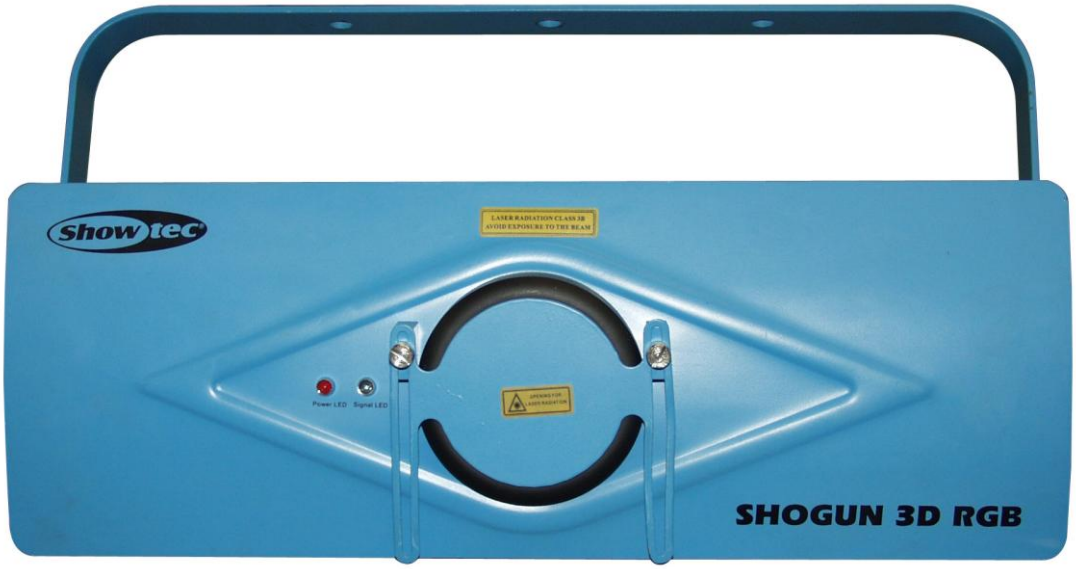
Shogun Club RGB-120

ORDERCODE 30978



SHOWELECTRONICS FOR PROFESSIONALS

ENGLISH INDEX

Please read over this manual before operation the light

1. Open the box for checking

In order to use this product safety and reasonable for the users, please read over this manual carefully before use and the operation must strictly according to this manual to avoid any damage to the product and personal safety.

Once after received this products please take and put carefully. And check carefully that whether the product was damaged or not during the transportation and please check the following things were enclosed:

Laser light 1PCS	Graphics USB card 1PCS
9 pin signal line 1PCS	USB connection cable 1pcs
3 pin signal line 1pcs	User manual 1pcs
Power cable 1PCS	Install CD-ROM 1PCS

2. Installation

1. Please check the voltage whether is the same with the one showed on the equipment or not.
2. It must ask for the technical person and set the light safety when installation. And let the light beam at the suitable angle.
3. When install this equipment please make sure there's no flammable surfaces (decorated things, etc) within at least 1.5M and maintain minimum distance of 0.5M from the equipment to the walls.
4. Please make sure that there's no other equipment or decorating materials obstructed the exhaust fan and the vent-pipe.
5. Products should be install immobility.
6. In case of safety, it's very important that to connect the earth with line.

3. ATTENTION

- Please do not open the bottom cover yourself without permission. Operate it accord the user manual. Please call the technician in case the machine broken down.
- Do not use it under the damp and rain.
- Pay attention to prevent the light from strong bump.
- Prevent the dust into the product
- Keep the vent-pipe well while working.
- Keep the plug insert well before put into power.
- Don't look the light directly to prevent make some destroy with eyes.
- Don't light or extinguish frequently, otherwise the life span of the light tube will be shortened.
- In view of the special characters, after operated the light an hour the product shall be paused about 15 minutes before be used next time.
- Keep the space between light equipments and the lighted things more than one meter.
- Don't touch the product and draw the power line if you hand wet.
- Don't open the cover for there have no parts the user can repair.
- Don't operate the light without lamps.
- If the semiconductor laser doesn't as light as before or there have some destroy with lens or other parts, please contact the distributor in time.
- When you want to retransfer the products, you'd better use the original package to shockproof.

4. Maintain

- Please use cotton stick dipped alcohol to wipe the mirrors at regular. Do not use the wet cloth or chemical impregnant to clean the mirrors.
- Please use the soft cloth to clean the surface of product.

ATTENTION: Disconnect input power before maintain.

Don't look straightly at the light sources.

