are as follows:

| Fixture No. | Address            | LED display (ON)         |
|-------------|--------------------|--------------------------|
| 1           | 1                  | 1                        |
| 2           | 6/18/19/28/29/54   | 006/018/019/028/029//054 |
| 3           | 11/35/37/55/57/107 | 011/035/037/055/057/107  |
| ⋮           | ⋮                  | ⋮                        |

### 8.3 DMX-512 Channel introduce:

This light pattern mode has 6 channel modes 5/17/18/27/28/53CH (the operation mode can be selected from the console mode → channel mode setting), SD mode is not affected by the channel number setting, SD PLAY has 3 channel modes 5/17/20CH, (when the channel mode is 5CH, SD card

mode 5CH is valid. SD card mode 17CH is valid when the channel mode is 18/19CH, and SD card mode 20CH is valid when the channel mode is 27/28/53CH.) The modes and descriptions are as follows:

| Channel | Content      |         |  |
|---------|--------------|---------|--|
| CH1     | Patterns     | 0~31    | Blackout                               |
|         |              | 32~63   | Manual choose cue                      |
|         |              | 64~95   | Auto trigger macro function            |
|         |              | 96~127  | Voice activated auto macro function    |
|         | SD card mode | 128~159 | Manual drawing selection               |
|         |              | 160~191 | Folder Play                            |
|         |              | 192~223 | Voice-activated manual image selection |
|         |              | 224~255 | Voice control triggers folder playback |

IPLAY mode of this lamp has one channel mode 5CH (channel mode can be checked in system setting → channel number setting), which is described as follows:

When CH1 =32 ~ 63, all channels are valid.

When CH1= 64 ~ 127, CH2 and CH6 are effective for automatic control.

### 5CH

| Channel |          | value    | Content                      |
|---------|----------|----------|------------------------------|
| CH1     | Cue mode | 0 ~ 31   | OFF (blackout)               |
|         |          | 32 ~ 63  | Manual choose cue            |
|         |          | 64 ~ 95  | Auto trigger macro function  |
|         |          | 96 ~ 127 | Sound trigger macro function |

|     |                                |           |  |
|-----|--------------------------------|-----------|--|
|     | SD Card                        | 128 ~ 255 | Please read SD card 5CH on page 28   |
| CH2 | Dimmer                         | 0 ~ 255   | Brightness 0% ~ 100%   |
| CH3 | List<br>(CH1: 32 ~ 63)         | 0 ~ 255   | List :each 32 value be 1 list, 8 lists total.  |
|     | Macro effect<br>(CH1: 64 ~ 95) |           | List: when the value is 0, all loop,<br>1-255 ,each 3 value be 1 macro function,<br>85 macro function total. |
| CH4 | cue                            | 0 ~ 15    | OFF (blackout)   |
|     |                                | 16 ~ 255  | each 12 value be 1 cue, 20 cues total.   |
| CH5 | zoom                           | 0 ~ 255   | 100% ~ 0%  |

### 17CH:

| Channel | Content                |          |  |
|---------|------------------------|----------|--|
| CH1     | Cue mode               | 0 ~31    | OFF ( Blackout )                                 |
|         |                        | 32 ~63   | Manual choose cue                                |
|         |                        | 64 ~95   | Auto trigger macro function                      |
|         |                        | 96 ~127  | Sound trigger macro function                     |
|         | SD card                | 128 ~255 | Please read SD card 17CH on<br>page 29           |
| CH2     | Dimmer                 | 0 ~255   | 0%- 100%   |
| CH3     | Red                    | 0 ~255   | 0%- 100%   |
| CH4     | Green                  | 0 ~255   | 0%- 100%   |
| CH5     | Blue                   | 0 ~255   | 0%- 100%   |
| CH6     | List<br>(CH1: 32 ~ 63) | 0 ~ 255  | List :each 32 value be 1 list, 8<br>lists total. |

