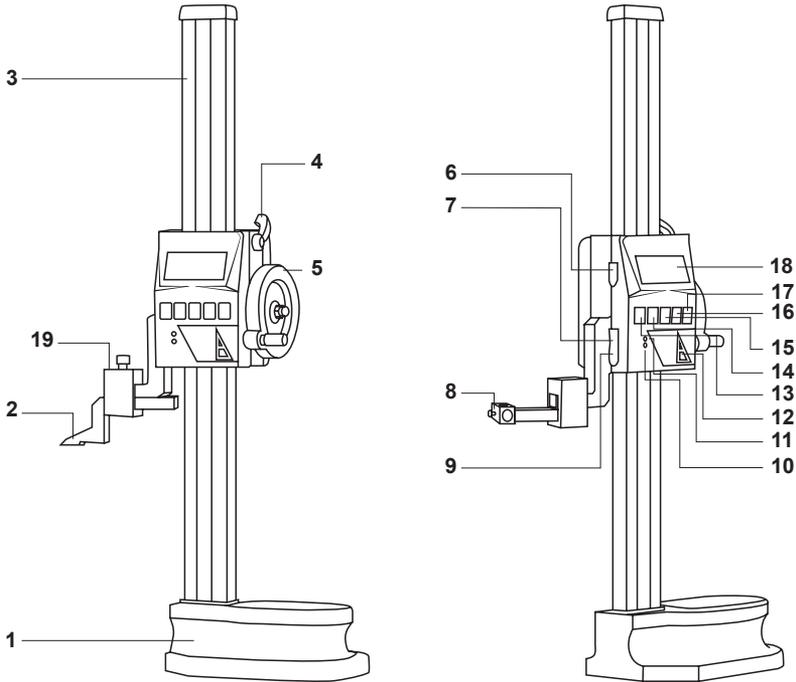


# AVENTOR HEIGHT GAGE REFERENCE GUIDE

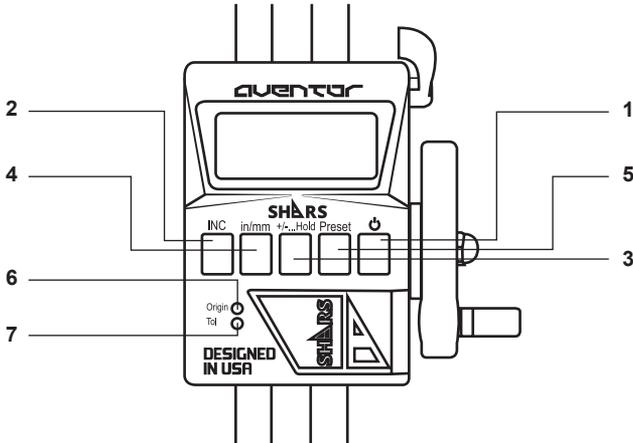


- 1. Base
- 2. Scriber
- 3. Beam Body
- 4. Lock Wrench
- 5. Handwheel
- 6. Data Output Port
- 7. Data Input Port

- 8. Indicator Holding Bar  
with Clamp
- 9. Power Input Port
- 10. Tol Button
- 11. ORIGIN Button
- 12. Battery Cover
- 13. INC Button

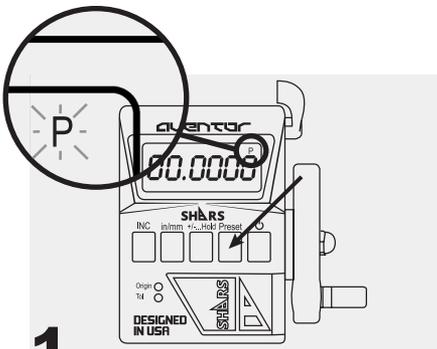
- 14. in/mm Button
- 15. HOLD/+/- Button
- 16. Preset Button
- 17. POWER Button
- 18. LCD Display
- 19. Scriber Clamp

