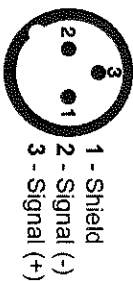


6. DMX-512 Connect

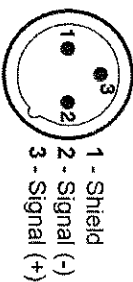
The device is equipped with 3-pin sockets for DMX input and output. The sockets are connected in parallel.

Only shielded twisted pair cables designed for 3-pin XLR plugs and connectors are used in order to connect the controller to the laser fixture or one laser fixture to another.

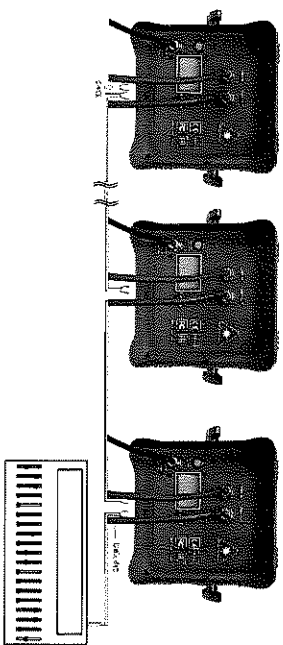
DMX - output
XLR mounting-sockets (rear view):



DMX-input
XLR mounting-plugs (rear view):



Building a serial DMX-chain:



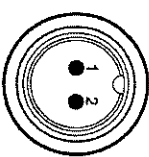
Connect the DMX output of the first device in the DMX chain with the MX input of the next device. Always connect an output to the input of the next laser fixture until all laser fixtures are connected. Up to 32 lamps can be connected.

Note: In the last laser fixture, the DMX cable must be terminated with a terminator.

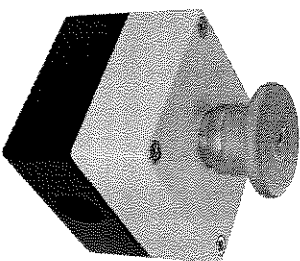
Solder the 120Ω resistor between signal (-) and signal (+) into the 3-pin XLR plug and insert it into the DMX output of the last laser fixture.

7. Remote interlock connector (Remote Interlock Bypass)

The laser equipment produced by our company follows the standards of IEC 60825-1 and USA FDA to ensure that this product meets international safety standards! Ensure the safety of laser products for human body and eyes during use, and prevent laser radiation from harming the environment.



Remote Interlock Bypass



Remote Interlock Bypass must be inserted in the E-STOP Remote as well in order to disable the interlock.

Both E-STOP Remote safety key and laser system safety key must be inserted and switched to ON position in order to disable the interlock.

8. Technical Specifications

Light source parameters	
Laser Wavelength:	R-638nm, G-520nm, B-450nm
Laser Power:	R-0.8W, G-0.8mW, B-1.5W
Spot Size (laser window spot)	5.5mm
Light Source Divergence Angle	<1.2mrad
Modulation Mode	TTL
Laser Class	Class IV
Imaging system	
Laser Color	Red, green, blue mixed colors
Evenness	>98%
Lens Horizontal Offset	-30% to +30%
Lens Vertical Offset	-30% to +30%
Imaging Mode	3D/2D pattern and animation (with software)
Projection Distance	<20M The best distance is 10~20M
Playback Rate	20 KPPS
Playback Angle	Max30°
Fail-safe system	
Safety standards	Follow the IEC60825 standard
Security project	Over current and voltage protection
Class of protection	IP65
Operating temperature	-15°C~45°C
Interface and control systems	
Control interface	DMX In/Out
DMX channel	16/20CH
Power supply interface	PowerCon
Power Consumption	
Power of operation	100~240V AC 50/60HZ
Power supply	Max 42W
Physical property	
Dimensions of products	22x19x8.5 cm
Weight of product	1.9 kg
Dimensions of package	27.5x24x15.5 cm
Weight of package	2 kg

9. Maintenance and cleaning

Equipment must be kept clean and must not accumulate dust, dirt and smoke residue. Otherwise, the light output of the laser fixture will be significantly reduced. Regular cleaning ensures not only maximum light output but also reliable operation throughout the service cycle. It is recommended to use lint-free cloth of any good glass cleaning solution. Under no circumstances should alcohol or solvents be used!

Danger!

Disconnect the power supply before starting any maintenance work

The front objective lens needs to be cleaned once a week because the smoke liquid tends to accumulate residues, which can reduce the light output. Cooling fans should be cleaned once a month.

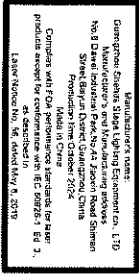
The interior of the laser fixture should be cleaned at least annually using a vacuum cleaner or air injector.

