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SmartPro SPGE-I

SmartPro SPGE-I Gem-Eye I Gem and Diamond Tester User Manual

Model: SPGE-I

1. Introduction

The SmartPro Gem-Eye I is a precision instrument designed to distinguish between diamonds and their simulants, as well as to assist in identifying various colored gemstones. It operates on the principle of thermal conductivity, leveraging the unique heat transfer properties of diamonds. This manual provides essential information for the proper setup, operation, and maintenance of your Gem-Eye I tester.

2. Key Features

- High efficiency in testing.
- Industry's thinnest probe tip (0.48mm) for testing diamonds as small as 0.01 carat.
- Instant identification of metals, simulants, and diamonds.
- Portable design for use in various locations.
- No waiting time required between tests.
- Equipped with a color stone estimator display to differentiate popular colored gemstones.

3. Package Contents

Verify that all items listed below are present in your package:

- SmartPro Gem-Eye I Unit
- Probe Pen
- AC Adapter
- User Manual Book (this document)
- Warranty Card
- Protective Carry Case
- Probe Tip Oxidation Sheet

4. Setup

4.1 Powering the Device

The SmartPro Gem-Eye I can be powered using the included AC adapter or internal batteries.

1. **Using the AC Adapter:** Connect the AC adapter to the "DC IN" port on the side of the Gem-Eye I unit. Plug the adapter into a standard electrical outlet.
2. **Using Batteries:** Ensure fresh batteries are installed in the battery compartment (location typically on the underside of the unit). The "L.BAT" indicator on the display will illuminate if battery power is low.



Image 4.1: The included AC adapter for powering the SmartPro Gem-Eye I unit.

4.2 Connecting the Probe Pen

Connect the probe pen cable to the designated port on the Gem-Eye I unit. Ensure a secure connection.



Image 4.2: The probe pen, which connects to the main unit for testing gemstones.



Image 4.3: The SmartPro Gem-Eye I main unit with the probe pen connected, ready for operation.

5. Operating Instructions

5.1 Power On and Warm-up

1. Press the green power button to turn on the device.
2. Allow the unit to warm up. The display will indicate when it is ready for calibration.

5.2 Calibration

Calibration is crucial for accurate readings. The device should be calibrated before each use and if ambient temperature changes significantly.

1. Ensure the probe tip is clean.
2. Place the probe tip onto the calibration plate (if provided) or follow the on-screen instructions for calibration.

3. Adjust the calibration dial (if present) until the indicator points to the "CAL" mark on the display.



Image 5.1: The main display of the SmartPro Gem-Eye I, showing the calibration mark and gemstone indicators.

5.3 Testing a Gemstone

For accurate results, ensure the gemstone is clean and at room temperature. Avoid touching the gemstone with your fingers during testing, as body heat can affect readings.

1. Hold the gemstone securely, preferably with tweezers.
2. Gently touch the probe tip perpendicularly to a clean, flat surface of the gemstone. Apply light, consistent pressure.
3. Observe the analog dial and indicator lights.
4. **Diamond Indication:** If the stone is a diamond, the indicator will move into the "DIAMOND" region, and corresponding lights/sounds will activate.
5. **Simulant Indication:** If the stone is a simulant, the indicator will fall into the "SIMULANT" region.
6. **Colored Gemstone Estimation:** The color stone estimator display provides a general indication of various colored

gemstones based on their thermal properties. Refer to the markings on the dial for guidance (e.g., Ruby, Sapphire, Topaz, Amethyst). This feature assists in narrowing down possibilities but does not provide definitive identification.

Important: The Gem-Eye I distinguishes based on thermal conductivity. It cannot differentiate between natural and synthetic diamonds or other treated stones with similar thermal properties. Always use in conjunction with other gemological tools and knowledge for definitive identification.

6. Maintenance

6.1 Probe Tip Cleaning

A clean probe tip is essential for accurate readings. Residue or oxidation can impair performance.

- Use the provided probe tip oxidation sheet to gently rub the probe tip.
- Avoid using abrasive materials or harsh chemicals, which can damage the tip.
- Clean the tip regularly, especially if readings become inconsistent.



Image 6.1: The probe tip oxidation sheet used for cleaning the delicate probe tip.

6.2 Storage

When not in use, store the Gem-Eye I in its protective carry case to prevent damage to the unit and the delicate probe tip.



Image 6.2: The SmartPro Gem-Eye I unit stored securely within its protective carry case.

6.3 Battery Replacement

Replace batteries when the "L.BAT" indicator illuminates or when the device fails to power on with battery power.

7. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on.	Low or dead batteries; AC adapter not connected or faulty.	Replace batteries or ensure AC adapter is securely connected and functional.
Inconsistent or inaccurate readings.	Probe tip is dirty or oxidized; improper calibration; gemstone not clean or at incorrect temperature; ambient temperature too low.	Clean probe tip with oxidation sheet; recalibrate the device; ensure gemstone is clean and at room temperature; operate in an environment with an ambient temperature of at least 72°F (22°C).
Device shuts off unexpectedly.	Low battery power; automatic shut-off feature activated.	Replace batteries or use AC adapter. The device may have an automatic shut-off feature to conserve power; restart if needed.
Probe tip appears damaged.	Physical impact or improper handling.	Contact customer support for repair or replacement options.

8. Specifications

Feature	Detail
Brand	SmartPro
Model Number	SPGE-I
Measurement Type	Thermoelectric Gemstone Tester
Power Source	Battery Powered (and AC Adapter)
Color	Black
Item Weight	2 Pounds (approx. 0.91 kg)
Upper Temperature Rating	77 Degrees Fahrenheit (25°C) - *Note: Optimal operating temperature may vary.*
Probe Tip Size	0.48mm
UPC	726898963219, 640823584525
Package Dimensions	6.61 x 6.34 x 4.17 inches (16.8 x 16.1 x 10.6 cm)

9. Warranty and Support

9.1 Warranty Information

Your SmartPro Gem-Eye I comes with a warranty. Please refer to the included Warranty Card for specific terms, conditions, and

duration of coverage. Retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty service, please contact SmartPro customer support. Contact details are typically provided on the Warranty Card or the manufacturer's official website.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

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Details

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