

WALL DETECTOR



LOMVUM®

Wall detector LW10 operation manual

Functional Description



The manual and operation instructions must be read carefully, And to comply with the provisions of the above documents, So that the best function of the detector can be played. Please keep the instruction book properly. Please turn over the page showing the chart of the detector. When reading this manual, you must turn to the diagram page for reference. Use the instrument according to the instruction

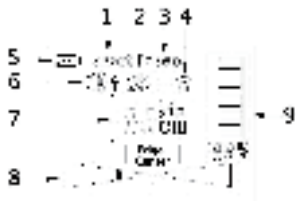
The detector can detect metal (steel bar, copper pipe) and cables hidden in walls, ceilings and floors. It can also detect wood beams, metals and cables hidden beneath the plaster-board.



The components of illustration

The product number in illustration is consistent with the product number in below detailed description

- 1 red indicator light
- 2 yellow indicator light
3. green indicator light
- 4 display screen
- 5 switches
6. "foreign object detection" button (Generally refers to the wooden block) , Long press the button to switch precision mode /deep mode.
7. Detect metal or cable buttons
8. Sensing area
- 9 battery compartments



Display screen

- 1.The exact mode in foreign object detection (note: the maximum detection depth in the precision mode is 20mm.)
- 2 .current detection mode , They are alternating current and foreign bodies (Generally refers to the wooden block) 、 metal.
- 3.the deep mode in foreign object detection (note: the maximum detection depth in the accurate mode is 38mm.)

4. magnetic or non-magnetic display icons
5. battery level display
6. Sound icon (press the wood detection button ⑥ and metal detection button ⑦ simultaneously to turn on/off)
7. Detection metal depth display area (this depth refers to the distance between the center point of the detection area and the measured object)
8. In the mode of detecting foreign bodies, the display icon indicating the boundary (Edge) or Center of the measured object to the Center line of the instrument is displayed; in the mode of metal and alternating current, Only the Center icon is displayed in metal mode.
9. signal icon

Technical data

Maximum detection depth

Ferrous metal	120 mm
Non-ferrous metal (copper)	100 mm
Alternating current (ac)	50 mm
Copper wire ($\geq 4 \text{ mm}^2$)	40 mm
Foreign body (Generally refers to the wooden block)	exact mode 20 mm / deep mode 38mm

Automatic shutdown time	5 minutes
Working humidity range	
Metal mode	0-85%RH
Foreign body mode	0-60%RH
Operating temperature range	-10 ℃ +50 ℃
Storage temperature range	-20 ℃ +70 ℃
Battery	1x9 volt dry battery
Battery Life	about 6 hours

The detection result will be affected by the size and material of the detected object, as well as the material and condition of the detected surface and other factors; If the cable is uncharged, the probe depth will be reduced.

Warning :

- Do not allow moisture to penetrate the instrument,,do not allow direct sunlight on the instrument.
- if the instrument is exposed in a high temperature differences environment, it must wait for the temperature of the instrument to rise before starting the instrument
- If you use or operate a transmitting device such as a microwave oven near the detector, the detection results will be affected
- Basically, detection results will be affected by some environmental factors around. The environment factor refers to the instrument is working, the instrument is near will generate strong magnetic field or electromagnetic field of the machine. In addition, moisture, metal building materials, aluminum cladding of insulating materials. Conductivity of wallpaper, carpet or tile conduction ability will affect the detecting result. Hence the wallboard. The ceiling and floor drilling, sawing, before that must pay attention to the related information (such as building figure)

For the best scanning effect:

- avoid wearing rings or watches when using the detector. Metal may cause inaccurate testing.
- move the tool evenly over the surface without lifting it or changing the applied pressure.
- the tool must always be in contact with the surface during scanning.
- make sure the fingers of the hand holding the tool do not touch the scanned surface.
- do not touch the surface of the detector or scan with your other hand or any other part of your body.
- always test slowly for maximum accuracy and sensitivity.

Use the instrument

Install/replace batteries

Use only 9V dry batteries.

