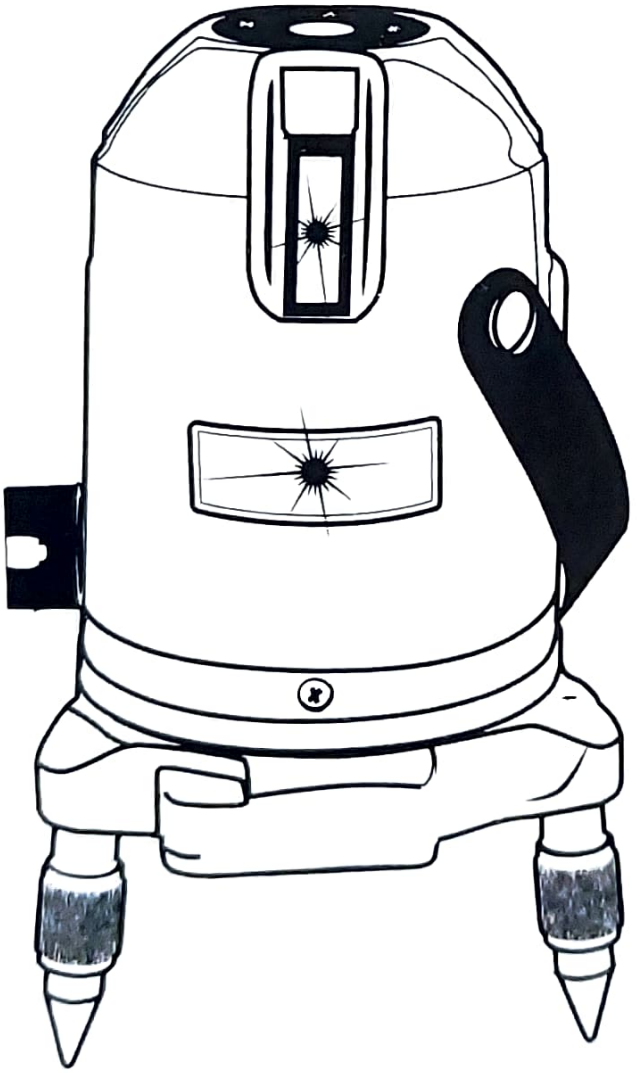
LASER LEVEL

INSTRUCTION MANUAL



GENERAL SAFETY RULES

WARNING! Read and understand all instructions. MISUSE or failure to follow the safety rules stated therein may cause serious personal injury.

1. Store the tool in a dry, ventilated, constant temperature, dust-free place.
2. Clean the surfaces at the exit opening of the laser regularly to ensure the transmission of light.
3. Regularly release the lock switch for half an hour to ensure a flexible bearing swing if the tool has stored for a long time without using.
4. Never disassemble the tool by non-professionals.
5. Avoid violent vibration, heavy impacts or falling of the tool.
6. Protect the tool against moisture and direct sun irradiation.
7. Always lock the switch after each use of the tool.
8. Remove the batteries from the tool when not using it for extended periods.
9. Do not direct the laser beam at persons or animals and do not stare into the laser beam yourself (not even from a distance).
10. Always wear laser viewing glasses during operation of the tool.
11. Do not use the laser viewing glasses as safety goggles, sun glasses or in traffic.
12. Do not use organic solvents to clean the tool.
13. Have the tool repaired only through qualified specialists using original spare parts.
14. Keep bystanders, children, and visitors away while operating the tool.
15. Do not allow children to use the tool.
16. Avoid reflection of the laser beam on smooth surfaces such as windows or mirrors. A reflected laser beam can also cause damage to the eye.
17. Switch the tool off during transport or when carrying it by the carrying strap.
18. Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dusts.

SAVE THESE INSTRUCTIONS.

APPLICATIONS

This tool is intended for determining and checking horizontal and vertical lines. Combining the functions of traditional air level and theodolite, it is widely used in construction projects. By producing laser lines precisely on the working object, it makes the construction process to be more convenient, time-saving and effective, and ensures the construction quality with high accuracy.

This tool is widely used in various units for construction works, such as woodworking, bricklaying and painting etc. In addition, it is also applied to many industries like cutting operation and areas of earthwork.

SPECIFICATIONS

Function Code		1V1H	2V1H	4V1H
Function Introduction	Vertical Lines	1	2	4
	Horizontal Line	1	1	1
	Centering Point	1	1	1
Power Supply		3 × 1.5V (AA Alkaline Battery)		
Level Class		2		
Laser Diode		635nm		
Plumb/Centering Point Accuracy		3m±1mm		
Line Width		5m±2mm		
Horizontal Self-leveling Range		±3°		
Horizontal Self-leveling Time		≤5s		
Shooting Angle		≥120°		
Working Range		Approx. 40m		
Operating Lifetime, approx.		10 h (with all laser lines be used)		
Operation Temperature		-10℃~40℃		
Storage Temperature		-20℃~40℃		
Net Weight		0.9kg		

※ Due to the continuing program of research and development, the specifications herein are subject to change without prior notice.