|      |                                |          |  |          |         |
|------|--------------------------------|----------|--|----------|---------|
|      | Macro effect<br>(CH1: 64 ~ 95) |          | List: when the value is 0, all loop, 1-255 ,each 3 value be 1 macro function, 85 macro function total. |          |         |
| CH7  | Cue                            | 0 ~15    | OFF (Blackout)   |          |         |
|      |                                | 16 ~255  | Each 12 value be 1 cue, 20 cues total;   |          |         |
| CH8  | X position                     | 0 ~255   | Left- right ( 128 center )   |          |         |
| CH9  | Y position                     | 0 ~255   | Up - down ( 128 center )   |          |         |
| CH10 | Rotation                       | 0 ~255   | Clockwise rotation (0°-360°)   |          |         |
| CH11 | Zoom                           | 0 ~255   | 100% - 0%  |          |         |
| CH12 | X flip                         | 0 ~255   | Left - right   |          |         |
| CH13 | Y flip                         | 0 ~255   | Up - down  |          |         |
| CH14 | Color                          | 0 ~7     | default  | 8 ~15    | white   |
|      |                                | 16 ~23   | red  | 24 ~31   | yellow  |
|      |                                | 32 ~39   | green  | 40 ~47   | cyan    |
|      |                                | 48 ~55   | blue   | 56 ~63   | purple  |
|      |                                | 64 ~127  | Each 8 value be 1 color effect, 8 effects total  |          |         |
|      |                                | 128 ~143 | Macro 1  | 144 ~159 | Macro 2 |
|      |                                | 160 ~175 | macro 3  | 176 ~191 | macro 4 |
|      |                                | 192 ~207 | macro 5  | 208 ~223 | macro 6 |
|      |                                | 224 ~239 | macro 7  | 240 ~255 | macro 8 |
| CH15 | Write in                       | 0 ~255   | 100%-0   |          |         |
| CH16 | Deformation                    | 0 ~15    | Invalid  |          |         |

|      |      |          |  |          |         |
|------|------|----------|--|----------|---------|
|      |      | 16~223   | Each 15 value be 1 macro effect, total 13 effects, (match CH11 zoom) |          |         |
|      |      | 224 ~255 | default  |          |         |
| CH17 | Wave | 0        | invalid  | 1 ~39    | macro 1 |
|      |      | 40 ~79   | macro 2  | 80 ~119  | macro 3 |
|      |      | 120 ~159 | macro 4  | 160 ~199 | macro 5 |
|      |      | 200 ~255 | macro 6  |          |         |

**18CH:**

| Channel | Content                        |          |  |
|---------|--------------------------------|----------|--|
| CH1     | Cue mode                       | 0 ~31    | OFF ( Blackout )   |
|         |                                | 32 ~63   | Manual choose cue  |
|         |                                | 64 ~95   | Auto trigger macro function  |
|         |                                | 96 ~127  | Sound trigger macro function   |
|         | SD card                        | 128 ~255 | Please read SD card 17CH on page 29  |
| CH2     | dimmer                         | 0 ~255   | 0%- 100%   |
| CH3     | List<br>(CH1: 32 ~ 63)         | 0 ~ 255  | List :each 32 value be 1 list, 8 lists total.  |
|         | Macro effect<br>(CH1: 64 ~ 95) |          | List: when the value is 0, all loop, 1-255 ,each 3 value be 1 macro function, 85 macro function total. |
| CH4     | Cue                            | 0 ~15    | OFF (Blackout)   |

|     |            |         |  |
|-----|------------|---------|--|
|     |            | 16 ~255 | Each 12 value be 1 cue, 20 cues total; |
| CH5 | X position | 0 ~255  | Left- right ( 128 center )             |
| CH6 | Y position | 0 ~255  | Up - down ( 128 center )               |
| CH7 | Zoom       | 0 ~255  | 100% - 0%                              |
| CH8 | X flip     | 0 ~255  | Left - right                           |
| CH9 | flip       | 0 ~255  | Up - down                              |

|      |                 |          |   |          |         |
|------|-----------------|----------|---|----------|---------|
| CH10 | color           | 0 ~7     | default   | 8 ~15    | white   |
|      |                 | 16 ~23   | red   | 24 ~31   | yellow  |
|      |                 | 32 ~39   | green   | 40 ~47   | cyan    |
|      |                 | 48 ~55   | blue  | 56 ~63   | purple  |
|      |                 | 64 ~127  | Each 8 value be 1 effect, 8 effects total.                                |          |         |
|      |                 | 128 ~143 | macro 1   | 144 ~159 | macro 2 |
|      |                 | 160 ~175 | macro 3   | 176 ~191 | macro 4 |
|      |                 | 192 ~207 | macro 5   | 208 ~223 | macro 6 |
|      |                 | 224 ~239 | macro 7   | 240 ~255 | macro 8 |
| CH11 | Deformati<br>on | 0 ~15    | invalid   |          |         |
|      |                 | 16~31    | Each 15 value be 1 macro effect, total 13 effects, (match CH7, CH16 zoom) |          |         |
|      |                 | 224 ~255 | default   |          |         |
| CH12 | Wave            | 0        | invalid   | 1 ~39    | macro 1 |
|      |                 | 40 ~79   | macro 2   | 80 ~119  | macro 3 |
|      |                 | 120 ~159 | macro 4   | 160 ~199 | macro 5 |

