

## Troubleshooting

1. If the power supply indicator doesn't light up and the laser doesn't work, please check the power supply, the input voltage and the fuse.
2. In Stand-Alone operation, if the power supply indicator is light up and sound active indicator isn't light up, but the laser is shut off doesn't work.
  - A. Because sound is too small make for laser shut off in sound active, please increase the music volume or increase audio sensitivity with sensitivity knob, please check as below.
  - B. Please check if unit has been set up in slave mode, then set up in master mode.
3. In Master-Slave operation, slave unit don't function, please check as below.
  - A. Make sure to there's only one master in the chain, and the others are set in slave mode.
  - B. Make sure to control the unit without DMX console controlling.
  - C. Make sure to take a good quality power cable and connection.
4. In DMX mode operation, the laser is OFF and the DMX signal indicator is unlighted, please check as below.
  - A. Make sure to set up the DMX mode.
  - B. Make sure to have a good connection.
5. In DMX operation, the unit can't be controlled by the DMX console, but the DMX signal indicator is flashing, please make sure the DMX console and unit have the same channel.
6. If the unit is fail, please turn off the unit, then turn on again after 5 minutes.

### Warranty Warnings:

1. Damages caused by the disregard of this user manual are not subject to Warranty.
2. Please consider that unauthorized modifications on the device are forbidden due to safety reasons. Please note that damages caused by manual modifications on the device or unauthorized operation by unqualified persons are not subject to warranty.
3. If this device will be operated in any way different to the one described in this manual, it may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns electric shock, etc.

After trying the above solution you still have a problem, please contact your dealer or our company for service.



# LL-L3D1RGB

## 3-IN-1 3D 1W RGB ANIMATION LASER SHOW SYSTEM

### *User's Manual*



Read this manual before using. Do not attempt to open the housing or repair this device by yourself without contact us!

Channel	Function	Value	Description
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**Unpacking:**

Thank you for purchasing this product. Please read user guide for safety and before using the product. Keep this manual for future reference. This product can create perfect laser programs and effects since it has passed a series of strictly tests before delivery. Please check the attachments listed on the page after opening the carton. Immediately upon receiving a fixture, carefully unpack the box. Check the box contents to ensure that all parts are present and that they are in good condition. If any part appears damaged from shipping, or if the box shows signs of mishandling, notify the shipper immediately. In addition, retain the box and all the packing material for inspection. In any event, save the carton and all packing material because, in case that you have to return the fixture to the factory, you will have to do so in its original box, with its original packing.

- 1. Laser Light: 1PCS
- 2. Power Cable: 1PCS
- 3. User Guide: 1PCS

**Technical Specification**

\* Voltage: bi-voltage 110V -220V-250V AC, 50HZ-60HZ/ Fuse: 2A/250V

\*Rated Power: 50W

*Laser:	Color	Wavelength	Power output	Scanner speed
	Red	650nm	300mW	10kpss-15kpss
	Green	532nm	100mW	
	Blue	470nm	700mW	
	Mixed white:	1100mW		

\*Laser class:Class IV

\*Working Modes: Sound Active, AUTO-Beam, AUTO-Animation, DMX512 (15 CH),

Master/Slave, PC Control

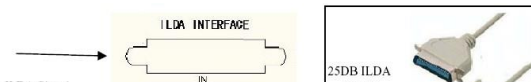
\*Graphics & Effects: 3 IN 1 3D 120 light beam show and more than 20 animated graphics show patterns , 3D plane image and 3D twinkling dot effects

\*Interface: 3 pins XLR jack for DMX or Master-Slave linking

\*Item Size: L\*W\*H=370\*320\*130mm

\*Inner box size: 330\*320\*195(0.021m³), carton: 660\*345\*430(0.098m³) 4pcs/carton

