

# RGB Animation Laser

# Instruction Manual



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This product manual contains important information about the safe installation and use of this product. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.



## Security warning

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- When unpacking and before disposing of the carton, check if there is any transportation damage before using the product. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.
- This equipment is not waterproof, keep it from rain, moisture and liquids.
- Do not install the product or project the beam onto inflammable surfaces. Minimum distance is 5 M  $\geq 5M$
- The product is only intended for installation, operation and maintenance by qualified personnel.
- Product should install in a cool place. Keep away from the wall 50cm
- Avoid direct exposure to the light from the lamp. The light is harmful to eyes.
- Keep the optical system clean. Do not touch the laser reflect lens with bare hands. Do not use any alcohol liquid or any other liquid to clean the optical system. Use medicinal absorbent cotton to clean it.

- Please do not attempt to dismantle and/or modify the product inner structure. Otherwise, would not provide 1 year of free warranty.
- Electrical connection must only be carried out by qualified personnel.
- Before installation, ensure that the voltage and frequency of power supply match the power requirement of the product.
- It is essential that each product is correctly earthed and that electrical installation conforms to all relevant standards.
- Do not connect this device to any other types of dimmer apparatus.
- Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging th power-cord
- There is no user serviceable parts inside the product, do not

open the housing and never operate the product with the cover removed.

If you have any questions, don't hesitate to consult our dealer or manufacturer.



RGBseries laser adopts embedded technology which enable laser moving, scaling, rotating, turn spin and gradually draw, animation, text, broken pen, wave laser effect can be achieved easily.

Unique functions as following:

1. Through DMX-512 Controller, you can select auto or sound control mode or to play built-in laser effects.
3. Through menu to set up scanner speed, laser color, X opposition, Y opposition
4. Unique sound control technology. Laser effect can response according to sound rhythm

### **Product technical parameters**

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Item NO: RGB

1. Voltage: AC90~240V 50~60HZ  $\pm$ 10%

2. Power consumption:80W
3. Laser source:Solid semi-conductor laser diode.
4. Laser power /wavelength: 3W RGB (R500/638 G10000/520 B2000/445)
5. Colors:RGB full color
6. Modulating signal:ANG 0~20K
7. Laser Patterns:128 pieces built-in laser patterns
8. DMX Channel:18CH
9. Scanner system:30K
10. Scan angle:±20°
11. Control signal:DMX-512 international standard signal
12. Control mode:Music, auto, master-slave and DMX-512I, ILDA Control
13. Cooling system:fan
14. Operation environment:Indoor
15. Operation temperature:-10° C~40° C

### **Product packing list**

These items are packed together with the lighting fixture. Upon unpack, please check:

Name	quantity	Unit	Note
laser light	1	set	
Power cable	1	pc	
Bracket (Hanger)	1	pc	
	1	pc	
Hanger screw	2	pcs	
Product manual	1	pc	

### **Power Connections Method**

Please connect power as following :

L (live wire ) =brown wire

E (earth wire) =yellow/green double color wire

N (null line ) =blue wire

When connecting, ensure that the voltage and frequency of power supply match the power requirement of the product.

This product is Class 1 protection equipment. The yellow-green double colors wire must be earthed by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of product. In power supply

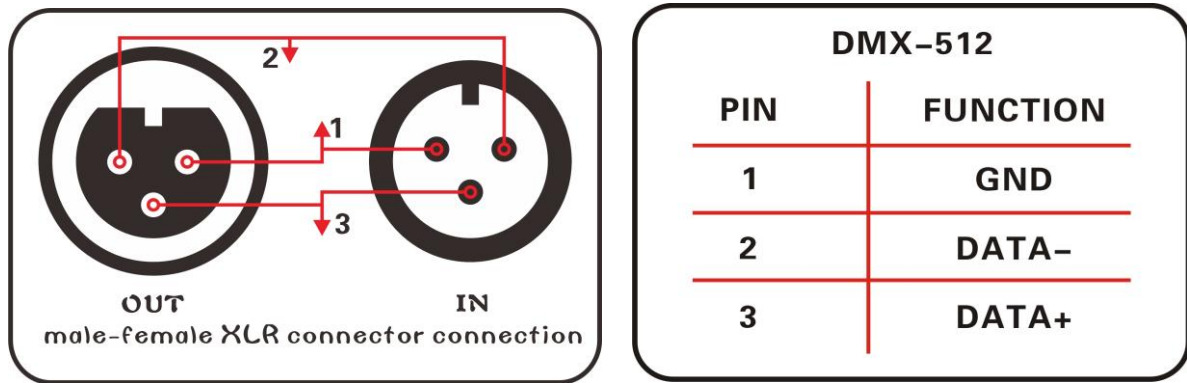
and voltage fluctuation large areas, we suggest you to use 110V or 220V or use voltage regulator to supply power. After electrical connection, this product will have a few seconds self-check action, self-check finished can be used.

