

Operation Manual

MODEL pH 630

**Microcomputer Based
pH&Temperature
Pocket Meter**



pH630

目录


产品检视.....	2
使用前准备.....	2
A. 安装电池	2
B. 电极浸泡.....	2
C. 设定和校正电极头和整机.....	2
pH630外观.....	3
A. 机器外观说明.....	3
B. 液晶显示说明.....	3
操作模式和按键操作.....	4
A. 操作模式.....	4
B. 按键操作.....	4
pH630使用说明.....	5
A. 开机/关机	5
B. 选择标准溶液.....	5
C. 校正.....	5
D. 测量	6
E. 锁定资料	6
更换电极.....	7
错误显示与排除方法	7
规格	8
质量保证	9

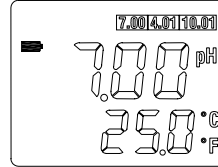
产品检视

小心地打开包装，检视仪器及配件是否有因运输而损坏，如有发现，请立即通知 JENCO 的代理商。

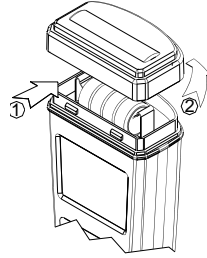
使用前准备

A. 安装电池

当 “” 符号显示在LCD的左上角时，请更换电池。此符号显示后，整机大约还可以正常工作2-3个小时。



1. 请看右侧更换电池的分解图。
2. 先按“1”的箭头，用左手拇指压住电池盖，再用右手食指按“2”的箭头，掰起电池盖。
3. 取出旧电池，换上四颗新电池，注意正负极不可装错，再将电池盖盖回，以确保正常的防水功能。



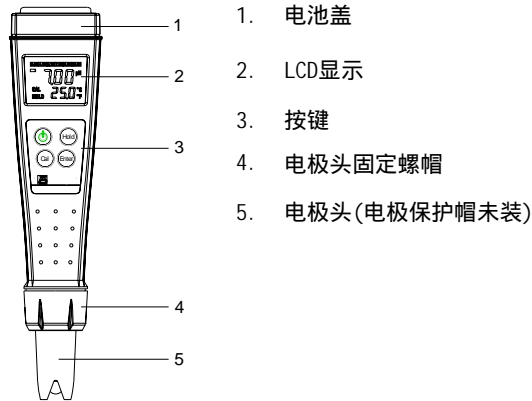
B. 电极的浸泡

1. 取下pH 630的电极保护帽。
2. 在第一次使用之前，请把电极头浸泡在3M氯化钾的浸泡液中活化，浸泡时间2小时以上。

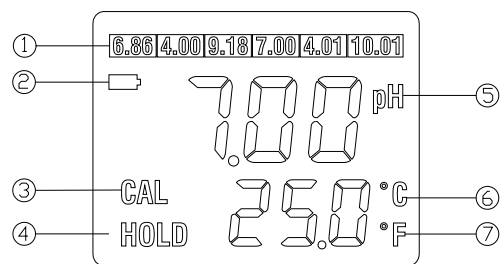
C. 设定和校正电极头和整机

pH 630 在第一次使用前必须设定和校正。
详细步骤见P5页的“校正”。

A. 机器外观说明



B. 液晶显示说明



1. 标准溶液和校正点显示
2. 低电显示
3. 校正模式显示
4. 锁定模式显示
5. pH读值
6. 温度读值()*
7. 温度读值()*

* 或者 的显示方式由工厂设定。

操作模式和按键操作

A. 操作模式

pH630有4种模式：

1. 测量模式：用于测量pH值和温度值的。
2. 校正模式：用于校正1,2或3点。
3. 锁定模式：用于锁定测量的数值。
4. 标准溶液选择模式：用于选择标准溶液组。
(7.00/4.01/10.01) 或 6.86(6.86/4.00/9.18).

