


**TECHNICAL SPECIFICATION**

<b>Voltage</b> : 230Vac, 50/60Hz	<b>Blue</b> : 300mW 455nm
<b>Fuse</b> : 2A Slow blow	<b>DMX Channels</b> : 10
<b>Laser Class</b> : 3B 	<b>Dimensions</b> : 220 x 176 x 99mm
<b>Red Laser</b> : 100mW 638nm	<b>Power Consumption</b> : 45W
<b>Green Power</b> : 50mW 532nm	<b>Weight</b> : 1.6kg

**IMPORTANT NOTE:** This product conformed to Laser & LED Safety standard BSEN60825-1 2007 incorporating corrigendum 2008

**DISPOSAL:**



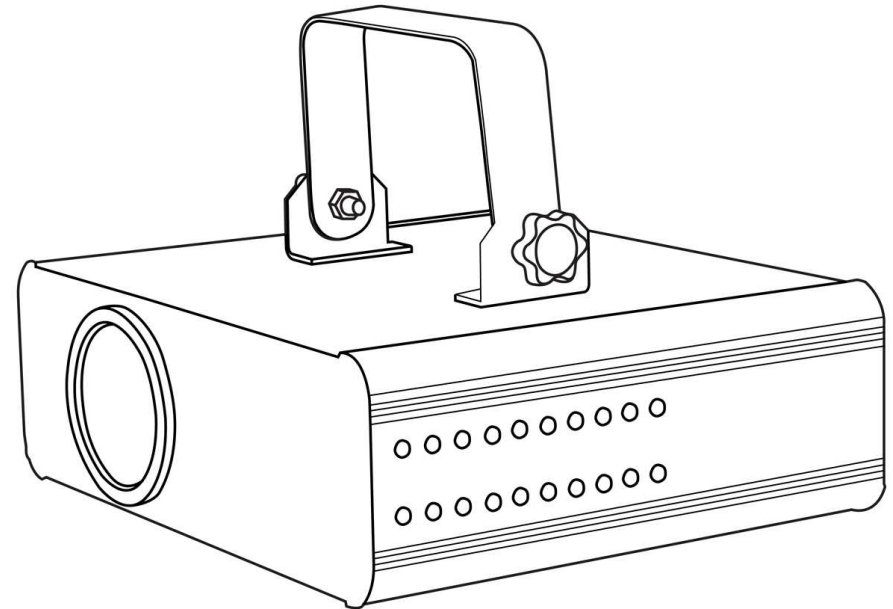
Please disposal of the unserviceable device according to the current statutory requirement

**3D SPIRO 2.0**

**RGB LASER**

Order ref: 152.760UK

User Manual



**IMPORTANT SAFETY NOTICE**  
Please Read this manual before operating

**VERSION 1.0**

<b>DMX CHANNEL</b>	<b>DMX VALUE</b>	<b>DESCRIPTION</b>
<b>1 (Mode)</b>	000-010	Blackout
	011-062	Sound to light
	063-125	Auto Mode
	126-189	DMX 512 Mode 1
	190-255	DMX 512 Mode 2
<b>2 (Pattern Select)</b>	000-255	Laser Pattern select (when CH1 in DMX mode 1)
	000-255	Laser Pattern select (when CH1 in DMX mode 2)
<b>3 (X Movement)</b>	000	No rotation
	001-120	Adjust position
	121-185	Auto left / right movement
	186-255	Auto left / right movement cycle
<b>4 (Y Movement)</b>	000	No rotation
	001-120	Adjust position
	121-185	Auto up / down movement
	186-255	Auto up / down movement cycle
<b>5 (Zoom in/out)</b>	000	No zoom in/out
	001-100	Manual adjust
	101-150	Zoom out
	151-200	Zoom in
	201-255	Zoom in/out
<b>6 (X axis rotating)</b>	000	No rotation
	001-110	Manual rotate position
	111-255	Auto rotating position
<b>7 (Y axis rotating)</b>	000	No rotation
	001-110	Manual rotate position
	111-255	Auto rotating position
<b>8 (Z axis rotating)</b>	000	No rotation
	001-140	Manual adjust position
	141-217	Auto clockwise rotation
	218-255	Auto anti-clockwise rotation
<b>9 (Colour select)</b>	000-255	Colour selection
<b>10 (Scanning Speed)</b>	000-255	Control the scanner speed of the patterns

