

**HANNA**

pH/ORP/ISE

 154.0 ppm

26.3 °C

**HI 98172 Calibration Check  
pH/ORP/ISE Meter**

ON / OFF RANGE **SETUP**

LIGHT

CAL **GLP**

▲ **MODE**

AutoEnd **CLR**

Calibration Check™  
**Portable Meters**

 **HANNA**®  
instruments  
With Great Products, Come Great Results™

2nd

# pH/ORP/ISE Portable Meters

## with Calibration Check™

Our new series of portable waterproof instruments offer measurement in pH, pH/ORP and pH/ORP/ISE with our exclusive Calibration Check™ and with 5 point calibration. These instruments recognize 7 memorized buffers and up to 5 custom buffers. The large, backlit LCD displays calibration messages and features an electrode condition graph which alerts the user of electrode status. Users can set a reminder of when calibration is due. These meters are equipped with auto-end measuring mode that ensure readings are only taken when they are stable. If measurements are taken to far outside the

calibration range, the instruments will warn the user with graphic symbols. Other common features of this series include log-on-demand of up to 150 records, RS232 connectivity, dual-temperature scale and battery recharging docking station.

Model HI 98170 offers accurate pH measurement while HI 98171 includes ORP to its range and HI 98172 measures ISE in direct ppm and has 5 point ISE calibration. All models are supplied in a hard carrying case with pH and temperature probes included.

Backlit LCD and battery life on display



### Features

- Measure pH, mV or ISE with temperature
- Electrode condition on display
- Waterproof protection
- "Outside Calibration Range" warning
- Settable "Cal Due" warning on display
- Up to 5 calibration points in 7 standard buffers
- Up to 5 custom buffers
- Electrode diagnostics to alert users when electrode needs attention
- °C or °F unit selection
- Log On Demand up to 150 records (50 each range)
- Auto-end feature
- GLP feature
- Auto HOLD feature to freeze readings
- RS232 PC connectivity (with HI 92000 software)



## Electrode Condition Graph

Provides a quick and clear indication of electrode status after calibration.



Bargraph Indication	Condition value
All 5 bars	81 to 100% life
4 bars	61 to 80%
3 bars	41 to 60%
2 bars	21 to 40%
1 bar	1 to 20%
1 bar blinking	0%
Frame only	Info not available

SPECIFICATIONS		HI 98170	HI 98171	HI 98172
pH	Range	-2.0 to 16.0; -2.00 to 16.00 pH		-2.00 to 16.00 pH
	Resolution	0.1; 0.01 pH		0.01 pH
	Accuracy*	±0.01; ±0.01 pH		±0.01 pH
mV	Range	—	±699.9 mV; ±2000 mV	
	Resolution	—	0.1; 1 mV	
	Accuracy*	—	±0.2 mV (±699.9 mV); ±1 mV (±2000 mV)	
ISE	Range	—	0.001 to 19990 ppm	
	Resolution	—	0.001 ppm (from 0.001 to 1.999)	
		—	0.01 ppm (from 2.00 to 19.99)	
		—	0.1 ppm (from 20.0 to 199.9)	
—		1 ppm (from 200 to 1999)		
Accuracy*	—	±0.5% f.s.		
Temperature	Range	-20.0 to 120.0 °C (-4.0 to 248.0°F)		
	Resolution	0.1° (0.1°F)		
	Accuracy	±0.4°C (±0.8°F) excluding probe error		
pH Calibration	Up to 5 calibration points; 7 standard buffers available (pH buffers 1.68, 4.01, 6.86, 7.01, 9.18, 10.01, 12.45) and 5 custom buffers			
ISE Calibration	—	Up to 5 point calibration, 6 standard buffers available (0.1, 1, 10, 100, 1000, 10000 ppm)		
Slope/Offset Calibration	±1 pH/From 80 to 110%			
Relative mV Offset Range	—	±2000 mV		
Temperature Compensation	Automatic or manual from -20.0 to 120.0°C (-4.0 to 248.0°F)			
Electrodes	HI 1230B pH electrode; HI 7662 temperature probe (included)			
LOG	On demand, 50 samples on each range			
Computer Interface	RS232 (HI 92000 software required)			
Input Impedance	10 <sup>12</sup> ohms			
Battery Type/Life	(4) 1.2V AA rechargeable batteries, approx. 200 hrs continuous use without backlight. Battery charger included. User-selectable auto off: 1-30 min. or disabled.			
Environment	0 to 50°C (32 to 122°F); RH 100%			
Dimensions/Weight	196 x 80 x 60 mm (7.7 x 3.1 x 2.4")/ 425 g (15 oz.)			

## ORDERING INFORMATION

**HI 98170, HI 98171, HI 98172** are supplied with HI 1230B combination double-junction, gel pH electrode; HI 7662 stainless steel temperature probe; pH 4.01 and pH 7.01 buffer solutions (20 mL ea.); 100 mL plastic beaker; (4) 1.2V AA, rechargeable batteries; HI 7100471 Inductive recharger with power adapter; rugged carrying case and instructions.

\*@20°C/68°F

## Screen Highlights



### Backlit Display

Large backlit graphic display shows current measurement readings along with the electrode condition and battery life.



### GLP

Comprehensive GLP functions are directly accessible by pressing the GLP key.

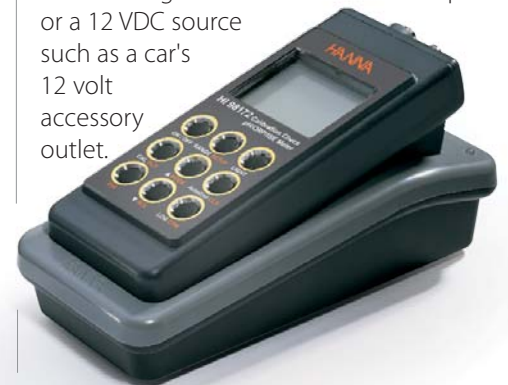


### Calibration Messages

Messages on the LCD make calibration easy and accurate.

## Rechargeable batteries with inductive recharger

These models have up to 200 hour extended battery life to guarantee long operation in the field. When the batteries are low, you don't have to worry about carrying a spare set with you—the batteries can be recharged with HANNA's inductive recharger. Simply leave the meter on the recharger for a few hours and you're ready to go. The recharger can either be plugged in a standard 115V socket using the included HANNA adapter or a 12 VDC source such as a car's 12 volt accessory outlet.



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