HANATEK FILM THICKNESS GAUGE MKII 8020

Instruction Manual (Obsolete Product)
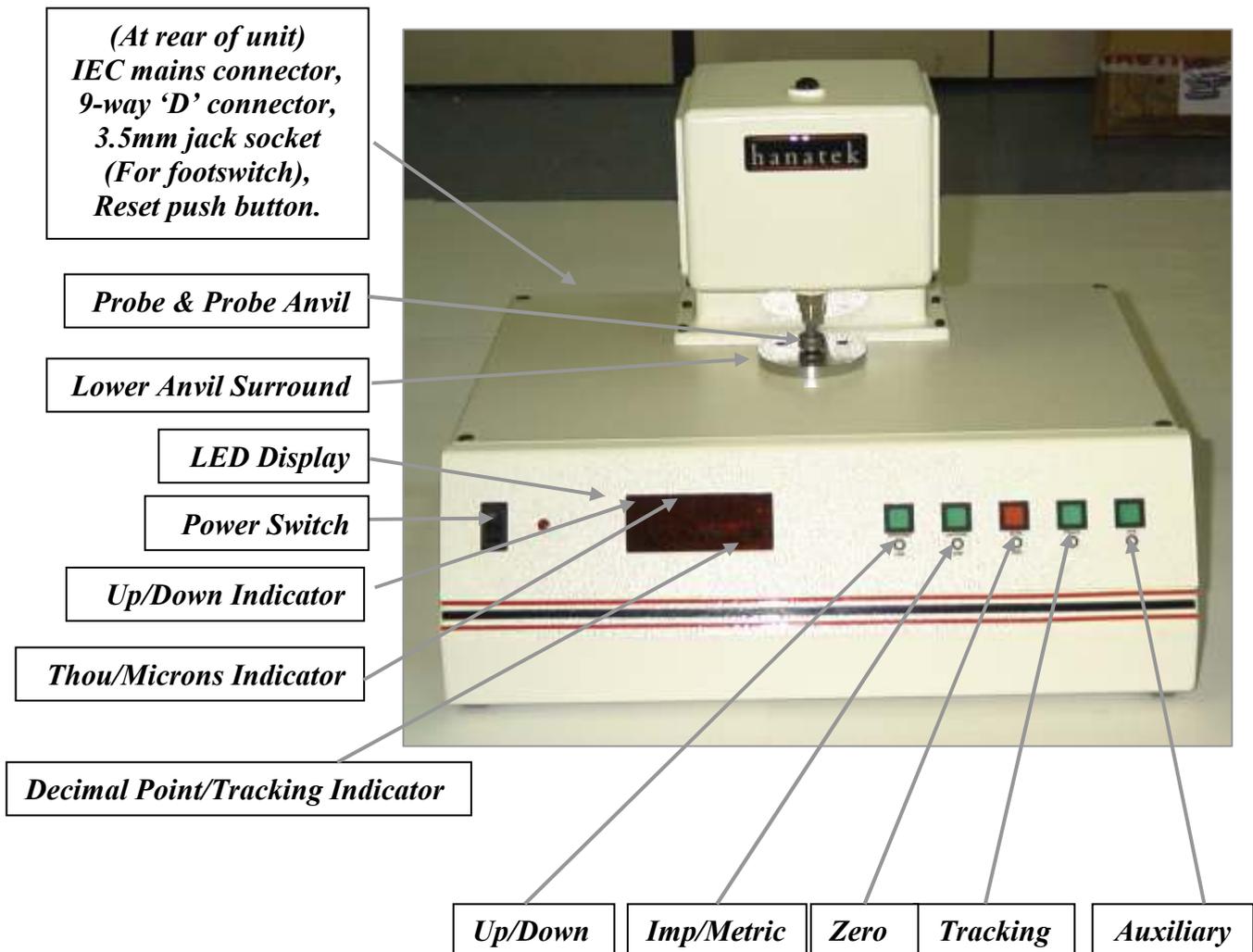Replaced with: http://www.hanatekinstruments.com/Precision-Thickness-Tester.html

Hanatek
Rhopoint House, Enviro 21 Park
Queensway Avenue South
St Leonards on Sea, East Sussex
TN38 9AG, UK

Tel. No. +44 (0)1424 739623
e-mail: sales@hanatekinstruments.com
website: www.hanatekinstruments.com

HANATEK FILM THICKNESS GAUGE MKII 8020

OPERATING MANUAL

(At rear of unit)
IEC mains connector,
9-way 'D' connector,
3.5mm jack socket
(For footswitch),
Reset push button.

