

MetalliScanner® m60c

Metal Detector with AC Scanning

BEFORE YOU BEGIN

- Always use a new alkaline battery with an extended expiration date.
- 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 and wiring into walls such as in a basement, and standard stud-spacing practices.
- Readings should always be consistent and repeatable.
- Zircon scanners are recommended for interior use only.
- Other objects commonly contained in walls, floors, or ceilings are water pipes, 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.
- Always turn off power when working near electrical wires (except when scanning).
- Due to the proximity of electrical wiring or pipes to the wall surface, caution should always be used when nailing, cutting, or drilling in walls, floors, and ceilings that may contain these items.

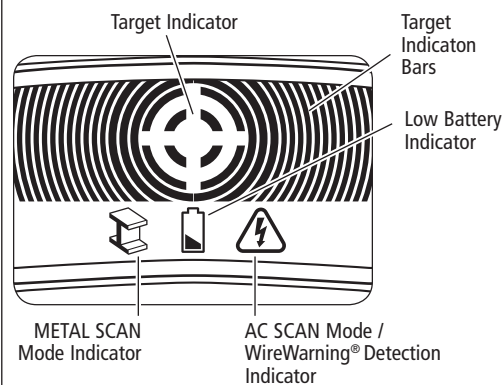
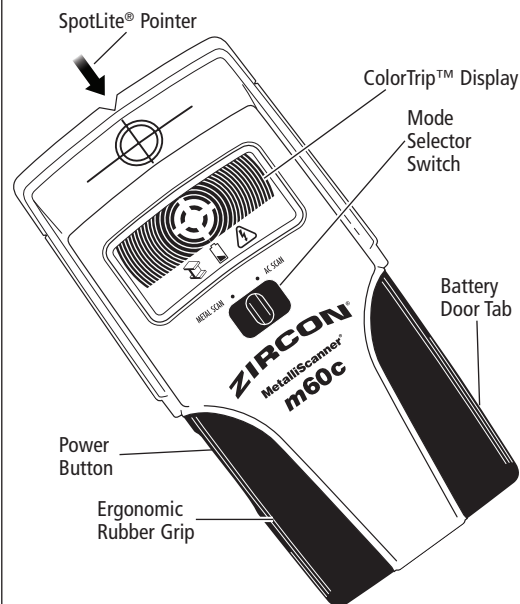
TROUBLESHOOTING & CONSTRUCTION TIPS

SITUATION	LIKELY CAUSE	SOLUTION
Area of voltage appears larger than actual wire during AC SCAN.	Voltage detection can spread on drywall by as much as 12" (30 cm) on each side of the wire.	Narrow the scan detection: 1. Turn scanner off. 2. Turn it on again at the edge of where the wire was first detected. 3. Repeat scan.
Difficulty detecting metal.	Scanner was calibrated over metal object or metal object is too deep or too small.	<ul style="list-style-type: none"> • The scanner may have been calibrated over a metal object, reducing sensitivity. Try calibrating in another location. • Scan in both horizontal and vertical directions. Metal sensitivity is increased when metal object is parallel to sensor.
Metal object reading appears wider than actual size.	Scanner sensitivity is calibrated too high.	To reduce sensitivity in METAL SCAN Mode, recalibrate scanner over either of the first two marks (see steps under SCAN FOR METAL).
Display flashes red continually at start of scan.	Scanner was calibrated directly over an area of live AC.	Release the Power Button, slide the tool a few inches (5–8 cm) to the left or right, and repeat scan.
Electrical wires suspected but none detected.	Wires are shielded by a metal conduit, braided wire, or metallic wall covering.	Use METAL SCAN Mode to scan for metal, wire, or metal conduit.
	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.
Low Battery Indicator flashes and scanner does not operate.	Low battery.	Install new 9-volt alkaline battery with an extended expiration date.

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.

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

ZIRCON



2 scanning modes:

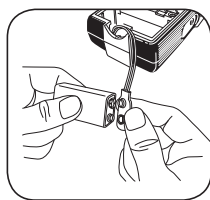
- **METAL SCAN** locates ferrous (magnetic) metal, such as steel, up to 3" deep (75 mm), and non-ferrous (non-magnetic) metal, such as copper, up to 1½" (38 mm) deep
- **AC SCAN** locates live, unshielded AC wires up to 2" (50 mm) deep

The advanced ColorTrip Display lights blue in METAL SCAN Mode and red in AC SCAN Mode. **WireWarning Detection** automatically detects and alerts for live AC (alternating current) wires in both modes. When AC voltage is detected, the display will flash red.

INSTALL 9-VOLT BATTERY

Always use a new alkaline battery with an extended expiration date. Be sure not to pull on wires when disconnecting an old battery.

Low Battery Indicator will flash when battery charge is too low for scanner to function properly.



WARNING Do not rely exclusively on the 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 in standard stud-spacing practices.

SELECT MODE / POWER UP

Move Mode Selector Switch to desired mode: **METAL SCAN** or **AC SCAN**.

To activate scanner, press and hold Power Button. If button is not pressed and held, unit shuts off.

SCAN FOR METAL

Use METAL SCAN to locate ferrous (magnetic) metal, such as structure steel or rebar up to 3" (75 mm) below the scanned surface and non-ferrous (non-magnetic) metal, such as copper piping, up to 1½" (38 mm) below the scanned surface.

For best results, hold the scanner as shown (Figure A) and move slowly when scanning. **Do not touch the surface during calibration or scan.**

1. Set mode to METAL SCAN.

2. For maximum sensitivity, press and hold Power Button. Hold the scanner away from the surface until a short beep confirms calibration is complete, then place against the surface to be scanned.

