



Testers and tools for
renovation and valuation

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KEE ELECTRONIC GOLD TESTER MODEL M-509GM



All equipment must be used in conjunction with the user's skill, knowledge and experience.

*Under no circumstances shall Quicktest be liable for
direct or indirect loss sustained in connection with testing equipment.*

It is your responsibility to regularly check readings against known samples.

KEE GOLD TESTER, MODEL M-509GM

- A** Scale
- B** ON/OFF button
- C** Calibration knob
- D** Test plate
- E** Red (+) socket on tester (use either)
- F** Black (-) socket on tester
- G** Protective snap-cap on pen (probe)
- H** Pen (probe)
- I** The end of the pen (probe) with the red socket
- J** The black plug on the black lead
- K** Crocodile clip
- L** The red plugs on the red lead (they are both the same)



BEFORE YOU START

For testing most jewellery (9ct to 22ct) you will need a yellow gold sample (*calibration sample*) of exactly 18ct. If you wish to test 20ct to 24ct accurately you will also need a sample of exactly 22ct. You can use any yellow gold items that have British hallmarks (if you already deal in gold and you are in the UK you *will* have these) or you can buy calibration samples from us.

CONNECTING THE LEADS

The red lead: remove the protective inserts from the ends. Connect one end to the red socket in the end of the pen (probe) and the other end to one of the red (+) sockets on the tester (it doesn't matter which one).

The black lead is for testing very large items that don't fit on the test plate, see TESTING LARGE ITEMS. You are unlikely to use this.

POWER

Press the ON/OFF button so that it locks down. The needle should move to the far right of the grey-shaded area marked 'P' – if not, change the battery (see CHANGING THE BATTERY).

CALIBRATION

We check every tester before dispatch. However, as the solution in the probe (pen) gets used, the readings become inaccurate, you will need to calibrate it.

Ensure that your 18ct calibration sample is perfectly, clean, bright and shiny; place it on the test plate. Remove the probe (pen) cap and very gently hold the felt tip on the sample while the needle settles (usually 2 or 3 seconds).

If the needle settles in the 18ct (white) area it does not need calibrating, there is nothing more to do; otherwise, adjust the calibration knob¹ until the needle rests in the middle of the 18ct (white) area. Remove the pen (probe), dab the calibration sample dry if it is wet, test again, calibrate again if necessary.

To test 20ct to 24ct accurately, calibrate as above, but with a sample of exactly 22ct gold. Without this fine-tweaking of calibration you will still know that an item is 'about 22ct' but you will not know if it is closer to 20ct or closer to 24ct, see TESTING HIGH CARAT.

¹ **WARNING:** the calibration knob is the black knob marked C on the diagram of parts. Do not touch the screw on the meter, you will break it and it will be beyond repair.

PREPARATION

It is not necessary to clean the side of the sample that is resting on the test plate unless it is covered with a layer of dirt.

The area of the item that you test *must* be filed first. A fine file (needle-file) is included with your KEE tester. File in a place that won't be noticed, file it over a small area but do it firmly. This is to remove any plating. If an item is plated with, say, 18ct gold, and you test the surface, the test will correctly show 18ct gold – because it is. You need to know what is *underneath* the plating. There is no way round this, even XRF testers costing £12,000.00 will not test through plating.

TESTING

Place the item on the test plate. Remove the probe (pen) cap and very gently hold the felt tip on the sample while the needle settles (usually 2 or 3 seconds). Do not press hard (you will damage the tip); do not wait more than 5 or 6 seconds (the needle can gradually drift upwards).

When new, the felt tip *might* be quite wet and can leave the item wet after testing. Dab the item dry before carrying out a second test otherwise you will get false reading. The fluid is a salt solution, it is not toxic.

TIP: the item must make firm contact with the test plate, coins, medallions or small engraved bars will make better contact if the *edge* (rather than the engraved surface) is resting on the plate.

WHEN YOU HAVE FINISHED

Replace the cap firmly otherwise the pen (probe) will dry out, or salt crystals will start to form around the tip. Any salt residue on the item can be wiped off with your finger or a damp cloth. Repeated testing on the same spot can leave a dull stain, this can be polished off.

