AQUAREAD
water monitoring instruments

The AQUAREAD WATER QUALITY RANGE

CONTENTS

Single Parameter Packages

- AquaPlus Package
- AP-LITE Package

These packages contain smaller probes offering single parameter water quality monitoring.

Entry Level Packages

- AP-700 Package
- AP-800 Package

These are entry level multiparameter water quality monitoring packages. The probes come fitted with all of the regular water monitoring sensors to provide basic water quality data.

Advanced Packages

- AP-2000/2000-D Package
- AP-5000 Package

These are advanced multiparameter water quality monitoring packages. The probes come fitted with all of the regular water monitoring sensors and also offer the option to install additional, more advanced sensors.

Long Term Deployment

- 7000 Package
- AquaLogger
- BlackBox

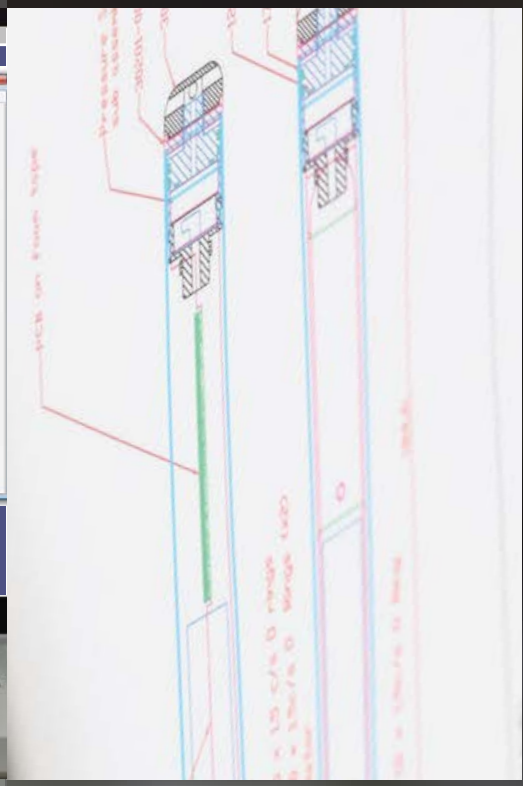
When you need to deploy your probes for longer durations the AP-7000 uses a self cleaning system to help keep the sensors cleaner for longer. Various data logging options are available.

Aquaread Software

- AquaLink
- OxiLink
- LoggerLink
- SondeLink

All Aquaread software is free to download from www.aquaread.com.

Sensor Specifications



- Full specifications on all sensors Aquaread offers.

AquaPlus Package

optical dissolved oxygen • conductivity • TDS • SSG • resistivity • salinity • temperature

Optical Dissolved oxygen water quality monitoring package

Combined optical dissolved oxygen, conductivity and temperature sensor for portable field use. Package comes complete with 3m cable, GPS meter and carry case

Why Optical?

Traditionally, DO measurement in portable field equipment has been done using membrane covered detectors known as Clark Cells. This type of cell suffers from problems including membrane fouling, calibration instability and worst of all, oxygen consumption. During measurement, a Clark Cell will consume oxygen making it necessary to have a constant flow of water over the cell.

Optical technology eliminates all these problems allowing high precision, membrane-free, long-term stability along with infrequent calibration and immunity to fouling by sulphides and other gases.

The Aquaread AquaPlus is the only Optical DO system that measures salinity directly. This allows for automatic salinity compensation giving you the highest accuracy in any type of water.

The Tech Behind AquaPlus

The Aquaread AquaPlus works on the principle of Dynamic Luminescence Quenching. A gas-permeable material known as a luminophore is excited with short bursts of blue light, which causes molecules in the luminophore to emit red photons. By measuring the delay of the returned red photons with respect to the blue excitation, the level of dissolved oxygen present can be determined.

