USER MANUAL
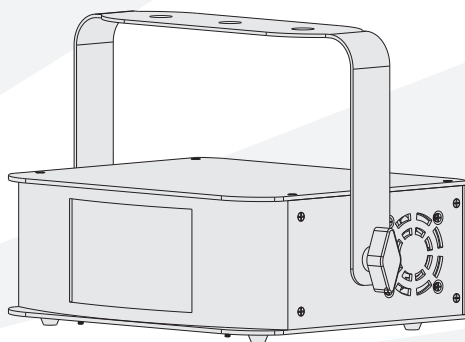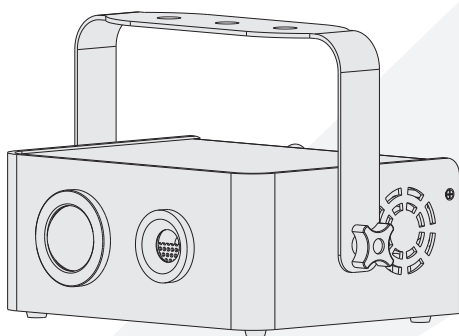
Unpacking Instructions

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 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
Power Cord	1 PCS
KEYs (for key switch)	2 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 allow contact with 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

◆ 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.

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

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

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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
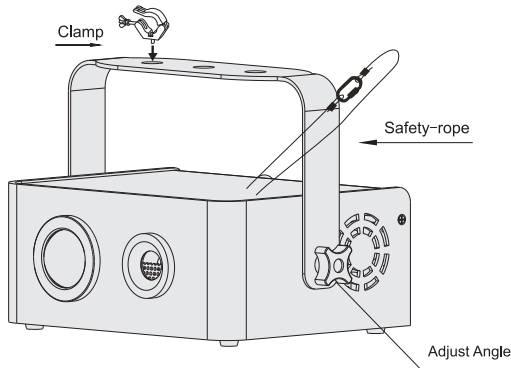
AC Power

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
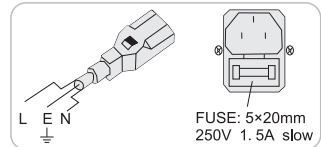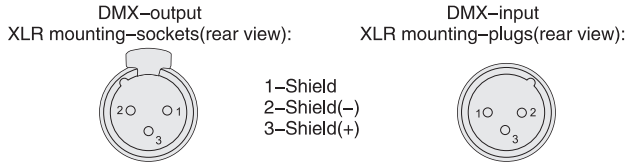
The power cord specification table:

| 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):

1–Shield
2–Shield(–)
3–Shield(+)

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

◆ 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

Operation instructions
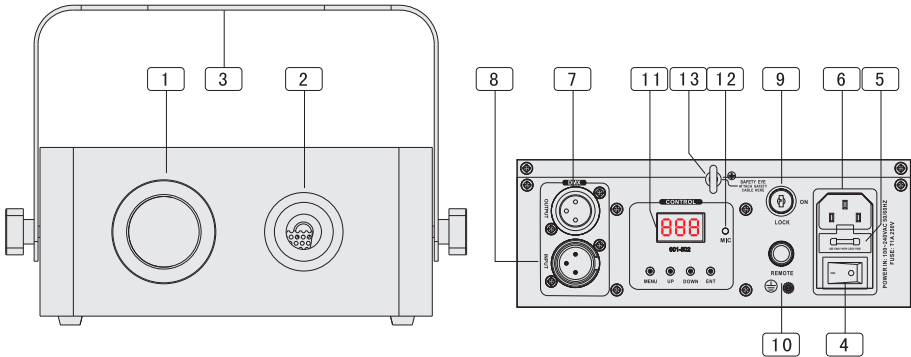
Product operation diagram

| NO	Name	Function
1	LED output	LED output aperture.
2	Laser output	Laser output aperture.
3	Hanging brac ket	With 2 knobs on both sides to fasten the unit and a mounting hole to fix a mounting hook.
4	Switch	Switch on and off the power
5	Fuse Holder	A backup fuse inside
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	Key switch	Make sure the professional person use
10	Urgent and safe switch	Switch off the laser manually if error occurs
11	LED control interface	Various mode setting operation for machine
12	Mic	Microphone. Turn the knob to adjust the sound activated sensitivity.
13	Safety eye	Connecting wire rope to prevent illegal operation and fall

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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 confirm the laser to show the present mode at the next operation.

UP   DOWN   UP/DOWN, to change operating mode, parameter or DMX address.

