Congratulations purchasing the AuRACLE AGT-2 mobile gold and platinum tester for mobile devices, manufactured by GemOro Superior Instruments, the most trusted name in testing instrumentation for the jewelry industry. To ensure the most effective operation of your tester, please read and understand the information in this manual before using your GemOro AuRACLE AGT-2.
Before downloading the application, please note the applicable system requirements for your particular mobile device:

**APPLE**: Requires Apple iOS 5.1 or higher.

**ANDROID**: Requires Honeycomb 3.1 or higher, USB host and/or USB On-The-Go ("USB OTG") support, (please check your hardware manufacturer’s documentation to ensure support for USB host or USB OTG).

**STEP 1: AGT-2 APP DOWNLOAD AND COMPONENT ASSEMBLY**

Turn on your mobile device and download the AGT-2 app. After the app has downloaded, launch it. Assemble the AGT-2 components by attaching the mobile device, pen probe and testing plate to the AGT-2 micro connection hub where indicated. Connect the testing plate cable to the jack on the hub labeled “TRAY” and the pen probe cable to the jack labeled “PEN”; use the remaining cable to connect the accessory jack on your mobile device to the jack on the hub labeled “DEVICE.”

**STEP 2: CHECK PEN PROBE & ELECTRICALLY CHARGE IT FOR USE**

1. Remove the pen probe cap, then dab the felt tip of the pen probe on a clean, dry paper towel to clean it and absorb any excess pen probe solution; the pen probe should have the consistency of an ordinary felt-tip pen or marker.
   - New pen probes are typically slightly overfilled to provide maximum usage; consequently, excess solution will likely come out when the pen probe is initially used and for a period of time thereafter. For this period of time, continuously dab the felt tip on a clean and dry paper towel to maintain the appropriate consistency.
   - Be aware that if the solution drips from an overfilled pen probe and simultaneously touches both the test piece and the testing plate, the tester will not work.

2. Use the small file (included) to abrade a small area on the surface of the calibration piece (piece must be non-plated 10K, 14K, 18K, 22K, 24K or platinum); fig. A. Filing the metal is an important part of calibrating and testing gold and platinum, so always make sure this is done in order to get proper results.

3. Set the calibration piece on the testing plate with the filed area facing up. Touch the “Test” icon on your screen, fig. B.

4. Charge the pen probe by holding it upright at approximately a 90° angle and gently but firmly touching the very end of the felt tip to the filed area of the calibration piece (fig. C) until the reading settles (fig D), which is typically in 2 to 3 seconds (this can be longer if the pen probe is new or has no charge at all. At this point, the pen probe is charging—it is not important where the reading settles since it has not been calibrated yet. Repeat this process three times, waiting each time for the reading to settle. This process electrically charges the pen probe for use and is a vital part of the start-up process.
STEP 3: CALIBRATION PROCESS

- Always charge the pen probe as described in Step 2, and calibrate it each time it is turned on. Re-calibrate it as necessary while in use. We recommend keeping the AGT-2 turned on throughout the day.
- Use only common 10K, 14K, 18K, 22K, 24K or platinum (non-plated) to calibrate the AGT-2. Be aware that 14K yellow gold with a high silver content (above 7%) will not allow proper calibration. Also, gold with an uncommon mixture of alloys may not provide proper calibration. An optional AGT-2 14K yellow gold calibration disc is available and recommended for calibrating your AGT-2.

Calibrating Apple Devices

- Touch the “CALIBRATE” icon at the bottom of your screen (fig. E) and then touch the screen to choose the gold karat value or platinum appropriate to the calibration piece you wish to use (fig. F). The AGT-2 will automatically prompt you to touch the end of the felt tip of the pen probe to the calibration piece (fig. G).
- Always touch only the very end of the felt tip of the pen probe to the filed area on the calibration piece using light but firm pressure, holding the pen at approximately a 90° angle to the gold (fig. H) until the reading stabilizes.
- Once the calibration process has been completed, the screen will display “Calibration Successful” (fig. I). You may now remove the pen probe from the calibration piece.
- Touch the “DONE” button (fig. J) on the screen to complete the process. Your AGT-2 is now calibrated and will return you to the testing screen.
- At various times, the app will show a red indicator light and display “Calibration Required” (fig. K). When you calibrate, this indicator will be cleared.
The device prompts for calibration.

