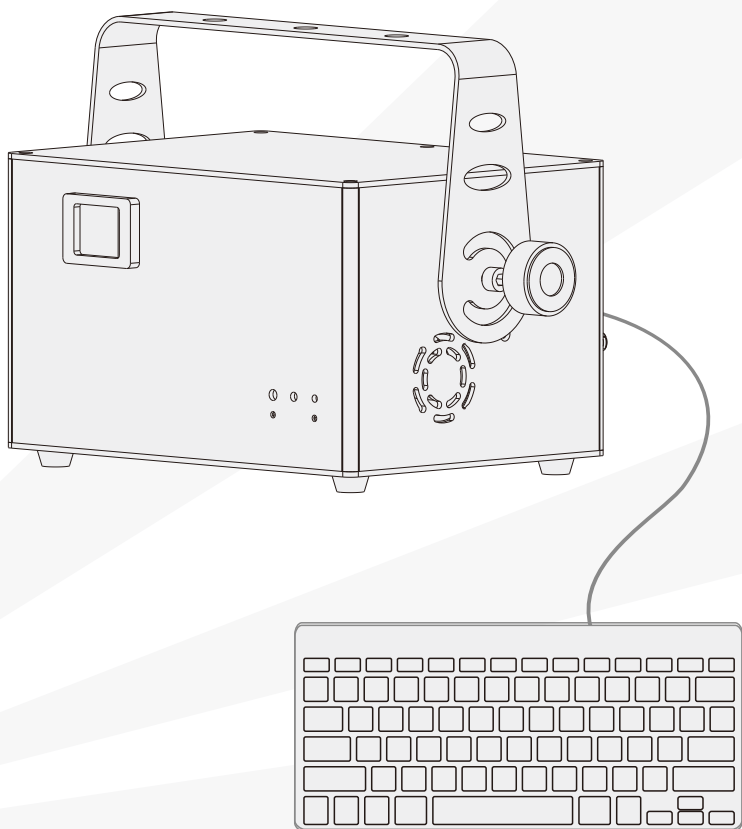


FINE USER MANUAL



Version 1.0



Unpacking Instructions

Read Manual before Operation

Dear user,

Thanks for choosing our laser device, believing this brand new product will bring you unlimited marvel and happiness. Before operating this device, please read this manual thoroughly, and retain it for future reference.

Warning Data

Please note the warnings in bold which will ensure the safe and smooth operation. These warnings are important to a certain extent.



Attention! Indicates a skill or other useful information for special situations.



Important! Indicates important information to protect personnel from laser incident or injury.



Caution! Prevent damage or injury from incorrect operation.



Laser! Laser safety warning labels.

Warning!

If the external flexible cable or cord of this luminaire is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or his service agent.

Shields, lenses or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired, for example by cracks or deep scratches.

Unpacking Instructions

As receiving a fixture, carefully unpack the carton, checking contents to ensure that all parts are in good condition. Informing the shipper immediately and retaining packing material for inspection if any parts damaged from shipping or device damaged. Keep packing materials as evidence for shipper's confirmation.



Attention!

This unit is in perfect condition before delivery; please check all accessories when unpacking the unit. User should follow this user manual to operate this unit, and make sure that you are clear on all laser safety information and unit operation before power it on. Any wrong operation will make this unit out of warranty.

Carefully move after receiving it, checking whether there is any damage from shipping, and all the accessories in it.

NAME	QTY
Laser Light	1
Power Cord	1
Switch Keys	2
Interlock Connector	1
Keyboard	1
USER MANUAL	1
Carton Case	1

Safety Instructions

Safety Instructions



To protect the environment, please try to recycle the packing material as much as possible.



The projector is for indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not expose the device to water or any other fluids, or metallic objects



Don't throw this product away just as general trash, please deal with the product follow the abandon electronic product regulation in your country.



