



USER MANUAL

UNICORN 5.5 UNICORN 11

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

Classified per IEC 60825-1: 2014
Complies with US FDA CDHR laser safety
standards 21 CFR 1040.10 & 1040.11
and Laser notice 56

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INTRODUCTION

Thank you for purchasing this LIGHTSPACE product. To ensure proper operation, please read this manual carefully before using the product. It could help you avoid dangerous and hazardous situations which could lead to serious injury or property damage. The manufacturer and its distributors cannot be held responsible for any damages caused by improper use or misuse of this LIGHTSPAC laser system. The owner/user is fully responsible for using this product in accordance to laser safety regulations of the country or state where the system is being used. Keep this User Manual for future consultation. If you sell this product to another user, be sure that they also receive this document.

PRODUCT LIST

Open the flight case / carton box carefully unpack everything inside.

Ensure all parts are present and in good condition.

Do not use any equipment that appears to be damaged and contact your supplier.



Laser Projector (1PCS)



W4578 Connector (1PCS)



Power cord (1PCS)



Safety Key for Projector (2PCS)



Metal Safety Wire (1PCS)



E-STOP BOX (1PCS)
Y45 Connector (1PCS)
Safety Key (2PCS)

PACKAGING



Carton box



Flight case



Plastic case

SAFETY NOTES

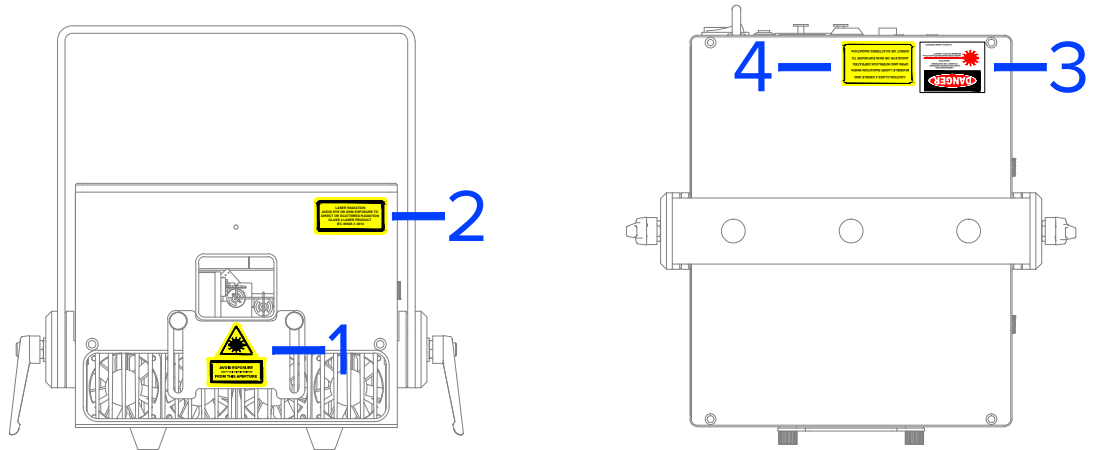
WARNING! This projector is a Class 4 laser product. It must never be used for audience-scanning applications. The output beam of the projector must always be at least 3 meters above the floor in the audience. See the proper operation section for further information.

Please read the following notes carefully! They include important safety information about the installation, usage, and maintenance of this product.