Hold the pen probe at approximately a 90° angle.

The device prompts for calibration.

The device prompts for calibration.

“Calibration Required” reminder helps prompt timely calibration.

“Calibration Successful” message; touch “Done” to complete calibration.

“Calibration Required” reminder helps prompt timely calibration.

Calibrating Android Devices

- Touch the “CALIBRATE” icon at the top of your screen (fig. L) and then touch the screen to select the metal (platinum or karat value of gold) you wish to calibrate (fig. M).

The AGT-2 will automatically prompt you to touch the end of the felt tip of the pen probe to the calibration piece (fig. N). **Please Note:** At various times, the app will show a red indicator light and display “Calibration Required” (fig. O). Calibrating will clear this indicator.

- Always touch only the very end of the felt tip of the pen probe to the filed area on the calibration piece using light but firm pressure, holding the pen at approximately a 90° angle to the gold (fig. P) until the reading stabilizes. The screen will show “Calibration in Progress” during this time.

- Once the calibration process has been completed, the screen will then display “Calibration Complete” (fig. Q). You may now remove the pen probe from the calibration piece.
Hold the pen probe at approximately 90° and touch the calibration piece.

STEP 4: RE-CHECK READINESS

- Touch the felt tip of the pen probe to the calibration piece again, holding it at approximately a 90° angle) to make sure that your calibration piece tests correctly. If it reads correctly, your AGT-2 is now calibrated and ready to use.
- If your AGT-2 does not test correctly, dab the felt tip on a clean, dry paper towel and repeat Step 3. Trying an alternate calibration piece may also resolve the problem.

STEP 5: TESTING GOLD AND PLATINUM

- To test gold and platinum, always first file a small area on the surface of the metal to be tested (fig. R). Set the test piece on the testing plate with the filed area facing up and be prepared to test that area.
- Touch the tip of the pen probe to the filed area on the metal (fig. S) and hold until the reading settles. Touch only the very end of the felt tip to the gold or platinum being tested. Touching with the side of the felt tip when testing gold will cause the result to be a higher karat than is accurate. Due to the various shapes of jewelry, it may be beneficial to hold the jewelry on the testing plate with your fingers to stabilize it, making certain that you have good contact between the felt tip and the metal during the test. Depending on the alloys used and percentages of each in the specific karat gold being tested, the test results will vary within the range of that karat. Be aware that platinum will test as “PT” or alternate between “PT” and “NA” on the far right of the bar graph.
- If you experience inconsistent test results, always dab the felt tip of the pen probe on a clean, dry paper towel and recalibrate the AGT-2 as needed while in use.
• Whenever the pen probe is not in use, **always** replace the cap and be sure that it snaps securely in place to avoid contamination and prevent drying out.
STEP 6: SAVING RESULTS
Touching the “Save” button on your screen allows you to save the last test results in your AGT-2 history.

![Apple “Save” button](image)

![Android “Save” button](image)

STEP 7: ACCESSING RESULTS SAVED IN HISTORY

**Apple History**
To access your saved testing history, touch the “History” icon on the bottom of your screen. Touch any test result and an input screen with a keyboard appears, allowing you to insert specific notes about that test.

![Touch the “History” icon to view saved test results.](image)

![Test history screen display with notes field open](image)
Android History
To access your saved testing history, touch the “HISTORY” icon on the top of your screen. Touch any test result and a field opens on the right side of your screen. Touch the field and a keyboard appears, allowing you to insert specific notes about that test.

STEP 8: SETTINGS
Apple Settings
- To access the AGT-2 settings, touch the “Settings” icon at the bottom of your screen.
- Choose between the two display options by touching the style display you want to use and then touch “Test” at the bottom of your screen to begin testing.

Analog Dial Meter: This display features a convenient dial format that shows you the test results by a needle moving around to the appropriate reading.

Horizontal Bar Meter: This display features a convenient bar graph reading and an alphanumeric digital karat, platinum or NA reading.
- Prevent the screen auto-off function from engaging by touching Prevent Lock-Screen so that the AGT-2 can be used continuously without interruption.
- Demo mode automatically simulates testing gold, platinum and using the various functions.
Android Settings

- To access the AGT-2 settings, touch the “SETTINGS” icon at the top of your screen.
- Choose between the two display options by touching “Meter Theme” and then selecting the style display you want.

