

QUBO

SOLA 
PASSION FOR PRECISION

Gebrauchsanweisung
Operating instructions
Manuel d'instructions
Istruzioni d'uso
Instrucciones de uso
Gebruiksaanwijzing
Руководство по применению
Instrukcja obsługi
Eksplatacijos instrukcija
Lietošanas instrukcija
Uputstvo za upotrebu
Návod k použití

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10.1 Lieferumfang QUBO BASIC

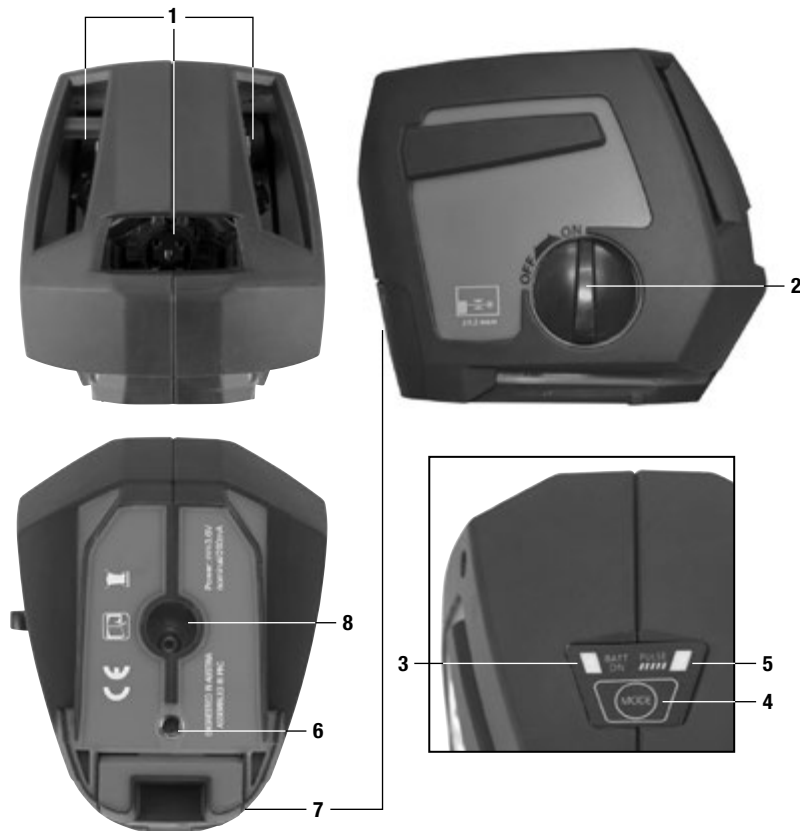
- 1 Linien- Punktlaser **QUBO**
- 2 Batterieadapter **BA**
- 3 Batterien Mignon (AA)
- 4 Trockenbauadapter **TBA**
- 5 Gerätetasche klein



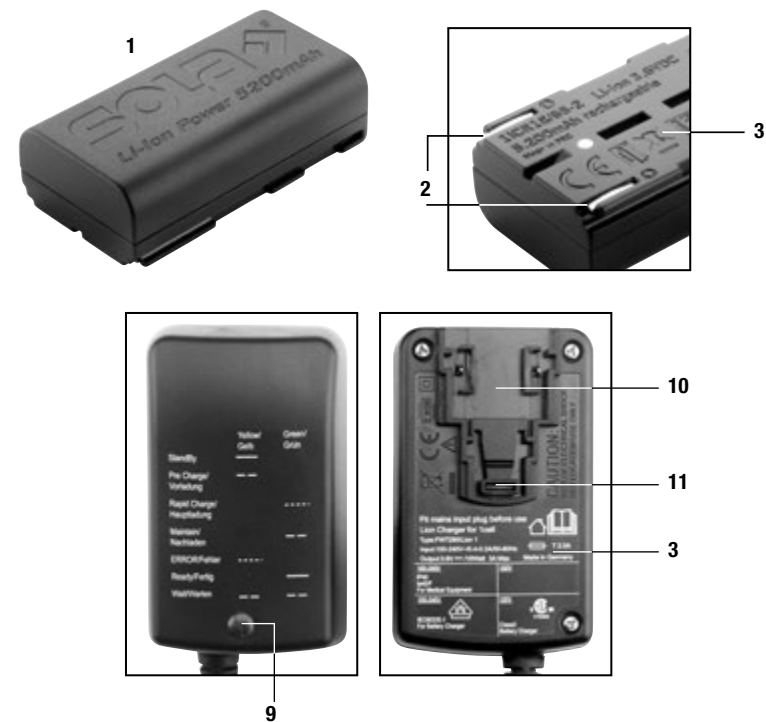
10.2 Lieferumfang QUBO PROFESSIONAL

- 1 Linien- Punktlaser **QUBO**
- 2 Batterieadapter **BA**
- 3 Batterien Mignon (AA)
- 4 Trockenbauadapter **TBA**
- 5 **SOLA-Li-Ion Akku 5.2**
- 6 Li-Ion Ladestation **LST Li-Ion**
- 7 Li-Ion Ladegerät **LG Li-Ion**
- 8 Länderstecker EU/UK **LS-EU / LS-UK**
- 9 Lasersichtbrille rot **LB RED**
- 10 Magnetische Zielscheibe **ZS RED**
- 11 Gerätetasche groß

