

## AP-2000/2000-D

### Advanced multiparameter water quality probes

The AP-2000 and AP-2000-D packages provide advanced, portable water quality monitoring. Offered as complete packages you are provided with everything you need to get testing water. Packages include an Aquaprobe, a GPS Aquameter, a 3 meter cable, accessories and some RapidCal calibration solution all housed in a neat carry case for easy storage and transport.

#### Build

All Aquaprobes are made with the same marine grade aluminium, finished in black with hard anodising for excellent corrosion and biofouling resistance. The use of metal, as opposed to plastic, gives our products their characteristic weight and high quality look and feel.

#### Sensors

The AP-2000 comes with all of the common water quality testing sensors pre fitted to the probe:

pH • ORP • Conductivity • TDS • SSG • Resistivity • Salinity  
• Dissolved Oxygen • Temperature

The AP-2000-D adds a depth sensor to the probe.

#### Probes come with 2 empty sockets

Both the AP-2000 and the AP-2000-D come with two empty Aux sockets pre-fitted with removable blanking plugs. These sockets allow you to customise your probe by adding in additional sensors.



AP-2000 with sockets exposed.

#### Socket Customisation Options

Aux port 1 can be fitted with either an optical sensor or an ion selective sensor (ISE).

Aux port 2 can be fitted with only an ISE sensor.

There are many different sensors to choose from to customise your probe:

#### ISE Electrode Options:

Ammonium / Ammonia,  
Chloride,  
Nitrate,  
Fluoride,  
Calcium.

#### Optical Electrode Options:

Turbidity,  
Chlorophyll,  
Blue Green Algae,  
Rhodamine,  
Fluorescein,  
Refined Oil,  
CDOM / FDOM.

#### Optical Dissolved Oxygen (DO) Sensor

The AP-2000 has a factory installed and fully calibrated optical DO sensor. The sensor requires much less maintenance than the galvanic version, gives more stable readings and requires cap changes only once every 2-3 years.

Optical DO sensor LED's flash during measurement.



## AP-2000 Package

Package comes complete with Aquaprobe, GPS Aquameter, 3m cable, rugged case and accessories. Various cable lengths are available; 10, 20 and 30m as standard.



All cables 20m and over come on a winding reel making them much easier to operate, especially when profiling.

## GPS Aquameter

The GPS Aquameter is a hand held device with a display for live data viewing and data recording. As one of our flagship products it is included in every Aquaprobe package. It is designed to be very simple to use and to make your job easier in the field.



## AP-2000 Flowcell

The flowcell available for the AP-2000 uses a simple clamp system, making it easy to take the probe in and out. It features a clear window so you can see the quality of the water visually and has a flanged base so that it can be securely mounted on site.

## AquaLink

Our AquaLink software is free to download from our website's download section. Use this software to download recorded data from your Aquameter, for analysis, reporting and google map creation.

## AquaLink Features

- Simple data download via button
- Tick and un-tick datasets to customise your outputs
- Output a text report for all highlighted data
- Output data as a CSV file that you can open in Excel
- Output data as a .KML file for use in Google Earth



AquaLink and Google Earth screen shots



## Specifications

|                       |                            |
|-----------------------|----------------------------|
| Protection Class      | IP68 (permanent immersion) |
| Immersion Depth       | Min 75mm. Max 100m *       |
| Operating Temperature | -5 °C - +70 °C             |
| Dimensions (L x Dia)  | 290mm x 42mm               |
| Weight                | 700g                       |

\* 100m submersion for period of 12 hours, 30m submersion suitable for permanent deployment, depth measurement displayed up to 60m on Aquameter.

For pricing or any further information, please contact Omni Instruments Ltd.



## Standard Parameters

|                             |            |  |
|-----------------------------|------------|--|
| Dissolved Oxygen            | Range      | 0 - 500.0% / 0 - 50.00 mg/L  |
|                             | Resolution | 0.1% / 0.01mg/L  |
| Depth AP-2000/ AP-5000      | Accuracy   | 0 - 200%: $\pm 1\%$ of reading. 200% - 500%: $\pm 10\%$                            |
|                             | Range      | $\pm 0 - 60.00$ m (60m max displayed depth, max probe immersion 100m)              |
|                             | Resolution | 1cm  |
| Depth AP-7000               | Accuracy   | $\pm 0.5\%$ FS   |
|                             | Range      | $\pm 0 - 99.99$ m  |
|                             | Resolution | 1cm  |
| Conductivity (EC)           | Accuracy   | $\pm 0.2\%$ FS   |
|                             | Range      | 0 - 200 mS/cm (0 - 200,000 $\mu$ S/cm)   |
|                             | Resolution | 3 Auto-range scales: 0 - 9999 $\mu$ S/cm, 10.00 - 99.99 mS/cm, 100.0 - 200.0mS/cm  |
| TDS *                       | Accuracy   | $\pm 1\%$ of reading   |
|                             | Range      | 0 - 100,000 mg/L (ppm)   |
|                             | Resolution | 2 Auto-range scales: 0 - 9999mg/L, 10.00 - 100.00g/L                               |
| Resistivity *               | Accuracy   | $\pm 1\%$ of reading   |
|                             | Range      | 5 $\Omega \cdot$ cm - 1 M $\Omega \cdot$ cm  |
|                             | Resolution | 2 Auto-range scales: 5 - 9999 $\Omega \cdot$ cm, 10.0 - 1000.0 K $\Omega \cdot$ cm |
| Salinity *                  | Accuracy   | $\pm 1\%$ of reading   |
|                             | Range      | 0 - 70 PSU / 0 - 70.00 ppt (g/Kg)  |
|                             | Resolution | 0.01 PSU / 0.01 ppt  |
| Seawater Specific Gravity * | Accuracy   | $\pm 1.0$ $\sigma$ t   |
|                             | Range      | 0 - 50 $\sigma$ t  |
|                             | Resolution | 0.1 $\sigma$ t   |
| pH                          | Accuracy   | $\pm 1.0$ $\sigma$ t   |
|                             | Range      | 0 - 14 pH / $\pm 625$ mV   |
|                             | Resolution | 0.01 pH / $\pm 0.1$ mV   |
| ORP                         | Accuracy   | $\pm 0.1$ pH / $\pm 5$ mV  |
|                             | Range      | $\pm 2000$ mV  |
|                             | Resolution | 0.1mV  |
| Temperature (non freezing)  | Accuracy   | $\pm 5$ mV   |
|                             | Range      | -5°C - +50°C (23°F - 122°F)  |
|                             | Resolution | 0.01°C / 0.1°F   |
|                             | Accuracy   | $\pm 0.1$ °C   |