**Analog Dial Meter**: This display features a convenient dial format that shows you the test results by a needle moving around to the appropriate reading.

**Horizontal Bar Meter**: This display features a convenient bar graph reading and an alphanumeric digital karat, platinum or NA reading.

*Touch the “Settings” icon.*

*Touch “Meter Theme” and select desired display.*
GemOro® AuRACLE™ AGT2

Apple Components

1. Carrying case
2. Device stand
3. Micro connection hub
4. Connection cable, hub to Apple device
5. Testing plate
6. Connection cable, hub to testing plate
7. Pen probe with connection cable
Android Components

1. Carrying case
2. Device stand
3. Micro connection hub
4. Connection cable, hub to Android device
   (includes two styles, use the one that fits your Android)
5. Testing plate
6. Connection cable, hub to testing plate
7. Pen probe with connection cable
The patented AGT-2 is an accurate testing device meant for the purposes of quickly and easily purchasing standard karat gold as well as platinum. It has been designed with the needs of a gold and platinum buyer in mind. Although both the AGT-1 and AGT-2 are considered the most accurate electronic testers in their class, they are not meant to be used as a tool for rigorous scientific assay. There are many alloys used to create gold jewelry of the various colors (white, yellow, green and red). As the vast majority of gold being purchased is 10K, 14K and 18K, your AGT-2 has been designed to focus primarily on these ranges, while still providing reasonably good, albeit at times inconsistent, testing results in the 22K range and, to a lesser degree, in the 24K range.

As the gold content of a piece of gold moves closer to pure, the presence of other metals becomes smaller and the electro-chemical reaction has fewer contaminants to detect; therefore, gold higher than 18K may test inconsistently. It is important to note that more than 99% of all gold stamped or cast of this quality is marked or stamped or in some other way backed by the mint that produced it. Coins made of high-karat gold are almost exclusively produced by government mints, and there are many reference sources that one can turn to for their identification. From a practical perspective, the gold of this purity is easy to identify by its rich color and you will observe that it is very heavy in the hand. While all high-karat gold will test with reasonable accuracy in the ranges above 18K using your AGT-2, it is prudent to also rely on the visual karat marks, reference sources and common sense.

**Troubleshooting & Helpful Tips**

*Electrically Charge the Pen Probe, Correct for Inconsistent Readings and Recalibrate:* Each time the AGT-2 is turned on, you must electrically charge the pen probe (Step 2) prior to calibrating. The AGT-2 must then always be calibrated before using (Step 3). It is also necessary to recalibrate the AGT-2 as needed and dab the felt tip of the pen probe on a clean, dry paper towel if inconsistent results are experienced. Recognize that the chemistry inside the pen probe is constantly changing over time as it is exposed to gold and other metals, contaminants, the environment and dirt. By recalibrating the AGT-2 periodically and cleaning the pen probe tip as needed, you allows the AGT-2 to adjust itself to the chemistry in the pen probe at that time. Since the AGT-2 can be calibrated in only a matter of seconds and the felt tip of the pen probe is quickly and easily cleaned if needed, these simple steps should be a regular part of your testing process and any problem-solving.

**Inconsistent Test Results:** Recalibration will typically fix this problem since the problem indicates the AGT-2 is out of calibration. Make sure the felt tip is clean by dabbing it with a clean, dry paper towel and then follow the calibration steps (Step 3) of the Easy Operation Guide. If the AGT-2 will not calibrate, the pen probe may be defective, spent, or in need of replacement. Please note: For best results, replace the pen probe if it is worn or it becomes excessively dirty from repeated exposure to costume jewelry, fake gold or other contaminates. A pen probe in this condition will begin to deliver erratic readings and these are good indicators that it should be replaced.

**Regular Cleaning of the Pen Probe Felt Tip and Testing Plate:** To avoid contamination, always wipe off the felt tip of the pen probe to remove any gold or other metal particles left behind by costume, gold-plated or gold-filled jewelry that may remain on the plate and pen probe. The metal particles left behind by previous tests such as metal filings from other karat gold, copper, brass or other base metals, naturally rubbed off during the testing process could potentially cause incorrect test results. Regular cleaning between tests, therefore, is important.

