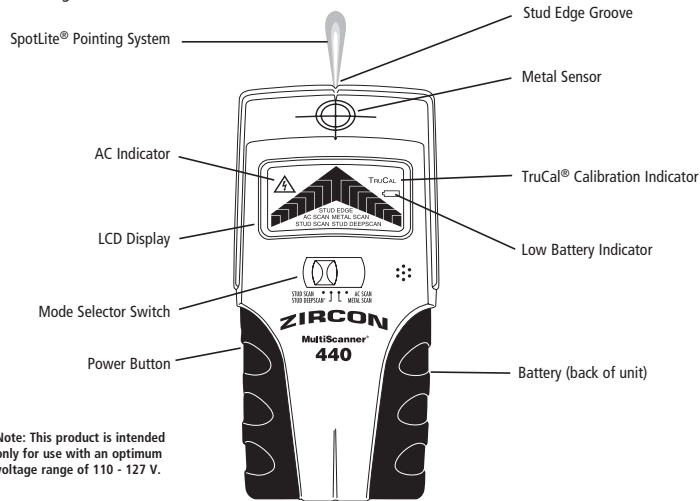


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## MultiScanner® 440

### Multifunction Wall Scanner

The MultiScanner® 440 features four scan modes to detect studs, metal, and live unshielded AC wiring up to 1½ in. (38 mm) deep behind walls, floors, and ceilings. The SpotLite® Pointing System automatically displays a beam of light over the edge of a stud or near metal/AC.



Note: This product is intended only for use with an optimum voltage range of 110 - 127 V.

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Visit [www.zircon.com/support](http://www.zircon.com/support) for the most current instructions.

**ZIRCON**

**LIMITED 1 YEAR WARRANTY**  
Zircon Corporation, ("Zircon") warrants this product to be free from defects in materials and workmanship for one year from the date of purchase. Any in-warranty defective product returned to Zircon®, freight prepaid with proof of purchase date and \$5.00 to cover postage and handling, will be repaired or replaced at Zircon's option. This warranty is limited to the electronic circuitry and original case of the product and specifically excludes damage caused by abuse, unreasonable use or neglect. This warranty is in lieu of all other warranties, express or implied, and no other representations or claims of any nature shall bind or obligate Zircon. Any implied warranties applicable to this product are limited to the one year period following its purchase. IN NO EVENT WILL ZIRCON BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM POSSESSION, USE OR MALFUNCTION OF THIS PRODUCT.

In accordance with government regulations, you are advised that: (i) some states do not allow limitations on how long an implied warranty lasts and/or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you, and further (ii) this warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Return product freight prepaid with proof of purchase date (dated sales receipt) and \$5.00 to cover postage and handling, to:  
Zircon Corporation  
\*Attn: Returns Department  
1580 Dell Avenue  
Campbell, CA 95008-6992 USA  
Be sure to include your name and return address. Out of warranty service and repair, where proof of purchase is not provided, shall be returned with repairs charged C.O.D. Allow 4 to 6 weeks for delivery.  
Customer Service, 1-800-245-9265 or 1-408-963-4550  
Monday-Friday, 8:00 a.m. to 5:00 p.m. PST  
[www.zircon.com](http://www.zircon.com)  
[info@zircon.com](mailto:info@zircon.com)

**Zircon Corporation**    **ZirconTV**  
**ZirconTools** | **ZirconToolPro**    **ZirconTools**

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## 1. MODE SELECTION

- When looking for studs, always start in STUD SCAN mode, which scans through surfaces up to ¾ inch (19 mm) thick.
- DEEPSCAN® mode should only be selected if you know the surface is built-up and thicker than normal construction. You should always scan the area in STUD SCAN mode first, to verify that DEEPSCAN® mode is needed. DEEPSCAN® mode is for depths between ¾ inch (19 mm) and 1½ inches (38 mm).
- When scanning for metal pipes or rebar, select METAL SCAN mode.
- When scanning for electrical wires, select AC SCAN mode.

