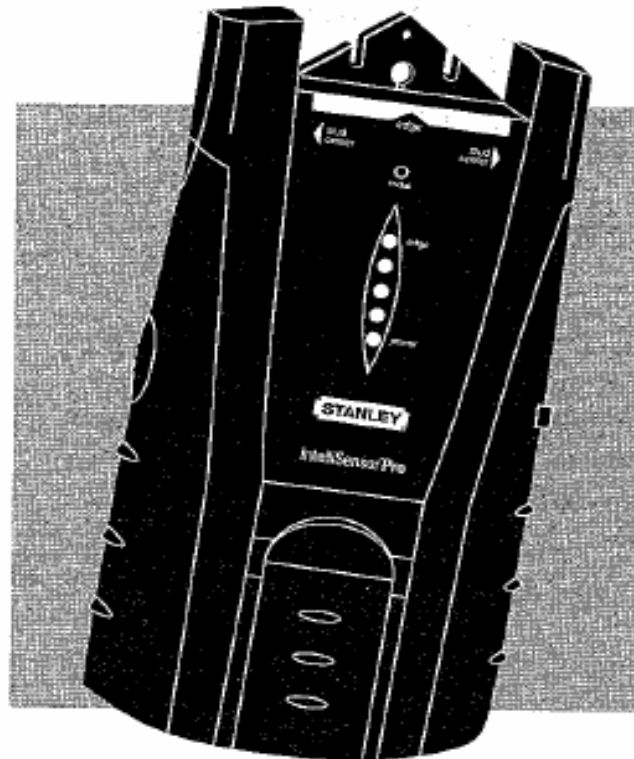


**STANLEY**<sup>®</sup>

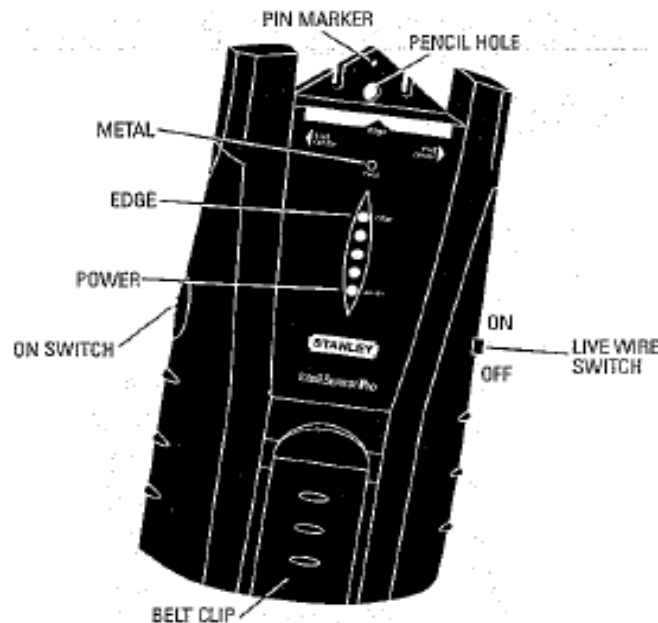
77-200

# IntelliSensor<sup>™</sup> Pro Stud Sensor

**INSTRUCTION  
MANUAL**



# Stanley IntelliSensor™ Pro Stud Sensor (77-200)



The Stanley IntelliSensor™ Stud Sensor uses electronic signals to locate the exact position of studs, joists, metal or live AC wires through drywall, concrete and other common wall materials. Once the edge of a stud has been detected, the IntelliSensor™ Pro unit emits audio and visual signals (LED Display) that allow you to easily pinpoint its center position. By use of the built-in marker or pencil hole, you can easily determine the center position on the wall.

The Stanley IntelliSensor™ Pro unit offers automatic calibration, a convenient belt clip and heavy-duty ABS construction. The ergonomically-designed shape increases user comfort and safety during use.

## OPERATING INSTRUCTIONS

### Battery:

Open door on back of unit and connect a 9-volt battery to clip (see Illustration 1). Place battery back into case and slide battery door on.

