

**IMPORTANT:**  
Read Before Using

**IMPORTANT :**  
Lire avant usage

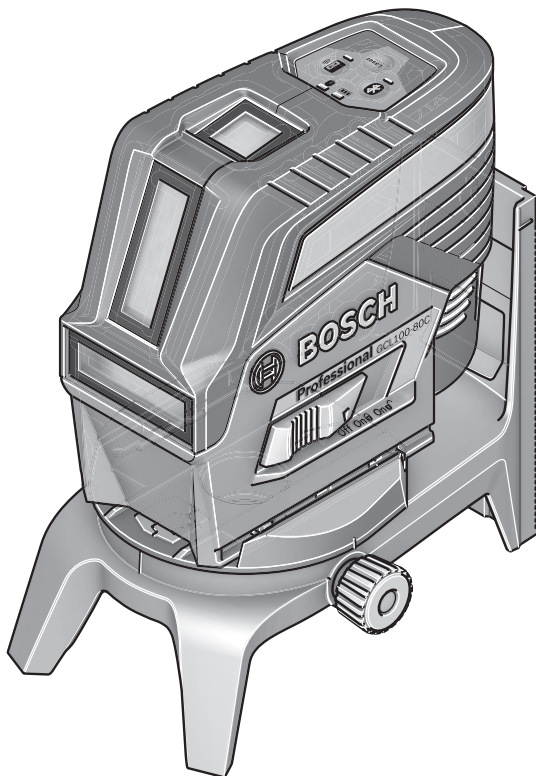
**IMPORTANTE:**  
Leer antes de usar



**Operating/Safety Instructions**

**Consignes de fonctionnement/sécurité**

**Instrucciones de funcionamiento y seguridad**



**GCL100-80C**  
**GCL100-80CG**



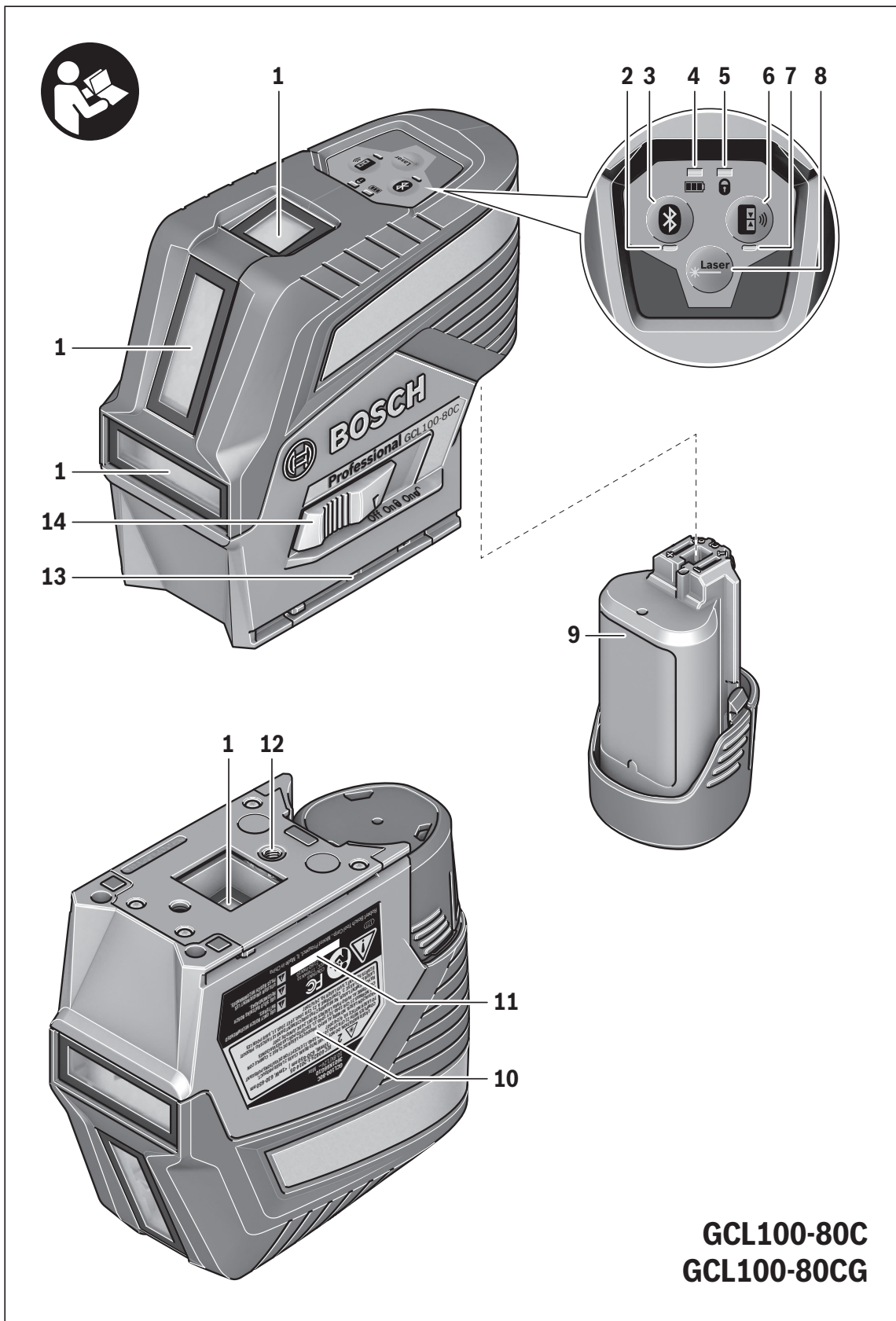
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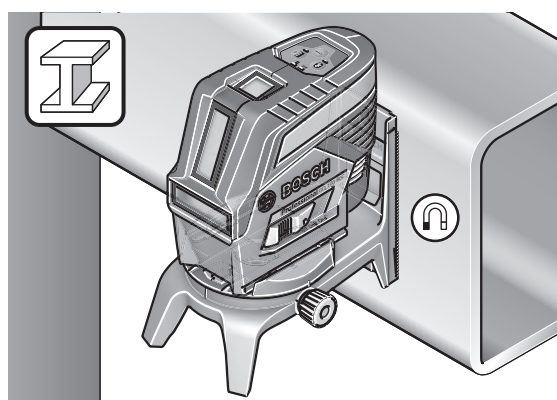
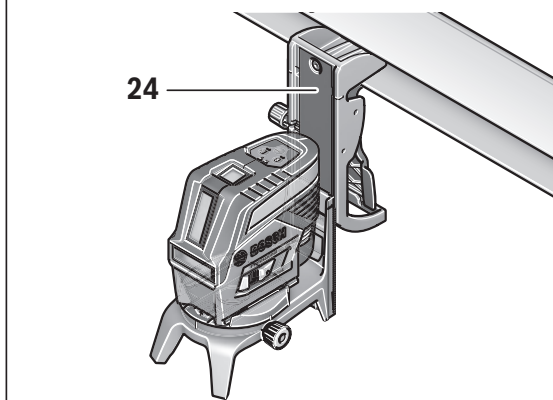
