

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

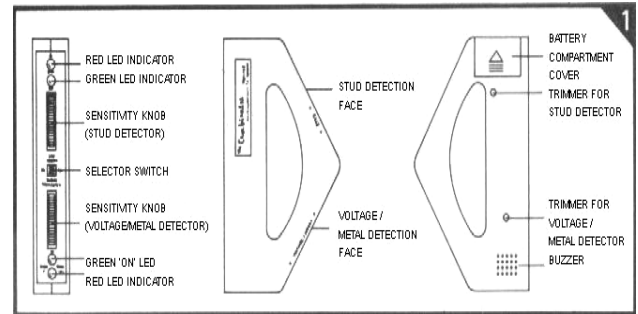
PREPARATION FOR USE

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:

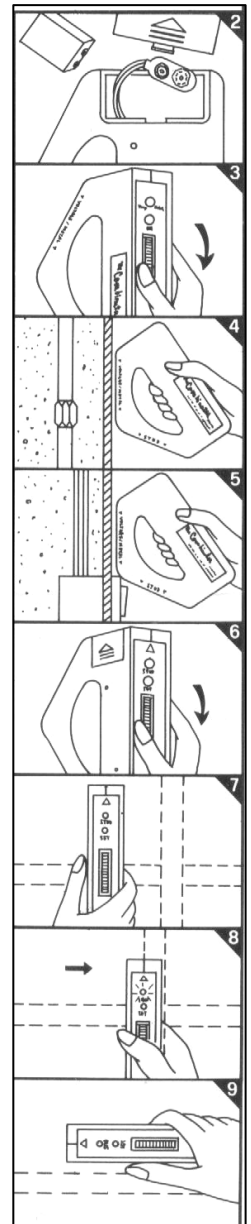
Using precision screwdriver for easy unit sensitivity adjustment

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)

:使用前請詳細閱讀說明書所有的內容

請將背後的電池蓋滑開並裝入 9V 電池 (如圖 2), 再將電池蓋裝回即可開始使用。

操作說明

金屬 / 電壓 探測程序

1. 握住產品如圖 3, 並將藍色旋鈕往下轉到底。
2. 撥動功能選擇開關到 "VOLTAGE/METAL DETECTOR" 的位置, 此時綠色 LED 燈會亮起。 確認產品是遠離金屬或是帶電流的導體。
3. 藍色旋鈕往上調轉直到紅色 LED 燈亮及蜂鳴器響起, 輕輕的倒轉藍色旋鈕直到紅色 LED 燈滅並且蜂鳴器不響, 此時產品準備完成, 可以使用。
4. 握住產品如圖 4 並且將產品向旁邊橫向移動直到橫掃過整個牆面。當附近探測到有金屬時紅色 LED 會亮起, 並且蜂鳴器會持續響, 當附近有帶電流的導體時紅色 LED 會閃燈並且蜂鳴器會嗶嗶響如圖 5。
5. 當開關打開之後, 如果指示信號沒有持續或是沒有熄滅, 此時產品需要調整。 請參考 "產品調整"。

安全

當產品顯示沒有探測到電壓 (當接觸到導體時, 紅色 LED 燈沒閃而且蜂鳴器沒有嗶嗶聲), 在碰觸任何導體前, 請先將產品放在已經知道有電壓的地方測試確認產品是否異常。

警告-如果導體有遮蔽物, 產品將會無法檢測電壓, 如果是金屬導體只會測出有金屬的反應。

- 註釋** - 1. 有一些防火牆可能內含金屬編織, 這時會擴大檢測到電壓的面積, 此時您的判斷可能是無效的。
- 2. 產品在牆上摩擦或是用力敲可能會產生靜電且誤測到此靜電的電壓。

漏電流-因產品被要求能測出極小的電流, 因此有一些狀況可能會誤判, 如一個帶電流的導體包覆不足的絕緣又接觸到潮濕的牆壁, 將會檢出這面牆有電壓。在這個狀況會存在一些潛在的危險, 請使用電壓計測試。

木框探測的程序:

找出垂直的木條或是牆壁の木柱請參照下面的步驟:

1. 垂直的握住產品如圖 6, 並將藍色旋鈕轉到底。
2. 將功能選擇開關撥到 "STUD DETECTOR" 的位置, 將藍色旋鈕往上轉直到紅 LED 燈亮及蜂鳴器響起。
3. 輕輕的反轉藍色旋鈕直到綠燈亮並且蜂鳴器變成較低的音調。
4. 如果產品不能被設定成上述的狀況, 則產品需要做調整, 細節請參考 "產品調整"。
5. 將產品向旁邊橫向移動直到橫過整個牆面 (如圖 7); 確認寫著 "STUD" 的檢測面是靠著牆面, 如果綠燈不亮請從頭照程序再執行一次。
6. 當產品移到木條的邊緣或是木柱的上方, 紅色 LED 燈會亮起並且蜂鳴器會轉變成較高的音調, 請在此處做記號 (如圖 8)。
7. 繼續移動產品, 當綠色 LED 燈亮起並且蜂鳴器的聲音轉變成較低的音調, 請也在此處做記號, 這些記號表示是木條或木柱的邊緣處在 2 個記號的中間即為木條或木柱的中心位置。

找出橫向的木條或是牆壁の木柱請參照下面的步驟:

1. 將產品橫著靠著牆面 (如圖 9)。
2. 使用與找出垂直的木條或是牆壁の木柱相同的程序去探測出橫向的木條或木柱。

-註釋-

1. 木柱探測功能可以在貼壁紙的牆壁上正常使用。但是背面有金屬薄片及金屬織物可能無法使用。
2. 產品偶爾在牆壁木條或木柱的上方, 但綠色 LED 燈不亮並且蜂鳴器不響是因為木柱或木條在溝槽的邊緣或下方。
3. 當在門的週圍及窗框因為有相接的木條或是木柱, 因此常會探測到 2 倍的寬度。
4. 門或窗戶可能存在實心的木頭, 則將不會發現木柱的位置, 如果產品的靈敏度是先用在一般牆面時然後移到實心木頭的區域將會感應實心木頭的存在。
5. 沿著垂直的木條或木柱讀取數個測量的結果是比較恰當的, 因為釘子可能會改變顯示出的中心位置。
6. 多次反覆的量測可以避免讀取誤測的結果。
7. 建議使用量測木條前, 先使用金屬/電壓探測功能確認木條或木柱不是導管或有電線。但有可能會測出一些小的螺絲或是鐵釘。

最大的精確度

經由此產品的靈敏度, 可以探測出導管及電線或是木柱及木條確切位置。首先, 先以產品, 靠燈光及蜂鳴器聲響, 將預計要探測的範圍掃過, 經過每一次的掃描探測, 逐步的調整藍色旋鈕直到燈及蜂鳴器不再長期的作動。在每一次掃描前慢慢的倒轉旋鈕直到燈及蜂鳴器在有隱藏導管/電線或是木條/木柱的位置動作。

產品調整:

使用精密起子輕易的就可以調整產品的靈敏度。

***金屬/電壓檢測調整:

1. 轉動藍色金屬/電壓零敏度調整鈕到 1/2 轉, 然後撥動功能選擇開關到 "Voltage/Metal Detector" 的位置。
2. 使用小的螺絲起子轉動圓孔中的調整一字鈕。
3. 如果綠色 LED 燈亮, 順時鐘慢慢的轉動一字鈕直到紅色 LED 燈亮並且蜂鳴器剛好響起, 慢慢的反向轉動直到綠色 LED 燈亮並且蜂鳴器停止響聲, 現在產品已經被正確調整完成。
4. 如果紅色 LED 燈亮及蜂鳴器響起, 逆時鐘慢慢的轉動一字鈕直到綠色 LED 剛好燈亮並且蜂鳴器停止響聲, 現在產品已經被正確調整完成。

***木柱檢測調整:

1. 轉動木柱藍色零敏度調整鈕到 1/2 轉, 然後撥動功能選擇開關到 "STUD DETECTOR" 的位置。
2. 握住產品將 "STUD" 面靠牆, 然後調整木材檢測靈敏度調整圓孔中的的一字調整鈕。
3. 如果綠色 LED 燈亮並且蜂鳴器響起, 順時針慢慢的轉動一字調整鈕直到紅燈亮並且蜂鳴器剛好響起, 慢慢的反向轉動直到綠色 LED 燈剛好亮起並且蜂鳴器轉變成較低的音調, 現在產品已經被正確調整完成。

產品不使用時, 請記得關掉開關 (撥動功能選擇開關到中間 "OFF" 的位置)

