

TOLSEN X20

97086

LI-ION CORDLESS LASER LEVEL

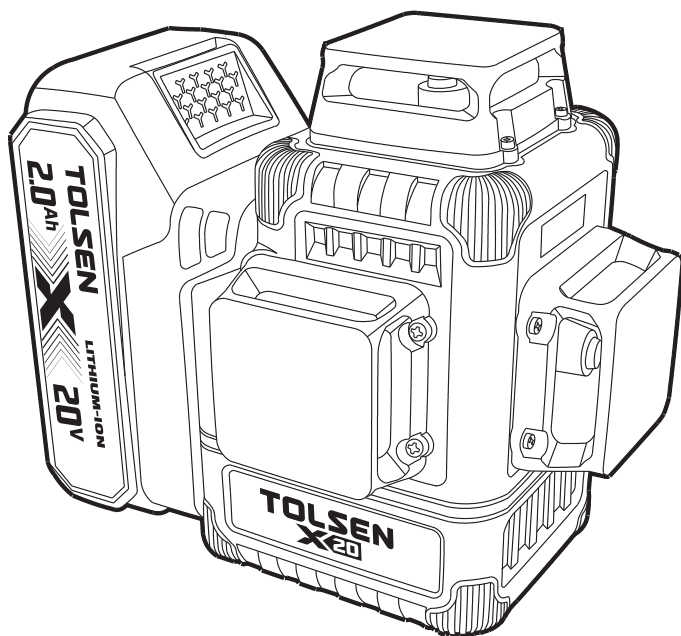
INSTRUCTION MANUAL

20V LITHIUM-ION



IEC 60825-1:2014

「INDUSTRIAL」



SAVE THIS MANUAL !

You will need this manual for safety instructions, operating procedures and warranty.
Put it and the original sales receipt in a safe dry place for future reference.

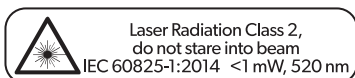
IMPORTANT SAFETY INFORMATION

Line laser



Working safely with the measuring tool is possible only when the operating and safety information are read **Completely** and the instructions contained therein are strictly followed. Never make warning labels on the measuring tool unrecognizable. **SAVE THESE INSTRUCTIONS**

1. Caution – The use of other operating or adjusting equipment or the application of other processing methods than those mentioned here, can lead to dangerous radiation exposure.
2. The measuring tool is provided with a warning label.



3. Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself. This measuring tool produces laser class 2 laser radiation according to IEC 60825-1. This can lead to persons being blinded.
4. 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.
5. 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.
6. Have the measuring tool repaired only through qualified specialists using original spare parts. This ensures that the safety of the measuring tool is maintained.
7. Do not allow children to use the laser measuring tool without supervision. They could unintentionally blind other persons or themselves.
8. Do not operate the measuring tool in explosive environments, such as in the presence of flammable liquids, gases or dusts. Sparks can be created in the measuring tool which may ignite the dust or fumes.

Laser target plate



Keep the laser target plate away from cardiac pacemakers. The magnets on the laser target plate generate a field that can impair the function of cardiac pace makers.

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

Service

1. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
2. Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

Battery Safety



WARNING

This battery can only be used in the machines included in the TOLSEN X20V lithium-ion power platform system. This battery can only be used cooperatively with the designated battery charger.

Li-Ion batteries, if incorrectly used, stored or charged will cause a fire, burn and explosion hazard.

Failure to follow these instructions may cause overheating or fire.

1. Keep the battery out of reach of children.
2. The battery should be charged at ambient temperatures between 5 and 40°C (ideally around 20°C) . After charging, allow 15 minutes for the battery to cool before use.
3. The Battery Charger monitors battery temperature and voltage while charging. **DO NOT** leave batteries on charge for extended periods and **NEVER** store batteries on charge. Ensure that the charger is disconnected from the mains supply after use.
4. When not in use batteries should be stored at room temperature. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 40°C (ideally around 20°C) .
5. Ensure that battery contacts cannot accidentally short in storage. Keep batteries clean; foreign objects or dirt may cause a short. Keep away from other metal objects, for example, paperclips, coins, keys, nails and screws.
6. **DO NOT** store lithium-ion battery packs in a discharged state over a long period as this can damage the lithium-ion cells. For long-term storage, store batteries in a high charge state disconnected from the power tool.
7. Batteries can become faulty over time, individual cells in the battery can fail and the battery could short. The charger will not charge faulty batteries. Use another battery, if possible, to check correct functionality of the charger and purchase a replacement battery if a faulty battery is indicated.
8. **DO NOT** open, disassemble, crush, heat or incinerate. Do not dispose of in fire or similar.

