

# **ALED BSW 600 CMY IP**

## **User Manual**



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## **TECHNICAL PARAMETERS**

### **Light source**

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

Light source specification: LED 600W module, 8000K

Light source life: 20000 hours

Rated power: 700W

### **Optical**

Zoom angle: 3.5-50 degrees

### **Controls**

Channel mode: 34/39CH

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

### **Effect**

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

High-speed strobe: 0.5-20 times/second, adjustable

Color: 6 colors + white light

Effect tray: super dazzling simulation of dynamic flames, gurgling water and other dynamic effects

Color mixing system: linear CMY+CTO color mixing system

Fixed gobo: 7 fixed gobos + white light

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

Prism: standard 3 facet prisms and 4 facet prisms, each prism can be independently rotate forward and backward

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

### **Construction**

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

Material: The shell is made of high-end materials such as international die-cast aluminum and aviation die-cast magnesium alloy

Protection level: IP66

### **Weight&Dimension**

Product size: 36\*27\*68cm

NW: 22kg

## Precautions and installation

### Tending

- The lamp should be kept dry and avoid working in a humid environment.
- Intermittent use will effectively extend the life of this lamp.
- In order to obtain good ventilation and lighting effect, attention should be paid to the regular cleaning of fans and fan nets as well as lenses.
- Do not use alcohol and other organic solvents to wipe the lamp shell, so as not to cause damage.

### Statement

The product is in good condition and complete packaging when it leaves the factory. All users should strictly comply with the above stated warnings and instructions. Any damage caused by misuse is not covered by our warranty, and any faults and problems caused by neglect of the operating manual are not covered by the dealer.

No further notice will be given if there are any technical changes to this manual.

### Product precautions

- In order to ensure the service life of the product, do not place the product in a damp or water leakage place, and do not work in an environment with temperature above 60 degrees
- Do not place this product in a place where it is easy to loosen or shake.
- To avoid the danger of electric shock, the maintenance of this product is assisted by professionals.
- When the bulb is used, the power supply voltage change should not exceed  $\pm 10\%$ . If the voltage is too high, the life of the bulb will be shortened; if the voltage is too low, the light color of the bulb will be affected.
- After power failure, it takes 20 minutes to fully cool the lamp before it can be used again.
- To ensure the normal use of this product, please read this instruction carefully.
- Signal line connection (DMX)

Use RS-485 cables that meet the specifications: shielded, with a characteristic impedance of 120 ohms, 22-24 AWG, and low capacitive reactance. Do not use microphone cables or cables with different specified characteristics. Terminal connections must use 3 or 5-pin XLR male/female connectors (minimum 1/4 W). As shown in Figure 1, it is a schematic diagram of signal line connections (the lamp in the figure is an example image and does not represent the actual appearance of this product).

Important note: The wires should not touch each other or the metal casing.

### Installation of light

The light can be placed horizontally, slanted and inverted. Be careful about the installation method when slanted and inverted.

Before positioning the light, ensure the stability of the installation location. When installing by reverse hanging, it must be ensured that the light will not fall off the support frame. A safety rope should be used to assist in hanging the lamp by passing it through the support frame and the light handle, ensuring safety and preventing the light from falling or sliding.

When the light is installed and adjusted, pedestrians are not allowed to pass under it. Regularly check whether the safety rope is worn out and whether the hook screws are loose.

Our company will not be liable for any consequences caused by the falling of the light due to unstable suspension installation.

## Chapter 2 Panel Operation

### 1. Overview

The schematic diagram of the light panel is shown in Figure 3. The number of light channels is indicated in the upper left corner of the title. The middle red text displays the usage time of the lamps, while the upper right corner shows the fault status of the lights (if there is no fault information to be viewed, it displays "ERR"; otherwise, it displays "NOR"). Below is the status bar, which shows the current signal of the lights, bulb status, communication status, etc. (The panel in the figure is an example image and does not represent the actual appearance of the product panel; please refer to panels of the same type as your product for reference).

