

## Optimizing Hands-Free Measurements: Adjusting the Ground Needle for Perfect Probe Fit

### Mounting a 3,5mm GND option

Align the hole on the 3,5mm GND towards the needle  
Press and twist on the 3,5mm GND on the metal cylinder

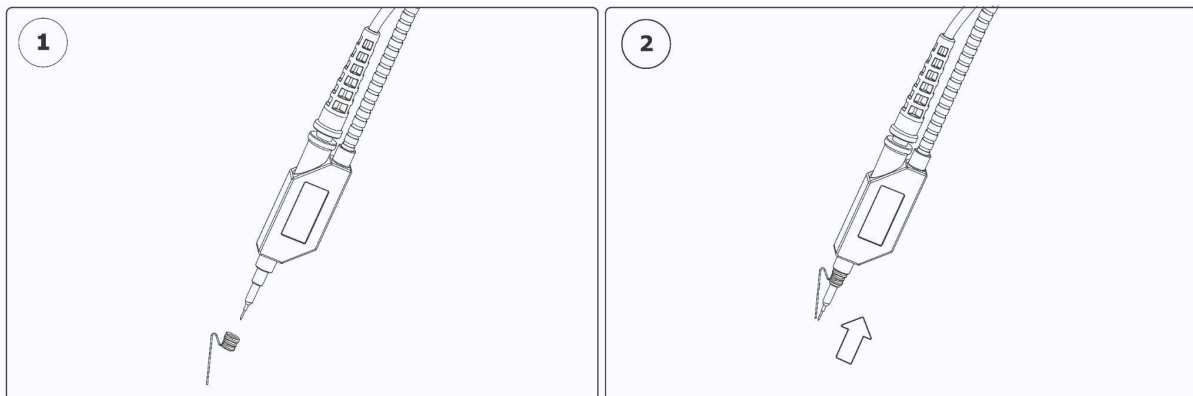


Fig 1. Illustration of GND option, Please be aware of the sharp needle tip!

### Adjusting the Ground Needle for Optimal Placement

Attach the spring-loaded ground needle and verify that the needle tips are aligned. For easier positioning, the ground needle should ideally be around 1 mm (0.04 inches) longer than the signal needle. Begin by placing the ground needle on, for example, the ground (GND) side of the component. Then, adjust the probe position to place the signal needle accurately.

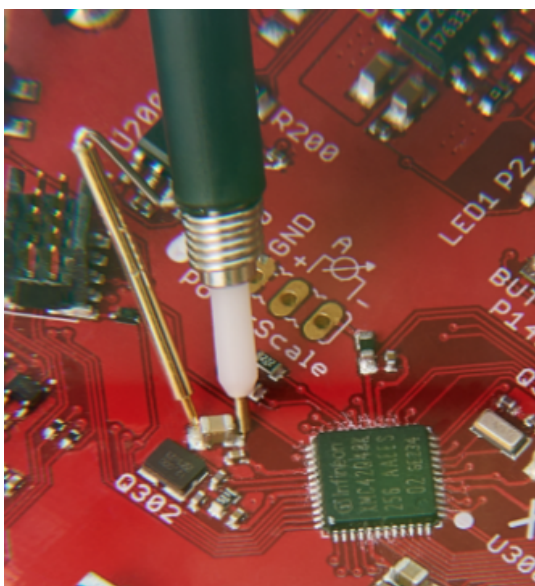


Fig 2. Using the spring loaded needle during handsfree measurement.