The pen probe contains a special saline solution that is safe, non-acidic, and non-toxic; however, salt crystal buildup is a natural occurrence with this device. Remove salt crystal buildup by dabbing the felt tip with a clean and dry paper towel. Using a warm, moist (from water only) paper towel, wipe off any salt crystal buildup from the calibration piece and the AGT-2 testing plate area only. **IMPORTANT: The pen probe solution will leave a stain or, in some instances, may ultimately produce corrosion on the testing plate if not wiped off immediately after it makes contact.** This staining or corrosion, however, will not affect the accuracy of the AGT-2, only its appearance. Remember to dry both the calibration piece and AGT-2 testing plate thoroughly. **Never expose the felt tip of your pen probe to water or other chemicals. Always replace the pen probe cap, snapping it securely in place, when the pen is not in use.**
**File All Metal Before Testing It:** To produce accurate results, all test metal must be filed to expose the metal below the surface before performing a test. Do not hold the metal over the AGT-2 testing plate while filing, as particles of the metal will fall on the plate and potentially skew the test results. Because the AGT-2 is a surface tester, the tester will read gold-plated and gold-filled as true gold if not filed to expose the substrate. **IMPORTANT:** Always wipe off the file, cleaning away metal debris between uses. Gold and other metal particles on the file could be transferred to the next test piece, causing contamination if left in place from one test to the next.

**Test Results are Too High:** This is an indication that the AGT-2 is out of calibration, or could indicate the presence of a high silver content, palladium or rhodium. Allowing the side of the felt tip to contact the test piece rather than the end while it is being used could also cause inaccurately high results.

**Important Note:** If the calibration was not successful, the AGT-2 will not provide accurate test results. If repeated attempts to calibrate the AGT-2 are unsuccessful, it is possible that your calibration piece has a higher karat flashing on its surface or that there is something unusual about its composition that makes the reading inconsistent. If this occurs, an alternate calibration piece should be tried. Please never hesitate to call the GemOro AGT-2 HELPLINE at 800.527.0719 or 214.351.0380 if needed and GemOro will gladly assist you in resolving any problems you may encounter.

**Other Precious Metals**

**Tungsten and Stainless Steel:** Be aware that if tungsten or stainless steel isn’t filed first, it may test in the high karat range or even as platinum; if it is properly filed, it will test as “NA.” Always file the metal before testing!

**Rhodium:** Be aware that rhodium will react as platinum on the AGT-2. It is rarely used as solid finished jewelry, but is commonly used as a plating material to make white gold or platinum appear brighter or whiter. If white gold is plated with rhodium and filed, it will then test accurately or possibly as a higher karat than marked since it is taking an average reading of the two metals. Always file metal before testing! If white gold tests higher than marked, it is probably rhodium-plated.

**Palladium:** Be aware that pure palladium will test somewhere between 18K and 24K on the AGT-2. In the case of palladium being mixed with gold, the reading will show a higher karat gold than is accurate. If you see a reading on white gold that is higher than marked, it may very well be mixed with palladium. Since white gold doesn’t exist in the 22K or 24K ranges, any result for a white metal falling in this range should be considered suspect.

**White Gold with High Nickel or High Silver Content:** Be aware that white gold with a high nickel content may test as a lower karat than is marked. While it could be under-karat gold in this instance, it is equally likely that the piece is the karat marked. White gold commonly has 4% to 7% silver content. If white gold has high silver content (above 7%) it may test as a slightly higher karat than marked; one telltale sign of this is a reading that settles slowly with a consistent rise as it does so.

**Owners Manual**

**Conditions for Ideal Operation**

To ensure the best possible accuracy for your metal testing with the GemOro® AuRACLE™ AGT-2, it should ideally be used in the following environmental conditions.

- **Test Metal at Room Temperature.** The AGT-2 is a workhorse and is capable of performing well in almost any normal or professional environment, with a room temperature of approximately 65°–75°F being the optimal. While it has proven to work just fine in temperatures as high as 100°F, we suggest you avoid using the AGT-2 in extreme temperatures so that you may always obtain the best results.

- **Test Dry Metal.** The metal being tested must be dry. If the surface of the metal is wet or has any type of surface moisture or chemical contaminants, it may not test correctly.

