



BOSCH GLL 3-80 C Red Self Levelling Multi Line Laser Level Instruction Manual

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BOSCH

BOSCH GLL 3-80 C Red Self Levelling Multi Line Laser Level



Product Information

Specifications

- **Model:** GLL Professional 3-80 C | 3-80 CG
- **Manufacturer:** Robert Bosch Power Tools GmbH
- **Country of Origin:** Germany
- **Website:** www.bosch-pt.com

Product Description

The GLL Professional is a line laser tool designed for various applications. It is available in two models – GLL 3-80 C and GLL 3-80 CG. The tool comes with multiple components, which are numbered and explained in the user manual.

Technical Specifications

- **GLL 3-80 C:** 3 601 K63 R..
- **GLL 3-80 CG:** 3 601 K63 T..
- **Laser Power:** <1 mW
- **Frequency:** 23 kHz (GLL 3-80 C), 10 kHz (GLL 3-80 CG)
- **Operating Voltage:** 12 V
- **Battery Type:** CR2032 (Lithium-Battery 3V)
- **Battery Life:** 8 hours (GLL 3-80 C), 6 hours (GLL 3-80 CG)
- **Weight:** 0.90 kg (GLL 3-80 C), 0.86 kg (GLL 3-80 CG)

Product Usage Instructions

Safety Instructions

1. The tool is delivered with a laser warning sign. Ensure proper understanding and adherence to the safety instructions provided.

2. Repairs should only be carried out by qualified personnel using original spare parts to ensure the safety of the tool.

Mounting

1. Follow the illustrations in the front part of the user manual for proper mounting of the components.

Power Supply

1. The tool can be operated using batteries or an optional battery adapter.
2. Use only the recommended batteries specified in the technical specifications.

Battery Installation

1. Insert the batteries into the battery adapter provided.

Battery Status Indicator

The battery status indicator (2) displays the current charge level of the batteries.

FAQ

- **Q: What is the weight of the GLL Professional?**
 - **A:** The weight of the GLL 3-80 C is 0.90 kg, and the weight of the GLL 3-80 CG is 0.86 kg.
- **Q: How long is the battery life?**
 - **A:** The GLL 3-80 C has a battery life of 8 hours, while the GLL 3-80 CG has a battery life of 6 hours.

Safety Instructions

All instructions must be read and observed in order for the measuring tool to function safely. The safeguards integrated into the measuring tool may be compromised if the measuring tool is not used in accordance with these instructions. Never make warning signs on the measuring tool unrecognizable.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE AND INCLUDE THEM WITH THE MEASURING TOOL WHEN TRANSFERRING IT TO A THIRD PARTY.

- **Warning!** If operating or adjustment devices other than those specified here are used or other procedures-ures are carried out, this can lead to dangerous exposure to radiation.
- The measuring tool is delivered with a laser warning sign (marked in the illustration of the measuring tool on the graphics page).
- If the text of the laser warning label is not in your national language, stick the provided warning label in your national language over it before operating for the first time.



- Do not direct the laser beam at persons or animals and do not stare into the direct or reflected laser beam yourself. You could blind somebody, cause accidents or damage your eyes.
- If laser radiation hits your eye, you must close your eyes and immediately turn your head away from the beam.

- Do not make any modifications to the laser equipment.
- Do not use the laser goggles (accessory) as protective goggles. The laser goggles make the laser beam easier to see; they do not protect you against laser radiation.
- Do not use the laser goggles (accessory) as sunglasses or while driving. The laser goggles do not provide full UV protection and impair your ability to see colors.
- Have the measuring tool serviced only by a qualified specialist using only original replacement parts? This will ensure that the safety of the measuring tool is maintained.
- Do not let children use the laser measuring tool unsupervised. They could unintentionally blind themselves or other persons.
- Do not use the measuring tool in explosive atmospheres that contain flammable liquids, gases, or dust. Sparks may be produced inside the measuring tool, which can ignite dust or fumes.
- Do not open the battery. There is a risk of short-circuiting. In case of damage and improper use of the battery, vapors may be emitted. The battery can set alight or explode. Ensure the area is well-ventilated and seek medical attention should you experience any adverse effects. The vapors may irritate the respiratory system.
- If used incorrectly or if the battery is damaged, flammable liquid may be ejected from the battery. Contact with this liquid should be avoided. If contact accidentally occurs, rinse off with water. If the liquid comes into contact with your eyes, seek additional medical attention. Liquid ejected from the battery may cause irritation or burns.
- The battery can be damaged by pointed objects such as nails or screwdrivers or by force applied externally. An internal short circuit may occur, causing the battery to burn, smoke, explode, or overheat.
- When the battery is not in use, keep it away from paper clips, coins, keys, nails, screws or other small metal objects that could make a connection from one terminal to another. A short circuit between the battery terminals may cause burns or a fire.
- Only use the battery with products from the manufacturer. This is the only way in which you can protect the battery against dangerous overload.
- Only charge the batteries using chargers recommended by the manufacturer. A charger that is suitable for one type of battery may pose a fire risk when used with a different battery.



- Protect the battery against heat, e.g. against continuous intense sunlight, fire, dirt, water and moisture. There is a risk of explosion and short-circuiting.



- Ensure that the coin cell is kept out of the reach of children.

Coin cells are dangerous

- Coin cells must never be swallowed or inserted into any other part of the body. If you suspect that someone has swallowed a coin cell or that a coin cell has entered the body in another way, seek medical attention immediately. Swallowing coin cells can result in severe internal burns and death within 2 hours.
- Ensure that coin cell replacement is carried out properly. There is a risk of explosion.
- Only use the coin cells listed in this operating manual. Do not use any other coin cells or other forms of electrical power supply.
- Do not attempt to recharge the coin cell and do not short circuit the coin cell. The coin cell may leak, explode, catch fire and cause personal injury.

- Remove and dispose of drained coin cell correctly. Drained coin cell may leak and damage the product or cause personal injury.
- Do not overheat the coin cell or throw it into fire. The coin cell may leak, explode, catch fire and cause personal injury.
- Do not damage the coin cell and take the coin cell apart. The coin cell may leak, explode, catch fire and cause personal injury.
- Do not allow damaged coin cells to come into contact with water. Leaking lithium may mix with water to create hydrogen, which could cause a fire, an explosion, or personal injury.
- Do not use the measuring tool if the coin cell holder (22) does not close. Remove the coin cell and have it repaired.
- Remove the rechargeable battery/non-rechargeable batteries from the measuring tool before carrying out work on the measuring tool (e.g. assembly, maintenance, etc.). The battery/batteries should also be removed for transport and storage. There is risk of injury from unintentionally pressing the on/off switch.
- When operating the measuring tool, loud signal tones may sound under certain circumstances. For this reason, keep the measuring tool away from your ears and from other persons. The loud sound can damage hearing.



