User Manual

**PH325
Long Tube Stem pH Meter**

INTRODUCTION

Congratulations on your purchase of this long tube pH pen. Please read the manual completely before using this pen. Filing and keeping the manual for future reference. Recommended to soak the electrode for at least 30 minutes before using to clear up the lazy effect.

Features:
- **IP65 Waterproof** housing.
- **Dual display** with ATC.
- **Data hold** to freeze readings.
- **Compact size**, easy to fit in pocket.
- **Low battery** indicator.
- **Auto power off**.
- **C/F** unit switchable.
- Power by 2pcs **CR2032** batteries.
- **Multi points** calibration.
- **One touch** only for calibration.

MATERIAL SUPPLIED

This package contains:

✓ The meter x 1
✓ CR2032 button battery x 2
✓ Operation manual
✓ Plain box

POWER SUPPLY

The meter is powered by 2 pcs CR2032 batteries. To check the battery when:
1. First time use
2. The battery symbol appears on LCD
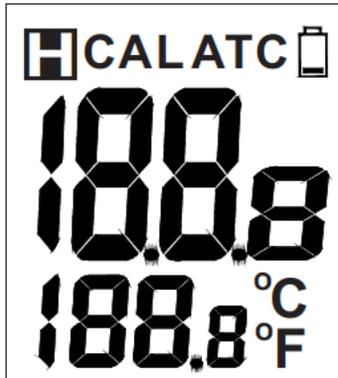3. The meter can not power on

1

To install the batteries:

1. Turn off the meter.
2. Loose the battery cover in clockwise direction by coin (DON'T discard the black O-ring!)
3. Replace the old batteries with two new button cells CR2032.
4. Make sure the batteries are in place and the polarity is correct.
5. Put back the battery cover and turn it in counter-clockwise direction to lock

NOTE:

1. **Please re-calibrate the meters after changing batteries.**

2. **Remove battery from instruments that you do not plan to use for a month or more. Do not leave battery in instrument.**

2

LCD DISPLAY

- The 1st display shows the measured pH reading.
- The 2nd display shows the temp.
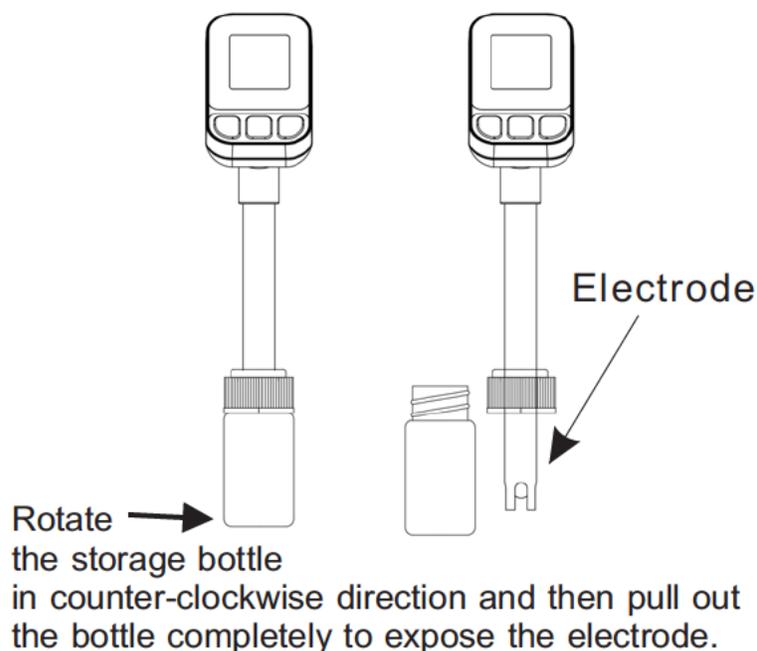- Cal=Calibration mode
- ATC=Auto Temp. Compensation
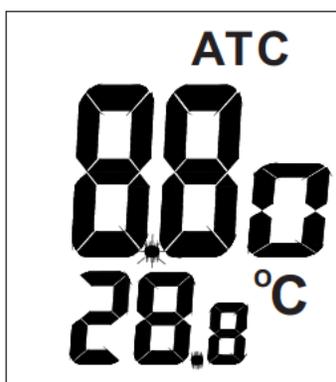- ⊞ =Data hold

KEYPAD

CAL   HOLD

OPERATION

1. Remove the probe storage bottle from meter to expose the electrode out. It is normal if you find white crystals are present on the cap or electrode assembly.
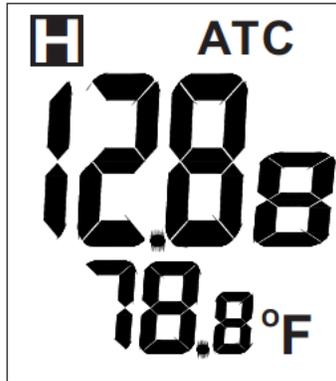
WARNING: For pH meters, please always make the bottle is filled with storage buffer to keep the electrode wet and in a good storage condition.