AquaPlus Mechanical Specification

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 100m**
Operating Temperature	-5˚C - +70˚C
Dimensions (L x Dia)	250mm x 24mm
Weight	400g

**100m submersion for period of 1 week, 30m submersion suitable for permanent deployment.

AquaPlus with the sleeve removed reveals the combined dissolved oxygen, conductivity & temperature sensors. The end cap is replaceable however you can expect more than 2 years life from one cap

AP-LITE Aquaprobe Package

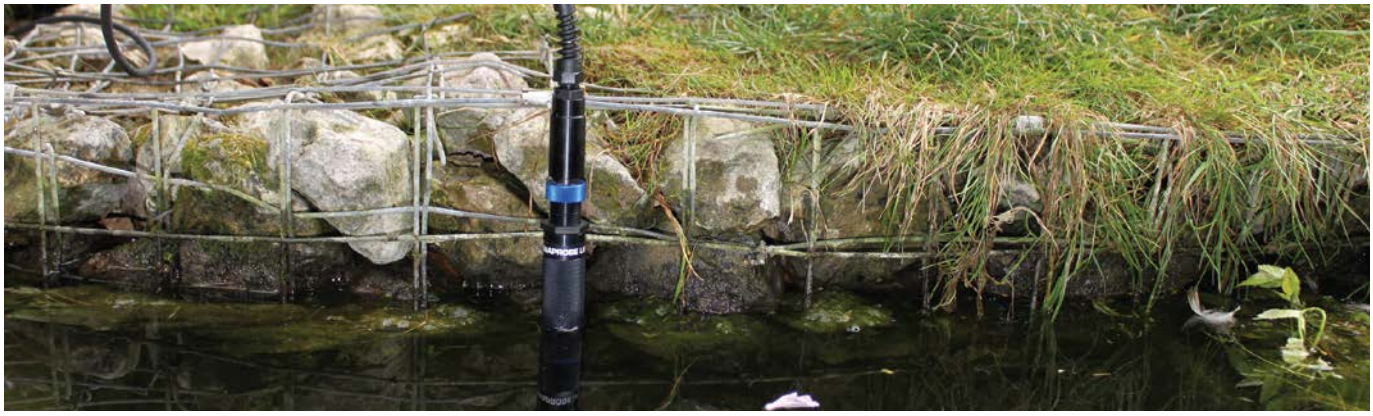
Choose one from eight different optical sensors for advanced single parameter monitoring

Single parameter water quality monitoring package

Simple, single parameter monitoring with the versatile, portable AP-LITE system

AP-LITE

The AP-LITE is a simple probe with a single optical socket. This socket is able to house any of our optical electrodes, including turbidity and chlorophyll. A temperature sensor is also included on the probe. The AP-LITE package includes our rugged 3m cable, our GPS Aquameter, a range of accessories and a rugged carry case.



The AP-LITE is commonly used with our sapphire lensed turbidity sensor, chlorophyll sensor or blue-green algae sensors. Whilst the package includes an Aquameter the AP-LITE can also be used with one of our AquaLoggers for unmanned turbidity, chlorophyll or blue-green algae monitoring.

AP-LITE Mechanical Specification

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 100m* *
Operating Temperature	-5˚C - +70˚C
Dimensions (L x Dia)	250mm x 24mm
Weight	400g

* *100m submersion for period of 1 week, 30m submersion suitable for permanent deployment.

Screw in sensors make it easy to install the various sensors available

Choose from a range of optical sensors for use in the AP-LITE, see the full range in the specifications section

AP-700 / 800 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • dissolved oxygen (DO) • temperature • turbidity

The cost effective, complete water quality monitoring package

Affordable multiparameter water quality testing packages that cover all the basics

AP-700 vs 800

The AP-700

pH • ORP • conductivity • TDS • SSG • Res • salinity • dissolved oxygen • temperature

The AP-800

pH • ORP • conductivity • TDS • SSG • Res • salinity • dissolved oxygen • temperature • TURBIDITY

See back pages for Sensor Specifications

"The AP-700 and the AP-800 Aquaprobes have a very similar build to the more advanced AP-2000, the fitted sensors even have the same high accuracy"

These packages are ideal if you are new to water quality monitoring. They will provide you with measurements for all of the commonly monitored parameters.

Both Aquaprobes come fitted with pH/ORP sensor, a conductivity sensor a dissolved oxygen sensor and a temperature sensor. The AP-800 also features our sapphire lensed turbidity sensor.

A 3m cable comes hard wired to the probe, extension cables are available if longer lengths are required; 10, 20 and 30m as standard.

