L1 SPOT480/LED

USER MANUAL

Catalogue

1. Precautions and installation Precautions and installation

1.1 DISCLAImer

Thank you for choosing our products! 8, This product is in good condition and the package is complete when it leaves the factory. For your safe and effective use of this product, before you use this product, please read this manual carefully and completely. This manual contains important information for installation and use. Please install and operate according to the requirements of the manual. At the same time, please keep this manual properly for use at any time. Our company does not assume all responsibility for damage to lamps or other performance due to individuals not operating in accordance with the instructions during installation, use and maintenance.

This manual is subject to technical changes without prior notice.

1.2 Maintenance

- Disconnect the power supply before performing maintenance.
- This lamp should be kept dry and avoid working in wet environment.
- Intermittent use will effectively extend the life of the luminaire.
- In order to obtain good ventilation and lighting effects, pay attention to cleaning the fan and fan net as well as the lens often.
- Do not rub the luminaires housing with organic solvents such as alcohol to avoid damage.

1.3 Product Precautions

- This light fixture is for professional use only.
- Ensure that the power supply voltage matches the required power supply voltage of the equipment before operation.
- Do not place this product in a place that is easy to loose or shake.
- During use, if the lamp is abnormal, stop using the lamp in time.
- In order to ensure the service life of the product, this product should not be placed in a humid or leaking place, and should not work in an environment where the temperature exceeds 60 degrees.
- When the lamp is used, the power supply voltage change should not exceed ±10%, the voltage is too high, will shorten the life of the lamp, the voltage is too low, it will affect the light color of the lamp.
- After the power off, it takes 20 minutes to use the lamp to cool down fully before it can be used again.
- The rotating parts of the lamp and the attaching accessories must be checked regularly, and the loosening and shaking should be reinforced in time to prevent accidents.
- In order to ensure the normal use of this product, please read this instruction carefully.

1.4 Product Description

- Light source power: W;
- Voltage: AC 200V~240V/50~60Hz;
- Color disk: Each color disk consists of 8 color plates + white light;
- Pattern plate: 12 pattern effects;

- 540° pan, 270° tilt.
- Overheat protection;
- Control mode: DMX512/ master-slave/automatic;
- IP20 protection level

1.5 Signal cable connection

Light fixtures feature standard DMX input and output 3-core or 5-core XLR sockets. Use a twisted-pair signal cable shielded specifically for DMX 512; The signal line is generally connected at a distance of 150 meters, and the DMX512 signal amplifier must be added for long distance signal transmission.

Use a shielded twisted-pair signal line from the DMX outlet of the controller to the DMX input of the first device, and from the DMX outlet of the first device to the DMX input of the second device, and so on, until all the lamps are connected. Then install a terminal plug on the last 3-pin connector of the connecting luminaire output on each line. (Weld a 4/1W, 120Ω resistor between the 2 and 3 pins of the 3-pin pin cannon plug).

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

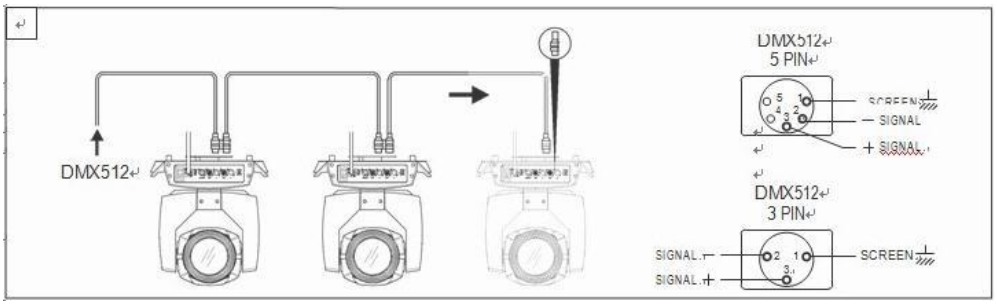

Figure 1 Schematic diagram of DMX signal wire connection

➢ The calculation method of the starting address code of the lamp:

The initial address code of the current luminaire is equal to (the initial address code of the previous luminaire)+(the number of channels of the luminaire)

1: The initial address code value of the first luminaire A001.

