

**SuperScan™ K4**  
Advanced Stud Finder**BEFORE YOU BEGIN**

ZIRCON<sup>®</sup> 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<sup>®</sup> 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.

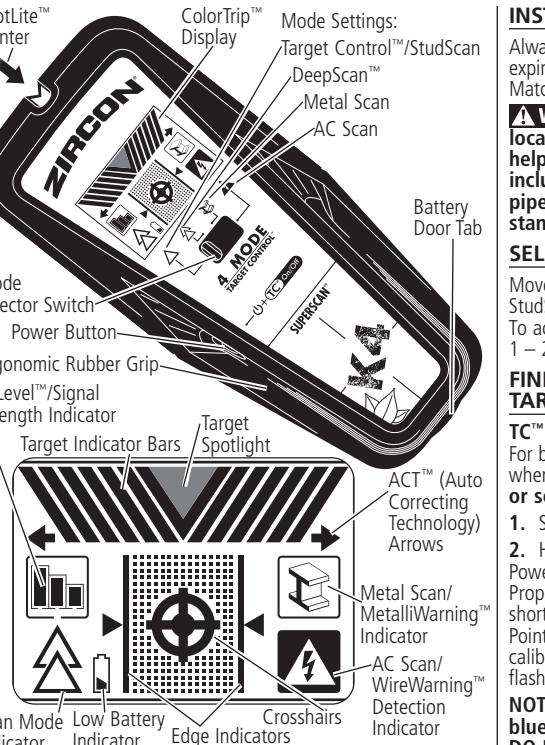
**TROUBLESHOOTING & CONSTRUCTION TIPS**

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>Scan the area in Metal Scan to determine if metal is present.</li> <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> <p><b>Five scanning modes:</b></p> <ul style="list-style-type: none"> <li><b>Target Control™ (TC™)</b> locates centre, edges, and direction of wood studs (while ignoring metal) up to 19 mm deep. <b>LCD will be backlit with a pale blue light.</b> 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.</li> <li><b>StudScan</b> locates centre, edges, and direction of both wood and metal studs up to 19 mm deep. <b>LCD will not be backlit in this mode.</b> 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.</li> <li><b>DeepScan™</b> locates centre, edges, and direction of studs (wood and metal) up to 38 mm deep. <b>LCD will be backlit with a green light.</b></li> <li><b>Metal Scan</b> locates ferrous (magnetic) metal, such as steel, up to 75 mm deep, and non-ferrous (non-magnetic) metal, such as copper, up to 38 mm deep. <b>LCD will be backlit with a dark blue light.</b></li> <li><b>AC Scan</b> locates live, unshielded AC wires behind drywall up to 50 mm deep. <b>LCD will be backlit with a red light.</b></li> </ul> <p><b>NOTE:</b> 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. <b>MetalWarning™ Indicator</b> will display when metal is detected or dangerously close in TC™, StudScan, and DeepScan™ modes.</p>
Difficulty detecting metal.	Metal object is too deep or too small.	<ul style="list-style-type: none"> <li>Try calibrating in another location.</li> <li>Scan in both horizontal and vertical directions. Metal sensitivity is increased when metal object is parallel to the sensor (located under the Zircon<sup>®</sup> logo).</li> </ul>
Metal object reading appears wider than actual size.	Metal has a greater density than wood.	To reduce sensitivity in Metal Scan mode, recalibrate scanner over either of first two marks (see steps under REFINE METAL SCAN).
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.	<p>Wires are shielded by a metal conduit, braided wire, or metallic wall covering.</p> <p>Wires deeper than 50 mm from the surface might not be detected.</p> <p>Wires may not be live.</p>	<p>Use Metal Scan mode to scan for metal, wire, or metal conduit.</p> <p>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.</p> <p>Plug a lamp into the outlet and turn it on to test whether wires are live.</p>
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.
Low Battery Indicator on.	Low battery.	
Low Battery Indicator flashes and scanner does not operate.	Dead battery.	Install a new 9V alkaline battery with an extended expiration date.



Scan QR code for more information.

Visit uk.zircon.com for the most current instructions.

**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.

**A 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, DeepScan™, Metal Scan, or AC Scan. 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. In 1–2 seconds, unit will calibrate. A short beep confirms that calibration is complete.
- While continuing to hold Power Button, slide scanner slowly against wall. With a strong read, SpotLite™ illuminates and a short beep sounds. Mark spot where largest number of Target Indicator Bars show. **(Figure D)**



Figure D

- Continue sliding in same direction until bars reduce, then reverse direction. Mark spot where Target Indicator Bars peak. The midpoint between the two marks is the location of metal object.



Figure E

**NOTE:** If unit indicates a large area of metal, refine scan to narrow area.

**REFINE METAL SCAN**

- Release Power Button, then place scanner over one of the previous marks. **(Figure A)**
- Press and hold Power Button, then repeat 3 and 4 under SCAN FOR METAL. This resets metal calibration to a lower sensitivity and narrows scan area.