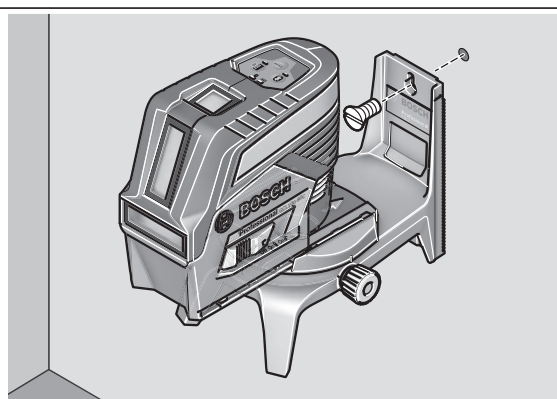
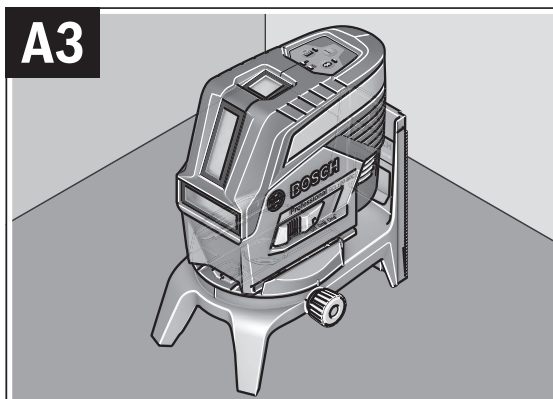
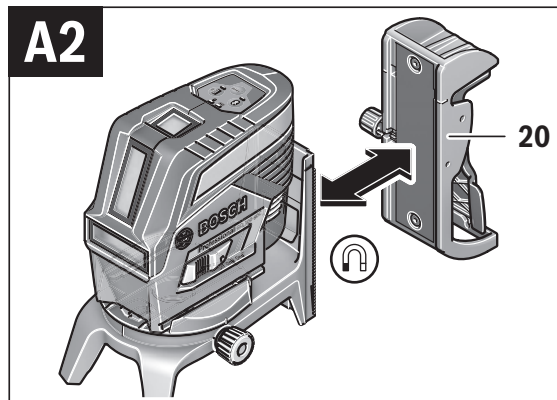
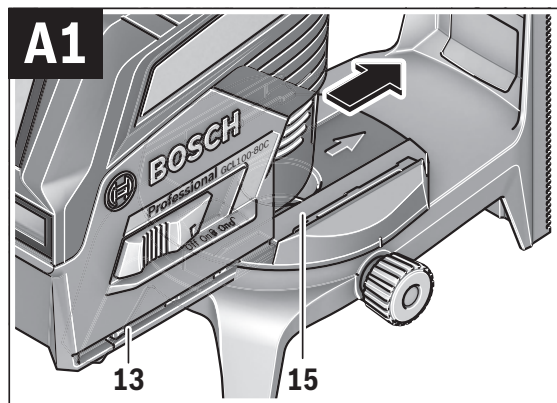
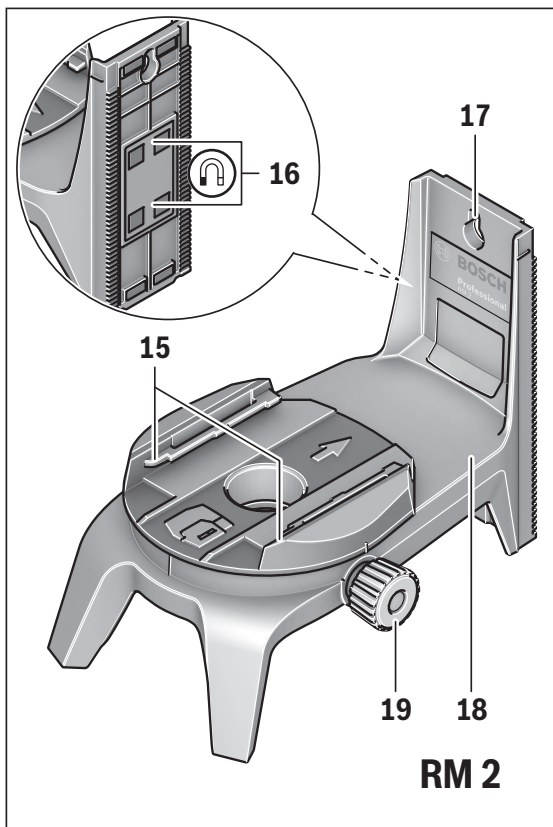
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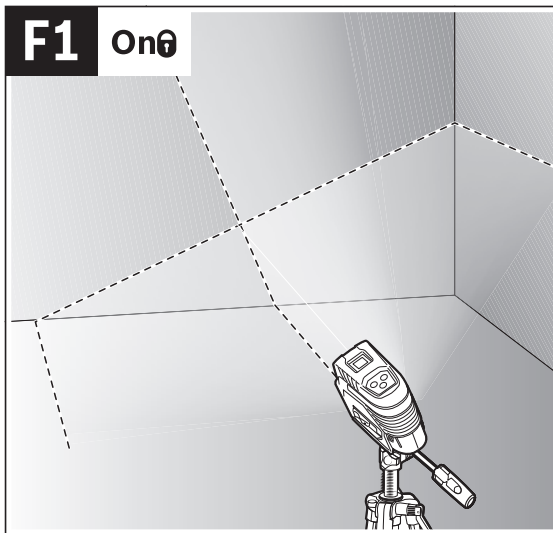
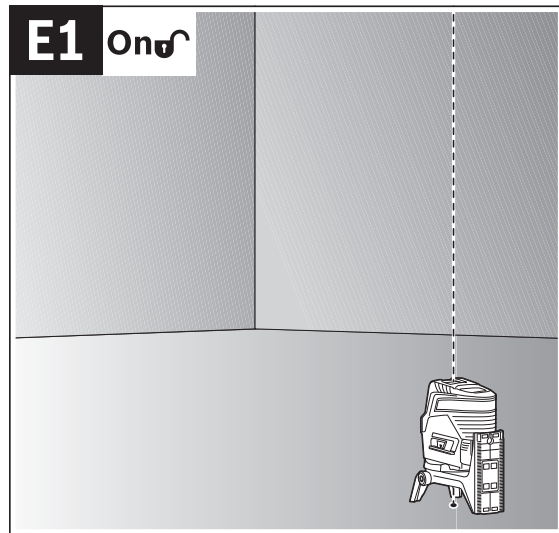
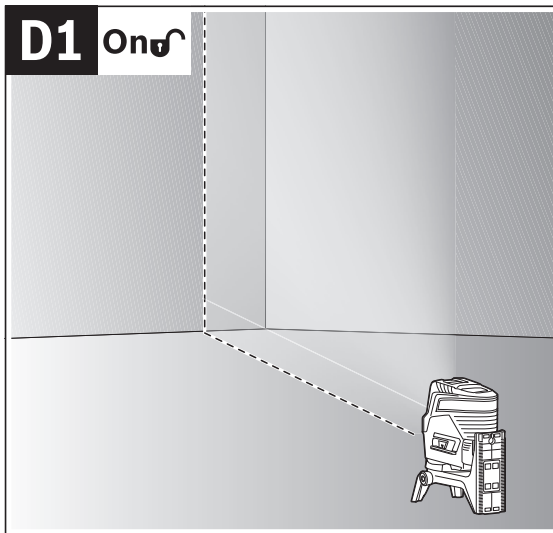
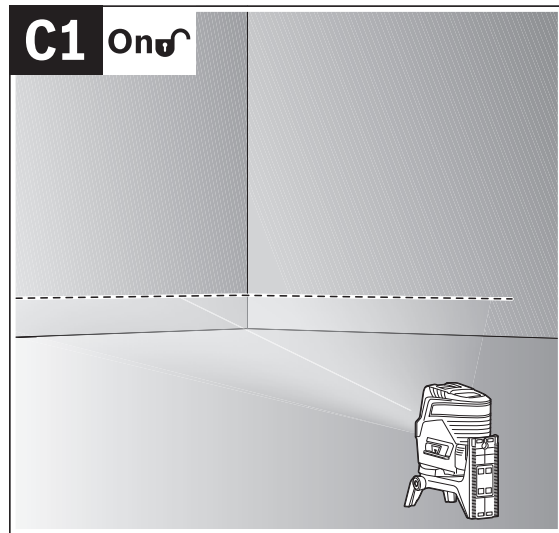
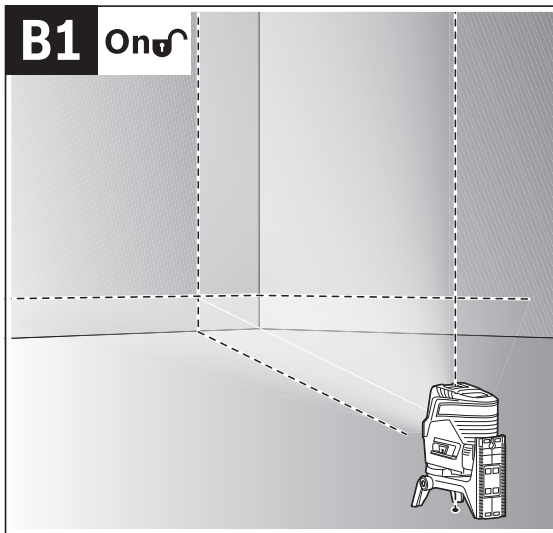