MS-2 MK2
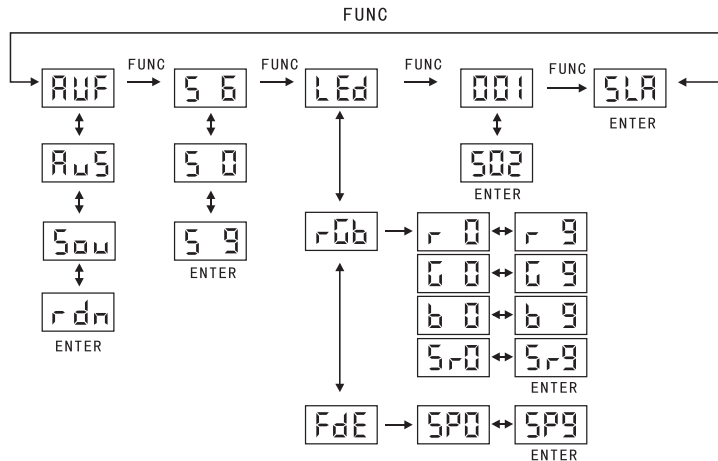
LED Display		STAND ALONE MODE PREPROGRAM EFFECT
AUF	AUF	Auto Running Fast Effect
AuS	AUS	Slow Running Slow Effect
Sou	SOU	Sound Activated Moving Effect
rdn	RDN	rAndom Effect

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Menu operating instruction

LED SET

Press FUNC, until LED or RGB or RDE is shown in LED display panel.
LED mode is preprogramed effect of LED.
RGB mode is manual setting of LED effect.
Once RGB mode is confirmed by press ENTER, the setting goes into 4 specification setting. Every pressing ENTER, it goes into next specification setting, until RGB is shown again. There 4 specification setting are listed below:

NO	Display	DESCRIPTION
1	R 0~R 9	Red LED brightness setting, dark -> bright
2	G 0~G 9	Green LED brightness setting, dark -> bright.
3	B 0~B 9	Blue LED brightness setting, dark -> bright.
4	SR0~SR9	LED strobe frequency, fast -> slow

MOONSTAR MK3 LUMIA Mk2
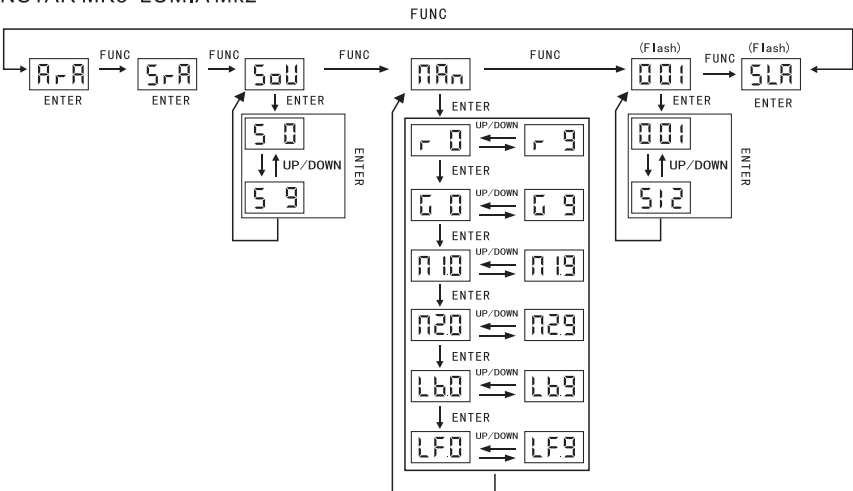
LED Display		STAND ALONE MODE PREPROGRAM EFFECT
ArA	ARA	Auto Running rAndom Effect
SPS	SPS	Slow Running rAndom Effect

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Manual Running Mode (MAN)

Press FUNC, until MAN is shown in LED display panel. Press ENTER to confirm MAN mode setting. Once MAN mode is confirmed by press ENTER, the setting goes into 6 specification setting. Every pressing ENTER, it goes into next specification setting, until MAN is shown again. There 6 specification setting are listed below:

NO	Display	DESCRIPTION
1	R 0~R 9	Red laser strobe frequency, fast -> slow.
2	G 0~G 9	Green laser strobe frequency, fast -> slow.
3	M10~M19	Laser Dots moving speed, slow -> fast.
4	M20~M29	Blue LED effect moving speed, slow -> fast
5	LB0~LB9	LED brightness setting, dark -> bright
6	LF0~LF9	LED strobe frequency, fast -> slow