Locate the fixture in a well ventilated spot, away from any flammable materials and/or liquids. The fixture must be fixed at least 20cm from surrounding walls

- ◆ To avoid condensation to be formed inside, allow this unit to adapt to the surrounding temperatures when bringing it into a warm room after transport. Condense sometimes prevents the unit from working at full performance or may even cause damages
- ◆ Don't cover any ventilation openings as this may result in overheating.
- ◆ Don't install it on flammable object.
- ◆ Don not use it when maximum ambient temperature is higher than 40 degree,
- ◆ Unplug the unit when it is not used for a longer time or before replacing the bulb.
- ◆ Don't open the top cover to avoid unit damage.
- ◆ Please use the original packing when the device is to be transported.

Laser Safety Warnings



According to EN 60825-1:2007, this product belongs to class 4. Direct eye contact may cause injury.



- ◆ This product is for laser show only. The class 3B laser light should be operated by professional operator only.
- ◆ This is so-called show laser, emitting radiation with a wavelength spectrum between 400 and 700nm and producing lighting effects for shows.
- ◆ International laser safety regulations require that the vertical height from installment to ground is more than 3 meters, horizontal distance is 2.5 meters from audience.
- ◆ Never direct the laser beam to people or animals and never leave this device running unattended.
- ◆ The legal requirements for using laser entertainment products vary from country to country. The user is responsible for the legal requirements at the location/country of use.



Warning! Avoid direct eye contact with laser beams during operation, especially when the laser beams stay still, or injury to eyes may occur.



Laser Safety Protection Feature



Caution! The laser security measures are designed according to the specific terms of the relevant international laser safety standards and has the following laser safety protection means

- ◆ Laser key switch: laser is available only when the key is turned on.
- ◆ Laser remote Emergency switch: remote connecting switch, which will cut off the laser light path emergently once the device in potential hazard;
- ◆ Laser indication : laser indication indicating the front panel of the laser light" laser-ready "
- ◆ Laser safety labels: affixed line with European standards for multiple chassis laser safety stickers
- ◆ laser modulation closed : When the laser scanning pattern is less than ± 1 degree, built-in single chip will close the light after comparison operation.
- ◆ Laser shutter protection: When the laser scanning pattern is less than ± 1 degree, shutter protection will cut off light path. (Remark: When the device work with ILDA or DMX program, there has the status of shutter protection, and the pattern is less than ± 1 degree, it's normal protection,)

Overhead Rigging

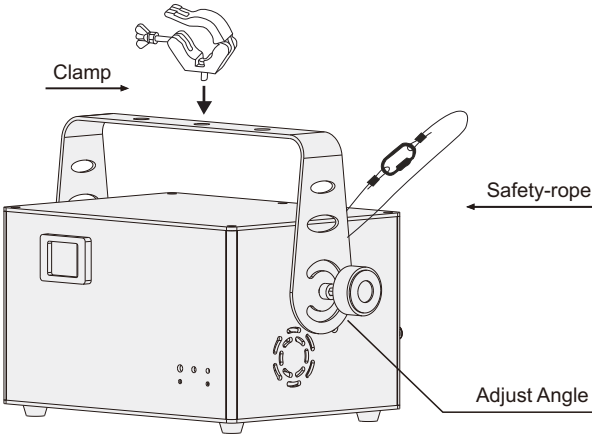


Attention! The installation must be carried out by qualified service personal only. Improper installation can result in serious injuries and /or damage to property. Overhead rigging required extensive experience! Working load limits should be respected, Certified installation materials should be used, the installed device should be inspected regularly for safety.

- ◆ Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- ◆ Locate the fixture in a well ventilated spot, far away from any flammable materials and/or liquids. The fixture must be fixed at least 50cm from surrounding walls
- ◆ The device should be installed out of reach of people and outside areas where persons may walk by or be seated.
- ◆ The device should be well fixed; a free swinging mounting is dangerous and may not be considered!
- ◆ Do not cover any ventilation opening as this may result in overheating
- ◆ Before the first time use, it must be inspected by professional staff to make sure safety, inspection regularly every year.

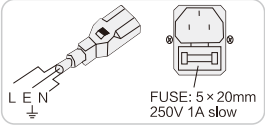


Before rigging make sure that installation area can hold the 10 times weight of device. Using the steel rope which can hold 12 times weight of device, through the eye-bolt for assisting hang installment.



