

## Leica Rugby CLH/CLA/CLI



Quick Guide  
Version 1.0  
English

- when it has to be **right**

**Leica**  
Geosystems

# 1 Important Information about your Instrument



Read and follow the User Manual of the main product before using the product or the accessories delivered with the product.



Keep for future reference!

## Intended use

- The Rugby CLH and Rugby CLI cast a horizontal laser plane or a laser beam for the purpose of alignment. The Rugby CLA casts a horizontal and vertical laser plane or a laser beam for the purpose of alignment.
- The laser beam can be detected by means of a laser detector.
- Remote control of product.
- Data communication with external appliances.

## Laser products and location of laser apertures

Laser product	Laser class	Classification
Rugby CLH EDM (Electronic Distance Measurement)	Class 1	IEC 60825-1 (2014-05)
Rugby CLA EDM (Electronic Distance Measurement)	Class 2	IEC 60825-1 (2014-05)

---

Laser product	Laser class	Classification
Rugby CLI EDM (Electronic Distance Measurement)	Class 1	IEC 60825-1 (2014-05)

---

 **CAUTION**

**Class 2 laser product**

From a safety perspective, class 2 laser products are not inherently safe for the eyes.

**Precautions:**

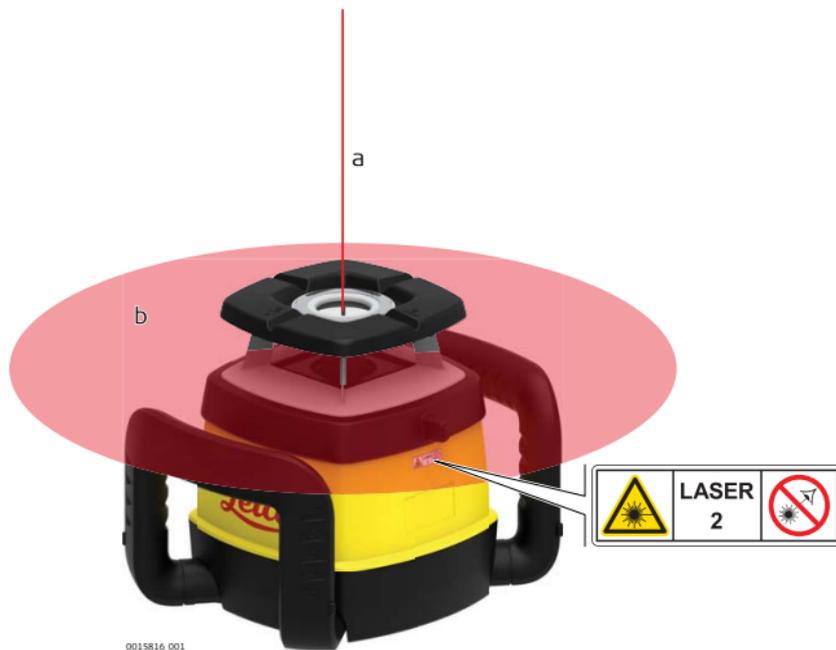
- ▶ Avoid staring into the beam or viewing it through optical instruments.
  - ▶ Avoid pointing the beam at other people or at animals.
-

**Labelling Rugby  
CLH**

a Laser beam

---

## Labelling Rugby CLA



0015816\_001

- a Laser beam, Plumb beam
- b Rotating laser beam

## Labelling Rugby CLI



a Invisible laser beam

---

 **WARNING**

**For the AC/DC power supply and the battery charger:  
Electric shock due to use under wet and severe conditions**

If unit becomes wet it may cause you to receive an electric shock.

**Precautions:**

- ▶ If the product becomes humid, it must not be used!
- ▶ Use the product only in dry environments, for example in buildings or vehicles.



- ▶ Protect the product against humidity.
-

 **WARNING****For the AC/DC power supply and the battery charger:****Unauthorised opening of the product**

Either of the following actions may cause you to receive an electric shock:

- Touching live components
- Using the product after incorrect attempts were made to carry out repairs.

**Precautions:**

- ▶ Do not open the product!
- ▶ Only Leica Geosystems authorised service centres are entitled to repair these products.



---

The product must not be disposed with household waste.

