C1 -600BSW/IP

600W IP 3IN1 BSW MOVING HEAD

USER MANUAL

Read the instructions carefully before use

Catalogues

1. Precautions and Installation Precautions and Installation

1.1 Statements

Thank you for choosing our products! This product comes out of the factory with perfect performance and intact packaging. For your safe and effective use of this product, please read this instruction manual carefully and completely before you use this product. This manual contains important information for installation and use. Please install and operate in accordance with the requirements of the manual. Also, please keep this manual properly for use at any time. Our company shall not be held responsible for any damage to the lamp or other performance caused by an individual's failure to follow the instructions during installation, use or maintenance.

Technical changes to this manual will not be notified separately.

1.2 Maintenance and Servicing

- Disconnect the power supply before performing maintenance.
- This luminaire should be kept dry and avoid working in damp conditions.
- Intermittent use will effectively extend the lifespan of this lamp.
- To achieve good ventilation and lighting effects, it is necessary to pay attention to frequently cleaning the fan, fan mesh and lenses.
- Do not wipe the lamp housing with organic solvents such as alcohol to avoid damage.

1.3 Product Precautions

- This luminaire is for professional use only.
- Make sure the power supply voltage matches the power supply voltage required by the equipment before operation.
- Do not place this product in a place that is loose or prone to vibration.
- If the lamp malfunctions during use, stop using it immediately.
- To ensure the lifespan of the product, do not place this product in a damp or leaking area, and do not work in an environment with a temperature above 60 degrees.
- When the bulb is in use, the power supply voltage should not change by more than ±10%. A voltage that is too high will shorten the bulb 's lifespan, and a voltage that is too low will affect the color of the bulb' s light.
- After the power is cut off, the lamp should be fully cooled for 20 minutes before it can be powered on again.
- The rotating parts of the lamp and the attached accessories must be inspected regularly. Any looseness or shaking should be reinforced in time to prevent accidents.
- For the normal use of this product, please read this instruction carefully.

1.4 Product Description

- Input voltage:AC100-240V.50/60Hz
- Limit power:700W
- Light source:600 LED module
- Life of light source: 20,000 hours
- Color temperature: 6500K

- Color rendering index: Ra≥70
- Control mode: DMX512.RDM
- Channel mode: 25international standard DMX512 channels
- Display system: 2.5-inch touch LCD, Chinese and English display, 180degree rotation
- Fixed Color; 6 colors + white light
- Color mixing system: Independent CMY color mixing system
- Color temperature adjustment: Independent CTO 2700-6500K linearadjustment
- Prism disk: Rotate 8 prisms +5 rows of mirrors
- Fixed pattern: 5 fixed pattern pieces + white circles+Flow effect pan
- Rotating pattern: 7 rotating pattern pieces (pluggable) with outer diameter of22.9mm, effective diameter of 11mm + white circle
- Atomizing system: light atomizing tablet
- Zoom system:6.5~ 35°～41° （Expand the white light Angle） linear focus
- Dimming system: 0-100% linear adjustent
- Stroboscopic system：fast stroboscopic,pulse stroboscopic
- Scanning: Horizontal scanning 540° ,vertical scanning 270°
- Protection level: IP66
- Working environment: 0-45C
- Product size: 380*275*640mm
- .Net weight: 22.5kg

1.5 Signal line connection

The luminaires have standard 3-pin or 5-pin XLR sockets for DMX input and output. Use a shielded twisted-pair signal cable specifically for DMX 512; The signal line 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 from the DMX output port of the controller to the DMX input port of the first device, and from 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. Then install a terminal plug on the last 3-core socket connected to the lamp output in each row. (Solder a 4/1W, 120Ω resistor between the 2 and 3 pins of a 3-pin XLR plug).

Important note: Wires must not touch each other or come into contact with the metal casing.

