

DIGITAL ULTRASONIC VELOCITY GAUGE AT-140H

This Ultrasonic Velocity Gauge is small in size, light in weight, easy to carry. Although complex and advanced, it is convenient to use and operate. Its ruggedness will allow many years of use if proper operating techniques are followed. Please read the following instructions carefully and always keep this manual within easy reach.

1. FEATURES

- * Applicable for metal, plastic and other hard material.
- * Used the exclusive Micro-computer LSI circuit and crystal time base to offer high accuracy measurement .
- * With high power of emission and broad band of receiving sensitivity, the gauge can match probes of different frequencies. That makes it easy to measure the rough surface, even cast iron. It is widely used in almost all kinds of industries.
- * Widely Applicable to measure the ultrasonic velocities of Gold as well as other many materials, e.g. Steel, Cast iron, Aluminum, Red copper, Brass, Zinc, Quartz glass, Polyethylene, PVC, Gray cast iron, Nodular cast iron.
- * Automatic power off to conserve power.
- * Can communicate with PC computer for statistics and printing by the optional cable and the software for RS232C interface

4. MEASURING PROCEDURE

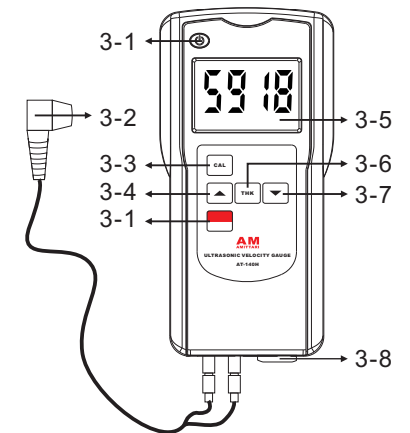
- 4.1 Just get a sample of known thickness.
- 4.2 Press the "Power Key" to turn on the unit.
- 4.3 Press the "Thickness Key" to input the known thickness into the meter. The Thickness set last could be shown on the display after pressing the "Thickness Key" . That thickness can be changed by pressing the plus key or minus key to any known thickness between 0.80mm ~ 50.00mm. The increment is 0.01mm every time when pressing the plus or "Minus Key". And the increment is 0.1mm if depressing the key for more than about 4seconds while the increment is 1.00mm if depressing the key for more than about 8seconds. And the increment is 10.0mm if depressing the key for more than about 12seconds. The changed thickness would be auto-saved to the meter for later use.
- 4.4 Drop a little oil onto the material to measure and press the Sensor onto the

2. SPECIFICATIONS

- Display: LCD
- Velocity Range: 500~9000m/s
- Resolution: 10m/s
- Accuracy : 0.5%±0.5%n
- Set Thickness: 0.70-50.00mm
- Power Supply:
4x1.5v AAA (UM-4) battery
- Operating Condition:
Temp. -5~45°C
Humidity <85%RH
- Size: 140x70x30mm
- Weight: about 130g
(not including batteries)
- Standard Accessory :
Carrying Aase.....1 pc.
Operation Manual.....1 pc.
Ultrasonic Sensor1 pc.
- Optional Accessories:
Cable & software for RS232C
Bluetooth or USB

- surface. The coupling symbol (☉) is on if coupling well. The reading on the display is the velocity of that material to be measured. The reading is held till a new measurement value is coming. The last value is held on the display till the power is off.
- 4.5 There are 2 ways to power off the meter. Manual off at any time by pressing the power key or auto power off about 10 minutes from last key operation.
 - 4.6 How to turn off the buzzer beep?
To power off the buzzer beep, just press the Plus key and the "Minus Key" simultaneously. And to make the buzzer beep, just press the "Plus Key" and the "Minus Key" simultaneously again.
- ### 5. CALIBRATION
- It is easy to calibrate the gold tester any time you suspect its measuring accuracy. There is a Standard Test Block included in the tester.
- 5.1 Drop a little oil on the 5 mm Standard block .

3. FRONT PANEL DESCRIPTIONS



- 3-1 Power Key
- 3-2 Ultrasonic Sensor
- 3-3 Calibration Key
- 3-4 Plus Key
- 3-5 Display
- 3-6 Thickness Key
- 3-7 Minus Key
- 3-8 Standard Block

- 5.2 Press the sensor onto the standard block. The coupling symbol (☉) is on if coupling well. The reading on the display should be 5920±20m/s. If not, please press the "CAL key" while keeping the sensor on the test block.
 - 5.3 Repeat 5.2 till the reading on the display is within 5920±20m/s.
- ### 6. BATTERY REPLACEMENT
- 6.1 When the battery symbol appears on the display, it is time to replace the batteries.
 - 6.2 Slide the Battery Cover away from the instrument and remove the batteries.
 - 6.3 Install batteries paying careful attention to polarity.