

# Palintest

Water Analysis Technologies

## ***MICRO 800 OPTICAL DO METER AND PROBE***



### **Quick Start Guide**

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## **1. INSTALLING THE BATTERIES**

The Micro 800 meter is powered by 5 AA batteries, either alkaline (supplied as standard) or rechargeable NiMH (but never mixed). Typical battery life is detailed in the specification.

- Remove the battery cover using the supplied screwdriver
- Install 5 AA batteries observing correct polarity
- Re-attach battery cover with screws to hand tight

## 2. SETTING UP THE METER

The Micro 800 Meter provides data acquisition, data logging and recall, calibration, atmospheric pressure monitoring and three-dimensional location information.

Initial set-up of the meter includes defining the language, setting the time/date plus specifying the units used for parameters measured. Dissolved Oxygen units are always displayed as both % Saturation and mg/l.

- Switch on the meter by pressing the red button briefly. **DO NOT HOLD THE BUTTON DOWN.**
- Press the **MENU** key
- Select **Settings** and press **OK**
- Select **Units** to define the default temperature, TDS factor, temperature and salinity units plus location/altitude/pressure units

- Press **ESC** to return to the **Settings** screen
- Select **Time & Date** to enter the current time and date using the up/down arrows.

### **3 CONNECTING THE PROBE**

The Micro 800 probe is attached to the meter via a high integrity waterproof connector and 3 metre cable protected to IP 68 class.

- **Always connect the probe to the meter with the meter switched off.**
- Align the probe connector with the instrument and tighten the blue ferrule to hand tight
- Switch on the meter by briefly pressing the red button and the probe serial number will be displayed

## 4 TAKING READINGS

The Micro 800 Optical DO Meter measures Dissolved Oxygen in aqueous samples, automatically compensating for atmospheric pressure, salinity and temperature. Additional data is provided for location (GPS position), conductivity and seawater specific gravity (SSG).

- Immerse the probe to a depth of **at least** 75mm to cover the electrical contacts for salinity measurement.
- DO measurements can be taken with the protective sleeve in place or removed e.g. in BOD bottles. **If sleeve is removed conductivity readings will not be valid.**
- Readings are shown on the screen with dynamic indication to show values are increasing/decreasing
- Scroll left or right through the screens to see the full data set

## 5     **STORING DATA**

The Micro 800 Meter has capacity to store 3000 full data sets of Dissolved Oxygen (in mg/l and % saturation, temperature, salinity, conductivity, TDS. Seawater Specific Gravity (SSG), barometric pressure, 3-D location and date/time.

- To manually store data press the M+ key. Data will be assigned a numerical address than can be used for selective recall using the MR key with up/down arrows.
- Use the Set-up facility to start Auto Data Logging at an interval ranging from 1 – 99 minutes between readings. **This mode will override the power save function.** A \* symbol will flash on the screen to indicate automatic logging is enabled.

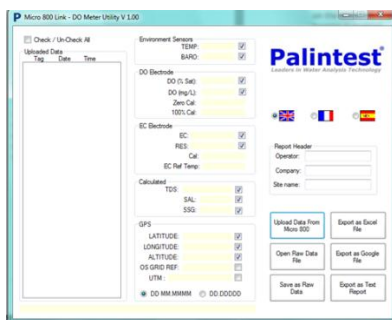
To return to the main screen press ESC or wait for the meter to revert automatically.



## 6 MICRO 800 LINK SOFTWARE

The Micro 800 Meter is supplied with a free utility for download/importing of data and a USB lead to connect the meter to the PC.

- Install the software on your PC **before connecting the instrument via the USB.**



- Connect the Micro 800 Meter using the USB lead and the meter screen will show 'USB Connected'
- Click 'Upload Data from Micro 800' to automatically upload stored data to the PC. Data can then be exported as required.

## **7 MAINTENANCE AND CALIBRATION**

The Micro 800 Meter does not require routine maintenance beyond change of batteries.

The Micro 800 DO probe contains sensing elements for Dissolved Oxygen and salinity/conductivity/TDS/SSG/temperature.

Calibration for Dissolved Oxygen is a two point process requiring the setting of zero and saturation point using Zero Oxygen Solution and damp cloth.

Optical DO caps will require replacement approximately every two years and replacement will be indicated by the Micro 800 Meter.

To calibrate the salinity a single 2570 $\mu$ S/cm standard is required. Immerse the probe to a minimum of 75mm and allow the reading to stabilise.

## **8 WARRANTY AND SUPPORT**

The Micro 800 Meter is supplied with a three year warranty. Register your purchase using the included card to ensure access to product updates and priority assistance.

The Micro 800 DO probes have a warranty of one year.

Warranties exclude damage due to misuse, abuse or accidental damage.

For technical assistance please contact your supplier or the Palintest Technical Support Team via the following:

Website: [www.palintest.com](http://www.palintest.com)

Email: [service@palintest.com](mailto:service@palintest.com)

Telephone: +44 191 491 0808

Fax: +44 191 482 5372

## **APPENDIX 1 SPECIFICATIONS**

### **Micro 800 Meter Specification:**

(H x W x D):	180mm x 90mm x 39mm
Weight:	450g (inc. batteries)
Power supply:	5 'AA' cells
Battery life:	>40 hrs (NiMH)
Operating Temp:	-20 - 70°C
IP Rating:	IP 67
GPS data:	±10m in three dimensions
Atmos pressure:	150 – 1150 mb ± 1 mb

### **Micro 800 DO Probe Specification:**

(L x D):	252mm x 24mm
Weight:	425g
IP Rating:	IP 68
Immersion:	75mm min to 30m max
Operating Temp:	-5 - 50°C

## APPENDIX 2 PERFORMANCE

Dissolved Oxygen	Range	0 - 500.0%, 0 - 50.00 mg/l
	Resolution	0.1%, 0.01 mg/l
	Accuracy	0 - 20 %/mg/l $\pm 1\%$ , 20 - 50 %/mg/l $\pm 10\%$
Conductivity	Range	0 - 200,000 $\mu\text{S}/\text{cm}$ 0 - 9999 $\mu\text{S}/\text{cm}$ , 10.00 - 99.99 mS/cm, 100.0 - 200.0 mS/cm
	Resolution	mS/cm
	Accuracy	$\pm 1\%$ or 1 $\mu\text{S}/\text{cm}$ if greater
Total Dissolved Solids	Range	0 - 100,000 mg/l
	Resolution	0 - 9999 mg/l, 10 - 100.0 g/l
	Accuracy	$\pm 1\%$ or 1 mg/l if greater
Resistivity	Range	5 Ocm - 1 MOcm 5 - 9999 Ocm, 10.0 - 1000.0K Ocm
	Resolution	Ocm
	Accuracy	$\pm 1\%$ or 1 Ocm if greater
Salinity	Range	0 - 70 PSU/ 0 - 70 ppt (g/kg)
	Resolution	0.01 PSU/0.01 ppt
	Accuracy	$\pm 1\%$ or 0.1 PSU if greater
SSG	Range	0 - 50
	Resolution	0.1
	Accuracy	$\pm 1.0$
Temperature	Range	-5 - 50°C
	Resolution	0.1 °C
	Accuracy	$\pm 0.5^\circ\text{C}$

