

INSTRUCTION MANUAL

LASER SENSOR

LS-B10

Thank you for purchasing the TOPCON LS-B10.

For the best performance of the instruments, please read these instructions carefully and keep them in a convenient location for future reference.

GENERAL HANDLING PRECAUTIONS

Before starting work or operation, be sure to check that the system is functioning properly.

Affection of the radio waves

When using the instrument in the following place, the strong radio wave may cause faulty operation.

- Near the instrument occurring strong radio waves. (e.g. Transceiver)
- · Near the radio wave towers such as television or radio.

DISPLAY FOR SAFE USE

In order to encourage the safe use of products and prevent any danger to the operator and others or damage to properties, important warnings are put on the products and inserted in the instruction manuals.

We suggest that everyone understand the meaning of the following displays and icons before reading the "Safety Cautions" and text.

Display	Meaning	
	Ignoring or disregard of this display may lead to death or serious injury.	
	Ignoring or disregard of this display may lead to personal injury or physical damage to the instrument.	

• Injury refers to hurt, burn, electric shock, etc.

 Physical damage refers to extensive damage to buildings or equipment and furniture.

HANDLING PRECAUTIONS

Guarding the instrument against shock

When transporting the instrument, provide some protection to minimize risk of shock. Heavy shock may affect beam accuracy.

SAFETY CAUTIONS

semble or r	isk of fire, electric shock or physical harm if you attempt to disas- epair the instrument yourself. to be carried out by TOPCON or an authorized dealer, only!			
	or electric shock. lamaged power cable, plug and socket.			
	or electric shock. a wet battery.			
May ignite a Never use a mine.	explosively. n instrument near flammable gas, liquid matter, and do not use in a coa			
or other ele	the LS-B10 magnetic clamp near anyone who uses a pace maker ctoronic medical devices. nagnetic field can disrupt the normal operation of such devices.			
	cause explosion or injury. se in fire or heat.			
	ircuit of a battery can cause a fire. circuit battery when storing it.			

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Risk of injury to fingers. Do not place fingers on magnet while mounting to equipment.

Strong magnetic field. Do not place LS-B10 magnetic clamp near any sensitive electronic devices or mag-

netic storage media such as computer disk. Do not allow skin or clothing to come into contact with acid from the batteries, if this

does occur then wash off with copious amounts of water and seek medical advice.

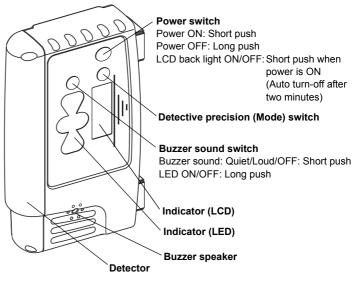
EXCEPTIONS FROM RESPONSIBILITY

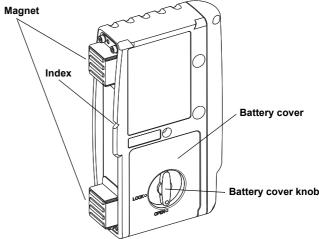
- 1) The user of this product is expected to follow all operating instructions and make periodic checks of the product's performance.
- 2) The manufacturer, or its representatives, assumes no responsibility for results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
- The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster, (an earthquake, storms, floods etc.).
- A fire, accident, or an act of a third party and/or a usage any other usual conditions.
 4) The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data, an interruption of business etc., caused by using the product or an unusable product.
- 5) The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage except for explained in the user manual.
- 6) The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement, or action due to connecting with other products.

Standard Set Composition

- 1 LS-B10 Instrument 1pc.
- 3 Instruction manual..... 1pc.

Nomenclature and Functions

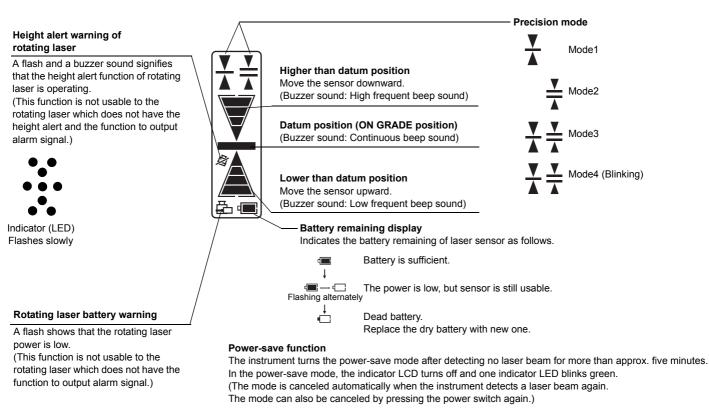




Please refer to the back of the instruction manual for the indicator display patterns.

Operation

- **1** Mount the LS-B10 on the equipment and position a rotating laser.
- **2** Raise or lower the machine blade or arm to position the cutting edge or bucket at the desired grade elevation.
- 3 Turn on the LS-B10.
- **4** Keep the machine blade or arm motionless and raise or lower the LS-B10 and adjust until ON-GRADE position are flashing. This is the ON GRADE position. The reference position has been set.
- **5** While operating, use the LED display to continually check grade, moving the blade or cutting / filling according to the direction of the LS-B10 display.



Auto-cut off function

The power will be turned off automatically after detecting no laser beam for more than approx. 30 minutes. (To turn on the laser sensor, press the power switch again.)

Laser beam positions and display patterns

Laser beam positions and display patterns						
Indicator (LCD)	Indicator (LED)	Detective precision				
		Mode1: ±2mm Mode2: ±6mm Mode3: ±12mm Mode4: ±30mm				
No display when in Mode4		±15mm/±0.05ft (30mm/0.1ft width)				
No display when in Mode4	● ● ○ ○ ○ ○ ○ ○ ○ ○ Flashes quickly	±25mm/±0.08ft (50mm/0.16ft width)				
		±35mm/±0.11ft (70mm/0.23ft width)				
	● ● ○ ○ ○ ○ ○ ○ ○ ○ Flashes slowly	±60mm/±0.2ft (120mm/0.39ft width				
	Flashes more slowly	When the laser beam is off to the top or to the bottom				

Specifications

Detective range	:	120mm (4.724inches)
Detective angle	:	270°
Detective precision	:	Mode1: ±2mm (0.0066ft)
	:	Mode2: ±6mm (0.020ft)
	:	Mode3: ±12mm (0.039ft)
	:	Mode4: ±30mm (0.098ft)
Detectable laser wave length	:	633~780nm
Laser detecting range (diameter)	:	700m (2300ft) (Using RL-H1Sa)
Power source	:	AA-size dry cells 3pcs.
Continuous operating time (+20°C/+68°F)	:	Approximately 100 hours (Using alkaline manganese dry cells)
Operating temperature	:	-20°C~+50°C (-4°F~+122°F)
Water proof	:	IP66
Dimensions (W/D/H)	:	110x36x176 (mm) (4.3"x1.4"x6.9")
Weight (Without cells)	:	0.5kg (1.2lbs)





EMC NOTICE In industrial locations or in proximity to industrial power installations, this instrument might be affected by electromagnetic noise. Under such conditions, please test the instrument performance before use.

constraints Constraints

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