

Calibration Certificate

This certificate guarantee that the product has been inspected and tested in accordance with the published specifications.

The instrument has been calibrated by using equipment which was already calibrated to standards traceable to international standards.

Model:

Serial no.: _____

Date _____

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User's Guide

PP-201 pH Meter

PP-203 pH/mV/Temp Meter

PP-206 pH/mV/Temp Meter



CE

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Introduction:

Thank you for selecting model PP series microprocessor-based pH/mV/Temperature meter. It is possible to measure a wide range of pH, ORP and Temperature with a replaceable electrode. We recommend that you read and follow the manual carefully.

Features:

- ※ Large LCD built into adjustable “flip-up” cover, and displays pH or ORP and Temperature simultaneously.
- ※ Rugged design for handheld or bench top use, neck-strap offers “hands-free” operation.
- ※ Automatic or manual temperature compensation. Degree °C/°F switchable(PP-203, 206 only).
- ※ Simple to calibrate by one keyboard for 3 points buffer, calibration value can be changed to as your desire.
- ※ Memory function stores and recalls up to 20 points. Maximum/Minimum storage and recall (PP-206 only).
- ※ Indicate percentage of slope(PTS) after calibration.
- ※ Battery low and consumption indicator. Auto shut off after 10 minutes of non use.
- ※ Audible beeper to alert user when function is completed.

Specifications:

	PP-203 & PP206		
	PP-201		
	pH	ORP	Temp.
Range	0 ~ 14.00 pH	-1999 ~ 1999	0 ~ 100.0°C
Accuracy	± 0.01 + 1 digit	± 2 + 1 digit	±0.3°C+1digit
Resolution	0.01 pH	1 mV	0.1°C
Compensation	MTC: 0 ~ 100°C	ATC: 0 ~ 100°C	
Battery	9V (6F22)	9V (6F22) or AC Adaptor	
Calibration	pH 4.00, 7.00, 10.00		
Multi-function	Store/Recall, Min/Max (PP-206 only)		
Dimensions	Meter: 96 x 120 x 46mm (folded)		
Weight	Meter: 260 g (with battery)		

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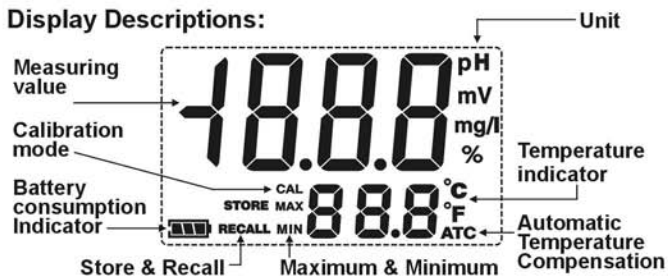
Device Descriptions:



Picture of PP-206

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Display Descriptions:



Functions of keyboard:



1. Press button to switch power On or Off.
2. Press and hold button to enter calibration mode.



1. Adjust temp. value for MTC while without inserting T/probe.
2. Change desired calibration value while under **CAL** mode.
3. Recall or erase all stored reading while under **RECALL** mode.



(PP-203, 206)

1. Press button to change function pH or mV.
2. Press and hold button to change degree °C or °F.



(PP-206)

1. Press and hold button to enter Maximum/Minimum mode.
2. Press and hold button again to exit this mode and return to measurement mode.



(PP-206)

1. Press button to store the reading.
2. Press and hold button to enter **RECALL** mode. To recall the stored reading by press up and down button.
3. Press and hold button again to exit this mode and return to measurement mode.




Operating procedure:

Accessories

Upon receiving the shipment, inspect the container and equipment for any signs of damage. Remove the packing list and verify that you have received all equipments :



Meter, Buffer solution pH 4, 7 & distilled water, neck-strap, T/Probe(PP-203, 206), Battery, User's Guide, Carrying case.
Optional: ORP electrode, AC/DC adaptor, Buffer pH 10.



Preparation

1. Fully extend the hinged cover, open the battery compartment by coin and connect 9V battery.
2. Connect electrode to **INPUT** BNC connector, unscrew soaking bottle to rinse the electrode with clean water and wipe it dry. Don't leak soaking solution from bottle, and replace bottle when end of usage.
3. Connect temperature probe to **TEMP** jack for ATC (PP-203, 206). MTC by press  and  button to get desired temperature compensation value.
4. Press  button to turn the meter power on.

