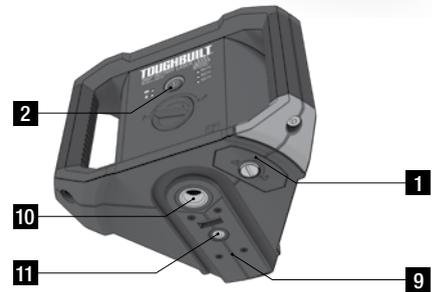
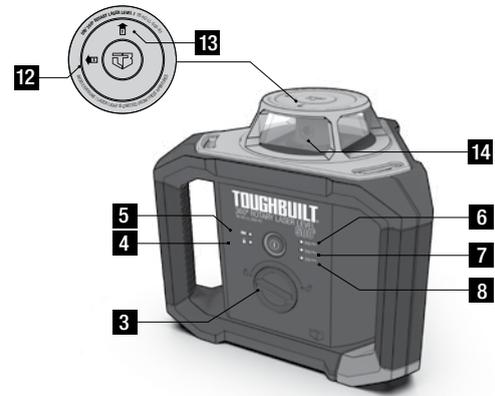


500' 360° ROTARY LASER LEVEL

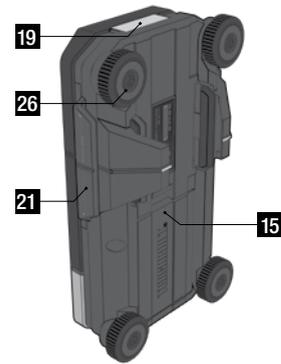
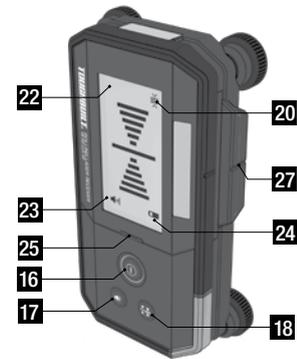
TB-H2-LL-500-R1



- 1** Battery Compartment/Lid
- 2** Power ON/OFF Push Button
- 3** Pendulum Lock/Unlock Switch
- 4** Pendulum Locked Indicator
- 5** Battery Charge Level Indicator
- 6** 800 RPM LED Indicator
- 7** 500 RPM LED Indicator
- 8** 200 RPM LED Indicator
- 9** Dove Tail Slide Mount
- 10** 5/8"-11 Tripod Mount
- 11** 1/4"-20 Tripod Mount
- 12** "X" Axis Indicator
- 13** "Y" Axis Indicator
- 14** Laser Beam Outlet

ROLLING LASER RECEIVER

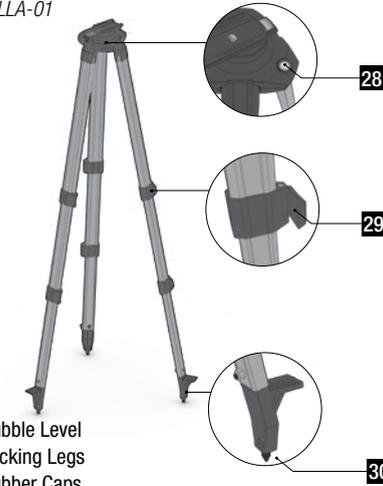
TB-H2-LLA-30



- 15** Battery Compartment/Lid
- 16** Power ON/OFF Push Button
- 17** Audio Signal Indicator Button
- 18** Accuracy Button
- 19** Attachment Magnet
- 20** Accuracy Level Indicator
- 21** Brake Release Pads x 2
- 22** LED Screen
- 23** Audio Volume Level Indicator
- 24** Battery Charge Level Indicator
- 25** Audio Speaker
- 26** Guide Rollers x 4
- 27** Centering Reference Marker x 2

QUICKSET® TRIPOD

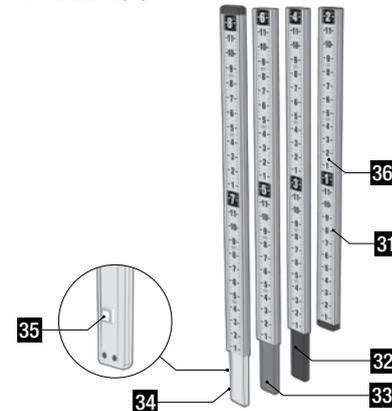
TB-H2-LLA-01



- 28** Bubble Level
- 29** Locking Legs
- 30** Rubber Caps

8' GRADE ROD

TB-H2-LLA-20-8



- 31** 0 to 2' Subsection
- 32** Black - 2 to 4' Subsection
- 33** Yellow - 4 to 6' Subsection
- 34** White - 6 to 8' Subsection
- 35** Locking Detent
- 36** Hook-and-Loop Strap

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Before using this product, review and familiarize yourself with the contents of this manual.

The specifications and general appearance of the instrument are subject to change without notice and without obligation by ToughBuilt® Industries, Inc. and may differ from those appearing in this manual.

