

**Precision is now available in a line of portable electrochemistry products that provides accurate measurement of pH, ORP, conductivity, TDS and salinity.**

**ST series pen meters are the economical option when you are simply looking for meters that are easy to use and provide accurate measurements.**

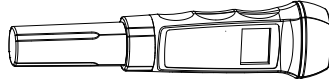
**The pen meters should not be used by Children of age 12 or younger.**

**This product conforms to the EMC Directive 2004/108/EC.**

## ST20 pen pH meter Instruction Manual

Please read the manual completely before use. This manual serves the following models:

- ST20 (pen pH meter)



### First Usage

Condition the pH electrodes by immersing it in pH electrode protection solution for 1 hour before using. If the pH electrode protection cap is dry (may cause white crystals), add storage solution in the cap and soak the pH electrode for 1 hour.

### Accuracy

ST20 is 0.01pH resolution and 0.05pH accuracy pen meter. Each ST20 pen meter is factory calibrated.

You may need to calibrate the ST20 regularly to ensure accuracy.

### pH Measurement

Remove the protection cap, rinse the pH electrode glass bulb with pure water (distilled water), and wipe clean. (Glass bulb is fragile, be careful, do not scratch it.)

- Press button-On/Off turn on the meter.
- Dip the electrode about 2 to 3cm into the test solution(at least 20ml). Stir and wait until the reading stabilized.
- Clean the electrode with pure water after measurement.
- When measurement, you can press button-Hold to freeze the reading, press button-Hold again to release measurement again.
- Press and hold button-On/Off to turn off the meter.

### Calibration

- Press the button-ON/OFF to switch the pen on, dip the electrode into pH 7.0 buffer.
- Press the button-CAL to enter into calibration mode, The "CAL 7.00 pH" will be shown, "CAL" is blinking. the meter will judge if the signal is stable automatically, it will take a few seconds, then the meter display "CAL 4.01 pH".
- When display "CAL 4.01 pH", "CAL" is blinking, means pH7.00 calibration has been finished, Rinse the electrode with pure water and dip it into pH 4.01 buffer.
- The meter will judge if the signal is stable automatically; it will take a few seconds, then the meter display "CAL 10.00 pH". If the number, such as "4.01" is blinking, means the calibration point can not pass. You may need to check if the buffer is right.
- When display "CAL 10.00 pH", means pH4.01 calibration has been finished, Rinse the electrode with pure water and dip it into pH 10.00 buffer.
- The "CAL" will disappear after finishing 3-point calibration and go back measurement mode.

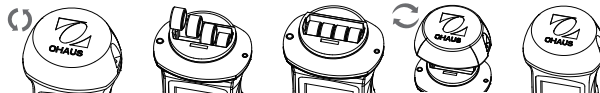


### Maintenance

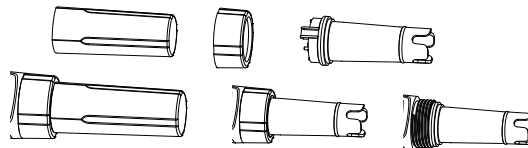
Clean the electrode after test and cover the protection cap, be sure storage solution is not dry in the cap.

Harsh samples may short the pen meter life time, such as sticky, dirty or oily liquids.

The meter use button battery 1.5V (AA)\*4, replace all the batteries when the display fade or not turn on.



### The electrode is replaceable.



### Order Information

Model	Description
ST20	0.01pH resolution waterproof pen pH meter

### Replaceable electrode:

Electrode pH20 ST

### Specification

Water Proof Pen Meters	ST20
Cond. range	0.00 – 14.00 pH
Resolution	0.01pH
Accuracy	± 0.05 pH
Battery	4 x 1.5V
Dimension	185 x 42 x 37mm
Weight	105g
Auto-off	After 6 min no operation
Ambient temperature	0~50 °C(32-122°F)
Materials	ABS



In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements. Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. If you have any questions, please contact the responsible authority or the distributor from which you purchased this device. Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related. Thank you for your contribution to environmental protection. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna, increase the separation between the equipment and receiver or consult the dealer or an experienced radio/TV technician for help.



\* 3 0 0 7 7 2 0 1 \*