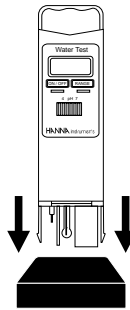


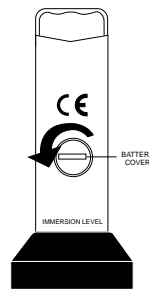
### MAINTENANCE

- Separate the compartment from the tester.
- Remove deposits formed on the liquid junction and the pH glass bulb by soaking in HI 7061 solution for 1½ hour.
- Soak the platinum wire in acetone for half hour.
- Rinse the bulb, platinum wire and liquid junction thoroughly with distilled water
- Reassemble the compartment and the tester.
- Fill the compartment with tap water.



### BATTERY REPLACEMENT

When the **Water Test** cannot be switched on or the display fades, pull out the battery cover and replace all three 1.4V batteries, paying attention to their polarity. Battery replacement must only take place in a non hazardous area using the battery types specified in this instruction manual.



### ACCESSORIES

- HI 7004M Buffer solution pH 4.01 (230 ml)
- HI 7004L Buffer solution pH 4.01 (460 ml)
- HI 7007M Buffer solution pH 7.01 (230 ml)
- HI 7007L Buffer solution pH 7.01 (460 ml)
- HI 7010M Buffer solution pH 10.01 (230 ml)
- HI 7010L Buffer solution pH 10.01 (460 ml)
- HI 7031M Conductivity solution 1413 µS/cm @25°C (230 ml)
- HI 7031L Conductivity solution 1413 µS/cm @25°C (460 ml)
- HI 7061M General Cleaning solution (230 ml)
- HI 7061L General Cleaning solution (460 ml)
- BATT009/P 1.4V battery (100 pcs)
- HI 76501/P Calibration screwdriver (20 pcs)

### RECOMMENDATIONS FOR USERS

Before using this product, make sure that it is entirely suitable for the environment in which it is used.

Operation of this instrument in residential area could cause unacceptable interferences to radio and TV equipments, requiring the operator to take all necessary steps to correct interferences.

The glass bulb at the end of the pH electrode is sensitive to electrostatic discharge.

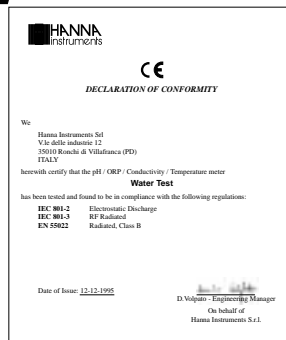
Avoid touching this glass bulb at all times.

For calibration it is recommended to use an antistatic screwdriver.

Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.

To avoid electrical shock, do not use this instrument when voltages at the measurement surface exceed 24 VAC or 60 VDC.

To avoid damages or burns, do not perform any measurement in microwave ovens.



SWATERR1  
03996

# WATER TEST

The "four-in-one" portable meter



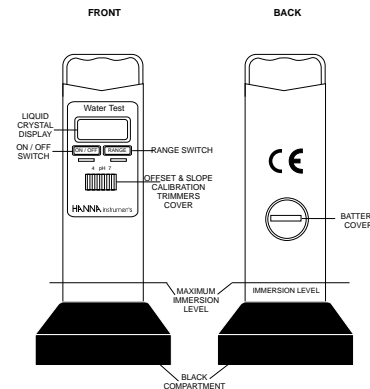
HANNA instruments

### GENERAL DESCRIPTION

The HANNA **Water Test** is a "four-in-one" portable meter designed for fast and accurate analysis and monitoring of water in biological applications, industrial wastewater, rivers, lakes, etc. It measures the main parameters in water analysis, namely, **pH**, **oxidation-reduction potential (REDOX)**, **conductivity** and **temperature**. All is needed for the analysis is a small sample of the water which is poured into the compartment and the 4 measurements are immediately available. The instrument has a complete pH range from 0 to 14, an ORP range from -1000 to +1000 mV, a conductivity range from 0 to 2000 µS/cm and a temperature range from 0 to 60°C. The instrument can be calibrated for pH and conductivity and comes with replaceable batteries.

### SPECIFICATIONS


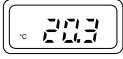

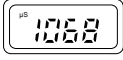
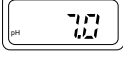
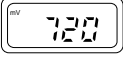


	<b>pH</b>	<b>ORP</b>	<b>Conductivity</b>	<b>Temperature</b>
<b>RANGE</b>	0.0 to 14.0 pH	±1000 mV	0 to 1999 µS/cm	0.0 to 60.0°C
<b>RESOLUTION</b>	0.1 pH	1 mV	1 µS/cm	0.1°C
<b>ACCURACY</b> (@20°C/68°F)	±0.2 pH	±5 mV	±2% Full Scale	±1°C
<b>TYPICAL EMC DEVIATION</b>	±0.4 pH	±2mV	±2% Full Scale	±1°C
<b>CALIBRATION</b>	pH: Manual double point through Offset and Slope trimmers µS/cm: Manual single point through trimmer			
<b>BATTERY</b>	3 x 1.4V batteries for approx. 200 hours of continuous use			
<b>DIMENSIONS</b>	190 x 85 x 85 mm (7.4 x 3.3 x 3.3")			
<b>WEIGHT</b>	260 g (9.2 oz.)			