TOUGHBUILT

ToughBuilt Industries, Inc.
6671 S. Las Vegas Blvd.
Building D, Suite 210
Las Vegas, NV 89119 USA

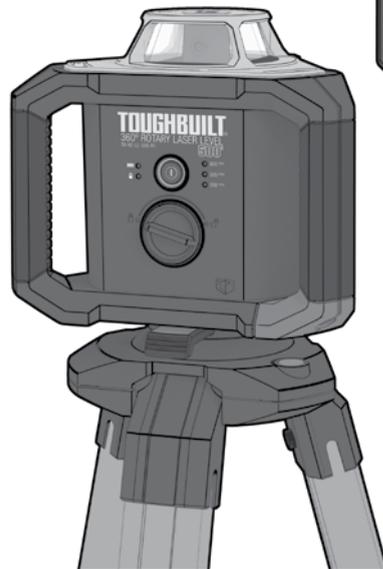
Made in China

TOUGHBUILT

OPERATING / SAFETY INSTRUCTIONS

500' 360° ROTARY LASER LEVEL KIT + ROLLING LASER RECEIVER

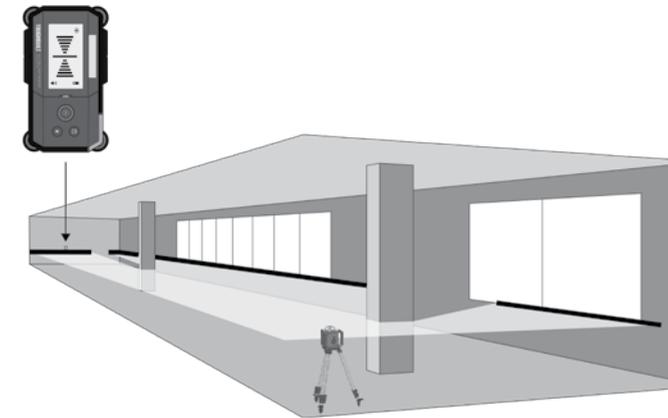
TB-H2S4-LL-500-R1



APPLICATION EXAMPLES

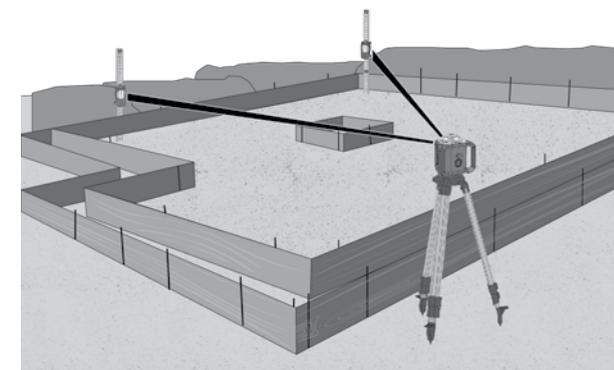
Leveling Indoors at Long Distances

In high ambient light conditions and for long distances, it is recommended to use the laser receiver for detection. Applicable when marking reference points.



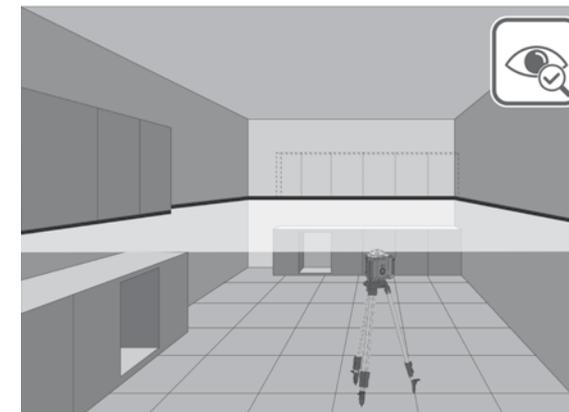
Leveling Outdoors

In outdoor scenarios over long distances, it is recommended to use the laser receiver mounted on the grade rod for laser beam detection. Applicable when setting elevations.



Leveling Indoors at Short Distances

In moderate light conditions and for short distances, the laser beam position can be visually detected. Applicable when making reference points.



LEARN MORE



1. SAFETY AND PRECAUTIONS

General Safety Rules

This instrument is a sensitive, precision instrument and should be treated as such.

▲ WARNING! Read, understand and memorize all safety warnings and instructions listed below. Failure to follow and adhere to them may result in electrical shock, fire, and/or serious injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

▲ WARNING! DO NOT remove or deface warning labels.

The following label is on your laser instrument:



DO NOT direct the laser beam at persons or animals.
DO NOT stare into the laser beam yourself.
 The instrument produces Class 3R 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. Serious eye injury could result.



Display	Meaning
▲ CAUTION	Ignoring the given directions could result in personal injury or property damage.

The label on your instrument may include the following symbols:

Symbol	Meaning
V	Volts
mW	Milliwatts
	Laser Warning
nm	Wavelength in nanometers
LASER 3R	Class 3R Laser Product
	To reduce the risk of injury, user must read the instruction manual
	Warning, Caution, Precaution
	Risk of eye injury. Wear ANSI-approved safety goggles with side shields
	Laser Radiation

▲ WARNING! DO NOT disassemble the instrument. Any tampering with this instrument will automatically void all warranties.

- **DO NOT** modify the product in any way. Modifying the laser instrument may result in hazardous laser radiation exposure.
- **DO NOT** stare directly into the beam or view directly with optical instruments. **DO NOT** point laser beam at others. Serious eye injury could result.
- **ALWAYS** make sure that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser instrument. If laser beam strikes your eyes, immediately close your eyes and turn your face away.
- **DO NOT** allow people who are unfamiliar with this instrument to operate it.
- **CAUTION!** Eye exposure to laser beam increases for people who are wearing prescription glasses/lenses.
- **DO NOT** set the laser beam at eye level.
- **DO NOT** leave the instrument in the ON position when unattended. **ALWAYS** turn OFF the instrument when it is not in use.
- **DO NOT** use this laser instrument for anything other than its intended purpose.

