

CE

LB100IP



User Manual

KEEP THIS MANUAL FOR FUTURE NEEDS

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1. Safety Instructions



WARNING

Please read the instruction carefully which includes important information about the installation, usage and maintenance.

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

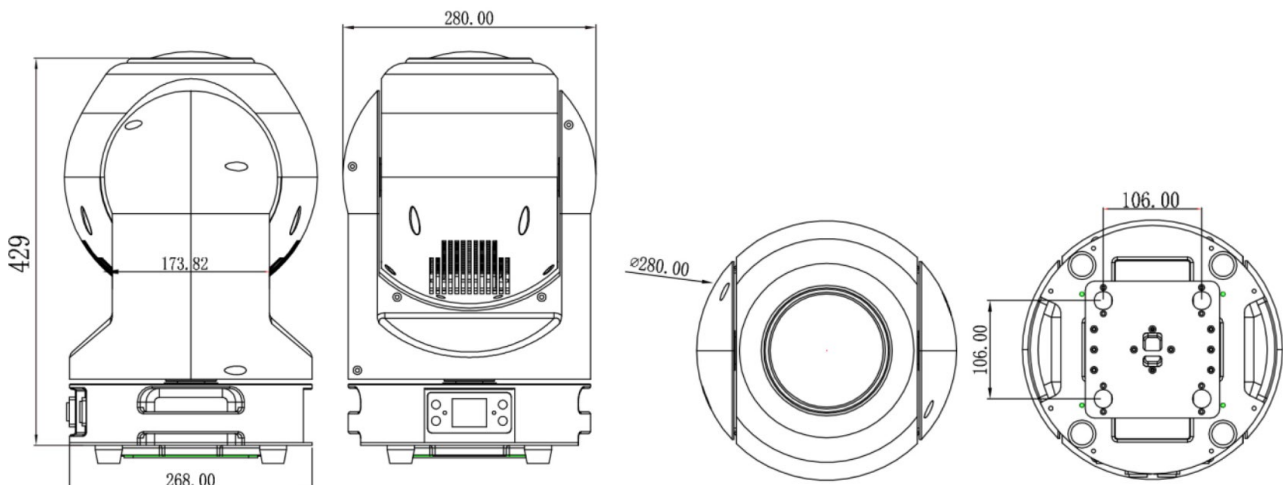
- Unpack and check carefully to ensure that there is no transportation damage before using the unit.
- This product is suitable for wet locations. Do not immerse in water.
- DO install and operate by qualified operator.
- DO NOT allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked, otherwise the unit will be overheated.
- Before operation, ensure that you are connecting this product to the proper voltage in accordance with the specifications in this manual or on the product's specification label.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Minimum ambient temperature TA: -10°C. Maximum ambient temperature TA: 40°C. Do not operate this product at a lower or higher temperature.
- DO NOT connect the device to any dimmer pack.
- During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.
- Keep flammable materials away from the fixture while operating to avoid fire hazard.
- Make sure the power cord is not crimped or damaged; replace it immediately if damaged.
- Unit's surface temperature may reach up to 75°C. DO NOT touch the housing bare-handed during its operation.
- Avoid any flammable liquids, water or metal from entering the unit. Once it happens, cut off the mains power immediately.
- DO NOT operate in a dirty or dusty environment.
- DO clean the fixture regularly.
- DO NOT touch any wire during operation as there might be a hazard of electric shock.
- Avoid entanglement of the power cord with other wires.
- The minimum distance to objects/surface must be more than 24 meters.
- Replace fuse/lamp only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- DO NOT open the housing as there are no user serviceable parts inside.
- DO NOT attempt to operate this unit if it becomes damaged.
- DO NOT attempt any repairs yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect this product from its power source before servicing.

- DO use the original packaging if the device is to be transported.
- Turn off the power and allow approximately 15 minutes for the fixture to cool down before servicing.
- DO replace the bulb once it is damaged, deformed or life-expired.
- Avoid direct eye exposure to the light source while the product is on.
- Never touch the bulb with bare fingers, as it may be hot.
- DO NOT operate this product if you see damage on the housing, shields, or cables. Have the damaged parts replaced by an authorized technician at once.