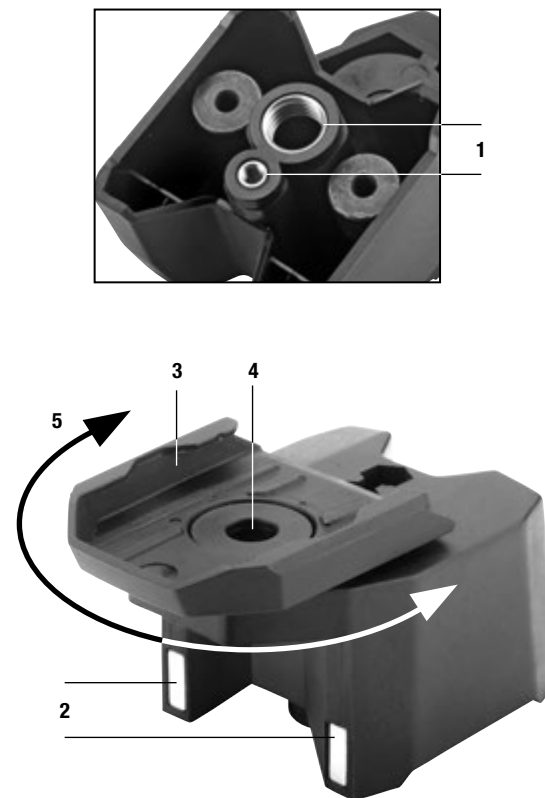
2.1.1 QUBO



2.1.3 SOLA Li-ion Akku, Ladestation und Ladegerät



2.1.2 Trockenbauadapter TBA



Operating manual

QUBO Line/Point Laser (German original version)

About this manual

Congratulations on the purchase of your new QUBO! You have acquired a SOLA measurement instrument, which can make your work easier, faster and more precise. To utilize the complete functionality range of this measurement instrument, and to ensure a safe operation, please observe the following instructions:

- Please read these operating manual before starting to use the device.
- Always keep the operating manual near the device.
- Only hand over the device to other persons together with the operating manual.
- Never render the attached warning signs unreadable.

Contents

1. General information
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3. Technical data
4. Safety instructions
5. Laser safety / classification
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1. General information

1.1 Signal words and their meaning

DANGER

For an imminent danger that could lead to serious injury or death.

WARNING

For a possibly dangerous situation that could lead to serious injury or death.

CAUTION

For a possibly dangerous situation that could lead to slight injury or property damage.

NOTE

For application notes and other useful information

1.2 Pictograms and other information

1.2.1 Warning signs



Warning of dangers in general

1.2.2 Symbole



Read instructions before use



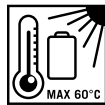
Batteries and devices may not be disposed of with household waste



Do not throw batteries into the fire



Warning label on packages with Li-Ion batteries



Warning signs on battery Do not heat the battery above 60 °C.



2 Class 2 laser device



Do not look into the laser beam!

2. Description

2.1 Device components, display and operating elements

2.1.1 QUBO

1. Laser beam window
2. On/off switch, transport lock
3. Status/battery voltage display «BATT-ON»
4. Operating modes button «MODE»
5. Operating mode «PULSE»
6. Tripod adapter 1/4"
7. Battery compartment cover
8. Plumb point beam window

2.1.2 Drywall adapter TBA

- 1 Tripod thread 5/8" and 1/4"
- 2 Nd magnet for drywall tracks
- 3 Holding fixture for QUBO
- 4 Opening for plumb point
- 5 flexible 360° adjustment

2.1.3 SOLA Li-Ion battery, charging station and charger

1. Li-Ion battery SOLA-Li-Ion-Akku 5.2
2. Battery contacts
3. Technical Specifications/certification label
4. Li-Ion charging station
5. Charging connector for the Li-Ion battery charging station
6. Li-Ion charging station
7. Charging cable
8. Charger plug
9. Operation indicator
10. Connection socket for the country-specific plug
11. Release button for the country-specific plug
12. Country-specific plug

2.2 Intended use

The QUBO is a Line/Point Laser that enables a single person to level and align plumb points as well as 90 degree angles horizontally and vertically.

The device is designed to be preferably used indoors. For outdoor applications, it must be ensured that the ambient conditions are similar to those indoors.

The visibility range of the laser lines depends on the ambient conditions.

In low light conditions or for long distances, the REC LRDO hand-held receiver can be used to locate the laser line position (the REC LRDO hand-held receiver is not included in the standard delivery, but can be ordered as an option).

Follow the instructions contained in this manual. The device and accessory equipment may be a source of danger if they are utilised improperly or inappropriately by persons who are not adequately instructed.

