

IMPORTANT:
Read Before Using

IMPORTANT :
Lire avant usage

IMPORTANTE:
Leer antes de usar

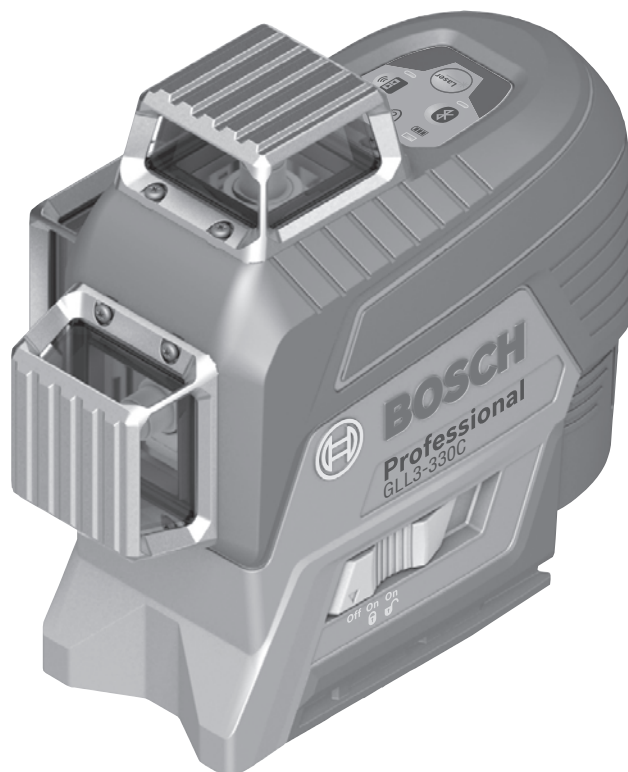


Operating/Safety Instructions

Consignes de fonctionnement/sécurité

Instrucciones de funcionamiento y seguridad

GLL3-330C
GLL3-330CG



BOSCH

