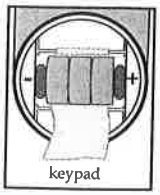
Open this booklet for calibration / testing / maintenance instructions.

Changing Batteries:

1. Open battery compartment lid (with attached lanyard loop).
2. Remove old batteries; replace with fresh ones. Note polarity (shown in battery compartment and in picture at right).



3. Recalibrate Testr after battery change.

Error Messages:

ER1 Weak batteries—replace

ER2 Wrong or bad buffer value, or electrode is failing.

OR Over range signal, or electrode is not in contact with solution, or electrode is failing.

Warranty:

The waterproof pHTestr 2 meter body is warranted against defects in materials and workmanship for a period of 12 months from the date of purchase; the electrode module is warrantied for a period of 6 months from the date of purchase. If repair, adjustment or replacement is necessary and has not been the result of abuse or misuse within the 6 month period, please return the Testr—freight pre-paid—and correction will be made without charge. Out of warranty products will be repaired on a charge basis.

Return of Items:

Authorization must be obtained from your OAKTON Distributor before returning items for any reason. When applying for authorization, please include information regarding the reason the item(s) are to be returned.

Note: We reserve the right to make improvements in design, construction and appearance of products without notice. Prices are subject to change without notice.

Waterproof pHTestr 2 Double Junction

OAKTON®
INSTRUMENTS
Setting the Standard, again and again™

CE

ISO 9001 CERTIFIED

Microprocessor based
pHTestr
that floats!
Designed for harsh applications

35624-23

WP pH Testr 2 DJ Instructions

Before you Begin:

Remove electrode cap. To condition electrode, immerse electrode in electrode storage solution, buffer or tap water for at least 30 minutes. DO NOT use de-ionized water.

Calibration:

Calibration should be done regularly, typically every day that the Testr is used. You can calibrate at up to three points (pH 4, 7, and 10).

1. Press ON/OFF button to switch unit on.
2. Dip electrode 1/2" to 1" into chosen buffer (pH 4, 7, or 10).
3. Press CAL button to enter Calibrate (CA) mode. 'CA' flashes on the display. Then, a pH value close to the pH buffer value will flash repeatedly.
4. After at least 30 seconds (about 30 flashes) **press the HOLD/CON button** to confirm calibration. The display will show 'CO' and then switch to the buffer value reading.
5. Repeat with other buffers if necessary. Rinse electrode in tap water before dipping into next buffer.

Calibration Troubleshooting:

Failure to press HOLD/CON to confirm calibration (step 4 above). Pressing the CAL button will resume measuring mode but will not enter the calibration value.

Insufficient sampling time. If the Testr does not have a long enough exposure to the buffer, a stable calibration point will not be reached. Wait at least 30 seconds before pressing HOLD/CON.

Failure to re-hydrate the electrode. A dry electrode will give fluctuating readings while it re-hydrates in a buffer, causing errors.

pH Testing:

1. Remove cap from the electrode and press the ON/OFF button to switch Testr on.
2. Dip the electrode 1/2" to 1" into the test solution. Stir once and let the reading stabilize.
3. Note the pH or press HOLD/CON button to freeze the reading. Press HOLD/CON again to release the reading.
4. Press ON/OFF to turn off Testr. If you do not press a button for 8.5 minutes the Testr will automatically shut off to conserve batteries.

Instrument Maintenance:

- Rinse the electrode with tap water or electrode storage solution after each measurement.
- In aggressive chemicals, dirty or viscous solutions, and solutions with heavy metals or proteins, take readings quickly and rinse electrode immediately afterward.
- Periodic soaks in warm pH 4 buffer will help remove contaminants.
- If possible, keep a small piece of paper or sponge in the electrode cap—moistened with clean water or electrode storage solution (NOT de-ionized water)—and close the cap over the electrode.

When you need a new electrode, see **"Electrode Replacement"** on insert in back of box.

68X247724 11/01 Rev 2

OAKTON® Waterproof pHTestr 1 & 2 Instructions

Before you Begin:

Remove electrode cap. To condition electrode, immerse electrode in electrode storage solution, buffer or tap water for at least 30 minutes. DO NOT use de-ionized water.

Calibration:

Calibration should be done regularly, typically every day that the Testr is used.

pHTestr 1: Calibrate at one point (either pH 4, 7, or 10).

pHTestr 2: Calibrate at three points (pH 4, 7, 10).

1. Press ON/OFF button to switch unit on.
2. Dip electrode 1/2" to 1" into chosen buffer (pH 4, 7, or 10).
3. Press CAL button to enter Calibrate (CA) mode. 'CA' flashes on the display. Then, a pH value close to the pH buffer value will flash repeatedly.
4. After at least 30 seconds (about 30 flashes) **press the HOLD/CON button** to confirm calibration. The display will show 'CO' and then switch to the buffer value reading.
5. Repeat with other buffers if necessary (pHTestr 2 only). Rinse electrode in tap water before dipping into next buffer.