2: The basic channel number of the controller should be greater than or equal to the total number of channels used by the luminaire.

3: Note: when using any controller, each luminaire should have its own starting address code, if the first luminaire's starting address code is set A001, the number of luminaire channels is 16CH; Then the starting address code of the second lamp is set to A017; The starting address code of the third lamp is set to A033; And so on,(this setting also needs to be determined according to different consoles)

1.6 Luminaire installation

The luminaire can be placed horizontally, hung diagonally and hung upside down. Be sure to

pay attention to the installation method when hanging diagonally and upside down.

As shown in Figure 2, before positioning the luminaire, it is necessary to ensure the stability of the installation site. During the reverse hanging installation, it is necessary to ensure that the luminaire does not fall down on the support frame. It is necessary to use the safety rope to pass through the support frame and the luminaire handle for auxiliary hanging to ensure safety. Figure 2 Schematic diagram of the lamp hanging upside down1Prevent the luminaire from falling and sliding.

During the installation and debugging of the lamps, pedestrians are forbidden to pass under the lamps. Regularly check whether the safety rope is worn and whether the hook screws are loose.

If the hanging installation is not stable, resulting in the fall of the lamp and all the consequences, our company does not assume any responsibility.

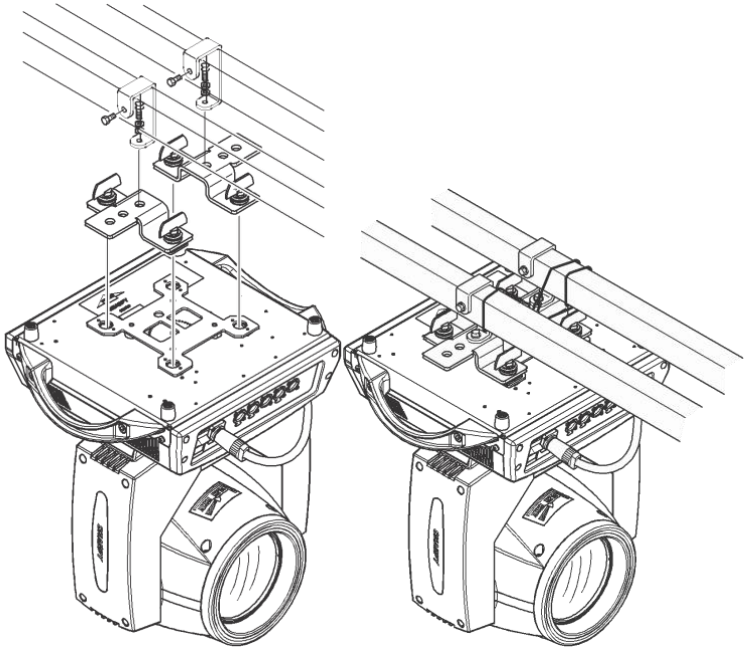

Figure 2 Schematic diagram of the lamp hanging upside down1

2. Control panel

2.1 Key Instructions

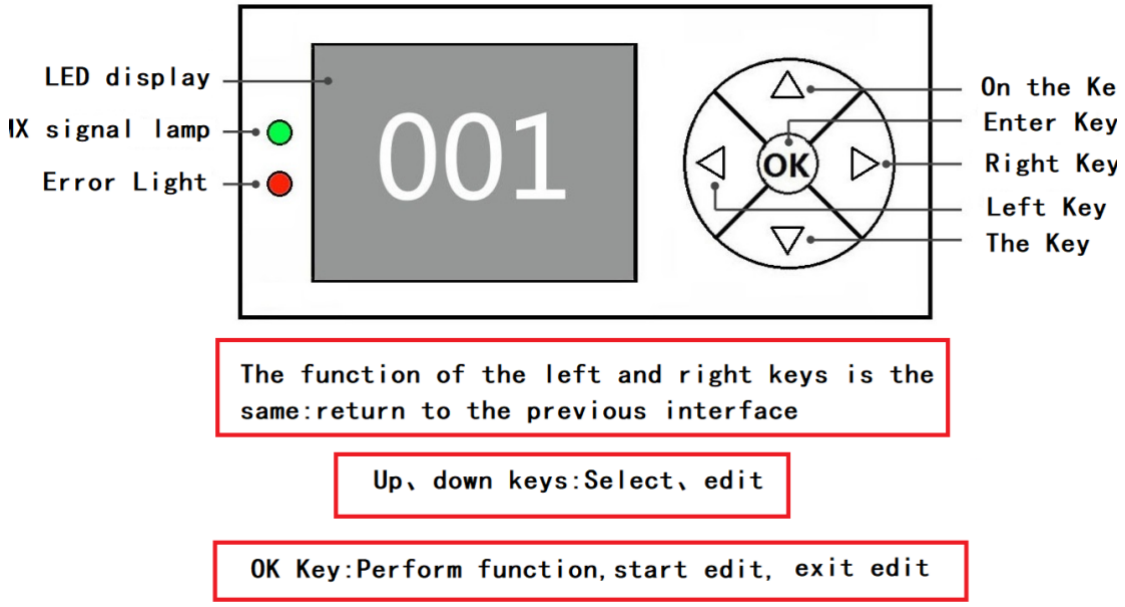

Figure 3 Schematic diagram of key description on the panel

The following takes "Modify DMX address code" as an example to describe the use of keys:

1, if the current is not the main interface, press the "left" key (one or more times) to return to the main interface

2, in the home screen, press the "up" key or "down" key to select the "Settings" button

3. Press the "OK" key to enter the "Settings" interface

4, in the "Settings" interface, press the "up" key or "down" key to select "DMX address"

5, press the "OK" key to enter the editing state

6, press the "up" key or "down" key to modify the DMX address code
7, press the "OK" key to exit the editing state
8. Press the right button on the main screen to enter the calibration menu shortcut.