- Keep the measuring tool and the magnetic accessories away from implants and other medical devices, e.g. pacemakers or insulin pumps. The magnets inside the measuring tool and accessories generate a field that can impair the function of implants and medical devices.
- Keep the measuring tool and the magnetic accessories away from magnetic data storage media and magnetically sensitive devices. The effect of the magnets inside the measuring tool and accessories can lead to irreversible data loss.
- The measuring tool is equipped with a wireless interface. Local operating restrictions, e.g. in airplanes or hospitals, must be observed. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Robert Bosch Power Tools GmbH is under license.
- **Caution!** When using the measuring tool with Bluetooth®, a fault may occur in other devices and systems, airplanes, and medical devices (e.g. pacemakers, hearing aids). Also, damage to people and animals in the immediate vicinity cannot be completely excluded. Do not use the measuring tool with Bluetooth® in the vicinity of medical devices, petrol stations, chemical plants, areas with a potentially explosive atmosphere, and in blasting areas. Do not use the measuring tool with Bluetooth® on airplanes. Avoid using the product near your body for extended periods.

Product Description and Specifications

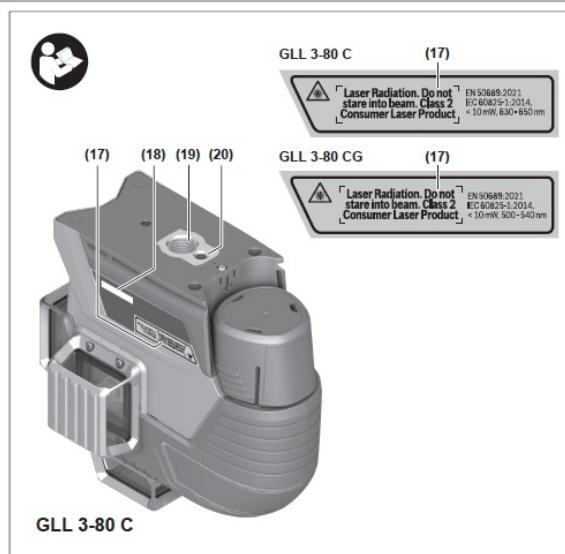
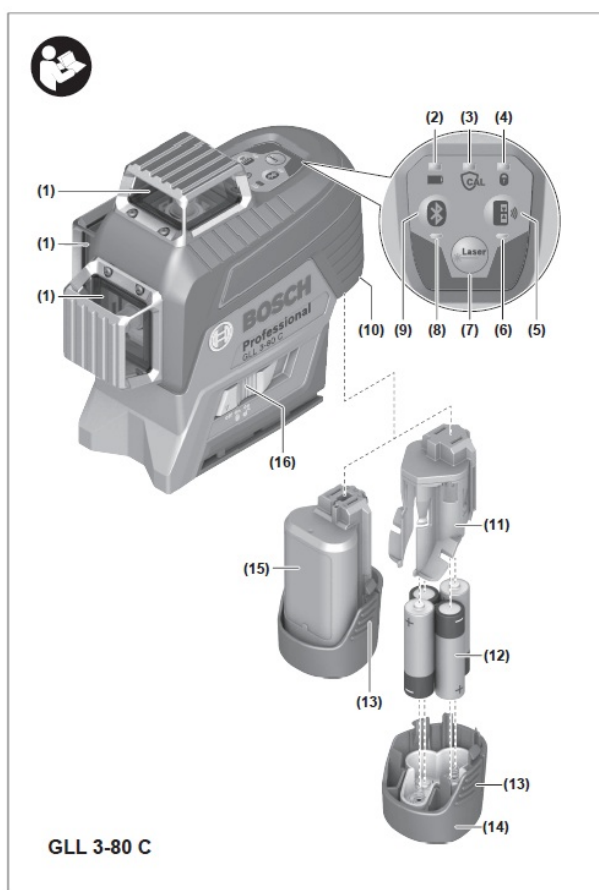
Please observe the illustrations at the beginning of this operating manual.

Intended Use

The measuring tool is intended for determining and checking horizontal and vertical lines. The measuring tool is suitable for indoor and outdoor use. This product is a consumer laser product in accordance with EN 50689.

Product Features

The numbering of the product features shown refers to the illustration of the measuring tool on the graphic page.



1. Laser beam outlet aperture
2. State of charge of rechargeable batteries/non-rechargeable batteries
3. Display CAL guard
4. Pendulum lock indicator
5. Receiver mode button
6. Receiver mode indicator
7. Button for laser operating mode
8. Bluetooth® connection indicator
9. Bluetooth® button
10. Battery bay

11. Battery adapter cover)
12. Batteries)
13. Rechargeable battery/battery adapter release button)
14. Battery adapter cap a)
15. Rechargeable battery)
16. On/off switch
17. Laser warning label
18. Serial number
19. 5/8" tripod mount
20. 1/4" tripod mount
21. Coin cell
22. Coin cell holder
23. Coin cell port
24. Magneta)
25. Universal holder a)
26. Rotating platform a)
27. Remote control a)
28. Laser target plate a)
29. Laser receiver a)
30. Laser viewing glasses a)
31. Protective bag a)
32. Tripod a)
33. Telescopic rod a)
34. Case a)
35. Inlay a)

a) Accessories shown or described are not included with the product as standard. You can find the complete selection of accessories in our accessories range.

Technical Data

Technical Data		
Line laser	GLL 3-80 C	GLL 3-80 CG
Article number	3 601 K63 R..	3 601 K63 T..
Working range ^{A)}		
– Standard	30 m	30 m
– in receiver mode	25 m	25 m
– With laser receiver	5–120 m	5–120 m
Levelling accuracy ^{B)C)D)}	±0.2 mm/m	±0.2 mm/m
Self-levelling range	±4°	±4°
Levelling time	< 4 s	< 4 s
Max. altitude	2000 m	2000 m
Relative air humidity max.	90 %	90 %
Pollution degree according to IEC 61010-1	2E)	2E)
Laser class	2	2
Laser type	< 10 mW, 630–650 nm	< 10 mW, 500–540 nm
C ₆	10	10
Divergence of laser line	50 × 10 mrad (full angle)	50 × 10 mrad (full angle)
Shortest pulse duration	1/10000 s	1/10000 s

Pulse frequency

– Operating without receiver mode	23 kHz	23 kHz
– Operating with receiver mode	10 kHz	10 kHz
Compatible laser receivers	LR 6, LR 7	LR 7
Tripod mount	1/4", 5/8"	1/4", 5/8"

Measuring tool power supply

– Rechargeable battery (Li-ion)	12 V	12 V
– Non-rechargeable batteries (alkaline manganese)	4 × 1.5 V LR6 (AA) (with battery adapter)	4 × 1.5 V LR6 (AA) (with battery adapter)
– Buffer battery (coin cell)	CR2032 (3 V lithium battery)	CR2032 (3 V lithium battery)

Operating time with three laser planes)

– With rechargeable battery	8 h	6 h
– With non-rechargeable batteries	6 h	4 h

Bluetooth® measuring tool

– Compatibility	Bluetooth® 4.0 (Low Energy) ^{G)}	Bluetooth® 4.0 (Low Energy) ^{G)}
– Max. signal range	30 m ^{H)}	30 m ^{H)}
– Operating frequency range	2402–2480 MHz	2402–2480 MHz
– Max. transmission power	< 1 mW	< 1 mW