Battery Charger Safety



WARNING

This charger can only be used to charge the batteries which has TOLSEN X20V symbol. If it is used to charge other kinds of batteries, there is a risk of explosion. **DO NOT** attempt to recharge non-rechargeable batteries.

1. This is class 2 power supply. It is suitable for indoor use only.
2. Before use, the input and output technical data must be checked to secure correct use.
3. Do not use the Battery Charger in the circumstances that the output polarity does not match the load polarity.
4. Do not attempt to use the charger with any batteries other than those supplied. Keep your battery charger clean; foreign objects or dirt may cause a short or block air vents. Failure to follow these instructions may cause overheating or fire
5. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Before Use

Removing a battery

Remove the Battery from the tool by pressing the lock button, then slide the Battery out of the Battery Slot.

WARNING:

DO NOT try to remove the Battery without pressing the lock button. The tool or Battery could be damaged.

Fitting a battery

1. Fit a battery by sliding it on to the Battery Slot of the tool until it clicks and locks into position

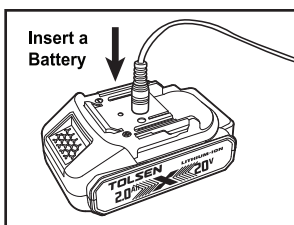
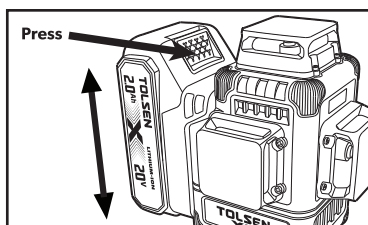
Note: Make sure the Battery and tool are lined up correctly. If the Battery does not slide into the tool easily, do not force it. Instead, slide the Battery out of the tool again, check the top of Battery and the tool battery slot are clean and undamaged and that the contacts are not bent

Setting up the battery charger

1. If there is battery fitted, remove any battery from battery charger first

2. Insert the Battery Charger mains plug into a suitable mains socket

Note: The Green LED on the Charger will always bright to indicate that the charger is ready to charge the battery.



WARNING: Use this charger ONLY to charge the supplied battery or additional purchased batteries that are specifically designed for this tool.

Charging the battery

WARNING: Failure to follow the correct procedure when charging batteries will result in permanent damage.

Note: Normal charging time is approximately 85minutes for a recently discharged 2.0Ah capacity battery.

However, if the Battery has been left in a discharged state for some time, it may take additional time to charge.

1. Slide a fully or partially discharged Battery on to the Battery Charger .
2. Once charging commences, the Red LED will on.
3. When the Battery is fully charged, the Red LED will off and Green LED will on.

IMPORTANT: When a low charge level is indicated, the tool may stop operating while in use, which is dangerous when operating it. Always ensure the battery pack has a good charge level.

Note: Symbology

	Class II Double insulated for additional protection
	CE conformity
	Read the instruction manual before using
	Wear hearing protection while operating the tool
	Operating environmental temperature Max 45°C
	Do not incinerate battery pack
	Do not expose to water
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	Batteries and rechargeable batteries are not household waste! As a consumer, you are required by law to dispose of all batteries and accumulators, whether or not they contain harmful substances *, at a collection point in your municipality / neighborhood or in commerce so that they can be disposed of in an environmentally sound manner.
	Battery pack is recyclable and should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice
	Safety alert
	For indoor use only
	Internal time lag fuse with a maximum current of 2A.

PRODUCT DESCRIPTION AND SPECIFICATIONS

Please unfold the fold-out page with the representation of the measuring tool and leave it unfolded while reading the operating instructions.

