

Product
Warranty card

产品说明保修卡



Warranty Terms

1. The products sold come with a two-year free warranty and lifetime repair service. That is, within two years, the quality problems of the product itself will be repaired free of charge, After two years, a certain cost is charged for product repair or replacement parts.
2. The software included in the products sold can enjoy free upgrades and functional improvement services in the later stage.
3. Provide corresponding technical support and cooperation for the products sold, and ensure a 24-hour technical service hotline.
4. The following product damage or other reasons caused by non-company factors are not included in the company's free repair:
 - (1) .Incorrect installation
 - (2) .Voltage mismatch
 - (3) . Improper use caused by failure to operate in accordance with the instruction manual
 - (4) .Repairs or alterations not authorized by the Company
 - (5). The machine lacks necessary maintenance
 - (6) . Failure to provide the proper working environment
 - (7) . Product damage caused by secondary transportation by the user
 - (8) . System failure caused by software or viruses other than the Company
 - (9) . Force majeure factors such as natural disasters (lightning strikes, earthquakes, tsunamis, floods, etc.) and unexpected circumstances
 - (10) . The product power supply must be effectively grounded

The above guarantee has the same legal effect for each user. Due to country or region changes, other rights may only apply to specific customers.

A8a RGB waterproof laser light



Please read this manual carefully
and carefully before use

USE CAUTION

- CHECK THAT THE LOCAL POWER SUPPLY MEETS THE PRODUCT INPUT VOLTAGE REQUIREMENTS.
- WHETHER THERE ARE LEAKAGE PROTECTORS, OVERCURRENT PROTECTORS, ETC. ON SITE WITH LOAD REQUIREMENTS.
- DO NOT USE A POWER CORD WITH DAMAGED INSULATION AND DO NOT LAP THE POWER CORD TO OTHER WIRES.
- WHEN INSTALLING EQUIPMENT, THE FIXING SCREWS MUST BE STRONG, EQUIPPED WITH SAFETY CABLES, AND CHECKED REGULARLY.
- THE TEMPERATURE OF THE LIGHT OUTLET OF THE DEVICE IS TOO HIGH, PLEASE DO NOT TOUCH IT CLOSE TO AVOID SCALDING.
- DURING USE, IF THE EQUIPMENT IS ABNORMAL, IT SHOULD BE STOPPED IN TIME TO PREVENT OTHER FAILURES.
- PLEASE BE INSTALLED AND DEBUGGED BY PROFESSIONALS, NON-PROFESSIONALS ARE STRICTLY FORBIDDEN TO DISASSEMBLE THE LAMPS PRIVATELY.
- DO NOT LOOK DIRECTLY AT THE LAMP WITH THE NAKED EYE, IT MAY CAUSE DAMAGE TO THE EYES.
- DO NOT CHANGE THE INTERNAL CIRCUIT STRUCTURE OF THE LAMP WITHOUT PERMISSION, WHICH MAY CAUSE THE LAMP TO SHORT CIRCUIT OR BURN OUT.
- WHEN NOT USING THE LAMP OR CLEANING THE LAMP, CUT OFF THE POWER.