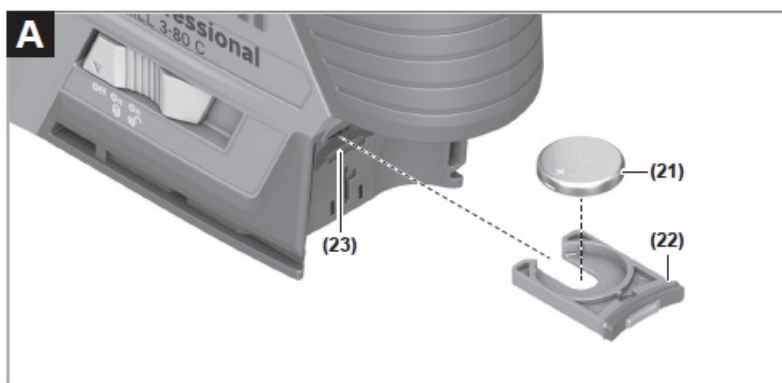
Bluetooth® smartphone

– Compatibility	Bluetooth® 4.0 (Low Energy) ^{G)}	Bluetooth® 4.0 (Low Energy) ^{G)}
– Operating system	Android 6 (and above) iOS 11 (and above)	Android 6 (and above) iOS 11 (and above)

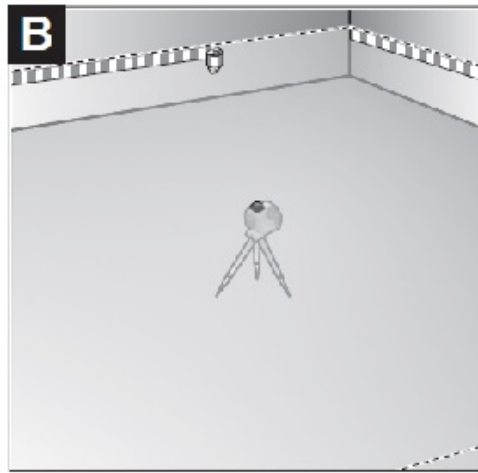
Weight according to EPTA-Procedure 01:2014

– With rechargeable battery	0.90 kg	0.90 kg
– With non-rechargeable batteries	0.86 kg	0.86 kg
Dimensions (length × width × height)	162 × 84 × 148 mm	162 × 84 × 148 mm
Protection rating ^{I)}	IP54 (dust and splash-proof)	IP54 (dust and splash-proof)

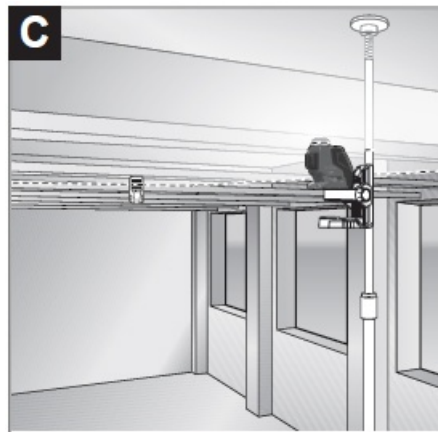
Recommended ambient temperature during charging	0 °C to +35 °C	0 °C to +35 °C
Permitted ambient temperature during operation	–10 °C to +40 °C	–10 °C to +40 °C
Permitted ambient temperature during storage	–20 °C to +70 °C	–20 °C to +70 °C
Recommended rechargeable batteries	GBA 12V... (except for GBA 12V ≥ 4.0 Ah)	GBA 12V... (except for GBA 12V ≥ 4.0 Ah)
Recommended chargers	GAL 12... GAX 18...	GAL 12... GAX 18...



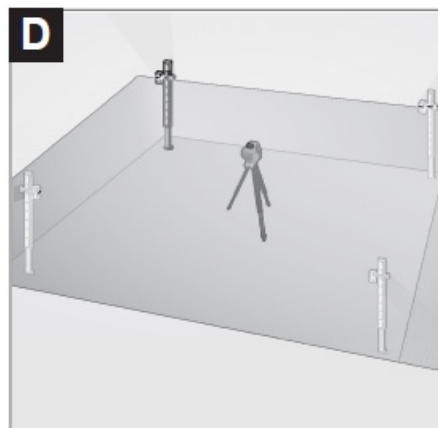
- **A)** The working range may be reduced by unfavourable environmental conditions (e.g. direct sunlight).



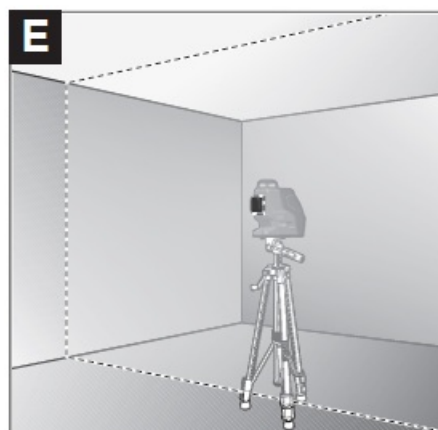
- **B)** At 20–25 °C



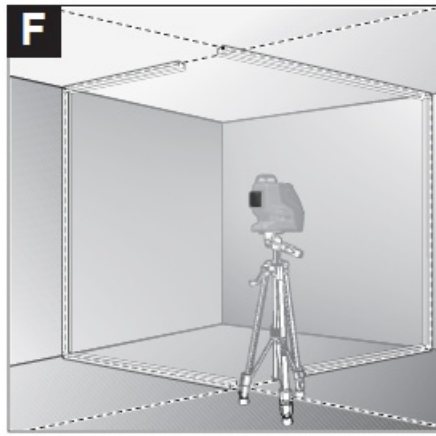
- **C)** Applies to the four horizontal intersection points



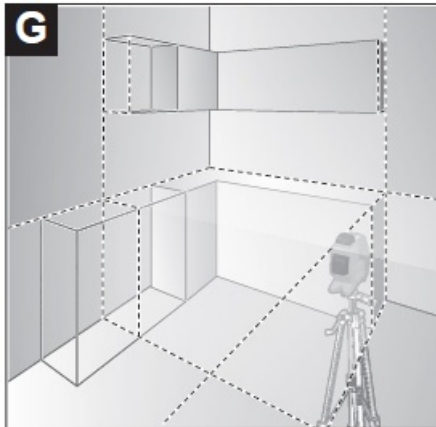
- **D)** The values stated presuppose normal to favourable environmental conditions (e.g. no vibration, no fog, no smoke, no direct sunlight). Extreme fluctuations in temperature can cause deviations in accuracy.



- **E)** Only non-conductive deposits occur, whereby occasional temporary conductivity caused by condensation is expected.



- **F)** Shorter operating times in Bluetooth® operation and/or in conjunction with RM



- **G)** When using Bluetooth® Low Energy devices, it may not be possible to establish a connection depending on the model and operating system. Bluetooth® devices must support the SPP profile.
- **H)** The signal range may vary greatly depending on external conditions, including the receiving device used. The Bluetooth® range may be significantly weaker inside closed rooms and through metallic barriers (e.g. walls, shelving units, cases, etc.).
- **I)** The lithium-ion battery and the AA1 battery adapter are excluded from IP54.

The serial number (18) on the type plate is used to clearly identify your measuring tool.

Assembly

Measuring Tool Power Supply

The measuring tool can be operated either with conventional non-rechargeable batteries or with a Bosch lithium-ion battery.

Operation with Rechargeable Battery

u Use only the chargers listed in the technical data. Only these chargers are matched to the lithium-ion battery of your measuring tool.

