SBE 39-IM Temperature (optional Pressure) Recorder added to Inductive Modem Product Line

The **SBE 39-IM** combines the features of the SBE 39 with more power and an **I**nductive **M**odem in place of the RS-232 interface. The modem provides reliable, low-cost, real-time data transmission for up to 100 instruments — all 39-IMs or a mix of 39-IMs and other IM instruments — using a single, plastic-coated, steel mooring cable. IM instruments clamp anywhere along the inherently rugged mooring cable; expensive and potentially unreliable multiconductor cables are not required. Data extraction from memory can be done via the internal RS-232 connector, providing fast upload of large data sets. The 39-IM can acquire more than 400,000 samples of temperature, pressure, and time; because of the low power consumption, deployments of 3 years or more are possible. The 39-IM comes standard with plastic housing for depths to 600 m, internal thermistor, 4 MB FLASH memory, and wire guide and clamp. Options include an external thermistor in pressure-protected sheath, titanium housing for depths to 10500 m, strain gauge pressure sensor (8 ranges), and net fender/fairing to shed fishing lines and nets.

New SBE 52-MP Moored Profiler CTD & Optional Dissolved Oxygen Sensor

The SBE 52-MP is a conductivity, temperature, and pressure sensor, designed for moored profiling applications in which the instrument makes vertical profile measurements from a device that travels vertically beneath a buoy, or from a buoyant sub-surface sensor package that is winched up and down from a bottom-mounted platform. The 52-MP incorporates pump-controlled, TC-ducted flow to minimize salinity spiking. The 52-MP comes standard with titanium housing for depths to 7000 m, strain gauge pressure sensor (8 ranges), integrated T-C Duct and internal pump, anti-foulant fittings and expendable anti-foulant devices, and bulkhead connector for optional SBE 43F Dissolved Oxygen sensor. Options include plastic

With optional SBE 43F Dissolved Oxygen Sensor

housing for depths to 600 m, an SBE 43F DO sensor module (frequency output version of our SBE 43 DO sensor), and a wet-pluggable connector.

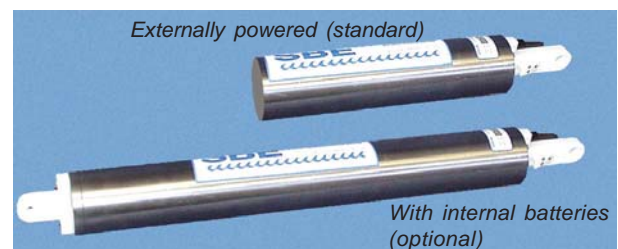## New SBE 53 BPR Bottom Pressure Recorder

The SBE 53 measures full ocean depth water level with extremely high resolution, accuracy, and stability. The SBE 53 combines a uniquely precise and stable time base with low power frequency acquisition circuitry, Paroscientific Digiquartz® pressure transducer, non-volatile 32 MB FLASH memory, and a precision thermometer to provide unprecedented bottom pressure recording capability. An optional conductivity sensor can be added to provide salinity data as well. The interval between each water level measurement and the duration of the integration period are user-programmable. The SBE 53 comes standard with a titanium housing for depths to 7000 m, Paroscientifc Digiquartz pressure sensor (4 ranges), and 32 MB FLASH memory. Options include an SBE 4M conductivity sensor, a high-accuracy external temperature sensor, and wet-pluggable connectors.

New SBE 54 Tsunami Pressure Sensor

Externally powered (standard)

With internal batteries (optional)

Reliable detection of deep ocean tsunami waves without generating false alarms requires a sensor that can accurately detect pressure changes of millimeter scale while sampling rapidly enough to characterize the shape of the tsunami waves and reflections in real-time. In addition to having extremely high resolution, the acquisition circuitry must be low power and be free of noise, drift, and temperature-induced changes. The pressure sensor must be reliable, stable, and capable of generating high resolution outputs. Sea-Bird's tsunami sensor continuously measures and outputs pressure every 15 seconds, with a pressure resolution of better than 1 mm at 7000 m. Its sole purpose is to function as the heart of a deep ocean tsunami detection system. Setup and operation require no user interaction. A power supply supervistor and watchdog timer ensure automatic recovery if power or normal operation is isnterrupted. The SBE 54 comes standard with a titanium housing for depths to 7000 m, 6800 m Paroscientific Digiquartz pressure sensor, and 128 MB FLASH memory. Options include a battery compartment for alkaline or lithium batteries, and three other pressure sensor ranges.

