AQUAREAD
water monitoring instruments

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.

All currently measured data can be recorded by pressing the M+ button, as you record your dataset the Aquameter uses its built in GPS receiver to record the precise location that the measurements were taken from, with data being viewable in Google Earth.

Build

Left: AquaLink screen shot.
Right: Google Earth screen shot with GeoTags

Process data in AquaLink

- 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

GPS Aquameter Mechanical Specification

Dimensions (L x H x D)	90mm x 180mm x 39mm
Weight	425g
Display	80 character backlit LCD
Data Memory	10,000 full sets inc GLP data
GPS Receiver	12 channel with int antenna
GPS Accuracy	+/- 10m in all 3 dimensions
Atmospheric Pressure	150mb – 1150mb Accuracy +/- 1mb
Interface	USB (cable provided)
Power Supply	5 x AA cells. Alkaline or Ni-MH rechargeable
Battery Life	Alkaline > 20 hours Ni-MH > 40 hours
Operating Temperature	-20°C to +70 C
Protection Class	IP67

The GPS Aquameter can be used with Aquaprobes to measure the following parameters

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Standard Parameters	Dissolved Oxygen	Range	0 – 500.0% / 0 – 50.00 mg/L
		Resolution	0.1% / 0.01mg/L
		Accuracy	0 - 200%: ± 1% of reading. 200% - 500%: ± 10%
	Depth AP-2000/ AP-5000	Range	± 0 – 60.00 m (60m max displayed depth, max probe immersion 100m)
		Resolution	1cm
		Accuracy	± 0.5% FS
	Depth AP-7000	Range	± 0 – 99.99 m
		Resolution	1cm
		Accuracy	± 0.2% FS
	Conductivity (EC)	Range	0 – 200 mS/cm (0 - 200,000 µS/cm)
		Resolution	3 Auto-range scales: 0 – 9999 µS/cm, 10.00 – 99.99 mS/cm, 100.0 – 200.0mS/cm
		Accuracy	± 1% of reading
	TDS*	Range	0 – 100,000 mg/L (ppm)
		Resolution	2 Auto-range scales: 0 – 9999mg/L, 10.00 – 100.00g/L
		Accuracy	± 1% of reading
	Resistivity*	Range	5 Ω • cm – 1 MΩ • cm
		Resolution	2 Auto-range scales: 5 – 9999 Ω • cm, 10.0 – 1000.0 KΩ • cm
		Accuracy	± 1% of reading
	Salinity*	Range	0 – 70 PSU / 0 – 70.00 ppt (g/Kg)
		Resolution	0.01 PSU / 0.01 ppt
		Accuracy	± 1% of reading
	Seawater Specific Gravity*	Range	0 – 50 σt
		Resolution	0.1 σt
		Accuracy	± 1.0 σt
	pH	Range	0 – 14 pH / ± 625mV
		Resolution	0.01 pH / ± 0.1mV
		Accuracy	± 0.1 pH / ± 5mV
	ORP	Range	± 2000mV
		Resolution	0.1mV
		Accuracy	± 5mV
	Temperature (non freezing)	Range	-5°C – +50°C (23°F – 122°F)
		Resolution	0.01°C / 0.1°F
		Accuracy	± 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	± 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	± 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	± 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	± 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	± 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	± 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	± 5% of auto-ranged scale
	Chlorophyll	Range	0 – 500.0 µg/L (ppb)
		Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
		Repeatability	± 5% of reading
	Phycocyanin (freshwater BGA)	Range	0 – 300,000 cells/mL
		Resolution	1 cell/mL
		Repeatability	± 10% of reading
	Phycerythrin (marine BGA)	Range	200,000 cells/mL
		Resolution	1 cell/mL
		Repeatability	± 10% of reading
	Rhodamine WT Dye	Range	0 – 500 µg/L (ppb)
		Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
		Accuracy	± 5% of reading
	Fluorescein Dye	Range	0 – 500 µg/L (ppb)
		Resolution	2 Auto-range scales: 0.00 - 99.99 µg/L, 100.0 - 500.0 µg/L
		Accuracy	± 5% of reading
	Refined Oil	Range	0 – 10,000 µg/L (ppb) (Napthalene)
		Resolution	0.1 µg/L
		Repeatability	± 10% of reading
	CDOM / FDOM	Range	0 – 20,000 µg/L (ppb) (Quinine Sulphate)
		Resolution	2 Auto-range scales: 0.0 – 9,999.9 µg/L, 10,000 – 20,000 µg/L
		Repeatability	± 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.