## DMX

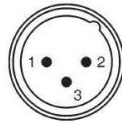
The fixture is equipped with 3-pin XLR connectors for DMX input and output. The SE connectors are wired in parallel. Only use a shielded twisted-pair cable designed for 3-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

**DMX - output**  
XLR mounting-sockets (rear view):

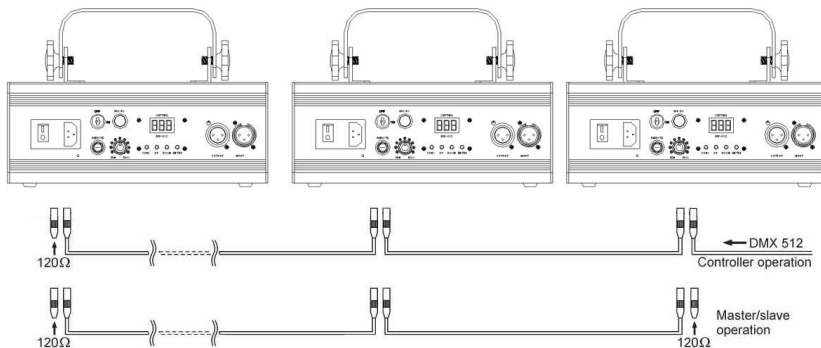


- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)

**DMX-input**  
XLR mounting-plugs (rear view):



Building a serial DMX-chain:



**Caution:** At the last fixture, the DMX-cable has to end with a terminator. Solder a 120 Ohm resistor between PIN 2 (-) and PIN 3 (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

When in DMX mode there are two channels with the following function:

## INTRODUCTION:

### 3D SPIRO 2.0 RGB LASER

Thank you for purchasing this 3D Spiro 2.0 laser.

This updated version of our ever-popular Spiro Laser has a range of exciting additional 3D patterns. The high power 638nm red laser diode produces a much brighter beam with the benefits of reduced laser radiation. The colour-changing beam and pattern effects are best viewed when projected onto a flat surface, and adding smoke or haze will further enhance the impressive effects making it ideal for mobile DJs and venue installation.

- Unique 3D patterns
- Brighter 638nm Red laser technology
- 0.45W total laser power (Red: 100mW, Green 50mW, Blue: 300mW)
- Auto, sound-to-light, pattern select and 10 channel DMX modes
- Master/slave mode
- Easy digital display to set the mode of operation
- Key controlled for laser safety
- We recommend that this product is used within the guidelines HSG95



# CAUTION

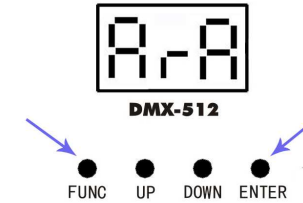


- Please read this manual fully before installing or operating this product as it contains important safety information relating to its installation and operation.



- This Class 3B laser product emits hazardous levels of optical radiation and will cause injury to the eyes if viewed directly.
- This product is not suitable for projection directly at audiences or other personnel.
- This product must not be used for any form of audience scanning application and is for professional use only.