- **DO NOT** use any optical instruments such as, but not limited to, telescopes or transits to view the laser beam. Serious eye injury could result.
- **DO NOT operate the laser instrument around children nor allow children to operate the laser instrument. ALWAYS position the laser instrument securely.** Damage to the laser instrument and/or serious injury to the user could result if the laser instrument falls.
- **ALWAYS** use accessories specifically outlined in this manual. Use of accessories that have been designed for use with other laser instruments could result in serious injury, or property damage.

Battery Safety Instructions

▲ **WARNING!** Batteries can explode or leak and cause burns if installed backwards, disassembled, charged, or exposed to water, fire or high temperature. To reduce this risk:

- **ALWAYS follow the instructions and warnings on the battery label and packaging.**
- **Keep batteries out of reach of children.**
- **ONLY** use AA alkaline batteries.
- **ALWAYS** insert batteries correctly with regard to polarity (+ and -), marked on the battery and the equipment.
- **DO NOT** charge alkaline batteries.
- **ALWAYS** replace all batteries at the same time, with same make, brand and charge level.
- **DO NOT** short battery terminal.
- **ALWAYS** check battery posts in the battery compartment for possible corrosion. Clean the posts before use.
- **DO NOT** use batteries with corroded terminals.
- **REMOVE** batteries if the instrument will not be used for an extended period. In storage, batteries may corrode and self-discharge.
- **DO NOT** store or use in locations where the temperature may reach or exceed 105°F (40.5°C), store in a cool, dry place.
- **DO NOT** mix old and new batteries.
- **DO NOT** mix rechargeable and non-rechargeable batteries.
- **DO NOT** incinerate or dismantle batteries.
- **DO NOT** mix battery chemistries.

- **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.

▲ **WARNING! Recycle used batteries and dispose of equipment properly.** Contact your local waste management for more information.

Work Area Safety

- **DO NOT** operate while children are present.
- **AVOID** dangerous environments.
- Keep pets away from job site.
- **AVOID** extended exposure to damp or wet locations.
- **DO NOT** use in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials).
- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **ALWAYS** alert by-standers that laser is in use. Make sure no one stares into the laser beam.

Personal Safety

- **STAY ALERT,** watch what you are doing and use common sense when operating the instrument. Secure loose clothing, jewelry and long hair.
- **DO NOT use the instrument while you are tired.** A moment of inattention while operating an instrument may result in serious personal injury or incorrect measurement results.
- **DO NOT** allow people who are unfamiliar with the procedures of this instrument to operate it.
- Maintain proper balance and footing when using the instrument.
- **DO NOT** operate instruments and machinery when under the influence of alcohol, medication, or drugs.
- **Use safety equipment. ALWAYS wear ANSI-APPROVED safety goggles.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce the risk of personal injuries.

Magnets

- **Keep the instruments, target card, and grade rod away from cardiac pacemakers.** The magnets of the instrument and laser target plate generate a field that can impair the function of cardiac pacemakers.
- **Keep the instruments, target card and magnetic rotating mounts away from magnetic data medium and magnetically sensitive equipment.** The effect of the magnets of the instrument, receiver, target plate, and grade rod can lead to irreversible data loss.

Instrument Use and Care

- **DO NOT use the laser if the Pendulum Lock/Unlock Switch  does not turn the laser on or off.** Any instrument that cannot be controlled with the switch is dangerous and must be repaired.
- Follow instructions in the **Maintenance** section of this manual. Use of unauthorized parts or failure to follow **Maintenance** instructions may create a risk of injury.

FCC Cautions

This equipment has been tested and found to comply with the limits for a Class B digital device, 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.
- Consult the dealer or an experienced radio/TV technician for help.

Specific Safety Rules for Laser Line Detector

- **DO NOT dispose of instrument nor batteries together with household waste material!** Instrument and batteries that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.
- **Ensure instrument magnets are securely mounted to a metal surface. The magnet holding strength decreases when it is attached to a thin or slippery metal plate which may cause the instrument to fall.**
- **Maintain labels and nameplates.** These carry important information. If unreadable, contact Customer Service for a free replacement.
- **This instrument conforms to the most stringent requirements of the relevant Electromagnetic Compatibility (EMC) Standards and Regulations.** Yet, the possibility of causing interference in other devices cannot be totally excluded.

▲ IMPORTANT! ToughBuilt® does not recommend nor encourage the use of third-party accessories on this instrument.

2. PRODUCT INFORMATION

Intended Use

This instrument is a self-leveling rotating laser that projects a rotating laser beam. The laser is designed to transfer horizontal level positions. It can be used to determine ground leveling and height marks. The laser level is suitable for indoor and outdoor use.