## 2. OPERATING TIPS

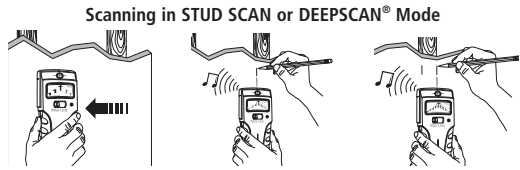
- Tool Position.** For proper use, always place tool flat against the surface before turning on power.
- Power.** Press and hold in the Power Button continuously while in use.
- Calibration.** Place tool flat against surface. Press and hold the Power Button. Do not move tool until calibration is complete (1-2 seconds). When calibration is complete, the TruCal® indicator will appear on the screen.
- Operation.** Move tool slowly, while keeping it flat against the wall. Do not rock, tilt, or lift it.
- If you calibrate over a stud in DEEPSCAN® mode, you probably will not detect any studs. Move tool a few inches right or left, release the Power Button, and start over.

## 3. SCANNING IN STUD SCAN OR DEEPSCAN® MODE

After calibrating (see number 2), continue to hold the Power Button and slowly slide the tool across the surface. When full arrow appears on the LCD, SpotLite® Pointing System shines a beam of light at the stud edge, and a steady tone sounds, you have located the edge of the stud. Mark this spot (see illustrations below).

Continue holding Power Button in and scan beyond the marked spot until arrow bars disappear.

Without releasing Power Button, slide tool in reverse direction to locate other edge of stud. Mark this second spot. Middle of stud is centered between the two marks.



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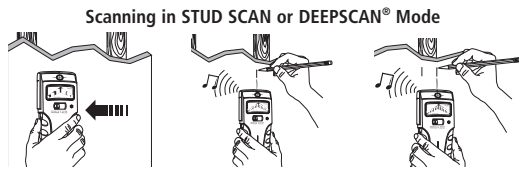
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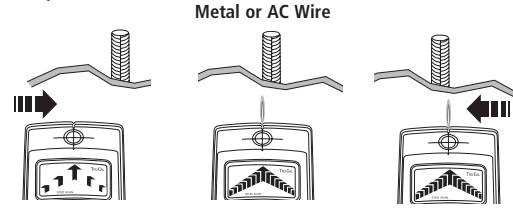
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## 4. SCANNING IN METAL OR AC MODE

Select mode. After calibrating (see number 2), continue to hold Power Button and slowly slide tool across the surface. When the display bars peak, SpotLite® beam shines and steady tone sounds, mark this spot. Continue in the same direction until display bars disappear.

Reverse direction and mark the spot where the display bars peak from that direction. The midpoint of the two marks is the approximate center of the object.



In METAL SCAN mode, if you calibrate directly over metal, you probably will not detect any metal. Move tool a few inches right or left, release the Power Button, and start over.

In AC SCAN mode, if you calibrate over AC voltage, tool will automatically recalibrate when you move it.

### WireWarning® Detection

WireWarning® detection works continuously in STUD SCAN, DEEPSCAN®, and METAL SCAN modes. When AC voltage is detected, the AC indicator will display on the screen.

**WARNING** Electrical field locators may not detect live AC wires if wires are more than 2 in. (51 mm) from the scanned surface, in concrete, encased in conduit, present behind a plywood shear wall or metallic wall covering, or if moisture is present in the environment or scanned surface.

**WARNING** DO NOT ASSUME THERE ARE NO LIVE ELECTRICAL WIRES IN THE WALL. DO NOT TAKE ACTIONS THAT COULD BE DANGEROUS IF THE WALL CONTAINS A LIVE ELECTRICAL WIRE. ALWAYS TURN OFF THE ELECTRICAL POWER, GAS, AND WATER SUPPLIES BEFORE PENETRATING A SURFACE. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN ELECTRIC SHOCK, FIRE, AND/OR SERIOUS INJURY OR PROPERTY DAMAGE.

Always turn off power when working near electrical wires.

