ZIRCON®

Wood Stud SuperScan®
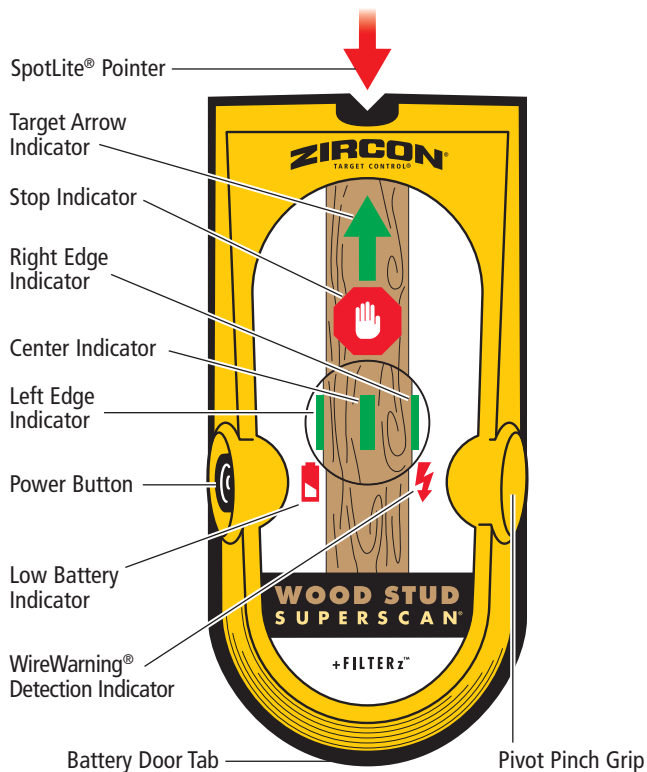Advanced Stud Finder with Target Control® Technology and FILTERz™ Cancellation

BEFORE YOU BEGIN
Always map your work area prior to cutting or drilling.

- Always use two new AA (1.5 V) alkaline batteries 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 tool 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 Auto or Edge mode, which scans for wood studs through surfaces up to ¾" (19 mm) deep. DeepScan® mode may detect objects further behind the wall that may or may not be a stud.
- Studs are normally spaced 16" or 24" (40 cm or 60 cm) apart on center, are normally 1½" (38 mm) wide, and may be separated by firestops. Anything closer together, or of a different width, may not be a stud.
- Always scan for studs at several different heights on the wall and mark the location of every target indicated by the stud finder. This scans for wood and metal studs and is called "mapping the wall." Pipes and other objects will likely not give consistent readings from floor to ceiling, as 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, tool 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.**

ABOUT WOOD STUD SUPERSCAN® ADVANCED STUD FINDER

- SpotLite® Pointer
- Target Arrow Indicator
- Stop Indicator
- Right Edge Indicator
- Center Indicator
- Left Edge Indicator
- Power Button
- Low Battery Indicator
- WireWarning® Detection Indicator
- Battery Door Tab
- Pivot Pinch Grip

Designed to locate wood studs and avoid metallic objects, such as plumbing, conduit, straps, brackets, screws, protector plates, or ducts hiding in the wall, patented Target Control® (TC™) technology analyzes complex data streams while FILTERz™ cancellation helps avoid low signal-strength, non-metallic targets, such as plastic pipe, PEX tubing, wiring, and more. TC™ is enabled in Auto and Edge modes only. TC™ is not enabled in DeepScan® mode.

Three scan modes:

- **Auto Mode** locates the center and edges of wood studs up to ¾" (19 mm) deep. TC™ technology is always engaged in this mode and will filter out metal. The Left Edge, Center, and Right Edge Indicators will all light green to designate tool is in Auto mode.
- **Edge Mode** locates the edges of wood studs up to ¾" (19 mm) deep. TC™ technology is always engaged in this mode and will filter out metal. Both Edge Indicators will light green to designate tool is in Edge mode.
- **DeepScan® Mode** locates the center of wood studs up to 1½" (38 mm) deep. TC™ technology is off in this mode and will detect metal. Center Indicator will light green to designate the tool is in DeepScan® mode.