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	Multi-modes optional base on different models;	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 with several SLAVE laser with DMX cable, SLAVE lasers aredoing exactly the same laser show as MASTER laser.Note:The slavescan't receive the remote signal;	

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DMX instructions

MS-2 MK2 DMX PROTOCOL

Channel	Value	Function
CH1 Mode	000-049	DMX MODE
	050-099	AUS
	100-149	AUF
	150-199	SOU
	200-255	RANDOM
CH2 LASER COLOR	000-004	BLACKOUT
	005-028	RED
	029-056	GREEN
	057-084	RED & GREEN
	085-112	RED OFF & GREEN STROBING
	113-140	GREEN OFF & RED STROBING
	141-168	RED ON & STROBING GREEN
	169-197	GREEN ON & STROBING RED
	198-224	RED & GREEN STROBING
	225-255	ALTERNATE STROBING RED & GREEN
CH3 GREEN STROBE	000-004	NO STROBE
	005-249	STROBE (SLOW > FAST)
	250-255	STROBE TO SOUND
CH4 LASER ROLLING	000-004	NO ROTATION
	005-127	CW ROTATION (SLOW > FAST)
	128-133	STOP
	134-255	CCW ROTATION (SLOW > FAST)
CH5 LASER VIBRATE	000-004	NO VIBRATING
	005-255	VIBRATE (SLOW > FAST)
CH6 LASER TWINKLE	000-004	NO ROTATION
	005-255	FLASH (SLOW > FAST)
CH7 RED LED	000-127	Fixed RED LED BRIGHTNESS(0 %- 100%)
	128-169	Brightness looping 0%-100%
	170-209	Brightness looping 100%-0%
	210-255	Alternately brightness 100%-0%-100%......
CH8 GREEN LED	000-127	GREEN LED BRIGHTNESS(0 %- 100%)
	128-169	Brightness looping 0%-100%
	170-209	Brightness looping 100%-0%
	210-255	Alternately brightness 100%-0%-100%......
CH9 BLUE LED	000-127	BLUE LED BRIGHTNESS(0 %- 100%)
	128-169	Brightness looping 0%-100%
	170-209	Brightness looping 100%-0%
	210-255	Alternately brightness 100%-0%-100%......

DMX instructions

MS-2 MK2 DMX PROTOCOL

Channel	Value	Function
CH10 LED DIM	000-255	LED MASTER DIMMER
CH11 LED STROBE	000-004	NO STROBE
	005-249	STROBE (SLOW > FAST)
	250-255	STROBE TO SOUND
CH12 LED ROTATE	000-004	NO ROTATION
	005-127	CW ROTATION (SLOW > FAST)
	128-133	STOP
	134-255	CCW ROTATION (SLOW > FAST)

MOONSTAR MK3   LUMIA Mk2 DMX PROTOCOL

Channel	Value	Function
CH1 Mode	000-051	LASER BACK OUT
	052-102	ARA, Auto Running rAndom Effect
	103-154	SRA, Slow Running rAndom Effect
	155-206	SOU, Sound Activated Moving Effect
	207-255	DMX mode
CH2 RED STROBE	000-004	Blackout
	005-127	Red laser on
	128-254	Red laser strobe frequency, fast -> slow.
	255-255	Strobe to sound
CH3 GREEN STROBE	000-004	Blackout
	005-127	Green laser on
	128-254	Green laser strobe frequency, fast -> slow.
	255-255	Strobe to sound
CH4 LASER ROLLING	000-004	No function
	005-127	Clockwise rotation (slow-fast)
	128-133	Stop
	134-255	Counterclockwise rotation (slow-fast)
CH6 LED POWER	000-004	Blackout
	005-255	LED brightness setting, dark -> bright
	000-004	Blackout
	005-127	LED on
CH7 LED STROBE	128-254	LED strobe frequency, fast -> slow.
	255-255	Strobe to sound

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Product specification

Product specification

Model	MOONSTAR MK3	MS-2 MK2	LUMIA
Red LD 650nm	150mw	150mw	150mw
Green DPSS 532nm	50mw	50mw	50mw
Laser level	Class 3B Laser	Class 3B Laser	Class 3B Laser
Mess	233x160x86mm	233x160x86mm	220x176x80mm
Weight	1.6kg	1.7kg	1.5kg
Range	100-240V 50/60Hz		
Fuse	250V 1 A Slow Blow (20mm Glass)		
Consumption	15W	34W	15W
Channel Range	7	12	6
AUTO	TWO Show AUTO	THREE Show AUTO	TWO Show AUTO
SOUND	ONE Show SOUND	ONE Show SOUND	ONE Show SOUND