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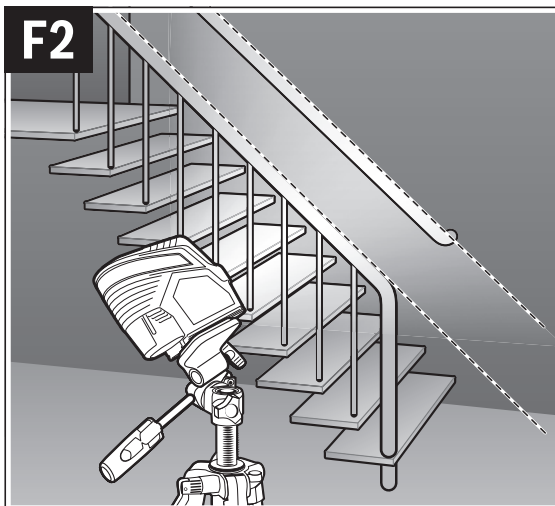
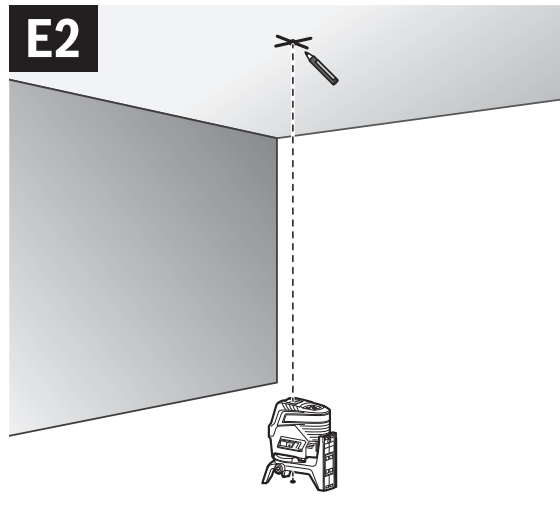
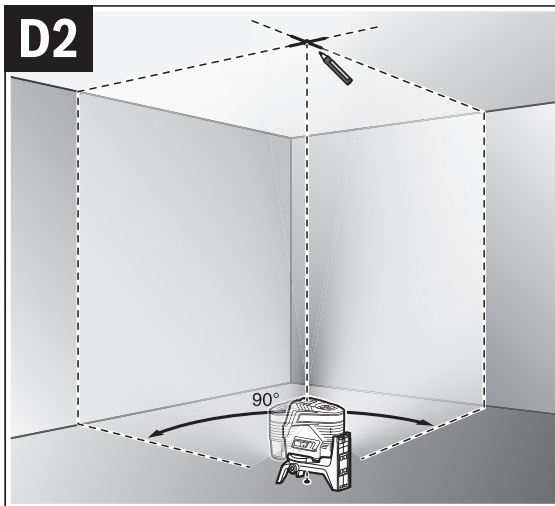
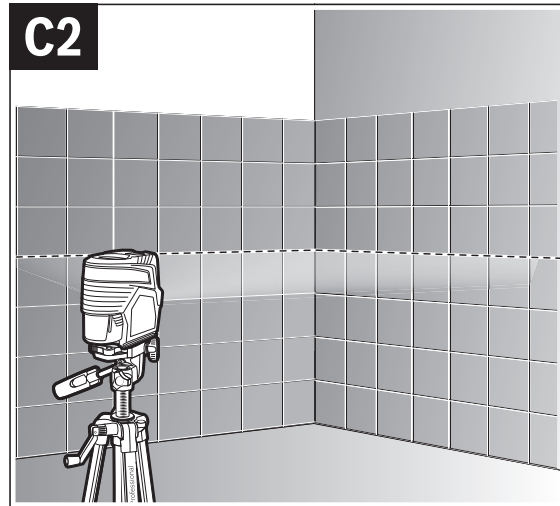
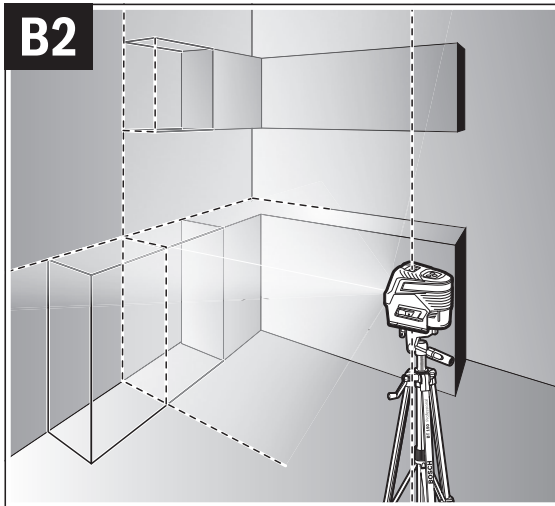
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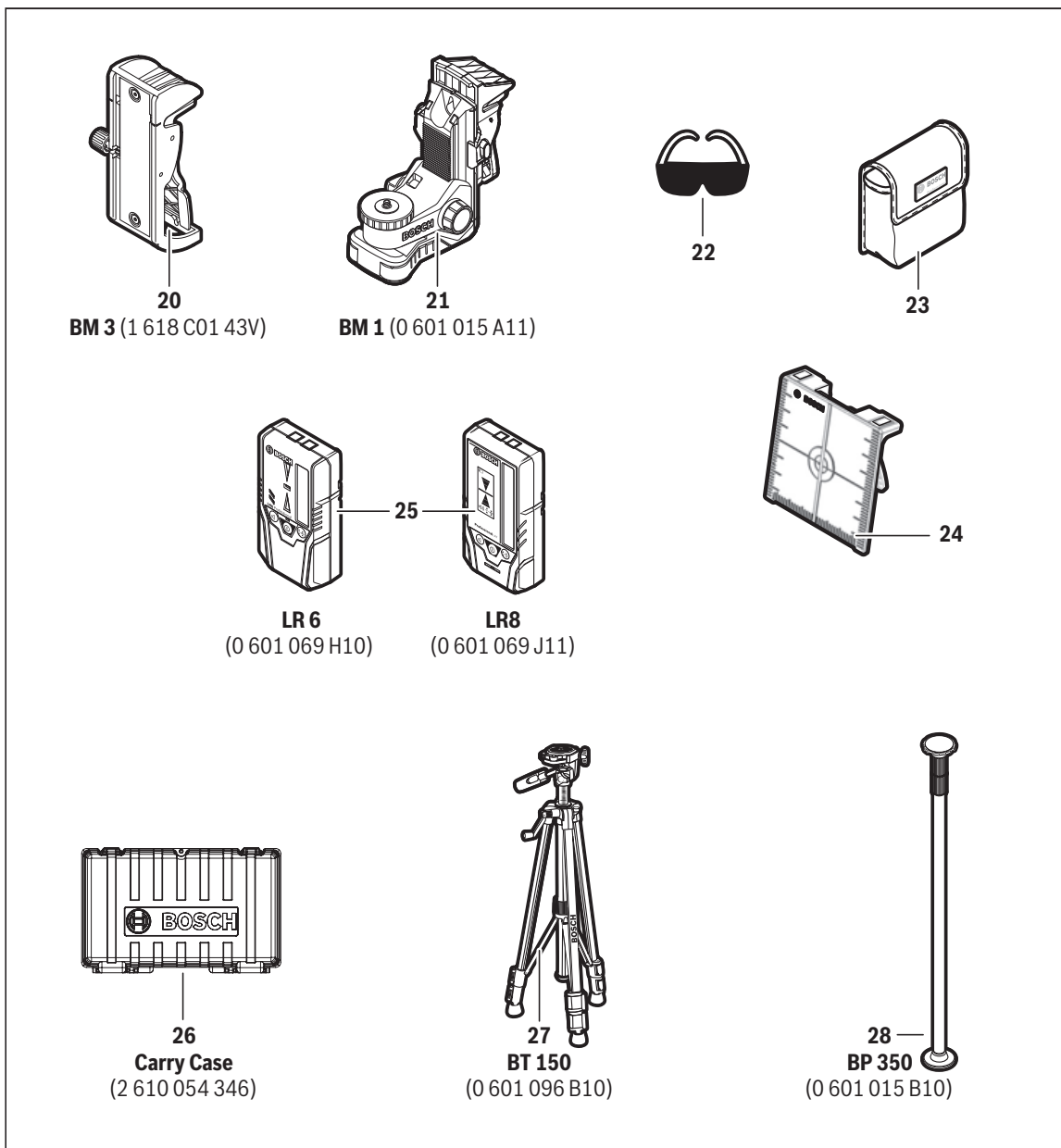
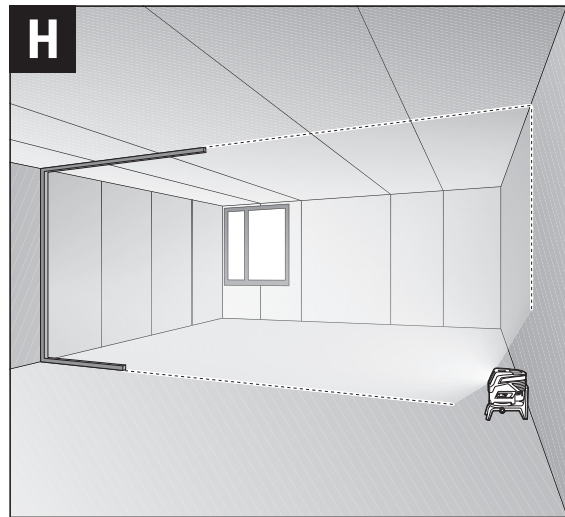
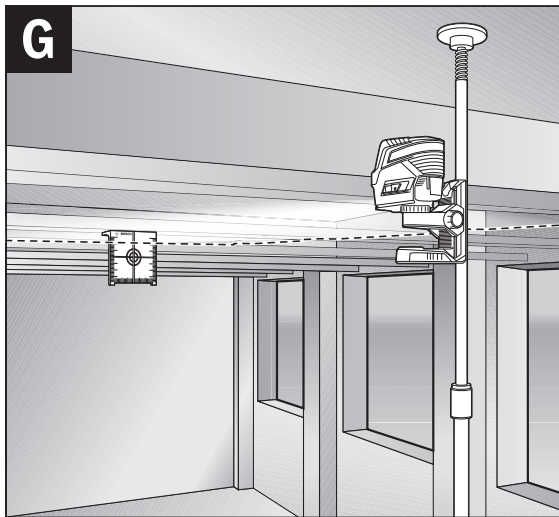
**For English Version  
See page 8**