Note: Lithium-ion rechargeable batteries are supplied partially charged according to international transport regulations.

To ensure full rechargeable battery capacity, fully charge the rechargeable battery before using your tool for the first time.

To insert the charged battery (15), slide it into the battery bay (10) until you feel it engage. To remove the battery (15), press the release buttons (13) and pull it out of the battery bay (10). Do not use force to do this.

Operation with Non-Rechargeable Batteries

It is recommended that you use alkaline manganese batteries to operate the measuring tool. The batteries are inserted into the battery adapter.

- The battery adapter is intended only for use in designated Bosch measuring tools and must not be used with power tools.

To insert the batteries, slide the cover (11) of the battery adapter into the battery bay (10). Place the batteries into the cover as per the illustration on the sealing cap (14). Slide the sealing cap over the cover until you feel it click into place.



To remove the batteries (12), press the release buttons (13) of the sealing cap (14) and pull off the sealing cap. Make sure that the batteries do not fall out. To do this, hold the measuring tool with the battery bay (10) facing upward. Remove the batteries. To remove the cover (11) from inside the battery bay, reach into the cover and pull it out of the measuring tool, applying light pressure to the side wall as you do so. Always replace all the batteries at the same time. Only use batteries from the same manufacturer and which have the same capacity.

- Take the batteries out of the measuring tool when you are not using it for a prolonged period of time. The batteries can corrode and self-discharge during prolonged storage in the measuring tool.
- Battery Charge Indicator

The battery charge indicator (2) shows the state of charge of the battery/batteries:

LED /State of charge

Green continuous light	100–75 %
Yellow continuous light	75–35 %
Red continuous light	35–10 %
No light	<div><div></div><div>– Rechargeable battery de- fective</div><div></div><div>– Batteries drained</div></div>

If the rechargeable battery or non-rechargeable batteries are running low, the laser lines will gradually become dimmer. Immediately replace a faulty rechargeable battery or any empty batteries.

Changing the Coin Cell (see Figure A)

The measuring tool is fitted with a coin cell (21) so that the date and time can be saved for the CAL guard function without having a battery pack or batteries inserted. In order to change the coin cell, remove the battery pack or the entire battery adapter. Pull the coin cell holder (22) out of the coin cell port (23). Remove the empty coin cell (21) and insert a new coin cell. Ensure that the polarity is correct according to the illustration on the coin cell holder (the positive terminal of the coin cell must be facing upwards). With the coin cell fitted, slide the coin cell holder (22) into the port (23). Ensure that the coin cell holder is inserted correctly and fully, as otherwise protection from dust and splashes is no longer guaranteed. When using for the first time, remove the protective film from the coin cell (21). To do this, follow the same steps as when changing the coin cell.

Operation

Starting Operation

- Protect the measuring tool from moisture and direct sunlight.
- Do not expose the measuring tool to any extreme temperatures or fluctuations in temperature. For example, do not leave it in a car for extended periods of time. If it has been subjected to significant fluctuations in temperature, first allow the measuring tool to adjust to the ambient temperature and then always carry out an accuracy check before continuing work (see “Accuracy Check of the Measuring Tool”, page 23). The precision of the measuring tool may be compromised if exposed to extreme temperatures or fluctuations in temperature.
- Avoid substantial knocks to the measuring tool and avoid dropping it. Always carry out an accuracy check before continuing work if the measuring tool has been subjected to severe external influences (see “Accuracy Check of the Measuring Tool”, page 23).
- Switch the measuring tool off when transporting it. The pendulum unit is locked when the tool is switched off, as it can otherwise be damaged by big movements.

Switching On/Off

To switch on the measuring tool, slide the on/off switch (16) to the ” On” position (for working with the pendulum lock) or to the ” On” position (for working with automatic levelling). As soon as it is switched on, the measuring tool emits laser lines from the outlet apertures (1).

Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself (even from a distance).

To switch off the measuring tool, slide the on/off switch (16) to the Off position. The pendulum unit is locked when the tool is switched off.

- Never leave the measuring tool unattended when switched on, and ensure the measuring tool is switched off after use. Others may be blinded by the laser beam.
- If the maximum permitted operating temperature of 40 °C is exceeded, the tool shuts down to protect the laser

diode. Once it has cooled down, the measuring tool is operational again and can be switched back on. If the temperature of the measuring tool is approaching the maximum permissible operating temperature, the laser lines will gradually become dimmer.

- The measuring tool is protected against electrostatic discharge (ESD). If the measuring tool becomes electrostatically charged (e.g. when it is touched in an environment with low humidity), it switches itself off automatically. In such cases, switch the on/off switch (16) off and on again.

Deactivating the Automatic Shut-Off Function

- If no button on the measuring tool is pressed for approx. 120 min, the measuring tool will automatically switch itself off to preserve battery life. To switch the measuring tool back on after it has been automatically switched off, you can either slide the on/off switch (16) to the "Off" position first and then switch the measuring tool back on, or press either the laser mode button (7) or the receiver mode button (5) once. To deactivate the automatic shut-off function, hold down the laser mode button (7) for at least 3 s (with the measuring tool switched on). If the automatic shut-off function is deactivated, the laser beams will flash briefly as confirmation. To activate the automatic shut-off function, switch the measuring tool off and on again.

Deactivating the Signal Tone Function

The signal tone function is always activated once the measuring tool is switched on. To deactivate or activate the signal tone function, simultaneously press the laser mode button (7) and the receiver mode button (5) and hold them down for at least 3 s. Three short signal tones will sound as confirmation both when the signal tone function is activated and deactivated.

Operating Modes

The measuring tool has several operating modes which you can switch between at any time.

These are for:

- Generating a horizontal laser plane,
- Generating a vertical laser plane,
- Generating two vertical laser planes,
- Generating a horizontal laser plane and two vertical laser planes.

After you switch it on, the measuring tool generates a horizontal laser plane. To change the operating mode, press the laser mode button (7). All operating modes can be selected with both automatic levelling or the pendulum lock.

Receiver Mode

The receiver mode must be activated when working with the laser receiver (29), regardless of which operating mode is selected.

In receiver mode, the laser lines flash at a very high frequency, enabling them to be detected by the laser receiver (29). To switch on receiver mode, press the receiver mode button (5). The receiver mode indicator (6) will light up green. When receiver mode is switched on, the laser lines are less visible to the human eye. Therefore, switch receiver mode off by pressing the receiver mode button (5) again to work without a laser receiver. The receiver mode indicator (6) will go out.

Automatic Levelling

Working with Automatic Levelling Position the measuring tool on a level, firm surface or attach it to the universal holder (25) or the tripod (32). For work with automatic leveling, slide the on/off switch (16) to the "On" position. The automatic leveling function automatically compensates for irregularities within the self-leveling range of $\pm 4^\circ$. The leveling is finished as soon as the laser lines stop moving. If automatic leveling is not possible, e.g. because the surface on which the measuring tool stands deviates by more than 4° from the horizontal plane, the laser lines will begin to flash quickly. If the signal tone function is activated, rapid signal tones will sound. Place the measuring tool in a horizontal position and wait for self-leveling to take place. As soon as the measuring tool is within the self-leveling range of $\pm 4^\circ$, the laser beams will light up continuously and the signal tones will cease. In case of ground vibrations or position changes during operation, the measuring tool is automatically leveled again. Upon re-leveling, check the position of the horizontal or vertical laser line with regard to the reference points to avoid errors by moving the measuring tool.

