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Sounding Better!

A Small Tip for a Successful Bar Check for Multibeam Echosounders

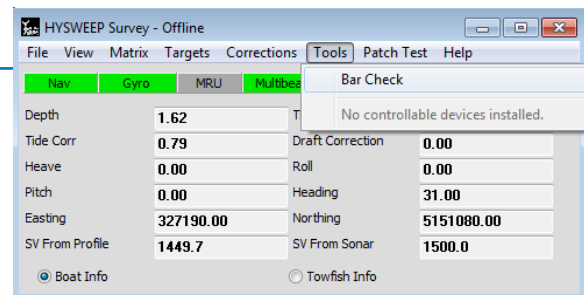
By Ivan Izaak

You may need to perform the Bar Check, from time to time, to verify the draft of the transducer.

The procedure is pretty simple:

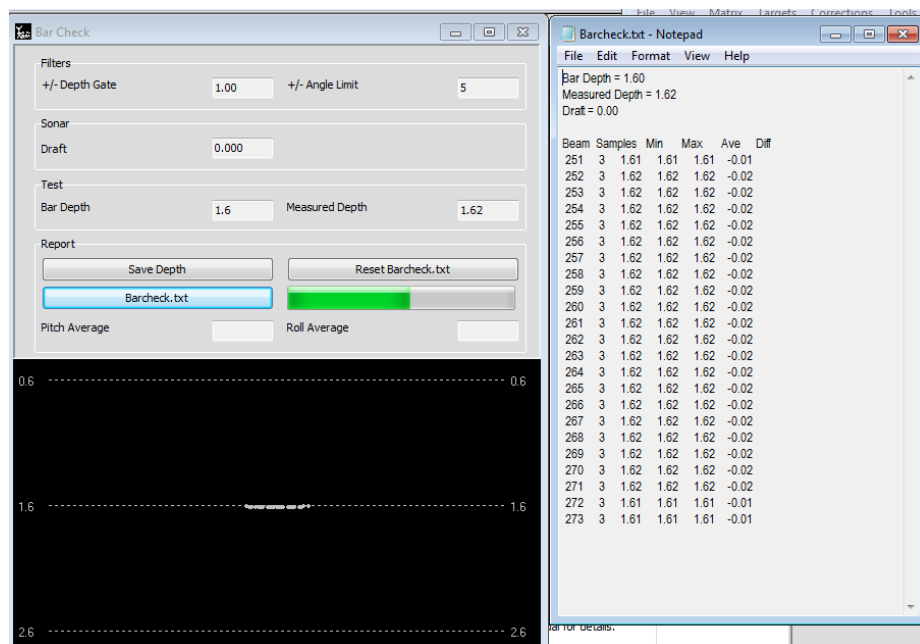
1. **Find a calm place** so that the waves do not affect the procedure.
2. **Run HYSWEEP® SURVEY.** (It is not necessary to run both HYPACK® SURVEY and HYSWEEP® SURVEY for a bar check).
3. **Start the Bar Check routine** from the TOOLS menu (Figure 1).

FIGURE 1. Getting to a Bar Check in HYSWEEP® SURVEY



4. **Lower a bar plate beneath the transducer to a known depth (2-5 m).** In Figure 2, it is 1.6m (shallow water).

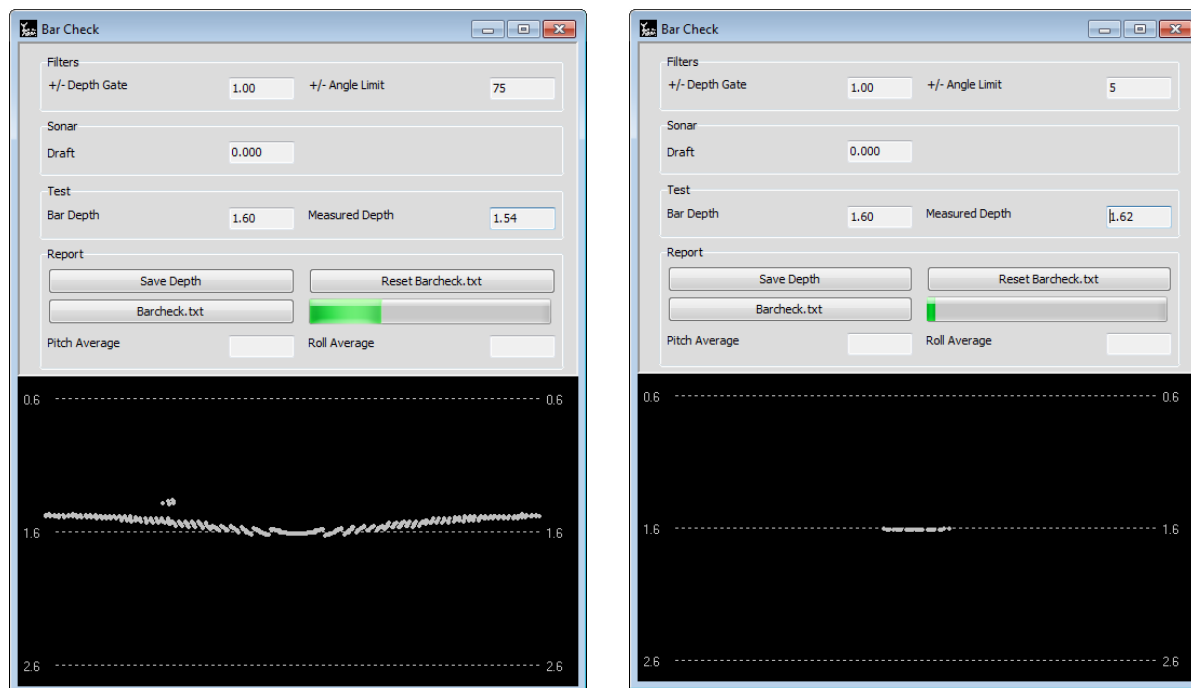
FIGURE 2. Bar Check Procedure When Everything is Right.



5. **If the multibeam echosounder (MBE) is noisy, you may set the Depth Gate Filter to ignore anything above/below the expected depth gate from the Bar Depth.** In Figure 2, the expected depth is 1.6 so the program will only accept the depth from 0.6 to 2.6m.

6. **Limit the swath (Angle Limit).** Figure 3 shows two samples. Limiting the swath to 5 degrees from nadir definitely does a good job!

FIGURE 3. Comparison of the full swath (left) and decreased swath (right) during a Bar Check



7. **Allow some time for the system to stabilize and to collect some statistics.** You should see the Measured Depth, which is the depth from the MBE corrected for the Vertical Offset entered in the HARDWARE and displayed as Draft (0.000 in the example above).
8. **If there is a prominent difference between the Bar Depth and the Measured Depth, you can change the Draft setting.** This may be necessary to repeat in HARDWARE later on.
9. **Save Depth** will create a Barcheck.TXT file containing statistics about the calibration (Figure 2 right).

I would not write an article repeating the HYPACK® User Manual if there is no small, but important tip; however, some customers have reported that they can't see a Measured Depth and no graphic is on their display.

This mostly happens when the Sonar Controller is set to filter out any sudden depth changes! For example, in the Reson Seabat Controller, many customers set the Adaptive Gate that will definitely filter out your bar plate.

Disable any filters in a controller! This is quite important for the Bar Check.

FIGURE 4. Disable any filters/gates in a Sonar Controller.