Aquaprobe Facts

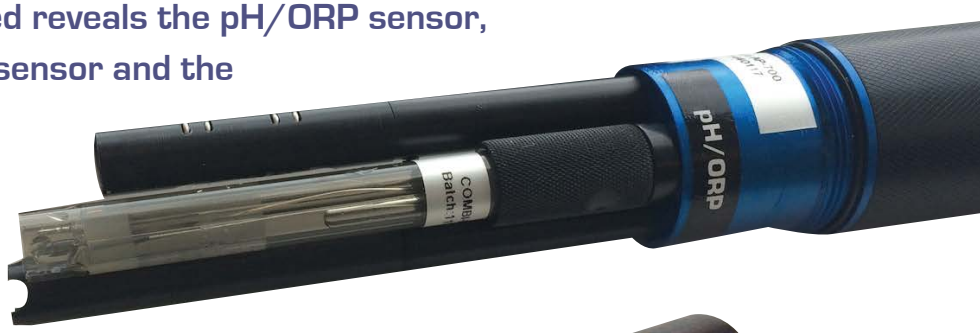
- *Every sensor on the 700/800 Aquaprobe is replaceable, pH/ORP sensors are user replaceable whereas the conductivity and dissolved oxygen sensors are factory replaceable*
- *Both the AP-700 and AP-800 can be supplied with optical DO and depth sensors on request*
- *The turbidity sensor on the AP-800 can be replaced with any of our optical or ISE sensors*

AP-700 / 800 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • dissolved oxygen (DO) • temperature • turbidity

The cost effective, complete water quality monitoring package

AP-700 with the sleeve removed reveals the pH/ORP sensor, the conductivity/temperature sensor and the dissolved oxygen sensor



Improved rugged galvanic DO sensor

Both the AP-700 and AP-800 feature the same new rugged DO sensor. The sensor tip is made from a solid zinc block meaning you can easily polish and clean the sensor to extend its life

AP-700/800 both feature a newly designed rugged galvanic DO sensor tip.

Designed to be used with the GPS Aquameter

Both Packages come with the GPS Aquameter for data collection, live readings and sensor calibration

AP-700 /800 Mechanical Specification

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 50m*
Operating Temperature	-5˚C - +70˚C
Dimensions (L x Dia)	290mm x 42mm
Weight	700g

*50m submersion for period of 1 week, 10m submersion suitable for permanent deployment.

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AP-2000 / AP-2000-D Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity
• optical dissolved oxygen • temperature • depth

Measures more parameters than any other 2" diameter multiparameter probe

Take your portable water quality monitoring to the next level by using the advanced AP-2000 multiparameter probe

AP-2000 / AP-2000-D

The AP-2000 comes pre-loaded with a selection of sensors:

pH • ORP • conductivity • TDS • SSG • Res • salinity
• optical dissolved oxygen • temperature • depth (AP-2000-D Only)

See back pages for Sensor Specifications

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

There are an additional 2 ports allowing you to add more:

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

ISE Electrode Options:

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

Optical Electrode Options:

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

Aquaprobe Facts

- *The IP68 rated Aquaprobe is constructed of marine grade aluminium and is designed for use in fresh, marine and waste-water applications.*

- *Its metal construction and weight reflect the superior build quality of the instrument.*

AP-2000 / AP-2000-D Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • optical dissolved oxygen • temperature • depth

Measures more parameters than any other 2" diameter multiparameter probe

GPS Aquameter

Every Aquaprobe package comes with a GPS Aquameter for live readings, automatic data recording and probe calibration

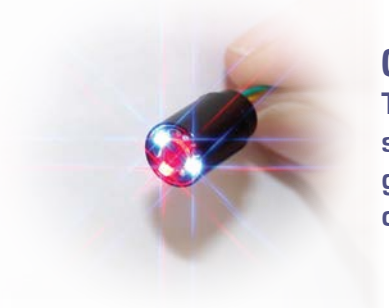
"Record the location of every data set using the GPS Aquameter."

3m Cable with AquaConn Connectors

The AP-2000 is fitted with our robust AquaConn metal connectors, each package comes with a 3m cable with AquaConn connectors at each end and Kevlar strands running the length of the cable for extra tensile strength

Flowcell available for every Aquaprobe

Every water quality testing probe has its own flowcell allowing you to bring sample water straight to the probe. This is ideal for ground water monitoring and some process applications



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 years

AP-2000/2000-D Mechanical Specification

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 1 week, 30m submersion suitable for permanent deployment, depth measurement displayed up to 60m on Aquameter.

