

**Operating Instructions:** IMPORTANT: PLEASE READ ALL INSTRUCTIONS BEFORE USING THE DETECTOR

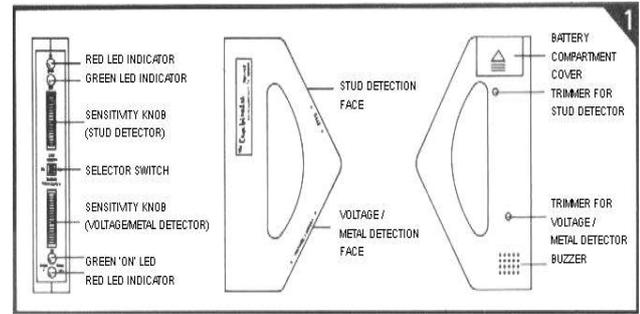
### PREPARATION FOR USE

Slide out battery compartment cover, on the back of the unit, and connect a fresh 9V-006P battery (see Fig.2). Replace cover and securely snap in place. Now the unit is ready for use.

### OPERATION

#### METAL/VOLTAGE DETECTION PROCEDURE:

1. Hold the unit as shown in Fig.3 and turn the blue knob fully downward.
2. Move the selector switch to VOLTAGE/METAL DETECTOR position. The green 'ON' LED will come on immediately. Make sure that the unit is well away from any metal or current-carrying conductor.
3. Turn the blue knob upwards until the indicators come on (RED LED lights and BUZZER sounds). Reverse the blue knob gently until the indicators just go off. The unit is now ready for use.
4. Hold the unit as shown in Fig.4 and move it sideways (in horizontal position), across the wall. The RED LED and a continuous buzzer tone will come on when a metal object is in the vicinity. Current-carrying conductor will be shown with a RED blinking LED and beeping sound of BUZZER (see Fig.5)
5. If the indicators do not go on, or won't go out, after the set has been switched on, the unit needs to be adjusted. Please refer to 'UNIT ADJUSTMENT'.



### SAFETY

When the unit gives a 'NO VOLTAGE' reading (no blinking motion of RED LED and beeping sound of BUZZER when touching the conductor), check the unit on a known voltage source BEFORE touching any conductor.

**CAUTION-**It will not detect shielded conductors, i.e. those in metal conduit; it only shows presence of METAL.

**- NOTE -** 1. Some wall may contain metallic fabric for fireproofing, this will spread the area of voltage pick-up. Placing your free hand on the wall may cancel the effect. 2. Rubbing or banging the unit on the wall may generate static electricity and cause a false reading.

**LEAKAGE CURRENTS-**Because of the extremely small current required to cause a reading on the unit, an apparent false reading may be seen in some situation. i.e. 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 with a voltmeter.

### WOOD FRAME DETECTION PROCEDURE:

**Locating vertical battens or wall studs refer to the following procedures:**

1. Hold the unit vertically as shown in Fig.6 and turn the blue knob fully downwards.
2. Move the selector switch to STUD DETECTOR position; turn the blue knob upwards until the RED LED and BUZZER come on.
3. Reverse the blue knob gently until the GREEN LED comes on and BUZZER sound changes to a lower pitch.
4. If the unit can not be set accordingly, it needs to be adjusted. For details, please refer to 'UNIT ADJUSTMENT'.
5. Move the unit horizontally across the wall (see Fig.7). Make sure that the detection face marked with "STUD" is placed against the wall. Otherwise, the GREEN LED will go out and calibration procedures need to carry from the beginning.
6. When an edge of batten or wall stud is under the groove of the unit, the RED LED will come on and BUZZER sound will change to a higher pitch. Mark this position on the wall (see Fig.8)
7. Resume the movement of the unit. When the GREEN LED comes on and BUZZER sound changes to a lower pitch, mark this position also. These marks indicate the edges of the batten or wall stud. The middle point between two marks will be the centre of the batten or wall stud.

**Locating horizontal battens or stud braces refer to the following procedures:**

1. Place the unit horizontally against the wall (see Fig.9).
2. Uses the same method of locating vertical battens or wall studs to detect horizontal battens or stud braces.

**- NOTE -**

1. The stud detection can be carried normally on wall-papered walls. However, it may not function on some types of foil backed or metallic fabric surfaces.
2. If by chance the unit is placed over the wall batten or stud to process calibration, the GREEN LED will go off and BUZZER will cease when the edge of batten or wall stud is under the groove of the unit.
3. A double width may be found around door and window frames due to double batten or stud encountered.
4. 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.
5. It is advisable to take several readings along the vertical batten or stud as a nail may change the apparent centre position.
6. Frequent re-calibration can help to avoid any false readings.
7. We recommend carrying metal/voltage detection to make sure the detected batten or wood stud is not a pipe or cable. Please note that some small securing screws or nails may be detected.

### MAXIMIZING ACCURACY

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

### UNIT ADJUSTMENT:

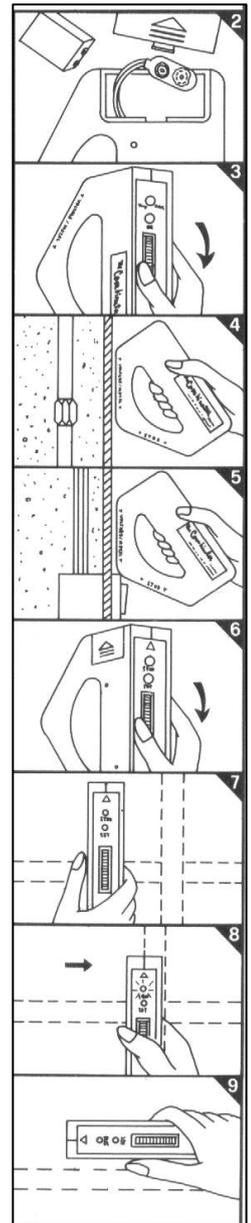
Using precision screwdriver for easy unit sensitivity adjustment

#### METAL/VOLTAGE DETECTION ADJUSTMENT:

1. Turn the blue Metal/Voltage sensitivity knob by 1/2 turn, then place selector switch to Voltage/Metal Detector position.
2. Turn the trimmer using the small screwdriver.
3. If the GREEN LED is on, slowly turn the trimmer CLOCKWISE until the RED LED and BUZZER just come on. Slowly turn back the trimmer until the GREEN LED just come on and BUZZER cease. Now the unit is correctly adjusted.
4. If the RED LED and BUZZER come on, slowly turn the trimmer ANTI-CLOCKWISE until the GREEN LED just go on and BUZZER cease. The unit is now correctly adjusted.

#### STUD DETECTION ADJUSTMENT:

1. Turn the blue STUD sensitivity knob by 1/2 turn, move selector switch to STUD DETECTOR position.
2. Hold the unit with 'STUD' face against the wall, then adjust the trimmer for WOOD DETECTION.
3. If the green light and buzzer are on, slowly turn the trimmer CLOCKWISE until the red light and buzzer just come on. Slowly turn back the trimmer until the GREEN LED is just on, and the BUZZER changes to a lower pitch. The unit is now correctly adjusted.



**REMEMBER TO SWITCH OFF THE UNIT WHEN NOT IN USE (MOVE SELECTOR SWITCH TO THE MIDDLE)**