WIREWARNING® DETECTION

WireWarning® Detection continuously detects and alerts for live, unshielded AC (alternating current) wires in all modes. When live AC voltage is detected, warning indicator appears until tool is moved sufficiently away from the live wire. When calibration begins over an AC wire, AC icon will flash. **Use extreme caution under these circumstances or whenever live AC wiring is present.**

⚠ **WARNING** **Tool may not detect AC activity if wires are more than 2" (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.**

METALLIWARNING® INDICATION

In Auto and Edge modes, when metal is detected, the Stop Indicator will display a solid red light (known as **MetalliWarning® Indication**).

LOLEVEL® INDICATION

In Auto and Edge modes, when tool senses a sustained weak signal, the Stop Indicator will flash red. A weak (low) signal may indicate other objects are present, such as plastic water pipes, PEX tubing, and plastic sewer drains.

INSTALL AA BATTERIES

Always use two new AA (1.5 V) alkaline batteries 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 tool 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.**

POWER UP / SELECT MODE

Press and release the Power Button to turn tool on. Do NOT hold Power Button down while scanning. Tool will calibrate as confirmed by a simultaneous flicker of the SpotLite® Pointer, all indicators briefly lighting, and haptic vibration. To change between modes, press the Power Button repeatedly until reaching the desired mode. Mode sequence is as follows: Auto, Edge, DeepScan® modes.

Tool will power off 3 minutes after the Power Button is released or when the tool is lifted from the surface after calibration is complete. To manually power off the tool, press the Power Button down 2 seconds. The tool will power back on in the mode last engaged.

SCANNING TECHNIQUE

For best results, hold tool flat against the surface, with thumb and index fingers placed on the pivot pinch grip and Power Button. Holding the tool incorrectly can cause inaccurate readings. Move slowly when scanning. Do not touch wall surface with either hand during calibration or scanning.

SCAN IN AUTO MODE

Use Auto mode to find the center and edges of wood studs up to ¾" (19 mm) deep.

1. Hold tool flat against wall, then press and release Power Button. Toggle mode by pressing then releasing Power Button repeatedly until the Center and Edge Indicators light solid green (**Figure A**). Unit will calibrate in 1–2 seconds. **Do not move tool during calibration.** Proper calibration is confirmed by a simultaneous flicker of SpotLite® Pointer, all indicators briefly lighting, and haptic vibration.

2. Slide tool slowly along wall. When tool finds the edge of a stud, SpotLite® Pointer illuminates, Edge Indicator flashes green, Target Indicator Arrow lights solid green, and a haptic vibration occurs. (**Figure B**)

3. Continue sliding. When tool finds the center of a stud, SpotLite® Pointer illuminates, Center Indicator flashes green, Target Arrow Indicator lights solid green, and a haptic vibration occurs (**Figure C**). Mark spot where stud center was found.

4. Continue scanning past to find other stud edge. The width of a stud is typically 1½" (38 mm).

Trust but Verify is a technique that can help minimize hitting existing metals on a stud, such as nails, screws, and protector plates. Once you have found the center of the stud in Auto mode, continue to run the tool vertically up and down the stud. The Stop Indicator light will turn on over screws or other metal, then turn off again when the stud is free from metal. If metal protector plates are properly installed over plumbing and electrical, the "safe-to-drill" zones are typically between adjacent drywall screws, nails, or protector plates. If the Stop Indicator stays continuously on when running vertically up and down the object, it could be a metal pipe and should not be mistaken for a stud.

Figure A

Figure B

Figure C

SCAN IN EDGE MODE

Use Edge mode to find the edges of wood studs up to ¾" (19 mm) deep. See SCANNING TECHNIQUE for best results.

1. Hold tool flat against wall, then press and release Power Button. Toggle mode by pressing then releasing Power Button repeatedly until only both Edge Indicators light solid green (**Figure D**). Wait for the tool to calibrate in 1–2 seconds. **Do not move tool during calibration.** Calibration is confirmed by a simultaneous flicker of SpotLite® Pointer, all indicators briefly lighting, and a haptic vibration.

2. Slide tool slowly along wall, keeping the Power Button pressed. When tool finds the edge of a stud, SpotLite® Pointer illuminates, Edge Indicator flashes green, Target Arrow Indicator lights solid green, and a haptic vibration occurs (**Figure E**). Mark stud edge.