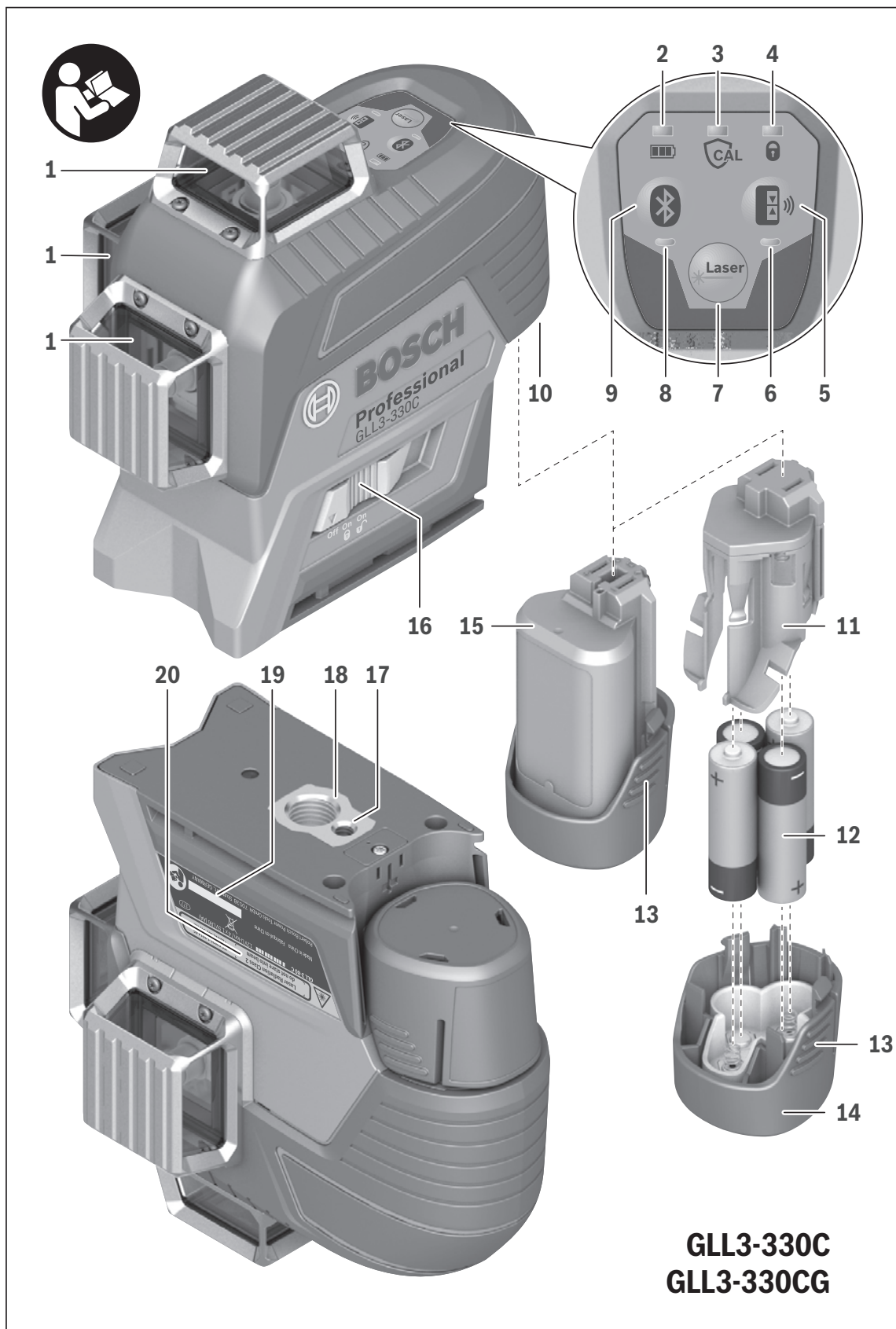
**Call Toll Free
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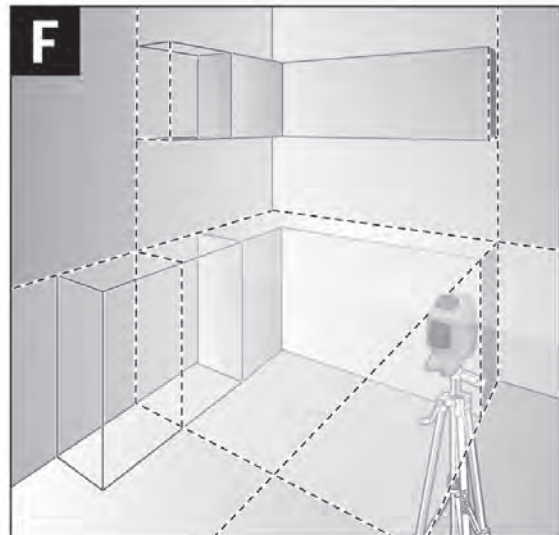
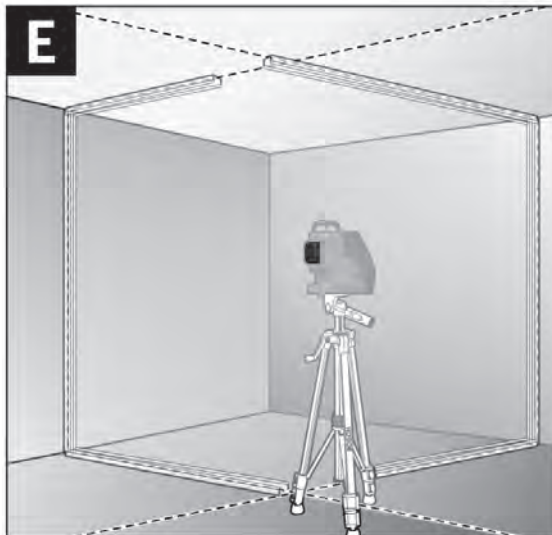
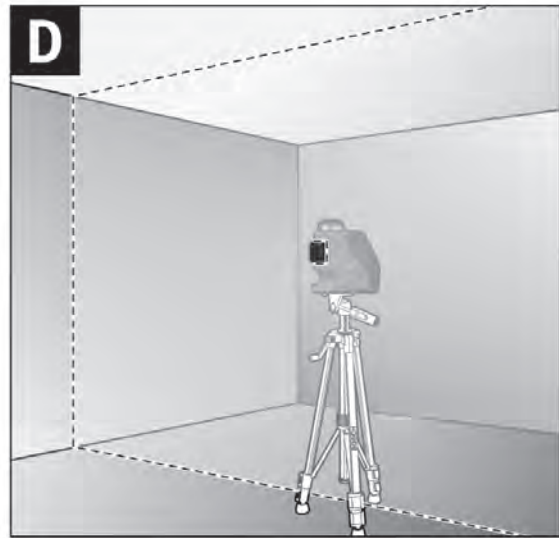
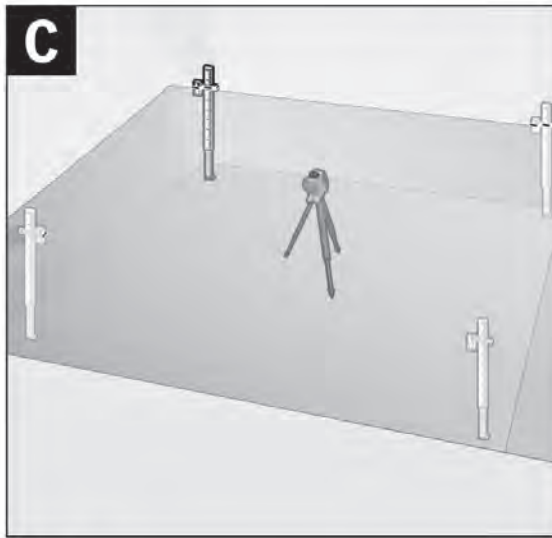
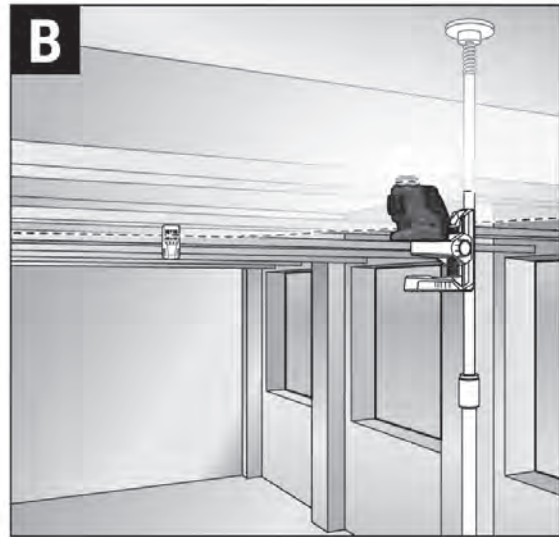