## Adjusting the Ground Needle for Perfect Probe Fit

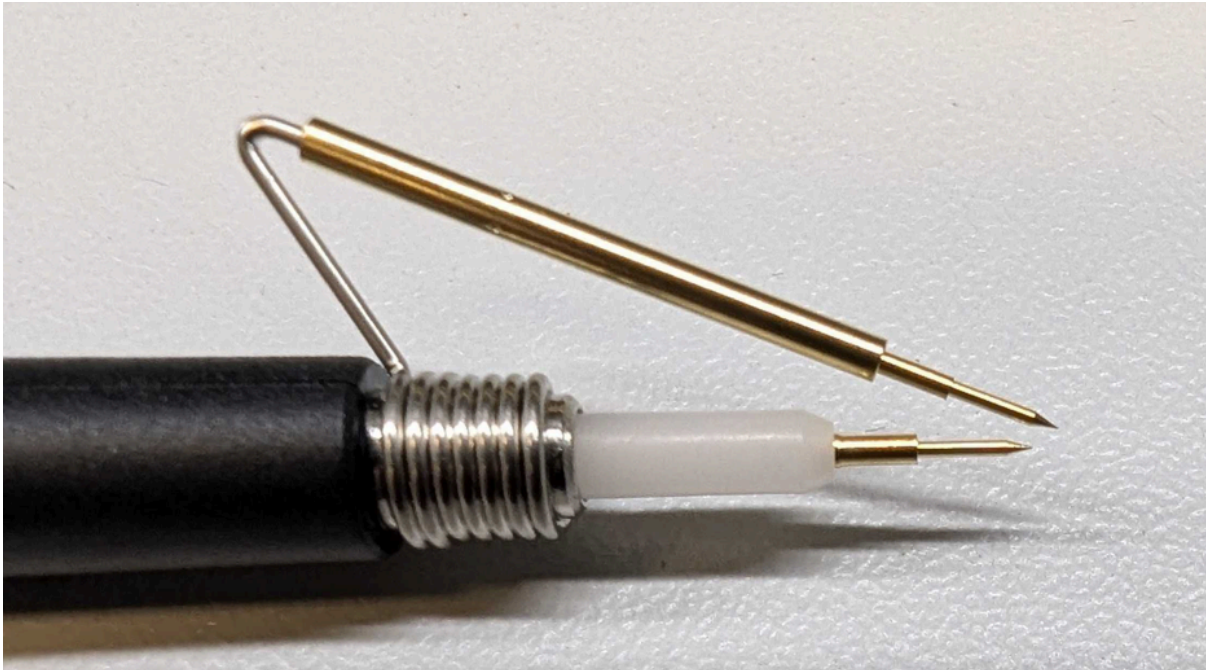


Fig 3. Spring loaded ground needle mounted, signal needle pushed as far in as possible.

**Tips & Tricks:** If you would like the ground needle to be slightly longer than the signal needle, push the signal needle all the way into the bottom of the needle holder.

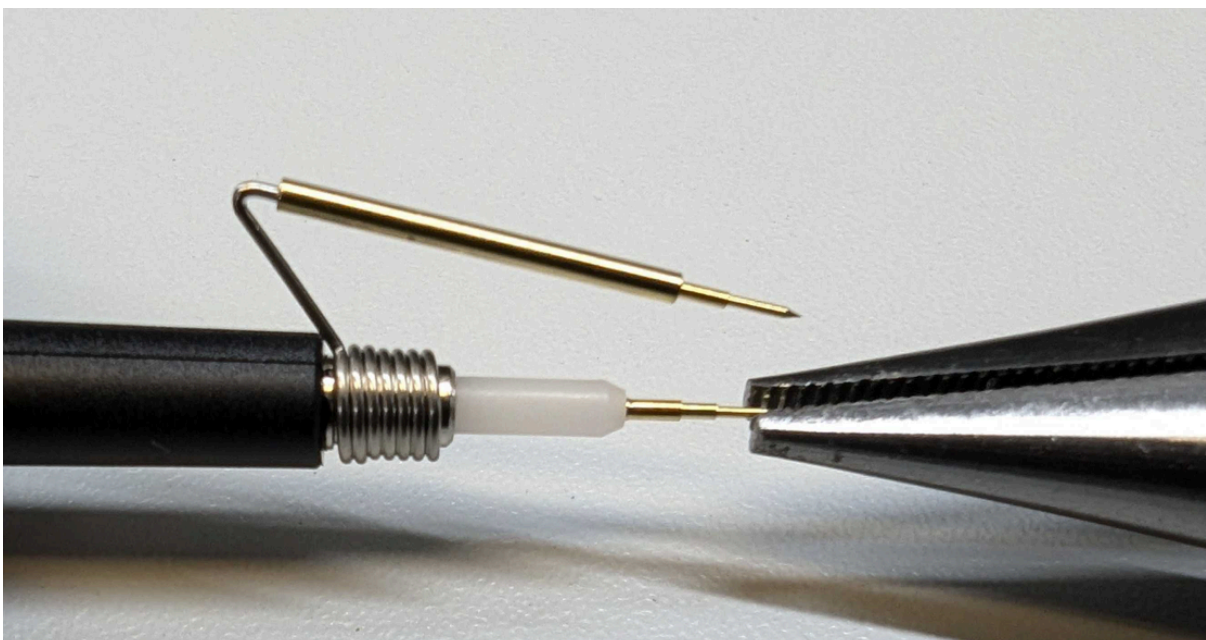


Fig 4. Use a plier to adjust the needle to preferred position.