B. 按键操作

按键	运作模式	持续时间	功能
Hold	测量模式	0 秒	锁定测量数值，再按一次退回测量模式。
	锁定模式	0 秒	回到测量模式
	校正模式	0 秒	离开校正模式
Cal	测量模式	0 秒	进入校正模式
	校正模式	0 秒	校正时，当“HOLD”显示时，按此键再重新校正一次
	测量模式	5秒以上	进入校正液选择模式
On/Off	所有模式	0 秒	打开/关闭机器
Enter	校正模式	0 秒	校正时，当“HOLD”显示时，按此键可储存校正数据

A. 开机/关机

按“On/Off”键即可打开机器。如果机器是在开机的状态，再按一次“On/Off”键，机器即可关闭。机器在不使用时，将在30分钟后自动关机。

B. 选择标准溶液

1. 首先机器必须在测量模式。
2. 按“Cal”键5秒以上，机器显示7.00标准溶液组，你可以把标准溶液组由6.86标准溶液组(6.86/4.00/9.18)改为7.00标准溶液组(7.00/4.01/10.01)。
3. 再按“Cal”键5秒以上，机器显示6.86标准溶液组，你可以把标准溶液组由7.00标准溶液组(7.00/4.01/10.01)改为6.86标准溶液组(6.86/4.00/9.18)。

注意：这个操作不需重复操作，除非需要改变标准溶液组别。

C. pH 校正

使用者可选择1点、2点或3点校正。

1. 取下机器的电极帽，将机器的电极头部分用蒸馏水洗净并擦干，放入第一种标准溶液中，此时机器会显示此种标准溶液的温度。

按“Cal”键进入校正模式，此时第一种标准溶液值将显示，“HOLD”显示将闪烁，当机器采样数据稳定后，此时，机器的“HOLD”显示将停止闪烁，并一直显示在屏幕上，此时再按“Enter”键存储此数值。稍等一会儿，机器将完成第一点校正，并准备第二点的校正。

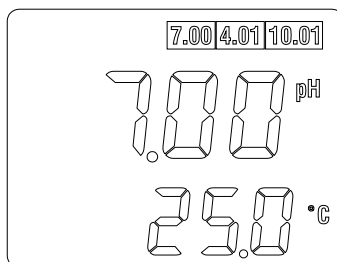
[**注意：**此时，按“Hold”键，机器将离开校正模式，“**单点校正**”完成。]

2. 从第一种标准溶液中取出机器，将机器的电极头部分用蒸馏水洗净并擦干，放入第二种标准溶液中，此时机器会显示此种标准溶液的温度。

- 此时，第一种标准溶液值将显示在屏幕上，第二种和第三种标准溶液值将在屏幕上闪烁，并且“HOLD”显示将闪烁，当机器采样数据稳定后，此时，机器的“HOLD”显示将停止闪烁，并一直显示在屏幕上，此时再按“Enter”键存储此数值。稍等一会儿，机器将完成第二点校正，并准备第三点的校正。

[注意：此时，按“Hold”键，机器将离开校正模式，“**两点校正**”完成。]

- 从第二种标准溶液中取出机器，将机器的电极头部分用蒸馏水洗净并擦干，放入第三种标准溶液中，此时机器会显示此种标准溶液的温度。
- 此时，第一种和第二种标准溶液值将显示在屏幕上，第三种标准溶液值将在屏幕上闪烁，并且“HOLD”显示将闪烁，当机器采样数据稳定后，此时，机器的“HOLD”显示将停止闪烁，并一直显示在屏幕上，此时再按“Enter”键存储此数值。稍等一会儿，机器将完成第三点校正，并自动退出校正模式。“**三点校正**”完成。



[注意：如果要获取精密测量，建议更换电极后或每周都需校正一次。]

