

INSTRUCTIONS



- 3-1 Sensor plug
- 3-2 Display
- 3-3 mm/inch key
- 3-4 Power key
- 3-5 Material selection key
- 3-6 Plus key
- 3-7 Ultrasonic sensor
- 3-8 Calibration key
- 3-9 Minus key
- 3-10 Battery compartment/cover
- 3-11 Coupling indicator
- 3-12 Standard calibration block
- 3-13 Velocity key
- 3-14 RS232C interface

1. Calibration

- 1.1 Press the Power key (3-4) to turn the unit on.
- 1.2 Drop a small amount of gel on the 5 mm Standard calibration block (3-12).
- 1.3 Press the Calibration key 3-8. `CAL` will be shown on the Display.
- 1.4 Press the Sensor 3-7 on the block (3-12). The coupling symbol (●) will be displayed when the sensor is coupling well. `5.0`mm (or `0.197` inch) and `CAL` will be shown on the display in turn. When steady, Press CAL key (3-8) to confirm the calibration. The unit is now ready to measure.
- 1.5 The calibration will be auto-saved to the unit once confirmed. It is not necessary to calibrate often unless the accuracy of any measurement appears doubtful.

2. Measuring by Velocity

- 2.1 Press the Velocity key (3-13) and the display shows the previous sound velocity setting.
- 2.2 To measure thickness by the known velocity:
 The velocity can be set by pressing the Plus key (3-6) or Minus key (3-9) to input the value of the known velocity of the metal being tested. Refer to the table of Velocities adjacent. The increment is 10m/s when pressing the plus or minus key. The increment is raised to 100m/s when the key is depressed for 4 seconds. By adjusting velocity, the thickness of any precious metal can easily be measured.
- 2.3 Once the velocity has been set, drop a small amount of gel onto the metal being tested and press the Sensor (3-7) onto the surface. When the sensor is coupling well, the reading displays the thickness of the metal by ultrasound measurement. Compare the result with the known thickness of the metal as determined by a ruler, callipers or known specifications. If there is a significant difference between the ultrasound result and the known thickness, the metal being tested should be assessed for adulteration.

Velocities of Precious Metals

Gold - 3240 m/s
Silver - 3650 m/s
Platinum - 3260 m/s