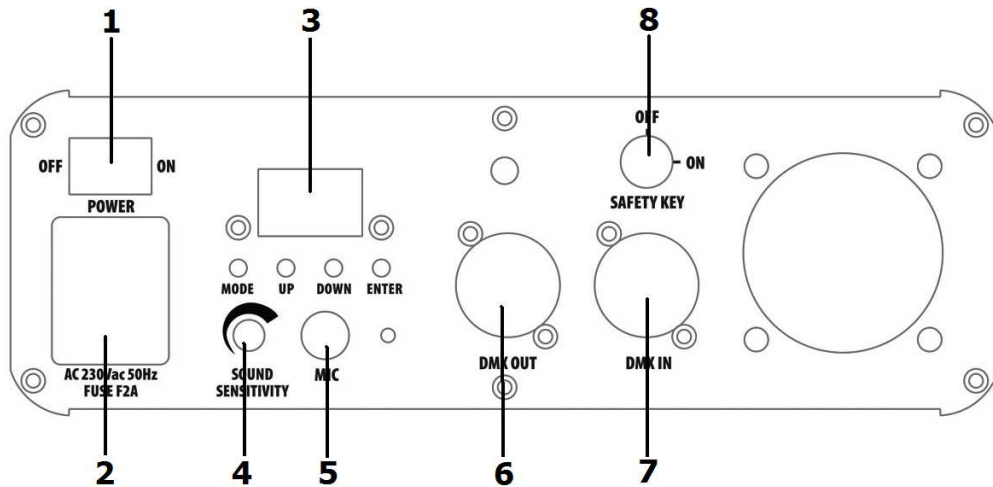
## OPERATION FOR SPIRO 2.0



Press the "FUNC" button to enter setup mode followed by the "UP" & "DOWN" keys to select the mode you desire. To confirm your selection press "ENTER"

Display	Function
AUt	Auto running random effects cycle
SOU	Sound activated random effects cycle
rgb	Colour select mode
P00-P42	Pattern select
001-512	DMX address
SLA	Slave mode

## REAR PANAL SPIRO 2.0:



1. Power ON/OFF Switch
2. IEC Power IN
3. Digital display
4. Sound sensitivity
5. Microphone
6. DMX OUT
7. DMX IN
8. Safety Key

## IMPORTANT INFORMATION:

This product is a Class 3B laser and should only be installed and used by personal who are trained in the management of laser radiation and are able to operate in accordance within the guidance given by the Health and Safety Executive (HSE) in HS(G)95: "The Radiation Safety of Lasers used for Display purposes".

Copies of this guide can be downloaded from the HSE website below:

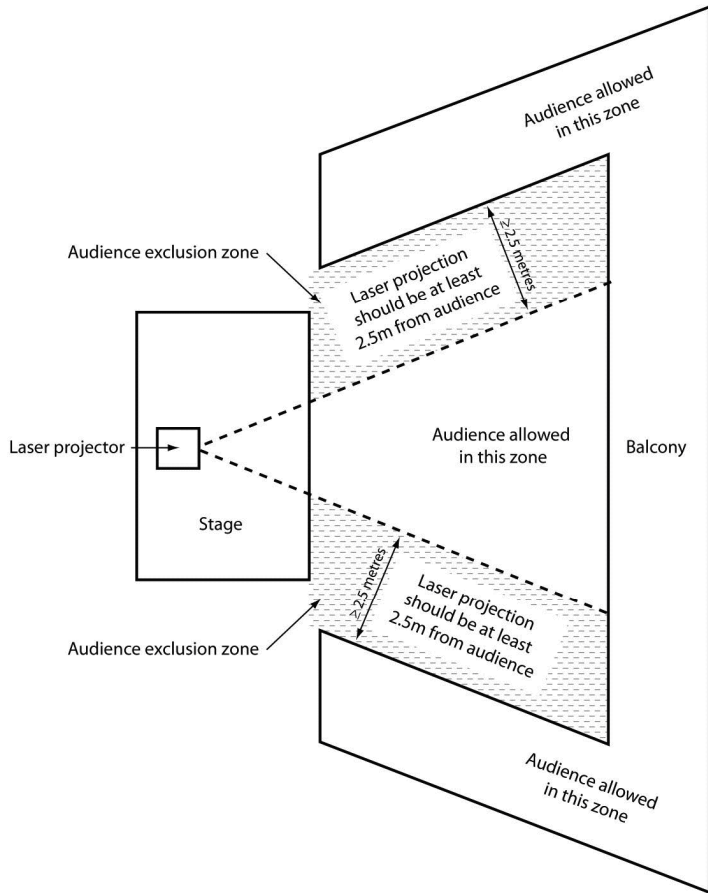
[www.hse.gov.uk/pubns/priced/hsg95.pdf](http://www.hse.gov.uk/pubns/priced/hsg95.pdf)

This product contains no user-serviceable parts. Under no circumstances should any attempt be made by the user to dismantle or modify it in any way.