DIRECTORY

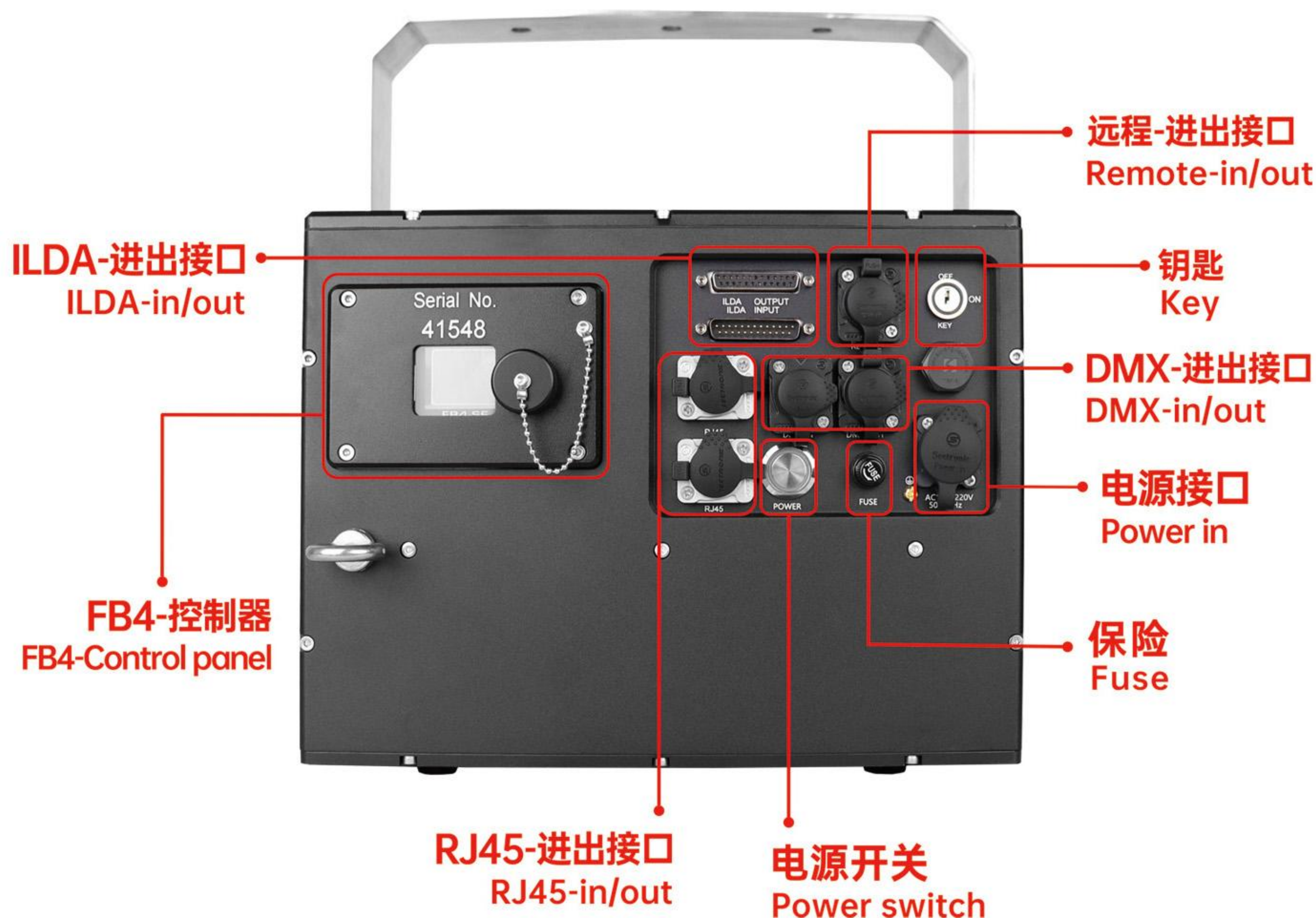
- 1.1)Product technical parameters
- 1.2)Device diagram
- 1.3)Connection diagram
- 1.4)Display instructions
- 1.5)Channel mode
- 1.6)Installation instructions
- 1.7)Maintenance, upkeep, calibration

DEVICE PARAMETERS

Product technical parameters

Voltage	110~220V； 50/60HZ				
lamp power	60W				
Laser power	Red:15W Green: 24W Blue: 21W				
Power consumption	785W				
wavelength	Red: 638nm	Green:525nm		Blue:450nm	
Laser source	Diode(NICHIA)				
Colors	RGB full color				
External Modulation	100K Analog ☐ TTL ☐				
DMX Channel	19CH/32CH				
Scanner system	50kpps ☐				
Control mode	Music ☐	Auto ☐	Master-slave ☐	DMX-512 ☐	ILDA Control ☐
Cooling system	fan				
Environment	Outdoors（IP65）				
Temperature	-20℃～45℃				
Net Weight	30KG				
Dimension Size	47*40*42CM（Handle height included）				
Packaging	Flight Case(With wheels) ☐				
Package size	67*52*47CM				
Packed weight	51KG				
Packaging picture					

SCHEMATIC OF THE DEVICE



HOOD ON THE FRONT OF THE DEVICE

TO START THE DEVICE, MAKE SURE THE FRONT VISOR IS TURNED ON
DO NOT POINT YOUR PHONE CAMERA DIRECTLY IN FRONT OF THE EXIT
SO AS NOT TO CAUSE THE CAMERA TO BURN OUT!

