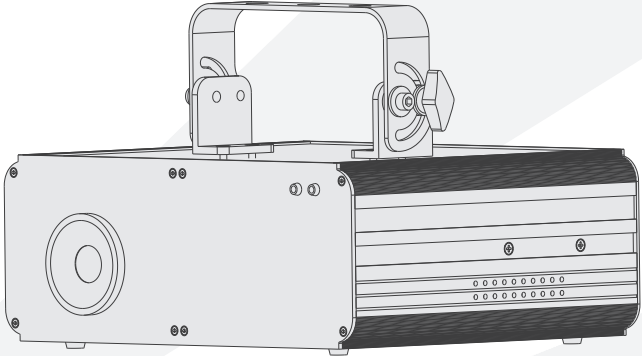


USER MANUAL



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.

The lamps shall be changed if it has become damaged or thermally deformed.

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 PC
KEYs (for key switch)Power Cord	1 PC
KEYs (for key switch)	2 PCS
Interlock Connector	1 PC
USER MANUAL	1 PC
Flight Case	1 PC

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 50cm 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 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 4 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 Emergency switch: remote connecting switch, it will cut off the laser light path emergently once the device in potential hazard;

Laser indication : laser indication on the front panel of the laser light for indicating " laser-ready " .

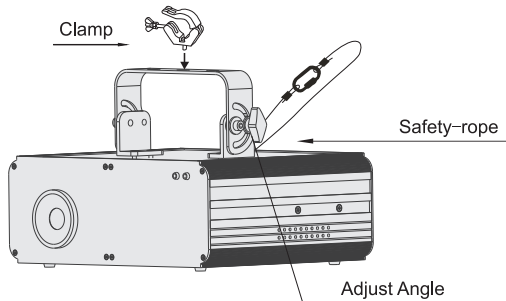
Laser safety label : The labels of according with European standard are stucked on the device body.

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.

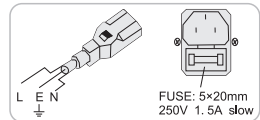
- ◆ Make sure the area below the installation place is free from unwanted persons during rigging, de-rigging and servicing.
- ◆ Locate the fixture in a well ventilated spot, far away from any flammable materials and/or liquids. The fixture must be fixed at least 50cm from surrounding walls
- ◆ The device 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.



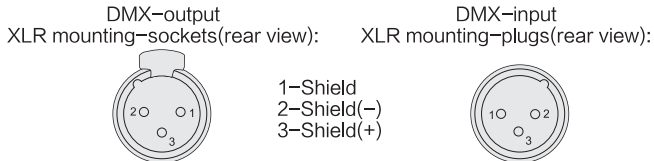
The power cord specification table:

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

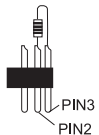
Overhead Rigging

DMX connection

- ◆ Connection between laser lights and DMX must use the shield 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).

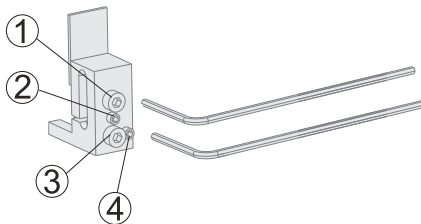


- ◆ Note, XLR plug/socket's 3pin can not be touched by inner hull, connection between pins is not allowed. Except above connection, XLR plug/socket can not be connected with XLR control line. Device receives international standard DMX512(1990) control signal.
- ◆ When using standard DMX512 control signal,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



Polarized adjustment

Any vibration and other reasons of the product during shipping, Laser aggregate light have the possibility to be deviated status. You can adjust through the aggregate three-dimensional adjusting frame carried as below picture:



1 and 2 to adjust at the same time
3 and 4 to adjust at the same time

1 tight 2 loose—light slants to the left
1 loose 2 close—the light slants to the right
3 tight 4 loose—the light deflection to up
3 loose 4 close—the light deflection to Down

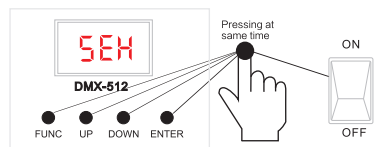


Warning! The polarization adjustment can only be adjusted by qualified professionals, operation, and to ensure strict accordance with the procedures described in this manual.