AC Power

Please use the attached power, note that power voltage and frequency are the same as the marked voltage and frequency of device when connecting power. Every device's power should be connected separately, so that device can be controlled individually.

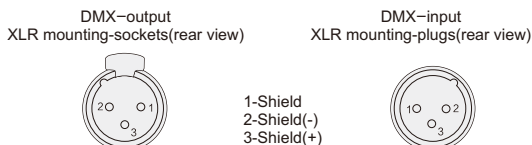


Cable(EU)	Cable(US)	Pin	International
Brown	Black	Live	L
Liht blue	White	Neutral	N
Yellow/Green	Green	Earth	⏏

Overhead Rigging

DMX-512 connection

Connection between laser lights and DMX must use the shielded cable of diameter more than 0.5mm. Please use the attached 3 pin XLR plug/socket to connect the DMX output/input interface. The connection between socket and cable as below(note the plug/socket's 3 pin number and position).

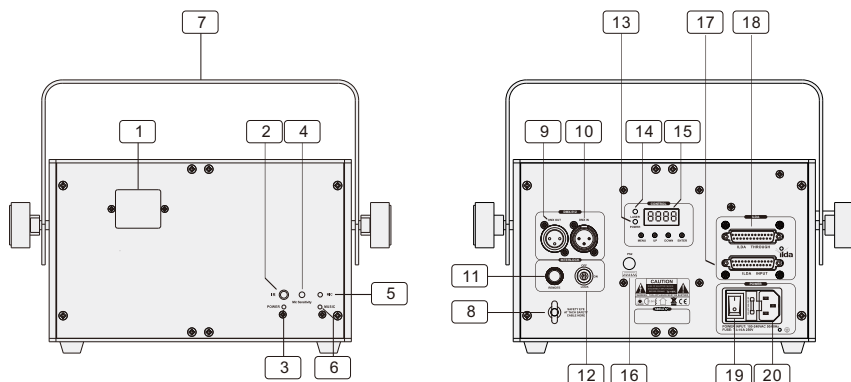


Note, XLR plug/socket's 3pin cannot be touched by inner hull, connection between pins is not allowed. Except above connection, XLR plug/socket cannot be connected with XLR control line. Device receives international standard DMX512 (1990) control signal.

When using standard DMX512 control signal, the last device's output interface must be connected to a DMX plug. This plug is putting a 120 ohm resistance between "canon" plug's 2 pin and 3 pin. Showing as below pic. Sticking this plug into the last device's signal output interface, it will avoid the interference during the process of signal transmission.



Operation instructions



NO	NAME	FUNCTION
1	Laser Aperture	The laser effect output aperture. Never look inside the fixture through this aperture while the fixture is operating.
2	Remote	The receiver of remote controller
3	POWER	Main power indicated LED. Red is ON.
4	Potentiometer	Turn the knob to adjust the sound activated sensitivity.
5	MIC	Receiving sound signal
6	Music LED	Indicated light of music signal. Synchronize to detected music signal
7	Handle	Used for hanging the light.
8	Safety Eye	Used to attach a safety cable when the fixture is rigged. Check more details in RIGGING
9	DMX output	3PIN Female XLR port, using for DMX
10	DMX input	3PIN Male XLR port, using for DMX
11	Urgent and safe switch	Switch off the laser manually if error occurs
12	Key switch	Make sure the professional person use
13	Laser Indicator	Indicated light of laser. Red is on.
14	Power Indicator	Indicated light of power. White is on.
15	LED display	For setting mode
16	PS/2 interface	Connecting PS/2 keyboard , or PS/2 USB keyboard of adaptor
17	ILDA THROUGH	Standard ILDA DB25 Output(through)
18	ILDA INPUT	Standard ILDA DB25 Input
19	Power Switch	Power ON/OFF.
20	Power input	Power input socket, built-in protective tube and spare tube

Menu operating instruction



When laser is powered on, LCD monitor on rear panel shows the current operating standalone mode or DMX address of DMX mode. With help of LCD control panel, is very easy to set and change the operating mode of laser. After every resetting and saved, the new mode information will be shown on LCD monitor at next power on.

