

## UT387C Stud Sensor User Manual

### ⚠ Caution:

Please read the manual carefully before use. Observe the safety regulations and the cautions in the manual to make best use of the Stud Sensor. The company reserves the right to modify the manual.

### UNI-T Stud sensor UT387C

1. V groove
2. LED indication
3. High AC voltage hazard
4. Stud icon
5. Target indication bars
6. Metal icon
7. Mode selection
- a. Stud Scan and Thick Scan: wood detection
- b. Metal Scan: metal detection
- c. AC Scan: live wire detection
8. Battery power
9. CENTER
10. Power switch
11. Battery compartment door

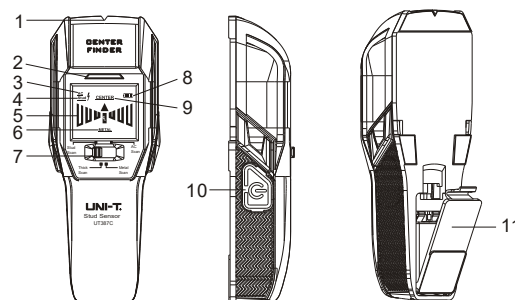


Figure 1

### Stud sensor UT387C application (Indoor dry wall)

UT387C is mainly used to detect the wood stud, metal stud, and live AC wires behind dry wall. Caution: The detection depth and accuracy of UT387C are easily affected by factors such as the ambient temperature and humidity, the texture of the wall, the density of the wall, the moisture content of the wall, the humidity of the stud, the width of the stud, and the curvature of the stud edge, etc. Do not use this detector in strong electromagnetic/magnetic fields, such as, electric fan, motor, high-power devices, etc.

### UT387C can scan the following materials:

Dry wall, plywood, hardwood flooring, coated wood wall, wallpaper.

### UT387C cannot scan the following materials:

Carpets, tiles, metal walls, cement wall.

### Specification

**Test condition:** temperature: 20°C 25°C; humidity: 35 55%

**Battery:** 9V square carbon-zinc or alkaline battery

**StudScan Mode:** 19mm (maximum depth)

**ThickScan Mode:** 28.5mm (maximum detection depth)

**Live AC Wires (120V 60Hz/220V 50Hz):** 50mm (max)

**Metal detection depth:** 76mm (Galvanized steel pipe: Max.76mm. Rebar: maximum 76mm. Copper pipe: maximum 38mm.)

**Low battery indication:** If the battery voltage is too low when power on, the battery icon will flash, the battery needs to be replaced.

**Operating temperature:** -7°C 49°C

**Storage temperature:** -20°C 66°C

**Waterproof:** No

### Operating Steps

#### 1. Installing the battery:

As shown in the figure, open the battery compartment door, insert a 9V battery, there are positive and negative terminal marks in the battery jar. Do not force the battery if battery installation is not in place. Close the door after installing correctly.

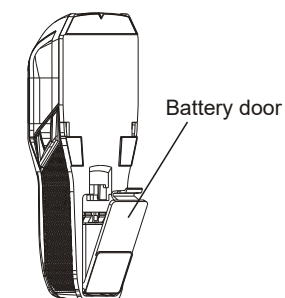


Figure 2

#### 2. Detecting wood stud and live wire:

1) Grip the UT387C at the handheld areas, position it straight up and down and flat against the wall.

**Note 1:** Avoid gripping over the finger stop, hold the device parallel to the studs. Keep the device flat against the surface, do not press it hard and do not rock and tilt. When moving the detector, holding position must stay unchanged, or else the detection result will be affected.

**Note 2:** Move the detector flat against the wall, the moving speed shall stay constant, otherwise the detection result may be inaccurate.

2) Selecting the detection mode: move switch to left for StudScan (Figure 3) and right for ThickScan (Figure 4).

**Note:** Select the detection mode according to different wall thickness. For example, select StudScan mode when the thickness of the dry wall is less than 20mm, select ThickScan mode when it is greater than 20mm.

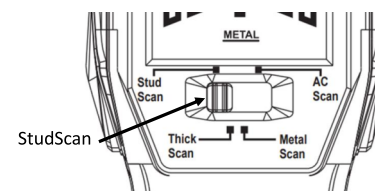


Figure 3

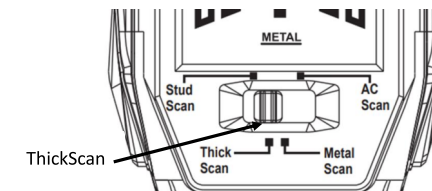


Figure 4

#### 3) Calibration:

Press and hold the power button, the device will calibrate automatically. (If the battery icon keeps flashing, it indicates low battery power, replace the battery and power on to redo the calibration). During the auto calibration process, LCD will display all icons (StudScan, ThickScan, Battery power icon, Metal, Target indication bars) until the calibration is completed. If the calibration is successful, the green LED will flash once and the buzzer will beep once, which indicates that user can move the device to detect woods.

**Note 1:** Before powering on, position the device on wall in place.

**Note 2:** Do not lift up the device from the dry wall after the calibration is completed. Recalibrate if the device is lifted from the dry wall.

