

产 品 说 明 书

User's Guide

型号 / MODEL: CT-6020A; CT-6020AL

[中文](#)

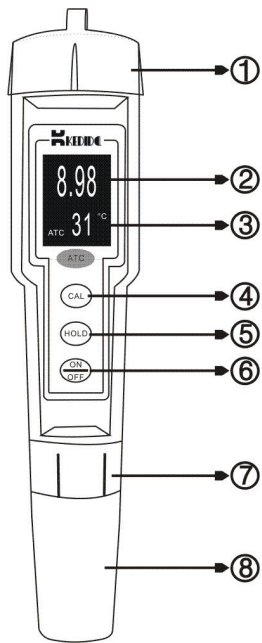
[English](#)

温馨提示

中文

English

- 1. 敬请在使用此仪表前，详细阅读此说明书
- 2. 仪表的玻璃电极为易碎品，取下保护帽要小心使用，因为任何破损或擦毛都可能使电极失效!
- 3. 玻璃电极的保质期为一年，出厂一年以后，不论使用与否，其性能都会有所老化，应及时更换。
- 4. 玻璃电极在干燥状态下是无法正常使用的，请使用前用蒸馏水或纯净水浸泡玻璃电极10~30分钟活化再使用。
- 5. 仪表开机时会显示产品型号，随后进入测量模式



序号	描述
1	电池区
2	数据显示区
3	温度显示区
4	CAL/校正键
5	HOLD/数据锁定键
6	ON/OFF 开关机键
7	固定电极环
8	电极连接部分

特点

➤ 测量范围 0.00 ~ 14.00 pH.

➤ LCD 液晶双显示pH值和温度值

➤ 外置电极一体式数字笔式pH计，方便使用

➤ 显示锁定功能 (HOLD)

➤ 全防水设计，体积小，重量轻

➤ °C/°F温度单位可选

➤ pH 4.01,pH 6.86, pH 9.18 三点校准

➤ 1.5 V 电池 (LR44, BAT) x 4 PCs

➤ 电极可拆卸，更换简单方便

➤ 自动温度补偿，在温度变化的情况下保证精度

➤ pH 4.01,pH 6.86, pH 9.18 标准缓冲液

➤ 10分钟自动关机功能

➤ 产品型号末尾带“L”有智能LED背光，感应系统可根据周围光线明暗自动开启或关闭。

➤ 产品广泛应用于环保，食品，卫生，地质探矿，冶金，地面水，工业废水，饮用水，酸雨等检测

技术参数

➤ 显示屏	➤ LCD, 尺寸 : 20 mm x 27 mm
➤ 测量范围	➤ 0.00 to 14.00 pH.
➤ 分辨率	➤ 0.01 pH
➤ 精 度	➤ ± 0.02 pH
➤ 校 正	➤ pH 4.01,pH 6.86, pH 9.18三点校准
➤ 工作温度	➤ 0 ~ 50°C(32 ~ 122 °F)
➤ 精 度	➤ 1°C / 2°F
➤ 自动补偿温度	➤ 0 ~ 50°C
➤ 尺寸	➤ 188 x 38mm
➤ 重量	➤ 136 g (包括电极).

操作指南

使用前请用力拨下仪表下方的电极保护帽，请勿旋动!

一、恢复出厂设置

- 1.按下“ON/OFF”键开机（如已开机，可省略）
- 2.长按“HOLD”键，直到显示屏显示**CLR**符号后，才可放起按键（确认仪表不能在锁定状态下）
- 3.仪表再次校正后可正常使用。

二、°C / °F单位转换（出厂有仪表默认温度单位：°C）

- 1.仪表在关机状态下，同时按住**CAL**键+**ON/OFF**键（切记不要放起）
- 2.等待显示屏右侧出现°C或者°F符号时，同时放开**CAL**键+**HOLD**键
- 3.点按“**CAL**键”进行温度单位选择°F或者°C
- 4.按“**HOLD**键”保存，并显示屏会显示“**SR**”符号
- 5.随后仪表进入正常测量模式。

