

## Testers (READER-I / GEM EYE-I)

### 1. Why doesn't my tester work when powered with an AC adaptor?

Only use the AC adaptor supplied by SmartPro, otherwise the polarity of the plug might not be suitable. Remove the AC adaptor from the inlet and try operating it with batteries. If the tester is operating normally using batteries, the AC adaptor is not working. If the tester is not working when using batteries, the tester is faulty. In the event that the tester is not working when using batteries, please send the unit to the authorized dealer nearest to you for repair.

### 2. Why does moissanite register as diamond when using my READER-I with a metal tray?

#### i). Forming incomplete test loop

READER-I provides results by using both the electrical and thermal conductivity property of gemstones. Moissanite is conductive while diamond is not. Hence, it is important to place the stone on a metal tray and to hold the metal tray with one hand and the tester with another to form a complete electrical loop. Otherwise, moissanite will not be conductive and READER-I will register diamond.

ii). Property of moissanite the uneven distribution of impurities in moissanite could also cause the above observation. Hence, try to take a few tests at the girdle and different locations on the table for better results.

### 3. Why do I sometimes hear intermittent beeping when testing stones with my READER-I?

READER-I has a built-in metal detector. Whenever the probe tip touches a metal surface, an audible intermittent beep will sound. This is only applicable to mounted stones.

### 4. Can SmartPro READER-I / GEM EYE-I tester detect uncut raw/uncut stone?

Yes, as long as the stone has a clean & flat surface.

### 5. Will the size of the gemstone affect the result?

Smaller stone conduct less heat from the probe tip. Hence, the reading indicated will be slightly lower. However, it is still within the reading zone.

### 6. Why do I get inconsistent reading from my tester?

Inconsistency in reading could be a result of variation in the environment such as the temperature and/or applied pressure of the probe tip.

i). Gems / Jewellery pieces should be tested at the room temperature.

ii). For stone below 0.5cts, always allow time for the stone to cool down before subsequent testing.

iii). The probe tip must be held perpendicularly (90o) to a flat surface on the stone. Consistent pressure must also be applied (the tip must be fully retracted into the probe).

iv). Clean the tip occasionally as dirt will directly lead to inconsistent test result.

v). Dirt on surface, inadequate polishing and uneven surface of the stones will affect the reading.

7. Why blue diamond & black diamond indicates as moissanite or metal?

Blue Diamond is a semiconductor due to the substitution of boron impurities in place of carbon atoms. Black Diamond is substituted with graphite or iron inclusions. Both blue and black Diamond will indicate as Moissanite or metal on the tester.

8. Why does moissanite indicates as diamond on some occasions?

In some instances there may be a disproportional allocation of silicon carbide located on a Moissanite; therefore, performing several tests on different spots (including the girdle) of the gemstone is recommended.

9. Why do I sometimes hear intermittent beeping when testing gemstones?

READER-I / GEM EYE-I has a built-in metal detector. Whenever the probe tip touches metal surface, an intermittent beep will sound. This is only applicable to mounted gemstones.

10. Can the GEM EYE-I identify the exact stone?

GEM EYE-I only provides the heat conductivity reference of various stones. Prior to testing, the user must be aware of which specific type of gemstone they are handling, then as a reassurance, use GEM EYE-I to confirm its identity.

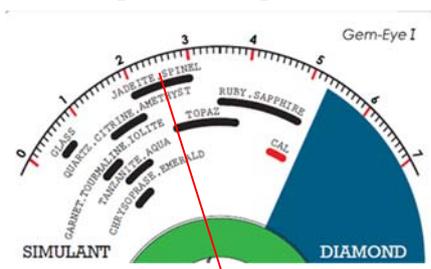
11. Can the GEM EYE-I identify synthetic and natural stones?

Due to the same formation of chemical composition of synthetic and natural colored gems, the thermal inertia of synthetic stones has the same heat conductivity as natural gemstones. The GEM EYE-I can hardly distinguish between synthetic and natural gems by testing its thermal inertia only.

12. How do I read/interpret the test results on the meter display of GEM EYE-I?

Please refer to the picture below. All readings (indicated by the red needle) that fall within the thin black bars are possible gemstones. Please note that the readings will fluctuate.

The diagram below indicates the possibilities of the gemstones being Jadeite, Spinel or Topaz



13. What does the number on the Dial Face represent?

It represents the output voltage of the heat conductivity measured in millivolts against time (in seconds) after the probe is brought into contact with different gemstones.

14. Why is the meter indicator not reverting back to zero?

It could be static charge on the surface of the meter. Please wipe the surface of the meter with a wet tissue to discharge the static electricity.

15. Why do I get inconsistent reading for loose stones from GEM EYE-I?

When heat conducts from the probe tip to the stone, the meter indicates the amount of heat conductivity of the stone. The reading falls once the heat saturated. Suggest placing the stone on the Stone Tray (provided) to enhance the heat conductivity. Always allow the stone to cool down for a while for the consequence test.

If the reading are still not giving the correct result, please do the recalibration process.

16. Why does the Moissanite registered as Diamond when using the metal tray?

It is important the stone must be placed on the Stone Rest or a Push Tweezers with one hand and the tester on the other.

17. It is difficult to hold stones of smaller diameter during testing. What should I do?

Suggest placing the stone on the metal stone tray (included with READER-I / GEM EYE-I).