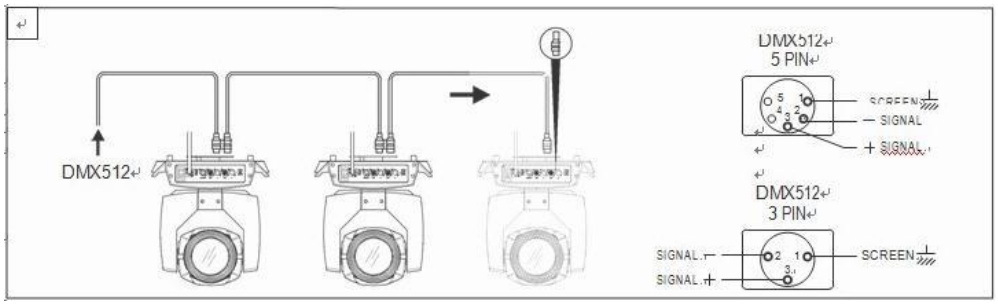

Figure 1 Schematic diagram of DMX signal line connection

➢ Method for calculating the starting address code of the luminaire:

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

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

2: The basic number of channels 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 lighting fixture must have its own starting address code, for example, if the starting address code of the first lighting fixture is set A001, the number of lighting fixture channels is 16CH; Then the starting address code for the second lighting fixture is set to A017; Set the starting address code for the third lamp to A033; And so on. (This setting may vary depending on the console.)

1.6 Luminaire installation

The lamps can be placed horizontally, hung diagonally or 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 luminaires, ensure the stability of the installation site. When installing the inverted hanging, make sure the luminaires do not fall off the support frame. Use safety ropes to pass through the support frame and the luminaires handle for auxiliary hanging to ensure safety. Figure 2 Schematic diagram of the upside-down lamp1Prevent the luminaires from falling and sliding.

Do not allow pedestrians to pass under the lamps during installation and commissioning, and regularly check for wear on the safety ropes and looseness on the hook screws.

Our company shall not be held responsible for any consequences resulting from the fall of the luminaires due to unstable hanging installation.

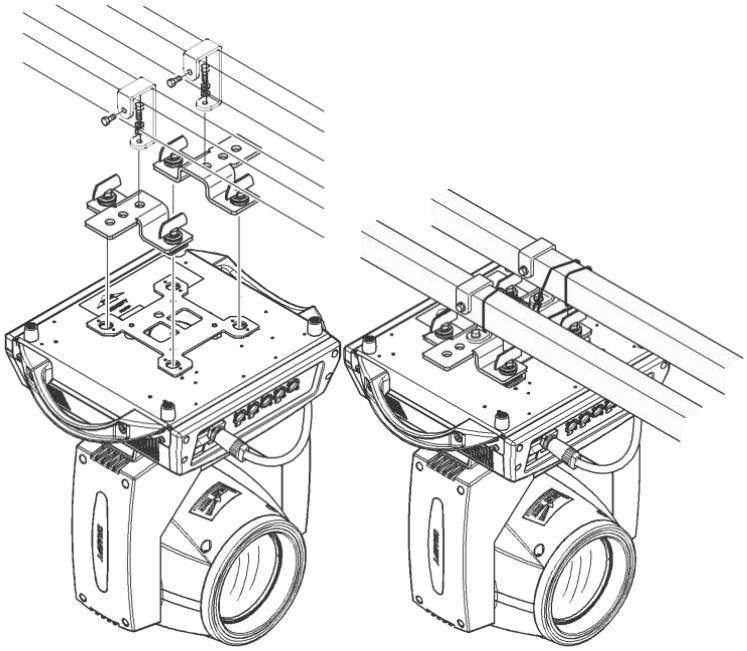

Figure 2 Schematic diagram of the upside-down lamp1

2. Control panel

2.1 Key Instructions

Figure 3 Schematic diagram of panel key instructions

The following is an example of "modifying the DMX address code" to illustrate how to use the keys:
1. If you are not on the main interface, press the left key (once or multiple 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. Under Settings, press Up or Down to select DMX Address.
5 Press the "OK" key to enter the editing mode
6 Press the Up key or down key to modify the DMX address code
7 Press the "OK" key to exit editing
8. Right-clicking on the main interface is the shortcut key to enter the calibration menu.