D. 测量

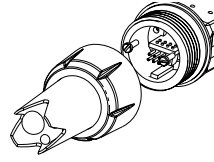
在“测量模式”把电极放入被测溶液中即可。

E. 锁定资料

- 当pH 值稳定后，按一次“Hold”键就锁定读值了。
- 再按一次“Hold”键，机器将回到“测量模式”，显示另一个测量值。

更换电极

1. 逆时针旋下电极头固定螺帽。
2. 将电极头（老化的）从电极落座上拔下。
3. 插入新的电极头，并保证电极头与整机接触良好。
4. 套上电极头固定螺帽并顺时针拧紧。
5. 把电极头放入3M KCL的浸泡液中浸泡2小时并重新校正。



错误显示与排除方法

LCD显示	温度显示	显示模式	可能原因[排除方法]
"ovr"	"ovr"	测量模式	温度 >99.9°C 的测量范围。 [降低被测溶液的温度。] [检查或更换电极头。]
"udr"	"udr"	测量模式	温度 <-9.9°C 的测量范围。 [升高被测溶液的温度。] [检查或更换电极头。]
"udr" or "ovr"	-9.9 ~ 99.9°C	测量模式	当pH值<0.00pH(udr)或>14.00pH(ovr)。 [超出测量范围或需重新校正。]
"ovr"	0.0 ~ 60.0°C	校正模式 a. 零点校正 b. 斜率校正	a. 零点校正 7.00pH: mV>100mV 6.86pH: mV>108.3mV b. 斜率>理想值的30% [检查或更换标准溶液。] [检查或更换电极头。]
"udr"	0.0 ~ 60.0°C	校正模式 a. 零点校正 b. 斜率校正	a. 零点校正 7.00pH: mV<-100mV 6.86pH: mV<91.7mV b. 斜率<理想值的30% [检查或更换标准溶液。] [检查或更换电极头。]
"udr" or "ovr"	-9.9 ~ 99.9°C	校正模式 a. 零点校正 b. 斜率校正	当标准溶液温度<0.0°C(udr) 或 >60.0°C(ovr) [调整标准溶液温度，使其在0 ~ 60°C 的测量范围内。]

规格

pH

测量范围	分辨率	精确度
0.00 ~ 14.00 pH	0.01 pH	±0.02 pH

温度

测量范围	分辨率	精确度
-9.9 ~ 99.9 °C	0.1 °C	±0.3 °C
14.2 ~ 99.9 °F	0.2 °F	±0.6 °F
100 ~ 212 °F	1 °F	±1 °F

pH

pH 校正液认知

pH 7.00, 4.01, 10.01
或 pH 6.86, 4.00, 9.18

pH 温度补偿

自动 -9.9°C (14.2°F) ~ 99.9 °C (212°F)

pH 校正液温度范围

0.0°C (32.0°F) ~ 60.0°C (140°F)

pH 电极零点校正范围

pH 7.00: ±100 mV
pH 6.86: +108.3 mV / -91.7 mV

pH 电极斜率校正范围

pH 4.00, 4.01, 9.18 和 10.01: ±30%

输入阻抗

>10¹²

温度

温度探棒

热敏电阻, 10 k (25 °C)

温度单位

工厂设定, °C或°F。

其他

电源

LR44 x 4

环境温度

0.0 ~ 50.0 °C

机身

IP67 防水外壳

重量

105 克

质量保证

仪器保修一年（以购买日为准）。在保修期内如有质量问题，本公司将无偿代为修复；如有人为因素造成故障或损坏，本公司竭诚代为修复，但需酬收工本费（配件如电极头、标准液等消耗品不在保证范围内）。在将本机退回本公司时，请用包装材料妥为包好，以避免运输途中碰伤。无论何种情况，在退回本机前，请先与本公司联系，并得到本公司认可，方可退回本机。

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CONTENTS

INITIAL INSPECTION AND ASSEMBLY	11
BEFORE YOUR FIRST USE	11
A. Replace the Batteries	11
B. Soak the Electrode....	11
C. Setup and Calibrate the Electrode and Meter.....	11
VISIONPLUS pH 630 OVERVIEW.....	12
A. Meter Description.....	12
B. LCD Display	12
OPERATION MODES AND KEYPAD OPERATIONS.	13
A. Operation Modes.....	13
B. Keypad Operations.....	13
USING VISIONPLUS pH 630.....	14
A. Power on/off	14
B. Select Buffer.....	14
C. Calibrate pH.....	14
D. Measure	15
E. Hold Data	15
REPLACE ELECTRODE.....	16
ERROR DISPLAYS AND TROUBLESHOOTING	17
SPECIFICATIONS	18
WARRANTY	19