Use a soft brush and vacuum cleaner to remove dust and dirt from fans and cooling vents.

Important! Check the air filter regularly and clean it before it gets clogged!

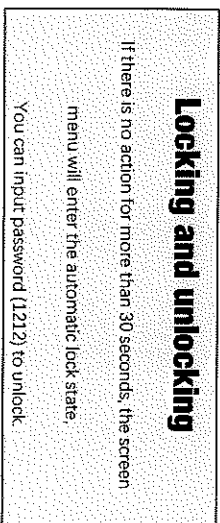
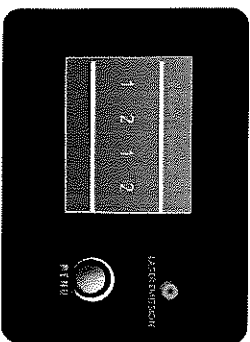
Clean the two air filters installed in the laser lamp cover and the two air filters installed in the laser lamp base. Use a vacuum cleaner, compressed air, or you can clean them and put them back to dry.

10. Laser label

Warning label - Hazard symbol	
Alternative label for laser aperture	
Warning label - Hazard symbol	
Alternative label for Class 4	
Certification label and identification label	

11. Menu interface

- To access the control menu, press the knob button.
- Rotate buttons to navigate the menu structure.
- To select a menu option or confirm your selection, press the knob button.
- Return to a higher level in the menu structure.



Laser safety device:

1: Manual reset mechanism. In order to avoid accidents caused by unattended laser, the laser system is equipped with manual reset function. After the laser emission is interrupted by using remote interlock or after the emission is interrupted by accidentally losing the main power supply, manual intervention is required to start the laser system again.

Laser emission indicator

2: Launch indicator light. The LED indicator light in the menu panel is flashing, which means that the laser is in the running launch state or to be launched. Once the laser system receives the instructions of the control software, it is ready to launch the laser. At this time, please do not face or check the laser launch hole to prevent laser damage to the eyes.

3: Safe operation device. In order to prevent accidental injury to the operator, when the laser is in the firing state, the laser will enter the stop firing state when the operator presses the key operation on the laser control panel. After 30 seconds, when the laser detects no key operation, it will resume the emission state.

4: Scan the safety device. When the scanning speed or amplitude changes or stops working due to any fault of the galvanometer, the laser will enter the termination emission state, and will not be brought into the emission state again until the galvanometer resumes scanning work.

12. Main Function

Menu	Value	Function
DMX Address	1-512	Set DMX Address
Channel	16CH	16CH DMX channel mode
	20CH	20CH DMX channel mode
	DMX	Set Laser DMX input
	ILDA	Set Laser ILDA mode input
	RANDOM	Randomly play all animation effects
	LINE	Play Line Effects
	ANIME	Play animal pattern effects
Mode Set	TEXT	Play text effect
	PROGRAM	Play program effects
	DRAW	Play mobile app painting effects
	MARK	Play beam effect
	BREAK	Device standby state
Play Speed	0-100	Playback speed of mode
Size	0-100	The size of the effect
Phase	X+Y+	Laser position X+Y+
	X+Y-	Laser position X+Y-
	X-Y-	Laser position X-Y-
	X-Y+	Laser position X-Y+
	*Y+X+	Laser position Y+X+
	*Y-X+	Laser position Y-X+
	*Y-X-	Laser position Y-X-
	*Y+X-	Laser position Y+X-
	Dimmer Red	Laser red dimmer
	Dimmer Green	Laser green dimmer
	Dimmer Blue	Laser blue dimmer
Dimmer All	0-100	Laser all dimmer
	0-100	Laser all dimmer
Language	EN	Language English
	CH	Language Chinese
Software	VY2.3	Current version number

13. Home Position Adjustment

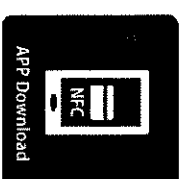
To access the offset menus, long press the [ENTER] button

Menu	Value	Function
Scanner Set	15-30K	Set scanner speed 15-30
Color Set	RGB	Laser RGB color
	G	Laser G color
Dot Protect	On	When the laser is focused to a point, turn off the laser
	Off	When the laser is focused at a point, maintain the laser output
Sound Sense	0-100	Adjustment of the sensitivity in sound mode

Backlight	On	The menu display screen is always on
RST Setting	OFF	The menu display screen will turn off after 20 seconds of inactivity
	YES	Restore factory settings

14. Mobile app download and connection

The laser product casing is embedded with an NFC chip. With just a gentle touch of your mobile device, you can quickly download our exclusive app and experience a more convenient and simple operation.



