



EL-D90G

USER MANUAL



Please read this manual carefully before use!

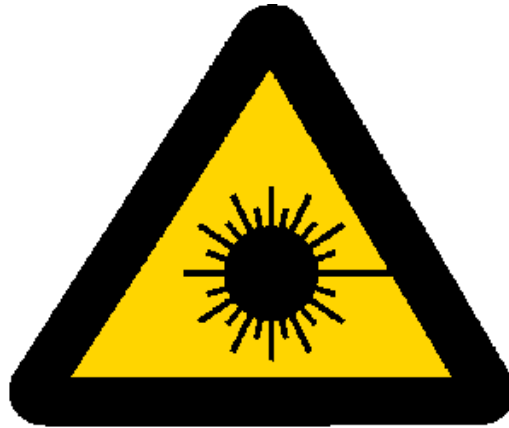
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Checking Parts

Please check if the following parts are included:

- 1 x EL-D90G Laser
- 1 x Power cable
- 1 x User manual



DANGER LASER RADIATION!

Avoid direct eye exposure!

Laser radiation can cause eye damage and/or skin damage

All protective measures for a safe operation of this laser must be applied.

1. SAFETY INSTRUCTIONS

- If the device has been exposed to drastic temperature fluctuation, do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- 1. The laser must only be used for shows. The operation is only allowed if it is controlled by a skilled and well-trained operator.
- Never leave this device running unattended and keep it away from children and unauthorized persons.
- 2. Keep away from heaters and other heating sources. In order to safeguard sufficient ventilation, leave 50 cm of free space around the device.
- 3. Never direct the laser beam to people or animals.
- 4. CAUTION LASER DIODE: Never unscrew the housing!
There are no serviceable parts inside the device. Maintenance and service operations shall only be carried out by authorized dealers.
- 5. Always disconnect from the mains when the device is not in use or before cleaning it.
- **HEALTH HAZARD! Never look directly into the light source, as sensitive persons may suffer an epileptic shock!**

2. OPERATING DETERMINATIONS

6. The operator has to make sure that laser radiation – also reflected laser radiation – higher than the highest allowed level is avoided by technical or organisational measures.
7. Make sure that the used voltage is : AC 220V~240V, 50/60Hz
8. If the device is used in a flying installation, the mounting brackets and an appropriate safety-rope must be fixed.
9. Laser effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
10. In some countries, the operator must notify the accident insurance and the authority for industrial safety, before operating a laser. For more information, contact the relevant authorities.
11. Please consider that unauthorized modifications on the device are forbidden due to safety reasons!
12. If this device will be operated in any way differently than described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

3. AUTO- MUSIC-MODE

When no DMX signal is connected (stand-alone mode) you can select auto mode (patterns will be displayed one after the other), by setting switch 10 to "ON" before turning the device on.

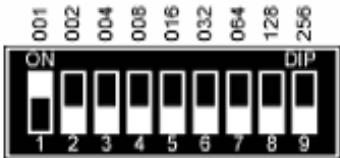
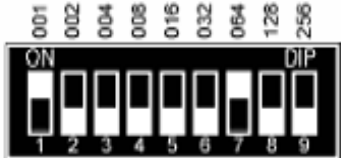
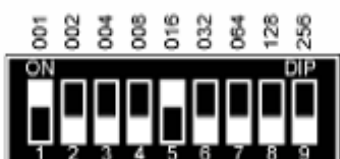
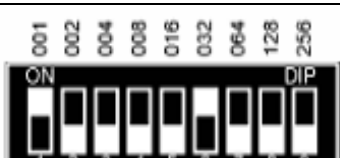
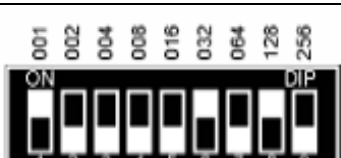
If you put switch 10 to "OFF" the patterns will change triggered by sound (sound or music mode). You can control the music-sensitivity of the microphone with the min-max knob on the rear panel.

When DMX is connected you can also select these two modes alternatively to DMX controlled operation (see chapter 5).

4. OPERATION WITH DMX

Set the DMX address code with the binary system "0" or "1" .

Examples:

DMX-address		DMX-address	
1		65	
17		113	
33		161	

The device has 4 operate channels, so if you set the first on DMX address "1"
The second should be DMX address "5" and so on.

5. DMX CHANNELS

The DMX channels are set as follows:

Kanal	Wert	Belegung
1	0 – 63	Sound mode (see chapter 3)
	64 – 127	Single pattern (select with channel 2)
	128 – 191	Automatic mode (see chapter 3)
	192 – 255	Blanking / Shut off
2	0 - 255	Pattern
3	0 - 255	Dot Speed
4	0 - 255	Line Speed

Please note that according to the pattern, not all effect channels are activated. E.g. you can't change the dot speed with the single dot pattern.

6. MAINTENANCE

Maintenance should be performed every 15-day period, by using a sponge which is dipped with alcohol, rather than wet cloth or other chemical liquid, to clean the mirror.

Always disconnect from the mains when the device is not in use or before cleaning it.

There are no serviceable parts inside the device. Maintenance and service operations are only to be carried out by authorized dealers.

Never look directly into the light source.

Always disconnect from the mains when the device is not in use or before cleaning it.

7. TECHNICAL SPECIFICATIONS

Power supply: AC 220V-240V, 50/60 Hz

Power consumption: 40 W

Ambient temperature: -10°C – +35°C

Working mode: automatic, music active, DMX512

DMX 512: 4 channels

laser power: green: 2x ca. 90mW / 532nm

Laser class: 3b

Weight: 4.5 kg

Dimensions: 41 x 28 x 12 cm

PLEASE NOTE

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

Laserworld cannot be made liable for damages caused by incorrect installations and unskilled operation!

EU- Declaration of Conformity



We hereby confirm that the following device

Laserworld Ecoline EL-D90G DMX

complies with the essential safety requirements, laid down in the regulations of the committee to assimilate the provisions of law of all participating EU states on the electromagnetic compatibility (98/336/EWG).

The device has been classified considering the following EU-norms on electromagnetic compatibility:

DIN EN 55103-1: 1996

DIN EN 55103-2: 1996

DIN EN 61000-3-2:2000 + A2: 2005

DIN EN 61000-3-3:1995 + A1: 2001

Assessment of compliance of the product with the requirements relating to the Low Voltage Directive (LVD) was based on the following standards:

DIN EN 60065 : 2002

Furthermore, the device is verified in correspondence to the laser class regulations DIN EN 60825-1, if properly set up according to the upper mentioned laser safety regulation. After installing the device, an inspection and official approval is indispensable for the overall setup. The inspection must follow the european guidelines EN 60825-1 and corresponding regulations for the prevention of accidents BGV-B2.

This declaration is executed on behalf of the EL-D90G DMX Laser manufacturer.

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