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AP-5000 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity
• optical dissolved oxygen • temperature • depth

Add even more sensors to your portable water quality monitoring package

Maximise your water quality data collection using the extra sensor ports of the portable AP-5000 Aquaprobe

AP-5000 Package

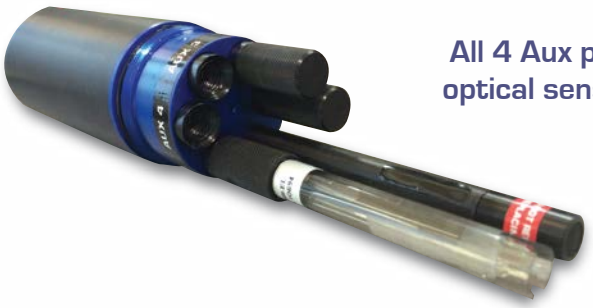
The AP-5000 comes pre-loaded with a selection of sensors:

pH • ORP • conductivity • TDS • SSG • Res • salinity
• optical dissolved oxygen • temperature • depth

See back pages for Sensor Specifications

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

There are an additional 4 ports allowing you to add more:



All 4 Aux ports can be fitted with either an optical sensor or an ISE from the list below

ISE Electrode Options:

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

Optical Electrode Options:

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

Aquaprobe Facts

- *All Aquaprobes are completely filled with resin protecting the circuitry and processors within the probe. The resin also make the probe completely water tight ensuring no leaks even at depth.*

- *The weight of the Aquaprobe means no external weights are required to allow the probe to drop below the surface*

AP-5000 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • optical dissolved oxygen • temperature • depth

Add even more sensors to your portable water quality monitoring package

AP-5000 Package Contents

Full range of accessories in every package

Every Aquaprobe package comes with a range of relevant accessories including a 3m cable, calibration vessels, USB cable to connect the GPS Aquameter to your PC, RapidCal calibration solution and batteries

AP-5000 can house more than one optical sensor

The AP-5000 has one major advantage over the AP-2000, it can house more than one optical sensor in it's unrestricted Aux ports. Many applications require both turbidity and chlorophyll monitoring at the same time, this is made possible using the AP-5000. Seen to the left is the AP-5000 fully loaded with 2 ISE and 2 optical sensors connected

The hidden depth sensor

With all of the sensors removed, in the image to the right, the depth sensor hole can be seen in the centre of the probe body

AP-5000 Mechanical Specification

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. Max 100m*
Operating Temperature	-5°C - +70°C
Dimensions (L x Dia)	340mm x 55mm
Weight	950g

*100m submersion for period of 1 week, 30m submersion suitable for permanent deployment, depth measurement displayed up to 60m on Aquameter.

AP-7000 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity
• optical dissolved oxygen • temperature • depth

Long term monitoring made easy with the AP-7000's effective self cleaning system

Record up to 17 water quality parameters
over long periods of unmanned monitoring using the AP-7000

AP-7000 Package

The AP-7000 comes pre-loaded with a selection of sensors:

pH • ORP • conductivity • TDS • SSG • Res • salinity
• optical dissolved oxygen • temperature • depth

See back pages for Sensor Specifications

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

There are an additional 6 ports allowing you to add much more:

All 6 Aux ports can be fitted with either an
optical sensor or an ISE from the list below

ISE Electrode Options:

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

Optical Electrode Options:

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

Aquaprobe PC KIT available

You are now able to connect your Aquaprobe direct to your PC Via the Aquaprobe PC-KIT's USB interface. Using the provided software you can take live readings, log data direct to your hard drive and calibrate probes with fully recorded calibration reports

AP-7000 Aquaprobe Package

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • optical dissolved oxygen • temperature • depth

Long term monitoring made easy with the AP-7000's effective self cleaning system

AP-7000 Self Cleaning System

Easy and cost effective to maintain

The self cleaning system on the AP-7000 cleans every sensor installed on the probe including pH and conductivity. Over time the brushes can become fouled particularly during long deployments so the wiper arm is designed to be easily removed for quick and simple brush replacement:

Top right: Remove the pin from the top of the cleaning arm
Right: Slide out the cleaning arm
Bottom right: slide out the brushes and quickly replace

Various Logging options

See next page for more details on logging options

GPS Aquameter

AquaLogger-7000

BlackBox

AP-7000 Mechanical Specification

Protection Class	IP68 (permanent immersion)
Immersion Depth	Min 75mm. max 100m*
Operating Temperature	-5°C - +70°C
Dimensions (L x Dia)	440mm x 77mm
Weight	1350g

*100m submersion for period of 1 week, 30m submersion suitable for permanent deployment, depth measurement up to 100m.