Calibration

< pH >

1. Dip the electrode into the buffer solution pH 7. Stir gently and wait until the display stabilized. Press and hold  button to enter calibration mode until the display appears icon **CAL**, and then flash 7.00. When the display stop flashing and indicates "**SA**", then "**End**" while calibration is ending, and return to measurement mode.
2. Rinse the electrode with clean water and wipe it dry. Dip the electrode into the buffer solution pH 4. Stir gently and wait until the display stabilized. Press and hold  button to enter calibration mode until the display appears icon **CAL**, and then flash 4.00. When the display stop flashing and indicates "%" (percentage of slope), then "**SA**", then "**End**" while calibration is ending, and return to measurement mode.
3. After slope calibration pH 4 or pH 10, the display will indicate percentage of slope (PTS) to show the status of electrode. If the PTS is below 70% or above 130%, the electrode must be replaced. A slope of 100% is ideal.


- Note:** (1) Icon **SA** will not appear if the calibration fails.
- (2) When doing a 2 or 3 point calibration, Calibrate with buffer pH 7 first, and then follow with buffer pH 4 or pH 10.
- (3) Calibration value can be adjusted as your desired buffer value during flash status while under **CAL** mode by press  and  button. For example, pH 6.86 instead of pH 7.00

Measurement

< pH >

1. After calibration, rinse the electrode with clean water and wipe it dry. Dip the electrode and T/probe(ATC) into sample solution to be measured. Stir gently and wait until a stable reading can be obtained.




< ORP >

1. Connect ORP electrode to **INPUT** BNC connector.
2. Calibration is not necessary for ORP. But it could be tested with a specific ORP solution to check electrode is good or bad.
3. Press  button to select the mV mode. The display will reflect the unit of measure.
4. Rinse the electrode with clean water and wipe it dry. Dip the electrode into sample solution to be measured. Stir gently and wait until a stable reading can be obtained.








- Note:** (1) The display will appear "**_ _ _**" when it is over measuring range.
- (2) It's not necessary for temperature compensation during measuring ORP value.
- (3) After measurement, rinse the electrode with clean water. Replace the soaking bottle. The soaking bottle should be always kept wet by adding soaking solution.

Functions mode: (PP-206)

Maximum (highest) and Minimum (lowest)

1. Press and hold  button to enter measuring maximum and minimum value mode until the display appears flash icons **MAX** and **MIN**.
2. Press  button with light to get maximum and minimum value in succession and then returns to the **MAX/MIN** recording mode.
3. Press and hold  button to exit this mode until icons **MAX** and **MIN** disappears, and return to measurement mode.

Store and Recall

1. Press  button to store the current reading. The storage location number will be displayed followed by the stored reading up to 20 points. If an attempt is made to store more than 20 points, the stored reading will be overwritten which are starting with the first reading.
2. Press and hold  button to into **RECALL** mode and the last stored reading taken will be displayed first. To recall the stored reading by press  or  button.
3. Press  and  button simultaneously until the display appears icon **nuL** to erase all stored reading while under the status of **RECALL** mode.
4. Press and hold  button to exit this mode until icon **RECALL** disappears, and return to measurement mode.

Note: (1) The display could not auto shut off while under the status of **MAX/MIN** mode.

Battery replacement:

1. Change a new battery when the battery indicator flashing.
2. Fully extend the hinged cover, insert coin to hole and press it down to open battery compartment. Connect a new 9V battery.

Electrode storage:

After measurement, rinse the electrode with clean water, and replace the soaking bottle or be soaked in beaker with 4M KCl soaking solution. The soaking bottle or beaker should be always kept wet by adding soaking solution.

Electrode cleaning:

1. Soft coating can be removed by vigorous stirring or by using a squirt bottle.
2. Chemical coating or hard coating should be chemically removed by detergent or others.
3. After chemical cleaning, the electrode should be soaked in soaking solution 1 hour at least before measuring.

Applications:

Agriculture • Anti-freeze recycling • Aquarium • Boiler • Chemical industry • Cooling tower • Drinking water • Fish farming • Food industry • Garden husbandry • Hydroponic • Laboratory usage • Plating industry • Swimming pool & Spa • Water treatment