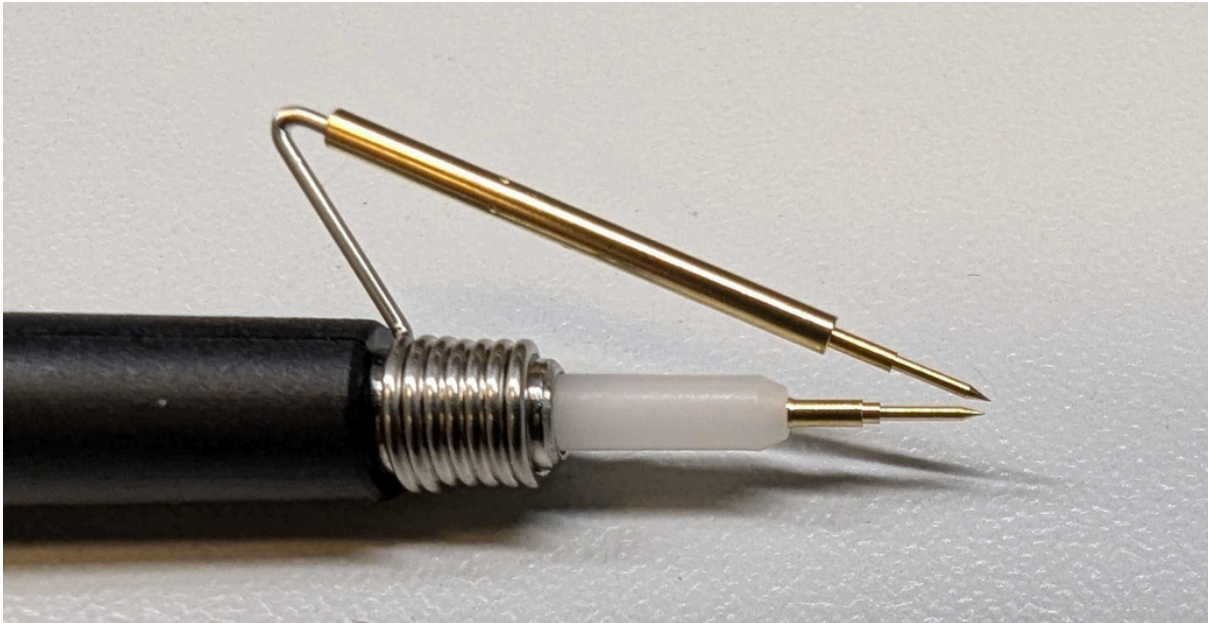


Fig 5. by placing the needles at the same distance they almost touch, to be able to measure components like 0201 size.

