

Automatic Self-leveling Rotary Laser LSL-105

Operating Manual



LINE SITE

Introduction

Congratulations on the purchase of your Linesite LSL105 Series Laser. Although simple to use, we recommend that you read this manual before operating the laser.

Description

The Linesite LSL105 is ideal for general construction, site preparation and other leveling applications. It automatically self-levels in horizontal.

Caution

Class 2M Laser Product
Wave length 630-680nm
Max Output Power of diode is 10mw
Laser Light: Avoid direct eye exposure
Conforms to IEC 60825-1

1.Functions

This instrument is equipped with the semiconductor diode with wavelength of 635nm, which the laser beam has supreme visibility. And the laser module of instrument will rotate freely to form a laser-scanning surface. Emitting direction of rotary laser-beam depicted as follows:



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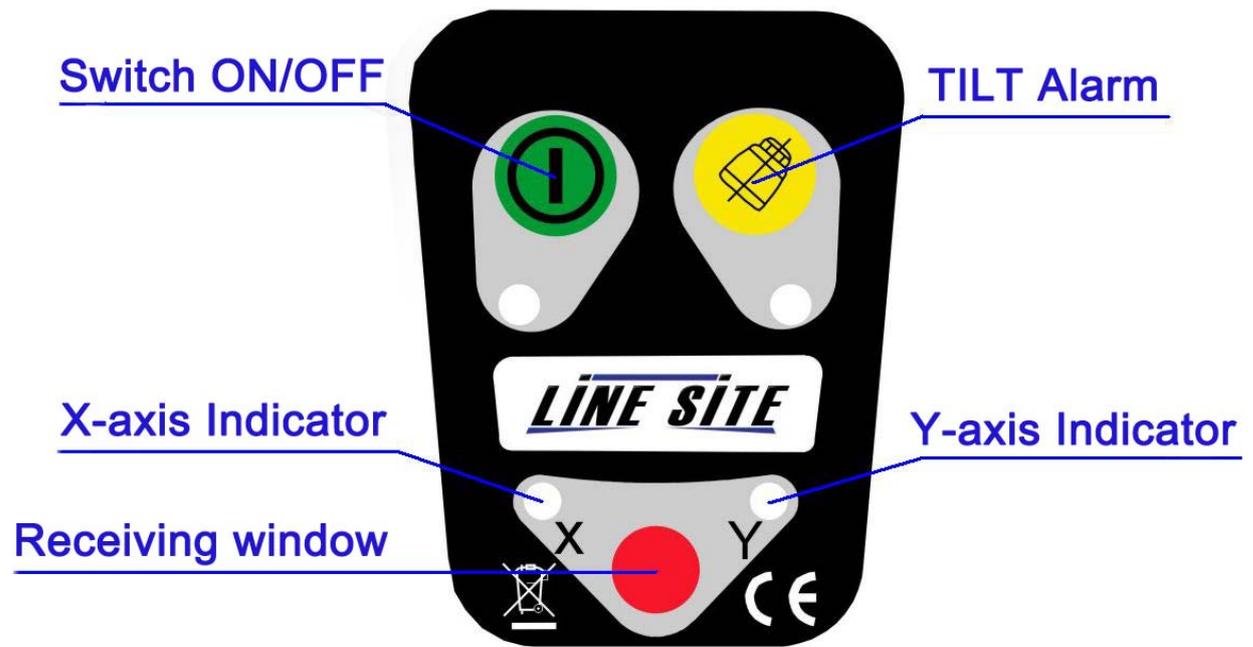
1. Introductions

2.1 Main body



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2.2 Panel



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2.3 Utilities of Panel

- (1) Switch ON/OFF: Controlling the state of power.
- (2) Automatic drift system: After laser auto-leveling, then press this button, after 20 seconds, the automatic drift system start to work. In this mode, The laser itself will warn the user for a misaligned device, When the indicator is twinkling quickly, the laser is misalign from its original position.
- (3) X-axis indicator: When it lights, the instrument can be calibrated on X-axis.
- (4) Y-axis indicator: When it lights, the instrument can be calibrated on Y-axis.

