How to Find Studs in a Wall Using Your Phone

Step-by-step guide on how to find studs in a wall using your phone. Use Wall Scanner & Metal Detector to locate screws and mark stud positions before drilling.

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Knowing **how to find studs in a wall with your phone** is a fundamental skill for any homeowner or DIY enthusiast. Whether you're hanging a heavy shelf, mounting a TV, or fixing a cabinet, drilling into a stud means your screws hold securely. Missing the stud and hitting empty drywall can mean pulled anchors, wobbling fixtures, and costly repairs.

The good news: your smartphone already has the sensor needed to locate studs. The **Wall Scanner & Metal Detector** app uses your phone's built-in magnetometer to detect the metal screws and nails that fasten drywall to studs — giving you a reliable map of your wall's hidden structure.

Download the app now on iOS (App Store) or Android (Google Play) — it's completely free with no ads.

What You'll Need

- Your iPhone or Android phone (with magnetometer — most modern phones have one)
- Wall Scanner & Metal Detector app (free)
- Painter's tape or a pencil

- A measuring tape (optional, for confirming standard stud spacing)

Step-by-Step: Finding Studs with Your Phone

Step 1: Remove Your Phone Case

Metal or thick phone cases can interfere with the magnetometer signal. Remove the case before scanning to get the clearest readings. If your case is plastic or silicone, it usually won't affect results, but removing it is still a good habit.

Step 2: Open Wall Scanner & Metal Detector and Calibrate

Launch the app and hold your phone away from the wall — ideally in the center of the room. The app will read the ambient magnetic field at this baseline level. This calibration step ensures the readings you see near the wall reflect actual changes, not background noise. Most versions of the app prompt you to calibrate automatically on first launch.

Step 3: Start from a Corner or Known Reference Point

Studs in North American homes are typically placed 16 inches apart (sometimes 24 inches in newer construction or garage walls). Starting from a corner gives you a predictable baseline — the first stud is usually 15.25 inches from the corner (to allow for the 0.75 inch corner drywall). In European construction, stud spacing varies more, so don't rely on spacing assumptions — trust the sensor readings.

Step 4: Slowly Slide the Phone Across the Wall

Hold your phone flat against the wall surface, with the back of the phone pressed gently against the drywall. Slowly move it horizontally across the wall at a consistent height (about chest level works well). Keep your movement steady — about 5 centimeters per second. Watch the app's magnetometer graph as you move.

Step 5: Watch for Magnetometer Spikes

As you pass over a metal screw or nail (which marks a stud's location), the magnetometer reading will spike upward. The app will typically highlight this with a visual indicator and may trigger a vibration or sound alert. The **peak of the spike is directly over the metal fastener** — and the stud is right behind it.

Note: You may see multiple small spikes if there are several screws along a single stud. This is normal. A stud typically has screws every 8–12 inches vertically.

Step 6: Mark the Stud Location

When the spike peaks, hold the phone still and mark the spot on the wall with a small pencil mark or a strip of painter's tape. Painter's tape is ideal because it leaves no residue and is highly visible.

Step 7: Verify with a Second Pass

Remove your marks and repeat the scan. Do this at least twice — once at chest height and once at a different height (higher or lower by 20 cm). If both passes show a spike at the

same horizontal position, you've confirmed a stud. If the spike location shifts between passes, it may be a false positive from a pipe, metal bracket, or electrical box rather than a stud.

Step 8: Find the Stud Edges (Optional)

Most studs are 1.5 inches (38mm) wide. The screw is usually centered on the stud. So if you find a spike at position X, the stud runs from X - 0.75 inches to X + 0.75 inches. For heavy loads, try to drill near the center of the stud (at the spike) rather than near the edge.

Step 9: Locate Additional Studs

Once you've found one stud, look for the next one at 16 inches (or 24 inches) to either side. Scan again to confirm. Repeat across the wall until you have all the stud locations marked.

Common Problems and How to Fix Them

No Spikes at All

If you see no spikes, the wall may have very few screws (older nail-only construction), or you may be moving too fast. Try slowing down your scan speed significantly.

Constant High Readings

If the reading is permanently high everywhere, you may be near a large metal object (radiator, metal stud wall, steel beam) or have not calibrated the app in a neutral location. Recalibrate away from the wall.

Spikes in Unexpected Places

Electrical boxes, pipe brackets, and corner beads can all cause spikes. If a spike doesn't conform to the regular 16-inch stud pattern, investigate further by tapping the wall — a stud produces a solid thud, while empty drywall sounds hollow.

When to Use a Professional Stud Finder

For very heavy loads — like large TVs, full bookshelves, or wall-mounted cabinets — consider confirming your phone app results with a dedicated hardware stud finder, or hiring a professional. For everyday hanging tasks, the phone app is more than sufficient.

Download Wall Scanner & Metal Detector

Ready to start? **Wall Scanner & Metal Detector** is free, works offline, requires no account, and has no ads. Get it on App Store for iPhone or Google Play for Android and tackle your next project with confidence.

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