

# RBR Data Buoy

## Instrumentation Platform with Telemetry

The RBR Data Buoy serves as a rugged and versatile system for monitoring of physical, chemical and biological properties of ocean, coastal, and inland waters. This package offers a complete turnkey solution built on RBR's high-accuracy sensors, third-party instrumentation, weather sensors and telemetry systems.

### Features:

- PC104 controller integrates all sensors
- Simple interface to RBR sensors
- Rugged hull design
- Solar powered

A robust RBR DBC-II Controller provides up to 20 analogue and digital I/O ports (RS-232/485, SDI-12, Ethernet) on the buoy. These ports can be easily configured by users to service the attached sensors and instruments, allowing independent sample rates for each channel, if desired.



Depending on the installed telemetry system, sensor data and buoy status may be viewed in real-time and/or displayed on a secure web page that is accessible via the internet from anywhere in the world. A GPS system is included to provide accurate position and clock.

The buoy system includes a programmable navigation light and a radar reflector. In the example shown, power to the system is provided by 4 x 8W solar panels and a 40Ah battery. Alternative power solutions are available to suit various payloads.

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- Oceans
- Coasts
- Lakes



## Technical

### RBR DBC-II Controller

Controller:	Low power PC104
Inputs:	RS232/485, SDI-12, Analog
Scan Rate:	Programmable for each channel
Memory:	Compact Flash (up to 8 GB)

### Buoy Hull

Diameter:	1.2, 1.9, 2.6, or 3.0 metre
Buoyancy:	200, 2000, 7000, or 9000 Kg
Material:	Moulded Polyethylene

### Communications

Telemetry:	GSM, CDMA, Satellite, or RF
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### Power (example shown)

Solar Panels:	QTY 4 - 8W panel
Batteries:	40AH @ 12Vdc

*Alternative supply systems available for higher power payloads*

### Typical Sensors

- Wind Speed & Direction
- Temperature
- Barometric Pressure
- Compass
- Salinity
- Thermistor Chains
- Fluorometer
- Turbidity

*Many other sensors available*

### Software

Integrated RBR Windows® software is available at no additional charge for all of our instruments. See reverse for further details or check our website for details, downloads and upgrades.

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# RBR Windows® Software

## Data Logger Software

The RBR Windows® software package has been designed for easy use while still providing the necessary features for logger programming, data retrieval and analysis. One piece of software does it all!

### Features:

- Intuitive
- Graphical Display
- Real-time data
- Derived Units
- Export to Matlab®
- GPS Integration
- Telemetry ready
- Setup cloning

RBR's Windows®-based data logger software includes a straightforward logger setup display menu that includes options for programming start and stop time, thresholding, sampling rates for both tides and waves (TWR-2050), burst rate, burst length, averaging, and batch programming.

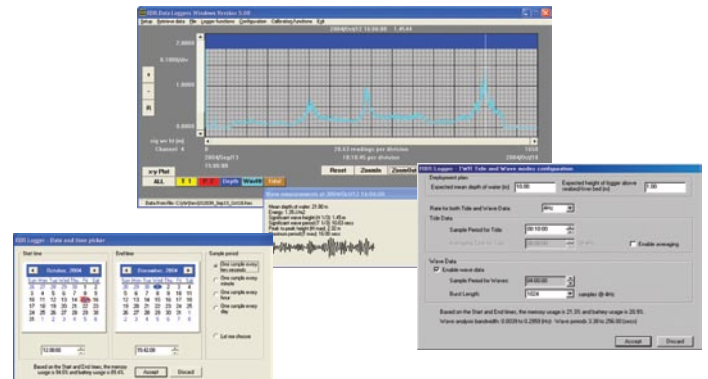
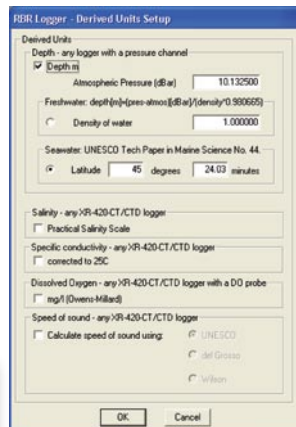
Some basic analysis features are included that allow the user to review the data graphically. Data can also be saved in various file formats for easy import into third party software packages, such as Matlab® or Microsoft® Excel®.

### Derived Units

- Salinity (PSS-78)
- Depth
- Speed of Sound
- Density
- Dissolved Oxygen
- Specific Conductivity

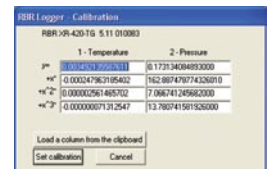
### Analysis of waves & wave spectra:

- Mean level
- Tidal slope
- Significant Wave Height
- Min & Max Elevation from Mean
- Mean Period
- Significant Wave Period
- Total Energy



Logger programming is easily achieved by using the 'Setup' dialog, which allows the user to choose Start and End times, Sampling Rate, Averaging, Thresholding, as well as synchronize the logger with the PC clock. The setup dialog also indicates the expected battery and memory usage for the chosen deployment settings.

Re-calibration is done easily by entering the coefficients for each channel of the logger in the appropriate columns. These values are stored in the logger, and a complete calibration history is always available at the click of a button. In order to reduce deployment error, a log file is automatically generated for all logger setup activity.



## System Requirements

- Operating System: Windows® 95/98/ME/2000/XP/Vista
- CPU: x86 133Mhz or higher
- RAM: 128MB recommended
- Communications: At least 1 RS-232 serial port, or USB
- Cost: RBR Software is free.



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