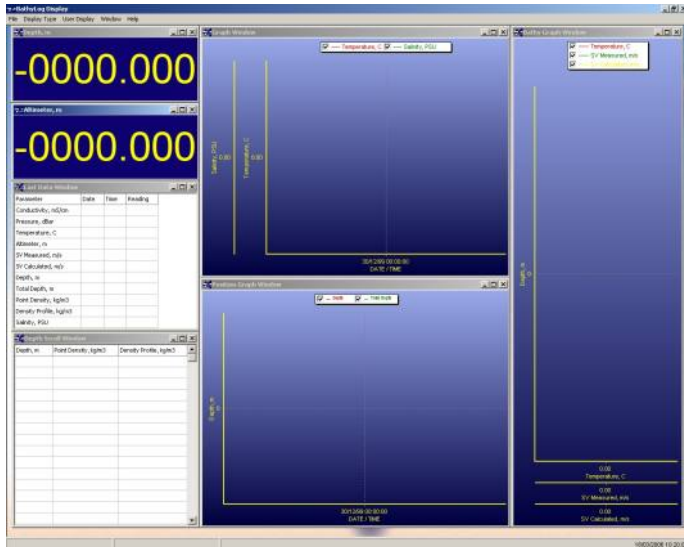


BathyLog Software



System Description

BathyLog is supplied free of charge with all MIDAS BathyPack systems and miniIPS Pressure Sensors. It logs and displays data from up to 8 different BathyPacks or miniIPS in real time, allowing you to get the most out of your suite of Valeport sensors, and providing exceptionally high accuracy depth and profile information.

The principle behind the software is that it will monitor the real time data input from a MIDAS BathyPack, using the precision Conductivity and Temperature data to generate a dynamically updated lookup table of the Density Profile. This density data is then used to convert the high accuracy Pressure data into Depth. The lookup table holds data for profiles to full ocean depth, at 1m intervals. Alternatively, it is possible to load data from previous deployments, or a single standard mean Density value, and use this to process the data from a stand-alone Pressure sensor.

In addition, the lookup table holds mean Sound Velocity data, which is used to dynamically correct the output from an acoustic altimeter.

So what makes it different?

There are several key features to this system:

High accuracy sensors - the key to accurate Density data is in using accurate Conductivity and Temperature sensors. Valeport has an excellent reputation for accurate, robust sensors, with unique synchronised digital sampling techniques. For the best in Sound Velocity data, it uses Valeport's digital time of flight sound velocity sensor, which overcomes the inherent errors of calculating sound speed from CTD data.

Precision Calculations - the relationship between Pressure and Depth is not simple, and for the best accuracy you need to use the UNESCO Pressure/Depth algorithm. This is a complex polynomial equation which uses local gravity and density profile information to provide Depth data. There is also an option to use a simplified linear equation, so that data is backwards compatible with that from systems which do not use the full UNESCO equation.

BathyLog is a Windows based software package, supplied with the MIDAS BathyPack and miniIPS products. It acts as the hub of the sensor suite, logging and displaying data from the BathyPack and miniIPS sensors, and using real time or pre-loaded density data to give accurate depth information from the measured pressure data.

Processing Power - BathyLog takes advantage of the power and versatility of today's PCs to make the valuable Density Profile data available in real time to other sensors in the suite. A typical scenario would be the BathyPack on a vehicle, providing raw data for BathyLog to generate a Density Profile. Several other individual miniIPS Pressure sensors may be located within the column on different structures, and BathyLog will accept a data input from these, and use the Density Profile data to provide real time correction to Depth. The versatile data display pages allow profile graphs, up to date data from all sensors, and relative position graphics to allow precision positioning.

Simplicity - all that is required is a PC to run the software. There is a 19" rack mount display available, which is simply an embedded PC running the same software, with a touch screen display.

System Requirements

- Operating System:** Windows 98SE or above
- Processor:** P2 500MHz or above recommended
- RAM:** Minimum 128Mbyte recommended
- Display:** Minimum 800 x 600 pixels
- Memory:** About 10Mbyte is required to install and run the program. Data logging may require several hundred Mbytes, depending on application and use.
- Data Input:** Multiple Serial Ports (one per sensor). Valeport offer an 8 channel USB/serial interface.
- Atmospheric Correction:** Separate atmospheric pressure sensor required for on-line correction.

As part of our policy of continuing development, we reserve the right to alter at any time, without notice, all specifications, designs, prices and conditions of supply of all equipment.

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