



PH & ORP METER

AE 6601

The AE6601 is a high-precision portable PH & ORP detector that measures the oxygen concentration and temperature in water.

Thank you for purchasing the handheld PH & ORP meter please read this manual thoroughly before operation, and keep this manual properly for emergencies.

This manual only provides methods and precautions for using the measuring functions related to this product.

Please check whether the instrument is in good condition and whether the accessories are complete after you received the product. In case of any missing parts or any other issues, please contact the supplier as soon as possible.



Meter Range 0.00~14.00pH

High Precision Probe Accuracy $\pm 0.02\text{pH}$

Manually record 99 pieces of data, and shut down after one hour of inactivity.

Automatic temperature compensation measurement in high altitude area, widely used in pH meter measurement in aquaculture, sewage treatment, industrial production, experimental scientific research and many other fields.

PH / ORP Probe Interface

Temperature Probe Interface



AE6601

TEMPERATURE METER



**AE6601 – pH Meter
w/ Glass Electrode**



**AE6601 – pH Meter
w/ Standard Electrode**



**AE6601 – ORP Meter
w/ Standard Electrode**



**AE6601 - pH Meter
w/ Surface Electrode**

AE6601

TEMPERATURE METER

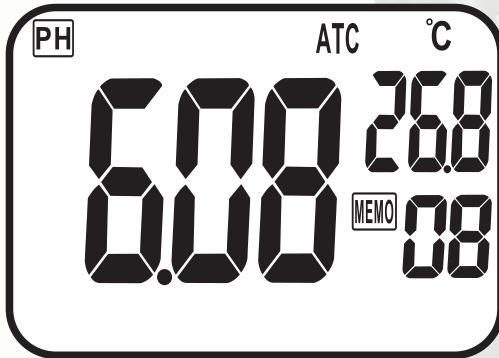
Specification:



Model	AE6601
PH measurement range	0.00~14.00pH
PH resolution	0.01pH
PH accuracy	±0.02pH
ORP measurement range	-1999 to+1999mV
ORP resolution	0.1 mV(-199.9 to +199.9mV),1 mV(other ranges)
ORP accuracy	±0.2 mV(-199.9 to +199.9mV), ± 2 mV(otherranges)
Temperature measurement range	-5.0~65.0°C .
Temperature resolution	0.1°C
Temperature accuracy	±0.5°C
PH Calibration	4.00/6.86 / 9.18 pHthree-pointcalibration
Automatic temperature compensation (ATC)	Yes (for PH measurement only)
Memory record	Up to 99 records
Auto power off	After one hour of inactivity
LCD size	38*54mm
Backlight	Yes
Probe cable length	About 1.15 meters (with probe)
Power supply	AAA*4pcs
Product dimension	70*30*169mm
Material supplied	Meter, PH probe, Temp. probe, pH Buffer*3, Manual, Certificate of Quality, AAA battery *4, Suitcase, (optional ORP probe)

PH Measurement Steps

1. Be sure to remove the pH electrode soaker bottle from the electrode before measurement, Plug the pH and Temp. probe into the port on the top of the meter, press "⊕ SET" to turn on the meter, the press "Mode/▲" key to switch to the pH measurement mode as shown in the figure below.



2. Dip the pH electrode and the Temp. probe into the sample, stir the pH electrode gently back and forth, The reading will be stable after about 1 minute, then read and record the data.

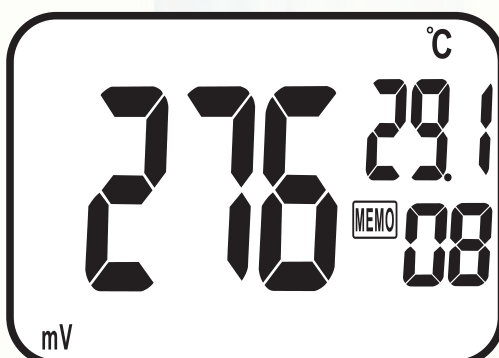
3. After powered on, press the "☀/Recall" key will turn on the backlight, and press the "☀/Recall" key once again to turn off the backlight. It will turns off automatically after 1 hour of inactivity. To override the automatic power off, hold down the "⊕ SET + Mode / ▲" keys at the same time for 2 seconds to turn on the meter until "n" appears. The automatic power off is disabled after rebooting and needs to be reset.

