Laser Beam 300 IP

User Manual

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TECHNICAL PARAMETERS

Light source

Voltage: Wide Voltage 110V-240V 50-60Hz
Light Source Type: Laser Light Source
Power: 300W

Optical

Beam Angle: 0-1.8°
Lens diameter: 165mm

Controls

Channel: Standard DMX512 Channels.
Control mode: DMX 512, RDM, self-propelled, master-slave self-propelled
Display: LCD display to adapt to different installation positions

Effect

Color: Pure: 13+1+Colorful Rainbow Effect+Atomization Function
Pattern: Pattern Plate: 13 Fixed Patterns+1 White Light
Focus: Electronic Linear High Definition Dynamic Focus, Using High-Density Glass Optical Lens.
Linear Dimming Curve: 0%-100% Linear Dimming
Prism: 8 prisms/8+16 prisms superimposed and rotatable, macro function

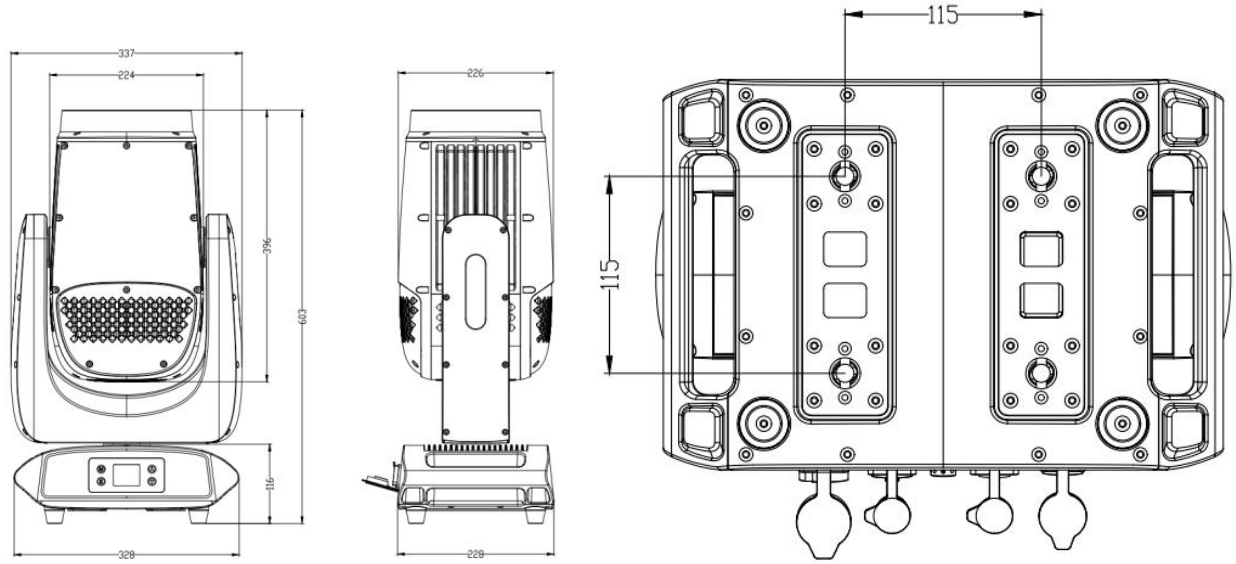
Construction

XY motor: three-phase electric drive, powerful, faster, more stable and quieter.
Appearance: all die-cast aluminum material
Waterproof grade: IP66
Horizontal/vertical: The waterproof lamp can do 540° horizontal or 270° vertical scanning, fast and stable,
The lamp is equipped with an intelligent photoelectric reset correction system, which can automatically return to the original position if it malfunctions accidentally. In addition, it has a horizontal and vertical locking button, which is more convenient for maintenance and transportation.

