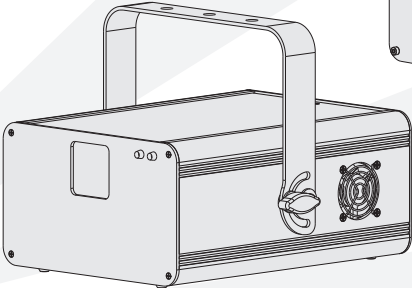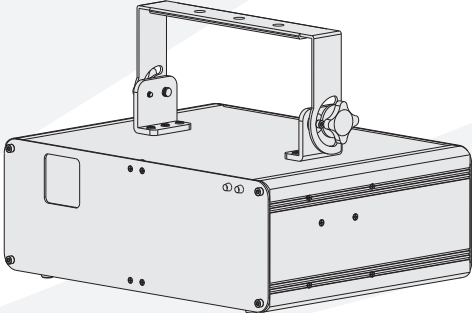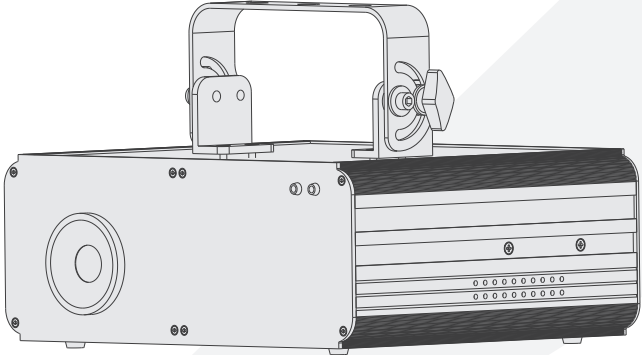# USER MANUAL

Version 1.0

Unpacking Instructions

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

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

◆ damagesDon'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 3B. Direct eye contact may cause injury.

LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

◆ This product is for laser show only. The class 3B laser light should be operated by professional operator only.

CAUTION-CLASS 4 LASER
RADIATION WHEN OPEN.
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION

◆ 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 sticked 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.

Clamp

Safety-rope

Adjust Angle
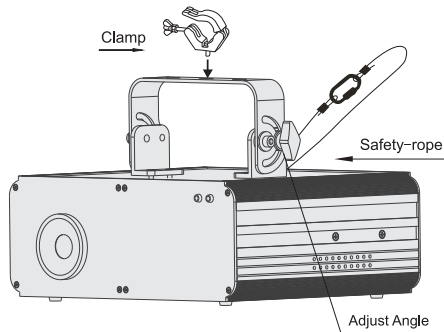
AC Power

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.

L   E N   FUSE: 5×20mm
                  250V 1.5A slow
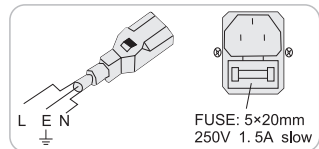
The power cord specification table:

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

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Overhead Rigging

DMX connection

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

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

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

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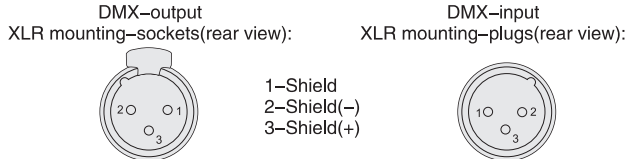
◆ Note, XLR plug/socket's 3pin can not be touched by inner hull, connection between pins is not allowed. Except above connection, XLR plug/socket can not be connected with XLR control line. Device receives international standard DMX512(1990) control signal.

◆ 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.

PIN3
PIN2
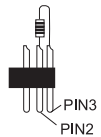
Polarized adjustment

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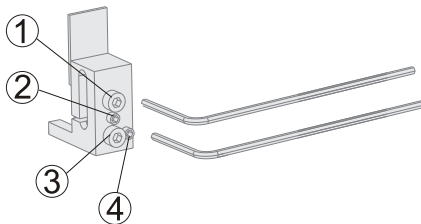
1 and 2 to adjust at the same time
3 and 4 to adjust at the same time

1 tight 2 loose--light slants to the left
1 loose 2 close--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.

