

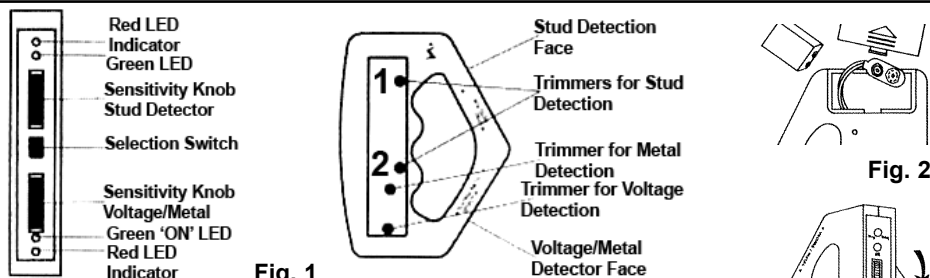
INSTRUCTIONS FOR:
3 IN 1 METAL, VOLTAGE AND STUD DETECTOR

Model: **AK2018**

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.



1. DESCRIPTION

Combined unit for the accurate detection of live or dead electricity cables, water or gas pipes and wooden studs or battens. Powered by a 9V battery (not supplied) the detector will, with red and green LED displays and an audible signal, show the presence of metal, electricity and studs or battens.

2. SAFETY

- When the unit gives a 'no voltage' reading (no flashing of red LED and beeping of the buzzer when touching the conductor), check the unit on a known voltage source BEFORE touching the conductor.
- Intended for indoor use only - **DO NOT** get the detector wet.
- The unit will not detect electricity in shielded conductors i.e. those in a metal conduit. In such cases it will indicate only the presence of metal.

3. OPERATION

☐ **Warning!** Ensure that you read, understand and apply the safety instructions before attempting to use the detector.

Note: Remove the battery cover. Install a 9V PP9 battery. Refit the battery cover. Refer to Fig. 2.

3.1 Metal Detection

- 3.1.1 Rotate the blue knob (Voltage/Metal Detector) fully downwards and move the selector switch to the Voltage/Metal Detection position. The green LED will illuminate. Make sure that the unit is well away from any metal or current carrying conductor and hold it as shown in Fig. 3.
- 3.1.2 Turn the blue knob upwards until the indicators come on (red LED illuminated and buzzer activated). Reverse the blue knob slowly until the indicators just go off. The unit is now ready for use.
- 3.1.3 Hold the unit as shown in Fig. 4 and move it sideways (horizontally) across the wall. The red LED and a continuous buzzer tone will come on when a metal object is in the vicinity.
- 3.1.4 If the indicators do not come on, or will not go off after the unit has been switched on, the detector requires adjustment. For adjustment details, refer to Section 3.5.

3.2 Voltage Detection

- 3.2.1 Turn the blue knob (Voltage/Metal Detector) downwards and move the selector switch to the Voltage/Metal Detector position. The green LED will illuminate immediately. Make sure that the unit is well away from any metal or current carrying conductor.
- 3.2.2 Turn the blue knob upwards until the indicators come on (red LED illuminated and buzzer activated). Reverse the blue knob slowly until the indicators just go off. The unit is now ready for use.
- 3.2.3 Hold the unit as shown in Fig. 4 and move it sideways (horizontally) across the wall. Current-carrying conductors will be shown by a flashing red LED and the sound of an interrupting buzzer.
- 3.2.4 If the indicators do not come on, or will not go off after the unit has been switched on, the detector requires adjustment. For adjustment details, refer to Section 3.5.

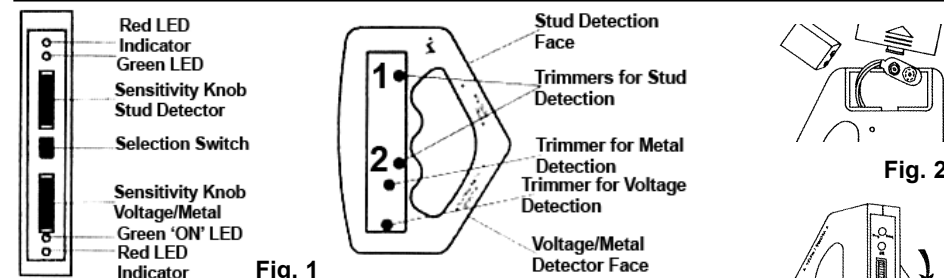
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Note: Remove the battery cover. Install a 9V PP9 battery. Refit the battery cover. Refer to Fig. 2.