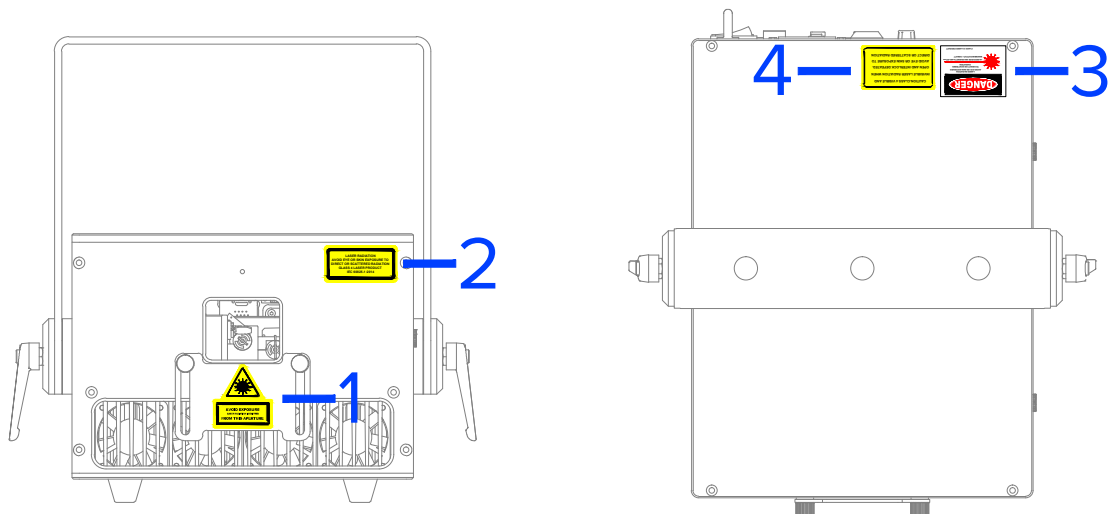
1. Keep this User Manual for future consultation. If you sell this product to another user, be sure that they also receive this document.
2. Always make sure that the voltage of the outlet to which you are connecting this product is within the range stated on the decal or rear panel of the product.
3. Product is not designed for use outdoors in adverse weather conditions. To prevent risk of fire or shock, do not expose this product to rain or moisture.
4. Always install this product in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
5. Always disconnect this product from the power source before cleaning it or replacing the fuse.
6. Make sure to replace the fuse with another of the same type and rating.
7. If mounting it overhead, always secure this product to a fastening device using a safety chain or cable.
8. In the event of a serious operating problem, stop using the projector immediately. Never try to repair the unit except in a controlled environment under trained supervision. Repairs carried out by unskilled people can lead to damage or malfunction of the unit, as well as exposure to dangerous laser light.
9. Never connect this product to a dimmer pack.
10. Make sure the power cord is not crimped or damaged.
11. Never disconnect the power cord by pulling or any moving part. Always use the hanging/mounting bracket or the handles. Or tugging on the cord.
12. Never carry a product from the power cord.
13. Always avoid eye or skin exposure to direct or scattered light from this product.
14. 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 this user manual. Read all instructions carefully BEFORE operating this device.
15. Never intentionally expose yourself or others to direct laser light.
16. This laser product can potentially cause instant eye injury or blindness if laser light directly strikes the eyes.
17. 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.
18. It is a US Federal offense to shine any laser at aircraft.
19. No service allowed by customer. There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. Service is only to be handled by the factory or authorized factory trained technicians
20. Product is not to be modified by the customer.
21. Caution use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY LABEL LOCATION

UNICORN 5.5



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1. Harazd Warning Symbol
- 2.Explanatory Label
- 3.Danger Laser Radiation
- 4.Hazard Warning Mark