三、自动温度补偿（ATC）

在显示屏左下角有**ATC**符号出现，表示仪表处于自动温度补偿工作模式中。

四、锁定功能

按“**ON/OFF**键”开机后待仪表进入测量模式，数据显示区有一个小数点不停地闪烁（正常测量模式）；

按下“**HOLD**键”锁定液晶显示屏上的当前数据，小数点停止闪动（锁在模式开启），再次点按“**HOLD**键”即解除锁定模式。

五、**仪表校正**（首先准备校正时用标准缓冲液-以PH7.00为例，温度在25℃为佳）

- 1.校正点分别为： **pH 4.01,pH 6.86, pH 9.18**； 请准备正确的缓冲液；
- 2.仪表在校正过程中， 未结束前切勿将仪表从校正液中取出
 - a.显示屏-左下角 “**CAL**” 符号闪烁中， 此刻仪表处于校正模式
 - b.显示屏还没有显示 “**END**” 符号前， 此时仪表还处于校正过程中

操作步骤（为保证仪表测量精度请即时进行仪表校正操作， 如果仪表长时间未使用， 请先将仪表电极部分浸泡在蒸馏水或纯净水中10～30分钟， 使电极活化， 活化过程中仪表可处于关机模式）

步 骤	描 述
1	电极活化后， 点按 “ON/OFF键” 开机
2	将电极插入标准缓冲液中， 适当搅动后静止等待读数稳定
3	长按 “ CAL 键” 大约三秒， “ CAL ” 符号出现在显示屏上
4	此时放开 “ CAL 键”， 等待仪表自动识别当前标准缓冲液的值并显示
5	之后显示 “ SR ” 符号， 仪表校正成功并存储正确数据
6	1秒后显示符号 “ END ”， 仪表退出校正模式
提示	如果仪表跳过第5步， 直接执行第6步， 表示仪表校正失败， 需重新校正或恢复出厂设置后再校正仪表。

六、超量程显示

当pH值低于0 或者高于 14时， pH显示区会显示：“- - -”。

当温度低于0°C或高于50°C时， 温度显示区会显示：符号 ‘**L**’ 或符号 ‘**H**’ 。

七、低电压提示

当电池符号显示或显示屏闪烁时， 表示电池电压已不足，请尽快更换新电池，切记新旧电池不要混用。

八、产品保修

产品购买之日起，免费保修一年（不包含电池和玻璃电极）

在下列情况下不属于保修范围：

使用不当造成损坏（如电池漏液、摔坏、进水等）； 工作温度超过**50°C**，外观受到损坏、超过保修时间以及产品被自行拆装；

九、温馨提示

1. pH计属于专业仪表，非专业人士请在专业人士指导下进行操作，以免造成仪器故障！

2. 首次使用前请把电极用清水浸泡10分钟左右，

3. PH计标定时请用标准缓冲液标定以及正确的操作方法，不正确的标定将会引起测量误差超标！在非标定状态下，请勿按“**CAL**”键，否则会引起仪器错误的标定，可能引起仪器不能正常工作或测量误差严重超标！

4. pH缓冲粉沫请用**250ML**蒸馏水溶解后，即可使用。

5. 使用时请不要把ph计插入液体过深，只要液体能够没过玻璃电极即可。使用前特别注意pH电极固定环是否松动，如果ph电极固定环松动，pH计使用过程中测试的液体可能会进入仪器内部造成故障。

附录

缓冲液的配置方法：本仪表出厂时配备有三包粉状标准缓冲剂，每一包粉状标准缓冲剂可配制250mL缓冲液。缓冲液配制时请勿使用金属容器。

以配制250mLpH值=6.86标准缓冲液为例说明配制方法：

- (1) 配制时用一个容量大于250mL干净的塑料（玻璃）容器，取出pH=6.86（绿色）缓冲剂塑料小袋，撕开它把里面的白色粉状物倒入容器中。
- (2) 在塑料（玻璃）容器中加入250mL蒸馏水，如果没有蒸馏水可用市售瓶装250mL纯净水代替。
- (3) 用一个洁净的玻璃或者其他工具棒缓慢搅动，直到粉状物全部溶解即可。

配制4.01和9.18，10.01标准缓冲液方法同上。三种缓冲液配制完成，应及时贴好标签，以防日后搞不清楚。

缓冲液的使用

250mL的缓冲液可以分多次使用，在仪器进行标定时用三个塑料（玻璃）小容器，分别倒入4.01、6.86和9.18缓冲液，并做好标记。缓冲液使用量只要能够全部淹没玻璃电极即可。使用过的缓冲液应倒掉不要重复使用。剩余部分存放在20-25°C阴凉干燥处。

Tips:

[中文](#)

