
# PeakTech 3433 Scanning Device User Manual



Contents



## PeakTech 3433 Scanning Device

## Safety instructions

This product complies the requirements of the following European Union directives for CE conformity: 2014/30 / EU (electromagnetic compatibility), 2011/65/EU (RoHS), pollution degree 2.
**WARNING!** Read these operating instructions before use and keep them in a known place. Always pass these operating instructions together with the measuring device to other users. For safety of operation of the device and to avoid serious injuries due to current or voltage flashovers or short circuits, the following safety instructions for operating the device must be observed

- Never operate the device unless it is completely closed.
- Only carry out measuring work in electrical systems in dry clothing, preferably in rubber shoes or on an insulating mat.
- It is essential to observe warnings on the device.
- Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not operate the device near strong magnetic fields (motors, transformers, etc.)
- Before starting the measuring operation, the device should be stabilized to the ambient temperature (important when transporting from cold to warm rooms and vice versa)
- Avoid formation of condensation or dripping water on electrical test equipment under all circumstances.
- If you are not going to use the device for a long time, remove the battery from the battery compartment.
- Periodically clean the case with a damp cloth and a mild detergent. Do not use corrosive abrasives.
- Avoid any proximity to explosive and flammable materials.
- Opening the unit and maintenance and repair work must only be carried out by qualified service technicians.
- Do not make any technical changes to the device.

## Introduction

Intended use
This practical wall scanning device is used in preparation of drilling, slitting or chiseling work and was developed to find metal, wood and live conductors in walls, floors or ceilings. The inverted and easy-to-read LCD display visually shows the distance to the material found and helps the user to evaluate the internal condition of the wall before e.g. pipes are damaged or short-circuits in power lines occur. The scanning depth of the sensor lies between 20mm (wood) and 120mm (ferrous metal) depending on the material sought. In addition, an LED (green, yellow, red) indicates whether a material has been found or if there is a danger of electrical shock at the current test location. The PeakTech 3433 is protected against the ingress of dust and jet water in protection class IP54 for a safe daily use. The simple operation, safe application and high-quality workmanship make this model an indispensable companion for every craftsman, do-it-yourselfer or installer for maintenance and all work in the building sector.

## Features

- LED light (green, yellow, red) with acoustic signal
- Measuring depth up to 120mm, depending on the material
- Distance display to measuring material
- Inverted LCD display 6cm with lighting
- IP 54 water and dust protected
- Metal / Electricity mode to find metal or electricity
- Wood mode button for finding wood
- Hand strap for optimal transport of the device

- Automatic switch-off after 5 min.
- Self-calibration when switching on
- Detection of ferrous and other metals

## Specifications

| | |
|---|---|
| **Maximum scan depth:**<br><br>Ferrous metals<br>Non-ferrous metals (copper) Live Wire**<br>Wood | <br>120 mm ± 10 mm<br>80 mm ± 10 mm<br>50 mm ± 10 mm<br>20 mm ± 10 mm |
| Automatic switch of after<br>approx. | 5 min. |
| Protection Rate | IP 54 |
| Display | 6 cm (2.4 inch) |
| Operating temperature | -10°C+50°C |
| Storage temperature | -20°C+70°C |
| Battery | 1x9V |
| Size | 200 x 83 x 28mm |

*Depends on operating mode, material and size of the objects, as well as material and condition of the base material Less scanning depth for wires/conductors that are not “live”.

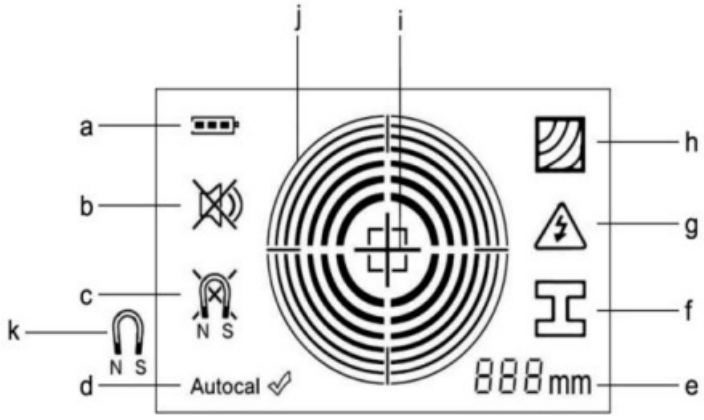
## Operating elements

### Device elements


1. LED indicator light

2. Inverted LCD display
3. Metal / Electricity Mode-Button
4. Wood Mode-Button
5. On / Off Button
6. Hand Strap
7. Sensor Area
8. Sliding Pad
9. Product Label Area
10. Battery Cover