3.1 Metal Detection

- 3.1.1 Rotate the blue knob (Voltage/Metal Detector) fully downwards and move the selector switch to the Voltage/Metal Detection position. The green LED will illuminate. Make sure that the unit is well away from any metal or current carrying conductor and hold it as shown in Fig. 3.
- 3.1.2 Turn the blue knob upwards until the indicators come on (red LED illuminated and buzzer activated). Reverse the blue knob slowly until the indicators just go off. The unit is now ready for use.
- 3.1.3 Hold the unit as shown in Fig. 4 and move it sideways (horizontally) across the wall. The red LED and a continuous buzzer tone will come on when a metal object is in the vicinity.
- 3.1.4 If the indicators do not come on, or will not go off after the unit has been switched on, the detector requires adjustment. For adjustment details, please refer to Section 3.5.

3.2 Voltage Detection

- 3.2.1 Turn the blue knob (Voltage/Metal Detector) downwards and move the selector switch to the (Voltage/Metal Detector) position. The green LED will illuminate immediately. Make sure that the unit is well away from any metal or current carrying conductor.
- 3.2.2 Turn the blue knob upwards until the indicators come on (red LED illuminated and buzzer activated). Reverse the blue knob slowly until the indicators just go off. The unit is now ready for use.
- 3.2.3 Hold the unit as shown in Fig. 4 and move it sideways (horizontally) across the wall. Current-carrying conductors will be shown by a flashing red LED and the sound of an interrupting buzzer.
- 3.2.4 If the indicators do not come on, or will not go off after the unit has been switched on, the detector requires adjustment. For adjustment details, please refer to Section 3.5.

- Notes:** a) Some walls may contain metallised fibre, for fire-proofing, which will spread the area of voltage pick-up. Placing your free hand on the wall may cancel the effect.
 b) Rubbing or banging the unit on the wall may generate static electricity and cause false readings.
 c) Because of the extremely small current required to cause a reading on the unit, an apparent false reading may be seen in some situations e.g. a conductor with poor insulation touching a damp wall, will show a voltage on the wall. In this situation, the unit is indicating a potential hazard which should be checked by a qualified electrician.

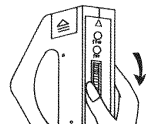


Fig. 5

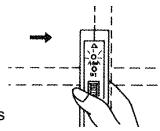


Fig. 6

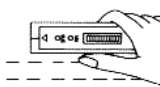


Fig. 7

3.3 Wood Detection

- 3.3.1 With the Stud Detection face against the wall, hold the unit vertically as shown in Fig. 5 and turn the blue knob fully downwards.
 3.3.2 Move the selector switch to the Stud Detector position.
 3.3.3 Turn the blue knob upwards until the red LED and the buzzer come on.
 3.3.4 Reverse the blue knob gently until the green LED is just illuminated and the buzzer ceases.
 3.3.5 If the unit cannot be set, it needs to be adjusted. Refer to Section 3.5.
 3.3.6 Move the unit horizontally across the wall. Refer to Fig. 6. Ensure that the detector face marked 'STUD' is placed against the wall, otherwise the green LED will go out and the calibration procedures will need to be repeated.
 3.3.7 When the edge of a batten or wall stud is under the unit's groove, the red LED will come on and the buzzer will sound. Mark this position on the wall.
 3.3.8 Resume the movement of the unit. When the red LED and the buzzer go off, leaving the green LED on, mark the position again. These marks indicate the edges of the batten or wall stud. The mid-point between the two marks will be the centre of the batten or wall stud.
 3.3.9 To locate horizontal battens or studs, place the unit on the wall as shown in Fig. 7 and use the method outlined above.