Features and Benefits

Rotary Laser Level - TB-H2-LL-500-R1

- Powerful Class 3R Green Laser Beam is more visible in broad daylight and direct sunlight
- IP-54 Dust and Moisture Ingress Rating
- Multiple Mounting Options: Dovetail, 1/4"-20 and 5/8"-11

Laser Receiver - TB-H2-LLA-30

- Designed for easy one-handed operation
- Can detect the laser beam in bright conditions up to 500'

QuickSet® Tripod - TB-H2-LLA-01

- Bubble Level for quick tripod leveling
- QuickSet® Dovetail Mount instantly locks the laser onto the tripod

8' Grade Rod - TB-H2-LLA-20-8

- 8' Aluminum Grade Rod has a uniform width from top to bottom, so the Rolling Laser Receiver effortlessly glides up and down the grade rod for fast, accurate readings
- Easy-to-read Measurement Graduation on both sides of the grade rod

Carrying Case

- Protective Carrying Case for transporting and storage

What is Included

- A** 1 x 500' 360° Rotary Laser Level - TB-H2-LL-500-R1
- B** 1 x Rolling Laser Receiver - TB-H2-LLA-30
- C** 1 x QuickSet® Tripod - TB-H2-LLA-01
- D** 1 x 8' Grade Rod - TB-H2-LLA-20-8
- E** 7 x AA alkaline batteries
- F** 1 x Instructional manual (not shown)
- G** 1 x Carrying case

A**B****C****D****E****G**

Specifications



500' 360° Rotary Laser Level TB-H2S4-LL-500-R1	
Beam Projection	Horizontal Rotation
Light Sources	Pendulum diode with laser wavelength of 500-540 nm
Laser Safety Class	Class 3R, <5 mW
Leveling Accuracy	± 3/8" at 100' (± 9 mm at 30 m)
Self-Leveling Range	± 3.5°
Range with Detector (Diameter)	Up to 786' (239 m)*
Laser Beam Color	Green
Debris Protection	IP54
Operating Temperature	14 to 122°F (-10 to 50°C)
Storage Temperature	-4 to 158°F (-20 to 70°C)
Power Source	4 x AA 1.5V alkaline batteries (included)
Operating Time	11 hours
Mounting Receptacle	a) Dove Tail slide mount with lock b) 1/4"-20 thread c) 5/8"-11 thread
Dimensions (W x H)	8-9/32" x 6-7/16" (210 mm x 163 mm)
Weight (without batteries)	3.47 lb (1,57 kg)

*Range achieved only with ToughBuilt® Receiver, model TB-H2-LLA-30.

Rolling Laser Receiver TB-H2-LLA-30	
Detection Range (Diameter)	786' (239 m)
Detection Accuracy	Fine setting: ± 0.06" (<164') ± 1,5 mm (<50 m) Coarse setting: ± 0.098" (≥164') ± 2,5 mm (≥50 m)
Audio Indicators	Slow beeps / fast beeps / monotone
Auto Power-OFF	20 min ± 1 min
Power Source	3 x AA alkaline batteries
Battery Run Time (continuous usage)	45 hours (approx.)
Target Indicator	Visual and Audio
Debris Protection	Waterproof Design
Dimensions (H x W x D)	6-15/16" x 3-9/16" x 1-31/32" (176,2 x 91 x 50 mm)
Weight (without batteries)	27.33 oz (775 g)



QuickSet® Tripod TB-H2-LLA-01	
Storage Dimensions (L x W x H)	31-3/4" x 6-1/8" x 6-1/8" (806 x 156 x 156 mm)
Net Weight	4.8 lb (2,18 kg)
Instrument Mounts	QuickSet®
Base Rotation	360°



8' Grade Rod TB-H2-LLA-20-8	
Length	8 feet (2,43 m)
Measurement Accuracy	1/4" and 1/16" increments
Material	Aluminum
Type	Modular (4 sub-sections with push-type lock detents)
Storage	Stacked and secured by built-in magnets and a hook-and loop strap



3. 500' 360° ROTARY LASER LEVEL

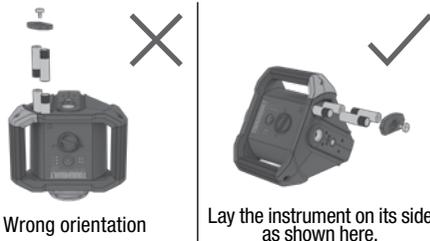
Installing the Batteries

Before installing or replacing batteries:

▲ CAUTION! ALWAYS make sure to turn the power OFF. Ensure the Pendulum Lock/Unlock Switch **3** is in the LOCKED position.

▲ CAUTION! Check the batteries thoroughly to make sure they are not damaged, and their terminals do not show signs of corrosion.

▲ WARNING! NEVER PLACE THE INSTRUMENT UPSIDE DOWN ON THE LASER BEAM OUTLET COVER.



Unscrew the Battery Compartment Lid screw **1** counterclockwise and remove the lid.

Insert 4 AA alkaline batteries observing the polarity specified on the inside of the battery compartment.

Close the battery compartment by replacing the lid and tightening the screw. When properly tightened, the Lid **1** will be flush with underside of the instrument. **DO NOT OVER TIGHTEN THE SCREW.**

▲ CAUTION! When the Battery Indicator LED **5** starts flashing, it is time to replace the batteries.

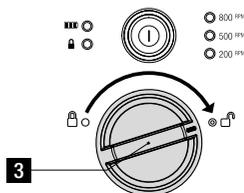
Powering ON

The instrument can be used in either a *Self-leveling Mode* or *Pendulum Locked Mode*.

Power-ON in the Self-Leveling Mode:

In this mode, the laser level checks the horizontal position and automatically self-aligns within the self-leveling range of approx. $\pm 3.5^\circ$.