3. Continue sliding. When tool scans over the object, the Target Arrow Indicator will light solid green to indicate its presence only and is not indicating stud center.

4. Continue sliding. When tool finds other stud edge, SpotLite® Pointer illuminates, other Edge Indicator flashes green, Target Arrow Indicator lights solid green, and a haptic vibration occurs. Mark other stud edge.

Figure D

Figure E

SCAN IN DEEPSCAN® MODE

DeepScan® mode locates the center of wood studs through thicker walls up to 1½" (38 mm) deep. See SCANNING TECHNIQUE for best results.

1. Hold tool flat against wall, then press and release Power Button. Toggle mode by pressing then releasing Power Button repeatedly until only the Center Indicator lights solid green (**Figure F**). Wait for the tool to calibrate in 1–2 seconds. **Do not move tool during calibration.** Calibration is confirmed by a simultaneous flicker of SpotLite® Pointer, all indicators briefly lighting, and a haptic vibration.

2. Slide tool slowly along wall. When tool finds center of a wood or metal stud, SpotLite® Pointer illuminates, Center Indicator flashes green, Target Arrow Indicator lights solid green, and a haptic vibration occurs. Mark stud center.

NOTE: In DeepScan® mode, the Stop Indicator will flash red when metal is detected. To confirm you have located a wood stud, use the *Trust but Verify* technique to find drywall screws or nails up and down stud. Other objects, such as plastic plumbing pipes, do not contain nails or drywall screws. A metal pipe or stud will give a continuous metal reading indicated by the solid illuminated Stop Indicator.
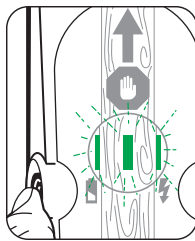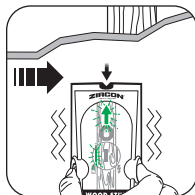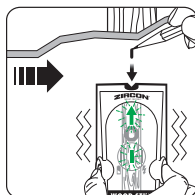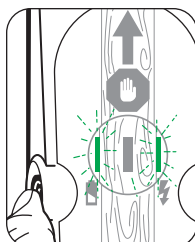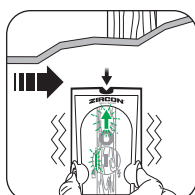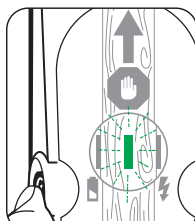

Figure F

⚠ 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

Studs Studs are normally spaced 16" or 24" (40 cm or 60 cm) apart on center and are ½" (38 mm) wide. Anything closer together, or of a different width, may not be a stud.

Wallpaper Tool functions normally on walls covered with wallpaper or fabric, unless the materials are metallic foil, contain metallic fibers, or are still wet after application. Wallpaper may need to dry for several weeks after application. For freshly painted walls, it may take a week or longer to dry after application.

Lath and plaster 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 tool slowly. This tool cannot scan for wood studs and joists through carpet and padding.

Electrical wiring and pipes Depending on the proximity of electrical wiring or pipes to the wall surface, tool 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.**

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

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

TROUBLESHOOTING & CONSTRUCTION TIPS

SITUATION	LIKELY CAUSE	SOLUTION
Tool detects objects other than studs during scanning or finds more objects that look like studs than should be there.	Objects may be near, or touching, the back of the wall surface.	• Check for other studs equally spaced to either side at 16" or 24" (40 cm or 60 cm) and check for the same stud at spots directly above or below the first scan area. • Standard studs measure approximately 1½" (38 mm) between edges. Anything smaller or larger is likely not a stud (unless near a door or window).
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 2" (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.
Tool Indicators flash continuously when trying to find stud.	Scanner is experiencing oversaturation when scanning over a dense object.	Restart scan and recalibrate in a different location.
Low Battery Indicator on.	Low battery.	Install two new AA (1.5 V) alkaline batteries with extended expiration dates.
Low Battery Indicator flashes and tool does not operate.	Dead battery.	Install two new AA (1.5 V) alkaline batteries with extended expiration dates.

Scan QR code for more information.