1. Usage steps:

Confirm device: Please ensure that your mobile device (such as a smartphone or tablet) supports NFC functionality and has enabled it. Most modern mobile devices come with an NFC chip built-in, which you can find and turn on in the device's settings.

Preparing to download: Open the NFC sensing area on your mobile device (usually located on the back of the phone) and make sure there are no phone cases or other obstacles blocking it.

Approaching Scan: Move your mobile device closer to the NFC chip location on our product.

Please keep the device stable and at an appropriate distance so that NFC signals can be accurately recognized.

Download APP: When the mobile device successfully recognizes the NFC chip, it will automatically jump to a page or pop up a prompt box, guiding you to download or open our exclusive APP. Please follow the instructions on the page to complete the download and installation process.

2. Matters needing attention:

Please ensure that your mobile device has sufficient battery power to avoid interruptions during the download process due to low battery.

If your mobile device fails to successfully recognize the NFC chip, please try adjusting the device's angle and distance, or check if there are any other objects interfering with the transmission of NFC signals.

When downloading the app, please ensure that your network connection is stable in order to smoothly complete the download process.

We are committed to providing you with smarter and more convenient products and services. If you encounter any problems or need assistance during use, please feel free to contact our customer service team, and we will be happy to answer and provide support for you. Wishing you a pleasant use!

3. Scan the QR code to download and install the app:



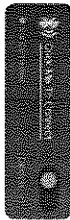
Android



ISO

2. Connect to APP Settings

Access the Bluetooth Settings and press [Click Me To Connect] to search for the current laser device!

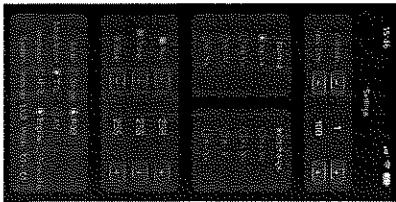


A-Click Me To Connect



B-Search for devices that can be connected

3. APP function Introduction



- 1: Support to modify the DMA address of the device through the APP;
- 2: support hand-drawn and played laser pattern;
- 3: Support text input and text laser pattern playback;
- 4: Support custom programming schemes;
- 5: Play built-in custom laser effects;
- 6: Set the size range of laser scanning;
- 7: Set the initial position of the laser
- 8: Set the RGB light source output of the laser
- 9: Set the laser mode TTL or analog modulation mode

DMX Channel Summary-16 CH Mode

Channel	Value	Function
CH1	0-35	Laser off
	36-255	Laser source on
CH2	0-9	Strobe off
	10-255	Strobe slow to fast
	0-4	Full color
	5-9	Red
CH3	10-14	Blue
	15-19	Red+Blue

DMX Channel Summary-20 CH Mode

		20-24	Green+Blue
		25-29	Red+Green
		30-34	Green
		35-255	Color effect
CH4	Color mode	0-9	Stop color effect
		10-127	Direct move
		128-255	Reverse directions move
CH5	CUE Groups	0-255	CUE Groups
CH6	CUE	0-255	CUE select
CH7	Zoom	0-255	CUE linear zoom (large to small)
		0-15	Zoom in
		16-55	Auto zoom out (slow to fast)
		56-95	Auto zoom in (slow to fast)
		96-135	Auto zoom in and zoom out (slow to fast)
CH8	Auto Zoom	136-175	Irregular zoom in and zoom out (slow to fast)
		176-215	X Y Irregular Zoom in and out mode (slow to fast)
		216-255	X Y Irregular Zoom in and out mode 2(slow to fast)
		0-127	Rotate 360°
CH9	Rotate	128-191	Clockwise Rotation
		192-255	Anti clockwise Rotation
CH10	X rotate	0-127	Clockwise Rotation
		128-255	Anti clockwise Rotation
CH11	Y rotate	0-127	Clockwise Rotation
		128-255	Anti clockwise Rotation
CH12	X move	0-255	X moving
CH13	Y move	0-255	Y moving
CH14	Twist effect	0-255	Twist effect slow to fast
CH15	Macro CUE	0-255	Macro CUE show
CH16	CUE speed	0-1	Normal speed
		2-255	Speed form slow to fast
DMX Channel Summary-20 CH Mode			
Channel		Value	Function
CH1	On/Off	0-35	Laser off
		36-255	Laser source on
CH2	Red	0-255	Red on
CH3	Green	0-255	Green on