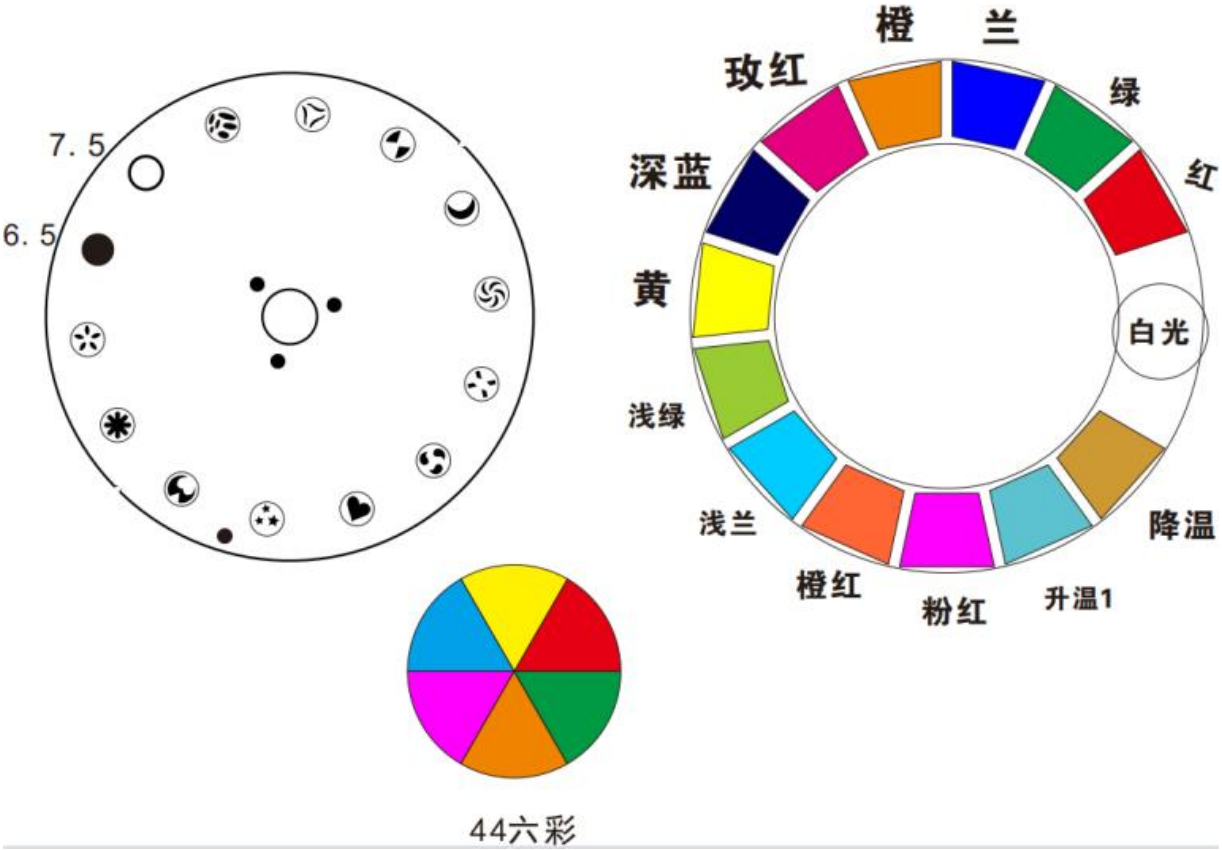
Weight&Dimension

Lamp Dimensions: 329*228*603mm
Net Weight: 19.8KG
Packing Dimensions: 64.5*49*42cm
Gross Weight: 24KG
Flight Case : 80*40*81cm(2in1)

SIZE DRAWING



Color + pattern + colorful



Effect

Chapter 1 Precautions and Installation

1.1 statement

Thank you for choosing our products! Our products leave the factory in perfect condition with intact packaging. To ensure safe and effective use, please read this complete user manual carefully before installation. This manual contains essential installation and operational instructions. Follow the guidelines meticulously during setup and maintenance. Keep this manual properly stored for future reference. Our company shall not be held liable for any damages to fixtures or performance issues caused by improper installation, operation, or maintenance by individual users.

Any technical changes in this manual will not be notified separately.

1.2 tending

- Disconnect the power supply before maintenance.
- This 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 effects, it is necessary to clean the fan, fan mesh and lens frequently.
- Do not use alcohol and other organic solvents to wipe the lamp shell, so as not to cause damage.