- Notes:** a) Stud detection can be carried out normally on papered walls. However, it may not function on some types of foil backed or metallic fabric surfaces.
 b) If by chance the unit is placed over a wall batten or stud during calibration, the green LED will go out and the buzzer cease to sound when the edge of the batten, or wall stud, is under the unit groove.
 c) A double width may be found around door and window frames due to double battens or studs being encountered.
 d) A solid wood header may exist in some doors or windows. The stud location will not be found if the unit is calibrated on a normal wall first and then moved to the header area. It will indicate the presence of a header.
 e) It is advisable to take several readings along the batten or stud as nails may change the apparent centre position.
 f) Frequent re-calibration can help to avoid false readings.
 g) We recommend carrying out voltage/metal detection to make sure that the detected batten or stud is not a pipe or cable. Note that some small securing screws or nails may be detected.

3.4 Maximising Accuracy

The sensitivity of the unit can be used to pin-point the exact position of pipes, cables or battens and studs. To do this, sweep the unit across the area in question, with light and buzzer sounding. After each sweep, gradually adjust the blue knob, until the light and buzzer are no longer activated. Gently reverse the knob before each subsequent sweep, until the light and buzzer activate at the location of the pipe, cable, batten or stud.

3.5 Unit Adjustment

3.5.1 METAL/VOLTAGE DETECTION ADJUSTMENT

- 3.5.1.1 Rotate the blue metal/voltage sensitivity knob half a turn.
 3.5.1.2 Slide the selector switch to the Voltage/Metal Detection position.
 3.5.1.3 Using a small screwdriver, turn either the METAL or VOLTAGE detection trimmer, Refer to Fig 1, as follows:
 1) If the green LED is on, slowly turn trimmer 1 **CLOCKWISE** until the red LED and buzzer just come on. Slowly turn back trimmer 2 until the green LED just comes on and the buzzer ceases. The unit is now correctly adjusted.

3.5.2 STUD DETECTION ADJUSTMENT

- 3.5.2.1 Rotate the blue stud sensitivity knob to mid-position.
 3.5.2.2 Slide the selector switch to the Stud Detection position.
 3.5.2.3 Hold the unit with stud face against the wall.
 3.5.2.4 Adjust the trimmers, using a small screwdriver, as follows:
 1) If the green LED is on, slowly turn trimmer 1 **CLOCKWISE** until the red LED and buzzer just come on.
 2) Slowly turn back trimmer 2 until the green LED just comes on and the buzzer ceases. The unit is now correctly adjusted.

Note: Switch off the detector when it is not in use by moving the SELECTOR SWITCH to the MIDDLE POSITION.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this equipment.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

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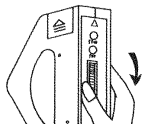


Fig. 5

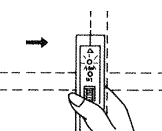


Fig. 6

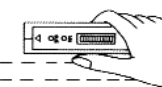


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3.3 Wood Detection

- 3.3.1 With the Stud Detection face against the wall, hold the unit vertically as shown in Fig. 5 and turn the blue knob fully downwards.
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3.5 Unit Adjustment

3.5.1 METAL/VOLTAGE DETECTION ADJUSTMENT

- 3.5.1.1 Rotate the blue metal/voltage sensitivity knob to mid-position.
 3.5.1.2 Slide the selector switch to the Voltage/Metal Detection position.
 3.5.1.3 Using a small screwdriver, turn either the METAL or VOLTAGE detection trimmer, Refer to Fig. 1, as follows:
 1) If the green LED is on, slowly turn trimmer 1 **CLOCKWISE** until the red LED and buzzer just come on. Slowly turn back trimmer 2 until the green LED just comes on and the buzzer ceases. The unit is now correctly adjusted.

3.5.2 STUD DETECTION ADJUSTMENT

- 3.5.2.1 Rotate the blue stud sensitivity knob to mid-position.
 3.5.2.2 Slide the selector switch to the Stud Detection position.
 3.5.2.3 Hold the unit with stud face against the wall.
 3.5.2.4 Adjust the trimmers, using a small screwdriver, as follows:
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