NOTE: Don't seperate laser machine from laser power and repaire them by yourself otherwise no good repair service will be supplied.i

5. Structure of the fixture

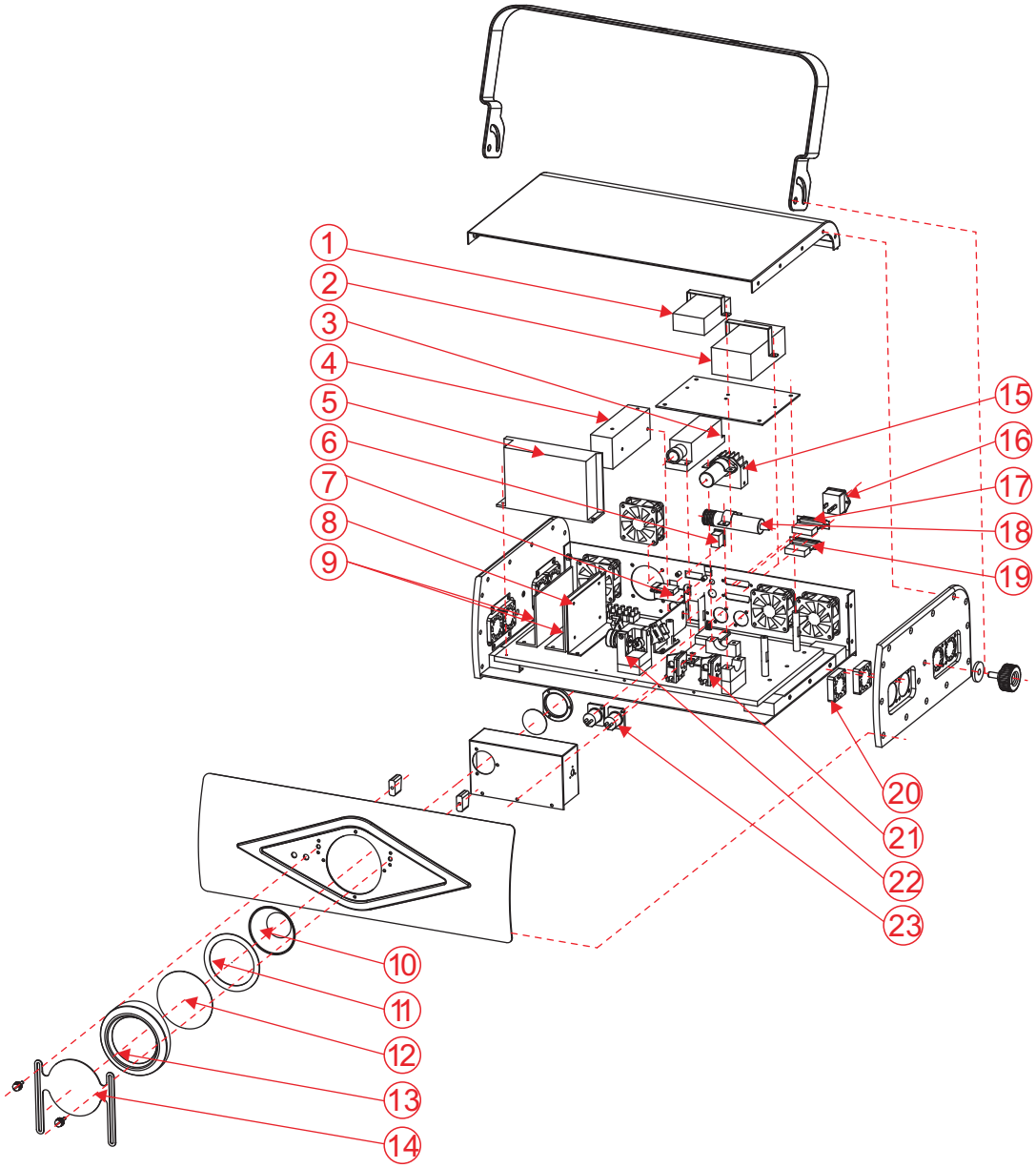


Fig5-1

No.	Description.
1	Power supply of green laser diode
2	Power supply of red laser diode
3	Blue laser diode
4	Power supply of blue laser diode
5	±12V power supply
6	Power input plug
7	Address code PCB
8	Signal switch PCB
9	X,Y scan board
10	Reflect
11	Washer
12	Dustproof mirror

No.	Description.
13	Lens holder
14	shutter
15	Green laser diode
16	Power input plug
17	Male ILDA 25 plug
18	Red laser diode
19	Female ILDA 25 plug
20	Fan
21	Adjustable mirror stand
22	Scan mirror
23	DMX plug signal

6. Scan motor Replacement

(1) Steps:

1. Unscrew UK M6 screw and plug out male signal connector.
2. Disassemble all M4 × 10 screw for X,Y scanner socket so that scan motors can be took out,put in or rotate to adjust the scan angle.
3. After adjust ,fix M4 × 10 screws,plug in male signal connector and then screw UK M6 screw.

