

Laser Beam 100 IP

User Manual



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TECHNICAL PARAMETERS

Light source

Light source power: 100W;

Voltage: AC 110V~240V/50~60Hz;

Total power: 150W

Optical system

Focus: 0~100% linear focus.

Strobe: 1-25Hz variation, strobe effects in multiple modes and speeds.

Dimming: 0-100% rotary linear dimming, soft and flicker-free.

Controls

Working mode: DMX512, scene, self-propelled, voice control.

DMX function: RDM two-way data transmission, the console can remotely reset the DMX address code.

DMX channel: 24CH/28CH

Effect

Color: 21 color filters + 1 white light, half color effect, bidirectional rotation,

Pattern: 29 fixed patterns + 1 white light, bidirectional rotation, variable speed shaking.

Prism: 1 row of prisms + 1 quad prism combination, can rotate in both directions at variable speeds.

Atomization: 1 independent atomization mirror with soft light effect.

Protection grade & Material

Chassis material: High temperature resistant precision cast aluminum shell , each joint has a highly elastic water-based rubber strip embedded in the seal to ensure that the internal parts are not affected by external rain erosion.

Protection level: IP65

Working environment : -20 °C ~40 °C

Dimensions

Product size : 27x24x47cm

Net weight : 14.24KG

Packing size: 54.2x 37.2x 37cm

1. Precautions and installation

Thank you for choosing our company's products! This product is in good condition and packed completely when it leaves the factory. For your safe and effective use of this product, please read this instruction manual carefully and completely before using this product. This manual contains important information on 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 any responsibility for any damage to the lamp or other performance caused by personal failure to follow the instructions during installation, use, and maintenance.

This manual is subject to technical changes without prior notice.

1.1 Maintenance

- Please disconnect the power supply before performing maintenance.
- The lamp should be kept dry and avoid working in a humid environment.
- Intermittent use will effectively extend the life of the lamp.
- In order to obtain good ventilation and lighting effects, pay attention to cleaning the fan, fan net and lens regularly.
- Do not wipe the lamp housing with organic solvents such as alcohol to avoid damage.

1.2 Product Notes

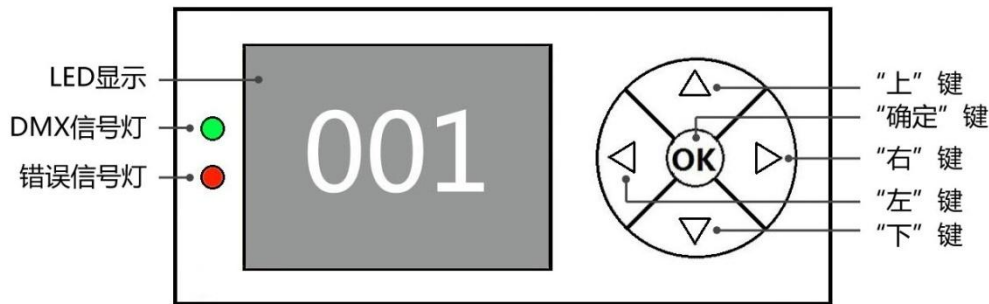
- This lamp is for professional use only.
- Before operation, ensure that the power supply voltage matches the power supply voltage required by the equipment.
- Do not place the product in a loose or vibrating place.
- During use, if the lamp has any abnormality, stop using the lamp immediately.
- To ensure the service life of the product, this product must not be placed in a humid or leaking place, and must not be operated in an environment with a temperature exceeding 60 degrees.
- When the bulb is in use, the power supply voltage change should not exceed $\pm 10\%$. If the voltage is too high, the life of the bulb will be shortened, and if the voltage is too low, the light color of the bulb will be affected.
- After a power outage, the lamp needs to be fully cooled down after 20 minutes before it can be powered on again.
- The rotating parts and adhesive accessories of the lamp must be checked regularly. If they are loose or shaking, they must be reinforced in time to prevent accidents.
- To ensure the normal use of this product, please read this instruction carefully.

