

# GEMORO<sup>®</sup> PRO-D 3<sup>®</sup>

DIAMOND &  
WHITE SAPPHIRE  
TESTER



The new generation tester for diamond fraud protection, the GemOro **PRO-D 3**, features enhanced testing abilities, sleek ergonomics and more!

## **OPERATING PROCEDURE & OWNERS MANUAL**

Congratulations on your purchase of the PRO-D 3 from GemOro Superior Instruments, the most trusted name in gemological instrumentation for the jewelry industry. You've made a great choice. Built upon the foundation of the second generation and most popular diamond tester to date, the PRO-D 3 offers even more. Separate true diamonds from white sapphire, CZ, and other known diamond simulants with confidence.

### **IMPORTANT: PLEASE BE CERTAIN TO READ THE FOLLOWING COMPLETELY BEFORE USING.**

#### **THERMAL CONDUCTIVITY & ELECTRICAL CONDUCTIVITY TESTING METHODS**

The recognized method for separating diamond from all known diamond simulants (except moissanite and synthetic diamond) is the thermal conductivity test. The thermal conductivity test works consistently well since a diamond's heat conductivity property is significantly greater than all other gemstones (except moissanite and synthetic diamond). White sapphire is also thermally conductive, yet not as conductive as diamond and moissanite, therefore, it can be separated from those two types of stones.

The GemOro Superior Instruments PRO-D 3 utilizes the thermal conductivity test and it will quickly help in identifying and separating the stone in question.

The PRO-D 3 is an advanced, technologically based tool.

**IMPORTANT DISCLAIMER:** The PRO-D 3 is a helpful screening tool that by design is to be used as a quick method for helping to identify diamonds. The PRO-D 3 should not be used as the final method for determining the authenticity or identity of the gemstone being tested. The final determination of the identity of any gemstone, whether genuine or not, should only be made by a trained gemologist. Neither GemOro nor any of its affiliates, dealers, or distributors shall be held liable for any loss and/or damages associated with the use of the PRO-D 3. No warranties exist with respect to the PRO-D 3 or its use other than those expressly contained herein. All other warranties of any kind or character whatsoever, whether expressed or implied, including warranties of merchantability or fitness for a particular purpose, are hereby disclaimed and are excluded from the warranties hereunder. In the event that a claim is made with respect to the PRO-D 3 or its use, the maximum liability of GemOro, and its affiliates, dealers, and distributors shall be the amount paid for the PRO-D 3.

**PLEASE READ BEFORE USING THE PROVIDED NiMH RECHARGEABLE BATTERIES:** Before using the NiMH rechargeable batteries that have been provided with your tester, the batteries should be fully charged as indicated by the small round LED indicator next to the power button glowing green when the PRO-D 3 is plugged in. While the batteries are being charged, the tester may be used as desired while powered by the AC current.

## CONDITIONS FOR IDEAL OPERATION

1. The PRO-D 3 should be used in the following environmental conditions. Both the tester and the stone being tested must be the same temperature. By not following these instructions you risk compromising the accuracy of the test.
  - a. Temperature: 65°F-80°F (18°C-27°C)
  - b. Air Relative Humidity: 45%-75%
2. The stone being tested must be dry. If the surface of the stone is wet or has any type of surface moisture it may not test correctly.
3. The stone being tested must be clean. Aside from obvious visible dirt that may be present on the stone, there may also be hand oil or other contaminants on the stones surface that may not be visible and which could impact the accuracy of the test. Always be certain to clean the stone being tested with an ultrasonic or steamer or other appropriate means, and thoroughly dry it and/or remove any cleaning chemicals remaining on the stone prior to testing.
4. It is imperative that the probe tip be cleaned regularly or ideally prior to performing a test. Please be aware that there may be hand oil or other contaminants that may not be visible on the probe tip, which could impact the accuracy of the test. To clean the tip, take a piece of uncoated white printer or copy paper and place the probe tip of the tester at a 90 degree angle against the paper while gently rubbing it in a forward motion a few times. Repeat this process routinely or prior to testing each time to ensure the cleanliness of the probe tip.

5. Always allow the stone being tested to cool off for 5-10 seconds prior to retesting. Blowing on the stone is recommended and will speed up this process. Please be aware that if while testing a stone the Pro-D 3 light pipe turns pink, unless it is a white sapphire or sapphire watch crystal, odds are that the stone has been overheated from prolonged exposure to the probe tip and, therefore, you must wait for the stone to cool off prior to retesting.