Working with the Pendulum Lock

For work with the pendulum lock, slide the on/off switch (16) to the "On" position. The pendulum lock indicator (4) lights up red and the laser lines continuously flash slowly. For work with the pendulum lock, the automatic leveling is switched off. You can hold the measuring tool freely in your hand or place it on a sloping surface. This means that the laser lines are no longer leveled and no longer necessarily run perpendicular to one another.

Remote control via the Bosch Levelling Remote App

The measuring tool is equipped with a Bluetooth® module which uses radio technology to enable remote control via a smartphone with a Bluetooth® interface. The Bosch Levelling Remote App application (app) is required to use this function. You can download this in the app store for your terminal device (Apple App Store, Google Play Store). Information about the system requirements for a Bluetooth® connection can be found on the Bosch website at www.bosch-pt.com. When remote controlling via Bluetooth®, poor reception conditions can cause time delays between the mobile terminal device and the measuring tool.

Switching on Bluetooth®

To switch on Bluetooth®, press the Bluetooth® button (9). Ensure that the Bluetooth® interface is activated on your mobile terminal device.

The connection between the mobile end device and measuring tool is established after the Bosch application has started. If multiple active measuring tools are found, select the appropriate measuring tool. A connection will be established automatically if only one active measuring tool is found. The connection is established as soon as the Bluetooth® indicator (8) lights up.

The Bluetooth® connection may be interrupted if the distance between the measuring tool and the mobile terminal device is too great or is blocked, and if there are any sources of electromagnetic interference. Should this occur, the Bluetooth® indicator (8) will flash.

Switching off Bluetooth®

To switch off Bluetooth® for remote control, press the Bluetooth® button (9) or switch off the measuring tool.

Calibration warning CAL guard

The sensors for calibration warning CAL guard monitor the status of the measuring tool, even when it is switched off. If the measuring tool is not being supplied with power by a rechargeable battery or non-rechargeable batteries, an internal energy storage system provides continuous monitoring by the sensors for 72 hours. The sensors are activated when the measuring tool is started up for the first time.

Calibration Warning Triggers

If one of the following events occurs, the calibration warning CAL guard is triggered and the indicator CAL guard (3) lights up red:

- The calibration interval (every 12 months) has expired.
- The measuring tool was stored outside of the storage temperature range.
- The measuring tool was subjected to a strong shock (e.g. impact with the ground after being dropped). You can refer to the Bosch Levelling Remote App to see which of the three events triggered the calibration warning.
- Without the app, the cause cannot be identified, as the indicator CAL guard (3) lighting up indicates merely that the levelling accuracy needs to be checked. Once the warning has been triggered, the indicator CAL guard (3) lights up until the leveling accuracy has been checked and the indicator is switched off. Procedure in the Event of a Calibration Warning Being Triggered Check the leveling accuracy of the measuring tool (see "Accuracy Check of the Measuring Tool", page 23). If the maximum deviation has not been exceeded in any of the tests, switch the indicator CAL guard (3) off. To do so, press and hold the receiver mode button (5) and the Bluetooth® button (9) at the same time for at least 3 s. The indicator CAL guard (3) will go out. Should the measuring tool exceed the maximum deviation during one of the tests, please have it repaired by a Bosch after-sales service.

Accuracy Check of the Measuring Tool

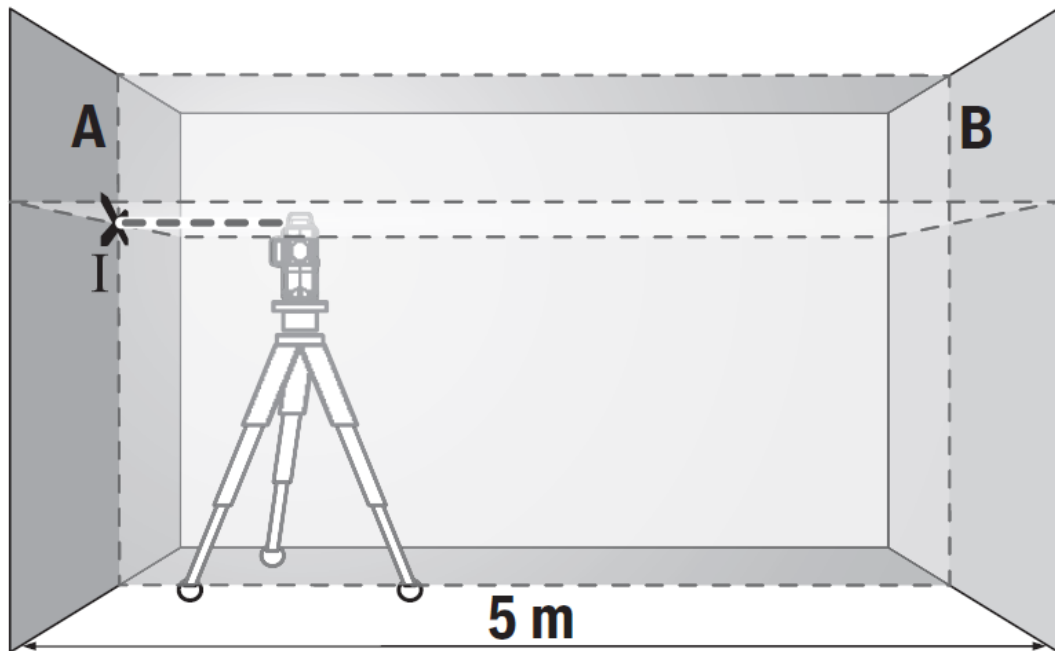
Influences on Accuracy

The largest influence is exerted by the ambient temperature. In particular, temperature differences that occur from the ground upwards can refract the laser beam. In order to minimise thermal influences resulting from heat rising from the floor, it is recommended that you use the measuring tool on a tripod. In addition, position the measuring tool in the centre of the work surface, wherever this is possible. In addition to external influences, device-specific influences (e.g. falls or heavy impacts) can also lead to deviations. For this reason, check the levelling accuracy each time before beginning work. First check the levelling accuracy of the horizontal laser line, then the levelling accuracy of the vertical laser lines. Should the measuring tool exceed the maximum deviation during one of the tests, please have it repaired by a Bosch after-sales service.