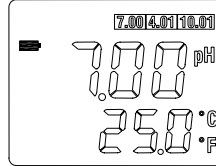
INITIAL INSPECTION AND ASSEMBLY

Carefully unpack the instrument and accessories. Inspect for damages made in shipment. If any damage is found, notify your **Jenco** representative immediately. All packing materials should be saved until satisfactory operation is confirmed.

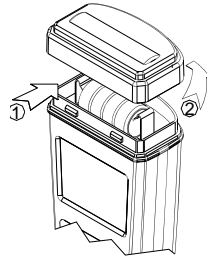
BEFORE YOUR FIRST USE

A. Replacing the Batteries

Replace the battery when the blinking low battery indicator "■" appears on the upper left corner of the LCD screen. The instrument can operate within specifications for approximately 2-3 hours after low battery indicator appears.



1. Shown in the right figure.
2. Take off the battery cover.
3. Remove all of the old batteries and insert a new set of batteries ensuring the polarities are correct.



B. Soak the Electrode

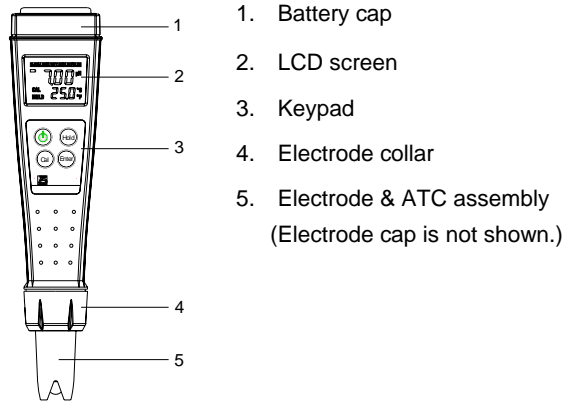
1. Remove the electrode cap covering the VisionPlus pH 630 meter.
2. Soak the electrode in a 3M KCL for 2 hours before first use or after storage.

C. Setup and Calibrate the Electrode and Meter

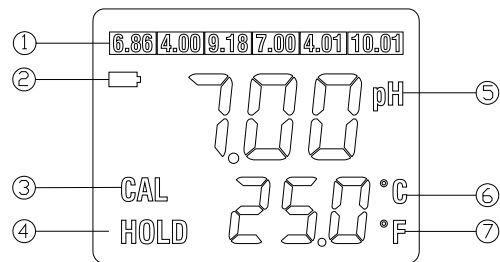
VisionPlus pH 630 must be setup and calibrated before your first use. Please follow the instructions detailed in section **USING VISIONPLUS pH 630** .

VISIONPLUS pH 630 OVERVIEW

A. Meter Description



B. LCD Display



1. CALIBRATION buffer(s) and NUMBER of calibration point
2. LOW BATTERY indicator
3. CALIBRATION mode indicator
4. HOLD mode indicator
5. pH reading
6. TEMPERATURE reading (for °C version)*
7. TEMPERATURE reading (for °F version)*
* °C or °F is factory pre-set.

OPERATION MODES AND KEYPAD OPERATIONS

A. Operation Modes

VisionPlus pH 630 meter has 4 operation modes:

1. Measure Mode. Measure Mode is used to make all pH and temperature measurements.
2. Calibration Mode. Calibration Mode is used to perform 1, 2 or 3 point calibration.
3. Hold Mode. Hold Mode is used to display held measured values for increased ease of use.
4. Buffer Select Mode. Buffer Select Mode is used to select the buffer set, which can either be 7.00(7.00/4.01/10.01) or 6.86(6.86/4.00/9.18).