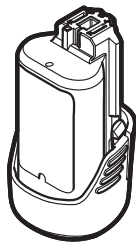




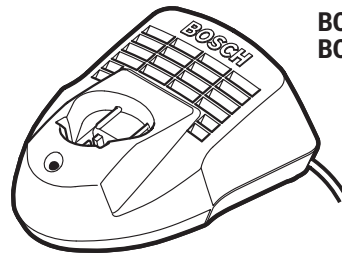








**BAT414  
BAT415**







**BC330  
BC430**



**GAL 12V-20**

## Safety Symbols

The definitions below describe the level of severity for each signal word. Please read the manual and pay attention to these symbols.

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	Read manual symbol - Alerts user to read manual.
	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	This symbol designates that this laser leveling tool complies with Part 15 of the FCC Rules.

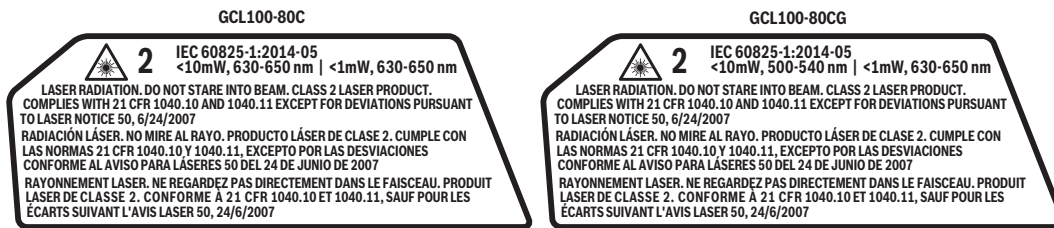
## General Safety Rules

**WARNING** Read all instructions. Failure to follow all instructions listed below may result in hazardous radiation exposure, electric shock, fire and/or serious injury.

### SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

The term “tool” in all of the warnings listed below refers to your mains-operated (corded) tool or battery-operated (cordless) tool.

**WARNING** The following labels are on your laser tool for your convenience and safety. They indicate where the laser light is emitted by the tool. ALWAYS BE AWARE of their location when using the tool.



**Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself.** This tool produces laser class 2 laser radiation and complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. This can lead to persons being blinded.

**DO NOT remove or deface any warning or caution labels.** Removing labels increases the risk of exposure to laser radiation.

Use of controls or adjustments or performance of procedures other than those specified in this manual, may result in hazardous radiation exposure.

**ALWAYS make sure that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser tool.**

**DO NOT place the laser tool in a position that may cause anyone to stare into the laser beam intentionally or unintentionally.** Serious eye injury could result.

**ALWAYS position the laser tool securely.** Damage to the laser tool and/or serious injury to the user could result if the laser tool fails.

**ALWAYS use only the accessories that are recommended by the manufacturer of your laser tool.** Use of accessories that have been designed for use with other laser tools could result in serious injury.

**DO NOT use this laser tool for any purpose other than those outlined in this manual.** This could result in serious injury.

**DO NOT leave the laser tool “ON” unattended in any operating mode.**

**DO NOT disassemble the laser tool.** There are no user serviceable parts inside. Do not modify the product in any way. Modifying the laser tool may result in hazardous laser radiation exposure.

**DO NOT use the laser viewing glasses as safety goggles.** The laser viewing glasses are used for improved visualization of the laser beam, but they do not protect against laser radiation.

**DO NOT use the laser viewing glasses as sun glasses or in traffic.** The laser viewing glasses do not afford complete UV protection and reduce color perception.

**DO NOT use any optical tools such as, but not limited to, telescopes or transits to view the laser beam.** Serious eye injury could result.

**DO NOT stare directly at the laser beam or project the laser beam directly into the eyes of others.** Serious eye injury could result.

### Work area safety

**Keep work area clean and well lit.** Cluttered or dark areas invite accidents.

**DO NOT operate the laser tool around children or allow children to operate the laser tool.** Serious eye injury could result.

**DO NOT use laser tools, attachments and accessories outdoors when lightning conditions are present.**

**Do not operate the laser tool in explosive environments, such as in the presence of flammable liquids, gases or dusts.** Sparks can be created in the laser tool which may ignite the dust or fumes.

### Electrical safety

**⚠ WARNING** Batteries can explode or leak, cause injury or fire. To reduce this risk, always follow all instructions

and warnings on the battery label and package.

**DO NOT expose the laser tool and battery to rain or wet conditions.** Water entering laser tool will increase the risk of fire and personal injury.

**DO NOT short any battery terminals.**

**DO NOT mix battery chemistries.**

**Dispose of or recycle batteries per local code.**

**DO NOT dispose of batteries in fire.**

**Keep batteries out of reach of children.**

**Remove batteries if the device will not be used for several months.**

### Personal safety

**If laser radiation strikes your eye, you must deliberately close your eyes and immediately turn your head away from the beam.**

**Do not make any modifications to the laser equipment.**

**Stay alert, watch what you are doing and use common sense when operating a tool.** **Do not use a tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating a tool may result in serious personal injury or incorrect measurement results.

**Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

**Use caution when using laser tools in the vicinity of electrical hazards.**

**Prevent unintentional starting. Ensure the switch is in the off-position before inserting batteries.** Accidental energizing laser tool that have the switch on invites accidents.

### Magnets



**Keep the tool, positioning device RM 2 (18), BM 1 (21), laser receiver LR 6/LR8 (25), and laser target plate (24) away from cardiac pacemakers.** The magnets of the tool and laser target plate generate a field that can impair the function of cardiac pacemakers.

**Keep the tool, positioning device RM 2 (18), BM 1 (21), laser receiver LR 6/LR8 (25), and laser target plate (24)**

away from magnetic data medium and magnetically-sensitive equipment. The effect of the magnets of the tool and laser target plate can lead to irreversible data loss.

## Use and care

**Use the correct tool for your application.** The correct tool will do the job better and safer.

**Do not use the tool if the switch does not turn it on and off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.

**Store idle tool out of the reach of children and do not allow persons unfamiliar with the tool or these instructions to operate the tool.** Tools are dangerous in the hands of untrained users.

**Maintain tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the operation. If damaged, tool repaired before use.** Many accidents are caused by poorly maintained tools.

**Use the tool, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of tool, taking into account the working conditions and the work to be performed.** Use of the tool for operations different from those intended could result in a hazardous situation.