MENU Model choice ,return to the previous menu.

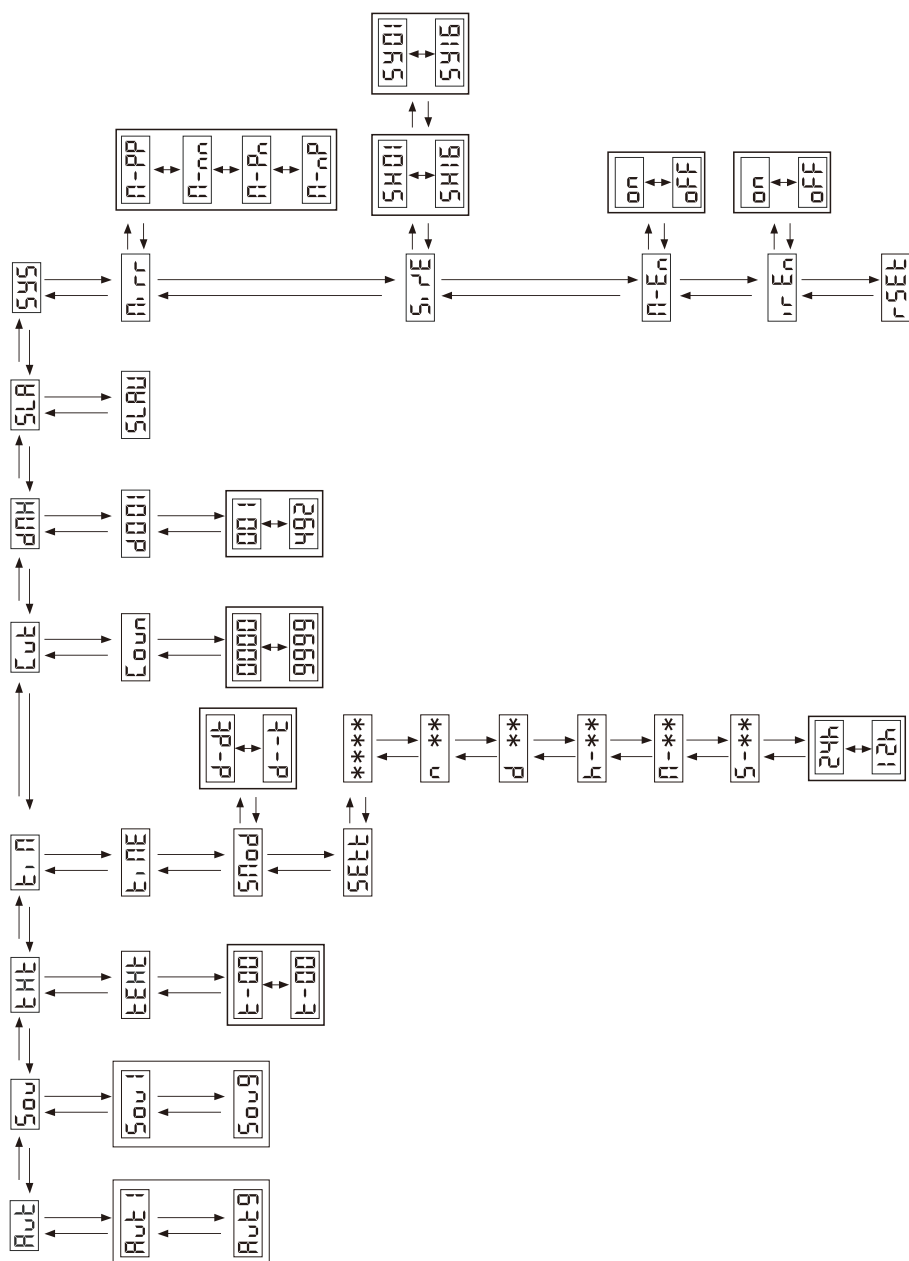
ENTER Go into the deeper menu.

UP For higher numeric value operation.

DOWN For lower numeric value operation.