1.3 Product Notes

- This lamp is for professional use only.
- Ensure that the power supply voltage matches the power supply voltage required by the equipment before operation.
- Do not place this product in a loose or vibrating place.
- During use, if the lamp is abnormal, stop using the lamp in time.
- In order to ensure the service life of the product, do not place the product in a humid or water-leaking place, and do not work in an environment with temperature above 60 degrees.
- When the bulb is used, the power supply voltage should not change more than ±10%. Too high voltage will shorten the life of the bulb, and too low voltage will affect the light color of the bulb.
- After the power is cut off, it takes 20 minutes for the lamp to be fully cooled before it can be used again.
- The rotating parts and adhesive accessories of the lamp must be checked regularly. If loosening or shaking occurs, reinforce it in time to prevent accidents.
- To ensure the normal use of this product, please read this instruction carefully.

1.1Signal line connection

The fixtures are equipped with standard DMX 512 shielded twisted pair signal cables featuring 3-pin or 5-pin XLR connectors. These cables are designed for DMX512 applications, typically supporting connections up to 150 meters. For extended transmission distances, DMX 512 signal amplifiers must be incorporated into the system.

Connect the DMX output port of the controller to the DMX input port of the first device using a shielded twisted pair signal cable. Continue this process from the DMX output port of the first device to the DMX input port of the second device, and so on, until all fixtures are connected. Install a terminal plug on the 3-pin connector at the last fixture output of each circuit segment. (Weld a 4/1W,120Ω resistor between pins 2 and 3 of the 3-pin RCA connector).

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

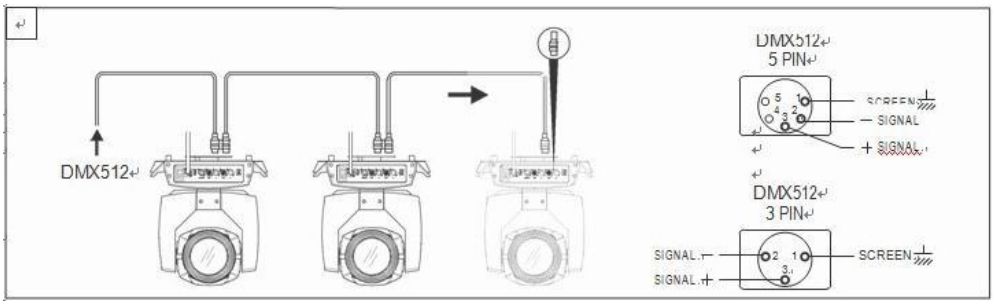


Figure 1 DMX signal line connection diagram

- Calculation method of lamp starting address code:

The starting address code of the current lamp is equal to (the starting address code of the previous lamp) + (the number of channels of the lamp) Note:

1: The starting address code value A001 of the first lamp.

2: The basic channel number of the controller should be greater than or equal to the total number of lamp use channels.

3. Note: When using any controller, each luminaire must have its own starting address code. For example, if the first luminaire is set to A001 with 16 channels, the second luminaire should be configured as A017, the third as A033, and so on (this configuration method may vary depending on the control console).

1.1 Light fixture installation

The lamp can be placed horizontally, hung diagonally and hung upside down. The installation method must be paid attention to when hanging diagonally and upside down.

As shown in Figure 2, before positioning the luminaire, ensure the stability of the installation location. When installing inverted hanging, it is essential to prevent the luminaire from falling off the support frame. A safety rope should be threaded through both the support frame and the luminaire handle to assist in securing the suspension, ensuring safety and preventing the luminaire from dropping or sliding.

When the lamp is installed and debugged, pedestrians are prohibited from passing under it. Regularly check whether the safety rope is worn out and whether the hook screw is loose.

If the lamp falls due to unstable suspension installation, we shall not be liable for all consequences.