4. After measurement, rinse the pH electrode and Temp. probe with clean water (e.g. tap water). You can brush the pH electrode tip with a soft brush softly, be careful about the glass bulb for lasting pH electrode life.

5. After using, plug the probe into the soaker bottle and then rotate the bottle to fit into the cover tightly. (make sure there is enough solution which is KCL in it).

ORP Measurement Steps

1. Plug the ORP probe into the port on the top of the meter, and remove the soaker bottle, press "⊕ SET" to turn on the device, then press the "Mode/▲" key to switch to the ORP measurement mode as shown in the figure below.



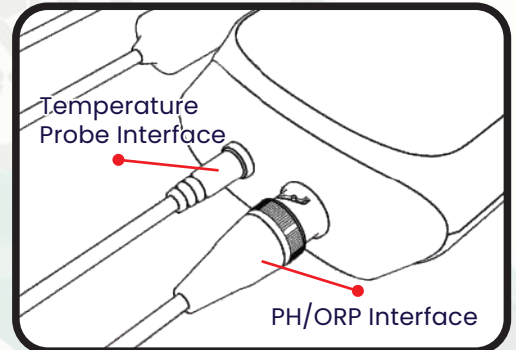
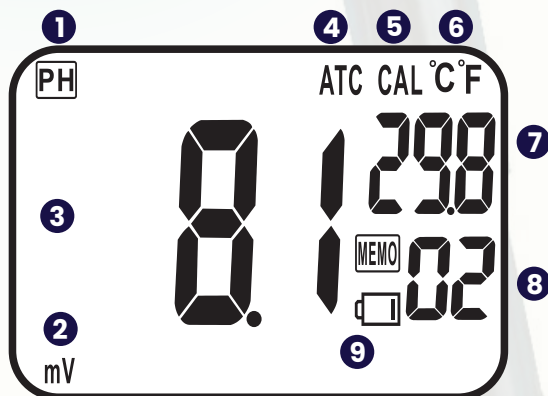
2. Dip the ORP electrode in the sample, stir the ORP electrode gently for about 1 minute, the data can be read and recorded when the value is stable.

3. After measurement, rinse the ORP probe with clean water (e.g. tap water).

4. After using, plug the probe into the soaker bottle and then rotate the bottle to fit into the cover tightly. (make sure there is enough solution which is KCL in it).

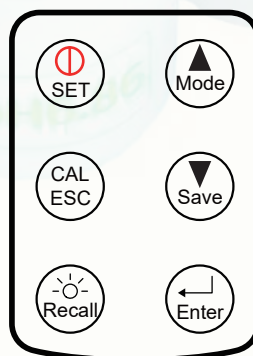
5. The ORP electrode needs to be polished with sandpaper on the platinum piece or platinum loop regularly. The platinum piece or platinum loop should be kept as shiny as possible, otherwise the measurement accuracy will be affected!

LCD Display



1. " PH " pH indication
2. " mV "ORP indication
3. Measurement value
4. " ATC " means automatic temperature compensation
5. " CAL " means calibration
6. Temperature unit
7. Temperature of meter
8. Total number of records
9. Low battery warning, please replace the battery to ensure the accuracy of the measurement.

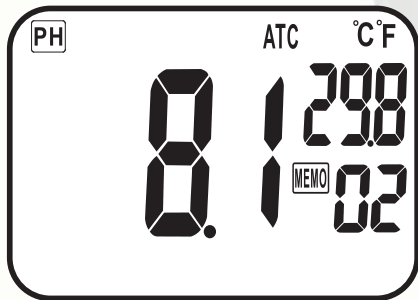
Keypad



- SETkey/⏻** : Short press to turn on/off; press > 1s in measurement mode to enter setting mode.
- CAL/ESC key** : Press > 1s in measurement mode to enter calibration mode;
Short press in setting mode to exit setting mode
- Recall/☀️key** : Short press to turn on or off the backlight; press > 1s to recall the saved data;
Press the up and down keys to select the record data one by one;
and press the ESC key to exit the record recall mode.
- Mode/▲ key** : Increase the setting value; Switch measuring modes
- Save/▼ key** : Decrease the setting value; Short press in measurement mode to save data
(Maximum of 99 records, New data can not be saved if the memory is full.
It is needed to clear up existing 99 memories for new data)
- Enter/↵key** : Key to confirm setting and calibration