LED Display		Functional Description
R u t	R u t 1	Auto Mode 1
	R u t 2	Auto Mode 2
	R u t 3 ~ R u t 9	Built-in holiday programs: 3. New Year, 4.Christmas. 5.Love, 6.Birthday, 7.Party, 8.Halloween, 9.Music
S o u	S o u 1	Sound Mode1
	S o u 2	Sound Mode 2
	S o u 3 ~ S o u 9	Built-in holiday programs: 3.New Year, 4.Christmas. 5.Love, 6.Birthday, 7.Party, 8.Halloween, 9.Music
t H t	t H t	Loop playback of built-in TEX0-9.
	t - 00 ~ t - 09	Text program saved in 0-9.
t, n	t, n t	Time Mode.
	S n o d	Time display mode:Time & Date or Only Time.
	S E t t	Time setting:year/month/date/week/hour/min/second/12or24h
C o u t	C o u n	Countdown Mode.
	0000 ~ 9999	Setting countdown time. ENTER to confirm. UP to start, DOWN to stop.
d n H	d 000	Signal reception menu.(when DMX is not connected, LED letters will twinkle)
	00 1 ~ 492	Channel addresses setting.
S L A	S L A U	Slave Mode.
S Y S	n, r r	Mirror setting: N-PP/PN/NP/NN
	S, r E	Image size setting: SH01-SH16;SY01-SY16
	n - E n	Master Mode.
	r E n	IR Mode.
	r S E t	Restore the factory initial setup.

Menu operating instruction

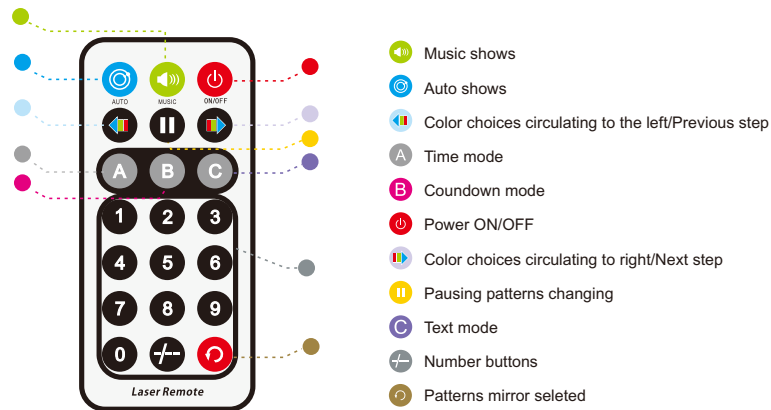


Menu operating instruction

Initial Setting


MENU	UP	DOWN	ENTER	UP	DOWN	ENTER
Auto/Sound Programs	Auto1-Auto9 Sound1-Sound9	To choose program effect through UP/DOWN, ENTER to confirm.				
Text Editing Mode	TEXT	Loop playback of saved TEX0-9.				
	TEXT0-TEXT9	Text program 0-9, ENTER to play.				
Time Mode	Smod(SHOW MODE)	To choose time display mode.	d-dt(DATE&TIME)	Time & Date Mode.		
			d-t(ONLY TIME)	Only Time Mode.		
	SETT(SETTING)	Time Setting Mode	year: **** hour: h-** month: n ** minute: N-** date: d** second: S-** 12/24h	ENTER to confirm and back to the previous step		
Count down Mode	COUN	ENTER into Countdown Mode	0000-9999	ENTER to confirm. UP to start, DOWN to stop.		
			TEX0-TEX9 (LINK TO 0-9)	Directly link to TEX0-9 after countdown.		
DMX Mode	d001	To check DMX signal. When DMX is not connected, LED letters will twinkle	001-492	Setting DMX value.		
SLAVE Mode	slav	ENTER into Slave Mode, When there is no signal, LED letters will twinkle				
System setting	MIRR (SET MIRROR)	Setting pattern direction	N-PP/PN/NP/NN	ENTER to confirm and back to the previous step		
	Zoom (SET SIZE)	Setting pattern size	SH01-SH16 SY01-SY16			
	N-En	Master Mode	ON/OFF			
	Irem (SET REMOTE)	IR Mode	ON/OFF			
		REST	ENTER to restore the factory initial setup			