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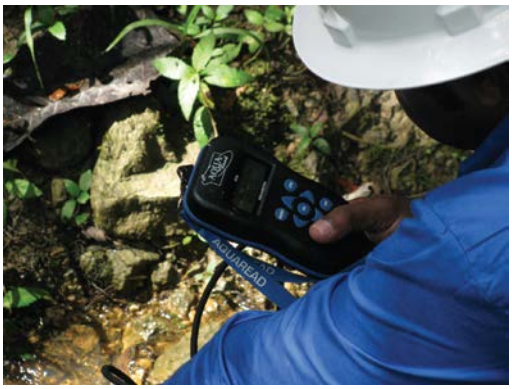
Aquaprobe Logging Options

GPS Aquameter • AquaLogger • BlackBox • AquaTel Telemetry

Many different logging options from spot testing to long term monitoring

Whatever your logging requirements we offer many options including spot testing, short to medium unmanned logging and data delivery using telemetry

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

GPS Aquameter Mechanical Specification

Dimensions (L x H x D)	90mm x 180mm x 39mm
Weight	425g
Display	80 character backlit LCD
Data Memory	1110 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

Aquaprobe Logging Options

GPS Aquameter • AquaLogger • BlackBox • AquaTel Telemetry

Many different logging options from spot testing to long term monitoring

AquaLogger

The AquaLogger is designed to be robust enough to handle unmanned deployments in all kinds of conditions. There are 2 types of AquaLogger available:

- **AquaLogger-2000:** for use with the AquaPlus, AP-LITE, AP-700, AP-800 and AP-2000 probes
- **AquaLogger-7000:** for use with the AP-5000 and AP-7000 Aquaprobes

AquaLogger Mechanical Specification

Dimensions (L x Dia)	AquaLogger 2000: 44mm x 250mm AquaLogger 7000: 77mm x 250mm
Weight	AquaLogger 2000: 420g AquaLogger 7000: 1500g
Data Memory	15,000 full sets inc GLP data
Atmospheric Pressure	150mb – 1150mb Accuracy +/- 1mb
Interface	USB (cable provided)
Power Supply	AquaLogger 2000: 2x Lithium C cells AquaLogger 7000: 6x Lith C cells + 2x AAA cells
Battery Life	Dependent upon logging rate and temperature.
Operating Temperature	-20°C to +70°C
Protection Class	IP67

Every AquaLogger comes complete with LoggerLink PC software and USB data cable so that you can set up your logging regime at your desk. Logging is initiated when the probe is connected

BlackBox

The BlackBox is a data converter that outputs our probes signals to industry standard SDI-12 or Modbus (RS485) protocols.

BlackBox Mechanical Specification

Input Voltage	10V – 14V DC
Input Current (awake)	~ 40mA (AP-Lite / AquaPlus / AP-700 - AP-2000) ~ 100mA (AP-5000 or AP-7000 attached) ~ 500mA (AP-7000 during self cleaning cycle)
Input Current (asleep)	< 100µA (includes current drawn by attached Probe)
Protection Class	IP67
Dimensions	140mm x 65mm x 30mm
Weight	400g
Connections	Probe socket on flying lead & 1M screened power/data cable
Fixing	Aluminium flange with four 5mm mounting holes
Digital Interface	User selectable between SDI-12 & Modbus (RS485)
Update rate	All data is refreshed every 2 seconds

The BlackBox features an internal pressure sensor to detect changes in atmospheric pressure

All data output by the BlackBox is therefore fully compensated ready to be handled/displayed by the chosen third party hardware

AquaSonde Range

pH • ORP • conductivity • TDS • SSG • resistivity • salinity
• optical dissolved oxygen • temperature • depth

Water quality monitoring sonde with internal memory and power

The AquaSonde brings built in data logging capabilities to our range of reliable multiparameter water quality testing probes. Their internal power allows for long term discreet deployments

The AquaSonde brings built in data logging capabilities to our range of reliable multiparameter water quality testing probes.

The AquaSondes are powered by internal lithium batteries to extend the duration of your deployments for as long as 180 days, model and logging rate dependent.