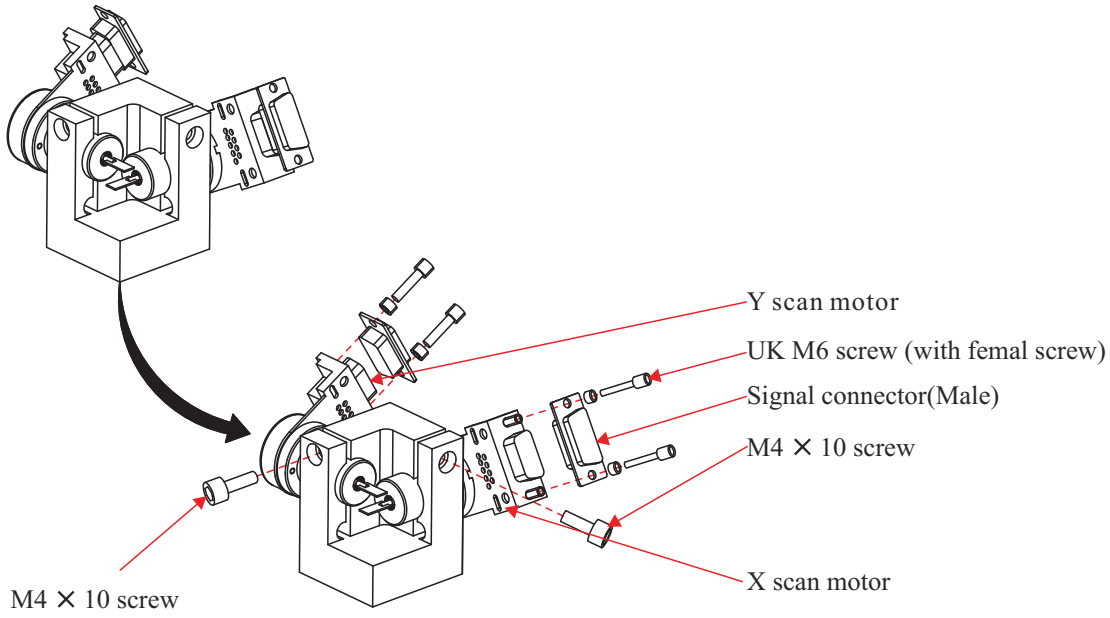


Fig6-1 Scan motor install diagram

(2) Optical system:

RGB mix beam be reflected out by X,Y scan mirrors.

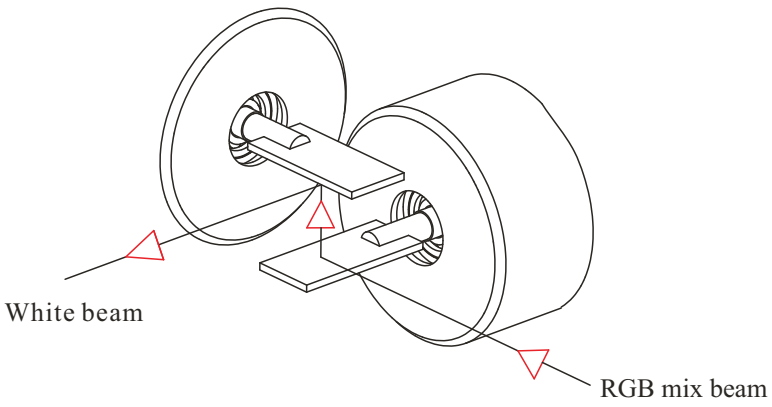


Fig6-2 Optical System diagram

7. Adjustable mirror socket

(1) Steps

1. Loose setscrew of X,Y and then adjust mirror socket to suitable position by X,Y adjustable screws.
2. Adjust Z adjustable screw at same time.
3. Fix X,Y setscrew.

NOTE: Made sure all beams through adjustable mirror socket be one point when you adjust X,Y,Z line with adjustable screw.

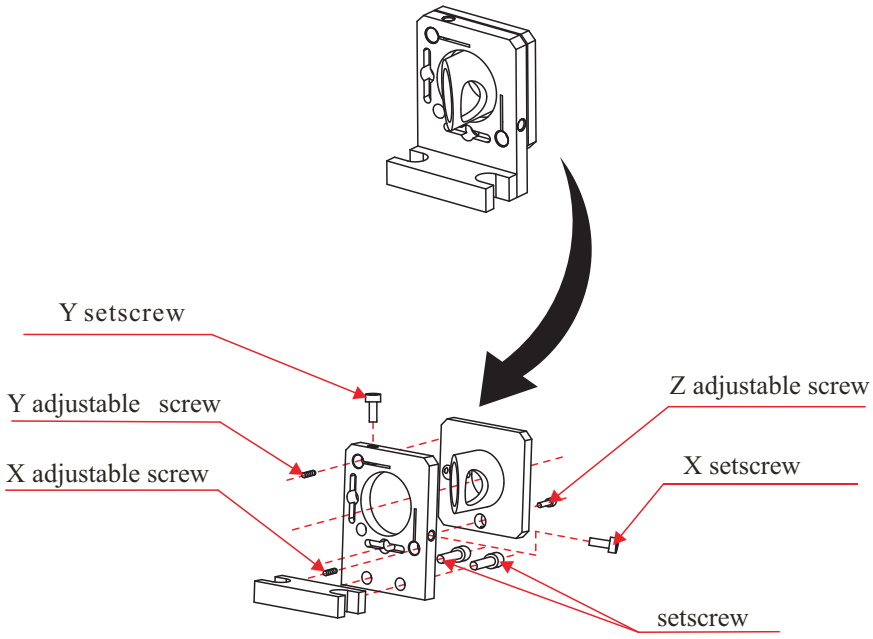


Fig7-1 Adjustable mirror socket structure

(2) RGB Laser beams mix system:

Mirror socket 1:Transmit green beam,reflect red beam,and then mix out yellow beam through mirror socket 1.