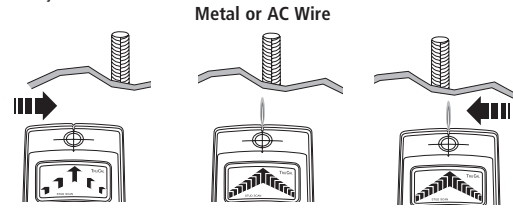
## 5. OPERATING CAUTIONS

Depending on the proximity of electrical wiring or pipes to the wall surface, tool may detect them in the same manner as studs, especially in DEEPSCAN® mode. Caution should always be used when nailing, sawing, or drilling into walls, floors, and ceilings that may contain these items. Because of its increased sensitivity, DEEPSCAN® mode may also detect other objects in walls that are not studs.

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Select mode. After calibrating (see number 2), continue to hold Power Button and slowly slide tool across the surface. When the display bars peak, SpotLite® beam shines and steady tone sounds, mark this spot. Continue in the same direction until display bars disappear.

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To avoid surprises, remember that studs or joists are normally spaced 16 or 24 in. (406 or 610 mm) apart and are 1½ in. (38 mm) in width. Anything closer together or a different width may not be a stud, joist, or firebreak. Always turn off the power when working near electrical wires.

### Working With Different Materials

- Wallpaper:** The MultiScanner® 440 functions normally on walls covered with wallpaper or fabric, unless the materials are metallic foil, contain metallic fibers, or are still wet after application.
- Lath & plaster:** Due to irregularities in plaster thickness, it is difficult for the tool to locate studs in STUD SCAN mode. Change to METAL SCAN mode to locate nail heads holding laths to studs. If plaster has metal mesh reinforcement, tool will be unable to detect anything through that material.
- Textured walls or acoustic ceilings:** When scanning a ceiling or wall with an uneven surface, place thin cardboard on ceiling or wall and scan over the cardboard using DEEPSCAN® mode. Calibrate with cardboard in place.
- Wood flooring, subflooring, or gypsum drywall over plywood sheathing:** use DEEPSCAN® mode.
- Tool cannot scan for wood studs and joists through ceramic floor tile, concrete, or carpeting and pad.
- In problem situations, try using METAL SCAN to locate nails or drywall screws that line up vertically where a stud is positioned.

Note: Sensing depth and accuracy can vary due to moisture, content of materials, wall texture, and paint. **Indoor use only.**

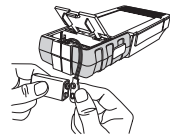
**WARNING** Do not rely exclusively on the detector to locate items behind the scanned surface. Use other information sources to help locate items before penetrating the surface. Such additional sources include construction plans, visible points of entry of pipes and wiring into walls, such as in a basement, and in standard 16 and 24 in. (41 and 61 cm) stud spacing practices.

## 6. CHANGING THE BATTERY

Press battery door release down with your finger or a coin and remove door.

Connect brand new 9V alkaline battery to cable and place inside.

Replace battery door and snap shut.



### FCC Part 15 Class B Registration Warning

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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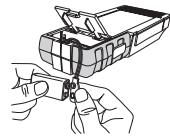
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## 7. HELPFUL HINTS (See also number 2, OPERATING TIPS)

