Squareled

User Manual: Squareled Fidelio 600W

Manual

SQUARELED FIDELIO

Catalogue

1. Safety Guide

Please read this manual carefully

Warning

Note:

The equipment is packaged at the factory, please follow the user manual. None machine failure is not covered by the warranty.

● Please open it carefully to ensure that the lamp is not damaged by transportation.
●The fixture is only suitable for indoor dry places.
● The installation and operation should be by professionals.
● Do not let children operate the machine.
● Use a secure cord when securing the fixture. Hold the bottom when moving the fixture.
● The device must be installed in a well-ventilated area, at least 50 cm from the adjacent plane. .
● Ensure that the vents are unobstructed to prevent overheating.
● Make sure that the power supply voltage matches the requirement before running.
● Ground the conductor to prevent electric shock.
● Do not operate the fixture in an environment above 40 °C.
● Do not connect the fixture directly to the dimming device.
● A small amount of smoke or odor may appear during the operation of the new fixture, and it will disappear after 15 minutes of operation.
● Do not place flammable materials next to the fixture during operation to prevent fire.
● Please check the power cord for damage before turning on the lamp.
● When the lamp is running, the surface temperature can reach 85 °C. Do not touch it by hand.
● Avoid flammable liquids, water or metal conductors entering the interior of the lamp to avoid electric shock or fire. If something enters the fixture, please cut off the power immediately.
● Avoid operating in dirty and dusty environments, and regularly clean and maintain the lamps.
● Do not touch the wires while the lamps are running to prevent electric shock.
● Avoid tying the power cord to other wires.
● The distance between the fixture and the illuminated surface should be greater than 5M.
● Disconnect the power before replacing the fuse or the lamp.
● Use the same model when replacing the fuse or the lamp.
● If there is a serious operation failure, please stop using it immediately.
● Do not turn fixture on and off frequently, and turn on the fixture at least 30 seconds later.
● Replace the lamp housing, lens or UV filter when it is obviously damaged.
●There are no available parts inside the lamp. Do not open the lamp cover without authorization.
● Do not operate the machine by yourself. Non-professional personnel may cause damage or malfunction to the equipment. For repairs, please contact the nearest authorized service center.
● Turn off the power when the lamp is not used or repaired for a long time.
● When you need to transport again, please use the original packaging materials.
● To avoid fire hazard or electric shock, do not expose the fixture to rain or wet areas.
● Do not look directly at the lamp when it is running.

2．Technical Specification

Light Source

LED Type: High power 600W White LED

CCT: 8000K / 6500K

LED life: 20,000H

CRI: ≥90

Pan&Tilt

Pan: 540° (16 bit)

Tilt: 270° (16 bit)

Advanced scanning system is faster, more stable, quieter, with automatic error correction reset function.

Color Plate

Uniform and smooth CMY+CTO (2700K-6500K)

1x Color disk: 6 color plates + white，Half-color effect, can be positioned at will, with a rainbow effect of bi-direction

Gobo

1x Rotation Gobo: 7 Plug-in rotation plate + white circle; patterned dithering and pattern arbitrary positioning.

1x Fixed Gobo: 7 Plug-in fixed plate + white circle; patterned dithering.

Both discs are plug gable, which is good for customers to change the pattern.

Spec.

3 channel mode: DMX512, 27/29/34 channels

Prism: Rotation 4 prisms，bi-direction prism with positioning function.

Aperture: 5%~ 100% linear adjustments.

Strobe：Electronic strobe, frequency up to 25Hz，and optional random strobe and pulse strobe.

Dimmer：0~100% linear， have 4 dimmer curve.

Atomization: two atomization, three atomization effects, 0~100% linear atomization.

Zoom: Electric zoom function,6° ~ 50° linear.

Cutting module: A set of controllable spot chamfering system consists of 4 chamfered corners. The whole chamfering system can be rotated by 90°. Through precise control of the cut sheet, triangles, diamonds, rectangles, etc. can be created in any direction.

Dynamic effect disk: super cool simulation dynamic vibration, turbulent water and other dynamic effects.