# BUTTON FUNCTION

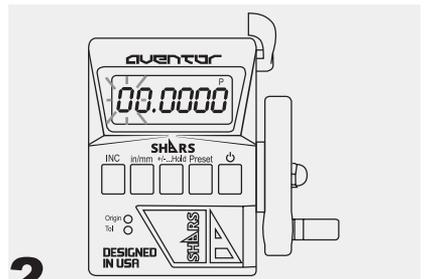


- 1) Power on/off button:** Press to power on and off
- 2) INC button:** Press to turn on Incremental Reading (INC), press and hold to turn it off
- 3) +/-...Hold button:** Press to toggle between +/-, press and hold to hold value at current number
- 4) in/mm button:** Press to toggle between in/mm
- 5) Preset button:** Press to toggle preset value on and off, press and hold to set preset value
- 6) Origin button:** Press and hold to set origin point
- 7) Tolerance button:** Press to toggle tolerance on/off, press and hold to set tolerance values

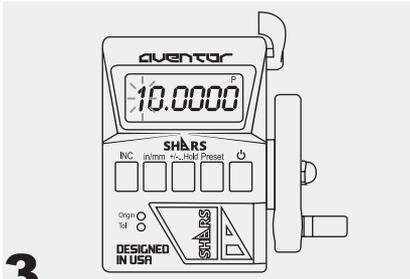
# SETTING THE PRESET VALUE



**1** Press and hold the preset button until a flashing “P” appears to enter the preset mode.

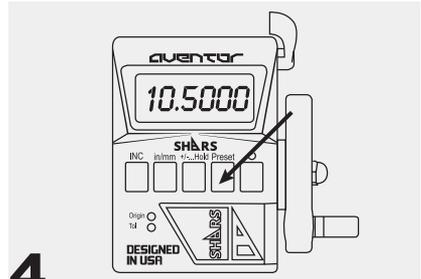


**2** Press and hold the preset button again to move to the next digit.



**3**

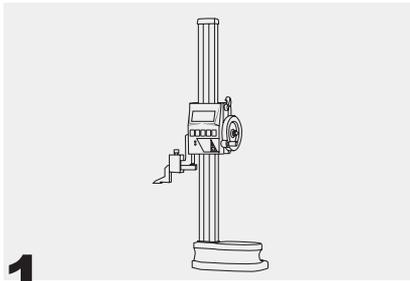
When the digit you want to change is flashing, press the preset button to adjust the flashing digit upwards from 0 to 9.



**4**

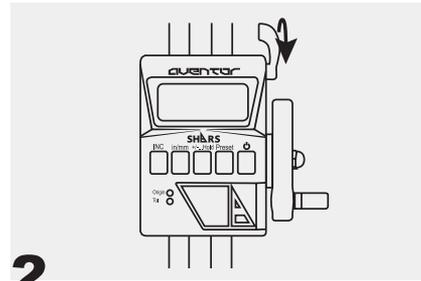
When you are finished setting the preset value, press and hold the preset button until the “P” is flashing. Then, short press the preset button to exit the preset mode.

## SETTING THE MEASURING REFERENCE



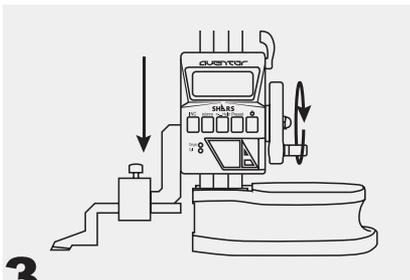
**1**

Clean the base and scriber before use.



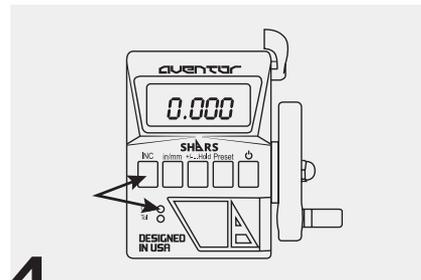
**2**

Unlock the lock wrench.



**3**

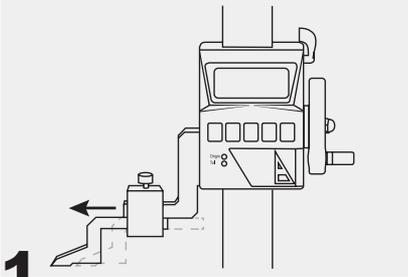
Rotate the handwheel to move height gage down, and let the measuring scriber contact the base plane.