|      |            |          |         |          |         |
|------|------------|----------|---------|----------|---------|
|      |            | 200 ~255 | macro 6 |          |         |
| CH13 | X position | 0        | valid   | 1 ~32    | macro 1 |
|      |            | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |            | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |            | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |            | 225 ~255 | macro 8 |          |         |
| CH14 | Y position | 0        | invalid | 1 ~32    | macro 1 |
|      |            | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |            | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |            | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |            | 225 ~255 | macro 8 |          |         |
| CH15 | Z rotation | 0        | invalid | 1 ~32    | macro 1 |
|      |            | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |            | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |            | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |            | 225 ~255 | macro 8 |          |         |
| CH16 | Zoom       | 0        | invalid | 1 ~32    | macro 1 |
|      |            | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |            | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |            | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |            | 225 ~255 | macro 8 |          |         |
| CH17 | X flip     | 0        | invalid | 1 ~32    | macro 1 |
|      |            | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |            | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |            | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |            | 225 ~255 | macro 8 |          |         |

|      |        |          |         |          |         |
|------|--------|----------|---------|----------|---------|
| CH18 | Y flip | 0        | invalid | 1 ~32    | macro 1 |
|      |        | 33 ~64   | macro 2 | 65 ~96   | macro 3 |
|      |        | 97 ~128  | macro 4 | 129 ~160 | macro 5 |
|      |        | 161 ~192 | macro 6 | 193 ~224 | macro 7 |
|      |        | 225 ~255 | macro 8 |          |         |

**27/28CH and 53CH-double pattern:**

| Channel     |      |         | Content  |
|-------------|------|---------|--|
| 27/28C<br>H | 53CH | Value   | 27/28CH indicates a single pattern and 53CH indicates a double pattern   |
| CH1         |      | 0~31    | Blackout   |
|             |      | 32~63   | Manual choose cue  |
|             |      | 64~95   | Auto mode  |
|             |      | 96~127  | Voice activated auto mode  |
|             |      | 128~255 | Please refer to the SD card channel pattern table  |
| CH2         |      | 0~255   | Total  |
| CH3         | CH28 | 0~255   | Red  |
| CH4         | CH29 | 0~255   | Green  |
| CH5         | CH30 | 0~255   | Blue   |
| CH6         | CH31 | 0~255   | CH1: 32~63, Each 32 value be 1 list, total 8 list  |
|             |      |         | CH1: 64~95; CH1: 96~127<br>0 numerical loop all; 1-255 Every 3 values is a macro function effect, a total of 85; |
| CH7         | CH32 | 0~15    | Blackout   |
|             |      | 16~255  | Each 12 value be 1 cue, total 20 cues  |

|      |      |  |   |         |          |         |          |
|------|------|--|---|---------|----------|---------|----------|
| CH8  | CH33 | 0~255                                  | Left .... right ( 128 center )                          |         |          |         |          |
| CH9  | CH34 | 0~255                                  | X fine position   |         |          |         |          |
| CH10 | CH35 | 0~255                                  | Down ....up ( 128 center )                              |         |          |         |          |
| CH11 | CH36 | 0~255                                  | Y fine position   |         |          |         |          |
| CH12 | CH37 | 0~255                                  | Rotation  |         |          |         |          |
| CH13 | CH38 | 0~255                                  | Fine rotation   |         |          |         |          |
| CH14 | CH39 | 0~255                                  | 100%...0%   |         |          |         |          |
| CH15 | CH40 | 0~255                                  | Left...right  |         |          |         |          |
| CH16 | CH41 | 0~255                                  | Down ... up   |         |          |         |          |
| CH17 | CH42 | color                                  |   |         |          |         |          |
|      |      | 0~7                                    | default   | 8~63    | 7 color  |         |          |
|      |      | 64~127                                 | Color effects (1 effect for every 8 values, 8 in total) |         |          |         |          |
|      |      | 128~143                                | Macro 1   | 144~159 | Macro 2  |         |          |
|      |      | 160~175                                | Macro 3   | 176~191 | Macro 4  |         |          |
|      |      | 192~207                                | Macro 5   | 208~223 | Macro 6  |         |          |
|      |      | 224~239                                | Macro 7   | 240~255 | Macro 8  |         |          |
| CH18 | CH43 | 0~255                                  | Write in, Visible point 100%-0                          |         |          |         |          |
| CH19 | CH44 | Deformation ( valid for 14CH 25CH )    |   |         |          |         |          |
|      |      | 0~15                                   | Invalid   | 16~31   | Macro 1  | 32~47   | Macro 2  |
|      |      | 48~63                                  | Macro 3   | 64~79   | Macro 4  | 80~95   | Macro 5  |
|      |      | 96~111                                 | Macro 6   | 112~127 | Macro 7  | 128~143 | Macro 8  |
|      |      | 144~159                                | Macro 9   | 160~175 | Macro 10 | 176~191 | Macro 11 |
|      |      | 192~207                                | Macro 12  | 208~223 | Macro 13 | 224~255 | default  |
| CH20 | CH45 | wave                                   |   |         |          |         |          |
|      |      | 1~39                                   | Macro 1   | 40~79   | Macro 2  | 80~119  | Macro 3  |
|      |      | 120~159                                | Macro 4   | 160~199 | Macro 5  | 200~255 | Macro 6  |
| CH21 | CH46 | Write in ( invalid if the value is 0 ) |   |         |          |         |          |
|      |      | 1~42                                   | Macro 1   | 43~84   | Macro 2  | 85~126  | Macro 3  |