Important:It is essential that Yellow/green double color wire is correctly earthed and that electrical installation conforms to all relevant standards

### **DMX Connection method**

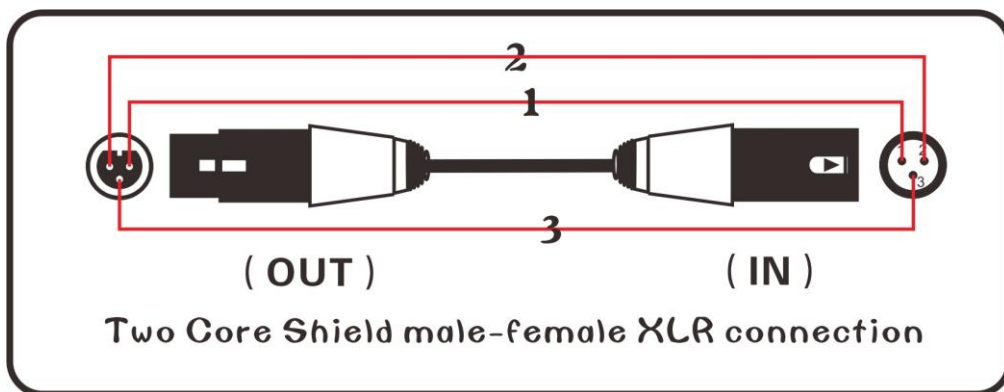
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DMX control signal connection must be made with a two core-screened cable, with each core having at least a 0.5mm diameter. Please use the product's signal cable OUT and IN as connection. The signal OUT and IN cables connection shown as above picture.

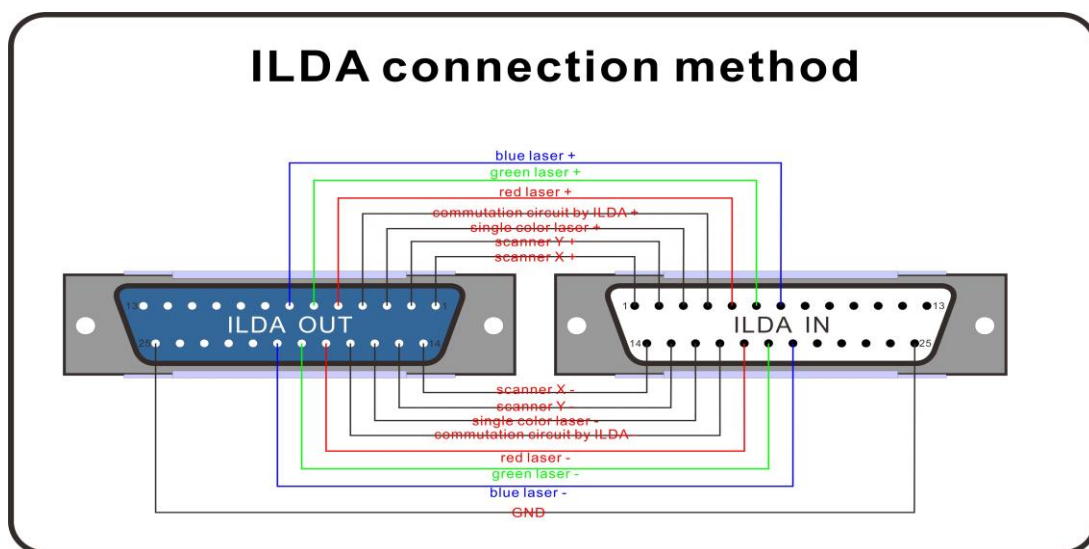
Note: Please do not connect the signal cable OUT and IN in other way except above shown.



This product accepts digital control signals in protocol DMX512(1990). The amount of lighting fixtures connected in parallel is no more than 32. Connect the DMX controller's **Output** to the first lighting fixture's **Input** cable with a 2 core XLR signal cable(Shown as above ), connect the first lighting fixture's **Output** cable to the second lighting fixture's **Input** cable and connect the rest light fixtures in the same

way. Eventually, connect the last lighting fixture's Output cable to a DMX terminator

Under DMX-512 signal control mode, the last lighting fixture's DMX Output must be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals. The DMX terminator is simply an XLR connector with a 120 Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. Then connections are illustrated above.



