

We thank you for purchasing our company's pH meter.

This product, the digital pH meter is widely used in applications such as aquarium, beverages, fish hatchery, food processing, photography, laboratory, quality control, schools and colleges, swimming pools and water conditioning.

We ask you to carefully read and understand this manual before using to guide you on how to gain the outmost benefits of all its function and uses.

Please keep this manual for future reference.

LINE SEIKI CO., LTD.

SAFETY INDICATION

Please strictly observe the safety instructions during the use of this product.

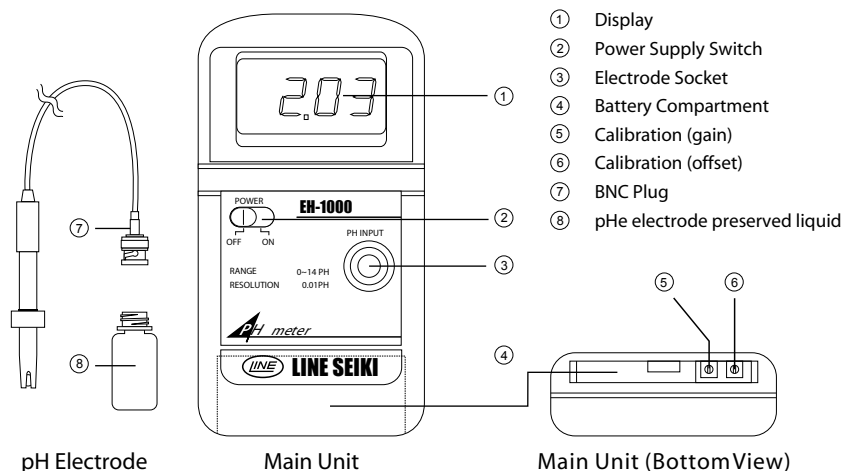
Read the precautionary instructions written next to the symbol indicating the caution mark of this manual.

Caution

- Please do not drop or subject this to a strong shock.
- Do not immerse this unit in water or any liquids. This product is not water proofed.
- Do not leave this instrument inside cars, buses and other vehicles during warm days.
- Do not expose the product into dust, high temperature and humidity, or direct sunlight.
- Make sure to remove the pH electrode when changing the battery.
- Turn off the power when the product is not being used. If the product is not to be used for a long time, please remove the battery.
- Avoid disassembling the product.
- Always put the tip of the electrode inside the preserved liquid if not in use.

PROCEDURES

1. Front Panel Description



2. Measuring Procedure

After calibrating the meter and electrode, these may now be used..

1. Remove the pH electrode from the preserved liquid bottle, and then connect the socket into the meter insert gate.
2. Turn-on the power.
3. Immerse the electrode into the solution. When the value in the display stabilizes, take the reading.
4. After measuring, please rinse the electrode with distilled water.

3. Battery Replacement

1. When the upper left corner of the LCD display shows "LO BAT", Battery need to be replaced.
2. In replacing the battery, slide out the battery cover until it is removed, then take the battery out.
3. Replace the battery with a new one and position this new battery correctly inside the meter's battery compartment.
4. Fasten back the cover.

* The instrument cannot measure accurately after low battery indicator is displayed. Please replace the battery immediately.

4. Cleaning

Wipe off dust, and other dirt on the unit using a dry cloth.

Caution

- Please do not wipe the unit with benzene or thinner, this may cause the unit to easily break and produce white marks on the chassis.

SPECIFICATIONS

1. General Specifications

Measuring Method	: glass electrode method (Combination Electrode)
Display	: 12.5 mm, LCD, 3 1/2 digits display
Sampling Time	: Approximately 0.4 seconds
Operating Temperature	: 0 - 50°C
Operating Humidity	: 90% RH max. (0 - 35°C) 80% RH max. (0 - 50°C)
Power Supply	: 006P, MN1604 (PP3) or equivalent ... 1 piece
Battery Life	: Approximately 270 hours
Dimensions	: Main Unit 131 (H) x 70 (W) x 25 (D) mm ...
	ph Electrode ... ϕ 9.5 mm x 120 mm
	Nearly 200 grams (battery and electrode included)
Accessories	: Instruction Manual ... 1 piece
	pH Electrode (EH-801) ... 1 piece
	Battery ... 1 piece

*1 1 Glass Electrode

The measured pH of a solution is determined by the amount of voltage (electric potential) produced across two electrodes. These electrodes are the glass electrode and the reference electrode.

*2 2 Combination Electrode

The combination electrode is a glass electrode and a reference electrode combined together to form a single electrode. The combination electrode is more convenient to handle in processes such as calibration, testing and washing.

* Attention

The pH electrode is easy to damage.
The life depends on the usage and measuring object.
Please exchange it to new one periodically.
The pH electrode is out of our standard warranty.

2. Electrical Specifications

Measuring Range	: pH 1 - 13
Resolution	: pH 0.01
Accuracy	: pH \pm 0.07 (pH5 - pH9) pH \pm 0.1 (pH4 - pH4.9, pH9.1 - 10) pH \pm 0.2 (pH1 - pH3.9, pH10.1 - pH13)

* Temperature Conditions : 23 \pm 5°C environment testing

PH CALIBRATION PROCEDURE

1. Prepare

1. pH electrode (EH-801)
2. 2 standard buffer solutions (Each sold separately)
: pH 7.00 (EH-807) / pH 4.00 (EH-804)

2. Two Points Calibration

1. Fasten the pH electrode into the electrode socket, then dip into the pH7 buffer solution.
2. Switch on the power.
3. Adjust "Gain Calibration Adjustment" until the display accurately shows the value of 7.00

3. Single Point Calibration

1. Fasten the pH electrode to the electrode socket, and dip the electrode into the buffer solution (example pH7 or those with other pH values).

* Measuring Consideration

This pH meter is already calibrated from the mV output of an ideal electrode (at 25°C environment).
However, (a) Knowing that ideal electrode produces zero volt at pH7.00, most electrodes will be slightly off.
(b) though the conditions of the environment may be at 25°C during calibration, measuring between 15 ~ 35°C may still be possible to do.
If the user wants to keep the electrode performing at high accuracy. It is necessary to always follow the calibration procedures.

LINE SEIKI CO., LTD.

37-7, 2-chome, Chuo-cho, Meguro-ku, Tokyo, 152-0001 JAPAN
Telephone : 03-5723-891 Fax : 03-3710-4552
E-mail : webtrade@line.co.jp
URL : <http://www.lineiseiki.com>