

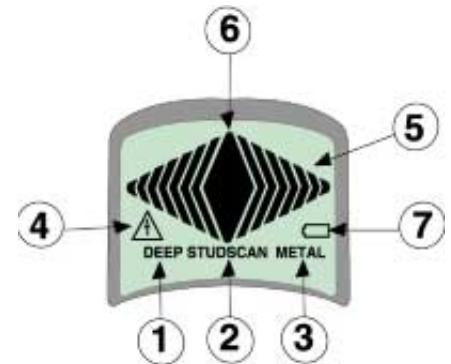
# VideoScanner® 5.5 Components

1. Metal Sensor
2. LCD Display
3. Activation/Mode Change Switch
4. Battery Door



## LCD Display Components

1. DeepScan® Mode Indicator
2. Stud Scanner Mode Indicator
3. Metal Mode Indicator
4. Hot Wire Indicator
5. LCD Bars
6. LCD Diamond
7. Low Battery Indicator



## Preparing the VideoScanner® for Use

Before the VideoScanner® is ready for use, one 9-volt battery must be installed.

To install the 9-volt battery, slide open the battery door, found under the product label, and connect the battery to the battery clip. Insert the battery into the VideoScanner® and replace the battery door. Press and release the power switch to turn on the VideoScanner®.



## Turning the Power On and Off

Press and release the on/mode switch to turn the power on or off. When the VideoScanner® is turned on again, it will return to the mode it was in when the power was turned off.

## Switching the VideoScanner® Modes

When the on/mode switch is held down for more than 1 second, the VideoScanner® will switch scanning modes. When the on/mode switch is released in any mode, the VideoScanner® will calibrate in that mode. To switch from one mode to another, just hold the switch in until the desired mode is selected.

## Calibrating in Stud Scan and DeepScan® Mode

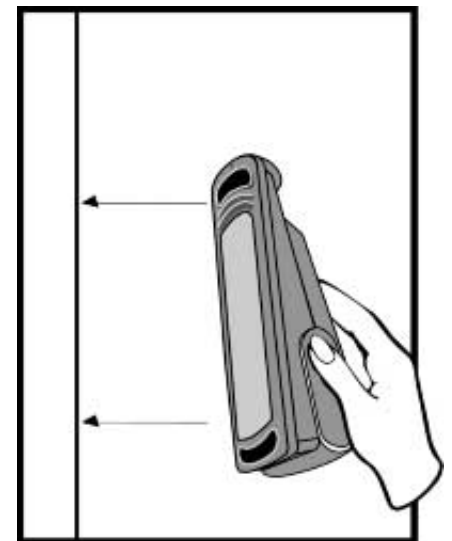
Before the VideoScanner® can accurately find a wood (or metal) stud or joist, it must be calibrated to the surface it will scan. Calibrating in both Stud Scanner and DeepScan® modes is identical.

Position the VideoScanner® so that the two Velcro pads on the back are flat against the area to be scanned.

Press and release the on/mode switch to turn on the VideoScanner®. If it is not already in the desired mode, press and hold down the on/mode switch to switch modes until Stud Scan, DEEPSCAN, or METAL appears on the LCD.

The VideoScanner® will calibrate automatically (about 1/10th of a second). During calibration the LCD will flash on and off once.

Note: If every other bar on the LCD are lit, the VideoScanner® did not calibrate properly because the area is probably too dense. Move the unit over a few inches and try to calibrate again.



# Flashing Display

If the VideoScanner® has been calibrated directly over a stud, or a dense area such as metal, or a wet, newly painted wall, the error condition will occur when you move the VideoScanner®. In the error condition all the LCD bars on the VideoScanner's display will flash and it will beep repeatedly.

If this happens, move the VideoScanner® over a couple of inches from where it was originally calibrated and recalibrate.

Be sure not to rock the VideoScanner® or lift it from the scanning surface during calibration. This will cause the VideoScanner to go into the error condition.

Because DeepScan® mode is very sensitive, the error condition has been disabled in this mode. Therefore, in DeepScan® mode, if no studs are detected, move the VideoScanner over a couple of inches from where you originally calibrated and recalibrate.

## Scanning in Stud Scanner and DeepScan® Modes

Stud Scanner and DeepScan® modes have identical scanning procedures. DeepScan® mode, however, is twice as sensitive as the Stud Scanner mode.