Electrode

Rotate ➔
the storage bottle
in counter-clockwise direction and then pull out
the bottle completely to expose the electrode.

2. Dip the electrode into the test solution.
   Press " $\mathbb{O}$ " to power on the meter
   and stir it to get a stable reading.

3. A small dot " • " is flashing while the
   meter is in measurement mode. The
   LCD not only shows the measured pH
   value but also displays the temperature.

4

4. Press "(▲) HOLD" to freeze current readings. The "H" icon will appear on the LCD and the small dot will not flash. Press "(▲) HOLD" again to release the hold mode.

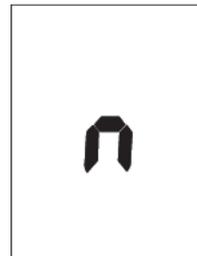H ATC

128
12.08
78.8°F

5. Turn off the meter by pressing "(①)" button.

6. Once finishing the measurement, clean the electrode, put back the bottle, store the meter under the 0~50°C.

7. Please see page 7 for the calibration procedures.

AUTO POWER OFF (SLEEP FUNCTION)

This meter will shut off automatically 20 minutes of inactivity. For operating longer time, you can disable the sleep mode.

To disable the auto power off:
Before power on, pressing "(①)" + "(▲) HOLD" keys simultaneously until a "n" appeared on the screen and then release keys to return to normal mode.

n

1.800.561.8187   www.itm.com   information@itm.com

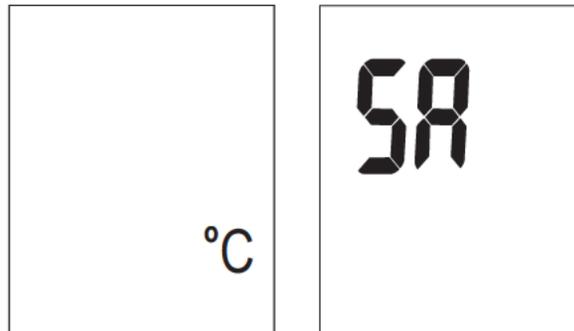**Note: The disable sleep mode will be invalid after every power off.**

AUTOMATIC TEMPERATURE COMPENSATION (ATC) & TEMP. UNIT SETTING

The pH pen is capable of measuring with Automatic Temperature Compensation. In above models, "**ATC**" will show in the middle top of the LCD.

Temp. Unit Setting

To select the temp. unit (°C or °F), turn off the meter first. When the meter is off, press "⏻" and "↵ CAL" at the same time until the C or F appears on the LCD. Press "▲ HOLD" to select the preferred unit and then press "↵ CAL" to save. "5A" will appear on the LCD for one sec and then go back to normal.
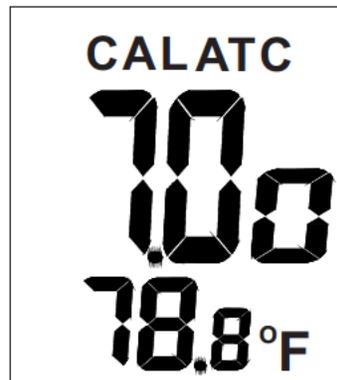
CALIBRATION MODE (CAL)

Calibration is necessary and should be done regularly, recommended everyday if the meter is used often. The unique calibration design of the meter features automatic buffer recognition to avoid errors.
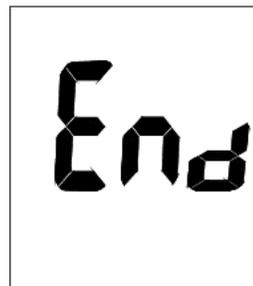
Calibration

1. Power on the meter.
2. Place the electrode into a buffer solution (4,7or10), pH7 should be calibrated first and then 4 or 10 pH for better accuracy
3. Press " (⏎) " to enter pH calibration mode. The icon "CAL" will appear on the LCD for one second and then pH value (4,7 or 10) will be displayed on the LCD.

4. If probe or buffer is in error:
   If the buffer is incorrectly used or the probe is damaged or the probe can not detect buffer in below voltage range, the meter will escape calibration mode automatically after 10 seconds.
   Text "End" will appear on the LCD in one second and then will go back to normal status.

