
Instruction Manual

HI 8064

Portable Thermohygrometer



Dear Customer,
 Thank you for choosing a Hanna product.
 Please read this instruction manual carefully before using the instrument.
 This manual will provide you with all the necessary information for the correct use of the instrument.
 If you need additional technical support, do not hesitate to e-mail us at tech@hannainst.com
 This instrument is in compliance with the CE directives.

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PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipment. If there is any damage, immediately notify your Dealer.

Note: Save all packing material until you are sure that the instrument functions correctly. All defective items must be returned in their original packing with the supplied accessories.

GENERAL DESCRIPTION

With a simple rotary switch measuring both relative humidity and temperature, **HI 8064** is an easy-to-operate thermohygrometer specially dedicated to education.

Just turn the dial from off to RH% for relative humidity or °C for temperature, and the large LCD will show the appropriate measured value in seconds.

The probe handle contains the amplification circuitry to ensure an accurate and linear reading throughout the range. The probe tip is perforated to allow air circulation and thus guarantee a fast response time. To measure humidity electronically, a thin film polymer capacitance is used.

The probe handle is made of tough ABS material to withstand the wear and tear of everyday use. Weighing less than a pound with battery life of one hundred hours and a response time of less than half a minute, **HI 8064** is ideal for use in schools, libraries, museums and horticulture.

SPECIFICATIONS

Range	10.0 to 95.0% RH 0.0 to 60.0°C
Resolution	0.1% RH / 0.1°C
Accuracy	±2% RH / ±0.4°C
Response Time	6 seconds for 95% accuracy
RH Calibration	Manual, 2 point, through trimmers on the RH probe
Environment	0 to 50°C (32 to 122°F); RH max 98% non-condensing
Battery Type	1 x 9V, alkaline
Battery Life	Approx. 100 hours of use
Dimensions	180 x 83 x 40 mm (7.1 x 3.3 x 1.6")
Weight	180 g (6.3 oz.)

FUNCTIONAL DESCRIPTION

- OFF position: the instrument is OFF; any other knob position turn the instrument ON.
- °C position: the meter is in temperature measurement mode.
- RH% position: the meter is operating in Relative Humidity measurement mode.
- Replacing battery: when the battery level is low and only a few hours of working life are left, the "V" symbol will appear on the display to warn the user that the battery needs to be replaced.
Remove the battery compartment rear cover on the rear of the instrument and replace the battery with a new one, while paying attention to the correct polarity.

RH CALIBRATION

The **HI 8064** thermohygrometer is factory calibrated, but it is recommended to periodically control the calibration status of the meter.

Use the **HI 7601** calibration kit composed of a container with two separate chambers, each one equipped with a threaded plug and three envelopes containing the necessary salts.

Preparing the calibration solutions

- Pour approximately 26 cc of distilled water into a glass container.
- Immerse the container in a bath of ice and water, and shake briefly. Then add slowly the contents of an envelope containing LiCl to the container while continuing to shake.
When the salt has completely dissolved, add the contents of the second envelope.
- Allow the solution to cool, and then pour it into the chamber marked "RH 11.1%", making sure that no residue remains on the walls of the glass container.

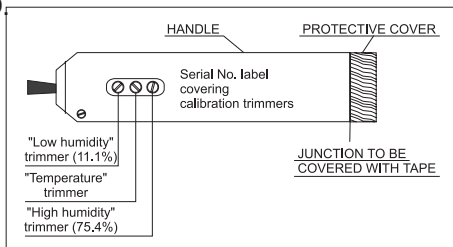
Note: When not in use, carefully seal the chamber as the LiCl solution is extremely hygroscopic and tends to capture the air humidity causing the solution to expand slowly until it overflows from the container.

- Pour approximately 26 cc of distilled water into the other chamber (marked "RH 75.4") and add the contents of the envelope containing NaCl, while shaking the container to avoid any lump formation.

Note: When not in use, carefully seal the container.