2. Technical Specifications

- Input Voltage: AC110-240V, 50/ 60Hz
- Light Source: 100W Laser Engine + 36pcs 0.5W RGB 3in1 LED
- Power Consumption: 150W
- Life Span: $\geq 20,000$ H
- LEN Diameter: 126mm
- Beam Angle: 1.2°
- Static Gobo: 29 static Gobos + Open
- Colors: 21 colors + Open
- Prism: Linear Prism and 8-facet Prism with bi-directional rotating at variable speeds
- Focus: 0-100% Linear Focus
- Frost: 0-100% linear Frost
- Strobe: 1-25HZ shutter with speed adjust
- Movement: 540° pan and 270° tilt movement , 16 bit smooth and precise resolution for PAN/TILT movement
- Control Mode: DMX 512, Master/Slave, Work Auto, Sound Activated , Support RDM control
- DMX Channels: 24/28 DMX Channels
- DMX Connector: 3-PIN IP XLR IN/OUT
- Software update: Easy to update Via DMX Connector
- Sleep mode: When disconnect DMX, the fixture returns to sleep mode automatically
- Body Structure: Aluminum Alloy Die-Cast + plastic
- Working Environment: $-20^\circ\text{C} \sim 45^\circ\text{C}$
- IP Rate: IP65 waterproof grade design
- Product Size: 280x268x429mm
- Packing Size: 545x375x380mm
- N.W: 15kgs
- G.W: 16.30kgs

Dimension:



3. DMX 512 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.

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

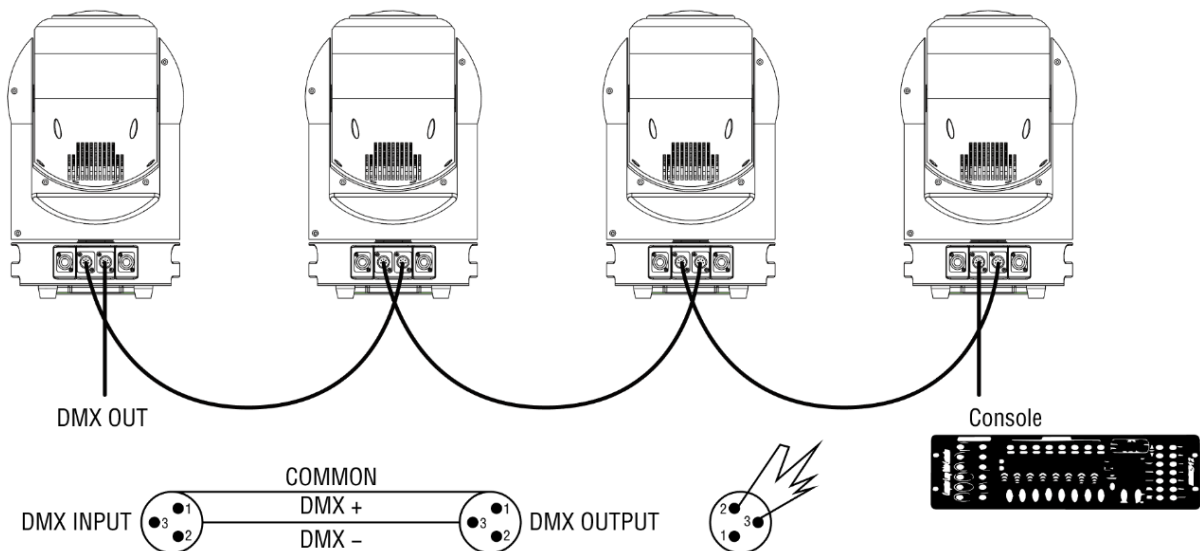
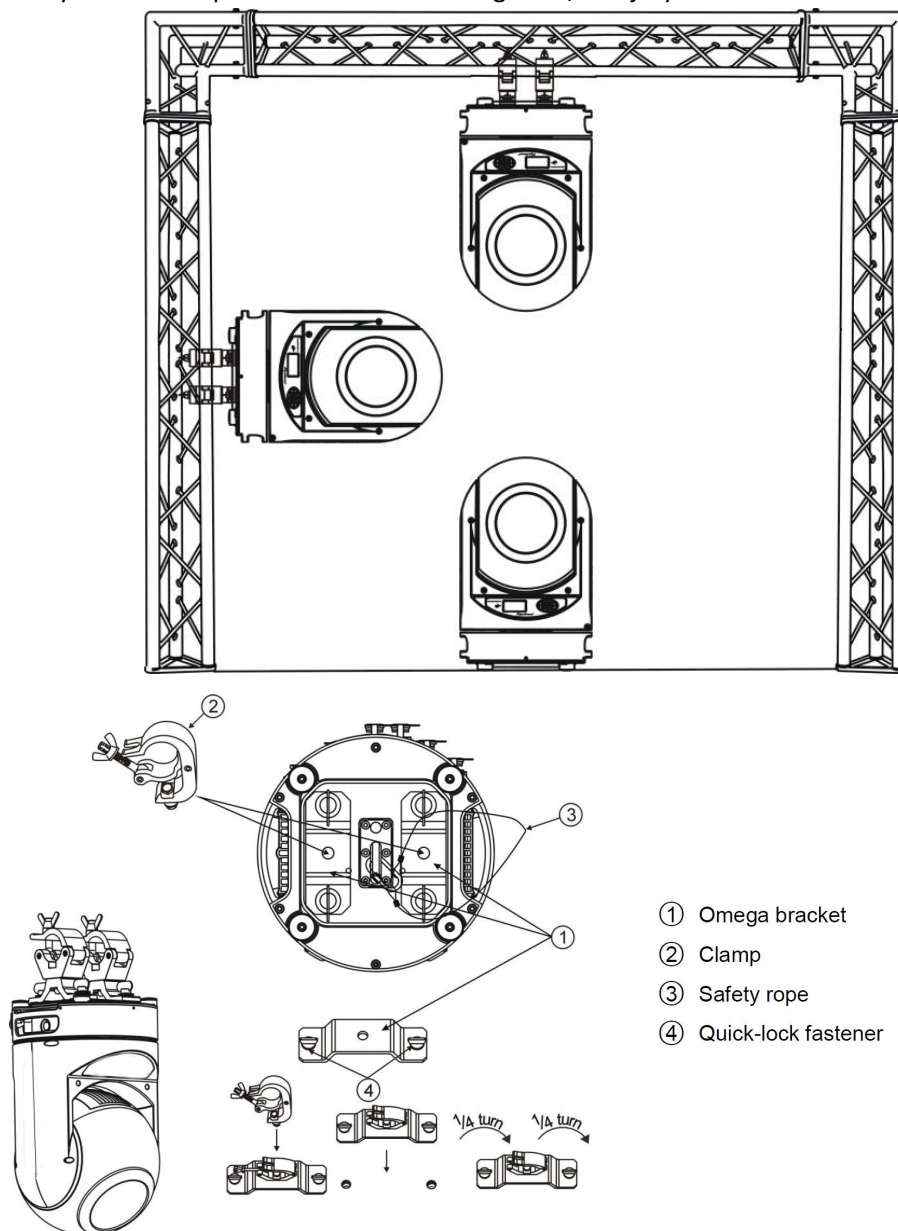


Figure 1 Schematic diagram of DMX signal wire connection

1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
 2. Connect the unit together in a “daisy chain” by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
 3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units’ power is disconnected.
 4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 1-512.
 5. The end of the DMX 512 system should be terminated to reduce signal errors.
 6. 3 pin XLR connectors are more popular than 5 pins XLR.
 - 3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
 - 5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.
- 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)

4. Fixture Installation

- DO install and operate by qualified operator. Fixture(s) should be installed in areas outside walking paths, seating areas, or away from areas where unauthorized personnel might reach the fixture by hand. NEVER stand directly below the fixture(s) when rigging, removing or servicing.
- Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always attach a safety cable that can hold at least 12 times the weight of the fixture whenever installing this fixture in a suspended environment to ensure that the fixture will not fall if the clamp fails.
- This fixture is fully operational in two different mounting positions: hanging upside-down or standing on the floor. We don't suggest to mount it sideways on trussing. Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.



Caution: For security reasons, you need to loop and wrap safety cables through fixture base handle and route and wrap through center bracket on fixture base (A). or pull the safety cables through the handle and around the truss (B).

The safety cable must be secured to keep from interfering with the pan and tile movement of the fixture.