Display

Touch LCD display: With rechargeable battery, you can enter the menu address code and other settings without powering up; when power off, press the “BAT SW” for 3 seconds to enter the setting DMX address and Other menu functions, automatically cut off in 5 seconds when not in operation. Automatically charge the battery when power is on;

Software

The DMX address code, machine reset, voice mode conversion and other functions can be changed from the console; so that the customer can know the fixture usage in time.

Other function

Input signal isolation protection function ensures signal transmission is stable and undisturbed.

RDM function

DMX signal input/output: 3-Pin or 5-Pin XLR, RJ45 and USB interface
Wireless function (optional)

Radiating

Dissipates heat by fan. After the temperature of the light source is higher than 40 degrees, the light source fan starts to work, and according to the temperature, the fan speed is adjusted accordingly.

Power supply

AC100~240v, 50/60Hz

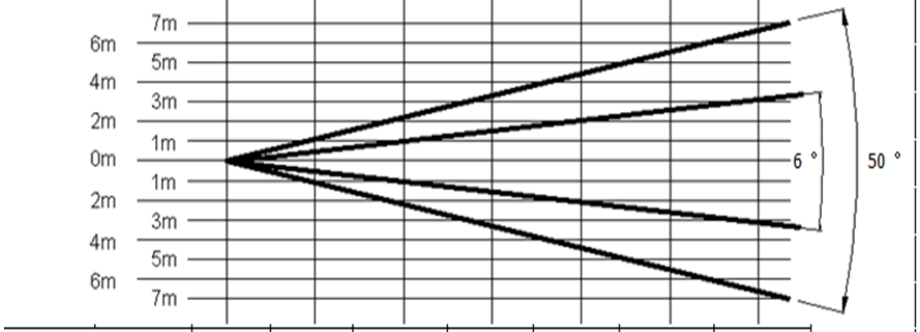
Size

Fixture size：473*432*855 mm

N.W.：44.5kg（including the hook）

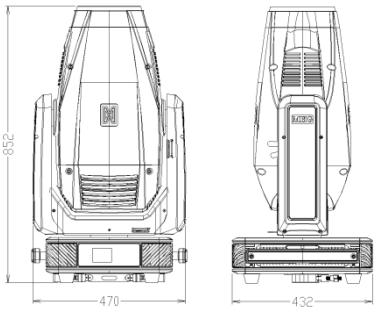
Illumination Chart

50 °	illumination (Lux)	0	1605	401	178	100	64	45
6 °	illumination (Lux)	0	45672	11418	5075	2854	1827	1269



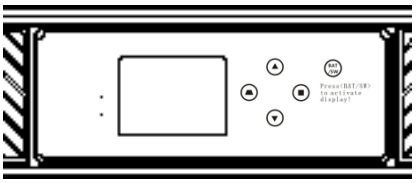
Distance (m)		0	5m	10m	15m	20m	25m	30m
50 °	Diameter (m)	0	0.8	1.6	2.4	3.3	4.1	4.9
6 °	Diameter (m)	0	0.1	0.2	0.3	0.4	0.5	0.6

Fixture size

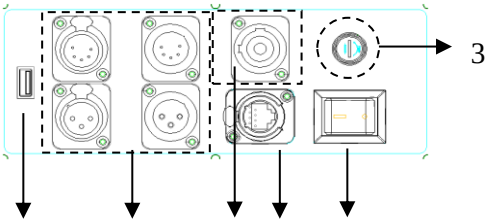


3．How to set up the machine

3.1 control panel



LCD Display： Display function menu and selected functions



Rear side covers card board

1. | 6 ‹ sig 1 in| 2 5 ‡ 4 DMX512 connection, connect DMX console and fixtures with XLR signal line, and input /output DMX signal;
2. **Power input**: Connect to the main power supply;
3. **Fuse (T 15A)**: Protects the fixture from damage caused by excessive current or short circuit;
4. **Power switch:** Power on/off;
5. **RJ45 Internet access**;
6. **USB socket**

3.2 Main functions

Press MENU for about 3s to enter the menu mode and use MENU to select the menu option that you want. Press the ENTER button to enter the selected function, the display will flash, then use UP/DOWN to select the desired function and press ENTER to confirm. Press MENU to return, or wait 1 minute to return to the main menu. The main functions are as follows:

DMX	DMX Address	1-512
	DMX Channel Mode	Mode1(29)
		Mode2(34)
		Mode3(37)
	DMX State	Blackout
		Hold
	View DMX Value	---
SET	Pan Inverse	Yes/No
	Tilt Inverse	Yes/No