2.2 Menu Description

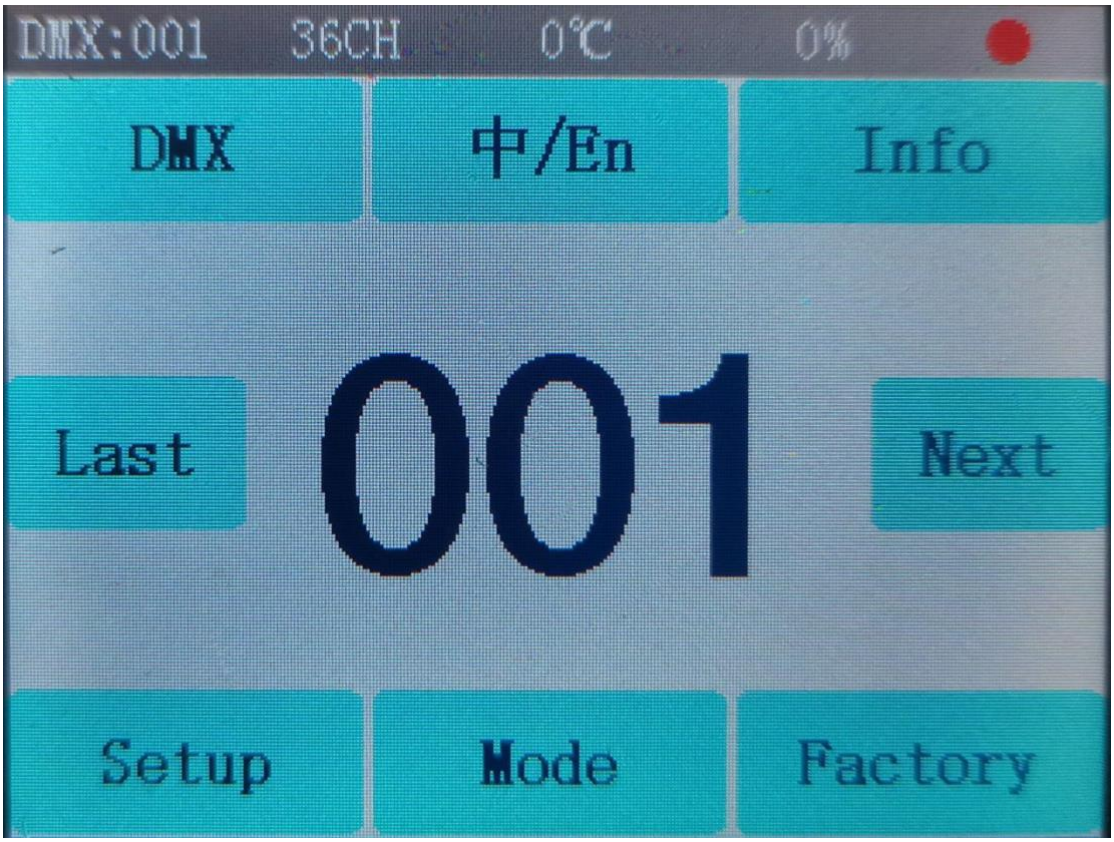

Figure 4 Schematic diagram of main menu

2.2.1 DMX Settings

Key description: Press up or down is +1 or -1 mode; Press one or the next one, quickly adjust the address code mode; Press the confirm key to return

Manual instructions: Enter the hundreds place first, then the tens place, and finally the one place. (For example: enter the 286 address code, it will first point 2, then point 8, and finally point 6)

2.2.2 In /En

Chinese/English interface switch;

2.2.3 System information

Options	Instructions	
System version	DIS	Display board software version
	MT	Motor board software version
Temperature information		Display lamp bead temperature
Fan information	Fan speed	Display fan speed information
System time	Total Bright bubble	Cumulative brightening time (accurate to minute)
	This brightening bubble	Time of this shining bubble (accurate to minute)
	Total usage time	Total usage time (accurate to minute)
	Time of use	Use time since this turn on (accurate to minutes)
	Date of manufacture	
	Duration of permission	9999 means no encryption and can be used for a long time. Other values indicate the remaining use time, with encryption;
Sensor monitoring	X Hall	0 when magnetic is detected, 1 otherwise
	Y Hall	0 when magnetic is detected, 1 otherwise
	Color disk Hall	0 when magnetic is detected, 1 otherwise
	CMY Hall	0 when magnetic is detected, 1 otherwise
	CTO Hall	0 when magnetic is detected, 1 otherwise
	Fix pattern panl	0 when magnetic is detected, 1 otherwise
	Glass pattern Hall	0 when magnetic is detected, 1 otherwise
	Glass pattern rotation Hall	0 when magnetic is detected, 1 otherwise
	Focus Hall	0 when magnetic is detected, 1 otherwise
	Enlarge Hall	0 when magnetic is detected, 1 otherwise
	Prism 1 Rotate the Hall	0 when magnetic is detected, 1 otherwise