\*N.W.: 4.2Kg, Gross Weight: 4.9Kg

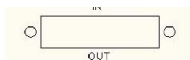


CH6	Pattern 2 color	The same as the CH4	It is the same as the CH4 ,Please look at the above Method CH4
CH7	Double pattern running mode	0~27	Single pattern mode(only pattern 1)
		28~55	Horizontal direction(X-Axis) mirror image
		56~83	Vertical direction(Y-Axis) mirror image
		84~111	Horizontal and Vertical direction together
		112~139	Zoom mirror image
		140~167	Pattern 1 non sinusoidal wave,pattern 2 do sinusoidal wave
		168~195	Pattern 1 non zoom , Pattern 2 only zoom
		196~223	Pattern 1 non rolling ,Pattern 2 only rolling
		224-251	Rolling mirror image
CH8	Pattern Horizontal control	252-255	Pattern 1 Non vertical moving & pattern 2 Non Horizontal moving
		0-127	Manually adjust to left or to right moving
		128-160	Auto to left moving
		161-192	Auto to right moving
		193-224	Auto to left/right moving
		225-239	Jumping
		240-247	prismatic shape
CH9	Pattern Vertical control	248-255	oblique up
		0-127	Manually adjust to left or to right moving
		128-160	Auto to down moving
		161-192	Auto to up moving
		193-224	Auto to up/down moving
		225-231	Round shape
		232-239	sinusoidal wave moving
CH10	Horizontal (X) dimmer	240-247	Square tracing moving
		248-255	oblique down
CH11	Vertical (Y) dimmer	0-150	Manually dimmer
		151-255	AUTO dimmer
CH12	Rotation	0-127	Manual rotation
		128-159	Auto clockwise rotation
		160-191	Auto counter clockwise rotation
		192-223	clock Pendulum effect
CH13	Pattern Zoom(+/-)	224-255	Elliptical orbit rotation
		0	No movement
		1-159	Manual zoom(+/-)
		160-191	AUTO zoom(+)
		192-223	AUTO zoom(-)
CH14	sinusoidal wave moving	224-255	AUTO zoom(+/-)
		0-128	vertical moving
CH15	pattern drawing	129-255	Horizontal moving
		0-64	Manual drawing
		65-255	Auto drawing from slow to fast

**Laser Expected Lifespan**

Laser gradually decline in brightness over time. HEAT is the dominant factor that leads to the

ILDA Signal



**DMX control**

The system only accepts the DMX512 signal of international standard to control the system.

Channel	Function	Value	Description
CH1	Mode	0~63	Laser off
		64~78	Sound active beam Animation
		79~93	Sound active beam light
		94~108	Sound active 3D Plane
		109~123	Sound active 3D twinkling dot
		124~127	Sound active 3 IN 1
		128~142	Auto-Animation
		143~157	Auto beam light
		158~172	Auto 3D plane
		173~187	Auto 3D twinkling dot
		188~191	Auto light beam ,3D plane ,3D twinkling 3 IN 1
192~255	DMX mode (manually)		
CH2	Pattern Select	0~127	light beam mode
		128~191	3D plane mode
		192~255	3D twinkling dot mode
CH3	Pattern 1 select	0~235	118 kinds static patterns
		236~239	wavelength change
		240~241	Hallowmas images changes
		242~243	Dance
		244~245	Street Dance
		246~247	Animation fish
		248~249	Animation horse
		250~251	Animation bird
252~255	Animation dinosaur		
CH4	Pattern 1 color	0~1	Laser off
		2~69	R--G--B--RG--RB--GB--RGB
		70~79	R--G--B 8 points display
		80~89	RG--RB--GB--RGB 8 points color change
		90~99	R--G--B--RG--RB--GB--RGB 8 point color change
		100~109	R--G--B--RG--RB--GB--RGB running in turn
		110~119	R--G--B turning color change
		120~129	RG--RB--GB--RGB turning color change
		130~139	R--G--B--RG--RB--GB--RGB turning color change
		140~179	R--G--B AUTO color change
		180~219	RG--RB--GB--RGB AUTO color change
220~255	R--G--B--RG--RB--GB--RGB AUTO color change		
CH5	Pattern 2 select	0~235	118 static patterns
		236~255	Free

	Do not remove or break the warranty label, otherwise it void the warranty.
	Always replace with the exact same type fuse, replacement with anything

acceleration of this decline. Packaged in clusters, laser exhibit higher operating temperatures than in ideal or singular optimum conditions. For this reason when all color lasers are used at their fullest intensity, life of the laser is significantly reduced. It is estimated that a viable lifespan of 4,000 to 10,000 hours will be achieved under normal operational conditions. If improving on this lifespan expectancy is of a higher priority, place care in providing for lower operational temperatures. It may include climatic-environmental and the reduction of overall projection intensity.