B. Keypad Operations

Key	Operation Mode	Duration	Function
Hold	Measure	0 second	Holds current measurement reading. Press again to resume measuring.
	Hold	0 second	Returns to Measure Mode.
	Calibration	0 second	Leaves Calibration Mode.
Cal	Measure	0 second	Enters Calibration Mode.
	Calibration	0 second	the "HOLD" icon is displayed, then the unit will recalibrate the buffer.
	Measure	5 seconds or more	Enters Buffer Select Mode.
On/Off	All	0 second	Turns meter on/off.
Enter	Calibration	0 second	the "HOLD" icon is displayed, then the unit will save the calibration.

A. Power On/Off

Press the "On/Off " key to turn the unit on. If the unit is running then you can press the "On/Off " key to turn the unit off. The unit will automatically turn off after 30 minutes of no key activity.

B. Select Buffer

1. Make sure unit is in "Measure Mode".
2. Press the "Cal" key for 5 seconds, the unit will display 7.00 to indicate you successfully changed from "6.86/4.00/9.18" set to "7.00/4.01/10.01" set.
3. Press the "Cal" key for 5 seconds again, the unit will display 6.86 to indicate you successfully changed from "7.00/4.01/10.01" set to "6.86/4.00/9.18" set.

Note: There is no need to repeat this procedure every time unless one decides to change the buffer settings.

C. Calibrate pH

The user can select one, two or three point pH calibration.

1. Rinse the electrode & ATC assembly in distilled water and immerse them in the first buffer solution. The temperature displayed is the buffer temperature.
2. Press "Cal" key to initiate calibration, the buffer icon will be on, the "HOLD" icon will flash until the unit detects a stable reading, When a stable reading is reached, the "HOLD" icon will be on. Press the "Enter" key to save the calibration, wait a second, the first point has been calibrated and the unit is ready to be sloped at the second buffer.

[**Note:** At this moment, Press the "Hold" key, the unit will exit the calibration mode. **Single point** calibration is complete.]

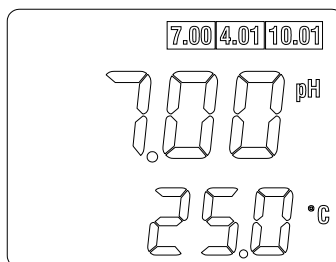
3. Remove the electrode & ATC assembly from the first buffer. Rinse them in distilled water and immerse them in the second buffer solution. The unit will display the temperature of the second buffer.
4. The first buffer icons will be on the second and third buffer icons will flash and the "HOLD " icon will flash

until the unit detects a stable reading, When a stable reading is reached, the "HOLD" icon will be on. Press the "Enter" key to save the calibration, wait a second, the second point has been calibrated and the unit is ready to be sloped at the third buffer.

[**Note:** At this moment, Press the "Hold" key, the unit will exit the calibration mode. **Dual points** calibration is complete.]

5. Remove the electrode & ATC assembly from the second buffer. Rinse them in distilled water and immerse them in the third buffer solution. The unit will display the temperature of the third buffer.

The first, second buffer icons will be on, the third buffer icons will flash and the "HOLD" icon will flash until the unit detects a stable reading, When a stable reading is reached, the "HOLD" icon will be on. Press the "Enter" key to save the calibration, wait a second, the third point has been calibrated and the unit will automatically exit the calibration mode. **Three points** calibration is complete.



[**Note:** For accurate measurements, it is recommended that pH calibration is performed once a week and after replacing the electrode.]

D. Measure

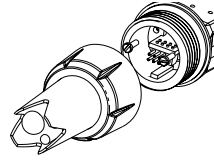
Dip the meter into the test solution in the "Measure Mode".

E. Hold Data

1. When the pH reading is stable, press "Hold" key once to lock the reading.
2. Press "Hold" key again to unlock reading and the unit will return to "Measure Mode". The unit is now ready for another measurement.