1. Place the instrument on a hard and level surface.
2. If you use the tripod, stabilize it before mounting the instrument on it.
3. Rotate the Pendulum Lock/Unlock Switch **3** to the UNLOCKED position to activate the laser beam.



NOTE:

If the instrument is tilted beyond its self-leveling limits (3.5°), it will not level and will emit a beeping sound indicating an error.

Power-ON in the Pendulum Locked Mode:

In a Pendulum Locked Mode, the self-leveling capability is disabled, and the laser level can be tilted to project a laser beam at an incline.

Press the Power Button **2** for three seconds to activate the laser beam.

▲ IMPORTANT! In this mode, the Pendulum Lock/Unlock Switch **3** **MUST ALWAYS** be in the LOCKED position.

NOTE:

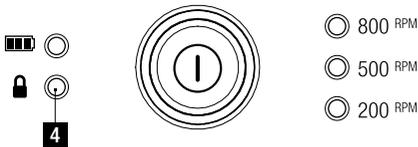
In any application where the instrument must be utilized in a tilted position, power it on in the *Pendulum Locked Mode* only.

LED Indicators on the Control Panel

LED Indicator	Setting	LED Light
 	Locked	Solid RED
Pendulum Lock/ Unlock Switch 3	Unlocked	OFF
 	Sufficient run capacity	Solid GREEN
Battery Condition	Replace batteries immediately	Flashing RED (flash every 2 sec)
Laser Beam RPM	 800 RPM (default speed)	Solid GREEN
	 500 RPM (when selected)	Solid GREEN
	 200 RPM (when selected)	Solid GREEN

The **800 RPM** speed LED Indicator **6** will glow GREEN.
The **500 RPM** **7** and **200 RPM** **8** speed LED Indicators
will not glow.

The instrument will be ready for use and the Pendulum
LOCKED Indicator **4** will glow in RED.



The instrument can be changed to *Self-Leveling Mode*
by rotating the Pendulum Lock/Unlock Switch **3** to the
UNLOCKED position and wait for the instrument to self-align.

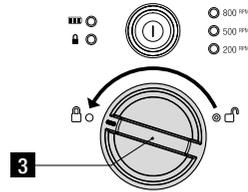
Powering OFF

1. Ensure the Pendulum Lock/Unlock Switch **3** is in the
LOCKED position.
2. Press and hold the Power Button **2** for two seconds.

NOTE:

To save battery power, turn the instrument OFF when
not in use.

Important Tips



Prior to removal or relocation of the instrument, **ALWAYS**
rotate the Pendulum Lock/Unlock Switch **3** to the LOCKED
(left) position.

▲ IMPORTANT! The laser beam cannot be turned OFF with
the Pendulum Lock/Unlock Switch **3** is in the UNLOCKED
position. This feature is incorporated to protect the instrument.

Before and during the work interval, wipe the Laser's Lens
with a lint-free cloth. **DO NOT USE PAPER TOWEL.**
Any debris on the reflector may cause laser deflection
and produce inaccurate readings.

To safeguard leveling accuracy, you should verify leveling
calibration on a periodic basis, as outlined on *page 27*.

Troubleshooting

Problem	Possible Cause	Solution
No Laser Beam	Batteries are not inserted	Install 4 x AA alkaline batteries
	Instrument is not powered-on	Push the Power Button for 3 seconds
	Low battery charge or dead batteries	Replace batteries with new alkaline batteries
	Incorrect battery polarity	Install batteries observing polarity
	Corroded battery posts	Replace batteries
	Corroded battery terminals	Clean terminals
Flashing Beam	Instrument is in the LOCKED position	In Locked and tilted mode, it is normal for the laser beam to fluctuate 5 seconds ON, 1 second OFF
Power LED glows solid RED	Voltage is lower than 4.6 volts	Battery power is reaching the depleted zone. Replace batteries
Power LED flashes RED	Voltage is lower than 4.1 volts	Replace batteries with new alkaline batteries
Cannot Switch the Unit OFF	Pendulum Lock/Unlock Switch is in the UNLOCKED position	Rotate the Lock/Unlock Switch switch to the LOCKED position

Contact ToughBuilt® Customer Service for additional support (US): 1 (800) 228-4695

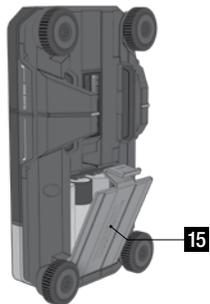
4. ROLLING LASER RECEIVER

Installing the Batteries

The Battery Compartment **15** is located at the back of the Receiver.

To Install Batteries

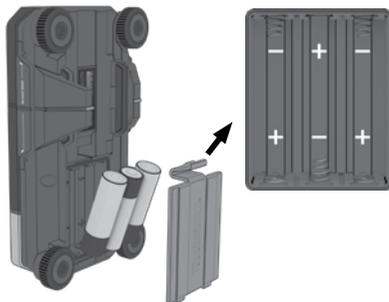
1. Pull back on the tab and partially lift the lid and pull toward the top side of the instrument.



2. Noting battery polarity, insert 3 x AA alkaline batteries.

To Close Compartment Lid

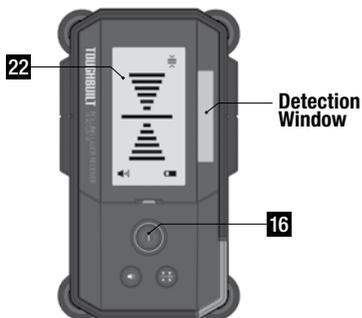
1. Hold the Battery Compartment Lid **15** in a slant position, and slide it under the lower two rollers until the lid tabs are in the compartment indentations.
2. Lower the lid and push it down to snap into place.