Calibration procedure

- Bring the calibration kit to a temperature of approximately 20 °C.
- Remove the plug from the chamber containing the LiCl solution and insert the probe.
- Remove the adhesive sticker which covers the calibration trimmer access holes.
- Wait for the reading to stabilize (this will take a few hours) and then turn the "Low humidity trimmer" (the one nearest to the probe connection cable) until the value of 11.1% RH will be displayed on the LCD.
- Remove the probe and tightly seal the chamber containing the LiCl solution.
- Remove the plug from the second chamber and insert the probe.
- Wait for the reading to stabilize and then note the displayed value.
- By using the Calibration Table (pages 8-9), find the displayed readout value on column "A" and the corresponding RH value of column "B", to which the meter has to be brought by acting on the "High humidity trimmer".
- Adjust the "High humidity trimmer" (the one opposed to the connection cable) until the required value is displayed on the LCD.
- Finally adjust the "Low humidity trimmer" until the value of 75.4% RH will be displayed on the LCD.



TEMPERATURE CALIBRATION

The **HI 8064** thermohygrometer is factory calibrated and therefore usually it requires no further intervention by the user.

If recalibration is desired, proceed as follows:

- Remove the adhesive sticker which covers the calibration trimmer access holes.
- Insert the probe into a recipient in which air heated at a temperature of 50 °C has been forced to circulate.
- Insert a thermometer with an accuracy of 0.1 °C into the same recipient.
- Read the temperature value on the thermometer.
- Adjust the temperature calibration trimmer (the central trimmer) until the measured temperature value is displayed on the LCD.

TAKING MEASUREMENTS

- For a rapid response, expose the end of the humidity detector to an air current moving at more than 0.5 m/second.

In absence of air movement, the response can be speeded up by shaking the probe.

- If condensed drops form upon the surface of the humidity sensors, turn the instrument off and wait until this undesired water has completely evaporated. To speed up the evaporation process, expose the humidity sensors to an air current.
- If the meter is used in dusty surroundings, the filter must be kept on at all time.