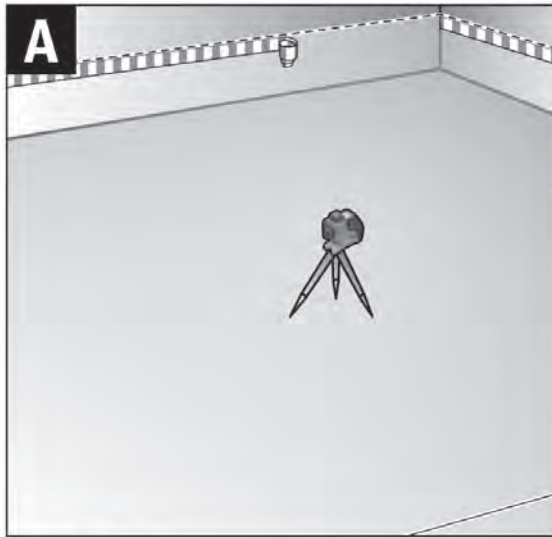
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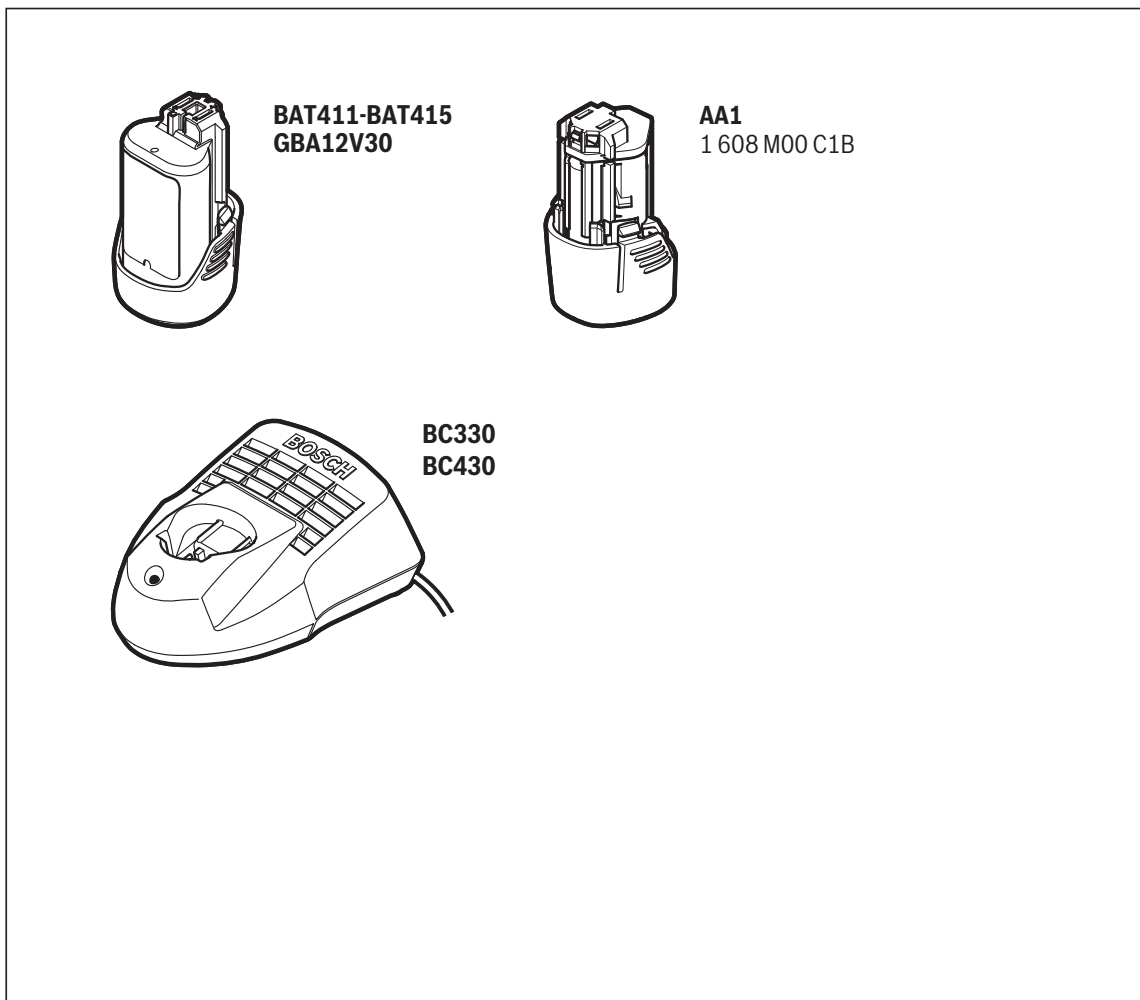
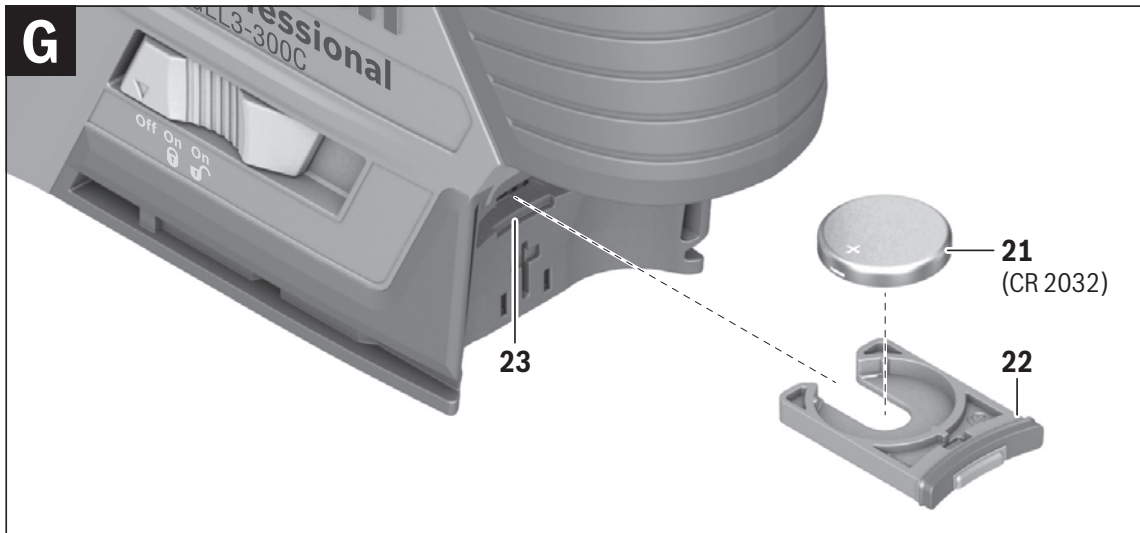
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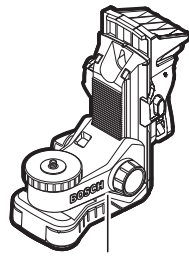
**For English Version
See page 5**

