DOUBLE-CHIPS DIGITAL HEIGHT GAUGE OPERATING INSTRUCTION

Suitable for range 0-300mm, 0-500mm, 0-l000mm, 0-1500mm

● MAINTENANCE INSTRUCTIONS

1. Before using the Height Gauge, clean the surface of the protective sticker with dry and clean cloth(or soaked with cleaning oil).
2. Operating Conditions: Temperature: 5~-40'C
   Relative Humidity: ≤80%
   Prevent any hydrous liquid from the protective sticker.
3. Never apply voltage (e. g. engraving with an electric pen) on any part of the Height Gauge for fear of damaging the circuit.
4. Preset a starting point of measurement correctly (please see the Operations). Do not press "ON/OFF/ZERO" button purposelessly for fear of measurement error.
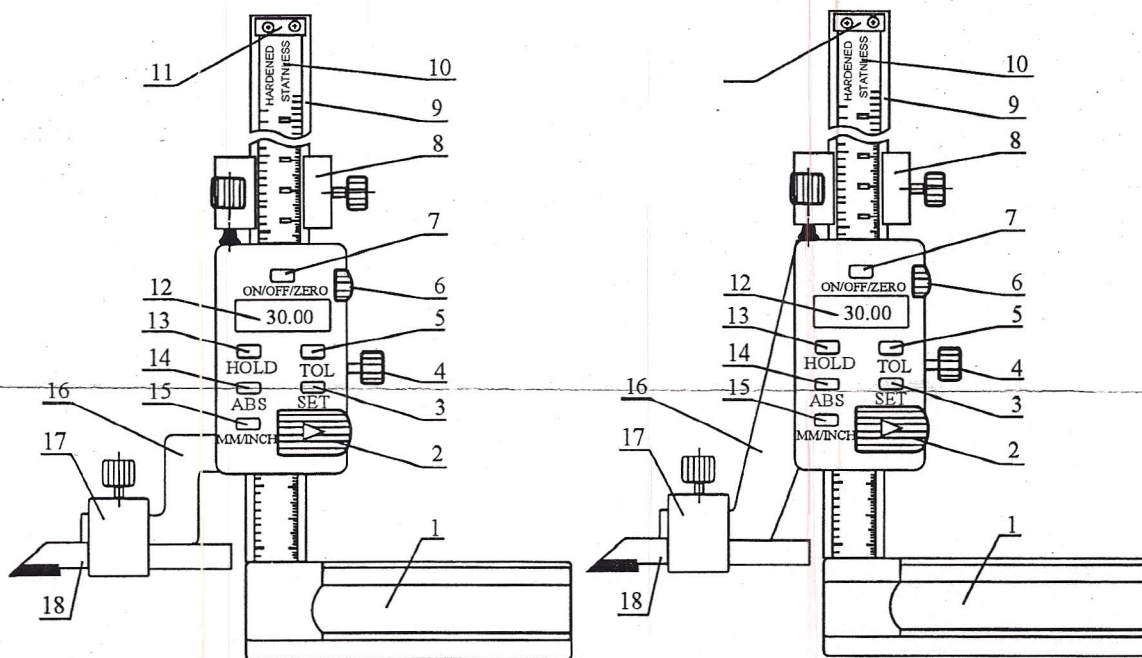
● NOMENCLATURE

FIGURE 1   FIGURE 2

1. Base	2. Battery Cover	3. Set Button	4. Locking Screw
5. TOL Button	6. Data Output	7. ON/OFF/ZERO Button	
8. Fine Adjustment Slider	9. Scale	10. Protective Sticker	
11. Stopper	12. LCD Display	13. HOLD Button	14. ABS Button
15. Metric/Inch Interchange Button	16. Slider	17. Jaw Clamp	18. Measuring Jaw

● BUTTON FUNCTIONS

1. **ABS:** relative/absolute measurement interchange button
   ● The electronic part is in absolute measuring state as soon as the power is turned on(no INC indicates) and absolute zero displays. Move the electronic part to start absolute measurement.
   Press ON/OFF/ZERO button (no longer than 3 seconds) and set the current position as absolute zero point.
   ● Press ABS button, the electronic part is in relative measuring state and INC displays. The value displayed is relative measuring value. Move the electronic part to start relative measurement. Press ON/OFF/ZERO button (no longer than 3 seconds) and set the current position as relative zero point.
2. **ON/OFF/ZERO:** power and zero-setting button
   ● Press ON/OFF/ZERO button (no longer than 3 seconds) in relative measuring state and set current position as relative zero point.
   ● PressON/OFF/ZERO button (no longer than 3 seconds) in absolute measuring state and set current position as absolute zero point.
   ● Press ON/OFF/ZERO button (longer than 3 seconds) in relative or absolute measuring state and the electronic part is off power.
3. **MM/INCH:** metric/inch system interchange button
   Press MM/INCH button to interchange metric/inch system at any position.