Mirror socket 2:Transmit yellow beam,reflect blue beam ,and then mix out white beam through mirror socket 2.

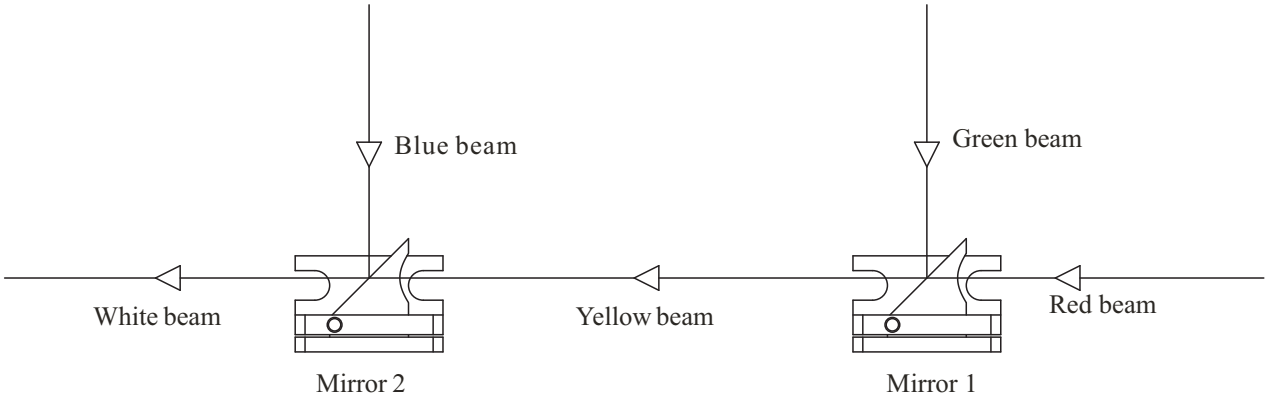


Fig7-2 RGB laser beams mix system

8. Laser diode replacement

Methods:

Disassemble whole laser system (include power supply,laser diode) and then replace new one at original position.

Note:keep laser diode,power supply and cables be 《ompletly and don`t try to damage,destroy or cut them so that it can be repaired (crefer fig 8-1).》