PRODUCT SAFETY LABEL

Harazd Warning Symbol



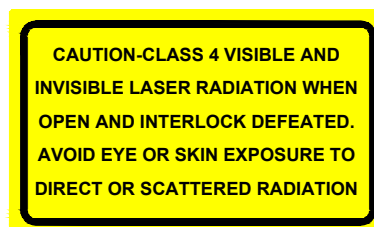
Explanatory Label



Danger Laser Radiation



Hazard Warning Mark

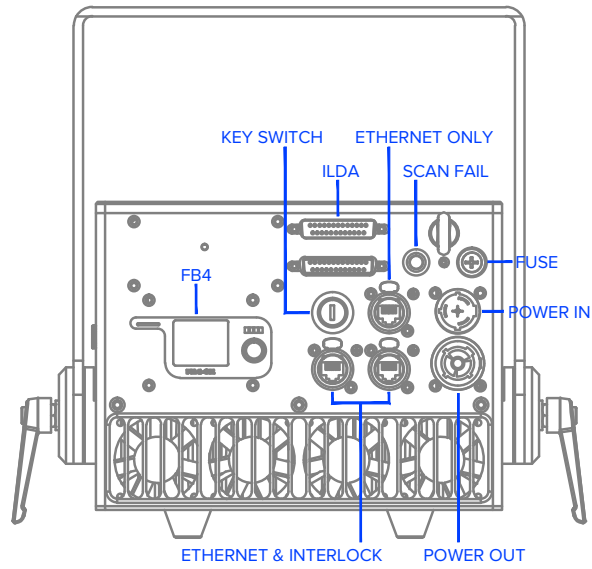


TECHNICAL SPECIFICATION

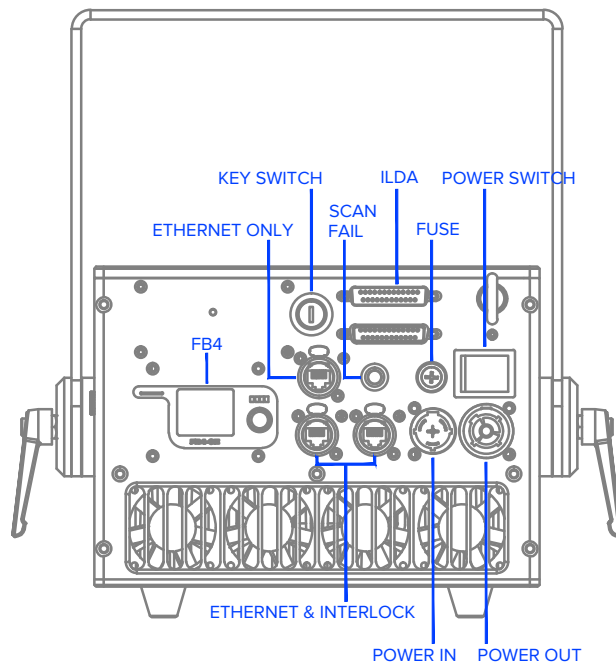
| MODEL | UNICORN 5.5 | UNICORN 11 |
|------------------------------|---|---------------------------------------|
| Total laser power | ≥5,500mW | ≥11,000mW |
| Diode-637 | 1500mW-637nm | 3000mW-637nm |
| Diode-525 | 2000mW-525nm | 4000mW-525nm |
| Diode-445 | 2000mW-445nm | 4000mW-445nm |
| Beam divergence | <1.0mrad [full angle] | <1.0mrad [full angle] |
| Modulation | >100KHz | >100KHz |
| Modulation way | Linear analog modulation | Linear analog modulation |
| Scanner type | PT-A40HP | PT-A40H |
| Scanning system | 35Kpps@8° | 30Kpps@8° |
| Scan angle | 45 degree | 45 degree |
| Signal connector | ArtNet,DMX,ILDA control | ArtNet,DMX,ILDA control |
| Ingress rating | IP20 | IP20 |
| Temperature control | Dual constant temperature system | Dual constant temperature system |
| Operating temperature | -10-40°C | -10-40°C |
| Dimensions | Length: 266 Width:219 Height: 181 | Length:316 Width:235 Height:185 |
| Weight | 8.5 kg | 12.5 kg |
| Power requirements | 100-240V 50-60Hz | 100-240V 50-60Hz |
| Consumption | 150W | 350W |
| E_{MPE} | 10W · m ⁻² | 10W · m ⁻² |
| Nohd | 782m | 1106m |