**Note 3:** During calibration, keep the device flat against the surface, do not rock or tilt. Do not touch the wall surface, otherwise the calibration data will be affected.

4) Continue to hold the power button, then slowly slide the device to scan on the wall. As it approaches the midpoint of the wood, the green LED lights up and the buzzer beeps, the target indication bar is full and the icon "CENTER" is displayed.

Note 1: Keep the device flat against the surface. When sliding the device, do not rock or press the device hard.

Note 2: Do not touch the wall surface, otherwise the calibration data will be affected.

5) The bottom of the V groove corresponds to the midpoint of the stud, mark it down.

Caution: When the device detects both wood and live AC wires at the same time, it will light the yellow LED.

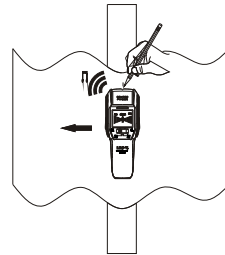


Figure 5

### 3. Detecting metal

The device has an interactive calibration function, users can find the accurate position of metal in the dry wall. Calibrate the instrument in the air to achieve best sensitivity, the most sensitive area of metal in the dry wall can be found by times of calibration, the target metal is located in the center area where the instrument indicates.

1) Selecting detection mode, move switch to Metal Scan (Figure 6)

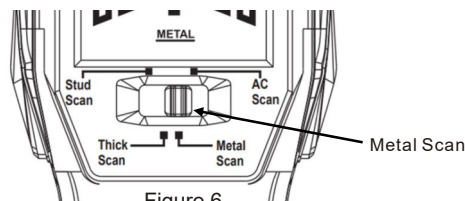


Figure 6

2) Grip the UT387C at the handheld areas, position it vertically and flat against the wall. Move the switch to Maximum Sensitivity, press and hold the power button. When calibrating, make sure the device is away from any metal. (On metal scan mode, the device is allowed to be away from the wall for calibration).

3) Calibration: Press and hold the power button, the device will calibrate automatically. (If the battery icon keeps flashing, it indicates low battery power, replace the battery and power on to redo the calibration). During the auto calibration process, LCD will display all icons (StudScan, ThickScan, Battery power icon, Metal, Target indication bars) until the calibration is completed. If the calibration is successful, the green LED will flash once and the buzzer will beep once, which indicates that user can move the device to detect the metal.

4) When the device approaches the metal, the red LED will light up, the buzzer will beep and the target indication will be full.

5) Decrease the sensitivity to narrow the scan area, repeat step 3. User can repeat times to narrow the scan area.

Note 1: If the device doesn't give a prompt of "calibration completed" within 5 seconds, there may be a strong magnetic/electric field, or the device is too close to metal, users need to release the power button and change a place to calibrate.

Note 1: Indication bar shown in below figure means there is metal.

⚠ Caution: When the device detects both metal and live AC wires at the same time, it will light the yellow LED.

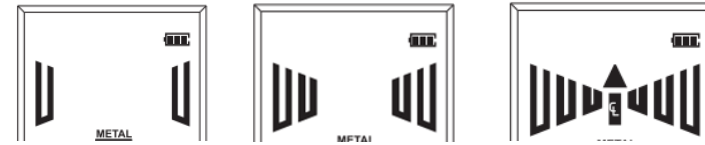


Figure 7

### 4. Detecting live AC wire

This mode is same as metal detection mode, it can also calibrate interactively.

1) Select detecting mode, move the switch to AC Scan (Figure 8)

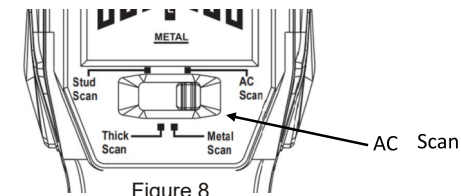


Figure 8

2) Grip the UT387C at the handheld areas, position it straight up and down and flat against the wall.

3) Calibration: Press and hold the power button, the device will calibrate automatically. (If the battery icon keeps flashing, it indicates low battery power, replace the battery and power on to redo the calibration). During the auto calibration process, LCD will display all icons (StudScan, ThickScan, Battery power icon, Metal, Target indication bars) until the calibration is completed. If the calibration is successful, the green LED will flash once and the buzzer will beep once, which indicates that user can move the device to detect the AC signal.

4) When the device approaches the AC signal, the red LED will light up, the buzzer will beep and the target indication will be full.

Both the StudScan and ThickScan modes can detect the live AC wires, the maximum distance of detection is 50mm. When the device detects a live AC wire, the live hazard symbol appears on the LCD while the red LED light is on.

⚠ Note: For shielded wires, wires buried in plastic pipes, or wires in metal walls, electric fields cannot be detected.

⚠ Note: When the device detects both wood and live AC wires at the same time, it will light the yellow LED.

⚠ Warning: Do not assume there are no live AC wires in the wall. Before cutting off the power, do not take actions such as blind construction or hammering nails that could be dangerous.

### Accessory

- 1. Device -----1 piece
- 2. 9V battery -----1 piece
- 3. User manual -----1 piece

## UNI-T®

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