

**BEFORE YOU BEGIN**

ZIRCON® STUD FINDERS WORK BY SENSING DENSITY CHANGES BEHIND THE WALL. OTHER OBJECTS CAN BE DETECTED, ESPECIALLY IF THEY ARE VERY CLOSE TO THE WALL. **DO NOT ASSUME THAT EVERYTHING DETECTED IS A STUD.**

- Always use a new 9V alkaline battery with an extended expiration date at least 3 years beyond the current date. Match battery direction to the image inside of battery cavity.

- Do not rely exclusively on the scanner to locate items behind a surface. Use other information to help locate such items before penetrating the surface, including construction plans, visible points of entry of pipes, wiring into walls such as in a basement, and standard stud-spacing practices.

- Always start your scan in Target Control™ (TC™) mode, which scans through standard single layer drywall up to 19 mm deep.

- Always scan for studs at several different heights on the wall and mark the location of every target indicated by the stud finder. This is called "mapping the wall." Pipes and other objects will likely not give consistent readings from floor to ceiling, like a stud would.

- Studs normally run from floor to ceiling, except above and below windows and above doors.

- Readings should always be consistent and repeatable.

- Zircon® stud finders are recommended for interior use only.

- Other objects commonly contained in walls, floors, or ceilings are water pipes (plastic and metal), gas lines, firestops, and electrical wiring.

- Sensing depth and accuracy can vary depending on scanning environment conditions, such as mineral content, moisture, texture, and consistency of the wall materials.

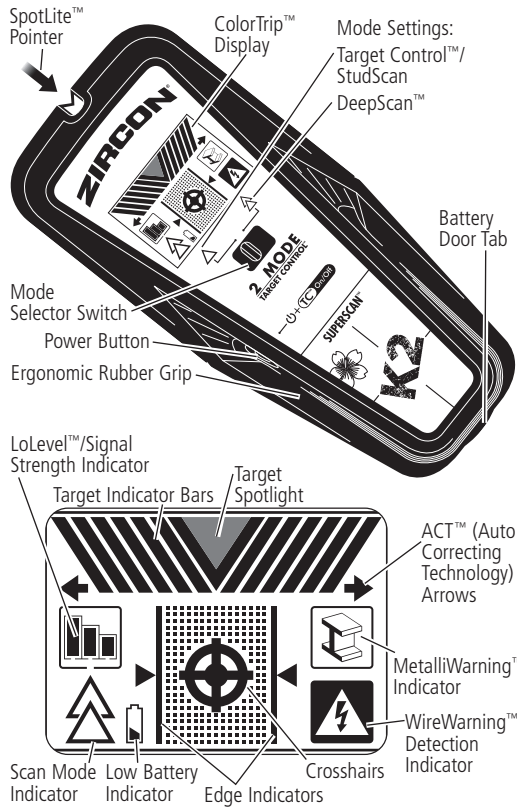
- Depending on the proximity of electrical wiring or pipes to the wall surface, scanner may detect them in the same manner as studs. **Caution should always be used when nailing, cutting, or drilling in walls, floors, and ceilings that could contain these items. Use extreme caution under these circumstances or whenever live AC wiring is present.**

- Studs are normally spaced 40 cm or 60 cm apart on centre, are normally 38 mm wide, and may be separated by firestops. Anything closer together, or of a different width, may not be a stud.

**IMPORTANT: Trust but Verify** is a technique that can help indicate "safe-to-drill" zones to minimize hitting existing metals on a stud, such as nails, screws, and protector plates. When the Crosshairs show in TC™, run scanner vertically up and down the stud. The stud indicators (Crosshairs, Edge Indicators, Target Indicator Bars, Target Spotlight, and SpotLite™ Pointer) will all turn off over screws and other metal, then turn on again when the stud is free from metal. The "safe-to-drill" zones are typically between adjacent drywall screws, nails, or protector plates, assuming the builder properly installed metal protector plates on the stud, and over plumbing and electrical. If stud indicators do not disappear when running vertically up and down the object in TC™ mode, the absence of drywall screws, nails, and protector plates indicates this could be a non-metallic object such as plastic plumbing or PEX tubing, and should not be mistaken for a stud.

**TROUBLESHOOTING & CONSTRUCTION TIPS**

SITUATION	LIKELY CAUSE	SOLUTION
Scanner detects objects other than studs in StudScan mode or finds more objects that look like studs than should be there.	Electrical wiring and metal or plastic pipes may be near, or touching, the back of the wall surface.	<ul style="list-style-type: none"> <li>Check for other studs equally spaced to either side at 40 cm or 60 cm and check for the same stud at spots directly above or below the first scan area.</li> <li>Standard studs measure approximately 38 mm between edges. Anything smaller or larger is likely not a stud (unless near door or window).</li> </ul>
Studs are continuously detected near windows and doors.	Multiple studs are in use.	Double and triple studs are sometimes used around doors and windows. Headers are used above them. Detect outer edges so you know where to begin.
Electrical wires suspected but none detected.	Wires deeper than 50 mm from the surface might not be detected.	If there is an outlet switch, turn it to ON position while scanning, but turn OFF when working near the wires. Use extra caution if the area has plywood, thick wood backing behind drywall, or walls that are thicker than normal.
	Wires may not be live.	Plug a lamp into the outlet and turn it on to test whether wires are live.
LCD screen flashes continuously when trying to find stud.	Scanner is experiencing oversaturation of exposure to metal.	Switch to Target Control™ or StudScan modes to lessen sensitivity to metal. <b>NOTE:</b> Scanner may not beep over studs 25 mm or deeper when doing this.
Low Battery Indicator on.	Low battery.	Install a new 9V alkaline battery with an extended expiration date.
Low Battery Indicator flashes and scanner does not operate.	Dead battery.	