## Battery tool use and care

**Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

**Use laser tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

**When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make a**

**connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.

**Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

**Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, EXPLOSION or risk of injury.

**Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 265 °F (130 °C) may cause explosion.

**Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the BATTERY and increase the risk of fire.

**Disconnect the battery pack from the tool before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

**Do not modify or attempt to repair the tool or the battery pack except as indicated in the instructions for use and care.**

## Service

**Have your tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the tool is maintained.

**Develop a periodic maintenance schedule for tool. When cleaning a tool be careful not to disassemble any portion of the tool since internal wires may be misplaced or pinched or may be improperly mounted.** Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

**SAVE THESE INSTRUCTIONS.**

## Bluetooth®

**Do not use the laser tool with Bluetooth® in the vicinity of gas stations, chemical plants, areas where there is danger of explosion and areas subject to blasting. Do not use the laser measure with Bluetooth® in airplanes. Do not use the laser measure with Bluetooth® in the vicinity of medical devices. Avoid operation in the direct vicinity of the human body over longer periods**

**of time.** When using the laser measure with Bluetooth®, interference with other devices and systems, airplanes and medical devices (e.g., cardiac pacemakers, hearing aids) may occur.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Robert Bosch Tool Corporation is under license.

## FCC Caution



The manufacturer is not responsible for radio interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

**NOTE!** This equipment has been tested and found to comply with the limits for a Class B digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee

that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**“Exposure to Radio Frequency (RF) Signals:** The wireless device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limit for exposure to radio frequency (RF) energy set by the Ministry of Health (Canada), Safety Code 6. These limits are part of comprehensive guidelines and established permitted levels of RF energy for the general population.

## Industry Canada (IC)

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

## Intended Use

The tool is intended for determining and checking horizontal and vertical lines as well as plumb points. The measuring tool is suitable for indoor and outdoor use.

## Features

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

- |   |                                  |   |
|---|----------------------------------|---|
| <b>1</b> Exit opening for laser beam                  | <b>9</b> Battery pack*           | <b>19</b> Fine adjustment knob of rotating platform |
| <b>2</b> Indicator for <i>Bluetooth</i> ® connection  | <b>10</b> Laser warning label    | <b>20</b> Ceiling clip (BM 3)*                      |
| <b>3</b> <i>Bluetooth</i> ® button                    | <b>11</b> Serial number          | <b>21</b> Positioning device BM 1*                  |
| <b>4</b> Charging condition of battery pack           | <b>12</b> Tripod mount 1/4"      | <b>22</b> Laser viewing glasses*                    |
| <b>5</b> Working without automatic leveling indicator | <b>13</b> Guide groove           | <b>23</b> Protective pouch*                         |
| <b>6</b> Receiver mode button                         | <b>14</b> On/Off switch          | <b>24</b> Laser target plate                        |
| <b>7</b> Receiver mode indicator                      | <b>15</b> Guide rail             | <b>25</b> Laser receiver*                           |
| <b>8</b> Button for laser operating mode              | <b>16</b> Magnets                | <b>26</b> Hard Carrying Case*                       |
|   | <b>17</b> Fastening slot         | <b>27</b> Tripod BT 150*                            |
|   | <b>18</b> Rotating mount (RM 2)* | <b>28</b> Telescopic rod BP350*                     |

\*The accessories illustrated or described are not included as standard delivery.

## Technical Data

Laser Model	GCL100-80C	GCL100-80CG
Working range (typical) <sup>1)</sup>		
–without laser receiver	up to 100 ft (30 m)	up to 100 ft (30 m)
–with laser receiver	15-165 ft (5-50 m)	15-165 ft (5-50 m)
–Upward laser point	30 ft (10 m)	30 ft (10 m)
–Downward laser point	30 ft (10 m)	30 ft (10 m)
Leveling Accuracy		
–Laser lines	±1/8 in. at 30 ft (3 mm at 10 m)	±1/8 in. at 30 ft (3 mm at 10 m)
–Laser points	±9/32 in. at 30 ft (7 mm at 10 m)	±9/32 in. at 30 ft (7 mm at 10 m)
Self-leveling range (typical)	±4°	±4°
Leveling duration (typical)	<4s	<4s
Operating temperature	14 °F ~122 °F (–10 °C ~ +50 °C)	14 °F ~122 °F (–10 °C ~ +50 °C)
Storage temperature		
–Laser Level	–4 °F ~ 158 °F (–20 °C ~ +70 °C)	–4 °F ~ 158 °F (–20 °C ~ +70 °C)
–Battery	32 °F ~122 °F (0 °C ~ +50 °C)	32 °F ~122 °F (0 °C ~ +50 °C)
Charging temperature	32 °F ~ 113 °F (0 °C ~ +45 °C)	32 °F ~ 113 °F (0 °C ~ +45 °C)
Max. altitude	6560 ft (2000 m)	6560 ft (2000 m)
Relative air humidity, max.	90 %	90 %
Pollution degree according IEC 61010 <sup>4)</sup>	2	2
Laser class	2	2

Laser Model	GCL100-80C	GCL100-80CG
Laser type		
–Line	630-650 nm, <10 mW	500-540 nm, <10 mW
–Point	630-650 nm, <1 mW	630-650 nm, <1 mW
Tripod mount	1/4"-20	1/4"-20
Laser tool power supply		
– Battery pack (lithium-ion)	10.8 V/12 V	10.8 V/12 V
Battery Charger List		
–Rechargeable Batteries	BAT414, BAT415	BAT414, BAT415
–Chargers	BC330, BC430 GAX18V-30, GAL 12V-20	BC330, BC430 GAX18V-30, GAL 12V-20
Compatible laser receivers	LR 6, LR8	LR8
<i>Bluetooth</i> ® laser tool		
–Compatibility	<i>Bluetooth</i> ® (Low Energy) <sup>2)</sup>	<i>Bluetooth</i> ® (Low Energy) <sup>2)</sup>
<i>Bluetooth</i> ® smartphone		
–Compatibility	<i>Bluetooth</i> ® (Low Energy) <sup>2)</sup>	<i>Bluetooth</i> ® (Low Energy) <sup>2)</sup>
–Operating system	Android 4.3 (and above) iOS 7 (and above)	Android 4.3 (and above) iOS 7 (and above)
Weight	1.4 lb (0.62 kg)	1.4 lb (0.62 kg)
Dimensions	5.4" x 4.8" x 2.2" (136 x 122 x 55 mm)	5.4" x 4.8" x 2.2" (136 x 122 x 55 mm)
Degree of protection <sup>3)</sup>	IP 54 (dust and splash water protected)	IP 54 (dust and splash water protected)

1) The working range can be decreased by unfavourable environmental conditions (e.g. direct sun irradiation).

2) For *Bluetooth*® low energy devices, establishing a connection may not be possible, depending on model and operating system. *Bluetooth*® devices must support the SPP profile.

3) Battery port and battery packs not included.

4) Conductive pollution occurs, or dry, non-conductive pollution occurs which becomes conductive due to condensation, which is expected. In such conditions, equipment is normally protected against exposure to direct sunlight, precipitation, and full wind pressure, but neither temperature nor humidity is controlled.

Technical data determined with battery from delivery scope (BAT414).

The laser tool can be clearly identified with the serial number **11** on the type plate.

## Preparation

### Laser Tool Power Supply

The laser tool can only be operated with a Bosch rechargeable lithium-ion battery pack.

#### Operation with Bosch Rechargeable Lithium-ion Battery Pack

**⚠ WARNING** Use only Bosch rechargeable lithium-ion battery packs listed in the technical data section of this manual. Use of other battery packs may increase the risk of fire, personal injury and property damage.

**Note:** The battery pack is supplied partially charged. To ensure full capacity of the battery pack, completely charge the battery pack in the battery charger before using for the first time.

**⚠ WARNING** Use only Bosch chargers listed in the technical data section of this manual. Use of other chargers may increase the risk of fire, personal injury and property damage.

The lithium-ion battery pack can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery pack.

The “Electronic Cell Protection (ECP)” protects the lithium-ion battery pack against deep discharging. When the battery pack is discharged, the laser tool is switched off by a protective circuit.

• **Do not switch the laser tool back on after it has been switched off by the protective circuit.** The battery pack can be damaged.

To insert the charged battery pack **9**, align battery pack and slide it into the battery port until it locks into position. Don't force.

To remove the battery pack **9**, press the battery release tabs and pull the battery pack out of the battery port. **Do not use force to do this.**

### Battery Status Indicator

The battery status indicator **4** shows the charge condition of the battery pack or batteries:

LED	Charge Condition
Continuous lighting, green	100–75 %
Continuous lighting, yellow	75–35 %
Continuous lighting, red	35–10 %
No light	– Battery pack defective – Batteries empty

If the battery pack is running low, the laser lines will gradually become dimmer.

Immediately replace a fault battery pack.