BACK PANEL VIEW

UNICORN 5.5

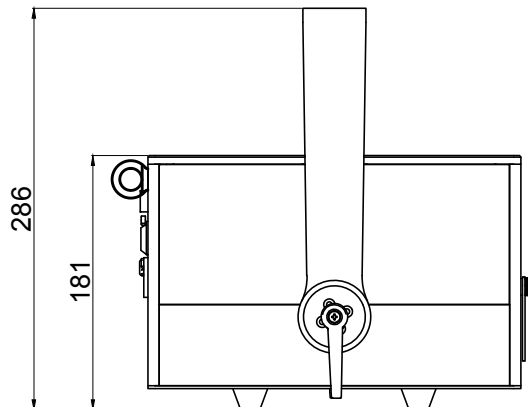
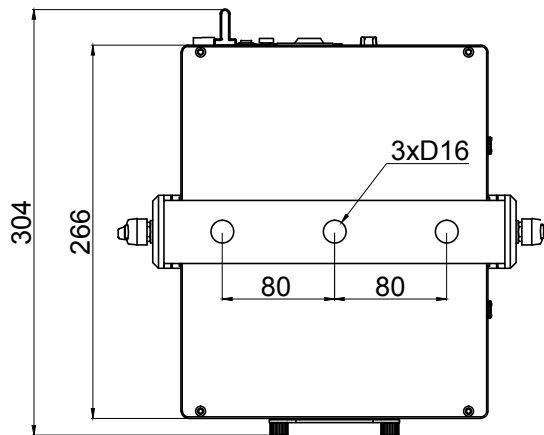
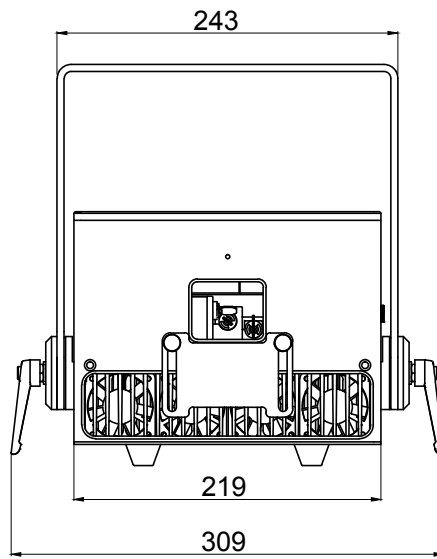


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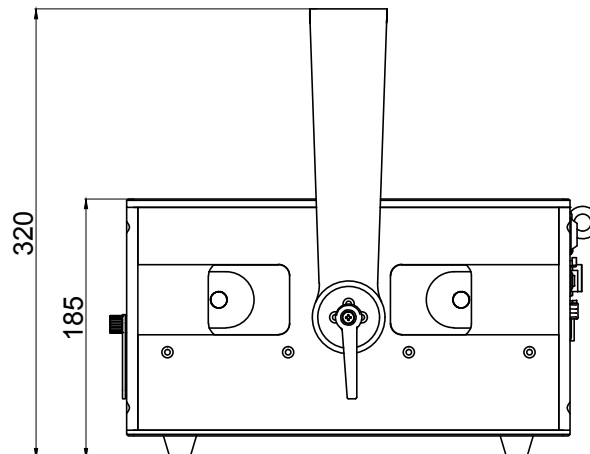
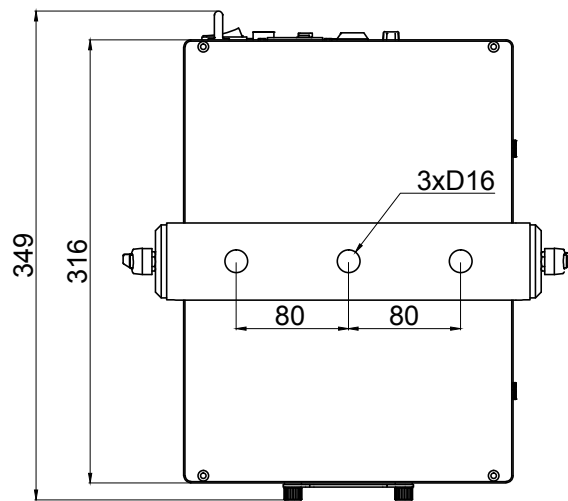
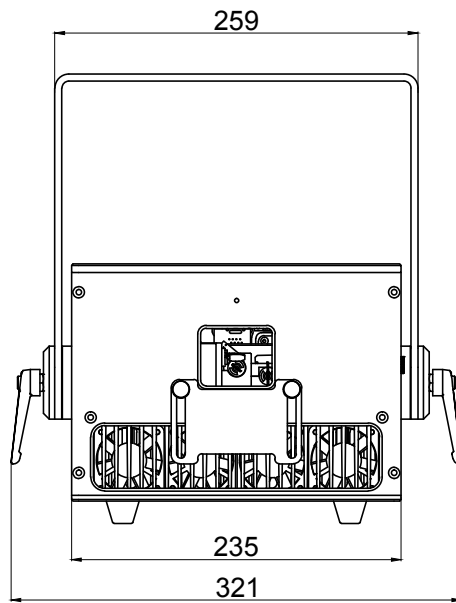


