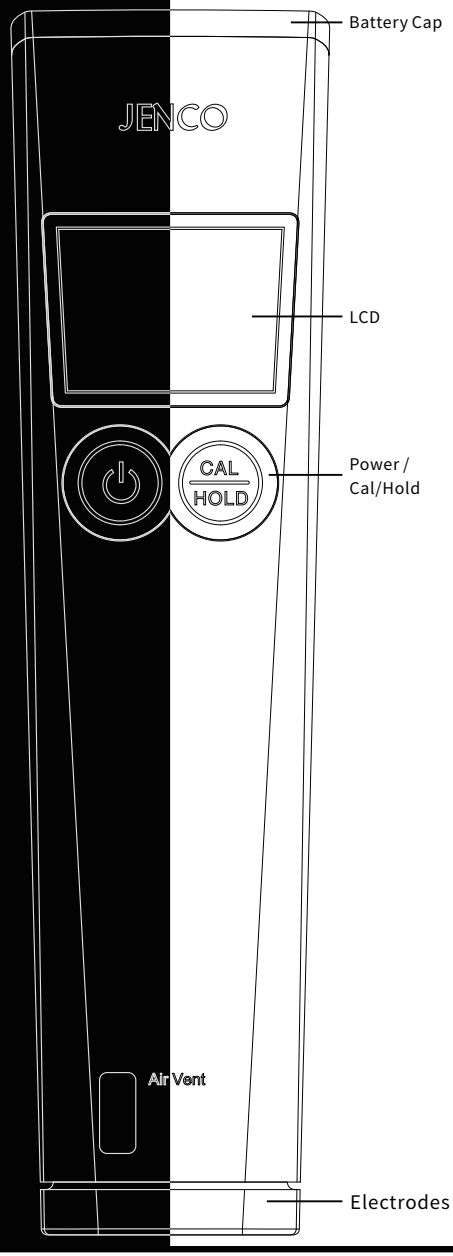
pH610N / ORP650N Operation Manual



Getting Started

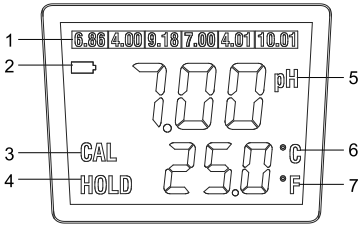
Thank you for entrusting Jenco for your water quality measurements. Please follow the steps below to start using your pH610N or ORP650N tester.

1 Activate the electrode of the tester by soaking it in pH buffer 4 solution for about 0.5-2hours

2 Install four LR44 batteries by removing, properly inserting the batteries and then replacing the battery cover

3 Understand the LCD display

(1) Calibration buffer(s)
(2) Low Battery indicator
(3) Calibration mode indicator
(4) Display hold indicator
(5) pH / ORP reading
(6) Temperature reading (for °C)
(7) Temperature reading (for °F)



4 Understand the operation modes

The pH610N tester has 3 operation modes and the ORP650N tester has 2 operation modes.

【Measure Mode】
Measure Mode is used to make all pH (for model pH610N), ORP (for model ORP650N) and temperature measurements.

【Calibration Mode】 ※pH610N only
Calibration Mode is used to perform1 or 2 point pH calibration.

【Hold Mode】
Hold Mode is used to hold and lock the display at the most recent measurement values. Once in Hold Mode, the tester can be removed from the measuring solution without affecting the displayed measurement values.

5 Understand keypad operations

Key	Initiating Mode	Action	Function
CAL / HOLD	Measure	Press and hold for 2 seconds	Enters Calibration Mode (for pH610N)
		Press and release	Holds display with or releases the display from the most current measurement values
	Calibration	Press and release	Exits Calibration Mode
On / Off	Power On	Press and release	Switches from °C to °F and vice versa
		Press and hold for 3 seconds	Power Off
	Power Off	Press and release	Power On

6 Turn the tester on

1. Press the “On/Off” key to turn on the tester.

【Note】 The tester will automatically turn off after 10 minutes last keypad use.

7 Calibrate pH (for pH610N)

pH610N defaults to USA buffer set (4.01, 7.00, 10.01). To change the buffer set, while the unit is off press and hold the "CAL/HOLD" key while pressing the "On/Off" key to turn on the tester. 【Note】Only repeat this procedure to change the buffer set.