### Working with Rotating Mount RM2 (see figures A1 – A3)

You can use the rotating mount **18** to rotate the measuring tool 360° around a central, always visible plumb point. This enables you to align the laser lines precisely, without having to change the position of the measuring tool.

You can use the fine adjustment knob **19** to align vertical laser lines precisely with reference points.

Place the measuring tool with the guide groove **13** on the guide rail **15** of the rotating mount **18** and slide the measuring tool to the stop onto the platform.

To disconnect, pull the measuring tool in the opposite direction from the rotating mount.

Positioning possibilities of the rotating mount:

- standing on a flat surface,
- screwed to a vertical surface,
- on metallic surfaces using the magnets **16**,
- on metallic ceiling strips using the ceiling clip **20**.

# Operation

## Initial Operation

- **Protect the tool against moisture and direct sun light.**
- **Do not subject the tool to extreme temperatures or variations in temperature.** As an example, do not leave it in vehicles for longer periods. In case of large variations in temperature, allow the tool to adjust to the ambient temperature before putting it into operation. In case of extreme temperatures or variations in temperature, the accuracy of the tool can be impaired.
- **Avoid heavy impact or dropping of the tool.** After heavy exterior impact on the tool, an accuracy check should always be carried out before continuing to work (see "Leveling Accuracy").
- **Switch the tool off during transport.** When switching off, the leveling unit is locked to help prevent damage in case of intense movement.

## Switching On and Off

**⚠ WARNING** Do not point the laser beam at persons or animals and do not look into the laser beam yourself, not even from a large distance.

**⚠ WARNING** Do not leave the switched on tool unattended and switch the tool off after use.

To **switch on** the measuring tool, slide the On/Off switch **14** to position "On" (for working without automatic leveling) or to position "On" (for working with automatic leveling). As soon as it is switched on, the measuring tool emits laser lines from the exit openings **1**.

To **switch off** the measuring tool, slide the On/Off switch **14** to position "Off".

The pendulum unit is locked when the tool is switched off.

When exceeding the maximum permitted operating temperature of 122 °F (50 °C), the measuring tool switches off to protect the laser diode. After cooling down, the measuring tool is ready for operation and can be switched on again.

## Automatic Shut-off

When no button on the measuring tool is pressed for approx. 120 minutes, the measuring tool automatically switches off to save the batteries.

To switch the measuring tool back on after automatic shut-off, you can either slide the On/Off switch **14** to position "Off" first and then switch the measuring tool back on, or press button **8**.

## Temporarily Deactivating Automatic Shut-Off

To deactivate automatic shut-off, hold down button **8** for at least 3 s with the measuring tool switched on. If automatic shut-off is deactivated, the laser lines will flash briefly as confirmation.

Note: If the operating temperature exceeds 113°F (45°C), automatic shut-off can no longer be deactivated.

After the next time the measuring tool is switched off and on, the automatic shut-off will be activated again.

## Setting the operating mode (see figures B1–F1)

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

- **Cross-line and point operation:** The measuring tool generates a horizontal and a vertical laser line facing forward, a vertical laser point facing upward and a vertical laser point facing downward.

The laser lines cross at a 90° angle.

- **Horizontal line operation:** The measuring tool generates a horizontal laser line facing forward.
- **Vertical line operation:** The measuring tool generates a vertical laser line facing forward.

If the measuring tool is positioned in the room, the vertical laser line is displayed on the ceiling beyond the upper laser point.

If the measuring tool is positioned directly against a wall, the vertical laser line generates an almost completely allround laser line (360° line).

- **Point operation:** The measuring tool generates a vertical laser point facing upward and a vertical laser point facing downward.

Use button **8** to switch between the individual operating modes, see table on page 24.

All modes except for point operation can be selected both with and without automatic leveling.

### Receiver Mode

Receiver mode must be activated to work with the laser receiver **25**, –regardless of which operating mode is selected–.

In receiver mode the laser lines flash at very high frequency, enabling them to be detected by the laser receiver **25**.

To switch on receiver mode, press button **6**. Indicator **7** will light up green.

When receiver mode is switched on, the laser lines are less visible to the human eye. For this reason, switch receiver mode off by pressing button **6** again to work without a laser receiver. Indicator **7** will extinguish.

## Automatic Leveling

### Working with Automatic Leveling (see figures B1–E1)

After switching on, the leveling function automatically compensates irregularities within the self-leveling range of  $\pm 4^\circ$ . The measuring tool is leveled in as soon as the laser lines no longer flash.

If the automatic leveling function is not possible, e.g. because the surface on which the measuring tool stands deviates by more than  $4^\circ$  from the horizontal plane, the laser beams flash. In this case, bring the measuring tool to the level position and wait for the self-leveling to take place.

In case of ground vibrations or position changes during operation, the measuring tool is automatically leveled in again. To avoid errors by moving the measuring tool, check the position of the laser beams with regard to the reference points upon re-leveling.










Position the measuring tool on a level, firm support or attach it to the rotating mount **18**.

For work with automatic leveling, slide the On/Off switch **14** to position “On”.

If the measuring tool is outside of the self-leveling range, the laser lines and/or points will flash quickly.

If you deactivate automatic leveling (On/Off switch **14** to position “Off”), the measuring tool will switch to cross-line operation.

### Working with Automatic Levelling

	Horizontal line operation	Vertical line operation	Point operation	Indicator 5 for working without automatic levelling	Figure
On/Off switch <b>14</b> in position “On”	● Cross-line operation	●	●		<b>B1</b>
 Press 1 time	●	–	–		<b>C1</b>
 Press 2 times	–	●	–		<b>D1</b>
 Press 3 times	–	–	●		<b>E1</b>
 Press 4 times	● Cross-line operation	●	●		<b>B1</b>

### Working without Automatic Leveling (see figure F1)








When automatic leveling is switched off, you can hold the measuring tool freely in your hand or place it on an inclined surface. The laser beams no longer necessarily run vertical to each other.

For work without automatic leveling, slide the On/Off switch **14** to position “On”.

The laser lines will flash slowly.

If you activate automatic leveling (On/Off switch **14** to position “On”), the measuring tool will switch to cross-line operation with point operation.

### Working without Automatic Levelling

	Horizontal line operation	Vertical line operation	Point operation	Indicator 5 for working without automatic levelling	Figure
On/Off switch <b>14</b> in position “On”	● Cross-line operation	●	–	 red	<b>F1</b>
 Press 1 time	●	–	–	 red	
 Press 2 times	–	●	–	 red	
 Press 3 times	● Cross-line operation	●	–	 red	<b>F1</b>

### Remote control via the “Leveling Remote App”

The laser tool is equipped with a *Bluetooth*® module which uses radio technology to enable remote control via a smartphone with a *Bluetooth*® interface.

The “Leveling Remote App” application (app) is needed to use this function. You can download this in the app store for your terminal device (Apple App Store, Google Play Store).

For information on the necessary system requirements for a *Bluetooth*® connection, please refer to the Bosch website.

When remote controlling by means of *Bluetooth*®, time lags may occur between mobile terminal/device and laser tool as a result of poor reception conditions.

### Switching On *Bluetooth*®

**Do not turn on laser**  
**WARNING** When using the Bosch app, the sudden bright laser beam may increase the risk of personal injury or property damage.

Ensure there are no bystanders in the direct path of the laser beam before turning on the laser remotely.

To switch on *Bluetooth*® for the remote control, press the *Bluetooth*®-button **3**. Ensure that the *Bluetooth*® interface is activated on your mobile terminal/device.

After starting the Bosch application, the connection between the mobile terminal/device and the laser tool is established. When several active laser tools are found, select the appropriate laser tool. When only one active laser tool is found, the connection is automatically established.

The connection is established as soon as the *Bluetooth*® indicator **2** lights up.

The *Bluetooth*® connection may be interrupted if there is too much distance or there are obstacles between laser tool and mobile terminal/device and if there are any electromagnetic interference sources. In this case, the *Bluetooth*® indicator flashes.

### Switching Off *Bluetooth*®

To switch off *Bluetooth*® for the remote control, press the *Bluetooth*®-button **3** or switch off the laser tool.

# Accuracy Check of the Laser Tool

## Influences on Accuracy

The ambient temperature has the greatest influence. Especially temperature differences occurring from the ground upward can divert the laser beam.

Because the largest difference in temperature layers is close to the ground, the tool should always be mounted on a tripod when distances exceeding 65 ft (20 m). If possible, also set up the tool in the center of the work area.