Software and Data Analysis

SEASAVE V7 Real-Time Data Acquisition Software

SEASAVE V7, a Windows 2000/XP application, is a Beta release of an entirely new version of SEASAVE. SEASAVE V7 acquires, converts, and displays real-time or archived raw data from SBE 9*plus*, 16, 16*plus*, 19, 19*plus*, 21, 25, 45, and 49 CTD systems. Improvements over the previous Windows versions include:

- More robust data acquisition / increased stability with a new architecture for data acquisition.
- Easier-to-use and more intuitive user interface
- Support for transmission of data over TCP/IP
- Better graphics, including the ability to have different plot colors for downcast and upcast.

The instrument configuration (.con) file format is preserved from the previous Windows version, so existing .con files can be used wtihout modification. And, SEASAVE V7 installs to a different location than earlier versions of SEASAVE, so you can install and try out the Beta release without overwriting or affecting your existing SEASAVE software.
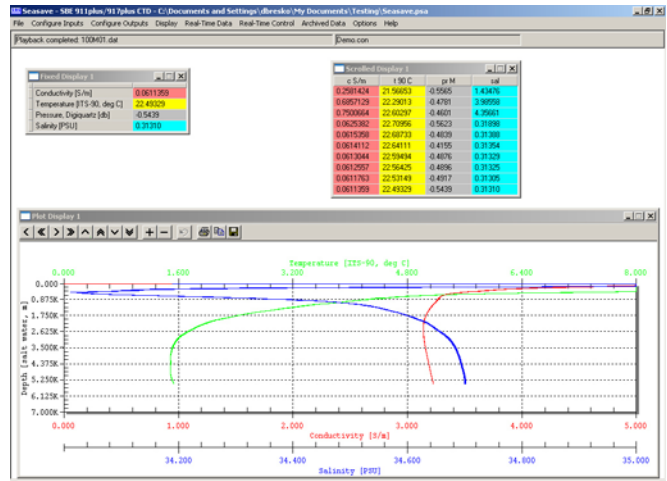
Software for SBE 37-IM and 37-IMP MicroCAT

SEATERM was updated to include the automatic installation of a utility for use with these MicroCATs, which allows for faster upload of inductive modem MicroCAT data. Previously, uploading data from an inductive modem MicroCAT took a significant amount of time, because the MicroCAT communicates with the Surface Inductive Modem at 1200 baud, and the MicroCAT's ASCII engineering units provide a long data string. Now, you can upload the data in hexadecimal (using the **#iiFORMAT=0** command to set the format), providing a shorter data string and quicker upload, and then rapidly convert the hex data to ASCII engineering units with the new utility, *SBE 37-IM Format 0 to ASCII Converter*. For a full memory of 185,000 samples of conductivity, temperature, pressure, and date and time, uploading in hex takes 10 hours vs. 23 hours for uploading in ASCII engineering units.

Website Tips (www.seabird.com)

Check out the following recent website additions:

- *Application Note 82: Guide to Specifying a CTD* — guide for evaluating specifications for CTD profilers.
- *Application Note 83: Deployment of Moored Instruments* — check list to assist users in deploying moored instruments.

To view these and other Application notes, pull down *Support* on our home page to select *Application Notes*.

Training

Our training curriculum covers profiling instruments (days 1-3) and moored instruments, thermosalinographs, and wave and tide recorders (day 4). The class is hands-on in nature, and includes extensive *practice* using our instruments for real-time data acquisition and processing the data. The course syllabus and course handouts are available on our website; pull down *Support* on our home page to select *Training*.

Sales Department Personnel

Calvin Lwin is the latest addition to our sales department's Application Engineering team. Calvin has an electrical engineering degree, and comes to Sea-Bird with 3 years of experience in the oceanographic equipment industry.

Front row (from left):
Calvin Lwin (applications engineering specialist)
Doug Bennett (sales and marketing manager)
Andrew Zeigweid (applications engineering specialist)
Back row (from left):
Cheryl Reed (sales administrator)
Debbie Bresko (technical writer/webmaster)

Sea-Bird Electronics, Inc.
1808 136th Place NE, Bellevue, Washington 98005 USA
Website: http://www.seabird.com

E-mail: seabird@seabird.com
Telephone: (425) 643-9866
Fax: (425) 643-9954