3. Technical data

3.1 Line/Point Laser QUBO

Application area *

- | | |
|---------------|-----------|
| - Laser lines | r = 20 m* |
| - Receiver | r = 80 m* |

- | | |
|------------------------------|------------|
| - Max. Measurement tolerance | |
| - Laser line | ± 0.2 mm/m |
| - Plumb point | ± 0.3 mm/m |

Protection class	IP54
------------------	------

Cross angle	90°
-------------	-----

Levelling range (typical)	± 4°
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Levelling time (typical)	≤ 5 s
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Power supply	3 x 1.5V mignon (AA) batteries / SOLA Li-Ion battery 5.2
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Operating time (at 20 °C)

- | | |
|---------------------------|------|
| - Mignon (AA) batteries | 12 h |
| - SOLA Li-Ion battery 5.2 | 28 h |

permissible temperatures

Operating temperature	-10 °C to +50 °C
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Storage temperature	-20 °C to +60 °C
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Laser diode lines/points	635 / 650 nm < 1 mW
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Laser class	2, DIN EN 60825-1 : 2008
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Tripod adapter	¼"
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Weight without battery	550 g
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Dimensions	115 × 103 × 135 mm
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*... depending on the environmental conditions at the workplace. | Changes (drawings, descriptions and technical data) are reserved.

3.2 SOLA Li-Ion battery 5.2

Type	Li-Ion with protective electronics
Cells	2 × ICR 18650 parallel
Capacity	5200 mAh
Voltage	3.6 VDC
Performance	28 Wh
permissible temperatures	
Operating temperature	-10 °C to +50 °C
Storage temperature (ideal)	-20 °C to +60 °C (ideal +20 °C to +25 °C)
Charging temperature	0 °C to +45 °C (ideal +20 °C to +25 °C)
Humidity	65 ± 20 %
Charging time	3 – 5 h
Weight	100 g
Dimension	71 × 39 × 22 mm

3.3 SOLA charger LG Li-Ion

Nominal input voltage	100 – 240 VAC/50 – 60 Hz
Nominal input current	0.4 A @ 100 VAC - 0.2 A @ 240 VAC under maximum load
Nominal input power	21 W _{rms} under maximum load
Output voltage	3.6 VDC
Charging current	3000 mA
Ambient temperature	-10 °C - +50 °C
Protection class	IP40
Power consumption during standby	≤ 0.3 W @ 100 VAC / ≤ 0.5 W @ 240 VAC

4. Safety instructions

4.1 AREA OF RESPONSIBILITY

4.1.1 Manufacturer

SOLA is responsible for the safe delivery condition of the product, including the operating manual and the original accessories.

4.1.2 Operator

The operator is responsible for using the product as intended, the deployment of his personnel, their training and the operational safety of the product.

- He understands the safety information which is stated on the product and the instructions which are contained in the operating manual.
- He shall comply with local regulations relating to safety and accident prevention regulations as well as worker protection laws and regulations.
- He shall immediately notify SOLA if safety-related issues should develop on the product or during its utilization.
- He shall ensure that the product is not utilized any further if defects become evident, and he will have the product repaired professionally.



4.2 Improper Use

- Use of the device and the accessories without instruction.
- Use of third-party accessories or additional equipment.
- Use outside of the intended limits (see Chapter 3/Technical data).
- Use under extreme temperature fluctuations without an adequate acclimatization.
- Disabling of safety devices and removal of hazard notices and labels.
- Unauthorized opening of the device.
- Performance of modifications or alterations the device or the accessories.
- Deliberate blinding of third parties.
- Inadequate safeguarding at the installation site.

4.3 Utilization limitations

The QUBO is suitable for a continuous use in an atmosphere which can be inhabited by humans.

- Do not operate the product in explosion-prone or corrosive environments.
- Inform the local safety authorities and safety experts before working in hazardous environments, in close proximity to electrical installations or similar surroundings.

4.4 Usage Hazards

4.4.1 General



WARNING

Missing or incomplete instructions may result in improper or incorrect use. This can cause accidents with serious damages to persons, property, assets and the environment.

- Follow the manufacturer's and operator's safety instructions.
- Protect equipment and accessories from access through children.



WARNING

Blinding by laser radiation can indirectly lead to serious accidents, especially for people who are driving a vehicle or operating machinery.

- Do not look into the laser beam.
- Do not set up the laser beam and the laser plane at eye level or aim at people.



CAUTION

A fall, longer storage, transportation or other mechanical effects can lead to erroneous measurement results. Check the unit for damage before use. Do not use damaged equipment.

- Repairs have to be exclusively performed by SOLA
- Before use, check the accuracy of the device (see Chapter 8/Checking the accuracy)

4.4.2 Charger/batteries/rechargeable batteries



DANGER

There is a risk of mortal danger from electric shock.

- Never open the SOLA Li-Ion battery charger or charging station.
- Only use the SOLA Li-Ion battery charger and charging station in dry places and do not bring them into contact with liquids.



DANGER

Strong mechanical influences, can lead to a leakage, fire or explosion of the batteries or trigger the release of toxic substances.

- Batteries and rechargeable batteries may not be opened or exposed to mechanical loads.
- Damaged batteries, chargers and charging stations may not be used. Repairs have to be exclusively performed by SOLA

**WARNING**

High ambient temperatures and immersion into liquids can cause a leakage, fire or explosion of the batteries or trigger the release of toxic substances.

- Protect batteries and rechargeable batteries from mechanical influences during transport.
- Never store the Li-Ion battery in the sun, on radiators or behind glass windows.
- Do not overheat batteries and rechargeable batteries or expose them to fire.
- Avoid the ingress of moisture into batteries and rechargeable batteries.
- Do not use damaged batteries or rechargeable batteries. Perform a proper disposal (see Chapter 12/Disposal).

**WARNING**

A short-circuiting or unintended use can cause batteries to overheat and create an injury or fire hazard.

