

# DIAMOND TESTER, MODEL DT-5

## PREPARATION

Supplied with PP3 battery. To change battery, slide battery cover in direction of arrow, pull old battery out gently, do not keep pulling until you pull the wires out. The stone holder is for loose (un-mounted) stones, since you would not be able to hold them in your fingers.

This model is particularly good at coping with extremes of temperature. Unlike other models, it has been calibrated for Northern Europe where outdoor markets and unheated halls can be cold.

## INSTRUCTIONS FOR USE

Turn the *SENSITIVITY* knob just enough for it to click. The *BATTERY OK* light will light up and the segments will flash briefly. Gently remove the rubber protective cap from test tip (remember to replace it after use). Slowly turn the *SENSITIVITY* knob until some of the segments are lit (usually the four red segments, see *SETTING THE SENSITIVITY* below). Wait for the *READY* light, this takes about 30 seconds so you probably have 20 seconds remaining.

Press test tip firmly onto the top of the diamond at right angles. Do not attempt to scratch the stone or you will break or bend the test-tip. Make sure you are touching the metal plate on the back, then if you miss the stone and touch the setting by accident an alarm will sound.

- *Lights remain static (nothing happens) = not diamond*
- *Lights up slowly, doesn't register 'diamond' = not diamond (probably ruby or sapphire)*
- *Lights up past Segment 9 (three blue lights and bleeps) = diamond*

Before the next test you *must* wait for the *READY* light. Repeatedly testing the same stone (especially a small stone) warms it until, eventually, a diamond will no longer read *DIAMOND*. Wait two or three minutes for the stone to cool down.

## SETTING THE SENSITIVITY

Turn the knob to light up the segments, set the starting-number like this:

**METHOD 1:** Look at the chart on the back of the diamond tester. The range of sizes and the temperatures are not critical, use them merely as a guide.

**METHOD 2:** Memorise the following:

***Unless you are working outside in the cold, start at No. 4 (or No.3 for large stones). If you are working in the cold, look at the chart***

**METHOD 3:** You will soon get the 'feel' of how it works, in exactly the same way as getting the 'feel' of gears in a car or bicycle without having to think about it. The starting-segment is irrelevant, you will know if you have a diamond from the *speed* the lights move, and you will know that large / cold stones react faster and that small / warm stones react slower.

## HOW IT WORKS

Knowing the principle upon which a diamond tester works is like learning which gear numbers to use depending on the steepness of the hill and the speed of the car, it may be of interest to the beginner but for the experienced user it is totally irrelevant.

The tip of the tester warms up. Diamonds (and, to a lesser extent, rubies and sapphires) are 'cold'. A crude test is to touch the stone against your lip to feel the 'coldness'. The diamond tester measures this relative 'coldness', i.e. how quickly the heat from the tip is 'drawn' into the stone. The faster the heat is drawn into the stone, the faster and further the lights move up. Of course, if the stone *really* is cold (e.g. outside in the winter) the reaction will be quicker, or if the stone *really* is hot (e.g. from a hot shop window) the reaction will be slower

...SO...

a small diamond won't have much 'coldness', it will 'draw' the heat slowly, the segments will light up slowly, you have to turn the sensitivity up to get it to read DIAMOND. A small *non*-diamond will be so 'warm' it won't draw the heat at all, the lights won't move. A large diamond will 'draw' the heat quickly, the lights will light up to DIAMOND in about one second. Some large non-diamond will draw *some* heat (especially rubies and sapphires), they will make the lights move up, but sluggishly, not at all like the reaction with a large diamond, but the chart will tell you to turn the sensitivity down slightly, just in case.

## MOISSANITE

Moissanite is a synthetic stone, it is the closest man has yet come to imitating diamond, it is nearly as hard as diamond, and it does appear, at first glance, just like diamond *and it registers DIAMOND on all diamond testers.*

Some questions and answers:

Q. Will a DIAMOND TESTER distinguish diamond from Moissanite?

A. **No.** Diamond testers work on Thermal Conductivity and the thermal conductivity of the stones is too similar to make this a reliable test

Q. Is there a tester that will distinguish Moissanite from diamond?

A. Yes, we sell electronic 'Moissanite testers' but these will **only** distinguish Moissanite from diamond, you will still need the DIAMOND TESTER to distinguish diamond from dozens of other similar-looking stones.

Q. Is there one tester that will test for both diamonds and Moissanite?

A. Yes, and the very latest model is quite reliable *providing* you follow the instructions precisely. The beauty of the DT-5 Diamond Tester is that even if you set the sensitivity wrongly, it is still obvious as to whether you have a diamond or not. The combined tester requires you to follow the instructions very precisely, including cleaning the stone thoroughly with alcohol, and also requires an extra-steady hand and perfect eyesight.

**DISCLAIMER:** 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 any item. It is your responsibility to regularly check equipment against known samples, to ensure that it is working correctly.

**FURTHER INFORMATION:** [www.quicktest.co.uk](http://www.quicktest.co.uk)