**THE TEMPERATURE OF THE LIGHT OUTLET IS HIGH
DO NOT TOUCH IT CLOSE TO AVOID SCALDING**



THE HANDLE CAN BE ROTATED 360 DEGREES

THIS DEVICE ALLOWS 360-DEGREE ADJUSTMENT
OF THE HANDLE DIRECTION EASY INSTALLATION
(THE SIZE OF THE DEVICE IS MEASURED
MANUALLY, THERE ARE 2-3CM
ERROR, THANK YOU FOR YOUR UNDERSTANDING!)

CONTROL BOX CONNECTION

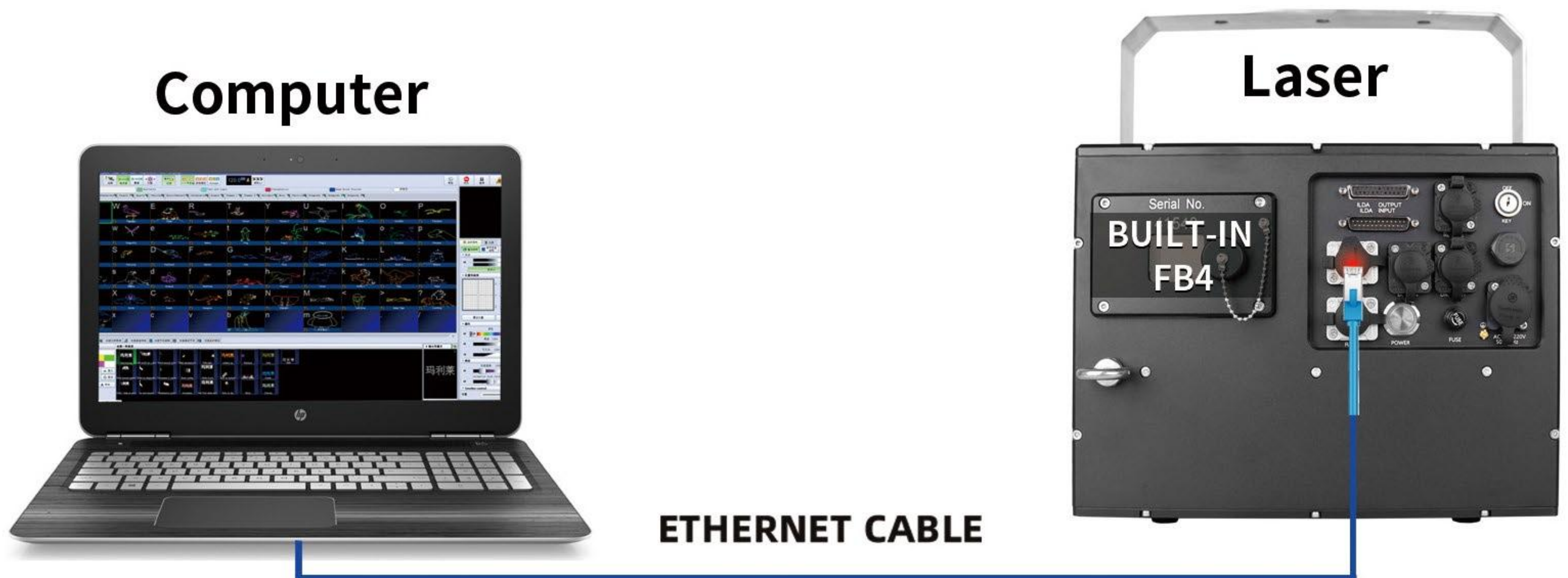
(No control box,
please ignore)

