

The AQUAREAD PRODUCT RANGE



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Water Quality



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- AquaPlus Package
- AP-700 & AP-800 Packages
- AP-2000 & AP-2000-D Packages
- AP-5000 Package
- AP-7000 Package

Logging Options



- The GPS Aquameter
- The AquaLogger
- The BlackBox

Water Level / Flood Warning



- The LevelLine
- The LevelLine-EWS
 - Set multiple alerts*
 - Alerts via SMS & Email*
 - Secure deployment*
 - Simple installation*
 - Cost effective alert system*
- The LevelLine-Mini

Telemetry



- **AquaTel Telemetry**
SMS & Email Comms
No annual fee
Data sent via email
Network signal indication
Secure deployment
Simple installation

Remote Monitoring



- **The AquaStation**
Remote water quality
Self cleaning
Self calibrating
Self powered
Various set-up options

Sensor Specifications



- **Aquaread Software**
- **Standard Parameters**
- **Ion Selective Sensors (ISE)**
- **Optical Sensors**
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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.



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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.

AquaTel Telemetry System

3G, GPRS telemetry device with SMS and email communications

No remote server means no annual subscriptions, you Own Your Data

AquaTel Telemetry System Specification

Power Supply			
Protection	Power reverse polarity protection		
Input Range	Internally powered by 2 Lithium D cells or 6 - 14VDC external		
Type of Power	Battery or external supply		
Power Consumption *	Sleep mode	Standby mode	Send mode
	360 uW 100 uA @ 3.6 Volts	12 mW 3.5 mA @3.6 Volts	~1 Watt ~ 300 mA @ 3.6 Volts
General Environmer			
Temperature	Operating: -40 ~ + 70 °C; Storage -40 ~ +85 °C		
Humidity	5 ~ 100 % RH		
IP Protection	IP 65		
Operation			
Battery life	up to 5 years; consult user manual for more information		
Configuration Programming	Via GPRS (SMS / Email) or PC software		
Data Retrieval	Automatic via GPRS (Email / FTP / Native protocol) Via USB-Connection by means of a Computer (Windows)		
Alarming	On pre-defined thresholds and rate of change of measurements; Via SMS / Email		
PowerSwitch	Internal voltage converter for supplying remote sensors		
System			
Watchdog	Yes		
RTC(Real Time Clock)	Yes, internally calibrated; accuracy < 100 ppm; Battery Backuped		
Memory	64Mb		
Pressure sensor	Yes		
Temperature sensor	Yes		
Power Sensor	Yes, Monitors power consumption, rest-capacity of battery		
Expansion Bus	One, for optional modules** Extra I/O, future functionality		
RS485 port	Yes		
Sample Frequency	1 reading per second		
Datalog Frequency	1 reading per minute		
Display	Optional LCD Module**		
Rohs Compliant	Yes		
Communication Ports			
Serial Data	RS485		
Serial Data	SDI-12		
Expansion port	Optional RS232 for external modem**		
3G / GPRS / GSM modem			
Frequency Range	Quad Band EGSM 850 / 900 / 1800 / 1900 MHz		
Capabilities	3G / GPRS / GSM / FTP / EMAIL / SMS		
Dimensions			
D x W x H	90 x 90 x 160mm		
Weight			
Nett Weight	650g		

* The Power consumption in sleep mode is when Datalogger is idle, and no tasks are performing. Only the RTC is running

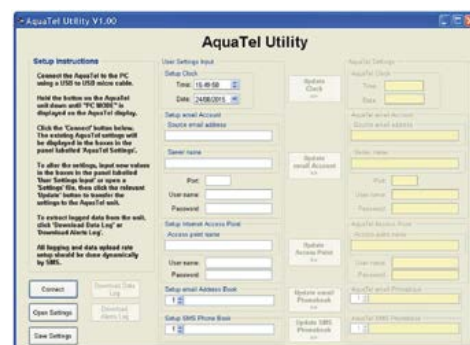
** LCD display / RS232 interface option sold together as a single module

AquaTel Set up Utility

The AquaTel Set up screen allows you to set up the following parameters:

- The AquaTel unit's real time clock
- An email account for data uploads
- A mobile internet access point
- Multiple contact email addresses
- Multiple contact SMS numbers

In addition, the software allows you to download logged data and save it to a file on your PC.



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 ot	
	Resolution	0.1 ot	
	Accuracy	± 1.0 ot	
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)	

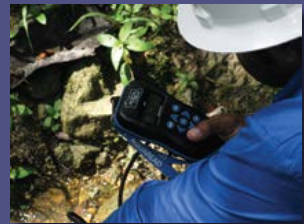
† Ammonium electrode required. Readings calculated from ammonium, pH and temperature values.

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 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.

AQUAREAD

water monitoring instruments



FS621752

EMS621753

Aquaread® - Community Trade Mark Registration No. 011713815
Aquaread® - Australia Trade Mark Registration No. 1436803
Leveline® - Community Trade Mark Registration No. 011713823
Aquaprobe® - UK Trade Mark Registration No. 00003000628
Aquameter® - UK Trade Mark Registration No. 00003000627
LoggerLink® - UK Trade Mark Registration No. 3081814