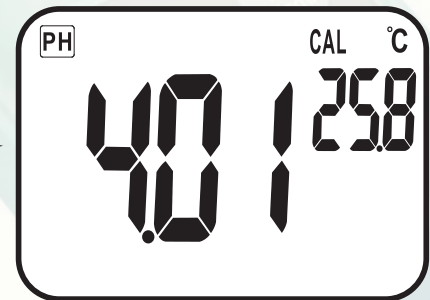
Calibration

- 1: We recommended that you should calibrate the pH probe every half a month. **Before calibration you should use a soft brush to clean the glass bulb area softly!**
- 2: Rinse the pH electrode/Temp. probe with clean water for 1 minute shake off the water on them slightly and wipe the surface of the pH electrode/Temp. probe with a tissue gently.



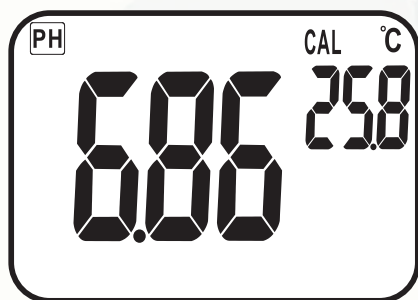
(Normal measurement mode)

Long press CAL/ESC to calibrate

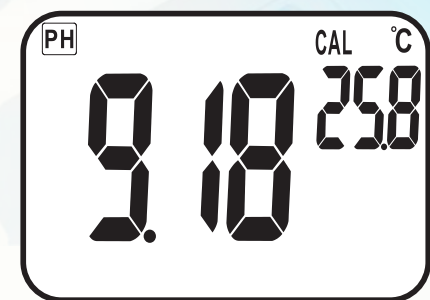


(4.00 calibration interface)

- 3: Dip the pH electrode/Temp. probe into the 4.00pH buffer solution (the buffer solution can be placed in a clean container to avoid overturning), gently stir it for 1 minute, press the "CAL/ESC" key for more than 1 second to enter the calibration mode, the value and CAL icon on the screen will flash, press the "Enter" key to complete the calibration, if the difference between the measured value and the buffer solution is less than 0.02pH, the calibration is correct, otherwise press the "CAL/ESC" key to recalibrate until the calibration is correct.



(6.86 calibration interface)



(9.18 calibration interface)

- 4: Take out the pH electrode/Temp. probe, place the 4.00 pH buffer solution back, rinse the pH electrode/Temp. probe with clean water shake off the water on them slightly and wipe the surface of the pH electrode/Temp. probe with a tissue gently.
- 5: Repeat steps 2, 3, and 4 to complete the 6.86pH and 9.18pH calibrations. (The buffer solution shall not be mixed with other liquids and shall be stored at room temperature and kept in dark place).

Setting

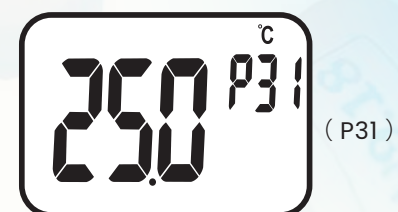
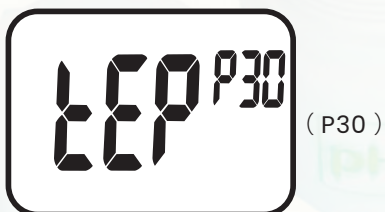
1. P10 for deleting the saved data : In measurement mode, press the "⏏ /SET" key > 1S to enter the setting mode P10, then press the "Enter/↵" key to P11, press the "Mode/▲" or "Save/▼" key until "YES" appears press "Enter/↵" again to confirm cleaning all memory meter will return to P10 when memories are deleted .