**Display elements**




- a. Battery indicator
- b. Switched-off audio signal indicator
- c. non-magnetic metal indicator
- d. “Autocal” calibration indicator
- e. metal detecting depth indicator
- f. Metal detection indicator
- g. “Live” wire indicator
- h. Wood detection indicator
- i. Object’s center indicator
- j. Measuring indicator
- k. Magnetic metal indicator

## Operation

**Switching on and off**

1. Protect the meter from moisture and more direct Exposure to sunlight.
2. Before switching on the measuring tool, make sure that that there is no moisture in sensor area “7”. If necessary, dry the measuring tool with a soft cloth.
3. When the measuring tool is exposed to an extreme temperature change let the device rest before turning it on to adjust it to the ambient temperature.
    - To switch on the measuring tool, press the On / Off button “5”.

To switch off the measuring tool, press the On / Off button “5” again.
- If no button on the measuring tool is pressed for approx. 30 seconds and no objects are found, the measuring tool switches off automatically to save the battery.

4. For switching the audio signal on and off, simultaneously press the “3” and “4” keys to switch the audio signal on and off. When the audio signal is switched off, the indicator b appears in the display.

**Detect objects**

1. Use the detector to find the objects below the detection area “7” can be found.
2. Always move the measuring tool in a straight line with light pressure over the surface without lifting it or changing the pressure. During the measurement, the sliding pads “8” must always be in contact with the surface.

**Detecting metal objects**

1. When the device is switched on, it is automatically in the metal search function. At this point the metal detection indicator “f” is shown in the display and the LED indicator “1” lights up green.
2. Position the measuring device on the surface to be scanned and move it to the side. As the tracker approaches a metal object, the reading of the measurement indicator “j” increases and a pulsating tone sounds. Move the tracker across the surface again to find the center of the object being scanned.
3. At the position of maximum display, the metal object is below the center of the sensor. At this point the crosshair “i” is shown on the display, a continuous tone sounds and the LED display “1” lights up red. As it moves away from the object, the display “y” decreases again.
4. If the metal object found is a non-magnetic metal (e.g. copper), the indicator for non-magnetic metals “c” is displayed. If the metal object found is a magnetic metal (such as iron), the “k” indicator is displayed for magnetic metals.
5. If the LED of the detector “1” lights up yellow, the metal is too deep or too small.

**Note:** When scanning for metal objects, the display will show “e” (distance value) in the display. If the measured objects are the standard steel rods with a diameter of 20mm and the steel rod is relatively parallel to the detector, the accuracy of the value is best. The distance value is only used as a general reference value.

**Note:** For reinforcing steel mesh and steel in the examined base material, a display is given over the entire surface of the measurement indicator “i”. It is typical for reinforcing steel mesh that the symbol “k” for magnetic metal is shown on the display directly above the iron bars, while the symbol “c” for non- magnetic metal is shown between the iron bars.

**Note:** Switch on the measuring tool. After a short self-test, the detector is ready for use. When the measuring tool has the following condition, the measuring tool needs to be calibrated.

- When you switch on the tracking device, it will calibrate itself. In the event of faults, switch the device off and on again so that the measuring device can calibrate itself once and the faults can be eliminated.
- At extreme temperatures or temperature fluctuations the accuracy of the tracking device is faulty and that meter needs to be calibrated. The calibration method is:
    - Position the Measuring device in an environment without metal and without strong magnetic field disturbances. Press the metal mode button “3” for approx. 2 seconds. Now the detector will do a brief

self-examination. The LED display “1”lights up green and indicates the self-calibration.

**Search for live wires**

- The warning for live wires is displayed in every mode.
  - The detector can detect live wires with 50 Hz or 60 Hz. Other live wires cannot be displayed. Press the “3” key twice to search for live wires. At this point the warning symbol “g” appears in the display and the LED display “1” lights up green.
  - Position the measuring device on any surface and move it around there. If the measuring device comes close to a live wire, the display of the measuring indicator “j” increases and the signal tone sounds with a rapid sequence of tones. Move the measuring device over the surface again to find the center of the searching line. In the position with maximum display, the live wire is below the middle of the sensor. At this point, the “i” will appear on the display and the acoustic signal will sound with a quick sequence of tones. In addition, the LED display “1” lights up red. When the measuring device moves away from the live wire, the display decreases.**Note:** Wires that are live can be identified more easily. For example, lamps are connected to a line that is currently being searched for. Lines with 110V, 220V and 380V (three-phase current) are detected with approximately the same scanning capacity.
    **Attention!** Under certain conditions, for example metal surfaces or under surfaces with a high water content, live wires cannot always be reliably detected. The signal strength of live wires depends on the position of the cable. You should therefore apply further measurements in the immediate vicinity or use other sources of information to check whether a live line is present. If you move the measuring tool repeatedly over the area, you will localize the live wire more precisely. Static electricity can cause the electrical wiring to be inaccurate, for example over a large area. To improve the reading, place your free hand flat against the wall next to Measuring device to remove the static electricity. Moving the detector quickly creates the static electricity. Please move slowly if you want to find live wires.