Intended Use

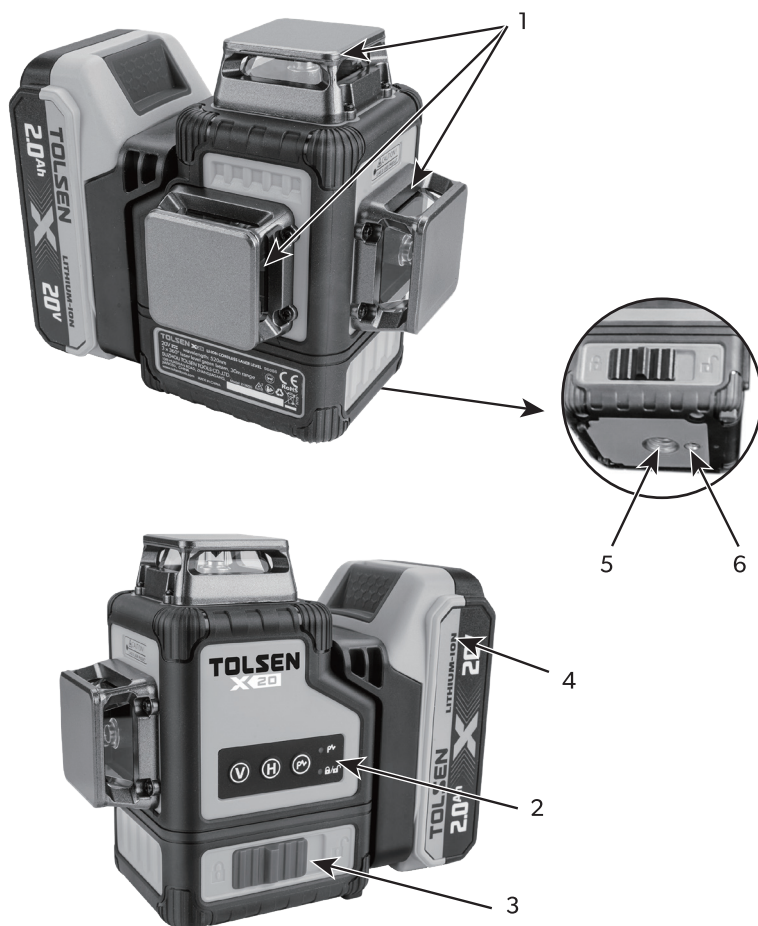
The measuring tool is intended for determining and checking horizontal and vertical lines.

Technical Data

Rated voltage	20VDC
Input power	20W
Wavelength	520nm Green light
Beam Accuracy	H/V Line ±3mm/10m
Laser intensity	Class II, <1mw
Self leveling	0-4°
Expanded Angle	H&V 360°
Max. working distance	30m(without detector)
Running time	3C≥ 15 hours (20V)
Working environment temperature	-10°C~+50°C
Storage ambient temperature	-20°C~+70°C
Maximum drop height	1.5m
Function mode	1C, 2C, 3C(Outdoor pulse function)
Battery pack Voltage	20VDC
Battery capacity	2.0Ah
Charger	
Input Voltage	110-120VAC 60Hz
Output Voltage	21.5VDC
Rated output current	1.5A
Charging Time	85minutes fast charging(2.0Ah battery)
Protection class	□

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

FUNCTIONS



1. Window for 360° coverage beam
2. Keypad
3. Locking switch(On/Off switch)
4. Battery pack
5. 5/8" threaded mount
6. 1/4" threaded mount

OPERATION

Initial Operation

1. Keep the measuring tool away from your eyes or other persons.
2. Protect the measuring tool against moisture and direct sun light.
3. Do not subject the measuring tool to extreme temperatures or variations in temperature. As an example, do not leave it in vehicles for long time. In case of large variations in temperature, allow the measuring 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 measuring tool can be impaired.
4. Avoid heavy impact or falling of the measuring tool. After heavy exterior impact on the measuring tool, an accuracy check should always be carried out before continuing to work.
5. Switch the measuring tool off during transport. When switching off, the levelling unit, which can be damaged in case of intense movement, is locked.

Switching On and Off

To switch on the measuring tool, slide the On/Off switch to the “ on” position (when working without automatic levelling) or to the “ on” position (when working with automatic levelling). Immediately after switching on, the measuring tool sends laser beams out of the exit openings .

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.