## **PRO-D 3 FEATURES**

1. Helps to identify diamond and white sapphire, including genuine sapphire watch crystals. The test results are shown via its PATENTED color-coded light pipe and unique sounding beep tones.
2. Quickly assists with testing most any size diamond, whether mounted or loose.
3. The sleek and ergonomic shape comfortably rests in and on your hand when held, and the tester has PATENT PENDING intuitive finger grip pads for increased user-friendliness and ease of use.
4. The LED illuminator is positioned under the probe tip. The LED Illuminator is a super bright white LED that illuminates the stone being tested.
5. The tester is equipped with a spring-loaded probe tip designed to protect the probe tip if excessive force is used while testing or if it is accidentally dropped.

6. The tester housing is made from durable ABS and is covered with GemOro's exclusive rubberized paint that provides an even greater grip.
7. Powered by (3) supplied 1.5V AAA NiMH rechargeable batteries and conveniently charged by a micro-USB adapter. The rechargeable batteries may be substituted with AAA alkaline batteries if a suitable power outlet is unavailable to recharge the NiMH batteries.
8. The tester is also designed to have its batteries charged with the optional GemOro UltraDock 3 charging station accessory (Item #0772).
9. Includes a GemOro rubberized protective carrying/storage case, aluminum loose stone holder, as well as (3) user-replaceable AAA NiMH rechargeable batteries, a universal multi-voltage 100V-240V AC adaptor/charger cube with micro-USB cord.
10. The tester is also designed to be used with the optional handy PATENT PENDING GemOro Test Stone Magnifier attachment, which when clipped onto the tester's tip area allows the user to more easily see and test small diamonds without accidentally touching the setting or prongs (Item # 0780).
11. The tester has an auto-off function to preserve the battery life and it will automatically turn itself off after a period of 5 minutes of non-use. After powering down, if you wish to resume using the PRO-D 3, simply touch the tester's power button and within seconds the tester will turn itself back on again.

12. Glowing LED Light Pipe and Probe Tip Indicator. Innovative PATENTED colored LEDs visually indicate (see images):

**GREEN** = Diamond

**PINK** = Sapphire

**RED** = Metal Alert



DIAMOND



SAPPHIRE



METAL ALERT

13. LED Indicators. The round LED indicator is located next to the oval shaped power button:

**GREEN** = Fully Charged Batteries

**YELLOW** = Charging Batteries

**RED** = Low Batteries



BATTERY LED INDICATOR

14. Bright green LED illuminated power button.

15. Pocket-sized and portable.

16. Simple to operate.

## **SPECIFICATIONS**

- Working Voltage: DC 1.2V (3) × AAA NiMH, DC 1.5V, (3) × AAA alkaline batteries or its universal voltage 100V-240V AC adapter cube.
- Probe Tip Warm-Up Time: Approximately 25 seconds.
- NiMH and Alkaline Battery Working Time: Approximately two hours of continuous use.
- Working Temperature: 65°F-80°F (18°C-27°C).
- Air Relative Humidity: 45%-75%.
- Net Weight: Approximately 100g (including batteries).

## **CAUTION**

DO NOT disassemble the PRO-D 3 other than to replace the batteries or the warranty will become void.



## OPERATION

1. NiMH Battery Usage and Alkaline Battery Installation: Remove the battery compartment door located on the end of the PRO-D 3 by using your thumb to slide the textured area down and in the direction of the arrow. **To activate the (3) NiMH rechargeable batteries, REMOVE THE (2) BLACK BATTERY DISCHARGE INSULATOR TABS located at the end of each battery and then carefully replace the battery compartment door (see image).** To increase the life of the NiMH rechargeable batteries, after removing the discharge insulator tabs in the battery compartment, fully charge the batteries prior to use.



TESTER BATTERY COMPARTMENT



BATTERY DISCHARGE INSULATOR TAB

If you wish to replace the NiMH batteries with alkaline batteries, after removing the battery compartment door as described above, insert (3) high-quality AAA 1.5V alkaline batteries into the battery compartment. The proper polarity positioning is indicated on the side of the battery compartment wall showing the direction of positive (+) and negative (-) polarity so that it is correctly positioned in the battery holder. Carefully replace the battery compartment door.