Figure 2 Schematic diagram of the lamp hanging upside down1

5. Control panel

5.1 Key Instructions

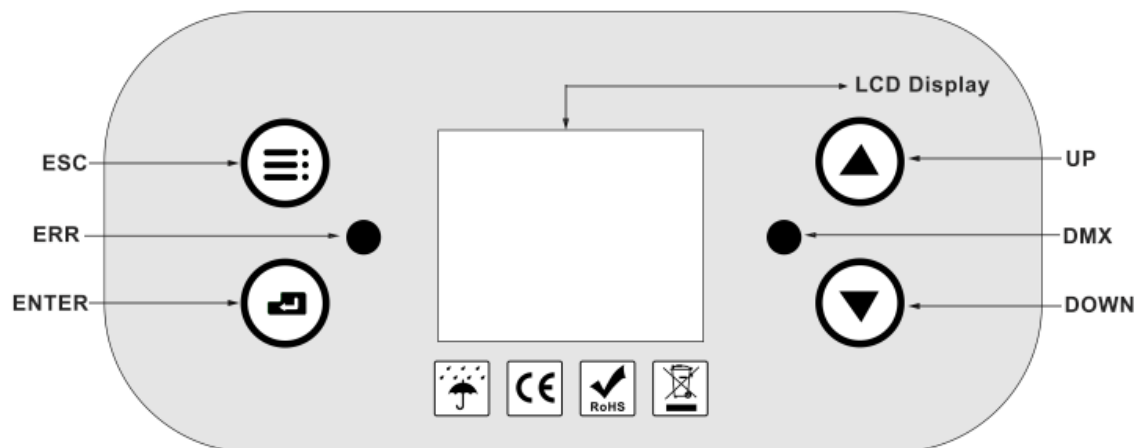








Figure 3 Schematic diagram of key description on the panel

 DMX	DMX Signal
 ERR	Error Signal
 UP	UP button
 DOWN	DOWN button
 ESC	Exit or Return button
 ENTER	Enter or Confirm the desired functions

- Turn on the unit, press the ESC button, enter the password UP-UP-DOWN-DOWN into menu mode
- Press the UP/DOWN button until the required function is shown on the monitor.
- Select the function by pressing the ENTER button.
- Use the UP/DOWN button to choose the submenu
- Press the ENTER button to store and automatically return to the last menu.
- Press the ESC button or let the unit idle 30 seconds to exit menu mode.
- The screen will be automatically locked if there is no operation for a long time, and can be unlocked by pressing the ESC button and enter the password again.