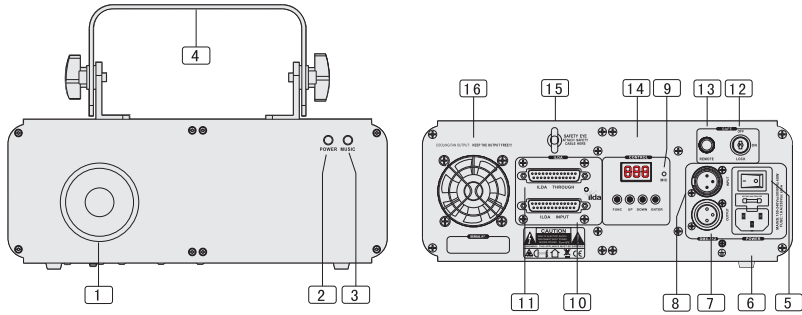
Centring adjustment

Since transportation, DMX mistake etc, laser image may deviate from the center of lens. You can use the LED digital panel to adjust motor and ensure laser program in the center of lens. Easy operation and practical function.

Pressing the 4 buttons at the same time, turning on the device, entering the model of digital centring. FUNC button choose SHE to set X axis and SHY to Y axis, the "UP" and "DOWN" to set deviation size. Observing the place of image and light lens, moving it to the right centre of light lens, then pressing the "ENTER" to confirm and save.



Operation instructions



Function of the front panel

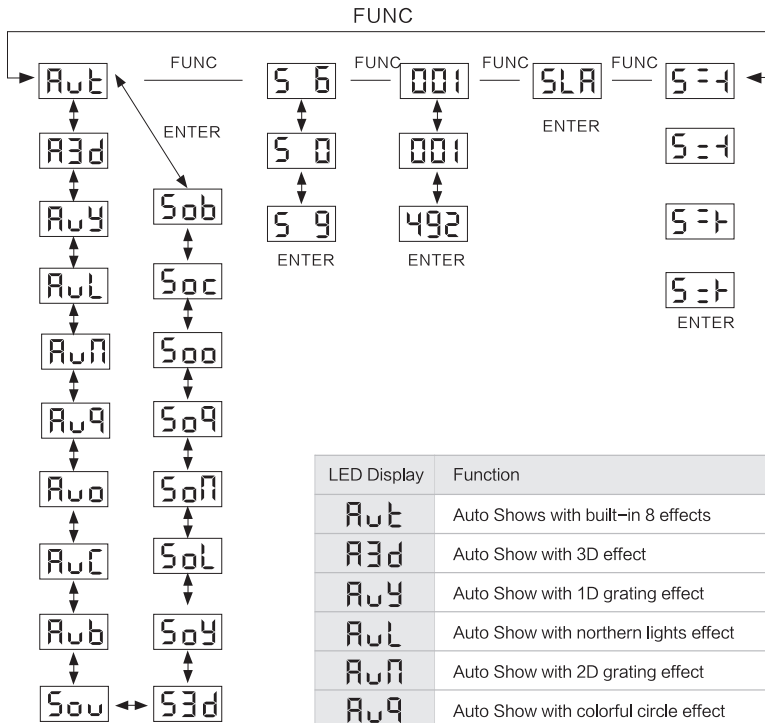
No	Name	Function
1	Laser output	Laser output aperture.
2	Power	Red ON
3	MUSIC	Synchronize to detected music signal
4	Hanging bracket	With 2 knobs on both sides to fasten the unit and a mounting hole to fix a mounting hook.
5	Switch	Switch on and off the power
6	Mains input	With socket and integrated fuse holder
7	DMX output	3PIN Female XLR port , using for DMX
8	DMX input	3PIN Male XLR port, using for DMX
9	Mic	Microphone. Turn the knob to adjust the sound activated sensitivity.
10	ILDA output	Standard ILDA interface, the output signal gain unlimited coupling.
11	ILDA input	Standard ILDA interface, input, inside the machine ILDA signal automatic switching device automatically switch between internal program and ILDA program.
12	Key switch	Make sure the professional person use
13	Urgent and safe switch	Switch off the laser manually if error occurs
14	LED control interface	Various mode setting operation for machine
15	Safety eye	Connecting wire rope to prevent illegal operation and fall
16	Cooling fan	Cooling and never cover this fan outlet