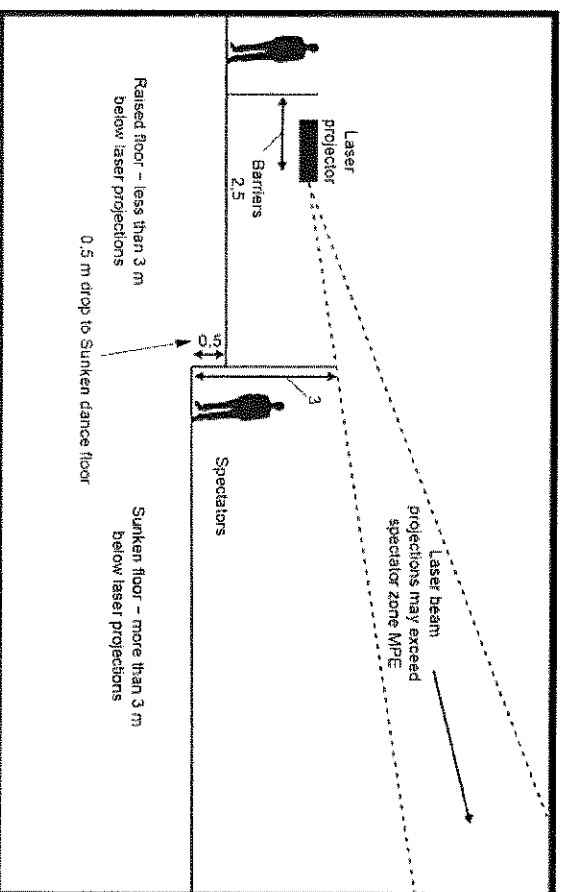
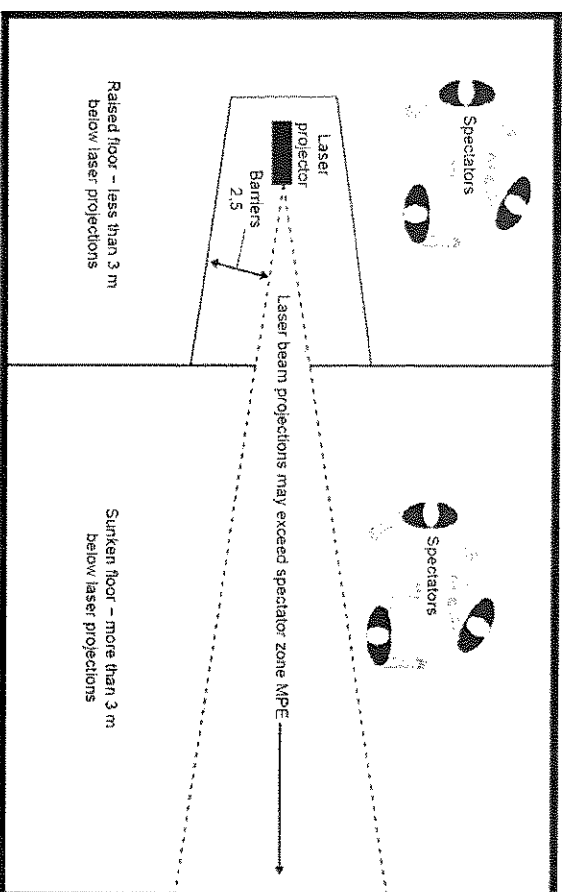


Figure 2 Audience/spectator separation nightclub scenario with operator in control

4. If a projection area terminates onto a balcony or near a window, where spectators can view the laser effect, and the exposure level at the termination point is likely to be in excess of the spectator MPE, the beams should terminate no higher than the floor level of the balcony if it has an opaque solid barrier. This condition is shown in Figure 3.

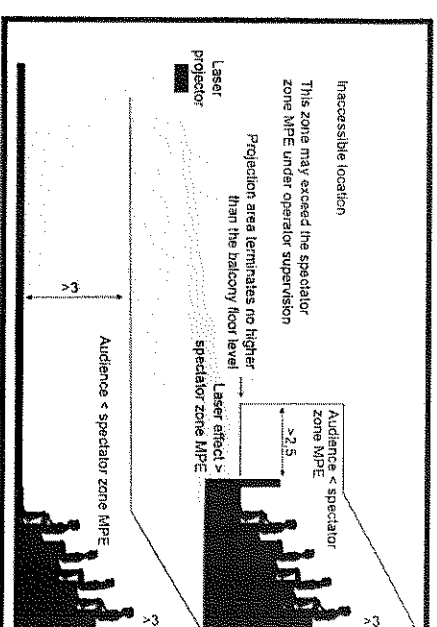


Figure 3 Audience/spectator separation near a balcony with operator in control

5. If the laser display or show is not under the continuous control of an operator who can immediately terminate laser beams in the event of a problem, a minimum separation distance of 3m in height and 2.5m laterally should be maintained between beams that exceed the spectator MPE exceeded by more than a factor of 5 in the space between 3m and 6m above any surface upon which spectators can reasonably be expected to stand. This condition is shown in Figure 4.