SEH
DMX-512
FUNC   UP   DOWN   ENTER

Pressing at same time

ON

OFF

4
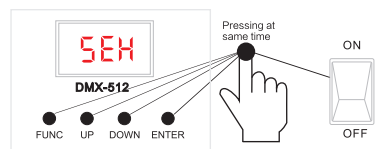
Operation instructions
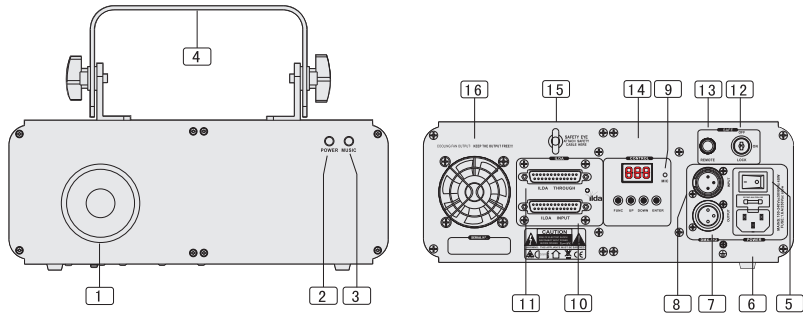
Function of the front panel

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
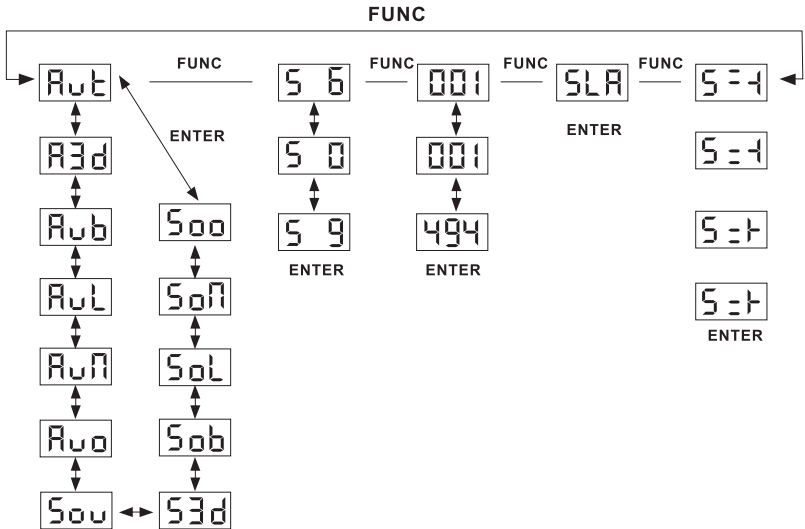
LED Display	Function
AUT	5 shows Auto
A3D	3D shows Auto
AUb	light beam show Auto
AUL	Lumia show Auto
AUN	2D grating show Auto
AUO	Universe nebula show Auto
S**	Above show with sound control

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Menu operating instruction

POWER-1-3-7 function menu model
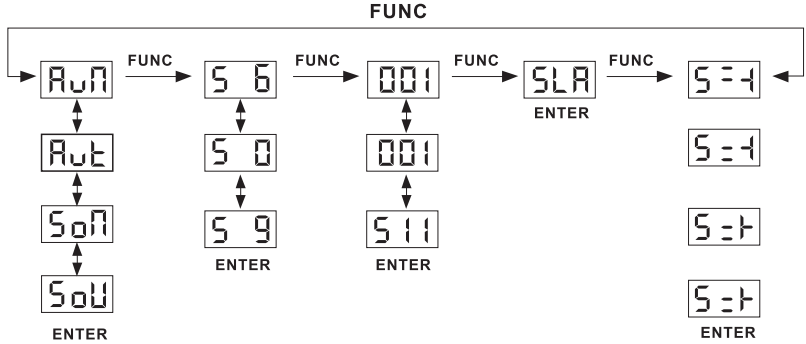
LED Display	Function
AUN	AUTO show double bursting grating
AUT	AUTO Show
SON	SOUND show double bursting grating
SOU	SOUND Show

Attention : In preprogrammed standalone SOUND mode, the laser beam will be blank-out in 3 seconds without AUDIO/MIC activated signal.

Initial setting

FUNC	UP DOWN	ENTER
Built-in Programs	AUT 5 shows Auto A3D 3D shows Auto AUb light beam show Auto AUL Lumia show Auto AUN 2D grating show Auto AUO Universe nebula show Auto SXX Above show with sound control	Press UP/DOWN to choose different effects,then press ENTER to confirm;
Sound Sensitivity	LED displayer will play S0-S9, S0 means receive no anysound; from S1 to S9 , the sensitivity is stronger and stronger;	Press UP/DOWN to choose the sensitivity andpress ENTER to confirm;
DMX Mode	DMX ADD 001 To DMX ADD 503	If the words strobeing always on the LED displayer,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 withseveral SLAVE laser with DMX cable, SLAVE lasers aredoing exactly the same laser show as MASTER laser. Note:The slavescan't receive the remote signal;	
Mirror Reverse	Pattern Mirror Reverse Setting: 	

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DMX instructions

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).