This light supports DMX/RDM protocol. When the light is searched by RDM host, three letters "RDM" will appear on the panel to indicate that the light is normally enumerated.

Note: Do not use a sharp or sharp object to click on the display screen to prevent damage.

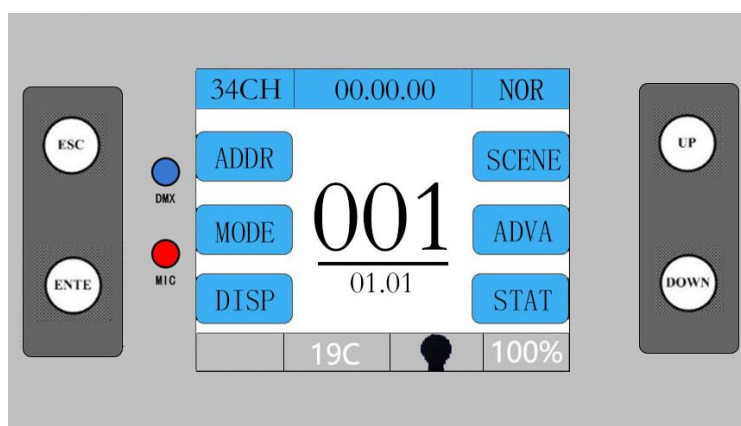


Figure 3 Schematic diagram of touch button display panel

### 2. Operation

#### 1. Use the touch button to operate the lamp

- The middle area is the display area, and the two sides are the input area. You can use the touch button to control the cursor to select the items to be set or viewed, and press the OK button to complete the operation.
- 

#### 2. Parameter value input

When the selected parameter needs to be entered, a window such as Figure 4 will be opened:

Figure 4 Numerical Settings page

- Set the value: The required value can be set by pressing the "up" and "down" keys.
- Save value: After setting the data by pressing the button, press the "ENTE" key to save the value immediately to the internal memory. The saved value will be applied to the lamp when the next time is started.
- 

#### 3. Set the option to turn on/off

- When the parameter is set to on/off, you can directly click the corresponding item to switch the parameter value. The modified parameter will be saved to the internal memory. When you press the parameter option on the right, the corresponding option will turn gray. When you release your hand, the corresponding parameter will change and be saved.
- The determination of important parameters will be set through the confirmation window, as shown in Figure 5 below:

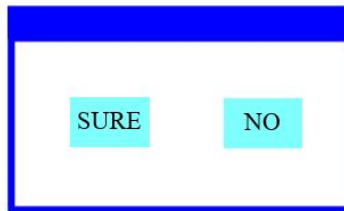
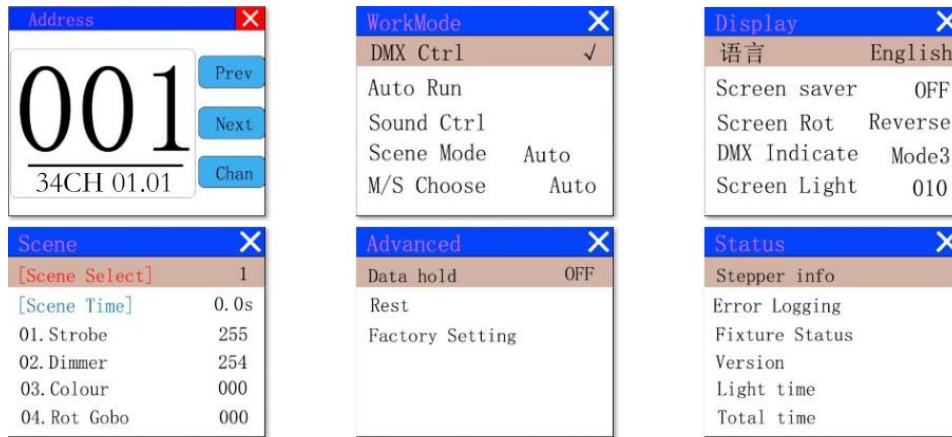