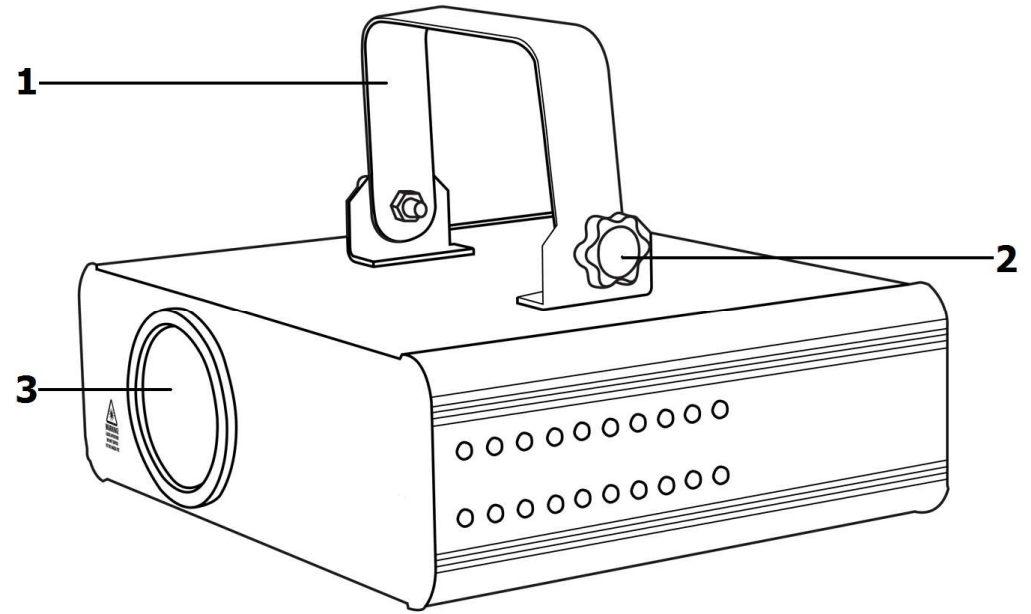
## INSTALLATION AND MOUNTING INSTRUCTIONS:

This product must be securely mounted so that its emission is always directed away from people and objects that are able to reflect the emission towards people. In this regard the separation distances of 3 metres vertically and 2.5 metres horizontally, cited in HS(G)95 and shown overleaf must be observed.

**VERTICAL BIRDS EYE VIEW:**



**LAYOUT SPIRO 2.0:**



- 1. Mounting bracket
- 2. Thumb screw
- 3. Laser Aperture

## TROUBLESHOOTING

### If the unit is not functioning properly

- Check that the IEC cable is connected properly
- Check that the mains power switch is on.
- Check the fuse hasn't blown (see below guide)
- Check that the unit isn't in DMX mode.
- Check the safety key is turned to the on position.
- If in sound to light mode ensure the microphone sensitivity is turned up.

## REPLACING FUSE

First disconnect from the mains power supply then remove the fuse holder above the IEC Socket to reveal the fuse. Replace with the correct fuse rating as stated on the product or in the user manual. Then lock the fuse holder cover back into place.

## GENERAL MAINTENANCE

Be sure to power off the fixture before conducting maintenance.