---

## Conformity to national regulations

- FCC Part 15 (applicable in US)
  - Hereby, Leica Geosystems AG declares that the radio equipment type Rugby CLH/CLA/CLI, Combo is in compliance with Directive 2014/53/EU and other applicable European Directives.  
The full text of the EU declaration of conformity is available at the following internet address: <http://www.leica-geosystems.com/ce>.
-  Class 1 equipment according to European Directive 2014/53/EU (RED) can be placed on the market and be put into service without restrictions in any EEA member state.
- The conformity for countries with other national regulations not covered by the FCC part 15 or European Directive 2014/53/EU has to be approved prior to use and operation.
  - Japanese Radio Law and Japanese Telecommunications Business Law Compliance.
    - This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).
    - This device should not be modified (otherwise the granted designation number will become invalid).
-

## 2

## Instrument Components

Rugby laser components

Rugby CLH



0015827\_001

- a Carry handle
- b Screen
- c Control panel
- d USB-C port, only for Rugby Manager software
- e Battery compartment

## Rugby CLA



0013826\_001

- a Vertical plumb window
- b Plate for optional scope
- c Carry handle
- d Screen
- e Control panel
- f USB-C port, only for Rugby Manager software
- g Battery compartment

## Rugby CLI

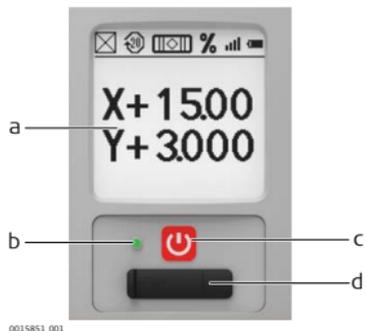


0015826.001

- a Plate for optional scope
- b Carry handle
- c Screen
- d Control panel
- e USB-C port, only for Rugby Manager software
- f Battery compartment

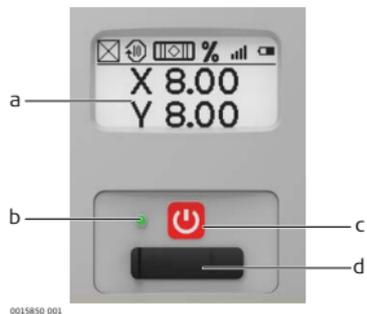
## Overview

### Rugby CLA/CLI



- a LCD display
- b Status LED
- c Power button
- d USB-C port, only for Rugby Manager software

## Rugby CLH



- a LCD display
- b Status LED
- c Power button
- d USB-C port, only for Rugby Manager software

## Functions

LCD display	Displays all required user information.
Power button	Press to turn on or off the Rugby.
Status LED	Indicates the level status of the Rugby.

### 3

## Technical Data

#### Operating range

Operating range (diameter)	Value
Rugby CLH/CLA/CLI	1300 m/4265 ft

#### Environmental specifications for Rugby and Combo

##### Temperature

Operating temperature	Storage temperature
-20°C to +50°C (-4°F to +122°F)	-40°C to +70°C (-40°F to +158°F)

##### Protection against water, dust and sand

###### Protection

Rugby: IP68 (IEC 60529) / MIL-STD-810G w/CHANGE 1 512.6 procedure I

Combo: IP67 (IEC 60529) / MIL-STD-810G w/CHANGE 1 512.6 procedure I

Dust tight

Protected against continuous immersion in water.

**A100 Lithium-Ion charger**

Type	Value
Type	Li-Ion battery charger
Input voltage	100 V AC-240 V AC, 50 Hz-60 Hz
Output voltage	12 V DC
Output current	3.0 A
Polarity	Shaft: negative, Tip: positive

**Internal battery for Rugby and Combo**

Type	Operating times* at 20°C
Lithium-Ion (Li-Ion Pack)	50 h

\*Operating times are dependent upon environmental conditions.



Charging the Li-Ion battery pack takes a maximum of five hours.

**CLB Lithium-Ion battery pack**

Type	Value
Type	Li-Ion battery pack
Input voltage	12 V DC
Input current	2.5 A

Type	Value
Charge time	5 hours (maximum) at 20°C

---

**4****Care and Transport**

---

**Transport in the field**

When transporting the equipment in the field, always make sure that you

- either carry the product in its original container,
  - or carry the tripod with its legs splayed across your shoulder, keeping the attached product upright.
- 

**Field adjustment**

Periodically carry out test measurements and perform the field adjustments indicated in the *User Manual*, particularly after the product has been dropped, stored for long periods or transported.