2.2 Menu Instructions

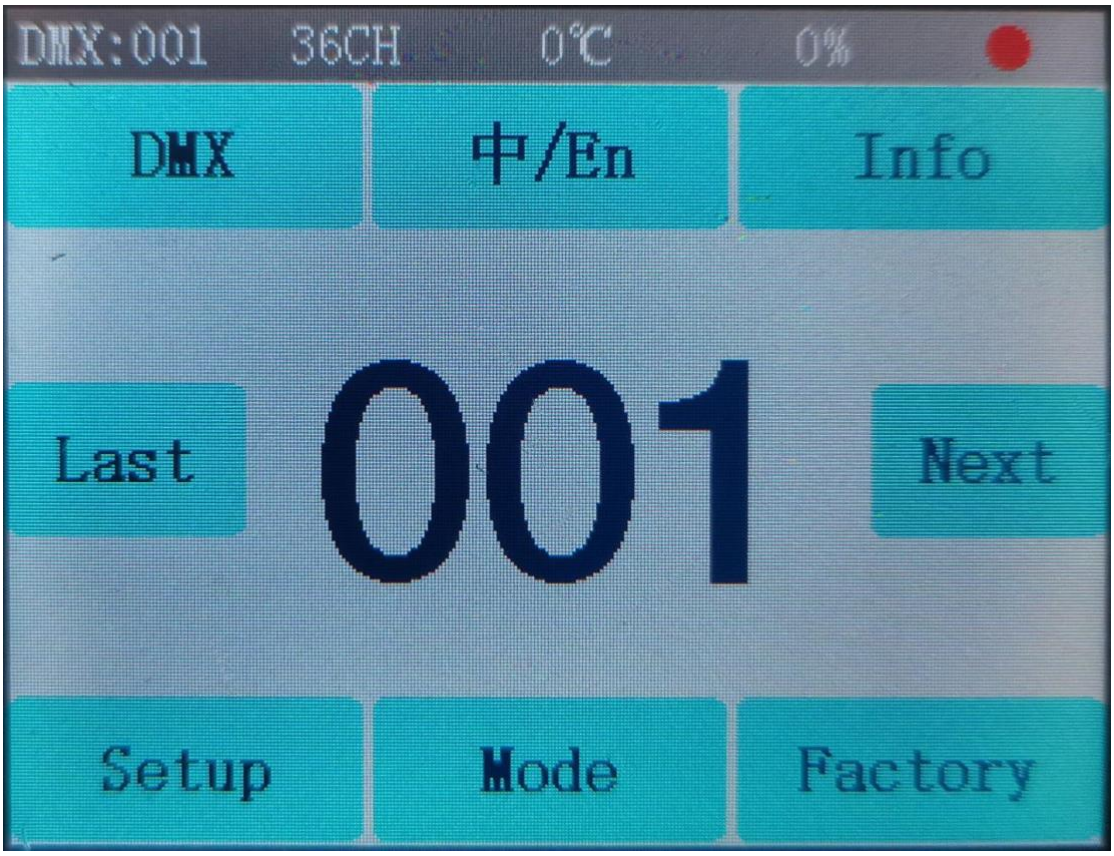

Figure 4 Schematic diagram of the main menu

2.2.1 DMX Settings

Key instructions: Pressing the up or down key is +1 or -1 mode; Press the previous or next one to quickly adjust the address code mode; Pressing the confirmation key is going back;

Press and hold the confirmation key to enter the numeric keypad selection. After selecting the number, press the confirmation key to enter the currentnumber. After entering the number you want, select the confirmation box and press the confirmation key to exit.

2.2.2 in /En

Switch between Chinese and English interfaces;

2.2.3 System Information

Options	Instructions	
System Version	Display panel	Display board software version
	XY board	Motor board software version