	X code disk status	2 digits, each corresponding to a photoelectric switch in the code disk
	Y code disk status	2 digits, each corresponding to a photoelectric switch in the code disk
	X-axis encoding disk step value	When traveling in the forward direction, the step value should increase, and when

		traveling in the reverse direction, the step value should decrease. The number should be normal every time you reach the same point
	The Y-axis encodes the disk step value	The step value should increase in the forward direction and decrease in the reverse direction. The number should be normal every time you reach the same point
System Error		If the red ERR indicator light shines, it indicates that the lamp is running incorrectly, and the details can be viewed from this sub-interface. After viewing, you can press the "Clear" button to clear the error record
DMX channel value monitoring		From this, the sub-interface is entered and the channel value is displayed in numerical and percentage terms for viewing

Common Error Messages	Instructions
MT board connection failed	Motor board not responding. There is a problem with the serial communication line connecting the display board to the motor board, or there is a problem with the motor board.
X-axis reset failed	There is a problem with the X-axis photoelectric switch, or the X-axis motor or motor board
Y-axis reset failed	Y-axis photoelectric switch, or Y-axis motor or motor board problem
X-axis Hall error	X-axis Hall, or a problem with the motor board
Y-axis Hall error	Y-axis Hall, or motor board problem
Color disk reset failed	Color disk Hall, or there is a problem with the color disk motor
The pattern plate failed to reset	Pattern plate Hall, or pattern plate motor has a problem
The focus reset failed	Focusing Hall, or a problem with the focusing motor