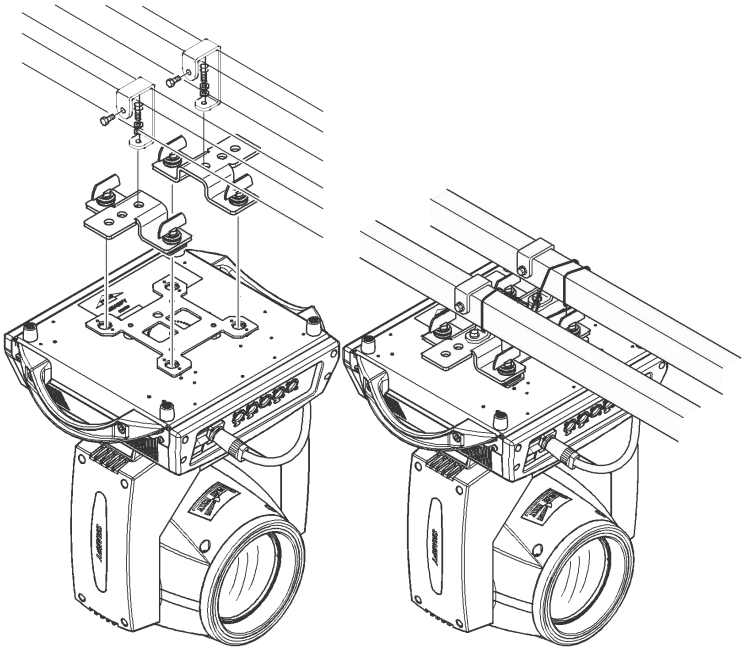
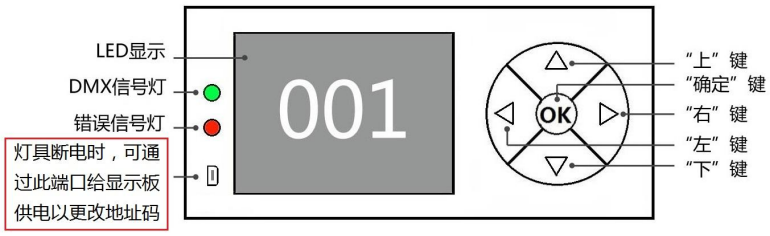


Figure 2 Schematic diagram of inverted lamp

2.control panel

2.1 Key instructions



“左” “右”键的功能是一样的：返回上一界面

“上”、“下”键：选择、编辑

“确定”键（即“OK”键）：执行功能、开始编辑、退出编辑

Figure 2. Schematic diagram of panel keys

The following uses the "modified DMX address code" as an example of how to use the keys:

1. If the current interface is not the main interface, press the "left" key (once or more times) to return to the main interface
2. Under the main interface, press the "up" or "down" key to select the "Settings" button
3. Press the "OK" button to enter the "Settings" interface
4. In the Settings interface, press the up or down key to select the DMX address
5. Press the "OK" button to enter the editing mode
6. Modify the DMX address code by pressing the "up" or "down" key
7. Exit the editing state by pressing the "OK" button

2.2 Menu description

Figure 3 Schematic diagram of main menu

2.2.1 Settings

option	explain	
running mode	DMX	From the machine status: receive DMX signals from the console or host
	scene	Run the scenario you set
	Self-Drive	Master status: Send DMX signal to slave machine
	sound control	
Scenario setup (Compile your own scene; up to 20 steps; press the "OK" button to enter the editing state.)	Scenario selection 01-20	Switch 1-20 steps; a total of 20 scenarios; switch to automatically save the data of the previous scenario (after editing the last step scenario, you need to return to the previous level menu, if you do not return directly, the last step cannot be saved)
	Scenario time 000-255	0-255 seconds; factory default 3 seconds (1 equals 1 second)
	Scenario running on/off	Switch scenario; all scenarios are turned off by default at the factory. In the closed state, this scenario is not run in the scenario running mode
	1. pigment … 2. stroboflash …	Set the functional value of the scene; functional reference channel description
DMX address	1~512	Press the "OK" button to enter editing mode. At this point, the hundred's place is selected. Press the "Up" and "Down" keys to modify the address code. Press "OK" again to select the tens' place editing. Press "OK" once more to select the units' place editing. Finally, press "OK" one last time to exit the editing mode.
lamp bulb	close	A gunk
	open	Bulb
Motor reset	close	
	open	Light fixture reset
channel	Standard	Standard 24-channel mode