RELATIVE HUMIDITY CALIBRATION TABLE

A	B	A	B	A	B	A	B	A	B
60.0	78.9	60.0	78.9	60.2	78.8	60.2	78.8	60.4	78.8
60.5	78.7	60.5	78.7	60.7	78.7	60.7	78.7	60.9	78.6
61.0	78.6	61.0	78.6	61.2	78.5	61.2	78.5	61.4	78.5
61.5	78.5	61.5	78.4	61.7	78.4	61.7	78.4	61.9	78.3
62.0	78.3	62.0	78.3	62.2	78.3	62.2	78.2	62.4	78.2
62.5	78.2	62.5	78.2	62.7	78.1	62.7	78.1	62.9	78.1
63.0	78.1	63.0	78.0	63.2	78.0	63.2	78.0	63.4	77.9
63.5	77.9	63.5	77.9	63.7	77.9	63.7	77.8	63.9	77.8
64.0	77.8	64.0	77.8	64.1	77.7	64.1	77.7	64.4	77.7
64.5	77.7	64.5	77.6	64.6	77.6	64.6	77.6	64.9	77.6
65.0	77.5	65.0	77.5	65.1	77.5	65.1	77.5	65.4	77.4
65.5	77.4	65.5	77.4	65.6	77.4	65.6	77.3	65.9	77.3
66.0	77.3	66.0	77.3	66.1	77.3	66.1	77.2	66.4	77.2
66.5	77.2	66.5	77.2	66.6	77.1	66.6	77.1	66.9	77.1
67.0	77.1	67.0	77.0	67.1	77.0	67.1	77.0	67.4	77.0
67.5	77.0	67.5	76.9	67.6	76.9	67.6	76.9	67.9	76.9
68.0	76.8	68.0	76.8	68.1	76.8	68.1	76.8	68.4	76.8
68.5	76.7	68.5	76.7	68.6	76.7	68.6	76.7	68.9	76.6
69.0	76.6	69.0	76.6	69.1	76.6	69.1	76.6	69.4	76.5
69.5	76.5	69.5	76.5	69.6	76.5	69.6	76.5	69.9	76.4
70.0	76.4	70.0	76.4	70.1	76.4	70.1	76.4	70.4	76.3
70.5	76.3	70.5	76.3	70.6	76.3	70.6	76.3	70.9	76.2
71.0	76.2	71.0	76.2	71.1	76.2	71.1	76.2	71.4	76.1
71.5	76.1	71.5	76.1	71.6	76.1	71.6	76.1	71.9	76.0
72.0	76.0	72.0	76.0	72.1	76.0	72.1	76.0	72.4	75.9
72.5	75.9	72.5	75.9	72.6	75.9	72.6	75.9	72.9	75.8
73.0	75.8	73.0	75.8	73.1	75.8	73.1	75.8	73.4	75.8
73.5	75.7	73.5	75.7	73.6	75.7	73.6	75.7	73.9	75.7
74.0	75.6	74.0	75.6	74.1	75.6	74.1	75.6	74.4	75.6
74.5	75.6	74.5	75.5	74.6	75.5	74.6	75.5	74.9	75.5
75.0	75.5	75.0	75.5	75.1	75.4	75.1	75.4	75.4	75.4
75.5	75.4	75.5	75.4	75.6	75.3	75.6	75.3	75.9	75.3
76.0	75.3	76.0	75.3	76.1	75.3	76.1	75.2	76.4	75.2
76.5	75.2	76.5	75.2	76.6	75.2	76.6	75.2	76.9	75.1
77.0	75.1	77.0	75.1	77.1	75.1	77.1	75.1	77.4	75.1
77.5	75.0	77.5	75.0	77.6	75.0	77.6	75.0	77.9	75.0
78.0	75.0	78.0	75.0	78.1	74.9	78.1	74.9	78.4	74.9
78.5	74.9	78.5	74.9	78.6	74.9	78.6	74.8	78.9	74.8
79.0	74.8	79.0	74.8	79.1	74.8	79.1	74.8	79.4	74.7
79.5	74.7	79.5	74.7	79.6	74.7	79.6	74.7	79.9	74.7