Remote control operation instruction






BUTTON	FUNCTION	DESCRIPTION
	ON/OFF	Power ON/OFF and black out. When it is pressed, enable laser light output, press again blackout the laser, and circle as it.
	Auto	Press AUTO, enter into Auto mode, it will play Auto show randomly. Press to change different programs.
	Sound	<ul style="list-style-type: none">◆ Press MUSIC enter into Sound mode, it will play Auto show randomly. Press to change different programs.◆ Press MUSIC for 2 seconds, enter into sound sensitivity adjustment. Then choose NO.1-9, 9 is the most sensitive, 1 is the slowest.
	Pause	Press it, program and color change will be paused, press again to continue play. Between the choice of 12R and 24R, press to choose 12R, press again to choose 24R
	Left	Color choices circulating to the left/Previous step
	Right	Color choices circulating to right/Next step
	Time mode	<ul style="list-style-type: none">◆ Press A, enter into time mode.◆ Press A again, circle play among YEAR, MONTH, DAY, WEEK, TIME◆ Press A for 2 seconds, enter into time adjust mode. The adjusted number flicker, press numeric key to choose the right value, press color choice key to choose last or next, then press A to save.
	Count down mode	Press B, enter into countdown mode. Press B for 2 seconds, adjust the value by 1-9, press B to count down, press to stop.
	Pattern rotation	Press C enter text model, then by choose to save text.
	Numeric key	Single number and double number setting.
	Mirror function	Every press, pattern changes in 4 kinds of mirror direction, after getting the right pattern direction, stop press.




Keyboard operation instruction

Press WINDOWS  button on the keyboard enter menu option. Laser will show corresponding menu.




BUTTON	FUNCTION	DESCRIPTION
	Menu option	Laser will show corresponding menu, press  to change below mode. Then save by  "ENTER" <div>1、AUTO 2、MUSIC</div> <div>3、TEXT 4、CLOCK</div> <div>5、COUNT DOWN 6、DMX</div> <div>7、SLAVE 8、SYSTEM</div>




1、Keyboard operation instruction of AUTO mode

Press WINDOWS , enter menu, Laser will show corresponding menu. Pressing  UP/DOWN to choose 1、AUTO, Press  ENTER to AUTO mode




Keyboard operation	Old	New	Pattern	Instruction
AUTO				In Auto Mode, press UP/DOWN to choose auto shows
	TAB	MIRROR		Display repeat setting, from the saved text.
	F2	COLOR	RGB	Choose last edited text, if one key without text, it will not display
	PAUSE			Press to stop, press again to continue.



2、Keyboard operation instruction in MUSIC mode

Press WINDOWS , enter menu option. Laser will show corresponding menu. Pressing  UP/DOWN to choose 2、MUSIC , Press  ENTER to MUSIC mode

Keyboard operation	Old	New	Pattern	Instruction
SOUND				In Sound Mode, press UP/DOWN to choose sound shows
	TAB	MIRROR		Mirror, pattern cycle change at 4 kinds mirror direction, when arrive favor pattern, press stop key.
	F2	COLOR	RGB	MUSIC color setting, to choose different color effect
	PAUSE			Press to stop, press again to continue.




3、Keyboard operation instruction in TEXT model













Press WINDOWS , enter menu option. Laser will show corresponding menu. Pressing  UP/DOWN to choose 3、TEXT, Press  ENTER to TEXT mode.


Keyboard operation	Old	New	Pattern	Instruction
text edit	F1	FLOW		Text flow setting, FLOW/STOP, press UP/DOWN to set flow speed
	F2	COLOR	RGB	Color setting, to choose different color
	F3	Draw		Draw setting, press UP/DOWN to set speed






Keyboard operation instruction

3. Keyboard operation instruction in TEXT model

Press WINDOWS  enter menu option. Laser will show corresponding menu. Pressing  UP/DOWN to choose 3、TEXT, Press  ENTER to TEXT mode.