DIMENSIONS

UNICORN 5.5



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INSTALLATION

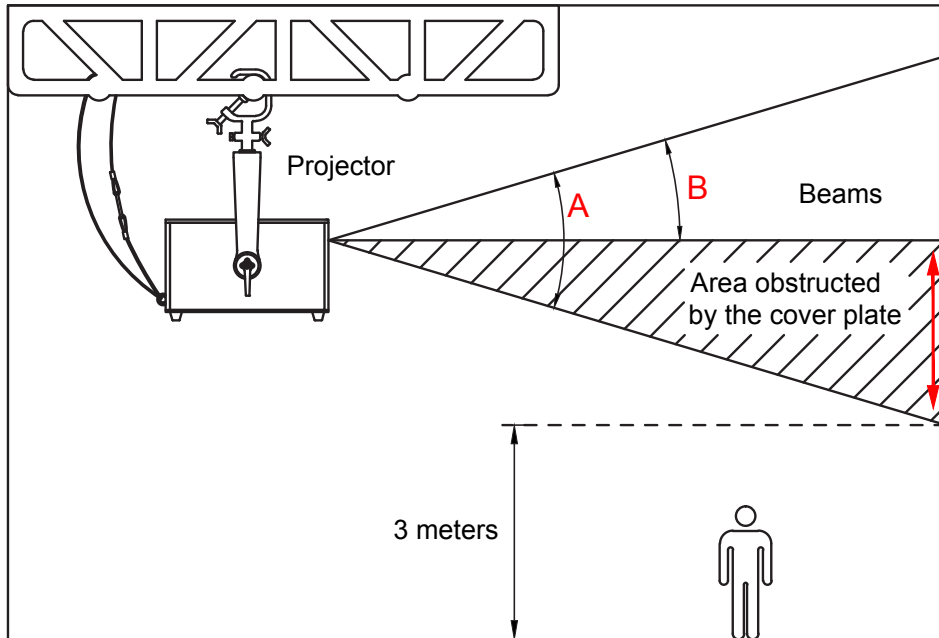
Please follow the below rules during installation

1. The owner/user is fully responsible for using this product in accordance to laser safety regulations of the country or state where the system is being used.
2. If mounting it overhead, always secure this product to a fastening device using a safety chain or cable.
3. Be sure that the structure onto which you are mounting this product can support its weight.
4. Always consider ease of access to the unit before deciding on a location for this product.
5. Always disconnect this product from the power source during installation.
6. Make sure the power cord is not crimped or damaged.
7. Install the product only at a firm, secure and accessible installation point away from unauthorized persons.
8. Make sure the product is properly tightened and does not break down due to sound vibrations, cable tension, or others.
9. Always make sure that the voltage of the outlet to which you are connecting this product is within the range stated on the decal or rear panel of the product.
10. Make sure the laser is placed at least 50cm away from walls or other place (including curtains, etc.).
11. Make sure the laser is away from any heat source, including spotlights, headlights, radiators, and make sure there is enough flowair for it.
12. Mount the product securely. You can do this with a screw, a nut, and a bolt. You may also use a mounting clamp if rigging this product onto a truss. The U-shaped support bracket has three mounting holes which may be used to secure the clamps to the projector.
13. Be sure that the structure onto which you are mounting this product can support its weight more than 10 times.
14. Make sure do not block the fan outlet when operating the laser.

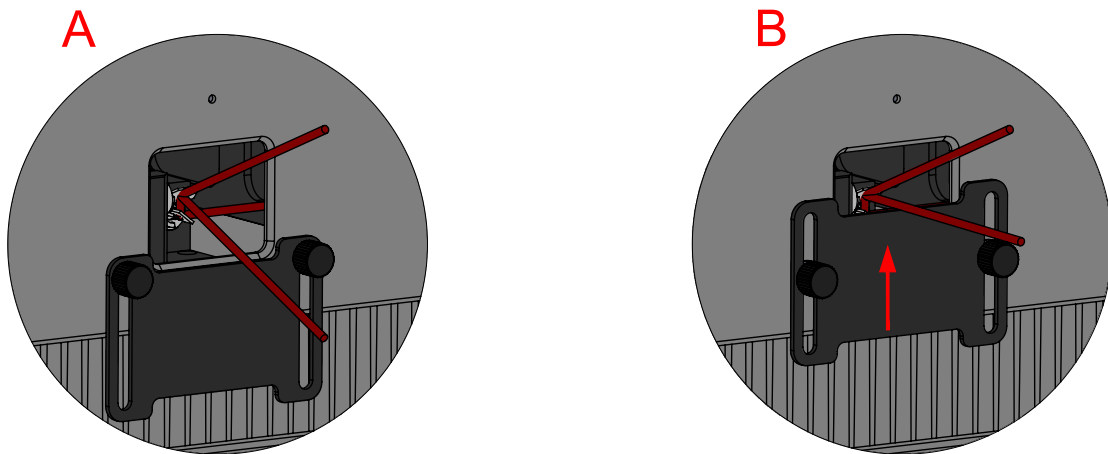
The manufacturer and its distributors cannot be held responsible for any damages caused by improper use or misuse of this LIGHTSPACE laser system.