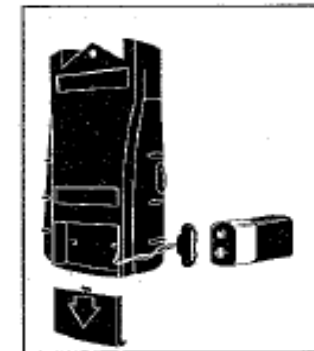


ILLUSTRATION 1

**Calibration:** *Calibrate the unit before use on wood or metal:*

*Pre-set the Live Wire switch in "ON" or "OFF" position prior to calibration, depending on detection requirements. Unless it is known that No live AC wires are present the Live Wire detection should be turned "ON" for safety.*

### Calibrating for Wood:

1. Hold the IntelliSensor™ Pro unit flat against the surface making firm contact. Locate the "On" switch on the left-hand side of the unit - press and release.

- Unit must be held *without any movement* until the green LED flashes, then sweep the unit across the surface to be tested until a long beep is heard and the green LED remains on. The unit is now calibrated for wood.
- If 3 separate beeps are heard, no wood was detected and the wood detection circuit is shut off. "Metal" indication will turn on.

### Calibrating for Metal:

- Hold the IntelliSensor™ Pro unit firmly against the surface. Press and release the "On" switch.
- Metal calibration is done when the unit is first turned on; the unit checks for the presence of metal and set its depth sensitivity accordingly to the presence of metal. If no metal is present it is set to maximum depth.
- To set the depth sensitivity of the unit, place the sensor over a metal object at the desired depth and turn the unit on. When the green LED starts to flash the unit will be set to the desired depth. It will now only indicate metal at this depth and closer. The actual depth will vary with type and size of metal used.

## USAGE

### Detecting Wood - For Wood Studs:

- Slide unit slowly across surface in a straight line (Illustration 2). As the unit moves closer

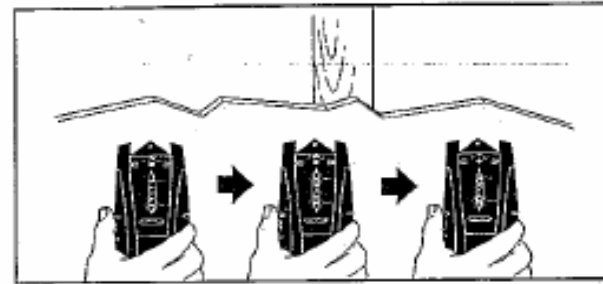


ILLUSTRATION 2

- to stud, red LED's will go on. When it detects the stud edge, the unit will sound a short repeating beep with the green LED and all 4 red LED's on.
- Use the pencil hole or press the marker button to mark the stud edge.
- Double check stud location by coming from opposite direction. Make additional markings. The midpoint of the marks indicates the stud center.

### Detecting Metal - For Metal Studs:

- Calibrate unit to desired depth sensitivity as described in "Calibration."
- Slide unit as described in "Detecting Wood - For Wood Studs, item #1, illustration #2, until red LED's start to come on. When edge of stud or plate is detected, unit will sound short, double beeps with the green LED flashing and the red LED's on. Mark location of edge.
- Double check opposite edge location by coming from opposite direction. Make additional markings; the midpoint of markings indicate stud or plate center.

4. For deep metal locating, or metal in up to 2" of concrete, maximum depth can be set by holding unit away from any surface and pressing the "On" button momentarily. Wait until the green LED stops flashing; The unit is now set for maximum metal depth and has shut off the wood detection circuit. This is indicated by "Metal" light turning on.
5. When metal sensing is set to maximum depth sensitivity and the sensed metal object is close to the unit (example; metal stud behind 1/2 inch wallboard) the apparent width of the sensed metal can be very wide. To locate the true **metal size** place the unit in the approximate center of the indicated area and re-calibrate the unit as described in Section 3, Calibrating for Metal. Then re-scan the area: repeat this procedure until the size of the metal is determined.