2.2.4 Light fixture setup

Options	Instructions	
DMX Channel	25CH	25 Channel mode

Working mode	Standard	Standard mode is suitable for outdoors
	theater	Suitable for indoor high floors
	Film and television	Suitable for indoor small space environment
Language	Chinese	Set to the Chinese interface
	English	Set to English interface
Screen flip	close	Front display
	open	Screen inverted display
Screen auto-flip	close	Disable the automatic rollover function
	open	Gravity sensing auto flip
Dimming curve	Square	Index
	linear	Linear
	SCurve	Sines
	InSquare	Logarithm
RDM function	close	Turn on the RDM function
	open	Disable the RDM function
DMX Signal	Hold	Continue running in its original state
	Reset	Turn the motor back and stop running
Screensaver	close	Turn off screensaver
	open	Turn on screensaver
Light pursuit mode	close	Off
	Mode 1	No power in XY Light pursuit mode
	Mode 2	XY Light pursuit mode with very little force
X Reversal	close	Default
	open	Switch start and end points
Y Reversal	close	Default
	open	Switch start and end points
XY swap	close	Default
	open	Channel for switching XY axes (including fine tuning)
XY encoder	open	Use an encoder (optocoupler) to judge out of step and automatically correct the position
	close	Correct position without using an encoder (optocoupler)
Restore default Settings		Press "OK" to see the confirmation dialog box, press "OK" again to restore the default Settings

2.2.5 Run Mode

Self-walking mode	DMX	Slave state: Receives DMX signals from the console or host
	Bootstrap	Host status: Self-drive and send DMX signal to slave
	Scenario 1, 2, 3	Turn on scene Self Walk
	Programming 1, 2, 3	Call console programmed program self-walk

Scene run	All	All open scenes run sequentially
	From 1 to 5	Call a scene run individually
Scene setup	Scene channel Save	Edit number Press the confirm key to save (Display: saving)
	Multi-step scene group	1, 2, 3; There are three groups
	Scene step selection	Under the current group, switch to the number of steps you want to edit
	Scene time (s)	1-100; Total time for each step to run
	Scene delay (%)	0-100; Gradient percentage, where 0 is a direct jump;
	Scene run	When turned on, all running modes can be invoked; Off can only be called individually
	1-36 channel values	
Console Programming	Programming 1, 2, 3	Switch the program location to record, press the confirm button to enter the programming record interface, need to connect the console
	Time (S)	Set running time for each 1 step
	Number of steps	Current step of the program
	Clear data	Clear all data in the current program
Console Programming >> Programming interface		Adjust the number of steps up and down, connect the console to save;

Manual control (In the main interface, click the operation mode menu, select the manual control item, press confirm to enter manual control)

This interface is used to control the current lamp and automatically enter the host state (does not receive DMX signal, self-walking mode is the host, and sends DMX signal to the bus to the slave machine).

The manual menu will display 36 channels according to the standard 36 channels set in the setting menu.

Options	Instructions	
1CH. X	0 ~ 255	Press "OK" to enter the editing state. At this time, the hundreds digit is selected, and press the "up" and "down" keys to change the channel value. Press the "OK" key again to select the tens edit. Press "OK" again to select the ones edit. Press again to exit the editing state
...	0 ~ 255	
35CH. Aperture	0 ~ 255	
36CH. Reset		Press "OK" to see the confirmation dialog box, press "OK" again to enter the reset interface, all motor reset

ALL reset		Press "OK" to see the confirmation dialog box,

		press "OK" again to enter the reset interface, all motors reset
XY reset		Press "OK" to see the confirmation dialog box, press "OK" again to enter the reset interface, XY reset
MT reset		Press "OK" to see the confirmation dialog box, press "OK" again to enter the reset interface, the small motor reset