	P/T Feedback	Yes/No
	Dimmer Curve	Liner
		Square law
		Inv SQ law
		S Curve
	Dimmer Speed	Fast
		Smooth
	Focus Compensate	Disable
		Near
		Medium
		Far
Display Setting	Display Inverse	Yes/No
	Backlight Switch	On/Off
	Backlight Intensity	1-10
	Temperature Unit	℃/℉
	Language	English/Chinese
Test	Auto Test	-
	Manual Test	-
Fixture Information	Fixture use time	-
	Temperature	-
	Firmware Version	-
Reset	Pan/Tilt	Yes/No
	Effect Motor	Yes/No
	All Motor	Yes/No
Special Function	Factory Setting	Yes/No

DMX Functions

Enter MENU mode, select DMX Functions, press ENTER to confirm, use UP/DOWN to select: DMX Address, DMX Channel Mode, DMX State and View DMX Value.

DMX Address

Select DMX Address and press ENTER to confirm that the current DMX Address will be shown on the display. Use UP/DOWN to select 001~512 address and press ENTER to save. Press MENU to return to the previous menu or wait for 1min to automatically exit the menu mode.

MXD Channel Mode

Select the DMX Channel Mode, press ENTER to confirm, the current channel mode will be displayed on the display, use UP / DOWN to select: 29 CH, 34 CH or 37 CH, press ENTER to save. Press MENU to return to the previous menu or wait for 1 minute to automatically exit the menu mode.

DMX State

Select the DMX State, press ENTER to confirm, the current DMX State will be shown on the display, and press the MENU return to the previous menu or wait for 1 minute to automatically exit the menu mode.

View DMX Value

Select the View DMX Value and press ENTER to confirm, the current DMX value will be displayed on the display. Use UP/DOWN to select the value and press ENTER to save. Press MENU to return to the previous menu or wait 1min is automatically exit the menu mode.

Fixture Setting

Enter MENU mode, select Fixture Setting, press ENTER to confirm, use UP/DOWN to select: Pan Inverse, Tilt Inverse, P/T Feedback, Backlight Switch, Backlight Intensity, Dimmer Speed, Dimmer Curve, and Focus Compensate.

Pan Inverse

Select Pan Inverse, press ENTER to confirm, the current mode will be displayed on the display, through UP/DOWN to select: NO (Normal Operation) or YES (Pan Inverse), then press ENTER to save. Press MENU to return to the previous menu or wait 1 minute to automatically exit menu mode.

Tilt Inverse

Select Tilt Inverse, press ENTER to confirm, the current mode will be displayed on the display, through UP/DOWN to select: No (Normal Operation) or Yes (Tilt Inverse), press ENTER to save. Press MENU to return to the previous menu or wait one minute to automatically exit menu mode.

P/T Feedback

Select P/T Feedback, press ENTER to confirm, the current mode will be displayed on the display, press UP/DOWN to select: No (P/T will remain the statue of out-of-step) or Yes (P/T will automatically correct out-of-step), press ENTER button to save. Press the MENU button to return to the previous menu or wait for 1 minute to automatically exit the menu mode.

Dimmer Speed

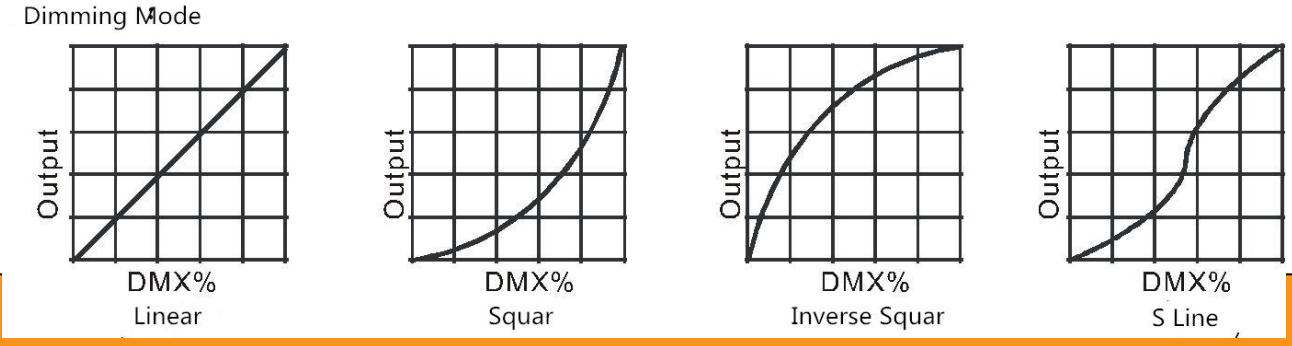
Select the Dimmer Speed, press ENTER to confirm, the current mode will be displayed on the display, through UP/DOWN to select: FAST or SMOOTH, press ENTER to save. Press MENU to return to the previous menu or wait 1 minute to exit the menu mode automatically.

