

Operation Manual

MODEL pH 630

**Microcomputer Based
pH&Temperature
Pocket Meter**



pH630



CONTENTS

INITIAL INSPECTION AND ASSEMBLY	2
BEFORE YOUR FIRST USE	2
A. Replace the Batteries	2
B. Soak the Electrode....	2
C. Setup and Calibrate the Electrode and Meter.....	2
VISIONPLUS pH 630 OVERVIEW.....	3
A. Meter Description.....	3
B. LCD Display	3
OPERATION MODES AND KEYPAD OPERATIONS...4	4
A. Operation Modes.....	4
B. Keypad Operations.....	4
USING VISIONPLUS pH 630.....	5
A. Power on/off	5
B. Select Buffer.....	5
C. Calibrate pH.....	5
D. Measure	6
E. Hold Data	6
REPLACE ELECTRODE.....	7
ERROR DISPLAYS AND TROUBLESHOOTING	8
SPECIFICATIONS	9
WARRANTY	10

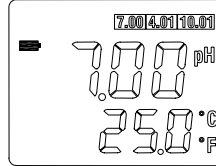
INITIAL INSPECTION AND ASSEMBLY

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.

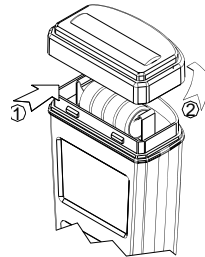
BEFORE YOUR FIRST USE

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

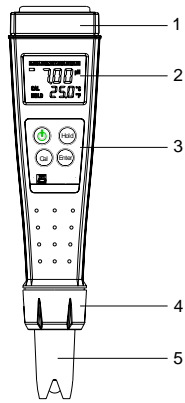
1. Remove the electrode cap covering the VisionPlus pH 630 meter.
2. Soak the electrode in a pH 4 buffer solution for 10 minutes before first use or after storage.

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**.

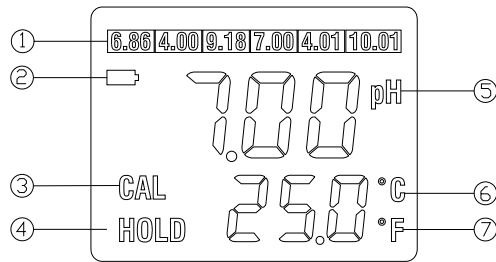
VISIONPLUS pH 630 OVERVIEW

A. Meter Description



- 1. Battery cap
- 2. LCD screen
- 3. Keypad
- 4. Electrode collar
- 5. Electrode & ATC assembly (Electrode cap is not shown.)

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) *
- * 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.

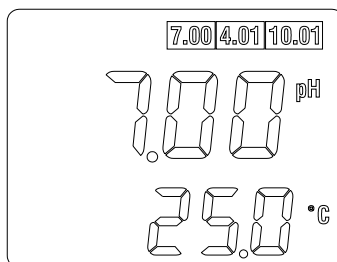
[**Note:** At this moment, Press the "Hold" key, the unit will exit the calibration mode. **Single point** calibration is complete.]

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.
6. 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

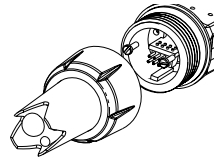
Dip the meter into the test solution in the "Measure Mode".

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 pH 4 buffer solution for 10 minutes 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 ± 1 LSD

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	$\pm 30\%$ at pH 4.00, 4.01, 9.18 and 10.01

Input impedance $>10^{12}$

Temperature

Temperature sensor	Thermistor, 10 k at 25°C
Temperature unit	Factory pre-set

General

Power:	LR44 x 4
Battery life:	200 Hours
Ambient temperature range	0.0 to 50.0 °C
Display(pH/TEMP):	pH:7.43 mm high TEMP:5.74mm high
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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