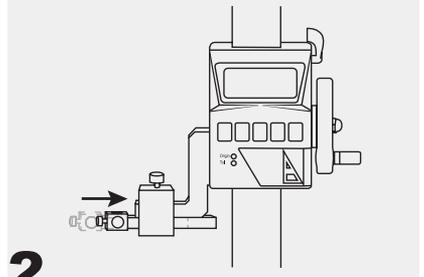
**4**

Press the ORIGIN button or INC button until the display shows “0.00”

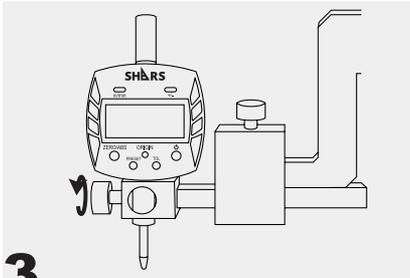
# DATA INPUT FUNCTION



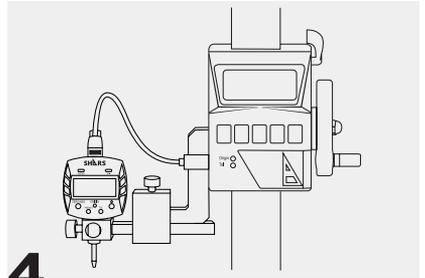
1 Remove the scriber.



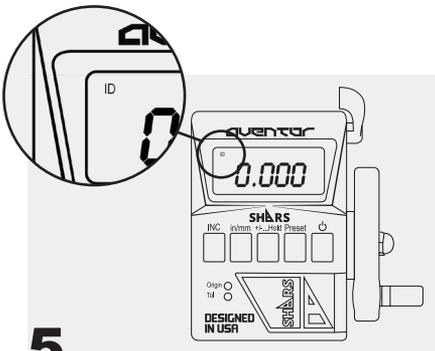
2 Install the clamp in the position of the scriber.



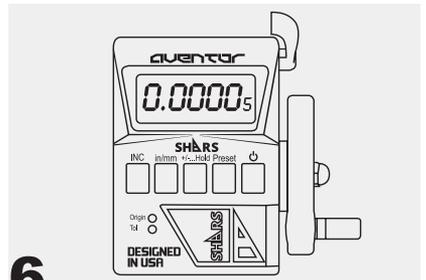
3 Install the indicator into the hole ( $\varnothing 8\text{mm}$  or  $\varnothing 3/8''$ ) of the clamp and lock it.



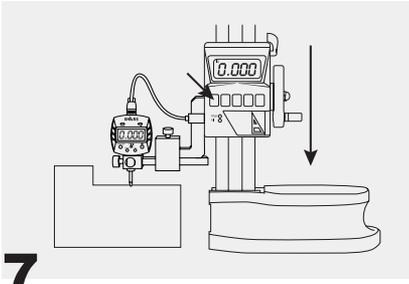
4 Connect the indicator and height gage by cable, height gage will collect the indicator data automatically.



5 If the connection is successful, the height gage will show "ID" symbol.

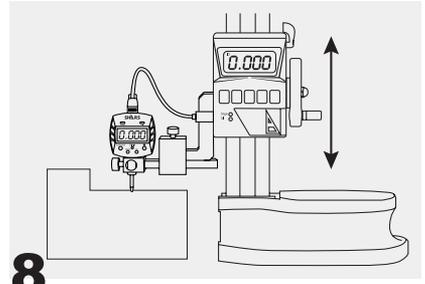


6 If the indicator is in millionth resolution e.g.  $0.001\text{mm}/.00005''$ , the height gage will display in millionth resolution without showing the ID symbol.



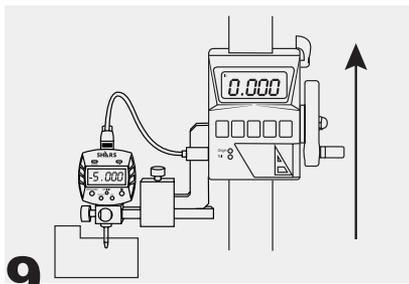
**7**

Move the height gage down, let the indicator probe touch off the reference point and preload the indicator, then press the INC on the height gage and zero the indicator.