**Featuring Revolutionary Target Control™ (TC™) Technology**

The SuperScan™ K2 wall scanner features TC™ technology, tuned to find wood studs while filtering out metallic false positive objects such as plumbing, conduit, straps, brackets, or ducts beneath surfaces. With TC™ mode, users can utilize "Trust but Verify" technique to help identify "safe-to-drill" zones between adjacent drywall screws, nails, and protector plates.

**Three scanning modes:**

- Target Control™ (TC™)** locates centre, edges, and direction of wood studs (while ignoring metal) up to 19 mm deep. **LCD will be backlit with a pale blue light.** In TC™ mode, the LoLevel™ Indicator indicates low (weak) signal objects, such as plastic water pipes, plastic sewer drains, or studs deeper than 19 mm. When compared to stud signals, the LoLevel™ Indicator may help differentiate studs from false positives.
- StudScan** locates centre, edges, and direction of both wood and metal studs up to 19 mm deep. **LCD will not be backlit in this mode.** In StudScan mode, the Signal Strength Indicator uses the same icon as the LoLevel™ Indicator. When TC™ is off, a strong signal is indicated by full signal strength bars.
- DeepScan™** locates centre, edges, and direction of studs (wood and metal) up to 38 mm deep. **LCD will be backlit with a green light.**

**NOTE:** TC™ and StudScan use the same switch setting but function differently. StudScan detects both wood and metal studs during scanning, while TC™ detects only wood studs and ignores metal. You can distinguish between the two modes by the pale blue backlight on LCD in TC™ mode. StudScan is not backlit. **MetalliWarning™ Indicator** will display when metal is detected or dangerously close in TC™, StudScan, and DeepScan™ modes.

**WIREWARNING™ DETECTION**

The Zircon® **WireWarning™ Detection** continuously detects and alerts for live, unshielded AC (alternating current) wires in any mode. When live AC voltage is detected, warning indicator appears and screen starts flashing red until scanner is moved sufficiently away from the live wire. When calibration begins over an AC wire

in any mode, AC icon will flash. **Use extreme caution under these circumstances or whenever live AC wiring is present.**

**⚠️ WARNING** Scanner may not detect AC activity if wires are more than 50 mm behind the scanned surface, in concrete, encased in conduit, behind a plywood shear wall or metallic wall covering, or if moisture is present in the environment or scanned surface.

**INSTALL 9-VOLT BATTERY**

Always use a new 9V alkaline battery with an extended expiration date at least 3 years beyond current date. Match battery direction to image inside battery cavity.

**⚠️ WARNING** Do not rely exclusively on scanner to locate items behind a surface. Use other information to help locate items before penetrating the surface, including construction plans, visible points of entry of pipes and wiring into walls, such as in a basement, and standard stud-spacing practices.

**SELECT MODE / POWER UP**

Move Mode Selector Switch to desired mode: Target Control™/StudScan or DeepScan™. To activate scanner, press and hold Power Button. Unit shuts off 1 – 2 seconds after Power Button is released.

**FIND A CLEAN WOOD STUD IN TARGET CONTROL™ (TC™) MODE**

TC™ is designed to detect wood studs during scanning. For best results, hold scanner as shown and move slowly when scanning. **Do not touch surface during calibration or scan.**

- Set mode to Target Control™/StudScan switch.
- Hold scanner flat against wall, then press and hold Power Button. Unit will calibrate in 1 – 2 seconds. Proper calibration is confirmed by a short beep, a flicker of SpotLite™ Pointer, and a flash of icons. If a calibration error occurs, all icons will flash continuously. **NOTE: Screen will have a pale blue backlight in TC™ mode. DO NOT MOVE SCANNER DURING CALIBRATION.**

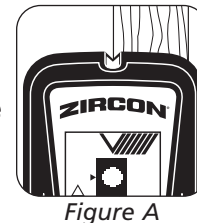


Figure A

- While holding down Power Button, slide scanner slowly along wall. When scanner finds edge of a stud, Edge Indicator shows. (Figure A)

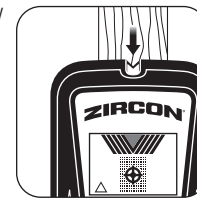


Figure B

- Continue sliding. When scanner finds centre of a stud, Crosshairs show and SpotLite™ illuminates. (Figure B) Mark spot where stud was found.

