Equipment Affected

This field service bulletin applies to SBE 25*plus* CTDs with firmware version 1.0 and lower, dated Dec 1 2012 and earlier. The CTD's firmware version and date can be found in the **GetHD** response:

```
gethd
<HardwareData DeviceType='SBE25plus' SerialNumber='0251077'>
   <Manufacturer>Sea-Bird Electronics, Inc</Manufacturer>
   <FirmwareVersion>1.0</FirmwareVersion>
   <FirmwareDate>Dec  1 2012 10:43:42</FirmwareDate>
   <CommandSetVersion>1.0</CommandSetVersion>
. . .
```

Description of Problem

Some 25*plus* users have reported missing data from some CTD casts while profiling in **cold seawater**. For the affected units, individual casts can stop prematurely, and the resulting.xml uploaded data file will only contain a header. **No data from the cast will be present in the file, and it cannot be recovered.**

The problem is intermittent and can occur when the raw conductivity frequency reaches approximately 3199 Hz. The specific temperature and conductivity at this frequency output value will depend on individual SBE 4 conductivity sensors, but correspond roughly with 0-5 °C and 30-35 psu seawater. This problem does not occur on every 25*plus*, or on every cast that reaches 3199 Hz. Extensive lab testing shows that it is not related to any particular settings on the 25plus or whether the 25*plus* is powered via batteries or an external power source. It can occur on one cast during a cruise, and can function normally in subsequent casts in the same location.

Real-time data transmission will be normal until the 25*plus* ceases logging, at which point the user must resume logging via the **StartNow** command or recover the CTD. Data obtained via real-time transmission is otherwise unaffected.

Solution

Sea-Bird released a firmware upgrade to the 25*plus* (**version 1.0.1**) that addresses this reset problem without changing the operating characteristics of the CTD. The new firmware allows the 25*plus* to continuously record data to the memory in cold temperatures as expected. Sea-Bird recommends returning the 25*plus* back to the factory for this firmware upgrade, as any interruption or mistake in the firmware update process can corrupt the EEPROM on the 25*plus*; if this occurs, the 25*plus* will require a hard reset at the factory.
Note: All 25plus units sent in for calibration or repairs will be upgraded at Sea-Bird.

Contact Sea-Bird service (service@seabird.com) to obtain an RMA number and fill out a Service Request Form for returning your instrument to Sea-Bird.