NOTICES: 1.IF THE LAPTOP DOES NOT HAVE A CRYSTAL HEAD INTERFACE,
YOU NEED TO ADD A USB TO CRYSTAL HEAD ADAPTER

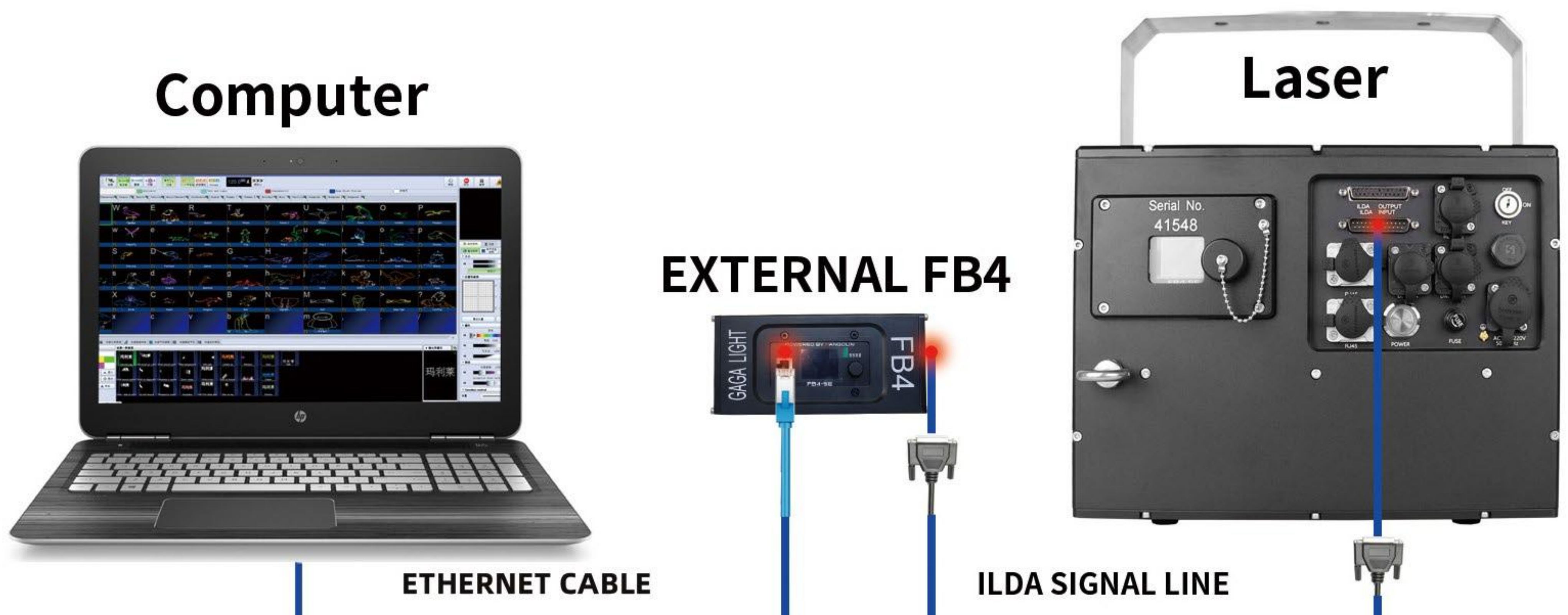
2.IF THERE ARE MULTIPLE LASER LIGHT DEVICES, YOU NEED TO ADD A SWITCH

3.If the distance is more than 80 meters,use optical fiber cable

CONNECTION DIAGRAM (BUILT-IN VERSION FB4)



CONNECTION DIAGRAM (EXTERNAL VERSION FB4)



DISPLAY INSTRUCTIONS

(If FB4 is built-in, please ignore it)

1. ROTATE COUNTERCLOCKWISE TO OPEN THIS ROUND LID



JUST ROTATE IT.
OPEN THE LID.

2. CLICK THE BLACK KNOB TO SELECT THE PROGRAM.



JUST OPEN
THE ROUND COVER
AND YOU WILL SEE
THE BLACK KNOB.

AFTER THE MODULATION IS COMPLETE,
REINSTALL THE WATERPROOF COVER

LCD Menu and function in troduction

*Main panel displays:

Version:Software version;

DMX Address:DMX address code;

Mode:Current working mode;

File:The current working file;

1.In the main panel,click the button to enter the menu.

2.In the main panel,ILD and RPG mode,double-click the button to change the folder

3.After entering the menu,you can double-click the button to exit.