	24CH	
language	English	Set the interface to English
	the Chinese language	Set the interface to Chinese
Screen flip	close	Front display
	open	Screen reverses display
X reversal	close	
	open	Rotate the X motor 540 degrees in the direction
Y reversal	close	
	open	The Y motor is rotated 270 degrees
XY exchange	close	
	open	Channel to swap XY axes (including fine-tuning)
XY encoder	open	Use encoder (opto-coupler) to determine out-of-sync and automatically correct position
	close	Position is not corrected using encoder (optocoupler)
DMX signal	keep	Continue to operate in its original state
	zero clearing	Motor reset, stop running
Lighting up the bulb	close	
	open	Lights out after startup
Color linear	open	Color changes linearly
	close	Color wheel nonlinear change, halftone change
Clear the scene data		Clear all data in the scenario setting
Restore default		After clicking the "OK" button, you will see the confirmation dialog box. Click the "OK" button again to restore the default Settings

2.2.2 Manual control

This interface is used to control the current lamp (does not receive DMX signal) and the corresponding channel. See the channel table for details.

option	explain	
1CH.	0~255	Press the "OK" button to enter editing mode. At this stage, the hundredth digit is selected. Press the "Up" and "Down" keys to adjust channel values. Press "OK" again to select the tenth digit for editing. Press "OK" once more to select the unit digit for editing. Press "OK" one last time to exit the editing mode.
……	0~255	
15CH.	0~255	
……	0~255	

2.2.3 Information

option	explain	
Ver		Display software version
DIS		Display board software version
MT		Motor board software version
temporal information	1. Total brightness 2. Total usage	Record cumulative bright bubble time Record the use time of lamps
system mistake		If the red ERR indicator is on, the lamp is running out of order. You can enter the sub-interface to view the details. After viewing, press the "Clear" button to clear the error record.
Blower speed		Display the current blower speed
Hall status	0000	When detected, the value is 0; otherwise, it is 1
X code step value	0000	When walking in the right direction, the step value should increase; when walking in the opposite direction, it should decrease. Each time you return to the same point, the value remains normal.
Y code step	0000	When walking in the right direction, the step value should

value		increase; when walking in the opposite direction, it should decrease. Each time you return to the same point, the value remains normal.
Duration of access		9999 without encryption; Other values can be used with encrypted time

A. Error message description

Common error messages	explain
MT board connection failed	The motor board did not respond. The serial communication line connecting the display board and the motor board is faulty, or the motor board is faulty.
X-axis repositioning failed	There is a problem with the X axis photoelectric switch, or the X axis motor or the motor board
Y-axis repositioning failed	There is a problem with the Y-axis photoelectric switch, or the Y-axis motor or the motor board
X-axis Hall error	X-axis Hall, or there's something wrong with the motor board
Y-axis Hall error	Y-axis Hall, or there's something wrong with the motor board
Color disk repositioning failed	Color panhall, or there is something wrong with the color pan motor
The pattern disk failed to reset	Pattern disk hoar, or there is something wrong with the pattern disk motor
The focus reset failed	The focus hole is out of focus, or there's something wrong with the focus motor
Light bulb control failed	The bulb or the light fails to brighten or extinguish, and there is something wrong with the light or the bulb

2.2.4 Factory

calibration	Fan adjustment (test)	Fan regulation
		Blower speed
		Low wind speed bubble on/off
	Data download	After changing the display board, download the calibration data of the original display board from the motor board
	X axle	After entering the sub-interface, you can adjust the reset position of the motor such as X-axis and Y-axis to compensate for the error in hardware installation. The adjustment range is-128~+127, and +0 means no adjustment.
	Y axle	
	pigment	
	pattern	
	focus	
	Turn the light off a half-step	
	Tuning and offset	
	Half-step prism 1	
	Riggle 1 trip	
	Lens 2 half-step	
	Rim 2 stroke	
	Half-step fogging	
	Wetting trip	
	The Journey of the Rainbow	
	zero clearing	close
		Yes, data recovery default value
	X Hoare	Turn off, X Hall error turn off
		Open, X Hall error open
	Y Hoare	Turn off, Y Hall error turn off
		Open, Y Hall error open
	half-power	No half-power function, Guan
		On, with half power functionality