Load the battery into the battery compartment shown in figure 12. When the detector is not used, the battery must be removed from the instrument. After long-term use, the battery will corrode or discharge automatically.

Turn on/off the machine

Before operating the probe, make sure there is no moisture in the detection area. Dry the detector with a cloth if necessary.

Press the start/stop button 5 to start the instrument:

After a short period of automatic testing, the probe is ready to run. The instrument automatically enters the function mode of metal detection. At this time, if there is a signal display in area 9 on the display screen without metal interference, it indicates that calibration is required. The calibration method is: Place the instrument in an environment free from metal and strong magnetic field interference (such as: Lifting the instrument into the air by hand, etc.), and then press and hold the detection metal button until the signal in area 9 of the display screen shows zero and the green light is on, and then the calibration is completed. At this time, release the button to detect the metal work.

Detection object type

A detector can be used to look for objects below the detection area.

Detect metal objects (steel bar, wire, copper pipe)

The maximum metal detection depth is 120mm

When detecting metal objects, press the metal detection button to enter the metal detection state. At this time, the metal detection pattern will appear on the display screen, and the green indicator light will be on.

Place the detector on the surface of the detector and move the instrument to the left or right in the same direction.

As the instrument gets closer to the metal object, the scale on the signal intensity display area of the display screen will gradually rise and the intensity percentage will gradually increase. As the instrument moves away from the object, the scale drops and the intensity percentage decreases. When the program determines that the signal received by the instrument reaches its maximum value, the metal object is positioned directly below the center of the detector. The Center icon (Center) is displayed on the display screen.

When metal is detected, the yellow or red light on the detector lights up, and there is a constant sound from the instrument.

The red light on the detector flashes when it detects both the metal and the ac signal, and a beeping sound came from the instrument.

When the detector displays a nonmagnetic metal symbol, it indicates that the current object being measured is generally a wire or copper pipe.

When the magnetic metal symbol is displayed on the detector, it indicates that the currently measured object is generally steel bar.

When the detector does not display magnetic or non-magnetic metal symbols, it indicates that the currently measured object is generally an alloy.

When the alternating current symbol on the instrument flashes, it indicates that there is an alternating current signal nearby.

Note: when detecting metal, the detection depth value will be displayed on the display screen synchronously with the detection operation. The accuracy of the depth value is related to the shape and material of the metal being measured, the distribution of the relative detector of the object being measured, and the surrounding media properties of the object being measured. When the measured object is standard steel bar with diameter of 18mm or copper tube with diameter of 18mm, the accuracy of depth value is the best. Otherwise, the depth value can only be used as a rough reference value.

Warning!

In some cases, tools may not be able to accurately indicate live wires in walls if internal equipment fails or is not properly operated, so do not rely solely on the instrument to identify the presence of dangerous live wires. Other evidence, such as construction drawings or visual identification of wiring or pipe entry points, should also be used.

Warning!

If the wall contains live wires, do not take potentially dangerous measures. Be sure to turn off power, gas, and water before turning holes or studs penetrate the wall surface.

- Concrete, brick, and ceramic surfaces have shielding effects on electric field signals from the firing line, so when tested on these surfaces, ac signal detection is affected.

Ac signals can be detected more easily when the appliance is connected to the desired conductor and turned on.

- "live" wire signals will spread from both sides of the actual wire, so sometimes the "live" wire alarm area looks much larger than the actual wire
- Ac signals come mainly from live wires, and may also come from static or induced electricity in the environment. Placing your hand on the wall next to the detector may help eliminate static and inductive electricity.
- The signal strength of a "live" wire depends on the location of the cable. Therefore, take further measurements nearby or use other information to check for "live" wires.
- non-" live "wires may be detected as metal objects, and thin wires may not be detected.

Foreign body detection (generally referred to as a wooden block)

- Maximum detection depth: exact mode: 20mm; deep mode: 38mm. Long press the button to switch exact mode /deep mode
- The foreign body detection mode will detect objects in gypsum drywall, plywood sheaths, bare wood floors, and coated wood walls.