Menu operating instruction

Once after every power on laser, the VERSION and MANUFACTURE INFORMATION will be shown in LCD monitor of rear panel. 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.

- FUNC** Mode Option, to choose the operating mode of laser.
- ENTER** Confirmation, to store the current menu or confirm the current function.
- UP** **DOWN** UP/DOWN, to change operating mode, parameter or DMX address.

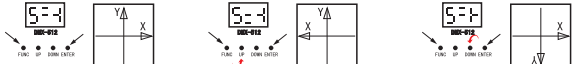
POWER-N function menu model



LED Display	Function
Aut	Auto Shows with built-in 8 effects
A3d	Auto Show with 3D effect
Auy	Auto Show with 1D grating effect
Aul	Auto Show with northern lights effect
Aun	Auto Show with 2D grating effect
Aua	Auto Show with colorful circle effect
Auo	Auto Show with universal laser effect
Auc	Auto Show with star cluster effect
Aub	Auto Show with animation and beam effect
S**	Sound Show corresponding to the above shows

Menu operating instruction

Initial setting

FUNC	UP DOWN	ENTER
Built-in Programs	AUT 8 Auto Shows A3d Auto Show with 3D effect AuY Auto Show with 1D grating effect AuL Auto Show with northern lights effect AuN Auto Show with 2D grating effect Auq Auto Show with colorful circle effect AuO Auto Show with universal laser effect AuC Auto Show with star cluster effect Aub Auto Show with animation and beam effect S** Sound Show corresponding to the above shows	Press UP/DOWN to choose different effects, then press ENTER to confirm;
Sound Sensitivity	LED display will play S0-S9, S0 means receive no any sound; from S1 to S9, the sensitivity is stronger and stronger;	Press UP/DOWN to choose the sensitivity and press ENTER to confirm
DMX Mode	DMX ADD 001 To DMX ADD 492	If the words strobing always on the LED display, that means the DMX signal or the slave signal is not connected well, pls check the cables and the controller device.
Slave Mode	Confirm the laser in SLAVE MODE. Connect MASTER laser with several SLAVE laser with DMX cable, SLAVE lasers are doing exactly the same laser show as MASTER laser. Note: The slaves can't receive the remote signal;	
Mirror Reverse	Pattern Mirror Reverse Setting: 	

DMX instructions

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	Fauction
CH1 Mode	000-018	Laser OFF ⓘ
	019-030	Mixed Effect Auto Show - 8in1
	031-042	Auto Show with 3D effect (A3D)
	043-054	Auto Show with 1D grating effect (AUY)
	055-066	Auto Show with northern lights effect (AUL)
	067-078	Auto Show with 2D grating effect (AUN)
	079-090	Auto Show with colorful circle effect (AUQ)
	091-102	Auto Show with universal laser effect (AUO)
	103-114	Auto Show with star cluster effect (AUC)
	115-126	Auto Show with animation and beam effect (AUB)
	127-138	Mixed Effect Sound Show - 8in1
	139-150	Sound Show with 3D effect (A3D)
	151-162	Sound Show with 1D grating effect (SOY)
	163-174	Sound Show with northern lights effect (SOL)
	175-186	Sound Show with 2D grating effect (SON)
	187-198	Sound Show with colorful circle effect (SOQ)
	199-210	Sound Show with universal laser effect (SOO)
	211-222	Sound Show with star cluster effect (SOC)
	223-234	Sound Show with animation and beam effect (SOB)
	235-244	DMX Control, only StarCluster Effect, Chart 1
245-255	DMX Control, Grating and Pattern, Chart 2	