5.2 Menu Description

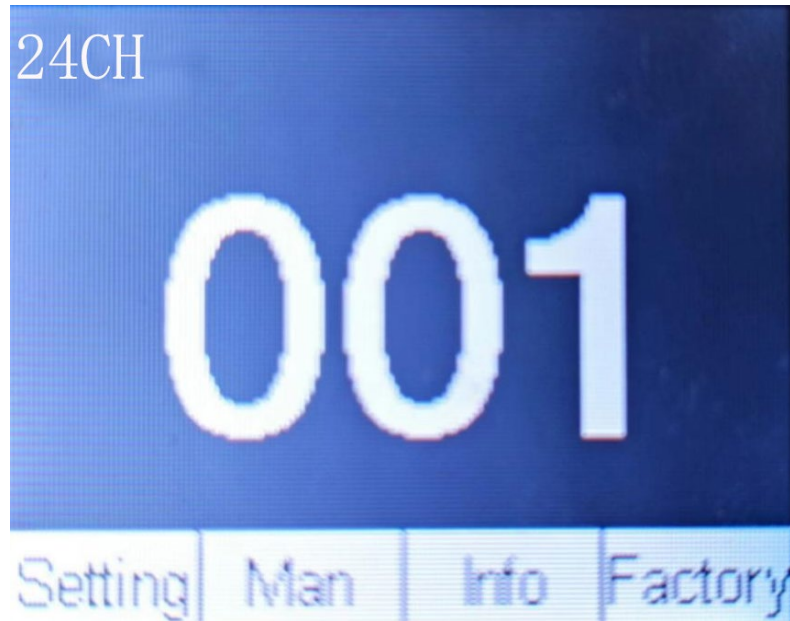


Figure 4 Schematic diagram of main menu

5.2.1 Settings

Options	Instructions		
Run Mode	DMX	DMX Control Mode	
	Scene	Running by the preset Scene Program	
	Sound	Sound Activated Mode	
	AUTO	Work Auto by preset program	
Scene Set	Scene Select	01-20	Scene select from 01-20, Total for 20 Scene
	Scene Time	000-255	Scene Time setting from 000-255
	Auto Run	On	Auto Run ON
		Off	Auto Run Turn Off
	Color	000-255	Manual Control the DMX Channels , Press UP or DOWN to choose the desire value from 000-255 ,Press Enter to confirm or Press Menu to exit
	Shutter&Strobe	000-255	
	Dimmer	000-255	
	Gobo	000-255	
	Prism1	000-255	
	Prism 1 Rotation	000-255	
	Prism2	000-255	
	Prism2 Rotation	000-255	
	Focus	000-255	
	Pan	000-255	
	Pan Fine	000-255	
	Tilt	000-255	
	Tilt Fine	000-255	
	Pan Tilt Time	000-255	
	Frost & Rainbow	000-255	
	RFU	000-255	

	LedDimmer	000-255	
	LedStrobe	000-255	
	Led Red	000-255	
	Led Green	000-255	
	Led Blue	000-255	
	Led Function	000-255	
	Led Scene	000-255	
	Led scene Speed	000-255	
DMX Address	001-512	Press "Enter" to enter the editing state. At this time, the hundreds digit is selected, and press the "up" and "down" keys to change the address code. Press the "Enter" key again to select the tens edit. Press "Enter" again to select the ones edit. Press again to exit the editing state	
Device Reset	OFF	Keep the present setting	
	ON	Light fixture reset	
Channel Mode	24CH	Standard 24 channel mode	
	28CH	28 channels mode	
Language	English	Set to English interface	
	Chinese	Set to the Chinese interface	
ScreenRotation	OFF	Front display	
	ON	Screen inverted display	
Invert Pan	OFF	Keep the Pan clockwise movement	
	ON	Pan Invert Movement	
Invert Tilt	OFF	Keep the Tilt clockwise movement	
	ON	Tilt Invert Movement	
Pan-Tilt Swap	OFF	Keep the present Pan Tilt Movement	
	ON	Channel to swap XY axes (incl. trims)	
Pan-Tilt Encoder	ON	Use the encoder (optocoupler) to determine the out-of-step and automatically correct the position	
	OFF	Correct position without using an encoder (optocoupler)	
DMX signal	Keep	Continue running in its original state	
	CLEAR	Turn the Signal back and stop running	
Linear color	ON	The color wheel changes linearly	
	OFF	Color wheel nonlinear change, half-color change	
ClearsSeneData		Clear Scene Data	
Load Default		Load and back to the default setting	

5.2.2 Manual control

This interface is used to control the current luminaire (does not receive DMX signals), corresponding to the channel. Refer to the channel table for details

Options	Instructions	
01. Color	000-255	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
02. Shutter&Strobe	000-255	
03. Dimmer	000-255	
04.Gobo	000-255	

05. Prism 1	000-255	the editing state
06. Prism 1 Rotation	000-255	
07. Prism 2	000-255	
08. Prism 2 Rotation	000-255	
09. Focus	000-255	
10. Pan	000-255	
11. Pan Fine	000-255	
12. Tilt	000-255	
13. Tilt Fine	000-255	
14. Pan-Tilt Time	000-255	
15. Frost & Rainbow	000-255	
16. Reset	000-255	
17.LedDimmer	000-255	
18.LedStrobe	000-255	
19.Led Red	000-255	
20.Led Green	000-255	
21. Led Blue	000-255	
22. Led Function	000-255	
23.Led Scene	000-255	
24.Led Scene Speed	000-255	

5.2.3 Information

Options	Instructions	
Ver	T195E-V.241217	Show software version
DIS	V. 8.3.1. 241228	Display board software version
MT:	V. 8.3.1. 241227	Motor board version
Time information	Total Lamp	Record the cumulative bright-bubble time
	Total User	Record the lighting working time
System Warning		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
Turbo FanSpeed		Record Fan Speed
Hall State	0000	0 when magnetic is detected, 1 otherwise
Panwheel Step	0000	The number of steps should increase for forward travel and decrease for reverse travel. The number should be normal every time you reach the same point
Tiltwheel Step	0000	The number of steps should increase for forward travel and decrease for reverse travel. The number should be normal every time you reach the same point
Authority Hours		9999 No encryption; Other values can be used with encryption