1. Remove the electrode cap of the instrument and rinse the electrode with distilled water. Place the electrode into the 6.86/7.00 pH buffer.
2. Press and hold the "Cal" button for 2 seconds to enter the calibration mode.
3. "Cal" is displayed on the LCD to indicate the current mode, and either 6.86 or 7.00 pH buffer value is displayed.
4. Blinking "HOLD" is displayed to indicate the tester is stabilizing. When the measurement is stabilized, the tester automatically stores the calibration value and the first calibration point is complete.
5. "udr" is displayed while the tester waits for the next calibration point, which defaults to pH buffer 9.18/10.01 or pH buffer 4.00/4.01.
6. Press "CAL/HOLD" key to exit calibration and save the first calibration data point, or rinse the electrode with distilled water and place it into either pH buffer 4.00/4.01 pH or 9.18/10.01 to continue to calibrate the second calibration point.
7. Blinking "HOLD" is displayed to indicate the tester is stabilizing. When the measurement is stabilized, the tester automatically stores the calibrated value and the second calibration point is complete.
8. "Cal" and "HOLD" is no longer displayed to indicate the second point calibration is completed, and the top part of the LCD displays the two calibrated buffer values.

【Note】pH 610N must be calibrated before first use.
ORP650N does not require any calibration.

8 Measure

1. From "Measure Mode", dip the electrode end of the tester into the test solution.

9 Hold Data

1. When the pH/ORP reading is stable, press "Hold" key to hold and lock the display to the latest measurement values.
2. Press "Hold" key again to release and unlock the display and the tester returns to "Measure Mode". The unit is now ready for another measurement.

Error Displays and Troubleshooting

LCD Display	Temp Display	Display Mode	Possible Cause(s) [Action(s)]
"ovr"	"ovr"	Measure	Temperature > 50.0 °C (122 °F) [Bring solution to a lower temperature]
"udr"	"udr"	Measure	Temperature < 0.0 °C (32.0 °F) [Bring solution to a higher temperature]
"udr" or "ovr"	0.0~50.0 °C 32.0~122 °F	Measure	Measurement for pH or ORP is out of range. [pH610N：Recalibrate with standard buffer solutions and take the measurement again] [ORP650N：Measure Standard ORP solutions. If the readings are out of range, contact vendor]
"ovr"	0.0~50.0 °C 32.0~122 °F	pH CAL a. pH-Offset b. pH-Slope	a. Offset calibration reading for (7.00 pH / 6.86 pH) is greater than (100 mV / 108.3 mV) b. New slope > ideal slope by 30 % [Calibrate with a new set of buffer solution or replace the tester]
"udr"	0.0~50.0 °C 32.0~122 °F	pH CAL a. pH-Offset b. pH-Slope	a. Offset calibration reading for (7.00 pH / 6.86 pH) is lower than (-100 mV / -91.7 mV) b. New slope < ideal：slope by 30 % [Calibrate with a new set of buffer solution or replace the tester]

Specifications

	pH610N	ORP650N
Parameters	pH / Temp	ORP / Temp
Range	0.00~14.00 pH	±1000 mV
Resolution	0.01 pH	1 mV
Accuracy	±0.05 pH	±3 mV
Temp. Range	0.0~50.0 °C (32.0~122.0 °F)	
Temp. Resolution	0.1 °C (≤ 99.9 °F, 0.2 °F ; > 99.9 °F, 1 °F)	
Temp. Accuracy	±0.5 °C / ±1 °F	
Input Impedance	$3X10^{11}$ Ω	
Power	LR44 x 4	
Battery Life	>150 hours	
Ambient Temperature Range	0.0~50.0 °C	
Waterproof	IP67	
Dimensions	163 x 43 x 20 mm	
Weight	65 g	

pH Buffer Recognition

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

pH Electrode Offset Recognition Range

pH 7.00	±100 mV
pH 6.86	-91.7 mV to 108.3 mV

pH Electrode Slope Recognition Range

pH 4.00, 4.01, 9.18, 10.01	±30 %

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.**

About Jenco

Jenco is a family-operated manufacturer with 45 years of specialization in designing and producing water quality instruments. For more information about the Wand tester or other Jenco products, please visit **https://jencoi.com**