Dimmer Curve

Select the Dimmer Curve and press ENTER to confirm. Use UP/DOWN to select Linear, Square, Inverse Square or S Line, after selecting the desired mode, press ENTER to set and save. Press MENU to return, or wait 1 minute, later return to the main menu.

Focus Compensate

Select Focus Compensate, press ENTER to confirm, the current mode will be displayed on the display, through UP/DOWN to select: Disable, Near, Medium or Far, press ENTER to save. Press MENU to return to the previous menu or wait 1 minute to automatically exit the menu mode.



Mode1（Optical linearity）：As the DMX value increases, the increase in light intensity tends to be linear；
Mode2（Square rate）：The light intensity is controlled to be fine at low values and thicker at high values；
Mode3（Reverse squared rate）：The light intensity is controlled to be thicker at low values and thinner at high values;
Mode4（S-Linear）：The light intensity is controlled to be finer at low values and high values, and thicker at intermediate values.

Display setting

Enter MENU mode, select Display Settings, press ENTER button to confirm, select by UP/DOWN: display reverse, backlight brightness, temperature unit or language.

Display Inverse

Select Display Inverse, press ENTER button to confirm, the current mode will be displayed on the screen, through the UP/DOWN button to select: No (normal) or Yes (display reverse), press the ENTER button to save. Press the MENU button to return to the previous menu or wait 1 minute to automatically exit the menu mode.

Backlight Intensity

Select the backlight brightness, press the ENTER button to confirm, the current mode will be displayed on the screen, press UP/DOWN to adjust the Backlight Brightness from 1 (black) to 10 (bright) and press the ENTER button to save. Press the ENTER button to save. Press MENU to return to the previous menu or wait for 1 minute to automatically exit the menu mode.

Temperature unit

Select the temperature unit, press the ENTER button to confirm, the current mode will be displayed on the display, through the UP/DOWN button to select: ℃ or °F, press the ENTER button to save. Press MENU to return to the previous menu or wait for 1 minute automatically exits the menu mode.

Language

Select the language, press the ENTER button to confirm, the current mode will be displayed on the display, use the UP / DOWN button to select: Chinese or English, press the ENTER button to save. Press MENU to return to the previous menu or wait for one minute automatically exits the menu mode.

Fixture Test

Enter the menu mode, select the Fixture test, press the ENTER button to confirm, select through the UP/DOWN button: automatic test, manual test.

Auto Test

Select the Auto Test, press ENTER to confirm, the machine will run the built-in program test level, vertical, color, pattern Disc, pattern disc rotation, stroboscopic, dimming, prism disc, prism disc rotation, atomization, focusing, etc. Press the MENU button to exit go back to the previous menu or return to the menu mode after the test ends.

Manual Test

Select manual test, press the ENTER button to confirm, the current channel will be displayed on the screen. Use UP/DOWN to select a channel: press ENTER to confirm, then use UP/DOWN to adjust the channel value and press ENTER to save, the machine will run at the value of the channel. Press MENU to return to the previous menu or wait for 1 minute to automatically retreat out menu mode.
(All channel values will become zero after exiting the manual test menu)

Fixture Information
Enter menu mode, select Fixture information, press ENTER button to confirm, use UP/DOWN button to select: device hours, temperature, fan status and CPU version.

Fixture use time
Select the fixture use time, press the ENTER button to confirm, the display will show the time the lamp is running, press the MENU button to exit.

Temperature

Select the Temperature, press the ENTER button to confirm, the temperature of the device will be displayed on the screen, press the MENU button to exit.