- Do not transport or store batteries in the pockets of garments.
- Do not bring the battery contacts in contact with jewelry, keys, or other electrically conductive objects.
- Do not charge the batteries.
- Do not discharge the batteries through short-circuiting.
- Do not solder the batteries within the device.
- Do not mix old and new batteries, and do not mix batteries from different manufacturers or with a differing type designation.

**WARNING**

Using charging devices from other manufacturer's can damage the Li-Ion batteries. This can lead to a fire and explosion hazard.

- Only use original SOLA accessories.

**WARNING**

If disposed of improperly third parties can possibly be seriously injured and the environment polluted. The burning of plastic components generates toxic fumes which may impair health of people. Batteries/rechargeable batteries may explode if they are damaged or heated excessively, and thereby cause poisoning, burning, corrosion or environmental contamination. If disposed of negligently unauthorized persons are able to use the product improperly.

- The product may not be disposed of together with household waste. Perform a proper disposal of the device and the accessories (see Chapter 12/Disposal).
- Protect the product at all times from access through unauthorized persons, and especially children.

4.5 ELECTROMAGNETIC COMPATIBILITY (EMC)

The electromagnetic compatibility is the ability of the product to function in an environment with electromagnetic radiation and electrostatic discharges were are present, without causing an electromagnetic interference for other devices.

4.5.1 Interference for other devices through QUBO

Although the product meets the strict requirements of the relevant directives and standards, SOLA can not completely exclude the possibility of interference with other devices (for example, when using the product in combination with third-party devices, such as field computers, personal computers, wireless devices, mobile phones, certain cables or external batteries).

- When using computers and radio equipment make sure to observe to the vendor-specific information about electromagnetic compatibility.
- Only use original SOLA equipment and accessories.

4.5.2 Interference of the QUBO through other devices

Although the product meets the strict requirements of the relevant directives and standards, SOLA can not entirely exclude the possibility that an intense electromagnetic radiation in the immediate vicinity of radio transmitters, two-way radios, diesel generators, etc. can distort the measurement results.

- When performing measurements under these conditions check the plausibility of the results.

5. LASER SAFETY/CLASSIFICATION

The QUBO emits three visible laser lines and one laser point.

The product corresponds to Laser Class 2 according to DIN EN 60825-1:2008.

Laser Class 2:

When using Class 2 laser devices the eye is protected by the eyelid closure reflex or evasive reactions in case of a random and short-term exposure.



WARNING

Looking directly into the beam with optical aids (e.g. binoculars, telescopes) can be dangerous.



CAUTION

Looking into the laser beam may be hazardous to the eye.

- Do not look into the laser beam.
- Do not aim the laser beam at other people.

Labeling on the device:



For the position of the type plate refer to the inside of the cover page.

- Do not remove the type plate!

6. Start-up

6.1 Operation with batteries

1. Open the battery compartment cover on the rear side of the device.
2. Insert batteries with the correct polarity into the SOLA battery adapter.
3. Insert the SOLA battery adapter in the correct position.
4. Close the battery compartment (audible click of the cover).

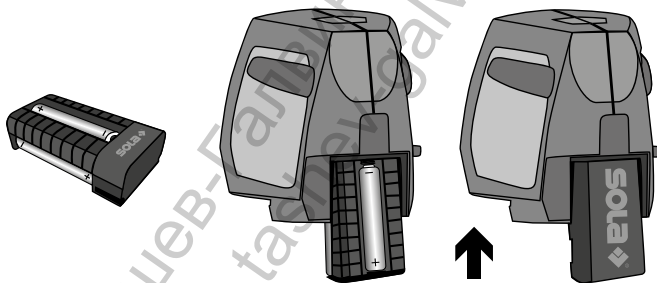
Only use 1.5V AA batteries!

If the device is not used for a long period, remove the batteries.



NOTE

The intensity of the laser lines can vary depending on the battery quality.
The best visibility can be achieved with the SOLA Li-Ion battery.



6.2 Operation with the SOLA Li-Ion battery

1. Fully charge the battery with the SOLA Li-Ion charger (see Chapter 7.2).
2. Open the battery compartment cover on the rear side of the device.
3. Insert the SOLA Li-Ion battery in the correct position.
4. Close the battery compartment (audible click of the cover).

If the device is not used for a long period, remove the battery and store it in a dry location (see Chapter 9 / Maintenance, storage and transport).

7. Operation

7.1 QUBO

7.1.1 Switching the laser on/off

On:

- ◆ Turn the on/off switch to the right (ON position) and the pendulum unit will be released - «BATT-ON» display will be lit (the device will beam all lines and points from the laser window).

The instrument will level itself automatically within the specified inclination range (see Chapter 3 / Technical data).

Off:

- ◆ Turn the on/off switch to the left (OFF position) and the pendulum unit will be locked - «BATT-ON» display will turn off.



NOTE

Magnets can affect the measurement instrument and lead to false results.

If the vertical laser line is not projected vertically to the wall or to the target surface, uneven surfaces can lead to erroneous measurement results.

- ◆ Make sure that the vertical laser line is projected vertically to the wall or to the target surface.

Severe temperature fluctuations can lead to erroneous measurement results.

- ◆ Before start-up, allow the device to acclimatise to the environmental conditions.

The «BATT-ON» display will flash when the battery capacity falls below 10%.