**Version française
Voir page 19**









24
BM 1
0 601 015 A01

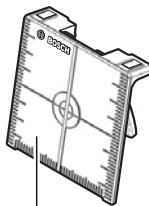


LR 6
0 601 069 H10



LR 8
0 601 069 J11

25



26

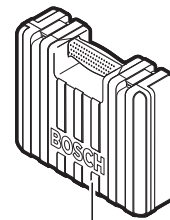


27

1 608 M00 05B
(GLL3-330C)
1 608 M00 05J
(GLL3-330CG)



28



29
6 082 762 25N







30
BT 150
0 601 096 B00



31
BP350
0 601 015 B00

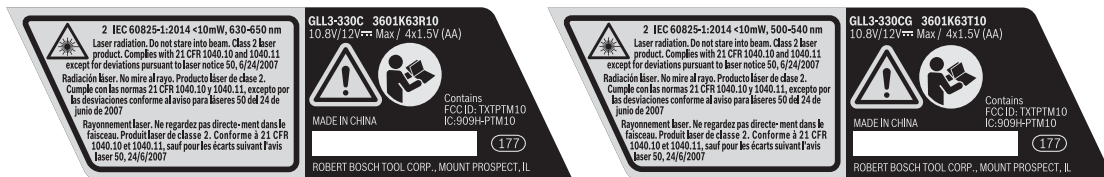
Safety Symbols

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. 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 charge alkaline batteries.

DO NOT mix old and new alkaline batteries. Replace all of them at the same time with new batteries of the same brand and type.