CPU Version

Select CPU Version, Press ENTER to confirm**,** the firmware version of the device will be displayed on the screen, press the MENU button to exit.

Reset Function
Enter menu mode, choose the Reset, press Enter Button , Press Up/Down to choose: Horizontal and Vertical, The head motor or all motor.

Pan/Tilt
Choose Pan/Tilt, Press Enter to confirm, Press Up/Down to choose: No or Yes(The Fixture run the build-in program to recover the initial position of the Pan/Tilt), Press Enter to save it, Press Menu exit.

Effect
Select Effect, Press Enter to confirm, Press Up/Down to select, No Or Yes (The Fixture runs the build-in program to recover the initial position of Effect). Press Enter to save. Press Menu to exit.

All
Select All, press the ENTER button to confirm, use the UP/DOWN button to select: No or Yes (The machine will run the built-in program to restore All initial positions). Press the ENTER button to save. Press the MENU button to exit.

Special function

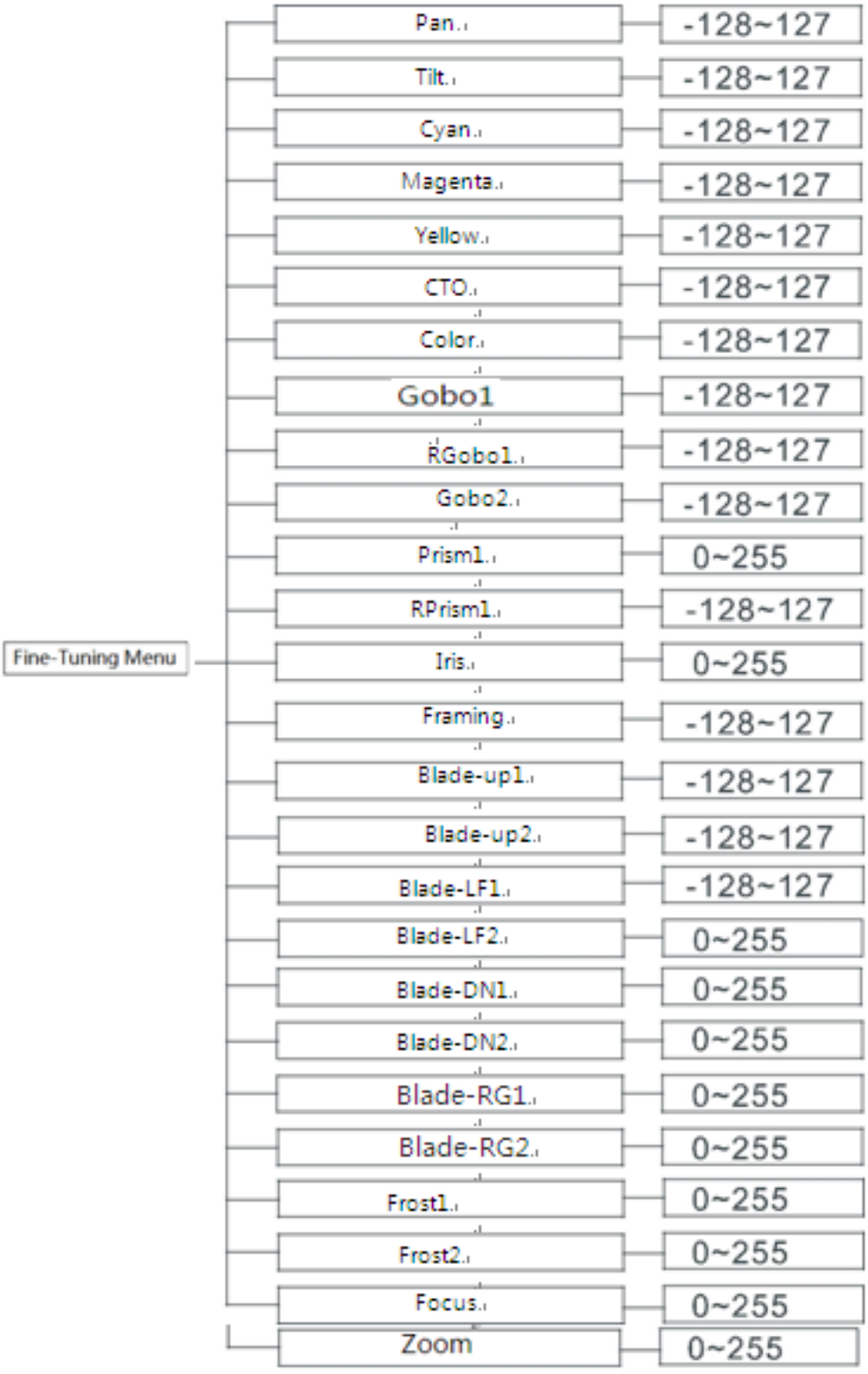
Enter the menu mode, select the special function, press the ENTER button to confirm, select: Restore Factory Settings.