- **Test Clean Metal.** The metal being tested must be clean and free of any obvious dirt or chemical contaminants that might interfere with the electro-chemical reaction between the pen probe and the metal. The tester may be used otherwise with minimal concern for normal or light surface dirt.
AuRACLE™ AGT-2 Advanced Features

- The world's first electronic gold and platinum tester that works with Apple iPhone, iPad, iPod Touch and Android devices.
- Assists to identify the karat value of 6K–24K yellow, white, green and pink gold with a non-destructive test.
- If simple steps are followed, also assists to identify non-gold, gold plate and gold-filled material (designated as “NA”).
- Assists to identify platinum.
- Test results are indicated and may be stored and saved on your mobile device.
- Tests almost any size gold and platinum jewelry (with surface area larger than the end of the felt tip of pen probe).
- Immediate test results may be achieved with no waiting between tests.
- Replaceable pen probe provides up to approximately 5000 tests if used properly.
- Pen probe uses no messy gel, no staining chemicals and no dangerous acid.
- Easy and fast push-button calibration. Common 10K, 14K, 18K, 22K, 24K or platinum is required to perform the AGT-2 calibration.
- Includes: AGT-2 app, micro-connection hub and connection cables, testing plate, pen probe and file.
- Assembled in the USA.
- One-year limited factory warranty.

Caution: Disassembling the AGT-2 micro-connection hub will void the warranty.

Some Common-Sense Guidelines

Use Common Sense In Interpreting the Test Results.

Always follow some common-sense guidelines before making your final determination of the karat value/authenticity of the precious metal being tested. Please keep in mind that those misrepresenting fake precious metal jewelry as genuine can be extremely clever and will use many tricks to make you think it is genuine—including allowing you to test a genuine piece, then switch it for a fake piece while you are distracted or inattentive.

Guideline A. Be aware that any piece that tests as “NA” is not gold.

Guideline B: Check the markings on the test piece for a karat stamp (10K or .417, 14K or .585, 18K or .750, 22K or .916, 24K or .999, GF or gold-filled, GEP or gold electroplated, YGF or yellow gold-filled, RGP or rolled gold plated, etc.). If, when tested, the results indicate anything to the contrary, the metal should be suspect. Test results below the 10K range must be interpreted by the user and estimated whether it is 6K–9K. In the UK, while 9K gold may be found, gold below this karat range is extremely rare, and the gold content is minimal. If the metal you are testing tests in a lower karat than you estimate as 9K or in a lower karat than is marked, it is adviseable to simply not buy it to avoid the risk.

Guideline C: Check the weight of the metal you are about to test. If it seems too light for its size, it could simply be hollow gold or it could be costume jewelry, gold-plated or gold-filled. Gold is a dense metal and has an associated greater weight than most other non-precious metals. Platinum is an even denser metal than gold, while weighing approximately 33% more than 18K gold.

Guideline D: Check the color of the gold, and be aware that non-gold base metals are often flashed or gold-plated with 24K gold to enhance their color and, as a result, the gold color will look too yellow. Since 24K gold is a rich yellow color and gold this pure is very uncommon in jewelry, any rich yellow gold color should be suspect. Look for tarnishing or variations in the color and finish of the jewelry as a sign of it being a fake.

Guideline E: Check the clasp used on the jewelry. Costume jewelry often has a spring-ring style clasp and this should be suspect. Karat jewelry more often than not will have a lobster-style clasp. Do not test the clasp only as it is common for a karat gold clasp to be attached to a fake gold necklace or bracelet in an attempt to mislead you.

While these facts and common sense guidelines will prove to be very helpful when buying gold and platinum, they should not be your only tools to determine the authenticity of the jewelry in question.
Warranty

Your AGT-2 features a ONE YEAR LIMITED WARRANTY against defects in materials and workmanship as determined by the factory. The pen probe is covered by a 30-day limited warranty against defects in materials and workmanship as determined by the factory. The pen probe is not covered against overuse, misuse or drying out due to the user not replacing the protective cap after use. These warranties become effective from the date of original purchase after the purchaser fills out the WARRANTY REGISTRATION FORM at www.gemoroproducts.com/warrantyregistration within 30 days of its purchase. If this criteria is not followed, the AGT-2 will automatically be covered by a 90-DAY LIMITED WARRANTY from the date of your AGT-2 purchase, as noted on the bill of sale (if supplied) or through the AGT-2 serial number tracking system as interpreted by the factory. The purchaser shall incur the cost for return postage, insurance and handling for all warranty and non-warranty repairs and/or replacements. Warranty repairs and/or replacements will be shipped back to the customer FOB Destination to the location of the customer’s choosing if located within the continental United States (U.S.). 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 U.S., 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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