Keyboard operation	Old	New	Pattern	Instruction
text edit	F4	ZOOM		Zoom setting, zoom in /zoom out/in and out, press UP/DOWN to set speed
	F5	X Move		X axis move right or left, STOP/MOVE AHEAD/MOVE OPPOSITE, press UP/DOWN to set speed
	F6	Y Move		Y axis move UP or DOWN. STOP/MOVE AHEAD/MOVE OPPOSITE, press UP/DOWN to set speed
	F7	Y Roll		Y axis roll, STOP/ COROTATION/REVERSE, press UP/DOWN to set speed
	F8	X Roll		X axis roll, STOP/ COROTATION/REVERSE, press UP/DOWN to set speed
	F9	Z Roll		Z axis roll, STOP/ COROTATION/REVERSE, press UP/DOWN to set speed
	F10	WAVE		Wave effect, wave range/wave quantity/wave frequency, press UP/DOWN to set speed
	F11	Text Qty		Display character quantity, 12. 10. 8. 6. 4
	F12	Play TIME		Setting display time, follow the cue , to set by the NO. key
	TAB	Mirror		Mirror pattern, pattern cyclic change at 4 kinds of mirror pattern direction.
	DEL			Clear the cache area
	BACKSPACE:			Delete one character
	HOME:			Text head
	END:			Text end
				Go ahead/back, move
	Ctrl+Alt+del:			Delete all text and task on every NO. key








Keyboard operation	Old	New	Pattern	Instruction
text saving	CTRL+NO	SAVE+NO		Save text and text parameter, No. KEY means content saved on it

Keyboard operation	Old	New	Pattern	Instruction
text display	ALT+NO.	Play+NO		Save text and text parameter, No. KEY means content saved on it
	INS	Loop Playback		Display repeat setting, from the saved text.
	PgUp			Choose last edited text, if one key without text, it will not display
	PgDn			Choose next edited text, if one key without text, it will not display
	Pause			Display paused




Keyboard operation instruction






4、Keyboard operation instruction of CLOCK

Press WINDOWS  enter menu option. Laser will show corresponding menu. Pressing  UP/DOWN to choose 4、CLOCK, Press  ENTER to CLOCK mode

Keyboard operation	Old	New	Pattern	Instruction
clock setting	ENTER			Enter into CLOCK mode
	SHOW MODE	DATE&TIME		Time & Date Mode
		ONLY TIME		Only Time Mode
	SETTING			Time setting
	**** YY ** ** M D **.* TIME			 Press UP/DOWN choose setting value, or press 0-9 to set.  ENTER to confirm.
	12R/24R			 Press UP/DOWN to choose 12R Mode or 24R Mode.
	PRESS ENTER			Save setting, back to time setting mode
	ESC			Give up save, withdrawn from time setting mode. To clock time mode
	TAB	MIRROR		Mirror, pattern cycle change at 4 kinds mirror direction, when arrive favor pattern, press stop key
	F2	COLOR	RGB	Choose different color effect

5、Keyboard operation instruction of COUNTDOWN

Press WINDOWS  enter menu option. Laser will show corresponding menu. Pressing  UP/DOWN to choose 5、COUNTDOWN. Press  ENTER to CLOCK mode

Keyboard operation	Old	New	Pattern	Instruction
COUNT DOWN	ENTER			Enter into countdown mode, No. is flicker, press0-9 set countdown second, 4 number countdown time is maximum, press ENTER to confirm
	BACKSPACE			Delete previous character
	SPACE KEY			Press SPACE KEY or PAUSE, timing and timing pause switch
	PAUSE			
	ESC			Timing again
	TAB	MIRROR		Mirror, pattern cycle change at 4 kinds mirror direction, when arrive favor pattern, press stop key
	F2	COLOR	RGB	choose different color effect

DMX Channels Chart



Several optional operating modes were preprogrammed set into this laser projector at DMX channel 1.
Before control other DMX channels, please be sure that the channel 1 was set in proper mode (value).