A	B	A	B	A	B	A	B	A	B
80.0	74.7	80.0	74.6	80.1	78.8	80.3	74.6	80.4	74.6
80.5	74.6	80.5	74.6	80.6	78.7	80.8	74.5	80.9	74.5
81.0	74.5	81.0	74.5	81.1	78.5	81.3	74.5	81.4	74.5
81.5	74.4	81.5	74.4	81.6	78.4	81.8	74.4	81.9	74.4
82.0	74.4	82.0	74.4	82.1	78.3	82.3	74.3	82.4	74.3
82.5	74.3	82.5	74.3	82.6	78.1	82.8	74.3	82.9	74.2
83.0	74.2	83.0	74.2	83.1	78.0	83.3	74.2	83.4	74.2
83.5	74.2	83.5	74.1	83.6	77.9	83.8	74.1	83.9	74.1
84.0	74.1	84.0	74.1	84.1	77.7	84.3	74.1	84.4	74.0
84.5	74.0	84.5	74.0	84.6	77.6	84.8	74.0	84.9	74.0
85.0	74.0	85.0	73.9	85.1	77.5	85.3	73.9	85.4	73.9
85.5	73.9	85.5	73.9	85.6	77.4	85.8	73.9	85.9	73.8
86.0	73.8	86.0	73.8	86.1	77.3	86.3	73.8	86.4	73.8
86.5	73.8	86.5	73.8	86.6	77.1	86.8	73.7	86.9	73.7
87.0	73.7	87.0	73.7	87.1	77.0	87.3	73.7	87.4	73.7
87.5	73.6	87.5	73.6	87.6	76.9	87.8	73.6	87.9	73.6
88.0	73.6	88.0	73.6	88.1	76.8	88.3	73.5	88.4	73.5
88.5	73.5	88.5	73.5	88.6	76.7	88.8	73.5	88.9	73.5
89.0	73.5	89.0	73.5	89.1	76.6	89.3	73.4	89.4	73.4
89.5	73.4	89.5	73.4	89.6	76.5	89.8	73.4	89.9	73.4
90.0	73.3	90.0	73.3	90.1	76.4	90.3	73.3	90.4	73.3
90.5	73.3	90.5	73.3	90.6	76.3	90.8	73.3	90.9	73.2
91.0	73.2	91.0	73.2	91.1	76.2	91.3	73.2	91.4	73.2
91.5	73.2	91.5	73.2	91.6	76.1	91.8	73.1	91.9	73.1
92.0	73.1	92.0	73.1	92.1	76.0	92.3	73.1	92.4	73.1
92.5	73.1	92.5	73.1	92.6	75.9	92.8	73.0	92.9	73.0
93.0	73.0	93.0	73.0	93.1	75.8	93.3	73.0	93.4	73.0
93.5	73.0	93.5	73.0	93.6	75.7	93.8	72.9	93.9	72.9
94.0	72.9	94.0	72.9	94.1	75.6	94.3	72.9	94.4	72.9
94.5	72.9	94.5	72.8	94.6	75.5	94.8	72.8	94.9	72.8
95.0	72.8	95.0	72.8	95.1	75.4	95.2	72.8	95.4	72.8
95.5	72.8	95.5	72.7	95.6	75.3	95.7	72.7	95.9	72.7
96.0	72.7	96.0	72.7	96.1	75.3	96.2	72.7	96.4	72.7
96.5	72.7	96.5	72.6	96.6	75.2	96.7	72.6	96.9	72.6
97.0	72.6	97.0	72.6	97.1	75.1	97.2	72.6	97.4	72.6
97.5	72.6	97.5	72.6	97.6	75.0	97.7	72.5	97.9	72.5
98.0	72.5	98.0	72.5	98.1	74.9	98.2	72.5	98.4	72.5
98.5	72.5	98.5	72.5	98.6	74.9	98.7	72.4	98.9	72.4
99.0	72.4	99.0	72.4	99.1	74.8	99.2	72.4	99.4	72.4
99.5	72.4	99.5	72.4	99.6	74.7	99.7	72.3	99.9	72.3
100.0	72.3								

WARRANTY

All Hanna Instruments **meters are warranted for two years** against defects in workmanship and materials when used for their intended purpose and maintained according to the instructions. The **probes are warranted for a period of six months**.

Damages due to accident, misuse, tampering or lack of prescribed maintenance are not covered. This warranty is limited to repair or replacement free of charge.

If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charge for repair or replacement. If the instrument is to be returned to Hanna Instruments, obtain a Return Goods Authorization from the Customer Service Department first and then send it with shipment cost prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

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Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

HANNA PRODUCTS

- CALIBRATION & MAINTENANCE SOLUTIONS
- CHEMICAL TEST KITS
- CHLORINE METERS
- CONDUCTIVITY/TDS METERS
- DISSOLVED OXYGEN METERS
- HYGROMETERS
- ION SPECIFIC METERS
- MAGNETIC STIRRERS
- Na/NaCl METERS
- pH/ORP/Na ELECTRODES
- PROBES (DO, $\mu\text{S}/\text{cm}$, RH, T, TDS)
- PUMPS
- REAGENTS
- SOFTWARE
- THERMOMETERS
- TITRATORS
- TRANSMITTERS
- TURBIDITY METERS
- Wide Range of Accessories

Most Hanna meters are available in the following formats:

- BENCH-TOP METERS
- POCKET-SIZE METERS
- PORTABLE METERS
- PRINTING/LOGGING METERS
- PROCESS METERS (Panel- and Wall-mounted)
- METERS FOR FOOD INDUSTRY

For additional information, contact your dealer or the nearest Hanna Customer Service Center.

You can also e-mail us at tech@hannainst.com