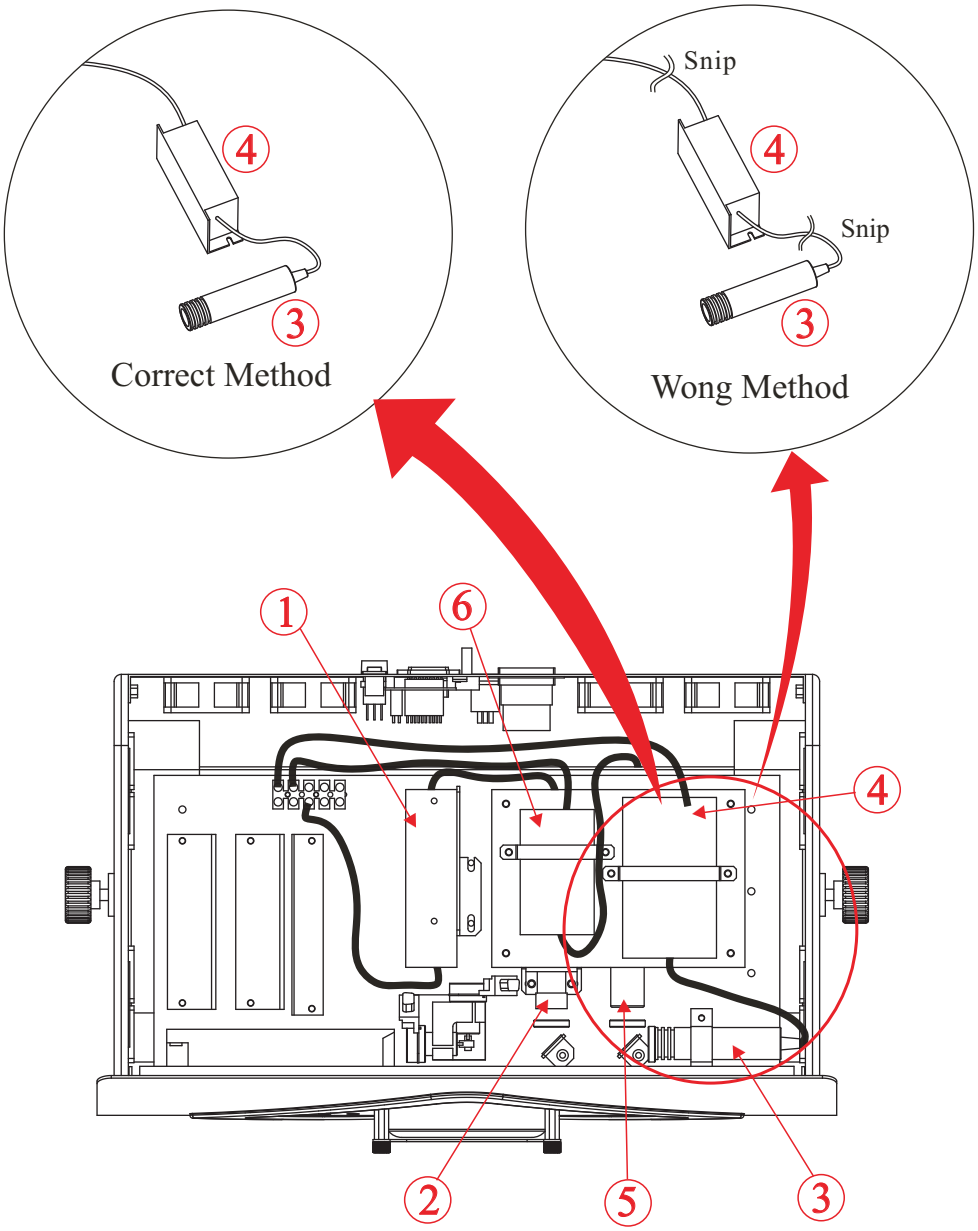
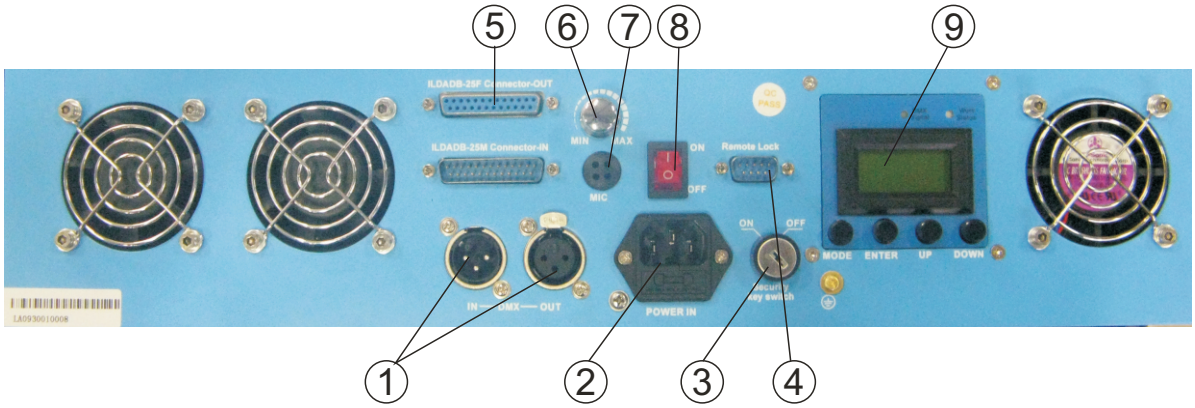


Fig8-1

①	power supply of blue laser diode	④	power supply of red laser diode
②	blue laser diode	⑤	Green laser diode
③	red laser diode	⑥	power supply of green laser diode

9. Control board instruction



1	**DMX IN/OUT:** International standard DMX512 signal input/output
2	**POWER INPUT：** Input power, with inner fuse.
3	**Security key switch：** Laser diode ON/OFF
4	**POWER ON/OFF:** Power on/off
5	**ILDA DB25F IN/OUT:** Signal input connection port of the laser perform software that in accordance with the ILDA standard.
6	**MIC:** Sound receiver
7	**MIN—MAX:** Sound control
8	**Remote Lock：** In the event of removal, laser will not emit any beam.(E.U. IEC regulation)
9	**Control Panel**

1. Computer software control mode

Fixture, there has a switch to select control mode - by computer or inside program:The fixture has ILDA DB 25 connector so that it can be controlled by computer software. In the When ILDA DB25F IN connects with QM2000 interfacial card or USB interfacial card, the lamp will be control by software which installed in the computer. When ILDA DB25F IN connector's connection port are free, the laser will driver by the inside program, temporality it can control by music or DMX512 signal.

The control mode switch will check the 4th Pin (InterLock A) and the 17th Pin (InterLock B) to adjust whether there has computer (with interfacial card) be connected to fixture. If Pin 4 not be connected to Pin 17, it means there no interfacial card otherwise there has and the connection port can receive all the signal of laser

perform software that accord with the ILDA standard, such as LD-2000 of Pangolin company.

