Instruction Guide

Light Controller LC 100

Please read the Guide before operating this product

PHOTON SYSTEMS INSTRUMENTS





Manual Version: 2022/04 © PSI (Photon Systems Instruments), spol. s r.o.

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The contents of this manual have been verified to correspond to the specifications of the device. However, deviations cannot be ruled out. Therefore, a complete correspondence between the manual and the real device cannot be guaranteed. The information in this manual is regularly checked, and corrections may be made in subsequent versions.

The visualizations shown in this manual are only illustrative.

This manual is an integral part of the purchase and delivery of equipment and its accessories and both Parties must abide by it

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1 SAFETY PRECAUTIONS

Read this manual carefully before operating the device. If you are not sure about something in the manual, contact the manufacturer for clarification.



By accepting the device, the customer agrees to follow the instructions in this guide.

GENERAL CAUTIONS:

- Light Controller LC 100 is designed for sole control of the PSI LED Light Sources. Do not use it with any other device!
- When connecting the instrument modules, use only the cables supplied by the manufacturer!
- Keep the instrument dry and avoid working in high humidity environment!
- The manufacturer is not responsible for any damage due to improper or incompetent operation !!!

GENERAL ELECTRICAL SAFETY GUIDELINES:

- Routinely check the devices and their wiring.
- Replace worn or damaged cords immediately.
- Use electrical extension cords wisely and do not overload them.
- Place the devices on a flat and firm surface. Keep them away from wet floors and counters.
- Avoid touching the device, socket outlet or switch if your hands are wet.
- Do not perform any alterations to the electrical part of the devices or their components.

The following table presents basic highlight symbols used in this manual:

| Symbol | Description | |
|---|--|--|
| $\mathbf{\Lambda}$ | Important information, read carefully. | |
| Complementary and additional information. | | |

Tab. 1 Used Symbols

2 LIST OF EQUIPMENT

CAREFULLY UNPACK THE CARTON, WHICH CONTAINS:

- Light Controller LC 100
- Communication Cable
- This Operation Manual (on a CD or a printed version)
- Optional Accessories (according to your specific order)



If any item is missing, please contact the manufacturer. Also check the carton for any visible external damage. If you find any damage, notify the carrier and the manufacturer immediately. In this case, the carton and all packing materials should be retained for inspection by the carrier or insurer.

For customer support, please write to: support@psi.cz

3 DEVICE DESCRIPTION

FRONT PANEL:



Fig. 1 Front Panel

[1] - Four LED indicators: on if the corresponding light is connected. [2] - Two-line display. [3] - Four control keys.

REAR PANEL:

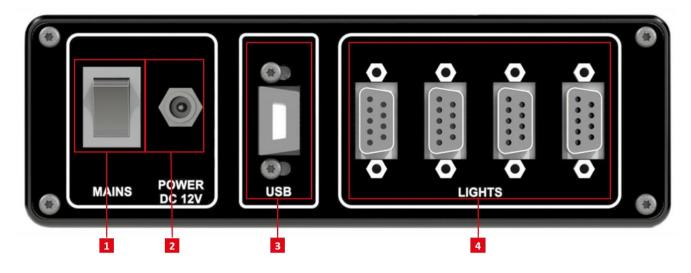


Fig. 2 Rear Panel

[1] – ON/OFF mains switch. [2] – Power connector. [3] – Service connector. [4] – Four serial connectors. The LED Light Source(s) can be connected to any of the four connectors; The Light Controller automatically detects the connected LED Light Source(s).