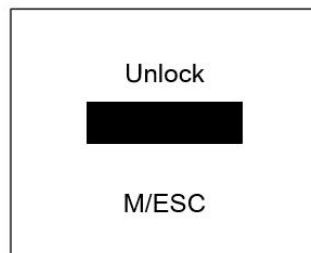
Figure 5. Determine the input window



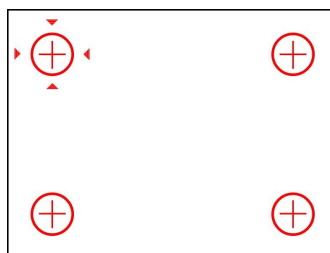
#### 4. Key button prevents accidental touch to unlock the operation

If the product uses touch button operation, since touch buttons are non-mechanical (capacitive sensing), to prevent accidental mis-touch that could lead to unexpected changes in the operation menu mode or data of the lighting device, the product includes a button unlock confirmation page for preventing accidental touch in the operation menu. To enter the menu to modify the mode or data of the lighting device, follow the prompts on the display and click the corresponding buttons sequentially.

- After displaying for a period of time, the display will enter the button anti-miscontact lock interface. There are two interfaces (please select the interface that is consistent with the product you hold for reference), as shown in Figure 7 below.



graph 7-1



graph 7-2

- For the interface shown in Figure 7-1, press the corresponding "ESC", "ENTER", "UP" and "DOWN" keys according to the requirements below the interface before unlocking.
- For the interface shown in Figure 7-2, when the corresponding button is pressed, the red icon of that button turns black, and the red indicator points to the next button position. By pressing each of the four corresponding buttons in sequence, you can exit the anti-misoperation interface. If the button icon remains red after pressing, it indicates that the wrong button has been pressed.
- After power-on, when editing the lamp parameters, it will trigger the entry into the anti-misoperation interface; however, browsing parameters will not trigger this entry. When the "lock screen" function is enabled, after a certain period without operating the lamp display panel, editing the lamp parameters will also enter the anti-misoperation interface. When the "lock screen" function is disabled, only upon

re-powering, editing the lamp parameters will enter the anti-misoperation interface. After unlocking and exiting the anti-misoperation interface, it will not re-enter during the current power-on cycle.

- "Lock Screen" function switch. To prevent accidental touch from turning off the "Lock Screen" function, when the "Lock Screen" is on and you press the confirm button for the "Lock Screen" option, it will enter an anti-misoperation interface to prompt you to turn off the "Lock Screen" function; if the "Lock Screen" is off, you can directly enable this function.

### 3. Function operation and parameter setting

Enter the Settings interface, as shown in Figure 6-1:

- In the main interface, you can select six buttons to enter the corresponding parameter setting interface.

#### 1. Set DMX address code

The DMX address and channel mode of the lamp can be set through

The menu setting of the lamp optimizes the address setting. The operation of several address code settings is as follows:

- Select "Previous" or "Next", the lamp will automatically calculate the address code of the next or previous one according to the current address code and channel data, which can be set quickly;
- Click the address code value to enter the address code editing window, where you can set any valid address code. The lamp automatically obtains the current channel number of the lamp and automatically filters out the unusable address code (512-current channel number).
- The lamp supports RDM protocol and can remotely set the lamp address code through RDM.
- Channel mode: different channel modes can be selected cyclically;

#### 2. Set the working mode of the light

The operation mode and control of the lamp can be set through the page shown in Figure 6-2. The lamp supports four operation modes (DMX mode, self-walking mode, sound control mode and scene mode). Please refer to the previous section for detailed parameter value setting, and the specific parameters are described in the following table:

running mode

<b>DMX pattern</b>	Console mode, receiving DMX signal, RDM signal	
<b>Autonomous mode</b>	The lamp runs automatically according to the built-in program	
<b>Voice-activated mode</b>	When the lamp detects a strong sound, the lamp automatically runs a scene according to the built-in program, otherwise it keeps the last scene	
<b>Scene mode 01</b>	It runs in the way of setting scenes and supports up to 10 custom edits	
	1~10	Output the specified scenario
	voluntarily	The scene is automatically output in the order of the set scene time (not 0), and the scene with time 0 is automatically skipped
<b>Master-slave selection</b>	It takes effect when the DMX mode is not selected. The mode of data output is selected, and the lamp automatically detects the DMX status and automatically switches the output to prevent data conflict	
	main engine	The lamp operates internally. If there is no signal from DMX, the output data (synchronous) is not output; otherwise, the output data is not output
	slave	The lamp operates internally and does not output data (not synchronized with other lamps)
	voluntarily	If there is no DMX signal, the lamp operates according to the built-in operation; otherwise, the lamp operates according to the DMX signal