- ◆ Charge the battery in time or replace with an additional SOLA Li-Ion battery.

7.1.2 PULSE mode

The REC LRDO hand-held receiver can be used to detect the laser lines at even greater distances or in unfavourable environmental conditions. The QUBO must be used in the PULSE operating mode for this.

On:

- ◆ Switch on the QUBO.
- ◆ Press the «MODE» button - «PULSE» display will be lit.

Off:

- ◆ Press the «MODE» button - «PULSE» display will turn off.

**NOTE**

Using the PULSE mode can save energy and extend battery life by up to 60%, if a particularly good visibility of the laser lines is not required.

7.1.3 Creating inclinations beyond the range of automatic levelling**On:**

- Switch off the QUBO (on/off switch to the OFF position).
- Press and hold the «MODE» button for 5 seconds - «PULSE» and «BATT-ON» displays will be lit.
To indicate that the self-levelling is switched off, the lines will blink every 4 seconds.

Off:

- Press and hold the «MODE» button for 5 seconds - «PULSE» display will turn off.

**CAUTION**

If the laser line is not projected vertically to the surface or the surface is uneven, this can lead to erroneous measurement results.








- Make sure that the laser line is projected vertically to the wall or to the target surface.

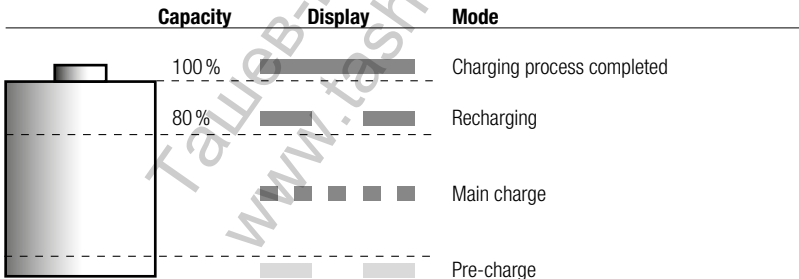
7.2 SOLA Li-Ion battery, charging station & charger

Before the initial startup, the SOLA Li-Ion battery must be fully charged.

- Plug the charger plug into the charging port of the Li-Ion Charger
- Connect the SOLA Li-Ion battery charger to a socket-outlet
- Insert the SOLA Li-Ion battery in the correct position.
- Depending on the charge state and the environmental conditions the charging time will be between 3 and 5 hours.
- After 10 charging cycles the battery will reach its full capacity.
- Ideally, the battery should always be fully charged. In urgent cases, the battery can be removed from the charging station before the charging process has been fully completed. This does not adversely affected the service life of the battery (no memory effect).

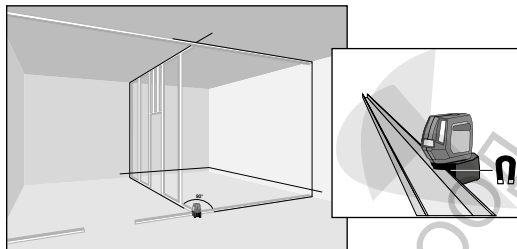
Operation indicator charger:

Colour	Display	Mode	Description
yellow green		Standby	No battery in the charger
yellow green		Wait cycle	Battery temperature beyond the valid range
yellow green		Pre-charge	Protective charging for deeply discharged batteries
yellow green		Main charge	Rapid charging phase with max. Power up to 80 %
yellow green		Recharging	Recharging between 80 – 100 %
yellow green		Completed	Charging process completed Battery is 100 % charged
yellow green		Error	Battery too hot/too cold, let it acclimatize and reinsert

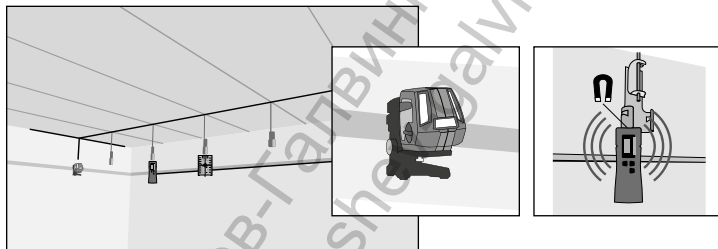


7.3 Applications

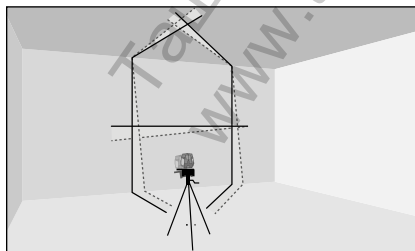
7.3.1 Setting up a drywall (with drywall adapter TBA)



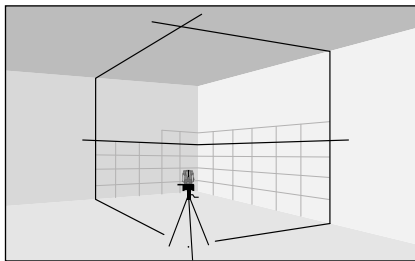
7.3.2 Ceiling suspension (with hand-held receiver and universal holder UH -> optional accessory)