#### **Detecting Live Wires:**

1. For proper operation the Live Wire switch must be preset to "ON" prior to calibrating the unit. The switch position should not be changed without recalibrating the unit.  
**For safety, the Live Wire switch should be left in the "ON" position unless it is known No live AC wires are present.**
2. When a live wire is detected, the unit will sound triple short beeps, green LED turns on and all red LED's flash in a rotating pattern.

3. When on, the Live Wire indication overrides both the wood and metal indications. Static electricity charges that can develop on drywall and other surfaces will spread the voltage detection area many inches to each side of the actual electrical wire. To aid in locating the wire position, scan holding the unit 1/2" away from the wall surface or place other hand on surface approximately 12" from sensor.

#### **Warning:**

***Live wire switch must be "On" to detect live wires. Shielded wires or live wires in metal conduits, casings, metalized walls or thick, dense walls, will not be detected. Always turn AC power off when working near wiring.***

The IntelliSensor™ Pro is designed to detect 110 and 220 volts AC in live electrical wires. It will also detect the presence of live wires having greater than 220 volts.

#### **Cautions on Operating**

You should always use caution when nailing, cutting or drilling in walls, ceilings and floors that may contain wiring or pipes near the surface **Shielded, dead or non-powered wiring will not be detected as live wires.** Always remember that studs or joists are normally spaced 16 inches or 24 inches apart and are 1-1/2 inches in width. To avoid surprises, be aware that anything closer together or of a different width may be an additional stud, joist or fire break.

When working near AC electrical wires, always turn off the power.

### **Prevent Interference**

To ensure best performance from the IntelliSensor™ Pro unit, the unit should be held properly with the hand on the lower portion of the unit. Keep your free hand at least 6 inches away from the unit while testing or scanning surfaces.

### **Conventional Construction**

Doors and windows are commonly constructed with additional studs and headers for added stability. The IntelliSensor™ Pro Stud Sensor detects the edge of these double studs and solid headers and emits and holds an audio signal as it completely crosses them.

### **Surface Differences**

*Wallpaper* - There will be no difference in the function of the IntelliSensor™ Pro Stud Sensor on surfaces covered with wallpaper or fabric unless the covering used contains metallic foil or fibers.

*Plaster and Lath* - Unless lath and plaster construction is excessively thick, there will be no problem with proper function of the IntelliSensor™ Pro unit.

*Concrete* - Metal up to 2" deep can be detected. If surface is rough, use of a piece of cardboard as outlined under ceilings is recommended.

*Ceilings* - When dealing with a rough surface such as a sprayed ceiling, utilize a piece of cardboard when scanning the surface. Run through the calibration technique described earlier WITH the piece of cardboard to assure best performance of the unit. Also, it is particularly important in this application to remember to keep your free hand away from the unit.

### **Specifications**

Utilizing the procedure of scanning and marking from two sides, the IntelliSensor™ Pro unit will find the center of wood or metal studs through 3/4 inch surfaces with 1/8 inch accuracy. Detects metal in up to 2 inches of concrete. Detects live wires in up to 2 inches of wall. Auto shut off after 3 minutes of operation.

Battery Life:	One year with normal use.
Shock Resistance:	Resistant to shock from 5 feet dropped onto concrete.
Water Resistance:	Water resistant, but not waterproof.
Operating Temperature:	+20°F to +120°F (-7°C to +49°C).
Storage:	-20°F to +150°F (-29°C to +66°C).

## **One Year Warranty**

Stanley Tools warrants this IntelliSensor™ Pro Stud Sensor against deficiencies in workmanship and materials for one year from the date of purchase. Deficient products will be replaced if sent to:

Stanley Distribution Center  
Attn: Manager - Field Quality Service  
1000 Stanley Drive  
Concord, NC 28027

### **There are additional facts about this warranty that you should know:**

Stanley Tools is not responsible for damage resulting from wear, abuse, or alteration of this product. Where permitted by law, Stanley is not responsible for incidental or consequential damages. There is no warranty beyond the provisions stated here. Agents of Stanley cannot change this warranty. This warranty may provide you with additional legal rights which vary by state, province or nation.