A. Error message description

Common error message	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 a problem with the motor board
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
Bulb control failure	Failure to light or extinguish bubbles, lamplighter or bulb problem

5.2.4 Factory (UP-DOWN-UP-DOWN)

Calibrate	FanSet(Test)	Fan Set
		Fan1 Speed
		Lamp Fan Low (ON/OFF)
	Data Download	After changing the display board, download the calibration data of the original display board from the motor board
	Pan	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.
	Tilt	
	Color	
	Gobo	
	Focus	
	Dimmer Zero	
	Dimmer Offset	
	Prism 1 Zero	
	Prism 1 Cal	
	Prism 1 Rt	
	Prism 2 Zero	
	Prism 2 Cal	
	Frost Zero	
	Frost	
	Rainbow Cal	
	Clear	OFF
		ON, the data is restored to default values
	X Hall	OFF, X Hall report wrong off
		ON, X Hall reports the wrong off
	Y Hall	OFF, Y Hall reports wrong off
		ON, Y Hall reports an error
	Power	000-255 adjustment

6.DMX Channels

Channels		Function	Value	Description
28CH	24CH			
1	1	Color Wheel	0-2	Open
			3-5	Open + Color 1
			6-8	Color 1
			9-11	Color 1 + Color 2
			12-14	Color 2
			15-17	Color 2 + Color 3
			18-20	Color 3
			21-23	Color 3 + Color 4
			24-26	Color 4
			27-29	Color 4 + Color 5
			30-32	Color 5
			33-35	Color 5 + Color 6
			36-38	Color 6
			39-41	Color 6 + Color 7
			42-44	Color 7
			45-47	Color 7 + Color 8
			48-50	Color 8
			51-53	Color 8 + Color 9
			54-56	Color 9
			57-59	Color 9 + Color 10
			60-62	Color 10
			63-65	Color 10 + Color 11
			66-68	Color 11
			69-71	Color 11 + Color 12
			72-74	Color 12
			75-77	Color 12 + Color 13
			78-80	Color 13
			81-83	Color 13 + Color 14
			84-86	Color 14
			87-89	Color 14 + Color 15
			90-92	Color 15
			93-95	Color 15 + Color 16
			96-98	Color 16
			99-101	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	Color 20
			123-125	Color 20 Color 21
			126-128	Color 21
			129-131	Color 21+ Open
			132-193	Invert rotation from fast to slow
			194-255	Forward rotation from slow to fast
2	2	Strobe	0-3	Closed
			4-103	Strobe from slow to fast
			104-107	Open
			108-207	Pulse Strobe from slow to fast
			208-212	Open

			213-251	Random Strobe from slow to fast
			252-255	Open
3	3	Dimmer	0-255	0-100% Linear Dimmer
4	4	Gobo	0-2	Open
			3-5	Gobo 1
			6-8	Gobo 2
			9-11	Gobo 3
			12-14	Gobo 4
			15-17	Gobo 5
			18-20	Gobo 6
			21-23	Gobo 7
			24-26	Gobo 8
			27-29	Gobo 9
			30-32	Gobo 10
			33-35	Gobo 11
			36-38	Gobo 12
			39-41	Gobo 13
			42-44	Gobo 14
			45-47	Gobo 15
			48-50	Color 16
			51-53	Gobo 17
			54-56	Gobo 18
			57-59	Gobo 19
			60-62	Gobo 20
			63-65	Gobo 21
			66-68	Gobo 22
			69-71	Gobo 23
			72-74	Gobo 24
			75-77	Gobo 25
			78-80	Gobo 26
			81-83	Gobo 27
			84-86	Gobo 28
			87-89	Gobo 29
			90-92	Open White Shake from Slow to Fast
			93-95	Gobo 1 Shake from Slow to Fast
			96-98	Gobo 2 Shake from Slow to Fast
			99-101	Gobo 3 Shake from Slow to Fast
			102-104	Gobo 4 Shake from Slow to Fast
			105-107	Gobo 5 Shake from Slow to Fast
			108-110	Gobo 6 Shake from Slow to Fast
			111-113	Gobo 7 Shake from Slow to Fast
			114-116	Gobo 8 Shake from Slow to Fast
			117-119	Gobo 9 Shake from Slow to Fast
			120-122	Gobo 10 Shake from Slow to Fast
			123-125	Gobo 11 Shake from Slow to Fast
			126-128	Gobo 12 Shake from Slow to Fast
			129-131	Gobo 13 Shake from Slow to Fast
			132-134	Gobo 14 Shake from Slow to Fast
			135-137	Gobo 15 Shake from Slow to Fast
			138-140	Gobo 16 Shake from Slow to Fast
			141-143	Gobo 17 Shake from Slow to Fast
			144-146	Gobo 18 Shake from Slow to Fast
			147-149	Gobo 19 Shake from Slow to Fast
			150-152	Gobo 20 Shake from Slow to Fast
			153-155	Gobo 21 Shake from Slow to Fast