Probe & Probe Anvil

Lower Anvil Surround

LED Display

Power Switch

Up/Down Indicator

Thou/Microns Indicator

Decimal Point/Tracking Indicator

Up/Down | **Imp/Metric** | **Zero** | **Tracking** | **Auxiliary**

Control Buttons

Fig.1

HANATEK FILM THICKNESS GAUGE MKII 8020

OPERATING MODES

The Thickness Gauge works in two operating modes, **Local** and **Remote.**

In **Local** mode, the push buttons provide control of the instrument, and the LED panel gives the status. In the **Remote** mode, a computer with suitable programme can be used to control all the functions of the unit, with the ability to display on the computer monitor the status of the unit. The two modes are independent, and can be used together if required. Suitable software is available from **Hanatek Ltd.** for the PC computer. Please refer to the Technical data section on page 12.

CONTROLS AND FUNCTIONS

The front of the base of the instrument has 5 non-latching push buttons. Their assignments are as indicated on the legend below the LED display. Buttons **Up/Down, IMP/Metric, Track** and **Aux.** toggle between the two states allocated to them, the others are single **On/Off** controls. Three of the buttons are also used for Baud rate selection. A **Reset** push-button is mounted on the rear of the unit.

The computer link shares all these command functions, and each separate function is allocated its own command.

Command Summary

Local Button:	Remote Command:	Action:
Up/Down /1200 baud	**U** (Up) **D** (Down)	raises/disengages the measuring probe lowers/engages the measuring probe
IMP/Metric /2400 baud	**I** (Imperial) **M** (Metric)	readings are displayed in thou readings are displayed in microns
Zero /4800 baud	**Z** (Zero)	clears display to 0000.0 and uses the cleared value as subsequent display offset
Track	**T** (Track)	automatically zeros the display if readings fall below 1 micron – see Zero
Aux.	**A** (Auxiliary)	lowers and raises the probe at 3 sec intervals
Up/Down + Zero (together)	**R** (Restore)	resets/removes display offset and stops zero tracking
N/A	**Q** (Query)	requests data transmission from the Gauge to the host computer
(Every time a button is pressed)	**B** (Beep)	sounds the Gauge's beeper

Notes:

• The **Zero** and **Track** functions cannot be engaged when the probe is raised.

• The **Up/Down, IMP/Metric** and **Zero** buttons are also used to select the serial **Baud rate** during the switch-on sequence

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GETTING STARTED

Switch **On** the gauge unit and observe the following sequence:

1. The beeper sounds and the probe is raised and then lowered.

2. The rightmost digit counts from **0** to **9** and back to **0,.**

3. **"12345"** is displayed.

4. The beeper sounds and the Baud rate of **9600** (default) is shown.

5. The beeper sounds again and **"S"** and the software version number are displayed.

6. The probe's reading appears on the display and the unit is ready.

Important Note: It is advisable to allow at least 20 minutes after switching **On** for the unit's working temperature to stabilise before taking measurements.

If required, a Baud rate other than the default 9600 may be selected during the "switch-on" sequence:

Re-inititate the unit by either switching it **Off/On** or, preferably, by pressing the **Reset** button at the back of the unit while holding down one of the Baud rate buttons and then releasing the **Reset.** The buttons listed below perform this secondary function:

Button	**Selected Baud Rate**
Up/Down	**1200**
IMP/Metric	**2400**
Zero	**4800**
No button	**9600**

Example: select the Baud rate of **4800**

1. Press and hold down the **Zero** button.

2. Press and release the **Reset** button while holding the **Zero** button down.

3. Wait for **"4800"** to appear on the display and then release the **Zero** button.

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<u>MANUAL MODE OF OPERATION USING THE LOCAL CONTROLS</u>

<u>Taking absolute readings:</u>

Ensure that the measuring surfaces (the probe's tip and the anvil) and the measured sample is all scrupulously clean. Press the **Up/Down** button a few times and check that the reading is **"0000.0"** when the probe is lowered. Use the **Zero** button if not.

Raise the probe and place the sample under the probe. Lower the probe and note the reading.

Use the **IMP/Metric** button as required to display in "thou" or in microns.

<u>Taking relative readings:</u>

Proceed as above and use the **Zero** button while the first sample is under the probe. This sets the display to zero and other samples will be measured relative to the first sample.

Raise the probe and replace the first sample with another. Lower the probe and note the reading. The value shown is the difference between the first reading and the current one.

Repeat with other samples.

<u>Notes:</u>

1. The resolution of the probe is 0.1 microns between 0 and 599.9 and changes to 0.5 microns when the reading is 600.0 microns or more.

2. The "imperial" mode is a display feature only; i.e. the readings are always taken at the highest possible resolution in metric, converted to imperial in software and displayed.