Calibration Troubleshooting:

Failure to press HOLD/CON to confirm calibration (step 4 above). Pressing the CAL button will resume measuring mode but will not enter the calibration value.

Insufficient sampling time. If the Testr does not have a long enough exposure to the buffer, a stable calibration point will not be reached. Wait at least 30 seconds before pressing HOLD/CON.

Failure to rehydrate the electrode. A dry electrode will give fluctuating readings while it rehydrates in a buffer, causing errors.

pH Testing:

1. Remove cap from the electrode and press the ON/OFF button to switch Testr on.
2. Dip the electrode 1/2" to 1" into the test solution. Stir once and let the reading stabilize.
3. Note the pH or press HOLD/ CON button to freeze the reading. Press HOLD/CON again to release the reading.
4. Press ON/OFF to turn off Testr. If you do not press a button for 8.5 minutes the Testr will automatically shut off to conserve batteries.

Instrument Maintenance:

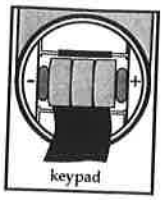
- Rinse the electrode with tap water or electrode storage solution after each measurement.
- In aggressive chemicals, dirty or viscous solutions, and solutions with heavy metals or proteins, take readings quickly and rinse electrode immediately afterward.
- Periodic soaks in warm pH 4 buffer will help remove contaminants.
- If possible, keep a small piece of paper or sponge in the electrode cap—moistened with clean water or electrode storage solution (NOT de-ionized water)—and close the cap over the electrode.

NOTE: Testr life is dependent on meter and electrode care. If the electrode is exposed to materials that contaminate the reference junction, electrode life will be shortened.

When you need a new electrode, see "**Electrode Replacement**" at right.

Replacing the batteries

1. Open battery compartment lid (with attached lanyard loop).
2. Remove old batteries; replace with fresh ones. Note polarity(shown in battery compartment and in picture at right).
3. Recalibrate Testr after battery change.



Error Messages:

ER1 Weak batteries—replace

ER2 Wrong or bad buffer value, or electrode is failing.

OR Over range signal, or electrode is not in contact with solution, or electrode is failing.

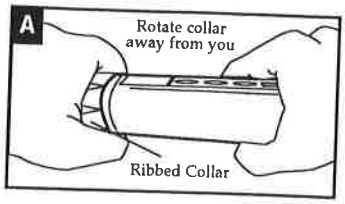
Specifications

	WP pHTestr 1	WP pHTestr 2
Range	–1.0 to 15.0 pH	
Resolution	0.1 pH	
Accuracy	±0.2 pH	±0.1 pH
Calibration	1 point (pH 4.0; 7.0; or 10.0)	3 points (pH 4.0; 7.0 and 10.0)
ATC	No	Yes
Operating Temperature	0 to 50°C (32 to 122°F)	
Functions	ON/OFF; HOLD; CA (Calibrate); CO (Confirm display); auto buffer recognition; auto-shutoff after 8.5 min. of nonuse	
Power	Three 1.5 V batteries (included). 24 hours continuous use (approx. 720 tests per battery set)	
Dimensions	6.5"L x 1.5" dia. (165 x 38 mm dia.)	
Weight	3.25 oz (90 gms)	

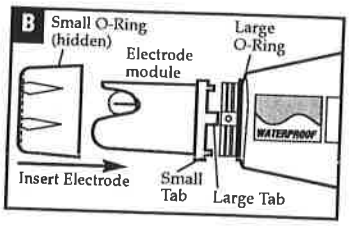
Electrode replacement:

You can replace the electrode module at the fraction of the cost of a new Testr. When the Testr fails to calibrate, gives fluctuating readings in buffers, shows error messages 'E2' or 'OR' in a buffer, and the procedures in the Maintenance section do not help, you need to change the electrode.

1. With dry hands, grip the ribbed Testr collar with electrode facing you. Twist the collar counter clockwise. *(see diagram A).* Save the ribbed Testr collar and O-ring for later use.



2. Pull the old electrode module away from the Testr.
3. Align the four tabs on the new module so they match the four slots on the testr. *(see diagram B).*



4. Gently push the module onto the slots to seat it in position. Push the smaller O-ring fully onto the new electrode module. Push the collar over the module and thread it into place by firmly twisting clockwise.

Warranty:

Each waterproof pHTestr 1 and 2 meter body is warranted against defects in materials and workmanship for a period of 12 months from the date of purchase; the electrode module is warrantied for a period of 6 months from the date of purchase. If repair, adjustment or replacement is necessary and has not been the result of abuse or misuse within the 6 month period, please return the Testr—freight pre-paid—and correction will be made without charge. Out of warranty products will be repaired on a charge basis.

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Authorization must be obtained from your OAKTON Distributor before returning items for any reason. When applying for authorization, please include information regarding the reason the item(s) are to be returned.