Apart from exterior influences, device-specific influences (such as heavy impact or falling down) can lead to deviations. Therefore, check the accuracy of the tool each time before starting your work.

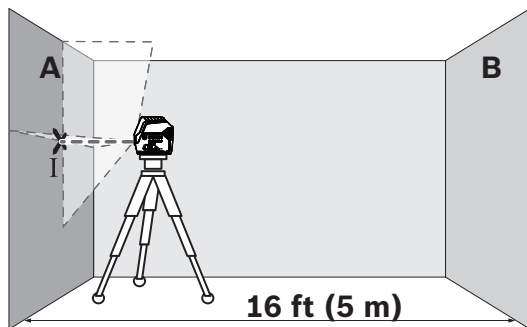
Firstly, check the leveling accuracy of the horizontal laser line and then the leveling accuracy of the vertical laser line.

Should the tool exceed the maximum deviation during one of the tests, please have it repaired by a Bosch after-sales service.

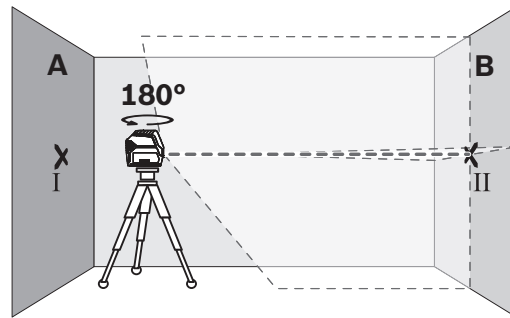
## Checking the Height Accuracy of the Horizontal Line

A free measuring distance of 16 ft (5 m) on a firm surface in front of two walls A and B is required for the check.

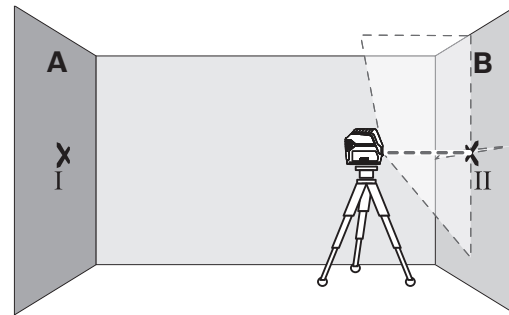
- Mount the tool onto a tripod, or place it on a firm and level surface close to the wall A. Switch the tool on. Select cross-line operation with automatic leveling.



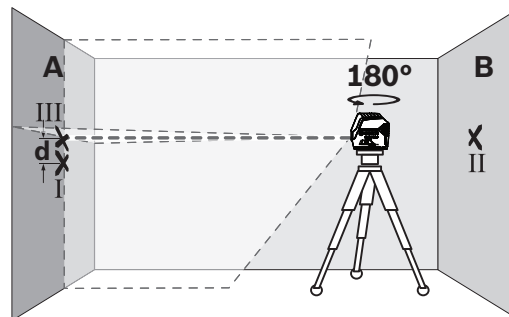
- Direct the laser against the close wall A and allow the tool to level in. Mark the center of the point where the laser lines cross each other on the wall (point I).



- Turn the tool by 180°, allow it to level in and mark the cross point of the laser lines on the opposite wall B (point II).
- Without turning the tool, position it close to wall B. Switch the tool on and allow it to level in.



- Align the height of the tool (using a tripod or by underlaying, if required) in such a manner that the cross point of the laser lines is projected against the previously marked point II on the wall B.



- Without changing the height, turn around the tool by 180°. Direct it against the wall A in such a manner that the vertical laser line runs through the already marked point I. Allow the tool to level in and mark the cross point of the laser lines on the wall A (point III).
- The difference **d** of both marked points I and III on wall A results in the actual height deviation of the tool.

The maximum permitted deviation  $d_{max}$  can be calculated as follows:

$d_{MAX} = \text{double the distance between the walls} \times 0.004 \text{ in/ft}$

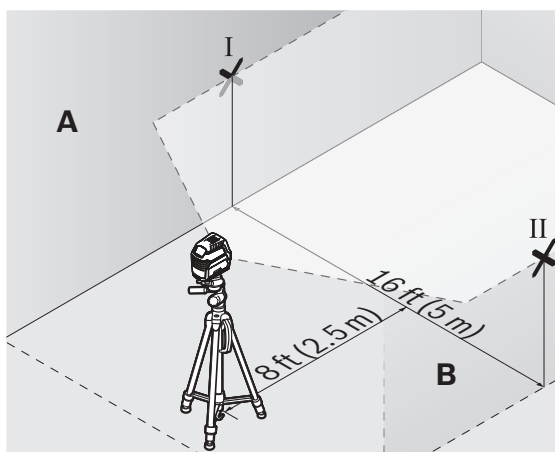
Example: If the distance between the walls is 16 ft (5 m), the maximum deviation is

$d_{MAX} = 2 \times 16 \text{ ft} \times 0.004 \text{ in/ft} = 1/8 \text{ in}$ . The marks must therefore be maximum 1/8 in. apart.

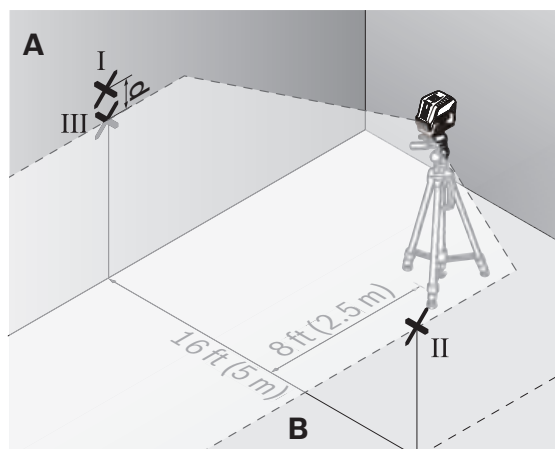
### Checking the Leveling Accuracy of the Horizontal Line

For the check, a free surface of approx. 16 x 16 ft (5 x 5 m) is required.

- Set up the measuring tool on a firm, level surface between both walls A and B. Allow the measuring tool to level in while in horizontal operation.



- At a distance of 8 ft (2.5 m) from the measuring tool, mark the centre of the laser line (point I on wall A and point II on wall B) on both walls.



- Set up the measuring tool 16 ft (5 m) away turned by 180° and allow it to level in.

- Align the height of the measuring tool (using a tripod or by underlaying, if required) in such a manner that the centre of the laser line is projected exactly against the previously marked point II on wall B.
- Mark the centre of the laser line as point III (vertically above or below point I) on the wall A.
- The difference  $d$  of both marked points I and III on wall A indicates the actual deviation of the measuring tool from the level plane.

The maximum permitted deviation  $d_{max}$  can be calculated as follows:

$d_{MAX} = \text{double the distance between the walls} \times 0.004 \text{ in/ft}$

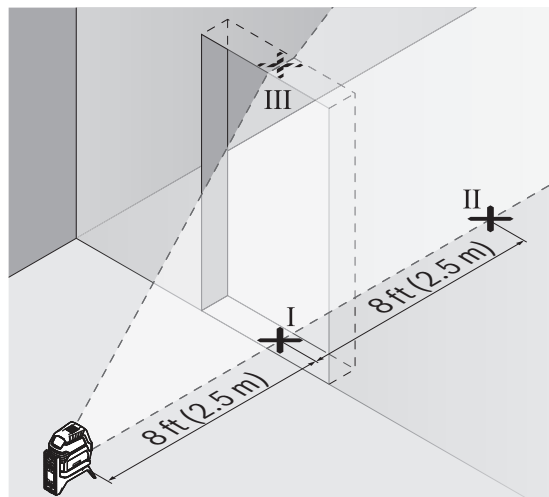
Example: If the distance between the walls is 16 ft (5 m), the maximum deviation is

$d_{MAX} = 2 \times 16 \text{ ft} \times 0.004 \text{ in/ft} = 1/8 \text{ in}$ . The marks must therefore be maximum 1/8 in. apart.

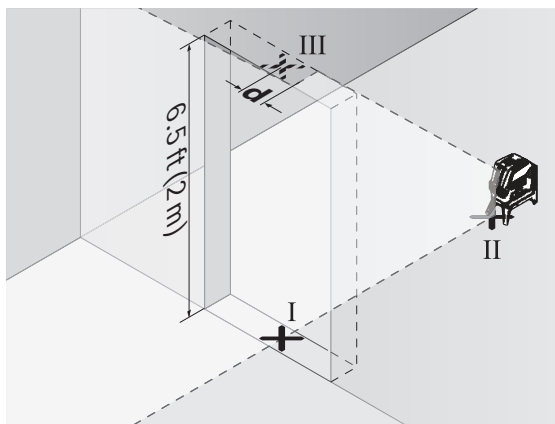
### Checking the Leveling Accuracy of the Vertical Line

For this check, a door opening is required with at least 8 ft (2.5 m) of space (on a firm surface) to each side of the door.