*LCD setting of menu:

NO.	First-grade menu	Menu description	Setting item	Setting instructions	Note
1	DMX Address	DMX address setting	1-512	DMX address value	
2	Show Mode	Play mode	ILD	ILD program single loop playback	Automatically switctch to DMX mode when connected to DMX
			PRG	Play according to PRG list order	
			Auto	Self-propelled mode	
			Sound	Voice control mode	
3	Program	Select a self-propelled program	Progr 0	Program 0	Programs 1 to 3 need to be edited with the console and imprted
			Progr 1	Program 1	
			Progr 2	Show 2	
			Progr 3	Program 3	
			Progr 4	Program 4	
4	SD File	Folder inside SD card	Folder name	The currently selected folder name	Only valid when playing SD card
5	Size X	Graphic size	-100-100	Built-in program phase	Only valid for Auto mode/DMX mode
6	Size Y	Graphic size	-100-100		
7	Speed	Playspeed	8-40	Speed of built-in shows	Set according to the galvanometer
8	DMX State	State without DMX signal	Show	Set palyback according to Show Mode	
			Black	No light	
9	Slave Mode	Master-slave status	Slave	Slave	Set to Slave state when not connected
			Master	Host	

10	Y Phasic	Y direction	Positive	Positive	Valid for signals from this unit and ILDA
			Reverse	Anti-	
11	X Phasic	X direction	Positive	Positive	
			REverse	Anti-	
12	Color Mode	Color mode	RGB	Color	
			White	Monochrome	
13	Laser Lock	Laser light lock	ON	Open	Closed laser protection when the laser angle is too small
			OFF	Turn off	
14	Sound sense	Voice control sensitivity	0-100	Voice control sensitivity percentage	
15	SD Sound	Animation content voice control switch	ON	Open	
			OFF	Turn off	
16	Highlight	Brightness setting	0-100	Highlight setting percentage	Set as a highlight at the color junction
17	ILDA Lock	ILDA mode lock	0-100	Locked as input signal from ILDA	Select lock to switch to ILDA input when using RJB5 interface
			OFF	Not locked	
18	Load Flash	Load FLASH	ON	Import ILD programs from SD card	Import programs from the SD card's<LOAD> folder
			OFF		
19	Update Prog	Update built-in shows	OFF	DON't update	Import shows from show 1.yuq-show 4.yuq
			Progr 1	Update show 1	
			Progr 2	Update 2	
			Progr 3	Update 3	
			Progr 4	Update 4	
			all	Update Program 1-Program 4	
20	Red dimmer	Red brightness	0-255		Only valid for Auto mode/DMX mode,no valid for ILDA
21	Green dimmer	Green brightness	0-255		
22	Blue dimmer	Blue brightness	0-255		
23	DMX mode	DMX mode select	6ch/19ch 32ch/29ch 52ch	DMX mode	Note:19CH/32CH is available only
24	Language	Language select	6ch/19ch 32ch/29ch 52ch	Language	

***DMX-512 Channel function**

19CH mode:

Channel	Function	Value	Description
CH1	Dimmer	0-255	Dimmer from dark to bright
CH2	Mode selection	0-49	Auto
		50-99	Voice control mode
		100-149	RPG file sequential palyback
		150-199	ILD file loop playback
		250-255	Built-in graphics
CH3	Grapjocs selection	0-255	Graphic selection,one graphic for every values
CH4	Display mode	0-63	Normal
		64-127	Highlight display
		128-191	Segmented display
		192-255	Point display
CH5	Selection of color	0-16	White
		17-33	Red
		34-50	Green
		51-67	Blue
		68-84	Yellow
		85-101	Purple
		102-118	Cyan
		119-135	White,Red,Green and blue color segments
		136-152	Blue,Yellow,Purple and Cyan color segments
		153-169	WHite Red Green Blue Yellow Purple Cyan color segmentation
		170-186	White,Red,Green,Blue colors flowing
		187-203	Blue,Yellow,Purple and Cyan colors flow
		204-220	White Red Green Blue Yellow Purple Cyan color flow
		221-237	Color breaks based on graphic breakpoints
		238-255	Voice-controlled color change
CH6	X move	0-125	Adjust the position manually
		126-175	Automatic left and right circular motion
		176-225	Automatic jump left and right circular movement
		226-245	Automatic irregular jumping
		246-255	Voice-controlled irregular jump
CH7	Y move	0-125	Adjust the position manually
		126-175	Automantic up and down cycle movement
		176-225	Auto jump up and down cyclic movement
		226-245	Automatic irregular jumping
		246-255	Voice-controlled irregular jump