**Safety Notice:**

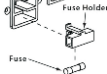









Please read the following notes carefully because they include important safety information about the installation, usage and maintenance of this product. It is important to read all these notes before starting to work with this product.

Lasers can be hazardous and have unique safety considerations. Permanent eye injury and blindness is possible if lasers are used incorrectly. Pay close attention to each safety REMARK and WARNING statement in the user manual. Read all instructions careful.

	There are no user serviceable parts inside the light. Any reference to servicing this unit you may find from now on in this User Manual will only apply to properly consult we certified technicians. Do not open the housing or attempt any repairs unless you
	Avoid direct eye exposure to the light source while the fixture is on. Always disconnect the light from its power source before servicing. Always connect the light to a grounded circuit to avoid the risk of electrocution.
	This product is for indoor use only! 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.
<b>Power</b> 110V 240V Ground	Always make sure that you are connecting the light to the proper voltage, as per the specifications in this manual or on the product's sticker. Never connect the light to a dimmer pack. Make sure that the power cable is not cracked, crimped or damaged. Ne
	The maximum ambient temperature (Ta) is 104 F (40 C). Do not operate the fixture at a higher temperature. In case of a serious operating problem, stop using this product immediately!

dipswitches directly is ok. ILDA mode (PC control) and Built-in program mode can be identified and transisted automatically.

1=ON 0=OFF X=ON OR OFF	
DIPSWITCH CHART	

	other than the specified fuse can cause fire or electric shock and damage your unit, and will void your manufactures warranty.		
	There are no serviceable parts in the light. Please have all servicing and adjustments made by a qualified service engineer.		
	Please refer to all applicable local codes and regulations for proper installation of the light.		Keep this manual for future consultation. If you sell the light to another user, make sure that they also receive this manual.
	Make sure there are no flammable materials close to the fixture(s) while operating.		Please prevent this light away from electrical shock
	When hanging this fixture, always secure it to a fastening device using a safety cable (not provided).		Use cleaning tissue to remove the dust absorbed on the external lenses periodically to optimize light output.
	Don't throw this product away just as general trash, please dispose of this product following the abandon electronic product regulation in your country.		To protect the environment, recycle packing material wherever possible.

### Laser Safty Warnings

Potential laser injury hazard exists with this product! Read these Instructions carefully, which include important information about installation, safe use and service!

### Caution

- \* Avoid direct eye contact with laser light. Never intentionally expose your eyes or others to direct laser radiation.
- \*This laser product can potentially cause instant eye injury or blindness if laser light directly strikes the eyes.
- \*It is illegal and dangerous to shine this laser into audience areas, where the audience or other personnel could get direct laser beams or bright reflections into their eyes.
- \*It is a US Federal offense to shine any laser at aircraft.

**Caution:** Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

1	2	3	4	5	6	7	8	9	10	Function
1	0	0	0	X	X	X	0	1	1	Auto-Animation
0	1	0	0	X	X	X	0	1	1	Auto-beam
0	0	1	0	X	X	X	0	1	1	Auto-3D plane
0	0	0	1	X	X	X	0	1	1	Auto-3D twinkling dot
0	0	0	0	X	X	X	0	1	1	Auto 3 in 1 (beam, 3D plane,3D dot)
1	0	0	0	X	X	X	0	1	1	sound active animation
0	1	0	0	X	X	X	0	1	1	sound active beam
0	0	1	0	X	X	X	0	1	1	sound active 3D plane
0	0	0	1	X	X	X	0	1	1	sound active 3D twinkling dot
0	0	0	0	X	X	X	0	1	1	sound active 3 in 1
Set DMX MODE ADDRESS									0	DMX

**Note :** When 9 and 10 is ON ,it is Auto , When 10 is ON ,it is sound active , When all is OFF , it is DMX

### DMX address calculation

For DMX mode, DMX address from #1 to 9# dipswitches must be set, the address is set from 1 to 511. Each dipswitch represents a binary value.