Note: We reserve the right to make improvements in design, construction and appearance of products without notice. Prices are subject to change without notice.

This Instruction Manual is also available for download on our Web-site: eutechinst.com or 4oakton.com

EUTECH INSTRUMENTS
Technology Made Easy ...

OAKTON

INSTRUCTION MANUAL

pHTestr 10, 20, 30, 10BNC, Spear

Large Screen
Waterproof pH / Temperature Tester
Double Junction

Introduction

Thank you for selecting our microprocessor waterproof pH tester with USA or NIST buffer set selection. You have one of five models:

- pHTestr10
- pHTestr20
- pHTestr30
- pHTestr10BNC
- pHSpear

This manual provides a step-by-step guide to operate the testers.

Before you begin:

Condition your pHTestr 10, 20, 30 electrodes by immersing it in electrode storage solution or tap water for at least 30 minutes before use. DO NOT use de-ionized water.

Ensure that your pHSpear electrode is always soaked in the electrode storage solution or tap water via its protective cap.

Note: For pHTestr10BNC, please refer to the pH electrode's instruction manual.

pH Buffer Set Selection

Your tester features USA (pH 4.01, pH 7.00 and pH 10.01) or NIST (pH 4.01, pH 6.86, and pH 9.18) standards. Select either one to suit your requirements.

1. While pressing the HOLD/ENT button, switch on the tester by pressing the ON/OFF button.
2. Release the HOLD/ENT button. The display will flash either USA or NIST.
3. Press CAL button to toggle between the two buffer set standards.
4. Press the HOLD/ENT button to confirm the selection of the buffer set.

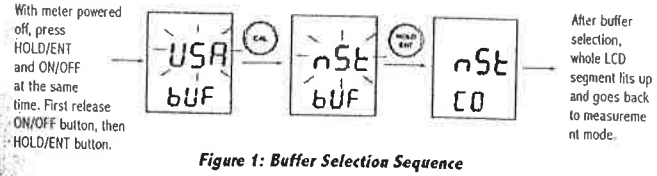

Figure 1: Buffer Selection Sequence

pH Calibration

Calibration should be done regularly, preferably once a week. You can calibrate up to three points using either the USA or the NIST buffer set standards.

1. Press ON/OFF button to switch unit on.
2. Dip electrode about 2 to 3 cm into the pH standard buffer solution.
3. Press the CAL button to enter calibration mode. The 'CAL' indicator will shown. The upper display will show the measured reading based on the calibration while the lower display will indicate the pH standard buffer solution.

Note: All testers have dual display during calibration mode
Note: To abort calibration, press the 'CAL' button.

4. Allow about 2 minutes for the tester reading to stabilize before pressing HOLD/ENT button to confirm the first calibration point. The upper display will be calibrated to the pH standard buffer solution and the lower display will then be toggling in between readings of the next pH standard buffer solution.
5. Repeat with other buffers if necessary. Rinse electrode in tap water bef dipping into next buffer.

Note: The calibration mode allows you to perform up to three calibration points bef returning to the measurement mode automatically. However, if you opted to have o one or two calibration points, simply skip the remaining calibration points by exiting the measurement mode by pressing the CAL button.

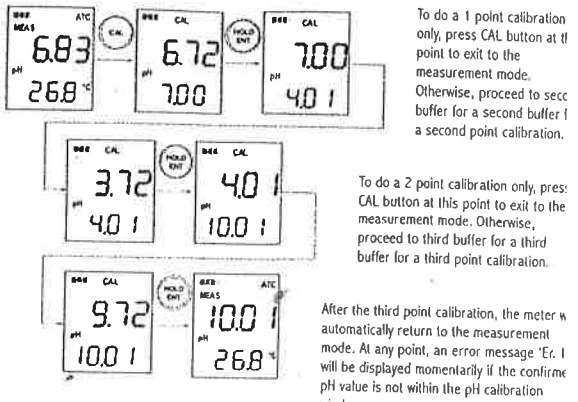

Figure 2: Example of pH Calibration Sequence

pH Measurement

1. Press the ON/OFF button to switch the tester on.
2. Dip the electrode about 2 to 3 cm into the test solution. Stir and let th reading stabilize. For pHSpear, pierce the penetrating tip electrode throug your semi solid sample as per the desired depth. Rotate left and right several times and tilt to ensure sample contact.
3. Note the pH value or press HOLD/ENT button to freeze the reading. To release the reading, press HOLD/ENT again.
4. Press ON/OFF to turn off tester. If you do not press a button for 8.5 minutes, the tester will automatically shut off to conserve batteries.

HOLD Function

This feature lets you freeze the display for a delayed observation

1. Press HOLD/ENT button to freeze the measurement. A 'HOLD' indicator will b displayed and the measurement will be frozen.
2. Press HOLD/ENT again to release the measurement. The 'HOLD' indicator wil not be displayed anymore indicating the held measurement is released.