<b>Light bulb switch</b>	(A light bulb light source) A confirmation dialog box pops up. Select "SURE" to confirm the current operation, turn on or off the light bulb, and the time interval between the switch is limited to 30 seconds	
	close	The current bulb output is off
	open	The current light output is on

The scene mode is suitable for a single or small number of lights. You only need to output a fixed scene, or you need to run a simple program. You can edit it in the scene page without connecting the console.

If the light source is a bulb, wait 10 minutes after turning off the bulb before turning it on again.

### 3. Panel display Settings

The lamp supports bilingual display and inverted display. Enter the corresponding parameter setting as shown in Figure 6-3, and the specific menu content is shown in the following table:

Display Settings

<b>language</b>	Set the language to display	
	English	English display
	the Chinese language	Chinese text
<b>Screen protection</b>	Set the screen to display content or mode after 30 seconds of no operation	
	close	Keep the last operation page on and the screen on
	pattern 1	Screen off
	pattern 2	Black screen, showing the address code of the current lamp in the lower left corner
	pattern 3	Display the trademark information, address code and operating mode
	pattern 4	Display the trademark information, address code and operation mode for 30 seconds before the screen goes off
<b>The screen rotates</b>	Set the display direction of the screen	
	close	Do not reverse display
	open	Reverse display
<b>DMX indicate</b>	Set the indication mode of DMX signal indicator	
	pattern 1	It lights up when there is a signal and turns off when there is no signal
	pattern 2	It turns off when there is a signal and on when there is no signal
	pattern 3	It flashes when there is a signal and goes out when there is no signal
<b>Screen backlight</b>	Set the brightness of the screen backlight after 10 seconds without operation, and turn it on when operating	
	1~10	Ten levels
<b>lock screen</b>	Set whether to enable the anti-touch lock screen	
	close	Only after the power is reconnected, the editor will enter the anti-touch interface once
	open	After a period of no operation, editing the lamp parameters will enter the anti-miscontact lock screen

### 4. Scene mode

Enter the page shown in Figure 6-4 (the channels displayed in the image are just examples for introduction; please refer to the channel table description in the next chapter for the specific channel table of this product). The light enters the scene editing mode. On this page, if the [Console Mode] option is off, the light does not receive DMX console data, and any edited data is immediately reflected on the light.

When it is on, the light receives console signals and reads the console data, which is then reflected on the corresponding channel display.

The content of the page depends on the current selected channel, and the displayed channel content and order are consistent with the lamp channel table. Through this page, you can edit 10 scenes as shown in the following table:

Scene mode

<b>Scene selection</b>	Select the current operation scenario	
	1~10	10 scene setting formats
<b>Scene time</b>	Set the retention time of the current scene when it is automatic. The final time is determined by the scene time multiplier, with the unit being 0.1 seconds	
	0	The current scene does not participate in automatic scene output
	1-255	0...1 second to 25.5 seconds
<b>1. X-axis</b>	0-255	The data of each channel is set, and the display content and sequence correspond to the channel table of the lamp one by one
.....	0-255	
.....	0-255	
<b>N. function</b>	0-255	

If the reset channel in the scene is edited to edit the valid reset data, the lamp will reset, but after the reset, the corresponding reset channel value will be automatically cleared to prevent multiple consecutive reset.

Check this page to get the current channel table order of the lamp. For specific channel data, please refer to the detailed channel description.