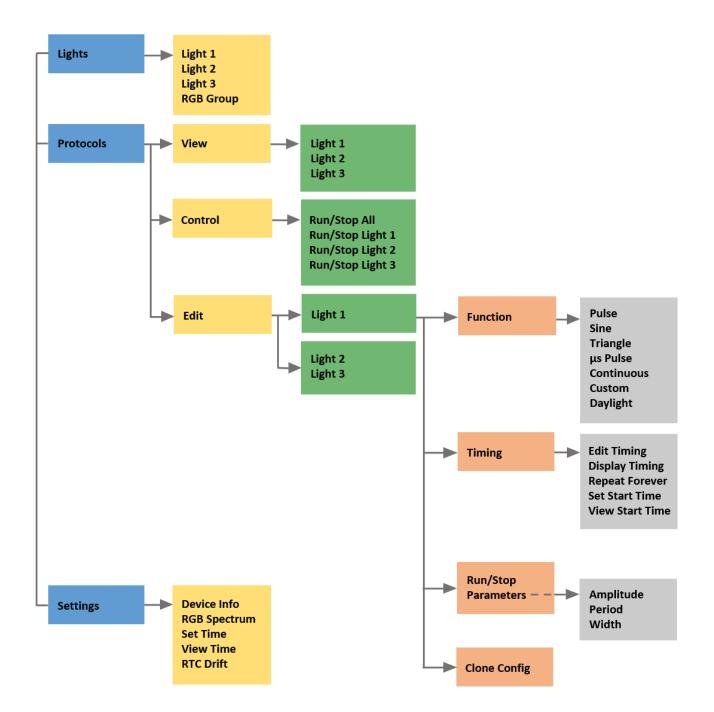
4 **DEVICE OPERATION**

Light Controller LC 100 supports up to four light sources. Each light source can be configured and calibrated independently using customer written protocols.

For light control and protocol writing, use the following four keys located on the front panel:

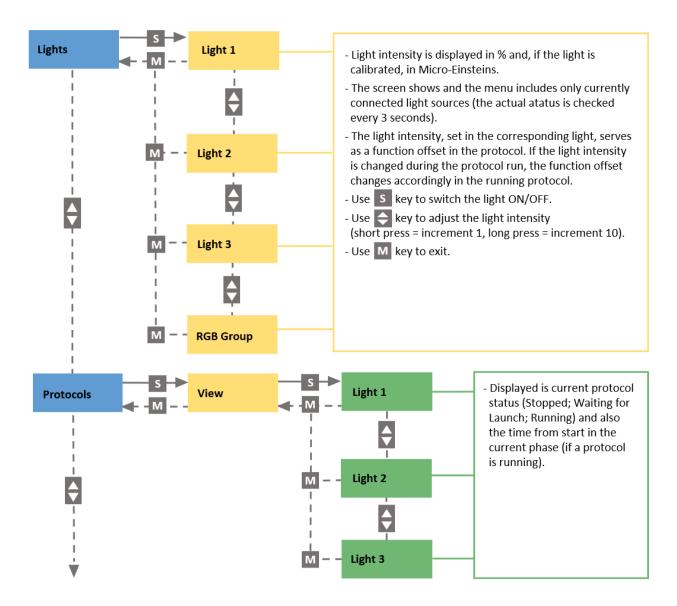
- [M]: To move back in the menu tree or to exit the menu.
- [S]: To move forward in the menu tree or to save your selection.
- [**↑**]: To move up in the menu or to add value.
- [ψ]: To move down in the menu or to subtract value.