CH8	Zoom	0-10	No scaling
		11-87	Resize manually
		88-150	Zoom
		151-200	Zoom out
		201-255	Loop zoom
CH9	X rotation	0	No rotation
		1-128	Manual adjustment
		129-255	Automatic rotation
CH10	Y rotation	0	No rotation
		1-128	Manual adjustment
		129-255	Automatic rotation
CH11	Center rotation	0	No rotation
		1-128	Manual adjustment
		129-192	Automatic clockwise rotation
		193-255	Automatic counterclockwise rotation
CH12	Gradual painting	0-10	No fade
		10-74	Adjust the fader manually
		75-104	Auto-grading(increase)
		105-144	Automatic fade (minus)
		145-184	Automatic loop fade Automatic loop fade
		185-224	End-to-end loop drawing gradually(increase)
		225-255	End-to-end loop gradual drawing(minus)
CH13	X wave	0-9	No waves
		10-69	Small amplitude wave
		70-129	Medium amplitude wave
		130-189	Large wave
		190-255	Maximum amplitude wave
CH14	Y wave	0-9	No waves
		10-69	Small amplitude wave
		70-129	Medium amplitude wave
		130-189	Large wave
		190-255	Maximum amplitude wave
CH15	Strobe	0-10	No strobe
		11-199	Auto strobe(from slow to fast)
		200-255	Strobe by Voice
CH16	Red modulation	0-255	Red light from brightest to dark
CH17	Green modulation	0-255	Green light from brightest to dark
CH18	Blue modulation	0-255	Blue light from brightest to dark
CH19	Movement out of bounds effect	0-49	Out of bounds rebound
		50-99	Out-of-bounds to be line
		100-149	Out-of-bounds blanking
		150-255	Out-of-bounds pass through

CH1 to CH19 is same as 19Chs mode.From CH20 to CH32,the laser light will output second Graphics at same time,CH20 to CH32 is for second Graphics as below:

32CH mode:

Channel	Function	Value	Description
CH20	Graphics selection	0-255	Graphic selection,one graphic for every two values
CH21	Display mode	0-63	Normal
		64-127	Highlight display
		128-191	Segmented display
		192-255	Point display
CH22	Selection of color	0-16	White
		17-33	Red
		34-50	Green
		51-67	Blue
		68-84	Yellow
		85-101	Purple
		102-118	Cyan
		119-135	White,Red,Green and Blue color segments
		136-152	Blue,Yellow,Purple and Cyan color segments
		153-169	White Red Green Blue Yellow Purple Cyan color segmentation
		170-186	White,Red,Green Blue colors flowing
		187-203	Blue,Yellow,Purple and Cyan colors flow
		204-220	White Red Green Blue Yellow Purple Cyan color flow
		221-237	Color breaks based on graphic breakpoints
		238-255	Voice-controlled color change
CH23	X move	0-125	Adjust the position manually
		126-175	Automatic left and right circular motion
		176-225	Automatic jump left and right circular movement
		226-245	Automatic irregular jumping
		246-255	Voice-controlled irregular jump
CH24	Y move	0-125	Adjust the position manually
		126-175	Automatic up and down cycle movement
		176-225	Auto jump up and down cyclic movement
		226-245	Automatic irregular jumping
		246-255	Voice-controlled irregular jump