Factory setting

Select to restore Factory setting, press the ENTER button to confirm, use the UP/DOWN button to select No (keep the current setting) or (Restore Factory setting), once selected, press the ENTER button to save. Press the MENU button to exit.

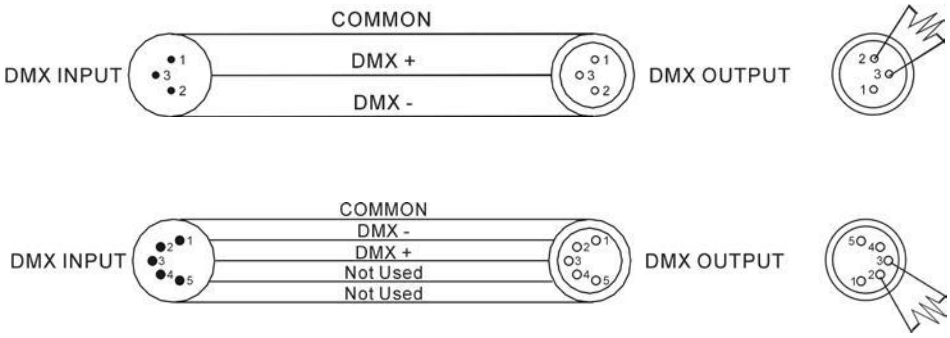
3.3 Initial position adjustment

Press the MENU button to enter the menu mode, then press the ENTER button for about 3 seconds to enter the initial setup menu to adjust the initial position of each motor. Press the ENTER button to confirm. Use the UP/DOWN button to select a submenu, press the ENTER button to save and automatically return to the previous menu. Press the MENU button to exit


Fine-Tuning Menu
Pan
-128~127
Tilt
-128~127
Cyan
-128~127
Magenta
-128~127
Yellow
-128~127
CTO
-128~127
Color
-128~127
Gobo1
-128~127
RGobo1
-128~127
Gobo2
-128~127
Prism1
0~255
RPrism1
-128~127
Iris
0~255
Framing
-128~127
Blade-up1
-128~127
Blade-up2
-128~127
Blade-LF1
-128~127
Blade-LF2
0~255
Blade-DN1
0~255
Blade-DN2
0~255
Blade-RG1
0~255
Blade-RG2
0~255
Frost1
0~255
Frost2
0~255
Focus
0~255
Zoom
0~255

4. Universal DMX Controller Control

4.1 DMX Connect



1. In order to reduce signal errors and avoid signal attenuation and interference during transmission, a 120OHM 1/4W resistor can be added between the 2 and 3 cores of the DMX output of the last machine.
2. Connect the luminaire with the XLR signal cable, one end to the output of the luminaire and the other end to the input of the next luminaire. XLR signal lines can only be used in series and cannot be connected in parallel. The DMX512 signal transmission speed is very fast. Damage to the signal line, weak soldering, poor contact, etc., all will affect the signal transmission, and cause the system to shut down.
3. When the power of a unit's machine is disconnected, the connection between the DMX output and the input is bypassed to maintain the DMX line connectivity.
4. Each light must have an address code that can receive information the console, ranging from 0-511(usually 0 &1 and 1 are the same)
5. The terminal of the DMX512 system needs to be equipped with a terminator to reduce errors in signal transmission.
6. The 4.3-core XLR connector is more common than the 5-pin 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：No use；

4.2 Address ID setting

When using a general purpose DMX controller to control the fixture, you need to set the starting address (1-512) for the fixture so that the machine can accept the DMX signal.
Press the MENU button to enter the menu mode, select the DMX function, press the ENTER button to confirm, the current address will flash on the display, then use the

UP/DOWN button to select the address code (1-512) and press the ENTER button to save. Press the MENU button to return to the previous menu or wait for one minute to automatically exit the menu mode.
Please refer to the chart below to set the address codes of the first 4 fixtures.