#### BATTERY POLARITY

2. The PRO-D 3 batteries may be charged by placing it in the optional UltraDock 3 battery charging station with the micro-USB power cord plugged into the rear of the charging station or by plugging its supplied micro-USB power cord into the rear of the tester and the USB adapter cube directly into a wall outlet. Once the tester is connected to the AC adapter or the charging station, the tester will switch to its DC power mode. The tester's built-in Intelligent Charging Circuit ICC will automatically identify the type of batteries installed (NiMH rechargeable batteries or alkaline batteries). If alkaline batteries are installed, the circuit will automatically cut off the power supply to the batteries so that the alkaline batteries will not be recharged. If NiMH rechargeable batteries are installed, the

batteries will be recharged and at the same time the tester may be used with the AC adapter.

3. To turn the PRO-D 3 ON press the oval shaped power button, located on the top center edge of the tester and hold it down for approximately one second, then release the button. The power button's green LED indicator will begin flashing. The warm-up time is approximately 25 seconds. When it has fully warmed up, the flashing green LED light will become solid and a beep tone will be sounded. You may now begin using the tester.



#### POWER BUTTON

4. The PRO-D 3 is also equipped with a PATENTED color-coded light pipe and probe tip cone indicator. This line of sight colored indicator allows the user to easily see the test results while keeping their eyes on the stone being tested.

**GREEN** = Diamond

**PINK** = Sapphire

**RED** = Metal Alert

5. Prior to using the PRO-D 3, be certain to REMOVE THE WHITE CAP at the front end of the tester that serves to protect the probe tip from accidentally being bent or broken. The cap may be easily removed by simply applying a minimal amount of pressure to the sides of the cap, as you hold it between your thumb and forefinger.

Then gently pull it out and off. Always replace the cap when the PRO-D 3 is not in use.



PROBE TIP CAP

6. To properly hold the PRO-D 3, it is important to grasp the tester with your thumb and forefinger while touching them to the PATENT PENDING finger pads located on either side of the tester. This will allow you to easily manipulate the tester and make the best contact with the stone being tested. While holding the tester, its ergonomic shape allows it to comfortably rest on the top of your hand. If you hold the tester without touching the finger pads, the metal alert feature will not function.



HOW TO PROPERLY HOLD THE TESTER

7. The LED Illuminator allows the user to easily see the stone being tested to confirm that only the stone is being tested and that the setting or prongs are not accidentally being touched.

You may also attach the optional GemOro Test Stone Magnifier to the Pro-D 3 by clipping it onto the end of the tester's probe tip cone. This will allow you to see a magnified view of the stone being tested and help ensure proper contact with the stone while not accidentally touching the setting or prongs.

8. Testing Mounted Stones: With one hand, hold the ring (or setting) that contains the stone you wish to test and in your other hand hold the PRO-D 3 (see image). Quickly, yet firmly touch the testers probe tip to the stone's "table", while being certain not to allow the probe tip to make contact with the metal setting or prongs. While firmly depressing the spring-loaded probe tip all of the way in until you hear a click sound, touch the stone just long enough to allow the tester to indicate a reading (1 or 2 seconds) and then take the probe tip away from the stone. Be aware that a stone that has been overheated by prolonged exposure to the probe, or from body heat due to wearing or the environment, may not test accurately. Always allow the stone and setting a few seconds to cool off to room temperature before testing. Blowing on the stone will speed up this process.



TESTING A MOUNTED STONE

9. Testing Loose Stones: Place the loose stone in the supplied aluminum loose stone testing plate positioned with the “culet” facing down into the recessed hole part of the testing plate. Then hold the testing plate steady with one hand, as this will also allow the electrical current to pass through your body, permitting the tester to function as designed and test properly. While holding the PRO-D 3 in your other hand, firmly touch the probe tip to the loose stone’s “table” (see image) until the test result is indicated. **YOU MUST FOLLOW THIS PROCEDURE WHEN TESTING LOOSE STONES OR THE TESTER MAY NOT TEST CORRECTLY. DO NOT ATTEMPT TO TEST LOOSE STONES WHILE HOLDING THEM IN YOUR FINGERS OR THE TESTER MAY NOT TEST CORRECTLY.**



TESTING LOOSE STONES WITH TESTING PLATE

10. The probe tip must be cleaned routinely to ensure proper contact with the stone being tested. To clean the probe tip, take a piece of uncoated white copy or printing paper and lay it on a table or counter or other flat surface. Place the tester in a 90-degree angle to the paper with the probe tip lightly touching the paper. Apply enough pressure

to gently depress the spring loaded probe tip slightly inside the housing. Then carefully rub the probe tip in one direction on the paper to clean it.