1.3 Signal line connection

The lamp is equipped with a standard 3-core or 5-core XLR socket for DMX input and output. Please use a shielded twisted pair signal cable designed for DMX 512; the signal cable is generally connected at a distance of 150 meters. For long-distance signal transmission, a DMX512 signal amplifier must be added. Use a shielded twisted pair signal line to connect the DMX output port of the controller to the DMX input port of the first device, and connect the DMX output port of the first device to the DMX input port of the second device, and so on, until all the lamps are connected, and then install a terminal plug on the last 3-core jack of each connection lamp output. (Solder a 4/1W, 120 Ω resistor between the 2nd and 3rd pins of the 3-core pin XLR plug).

Control Panel

2.1 Button Description



“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 3 Panel button description diagram

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

1. If the current interface is not the main interface, press the "left" key (one or more times) to return to the main interface.
2. In 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 "DMX Address"
5. Press the "OK" button to enter the editing state
6. Press the "Up" or "Down" key to modify the DMX address code.
7. Press the "OK" key to exit the editing state

2.2 Menu Description



Figure 4 Main menu diagram

2.2.1 set up

Options	illustrate	
run	DMX	Slave state: receiving DMX signals from the console or host
	Self-propelled	Host status: self-propelled and sending DMX signals to slaves
	Voice control	
DMX Address	1~512	Press the "OK" key to enter the editing state. At this time, the hundreds digit is selected. Press the "Up" and "Down" keys to change the address code. Press the "OK" key again to select the tens digit for editing. Press the "OK" key again to select the ones digit for editing. Press it again to exit the editing state.
Motor reset	close	
	open	Lamp reset
aisle	Standard 16CH	Standard 16-channel mode
	Extension 20CH	Expanded 20-channel mode
language	English	Set to English interface
	Chinese	Set to Chinese interface
Screen flip	close	Front display
	open	Inverted screen display
X-Reverse	close	
	open	X motor direction rotates 540 degrees
Y Invert	close	
	open	Y motor direction rotates 270 degrees
XY Swap	close	
	open	Swap XY axis channels (including fine adjustment)
XY Encoder	open	Use encoder (photocoupler) to detect loss of step and automatically correct position
	close	Correction of position without encoder (photocoupler)
DMX signal	Keep	Continue to run as is
	Clear	The motor returns to its original position and stops running
Color Linear	open	Color wheel linear change
	close	Color wheel nonlinear change, half color change
Restore Defaults	open	
	close	Press the "OK" key to see the confirmation dialog box, press the "OK" key again to restore the default settings

2.2.2 Manual Control

This interface is used to control the current lamp (not receiving DMX signals), corresponding to the channel. For details, refer to the channel table

Options	illustrate	
1CH.	0~255	Press the "OK" key to enter the editing state. At this time, the hundreds place is selected. Press the "Up" and "Down" keys to change the channel value. Press the "OK" key again to select the tens place to edit. Press the "OK" key again to select the ones place to edit. Press again to exit the editing state
...	0~255	
15CH.	0~255	
...	0~255	

2.2.3 information

Options	illustrate	
Ver		Display software version
DIS		Display board software version
MT		Motor board software version
Time Information	1. Total bright bubbles 2. Total usage	Record the cumulative bright bubble time Record lamp usage time
System Error		If the red ERR indicator light is on, it means that the lamp is operating incorrectly. You can enter the sub-interface to view the details. After viewing, press the "Clear" button to clear the error record.
Blower speed		Displays the current blower speed
Hall state	0000	When magnetic field is detected, it is 0; otherwise, it is 1
X-coded step value	0000	When walking in the positive direction, the step value should increase, and when walking in the reverse direction, the step value should decrease. It is normal if the value is the same every time when going to the same point
Y-encoded step value	0000	When walking in the positive direction, the step value should increase, and when walking in the reverse direction, the step value should decrease. It is normal if the value is the same every time when going to the same point
Permission duration		9999 is not encrypted; other values can be encrypted