	Focusing plate	Motor board software version
System time	Total bright bubbles	Cumulative lighting time (accurate to minutes)
	This light up bubble	This lighting time (accurate to the minute)
	Total usage time	Cumulative usage time (accurate to minutes)
	Current usage time	Usage time since this startup (accurate to minutes)
	Date of manufacture	
	Permission duration	9999 represents unencrypted and can be used for a long time; Other numbers indicate the remaining usage time, encrypted;
Sensor monitoring	X Hall	0 when magnetic is detected and 1 otherwise
	Y Hall	0 when magnetic is detected and 1 otherwise
	Color disk Hall	0 when magnetic is detected and 1 otherwise
	Fix the pattern pan	0 when magnetic is detected and 1 otherwise
	Glass pattern Hall	0 when magnetic is detected and 1 otherwise
	The glass pattern rotates Hall	0 when magnetic is detected and 1 otherwise
	Focus Hall	0 when magnetic is detected and 1 otherwise
	Magnifying Hall	0 when magnetic is detected and 1 otherwise
	The status of the X-encoded disk	Two digits, each corresponding to a photoelectric switch on the encoding disk
	Y code disk status	Two digits, each corresponding to a photoelectric switch on the encoding disk
	The X-axis encodes the disk step value	When moving forward, the step value should increase; when moving backward, the step value should decrease. It is normal for the values to be the same each time you turn to the same point
	The Y-axis encodes disk step values	When moving forward, the step value should increase; when moving backward, the step value should decrease. It is normal for the values to be the same each time you turn to the same point
System error		If the red ERR indicator light is on, it indicates that the lamp is operating incorrectly. For more details, you can enter the subinterface from here. After viewing, press the "Clear" button to clear the error record
DMX channel value monitoring		Enter the subinterface from here, where channel values are displayed as numerical and percentage

		values for viewing

Common Error Messages	Instructions
MT board connection failed	The motor board did not respond. 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, or the X-axis motor or motor board
Failed Y-axis reset	There is a problem with the Y-axis photoelectric switch, or the Y-axis motor or motor board
X-axis Hall error	X-axis Hall, or there's a problem with the motor board
Y-axis Hall error	Y-axis Hall, or there's something wrong with the motor board
The color disk reset failed	Color disk Hall, or there is a problem with the color disk motor
Pattern disk reset failed	Pattern disk Hall, or there is a problem with the pattern disk motor
Focus reset failed	Focus Hall, or there is a problem with the focus motor

2.2.4 Lamp Settings

Options	Explanation	
DMX channel	26CH/36CH	Channel mode switching
Language	Chinese	Set the interface to Chinese
	English	Set the interface to English
Screen flip	close	Front display
	open	The screen is displayed upside down
The screen flips automatically	close	Turn off the automatic flipping function
	open	Gravity-sensing auto-flip
Dimming curve	Straight line	The dimming curve is straight
	Exponent	The dimming curve is exponential
	Logarithm	The dimming curve is logarithmic
	Sine	The dimming curve is sine
DMX signal	Maintain	Continue running as it is
	Reset	The motor returns to its original position and stops running
Screen saver	close	Turn off screen saver
	open	Open the screen saver
X Reverse	close	Default

	open	Switch the start and finish points
Y reversal	close	Default
	open	Switch the start and finish points
XY exchange	close	Default
	open	Swap the XY-axis channels (including fine-tuning)
XY encoder	open	Use an encoder (optocoupler) to identify out-of-step and automatically correct position
	close	Do not use an encoder (optocoupler) to correct position
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-propelled mode	DMX	Slave status: Receiving DMX signals from the console or host
	Self-propelled	Host status: Self-propelled and sends DMX signals to the slave
Manual control		
ALL reset		Press the "OK" button to see the confirmation dialog box. Press the "OK" button again to enter the reset interface and reset all motors
XY reset		Press the "OK" key to see the confirmation dialog box. Press the "OK" key again to enter the reset interface and reset XY
MT Reset		After pressing the "OK" key, you see the confirmation dialog box. Press the "OK" key again to enter the reset interface and reset the small motor

Manual control **(Click the Running mode menu on the main interface, select manual Control, press Confirm to enter manual control)**

This interface is used to control the current lamp while automatically entering the master state (does not receive DMX signals, is the master in auto-travel mode, and sends DMX signals to the bus to the slave).

The manual menu will display 36 channels corresponding to the standard 36 channels set in the Settings menu.

