



CS-400G ECO

USER MANUAL



Please read this manual carefully before use!

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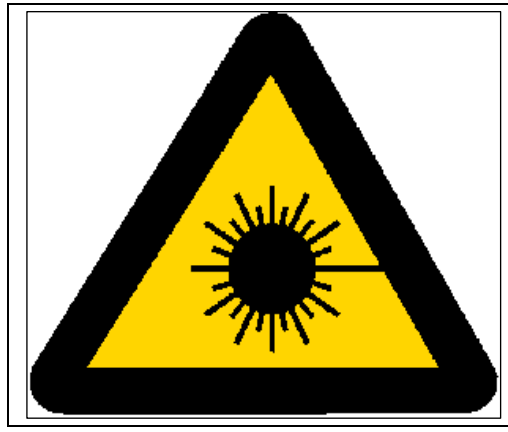
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Checking Parts

Please check if the following parts are included:

- 1 x CS-400G ECO Laser
- 1 x Power cable
- 1 x ILDA adaptor
- 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.
13. When the laser is not attached to an ILDA output device (even for a short period), switch ILDA mode off (see below), or turn the device off.

3. OPERATION

Please note: for sound/DMX mode the two switches on the back of the device labelled "BLANKING" and "X/Y" have to be up.

When both switches are down the device can be controlled by an ILDA output (such as our USB-Box). Use this switch setting only when connected to such an ILDA controller. Even if you disconnect/interrupt the ILDA connection only for a short period, always put the switches into up position, or turn the device off!

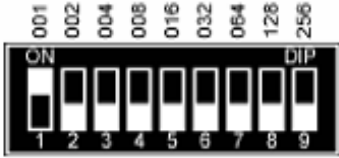
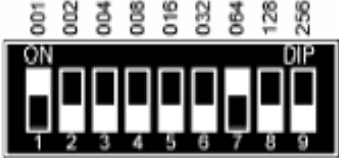
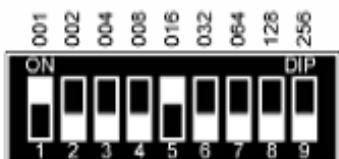
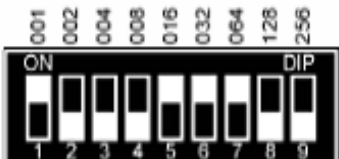
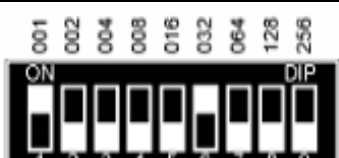
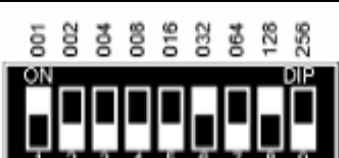
4. AUTO- MUSIC-MODE

If you put switch 10 to "ON" the patterns will change automatically, and are animated by sound (sound or music mode), the switches labelled "BLANKING" and "X/Y" have to be up. You can control the music-sensitivity of the microphone with the min-max knob on the rear panel. With switch 1 you can select two modes: standard sound mode (patterns will move triggered by sound), and animated sound mode (patterns will move slowly without sound and will be accelerated with sound).

5. OPERATION WITH DMX

If you turn switch 10 to "OFF", and switches "BLANKING" and "X/Y" up, the device is in DMX mode. Set the DMX address and connect the device to a DMX controller, you can then operate you CS-200G ECO with DMX.

Set the DMX address code with the binary system "0" or "1". A few examples:

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

The device uses 11 channels, so if you set the first on DMX address "1" the second should be DMX address "12" and so on.

The DMX channels are as following:

channel	Function
1	Mode: 0-69 laser off; 70--139 sound mode; 140-209 animated sound mode (see above); 210-255 DMX mode
2	Pattern
3	Effect channel: Strobe
4	Horizontal movement: 0 no effect; 1-167 (fixed) movement; 168-188 animated movement left to right with increasing speed; 189-209 do. Right to left; 210-255 do. left to right and back
5	Vertical movement: analogous to hor. movem.
6	Zoom: 0-10 no effect; 11-104 increasing size; 105-154 growing with increasing speed; 155-204 do. shrinking; 205-255 do. growing/shrinking
7	Width (rotation about y): 0-150 fixed rotation; 151-255 automatic rotation with incr. speed
8	Height (rot. About X): analogous to width
9	Rotation: 0-180 fixed rotation; 181-217 automatic with incr. speed clockwise; 218-255 do. counter clockwise
10	Blanking: 0-70 no effect; 71-139 points are brighter; 140-209 dashed lines; 210-255 points only
11	Wave

Please note that according to the pattern, not all effect channels are activated. E.g. you can't zoom dynamic patterns, etc.

Channel 3 (strobe) is also available when in soundmode (channel 1 70-209).

6. ILDA OPERATION

Connect the laser to an ILDA output (as our USB-box) using the adaptor shipped with the device, switches "BLANKING" and "X/Y" on the back of the laser have to be down. You can now operate the laser with ILDA.

Use this switch setting only when connected to an ILDA controller. Even if you disconnect/interrupt the IDLA connection only for a short period, always put the switches into up position, or turn the device off.

You can now control laser output with a PC, using for example our ShowEditor 2007 software. Laserworld offers a variety of music synchronous lasershow for ShowEditor 2007.

7. 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.

8. TECHNICAL SPECIFICATIONS

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

DMX 512: 11 channels

Ambient temperature: -10°C – +35°C

Power consumption: 40 W

Working mode: automatic, music active, DMX512, ILDA

Optical power: ca. 350-420mW / 532nm

Laser classification: 3b

Weight: 4 kg

Dimensions: 265 x 125 x 192 mm

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 CS-400G ECO Laser Projector

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 (89/446/EEG).

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 CS-200G ECO Laser manufacturer

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