3.Directions

3.1 Battery Installment

Both Rechargeable batteries and 5# dry batteries are available for this instrument. But please notice the two kind of batteries can not be mixed.

- (1) Take down the cover of battery case after loosing the knob on outside.
- (2) Put the batteries into the case in their right electrode.
- (3) Lay the cover on the case then tightens the cover screw.

3.2 Instrument Placement

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Lay the instrument on the tripod or flat surface, or even hang it on the wall by wall bracket. Set the instrument upright and keep the slope of instrument within the range from -5° to $+5^{\circ}$.

3.3 Operations

3.3.1 Switch ON/OFF

Press the Key Switch ON/OFF, when power indicator lights and mode of automatic leveling starts up.

When voltage indicator lights, it shows the voltage of batteries is insufficient. Then the rechargeable batteries of instrument need to be charged or 5# dry batteries to be renewed.

Press the Key Switch ON/OFF again to close the instrument, meanwhile the power indicator goes out.

3.3.2 Leveling indication

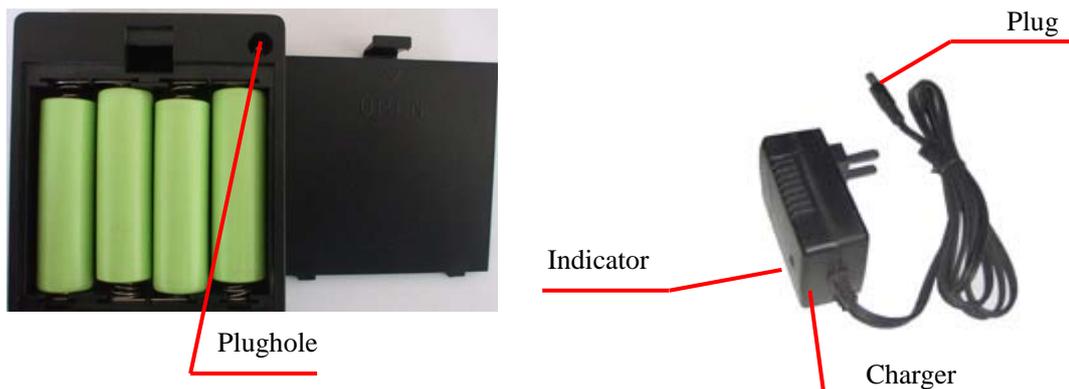
Press the Key Switch ON/OFF to bring automatic leveling into function, meanwhile, the laser beam begins to wink slowly. After automatic leveling, the laser module will rotate at the speed of 600r.p.m.

If the instrument is placed improperly, or the slope of instrument exceeds the range from -5° to $+5^{\circ}$, when the laser beam is winking fleetly. The instrument should be reset in this position.

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Notices: Instrument will close automatically after five minutes alarm.

4.Power



When the voltage indicator lights, the batteries need to be charged immediately. Connecting the charger with AC, insert the plug of charger into the plughole at the bottom of the charging device.(As depicted above).

If the indicator of charger become red, it shows the batteries are in charging.

If the indicator of charger become green, it shows the batteries is fully charged.

Notices:

(1) Using the standard rechargeable batteries of the instrument, charging will be finished within 5 hours.