2.2.6 Factory Settings

Options	Instructions	
Motor Calibration	X-axis	After entering the sub-interface, the reset position of the motor such as X axis and Y axis can be adjusted to make up for the error on the hardware installation. The adjustment range is -128~+127, and +0 indicates no adjustment.
	Y-axis	
	Color plate	
	Fixed pattern plate	
	Glass pattern plate	
	Glass pattern spin	
	Effects tray zero	
	Disc travel	
	Apparent finger zero	
	Apparent finger stroke	
	Temperature	
	Cyan	
	Magenta	
	Yellow	
	Focus	
	Zoom	
	Prism 1 Zero point	
	Prism 1 Stroke	
	Prism 2 Zero	
	Prism 2 Stroke	
	Prism 1 Rotation	
	Prism 2 Rotate	
	Frost zero	
	Frost stroke	
	Cutting rotary	

	plate	
	Aperture	
XY speed adjustment	X-axis speed	000-255, slow to fast adjustment
	Y-axis speed	
Fan adjustment	Fan regulation	Only do temporary adjustment, power is not saved
	Fan speed	

3. Channel function

3.1 Channel Table

25 Channels		35 channels
1	X	X
2	X Fine	X Fine
3	Y	Y
4	Y Fine	Y Fine
5	XY Speed	XY Speed
6	Shutter	Shutter
7	Dimming	Dimming
8	C	Dimming Fine
9	M	C
10	Y	C Fine
11	CTO	M
12	Color	M Fine
13	Gobo2	Y
14	Gobo2 Rotation	Y Fine
15	Gobo	CTO
16	Focus	CTO Fine
17	Focus Fine	Color
18	Zoom	Color Fine
19	Autofocus	Gobo2
20	Autofocus calibration	Gobo2 Rotation
21	Prism 1+2	GOBO2 Rotation Fine
22	Prism 1 Rotate	Gobo
23	Prism 2 Rotate	Focus
24	Frost	Focus Fine
25	Reset	Zoom
26		Zoom Fine

27		Autofocus
28		Autofocus calibration
29		Prism 1+2
30		Prism 1 Rotate
31		Prism1 Rotate Fine
32		Prism 2 Rotate
33		Prism2 Rotate Fine
34		Frost
35		Reset

Channel parameter values (full version) :

35 channels	Names	Numerical value	Description

CH1	X	0-255.	0-540 degrees
CH2	X Fine	0-255.	0-2 degrees
CH3	Y	0-255.	0-270 degrees
CH4	Y Fine	0-255.	0-1 degrees
CH5	XY Speed	0-255.	From fast to slow
CH6	Shutter	0-3	Shutout
		4-127.	Slow to fast Normal strobe
		128-191.	Bisect stroboscopic from slow to fast
		192-251.	Random stroboscopic from slow to fast
		252-255.	Open Light
CH7	Dimmer	0-255.	0-100% dimming
CH8	Dimming Fine	0-255.	
CH9	C	0-255.	
CH10	C Fine	0-255.	
CH11	M	0-255.	
CH12	M Fine	0-255.	
CH13	Y	0-255.	
CH14	Y Fine	0-255.	
CH15	CTO	0-255.	
CH16	CTO Fine	0-255.	
CH17	Color	0-4	White Light
		5-9	White light + Color 1
		10-14	Color 1
		15-19	Color 1+ Color 2
		20-24	Color 2
		25-29	Color 2+ Color 3
		30-34	Color 3
		35-39	Color 3+ Color 4
		40-44	Color 4
		45-49	
		50-54	Color 4+ Color 5
		55-59	Color 5
		60-64.	Color 5+ Color 6
		65-69.	Color 6
		70-74.	Color 6+ Color 7
		75-79.	Color 7
		80-84.	Color 8
		85-168.	Flow forward from fast to slow

		169-170.	Stop
		171-255.	Flow backward from slow to fast
CH18	Color Fine	0-255.	
CH19	Gobo2	0-9	White Light
		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.	Slow to Fast Shake Gobo 1
		90-99.	Slow to Fast Shake Gobo 2
		100-109.	Slow to fast Shake Gobo 3
		110-119.	Slow to fast Shake Gobo 4
		120-129.	Slow to Fast Shake Gobo 5
		130-139.	Slow to fast Shake Gobo 6
		140-149.	slow to fast Shake Gobo 7
		150-190.	Flow forward from fast to slow
		191-192.	Stop
		193-255.	Backward flowing water from slow to fast
CH20	Gobo2 Rotation	0-127.	Angle switch
		128-190.	Forward flowing water from fast to slow
		191-192.	Stop
		193-255.	Backward flowing water from slow to fast
CH21	Gobo2 Rotation fine	0-255.	
CH22	Gobo	0-4	Gobo 1
		5-9	Gobo 2
		10-14	Gobo 3
		15-19	Gobo 4
		20-24	Gobo 5
		25-29	Gobo 6
		30-34	Gobo 7
		35-39	Gobo 8
		40-44	Gobo 9
		45-49	Gobo 10