- Position the tool on a firm, level surface (not on a tripod) 8 ft (2.5 m) away from the door opening. Allow the tool to level in while in vertical operation with automatic leveling, and direct the laser beam at the door opening.



- Mark the center of the vertical laser line at the floor of the door opening (point I), at a distance of 16 ft (5 m) beyond the other side of the door opening (point II) and at the upper edge of the door opening (point III).



- Rotate the tool by 180° and position it on the other side of the door opening directly behind point II. Allow the tool to level in and align the vertical laser line in such a manner that its center runs exactly through points I and II.
- Mark the center of the laser line at the upper edge of the door opening as point IV.
- The difference **d** of both marked points III and IV results in the actual deviation of the tool to the plumb line.
- Measure the height of the door opening. The maximum admissible deviation is calculated as follows:

Repeat the measuring procedure for the second vertical laser plane. For this, select an operating mode in which a vertical laser plane is generated aside of the tool. Turn the tool 90° before beginning with the measuring procedure.

Doubled height of the door opening x 0.004 in/ft

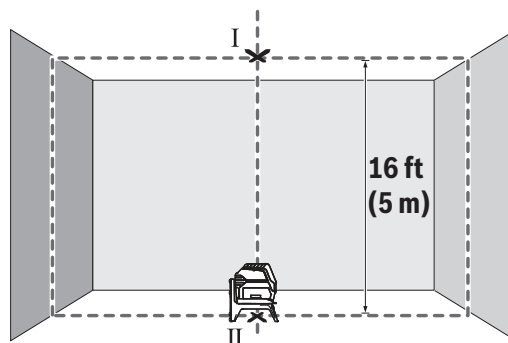
Example: For a door-opening height of 6.5ft, the maximum deviation may be

$2 \times 6.5 \text{ ft} \times \pm 0.004 \text{ in/ft} = \pm 1/16 \text{ in}$ . Consequently, points III and IV may be no more than 1/16 in (max.) apart from each other.

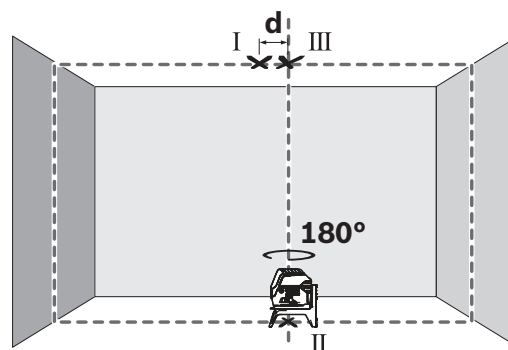
## Checking Plumb Accuracy

For this check, a free measuring distance of approx. 16 ft (5m) between floor and ceiling on a firm surface is required.

- Mount the measuring tool onto the rotating mount and place it on the floor.
- Switch the measuring tool on and allow it to level.



- Mark the centre of the upper crossing point on the ceiling (point I). Also mark the centre of the bottom laser point on the floor (point II).



- Rotate the measuring tool 180°. Position it so that the centre of the lower laser point is on the point II which has already been marked. Allow the measuring tool to level.

Mark the centre of the upper laser point (point III).

- The difference **d** of both marked points I and III on the ceiling results in the actual deviation of the measuring tool to the plumb line.

The maximum permitted deviation **d<sub>max</sub>** can be calculated as follows:

**d<sub>MAX</sub>** = double the distance between floor and ceiling x 0.009 in/ft

Example: If the distance from the floor to the ceiling is 5m, the maximum deviation is

**d<sub>MAX</sub>** =  $2 \times 16 \text{ ft} \times 0.009 \text{ in/ft} = 9/32 \text{ in}$ . The marks must therefore be maximum 9/32 in. apart.

## Working Advice

- **For marking, always use only the center of the laser point or the laser line.** The size of the laser point as well as the width of the laser line change with distance.
- **The measuring tool is equipped with a radio interface. Local operating restrictions, e.g. in airplanes or hospitals, are to be observed.**

### 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 **12** on the thread of the tripod **27** or a conventional camera tripod. Tighten the measuring tool using the locking screw of the tripod.

Adjust the tripod roughly before switching on the measuring tool.

### Fastening with the Universal Holder (Accessory) (see figure G)

With the BM 1 positioning device **21**, you can fasten the measuring tool, e.g., to vertical surfaces, pipes or magnetisable materials. The universal holder is also suitable for use as a ground tripod and makes the height adjustment of the measuring tool easier.

Adjust the BM 1 positioning device **21** roughly before switching on the measuring tool.

### Working with the Laser Target Plate (see figure G)

The laser target plate **24** increases the visibility of the laser beam under unfavourable conditions and at large distances.

The reflective part of the laser target plate **24** improves the visibility of the laser line. Thanks to the transparent part, the laser line is also visible from the back side of the laser target plate.

### Laser Viewing Glasses (Accessory)

The laser viewing glasses filter out ambient light. This enhances the laser visibility for the eye.

- **Do not use the laser viewing glasses as safety goggles.** The laser viewing glasses are used for improved visualization of the laser beam, but they do not protect against laser radiation.
- **Do not use the laser viewing glasses as sun glasses or in traffic.** The laser viewing glasses do not afford complete UV protection and reduce color perception.

### Work Examples (see figures B2–F2, G and H)

Applicational examples for the measuring tool can be found on the graphics pages.

Always position the measuring tool close to the surface or edge you want to check, and allow it to level in prior to each measurement.

## Maintenance and Service

Store and transport the tool only in the supplied protective case.

Keep the tool clean at all times.

Do not immerse the tool into water or other fluids.

Wipe off debris using a moist and soft cloth. Do not use any cleaning agents or solvents.

Regularly clean the surfaces at the exit opening of the laser in particular, and pay attention to any fluff of fibers.

If the tool should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an authorized after-sales service center for Bosch power tools.

In all correspondence and spare parts orders, please always include the 10-digit article number given on the type plate of the tool.

In case of repairs, send in the tool packed in its protective pouch **23**.

### ENVIRONMENT PROTECTION



Recycle raw materials & batteries instead of disposing of waste. The unit, accessories, packaging & used batteries should be sorted for environmentally friendly recycling in accordance with the latest regulations.

## LIMITED WARRANTY OF BOSCH LASER AND MEASURING TOOL PRODUCTS

Robert Bosch Tool Corporation ("Seller") warrants to the original purchaser only, that all Bosch lasers and measuring tools will be free from defects in material or workmanship for a period of one (1) year from date of purchase. Bosch will extend warranty coverage to two (2) years when you register your product within eight (8) weeks after date of purchase. Product registration card must be complete and mailed to Bosch (postmarked within eight weeks after date of purchase), or you may register on-line. If you choose not to register your product, a one (1) year limited warranty will apply to your product.

### **30 Day Money Back Refund or Replacement -**

If you are not completely satisfied with the performance of your laser and measuring tools, for any reason, you can return it to your Bosch dealer within 30 days of the date of purchase for a full refund or replacement. To obtain this 30-Day Refund or Replacement, your return must be accompanied by the original receipt for purchase of the laser or optical instrument product. A maximum of 2 returns per customer will be permitted.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or misrepaired by persons other than Seller or Authorized Service Center. To make a claim under this Limited Warranty, you must return the complete Bosch laser or measuring tool, transportation prepaid, to any BOSCH Factory Service Center or Authorized Service Center. Please include a dated proof of purchase with your tool. For locations of nearby service centers, please use our on-line service locator.

THIS WARRANTY PROGRAM DOES NOT APPLY TO TRIPODS AND RODS. Robert Bosch Tool Corporation ("Seller") warrants tripods and leveling rods for a period of one (1) year from date of purchase.

THIS LIMITED WARRANTY DOES NOT APPLY TO OTHER ACCESSORY ITEMS AND RELATED ITEMS. THESE ITEMS RECEIVE A 90 DAY LIMITED WARRANTY.

To make a claim under this Limited Warranty, you must return the complete product, transportation prepaid. For details to make a claim under this Limited Warranty please visit.

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