\* Readings calculated from EC and temperature electrode values

## ISE

|          |            |   |
|----------|------------|---|
| Ammonium | Range      | 0 - 9,000mg/L (ppm)   |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 8,999.9 mg/L  |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |
| Ammonia† | Range      | 0 - 9,000mg/L (ppm)   |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 8,999.9 mg/L  |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |
| Chloride | Range      | 0 - 20,000mg/L (ppm)  |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 19,999.9 mg/L |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |
| Fluoride | Range      | 0 - 1,000mg/L (ppm)   |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 999.9 mg/L    |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |
| Nitrate  | Range      | 0 - 30,000mg/L (ppm)  |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 29,999.9 mg/L |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |
| Calcium  | Range      | 0 - 2,000mg/L (ppm)   |
|          | Resolution | 2 Auto-range scales: 0.00 - 99.99 mg/L, 100.0 - 1,999.9 mg/L  |
|          | Accuracy   | $\pm 10\%$ of reading or 2ppm (whichever is greater)          |

† Ammonium electrode required. Readings calculated from ammonium, pH and temperature values.

## Optical

|                              |               |   |
|------------------------------|---------------|---|
| Turbidity                    | Range         | 0 - 4000 NTU  |
|                              | Resolution    | 2 Auto-range scales: 0.0 - 99.9 NTU, 100 - 4000 NTU                     |
|                              | Accuracy      | $\pm 5\%$ of auto-ranged scale  |
| Chlorophyll                  | Range         | 0 - 500.0 $\mu$ g/L (ppb)   |
|                              | Resolution    | 2 Auto-range scales: 0.00 - 99.99 $\mu$ g/L, 100.0 - 500.0 $\mu$ g/L    |
|                              | Repeatability | $\pm 5\%$ of reading  |
| Phycocyanin (freshwater BGA) | Range         | 0 - 300,000 cells/mL  |
|                              | Resolution    | 1 cell/mL   |
|                              | Repeatability | $\pm 10\%$ of reading   |
| Phycerythrin (marine BGA)    | Range         | 200,000 cells/mL  |
|                              | Resolution    | 1 cell/mL   |
|                              | Repeatability | $\pm 10\%$ of reading   |
| Rhodamine WT Dye             | Range         | 0 - 500 $\mu$ g/L (ppb)   |
|                              | Resolution    | 2 Auto-range scales: 0.00 - 99.99 $\mu$ g/L, 100.0 - 500.0 $\mu$ g/L    |
|                              | Accuracy      | $\pm 5\%$ of reading  |
| Fluorescein Dye              | Range         | 0 - 500 $\mu$ g/L (ppb)   |
|                              | Resolution    | 2 Auto-range scales: 0.00 - 99.99 $\mu$ g/L, 100.0 - 500.0 $\mu$ g/L    |
|                              | Accuracy      | $\pm 5\%$ of reading  |
| Refined Oil                  | Range         | 0 - 10,000 $\mu$ g/L (ppb) (Napthalene)                                 |
|                              | Resolution    | 0.1 $\mu$ g/L   |
|                              | Repeatability | $\pm 10\%$ of reading   |
| CDOM / FDOM                  | Range         | 0 - 20,000 $\mu$ g/L (ppb) (Quinine Sulphate)                           |
|                              | Resolution    | 2 Auto-range scales: 0.0 - 9,999.9 $\mu$ g/L, 10,000 - 20,000 $\mu$ g/L |
|                              | Repeatability | $\pm 10\%$ of reading   |

The accuracy figures quoted throughout this document represent the equipment's capability at the calibration points at 25°C. These figures do not take into account errors introduced by variations in the accuracy of calibration solutions and errors beyond the control of the manufacturer that may be introduced by environmental conditions in the field. Accuracy in the field is also dependent upon full calibration and minimal time between calibration and use.