ILDA control signal connection method:

Connection built through product male/female DB 25 degree socket. Like above picture. In addition to the above connections, ILDA signal cannot be connected in any other w

### Back panel introduction





No.1 : 9 pin Remote and key, if you want to make the laser work, the key must “ on” and the 9pin remote must insert the 9pin interface.

NO2 and NO.3 : ILDA IN/OUT , when you want the laser controlled by laser software, you must connect ILDA cable with ILDA interface.

NO.4 : SD card ( there is one SD card there , some patterns inside the SD)

NO.5 : LCD display, you can see function in LCD display

NO.6 : Function knobs for LCD display, you can adjust it to choose function in LCD menu, and then press to confirm the function you choose.

NO.7 and No.8: DMX in/out

NO.9 : Safety loop

NO.10: Over currency switch, when the electricity shortcut, it will protect the laser

NO.11 : Switch on/off

NO.12: Power in

### **Operation steps:**

1. First , connect power 100V-240V , power connect at NO.12 at the back panel
2. Insert the key, and make it on, and insert 9pin lock at 9pin interface , see NO.1
3. Turn on the laser, press button : NO.11
4. Adjust the knob of LCD display and choose working mode, Auto, sound, DMX, SD, ILDA etc and then press when choose.

### **Lighting fixture's DMX and IP function set-up method**

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When using DMX-512 Controller to control several pieces lighting fixtures, each lighting fixture must be given a DMX start address so that the correct lighting can respond to correct signals. This product has 18CH DMX-512 control Channels. So set the No.1 lighting DMX start address as 001, No.2 lighting address as 018, No.3 lighting address as 037, No.4

lighting address as 055, and so on.

You can enter DMX-512 working mode through back panel menu as well.

Operation method: Find DMX-512, then press **Enter** to enter next menu. And find **Running** and press **Enter** again, the DMX-512 working mode has been enabled.

### **LCD Menu and function introduction**

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#### **1. Panel display:**

DMX Address: DMX Address

Work mode: The current working mode

File: The current file

Version: Software version

In the main panel, click the button to enter the menu.

In the main panel, ILD and RPG mode, double-click the button can change the folder.

Enter the menu, can double click on the button to exit.

#### **2. Menu display**

DMX Address set 1-512

Show mode, Auto PRG ILD Sound

Prg Mode : Play PRG file, The second line shows the current playlist name.

ILDA Mode: Cycle of a single ILDA file (extension file, called ILD case-insensitive)

Audio Mode: Play the internal Audio program

Auto Mode: Play the internal automatic program.

**Phasic setting:** Press the "UP" and "DOWN" change phase.

The acoustic sensitivity Settings 0-100

SD File SD card folder options

**SIZE :** Graphic size Settings 10-100

**Phasic set :**Set the graphics direction, This setting only change the machine program phase.

Speed set: According to the galvanometer speed setting the parameter, and not set too high, otherwise it will damage the galvanometer.

**DMX STATE DMX:** In the absence of DMX work mode setting.

Show mode : According to the Show mode setting.

Black out : Disconnect the output

Lock disconnect state before

**SLAVE MODE** : Slave mode setting

Slave: Slave mode, When a host signal input controlled by the host.

Host: Host mode, Play host signal output, a system can have only one host, otherwise the signal will be messy.

**X Phasic**: X Phasic setting, This setting change the machine and external ILDA input phase at the same time.

Laser Lock : When dot shut the light function.

Red Power: Auto、Audio、ILD、PRG.

Green Power: Auto、Audio、ILD、PRG.

Blue Power: Auto、Audio、ILD、PRG.

Software Version

Notes:

1. This system supports only short file name, file name (including folder name) by eight file name and the three most extension, file name and extension is composed of letters, Numbers, and underscores. The file name is not more than eight, cannot have any Chinese characters, or file system can't identify.

2. SD card to specialized CARDS, do not mix with other file storage, up to 50 folders, each folder can support up to 256 ILD files, can support up to 10.prg file.

3. Program list: the user can use a text editor (notebook) to edit the program list, its extension. These RPG. Program list consists of playing file name, speed, number, separated by ", "in the middle.

When in a folder, need with the folder in the folder to create a PRG file of the same name, and put all need to play the file within the folder editor to the PRG file. For example, in the aurora folder, create a aurora.prg file.

New ILDA file, need to add the file to the.prg file, so that we can choose to play files accurately find the file, and the playback speed required by you to play the file.