			156-158	Gobo 22 Shake from Slow to Fast
			159-161	Gobo 23 Shake from Slow to Fast
			162-164	Gobo 24 Shake from Slow to Fast
			165-167	Gobo 25 Shake from Slow to Fast
			168-170	Gobo 26 Shake from Slow to Fast
			171-173	Gobo 27 Shake from Slow to Fast
			174-176	Gobo 28 Shake from Slow to Fast
			177-179	Gobo 29 Shake from Slow to Fast
			180-217	Forward rotation from fast to slow
			218-255	Invert rotation from slow to fast
5	5	Prism 1	0-127	No Function
			128-255	Prism Insert
6	6	Prism 1 Rotation	0-127	Prism rotation to any position
			128-190	Invert rotation from fast to slow
			191-192	Stop
			193-255	Forward rotation from slow to fast
7	7	Prism 2	0-127	No Function
			128-255	Prism Insert
8	8	Prism2 Rotation	0-127	Prism rotation to any position
			128-190	Invert rotation from fast to slow
			191-192	Stop
			193-255	Forward rotation from slow to fast
9	9	Focus	0-255	Focus from far to near
10	10	Pan	0-255	540° Pan Movement
11	11	Pan Fine	0-255	1.2 ° Pan fine Adjustment
12	12	Tilt	0-255	270° Tilt Movement
13	13	Tilt Fine	0-255	1.2 ° Tilt fine Adjustment
14	14	XY Speed	0-255	Pan/Tilt speed from fast to slow
15	15	Frost	0-127	No Function
			128-255	Frost insert
16	16	Reset	0-25	No Function
			26-50	Reset Effect
			61-85	Reset XY
			251-255	Reset All
17	17	LED Ring Dimmer	0-255	0-100% LED Ring Linear Dimmer
18	18	LED Ring Strobe	0-3	Closed
			4-103	Strobe from slow to fast
			104-107	Open
			108-207	Pulse Strobe from slow to fast
			208-212	Open
			213-251	Random Strobe from slow to fast
			252-255	Open
19	19	LED Ring-Red	0-255	0-100% LED Ring-Red Dimmer
20	20	LED Ring-Green	0-255	0-100% LED Ring-Green Dimmer
21	21	LED Ring-Blue	0-255	0-100% LED Ring-Blue Dimmer
22	22	LED Macro Color	0-9	No function
			10-255	Macro Color for LED Ring
23	23	Preset Effect for LED	0-14	No Function
			15-89	Scene Effect 1 (R,G,B Color)
			90-209	Scene Effect 2 (RGB Color Mixing Chasing)
			210-224	Scene Effect 3 (Random Color Effect)
			225-239	Color Step Change
			240-255	Color Gradual Change

24	24	Speed for LED Preset Effect	0-127	Color Forward chasing from slow to fast
			128-255	Color Invert chasing from fast to slow
25		Reserved	0-255	No Function
26		Color Wheel Speed	0-255	Speed from fast to slow
27		Dimming –Prism-Frost speed	0-255	
28		Gobo Speed	0-255	

7.Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

The light bulb is not working

- Check 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 the DMX512 controller is sending instructions.

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 adopts high quality shielded twisted pair wire;
- Connect the signal terminal resistor (120 ohms) at the end of the lamp.

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 of the lamp has fallen off and is 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.

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.

8.Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth and use normal glass to clean liquid.
- Always dry the parts carefully. □ Clean the external optics at least every 20 days.
- Clean the internal optics at least every 30 days.