- Scanner automatically recalibrates when in use. If the two ACT™ arrows appear on LCD, scanner was calibrated over a stud, then moved away. This is ACT™ (Auto Correcting Technology) in action. (Figure C) **NOTE:** LoLevel™ Indicator will display rapidly cascading bars when device senses a sustained weak signal, indicating a false positive object may be present.

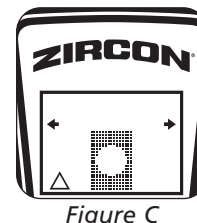


Figure C

- Use the **Trust but Verify** technique for finding drywall screws or nails up and down stud to confirm that you have located a wood stud. Other objects, such as plastic plumbing pipes, do not contain nails or drywall screws. (See important note under BEFORE YOU BEGIN for more information on this procedure.)

**FIND A STUD IN STUDSCAN MODE (TC™ OFF)**

- Set mode to Target Control™/StudScan switch.
- Hold scanner flat against wall, **press Power Button, release it, then press it again**, holding it down the second time. Unit will calibrate in 1 – 2 seconds. A short beep confirms that calibration is complete. If a calibration error occurs, all icons will flash continuously.

**NOTE: Scanner is in StudScan mode (TC™ off) when LCD backlight is off.** When TC™ mode is off, metal objects may be indicated as a stud and Signal Strength Indicator will have steady strength bars. **DO NOT MOVE SCANNER DURING CALIBRATION.**

- While holding down Power Button, slide scanner slowly along wall. When scanner finds edge of a stud, Edge Indicator shows.

- Continue sliding. When scanner finds centre of a stud, Crosshairs turn on, SpotLite™ illuminates, and a beep sounds. Mark spot where stud was found.

Scanner automatically recalibrates when in use. If the two ACT™ arrows appear on LCD, scanner was calibrated too close to a stud, then moved away. This is ACT™ (Auto Correcting Technology) in action.

To return to Target Control™ (TC™) mode, release and press Power Button again. When the display is backlit pale blue, you are back in TC™ mode.

**SCAN IN DEEPSCAN™ MODE**

DeepScan™ mode is used to scan for deeper studs, or for use with thicker walls. It can detect studs up to 38 mm deep.

- Set mode to DeepScan™.
- Repeat steps 2 – 4 under STUDSCAN MODE section.

**NOTE:** When scanning on thicker surfaces, device may not find edges on surfaces thicker than 19 mm.

**⚠️ 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, 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.**

**LIMITED TWO-YEAR WARRANTY**

Zircon Corporation ("Zircon") warrants to the original purchaser (or original user by gift) that this product will be free from defects in materials and workmanship for two years from date of purchase. This warranty is limited to the electronic circuitry of the product, and specifically excludes consumable parts, including batteries, and software, even if packaged with the product. Defects caused by abuse, modification, handling contrary to these instructions, other unreasonable use, or neglect are not covered under this warranty. No liability is accepted under this Limited Warranty for normal wear and tear and minor defects which do not detract from the function of the product. **This Limited Warranty is in addition to the statutory rights to which purchaser is entitled and which are not excluded by this warranty, to the extent any such exclusion is permitted by law.** IN NO EVENT WILL ZIRCON BE LIABLE FOR ANY LOSS THAT IS NOT FORSEEABLE RESULTING FROM POSSESSION, USE, OR MALFUNCTION OF THIS PRODUCT.

**WORKING WITH DIFFERENT MATERIALS**

**Wallpaper** Scanner functions normally on walls covered with wallpaper or fabric, unless the materials are metallic foil, contain metallic fibres, or are still wet after application. Wallpaper may need to dry for several weeks after application.

**Freshly painted walls** It may take a week or longer to dry after application.

**Lath and plaster** This tool is not designed to scan over lath and plaster.

**Highly textured walls or acoustic ceilings** When scanning a ceiling or wall with an uneven surface, place thin cardboard on the surface to be scanned and scan over the cardboard in DeepScan™ Mode.

**Wood flooring, subflooring, or gypsum drywall over plywood sheathing** Use DeepScan™ mode and move the scanner slowly. This scanner cannot scan for wood studs and joists through carpet and padding.

**NOTE: Sensing depth and accuracy can vary depending on scanning environment conditions such as mineral content, moisture, texture, and consistency of the wall materials.**

**Electrical wiring and pipes** Depending on the proximity of electrical wiring or pipes to the wall surface, scanner may detect them in the same manner as studs.

**Caution should always be used when nailing, cutting, or drilling in walls, floors, and ceilings that may contain these items.**

**Studs** Studs are normally spaced 40 cm or 60 cm apart on centre and are 38 mm wide. Anything closer together, or of a different width, may not be a stud.

Any in-warranty defective product returned to the place of purchase with original proof of purchase will be replaced or purchase price refunded at retailer's option. **This Limited Warranty applies only to products purchased within the European Economic Area and United Kingdom. For warranties applicable to Zircon products purchased in other geographical areas, see www.zircon.com/warranty-registration.**

For questions about this warranty or Zircon products, contact: 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)

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