3. While holding Power Button, slide the scanner slowly against the wall. For a strong read, the SpotLite Pointer will shine, a steady beep will sound, and the Target Indicator will display. (Figure B)

4. **Mark the spot** where the most Target Indication Bars show on the display. (Figure C)

5. Continue in same direction until bars reduce, then reverse direction. **Mark the spot** where the display bars peak. (Figure D) The midpoint between the two marks is the location of the metal object. (Figure E)

NOTE: If the scanner indicates a large area of metal, refine the scan to narrow the scanned area.

REFINE THE METAL SCAN

1. 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.
2. Press and hold Power Button, then repeat steps 3–5 under SCAN FOR METAL.
3. Repeat as needed for increased accuracy.

NOTE: If any bars display, metal is present. Small targets or targets deep below the surface may only show two or four bars, and the scanner may not be able to locate the center of the metal.

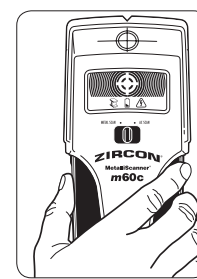


Figure A

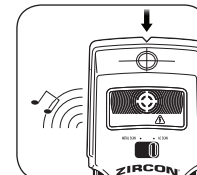


Figure B

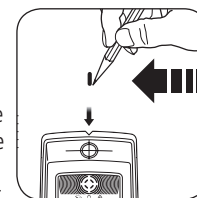


Figure C

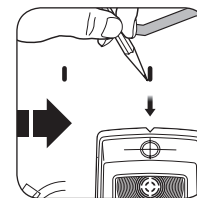


Figure D

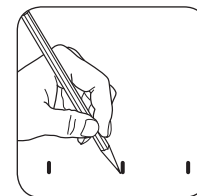


Figure E

SCAN FOR AC (alternating current)

Use AC SCAN to find live (hot), unshielded wiring up to 2" (50 mm) below the scanned surface.

ALWAYS TURN OFF POWER WHEN WORKING NEAR ELECTRICAL WIRES (EXCEPT WHEN SCANNING).

1. Set mode to AC SCAN.

2. 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.**

3. While continuing to hold Power Button, slide the scanner slowly against the wall. For a strong read, the SpotLite Pointer will shine, a steady beep will sound, and the Target Indicator will display. (Figure B)

4. **Mark the spot** where the most Target Indication Bars display. (Figure C)

5. Continue sliding in same direction until bars reduce, then reverse direction. **Mark the spot** where the most Target Indication Bars display. (Figure D) The midpoint between the two marks is the location of the metal object. (Figure E)

If the unit indicates live electricity over a large area, reduce the sensitivity of the scanner to refine the scanning area and more accurately locate the live AC wiring (see REFINING THE AC SCAN below).

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.

REFINE THE AC SCAN

1. 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.
2. Press and hold Power, then repeat steps 3-5 under SCAN FOR AC.
3. Repeat as needed for increased accuracy.

LIMITED 1 YEAR WARRANTY

Zircon Corporation ("Zircon") warrants to the product owner that this product will be free from defects in materials and workmanship for one year from the original date of purchase. Any defective product returned to Zircon within the warranty period to the address below, freight prepaid, along with proof of purchase, will be repaired or replaced, at Zircon's option. Repair or replacement may be made with a new or refurbished product or components, at Zircon's sole discretion. If the returned product is no longer available, Zircon may replace the product with a similar product of similar function. This warranty is limited to the electronic circuitry of the product and original case of the product, and specifically excludes any damage caused by abuse, modification, handling contrary to these instructions, other unreasonable use, or neglect. This is your sole and exclusive remedy for breach of this Limited Warranty.

This Limited Warranty is in lieu of all other warranties, express or implied, and no other representations or claims of a similar nature will bind or obligate Zircon. Any implied warranties applicable to this product that cannot be disclaimed are limited to the one year period following its purchase. This Limited Warranty does not cover consumable parts, including batteries, or software, even if packaged with the product.

NOTE: AC SCAN only detects live (hot) unshielded AC wiring. Refer to the WARNING Statement under WireWarning Detection below for important details and warnings about AC detection.

WIREWARNING DETECTION The Zircon® WireWarning Detection feature works continuously in both modes. When live AC voltage is detected in METAL SCAN Mode, the warning indicator shows and the display flashes red. If scanning begins over a live AC wire, the indicator or middle bars (in AC SCAN) will flash on the red display continuously.

Use extreme caution under these circumstances, or whenever live AC wiring is present.

WARNING THE SCANNER MAY NOT DETECT LIVE CURRENT IF WIRES ARE MORE THAN 2" (50 mm) BELOW 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.

WORKING WITH DIFFERENT MATERIALS

Wallpaper This scanner 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.

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

Lath and plaster Use 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, acoustic ceilings, wood flooring, subflooring, or gypsum drywall over plywood sheathing Use METAL SCAN mode to locate nails or screws that may line up vertically where a stud or joist is positioned.

Electrical wiring and pipes 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 contents, moisture, texture and consistency of the wall materials.

IN NO EVENT WILL ZIRCON BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM POSSESSION, USE OR MALFUNCTION OF THIS PRODUCT.

Some states do not allow limitations on certain implied warranties and/or the limitation on incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Return products for warranty service, freight prepaid with proof of purchase (a dated sales receipt) to:

Zircon Corporation, Attn: Returns Department
1580 Dell Avenue
Campbell, CA 95008-6992 USA

Be sure to include your name and return address. Allow 4–6 weeks for delivery.

Customer Service: 1-800-245-9265 or 1-408-963-4550
Monday–Friday, 8:00 a.m.–5:00 p.m. PT
info@zircon.com • www.zircon.com

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