



## HI981004 pH Tester



## Certification

All Hanna Instruments conform to the CE European Directives.



**Disposal of Electrical & Electronic Equipment.** The product should not be treated as household waste. Instead hand it over to the appropriate collection point for the recycling of electrical and electronic equipment which will conserve natural resources.

**Disposal of waste batteries.** This product contains battery, do not dispose of it with other household waste. Hand it over to the appropriate collection point for recycling.

Ensuring proper product and battery disposal prevents potential negative consequences for the environment and human health. For more information, contact your city, your local household waste disposal service, the place of purchase or go to [www.hannainst.com](http://www.hannainst.com).

## Recommendations for Users

Before using this tester, make sure that it is entirely suitable for your specific application and for the environment in which it is used. Avoid touching the electrode at all times. Any variation introduced by the user to the supplied equipment may degrade the tester's performance. For your and the tester's safety do not use or store the tester in hazardous environments.

## Warranty

HI981004 is warranted for a period of one year against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. The electrode is warranted for a period of six months. This warranty is limited to repair or replacement free of charge. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered. If service is required, contact your local Hanna Instruments Office. If under warranty, report the model number, date of purchase, serial number and the nature of the problem. If the repair is not covered by the warranty, you will be notified of the charges incurred.

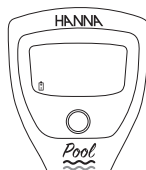
If the instrument is to be returned to Hanna Instruments Office, first obtain a Returned Goods Authorization (RGA) number from the Technical Service department and then send it with shipping costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

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

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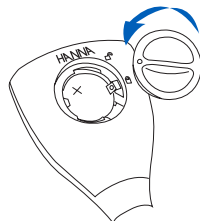
## Battery Indicator



The tester features a low battery indicator. When the battery is running low, the battery indicator is displayed blinking. When the battery is depleted, "Erb" is displayed before the tester turns off.

## Battery Replacement

To change the CR2032 Li-ion battery, turn the battery cover located on the back of the tester counterclockwise to unlock. Remove cover and replace with + side facing up.



**Note:** Only use the battery type specified in this instruction manual. Old batteries should be disposed in accordance with local regulations.

## Accessories

### Electrode

HI1271 pH electrode

### pH Buffer Solution

HI700044P pH 4.01 buffer solution, 20 mL sachet (25 pcs.)

HI700074P pH 7.01 buffer solution, 20 mL sachet (25 pcs.)

HI70010P pH 10.01 buffer solution, 20 mL sachet (25 pcs.)

HI77400P pH 4.01 & 7.01 buffer solution, 20 mL sachet (10 pcs., 5 each)

HI770710P pH 10.01 & 7.01 buffer solution, 20 mL sachet (10 pcs., 5 each)

### Electrode Cleaning Solution

HI7006014P General purpose cleaning solution, 20 mL sachet (25 pcs.)

### Electrode Storage Solution

HI703004L Electrode storage solution, 500 mL

## Care & Maintenance

Please read the information below, to ensure highest possible accuracy:

- Fresh buffer should be used for each calibration, once the sachets are opened the buffer value can change over time.
- If measurements are taken successively, rinse the probe thoroughly in distilled or deionized water to eliminate cross-contamination.
- When not in use add a few drops of storage solution to the protective cap to keep the probe hydrated. If storage solution is not available, pH 4.01 or pH 7.01 buffer can be used.
- For improved accuracy a two-point calibration is recommended. Use buffers that bracket the expected value of the sample to be tested.

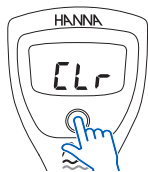
**Note:** Never immerse the tester over maximum immersion level.

## Auto-off



From measurement mode, press and hold the ON/OFF button. The tester will cycle through "OFF," "CAL," then current auto-off setting. The default setting is 8 minutes ("d08"). Press ON/OFF button to change. "d60" is auto-off after 60 minutes, and "d-" disables the auto-off feature. Press and hold the button to exit the menu.

## Clear Calibration



Place the tester in calibration mode. Press and hold ON/OFF until "CLr" is displayed. The tester will now be at default calibration. No tags will be displayed in measurement mode until calibration is performed.

## "Err" Message



In calibration mode, if the tester displays "Err" message when in the correct fresh buffer solution, the probe should be cleaned. Place the probe in the HI7006014 cleaning solution for 15 minutes. Rinse with purified water and place in storage solution for 1 hour before calibrating. If the "Err" message is displayed after cleaning the probe, replace the probe.

## Dear Customer,

Thank you for choosing a Hanna Instruments product. Please read this instruction manual carefully before using the tester. For more information about Hanna Instruments and our products, visit [www.hannainst.com](http://www.hannainst.com) or e-mail us at [sales@hannainst.com](mailto:sales@hannainst.com). For technical support, contact your local Hanna Instruments Office or e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com).