## 5. Set the working parameters of the light

Enter the page shown in Figure 6-5 above, adjust the field parameters of the light for easy on-site installation and so on:

advanced setup

<b>X-axis reversed</b>	Set the X axis rotation direction	
	close	Not reverse
	open	opposite direction
<b>The Y axis is reversed</b>	Set the Y axis rotation direction	
	close	Not reverse
	open	opposite direction
<b>Light coupling correction</b>	Set the lamp to detect and correct XY out of step	
	close	Do not correct the position after stepping out
	open	After the step loss, it automatically corrects the position and records the step loss fault
<b>X-axis offset</b>	Set the position of the X axis zero point of the lamp	
	4-150	
<b>Y axis offset</b>	Set the position of the Y axis zero point of the lamp	
	4-48	
<b>data-hold</b>	Set the output status of the lamp when there is no DMX signal	
	close	No signal, so the motor and light source return to the position and state when the reset is complete
	open	No signal, keep the last frame of DMX data output
<b>Scene time multiplier</b>	The scene retention time is determined together with the scene time	
	1-255	Retention time = scene time * multiplier
<b>Turn on the light mode</b>	Set the way to turn on the light bulb for the first time after it is powered on	
	Apply electricity to open the	When power is applied, turn on the light bulb first and reset the lamp after 30 seconds

	bubbles	
	Open the bubble after resetting	After 3 seconds, reset the lamp and turn on the bulb after resetting
	Open the bubbles manually	After the reset is complete, manually turn on the bulb through the menu or console
<b>Light fixture reset</b>	A confirmation box pops up. After selecting "SURE", the lamp position returns to the initial position	
<b>Factory Settings</b>	A confirmation box pops up. After selecting "SURE", the lamp parameters return to the factory setting	

When the power-on deflation mode is selected, the lamp will wait for the bulb to start for 30 seconds after power-on, so that the bulb can be fully started. After the internal voltage is stable enough, the reset program will be started again. If the on-site power capacity is stable, it is recommended to use the power-on bulb mode.

When the light cannot be corrected, check whether the "light coupling correction" is turned off.

If the light is not output as expected after the signal is removed, check the "data hold" setting first.

When setting the XY offset, after completing the setting, please first control the XY with the maximum travel to check that the X and Y will not collide with the positioning rod or housing after the setting.

## 6. Check the current status of the light

Enter the page shown in Figure 6-6 to view the information and real-time status of the lamp, so as to know the use status of the lamp. If the lamp needs after-sales service, please provide the status information displayed on this page as a basis for judgment, as shown in the following table:

status information

<b>Motor information</b>	Display the information status of all motors and signals in the lamp	
	Hoare	If it is not displayed, it indicates that the motor has no Hall correction; 0 indicates that the motor is away from the correction point; 1 indicates that the motor is at the correction point
	state	Display the reset status of the motor
	X axle	Display the real-time position value of the X-axis optical coupling feedback
	Y axle	Display the real-time position value of the Y-axis optical coupler feedback
	optocoupler	Display the level state of two signals of X and Y axis optical coupler in binary
<b>Fault/state logging</b>	Display the last 8 fault records of the lamp reset and operation. The fault records are not saved after power failure, and are valid for the current power-on cycle	
	fault data	The total number of faults detected after power-on
	12: :03	Power-on time at the time of fault occurrence, in minutes
	Hall fault	When the motor is reset, the motor does not detect the valid Hall signal
	Hall short circuit	When the motor is reset, the Hall signal of the motor is detected to be valid all the time
	Light coupling fault	No valid optocoupler signal was detected when the motor was reset
	fall out step	The motor is out of step during operation
	Hit the pole	The positioning rod is hit when the motor is reset
	The bulb is faulty	The bulb blew out accidentally
	Sensor malfunction	The temperature sensor signal is abnormal
	Fan failure	The main fan is not working properly

