

ES MIZAR. Prestige Series II DIAMOND TECH PRO

Sept '97

Congratulations on your purchase of the Prestige Series II, the world's finest diamond tester. With this unique Instrument you will obtain the most information about the stones you are testing. You also will have the versatility of selecting between the "auto" mode with valuable sensitivity or the "manual" mode which allows for adjustments for extremes in temperature or stone size.

IDENTIFICATION OF PARTS

- 1. Probe
- 2. Range Indicator
- 3. Auto/Manual Range Adj.
- 4. Wait/Low Battery Lamp
- 5. Battery Compartment
- 6. Conductive Panel
- 7. Testing Platform for Loose Stones
- 8. "ON" Button
- 9. "OFF" Button

OPERATIONAL CHECKOUT

- 1. Rotate the Thumbwheel (3) in a counter-clockwise direction beyond the "click".
- 2. Press the "ON" button (8).
- 3. The Wait Lamp (4) will be lit.
- 4. All other display lamps will remain extinguished for the wait period, which is typically less than nine seconds at room temperature. The time can increase with low temperatures or a weak battery. After the wait period there is a single beep.
- 5. If the waiting time exceeds twenty seconds or the Wait Lamp fails to extinguish replace the battery.
- 6. The Diamond Tester is ready to use after the Wait Lamp extinguishes and a display lamp (#1 to #8) is lit. In the "Auto" mode display lamp 3 is normally lit after the unit has warmed up, typically ten to twenty seconds.
- 7. If the ambient temperature is not within the range of the automatic circuitry (70-88 F, 21-31 C) the diamond tester is still able to test a stone by testing with the Manual Range Adjust (3).
- 8. When testing is completed press the "OFF" button. Always turn off the unit after testing to increase battery life.

"AUTO-SET"

This adjustment affects the sensitivity of the "automatic range" only. It is pre-set at the factory to lamp #3. If you prefer a higher sensitivity for diamonds you may adjust the "auto-set" (through the bottom of the front label) to lamp #4. To make this adjustment, turn the thumbwheel (3) fully counter-clockwise until clicked. Turn the unit on and wait twenty seconds to allow the probe to reach maximum temperature. Then with a jeweler's screwdriver adjust the "Auto-Set" to "the center of" lamp #4. If you prefer a lower sensitivity follow the above procedure and adjust to "the center of" lamp #2. This adjustment will not affect the Manual mode.

AUTOMATIC SHUT-OFF

The Diamond Tester will automatically shut off after 90 seconds of inactivity. Whenever the "On" button is pressed the timer resets to 90 seconds. If the unit is shut off before you have completed your test simply press the on button and continue your testing as soon as the display comes on. Always press the "OFF" button after testing to prolong battery life.

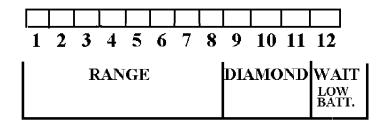
PREPARATION PRIOR TO TESTING A STONE

- The presence of dust, dirt, film and moisture on a stone may produce an inaccurate indication. Therefore, it is prudent to routinely clean the surface of each stone to be tested by using a damp soft clean fabric followed by drying using a dry soft clean fabric.
- · Remove the protective cover from the probe.
- The tip of the probe should be cleaned frequently by wiping the tip across the surface of a piece of bonded paper or a business card. Copier paper and fax paper are to be avoided.
- The tip of the probe may be damaged by accidental drop. Always place the protective cover over the probe immediately after use. Probe tip damage is exempted from the warranty.
- During testing the users hands should be clean and dry. Do not wear gloves.
- The stone to be tested should be allowed to reach room temperature.
- For maximum accuracy, minimize handling of the stone prior to testing. If the item to be tested consists of a setting containing many stones requiring more than ten seconds to test user must avoid heating the setting with his hand; allow the item to be untouched for about fifteen seconds.
- Loose stones may be placed on the testing platform (9) at any time and be tested immediately.
- Best results are obtained by performing tests in still air. Avoid fans, drafts or air movement from air conditioning or heating sources. Avoid breathing directly on the probe tip while testing.

"AUTO" TESTING

"Auto"-Testing can be performed when the temperature is within 70-88 F and the stone size is between .08 and .75 Karats. For all other conditions use the manual mode and adjust to the calibration chart (p.3). The automatic testing mode ("Auto"-Testing) is achieved by rotating the thumbwheel counter-clockwise until a "click" is felt.