4. **SET:** preset button

Press SET button, the indicator SET flashes (0 displays in relative measuring state, last value displays in absolute measuring state). Hold SET button, digits flash in turn from big to small. When you see the digit you want to set, release SET button. Press SET button once (no longer than 1 second), the current digits add one (0-9 in turn). After this digit is set, hold SET button, then next digit flashes. When value setting is finished, hold SET button until indicator SET flashes, then press SET button again (no longer than 1 second), indicator SET disappears and the value you set is displayed on LCD screen. (NOTE: press ON/OFF/ZERO button during value setting, then exit)

5. **TOL:** tolerance setting button
   - Press TOL button," ↑ "displays, indicator SET flashes, then you can start setting upper limit. Just operate as value setting, only change SET button to TOL button.
   - After finishing setting upper limit, while indicator SET flashing, press SET button again (no longer than 1 second), then indicator" ↓ " displays and indicator SET flashes. Then you can start setting lower limit in the same way.
   - After finishing setting lower limit, while indicator SET flashing, press SET button again (no longer than 1 second), then the electronic part is in tolerance measuring state. When the indicator" ↑ " displays, the measured value is beyond upper limit. When the indicator" ↓ " displays, the measured value is beyond lower limit. When indicator "OK" displays, the measured value is within tolerance.

6. **HOLD:** data holding button

Press HOLD button at any position, the measuring value displays on LCD. Move the electronic part, the value is kept on LCD. Press HOLD button again, then resume to measuring state, the current value displays on LCD.

7. **Power ON/OFF:**
   I. Auto power off
   - When the electronic part stays idle (moving speed no faster than 0.4m/s) for 3'30", it is in simulative off-power state (no display). You can move the electronic part or press ON/OFF/ZERO button to turn on the power, the zero point will not change.
   - When the electronic part stays idle (moving speed no faster than 0.4m/s) for 30 minutes, it is in off-power state. Power can only be turned on by pressing ON/OFF/ZERO button, the zero point will not change.
   II. Manual power off
   Press ON/OFF/ZERO button (longer than 3 seconds), the electronic part is in off-power state.
   Then press ON/OFF/ZERO button (no longer than 3 seconds), it is in measuring state.
   NOTE: We can make electronic parts with manual power off or manual & auto power off.

● **DATA OUTPUT**
1. Data can be input to a computer or a special printer via a special cable.
2. Working way of the interface: synchronous series.
3. Data: binary code, 24 bits. Each datum will be sent twice. The cycle is 300ms (20ms in fast reading state). Transmitting time is 0.5ms.
4. Four wires (from left to right): Negative Power -, Data D, Clock Pulse CP, Positive Power +.
5. Pulse Range of Data: Datum Level ≤0.2V, Level "1" ≥ 1.3V
6. Clock Pulse CP: 90KHz, effective for high electrical level.

● **TECHNICAL SPECIFICATIONS**
1. Resolution: 0.01mm
2. Repeatability: 0.01mm
3. Technical standard: JB5609-91
4. Maximum response speed: 1m/s
5. Power: One silver oxide battery, 1.55V

● **OPERATIONS**
1. Dry the surface of the protective sticker and clean the base and measuring jaw, then fix the measuring jaw.
2. Clean the working platform and put the Height Gauge on it. Loosen the locking screw and move the slider to check if the LCD displays and all the buttons work properly.
3. Preset the starting point of measurement:
   a) Usually the zero point of measurement is the surface of working platform. Make the measuring jaw and platform surface gently touch (measuring force is about 3~5N), the value on LCD should be 0, or press ON/OFF/ZERO button to make it be 0.
   b) When measuring an object beyond the range of the Height Gauge, lift the base with a block. Then the zero point is the platform surface and the starting point is the surface of the block or object. If the starting point is the block, preset the height of the block(the height should be measured by more accurate instrument). If the starting point is the surface of the measured object, preset the height of the surface (the height is designed value or actual value, according to actual needs).

● **BATTERY REPLACEMENT**
Abnormal display (digits flashing or even no display) shows a flat battery and it should be replaced. Take off the cover in the direction shown by the arrow and replace the battery with a new one. If the battery bought from market does not work satisfactorily (The power may wear down because of the long-term storage or the battery's automatic discharge etc.), please do not hesitate to contact the supplier.
Note: 1.The positive pole of the battery must face out.
   2.Please preset the zero point of measurement again after the battery replacement.