Options	Instructions	
1CH. X	0 ~ 255	Press the "OK" key to enter the editing state. At this point, the 100 bits are selected. Press the Up and down keys to change the channel values. Press the "OK" key again to select the tens edit. Press the "OK" key again to select the units edit. Press once again to exit the editing state
……	0 ~ 255	
……	0 ~ 255	

2.2.6 Factory Settings

Options	Instructions	
Motor calibration	X-axis	After entering the sub-interface, the reset positions of motors such as the X-axis and Y-axis can be adjusted to compensate for hardware installation errors. The adjustment range is -128 to +127, and +0 indicates no adjustment.
	Y-axis	
	Cyan	
	Magenta	
	yellow	
	CTO	
	Colour	
	Pattern	
	GlassPattern	
	GlassPattern rotation	
	Focus	
	Zoom in	
	Enlargethe travel	
	Prism 1 Zero	
	Prism 1 Stroke	
	Prism 2 Zero	
	Prism 2 Stroke	
	Prism 1 Rotation	
	Prism 2 Rotate	
	Atomization zero point	
	Atomization stroke	
LED calibration	LED calibration	Adjust overall lighting
	LED1 calibration	Maximum brightness adjustment for channel 1 LED
	LED2 calibration	Maximum brightness adjustment for channel 2 LED
XY speed adjustment	X-axis speed	000-255, slow to fast adjustment
	Y-axis speed	
Administrator	It needs to be provided by the manufacturer	
Backup data		Calibration data is backed up to the motherboard
Restore data		Download the data from the motherboard to the display board

3. Channel function

3.1 Channel Table

Channel 26		36 channels
1	X	X
2	X Fine	X Fine
3	Y	Y
4	Y Fine	Y Fine
5	XY speed	XY speed
6	Strobe	Strobe
7	Dimming	Dimming
8	Cyan	Dimming fineg
9	Magenta	Cyan
10	yellow	Cyan fine
11	CTO	Tasting red
12	Colour	Magenta fine
13	Glass pattern	yellow
14	Glass pattern rotation	Yellow fine
15	Gobo	CTO
16	Effect pattern	CTO fine
17	Focus	Color
18	Focus fine	Color fine
19	Zoom	Glass pattern
20	Auto focus	Glass pattern rotation
21	Auto-focus calibration	Glass pattern rotation fine-tuning
22	Prism 1+2	Gobo
23	Prism 1 Rotate	Effect pattern
24	Prism 2 Rotation	Focus
25	Frost	Focus fine
26	Functions	Zoom
27		Zoom Fine
28		Autofocus
29		Autofocus calibration
30		Prism 1+2
31		Prism 1 Rotation
32		Prism 1 rotation fine
33		Prism 2 Rotate
34		Prism 2 Spin Fine
35		Frost
36		Functions

Channel parameter values (Full version) :

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 degree
CH5	**XY speed**	0-255	From fast to slow
CH6	**Strobe**	0-3	Turn on
		4-103	Slow to fast normal strobe
		104-107	Turn on
		108-207	Split the strobe light from slow to fast
		208-212	Turn on
		213-251	Random strobe from slow to fast
		252-255	Turn on
CH7	**Dimming**	0-255	0-100% dimming
CH8	**Dimming fine**	0-255	
CH9	**Cyan**	0-255	
CH10	**Cyan fine**	0-255	
CH11	**Magenta**	0-255	
CH12	**Magenta fine**	0-255	
CH13	**Yellow**	0-255	
CH14	**Yellow 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	Colour 1
		15-19	Colour 1+ Colour 2
		20-24	Colour 2
		25-29	Colour 2+ Colour 3
		30-34	Colour 3
		35-39	Colour 3+ Colour 4
		40-44	Colour 4
		45-49	Colour 4+ Colour 5
		50-54	Colour 5
		55-59	Colour 5+ Colour 6

		60-64	Colour 6
		65-69	Color 6+ white light
		70-168	Forward flowing water from fast to slow
		169-170	Stop
		171-255	Reverse the flow from slow to fast
CH18	**Color fine-tuning**	0-255	
CH19	**Glass pattern**	0-9	White light
		10-19	Pattern 1
		20-29	Pattern 2
		30-39	Pattern 3
		40-49	Pattern 4
		50-59	Pattern 5
		60-69	Pattern 6
		70-79	Pattern 7
		80-89	Shake Pattern 1 from slow to fast
		90-99	Shake pattern 2 from slow to fast
		100-109	Shake pattern 3 from slow to fast
		110-119	Shake pattern 4 from slow to fast
		120-129	Shake pattern 5 from slow to fast
		130-139	Shake the pattern from slow to fast 6
		140-149	Shake the pattern from slow to fast 7
		150-190	Forward flowing water from fast to slow
		191-192	Stop
		193-255	Reverse the flow from slow to fast
CH20	**Glass pattern rotation**	0-127	Angle switching
		128-190	Forward flow from fast to slow
		191-192	Stop
		193-255	Reverse the flow from slow to fast
CH21	**Glass pattern rotation fine-tuning**	0-255	
CH22	**Gobo**	0-9	Gobo 1
		10-19	Gobo 2
		20-29	Gobo 3
		30-39	Gobo 4
		40-49	Gobo 5
		50-59	Gobo 6
		60-69	Shake Gobo 1 from slow to fast