CH25	Zoom	0-10	No scaling
		11-87	Resize manually
		11-87	Zoom
		151-200	Zoom out
		201-255	Loop zoom
CH26	X rotation	0	No rotation
		1-128	Manual adjustment
		129-255	Automatic rotation
CH27	Y rotation	0	No rotation
		1-128	Manual adjustment
		129-255	Automatic rotation
CH28	Center rotation	0	Automatic rotation
		1-128	Manual adjustment
		129-192	Automatic clockwise rotation
		193-255	Automatic counterclockwise rotation
CH29	Gradual painting	0-10	No fade
		10-74	Adjust the fader manually
		75-104	Auto-grading(increase)
		105-144	Automatic fade(minus)
		145-184	Automatic loop fade
		185-224	End-to-end loop drawing gradually(increase)
		225-255	End-to-end loop gradual drawing(,minus)
CH30	X wave	0-9	No waves
		10-69	Small amplitude wave
		70-129	Medium amplitude wave
		130-189	Large wave
		190-255	Maximum amplitude wave
CH31	Y wave	0-9	No waves
		10-69	Small amplitude wave
		70-129	Medium amplitude wave
		130-189	Large wave
		190-255	Maximum amplitude wave
CH32	Movement out of bounds effect	0-49	Out of bounds rebound
		50-99	Out-of-bounds to be line
		100-149	Out-of-bounds blanking
		150-255	Out-of-bounds pass through

(If the FB4-DMX sub-board is not installed, please ignore this message.)

16 Channels

Channels	Value	Function	Description	Width
1	0-255	DMX Modes	0-31 Blackout	8 Bit
			33-95 Four channels	
			97-159 Eight channels	
			161-232 Twelve channels	
			225-255 Sixteen channels	
2	0-255	Page index (9 pages in total)	0-15 Page 1	8 Bit
			17-31 Page 2	
			33-47 Page 3	
			49-63 Page 4	
			65-79 Page 5	
			81-95 Page 6	
			97-111 Page 7 113-127 Page 8 129-255 Page 9	
3	0-255	Cue Index (48 cues in total)	0-32 None active 33-35 Cue 1	8 Bit
			37-39 Cue 2	
			-	
				
			221-223 Cue 48 225-255 Repeat	
4	0-255	Cue Speed	0-15 Full Speed 17-31 Pause	8 Bit
			33-255 25 till 200%	
5	0-255	Dimmer	0 till 100%	8 Bit
6	0-255	Zoom	0 till 100%	8 Bit
7	0-255	Size X	-100 till 100%	8 Bit
8	0-255	Size Y	-100 till 100%	8 Bit
9	0-255	Angle Z	0 till 360 degrees	8 Bit
10	0-255	Position X	0 = left	8 Bit
			128 = Center 255 = Right	
11	0-255	Position Y	0 = top	8 Bit
			128 = center 255 = bottom	
12	0-255	Visible points	Zero Points till 100% of points visible	8 Bit
13	0-255	Scan Rate	0-31 Cue preferred speed 33-223 6K till 29K	8 Bit
			225-255 30K	
14	0-255	Cue release	0-31 Default 33-95 Hold	8 Bit
			97-159 Loop 161-223 Next 225-255 Stop	
15	0-255	Color Scroll	0-31 Original cue color 33-223 Color Scroll	8 Bit
			225-255 White	
16	0-255	Reserved	Reserved	8 Bit

39 Channels

Channels	Function	width	Description	Comments
1	Fixture Mode	8-bit	Value should be 251 (0xFB) to enable output	During setup the red light on the FB4 will blink.
			Value should be 240 (0xF0) for at least 2 seconds to enter the setup profile. (FB4 will exit "setup profile" as soon as the value is no longer 240)	During playback mode, the red light will burn continuously.
2	Master Intensity	8-bit	0 = 0%, 255 = 100%	Only available in the setup mode.
3	Test frame	8-bit	0 = off, 1-255 = "/content/test_xxx.FB4Animation" (xxx = 001-255)	
4,5	Geo: X Size	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
6,7	Geo: Y Size	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
8,9	Geo: X Position	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
10,11	Geo: Y Position	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
12,13	Geo: Z Rotation	16-bit	0 = 0°, 65535 = 360°	Content is located at "/content/dmx/PxxxCyyy. FB4 Animation" Where xxx is page and yyy is cue (zero padded, so 1 → 001)
14	Page	8-bit	0 = No output, 1-255 = Page 1-255	
15	Cues	8-bit	0 = No output, 1-255 = Cue 1-255	
16	Cue Speed	8-bit	0 = 0%, 100 = 100%, 255 = 255%	
17	Dimmer	8-bit	0 = 0%, 255 = 100%	
18,19	Zoom	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	