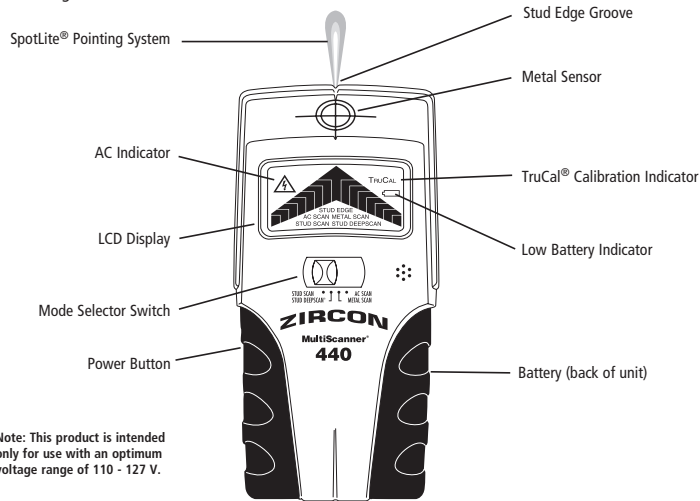
| Situation   | Probable Causes  | Solutions  |
|---|--|--|
| Not certain the object found is a stud in DEEPSCAN® mode.             | • DEEPSCAN® increased sensitivity may have located something other than a stud.  | • Scan the same area with METAL SCAN and AC SCAN. If tool indicates the presence of metal or hot AC, do NOT assume the original stud indication is a stud.   |
| Tool beeps and screen flashes.  | • Tool was calibrated over a stud or on dense part of wall.<br>• Tool tilted or lifted during scan.  | • Turn tool off, move over a few inches, press Power Button, and start again.<br>• On rough surfaces, place thin cardboard on wall, scanning through it to help slide scanner more smoothly.   |
| Working in DEEPSCAN® mode and can't detect studs.                     | • You may have calibrated over a stud. (DEEPSCAN® mode is very sensitive. The error condition has been disabled in this mode.)   | • Move tool over a couple of inches and recalibrate.   |
| Detects other objects besides studs in STUD SCAN and DEEPSCAN® modes. | • Electrical wiring and metal/plastic pipes may be near or touching back surface of wall.  | • Switch to METAL SCAN mode, where combined with WireWarning® detection, pipes and electrical wiring should be detected.<br>• Check for other studs equally spaced to either side (12, 16, or 24 in. apart [305, 406, or 610 mm]) or the same stud at several places directly above or below the first.<br>• Use CAUTION when nailing, sawing, or drilling into walls, floors, and ceilings where these items may exist. |
| Area of voltage appears much larger than actual wire. (AC only)       | • Static charge may develop on drywall, spreading voltage detection as much as 12 in. (305 mm) laterally from each side of an actual electrical wire.                          | • To narrow detection, turn tool off and on again at the edge of where wire was first detected and scan again.<br>• Place your free hand flat against wall near tool to drain static.  |
| Center arrow doesn't appear on LCD.                                   | • Wall is particularly thick or dense.   | • Interpret the pair of LCD bars closest to the center as stud edge.<br>• Switch to DEEPSCAN®, where more bars may appear, to locate the stud.   |
| Difficulty detecting metal.   | • Tool not properly calibrated.<br>• Metal targets too deep.   | • Always calibrate in air for best sensitivity and to avoid calibrating over any metal.<br>• Scan in both horizontal and vertical directions. Metal sensitivity is increased when metal object is parallel to sensor, located at front end of tool beneath crosshair.  |
| Image of metal object appears wider than actual size.                 | • Metal has greater density than wood.   | • To reduce sensitivity, recalibrate tool over either of first two marks.  |
| Constant readings of studs near windows and doors.                    | • Double and triple studs are usually found around doors and windows. Solid headers are above them.  | • Detect outer edges so you know where to begin.   |
| You suspect electrical wires, but do not detect any.                  | • Wires may be shielded in metal conduit or behind metallic wall covering.<br>• Wires deeper than 2 in. (51 mm) from surface might not be detected.<br>• Wires may not be hot. | • Try METAL SCAN to see if you can find metal, wire, or metal conduit.<br>• Always turn off the power when working near electrical wires.<br>• Try turning on switches to outlet.<br>• Try plugging a lamp into outlet and turning on switch.  |

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In accordance with government regulations, you are advised that: (i) some states do not allow limitations on how long an implied warranty lasts and/or the exclusion or limitation of incidental or consequential damages, so the above limitations and/or exclusions may not apply to you, and further (ii) this warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Return product freight prepaid with proof of purchase date (dated sales receipt) and \$5.00 to cover postage and handling, to:  
Zircon Corporation  
\*Attn: Returns Department  
1580 Dell Avenue  
Campbell, CA 95008-6992 USA  
Be sure to include your name and return address. Out of warranty service and repair, where proof of purchase is not provided, shall be returned with repairs charged C.O.D. Allow 4 to 6 weeks for delivery.  
Customer Service, 1-800-245-9265 or 1-408-963-4550  
Monday-Friday, 8:00 a.m. to 5:00 p.m. PST  
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