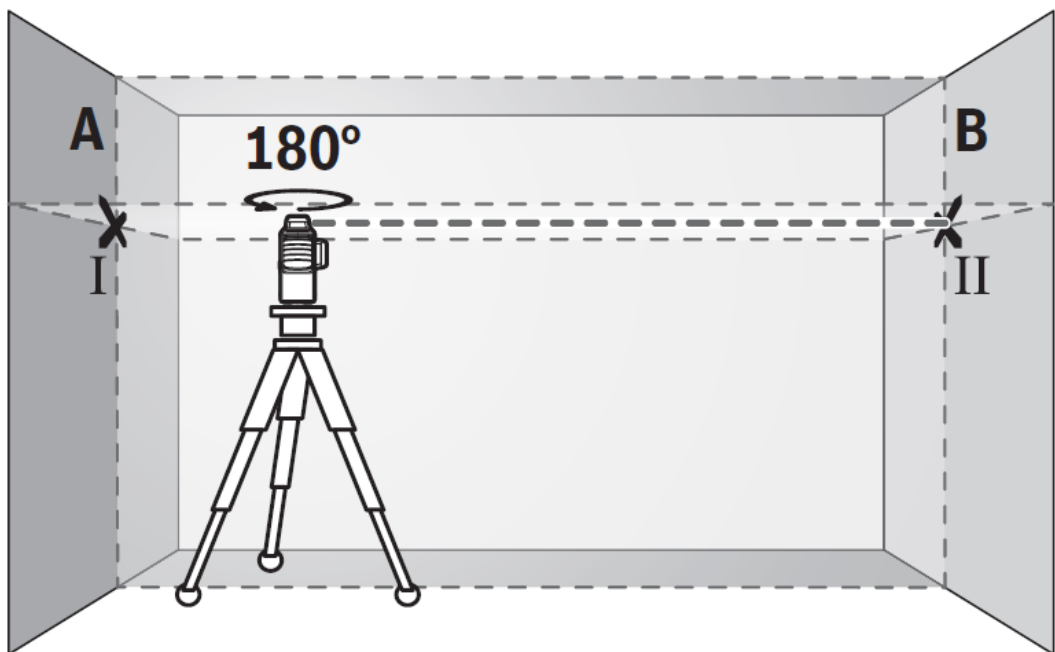
Checking the Horizontal Levelling Accuracy of the Transverse Axis

For this check, you will need a free measuring distance of 5 m on firm ground between two walls (designated A and B).

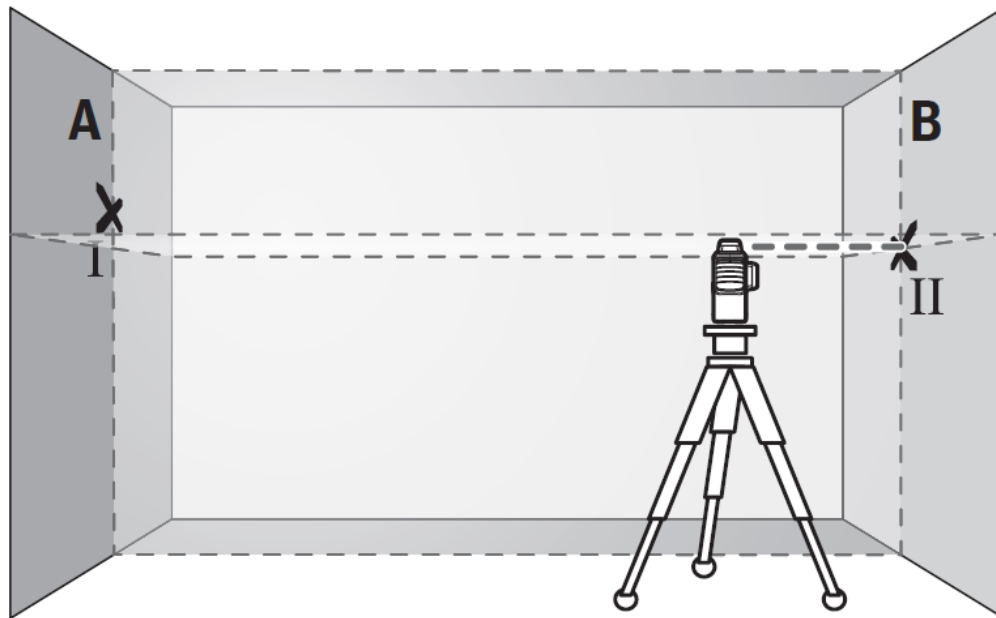
- Mount the measuring tool close to wall A on a tripod, or place it on a firm, flat surface. Switch on the measuring tool in the mode with automatic levelling. Select the operating mode for generating a horizontal laser plane and a vertical laser plane directly in front of the measuring tool.



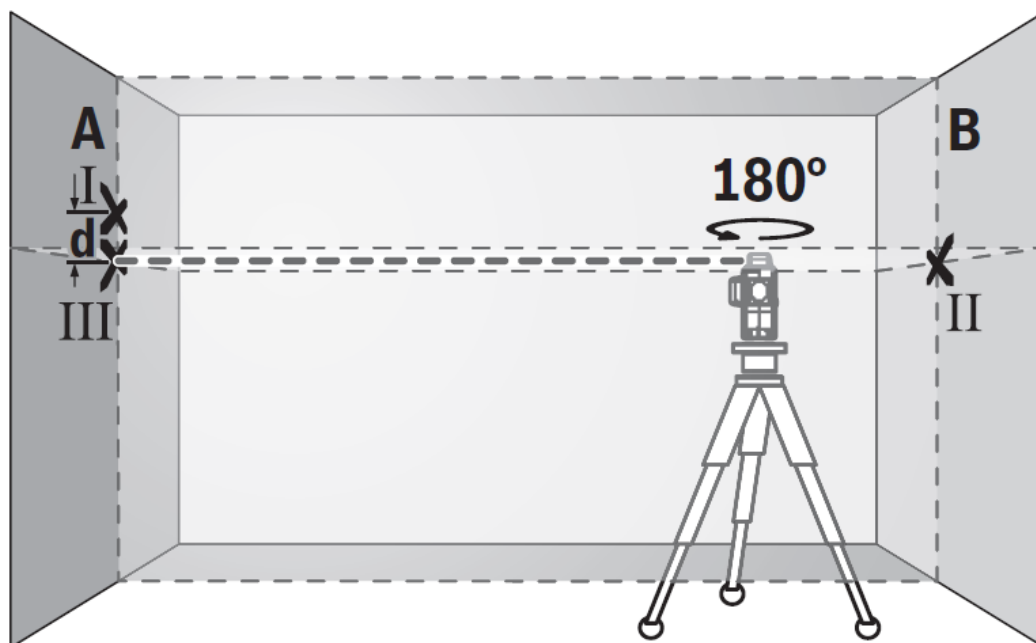
- Aim the laser at the closer wall A and allow the measuring tool to level in. Mark the middle of the point at which the laser lines cross on the wall (point I).



- Turn the measuring tool 180°, allow it to level in and mark the point where the laser lines cross on the opposite wall B (point II).



- Position the measuring tool – without rotating it – close to wall B, switch it on and allow it to level in. A B
- Align the height of the measuring tool (using the tripod or by placing objects underneath as required) so that the point where the laser lines cross exactly hits the previously marked point II on wall B.



- Turn the measuring tool 180° without adjusting the height. Aim it at wall A such that the vertical laser line runs through the already marked point I. Allow the measuring tool to level in and mark the point where the laser lines cross on wall A (point III).
- The discrepancy d between the two marked points I and III on wall A reveals the actual height deviation of the measuring tool.