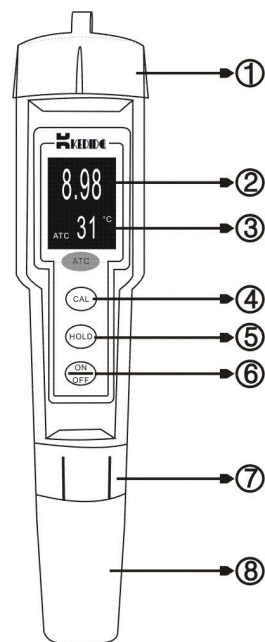
[English](#)

1. Please read this manual carefully before using this instrument
2. The glass electrode of the instrument is fragile, so be careful when removing the protective cap, as any damage or rubbing may cause the electrode to fail!

The shelf life of glass electrodes is one year. After one year from the factory, their performance will deteriorate regardless of whether they are used or not, and they should be replaced in a timely manner.

4. Glass electrodes cannot be used normally in a dry state. Please soak the glass electrodes in distilled or purified water for 10-30 minutes before use to activate them.

When the instrument is turned on, it will display the product model and then enter the measurement mode



No,	Description
1	Battery Area
2	Data Display Area
3	Temperature Area
4	CAL key
5	HOLD key
6	ON/OFF key
7	Fixed electrode ring
8	Electrode connection part

Specification

➤ Measurement range 0.00-14.00 pH	➤ LCD dual display of pH and temperature values
➤ External electrode integrated digital pen pH meter, convenient to use	➤ Display lock function (HOLD)
➤ Fully waterproof design, small size, light weight	➤ Temperature units of °C/°F are optional
➤ PH 4.01, pH 7.00, pH 10.01 three-point calibration	➤ 1.5 V (LR44, BAT) x 4 PCs
➤ The electrode is detachable and easy to replace	➤ Automatic temperature compensation ensures accuracy under temperature changes
➤ PH 4.01, pH 7.00, pH 10.01 standard buffer solution	➤ 10 minute automatic shutdown function
➤ The product model ends with an "L" indicating intelligent LED backlight, and the sensing system can automatically turn on or off based on the brightness of the surrounding light.	
➤ The product is widely used in environmental protection, food, hygiene, geological exploration, metallurgy, surface water, industrial wastewater, drinking water, acid rain and other testing	

Features

➤ LCD	➤ LCD, Size : 20 mm x 27 mm
➤ Measurement Range	➤ 0.00 to 14.00 pH.
➤ Resolution	➤ 0.01 pH
➤ Accuracy	➤ ± 0.02 pH
➤ Calibration	➤ pH 7.00, pH 4.01, pH 10.01三点校准
➤ Working Temperature	➤ 0 ~ 50°C(32 ~ 122 °F)
➤ Resolution	➤ 1°C / 2°F
➤ ATC	➤ 0 ~ 50°C
➤ Size	➤ 188 x 38mm
➤ Weight	➤ 136g (包括电极).

Operational Guidelines

Before use, please forcefully remove the electrode protection cap under the instrument panel and do not rotate it!

A、Restore factory settings

1. Press the "ON/OFF" button to turn on the device (if it is already turned on, it can be omitted)
2. Long press the "HOLD" button until the **CLR** symbol is displayed on the screen, then release the button (confirm that the instrument cannot be locked)
3. After recalibration, the instrument can be used normally.

B、°C/°F unit conversion (default temperature unit for instruments at the factory: °C)

1. When the instrument is turned off, Keep to press the CAL key+ON/OFF key at the same time (remember not to put it up)
2. When the °C or °F symbol appears on the right side of the display screen, release the CAL and HOLD keys simultaneously
3. Press the "CAL" key to select the temperature unit as °F or °C
4. Press the "HOLD" key to save, and the **SR** symbol will be displayed on the screen
5. Subsequently, the instrument enters normal measurement mode.

C、Automatic Temperature Compensation (ATC)

The ATC symbol appears in the lower left corner of the display screen, indicating that the instrument is in automatic temperature compensation mode.

D、Hold Function

Press the "ON/OFF" button to turn on the instrument and wait for it to enter measurement mode. A decimal point will flash continuously in the data display area (normal measurement mode);

Press the "HOLD" button to lock the current data on the LCD screen, and the decimal point stops flashing (locked in mode). Press the "HOLD" button again to unlock the mode.