Menu Tree – Main

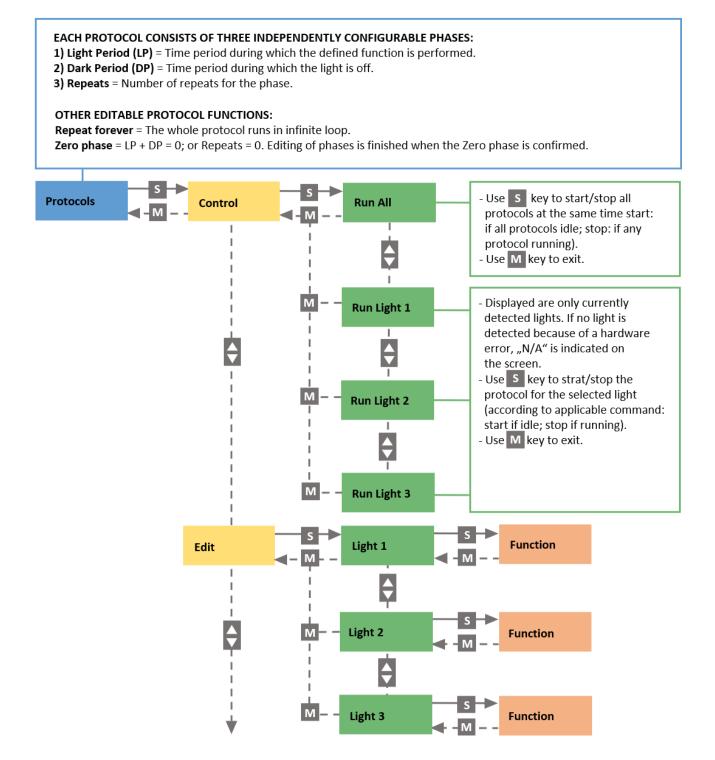




Menu Lights + Menu Protocols

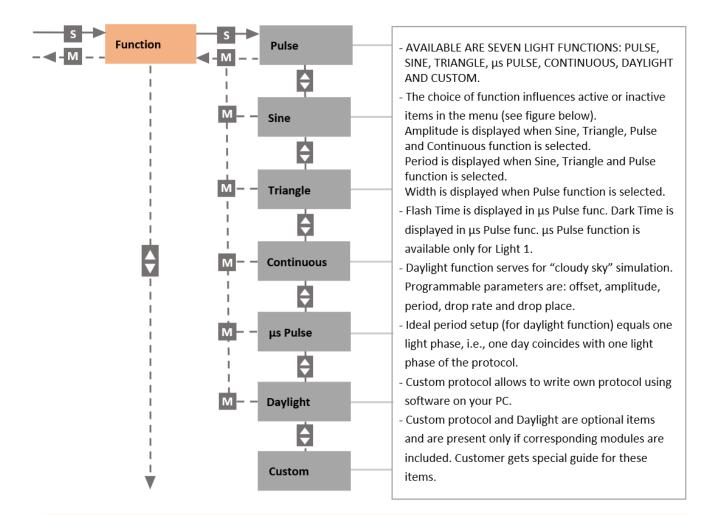


Menu Protocols -> Control + Edit

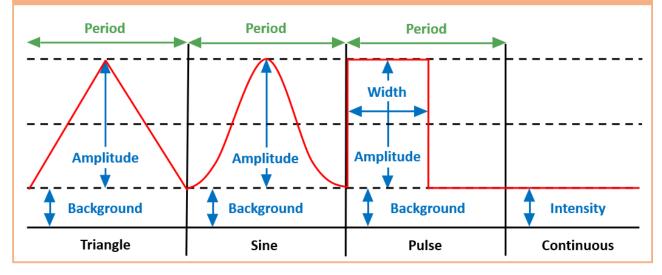




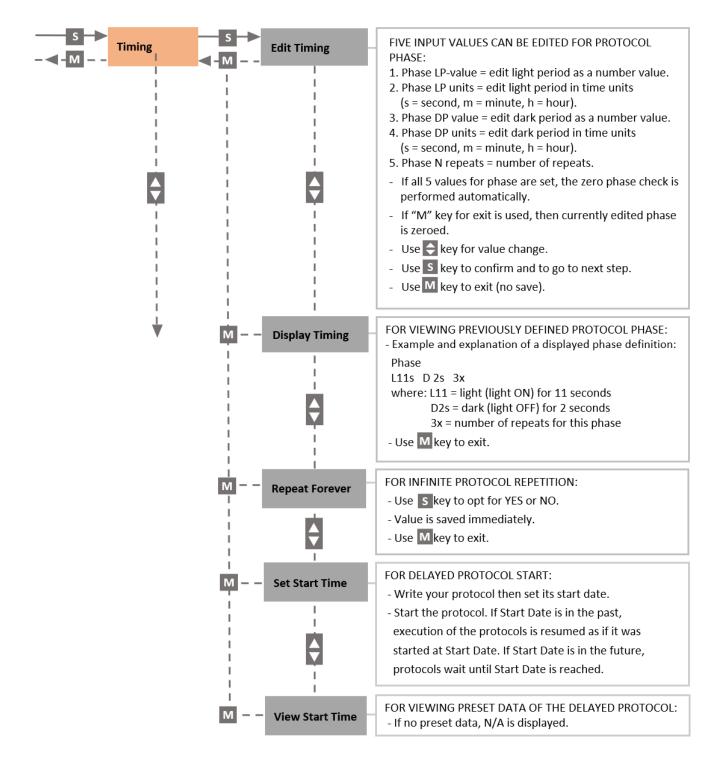
Menu Protocols → Edit → LightN → Function



