

The **PATENTED AGT2** 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 AGT1 and AGT2 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 AGT2 has been designed to primarily focus on these ranges, while still providing reasonably good, yet at times inconsistent testing results in the 22K and to a lesser degree in the 24K ranges.

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 less contaminants to detect. As such, gold higher than 18K may test inconsistently among the higher karat ranges. It is important to note that over 99% of all gold stamped or cast of this quality is marked or stamped or backed by the mint that has 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. All high karat gold will test with reasonable accuracy above the 18K+ ranges of your AGT2, but it is best to 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 AGT2 is turned on **YOU MUST ELECTRICALLY CHARGE THE PEN PROBE (STEP 2) PRIOR TO CALIBRATING.** The AGT2 must then always be calibrated before using (STEP 3). It is also necessary to recalibrate the AGT2 as needed and dab the pen probe's felt tip 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 AGT2 periodically and cleaning the pen probe's felt tip as needed, this allows the AGT2 to adjust itself to the chemistry in the pen probe at that time. Since the AGT2 can be calibrated in only a matter of seconds or the pen probe's felt tip may be quickly and easily cleaned if needed, these simple steps should be a regular part of problem solving and your testing process.

INCONSISTENT TEST RESULTS: RECALIBRATION WILL TYPICALLY FIX THIS PROBLEM SINCE THIS INDICATES THE AGT2 IS OUT OF CALIBRATION.

Make sure the pen probe's felt tip is clean by dabbing it with a clean, dry paper towel and then follow the calibration STEP 3 of the Easy Operation Guide. If the AGT2 will not calibrate, the pen probe may be defective, spent or in need of replacement. Please note that it is recommended that for best results that you should consider replacing the pen probe if it is worn or it becomes excessively dirty from repeated exposure to costume jewelry, fake gold or other contaminants. 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'S FELT TIP AND TESTING

PLATE: Always wipe off the gold particles and other metal particles coming from costume, gold-plated or gold-filled jewelry that may remain on the pen probe's felt tip to avoid contamination. The metal particles remaining on the pen probe's felt tip that are naturally rubbed off during the testing process, and especially metal filings from other karat gold, copper, brass or other base metals that have been filed and remain on the pen probe's felt tip could potentially cause incorrect test results. Therefore, regular cleaning when needed is important.

The pen probe contains a special saline solution that is safe, non-acidic, and non-toxic. Remove salt crystal buildup by dabbing the pen probe's felt tip with a clean and dry paper towel. Salt crystal buildup is a natural occurrence with this device. Using a warm, moist (from water only) paper towel, wipe off any salt crystal buildup from the calibration piece and the AGT2 testing plate area only. **Be aware that the pen probe solution will leave a stain or in some instances it may ultimately over time produce corrosion on the testing plate if not wiped off immediately after it makes contact, so cleaning it right after this occurs is advised.** While this staining or corrosion may occur, it will affect the testing plates cosmetic appearance only and not impact the accuracy of the AGT2. Remember to dry both the calibration piece and AGT2 testing plate thoroughly. **Never expose the pen probe's felt tip to water or other chemicals.** Always replace the pen probe cap until it snaps on when not in use.

FILE ALL METAL BEFORE TESTING AND CLEAN THE FILE: Gold, platinum, gold-plated, gold-filled, tungsten and stainless steel must be filed below the surface before testing to produce accurate results. Do not file the metal over the AGT2 testing plate, as particles of the metal being filed will fall on it and potentially have an effect on the test results. This is a surface tester and the tester will read gold-plated and gold-filled as solid gold if not filed to the base metal. **Always wipe off the file.** Be aware that gold and other metal particles on the file that came from other karat gold, gold-plated or gold-filled jewelry that has also been filed with it could cause contamination from the metal to spread to the next piece you are testing if it is not regularly cleaned off.

TEST RESULTS ARE TOO HIGH: This is an indication that the AGT2 is out of calibration, or perhaps there is a presence of a high silver content, palladium or rhodium or possibly the side of the pen probe's felt tip is touching the gold while being used incorrectly by mistake.

IMPORTANT NOTE: If the calibration was not successful and the AGT2 will not provide accurate test results. If repeated attempts to calibrate the AGT2 are unsuccessful, it is likely that your calibration piece may have a higher karat flashing on it or 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 AGT2 HELPLINE at 800.527.0719 or 214.351.0380 if needed and we will gladly assist you to quickly troubleshoot and fix 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, but if it is filed it will then test as NA. **ALWAYS FILE IT FIRST!**

RHODIUM: Be aware that rhodium will react as platinum on the AGT2. It is rarely used as solid finished jewelry, but instead 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 IT FIRST!** 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 AGT2. In the case of palladium being mixed with gold it will drive the reading up to a higher karat than it is. 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, if you see a reading on a white metal in this range, be suspect.

WHITE GOLD WITH HIGH NICKEL OR HIGH SILVER CONTENT: Be aware that white gold with high nickel content may test as a lower karat than marked. While it could be under karat gold in this instance, it is likely 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, while reacting with a slow and consistent rise in the reading as a telltale sign.