- 1. Perform the operational checkout as described above.
- 2. The twelve lamp Auto/Manual Range Indicator is segmented as follows:



- 3. The ambient temperature should be between 70°F and 88°F for "Auto" Testing. Normally Lamp #3 will be lit.
- 4. Hold the diamond tester in your hand so that your fingers are in contact with the conductive panel (6).
- 5. With the other hand pick up the stone to be tested by its setting or place a loose stone in the appropriate well in the testing platform held with that hand.
- 6. Guide the probe tip to the center of a facet on the stone.
- 7. Touch the probe tip to the stone so that the probe tip is firmly and squarely against the facet of the stone. Excessive force which might bend or break the tip must be avoided.
- 8. Make sure the probe is perpendicular to facet of stone while testing.
- 9. After each test the display should return to the original lamp.

MANUAL TESTING RANGE

Manual testing can be used under all conditions (temperatures and stone size).

Before testing a stone set the Range Indicator (2) to the correct calibration position with the Range Adj. (3). The correct position is selected from the calibration chart below. Selection of the calibration is based on the stone size and surrounding temperature.

GR	GREEN LAMPS			YELLOW LAMPS				RED LAMPS			
1	2	3	4	5	6	7	8	9	10	11	12

CALIBRATION CHART

(Heat conductivity is affected by surrounding temperature and stone size.)

		SURROUNDING TEMPERATURE				
		Under 10 C Under 50 F	10 C-30 C 50 F-85 F	Over 30 C Over 85 F		
STONE SIZE	less than .06 ct.	5	6	7		
(any shape)	0.06 ct0.5 ct.	3	4	5		
	more than .5 ct.	1	2	3		

Under 0.06ct., set the Range Indicator Lamp to light on up to 6. From 0.06ct. to 0.5ct, set the Range Indicator Lamp to light up to 4. Over 0.5ct., set the Range Indicator Lamp to light on up to 2. For example, when testing a stone of about 0.3 carat in colder temperatures, set the Range Indicator Lamp to light on 3 and in warmer temperatures set it to light on 5.

HELPFUL HINTS

- If the red Low Battery lamp remains on after twenty seconds replace battery.
- Stones being worn, which may be well above room temperature can be tested immediately using the manual mode.
 Simply set the range set point one lamp number greater than what the calibration chart indicates or allow the stone to return to room temperature before testing.
- When testing a small stone avoid incidental heating of the stone by the probe; make good contact against the stone on the first test attempt, otherwise allow the stone to return to room temperature before retesting.
- Observation of display activity allows user to determine a number of things: a) Diamonds cause rapid "movement up the display" and large diamonds "move all the way to lamp eleven quickly. b) Cubic Zirconias hardly "move up the display" at all. c) Other semi-precious gems consistently "move up the display" various "distances" based on their size. d) The only stone that comes close to reading as a diamond is the large sapphire or ruby (corundum). It "moves up the range" very slowly compared to diamond and the slow movement is a further indication of sapphire. Also the kind of color usually allows easy rejection of colored sapphires. Large white sapphires can approach the diamond range but these stones can easily be rejected because they do not "sparkle" as diamonds do under normal incandescent lighting.

INTERPRETING THE INDICATION				
METAL ALERT	The sounding of a continuous audible tone indicates that the probe tip is in contact with either the users hand, the setting, or the testing platform. The " <i>Tone</i> " is also accompanied by the display being momentarily turned off. The remedy is to reposition the probe tip as described under " <i>Auto</i> " Test section.			
DIAMOND SIMULANTS	When testing Cubic Zirconiums, "Paste", Strass and other diamond simulants no illumination of the green diamond lamp will be observed. However, some diamond simulants may light one yellow lamp beyond the initial set point.			
DIAMONDS	Testing of a genuine diamond will cause the green diamond lamp to flash (along with the red error light) and a discontinuous beeping (beep-beep) will sound.			

MAINTENANCE

- Always place the protective cover over the probe immediately after use. Probe tip damage is not covered in the warranty.
- The only maintenance required is: (1.) cleaning the probe tip and (2) battery replacement.

SPECIFICATIONS

MODEL DIAMOND TECH PRO

POWER SOURCE 9 VOLT BATTERY NEDA SIZE 1604 (006P)

NET WEIGHT 105 GRAMS 3.7 OZ.

ACCESSORIES TESTING PLATFORM (BATTERY INCLUDED)

WARRANTY

R S MIZAR provides that each Diamond Tech Pro will be free from defects in material and workmanship for a period of two years from the date of purchase. (Batteries and Probe Tip are not included in Warranty.) This warranty becomes void by:

- 1. Unauthorized repair, misuse, modification, alteration, tampering or breaking any factory seal.
- 2. Accidental damage, neglect or improper use.
- R S MIZAR shall not be held legally liable or responsible for any error in display indication or the interpretation thereof in the identification of any stones, minerals, gems or gemstones by the Diamond Tech Pro.

WARRANTY SERVICE

Should the Diamond Tech Pro require warranty service write or call R S MIZAR for a return material authorization (*RMA*). Be prepared to provide proof of purchase. Pack the Diamond Tech Pro securely along with a description of the malfunction or problem and return unit freight pre-paid to the address below.

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