In the theory, all the signal of laser perform software that accord with the ILDA Db25 standard can control the fixture. But Pin 4 and Pin 17 not be connected in some laser perform interfacial card. You will need to sold this two pins together at Pin25 signal output connector or connect Pin4 and Pin 17of the standard Pin 25 signal cable before use.

Note: We have tested that Pangolin Ld2000 (Qm2000 PCI interfacial card) and our i.Top laser (USB2.0)interfacial card) can work with this fixture well. But you will need to make changes as above mentioned when you use Mamba Black software (Easylaser interfacial card) of MediaLaser company.

2.**Inside program mode (include DMX)**

This mode will be set by address code.

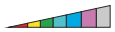
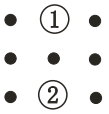
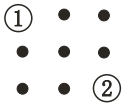
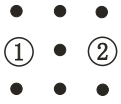
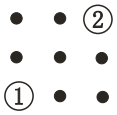
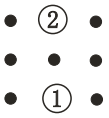
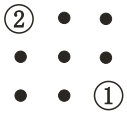
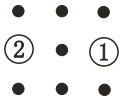
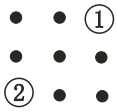
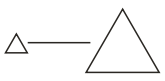
10. Control board operation

1. **Mode:** Select working mode by pressing **MODE**.
2. **ENTER:** Press **ENTER** to confirm the selection.
3. **UP:** Press **UP** to add the address code.
4. **DOWN:** Press **DOWN** to decrease the address code.
5. **DMX Signal:** DMX512 input. LED on means there is an incoming DMX signal, otherwise there is no MDX 512 signal or a faulty signal.
6. **Work Status:** LED on means the display PCB is working well.

11. DMX512 Operate

The machine can display two different patterns at the same time--24 channel version.And the 2nd pattern can move with the main pattern-17 channel version,Also you can display one pattern only--14channel version. The function of each channel as following(if the channnel not mention main pattern or the 2nd pattern, it means this channel has effect for both two patterns. Such as channel 1,4,11,12).

Channel		DMX Value	Function
1	Control Mode	0-41	Accelerated music active(Channel 2~24 no function)
		42~83	Standard music active(Channel 2~24 no function)
		84~125	Auto-mode(Channel 2~24 no function)
		126~167	Sound accelerated manual mode
		168~209	Manual(Sound active)
		210~255	Manual(Auto-mode, movement auto active)
2	Main Pattern Colour	0~16	Close
		17~33	Original colour
		34~50	Red
		51~67	Yellow
		68~84	Green
		85~101	Cyan
		102~118	Blue
		119~135	Purple
		136~152	White
		153~169	Single colour change
		170~186	Stochastic Single colour
		187~203	Rainbow colour flow
		204~220	Static colour + strobe
		221~237	Stochastic colour + strobe
		238~254	Stochastic multi colour + strobe
		255	Colour flow + strobe
3	Main Pattern	0~255	256 patterns(0~255)
4	Speed	0~255	42 Class speed(0~255)/6=(0~42)
5	Main Pattern Rotate	0~63	No Function
		64~127	Horizontal Rotate(around Y axis)
		128~191	Vertical Rotate(around X axis)
		192~255	Horizontal & Vertical rotate
6	Main Pattern Dot+ Rotating	0~63	No Function
		64~127	Rotating(around Z axis)
		128~191	Dotting(only dot, no line)
		192~255	Dot rotating
7	Main Pattern move	0~63	No Function
		64~127	Horizontal Movement
		128~191	Vertical Movement
		192~255	Sidelong Movement
8	Main Pattern Extend	0~63	No Function
		64~127	Extend in Horizontal
		128~191	Extend in Vertical
		192~255	Extend in Horizontal & Vertical
9	Main Pattern Zoom	0~63	No Function
		64~127	From small to large
		128~191	from large to small
		192~255	From small to large and then from large to small

10	Drawing speed	0~255	16 Class speed(0~255)/17=(0~15) 0 no effect 
11	Scan speed	0~2	Preset scan speed(Speed 50)
		3~255	253 class speed(from fast to slow) 
12	Color speed	0~255	255 Class(Slow to fast) 
13	Main patter pattern Size	0~2	Original Size(100%) 
		3~255	253 Class Size(3%~255%) 
14	Twin patterns & position Postion Reference frame (0,0) (0,255) A B C D E F G H I (0,255) (255,255) A(64,64) B(128,64) C(192,64) D(64,128) E(128,128) F(64,128) G(64,64) H(128,64) I(192,192)	0~27	No double patterns & position(15~24 out of effect)
		28~55	Pattern 1 Position B Pattern 2 Position H 
		56~83	Pattern 1 Position A Pattern 2 Position I 
		84~111	Pattern 1 Position D Pattern 2 Position F 
		112~139	Pattern 1 Position G Pattern 2 Position C 
		140~167	Pattern 1 Position H Pattern 2 Position B 
		168~195	Pattern 1 Position I Pattern 2 Position A 
		196~223	Pattern 1 Position F Pattern 2 Position D 
		224~251	Pattern 1 Position C Pattern 2 Position G 
		252~255	Pattern 1 Position E Pattern 2 Position E 
15	the 2nd pattern move mode	0~63	The 2nd pattern reverse with the main pattern(18~24 no effect) 
		64~127	The 2nd pattern rotate with the main pattern(18~24 no effect) 
		128~191	The 2nd pattern reverse alone(18~24 channel decide move mode) 
		191~255	The 2nd pattern rotate alone(18~24 channel decide move mode) 
16	the 2nd pattern	0~255	256 patterns
17	The 2nd pattern size	0~2	Original size(100%) 
		3~255	253 Class size(3%~255%) 