Do remember to turn the power off, otherwise the battery will go flat.

TIP

Keep the calibration sample(s) on the test plate, test them regularly to check that you are getting correct readings.

TESTING LARGE ITEMS

For testing items that don't fit on the test plate, use the black lead.

Remove the protective insert and connect to the black socket (-) on the tester. Clip part of the item to the crocodile clip, touch another part of the item (clean and freshly-filed) with the pen (probe) tip.

THIS IS INSTEAD OF PLACING THE ITEM ON THE TEST PLATE – SO DO NOT PLACE THE ITEM ON THE TEST PLATE.

TESTING HIGH CARAT

For testing 'Asian gold' accurately (it could be anywhere from 20ct to 24ct) the calibration must be fine-tuned with a calibration sample of exactly 22ct.

Calibrate the tester with the 18ct calibration sample then calibrate it with the 22ct sample (see *CALIBRATION*). Whenever you calibrate with one of the samples, the other will go slightly adrift. Ideally you should get the 18ct sample to register in the very middle of the 18ct (white) area of the dial and the 22ct to register in the very middle of the 22ct (blue) area of the dial, but you might have to compromise by setting one or both fractionally higher or lower. This *is* fiddly but it is the only way (and this is the only tester of this type) that will test high-carat with a reasonable degree of accuracy.

TESTING WHITE METALS

White gold will usually register higher than yellow gold: if it reads 14ct it might be closer to 9ct²; if it reads 18ct it might be closer to 14ct; if it reads 22ct it might be closer to 18ct (it can't be 22ct because 22ct is always yellow). On silver the needle will stay on the far left (red area) to indicate *NOT GOLD*; for both platinum and Palladium the needle will move the far right of the dial to "P".

² 9ct white gold isn't common but it does exist.

CHANGING THE BATTERY

When you turn the power on, the needle should flip to the far right of the meter, this shows that the battery is OK. If it does not, change the battery: one AA battery. Use a good quality alkaline or Lithium battery.

The outer 'sleeve' is made of a soft rubber, it simply pushes off, like this:



Then remove the two screws, open the tester, replace the battery.

DO NOT TOUCH THE SCREW ON THE FRONT OF THE METER!

FREQUENTLY ASKED QUESTIONS

How long does the pen (probe) last?

How do you know when the pen (probe) needs changing?

There is no “official” life of a pen (probe). We carried out a survey of our customers. Most said their pen (probe) lasted between 3 months and 18 months.³ *However, if you don't replace the cap firmly it will dry out.* When you buy a replacement probe, it has sticker with the date of supply, there is a limited guarantee.⁴

Check the reading against your 18ct calibration sample regularly. At first you will find that the KEE needs calibrating every few dozen tests. As the fluid in the pen (probe) gets used up, you will notice you have to calibrate it more often, maybe every dozen tests...then every handful of tests...and eventually it simply won't calibrate, the calibration knob won't turn far enough to move the needle into the “18Kt” area. *This does not mean the KEE is faulty, it means you need a new pen (probe)!*

How long does the battery last?

How do you know when the battery needs changing?

Providing you remember to turn it off after use, the battery will last many months. When you turn the power on, the needle should flip to the far right of the meter. This shows that the battery is OK.

Can more than one item be placed on the test plate at once?

Yes. For easy checking you may like to keep the calibration sample on the test plate all the time. For easy testing you may like to place a few items on the test plate at once then test them one after the other.

Why is the dial marked “Kt” and not “ct”?

Does the KEE test 9ct?

Because it's American. They use the abbreviation “K” (or “Kt”) for karat instead of “ct” for Carat. A reading anywhere in the 10kt (yellow) area indicates 9ct.

What does “P” mean on the dial?

Platinum. But it also reads “P” on Palladium. We do not advertise the Kee tester as being able to test platinum.

³ We also had 2 customers who said a probe lasts two years, and 1 who said their probe only lasted 6 weeks.

⁴ From the date of supply a probe (pen) is guaranteed for one month *providing* (when it's returned to us) it is still wet and providing it is not black with dirt and/or squished out of shape.