Light Function Visualization



Menu Protocols → Edit → LightN → Timing

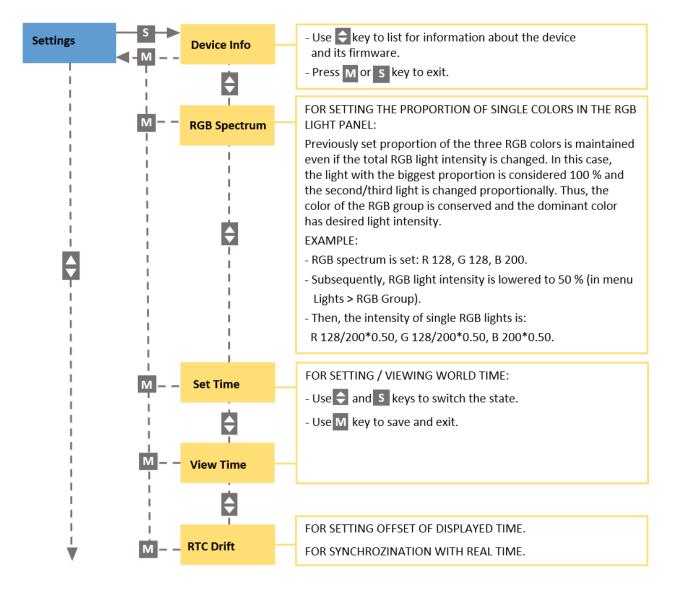




Menu Protocols → Edit → LightN → Run/Stop... Clone Config

| S Run/Sto | - Use S key to | _ STARTING OR STOPPING: (shortcut to: Protocols > Run > Run/Stop LightN) start/stop the protocol. |
|--|----------------|--|
| i i k | - Use M key to | exit |
| M — — Parame | ters S Amplit | ude FOR AMPLITUDE MODULATION: - Use key to adjust the amplitude value in %. |
| | | If the light is calibrated, the amplitude value can be set also in Micro-Einsteins. - Amplitude value is blinking if: Amplitude + Offset (light intensity) > 100 %. - Use S key to save the value and to exit. - Use M key to exit (no save). |
| | M · Period | FOR LIGHT PERIOD MODULATION: Use key to set the light period in two steps: 1) Adjust the value. 2) Select time units (s = seconds, m = minutes, h = hours). Use key to save the value and to exit. Use key to exit (no save). |
| | M Width | FOR SETTING WIDTH (IN THE PULSE FUNCTION): Use ♦ key to set width in the Pulse function (in % from the light period). Use S key to save the value and to exit. Use M key to exit (no save). |
| | M – – Flash T | Flash Time and Dark Time is displayed in μs Pulse function.Flash Time – time period during which the light is ON.Dark Time – time period during which the light is OFF.Values are set in ms or μs. |
| | M Dark T | Time |
| Image: Clone Config FOR QUICK COPYING OF PREVIOUSLY SET FUNCTIONS: - This function enables copying light setup (protocol function, param from selected light to any other light. | | enables copying light setup (protocol function, parameters and timing) |

Menu Settings -> Device Info ... RTC Drift





5 STATEMENT OF LIMITED WARRANTY

- This Limited Warranty applies only to the Light Controller LC 100. It is valid one year from the date of shipment.
- If at any time within this warranty period the instrument does not function as warranted, return it and the manufacturer will repair or replace it at no charge. The customer is responsible for shipping and insurance charges (for the full product value) to PSI. The manufacturer is responsible for shipping and insurance on return of the instrument to the customer.
- No warranty will apply to any instrument that has been (i) modified, altered, or repaired by persons unauthorized by the manufacturer; (ii) subjected to misuse, negligence, or accident; (iii) connected, installed, adjusted, or used otherwise than in accordance with the instructions supplied by the manufacturer.
- The warranty is return-to-base only, and does not include on-site repair charges such as labor, travel, or other expenses associated with the repair or installation of replacement parts at the customer's site.
- The manufacturer repairs or replaces faulty instruments as quickly as possible; the maximum time is one month.
- The manufacturer will keep spare parts or their adequate substitutes for a period of at least five years.
- Returned instruments must be packaged sufficiently so as not to assume any transit damage. If damage is caused due to insufficient packaging, the instrument will be treated as an out-of-warranty repair and charged as such.
- PSI also offers out-of-warranty repairs. These are usually returned to the customer on a cash-on-delivery basis.
- Wear & Tear Items (such as sealing, tubing, padding, etc.) are excluded from this warranty. The term Wear & Tear denotes the damage that naturally and inevitably occurs as a result of normal use or aging even when an item is used competently and with care and proper maintenance.

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