Channels	Function	width	Description	Comments
20,21	X size	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
22,23	Y size	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
24,25	Z angle	16-bit	0 = 0°, 65535 = 360°	
26,27	Z rotation	16-bit	Continues rotation from -60 till 60 Rpm, 0 = Original, 1 till 32767 = -100% till -1% rotation, 32768 = keep angle but do not rotate, 32769 till 65535 = 1% till 100% rotation	
28,29	X position	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
30,31	Y position	16-bit	0 = -100%, 32768 = 0, 65535 = +100%	
32	Scanrate	8-bit	0-255 = From 5K to cue scanrate	Lowering the scan rate can impact the cue speed of the laser
33	Red	8-bit	Red component for mixing with the original cue	

Channels	Function	width	Description	Comments
34	Green	8-bit	Green component for mixing with the original cue	
35	Blue	8-bit	Blue component for mixing with the original cue	
36	Alpha	8-bit	0 = Original color, 255 = RGB color	
37	Visible points start	8-bit	Cut off points from the start of a frame	
38	Visible points end	8-bit	Cut off points from the end of a frame	
39	Strobe	8-bit	0 = Off, 1 = 1Hz , 255 = 20Hz	

NOTES

Special considerations

Electronic devices are prohibited from pointing at laser lamps for exit cameras

Easy to burn out the camera!

Mobile phone / Camera / Camcorder/ other photography and video products

Burnt out sample display

Sample ①



Sample ②



Sample ③



INSTALLATION INSTRUCTIONS

Installation matters

- 1.The iron frame for carrying laser lights on the ground must be higher than 3M
(Except for rooftops or other special areas)
- 2.The bottom of the iron frame must be fixed, welded to the ground, or in case of soft ground, cement piles must be built
- 3.The equipment on the shelf must be protected and fixed to prevent typhoons from falling and causing unnecessary losses
- 4.After the show starts, try not to let customers get too close to the equipment and keep a certain distance to enjoy

Installation reference style

Sample ① Customized 2M height aluminum alloy frame	Sample ② Soft ground poured custom alloy frame	Sample ③ Mounting equipment on wall mounts	Sample ④ Soft ground pouring custom tripod
			

EQUIPMENT MAINTENANCE

THE BACK PLATE IS PARTIALLY PROTECTED

WATERPROOF CHASSIS, NEED TO PUT UNUSED HOLES,
IF THE DMX HOLE IS COVERED WITH A RUBBER COVER,
SO THAT DUST OR RAIN DOES NOT ENTER THE INSIDE OF THE CHASSIS

FRONT DUST GLASS LENSES

WIPE IN ONE DIRECTION WITH A COTTON SWAB AND ALCOHOL,
AND WIPE AGAIN WITH A DRY PAPER TOWEL,
AFTER THE SHOW, COVER THE SUNSHADE.



THE RADIATOR IS PARTIALLY CLEAN

THE COMMONLY USED BLOW GUN IS AIMED AT THE HEAT DISSIPATION
PART TO BLOW OFF THE DUST, LET THE LASER LIGHT DISSIPATE
HEAT BETTER, EXTEND THE LIFE OF THE LIGHT SOURCE.

COMMON FAILURES

THE LASER LIGHT DOES NOT EMIT LIGHT

- ◆ CHECK THAT THE FRONT VISOR IS OPEN.
- ◆ THE SUPPLY VOLTAGE IS UNSTABLE.
- ◆ THE CONNECTING WIRE LEAKS AND THE SIGNAL CABLE FALLS OFF OR POOR CONTACT.
- ◆ IF IT IS A BUILT-IN CONTROLLER, A COMPUTER LASER LIGHT MUST BE CONNECTED TO WORK.
- ◆ WHETHER THE GB 110V ☐ 220V ☐ VOLTAGE IS CONNECTED CORRECTLY.

User Profile

Date		Name		Contact	
Product name				Product number	
Remark:					

Warranty Records

[illegible]