		50-54	Gobo 11
		55-59	Gobo 12
		60-64.	Slow to Fast Shake Gobo 1
		65-69.	Slow to fast Shake Gobo 2
		70-74.	Slow to fast Shake Gobo 3
		75-79.	Slow to Fast Shake Gobo 4
		80-84.	Slow to fast Shake Gobo 5
		85-89.	slow to fast Shake Gobo 6
		90-94.	Slow to fast Shake Gobo 7
		95-99.	Slow to fast Shake Gobo 8
		100-104.	Slow to fast Shake Gobo 9
		105-109.	Slow to fast Shake Gobo 10
		110-114.	slow to fast Shake Gobo 11
		115-119.	slow to fast Shake Gobo 12
		120-190.	Flow forward from fast to slow
		191-192.	Stop
		194-255.	Backward flowing water from slow to fast
CH23	Focus	216-255.	Backward flowing water from slow to fast
CH24	Focus Fine	0-255.	
CH25	Zoom	0-255.	From small to large
CH26	Zoom Fine	0-255.	
CH27	Autofocus	0-63.	None
		64-127.	5 m
		128-255.	10 m
CH28	Autofocus trims	0-255.	
CH29	Prisms	0-63.	None
		64-127.	Prism 1
		128-191.	Prism 2
		192-255.	Prism 1+ Prism 2
CH30	Prism 1 Rotation	0-127.	Angle switch
		128-187.	Flow forward from fast to slow
		188-195.	Stop
		196-255.	Backward flowing water from slow to fast
CH31	Prism 1 Rotation fine	0-255.	

CH32	Prism 2 Rotation	0-127.	Angle switch
		128-187.	Flow forward from fast to slow
		188-195.	Stop
		196-255.	Backward flowing water from slow to fast
CH33	Prisms 1 Rotation fine	0-255.	
CH34	Frost	0-127.	None
		128-255.	Frost cut in
CH35	Reset	0-209.	Safe
		210-215.	Reset XY
		220-235.	Reset Effect
		240-255.	Reset All

4. Common Faults

According to some common faults, the corresponding solutions are put forward. Any problems that cannot be solved should be dealt with by professionals. Disconnect the light fixture from the power supply before maintaining it.

1. The light bulb is not working

- Check that the voltage that matches the light fixture is installed;
- Check whether the lamp power supply connection or control switch is in poor contact;
- Check whether the power supply is insufficient;
- Check that the DMX512 controller is sending instructions.

2. The light fixture does not accept control from the console after normal reset

- Check luminaire digital start address value and function options are correct;
- Check whether the connection of the communication control line is correct, the communication line is too long or has been interrupted;
- Check whether the control equipment is invalid, check whether the signal amplifier connected to the series is invalid;
- Check whether the communication line is too long or other devices interfere with each other;
- Optimize wiring, shorten the length of the control signal line, high-voltage and low-voltage lines separate wiring;
- Add signal amplifiers;
- Signal line using high quality shielded twisted pair wire;

- Connect the signal terminal resistor (120 ohms) at the end of the lamp.

3. Luminaire does not start

- Check that the power supply parameters are consistent with the luminaire;
- Check the lamps in the long distance transportation process due to extrusion deformation, internal parts vibration, moisture and other reasons, resulting in poor contact

  Or fall off.
- Please check whether the internal wire integration connector is loose or loose.
- Check whether the electronic components of the lamp (such as electronic transformer, PCB board, motor control board, etc.) are loose, short circuit and burned out.

4. When working, the action of the X axis or Y axis of the luminaire is abnormal

- Check them one by one by following the previous step;
- Check whether the transmission belt corresponding to the X and Y axis direction in the lamp falls off and breaks;
- Check whether the data feedback receiver (optocoupler) corresponding to the X and Y directions in the lamp is damaged;
- Restart and reset once.