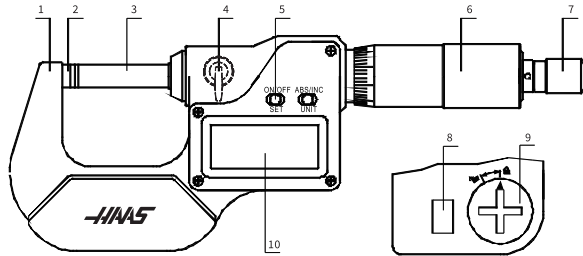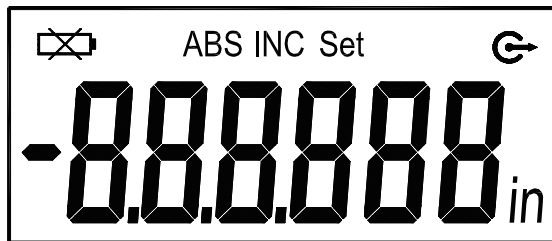# DIGITAL MICROMETER INSTRUCTION MANUAL

Please read the product instruction carefully and use the product correctly under the instruction

MICROMETER COMPONENTS

1. Frame
2. Anvil
3. Spindle
4. Locking device
5. Keys
6. Thimble (or ratchet friction thimble)
7. Ratchet in fast drive
8. Output port
9. Battery cover
10. LCD display

LCD DISPLAY

In: Inch mode
INC: Relative measuring
ABS: Absolute measuring
: Low battery
: Data output
Set: Set the origin

OPERATION

Two ways of pressing key are used :
(1) Press and release.   (2) Press and hold (more than 1 sec.).

ON/OFF and SET

 : **ON/OFF**, Powers unit on/off
 : **SET**, Sets the origin

ABS/INC and UNIT

 : **ABS/INC,** Absolute/Relative measuring mode conversion.
 : **UNIT,** Metric/Inch measuring mode conversion.

Data output keys , for SPC cable

Two ways of pressing buttons are used:
 : Output the data once to PC and " " flashes once on the display.
 : Output the data to the PC continuously and " " is stead on the display. Press the key
   again to stop the data transfer.

DIGITAL MICROMETER

SET THE ORIGIN

Set the origin (for normal micrometers.)

Press and hold "SET" key until "Set" flashes once on LCD and the display is set to the origin.

Set a new origin (only for 3-point internal micrometer and micrometer heads.)

1. Press and hold "**SET**" key until "**Set**" flashes and the origin is displayed. Press "SET" key, the display will be set to this origin if not changing the origin.
2. Press and hold "**SET**" key until "**Set**" disappears and the first digit starts flashing.
3. Press "SET" key, the flashing digit +1 until it is desired.
4. Press and hold "**SET**" key until the next digit flashes.
5. Repeat steps 3 and 4 until the required value on the display is reached.
6. Press and hold "**SET**" key until "**Set**" flashes. Press "**SET**" key, the data on LCD will be set to the origin.
7. The origin will not be lost if the battery is replaced.
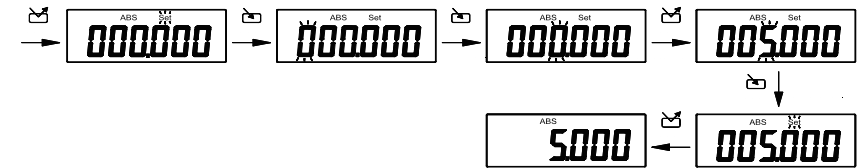
Set a stepped origin (for depth micrometers, gear tooth micrometers, and adjustable/interchangeable anvils)

- Press and hold the "SET" key until the "SET" icon flashes and the origin is established. To establish a new origin, adjust spindle, and press and hold the "SET" key again to reset origin as needed.
- To cycle between inch and metric setting, press and hold the "UNIT" key. Once correct unit of measurement is set, re-establish origin for accurate measurements.
- The origin will not be lost if the battery is replaced.