Powering ON

Press the Power ON/OFF Button **16** once to turn the instrument ON.

- Display screen **22** will light up briefly.
- Two short beeps followed by a prolonged beep will indicate that the instrument has been powered ON.



Powering OFF

1. Press the Power ON/OFF Button **16** once.
2. All display indicators as well as all LED's light up briefly.
3. The instrument will make three rapid beeps and the instrument is powered OFF.

Power Saving

Receiver will automatically shut OFF after 20 minutes if:

- The unit does not receive any laser signal
- The control buttons are not pressed

Default Settings

- Audio will always default to low volume.
- Accuracy will always default to the "Fine Accuracy" setting.
- Battery Level Indicator **24** will always be displayed.
- Backlight will always default to the brightest setting.

Screen Backlight Setting

- When instrument is ON, the backlight defaults to the brightest setting.
- Backlight dims automatically when there is no detection or command buttons are not pressed for 2 minutes.

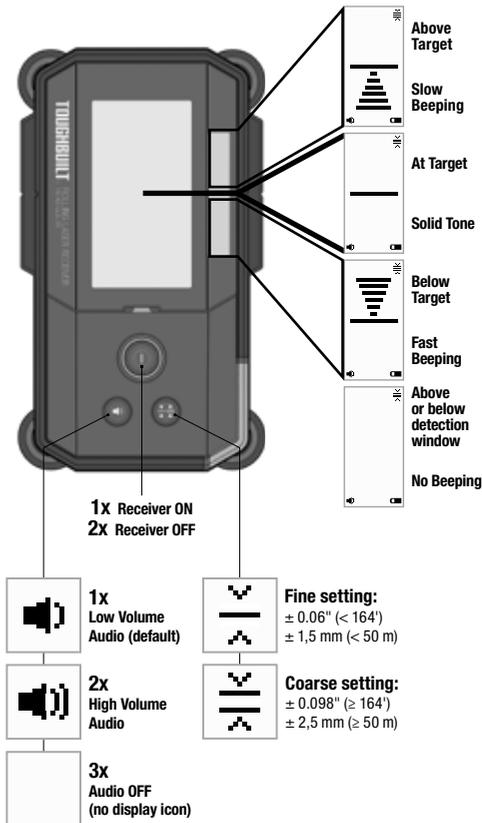
- To turn OFF the backlight completely, press and hold the Audio **17** and Accuracy Buttons **18** simultaneously for 2 seconds.

Audio Volume Adjustments

- Press the Audio Signal Button **17** once to switch to high volume.
- Press the button again to turn audio volume OFF.

NOTE:

If you press the Accuracy Button **18** you will still hear a beep.



Important Tips

Audio Signal for Indication of the Laser Beam

- The position of the laser beam on the reception area can be indicated via an audio signal.
- The volume level can be increased, decreased or switched OFF.
- At low volume level, the Audio Signal Indicator **17** appears on the display with one bar.
- At high volume level, the Audio Signal Indicator **17** appears on the display with two bars.
- When the audio signal is turned OFF, the volume indicator cannot be seen.
- Independent of the audio signal setting, a short, low-volume beep sounds every time a button on the receiver is pressed.

Fine/Coarse Adjustment

- Accuracy will always default to fine setting when powered-ON.
- Press the Accuracy Button **18** once to switch to coarse setting.
- Pressing the Accuracy Button **18** again will switch back to fine setting.

NOTE:

Course setting allows faster detection and centering of the laser beam.

Detecting the Laser Beam

- The position of the laser beam on the LED display is indicated by:
 - Audio and directional indicators
 - Optionally via the directional signal only

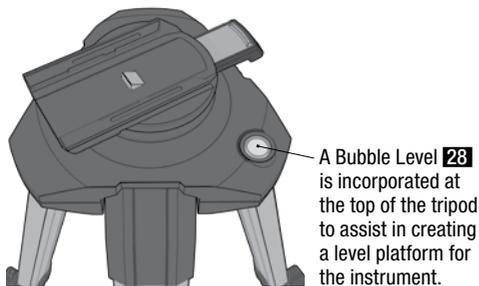
Troubleshooting

Problem	Possible Cause	Solution
No Laser Beam Detection	Batteries are not inserted	Install 3x AA alkaline batteries
	Instrument is not powered-ON	Push the Power Button 16 once
	Low charge or dead batteries	Replace batteries with fresh alkaline batteries
	Incorrect battery polarity	Install batteries observing polarity
No Audio	Corroded battery posts	Replace batteries
	Corroded battery terminals	Clean terminals
No Audio	Audio is turned OFF	Push the Audio Button 17

Contact ToughBuilt® Customer Service for additional support (US): 1 (800) 228-4695

5. QUICKSET® TRIPOD

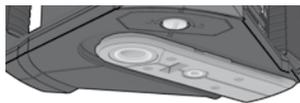
ToughBuilt® tripod has two-stage extendable Locking Legs **29** and Rubber Caps **30** for use on multiple surfaces.



Assembly

Mounting Rotary Laser Level to Tripod

▲ IMPORTANT! Before mounting the instrument to the tripod, stabilize the tripod to reduce the chance of tipping.