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.

⚠ WARNING Chemical Burn Hazard. Keep lithium button/coin batteries away from children. This product contains a lithium button/coin cell battery. If a new or used lithium button/coin cell battery is swallowed or enters the body, it can cause severe internal burns and can lead to death in as little as 2 hours. Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

Magnets



Keep the tool, positioning device BM 1 24, laser receiver LR 6/LR8 25, and laser target plate 26 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 BM 1 24, laser receiver LR 6/LR8 25, and laser target plate 26 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.

Noise Information

The A-weighted sound pressure level of the audio signal at one meter distance is 80dB(A). **Do not hold the laser tool close to your ear!**

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 behaviour 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.

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.

Features

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

1 Exit opening for laser beam	10 Battery port	20 Laser warning label
2 Charging condition of battery pack/batteries	11 Battery adapter cover*	21 Button cell
3 CAL guard indicator	12 Batteries*	22 Button cell holder
4 Working without automatic leveling indicator	13 Battery release tab for battery pack/battery adapter*	23 Button cell port
5 Receiver mode button	14 Battery adapter sealing cap*	24 Positioning device BM 1*
6 Receiver mode indicator	15 Battery pack*	25 Laser receiver*
7 Button for laser operating mode	16 On/Off switch	26 Laser target plate*
8 Indicator for <i>Bluetooth</i> ® connection	17 Tripod mount 1/4"	27 Laser viewing glasses*
9 <i>Bluetooth</i> ® button	18 Tripod mount 5/8"	28 Protective pouch*
	19 Serial number	29 Hard Carrying Case
		30 Tripod BT 150*
		31 Telescopic rod BP350*

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

Technical Data

Laser Line	GLL3-330C	GLL3-330CG
Working range (typical) ¹⁾		
–without laser receiver (diameter)	200 ft (60m)	200 ft (60m)
–with laser receiver (diameter)	15-330 ft (5-100m)	15-330 ft (5-100m)
Leveling Accuracy (typical)	±3/32 in. at 30 ft (±2.40 mm at 10 m)	±3/32 in. at 30 ft (±2.40 mm at 10 m)
Self-leveling range (typical)	±4°	±4°
Leveling duration (typical)	<4s	<4s
Operating temperature ⁴⁾	14 °F ~ 104 °F (–10 °C ~ +40 °C)	14 °F ~ 104 °F (–10 °C ~ +40 °C)
Storage temperature	–4 °F ~ 158 °F (–20 °C ~ +70 °C)	–4 °F ~ 158 °F (–20 °C ~ +70 °C)
Relative air humidity, max.	90 %	90 %
Laser class	2	2
Laser type	630-650 nm, <10 mW	500-540 nm, <10 mW
Tripod mount	1/4"-20, 5/8"-11	1/4"-20, 5/8"-11
Laser tool power supply		
– Battery pack (lithium-ion)	10.8 V/12 V	10.8 V/12 V
– Batteries (alkali-manganese)	4 x 1.5 V LR6 (AA) (with battery adapter)	4 x 1.5 V LR6 (AA) (with battery adapter)
Operating time with 3 laser levels ²⁾		
–with battery pack (BAT414)	8 h	6 h
–with batteries	6 h	4 h

Laser Line	GLL3-330C	GLL3-330CG
Bosch rechargeable battery packs	BAT411-BAT415 GBA12V30	BAT411-BAT415 GBA12V30
Bosch battery chargers	BC330 BC430 GAX18V-30	BC330 BC430 GAX18V-30
TrackMyTools <i>Bluetooth</i> ® module power supply –Button cell	CR2032 (3 V lithium battery)	CR2032 (3 V lithium battery)
<i>Bluetooth</i> ® laser tool –Compatibility	<i>Bluetooth</i> ® (Low Energy) ³⁾	<i>Bluetooth</i> ® (Low Energy) ³⁾
<i>Bluetooth</i> ® smartphone –Compatibility –Operating system	<i>Bluetooth</i> ® (Low Energy) ³⁾ Android 4.3 (and above) iOS 7 (and above)	<i>Bluetooth</i> ® (Low Energy) ³⁾ Android 4.3 (and above) iOS 7 (and above)
Weight	2lb (900g)	2lb (900g)
Dimensions	6.4" x 3.3" x 5.8" (162 x 84 x 148 mm)	6.4" x 3.3" x 5.8" (162 x 84 x 148 mm)
Degree of protection ⁵⁾	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) Shorter operating times in *Bluetooth*® operation.

3) 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.

4) limited performance at temperatures < 32 F (0 C).

5) Battery port and battery packs not included.

Technical data determined with battery from delivery scope.

The laser tool can be clearly identified with the serial number **19** on the type plate.

Preparation

Laser Tool Power Supply

The laser tool can either be operated with commercially available LR 6 (AA) batteries or 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 **15**, align battery pack and slide it into the battery port until it locks into position. Don't force.