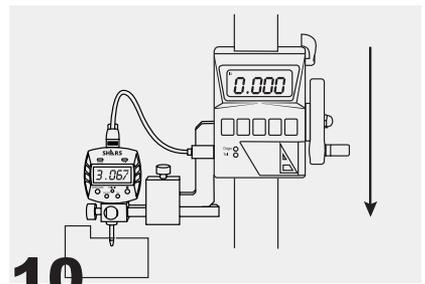
**8**

At this point, no matter if the height gage moves up or down in the measuring range of the indicator, the measurement of the current position will be shown on the height gage display.



**9**

The height gage display will be the sum of the height gage measurement and the indicator measurement, and these two gages measurement increase in opposite directions. In this figure, the height gage display is zero because the height gage moved up +5.000 while the indicator is moved down -5.000, so the sum is  $+5.000 + (-5.000) = 0$ . This is using the same reference point.

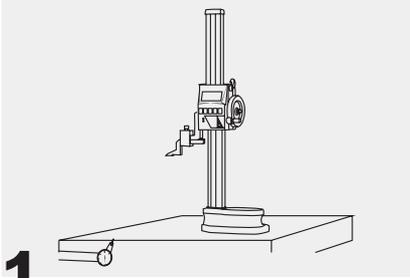


**10**

The same is true in this figure. The height gage will display zero because the height gage moved down -3.067 while the indicator moved up +3.067, so the sum is  $-3.067 + 3.067 = 0$ . The number shown on the height gage display may not be 0.00000" but should be within the accuracy range of the height gage.

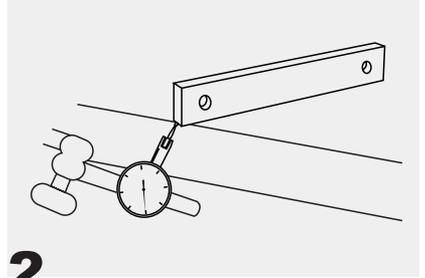
**\*Indicator Not Included**

# HOW TO TEST REPEATABILITY OF HEIGHT GAGE



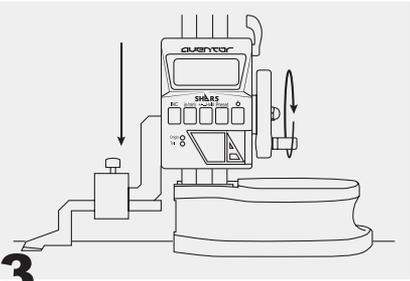
**1**

Put electronic height gage on a granite surface plate. Install .008x.0001" indicator (303-3210) into a magnet base, and stabilize the magnet base on the granite surface plate's stand.



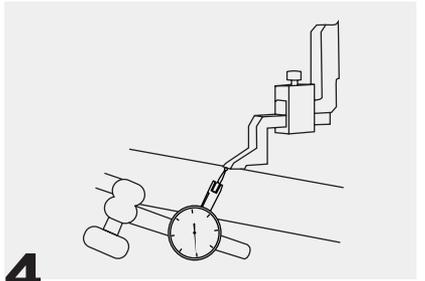
**2**

Use a gage block or steel parallel to test the start position of indicator, making sure the indicator points to 0.



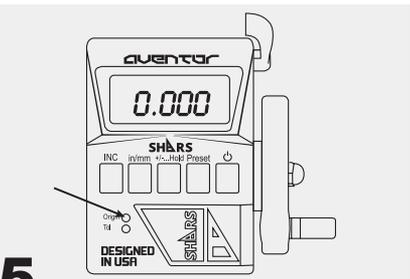
**3**

Install the scribe into the height gage and lower the height gage, making sure the scribe touches the surface of the granite plate.



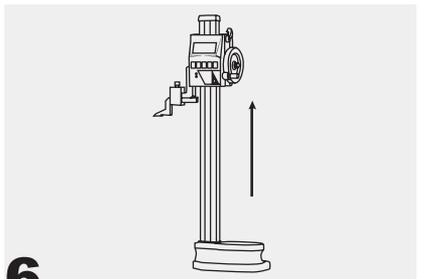
**4**

Move the scribe to the indicator. Make sure the start position of the indicator points to 0.