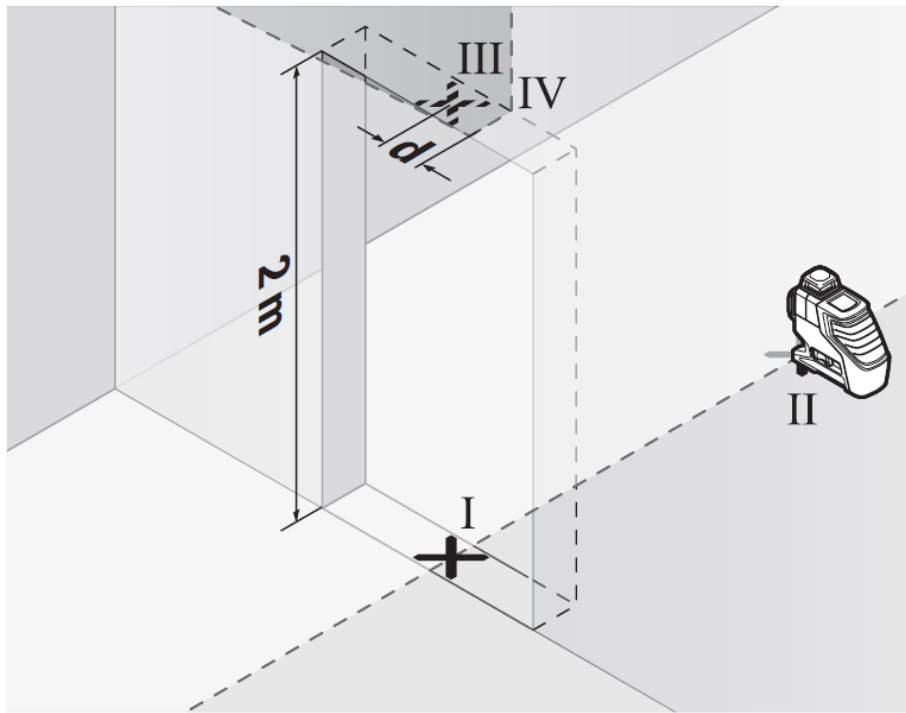
The maximum permitted deviation on the measuring distance of $2 \times 5 \text{ m} = 10 \text{ m}$ is as follows:

- $10 \text{ m} \times \pm 0.2 \text{ mm/m} = \pm 2 \text{ mm}$. The discrepancy d between points I and II must therefore amount to no more than 2 mm.

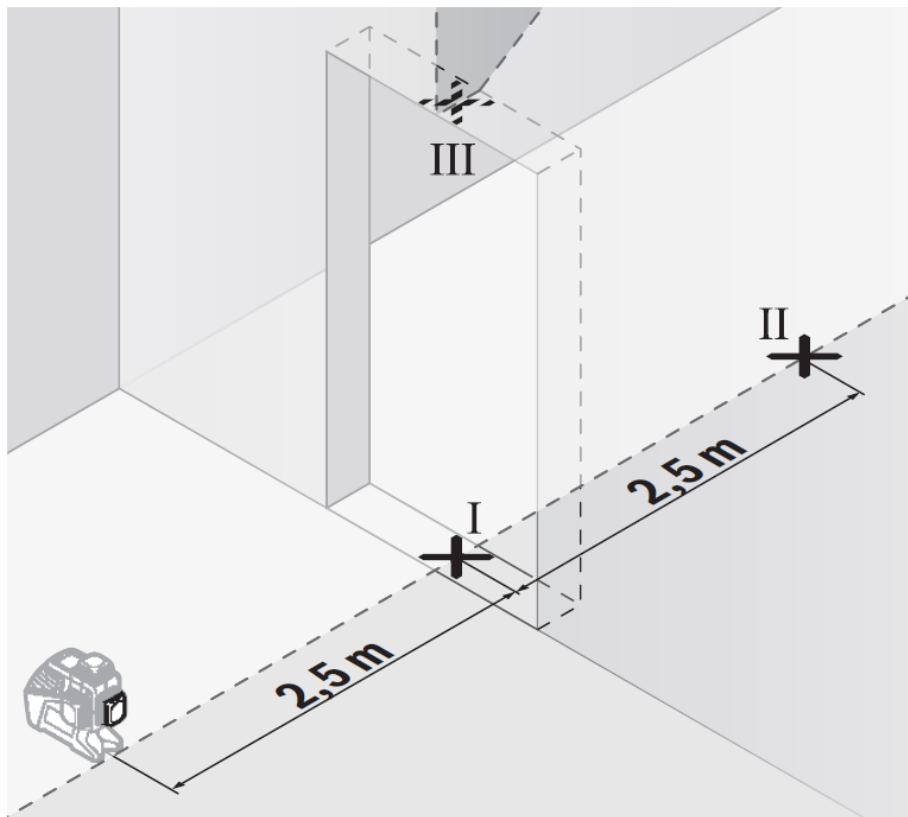
Checking the Levelling Accuracy of the Vertical Lines

For this check, you will need a door opening (on solid ground) which has at least 2.5 m of space either side of the

door.



- Place the measuring tool 2.5 m away from the door opening on a firm, flat surface (not on a tripod). Switch on the measuring tool in the mode with automatic levelling. Select the operating mode for generating a vertical laser plane directly in front of the measuring tool.



- Mark the centre of the vertical laser line on the floor of the door opening (point I), 5 m away on the other side of the door opening (point II) and on the upper edge of the door opening (point III).
- Rotate the measuring tool 180° and position it on the other side of the door opening, directly behind point II. Allow the measuring tool to level in and align the vertical laser line in such a way that its centre passes through points I and II exactly.

- Mark the centre of the laser line on the upper edge of the door opening as point IV.
- The discrepancy d between the two marked points III and IV reveals the actual vertical deviation of the measuring tool.
- Measure the height of the door opening.

Repeat the measuring process for the two vertical laser planes. To do this, select the operating mode for generating a vertical laser plane to one side of the measuring tool and rotate the measuring tool by 90° before beginning the measuring process.

You can calculate the maximum permitted deviation as follows: Doubled height of the door opening × 0.2 mm/m
 Example: At a door opening height of 2 m, the maximum deviation amounts to $2 \times 2 \text{ m} \times \pm 0.2 \text{ mm/m} = \pm 0.8 \text{ mm}$.
 The points III and IV must therefore be no further than 0.8 mm from each other.

Working Advice

- Only the centre of the laser line must be used for marking. The width of the laser line changes depending on the distance.

Working with the Laser Target Plate

The laser target plate (28) improves visibility of the laser beam in unfavourable conditions and at greater distances. The reflective surface of the laser target plate (28) improves visibility of the laser line. The transparent surface enables the laser line to be seen from behind the laser target plate.

Working with the Tripod (Accessory)

A tripod offers a stable, height-adjustable support surface for measuring. Place the measuring tool with the 1/4" tripod mount (20) on the thread of the tripod (32) or a conventional camera tripod. Use the 5/8" tripod mount (19) to secure the measuring tool on a conventional building tripod. Tighten the measuring tool using the locking screw of the tripod.

- Roughly align the tripod before switching on the measuring tool.

Securing with the universal holder (accessory) (see figure C)

You can secure the measuring tool, for example, on vertical surfaces or magnetisable materials using the universal holder (25). The universal holder is also suitable for use as a floor stand and facilitates the height adjustment of the measuring tool.

- Keep your fingers away from the rear side of the magnetic accessory while attaching the accessory to surfaces.
- The strong pulling force of the magnets may jam your fingers.
- Roughly align the universal holder (25) before switching on the measuring tool.