To remove the battery pack **15**, press the battery release tab **13** and pull the battery pack out of the battery port **10**. **Do not use force to do this.**

Operation with LR 6 (AA) Batteries

Alkali-manganese batteries are recommended for the laser tool.

The batteries are inserted into the battery adapter.

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

To insert the batteries, slide the cover **11** of the battery adapter into the battery port **10**. Place the batteries in the cover as shown in 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 battery release tab **13** of the sealing cap **14** and pull off the sealing cap. Make sure that the

batteries do not fall out. To do so, hold the laser tool with the battery port **10** facing upward. Remove the batteries.

To remove the inside cover **11** from the battery port **10**, reach into the cover and pull it out of the laser tool by applying light pressure to the side wall.

Always replace all batteries at the same time. Only use batteries from one brand and with the identical capacity.

- **Remove the batteries from the laser tool when not using it for extended periods.** When storing for extended periods, the batteries can corrode and self-discharge.

Battery Status Indicator

The battery status indicator **2** 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 or the batteries are running low, the laser lines will gradually become dimmer.

Immediately replace a fault battery pack or empty batteries.

Button Cell Activation/Replacement

To enable the communication of this laser leveling tool in the off state to a mobile terminal/device, the laser leveling tool is equipped with a button cell.

To activate the included button cell:

1. Remove the button cell holder **22** from the button cell port **23**.
2. Remove the protective film from the button cell **21**.
3. Insert the button cell **21** (CR 2032) into the button cell holder **22**. Make sure that the positive pole is pointing upwards.
4. Insert the button cell holder **22** into the button cell port **23**.
5. Ensure button cell holder **22** is secured into button cell port **23**.

When replacing a button cell, follow step 1 and steps 3-5.

When the button cell runs out of energy, the app displays a warning.

⚠ WARNING Chemical Burn Hazard. Keep lithium button/coin batteries away from children. This product contains a lithium button/coin cell battery. If a new or used lithium button/coin cell battery is swallowed or enters the body, it can cause severe internal burns and can lead to death in as little as 2 hours. Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

Operation

Initial Operation

- **Loud audio signals will sound under certain conditions while operating the tool. Therefore, keep the tool away from your ear or other persons.** The loud audio signal can cause hearing damage.
- **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, which can be damaged in case of intense movement, is locked.

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 tool, slide the On/Off switch **16** to the "**on**". position (when working without automatic leveling) or to the "**on**" position (when working with automatic leveling). Immediately after switching on, the tool sends laser beams out of the exit openings **1**.

To **switch off** the tool, slide the On/Off switch **16** to the "**off**" position. When switching off, the leveling unit is locked.

When exceeding the maximum permitted operating temperature of 104°F, the tool switches off to protect the laser diode. After cooling down, the tool is ready for operation and can be switched on again.

Automatic Shut-off

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

To switch on the tool after automatic shut-off, either slide the On/Off switch **16** to the "**off**" position and then switch the tool on again or press the operating mode button **7** once or press the receiver mode button **5** once.

Deactivating the Automatic Shut-off

To deactivate the automatic shut-off, keep the operating mode button **7** pressed for at least 3 s (while the tool is switched on). Deactivation of the automatic shut-off is confirmed by brief flashing of the laser beams.

Activating the Automatic Shut-off

To activate the automatic shut-off, switch the tool off and then on again.

Deactivating the Signal Tone

After the tool has been switched on, the audio signal is always activated.

To deactivate/activate the audio signal, press and hold the operating mode button **7** and the receiver mode button **5** at the same time for at least 3 s.

The audio signal activation and deactivation are both confirmed by three short beeps.

Operating Modes

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

- Generating a horizontal laser plane,
- Generating a vertical laser plane,
- Generating two vertical laser planes,
- Generating a horizontal laser plane as well as two vertical laser planes.

After switching on, the tool generates a horizontal laser plane. To change the operating mode, press the operating mode button **7**.

All operating modes can be selected with or without automatic leveling.

Receiver Mode

When working with the laser receiver **25**, the receiver mode must be activated, – independent of the selected operating mode.

In receiver mode, the laser lines flash at very high frequency and thus become detectable by the laser receiver **25**.


To switch on receiver mode, press button **5**. When receiver mode is switched on, the receiver mode indicator **6** lights up green.

When receiver mode is switched on, the visibility of the laser lines is reduced for the human eye. Therefore, shut off receiver mode by pushing button **5** again when working without laser receiver. When receiver mode is switched off, the receiver mode indicator **6** is deactivated.

Automatic Leveling

Working with Automatic Leveling

Position the tool on a level and firm support, attach it to the BM 1 positioning device **24** or to the tripod **30**.

When working with automatic leveling, push the On/Off switch **16** to the “ on” position.