Figure F

**NOTE:** If any bars display, metal is present.

**SCAN FOR AC (ALTERNATING CURRENT)**

Use AC Scan Mode to find live, unshielded electrical wiring. **ALWAYS TURN OFF POWER WHEN WORKING NEAR ELECTRICAL WIRES (EXCEPT WHEN SCANNING).**

- Set mode to AC Scan.
- Hold scanner flat against wall, then press and hold Power Button. A short beep confirms that calibration is complete. **DO NOT MOVE SCANNER DURING CALIBRATION.**

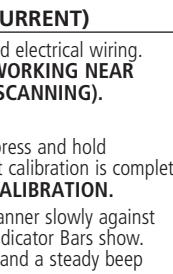


Figure C

- While holding Power Button, slide scanner slowly against wall. Mark spot where the most Target Indicator Bars show. With a strong read, scanner will light up and a steady beep will sound.
- Continue in same direction until bars reduce, then reverse direction. Mark spot where Target Indicator Bars peak. The midpoint between the two marks is the location of the live, unshielded AC wiring. If unit indicates live electricity over a large area, reduce sensitivity of scanner to refine scanning area and more accurately locate the live AC wiring.

**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 backlit 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.

**A 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.

**NOTE:** AC Scan only detects live (hot) unshielded AC wiring. Refer to the WARNING statement under WIREWARNING™ DETECTION for important details and warnings about AC detection.

**REFINE AC SCAN**

- Release Power Button, then position the scanner over one of the previous marks. This will reset to a lower sensitivity and narrow the scan area.
- Press and hold Power Button, then repeat 3 and 4 under SCAN FOR AC.
- Repeat as needed for increased accuracy.

**A 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.**

**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. If it is difficult to locate a stud in StudScan Mode on dry or freshly-dried paint, switch to Metal Scan Mode to locate the nails or drywall screws holding drywall to the studs.

**Lath and plaster** Due to irregularities in plaster thickness, it is difficult for this scanner to locate studs in any stud-scanning mode. Switch mode to Metal Scan to locate the nail heads holding wood lath to the studs. If the plaster has metal mesh reinforcement, the scanner will be unable to detect studs through that material.

**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](http://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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**GB** **PROTECTING THE ENVIRONMENT**

Separate collection. This product must not be disposed with normal household waste.

Should your Zircon product need replacement or is of no further use to you, do not dispose of it with household waste. Make this product available for separate collection.

Separate collection of used products and packaging allows materials to be recycled and used again. Re-use of recycled materials helps prevent environmental pollution and reduces the demand for raw materials.

Local regulations may provide for separate collection of electrical products from the household, at municipal waste sites or by the retailer when you purchase a new product.

**FR** **Attestations DEEE et CE**

Tri sélectif. Ce produit ne doit pas être jeté avec les déchets ménagers courants.

Si votre appareil Zircon doit être remplacé ou ne vous est plus nécessaire, ne le jetez pas avec vos ordures ménagères. Il doit faire partie d'une collecte sélective.

Le tri sélectif de produits et emballages usagés permet leur recyclage et leur ré-utilisation. La ré-utilisation de matériaux recyclés protège l'environnement de pollutions et diminue la demande en matériau brut.

Les réglementations locales peuvent prévoir une collecte particulière dans les déchetteries municipales ou chez votre détaillant lorsque vous achetez un nouveau produit.

**NL** **WEEE en CE bekraftigingen**

Gescheiden inzameling. Dit product mag niet met normaal huishoudelijk vuil worden weggegooid.

Indien uw Zircon product vervangen moet worden of als u het niet langer gebruikt, gooi het dan niet weg met huishoudelijk vuil. Zorg ervoor dat dit product gescheiden ingezameld wordt.

Gescheiden inzameling van gebruikte producten en verpakkingen laat toe dat materiaal gerecycled en opnieuw gebruikt wordt. Opnieuw gebruiken van gerecycleerde materialen helpt milieuvvuiling voorkomen en vermindert de vraag naar ruwe materialen.

Er kunnen plaatselijke regelingen bestaan wat betreft het gescheiden inzamelen van elektrische huishoudelijke producten op afvalopslagplaatsen van de gemeente.

**SE** **WEEE och CE information**

Separat avfallssortering. Denna produkt får inte kastas bland normalt hushållsavfall.

Om din Zircon produkt behöver ersättas eller om den inte längre används kast då inte den bland hushållsavfallet. Se istället till att den lämnas till separat avfallssortering.

Separat avfallssortering av kasserade produkter och förpackningar gör det möjligt att materialet kan återanvändas. Detta hjälper till att förhindra miljöförstöring och reducerar behovet av nytt råmaterial.

Lokala bestämmelser kan föreskriva separat avfallssortering av elektriska produkter i hushållet, vid kommunala sopstationer eller hos återförsäljare när du köper en ny produkt.

**NO** **Beskytte miljøet**

Separat innsamling. Dette produktet må ikke kastes sammen med vanlig husholdningsavfall.

Hvis Zircon-produktet trenger å skiftes ut eller du ikke lenger har behov for det, må du ikke kaste det sammen med husholdningsavfallet. Gjør produktet tilgjengelig for separat innsamling.

Separat innsamling av brukte produkter og emballasje gjør det mulig å resirkulere materialene og gjenbruke dem. Gjenbruk av resirkulerte materialer bidrar til å forebygge miljøforurensning og reduserer behovet for råmaterialer.

Lokale bestemmelser kan gi mulighet til separat innsamling av elektriske produkter fra husholdninger på kommunale avfallsplatser eller hos forhandleren når du kjøper et nytt produkt.