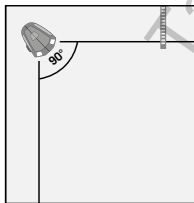
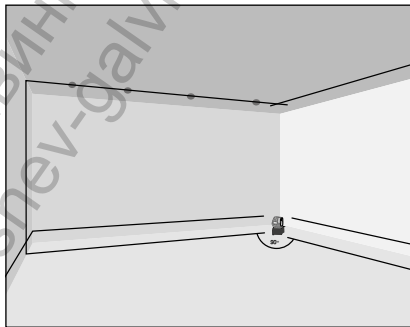
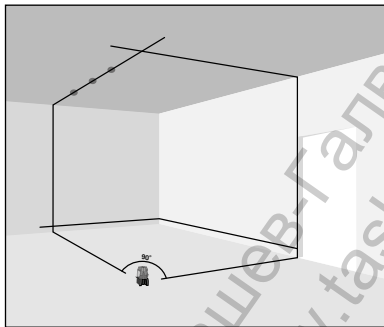
7.3.3 Inclination



7.3.4 Horizontal and vertical levelling (with tripod -> optional accessory)



7.3.5 Interior design with a 90° angle



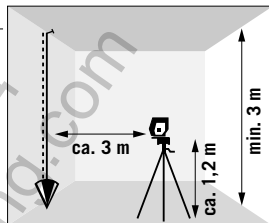
8. Checking the accuracy

Check accuracy of the SOLA QUBO before each measurement.

- Before starting the check let the device acclimatise to the environmental conditions.

8.1 Checking the accuracy of the vertical line

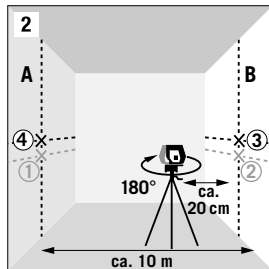
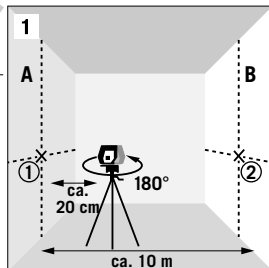
- Attach a plumb line as close as possible to a (at least) 3 m high wall.
- Mount the QUBO onto a tripod at a height of approx. 1.2 m.
- Position the device approx. 3 m in front of the plumb line.
- Switch on the QUBO and project the vertical laser line onto the plumb line.



If the deviation is greater than 4 mm, the device must be readjusted.
In this case, consult your dealer.

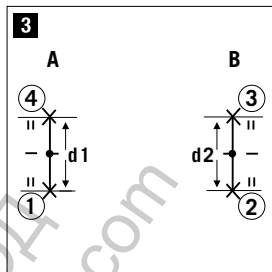
8.3 Checking the leveling accuracy of the horizontal line

- Select two horizontal, flat walls (A & B), which are approx. 10 meters apart.
 - Mount the QUBO onto a tripod and position it at a distance of approx. 20 cm from wall A.
 - Mark the intersecting point ① of the vertical and horizontal lines on wall A.
- Rotate the QUBO by 180° and mark point ② on wall B.
 - Position the laser at the same height approx. 20 cm away from wall B and mark point ③ on wall B.
- Rotate the QUBO by 180° and mark point ④ on wall A.
 - Measure the vertical distance (d1) of the marked points ①-④ and the vertical spacing (d2) of the points ②-③.
- Mark the center point of (d1) and (d2).



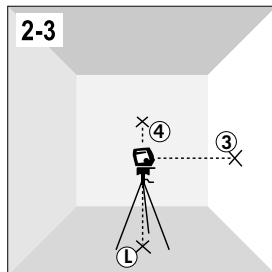
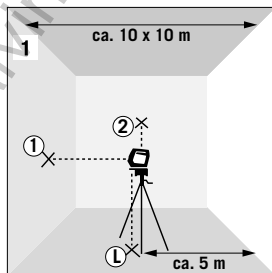
- If the reference points ① and ③ are on different sides of the center point, (d2) must be subtracted from (d1).
- If the reference points ① and ③ are on the same side of the center point, (d2) must be added to (d1).
- Divide the results with twice the value of the room length.

If the result is greater than 4 mm, the device must be readjusted. For this, please consult your dealer.



8.3 Checking the perpendicularity of the lateral axes in a square room

1. Select a room with a square floor plan, in which the walls are approx. 10 metres apart.
 - Position the device on a tripod in the middle of the room and align the vertical laser lines perpendicular to one of the walls.
 - Mark the centre of the lower plumb beam (L) on the floor.
 - Mark the intersecting point ① of the vertical and horizontal laser lines.
 - Mark the intersecting point ② of the vertical and horizontal laser lines.
2. Rotate the device 90° clockwise.
 - The lower plumb beam must remain on the marking (L) and the left lateral intersecting point must be exactly aligned to the marking ②.
 - Mark the intersecting point ③ of the vertical and horizontal laser lines.
3. Rotate the device 90° clockwise.
 - The lower plumb beam must remain on the marking (L) and the left lateral intersecting point must be exactly aligned to the marking ③.
 - Mark the intersecting point ④ of the vertical and horizontal laser lines.

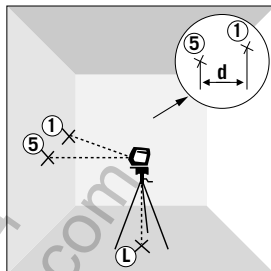


4. Rotate the device 90° clockwise.

- The lower plumb beam must remain on the marking (L) and the left lateral intersecting point must be exactly aligned to the marking (4).
- Mark the intersecting point (5) of the vertical and horizontal laser lines.