DMX Chart 1, when CH1 is at 235-244, only StarCluster Effect

Channel	Value	Fauction
CH2 Grating Rotating	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling
CH3 Color	000-007	Original preprogrammed color
	008-015	Red
	016-023	Green
	024-031	Yellow
	032-039	Blue
	040-047	Pink
	048-055	Cyan
	056-063	White

DMX instructions

Channel	Value	Fauction
CH3 Color	064-111	Color Rolling
	112-159	Color Jumping
	160-127	Color Moving
	208-255	Strobe
CH4 X Move	000-127	128 different fixed position on X axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH5 Move speed	000-255	Fast to slow
CH6 Y Move	000-127	128 different fixed position on Y axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH7 Move speed	000-255	Fast to slow

DMX Chart 2, when CH1 is at 245-255, Grating and Patterns effect

Channel	Value	Fauction
CH2 Group	000-051	Pattern Group 1
	052-103	Pattern Group 2
	104-155	Pattern Group 3
	156-207	Pattern Group 4
	208-255	Pattern Group 5
CH3 Pattern	000-255	16 patterns option in 1 group
CH4 Grating / Effect Wheel	000-031	Grating Effect 1 (3D effect)
	032-063	Grating Effect 2
	064-095	Grating Effect 3
	096-127	Grating Effect 4
	128-159	Grating Effect 5
	160-191	Grating Effect 6
	192-255	Traditional Scanned Beam (no grating)
CH5 Grating Rotating	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling
CH6 Color	000-007	Original preprogrammed color
	008-015	Red
	016-023	Green
	024-031	Yellow
	032-039	Blue
	040-047	Pink
	048-055	Cyan
056-063	White	

DMX instructions

Channel	Value	Fauction
CH6 Color	064-111	Color Rolling
	112-159	Color Jumping
	160-127	Color Moving
	208-255	Strobe
CH7 Clipping	0	Full pattern without clipping
	001-127	0%~99% fixed pattern clipped
	128-255	Clipping Speed
CH8 Zoom	000-127	100%-5% fixed pattern zoomed
	128-169	Zooming IN
	170-209	Zooming OUT
	210-255	Alternately Zooming
CH9 Zoom Speed	000-255	Fast to slow
CH10 Y Rolling	000-127	0-359 degree fixed Y axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
CH11 Roll Speed	000-255	Fast to slow
CH12 X Rolling	000-127	0-359 degree fixed Y axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
CH13 Roll Speed	000-255	Fast to slow
CH14 Z Rolling	000-127	0-359 degree fixed Z axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
CH15 Roll Speed	000-255	Fast to slow
CH16 X Move	000-127	128 different fixed position on X axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH17 Move Speed	000-255	Fast to slow
CH18 Y Move	000-127	128 different fixed position on Y axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH19 Move Speed	000-255	Fast to slow

Built-in pattern library & Product specification

Built-in pattern library

DMX	1	2	3	4	5
000-015					
016-031					
032-047					
048-063					
064-079					
080-095					
096-111					
112-127					
128-143					
144-159					
160-175					
176-191					
192-207					
208-223					
224-239					
240-255					

Product specification

Model	POWER-N(1000RGB)	POWER-N(1500RGB)
LD Red	200mW/638nm	500mW/638nm
DPSS Green	200mW/532nm	200mW/532nm
LD Blue	600mW/450nm	800mW/450nm
Laser Class	Class 4	
Size	290×240×110mm	
Weight	4.2kg	
Power Input	100-240V 50/60Hz	
Power	50W	
Scanner Speed	20K@±15°	
Channel	1-19	
Auto Show	9	
Sound Show	9	