PROPER USAGE

Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



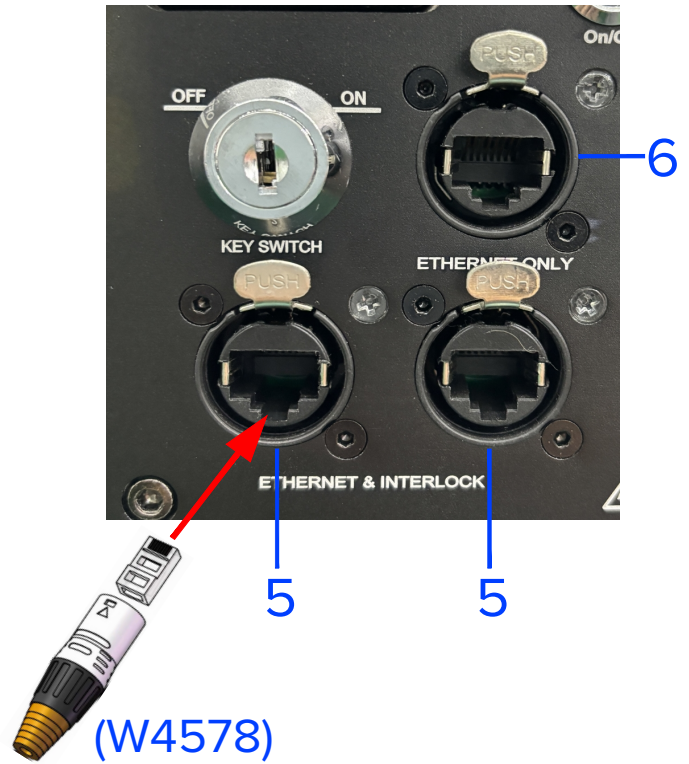
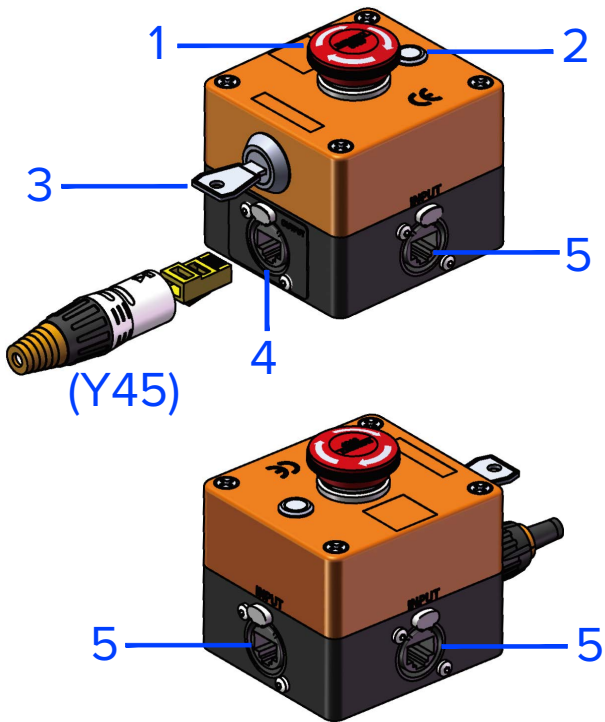
The audience area can be passively protected by sliding the aperture cover plate upwards and fixing it in proper position by the thumb screws.