A. Error message description

Common error messages	illustrate
MT board connection failed	The motor board is not responding. There is a problem with the serial communication line connecting the display board and 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, the X-axis motor, or the motor board.
Y axis reset failed	There is a problem with the Y-axis photoelectric switch, the Y-axis motor, or the motor board.
X-axis Hall error	X-axis Hall or motor board has problems
Y-axis Hall error	Y-axis Hall or motor board has problems
Color wheel reset failed	There is a problem with the color plate Hall or the color plate motor
Pattern wheel reset failed	There is a problem with the pattern plate Hall or the pattern plate motor
Focus reset failed	There is a problem with the focus Hall or the focus motor
Lamp control failure	The light bulb fails to light up or extinguish. There is something wrong with the igniter or bulb.

2.2.4 factory

calibration	Data Download	After replacing the display board, download the calibration data of the original display board from the motor board
	X-axis	After entering the sub-interface, you can adjust the reset

	Y-axis	position of the X-axis, Y-axis and other motors to compensate for the error in hardware installation. The adjustment range is -128~+127, and +0 means no adjustment.
	color	
	pattern	
	focusing	
	Dimming	
	Prism 1 Zero Point	
	Prism 1 stroke	
	Prism 2 Zero Point	
	Prism 2 Travel	
	Atomization zero point	
	Atomization stroke	
	Colorful Mirror Zero Point	
	Colorful Mirror Tour	
	Clear	close
		On, data is restored to default value
	power	0-255 power adjustment
	X Hall	Off, X Hall error off
		Open, X Hall error open
	Y Hall	Close, Y Hall reported an error
		Open, Y Hall reported an error opening

Channel Function

3.1 Channel table

aisle	24-channel mode
1	Color Wheel
2	Cut light/strobe
3	Dimming
4	Gobo Wheel
5	Prism 1
6	Prism 1 rotation
7	Prism 2
8	Prism 2 Rotation
9	focusing
10	X
11	X-trim
12	Y
13	Y fine adjustment
14	XY Speed
15	Atomization & Colorful
16	Reset
17	Lamp Dimming
18	Lamp bead strobe

19	Lamp beads red
20	Lamp beads green
twenty one	Lamp beads blue
twenty two	Lamp color selection
twenty three	Lamp beads scene
twenty four	Lamp bead scene speed
25	
26	
27	
28	

Channel parameters (full version):

aisle	Function	Channel Value	Effect
1	Color Wheel	000 - 00 2	White light
		00 3 - 00 5	White light + color 1
		0 06 - 0 08	Color 1
		0 09 - 01 1	Color 1+Color 2
		0 12 - 0 14	Color 2
		015 - 017	Color 2 + Color 3
		018 - 020	Color 3
		021- 023	Color 3 + Color 4
		024 - 026	Color 4
		027 - 029	Color 4 + Color 5
		030 - 032	Color 5
		033 - 035	Color 5+Color 6
		036 - 038	Color 6
		039 - 041	Color 6+Color 7
		042 - 044	Color 7
		045 - 047	Color 7+Color 8
		048 - 050	Color 8
		051 - 053	Color 8+Color 9
		054 - 056	Color 9
		057 - 059	Color 9 + Color 10
		060 - 062	Color 10
		063 - 065	Color 10 + Color 11
		068 - 068	Color 11
		069 - 071	Color 11+Color 12
		072 - 074	Color 12
		075 - 077	Color 12 + Color 13
		078 - 080	Color 13
		081 - 083	Color 13 + Color 14
		084 - 086	Color 14
		087 - 089	Color 14 + Color 15
		090 - 092	Color 15
		093 - 095	Color 15 + Color 16
		096 - 098	Color 16
		099 - 101	Color 16 + Color 17
		102 - 104	Color 17
		105 - 107	Color 17 + Color 18
		108 - 110	Color 18
		111 - 113	Color 18 + Color 19
		114 - 116	Color 19
		117 - 119	Color 19 + Color 20