|      |      |            |                         |         |         |         |         |
|------|------|------------|-------------------------|---------|---------|---------|---------|
|      |      | 127~255    | Flash (0-100%)          |         |         |         |         |
| CH22 | CH47 | X position |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH23 | CH48 | Y position |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH24 | CH49 | Rotation   |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH25 | CH50 | Zoom       |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH26 | CH51 | X flip     |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH27 | CH52 | Y flip     |                         |         |         |         |         |
|      |      | 0          | Invalid                 | 1~32    | Macro 1 | 33~64   | Macro 2 |
|      |      | 65~96      | Macro 3                 | 97~128  | Macro 4 | 129~160 | Macro 5 |
|      |      | 161~192    | Macro 6                 | 193~224 | Macro 7 | 225~255 | Macro 8 |
| CH28 | CH53 | 0~255      | 1.....40Kpps Scan speed |         |         |         |         |

### SD card 5CH:

| Channel | Content      |         |   |
|---------|--------------|---------|---|
| CH1     | Patterns     | 0~31    | Blackout                                    |
|         |              | 32~63   | Manual choose cue                           |
|         |              | 64~95   | Auto mode                                   |
|         |              | 96~127  | Voice activated auto mode                   |
|         | SD card mode | 128~159 | Manual choose cue                           |
|         |              | 160~191 | Folder Play                                 |
|         |              | 192~223 | Voice activated auto mode                   |
|         |              | 224~255 | Voice activated folder mode                 |
| CH2     | Total        | 0~255   | Fade 0% .... 100%                           |
| CH3     | Folder       | 0~255   | Each 32 value be 1 list, total 8 list       |
| CH4     | Material     | 0~15    | Blackout                                    |
|         |              | 16~255  | Every 5 values is a material, a total of 48 |
| CH5     | Zoom         | 0~255   | Fade 100%...0%                              |

### SD card 17CH:

| Channel | Content      |         |                           |
|---------|--------------|---------|---------------------------|
| CH1     | Patterns     | 0~31    | Blackout                  |
|         |              | 32~63   | Manual choose cue         |
|         |              | 64~95   | Auto mode                 |
|         |              | 96~127  | Voice activated auto mode |
|         | SD card mode | 128~159 | Manual choose cue         |