Channel function

3.1 3.1 Channel tables

channel	channel pattern
	24
1	Color wheel
2	Blind spots/flicker
3	aiming
4	Pattern disk
5	Prism 1
6	Prism 1 rotation
7	Lens 2
8	Rotation of prism 2
9	focus
10	X
11	X fine-tuning
12	Y
13	Y fine-tuning
14	XY velocity
15	Fogging/Colorful
16	Lightbulb & Reset
17	Lamp dimming
18	Lamp flicker
19	Red lamp ring
20	Green lamp ring
21	Lamp ring blue
22	Lamp selection
23	Lamp effect
24	Lamp effect speed

Channel parameter (full version):

24CH	function	Channel values	effect
1	Color Panel	000-004	white light
		005 -009	White light + color 1
		010 - 014	Color 1
		015 - 019	Color 1 + Color 2
		020 - 024	Color 2
		025 - 029	Color 2+ Color 3
		030 - 034	Color 3
		035 - 039	Color 3+Color 4
		040 - 044	Color 4
		045 - 049	Color 4+ Color 5
		050 - 054	Color 5
		055 - 059	Color 5 + Color 6
		060 - 064	Color 6
		065 - 069	Color 6+ Color 7
		070 - 074	Color 7
		075 - 079	Color 7 + Color 8
		080 - 084	Color 8
		085 - 089	Color 8 + Color 9

		090 - 094	Color 9
		095 - 099	Color 9+ Color 10
		100 -104	Color 10
		105 -109	Color 10+ Color 11
		110 -114	Color 11
		115 -119	Color 11+ Color 12
		120 -124	Color 12
		125 -129	Color 12+ Color 13
		130 -134	Color 13
		135 -139	Color 13+ Color 14
		140 -144	Color 14
		145 -149	Colour 14+ white light
		150 -200	Backflow (from fast to slow)
		201- 255	Positive flow (from slow to fast)
2	stroboflash	000-003	Shutter closed
		004-103	Flicker from slow to fast
		104-107	Light gate open → (controlled by dimming channel)
		108-207	Pulse frequency flashes from slow to fast
		208-212	Light gate open → (controlled by dimming channel)
		213-251	Random strobe from slow to fast
		252-255	Light gate open → (controlled by dimming channel)
3	aiming	000-255	From dark to light
4	Pattern disk	000 - 004	Figure 1
		005 - 009	Figure 2
		010 - 014	Figure 3
		015 - 019	Figure 4
		020 - 024	Figure 5
		025 - 029	Figure 6
		030 - 034	Figure 7
		035 - 039	Figure 8
		040 - 044	Figure 9
		045 - 049	Figure 10
		050 - 054	Figure 11
		055 - 059	Figure 12
		060 - 064	Figure 13
		065 - 069	Figure 14
		070 - 074	Figure 15
		075 - 079	Figure 1 Stabilization (from slow to fast)
		080 - 084	Figure 2 jitter (from slow to fast)
		085 - 089	Figure 3 jitter (from slow to fast)
		090 - 094	Figure 4. Damping (from slow to fast)
		095 - 099	Figure 5. Dithering (from slow to fast)
		100 - 104	Figure 6. Damping (from slow to fast)
		105 - 109	Figure 7 jitter (from slow to fast)
		110 - 114	Figure 8 Jitter (from slow to fast)
		115 - 119	Figure 9 Dithering (from slow to fast)
		120 - 124	Figure 10 Dismounting (from slow to fast)
		125 - 129	Figure 11 Dismounting (from slow to fast)
		130 - 134	Figure 12 Dismounting (from slow to fast)
		135 - 139	Figure 13 Dismounting (from slow to fast)
		140 -144	Figure 14 Dismounting (from slow to fast)
		145 -149	Figure 15 Dismounting (from slow to fast)
		150 - 200	Positive flow (from fast to slow)
		201 - 255	Backflow (from slow to fast)
5	Prism 1	000-127	Refrigerator 1 pops up
		128-255	Rim 1 cut in
6	Prism 1 rotation	000-127	Prism 1 Angle adjustment
		128-190	Reverse rotation (from fast to slow)