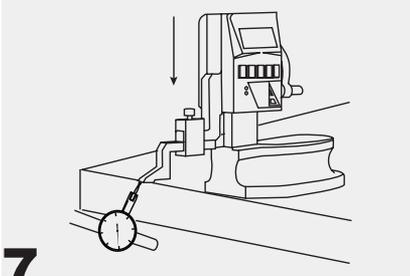
**5**

Reset the height gage by pressing and holding the origin key, making sure the screen shows 0.



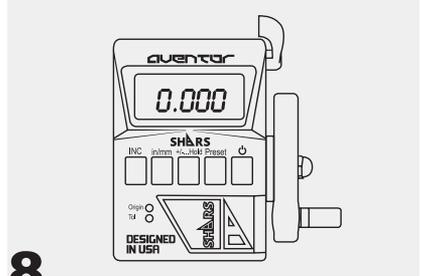
**6**

Move the height gage to the highest position.



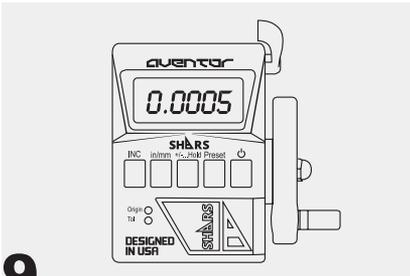
**7**

Move the height gage back to the start point, making sure the indicator points to 0.



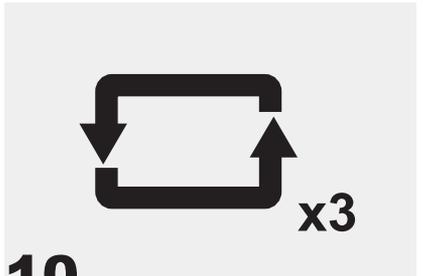
**8**

Read the height gage screen. If it shows “0.000”, that means the repeatability is 0.000”. If it shows “0.0005” or “-0.0005”, that means the repeatability is 0.0005”.



**9**

If the repeatability is less than or equal to 0.0005”, it means the repeatability of this height gage is qualified.



**10**

Repeat the above steps more than 3 times. Repeatability of height gage should be less than or equal to 0.0005”.

## NOTES

- 1) Keep the tool clean and avoid shocks or accuracy may be affected.
- 2) Move the tool by the base, not by the body.
- 3) Lower the height gage when not in use, but not lower than the bottom of the base. If the tool will not be used for a long period of time, remove the scribe and apply a light coat of oil on all surfaces.
- 4) Keep away from strong magnetic fields.
- 5) Prevent water or other liquids from entering the height gage display.

## FEATURES

- 1) Uses Defining Positioning Sensor measuring system
- 2) No measuring speed limit
- 3) Large and easy to read LCD display
- 4) SPC data output to office software without another interface program
- 5) External digital DAA input function, without the need for repeatedly setting 0 on the dial to make for easy measuring
- 6) External power input port

## POWER

- 1) **Battery Type:** CR2032/DC3V
- 2) **External Power:** DC5V 300mA

## MAIN TECHNICAL INDEX

<b>Measurement Range:</b>	0~300mm/0~12" or 0~600mm/0~24"
<b>Resolution:</b>	0.01mm;0.0005"
<b>Indication Accuracy:</b>	0~300mm/0~12"=0.03mm/0.001" 0~600mm/0~24"=0.05mm/0.002"
<b>Working Temperature:</b>	0~40°C
<b>Storage and Transport Temperature:</b>	-20~70°C
<b>Surrounding Humidity:</b>	Relative humidity ≤ 80%

## WHAT'S INCLUDED

- 1) Carbide tipped scriber
- 2) Indicator attachment arm for 3/8" and 8mm stem
- 3) Data interface cable for Aventura Indicator and SPC data output cable
- 4) Inspection report with measurement values (Not NIST traceable)
- 5) 3V CR2032 Lithium battery
- 6) Scriber Clamp

**SHARS**  
TOOL COMPANY

[www.shars.com](http://www.shars.com)

840 Equity Dr. • St. Charles, IL 60174 • (630) 443-6822 • Fax (630) 443-6823

© Shars Tool Company 2020