F TOPCON INSTRUCTION MANUAL Level Sensor LS-80A/B/G/L

Thank you for purchasing the TOPCON Level Sensor LS-80A/B/G/L. For the best performance of the instruments, please read these instructions carefully and keep them in a convenient location for future reference.

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.

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. SAFETY CAUTIONS

/ WARNING

- 1) There is a risk of fire, electric shock or physical harm if you attempt to disassemble or repair the instrument yourself.
- This is only to be carried out by TOPCON or an authorized dealer, only I 2) Risk of fire or electric shock.
- Do not use a wet battery or charger.
- 3) Battery can cause explosion or injury.
- Do not dispose in fire or heat.
- The short circuit of a battery can cause a fire. Do not short circuit battery when storing it. 4)

/I∖ CAUTION

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 dam age and loss of profits.
- 3) 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.
- The manufacturer or its representatives assumes no responsibility for any dam-5) age, 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.

FCC

NOTE: This equipment has been tested and found to comply with 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 fre-quency 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 equip-ment 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: Reorlent or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment Info 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 Declaration of Conformity LS-80A/B/G/L Model Number: Trade Name: TOPCON CORPORATION Manufacturer Name: TOPCON CORPORATION Address: 75-1, Hasunuma-cho, ItabashI-ku, Tokyo, 174-8580 JAPAN Country: **JAPAN** U.S.A. Representative Responsible party: TOPCON POSITIONING SYSTEMS, INC. 7400 National Drive Livermore, CA94551, U.S.A Address: 925-245-8300 Telephone number AN 13813 TOPCON CORPORATION 75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, Japan Intio://w

NOMENCLATURE

Power switch **Detective precision switch** Two leveling precision options are available, normal precision and high precision. By pressing this switch, the precision options are switched alternately. Confirm the precision choice by the indicator. (Normal precision is set when tur ing on the power switch.)

Buzzer sound switch, (Qulet/Loud/OFF)

DISPLAY

Height alert warning of rotating laser*1 (Except for LS-80G) A flash and a buzzer sound signifies that the height alert function of rotating laser is operating. Level sensor can detect the signal of heigh alert warning of the rotating laser.

(This function is not usable to the rotating laser which does not have the height alert and the function to output alarm signal.)

Rotating laser battery warning*2

(Except for LS-80G) A flash shows that the rotating laser

- power is low. The level sensor can detect the rotating laser
- battery warning. (This function is not usable to the rotating laser

which does not have the function to output alarm signal.)

Note: The warning displays *1 and *2 are the func-

tions that the level sensor detects alarm signal from the rolating laser.

The level sensor can be canceled the alarm detec tion from the rotating laser.

To be canceled the detection; Press the power

switch while pressing the buzzer sound switch when powering on.

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

*1, 2 For more Information about the warning displays of above *1 and *2, refer to Instruc-

REPLACING BATTERY

- Keep pushing the battery cover in 1 direction, and then try to 1 slide the cover in 2 direction. The cover does not move but it will be open.
- 2 Take out the battery and place a new one into the battery box. 3 Press the lid down and click to close.
- Replace all 2 batteries with new ones at the same time. Do not mix used and new batteries, and do not mix different types of batterles together.
- Use alkaline dry cells. (Dry cells for movement confirmation are packed in shipment.) Nickel hydrogen dry cells and nickel cadmium dry cells can be used too, but the operating time is dif-ferent from the time of alkaline dry cells.
- Generally, performances of dry cell deteriorate temporarily in low temperature, but recover in normal temperature

DETECTIVE RANGE

Precision Display 80A/G/L 80B ±1mm (2mm width) 🖌 High SPECIFICATIONS Vormal ±2mm Detective range Detective range Somm (2.0 in) Detective precision High precision : ±1mm (±0.04 in) Normal precision : ±2mm (±0.08 in) Detective beam indication Liquid crystal : Both sides (LS-80A/G/L) Buzzer (LS-80A/B/G/L) Buzzer (LS-80A/B/G/L) ±5mm (10mm width) Δ Power source 2×AA size dry cell batteries V ±10mm Batteries included in the package are to confirm the initial operation. Please replace the batteries provided with new batteries as soon as possible. (20mm width) A Voltage DC 3V A The time for auto-cut off Approx, 30 min. ±15mm (30mm Width) A Waterproof property / dust resistance JIS protection grade IP66 Operating temperature -20°C to +50°C (-4°F to +122°F) Continuous operating time nore than more than Ŕ ±5mm ±15mm Alkaline manganesse dry batteries Approx. 120hours Dimensions 146 (i) \times 76 (w) \times 26 (h) mm (5,7 (i) \times 2.9 (w) \times 1.0 (h) in) (more than 30mm width) 10mm width A Level sensor is moved Weight upward or downward 0.19 kg (0.41 lbs) (including dry batteries) from laser beam. About measuring range, refer to instruction manual (*LS-808 : Bilnking)



- tion manual of each rotating laser.



AUTO-CUT OFF FUNCTION

A

1

C

-5-80A

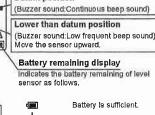
000

M TOPCON

High precision mode

Normal precision mode

Higher than datum position (Buzzer sound:High frequent beep sound) Move the sensor downward, Datum position diama di ana



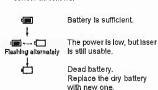
Indicator

Index

Also located on the back side

Beam receiving window

Buzzer speaker



EMC NOTICE E In Industrial locations or in proximity to in industrial power installations, this instrument might be affected by electromagnetic noise. Under such conditions, please test the battiment test formance before the Please see the attached address list or the following website for contact addresses, GLOBAL GATEWAY http://global.toncon.com/

EXAMPLE OPERATIONAL