Dipswitch	Value	Dipswitch	Value
# 1	1	# 6	32
# 2	2	# 7	64
# 3	4	# 8	128
# 4	8	# 9	256
# 5	16	# 10	DMX, Set to "0"

One unit has 5 channels, so each unit must be assigns 5 channels at least. We may assign 8 channels for one unit, then DMX address = 8\*N + 1, N=0, 1, 2, 3 ..... Example, One loop address=1, two loop address=9, three loop address=17, four loop address=25

Loop	Address	Binary	Dipswitches
1	1	10000000	# 1
2	9	10010000	# 1+#4
3	17	10001000	# 1+#5
4	25	10011000	# 1+#4+#5

The dipswitches setting for DMX address see the " DMX Address Quick Reference Chart ".

### PC Control Operation

This mode allows you to use PC software(for example: Pangolin, Phenix, Mamba) to operate. If no IDLA signal to DB25 jack in ILDA mode, the laser and scanner will is closed for protection. The scan speed of software coltrol must be less than the scanner speed, otherwise, the patterns possible have distortion, or the scanner is protected possibly by built-in circuitry.

### NON-INTERLOCKED HOUSING WARNING

\*This unit contains high power laser devices internally. Do not open the laser housing, due to potential exposure to unsafe levels of laser radiation. The laser power levels accessible if the unit is opened can cause instant blindness, skin burns and fires.

4. Turn on the all units' power, the units begins reset, then the unit begins working.

The slave units will react the same as the master unit.

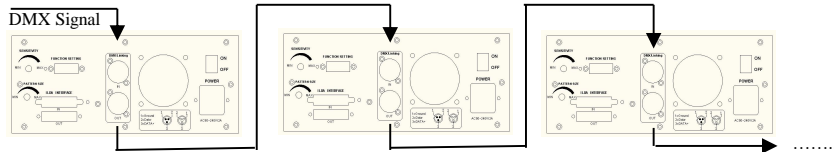
5. The units will react to the low frequencies of music via the internal microphone.

Adjust the audio sensitivity knob on the back of the master unit to make the unit more or less sensitive in sound active. The panel has LED indicating for sound active.

#### Universal DMX Operation (DMX mode)

This mode allows you to use universal DMX-512 console to operate.

1. Install the units in a suitable position (laying or appending).
2. Use standard XLR microphone cable chain your units together via the XLR connector on the rear of the units. For longer cable runs we suggest a terminator at the last fixture.
3. Assign a DMX address to each the unit using dipswitches, see the "DMX Address Quick Reference Char".



1 : MASTER: SOUND/AUTO/DMX    2 : SLAVE    2 : SLAVE

4. Turn on the all units' power, the units begins reset, then the unit begins working.

5. Use DMX console to control your units.

#### Notes:

1. DMX console can not be used in Master-Slave operation (Sound Active or AUTO mode ).
2. There should be only one master unit in Master-Slave operation.

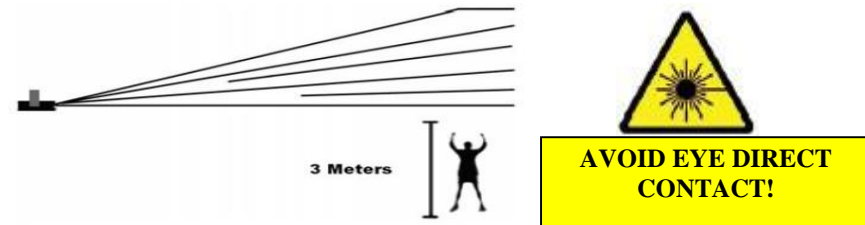
#### DMX Control

The system only accepts the DMX512 signal of international standard to control the system mode, the laser beam ON /OFF, running direction, running speed and twinkle speed etc.

#### Function setting

If it is set to ILDA mode (use PC software to control laser light), just need to connect ILDA signal to DB25 jack. If set to Built-in program, then ILDA signal cannot be connected, setting

## Installation



\*Laser effects projected 3 meters (9.8 ft) above the audience are eye safe. A survey should be taken to assess the likelihood of any reflective surfaces (such as high windows, chrome bars etc) bouncing stray beams back down into the audience.

\*Using a fastening clamps on the light and tight to the ceiling in a strong hook..

\*Make sure its correct power output and plug the power cable to the wall socket.

\* Power must be in earth! Power on the light.

\* Do not shoot the beams to the audience!

\*Do not look direct into the laser aperture once the laser light is ON. Please pay attention to the Laser Danger Warning Label!