After switching on, the leveling function automatically compensates irregularities within the self-leveling range of $\pm 4^\circ$. The leveling is finished as soon as the laser beams do not move any more.


If automatic leveling is not possible, e.g. because the surface on which the tool stands deviates by more than 4° from the horizontal plane, the laser lines begin to flash rapidly.

When the audio signal is activated, a fast-beat signal sounds for 30 s (maximum). This alarm is deactivated within 10 s after switching on, in order to allow adjustment of the tool.

Set up the tool in level position and wait for the self-leveling to take place. As soon as the tool is within the self-leveling range of $\pm 4^\circ$, all laser beams light up continuously and the audio signal is switched off.

In case of ground vibrations or position changes during operation, the tool is automatically leveled in again. To avoid errors, check the position of the horizontal and vertical laser line with regard to the reference points upon releveling.

Working without Automatic Leveling

For working without automatic leveling, slide the On/Off switch **16** to the “ on” position.

When automatic leveling is switched off, indicator **4** lights up red and for the first 30 s laser beams flash slowly.

When the automatic leveling is switched off, the tool can be held by hand or placed on an inclined surface. In cross-line operation, the two laser lines do not necessarily run at a right angle to each other.

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 **ing the Bosch app**
ght to the laser tool. 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 **9**. 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 **8** 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 **9** or switch off the laser tool.

CAL Guard Calibration Warning

The CAL guard calibration warning sensors monitor the status of the laser tool, even when it is switched off. If the laser tool is not being supplied with power by a battery pack or batteries, an internal energy storage battery provides continuous monitoring by the sensors for 72 hours.

The sensors are activated when the laser tool is started up for the first time.

Calibration warning triggers

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

- The calibration interval (every 12 months) has expired.
- The laser tool was stored outside of the storage temperature range.
- The laser tool suffered a severe shock (e.g. impact on the floor after a fall).

You can refer to the “Leveling Remote App” to see which of the three events triggered the calibration warning. Without the app, the cause cannot be identified as the CAL guard indicator, the CAL guard indicator **3** lighting up indicates merely that the leveling accuracy needs to be checked.

Once the warning has been triggered, the CAL guard indicator **3** lights up until the leveling accuracy has been checked and the indicator switched off.

Procedure in the event of a calibration warning being triggered

Check the leveling accuracy of the laser tool (see “Accuracy Check of the Laser Tool”).

If the maximum deviation has not been exceeded in any of the tests, switch the CAL guard indicator **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 CAL guard indicator **3** goes out.

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

Working Advice

- **Always use the center of the laser line for marking.** The width of the laser line changes with the distance.

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. 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.

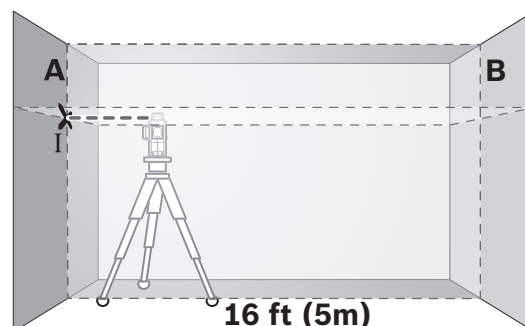
Firstly, check the leveling accuracy of the horizontal laser line and then the leveling accuracy of the vertical laser line.

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

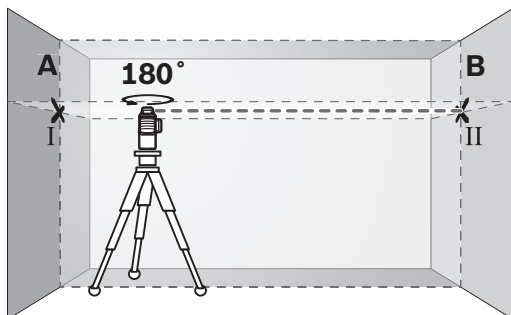
Checking the Horizontal Leveling Accuracy

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

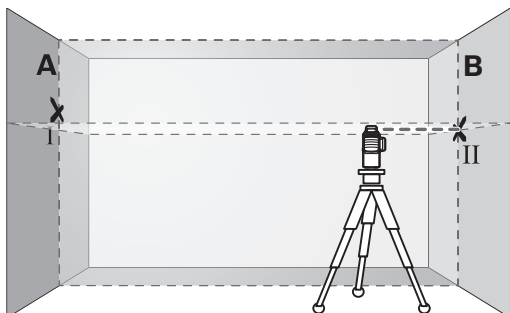
- Mount the tool onto a tripod, or place it on a firm and level surface close to the wall A. Switch the tool on. Select cross-line operation with automatic leveling. Select the operating mode in which a horizontal and vertical laser plane is generated in front of the tool.