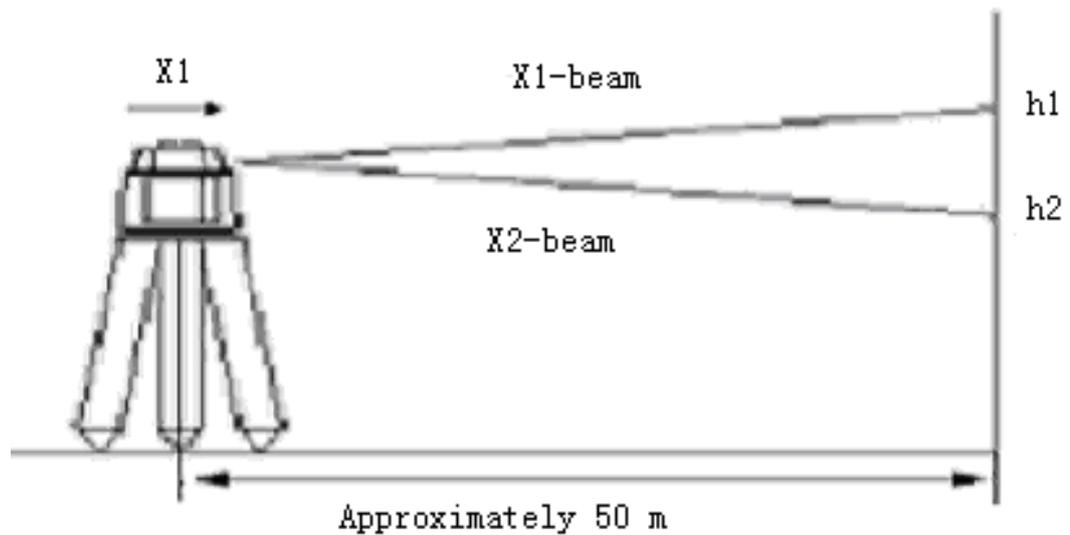
(2) Power required for the charger: Frequency: 50-60HZ, Voltage: 85-265V.

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- (3) If keeping the instrument in storage (or Leave the instrument unused for a long time), the batteries (dry battery or rechargeable battery) need to be taken out from the instrument.
- (4) Brand-new rechargeable batteries or long-time unused batteries needs to be recharged and discharged three times to attain the capacity required.

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5. Accuracy Checking



- (1) Place the instrument at the point of 50m in front of wall (or set a scaleplate at the point of 50m away from the instrument), and then adjust the level of the base approximately to aim the X1 to the wall (or scale plate), as depicted below:
- (2) After switching on the power, use the laser detector measure and mark the h1 of X1 direction on the wall or scale plate.

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(3) Loose the screw of the tripod ,and then turn around the instrument of 180°to measure and mark the h2 of X2-direction on the wall or scaleplate.

D-value between h1 and h2 ought to be less than 10mm.

(4) The way for checking Y-axis is the same as the X-axis.

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7.Specifications

Leveling Accuracy	Horizontal ±20''
Leveling Range	±5°
Measuring Range	Diameter: 500m (With laser detector)
Slope-adjusting Range	±5 (X&Y-axis With remote control)
Light Source	Laser Diode wavelength: 635nm
Laser Standard	Class II
Remote Distance	Approximately 20m
Working Temperature	-20 °C – +50 °C (-4°F – +122°F)
Power supply	DC 4.8-6V (4 *AA NI-MH batteries or Alkaline batteries)
Hours in continuous use	Approximately 22 hours
Water-proof	IP 64
Dimension	190(L)*145(W)*166(H)mm
Weight	1.2kg

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8. Care and Handling

- A) The Linesite LSL105 is a precision instrument that must be handled with care. Avoid shock and vibrations.
- B) After use, it is recommended that you wipe the laser dry and store it in a dry place. Do not store the laser in its case if the lasers or the case is wet.
- C) Do not store the laser at temperatures below –20C or above 80C. The electronic components could be damaged.
- D) To maintain the precision of your laser, check and adjust it regularly.
- E) We recommend a yearly service check for your instrument. Contact your dealer for the nearest service center.
- F) Keep the glass lighthouse of the laser clean with a soft cloth and glass cleaner.

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9. Warranty

Your Linesite LSL105 Laser is guaranteed to be free of manufacturing defects for a period of 1 year. Any abnormal usage, or if the instrument has been subjected to shock will void the warranty. The warranty will not apply to any damage resulting from negligence, accident or misuse.

Under no circumstances will the liability of the manufacturer exceed the cost of repairing or replacing the instrument. Disassembling the laser by other than a qualified technician will void the warranty.

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10. Distributor:

LINE SITE



Linesite Lasers are distributed by Trinitec Distribution Inc.

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