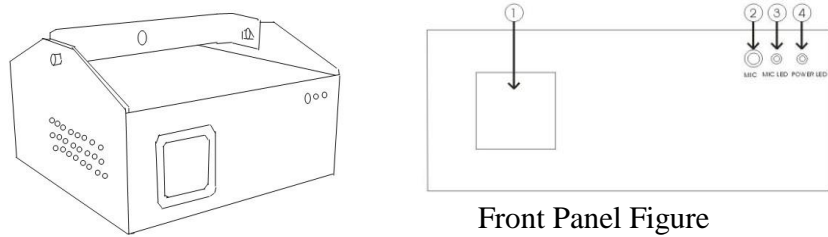
## Cleaning

**Fixture Cleaning:** Due to fog residue, smoke, and dust cleaning the internal and external lenses should be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the out- side casing.
2. Clean the external optics with glass cleaner and a soft cloth every 20 days.
3. Always be sure to dry all parts completely before plugging the unit back in.

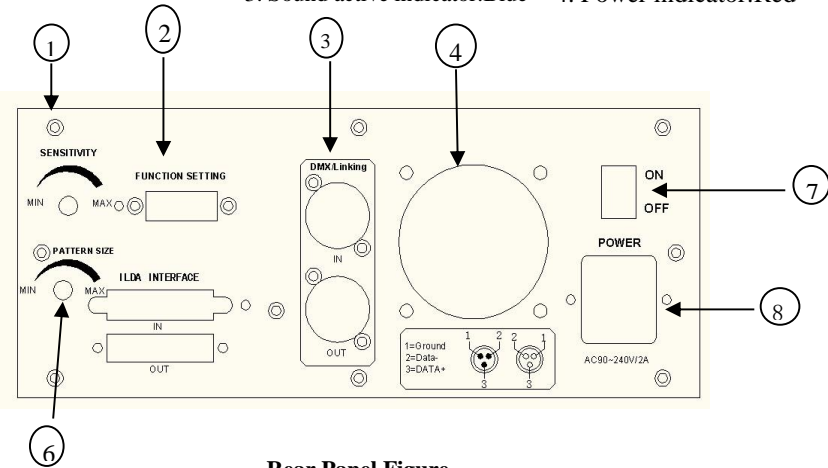
Cleaning frequency depends on the environment in which the fixture operates (I.e. smoke, fog residue, dust, dew). In heavy use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp beam output.

Front/Rear Panel



Front Panel Figure

- 1. Laser aperture
- 2. Sound active microphone
- 3. Sound active indicator:Blue
- 4. Power indicator:Red



Rear Panel Figure

- 1. Audio sensitivity knob
- 2. Function of built-in program setting dipswitches
- 3. DMX or linking jack
- 4. Cooling fan
- 5. Pattern size knob
- 6. ILDA IN/OUT interface with DB25 jack
- 7. Power switch ON/OFF
- 8. Power jack

Function & Setting

Sound Active

The change of the laser pattern is controlled by sound, that is, the rhythm of the sound control the effect of the changing laser pattern. Turning the sensitivity knob in the clockwise direction to increase the fixture's sensitivity to sound, the knob in the counter clockwise direction to decrease. The laser diode will automatically turn off after 8 seconds when the music stops.

AUTO

Auto cycles the built-in programs without being controlled externally. It has no laser OFF. The mode allows a single unit to react to the beat of the music in the master mode.

1. Install the units in a suitable position (laying or appending).
2. Set dipswitch to select Sound Active or AUTO mode.
3. Turn on the unit power, the unit begins reset, then the unit begins working.
4. The unit will react to the low frequencies of music via the internal microphone.

Adjust the audio sensitivity knob on the back of the unit to make the unit more or less sensitive in sound active. The panel has LED indicating for sound active.

Master-Slave Operation

This mode will allow you to link up to 32 units together without controller.

1. Install the units in a suitable position (laying or appending).
2. Choose a unit to function as Master mode, set dipswitch to select Sound Active or AUTO mode. The others must be set to Slave mode, set dipswitch to select Slave mode.
3. Use standard XLR microphone cable chain your units together via the XLR connector on the rear of the units. For longer cable runs we suggest a terminator at the last fixture.

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.