This product is for overhead mounting only. For safety purposes, this projector should be mounted on steady elevated platforms or sturdy overhead supports using suitable hanging clamps. In all cases, you must use safety cables.

International laser safety regulations require that laser products must be operated in the fashion illustrated below, with a minimum of 3 meters (9.8 ft) of vertical separation between the floor and the lowest laser light vertically. Additionally, 3 meters of horizontal separation is required between laser light and audience or other public spaces.

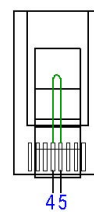
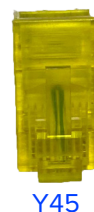
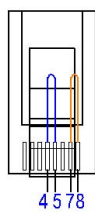
E-STOP BOX 3.0



| NO. | Name | Function |
|-----|---------------|--|
| 1 | E-STOP SWITCH | Press the E-STOP SWITCH,the projector shut off immediately. |
| 2 | RE-START | Press the RE-START,the projector re-start and begin emitting laser light. |
| 3 | KEY SWITCH | Remote interlock box lock |
| 4 | Y45 PORT | PIN4 and PIN5, Use for NEXT E-STOP |
| 5 | W4578 PORT | PIN4 and PIN5 Use for E-STOP SWICH and KEY SWICH PIN7 and PIN8 use for RE-START PIN1,PIN2,PIN3 and PIN6 use for ETHERNET |
| 6 | ETHERNET | PIN1,PIN2,PIN3 and PIN6 use for ETHERNET PIN4,PIN5,PIN7 and PIN8 no use or unknown |

W4578:
Convenient for internal inspection, instead of E-STOP
(PIN4 and PIN5 connect together
PIN7 and PIN8 connect together)

Y45:
Convenient for internal inspection, instead of NEXT
E-STOP (PIN4 and PIN5 connect together)