<b>Light fixture condition</b>	Display the key status data of the current lamp for reference	
	communication	0~100%, communication quality of data link inside the lamp
	miscount	After power on, the total number of error frames detected is accumulated
	Light source temperature	The temperature of the current light source is displayed. "---" indicates no detection
	Display board temperature	Displays the temperature of the current display panel or the ambient temperature nearby
	Sensor 1 temperature	Displays the current motherboard temperature or the ambient temperature at which the motherboard is installed
<b>Version information</b>	Display the information and version of the current lamp, which is an important reference for after-sales maintenance	
	equipment	The name of the lamp is the same as the device information of RDM
	model	The model of the lamp is the same as the model information of RDM
	display board	The firmware version and serial number of the display board
	Motherboard 1	Firmware version and serial number of motherboard 1
<b>Light source time</b>	Record the total cumulative time when the light source is turned on, in minutes. The user can manually clear it as a reference time for regular maintenance of the light source	
<b>Lighting time</b>	Record the total cumulative time of lamp opening, unit minute, can not be deleted	

## Chapter 3 Channel Description

### Channel table

Note: The different light channel tables are different, the following channel table is for reference only

CH1	CH2	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 ]	Pan/Tilt Speed	0-255	From fast to slow
[ CH6 ]	[ CH6 ]	Reset/ Function	0-139	None
			140-149	Reset XY motor over 4 seconds
			150-199	Reset Effect motor over 4 seconds
			200-209	Reset the whole fixture over 4 seconds
			210-255	None
[ CH7 ]	[ CH7 ]	C	0-255	C
[ CH8 ]	[ CH8 ]	M	0-255	M
[ CH9 ]	[ CH9 ]	Y	0-255	Y
[ CH10 ]	[ CH10 ]	Colour Wheel	0-127	Linear color
			128-129	White
			130-134	Color 1
			135-138	Color 2
			139-143	Color 3

			144-147	Color 4
			148-152	Color 5
			153-157	Color 6
			158-189	CTO
			190-215	Forward water effect from fast to slow
			216-217	Stop
			218-255	Backward water effect from slow to fast
[ CH11 ]		Colour Wheel Fine	0-255	
[ CH12 ]	[ CH11 ]	CMY Macro	0	White
			1-132	CMY color mixing
			133-255	RAW DMX
[ CH13 ]	[ CH12 ]		0-255	
[ CH14 ]	[ CH13 ]	Colour Wheel Speed	0-255	
[ CH15 ]	[ CH14 ]	Lighting Effect Speed	0-255	
[ CH16 ]	[ CH15 ]	Insert Effect	0-19	None
			20-255	Fire Tray
[ CH17 ]	[ CH16 ]	Effect	0-255	Waterproof effect from slow to fast
[ CH18 ]	[ CH17 ]		0-255	
[ CH19 ]	[ CH18 ]	Fixed gobo Wheel	0-3	White
			4-9	Gobo1
			10-15	Gobo2
			16-21	Gobo3
			22-27	Gobo4
			28-33	Gobo5
			34-39	Gobo6
			40-45	Gobo7
			46-51	Gobo6
			52-57	Gobo5
			58-63	Gobo4
			64-69	Gobo3
			70-75	Gobo2
			76-81	Gobo1
			82-87	White
			88-95	Shake slow to fast Gobo1
			96-103	Shake slow to fast Gobo2
			104-111	Shake slow to fast Gobo3
			112-119	Shake slow to fast Gobo4
			120-127	Shake slow to fast Gobo5
			128-135	Shake slow to fast Gobo6
			136-143	Shake slow to fast Gobo7
			144-151	Shake slow to fast Gobo6