To switch off the measuring tool, slide the On/Off switch to the “off” position, and long press “I”. When switching off, the levelling unit is locked.

OPERATING MODES

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

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

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

All operating modes can be selected both with and without automatic levelling.

Pulse Function

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

In pulse function, the laser lines flash at very high frequency and thus become detectable by the laser receiver.

To switch on the pulse function, press button “P”. When the pulse function is switched on

When the pulse function is switched on, the visibility of the laser lines is reduced for the human eye. Therefore, shut off the pulse function by pushing button again when working without laser receiver. When the pulse function is switched off, the visibility of the laser lines will be restored.

Automatic Levelling

Working with Automatic Levelling

Position the measuring tool on a level and firm support, attach it to the holder or to the tripod.

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

After switching on, the levelling function automatically compensates irregularities within the self-levelling range of $\pm 4^\circ$.

The levelling is finished as soon as the laser beams do not move any more.

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

Set up the measuring tool in level position and wait for the selflevelling to take place. As soon as the measuring tool is within the self-levelling 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 measuring tool is automatically levelled in again. To avoid errors, check the position of the horizontal and vertical laser line with regard to the reference points upon re-levelling.

Working without Automatic Levelling

For working without automatic levelling, slide the On/Off switch to the “ on” position. When automatic levelling is switched off, the laser beam will flash every 5 seconds. When automatic levelling is switched off, you can hold the measuring tool freely in your hand or place it on an inclined surface. The laser lines no longer necessarily run vertical to each other.

MAINTENANCE

WARNING: ALWAYS disconnect from the mains power supply, before carrying out any maintenance/ cleaning of the charger. Remove the battery before carrying out any maintenance/ cleaning of the tool.

Note: Both the tool and the charger contain no user-serviceable parts. If the device does not perform as outlined in this manual, return it to an authorised service centre for repair

General inspection

- Regularly check that all the fixing screws are tight
- Inspect the supply cord of the tool, prior to each use, for damage or wear. Repairs should be carried out by an authorised service centre. This advice also applies to extension cords used with this tool.

Cleaning

- Keep your tool clean at all times. Dirt and dust will cause internal parts to wear quickly, and shorten the machine's service life. Clean the body of your machine with a soft brush, or dry cloth. If available, use clean, dry, compressed air to blow through the ventilation holes
- Clean the tool casing with a soft damp cloth using a mild detergent. Do not use alcohol, petrol or strong cleaning agents
- Never use caustic agents to clean plastic parts

Lubrication

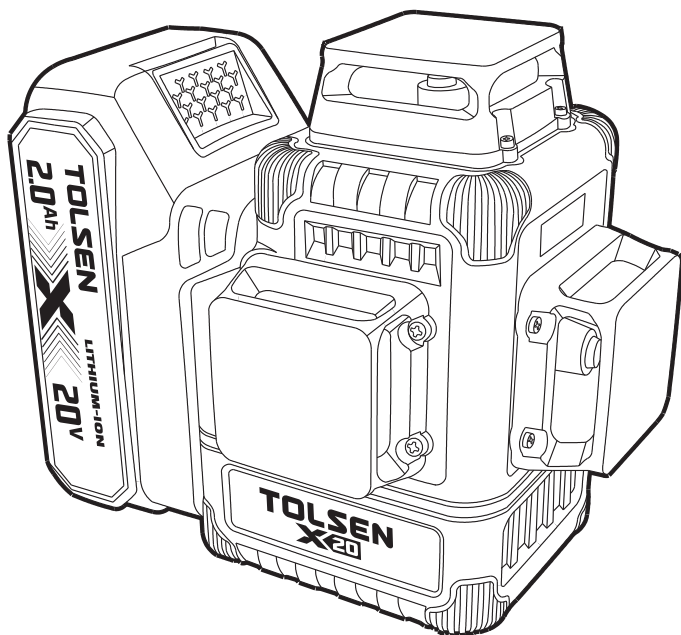
- Slightly lubricate all moving parts at regular intervals with a suitable spray lubricant



Disposal

Always adhere to national regulations when disposing of power tools that are no longer functional and are not viable for repair.

- Do not dispose of power tools, or other waste electrical and electronic equipment (WEEE), with household waste.
- Contact your local waste disposal authority for information on the correct way to dispose of power tools



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