		70-79	Shake Gobo 2 from slow to fast
		80-89	Shake Gobo 3 from slow to fast
		90-99	Shake Gobo 4 from slow to fast
		100-109	Shake Gobo 5 from slow to fast
		110-119	Shake Gobo 6 from slow to fast
		120-190	Forward flowing water from fast to slow
		191-192	Stop
		193-255	Reverse the flow from slow to fast
CH23	**Effect pattern**	0-9	Stop
		10-255	Reverse the flow from slow to fast
CH24	**Focus**	0-255	Focus travel adjustment
CH25	**Focus fine**	0-255	
CH26	**Zoom**	0-255	Enlarge travel adjustment
CH27	**Zoom Fine**	0-255	
CH28	**Auto-focus**	0-63	no
		64-127	5 meters
		128-255	10 meters
CH29	**Auto-focus calibration**	0-255	
CH30	**Prism**	0-63	Remove the prism
		64-127	Prism 1
		128-191	Prism 2
		192-255	Prism 1+ Prism 2
CH31	**Prism 1 Rotation**	0-127	Angle switching
		128-187	Forward flow from fast to slow
		188-195	Stop
		196-255	Reverse the flow from slow to fast
CH32	**Prism 1 Rotation fine**	0-255	
CH33	**Prism 2 Rotation**	0-127	Angle switching
		128-187	Forward flow from fast to slow
		188-195	Stop
		196-255	Reverse the flow from slow to fast
CH34	**Prism 2 Rotation fine**	0-255	
CH35	**Frost**	0-127	no
		128-255	Atomization
CH36	**Reset**	0-209	no
		210-215	Reset XY for more than 6 seconds

		220-235	Reset effect motor for more than 6 seconds
		240-255	Reset all in more than 6 seconds

4. Common Faults

Corresponding solutions are proposed for some common faults. Any unsolvable problem should be dealt with by a professional. Before maintaining the lamp, disconnect the power supply first.

1. The bulb/lamp bead is not working

- Check if a voltage that matches the luminaire is installed;
- Check for poor contact at the power supply connection or control switch for the lighting fixtures;
- Check if the power supply is insufficient;
- Check if the DMX512 controller has sent instructions.

2. The lamp does not accept control from the console after a normal reset

- Check if the digital start address values and function options of the luminaire are correct;
- Check if the connection of the communication control line is correct, if the communication line is too long or has been interrupted;
- Check if the control equipment has failed, check if the signal amplifiers connected in series have failed;
- Check if the communication lines are too long or if there are other devices interfering with each other;
- Optimize wiring, shorten the length of control signal lines, and lay out high-voltage and low-voltage lines separately;
- Add signal amplifiers;
- Signal lines use high-quality shielded twisted pairs;
- Connect the signal terminal resistor (120 ohms) at the end of the lamp.

3. The lamp does not start

- Check if the power supply parameters match the lamp;
- Check that the lamps have poor contact due to reasons such as squeezing deformation, vibration of internal parts, and moisture during long-distance transportation

  Or fall off.
- Please check if the internal wire connectors of the luminaire are loose or detached.
- Check the electronic components of the lamp (such as the electronic transformer, PCB board, motor control board, etc.) for looseness, short circuit and burnout.

4. The X-axis or Y-axis of the lamp is not functioning properly when it is in operation

- Check each one as in the previous step;
- Check if the drive belts corresponding to the X and Y axes inside the lamp are loose or broken;
- Check whether the data feedback receiver (optocoupler) corresponding to the X and Y directions in the lamp is damaged;
- Restart and reset once.