Acceptable voltage range of each point:
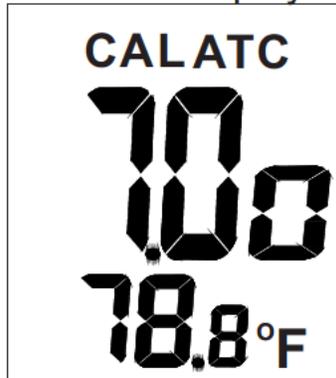PH 4.00 :   97mV..... 250mV
PH 7.00 : - 60mV.....   60mV
PH10.00 : - 250mV..... -97mV

5. If the probe recognizes the buffer:
   If the probe successfully recognizes the
   buffer, the buffer pH value (4 or 7 or 10)
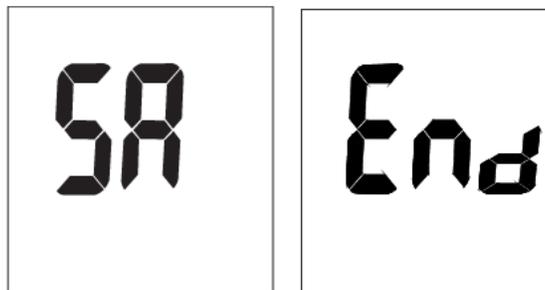   will appear on the display in 2 seconds.

CAL ATC

7.00

78.8°F

If the calibration buffer is not 4,7,10 but
another value, such as 7.01, just
press " (▲) HOLD " to change the value.

6. The adjustable cal. point range for 4.0
   pH is from 3.50 to 4.50. For 7.0 pH is
   from 6.50 to 7.50. For 10.0 pH is from
   9.50 to 10.50

7. To save the calibration value:
   When the electrode reads a stable value
   and user stops pressing any keys, the
   meter will automatically save the value
   and then escape the calibration mode.

SA   **End**

8. Rinse the probe with de-ionized water or a rinse solution (tap water...) after each measurement to last the meter's life.

9. Repeat above steps until the 3 point calibration are finished.

MAINTENANCE

✓Please always keep the pH glass bulb wet by using the storage bottle to protect and store the electrode.

✓Always rinse the pH electrode in de-ionized water or rinse solution (tap water......) before next use.

✓Never touch or rub glass bulb in order to last pH electrode life.

✓ Make sure the electrode is clean. Between measurements, rinse the electrode with deionised water. If the eletrode has been exposed to a solvent immiscible with water, clean it with a solvent miscible with water e.g. ethanol or acetone and rinse carefully with water.

✓Store the electrode carefully.

TROUBLESHOOTING

◆ **Power on but no display**
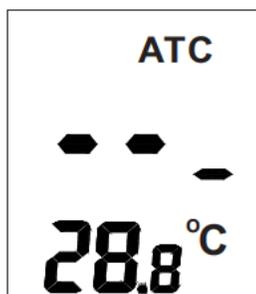
    1) Make sure the time of pressing power key is more than 100 mS.

    2) Check the battery are in place and make good contact and correct polarity.

    3) Replace with new batteries and try again.

    4) Move away the batteries for one minute and then put back again.

◆ **Slow response**

Clean probe by immersing the electrode in tap water for 10-15 minutes, then rinse thoroughly with distilled water or use a general purpose electrode cleaner.
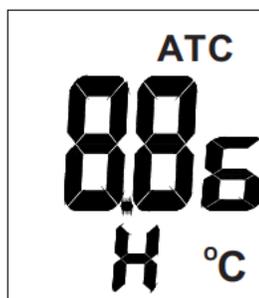
◆ **LCD display " - - - "**

Out of pH range, too acidic/or too alkaline.

ATC

- - -

$28.8\ ^{\circ}C$

◆ **"H." Or "L."**

Out of temp. range, too cold/or too hot.

ATC

88.6

H $^{\circ}C$

◆ **pH value fluctuate quickly**

It is normal when the electrode is not immersed in the water but exposed in air.

SPECIFICATION

Model	8620
Body Material	PC
Reference	Single,Ag/AgCl
Junction	Ceramic
Electrolyte	Gel,3.3M KCL
Tip Shape	Spheric
pH range	0.00~14.00
pH accuracy	+/-0.1
pH resolution	+/-0.01
Temp. Sensor	Built-in
Probe Diameter	12 mm
Probe Length	130mm
LCD size	29(H)x22.5(W)mm
Operating temp.	0~50°C
Operating RH%	Humidity<80%
Storage temp.	10~50°C
Storage RH%	Humidity < 90%
Sensor life time	>6 months (with good maintenance)
Meter Dimension	187.4(L)x40(W)x58.4(H)mm
Weight	115g
Battery	CR2032 x 2pcs
Standard Package	Meter/Battery/Manual/Paper box
Application	Laboratory general purpose

✓ Battery Life: >100 hrs continuous use

Warranty

Triplett Test Equipment and Tools extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries are not covered by this warranty