All AquaSondes feature an internal memory that is capable of storing up to 150,000 full data sets, that equates to over 3 years continuous data logging.

These logging devices can be deployed on their own for a discrete deployment or they can be deployed with a vented cable allowing for barometric compensation of measurements, specifically depth and % saturation of dissolved oxygen.

Each AquaSonde is supplied with a QuickDeploy Key, used to initiate the probe's logging regime and SondeLink PC software for complete logger set up, sensor calibration and data collection.

The key has multiple functions. It seals the connector, starts the pre-programmed logging and gives a visual indication of memory and power remaining.

AquaSonde Range

pH • ORP • conductivity • TDS • SSG • resistivity • salinity • optical dissolved oxygen • temperature • depth

Water quality monitoring sonde with internal memory and power

Logging/Event/Cleaning Rates

Programmable. Fastest logging rate 0.5Hz. Slowest logging rate 120 hours.
Event testing and logging on any single parameter programmable between 1 minute and 99 hours. Programmable cleaning rate (AS-7000 only)

Vented Data Cable Option

All models feature an internal barometric pressure sensor that is used when calculating Depth and percentage saturation of Dissolved Oxygen.
If the AquaSonde is to be deployed for more than a day at a time and accurate Depth and %DO values are required, a vented cable is recommended.
For profiling, dip testing or short-term deployment during which time the change in barometric pressure will be negligible, a vented cable is not necessary.

Vent / Data Hub

This option is a termination device for the vented cable that allows a desiccant bottle to be attached and provides a USB port for data retrieval and a visual indication of AquaSonde health, battery and memory condition. By attaching a PC running SondeLink to the USB port, direct access can be gained to the AquaSonde allowing live data viewing, live data logging directly to PC, retrieval of logged data and full setup, all whilst the AquaSonde is submerged.

AquaSonde Mechanical Specification

	AQUASONDE-2000	AQUASONDE-5000	AQUASONDE-7000
IP	IP68 (permanent immersion)	IP68 (permanent immersion)	IP68 (permanent immersion)
Depth	Min 75mm. Max 100m*	Min 75mm. Max 100m*	Min 75mm. Max 100m*
Temperature	-5˚C - +70˚C	-5˚C - +70˚C	-5˚C - +70˚C
Dimensions	42 x 515mm	58 x 570mm	77 x 635mm
Weight (Inc Batt)	0.9kg	1.9kg	3.4kg
Batteries **	2x 3.6V Lithium C cells. Life greater than 6 months.	2x 3.6V Lithium D cells. Life greater than 10 months.	2x 3.6V Lithium D cells. Life greater than 9 months.
Memory capacity	150,000 full data sets	150,000 full data sets	150,000 full data sets

*100m submersion for profiling, 30m submersion suitable for permanent deployment.
**Battery life estimated at 20°C with a logging rate of 15 minutes and a cleaning rate (AS-7000 only) of 12 hours, may vary with electrode options.

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Aquaread Software

All Aquaread software is available for download from the dedicated software section on our website

All Software provided

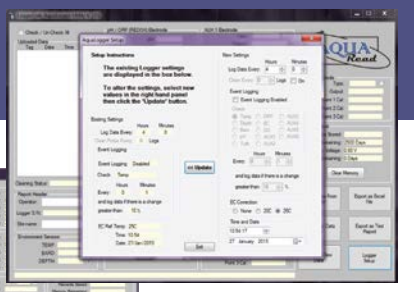
Every Aquaread product that requires PC software comes with a USB data cable, software is available to download from our web site at www.aquaread.com/software-downloads/

GPS Aquameter - AquaLink
AquaPlus Meter - OxiLink

AquaLink / OxiLink 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

AquaLogger - LoggerLink



LoggerLink Features

- Simple data download
- Export data as a full report or save file to your PC
- Set up the logging regime and event triggers
- Upload settings back to the AquaLogger
- Check available memory and battery life

AquaSonde - SondeLink

PC Application

SondeLink free PC application provides the following features via an integrated USB interface:

- Live data viewing
- Live data logging directly to PC
- Full calibration with calibration report generation
- Retrieval of logged data
- Logged data output to spreadsheet and text files
- Full setup utility
- Site name and GPS geotagging

Water Quality Specifications

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	± 0.5 °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 – 3000 NTU
	Resolution	2 Auto-range scales: 0.0 - 99.9 NTU, 100 - 3000 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.

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