1. Position the open end of the Dove Tail Mount **9** at the release-tab side of the tripod (see the picture above).
2. While holding the tripod, gently push the instrument forward until a click sound indicates that the instrument is secured in place.



Dismounting Rotary Laser Level from Tripod

1. Hold one of the instrument handles and press the release tab.
2. Pull back on the instrument until it is completely separated from the tripod.

6. 8' GRADE ROD

▲ CAUTION! Take care not to deface the graduations on the grade rod.

The 8' grade rod consists of four 2' subsections, which are slip-fitted onto one another and locked in place by Locking Detents **35**. They are graded from 0 to 2', 2' to 4', 4' to 6', and 6' to 8' feet, in 1/16" and 1/4" increments.

Each subsection has two sets of internally located magnets. Store the four subsections by stacking them together with these magnets. For added security, attach the Hook-and-Loop Strap **36** to the 0-2' subsection with the snap button (should be displayed on the image) and tie the subsections together.

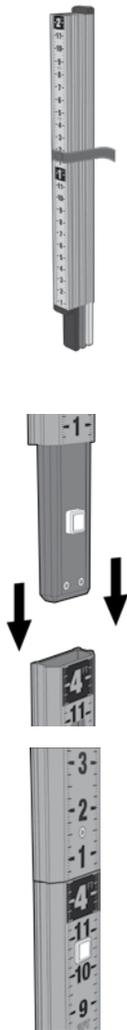
To Assemble the Grade Rod

1. Peel back the end of the Hook-and-Loop Strap **36** and separate the subsections by pulling them apart. Except for the 1-2' subsection, the remaining three subsections are equipped with connecting members.

Each connecting member has a different color:

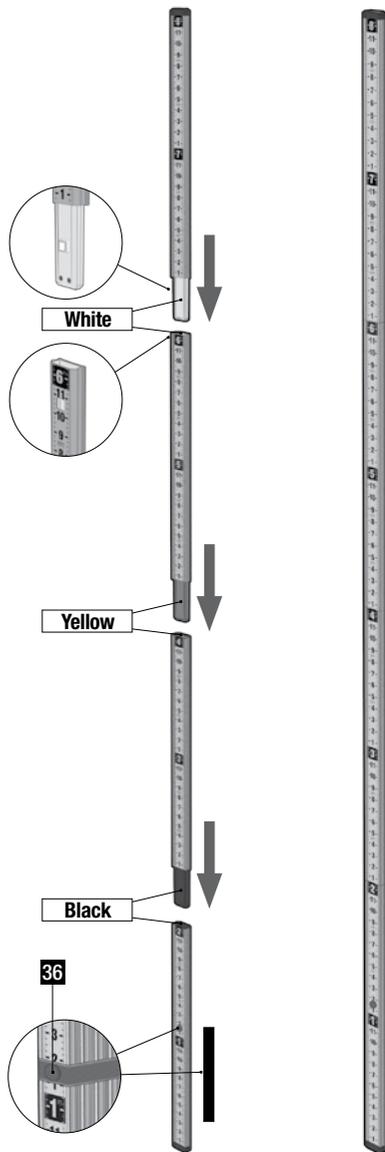
- 31** 0 to 2' subsection
- 32** 2' to 4' subsection (black)
- 33** 4' to 6' subsection (yellow)
- 34** 6' to 8' subsection (white)

2. Slide the black connecting member of the 2-4' subsection into the black compartment of 1-2' subsection until the detent locks **35** in place.
3. Slide other subsections as described on the picture noting that the color of the connecting member and the color of the compartment should match.
4. After assembly, lightly pull on the subsections to ensure that they are securely locked in place.



4x Subsections

Assembled



Assembly

To Mount the Receiver to the Grade Rod

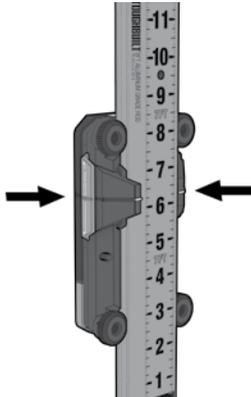
NOTE:

Always attach the receiver onto the grade rod from the 8-ft end over the plastic end cap to prevent damage to the receiver rollers.

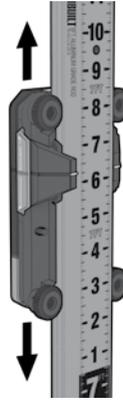
1. Position the 8-ft end cap between two lower rollers at the back side of the receiver.



2. Squeeze the two brake release pads **21** and lower the receiver until the top of the grade rod clears the upper rollers.



3. To reposition the rolling receiver over the grade rod, squeeze the two brake release pads **21** and proceed. You may release the two brake pads to lock the receiver onto the grade rod. The receiver will remain secured on the grade rod.



To Dismantle and Store the Grade Rod

NOTE:

Always remove the receiver from the grade rod before dismantling it.

1. Push the locking detents **35** of each subsection and pull the parts apart slightly, remove your finger from the detent and pull the subsection apart.
2. Repeat this procedure for the remaining subsections.
3. Stack the four subsections together for storage.