			152-159	Shake slow to fast Gobo5
			160-167	Shake slow to fast Gobo4
			168-175	Shake slow to fast Gobo3
			176-183	Shake slow to fast Gobo2
			184-191	Shake slow to fast Gobo1
			192-199	Shake slow to fast white light
			200-201	White light
			202-222	Backward water effect from fast to slow
			223-255	Forward water effect from slow to fast
[ CH20 ]	[ CH19 ]	Rotating gobo wheel	0-4	White
			5-7	Gobo1
			8-10	Gobo2
			11-13	Gobo3
			14-16	Gobo4
			17-19	Gobo5
			20-22	Gobo6
			23-31	Gobo7
			32-34	Gobo1 Rotation
			35-37	Gobo2 Rotation
			38-40	Gobo3 Rotation
			41-43	Gobo4 Rotation
			44-46	Gobo5 Rotation
			47-49	Gobo6 Rotation
			50-59	Gobo7 Rotation
			60-67	Shake slow to fast Gobo1
			68-75	Shake slow to fast Gobo2
			76-83	Shake slow to fast Gobo3
			84-91	Shake slow to fast Gobo4
			92-99	Shake slow to fast Gobo5
			100-107	Shake slow to fast Gobo6
			108-129	Shake slow to fast Gobo7
			130-137	Shake+ rotation slow to fast Gobo1
			138-145	Shake+ rotation slow to fast Gobo2
			146-153	Shake+ rotation slow to fast Gobo3
			154-161	Shake+ rotation slow to fast Gobo4
			162-169	Shake+ rotation slow to fast Gobo5
			170-177	Shake+ rotation slow to fast Gobo6
			178-199	Shake+ rotation slow to fast Gobo7
			200-201	White light
			202-222	Forward water effect from fast to slow
			223-255	Backward water effect from slow to fast
[ CH21 ]	[ CH20 ]	Gobo	0-0	Stop
			1-127	0-360 degrees

		Auto Rotation	128-129	Stop
			130-255	Rotate from fast to slow
				32-59 Rotate gobos
[ CH22 ]		Gobo Wheel Fine	0-255	
[ CH23 ]	[ CH21 ]	Prism1	0-3	None
			4-255	Insert 3 facet prisms
[ CH24 ]	[ CH22 ]	Prism1 Auto Rotation	0-0	Stop
			1-127	0-360 degrees
			128-190	Rotate forward from fast to slow
			191-192	Stop
			193-255	Rotate reverse from slow to fast
[ CH25 ]	[ CH23 ]	Prism2	0-3	No
			4-255	Insert 4 facet prisms
[ CH26 ]	[ CH24 ]	Prism 2 Auto Rotation	0-0	Stop
			1-127	0-360 degrees
			128-190	Rotate forward fast to slow
			191-192	Stop
			193-255	Rotate reverse from slow to fast
[ CH27 ]	[ CH25 ]	Prism Macro	0-3	None
			4-67	Prism Macro effect
			68-255	None
[ CH28 ]	[ CH26 ]		0-255	
[ CH29 ]	[ CH27 ]		0-255	
[ CH30 ]	[ CH28 ]		0-255	
[ CH31 ]	[ CH29 ]	Frost	0-255	Liner frost
[ CH32 ]	[ CH30 ]	Zoom	0-255	Small to large
[ CH33 ]		Zoom Fine	0-255	
[ CH34 ]	[ CH31 ]	Focus	0-255	Far to near
[ CH35 ]		Focus Fine	0-255	
[ CH36 ]	[ CH32 ]	CTO	0-9	None
			10-255	Liner CTO
[ CH37 ]	[ CH33 ]	Strobe	0-31	Dark
			32-63	Switch
			64-95	Pulse strobe from slow to fast
			96-127	Switch
			128-143	Gradually turn on the strobe from slow to fast
			144-159	Gradually turn off the strobe from slow to fast
			160-191	Switch
			192-223	Random strobe from slow to fast
			224-255	Switch
[ CH38 ]	[ CH34 ]	Dimmer	0-255	0-100% dimmer
[ CH39 ]		Dimmer Fine	0-255	Dimmer fine

## Chapter 4 Common faults and usage precautions

### 1. Common Fault Handling

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

The bulb doesn't work (except for LED light source)

Possible cause: The bulb is not completely cooled, or the bulb has reached its life. Handle as follows:

- Due to abnormal operation, the bulb is not completely cooled. The lamp body should be cooled for more than 10 minutes to make its internal state completely restored to normal, and then the power supply can be started again;
- Check whether the bulb has reached its service life, and replace it with a new bulb;
- Check whether the bulb and lamp wiring are leaking, falling off or poorly connected;
- Replace the new light bulb.