POWER-N DMX model in ILDA connection

Channel	Value	Fauction
CH1 grating self-revolving	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling
CH2 grating choice	000-031	3D Laser shows
	032-063	Light beam and animation effec
	064-095	Lumia show
	096-127	Light beam and animation effect
	128-159	2D grating show
	160-191	Light beam and animation effect
	192-223	Universe nebula show
	224-255	Light beam and animation effect

POWER-1-3-7 DMX model in ILDA connection

Channel	Value	Fauction
CH1 Grating Effect	000-127	Grating Effect OFF
	128-255	Grating Effect ON
CH2 Grating Rotation	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling

POWER-N DMX Model

Channel	Value	Fauction
CH1 Mode	000-018	Laser OFF
	019-036	5 shows Auto
	037-054	3D shows Auto
	055-072	light beam show Auto
	073-090	Lumia show Auto
	091-108	2D grating show Auto
	109-126	Universe nebula show Auto
	127-144	5 shows Sound
	145-162	3D show Sound

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DMX instructions

POWER-N DMX Model

Channel	Value	Fauction
CH1 Model	163-180	Light beam show with sound control
	181-198	Lumia show SOUND
	199-216	Lumia show SOUND
	217-234	Universe nebula show
	235-255	DMX Model
CH2 Group	000-051	1 Group Patterns.
	052-103	2 Group Patterns
	104-155	3 Group Patterns
	156-207	4 Group Patterns
	208-255	5 Group Patterns
CH3 pattern	000-255	Every 16 for 1 group, total 16 patterns.
CH4 Color	000-007	Original preprogramed color
	008-015	Red
	016-023	Green
	024-031	Yellow
	032-039	Bule
	040-047	Prnk
	048-055	Cyan
	056-063	White
	064-111	Color Rolling
	112-159	Color Jumping
	160-127	Color Moving
	208-255	Strobing
CH5 Clipping	000	Full pattern without clipping
	001-127	0%~99% fixed pattern clipped
	128-255	Clipping Speed
CH6 Zooming	000-127	100%-5% fixed pattern zoomed
	128-169	Zooming IN
	170-209	Zooming OUT
	210-255	Alternately Zooming
CH7 Zoom speed	000-255	Fast to slow
CH8 Y axis rolling	000-127	0 -359 degree fixed Y axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
CH9 Roll speed	000-255	Fast to slow
CH10 X axis Rolling	000-127	0 -359 degree fixed X axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling

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DMX instructions

POWER-N DMX Model

Channel	Value	Fauction
CH11 Roll speed	000~255	Fast to slow
CH12 Z axis Rolling	000-127	0 -359 degree fixed Z axis rolled
	128-191	Clockwise rolling
	192-255	Anticlockwise rolling
CH13 Roll speed	000~255	Fast to slow
CH14 X axis mobile	000-127	128 different fixed position on X axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH15 mobile speed	000~255	Fast to slow
CH16 Y axis mobile	000-127	128 different fixed position on Y axis
	128-191	Clockwise moving
	192-255	Anticlockwise moving
CH17 mobile speed	000~255	Fast to slow
CH18 grating self-revolving	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling
CH19 grating choice	000-031	3D Laser effects
	032-063	Light beam and animation effect
	064-095	Lumia effects
	096-127	Light beam and animation effect
	128-159	2D grating effects
	160-191	Light beam and animation effect
	192-223	Universe nebula effects
	224-255	Light beam and animation effect

POWER-1 / 3 / 7 DMX Model

Channel	Value	Fauction
CH1 Mode	000-049	Laser OFF
	050-099	2D grating show Auto
	100-149	Show AUTO
	150-199	2D grating show Sound
	200-249	Show Sound
	250-255	DMX Mode
CH18 Grating Effect	000-127	Grating Effect OFF
	128-255	Grating Effect ON
CH19 Grating Rotation	000-004	NO Grating Rotation
	005-127	Clockwise rolling
	128-133	NO Grating Rotation
	134-255	Anticlockwise rolling

Remark:CH2-CH17 CHANNELS are the same as Power-N

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-1(G300) POWER-1(B1000)	POWER-3 (RGY)(RBP)(GBC)	POWER-7 (720RGB)(850RGB)(1000RGB)			POWER-N
Red LD		200mw/638nm	120mw/638nm	200mw/638nm	200mw/638nm	
Green DPSS	300mw/532nm	150mw/532nm	100mw/532nm	150mw/532nm	200mw/532nm	100mw
Bule LD	1000mw/450nm	500mw/450nm	500mw/450nm	500mw/450nm	600mw/450nm	490mw
Laser level	Class 3B Class 4	Class 3B Class 4	Class 4			Class 3B
Mess	310x240x210mm					278x290x202mm
Weight	3.4kg	5.2kg	5.9kg			4.2kg
Range	100-240V 50/60Hz					
Fuse	T1.6A 250V					
Consumption	30W	40W	50W			
Channel Range	1-19					
Scanner speed	20K@+20°					
I/Q Connectors	（DMX）3-pin XLR/（ILDA）DB25					
AUTO	Two show AUTO		Six show AUTO			
SOUND	Two show SOUND		Six show SOUND			

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