|      |            |         |   |         |        |
|------|------------|---------|---|---------|--------|
|      |            | 160~191 | Folder Play                               |         |        |
|      |            | 192~223 | Voice activated auto mode                 |         |        |
|      |            | 224~255 | Voice activated folder mode               |         |        |
| CH2  | Total      | 0~255   | Fade 0% .... 100%                         |         |        |
| CH3  | Red        | 0~255   | Fade 0% .... 100%                         |         |        |
| CH4  | Green      | 0~255   | Fade 0% .... 100%                         |         |        |
| CH5  | Blue       | 0~255   | Fade 0% .... 100%                         |         |        |
| CH6  | Folder     | 0~255   | Each 32 values is a folder, a total of 8; |         |        |
| CH7  | Material   | 0~15    | Blackout                                  |         |        |
|      |            | 16~255  | Each 5 value be 1 cue, total 48 cues      |         |        |
| CH8  | X position | 0~255   | Left .... right (128 center)              |         |        |
| CH9  | Y position | 0~255   | Down ....up (128 center)                  |         |        |
| CH10 | Rotation   | 0~255   | Clockwise rotation (0°-360°)              |         |        |
| CH11 | Zoom       | 0~255   | 100%....0%                                |         |        |
| CH12 | X flip     | 0~255   | Left...right                              |         |        |
| CH13 | Y flip     | 0~255   | Down ... up                               |         |        |
| CH14 | Color      | 0~31    | Default                                   | 32~63   | White  |
|      |            | 64~95   | Red                                       | 96~127  | Yellow |
|      |            | 128~159 | Green                                     | 160~191 | Cyan   |
|      |            | 192~223 | Blue                                      | 224~255 | Purple |
| CH15 | Write in   | 0~255   | Visible point 100%-0                      |         |        |
| CH16 | Speed      | 0~15    | Default                                   |         |        |

|      |           |         |            |
|------|-----------|---------|------------|
|      |           | 16~31   | Pause      |
|      |           | 32~255  | 25% - 200% |
| CH17 | Scan rate | 0~31    | Default    |
|      |           | 32~223  | 6k - 29k   |
|      |           | 224~255 | 30k        |

















































### SD card 20CH:

| Channe | Parameter  | Value   | Parameter description   |
|--------|------------|---------|---|
| CH1    | IPLAY mode | 0~31    | Black   |
|        |            | 32~63   | Manual play   |
|        |            | 64~95   | Auto play   |
|        |            | 96~127  | Music play  |
|        | SD mode    | 128~159 | Manual play   |
|        |            | 160~191 | Auto play   |
|        |            | 192~223 | Music play (one file)   |
|        |            | 224~255 | Music play (all files loop)   |
| CH2    | Dimmer     | 0~255   | Brightness 0% .... 100%   |
| CH3    | Red        | 0~255   | Brightness 0% .... 100%   |
| CH4    | Green      | 0~255   | Brightness 0% .... 100%   |
| CH5    | Blue       | 0~255   | Brightness 0% .... 100%   |
| CH6    | List       | 0~255   | Each 32 value be 1 list, total 8 list<br>each 10 value be 1 macro, total 25 macro |
|        | Macro      |         |   |
| CH7    | Cue        | 0~15    | Black   |
|        |            | 16~255  | Each 12 value be 1 cue, total 20 cues   |
| CH8    | X position | 0~255   | Left .... right (128 center)  |
| CH9    | X fine     | 0~255   | X fine position   |
| CH10   | Y position | 0~255   | Up ....down (128 center)  |

|         |               |         |                              |
|---------|---------------|---------|------------------------------|
| CH11    | Y fine        | 0~255   | Y fine position              |
| CH12    | Rotation      | 0~255   | Clockwise rotation (0°-360°) |
| CH13    | Fine rotation | 0~255   | Fine rotation                |
| CH14    | Zoom          | 0~255   | 100%...0%                    |
| CH15    | X flip        | 0~255   | Left...right                 |
| CH16    | Y flip        | 0~255   | Down ... up                  |
| CH17    | Color         | 0~31    | Default                      |
|         |               | 32~63   | White                        |
|         |               | 64~95   | Red                          |
|         |               | 96~127  | Yellow                       |
|         |               | 128~159 | Green                        |
|         |               | 160~191 | Cyan                         |
|         |               | 192~223 | Blue                         |
| 224~255 | Purple        |         |                              |
| CH18    | Write in      | 0~255   | Visible point 100%-0         |
| CH19    | Speed         | 0~15    | Default                      |
|         |               | 16~31   | Pause                        |
|         |               | 32~255  | 25% - 200%                   |
| CH20    | Scan rate     | 0~31    | Default                      |
|         |               | 32~223  | 6k - 29k                     |
|         |               | 224~255 | 30k                          |