11. Using the Optional UltraDock 3: Place the charging station in a convenient location near where it will be used such as on a desk, showcase or repair area. Take the testers micro-USB power cord and plug it into the rear of the UltraDock 3, while plugging the USB into its AC power cube adapter. Plug the adapter into a convenient wall outlet. You may now simply place the PRO-D 3 in the charging stations cradle with its on bottom edge facing down, and the rear of the PRO-D 3 facing the back end of the cradle. The PRO-D 3 will automatically have its NiMH batteries charged while in the UltraDock 3. (see image)



TESTER IN OPTIONAL ULTRADOCK 3

12. Using the Optional Test Stone Magnifier: Insert the PRO-D 3's probe tip cone through the wider opening of the magnifiers oval shaped bracket and clip it into place. Depending on whether you are right or left handed, you may conveniently position it on either side of the tester. Pivot the hinged magnifier so that it is positioned in front of the testers probe tip. You may now view the stones you are testing under magnification. (see image)



HOW TO USE THE MAGNIFIER



HOW TO REMOVE THE MAGNIFIER



## **MAINTENANCE:**

1. The PRO-D 3 is a professional instrument and proper care should always be used when using it. You should always protect it when it is not in use.
2. Always replace the protective probe tip cap to keep the probe tip from becoming damaged.
3. If using alkaline batteries, always replace the batteries after long periods of time to prevent premature corrosion or battery leakage, which is common with old or spent alkaline batteries after a period of time. Be aware that damage to the PRO-D 3 may occur if there is battery leakage and it will void the warranty.
4. In the event the PRO-D 3 is not used for an extended period of time, the batteries should be removed.
5. Routinely clean the probe tip.
6. The PRO-D 3 is not user serviceable other than battery replacement, probe tip cleaning, and recalibration. If service is required, please contact your supplier or the factory. Any other attempt to repair the tester by a user will void the warranty.

## **HELPFUL SUGGESTIONS**

1. If substituting alkaline batteries for the NiMH rechargeable batteries, only use high-quality AAA alkaline batteries.
2. The PRO-D 3 is designed to be able to easily test faceted or rough stones of virtually all sizes. However, please keep in mind that small stones will naturally heat up much faster after

being touched by the probe tip. After each test be certain to cool off the stone by blowing on it or waiting a few seconds until it cools if a retest is required. If testing diamonds in a pave setting, please note it is easy to accidentally overheat the stones next to the one being tested. Therefore, it is very important that you test the stones while alternating testing one area of the ring and then another, while regularly blowing on the stones to cool them off.

3. The PRO-D 3 has been calibrated at the factory and should not require further calibration. If after using the PRO-D 3 it is determined that recalibration is required, please contact the factory for calibration instructions, which can be easily accomplished by any user.

## **WARRANTY**

Congratulations on your purchase of the GemOro® PRO-D 3! Your PRO-D 3 features a 2-YEAR PROBE TIP AND BATTERY WARRANTY and LIFETIME LIMITED WARRANTY on the rest of the tester. Damage caused by abuse will void the warranty. These warranties become effective from the date of the original purchase assuming the purchaser fills out the WARRANTY REGISTRATION FORM at [www.gemoroproducts.com/warrantyregistration](http://www.gemoroproducts.com/warrantyregistration) or the purchaser provides a copy of their invoice (bill of sale) when making a warranty claim. In the event the tester's owner has not registered their tester or provided a copy of their invoice for when they purchased the PRO-D 3, warranty service will be determined by the serial number tracking system as interpreted by the factory. In the event the PRO-D 3 is no longer available or has been discontinued and warranty coverage is applicable, at the factory's sole discretion, an equivalent tester may be substituted for the defective PRO-D 3. The purchaser shall incur the cost for postage, insurance, and handling for all warranty and non-warranty repairs. Warranty repairs and/or replacements will be shipped back to the customer FOB Destination to the location of the customer's choosing if within the continental United States. Non-warranty repairs will be shipped back to the customer FOB Factory. Should the customer require the repair and/or replacement unit(s) to be shipped outside the continental United States, the customer will be required to pay any related shipping charges and any related taxes / duties for the respective destination country, regardless of whether it is a warranty or non-warranty claim.



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