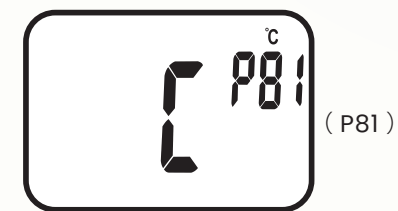
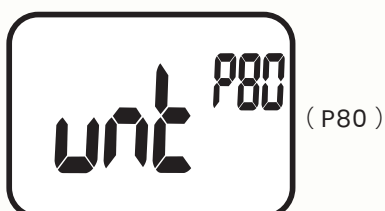
2. P20 for setting pH electrode parameters : In setting mode, press " Mode/▲" or "Save/▼" key to switch to P20, press "Enter/↵" key to switch from P21 to P25 in turn, you can check slope value in P21, P22 P23, P24, and check offset voltage in P25.



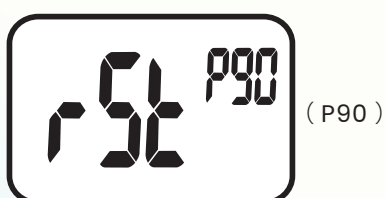
3. P30 for setting manual compensation temperature : In setting mode, press "Mode/▲" or "Save/▼" key to switch to P30, press "Enter/↵" key to enter P31, and then press "Mode/▲" or "Save" /▼ " key to adjust the manual compensation temperature value, press "Enter/↵" key to complete the manual compensation temperature setting.



4. P80 for switching temperature unit : In setting mode press "Mode/▲" or "Save/▼" key to switch to P80, press "Enter/↵" key to enter P81, and then press "Mode/▲" or "Save/▼" key to select °C/°F unit press "Enter/↵" key to confirm.



5. P90 for clearing calibration data : In setting mode, press "Mode/▲" or "Save/▼" key to switch to P90, "Enter/↵" key to enter P91 press "Mode/▲" or "Save/▼" key until the word "yes" appears, press "Enter/↵" key to clear the calibration data, after clearing the calibration data, you need to re-calibrate.



Error code

- 1) E02 : Reading is under the lower limit;
- 2) E03 : Reading is over the upper limit;
- 3) E04 : The original temperature data error result in this error;
- 4) E13 : Slope or offset value of pH probe is out of range.
Clean or re-calibrate pH probe or replaced with a new probe;
- 5) E31 : Measuring circuit failure, repair is required;

Maintenance

1. Misoperation : **leave the pH probe without the soaker bottle after the measurement.**
After using, clean the probe and plug the probe into the soaker bottle (make sure there is enough solution which is KCL in it), rotate the bottle to fit into the cover tightly.
2. If not used for a longtime, you should handle it as follows :
 - 1) Plug the probe into the soaker bottle (make sure there is enough solution), rotate the bottle to fit into the cover tightly.
 - 2) Take out the battery, otherwise the battery solution maybe leak and cause damage to the meter!
 - 3) Make sure to store it in a temperature above zero **to prevent freezing!**

**Warning : Soaker solution, buffer solution, etc. cannot be eaten!
Keep out of reach of children!**

Temperature effect on pH buffer

ph4.00

5	10	15	20	25	30	35	40	45	50	55	60
4.00	4.00	4.00	4.00	4.01	4.02	4.03	4.04	4.05	4.06	4.08	4.09

ph6.86

5	10	15	20	25	30	35	40	45	50	55	60
6.95	6.92	6.90	6.88	6.86	6.85	6.84	6.83	6.83	6.83	6.83	6.84

ph9.18

5	10	15	20	25	30	35	40	45	50	55	60
9.39	9.33	9.28	9.23	9.18	9.14	9.11	9.07	9.04	9.02	8.99	8.97

Important declare

- 1 : Old batteries must be disposed of in accordance with local laws and regulations.
- 2 : The company reserves the right to update and modify the Design Specifications and Manual of this product without prior notice.

Warranty

1. The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty covers normal operation and does not cover battery misuse, abuse, alteration, tampering, neglect, improper maintenance or damage resulting from leaking batteries.
2. The above warranty terms are only valid for the main instrument and consumables such as probe accessories are not covered by the warranty.