## 9. Built in effect list

|      | DMX数值   | 图案组1    | 图案组2 | 图案组3 | 图案组4 | 图案组5 | 图案组6 | 图案组7                   |
|------|---------|---------|------|------|------|------|------|------------------------|
| 图案   | 0-15    | 无效 (闭光) |      |      |      |      |      |                        |
| 图案1  | 16-27   |         |      |      |      |      |      | <i>in moment of</i>    |
| 图案2  | 28-41   |         |      |      |      |      |      | <b>HELLO I</b>         |
| 图案3  | 42-53   |         |      |      |      |      |      | <i>happy</i>           |
| 图案4  | 54-63   |         |      |      |      |      |      | <i>Merry Christmas</i> |
| 图案5  | 64-75   |         |      |      |      |      |      | <i>Happy New Year</i>  |
| 图案6  | 76-87   |         |      |      |      |      |      | <i>Thank you</i>       |
| 图案7  | 88-99   |         |      |      |      |      |      | <i>happy wedding</i>   |
| 图案8  | 100-111 |         |      |      |      |      |      | <i>Valentine's Day</i> |
| 图案9  | 112-123 |         |      |      |      |      |      | <i>Happy Birthday</i>  |
| 图案10 | 124-135 |         |      |      |      |      |      | <i>congratulation</i>  |
| 图案11 | 136-147 |         |      |      |      |      |      | <i>恭喜</i>              |
| 图案12 | 148-159 |         |      |      |      |      |      | <i>恭喜</i>              |

|      |         |   |   |   |   |   |   |   |
|------|---------|---|---|---|---|---|---|---|
| 图案13 | 160-171 |  |  |  |  |  |  | 1 |
| 图案14 | 173-184 |  |  |  |  |  |  | 2 |
| 图案15 | 185-195 |  |  |  |  |  |  | 3 |
| 图案16 | 196-207 |  |  |  |  |  |  | 4 |
| 图案17 | 208-219 |  |  |  |  |  |  | 5 |
| 图案18 | 220-231 |  |  |  |  |  |  | 6 |
| 图案19 | 232-243 |  |  |  |  |  |  | 7 |
| 图案20 | 244-255 |  |  |  |  |  |  | 8 |

## 10. Maintenance

Maintenance should be performed every 15-day period, by using a sponge which is dipped with alcohol, rather than wet cloth or other chemical liquid, to clean the mirror. Always disconnect from the power when the device is not in use or before cleaning it.

Cooling fan cleaning: Use compressed air to clean the fan of the device. The fan position plays a vital role in the normal operation of the device. Please ensure the normal operation of the fan.

When the equipment is used frequently, the fan should be cleaned every 1 month, or in a dusty and oily environment, the number of cleanings should be increased. The actual operation should be implemented according to the

application environment of the equipment to ensure the normal operation of the fan.

Internal optical cleaning: cleaning internal optical components requires professional authorized technicians to operate. Incorrect cleaning techniques or improper cleaning choices can cause serious damage to the equipment. Since the optical part and the rest of the light source system are separated and sealed, this operation should not be performed more than once a year.

## 11. Warning and Declaration

Do not look directly at the light source with your eyes when turning on the light. Before any installation and maintenance work, please make sure that the power has been cut off.



电学安全

Electrical safety



光学安全

Optical security

| Product common breakdown comparison table                                 |   |
|---|---|
| breakdown cause   | Major breakdown analysis and solution   |
| The fixture no light or no work   | <ol style="list-style-type: none"> <li>1.Check the power cable whether to connect the fixture, whether the fuse does bum out.</li> <li>2.Check the input voltage whether to assign the voltage match with the fixture.</li> </ol>   |
| No sound control  | <ol style="list-style-type: none"> <li>1.Check the address code or the display whether establishes according to the instruction booklet is the voice control pattern.</li> <li>2.Check the potentiometer possibly moves is smallest, attempt to adjust the potentiometer.</li> </ol>                  |
| The fixture can bright normally, but it not controlled by controller      | <ol style="list-style-type: none"> <li>1. Please check the fixtures' DIP outset address setting whether correctly.</li> <li>2.Please check the XLR signal cable whether be damage.</li> </ol>   |
| Master-slave mode, The master mode is normal,but slave mode is not normal | <ol style="list-style-type: none"> <li>1.Please conformed only one for the master and the master without DMX be connected, and to set master as sound control or auto pattern.</li> <li>2.If the Master-slave setting is right but still have problem, please check the XLR connect cable.</li> </ol> |
| The button malfunction, does not work.                                    | <ol style="list-style-type: none"> <li>1.Check the buttons whether to have some button not to have the normal reset.</li> </ol>   |
| The fixtures' brightness obvious dim                                      | <ol style="list-style-type: none"> <li>1.Check the LED tubes or the light already whether to be service life.</li> <li>2.Check the internal and external optical system whether to be clean.</li> </ol>   |
| If above method cannot eliminate the fault, please consult the dealer.    |   |