---

### First-time use/ charging batteries

- The battery must be charged before using it for the first time because it is delivered with an energy content as low as possible.
- The permissible temperature range for charging is from 0 °C to +40 °C/ +32 °F to +104 °F. For optimal charging, we recommend charging the batteries at a low ambient temperature of +10 °C to +20 °C/+50 °F to +68 °F if possible.
- It is normal for the battery to become warm during charging. Using the chargers recommended by Leica Geosystems, it is not possible to charge the battery once the temperature is too high.
- For new batteries or batteries that have been stored for a long time (> three months), it is effectual to make only one charge/discharge cycle.
- For Li-Ion batteries, a single discharging and charging cycle is sufficient. We recommend carrying out the process when the battery capacity indicated on the charger or on a Leica Geosystems product deviates significantly from the actual battery capacity available.

---

### Changing the Li-Ion batteries step-by- step

With the rechargeable Li-Ion battery pack the battery indicator on the Rugby LCD display shows when the battery pack is low and needs to be charged. The charge indicator LED on the Li-Ion battery pack indicates when the pack is being charged (flashing slowly) or fully charged (on, not flashing).



The batteries are inserted in the front of the laser.



The rechargeable battery pack can be recharged without being removed from the laser. Refer to Charging the Li-Ion battery pack step-by-step.

1. Slide the locking mechanism on the battery compartment to the right and open the cover of the battery compartment.
2. To remove the batteries: Remove the batteries from the battery compartment.

To insert the batteries: Insert the batteries into the battery compartment.

3. Close the cover of the battery compartment and slide the locking mechanism to the left centre position until it locks into position.

### Charging the Li-Ion battery pack step-by-step

The rechargeable Li-Ion battery pack on the Rugby can be charged without removing the battery pack from the laser.



1. Slide the locking mechanism on the battery compartment to the left to expose the charge jack.
2. Plug the AC connector into the appropriate AC power source.
3. Connect the charger plug into the charge jack on the Rugby battery pack.

- 
4. The small LED next to the charge jack flashes indicating that the Rugby is charging. The LED is on solid when the battery pack is fully charged.
- 
5. When the battery pack is fully charged, disconnect the charger plug from the charge jack.
- 
6. Slide the locking mechanism to the centre position to prevent dirt from getting into the charging jack.



The battery pack reaches a full charge in approximately 5 hours if completely empty. A one-hour charge should allow the Rugby to run for a full 8 hours.

---

**Turning on and off**

Press the Power button to turn on or off the Rugby.

### After turning on:

- The LCD display turns on and displays the current status of the Rugby.
- If set up within the  $\pm 6^\circ$  self-levelling range (horizontal or vertical), the Rugby automatically levels to create an accurate horizontal plane of laser light.
- Once levelled, the head starts rotating and the Rugby is ready for use.
- The H.I.Alert system becomes active 30 seconds after completing the levelling. The H.I.Alert system protects the laser against changes in elevation caused by any movement or settling of the tripod.
- The self-levelling system and the H.I.Alert function continue to monitor the position of the laser beam to ensure consistent and accurate work.



The H.I.Alert function turns on automatically every time the Rugby is turned on.

---

## 6

**EU Declaration of Conformity****EU Declaration of  
Conformity**

This corresponds to EN ISO/IEC 17050-1.

We, **Leica Geosystems AG, CH-9435 Heerbrugg (Switzerland)**, declare under our sole responsibility that the product(s) **Rugby CLH/Rugby CLA/Rugby CLI**, following the provision of Directive(s)

- **2011/65/EU Restriction of hazardous substances (RoHS)**
- **2006/42/EC Machinery (MD)**
- **2014/53/EU Radio equipment (RED) (in accordance with annex II)**

to which this declaration relates, is in compliance with the following standards:

- **EN 61000-6-2:2005**
- **EN 61000-6-3:2007+A1:2011**
- **ETSI EN 301 489-1 V2.2.0**
- **ETSI EN 301 489-17 V3.2.0**
- **EN 300 328 V2.1.1**
- **EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013**

## Leica Geosystems AG



For a signed version and translations into the official EU languages please refer to: <http://www.leica-geosystems.com/ce>.



---

For translations into the official EU languages please refer to:

*[http://w3.leica-geosystems.com/downloads123/zz/general/general/conformity-declarations/CE-Conformity-Declaration\\_Translation.pdf](http://w3.leica-geosystems.com/downloads123/zz/general/general/conformity-declarations/CE-Conformity-Declaration_Translation.pdf)*

---

## 871343-1.0.0en

Original text (871343-1.0.0en)

Published in Switzerland

© 2018 Leica Geosystems AG, Heerbrugg, Switzerland

[www.leica-geosystems.com](http://www.leica-geosystems.com)



- when it has to be **right**

**Leica**  
Geosystems