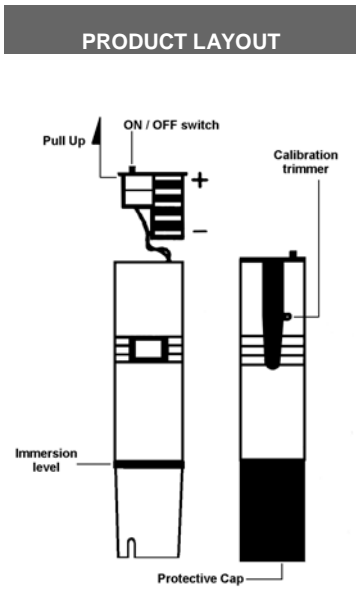


# Water PAL

HIGH ACCURACY ELECTRO-CHEMISTRY TEST PEN

## OPERATION MANUAL

SPECIFICATIONS	
Range	: 0.1 to 800 ppm
Resolution	: 0.1 ppm
Accuracy	: ±2%
Battery	: 4 x 1.5V Button cell (Alkaline A76 or equivalent)
Battery life	: Approx. 100 hours
Operating temperature	: 0° to 50°C
Size (LxWxH)	: 147 x 32 x 15mm
Weight	: Approx. 50 gm



### MAKING MEASUREMENT

1. Remove protective cap from bottom.
2. To switch on the unit, slide the 'ON/OFF' switch located on top of the tester to 'ON'.
3. Scoop sample solution in a cup and dip tester up to the immersion level and shake the sensor area to remove bubbles.

5. Wait for 1 to 2 minute before readout. For consistent measurement, always leave a gap of 1/2 inch or 13mm from the ground. Maintain this gap for calibration and for all measurements.
6. A 1-2ppm/uS vice versa movement is a normal indicator of measuring stability and measurement result should be taken at nominal within the 1-2ppm/uS movement.
7. Always rinse the sensor area with water, blot dry before and after each test.
8. Switch off the tester and replace protective cap before storing away.

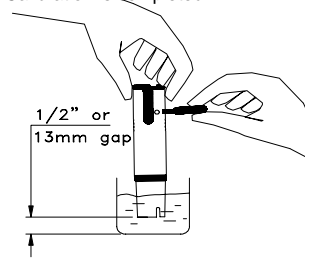
### CALIBRATION

Your tester is factory calibrated. It is recommended to re-calibrate regularly to maintain the desired accuracy of the unit.

1. With Cap removed, dip sensor area in standard solution.

Order Code	Standard Reading
8065	650

2. Shake the sensor area to remove bubbles and wait about 2 minutes for reading to stabilize.
3. With the use of the provided small screw driver, locate the "Calibration trimmer" at the back of the tester and tune the display to read as the standard reading
4. Rinse sensor with tap water.
5. Calibration is completed.

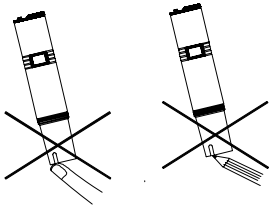


### NOTES ON MEASUREMENT:

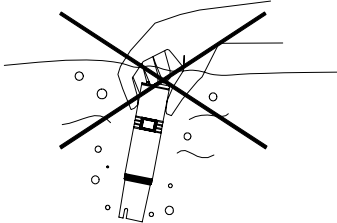
In the presence of certain radio transmitters, this product may produce erroneous readings. If this occurs then measurements should be repeated at another location.

### PRECAUTIONS IN HANDLING

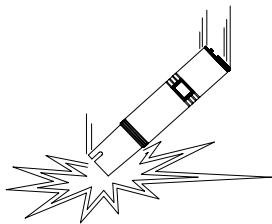
**Do not** touch, rub or scratch the sensor. It might loose its sensitivity and accuracy.



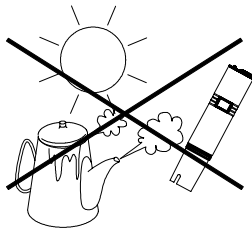
**Do not** drop unit in water or dip unit beyond the immersion level. The unit is not water-tight and is beyond repair if water get in unit.



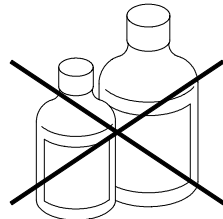
**Do not** drop unit. The tester is fragile not made to withstand impact. It will crack or break under impact, which is beyond repair.



**Do not** store unit under high temperature or direct sunlight. This will shorten the life-span of the product.



**Do not** clean unit with thinner or solvents. This will damage the unit. Use only a damp cloth to clean unit if needed.



### TROUBLESHOOTING & MAINTENANCE

- To improve performance of tester, clean the electrode periodically every 6 or 12 months by rinsing it in alcohol for few minutes.
- If the displays become faint or disappear, this could be due to run-down batteries. Pull out the battery case from top of unit (see layout) and replace all four batteries accordingly.
- Check batteries voltage should be 4volts and above. Reading accuracy will deteriorate with weak batteries.
- If unit is not used or stored for a long period of time, it is a good practice to remove the batteries in case of battery leaks and cause damage to the contacts.

### APPLICATION

- Chemical industry
- Laboratory and school
- Batteries production
- Steam process
- Semi-conductor water treatment
- Quality control
- Food processing
- Boiler
- Cooling tower
- Medicine production processes

### OTHER PRODUCTS

Order Code	Range
pH PAL	: 0.0 ~ 14.0pH
TDS 1 (x10)	: 10 ~ 1,990ppm
TDS 2 (x100)	: 100 ~ 10,000ppm
TDS 3 (x10)	: 10 ~ 1,990µs
TDS 4 (x100)	: 100 ~ 19,900µs
PureWaterPAL	: 0.0 ~ 99.9ppm (ppm)
PureWaterPAL	: 0.0 ~ 99.9µs (µS)
TDS Check	: 10 ~ 1990 ppm (Direct display)

**NEW WATER RESISTANT RANGE**

pH PRO	: 0.00 ~ 14.00pH
ECO PH	: 0.0 ~ 14.0pH
ECO TDS	: 10 ~ 1,990ppm
ECO TDS2	: 10 ~ 10,000ppm
ECO µSIEMEN	: 10 ~ 1,990µS
ECO mSIEMEN	: 0.1 ~ 19.9mS
ECO REDOX	: -999 ~ +999mV