Channel Mode	Fixture 1 Address ID	Fixture 2 Address ID	Fixture 3 Address ID	Fixture 4 Address ID
29 CH	1	30	59	88
34 CH	1	35	69	103
37CH	1	38	75	112

4.3 DMX 512 Channel

MH-L600 DMX PROTOCOL				
29ch	34ch	37ch	value	Function
27	29	1	(0-255)	Pan
	30	2	(0-255)	Pan Fine
28	31	3	(0-255)	Tilt
	32	4	(0-255)	Tilt Fine
	33	5	(0-255)	Pan/Tilt Speed Fast - Slow
29	34	6		Special Function
			(0-29)	Null
			(30-39)	Dimmer Curve SQUARE_LAW
			(40-49)	Dimmer Curve INVERSE_SQUARE_LAE
			(50-59)	Dimmer Curve LINE
			(60-69)	Dimmer Curve S
			(70-79)	Black Out When XY Move Enable
			(80-89)	Black Out When XY Move Disable
			(90-99)	Black Out When Color Change Enable
			(100-109)	Black Out When Color Change Disable
			(110-119)	Black Out When Gobo Change Enable
			(120-129)	Black Out When Gobo Change Disable
			(130-139)	Focus Compensate Off
			(140-149)	Focus Compensate Near
			(150-159)	Focus Compensate Medium
			(160-169)	Focus Compensate Far

			(170-179) (180-189) (190-199) (200-209) (210-219) (220-229) (230-255)	Dimmer Speed Default Dimmer Speed Fast Dimmer Speed Smooth Reset All Reset Effect Reset XY Null
1	6	7	 (0-15) (16-30) (31-135) (136-145) (146-175) (176-185) (186-215) (216-225) (226-245) (246-255)	Strobe Shutter closed Shutter open Strobe (slow to fast) Shutter open Fast Close Slow Open(slow to fast) Shutter open Fast Open Slow Close(slow to fast) Shutter open Random strobe (slow to fast) Shutter open
2	7	8	(0-255)	Dimmer
	8	9	(0-255)	Dimmer Fine
3	1	10	(0-255)	Cyan
4	2	11	(0-255)	Magenta
5	3	12	(0-255)	Yellow
6	4	13	(0-255)	CTO
7	5	14	 (0-131) (132-141) (142-151) (152-161) (162-171) (172-181) (182-191) (192-222) (223-224) (225-255)	Color Open-Color6 Index Color-1 Color-2 Color-3 Color-4 Color-5 Color-6 Rotation CW(fast to slow) Stop Rotation CCW(slow to fast)
8	9	15	 (0-7)	Gobo1 Open

			(8-15)	R-Gobo1-1 index
			(16-23)	R-Gobo1-2 index
			(24-31)	R-Gobo1-3 index
			(32-39)	R-Gobo1-4 index
			(40-47)	R-Gobo1-5 index
			(48-55)	R-Gobo1-6 index
			(56-95)	Gobo1 CW(fast to slow)
			(96-97)	Gobo1 Stop
			(98-129)	Gobo1 CCW(slow to fast)
			(130-147)	R-Gobo1-1 Shaking(Slow to Fast)
			(148-165)	R-Gobo1-2 Shaking(Slow to Fast)
			(166-183)	R-Gobo1-3 Shaking(Slow to Fast)
			(184-201)	R-Gobo1-4 Shaking(Slow to Fast)
			(202-219)	R-Gobo1-5 Shaking(Slow to Fast)
			(220-237)	R-Gobo1-5 Shaking(Slow to Fast)
			(238-255)	R-Gobo1-6 Shaking(Slow to Fast)
9	10	16		R-Gobo1
			(0-127)	R-Gobo1-6 index
			(128-191)	Rotation CW(fast to slow)
			(192-255)	Rotation CCW(slow to fast)
	11	17		R-Gobo1 Fine
			(0-255)	R-Gobo1-6 (0-65535) index
10	12	18		Gobo2
			(0-7)	Open
			(8-15)	Gobo2-1 index
			(16-23)	Gobo2-2 index
			(24-31)	Gobo2-3 index
			(32-39)	Gobo2-4 index
			(40-47)	Gobo2-5 index
			(48-55)	Gobo2-6 index
			(56-63)	Gobo2-6 index
			(64-95)	Gobo2 CW(fast to slow)
			(96-97)	Gobo2 Stop
			(98-129)	Gobo2 CCW(slow to fast)
			(130-147)	Gobo2-1 Shaking(Slow to Fast)
			(148-165)	Gobo2-2 Shaking(Slow to Fast)
			(166-183)	Gobo2-3 Shaking(Slow to Fast)