Channel	Value	Description
CH1 MODE CHOICE	000-009	Blackout
	010-049	Auto Mode
	050-099	Sound Mode
	100-149	TEXT Mode
	150-200	The first pattern
	200-255	The second pattern

CH2 AUTO MODE

Channel	Value	Description
CH2	000-029	AUTO1
	030-059	AUTO2
	060-089	AUTO3
	090-119	AUTO4
	120-149	AUTO5
	150-179	AUTO6
	180-209	AUTO7
	210-239	AUTO8
	240-255	AUTO9

CH2 MUSIC MODE

Channel	Value	Description
CH2	000-029	MUSIC1
	030-059	MUSIC2
	060-089	MUSIC3
	090-119	MUSIC4
	120-149	MUSIC5
	150-179	MUSIC6
	180-209	MUSIC7
	210-239	MUSIC8
	240-255	MUSIC9

CH2-CH3 TEXT MODE

Channel	Value	Description
CH2 Key show	000-255	Shows stored in the Key 0-9 of when programing with the keyboard
CH3 Scrolling speed	000-255	Scrolling Speed for key show if scrolling effect applied

DMX Channels Chart

CH2-CH3 First pattern&Seconde Pattern Mode

Channel	Value	Description
CH2 PATTERN GROUP	000-031	First pattern group
	032-063	Second pattern group
	064-095	Third pattern group
	096-127	Fourth pattern group
	128-159	Fifth pattern group
	160-191	Sixth pattern group
	192-223	Seventh pattern group
	224-255	Eighth pattern group
CH3 Pattern	000-255	Every 16 values for a pattern, total for 128 patterns

CH4-CH20 TEXT MODE First pattern&Seconde Pattern Mode

Channel	Value	Description
CH4 COLOR	000-007	Built-in colors
	008-015	R
	016-023	G
	024-031	R+G
	032-039	B
	040-047	R+B
	048-057	G+B
	058-063	R+G+B
	064-111	Single color conversion
	112-159	Multi-color moving up and down
	160-207	Multi-color moving left to right
	208-255	Strobe
CH 5 Clipping	000	Whole pattern
	001-127	0%-99% clipping fixed pattern
	128-255	Clipping speed (slow to fast)
CH 6 Zooming	000-127	100%-5% pattern zooming
	128-169	Zoom in
	170-209	Zoom out
	210-255	Loop zooming in/out
CH 7 Zooming Speed	000-255	Fast to slow
CH 8 Y Rotation	000-127	Fixed position after rotating 0-359°
	128-191	Clockwise rotation
	192-255	Anticlockwise rotation
CH 9 Rotational Speed	000-255	Fast to slow
CH 10 X Rotation	000-127	Fixed position after rotating 0-359°
	128-191	Clockwise rotation
	192-255	Anticlockwise rotation



DMX Channels Chart /Product specification

Channel	Value	Description
CH 11 Rotational Speed	000-255	Fast to slow
CH 12 Z Rotation	000-127	Fixed position after rotating 0-359°
	128-191	Clockwise rotation
	192-255	Anticlockwise rotation
CH 13 Rotational Speed	000-255	Fast to slow
CH 14 X Movement	000-127	128 different fixed position on X axis
	128-191	Clockwise rotation
	192-255	Anticlockwise rotation
CH 15 Movement Speed	000-255	Fast to slow
CH 16 Y Movement	000-127	128 different fixed position on X axis
	128-191	Clockwise rotation
	192-255	Anticlockwise rotation
CH 17 Movement Speed	000-255	Fast to slow
CH 18 Wave Size	000-255	Wave size
CH 19 Wave Frequency	000-255	Wave frequency
CH 20 Wave Speed	000-127	Wave position
	128-255	Movement speed

Product specification

Model	Fine 1W	Fine 3W	Fine 6W
Size	291×200×120mm	337×198×231mm	322×215×251mm
Weight	3.6kg	5.56kg	5.75kg
Power	25W	80W	175W
Voltage	100-240V 50/60Hz	100-240V 50/60Hz	100-240V 50/60Hz
Red LD	200mW 638nm	800mW 638nm	1000mW 638nm
Green LD	200mW 520nm	1000mW 520nm	2000mW 520nm
Blue LD	600mW 450nm	2000mW 450nm	3000mW 450nm
Laser Class	Class 4	Class 4	Class 4
Scanner Speed	20K	30K	30K
Auto Show	9	9	9
Sound Show	9	9	9