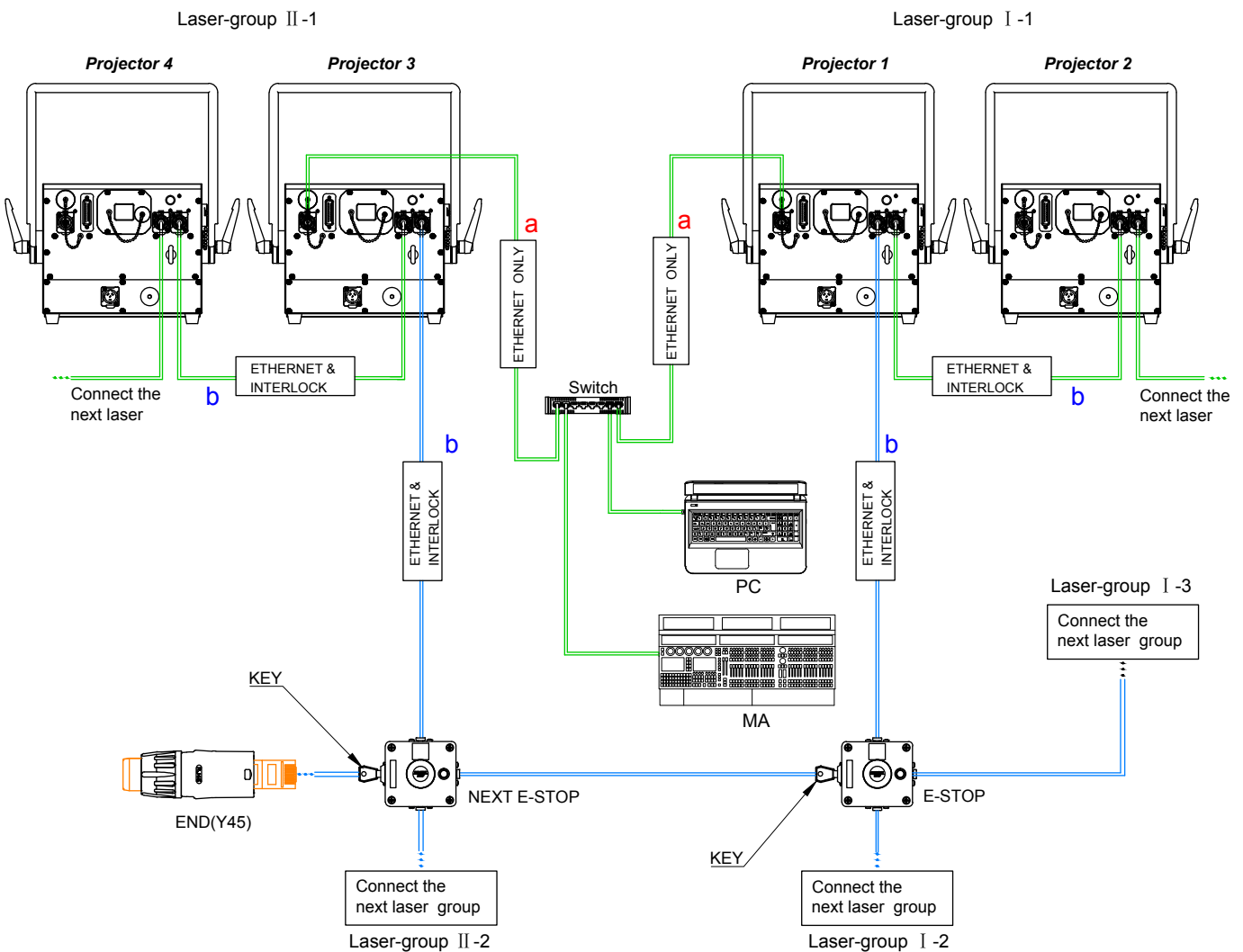
INTERLOCK & ETHERNET

REMOTE INTERLOCK

1. Proper using remote interlock,E-stop,refer to below.
2. Connect the E-stop box to any of the RJ45 connector (Ethernet&interlock) on the rear of the projector using Ethernet cable. Ensure that the other end of the cable is firmly attached to the E-stop box.
3. If you do not use E-stop box, please insert the W4578 Connector to the projector.

Please pay attention! In most of countries, every laser system is required by law to have a fully functioning emergency stop switch.If you use the provided interlock connector instead of the safety interlock, you must have another way to stop the laser output immediately in case of emergency.

ETHERNET&INTERLOCK / PC CONTROL / MA CONSOLE



- a. After the Ethernet signal passes through the Switch,when connecting to Projector 1 and Projector 3,The Network Plug must be inserted into the " **ETHERNET ONLY** " port,otherwise the Interlock will fail.
- b. Except for the Ethernet signal input on Projector 1 and Projector 3 ,the rest signal of Ethernet and Interlock must be connected to the " **ETHERNET&INTERLOCK** " port, otherwise the Interlock will fail.

MAINTENANCE

1. Always disconnect this product from the power source before cleaning it or replacing the fuse.
2. Cleaning of internal optical elements must be done by authorized technicians. Improper operation or chemical for cleaning can cause serious damage to the projector. Cleaning times depend on the operating times and operating environment. It is recommended to clean the external optical system every 180 days.
3. Check regularly for loose screws and damaged parts. Replace damaged parts if necessary.
4. Added regularly to various rotating parts or bearings to improve the lifespan of the products.
5. Make sure to replace the fuse with another of the same type and rating.
6. In the event of a serious operating problem, stop using the projector immediately. Never try to repair the unit except in a controlled environment under trained supervision. Repairs carried out by unskilled people can lead to damage or malfunction of the unit, as well as exposure to dangerous laser light.
7. No service allowed by customer. There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. Service is only to be handled by the factory or authorized factory trained technicians.

WARRANTY POLICY

1. The laser projector from LIGHTSPACE has two years warranty service (from the date of purchase), when applying for warranty, need to show warranty card and original purchase voucher.
2. During the warranty period, LIGHTSPACE will provide free maintenance for customers, but for out of warranty, customers would need to bear repair cost.
3. Stop using immediately and contact your supplier if you found the projector is over heating, damaged or other abnormal situation.
4. The warranty service is not including following situations: Injury caused by accident or improperly use; The component isn't from LIGHTSPACE; To modify product without any approval of LIGHTSPACE.
5. For any maintenance problems, please dial the official service E-mail : **service@8lightspace.com**
6. The right of final explanation belongs to LIGHTSPACE.