		120 - 122 123 - 125 126 - 128 129 - 131 132 - 193 194 - 255	Color 20 Color 20 + Color 21 Color 21 Color 21+white light Reverse water flow (from fast to slow) Forward water flow (from slow to fast)
2	Strobe	000-003 004-103 104-107 108-207 208-212 213-251 252-255	Shutter closed Strobe from slow to fast Shutter opens → (controlled by dimming channel) Pulse strobe from slow to fast Shutter opens → (controlled by dimming channel) Random strobe from slow to fast Shutter opens → (controlled by dimming channel)
3	Dimming	000-255	From dark to light
4	Gobo Wheel	000 - 002 003 - 005 006- 008 009 - 011 012 - 014 015 - 017 018 - 020 021 - 023 024 - 026 027 - 029 030 - 032 033- 035 036- 038 039 - 041 042 - 044 045 - 047 048 - 050 051 - 053 054 - 056 057 - 059 060 - 062 063 - 065 066 - 068 069 - 071 072 - 074 075 - 077 078 - 080 081 - 083 084 - 086 087 - 089 090 - 092 093 - 095 096 - 098 099 - 101 102 - 104 105 - 107 108 - 110 111 - 113 114 - 116 117 - 119 120 - 122 123 - 125 126 - 128 129 - 131	Solid Figure 1 Solid Figure 2 Solid Figure 3 Solid Figure 4 Solid Figure 5 Solid Figure 6 Solid Figure 7 Solid Figure 8 Solid Figure 9 Solid Figure 10 Solid Figure 11 Solid Figure 12 Solid Figure 13 Solid Figure 14 Solid Figure 15 Solid Figure 16 Solid Figure 17 Solid Figure 18 Solid Figure 19 Solid Figure 20 Solid Figure 21 Solid Figure 22 Solid Figure 23 Solid Figure 24 Solid Figure 25 Solid Figure 26 Solid Figure 27 Solid Figure 28 Solid Figure 29 Solid Figure 30 Solid picture 1 jitter (from slow to fast) Solid picture 2 jitter (from slow to fast) Solid picture 3 jitter (from slow to fast) Solid picture 4 jitter (from slow to fast) Solid picture 5 jitter (from slow to fast) Solid picture 6 jitter (from slow to fast) Solid picture 7 jitter (from slow to fast) Solid picture 8 jitter (from slow to fast) Solid picture 9 jitter (from slow to fast) Solid picture 10 jitter (from slow to fast) Solid Figure 11 Jitter (from slow to fast) Solid Figure 12 Jitter (from slow to fast) Solid Figure 13 Jitter (from slow to fast) Solid Figure 14 Jitter (from slow to fast)