18	The 2nd pattern colour	0~16	Colse
		17~33	Original color
		34~50	Red
		51~67	Yellow
		68~84	Green
		85~101	Cyan
		102~118	Blue
		119~135	Purple
		136~152	White
		153~169	Single color change
		170~186	Stochastic color change--original color + a new color
		187~203	Rainbow flow effecf
		204~220	Original color + strobe
		221~237	Stochastic color + strobe
		238~254	Stochastic rainbow color + strobe
		255	Rainbow flow + strobe
19	The 2nd Pattern Rotate	0~63	No Function
		64~127	Horizontal rotate(around Y axis)
		128~191	Vertical rotate(around X axis)
		192~255	Horizontal & Vertical rotate
20	The 2nd Pattern Dot rotating	0~63	No Function
		64~127	Rotate(around Z axis)
		128~191	Dotting(Only dot, no line)
		192~255	Dot rotating
21	The 2nd Pattern Move	0~63	No Function
		64~127	Horizontal move
		128~191	Vertical move
		192~255	Sidelong move
22	The 2nd Pattern Extend	0~63	No Function
		64~127	Extend in Horizontal
		128~191	Extend in Vertical
		192~255	Extend in Horizontal & Vertical
23	Zoom	0~63	No Function
		64~127	From small to large
		128~191	From large to small
		192~255	From small to large and then to small
24	Drawing speed	0~255	42 Class speed(0~255)/6=(0~42) 0 no drawing