POWER

- The micrometer uses a SR44 battery. Replace the battery if the LCD display is dim or the icon shows on the display. Ensure the "+" side of the battery faces the user when replacing.
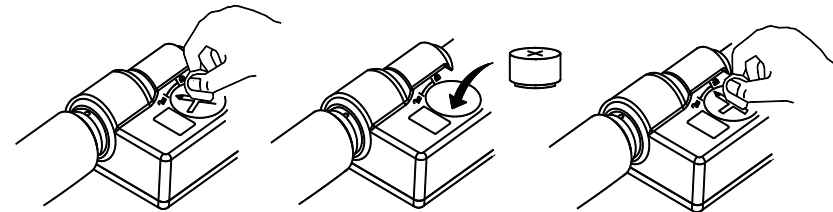

- The micrometer will turn off in ~5 minutes if it is not used. The micrometer will turn back on if the on/off button is pressed, or the thimble is rotated.
- Power off the micrometer by pressing "**ON/OFF**" key to save battery if not use.

DATA OUTPUT

- The data output uses a RS232C interface. The micrometer can be connected to a PC's serial port or USB port, cables are not included.
- Pressing the "OUTPUT" button will send the data to the PC once; Note that "⟲" flashes once.
- Press and hold the "OUTPUT" key for 1 sec will output the data to PC continuously and "⟲" is steadily displayed. Press the "OUTPUT" key again to stop outputting.

1. SPC cable
2. Data output key
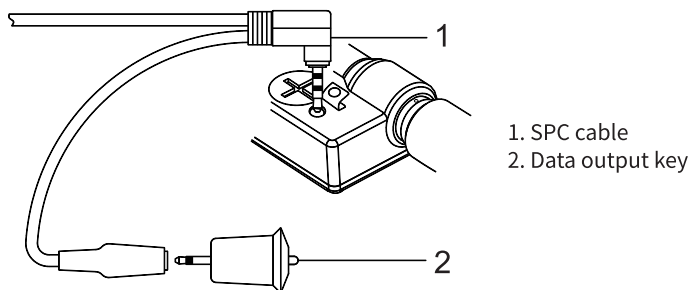
Series port format:

Baud rate	Start bit	Data bit	Stop bit	Parity	Data logic
1200	1	7	2	none	reverse

Data format:

Order	1	2	3	4	5	6	7	8	9	10
Metric	S	N1	N1	N	.	N	N	N	CR	LX
Inch	S	N	.	N	N	N	N	N	CR	LX

S: Minus or space   N1: Minus or space or digit 0-9   N：Digit 0-9

SPECIFICATIONS

Measuring force: 5~10N

Power consumption: ≤ 25μA

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: -20 to 60°C (-4 to 140°F)

Protection class: IP65

CAUTIONS

Do not subject the micrometer to misuse or shocks. Do not drop the micrometer or apply excessive force. Do not disassemble the micrometer. Do not press any buttons with a sharp or pointed object. Do not use or store the micrometer in direct sunlight, or in an excessively hot or cold environment. Do not subject the display to strong magnetic fields or high voltage environment. Use dry soft cloth to clean the display. Do not use any harsh solvent such as acetone, etc. The spindle is designed so that it cannot be removed from the inner sleeve. Do not move it past the upper limit of the measuring range. Remove the battery if the micrometer will not be used for a long time.
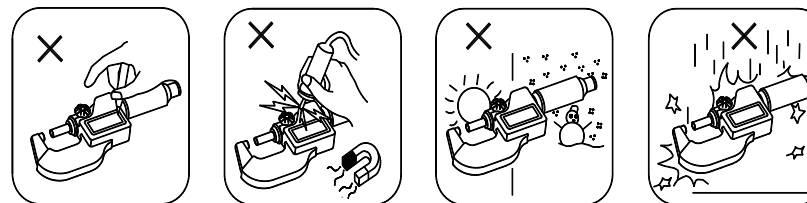
TROUBLE SHOOTING

Error	Reason	Solution
Display "E 1" Display "Exxxxx"	Measured value is over display range.	Reset the origin or convert to relative measuring mode.
Display "E 2"	The origin is out of range.	Reset the origin.
Display "E 3" Display "E 8"	The micrometer faulted. Range sensor faulted.	Remove and replace the battery. Micrometer needs repair.
Measuring value is not correct	Measuring surfaces are dirty. The origin is out of range.	Clean measuring surfaces. Reset the origin.
Display shows senseless data	The micrometer faulted.	Remove and replace the battery.
No display Display is blurring "▭" appears	Battery voltage is low.	Replace battery.
The output data is wrong	Battery voltage is low.	Replace battery.

⚠ **WARNING**
The safety information given must be understood by any person using or maintaining these products.