The beam appeared dim

Possible causes: long use of the bulb or dirty optical path. The treatment is as follows:

- Check whether the bulb has reached its service life, and replace it with a new bulb;
- Check whether the optical parts or bulbs are clean, and whether there is dust accumulated on the bulbs and other optical devices. The bulbs and components inside the lamps should be cleaned and maintained regularly.

The projection of the gobo is blurred

- Check that the electronic focus channel value is appropriate for the current projection distance.

The lights work intermittently

Possible reasons: The internal line enters the protection state. Handle as follows:

- Check whether the fan is running normally or dirty, resulting in the internal temperature of the lamp rising;
- Check whether the internal temperature control switch is closed;
- Check whether the bulb has reached its service life and replace it with a new one.

After the lamp is normally reset, it doesn't accept control from the console

Possible causes: signal line fault or lamp parameter setting is not normal. The treatment is as follows:

- Check the starting address code and check the connection of DMX signal line (whether the signal cable is intact, whether the connector is loose);
- Add signal amplifier, add 120 ohm terminal resistor;

The light won't start

Possible cause: poor power line. Handle as follows:

- Check whether the fuse on the power input socket is blown, and replace the fuse;
- The lamp is in poor contact with the line due to vibration during long-distance transportation
- Check the input power supply, computer board and other plug-in devices.

### 2. Precautions for Use

- Check whether the local power supply meets the rated voltage requirements of the product, and whether the leakage protector and over current protector meet the requirements of the load;
- Do not use the power cord with damaged insulation layer, and do not connect the power cord to other wires;
- The lamp adopts strong wind cooling, which is easy to accumulate dust. It must be cleaned once a month, especially the heat dissipation air outlet, otherwise it will be blocked due to dust accumulation, resulting in poor heat dissipation and abnormal lamp.
- When installing the lamp, the fixing screws must be tight, and add safety ropes, and check regularly;

- When installing and positioning the lamp, any point on the surface of the lamp should be kept a minimum distance of 10 meters from any inflammable and explosive material, and the distance from the illuminated object is 2.5 meters. Please do not directly install the lamp on the surface of combustible material;
- It is recommended that the continuous working time of the lamp should not exceed 10 hours, and the interval time between continuous starting of the lamp should not be less than 10 minutes, otherwise the lamp will not be able to trigger normally due to overheating protection;
- The closing time of the switch valve should not exceed 5 minutes. If it is necessary to close the light for a long time, the light bulb should be closed by using the control console (light bulb control channel);
- In order to ensure that multiple lamps better comply with the scene effect, the lamps should not always be in an unfinished current scene, that is, start the next scene action, preferably this state should not exceed 3 minutes, to ensure that multiple lamps can run synchronously;
- During use, if the lamp is abnormal, it should be stopped in time to prevent other faults.

### 3. Precautions for using RDM

RDM is an extended version of the DMX512-A protocol, which is a remote device management (Remote Device Management) protocol. Traditional DMX512 communication is one-way communication, and the protocol is based on the RS-485 bus. RS-485 is a time-sharing multi-point, half-duplex protocol, which only allows one port to output to the host at the same time. Therefore, when using RDM, you should pay attention to the following points:

- Use a console or host device that supports the RDM protocol;
- To use a two-way signal amplifier, a traditional one-way signal amplifier is not suitable for RDM protocol, because RMD protocol requires feedback data, using a one-way amplifier will block the return data, resulting in the search for the lamp;
- All lights must be set to DMX mode to ensure that there is only one host on the signal line;
- An impedance matching resistor of 120ohm must be inserted between terminal 2 and 3 of the terminal plug. When the signal line is relatively long, differential signals will be more stable to reduce signal reflection, which is conducive to the quality of communication;
- When the light is controlled by DMX but cannot search the light by RDM, check the signal amplifier first, and then check whether there is a poor contact between line 2 and line 3 of the signal line.

#### REMARK

The product has perfect performance and integrity packing.

All users should be strictly comply 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.

Errors and omissions for every information given in this manual excepted.

All information is subject to change without prior notice.