**Detecting wooden objects**

1. When looking for wooden objects, position the measuring device on the desired surface. By pressing the wood mode button “4”, the LED display lights up green until the measuring device has completed the calibration. The display symbol “h” of the wood detection now appears in the display. Now position the measuring device on the desired surface and move it around. When the measuring device approaches a wooden object, the display of the measuring indicator “j” increases and a signal tone sounds with a rapid sequence of tones. Move the measuring device over the surface repeatedly to find the center of the scanned object. At the position of maximum display, the wooden object is below the center of the sensor. At this point the “i” indicator is shown on the display, a continuous tone sounds and the LED indicator “1” lights up red. As the meter moves away from the object, the display will decrease. If the wooden object is too deep or too small, the LED of the detector “1” lights up yellow.
   **Attention!** When wooden objects are detected, the measuring display increases and the signal tone sounds with a rapid sequence of tones; the display also flashes red or yellow when the measuring device is positioned on the base material to be detected. If the above conditions have occurred, the process must be repeated. The wood mode button “4” must be pressed based on the detected material. The LED display 1 lights up green and shows the calibration. If the detector searches for wood objects again or on another wall or surface, the wood

mode button “4” must be pressed repeatedly. After a short self- test, the LED display “1” lights up green and shows the calibration. Only then should you start measuring.

**Instructions for the operating mode**

1. Basically, the measured value can be affected by certain environmental conditions. These include, for example: proximity to other devices that generate strong magnetic or electromagnetic fields, moisture, metallic building materials, foil-coated insulation materials or conductive wallpaper. Therefore, please also consider other sources of information, for example construction plans, before drilling, sawing or doing installation in walls, ceilings or floors.

## Maintenance and cleaning

1. If the measurement indicator “j” is displayed continuously even though there is no metal object in the vicinity of the measuring device, the measuring device can be calibrated manually. To do this, remove all objects in the vicinity of the measuring device (including wristwatches etc.) and keep the measuring device in an environment free of metal and strong magnetic field interferences. Press the metal mode button “5” again until the red, yellow and green lights light up simultaneously, if this is the case, release the metal mode button “5” again. After a few seconds the light will turn green and the calibration process was successful.

**Cleaning**

1. Wipe off dirt or grime with a dry, soft cloth. Do not use detergents or solvents.
2. In order not to impair the measuring function, no stickers or nameplates may be affixed in sensor area “7” on the front and back of the measuring device. (Especially not made of metal).
3. Only store and transport the measuring device in the protective cover provided.

## Battery replacement

Pay attention to the battery level indicator before use. Even if the device can still be switched on, the battery can be very weak and thereby falsify the measurement result. Replace the battery immediately if the battery indicator indicates this or the device can no longer be switched on.

**Notification about the Battery Regulation**
The delivery of many devices includes batteries, which for example serve to operate the remote control. There also could be batteries or accumulators built into the device itself. In connection with the sale of these batteries or accumulators, we are obliged under the Battery Regulations to notify our customers of the following: Ordinance – at a municipal collection point or place them in the shops on the spot free of charge. You can return batteries obtained from us free of charge after use at our address stated on the last page or send them back to us by post. Please dispose of old batteries at a council collection point or return them to a local shop at no cost. The disposal in domestic refuse is strictly forbidden according to the Battery Regulations. You can return used batteries obtained from us at no charge at the address on the last side in this manual or by posting with sufficient stamps. Contaminated batteries shall be marked with a symbol consisting of a crossed-out refuse bin and the chemical symbol (Cd, Hg or Pb) of the heavy metal which is responsible for the classification as pollutant:

1. “Cd” means cadmium.
2. “Hg” means mercury.
3. “Pb” stands for lead.

## Documents / Resources

| | |
|---|---|
|  | PeakTech 3433 Scanning Device [pdf] User Manual<br>3433 Scanning Device, 3433, Scanning Device |

## References

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