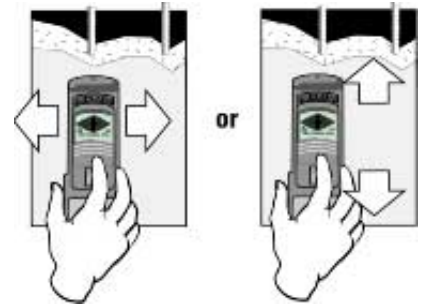
After the VideoScanner® is set securely on a surface and has been calibrated, slide it horizontally without lifting or rocking the unit.

As the VideoScanner® moves towards a stud, the LCD bars appear starting from the outer edges inward. Once the VideoScanner® detects the edge of the stud, the center bar on the LCD will appear and a steady tone will sound.

Mark the edge of the stud.

Continue moving across the stud until most of the bars disappear then reverse direction and continue scanning to locate the other edge of the stud. The center of the two marks is the center of the stud.

Note: If the wall is especially thick or dense, the bars may never close completely to the center in Stud Scanner mode. If this occurs, the appearance of the LCD pair of bars closest to the center may be interpreted to indicate the stud edge. Or, switch to DeepScan® mode, where more bars may appear, to locate the stud.



## Calibrating in Metal Mode

For maximum metal sensitivity, calibrate the VideoScanner® in the air, away from the surface and any metal objects before scanning in Metal mode. To place the VideoScanner® in Metal mode, press and hold the on/mode switch until the METAL indicator appears. When the on/mode switch is released, the VideoScanner® will calibrate automatically (calibration takes less than one second).

During calibration the LCD bars will flash on and off once.

## Scanning in Metal Mode

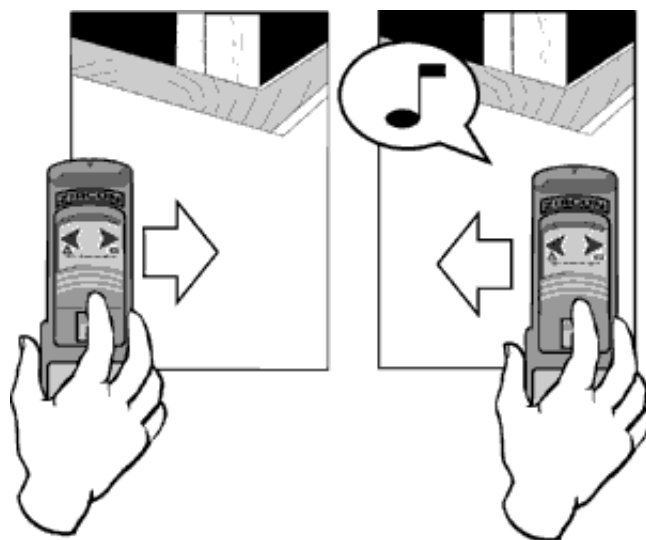
After calibrating away from the scanning surface, place the VideoScanner® against the surface and begin to slide the VideoScanner® either horizontally or vertically.

Once the VideoScanner® begins to detect metal, the LCD bars will appear starting from the outer edges inwards. When the VideoScanner displays the maximum indication, mark this point with a pencil.

Continue sliding the VideoScanner® horizontally until most of the bars disappear from the display, then reverse the direction of the unit to locate the other maximum indication.

Mark this point with a pencil. The center of the two marks is the center of the metal object. This width will vary from a single peak for a narrow rebar to a wide area for a larger field such as a metal stud.

The steady tone sounds with the diamond on the LCD bar in Metal mode as in Stud Scanner and DeepScan®.



## Continuous AC Voltage Detection

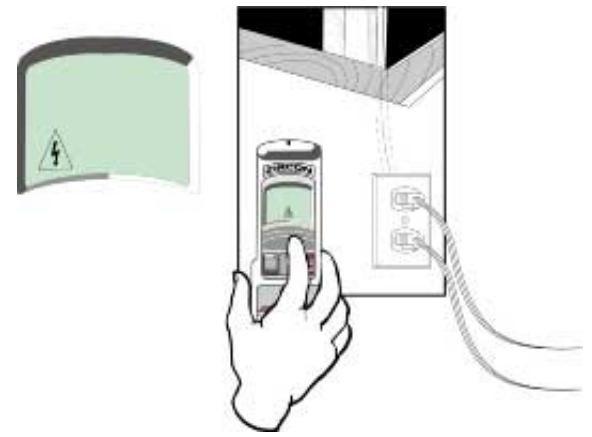
The VideoScanner® is designed to detect from 90 to 250 volts at 50 to 60 Hertz AC in a HOT electrical wire. Once voltage has been detected, the VideoScanner® displays the Hot Wire Indicator (FIGURE 9: Locating a Hot Wire).

