Sonarmite Driver Gets a Facelift

By Bob Glover

One of the more popular single beam echo sounder drivers is the sonarmite.dll. This driver has been unchanged from when it was first written years ago and now has undergone some updating. Recently, a customer brought it to our attention that the data string output from the device contains more information than just a simple depth record. The client, who was using the SonarMite, sent us a breakdown of just what else is contained in the output string:

FIGURE 1. *Sonarmite Output*

Pressing ^F (Contol F) will toggle the output formats as below …

Format 0 Old SonarMite format with null HPR (e.g. 1 1.88 0 0 0.0 12.7 128 20)

```
1 0.48 0 0 0 8.9 115 0
1 0.48 0 0 0 8.9 115 0
1 0.48 0 0 0 17.8 116 0
1 0.48 0 0 0 8.9 115 0
1 0.48 0 0 0 8.9 115 0
```
Example Standard Sonarmite Output

Output Parameters

Output message is eight numeric ASCII parameters, floating format, space delimited as …

id depth roll pitch heave battery qa flags<cr><lf>

where …

id = The id number of the instrument (0..7)
depth = current measured depth (m)
roll = current roll lateral atitude (+/-deg)
pitch = current pitch axial atitude (+/-deg)
heave = current heave depth correction (m)
battery = current battery condition (v)
qa = current depth relative qa value (0=null, 70=poor, 128=best)
flags = binary toggle flags 1=^X, 2=^Y, 4=^A, 16=^Z, 32=^G

Please note that if no transducer is seen or the qa is below 5 (out of water) then the output will appear as a string of 8 nulls at 1 second timeouts, in normal operation the eight numbers are reported at 0.5 second intervals.

Our user asked if we could record, not only the output depth, but also the quality relative to the current depth. They also hoped we could display the current battery condition, in real time, while in SURVEY. This seemed like a reasonable request that would benefit, not only this one client in particular, but others using this driver for data acquisition. We brought our programming department on board and discussed changes to the driver. The adaptation of the requested values was straight-forward and the driver was modified accordingly. The client tested the update and reported that the driver is functioning as expected.

The new driver will now record the quality code as a second depth in the raw file which can be displayed in the SINGLE BEAM EDITOR for Quality Control of the data collected. Per the material provided to us, the quality flag is represented as 0 (null), 70 (poor), or 128 (best).
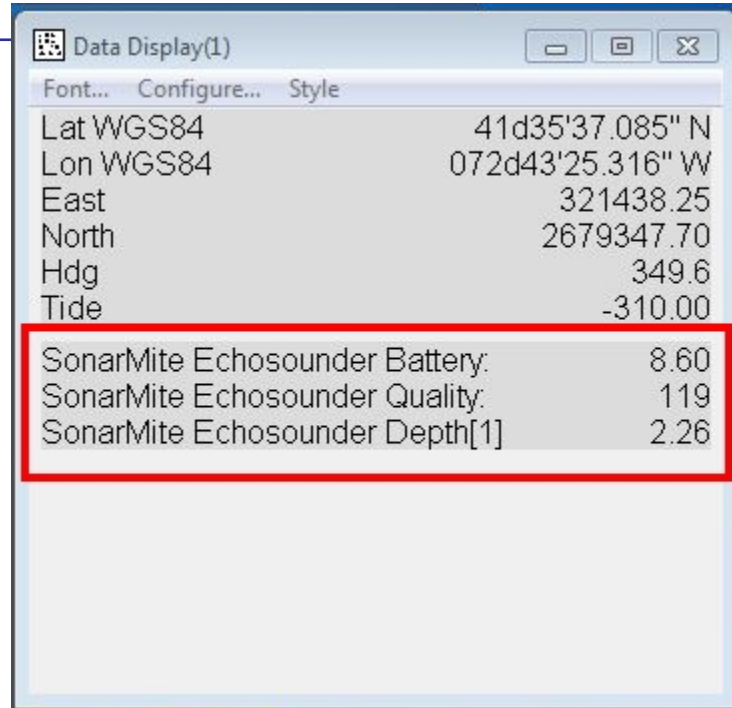
It will also be useful to filter your data based on this information during post-survey processing. It should be noted; however, that this quality flag is recorded directly as parsed from the SonarMite unit itself. HYPACK® is simply recording and reporting the output message and makes no guarantees regarding what standard this quality flag represents.

The driver has also been modified to display the unit's current battery condition while working in SURVEY. This data is not recorded to the raw file, but is a useful tool while in SURVEY.

FIGURE 2. *Sonarmite Data Display*

This addition allows the sonar operator to monitor the battery draw down while conducting lengthy surveys and may prevent unnecessary downtime.

Should you have any questions or request the updated sonarmite.dll, please contact us at help@HYPACK.com and we will be happy to assist you.