		132 - 134 135 - 137 138 - 140 141 - 143 144 - 146 147 - 149 150 - 152 153 - 155 156 - 158 159 - 161 162- 164 165 - 167 168 - 170 171- 173 174 - 176 177 - 179 180 - 217 218 - 255	Solid picture 15 jitter (from slow to fast) Solid picture 16 jitter (from slow to fast) Solid Figure 17 Jitter (from slow to fast) Solid picture 18 jitter (from slow to fast) Solid Figure 19 Jitter (from slow to fast) Solid picture 20 jitter (from slow to fast) Solid Figure 21 Jitter (from slow to fast) Solid Figure 22 Jitter (from slow to fast) Solid Figure 23 Jitter (from slow to fast) Solid picture 24 jitter (from slow to fast) Solid picture 25 jitter (from slow to fast) Solid Figure 26 Jitter (from slow to fast) Solid Figure 27 Jitter (from slow to fast) Solid picture 28 jitter (from slow to fast) Solid Figure 29 Jitter (from slow to fast) Solid picture 30 jitter (from slow to fast) Forward water flow (from fast to slow) Reverse flow (from slow to fast)
5	Prism 1	000-127 128-255	Prism 1 pop-up Prism 1 cut-in
6	Prism 1 rotation	000-127 128-190 191-192 193-255	Prism 1 angle adjustment Reverse rotation (fast to slow) stop Forward rotation (from slow to fast)
7	Prism 2	000-127 128-255	Prism 1 pop-up Prism 1 cut-in
8	Prism 2 Rotation	000-127 128-190 191-192 193-255	Prism 2 angle adjustment Reverse rotation (fast to slow) stop Forward rotation (from slow to fast)
9	focusing	000-255	Pattern clarity from far to near
10	X-axis	000-255	Horizontal 540 degree scanning
11	X-axis fine adjustment	000-255	Horizontal 1.2 degree fine adjustment
12	Y-axis	000-255	Vertical 270 degree scanning
13	Y-axis fine adjustment	000-255	Vertical 1.2 degree fine adjustment
14	XY Speed	000-255	Speed from fast to slow
15	Atomization & Colorful	000-127 128--255	none Colorful or atomized cut-in
16	Reset	000-025 026-050 061-085 251-255	No, no action will be taken in areas without specified functions Small motor reset XY motor reset All motors reset
17	Light ring dimming	000-255	Light ring dimming, from dark to bright
18	Light ring strobe	000-003 004-103 104-107 108-207 208-212 213-251 252-255	Shutter Open Strobe from slow to fast Shutter opens → (controlled by dimming channel) Pulse strobe from slow to fast Shutter opens → (controlled by dimming channel) Random strobe from slow to fast Shutter opens → (controlled by dimming channel)
19	Light ring red	000-255	From dark to light
20	Light ring green	000-255	From dark to light
twenty one	Light ring blue	000-255	From dark to light

twenty two	Light ring color selection	0 - 9 10 - 255	invalid Light ring color macro
twenty three	Light ring effect	000-014 015-08909 0-209210-2 24225-239 240-255	Invalid scene effect 1 (red, green, blue can be used as background color) scene effect 2 (colorful horse racing effect) scene effect 3 (random color of lamp beads) light ring jump light ring gradient
twenty four	Light ring effect speed	000-127 128-255	Forward horse racing: from slow to fast Reverse horse racing: from fast to slow
25	reserve	000-255	Speed from fast to slow
26	Color wheel speed		
27	Dimming-Prism-Atomization Speed		
28	Gobo Speed		

Common Failures

Corresponding solutions are proposed for some common faults. Any unsolvable problems should be handled by professionals. Please disconnect the power supply before maintaining the lamp.

Light bulb is not working

- Check whether the voltage matching the lamp is installed;
- Check whether the power supply connection of the lamp or the control switch has poor contact;
- Check if the power supply is insufficient;
- Check whether the DMX512 controller has sent any instructions.

The lamp does not accept the control of the console after normal reset

- Check whether the digital start address value and function options of the lamp 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 device is faulty, and check whether the signal amplifier connected in series is faulty;
- Check whether the communication line is too long or there is interference from other devices;
- Optimize wiring, shorten the length of control signal lines, and separate high-voltage and low-voltage lines;
- Add a signal amplifier;
- The signal line uses high-quality shielded twisted pair cable;
- Connect the signal terminal resistor (120 ohms) at the end of the lamp.

The lamp cannot be turned on

- Check whether the power supply parameters are consistent with the lamp;
- Check whether the lamps have poor contact due to extrusion deformation, internal parts vibration, moisture, etc. during long-distance transportation.

Or fall off.

- Please check whether the wires and connectors inside the lamp are falling off or loose.
- Check whether the electronic components of the lamp (such as electronic transformer, PCB board, motor control board, etc.) are loose, short-circuited or burned out.

When working, the X-axis or Y-axis of the lamp does not move normally.

- Check one by one according to the previous steps;
- Check whether the transmission belts corresponding to the X and Y axis directions in the lamp are falling off or broken;
- Check whether the data feedback receiver (optical coupler) corresponding to the X and Y directions in the lamp is damaged;
- Restart the computer and reset it again.

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.