For safety, the voltage detection feature works continuously in all modes.

Note: A static charge may develop on a wall, which will spread the voltage detection as much as 12 inches (30.5 cm) from either side of the actual electrical wire. To narrow the detection, hold the VideoScanner® approximately 1 inch (2.5 cm) from the wall, while scanning or place your free hand on the wall surface near the tool as you scan.

It is also helpful to turn the unit off and on again in the outer portion of that field to recalibrate and narrow the voltage field.

Caution: voltage is not detected in conduit, behind metallic wall covering, and behind plywood shear wall. Use extra caution if the construction situation has plywood or thick wood backing behind drywall or the walls are thicker than normal.



## Automatic Power Off

To keep the battery from running low too quickly, the VideoScanner® has been designed to turn itself off if the unit has not been used for two minutes or after thirty minutes of continuous use.

## Operation Tips

The following tips help achieve the best results from the VideoScanner®.

For best results the VideoScanner should always be held parallel to and moved perpendicular to the object one is trying to locate.

If the user is uncertain which way the objects run, this can be determined by first scanning in one direction and then scanning in a perpendicular direction.

**Low Battery:** When the Low Battery Indicator appears, replace the battery as soon as possible to maintain sensitivity.

**Double Studs & Solid Headers:** These members are usually found around doors and windows. The VideoScanner® will only detect the outer edges.

**Wallpaper:** Newly papered walls must be dry and then the VideoScanner® functions normally on walls covered with wallpaper or fabric, unless the materials are metallic foil or contain metallic fibers.

**Lath & Plaster:** Due to irregularities in the plaster thickness, it is difficult for the VideoScanner® to locate studs with Stud Scan. Change modes to metal and you can locate the nail heads holding the laths to the stud. If the plaster has a metal mesh reinforcement, the VideoScanner® will be unable to detect anything through that material.

**Acoustic Ceilings:** When scanning a ceiling with an uneven surface, place thin cardboard on the ceiling and scan over the cardboard. When using this technique, calibration must be performed with the cardboard in place.

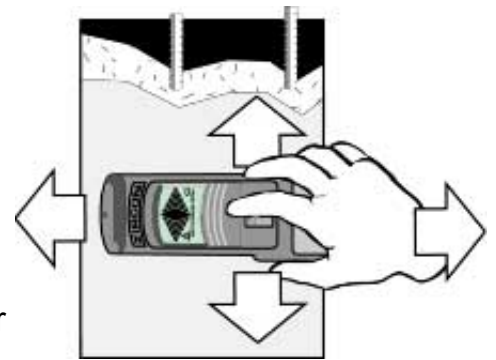
# Metal Finding Tips

The metal sensor is located inside the raised portion at the end opposite the battery.

The following tips help achieve the best results from the VideoScanner®:

Always calibrate in air for best sensitivity.

While scanning for metal, the image of the metal object may appear wider than the actual size. To get a narrower image, calibrate the VideoScanner® over either of the first two marks. Scan from both directions and mark the new and narrowed maximum detection points. Once again, the center of the two marks is the center of the metal object. This technique can be sequentially repeated until the VideoScanner® pinpoints the precise midpoint of the metal object.



When scanning for metal members approaching 3 inches (7.6 cm) deep, scan in both horizontal and vertical directions. Metal sensitivity is sometimes increased when the metal object is parallel to the sensor.

If every other bar on the LCD appears simultaneously, the VideoScanner® did not calibrate properly because the area is probably too dense. Move the unit over a few inches and try to calibrate again.

**Caution:** Depending on the proximity of the electrical wiring or metal and plastic pipes to the wall surface, the VideoScanner® may detect them in the same manner as studs in the DeepScan® and Stud Scanner modes. Caution should always be used when nailing, cutting, or drilling in walls, floors, and ceilings that may contain these items.

The VideoScanner® will not detect hot wires inside metal pipe or conduit, or behind some plywood or thick wall sections.

Always turn off the power if working near electrical wires.