# NULLING YOUR LEADS

## WHY NULL EVERY SINGLE TIME?

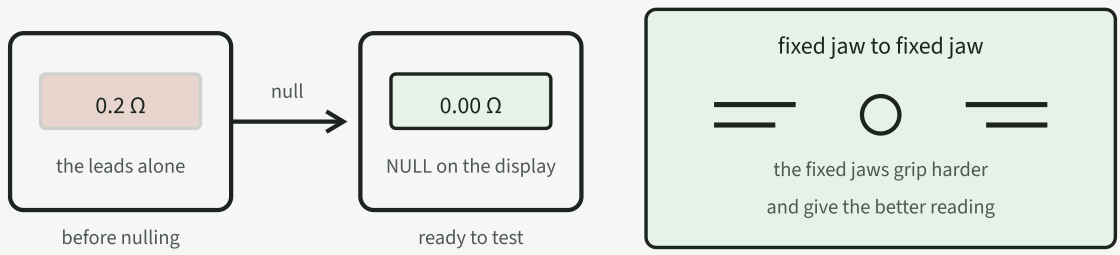
This is the one step that quietly ruins readings. With crocodile clips on the ends, set to continuity, press test and the meter shows **0.2 Ω** — that is the leads alone. Press the null button, test again, and it reads zero with **null** shown on the display.

### NULLING, IN ORDER

1. Clips on, **fixed jaw to fixed jaw** — not moving jaw to moving jaw. The fixed jaws grip harder and give a better reading.
2. Set the dial to continuity.
3. Press test → reads the resistance of the leads (about 0.2 Ω).
4. Press null, press test again → reads zero, display says null.
5. Now your $r_2$ or $R_1 + R_2$ reading is the circuit, not the leads.

✋ **Null it every time you use it.** Even if the display still says zero from last time. Copper always has resistance, and after the meter has been off for a few days that resistance comes back into the reading. A meter left for a few days will have re-acquired that 0.2 Ω.

**Leads are mostly universal.**
You are not stuck with the ones that came with the kit. Brown and green are the habit for continuity — brown for $r_1$, green for $r_2$.




0.2 Ω of lead resistance is enough to make a sound bonding conductor read wrongly. Null first, and re-null if you change function.

Free section from Sparky Study Notes. The full Level 3 notes, 1,463 practice questions and the video lessons: sparkystudynotes.co.uk