

LP618

Auto Leveling Cross Line Laser



remote control



main unit



detector and clamp

operation manual

Table of contents	1
1. Brief introduction	2
1.1 Configuration	2
1.2 Introduction to the main unit	3
2. Technical data	4
3. Operations	5
3.1 Preparing the power supply	5
3.2 Operations of keys	5
4. Use of the detector	6
4.1 Parts of the detector	6
4.2 Mounting battery	6
4.3 Power ON/OFF	7
4.4 Operation	7
4.5 Switching audio tone setting	8
4.6 Technical data on the detector	8
5. Accuracy tests on the instrument	9
5.1. Check all laser lines for the following	9
5.2. Vertical cross point checks	9
5.3. Vertical line checks	10
5.4. Horizontal line checks	10
5.5. Horizontal line accuracy checks	11

1. Brief introduction

It features batteries, highly visible laser beams, horizontal fan angle of 180° and compact size and light weight etc.

1.1 Configuration

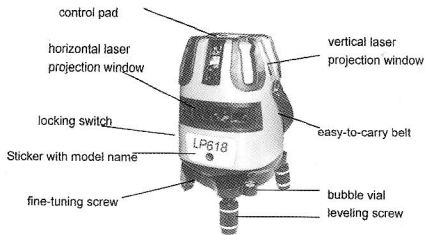
standard configuration

- ① main unit
- ② target plate TP-2
- ③ laser glasses
- ④ 4 pieces of AA size alkaline batteries
- ⑤ remote control with 2pc AA size alkaline batteries
- ⑥ Soft bag

optional

- ① detector LVH 100
- ② detector clamp LA-1
- ③ 1 piece of 9V battery

1.2 Introduction to the main unit



2. Technical data


item:	LP618
accuracy:	1mm/5m
auto leveling range:	$\pm 3^\circ$
operating range:	10m without detector, 40m with detector
laser wave length:	635nm
laser beam width:	2mm/5m
laser output:	$\leq 1\text{mW}$
laser safety class:	Class 2M
remote operating range:	$> 10\text{m}$
power supply:	6V (4 pieces of AA size alkaline batteries)
operating duration:	continuously 8 hours
operating temperature range:	$-10^\circ - +50^\circ$
waterproof classification:	IP54
dimension:	110 x 130 x 190 mm

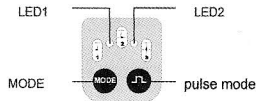
3. Operations

3.1 Preparing the power supply

- Open up the battery cover in the direction as the figure shows.
- Insert 4 AA batteries in the directions printed inside the battery compartment.
- Replace the cover.

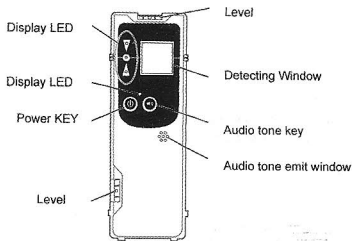
3.2 Operations of keys

- Turn the locking switch to ON position, then LED1 turns green, indication power on, and horizontal laser and plummet spot are lit on
- Press MODE one time, the front vertical line is lit on, press Mode for the second time then left and right vertical line on, press Mode for the third time then all vertical lines on, only horizontal line is lit up when the MODE is pressed for the fourth time, such sequence can be repeated.
(Horizontal line and plummet spot keep lit on when in operation).
- Press  and the unit enters pulse mode, LED 2 is lit on red and the laser flashes at the frequency of 10 KHz, under this mode, detector can be used to determine the position of the laser beam.
- When the instrument is tilted at any angle exceeding 3° , laser beam flashes at the frequency of 2 Hz indicating that the instrument is out of its operation range, please adjust the instrument back to its level range.
- When battery is $4.0\text{V} \pm 0.2\text{V}$, Power indication LED flashes red.
When battery is $3.8\text{V} \pm 0.2\text{V}$, Power indication LED is lit red constantly, the instrument stops operation.
- Turn the locking switch to OFF position to switch off the instrument.



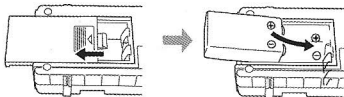
4. Use of the detector

4.1 Parts of the detector



4.2 Mounting battery

- Slide the battery cover to open.
- Mount one 9V battery. The direction of the battery is indicated in the battery box.
- Replace the battery cover



4.3 Power ON/OFF

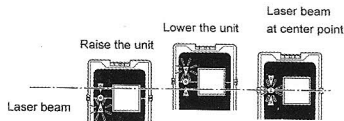
1. Press the Power key.
2. The audio tone sounds 3 times and the Power LED lights steadily to indicate that the detector is ready for operation.
3. Press the Power key again to turn the detector off.

Note

- The Power LED flashes when remaining battery power is low. Replace with a new battery.
- When no detection has been performed for a period of 10 minutes, the audio tone sounds twice and the detector turns off automatically.


4.4 Operation

1. Set up the laser detector opposite the line laser device in a location irradiated by the emitted laser. Adjust the detector until the Level bubble is between the lines. Raise/lower the detector according to the direction shown by Δ/∇ .
2. When the emitted laser beam strikes along the center of the Detecting Window the blue LED between Δ/∇ lights steadily. Mark the notch position at the sides of the detector.



4.5 Switching audio tone setting

The audio tone is default to LOUD buzzer level when detector is powered on.

You can change the buzzer level by pressing , the sequence is as:

LOUD / NORMAL / OFF

4.6 Technical data on the detector

Accuracy:	±1mm or less (within detection range only) see note below
Height of Detection Window:	about 15mm
LEDs:	Red, blue
Audio tones:	3 types (depending on position of detected laser beam)
Audio tone volume:	LOUD / NORMAL / OFF (selectable)
Sensitivity of level:	1"/2mm
Power:	9V alkaline battery (6LR61)
Lower power alert function:	Yes
Auto Power Cut Off:	Yes (10 minutes from last laser detection or last operation)
Operating time:	about 15 hours
Operating temperature:	-10°C to 50°C
Size:	150 x 50 x 26 mm
Weight (including battery):	about 150g
Dust and water resistance:	IP54 (IEC 60529:2001)
Optional accessories:	Rod Clamp, 9V alkaline battery

Note: Some specifications may vary depending on line laser used.

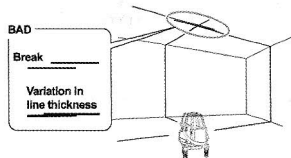
5. Accuracy tests on the instrument

Checks before operation

- Always perform checks before operation to ensure that the instrument is in good working order.
- Stop operation and perform a detailed check of instrument accuracy as described in the following section when abnormalities are encountered.

5.1. Check all laser lines for the following

- Emitted lines are sharp with no flickering or faint spots
- Emitted lines are of a uniform thickness with no breaks



5.2. Vertical cross-point checks

- Set the instrument on a flat floor surface and emit all vertical lines.
- Rotate the upper section of the instrument 180° and check that the cross-point position on the ceiling does not deviate.
- Rotate the upper section of the instrument 180° this time checking that the cross-point of the emitted vertical lines continues to strike the same point throughout rotation.