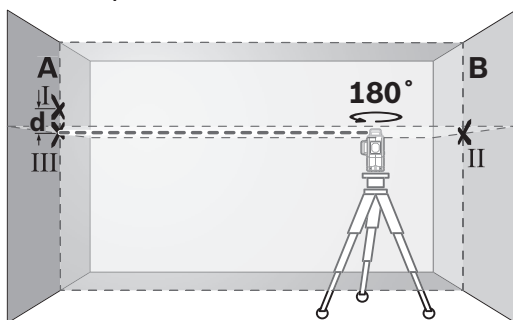
- Direct the laser against the close wall A and allow the tool to level in. Mark the center of the point where the laser lines cross each other on the wall (point I).



- 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 of both marked points I and III on wall A results in the actual height deviation of the tool alongside the lateral axis.

On the measuring distance of $2 \times 16\text{ft} = 32\text{ft}$, the maximum allowable deviation is:

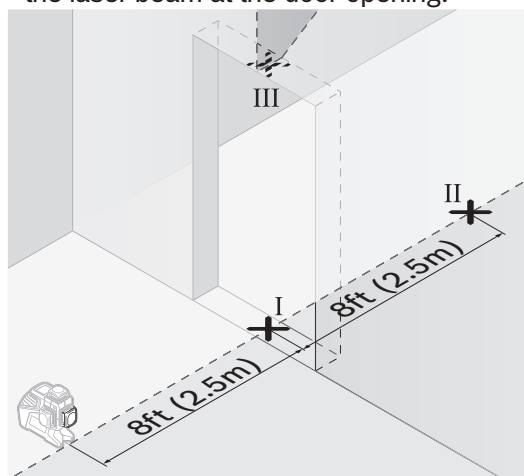
$$32\text{ft} \times \pm 0.0024\text{in/ft} = \pm 5/64 \text{ (0.078 in)}$$

Thus, the difference **d** between points I and III must not exceed 5/64 in (max.).

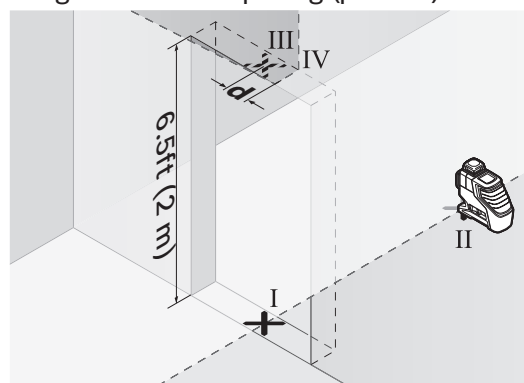
Checking the Leveling Accuracy of the Vertical Line

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

- Position the tool on a firm, level surface (not on a tripod) 8ft 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 8ft 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 0.0024 in/ft

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

$2 \times 6.5 \text{ ft} \times \pm 0.0024 \text{ in/ft} = \pm 1/32 \text{ (0.312 in)}$ Consequently, points III and IV may be no more than 1/32 in (max.) apart from each other.

Use with Attachments

Working with the Laser Target Plate

The laser target plate **26** increases the visibility of the laser beam under unfavorable conditions and at large distances.

The reflective part of the laser target plate **26** 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.

Working with the Tripod (Optional Accessory)

A tripod offers a stable, height-adjustable support. Position the tool with the 1/4-20 tripod mount **17** onto the thread of the tripod **30** or a commercially available camera tripod. For fastening to a commercially available construction tripod, use the 5/8-11 tripod mount **18**. Tighten the tool with the tripod mounting stud.

Fastening with the BM 1 Positioning Device (Accessory) (see figure B)

With the BM 1 positioning device **24**, you can fasten the tool, e.g., to vertical surfaces, pipes or magnetic materials. The BM 1 positioning device is also suitable for use as a ground tripod and makes the height adjustment of the tool easier. The clip attachment is suitable for drop ceiling applications.

Working with the Laser Receiver (Accessory) (see figure B)

Under unfavorable light conditions (bright environment, direct sunlight) and for larger distances, use the laser receiver for improved finding of the laser lines **25**. When working with the laser receiver, switch the pulse function on (see “Receiver Mode”).

Laser Viewing Glasses (Optional Accessory)

The laser viewing glasses filter out the ambient light. This makes the red light of the laser appear brighter for the eyes.

- **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 A–F)

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

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 **28**.

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.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO ONE YEAR FROM DATE OF PURCHASE. SOME STATES IN THE U.S., AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S., AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE IN THE U.S., OR PROVINCE TO PROVINCE IN CANADA AND FROM COUNTRY TO COUNTRY.

THIS LIMITED WARRANTY APPLIES ONLY TO PRODUCTS SOLD WITHIN THE UNITED STATES OF AMERICA, CANADA AND THE COMMONWEALTH OF PUERTO RICO. FOR WARRANTY COVERAGE WITHIN OTHER COUNTRIES, CONTACT YOUR LOCAL BOSCH DEALER OR IMPORTER.