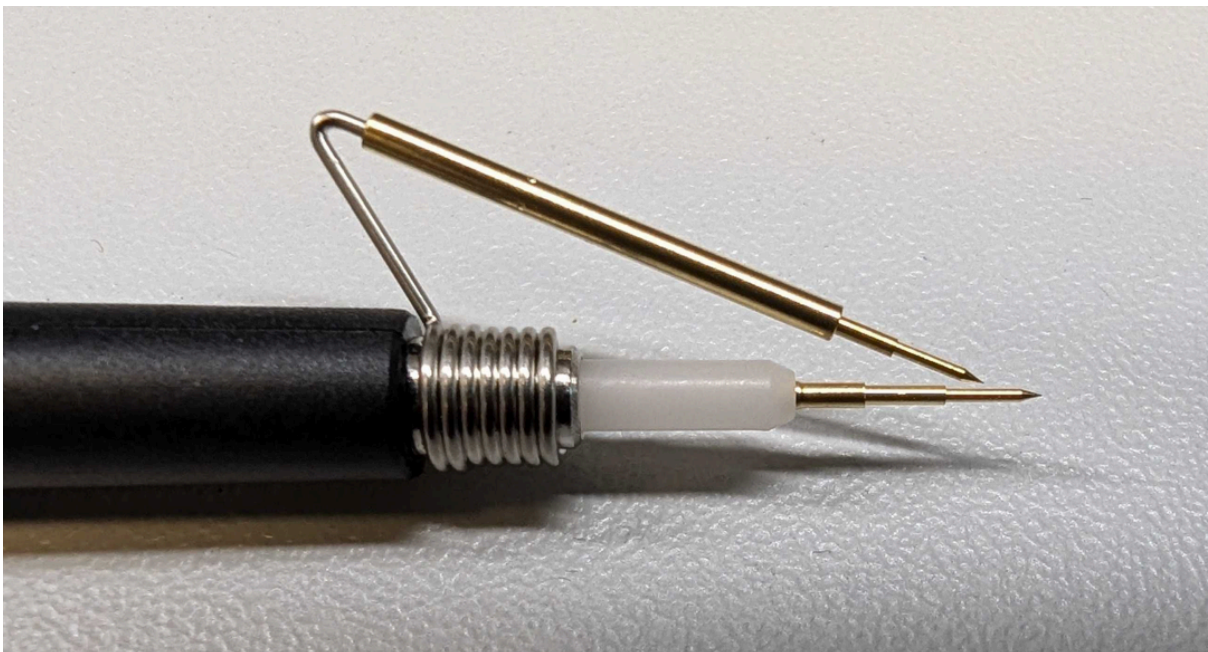


Fig 6. The signal needle can be extended to be longer than the ground needle but it is not recommended and preferred for stable measurement, since it increases the risk of breaking the needle if any side force unintentionally is applied during the measurement.

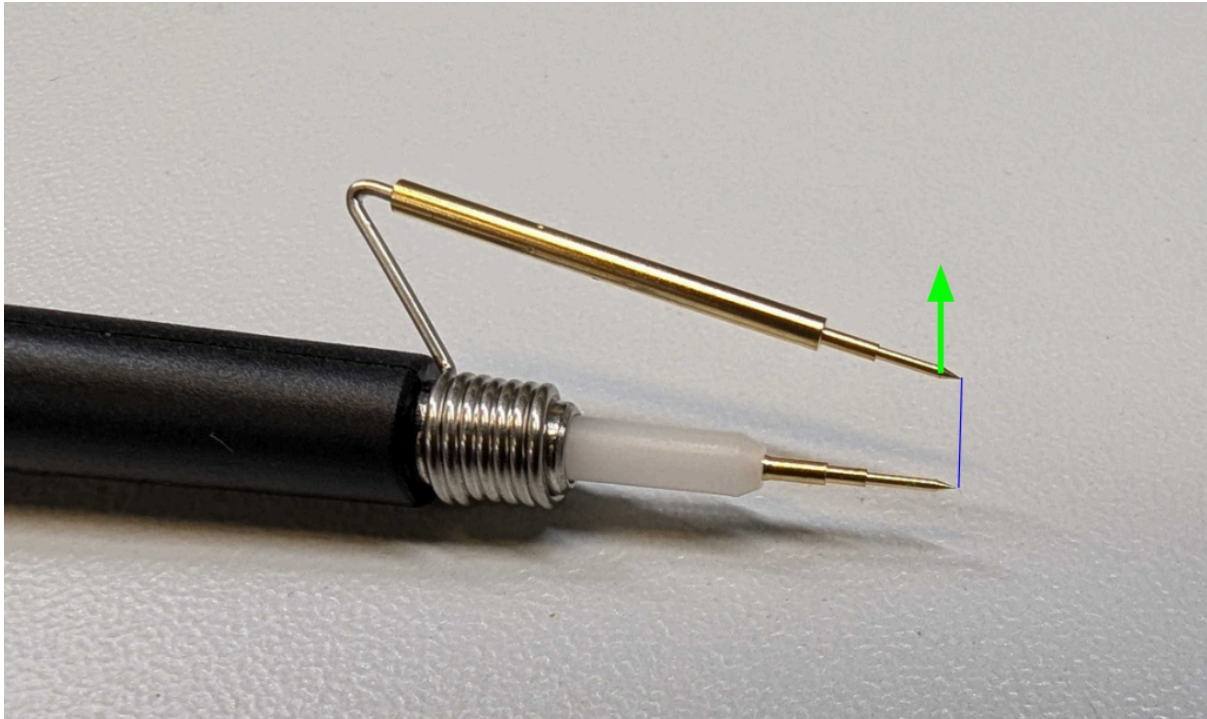


Fig 7. Gently open the gap by moving the GND needle upwards as the green arrow in the picture to create a larger gap between the signal and ground needle. Each time the position is moved the metal will get harder, eventually the metal will break if moved several times. It is therefore recommended to change needles with different gaps instead of changing the gap between different component sizes.