## Preliminary Examination

Remove the tester and accessories from the packing material and examine it carefully. If you require any further information, please contact Hanna Instruments technical support team at [tech@hannainst.com](mailto:tech@hannainst.com).

HI981004 is delivered in a plastic carrying case and is supplied with:

- HI700044 pH 4.01 buffer solution liquid, sachet (2 pcs.)
- HI700074 pH 7.01 buffer solution liquid, sachet (2 pcs.)
- HI7006014 General purpose cleaning solution, sachet (2 pcs.)
- CR2032 battery
- Instrument quality certificate
- Instruction manual

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

## General Description & Intended Use

HI981004 is a sturdy compact tester, part of Hanna Instruments pool-line family. It offers automatic calibration to one or two points, automatic buffer recognition, calibrated buffer tags, stability indicator, low battery indicator, and selectable automatic shut off.

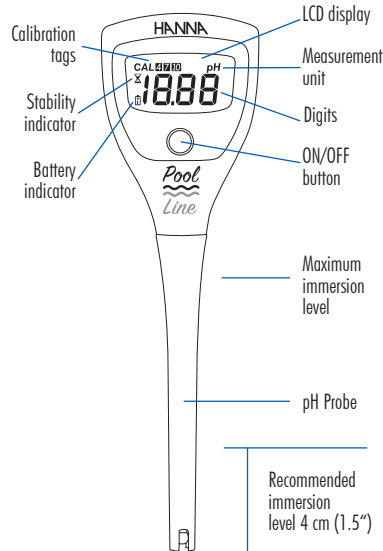
### pH Probe

HI981004 is supplied together with HI1271 pH electrode. The electrode is 103 mm long and tapers to an 8 mm diameter at the sensing end to easily fit into test tubes, vials, and other containers with small openings.

## Specifications

Range	0.00 to 14.00 pH
Resolution	0.01 pH
Accuracy	±0.20 pH @25 °C (77 °F)
Calibration	Automatic, one or two-point
Electrode	HI1271 (included)
Battery Type	CR2032 Li-ion
Battery Life	Approximately 1000 hours of continuous use
Auto-off	8 minutes, 60 minutes or can be disabled
Environment	0 to 50 °C (32 to 122 °F); RH 95% max.
Dimensions	50 x 174 x 21 mm (2 x 6.8 x 0.9")
Weight	50 g (1.8 oz.)

## Functional Description & LCD Display



## Preparation

The pH electrode is shipped dry. Remove the protective cap and condition the electrode by soaking the tip (bottom 4 cm (1.5")) in pH 7.01 buffer solution for several hours before calibration. Follow the calibration procedure.

- Do not be alarmed if salt deposits are present. Rinse the probe with water and blot dry.
- Screw the electrode to the tester body and turn the tester on.
- Remove the protective cap and immerse the tip of the electrode in the sample to be tested.
- Stir gently and wait for a stable reading.

**Note:** Never immerse the electrode over the maximum immersion level. The connector must always be clean and dry.

### Storage

- After use, rinse the electrode with water and store it with a few drops of HI703004 Storage solution in the protective cap.
- Replace protective cap after each use.

**Note:** Do not use distilled or deionized water for storage purposes.

## Operation

Press the ON/OFF button to turn the tester on. All tags will be displayed. The tester will enter measurement mode with current reading and calibrated buffers displayed.

## Calibration



From measurement mode, press and hold the ON/OFF button until "CAL" is displayed.



When "7.01" blinks on the display, place the tip of the probe into a pH 4.01, 7.01, or 10.01 buffer solution.



**A** For one or two-point calibration using pH 7.01 buffer follow procedure A

**B** For one-point calibration using pH 4.01 or pH 10.01 buffer follow procedure B

**Note:** It is recommended to calibrate the electrode with buffers at the temperature it will be used at.

## A One or Two-Point Calibration with pH 7.01



When "7.01" is displayed, place the tip of the electrode in pH 7.01 buffer.

One-Point



Press the ON/OFF button to save the one-point calibration.



"Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tag will be displayed.

When the reading is stable, the stability icon will disappear.

When "4.01" is displayed, follow the procedure to the right for a one or two-point calibration.

Two-Point



Place the tip of the electrode in pH 4.01 or pH 10.01 buffer. The buffer is automatically recognized, the stability indicator will blink.



Wait until the measurement is stable and the stability indicator disappears. "Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tags will be displayed.

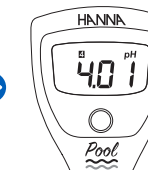
## B One-Point Calibration with pH 4.01 or pH 10.01



When "7.01" is displayed, place the tip of the electrode in pH 4.01 or pH 10.01 buffer. The buffer value will be recognized automatically and "4.01" or "10.01" will be displayed.



When the reading is stable, the stability indicator will disappear. "Sto" will be displayed when the calibration is saved.



The tester will return to measurement mode and the calibration tag will be displayed.