- The foreign body detection mode does not detect the concrete, mortar, lumps, bricks, carpets, foils, metal surfaces, tiles, glass or any other dense material.
- Sensitivity depth and accuracy will vary due to moisture content, material content, wall texture and paint.

The foreign body detection mode actually detects more than just wood blocks. It can also detect metals and other dense materials, such as water pipes and plastic pipes near the back of walls or ceiling surfaces. To help identify the wooden stall, first scan the metal and mark the location of any detected metal objects. The scan is then performed in the foreign body detection mode. The items detected in the foreign body detection mode but not detected in the metal detection mode may be wooden studs.

Press the wood button to enter the mode of detecting foreign matter, and an icon of detecting foreign matter (generally referring to wood file) will appear on the display screen.

When detecting foreign bodies, the instrument must be vertically attached to the wall and then press the button for detecting foreign bodies. Keep the instrument stationary for 1-3 seconds and wait for the completion of instrument calibration (the green light is on at this time) before conducting the detection operation.

Place the detector on the surface of the probe and move the instrument evenly and slowly to the left or right in the same direction. Do not lift the instrument or apply additional pressure.

When the instrument is close to the edge of the wooden bar of the object to be measured, the display screen will display the signal percentage synchronously, and the boundary icon with the same direction will gradually display.

When the instrument is on the Edge of a wooden block, the Edge character (Edge) will be displayed and the corresponding Edge icon will be displayed. Continue to move the instrument in the same direction, Edge character (Edge) off, the other half of the Edge icon gradually displayed; When the instrument is in the middle of the wooden stall,

the Center character (Center) is displayed on the display screen and all the border icons on both sides are displayed. The red light will be on and the buzzer will "drip...". Long beep, maximum signal percentage.

Now keep moving in the same direction, the center cross icon and character are extinguished, the buzzer stops sounding, and the boundary icon is gradually extinguished with the departure of the instrument. When the instrument is at the other Edge of the wooden file, the Edge character (Edge) will be displayed on the instrument and the border icon on the corresponding half side will be displayed. The display screen will display the signal percentage synchronously. Continue to move the instrument until it is far away from the wooden block. The signal percentage gradually decreases and the boundary icon gradually disappears. When the instrument cannot detect the wooden block and the green light is on. The detection operation is completed

Note:

Repeated detection, the location will be more accurate. When a foreign object is detected, alternating current is also detected. At this time, the symbol of alternating current on the instrument flashes, and the instrument makes a short "drip drip" sound.

In foreign body mode, when only ac current is detected, the instrument flashes only ac symbol on the display

Note:

- Sometimes due to various environmental factors, the instrument may not be automatically calibrated, and there may be wrong alarm signal, please manually calibrate. The calibration method is to briefly press the foreign body detection mode button until the green light is on again.
- If the instrument has just been calibrated on the log, move the tool out of the log range and only detect it when the log is tested again.
- If you receive unstable scan results, it may be due to moisture in the wall cavity or drywall, moisture, or recently applied paint or

wallpaper that is not completely dry. While moisture may not always be visible, it can interfere with the tool's sensors. Please let the walls dry for a few days.

- For some environmental factors or uneven surfaces, it is difficult to detect wood nails with foreign body detection mode. By changing the mode of metal detection to locate the nails that hold the material to the wood nails, it may be easier to find these objects.
- Depending on the distance between the wire or pipe and the wall, the instrument can detect foreign objects in the same way it detects them. Care should always be taken when nailing, cutting, or drilling walls, floors, and ceilings that may contain these objects.

Maintenance, service, cleaning

Use a dry, soft cloth to remove dirt from the instrument. Do not use cleaners or solvents.

Do not put any label or nameplate on the detection area before and after the detector. Do not paste metal nameplate.

Use the included protective case to store and carry the detector.

Disposal waste

Damaged detectors, accessories and packing materials must be recycled and utilized in an environmentally friendly manner.

Right to modify