


Battery replacement

The meter displays the remaining percentage when turned on. When the battery level is below 5%, the  symbol on the bottom left of the LCD lights up to indicate a low battery condition. If the battery level is low enough to cause erroneous readings, the Battery Error Prevention System (BEPS) turns the **HI 991000** off.

To ensure a watertight seal, the batteries are accessed by separating the front and back halves of the meter. The 4 Philips-head screws are located on the 4 corners of the back of the meter. Once the back has been removed, carefully replace the 4 AAA batteries located in the battery compartment, paying attention to their polarity. Re-attach the back, making sure that the gasket is in place.

Calibration solutions

HI 77400P	pH 4.01 & 7.01 (20 mL, 5 pcs each)
HI 770710P	pH 7.01 & 10.01 (20 mL, 5 pcs each)
HI 70004P	pH 4.01 calibration solution (20 mL, 25 pcs)
HI 70006P	pH 6.86 calibration solution (20 mL, 25 pcs)
HI 70007P	pH 7.01 calibration solution (20 mL, 25 pcs)
HI 70009P	pH 9.18 calibration solution (20 mL, 25 pcs)
HI 70010P	pH 10.01 calibration solution (20 mL, 25 pcs)

Other accessories

HI 710007	Protective rubber boot
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HI991000 is in compliance with the CE directives
EN 50081-1 and 50082-1



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<http://www.hannainst.com>

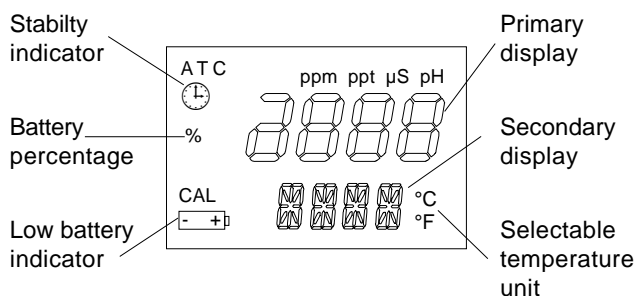
HI 991000

Portable pH Meter

Instruction Manual

SPECIFICATIONS

Range	pH	0.00÷14.00
	Temperature	0.0÷60.0°C or 32.0÷140.0°F
Resolution	pH	0.01pH
	Temperature	0.1°C or 0.1°F
Accuracy	pH	±0.01pH
	(@20°C/68°F)Temperature	±0.5°C or ±1°F
Typical EMC	pH	±0.3pH
Deviation	Temperature	±1°C or ±1°F
Temperature Compensation		Automatic
pH Calibration	1 or 2 point with auto-buffer recognition pH 4.01/7.01/10.01 or pH 4.01/6.86/9.18	
Probe	HI 1291 pH/temperature probe (included)	
Battery Type/Life	4 x 1.5V AAA with BEPS / 500 hours	
Environment	0 to 50°C (32 to 122°F); RH 100%	
Dimensions	143x80x38mm (5.6x3.2x1.5")	



OPERATIONAL GUIDE

To connect the probe

Connect the **HI 1291** probe to the DIN socket on the top of the **HI 991000** by aligning the pins and pushing in the plug. Tighten the nut to ensure a good connection. Remove the protective cap from the **HI 1291** probe before taking any measurements.

To turn HI 991000 on and to check battery status

Press the ON/OFF/MODE button for 2 seconds. All the used segments on the LCD will be visible for a few seconds, followed by a percent indication of the remaining battery life. Eg. % 100 BATT.

To turn HI 991000 off

Press the ON/OFF/MODE button from normal measuring mode. OFF will appear on the bottom display.

To freeze the display

Press the SET/HOLD button for 2 seconds until HOLD appears on the bottom display. Eg. pH 5.73 hold.

Press any button to return to normal mode.

pH MEASUREMENTS & CALIBRATION

- Make sure the meter has been calibrated.
- If the electrode has been left dry, soak in pH 7 to reactivate.
- Place the tip of the probe in the sample to be tested.
- Shake the probe briefly while submerged and wait until the ☺ symbol on the top left of the LCD is turned off.
- The LCD will show the pH value automatically compensated for temperature and the temperature of the sample.
- If measurements are taken in different samples successively, rinse the probe tip thoroughly to eliminate cross-contamination; and after cleaning, rinse the probe tip with some of the sample to be measured.

Calibration buffer set

- Press the ON/OFF/MODE button for 6 seconds, until CAL on the bottom display is replaced by TEMP and the current temperature unit. Eg. TEMP °C.
- Press the ON/OFF/HOLD button again to show the current buffer set: pH 7.01 BUFF (for 4.01/7.01/10.01) or pH 6.86 BUFF (for 4.01/6.86/9.18).

- Press the SET/HOLD button for changing the buffer set.
- Press the ON/OFF/MODE button to return to normal pH measuring mode.

pH calibration

- Press and hold the ON/OFF/MODE button for 3 seconds, until OFF on the bottom display is replaced by CAL.
- Release the button. The LCD will display pH 7.01 USE or pH 6.86 USE (if you selected the NIST buffer set).
- For a *single point pH calibration*, place the probe in any buffer from the selected buffer set (eg. pH 7.01 or pH 4.01 or pH 10.01). The meter will recognize the buffer value and will display OK for 1 second.

If the pH 7.01 buffer (or 6.86 if you selected the NIST buffer set) was used, press the ON/OFF/MODE button to return to the pH measuring mode.

- For a *two point pH calibration*, place the probe in pH 7.01 (or 6.86, if you selected the NIST buffer set). The LCD will display the recognized buffer value and OK for 1 second and then display pH 4.01 USE.

Place the probe in the second buffer value (pH 4.01 or 10.01, or, if using NIST, pH 4.01 or 9.18). When the second buffer is recognized, the LCD will display OK for 1 second and the meter will return to normal measuring mode.

TO CHANGE THE TEMPERATURE UNIT (FROM °C TO °F)

Press the ON/OFF/MODE button for 6 seconds, until CAL on the bottom display is replaced by TEMP and the current temperature unit. Eg. TEMP °C.

Use the SET/HOLD button to change the temperature unit, and then press ON/OFF/MODE until the meter returns to normal measuring mode.

To reset to the default calibration

To clear a previous calibration, press the ON/OFF/MODE button after entering the calibration mode. The bottom LCD will display ESC for 1 second and the meter will return to normal measuring mode. The "CAL" symbol on the LCD will disappear. The meter will be reset to the default calibration.