E、 **Instrument calibration** (first prepare calibration with standard buffer solution - taking PH7.00 as an example, the temperature is best at 25 °C)

1. The calibration points are: pH 7.00; pH4.01; pH10.01; Please prepare the correct buffer solution;
2. Do not remove the instrument from the calibration solution before the calibration process is completed
 - a. Display screen - The "CAL" symbol in the bottom left corner is flashing, indicating that the instrument is currently in calibration mode
 - b. Before the display screen shows the "END" symbol, the instrument is still in the calibration process

Operation steps (To ensure the measurement accuracy of the instrument, please perform instrument calibration immediately. If the instrument has not been used for a long time, please soak the electrode part of the instrument in distilled water or purified water for 10-30 minutes to activate the electrode. During the activation process, the instrument can be in shutdown mode)

Step	Description
1	After electrode activation, press the "ON/OFF" button to turn on the device
2	Insert the electrode into the standard buffer solution, stir it appropriately, and wait for the reading to stabilize
3	Press and hold the 'CAL' button for approximately three seconds, and the ' CAL ' symbol will appear on the display screen
4	At this point, press the 'CAL' button and wait for the instrument to automatically recognize the current value of the standard buffer and display it
5	Afterwards, the " SR " symbol will be displayed, indicating that the instrument calibration has been successful and the correct data has been stored
6	After 1 second, the symbol " END " will be displayed, and the instrument will exit calibration mode
Remark	If the instrument skips step 5 and directly executes step 6, it indicates that the instrument calibration has failed and needs to be recalibrated or restored to factory settings before calibrating the instrument.

F、Over range display

When the pH value is below 0 or above 14, the pH display area will show: "---"。

When the temperature is below 0 °C or above 50 °C, the temperature display area will show the symbol 'L' or symbol 'H' 。

G、Low Voltage Indication

When the battery symbol displays or the display screen flashes, it indicates that the battery voltage is insufficient. Please replace the new battery as soon as possible and remember not to mix old and new batteries.

H、Product Warranty

Free one-year warranty from the date of purchase (excluding battery and glass electrode)

The following situations are not covered by the warranty:

Damage caused by improper use (such as battery leakage, breakage, water ingress, etc.); The working temperature exceeds 50 °C, the appearance is damaged, the warranty period has expired, and the product has been disassembled by oneself;

I、Remind

1. pH meters are professional instruments. Non professionals are advised to operate them under the guidance of professionals to avoid instrument malfunctions!
2. Before the first use, please soak the electrode in clean water for about 10 minutes,
3. When calibrating the pH meter, please use standard buffer solution and correct operating methods. Incorrect calibration will cause measurement errors to exceed the standard! Do not press the "CAL" button in non calibrated state, otherwise it may cause incorrect calibration of the instrument, which may result in the instrument not working properly or measurement errors exceeding the standard seriously!
4. Please dissolve the pH buffering powder in 250ML distilled water before use.
5. Please do not insert the pH meter too deeply into the liquid during use, as long as the liquid can pass through the glass electrode. Pay special attention to whether the pH electrode fixing ring is loose before use. If the pH electrode fixing ring is loose, the liquid tested during the use of the pH meter may enter the instrument and cause malfunction.

Addendum

The preparation method of buffer solution: This instrument is equipped with three packages of powdered standard buffer solution at the factory, and each package of powdered standard buffer solution can prepare 250mL of buffer solution. Do not use metal containers when preparing buffer solution.

Taking the preparation of 250mL pH value=6.86 standard buffer solution as an example to illustrate the preparation method;

(1) When preparing, use a clean plastic (glass) container with a capacity greater than 250mL, take out a pH=6.86 (green) buffer plastic bag, tear it open, and pour the white powder inside into the container.

(2) Add 250mL of distilled water to a plastic (glass) container. If there is no distilled water available, 250mL of purified water can be used as a substitute in a commercially available bottle.

(3) Slowly stir with a clean glass or other tool until the powder is completely dissolved.

The method for preparing standard buffer solutions for 4.01, 9.18, and 10.01 is the same as above. After the preparation of the three buffer solutions is completed, labels should be promptly affixed to prevent confusion in the future.

Discard the solution after use

250mL of buffer solution can be used multiple times. When calibrating the instrument, use three small plastic (glass) containers to pour in buffer solutions of 4.01, 6.86, and 9.18, respectively, and mark them. The amount of buffer solution used should be sufficient to completely submerge the glass electrode. Used buffer should be poured out and not reused. The remaining part should be stored in a cool and dry place at 20-25 °C.