The horizontal distance (d) between the marked points (1) and (5) may only be a max. of 6 mm at a measuring distance of 5 m.

If the result is more than 6 mm, the device must be readjusted.
Please contact your dealer.



9. Maintenance, storage and transportation

9.1 Cleaning

- Wipe off the dirt with a soft damp cloth.
- Check the outlet openings of the laser regularly, and thoroughly clean them if necessary. Do not touch the glass with your fingers.
- Do not use aggressive cleaning agents or solvents.
- Do not immerse the device into water!
- Clean and dry wet equipment, accessories and transport containers prior to packaging them. Only pack equipment again when it is completely dry.
- Keep plug connections clean and protected from moisture.

9.2 Storage

9.2.1 General

- The equipment may only be stored within the specified temperature limits (see Chapter 3/Technical data).
- After a prolonged storage check the accuracy of the measuring device before using it.

9.2.2 Batteries/rechargeable batteries

- For storage, remove the batteries from the device or from the charging station.
- The storage should preferably be performed in a dry environment at room temperature (see Chapter 3/Technical data).

- Protect from moisture and humidity. Dry wet or damp batteries before the storage, or respectively before usage.
- Prior to a prolonged storage charge the battery to 80 % capacity (see Chapter 7/operation). Repeat the procedure every 6 months.
- After storage, fully charge the battery before use.
- Check the battery for damage before use. Do not use damaged batteries!

9.3 Transport

9.3.1 General

The device may be damaged through strong vibrations or by falling. Never transport the product loosely. Always use the original packaging or an equivalent transport container.

- Switch off the measuring device before transporting it. During the shutdown the pendulum unit is locked in position and protected against damage.
- Check the unit for damages before use.
- Regularly check the accuracy of the device (see Chapter 8/Checking the accuracy).

9.3.2 Batteries/rechargeable batteries

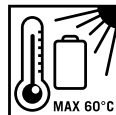
When transporting or shipping batteries, the operator is responsible for complying with the applicable national and international laws and regulations.

- Before shipping, remove the batteries from the device.

Li-ion batteries fall under the jurisdiction governing hazardous goods, but they may be transported on the road by their operator without further stipulations.

When shipping through third parties (e.g. forwarding agent or air freight) the special requirements regarding the packaging and labeling must be observed.

- Remove the battery from the device and ship it in its storage condition (80 % capacity).
- Cover exposed contacts with tape.
- Package the battery in such a manner that it can not move around in the packaging, and that it can not be damaged by external influences.
- Further national and international regulations and any additional requirements as well as the stipulations of the respective transport company must be observed.



10. Scope of delivery and accessories

10.1 Scope of delivery QUBO Basic

- 1 Line/Point Laser **QUBO**
- 1 Battery adapter **BA**
- 3 Mignon batteries (AA)
- 1 Drywall adapter **TBA**
- 1 Device pouch small
- 1 Operating manual
- 1 Diagnostic form for complaints

10.2 Scope of delivery QUBO PROFESSIONAL

- 1 Line/Point Laser **QUBO**
- 1 Battery adapter **BA**
- 3 Mignon batteries (AA)
- 1 Drywall adapter **TBA**
- 1 Li-Ion battery **SOLA-LI-ION AKKU 5.2**
- 1 Li-Ion charging station **LST Li-Ion**
- 1 Li-Ion battery charger **LG Li-Ion**
- 1 Country-specific plug **LS-EU / LS-UK**
- 1 Laser goggles red **LB RED**
- 1 Magnetic target **ZS RED**
- 1 Device pouch large
- 1 Operating manual
- 1 Diagnostic form for complaints

10.3 ACCESSORIES (optional)

Receiver with holding fixture and
9V 6F22 (E-Block) battery **REC LRDO**

SOLA-LI-ION Battery Set:

Li-Ion battery **SOLA-LI-ION AKKU 5.2**

Li-Ion charging station **LST Li-Ion**

Li-Ion battery charger **LG Li-Ion**

Country-specific plug EU **LS-EU**

Country-specific plug UK **LS-UK**

Compact tripod **FST**

Universal holder **UH**

Drywall adapter **TBA**

Thread adapter set **GA-SET**

Battery adapter **BA**

Car adapter **CC**

Laser goggles red **LB red**

Magnetic target **ZS red**

Further information regarding the accessories can
be obtained at **www.sola.at**

11. Troubleshooting

Error	Possible cause	Troubleshooting
Device is switched on, display «ON - BATT» does not light up and there is no visible laser beam.	<ul style="list-style-type: none"> ➤ Battery empty ➤ Rechargeable battery empty ➤ Battery/rechargeable battery inserted incorrectly ➤ Device or switch defective 	<ul style="list-style-type: none"> ➤ Replace the battery ➤ Recharge or replace battery ➤ Insert the batteries / rechargeable batteries correctly ➤ Contact the dealer and have the device repaired.
Device turns off again immediately after startup.	<ul style="list-style-type: none"> ➤ Battery empty Rechargeable battery empty 	<ul style="list-style-type: none"> ➤ Replace the battery ➤ Recharge or replace battery
Device is switched on, display «ON - BATT» lights up, but there is no visible laser beam.	<ul style="list-style-type: none"> ➤ Ambient temperature too high/low ➤ Laser diode or laser control defective 	<ul style="list-style-type: none"> ➤ Allow for an acclimatization of the device ➤ Contact the dealer and have the device repaired.
Device is switched on, display «ON - BATT» lights up, but some laser beams are not visible.	<ul style="list-style-type: none"> ➤ Laser diode or laser control defective 	<ul style="list-style-type: none"> ➤ Contact the dealer and have the device repaired.
Laser lines blink in one second intervals	<ul style="list-style-type: none"> ➤ Device is beyond the self-leveling range 	<ul style="list-style-type: none"> ➤ Align the device horizontally
The «ON - BATT» indicator is blinking	<ul style="list-style-type: none"> ➤ Battery capacity is less than 10 % 	<ul style="list-style-type: none"> ➤ Recharge the battery in time
Laser lines blink every 4 seconds	<ul style="list-style-type: none"> ➤ Device is in the manual inclination mode 	<ul style="list-style-type: none"> ➤ Press and hold the «MODE» button for 4s or switch on the laser device

12. Disposal

If disposed of improperly third parties can possibly be seriously injured and the environment polluted.

The burning of plastic components generates toxic fumes which may impair health of people.

Batteries/rechargeable batteries may explode if they are damaged or heated excessively, and thereby cause poisoning, burning, corrosion or environmental contamination.

If disposed of negligently unauthorized persons are able to use the product improperly.

Measuring tools, accessories and packaging must be recycled in an environmentally-friendly manner.



The product as well as the accessories - especially the batteries and rechargeable batteries - may not be disposed of with household waste.

- Perform a proper disposal of the device and the accessories.
- Only dispose of batteries in a discharged state.
- Observe the country-specific disposal requirements.

Your SOLA dealership will take back batteries as well as old equipment, and will ensure a proper disposal.

Only for EU countries



Electric tools may not be disposed of with household waste!

According to the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in national law, no longer usable electrical and electronic equipment must be collected separately and recycled in an environmentally friendly manner.

13. Manufacturer's Guarantee

„The manufacturer warrants to the original purchaser who is stated on the guarantee card, the freedom from defects for the device for a period of two years, with the exception of batteries, as of the point in time the device is handed over. The guarantee is limited to repairs and/or replacements at manufacturer's discretion. Defects which are caused through improper handling by the purchaser or third parties, natural wear and optical flaws that do not affect the usability of the equipment, are not covered by this guarantee. Claims under this guarantee can only be invoked if the device is submitted along with the guarantee card, completely filled out by the dealer, dated and provided with the company stamp. If the guarantee claim is justified, the manufacturer shall bear the transport costs. The duration of the guarantee will not be extended through repair or spare parts work which is carried out within the scope of the guarantee. Further claims are excluded, unless there are provided by the respective national legislation. In particular the manufacturer shall not be liable for any direct, indirect, incidental or consequential damages, losses or expenses in connection with the use or because of the inability to use the tool for any purpose whatsoever. Implied warranties for the usage or suitability for a particular purpose are expressly excluded.“

14. EC conformity declaration



Konformitätserklärung Declaration of Conformity Déclaration de Conformité



Wir/We/Nous **SOLA-Messwerkzeuge GmbH, A-6840 Götzis, Austria**

erklären in alleiniger Verantwortung, dass das Produkt(e)
declare under our sole responsibility that the Product(s)
déclarons sous notre seule responsabilité que le(s) produit(s)

QUBO, SOLA-Li-Ion Akku 5.2, LG Li-Ion

auf das sich diese Erklärung bezieht, mit den folgenden Normen übereinstimmt.
to which this declarations relates is in conformity with the following standards.
auquel(s) se réfère cette déclaration est conforme aux normes.

QUBO:

- EN 61010-1:2010
- EN 61326-1:2013
- IEC 60825-1

Li-Ion Akku 5.2:

- EN 61000-6-1: 2007
- EN 61000-6-3: 2007 + A1:2011
- UN38.3

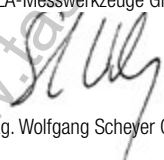
LG Li-Ion:

- EN 60601-1: 01/2006
- EN 60335-2-26 06/2005
- EN 60335-1 11/2010
- EN 61000-6-3 09/2007
- EN 60601-1-2 10/2006
- EN 55022 05/2008
- EN 60601-1-2 10/2006
- EN 61000-6-2 03/2006
- EN 55014-1 06/2007
- EN 55014-2 06/2007

Gemäss den Bestimmungen der Richtlinie(n)
Following the provisions of Directive(s)
Conformément aux dispositions de(s) Directive(s)

Electromagnetic compatibility 2004/108/EC
Low Voltage Directive 2006/95/EC

SOLA-Messwerkzeuge GmbH



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Phone +43(0)5523 53380, sola@sola.at, www.sola.at

Herstellergarantie QUBO

Limited warranty QUBO

Seriennummer / Serial no.

Firma / Company / Name

Adresse / address

Telefon / Telephone



SOLA-Messwerkzeuge GmbH

Unteres Tobel 25
A-6840 Götzis
Austria



PASSION FOR PRECISION

Kaufdatum / Stempel / Unterschrift des Händlers Date of purchase / Stamp / Signature (dealer)



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