		191-192 193-255	cease Forward rotation (from slow to fast)
7	Lens 2	000-127 128-255	Refrigerator 1 pops up Rim 1 cut in
8	Rotation of prism 2	000-127 128-190 191-192 193-255	Prism 1 Angle adjustment Reverse rotation (from fast to slow) cease Forward rotation (from slow to fast)
9	focus	000-255	The pattern clarity goes from far to near
10	X axle	000-255	The horizontal scan is 540 degrees
11	X-axis fine-tuning	000-255	1.2 degree horizontal fine-tuning
12	Y axle	000-255	Vertical 270 degree scan
13	Y-axis fine-tuning	000-255	Vertical 1.2 degree fine-tuning
14	XY velocity	000-255	Speed from fast to slow
15	Fog & Rainbow	000-127 128-191 192-255	not have Rainbow cut-in Wetting entry
16	Lightbulb & Reset	000-025 026-050 061-085 100-109 200-209 251-255	No, no action in areas that are not designated for function Small motor reset XY motor reset Turn off the light bulb Light a light bulb All motors reset
17	Lamp dimming	000-255	Lighting the lamp, from dark to light
18	Lamp flicker	000-003 004-103 104-107 108-207 208-212 213-251 252-255	Light gate opened Flicker from slow to fast Light gate open → (controlled by dimming channel) The pulse frequency flashes from slow to fast Light gate open → (controlled by dimming channel) Random strobe from slow to fast Light gate open → (controlled by dimming channel)
19	Red lamp ring	000-255	From dark to light
20	Green lamp ring	000-255	From dark to light
21	Lamp ring blue	000-255	From dark to light
22	Lamp selection	0 - 9 10 - 255	of no avail Lamp color macro
23	Lamp effect	000-014 015-089 090-209 210-224 225-239 240-255	of no avail Scene effect 1 (red, green and blue can be used as background color) Scene effect 2 (color race effect) Scene effect 3 (random color of LED) Lamp flicker Lamp ring gradient
24	Lamp effect speed	000-127 128-255	Positive horse racing; from slow to fast Reverse horse racing; from fast to slow

Common faults

For some common faults, corresponding solutions are proposed. Any problems that cannot be solved should be handled by professionals. Before maintaining the lamp, disconnect the power first.

Lightbulb doesn't work

- Check whether the voltage matching the lamp is installed;
- Check whether the power supply connection of the lamp or the control switch is in poor contact;
- Check for insufficient power supply;
- Check whether the DMX512 controller has sent a command.

After normal reset of the lamp, it does not accept the control of the console

- Check whether the digital start address value and function options of the lamp are correct;
- Check whether the connection of communication control lines is correct, whether the communication lines are too long or have been interrupted;
- Check whether the control device is invalid, check whether the serial signal amplifier is invalid;
- Check whether the communication line is too long or there is interference between other equipment;
- Optimize the wiring, shorten the length of control signal lines, high voltage and low voltage lines are separated wiring;
- Add a signal amplifier;
- The signal line adopts high quality shielded twisted pair;
- Connect a signal terminal resistor (120 ohms) to the end of the lamp.

The lamp does not start

- Check whether the power supply parameters are consistent with the lamp;
- Check the lamp for contact failure caused by compression deformation, internal part vibration, humidity and other reasons during long-distance transportation
  Or fall off.
- Check whether the internal wires and connectors of the lamp are 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 burn out.

During operation, the X-axis or Y-axis movement of the lamp is abnormal

- Check one by one according to the previous step;
- Check whether the transmission belt corresponding to X and Y axis in the lamp is fallen off or broken;
- Check whether the data feedback receiver (opto-coupler) in the X and Y directions of the lamp is damaged;
- Restart and reset once.

REMARK

The product has perfect performance and intergrity 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.