			(184-201) (202-219) (220-237) (238-255)	Gobo2-4 Shaking(Slow to Fast) Gobo2-5 Shaking(Slow to Fast) Gobo2-5 Shaking(Slow to Fast) Gobo2-6 Shaking(Slow to Fast)
21	19	19	 (0-255)	Iris Big to Small
11	13	20	 (0-15) (16-125) (126-145) (146-255)	Fire Wheel Close Rotation CW(fast to slow) Stop Rotation CCW(slow to fast)
22	14	21	 (0-15) (16-255)	Prism Prism off Prism On
23	15	22	 (0-127) (128-191) (192-255)	R-Prism Index 0°-360° Index Rotation CW(fast to slow) Rotation CCW(slow to fast)
		23	 (0-255)	R-Prism Fine (0-65535) Index
24	16	24	 (0-99) (100-199) (200-214) (215-229) (230-255)	Frost Frost1 Open to full frost Frost2 Open to full frost Frost1 Open Frost2 Open Frost1 & Frost2 Open
25	17	25	(0-255)	Zoom
		26	(0-255)	Zoom Fine
26	18	27	(0-255)	Focus
		28	(0-255)	Focus Fine
12	20	29	 (0-255)	Blade Ring Index 0°-90°
13	21	30	 (0-255)	BladeA1 Index 0% -100%
14	22	31		BladeA1

			(0-255)	Index 0% -100%
15	23	32	(0-255)	BladeA1 Index 0% -100%
16	24	33	(0-255)	BladeA1 Index 0% -100%
17	25	34	(0-255)	BladeA1 Index 0% -100%
18	26	35	(0-255)	BladeA1 Index 0% -100%
19	27	36	(0-255)	BladeA1 Index 0% -100%
20	28	37	(0-255)	BladeA1 Index 0% -100%

5. Trouble shooting

The following are some of the problems that often occur during operation. It is accompanied by some suggestions for troubleshooting.

A. The Fixture cannot operate, there is no light, and the fan is damaged.

1. Check the power connection and the fuse is intact.
2. Check the voltage.
3. Check the indicator light of the switching power supply.

B. Out of control by Console

1. The indicator light must be red. If it is not lit, check the DMX signal connector and signal cable to see if it is connected correctly.
2. If the DMX indicator is red, but does not respond to the control channel, check that the address code setting is correct.
3. If the DMX signal transmission is intermittent, check that the Aviation connector is connected to the signal line.
4. Try using another controller.
5. Check to see if the DMX signal line and the high voltage line are too close together to damage or interfere with the signal circuit.

C. Some channel fails

1. The stepper motor may be damaged and the motor leads may be broken.
2. The drive circuit of the motor may be faulty.

6. Fixture cleaning

The inside and outside of the lens and the mirror must be wiped frequently to make the lighting better. The frequency of wiping depends on the environment. Moist, smoky, and particularly dirty environments can cause dust to accumulate in the lens.
--- Use soft linen and a special glass cleaner.
--- Carefully dry the parts.
--- Wipe the outside of the lens at least every 30 days.

7. Accessories

1pcs Power Cable

1pcs Signal Cable

1pcs Safety Rope

1pcs User Manual

Das Lichttechnikhaus Vertriebs GmbH

Rudolf-Diesel-Str. 3, D-89312 Günzburg

Telefon +49 (0) 82 21 207 98-0
Fax +49 (0) 82 21 207 98-69
E-Mail info@lth-gmbh.de
Web www.lth-gmbh.de