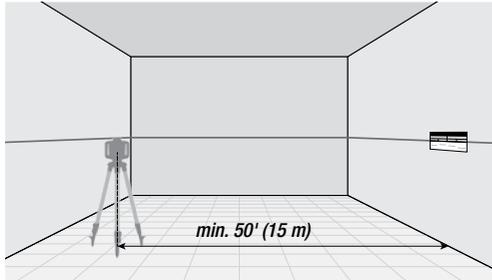


7. ACCURACY CHECK

▲ IMPORTANT! Laser beam widens over distance; therefore, **ALWAYS** take measurements at the center of the beam. However, for the sole purpose of accuracy check, since the distance between the instrument and the target remains constant, you may use the lower edge of the beam as reference.

▲ IMPORTANT! Tripod needs to stand on solid ground.

▲ WARNING! Ground shake or impact to the mounted instrument may cause the beam position to fluctuate. Allow time for the laser beam to self-level and ensure your vertical height is maintained prior to continuing.



1. Position the instrument and tripod at no less than 50' (15 m) from the opposite wall in a dimly lit room.
2. Draw an accuracy check worksheet as shown below.
3. Position the worksheet on the opposite wall of the room so that the laser beam can be clearly marked.

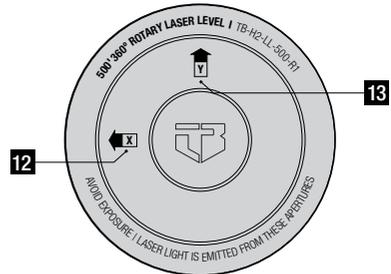
Worksheet			
X-Axis		Y-Axis	
X - 0°	X - 180°	Y - 0°	Y - 180°
_____		_____	
_____		_____	

*Displayed markings are exaggerated for illustration purposes.

▲ IMPORTANT! Do not tamper with the tripod or modify the position of the worksheet during the accuracy check process.

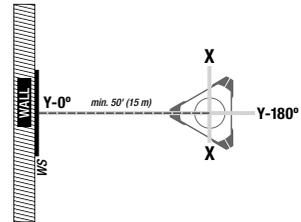
4. **Power-ON the instrument:** Rotate the Pendulum Lock/Unlock Switch **3** to the UNLOCKED Position and wait until the beam is self-leveled on the horizontal plane.

5. Find the directional planes of the X and Y Axis marked on the top side of the instrument.



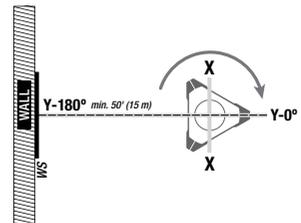
6. **Y-Axis [Y-0°]:**

Position the instrument as described in the image, so that the "Y" Axis Indicator **13** is directed toward the wall with the *Worksheet (WS)*. In the "Y-0°" column of the worksheet, mark a horizontal line as close as possible to the center of the laser beam.



7. **Y-Axis [Y-180°]:**

Gently rotate the instrument 180°. Mark a second line on the worksheet in the Y-180° column.



8. **X-Axis [X-0° and X-180°]:**

Repeat *Steps 6 and 7* for the X-axis to mark X-0° and X-180° on the worksheet.

9. Compare the four lines by drawing a straight line along the lowest and highest reference lines. If the distance between these two lines is less than the Total allowable deviation of 3/8" at 50' or 3/4" at 100', the instrument is properly calibrated.

However, if the measured deviation is more than the stated tolerances, repeat the accuracy check procedure. Should the readings persist over the allowable deviation, the instrument is OFF calibration.

Contact ToughBuilt® Customer Service for additional support.

8. MAINTENANCE

The only required maintenance is cleaning of the unit, and replacement of the batteries.

Customer Service Number (US): 1 (800) 228-4695

Cleaning

If the unit is soiled, wipe with a damp cloth. **DO NOT USE CHEMICALS.** Laser reflectors shall be wiped with a lint free cloth only. **DO NOT USE PAPER TOWEL.**

Accessories

▲ IMPORTANT! To reduce the risk of injury, only ToughBuilt® accessories should be used with this product.

Storage

- **ALWAYS** store the instrument in its original container.
- Before storage, make sure the unit is turned OFF.
- **DO NOT** store a damp or wet unit.
- For extended storage, remove the batteries and store the instrument in a dry, cool place, out of reach of children.
- **DO NOT** place objects on the instrument container.

▲ IMPORTANT! To prevent damage to the Laser mechanism, Pendulum Lock/Unlock Switch **ⓧ** must be in the LOCKED position prior to relocation or storage.

9. END OF PRODUCT LIFE



This product must not be disposed of with normal household waste. Please sort it out for separate recycling.



Separate collection of used products and packaging allows materials to be recycled and used again.

Reuse of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Some local governments may require local or municipal waste disposal centers or retailers of new products to provide households with electronic product recycling services.

10. WARRANTY AND REGISTRATION

3-YEAR LIMITED WARRANTY.

(Proof of purchase is required to register the product).

▲ IMPORTANT! Alkaline batteries that ship with the tool are not warranted by ToughBuilt®.

For warranty details, visit: www.toughbuilt.com

Online Registration

1. Visit: <https://toughbuilt.com/register-your-product> or scan the QR code below to begin the product registration.



2. Fill in the form and upload the proof of purchase.

For product registration support, please call our

Customer Service Line:

US: 1 (800) 228-4695

Mexico: +52 55 9225 6212

Canada: +1 844 5751923

Have product and purchase information available when contacting ToughBuilt® Industries for product support.

▲ IMPORTANT! Specifications are subject to change without notice.