4. The system support for standard ILDA format file, the extension of ILD file



**DMX-512 FUCTION CHANNELS:**

DMX Operation:									
Channel	Function	Value	Description						
CH1	Model Select	0-49	Auto mode						
		50-99	Audio(Sound Active) mode						
		100-149	PRG mode						
		150-199	ILD mode						
		200-255	Manual mode						

CH2	Pattern/Folder Select	0-255	Manual mode		PRG/ILD mode	
			Pattern select, every 3 value one pattern		File select	
CH3	Flashing/File Select	0-10	No strobe			
		11-199	Auto strobe			
		200-255	Audio strobe			
CH4	RGB Models Color Select	0-5	Laser off			
		6-16	White	6-10	original color	
				11-16	White	
		17-33	Red			
		34-50	Green			
		51-67	Blue			
		68-84	Yellow			
		85-101	Purple			
		102-118	Cyan			
		119-135	White, red, green, blue color section			
		136-152	Blue, yellow, purple, cyan color section			
		153-169	W, R, G, B, Y, P, C 7 color section			
		170-186	White, red, green, blue 4 color flow			
		187-203	Blue, yellow, purple, cyan 4 color flow			
		204-220	Blue, yellow, purple, cyan 4 color flow			
		221-237	color subsection by inflexion			
		238-255	Sound active color change			
CH5	X move	0-125	Adjust position by manual			
		126-185	Move circle from left to right automatically			
		186-225	Jump circle from right to left automatically			
		226-245	Auto jumping			
		246-255	Audio jumping			
CH6	Y move	0-125	Adjust position by manual			
		126-185	Move circle from up to down automatically			
		186-225	Jump circle from down to up automatically			
		226-245	Auto jumping			
		246-255	Audio jumping			
CH7	Zoom(+/-)	0-10	No change			
		11-87	Adjust size by manual			
		88-150	Zoom +			
		151-200	Zoom -			
		201-255	Zoom (+/-) circle			
CH8	Rolling X	0	No change			
		1-128	Manual rotation			
		129-255	Auto rotation			

CH9	Rolling Y	0	No change
		1-128	Manual rotation
		129-255	Auto rotation
CH10	Rolling Center	0	No change
		1-128	Manual rotation
		129-192	Auto clockwise rotation
		193-255	Auto counterclockwise rotation
CH11	Drawing	0-10	No change
		10-74	Manual drawing
		75-104	Auto drawing +
		105-144	Auto drawing -
		145-184	Auto drawing circle
		185-224	End to end drawing circle +
		225-255	End to end drawing circle -
CH12	X wave	0-9	No wave
		10-69	Small wave
		70-129	Medium wave
		130-189	Big wave
		190-255	Biggest wave
CH13	Y wave	0-9	No wave
		10-69	Small wave
		70-129	Medium wave
		130-189	Big wave
		190-255	Biggest wave
CH14	Display Mode	0-63	Normal display
		64-127	Light dot display
		128-191	Segment display
		192-255	Dot display
CH15	Red Dimmer	0-255	Dimmer laser output power from 100% to 0%
CH16	Green Dimmer	0-255	Dimmer laser output power from 100% to 0%
CH17	Blue Dimmer	0-255	Dimmer laser output power from 100% to 0%

## **ILDA control mode**

Connect ILDA signal,the lighting fixtures will automatically switchover to ILDA



working mode.This lighting fixtures' ILDA signal cable connection way is compliant to international standard.

## Maintenance

To prolong the life of the product,it is very important to do maintenance work.The environment is hash outdoors,or if the product is idle for a long time,damp,smoke or particularly dirty surroundings can cause greater accumulation of dirt on its cover and housing.So it should be cleaned to maintain an optimum light output and at the same time to prevent it from corrupted by acid gas.

Cleaning frequency depends on the environment in which the fixture operates.Soft cloth and typical glass cleaning products should be used for cleaning.It is recommended to clean product at least once every 20 days.

Friendly notice:Do not use any organic solvent,e.g.alcohol to clean housing of the apparatus.

## Troubleshooting

Problems	Action
The product doesn't switch on	Power connection is not correct.Re-connect the power.
	Power supply is damaged or abnormal.Call a qualified personnel to fix it.
	Connection of control board is not correct.Call a qualified personnel to fix it.
The product can turn on,but no light coming out.	Control mode is wrongly setting up.Resetting it according to instruction book
	Control section is damaged.Call a qualified personnel to fix it.
The beam appears dim	The product is too hot.Take ventilation measures to make it cool.

Note:This product is under warranty for 1 year(From the date of delivery), 1 years after can provide paid maintenance services.But if it is because of natural disasters or user's operation not according to manual.We won't provide warranty.