Working with the laser receiver (accessory) (see figure C)

- Use the laser receiver (29) to improve detection of the laser lines in adverse lighting conditions (bright environment, direct sunlight) and over greater distances.

- When working with the laser receiver, switch on receiver mode (see “Receiver Mode”).

Laser Goggles (Accessory)

The laser goggles filter out ambient light. This makes the light of the laser appear brighter to the eye.

- Do not use the laser goggles (accessory) as protective goggles. The laser goggles make the laser beam easier to see; they do not protect you against laser radiation.
- Do not use the laser goggles (accessory) as sunglasses or while driving. The laser goggles do not provide full UV protection and impair your ability to see colours.

Example applications (see figures B–G)

- Examples of possible applications for the measuring tool can be found on the graphics pages.

Maintenance and Service

Maintenance and Cleaning

- Keep the measuring tool clean at all times.
- Never immerse the measuring tool in water or other liquids.
- Wipe off any dirt using a damp, soft cloth. Do not use any detergents or solvents.
- The areas around the outlet aperture of the laser in particular should be cleaned on a regular basis. Make sure to check for lint when doing this.
- Only store and transport the measuring tool in the protective bag (31) or the case (34).
- If the measuring tool needs to be repaired, send it off in the protective bag (31) or the case (34).

After-Sales Service and Application Service

Our after-sales service responds to your questions concerning maintenance and repair of your product as well as spare parts. You can find explosion drawings and information on spare parts at: www.bosch-pt.com.¹ The Bosch product use advice team will be happy to help you with any questions about our products and their accessories. In all correspondence and spare parts orders, please always include the 10-digit article number given on the nameplate of the product.

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- At www.bosch-pt.co.uk you can order spare parts or arrange the collection of a product in need of servicing or repair.
- **Tel. Service:** (0344) 7360109
- **E-Mail:** boschservicecentre@bosch.com
- You can find further service addresses at: www.bosch-pt.com/serviceaddresses

Transport

The recommended lithium-ion batteries are subject to legislation on the transport of dangerous goods. The user can transport the batteries by road without further requirements. When shipping by third parties (e.g.: by air transport or forwarding agency), special requirements on packaging and labeling must be observed. For preparation of the item being shipped, consulting an expert for hazardous material is required. Dispatch battery packs only when the housing is undamaged. Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging. Please also observe the possibility of more detailed national regulations.

Disposal



Measuring tools, rechargeable/non-rechargeable batteries, accessories, and packaging should be sorted for environmental recycling. Do not dispose of the measuring tools or battery packs/batteries with household waste. Disposal measuring tools, rechargeable/non-rechargeable batteries, accessories, and packaging should be sorted for environmental recycling. Do not dispose of the measuring tools or battery packs/batteries with household waste.

Only for EU countries:

According to the Directive 2012/19/EU on waste electrical and electronic equipment and its transposition into national law, measuring tools that are no longer usable, and, according to the Directive 2006/66/EC, defective or drained batteries must be collected separately and disposed of in an environmentally correct manner. If disposed incorrectly, waste electrical and electronic equipment may have harmful effects on the environment and human health, due to the potential presence of hazardous.

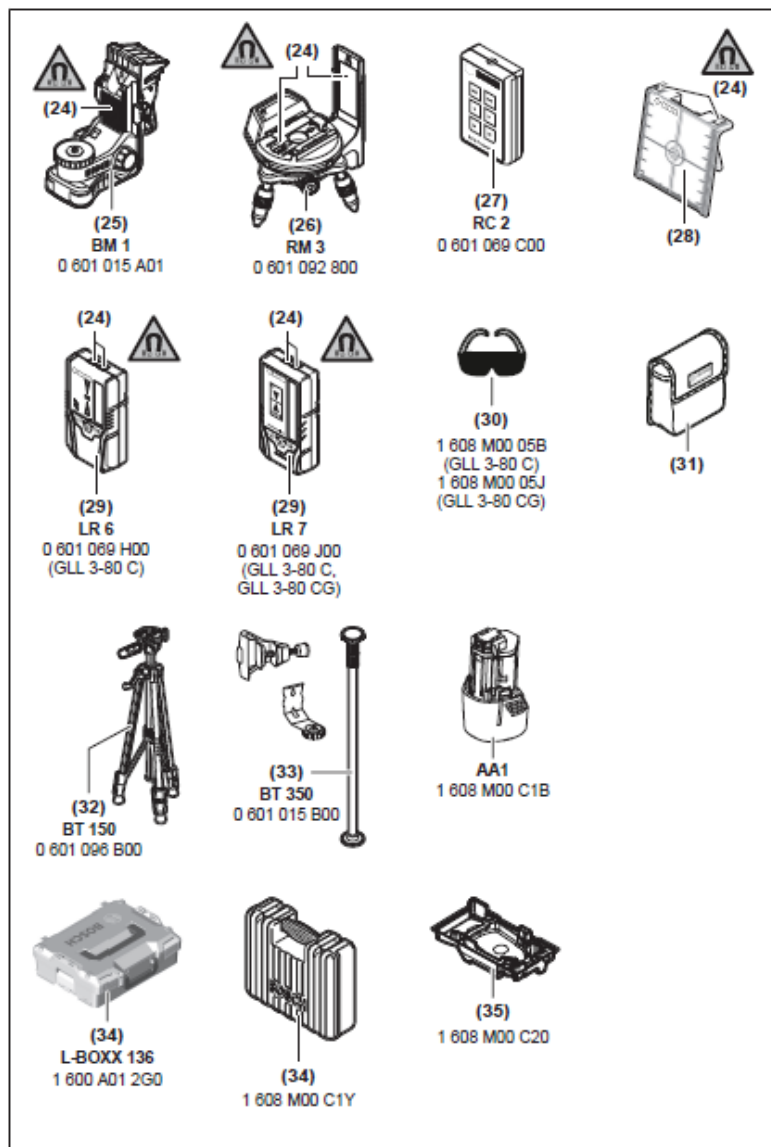
Only for United Kingdom:

According to The Waste Electrical and Electronic Equipment Regulations 2013 (SI 2013/3113) (as amended) and the Waste Batteries and Accumulators Regulations 2009 (SI 2009/890) (as amended), products that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

Battery packs/batteries:

- Please observe the notes in the section on transport (see “Transport”).

ACCESSORIES



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- <http://eu-doc.bosch.com/>


Declaration of Conformity

Hereby, Robert Bosch Limited as authorised representative acting on behalf of Robert Bosch Power Tools GmbH declares that the radio equipment type GLL 3-80 C/GLL 3-80 CG is in compliance with the Radio Equipment Regulations 2017. The full text of the declaration of conformity is available at the following internet address:
<https://gb-doc.bosch.com>

Robert Bosch Power Tools GmbH



















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Documents / Resources

	BOSCH GLL 3-80 C Red Self Levelling Multi Line Laser Level [pdf] Instruction Manual 3 601 K63 R, 3 601 K63 T, GLL 3-80 C, GLL 3-80 C Red Self Levelling Multi Line Laser Level, Red Self Levelling Multi Line Laser Level, Levelling Multi Line Laser Level, Multi Line Laser Level, Line Laser Level, Laser Level, Level
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