Caution

①Working Range maybe affected by many factors like weather, working condition, etc.

② Performance of alkaline battery may affect its operating lifetime.(Data are just for reference)

GENERAL VIEW

1. Function keys: Press the key marked "V" will produce vertical laser line(s) and "H" will produce a horizontal laser line. Press the "OUTDOOR" key to select the indoor or outdoor operating mode.
2. Carrying strap: Easy to carry the tool by hand
3. Lock switch: Turn off the tool and fix the laser unit to ensure the accuracy.
4. Adjustable legs: Rough-leveling the tool by turning the legs.
5. Bubble: Rough-leveling the tool by adjusting the adjustable legs to center the bubble into the circle line, then the tool will self-level.
6. Fine adjustment knob: Fine-leveling the tool by turning this knob.
7. Exit opening for horizontal laser beam: Press the "H" key to send out the horizontal laser line.
8. Exit opening for vertical laser beam: Press the "V" key to send out the vertical laser line(s).
9. Indicator light: The indicator light will flash when out range of self-leveling or when pressing the "OUTDOOR" key to select the indoor or outdoor operating mode.

INSTRUCTIONS FOR OPERATION

Inserting/Replacing Batteries

CAUTION:

- Only use high-performance alkaline batteries (three pieces).
- Always replace all batteries at the same time.

To insert new batteries, open the battery lid by pressing the latch of it in the direction of the arrow and remove the battery lid, remove the old batteries and replace with new ones. Pay attention to the polarity when inserting/replacing the batteries.

Rough Leveling

Turn the three adjustable legs to center the bubble into the circle line (quite accurate is not necessary); the tool will self-level when turning on.

Switch Operation

To turn on the tool, simply turn the lock switch clockwise. Immediately after turning on the tool, the centering laser point will be opened and the indicator lights under the bubble.

Turn the lock switch counterclockwise to turn off the tool.

Leveling Operation

Press the "V/H" key to choose your desired laser line(s), or press one of them then press another one to produce cross-lines on the ceiling according to the actual situation. When the vertical line is desired to align with a certain position, manually turn the body of the tool with use of the fine adjustment knob to make an accurate alignment. **To raise or lower the horizontal laser line**, attach the tool on a commercially available photographic tripod, align the horizontal laser line with a desired position by adjusting the height of the tripod.

Refer to the following schematic diagram to operate the tool. (**Fig. 1**)

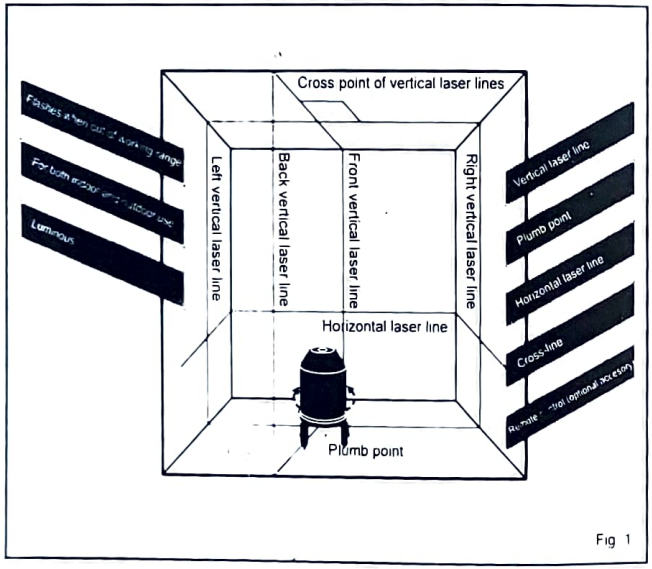


Fig 1

Alerting

The laser lines flash when the tool is not well positioned. Adjust the adjustable legs to level the tool until the laser lines no longer flash.

FEATURES AND FUNCTIONS

1. Alerting when out range of self-leveling (Laser and Indicator light flashing and laser level beeping).
2. Magnetic-damped compensation system ensures a rapid and timesaving leveling, shortening leveling time to 3 to 5 seconds.
3. With three operating modes, i.e. horizontal operation, vertical operation, cross-line operation, between which can be switched at any time. Vertical lines can be extended over the zenith.
4. Horizontal and vertical line 1 with point helps enlarge the working range.
5. Centering laser point (plumb point) and bubble help to position the machine accurately. Bubble is visible during the night.
6. 360° rotatable body with fine adjustment knob ensures a quick and accurate alignment.
7. Optional laser receiver (sold separately) could extend the working range to 50 meters.
8. Working height is adjustable with a tripod.
9. Laser signals reception function makes the tool can be operated outdoor or at a distance.

MAINTENANCE

1. Store and transport the tool only in the supplied protective case.
2. Keep the tool clean at all times. Do not use any cleaning agents or solvents to clean the tool. Wipe off dust and debris by using a moist and soft cloth.
3. Do not immerse the tool into water or other fluids.

※ Repairs and any other maintenance should be performed by authorized service centers, always using original replacement parts.