REPLACE ELECTRODE

1. Unscrew the electrode collar to remove the electrode & ATC assembly as shown in the right figure.
2. Remove the old electrode from the electrode collar.
3. Insert a new electrode, make sure the electrode fit back into the meter correctly.
4. Screw back the electrode collar.
5. Soak the electrode in a 3M KCL for 2 hours and recalibrate the pH 630 following the instructions detailed in section **USING VISIONPLUS pH 630**



ERROR DISPLAYS AND TROUBLESHOOTING

pH LCD Display	ATC Display	DISPLAY Mode	Possible cause(s) [Action(s)]
"ovr"	"ovr"	Measure	Temperature >99.9°C range. [Bring solution to a lower temperature.] [Replace electrode & ATC assembly.]
"udr"	"udr"	Measure	Temperature <-9.9°C range. [Bring solution to a higher temperature.] [Replace electrode & ATC assembly.]
"udr" or "ovr"	-9.9~ 99.9°C	Measure	When pH value < 0.00pH (udr) or >14.00pH(ovr) [Over Range or Recalibrate.]
"ovr"	0.0 ~ 60.0°C	pH CAL a.pH-OFFSET b.pH-SLOPE	a. Offset @ 7.00pH: mV>100mV Offset@6.86pH: mV>108.3mV b. New slope>ideal slope by 30% [Use a new buffer solution.] [Replace electrode & ATC assembly.]
"udr"	0.0 ~ 60.0°C	pH CAL a.pH-OFFSET b.pH-SLOPE	a. Offset @ 7.00pH: mV<-100mV Offset @ 6.86pH: mV< 91.7 mV b. New Slope<ideal slope by 30% [Use a new buffer solution.] [Replace electrode & ATC assembly.]
"udr" or "ovr"	-9.9~ 99.9°C	pH CAL a.pH-OFFSET b.pH-SLOPE	When buffer temperature <0.0°C(udr) or >60.0°C(ovr) [Bring buffer temperature within 0 to 60°C range.]

SPECIFICATIONS

pH

Range	Resolution	Accuracy
0.00 to 14.00 pH	0.01 pH	±0.02 pH

Temperature

Range	Resolution	Accuracy
-9.9 to 99.9 °C	0.1 °C	±0.3 °C
14.2 to 99.9 °F	0.2 °F	±0.6 °F
100 to 212 °F	1 °F	±1 °F

pH

pH buffer recognition

pH 7.00, 4.01, 10.01
or pH 6.86, 4.00, 9.18

pH Temperature compensation

AUTO -9.9°C (14.2°F) to
99.9 °C (212°F)

pH Buffer Temperature range

0.0°C (32.0°F) to 60.0°C
(140°F)

pH Electrode Offset recognition

±100 mV at pH 7.00
+108.3 mV / -91.7 mV at pH 6.86

pH Electrode Slope recognition

±30% at pH 4.00, 4.01, 9.18 and 10.01

Input impedance

>10¹²

Temperature

Temperature sensor

Thermistor, 10 k at 25°C

Temperature unit

Factory pre-set

General

Power:

LR44 x 4

Ambient temperature range

0.0 to 50.0 °C

Case

IP67 water-tight case

Weight

105 g

WARRANTY

Jenco warrants this product to be free from significant deviations in material and workmanship for a period of 1 year from date of purchase. If repair or adjustment is necessary and has not been the result of abuse or misuse, within the year period, please return-freight-prepaid and the correction of the defect will be made free of charge. If you purchased the item from our **Jenco** distributors and it is under warranty, please contact them to notify us of the situation. **Jenco** Service Department alone will determine if the product problem is due to deviations or customer misuse.

Out-of-warranty products will be repaired on a charge basis.

RETURN OF ITEMS

Authorization must be obtained from one of our representatives before returning items for any reason. When applying for authorization, have the model and serial number handy, including data regarding the reason for return. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. **Jenco** will not be responsible for damage resulting from careless or insufficient packing. A fee will be charged on all authorized returns.

NOTE: **Jenco** reserves the right to make improvements in design, construction and appearance of our products without notice.

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