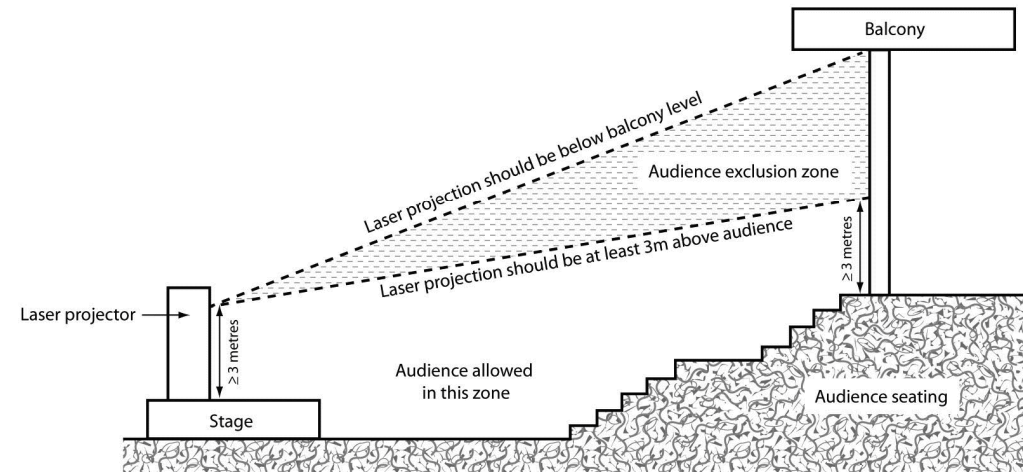
To maintain optimum performance and minimise wear, fixtures should be cleaned frequently.

Usage and environment are contributing factors in determining frequency. As a general rule, fixtures should be cleaned at least twice a month. Dust build-up reduces light output & performance as well as overheating. This can lead to reduced life and increased mechanical wear.

Unplug fixture from power. Use a vacuum or air compressor and a soft brush to remove dust collected on external vents and internal components. Clean all glass when fixture is cold with a mild solution to the cloth or tissue, and drag dirt and grime to the outside of the lens. Gently polish optical surfaces until they are free of haze and lint.

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimise light output. Cleaning frequently depends on the environment in which the fixture operates: damp, smoky or particularly dirty surroundings can require cleaning fluid. Always dry the parts carefully. Clean the external optics at least every 20 days.

## VERTICAL CROSS SECTIONAL VIEW:



**PACKAGE CONTENTS:**

Please check the contents to ensure that the product has been received in good condition.

Laser x 1unit	User's Guide x 1pc
IEC Power Lead x 1pc	Safety Keys x 2pcs

If you find any accessory is missing or the product has arrived with any problems, please contact your retailer at once.

This product contains no user-serviceable parts so make no attempt to try to fix or modify this item yourself as this will invalidate the warranty. We recommend you keep the original package and proof of purchase for any possible replacement or returned demand.

**SETUP:**

1. Unpack the laser ensuring all packaging and tape is removed.
2. Always test the laser before fixing in a permanent location.
3. Connect the IEC mains plug and power up.
4. Insert the safety key and turn to a quarter turn clockwise. At this moment ensure that no one is exposed to laser radiation.
5. Select which mode you want to operate the laser in.
6. Leave the laser to run for 10 minutes before installing in its location.

**CONNECT WITH POWER SUPPLY – THE GROUND WIRE MUST BE CONNECTED:**

Use the supplied IEC lead to connect to the main power supply as follows:

Wire	Connection	International signal
Brown	Live	L
Blue	Neutral	N
Yellow /Cyan	Earth	

For your safety, please kindly pay attention to all of the warnings below:

- Always plug in the power plug last and disconnect from the mains when the device is not in use or before cleaning.
- Do not install and operate the device in rain or extreme heat, moisture or dusty environments.
- This device is for indoor use only and in a dry environment.
- Do not switch on immediately. Wait until the unit reaches room temperature.
- Do not shake the device and avoid brute force when installing or operating.
- Do not use the device during thunderstorms and please disconnect the power.
- Do not use solvents or aggressive detergent to clean the device. Use a soft and clean cloth.
- Do not modify the device or the connected power cord without authorisation.
- Do not stare into the aperture. This product emits hazardous levels of optical radiation and will cause serious injury to the eyes if viewed at close range.
- This product should be securely mounted so that its output emission is always directed away from people and at objects that are able to reflect emission towards people. In this regard, the separation distances cited in HS(G)95 should be observed.
- The symbol determines the minimum distance from lighted objects. The minimum distance between light-output and the illuminated surface must be more than 0.5m.