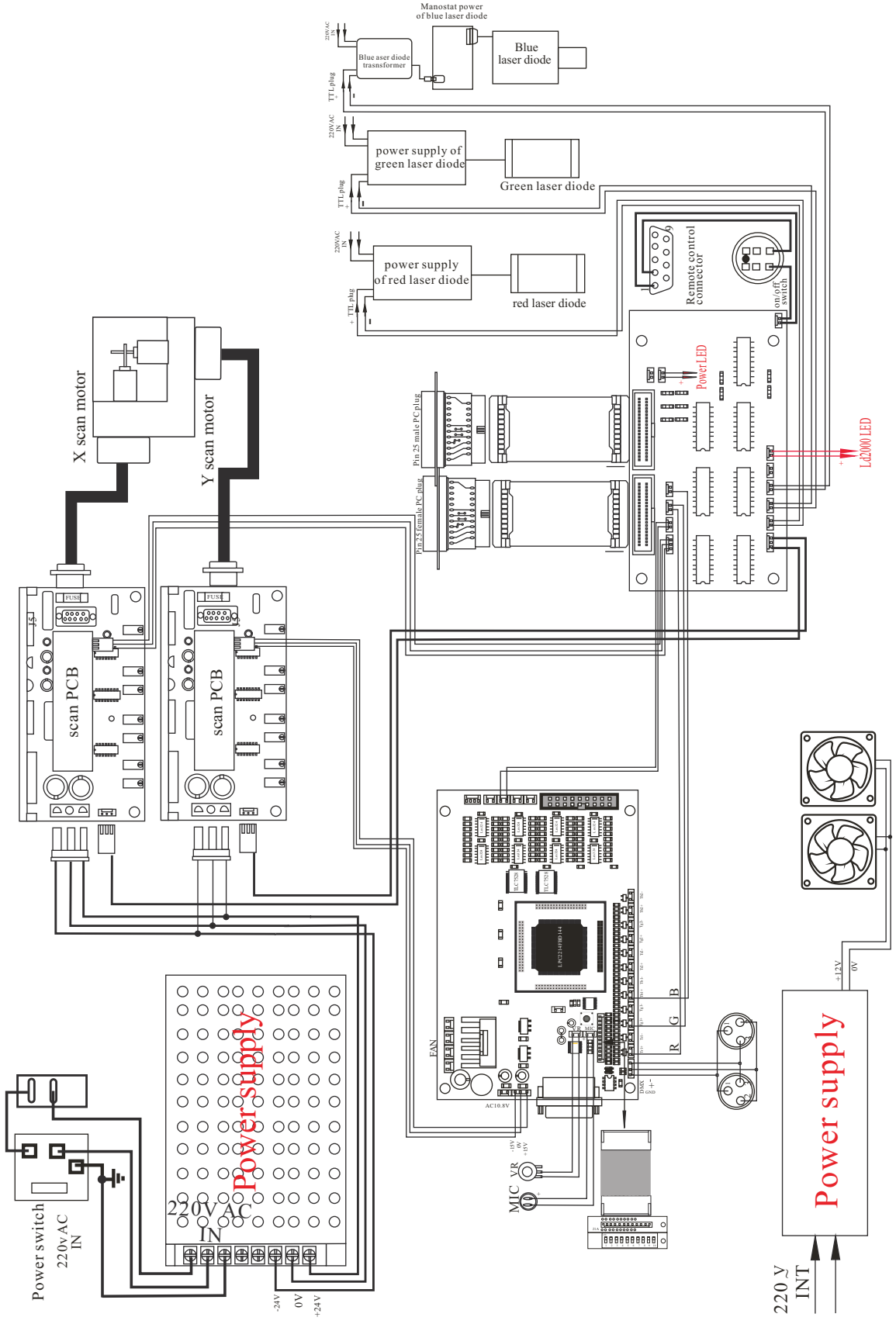
12. Specification

- Voltage: AC 220V~240V, 50/60Hz
- Total power: 50W
- Scanner: Super-speed scanner
- Cooling mode: Air cooling
- Scan angel ：0~±30°
- DMX Channel: 24 CHS
- Laser light power: Red Laser Class 3B 650nm
  Green Laser Class 3B 532nm
  Blue Laser Class 3B 473nm
- Control mode: Music mode, Auto-mode, DMX512
- Net weight: 17 kg
- Dimension: 565 x 350 x 290 mm

13. Maintain

- Maintenance should be performed every 15-day period, by using a sponge which is dipped with alcohol, rather than wet cloth or other chemical liquid, to clean the mirror.
- Warning: Power must be disconnected before maintenance or repair. Do not look at the light source directly.
  ATTENTION: DISCONNECT INPUT POWER BEFORE MAINTAIN.
  DON'T LOOK STRAIGHTLY AT THE LIGHT SOURCES.
  NOTE: Don't seperate laser machine from laser power and repaire them by yourself otherwise no good repair service will be supplied.

14. Electrical diagram



15. Trouble shooting

Problem	Causation	Replace part	Series number
No power	Damaged Fuse	Fuse	09-00-2001-01
	Damaged Pin4 switch	Pin 4 switch	08-05-0420-02
	Damaged power supply	±24V	16-03-0004-00
No response to music or it is difficult beactived by music	Damaged mic	MIC	16-03-0001-00
	Damaged control PCB	Control PCB	26-2A-LT211V2-00
	Damaged potentiometer	Potentionmeter	04-03-0105-03
X,Y scanner no strength or no patternor scanner shaking	Damaged scanner	Super scan motor	15-01-2215-00
	Damaged control PCB	Control PCB	26-2A-LT211V2-00
	Damaged power supply	±24V	16-03-0004-00
	Damaged scan board	Scan board	26-2A-FASTSCAN-00
No beam or beam dim or beam can't close, but other functions OK	Dirty lens	Please refer to the usermanual for further instruction	
	Damaged laser diode	Green laser diode	07-01-0030-08
		Red laser diode	07-03-0250-01
		Blue laser diode	07-02-0020-02
	Damaged control PCB	Control PCB	26-2A-LT211V2-00
	Control mode setting incorrect	Please refer to the usermanual for further instruction	
	Damaged Signal switch board	Signal switch board 4	26-2A-Sigalsw4-00
Can not control other function OK,Such as laser diode and fans	Control mode setting incorrect	Please refer to the usermanual for further instruction	
	Damaged control PCB	Control PCB	26-2A-LT211V2-00
	Damaged power supply	±24V	16-03-0004-00
	Damaged address board	LT-6 address code board	26-2A-LT6SW-00
	Damaged Signal switch board	Signal switch board 4	26-2A-Sigalsw4-00
	USB box	USB box	USB21-KT-00
	Internal wires are disconnected	USB signal cable	27-08-0005-00
		L D 2000 signal cable	
	Damaged power supply	±24V	16-03-0019-00

Appendix: ILDADB25F PINOUTSDB 25 definens

1	X +	-5 to +5V
2	Y +	-5 to +5V
3	No Use	No use
4	Interlock A	Connected to Pin 17 inside the QM 2000
5	Red +	0v to +2.5v
6	Green +	0v to +2.5v
7	Blue +	0v to +2.5v
8	No Use	No use
9	No Use	No use
10	No Use	No use
11	No Use	No use
12	Not connected	No use
13	No Use	No use
14	X –	+5V to -5V
15	Y –	+5V to -5V
16	No Use	No use
17	Interlock B	Connected to Pin4 inside the Qm 2000
18	Red –	-2.5V to 0V
19	Green –	-2.5V to 0V
20	Blue –	-2.5V to 0V
21	No Use	No use
22	No Use	No use
23	No Use	No use
24	No Use	No use
25	Ground	Cable shielded