**HANNA**  
instruments




Stay in Touch with the Manufacturer !


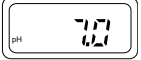



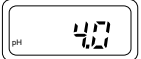
## OPERATING INFORMATION

- Do not be alarmed if white crystals appear around the cap. This is normal with electrodes and they dissolve when rinsed with water.
- Take a sample of the water to be tested and pour into the black compartment of the **Water Test**. If you are scooping up the water with the black compartment, do not immerse above the maximum immersion level indicated.
- Turn the tester on by pressing the ON/OFF switch on the front panel.  
- The tester will automatically default the temperature measurement indicated by the "°C" symbol on the display.
- Press the RANGE switch once to display the conductivity expressed in  $\mu\text{S}$ .  
- Press the RANGE switch once more to display pH. 
- Press the RANGE switch once again to display ORP expressed in mV. 
- If the tester compartment is dry for more than 2 days, you will have to wait for about 5 minutes before taking pH measurements.
- In order to take more accurate pH and conductivity measurements, make sure that **Water Test** is calibrated for pH and conductivity before use.
- When the measurements are completed, empty the compartment, rinse with tap water to minimize contamination and switch the tester off by pressing the ON/OFF switch again. 
- In order to have a fast response time during measurement, the compartment of the tester should be filled with tap water when the tester is not in use. For long term storage, the tester should be kept in the original box. 



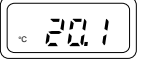

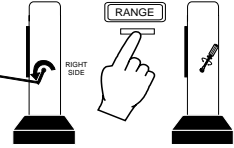
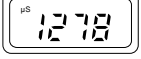
DO NOT USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

## pH CALIBRATION

- Pour a small quantity of distilled water into the black compartment, rinse by shaking the compartment and then discard the content. 
- Pour a small quantity of pH 7 (HI7007) buffer solution into the compartment and switch the tester on by pressing the ON/OFF switch. 
- Press the RANGE switch twice to display pH measurements. 

- If the display does not show "7.0 pH", adjust the right trimmer located behind the cover until the display shows "7.0 pH".  
- Discard the pH 7 solution, pour a small quantity of distilled water into the black compartment, rinse by shaking the compartment and then discard the content. 
- Pour a small quantity of pH 4 (HI7004) or pH 10 (HI7010) buffer solution into the compartment. 
- If the display does not show "4.0 pH" (or "10.0 pH"), adjust the left trimmer located behind the cover until the display shows "4.0 pH" (or "10.0 pH").  
- Discard the pH 4 (or pH 10) solution, pour a small quantity of distilled water into the black compartment, rinse by shaking the compartment and then discard the content.
- The unit is now calibrated for pH and ready for use.

## CONDUCTIVITY CALIBRATION

- Pour a small quantity of distilled water into the black compartment, rinse by shaking the compartment and then discard the content. 
- Fill the compartment with HI7031 conductivity solution to overflow and switch the tester on by pressing the ON/OFF switch. The temperature of the solution will be displayed.  
- Note the temperature of the solution and read the corresponding conductivity from the table printed on the solution label (e.g. 1413  $\mu\text{S}/\text{cm}$  @ 25°C).
- Remove the screw on the right of the casing. Press the RANGE switch to display conductivity measurements and adjust the trimmer on the right of the casing until the display shows the corresponding conductivity reading at the noted temperature (e.g. 1278  $\mu\text{S}/\text{cm}$  @ 20°C). Replace the screw after calibration.   

°C	°F	HI7031 ( $\mu\text{S}/\text{cm}$ )	°C	°F	HI7031 ( $\mu\text{S}/\text{cm}$ )
0	32	776	22	71.6	1332
5	41	896	23	73.4	1359
10	50	1020	24	75.2	1386
15	59	1147	25	77	1413
16	60.8	1173	26	78.8	1440
17	62.6	1199	27	80.6	1467
18	64.4	1225	28	82.4	1494
19	66.2	1251	29	84.2	1521
20	68	1278	30	86	1548
21	69.8	1305	31	87.8	1575

ALWAYS USE FRESH BUFFERS FOR CALIBRATION & NEVER REUSE THEM.