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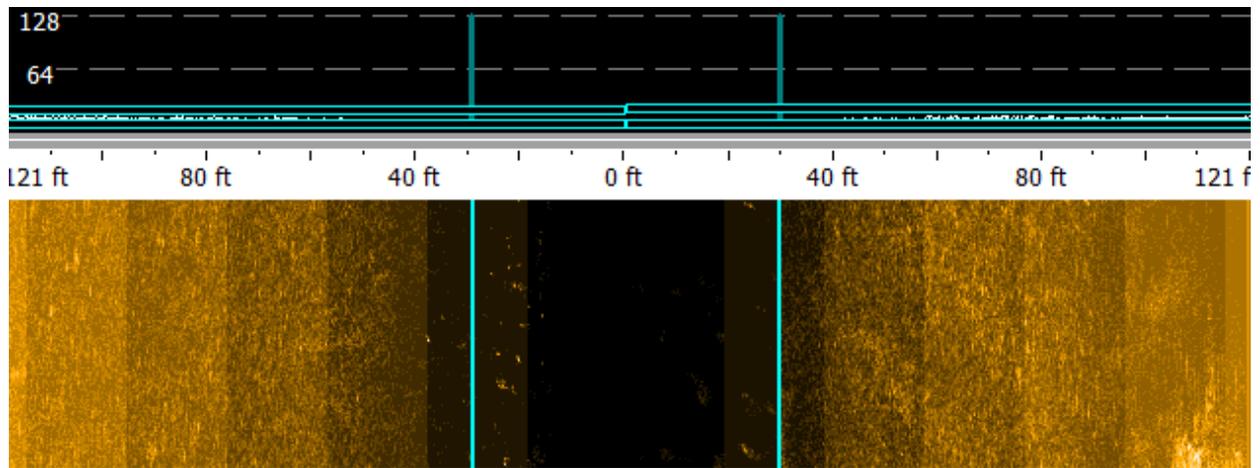
Sounding Better!

Tips on Getting a Great Image from Your SIDE SCAN SURVEY

By Daniel Tobin

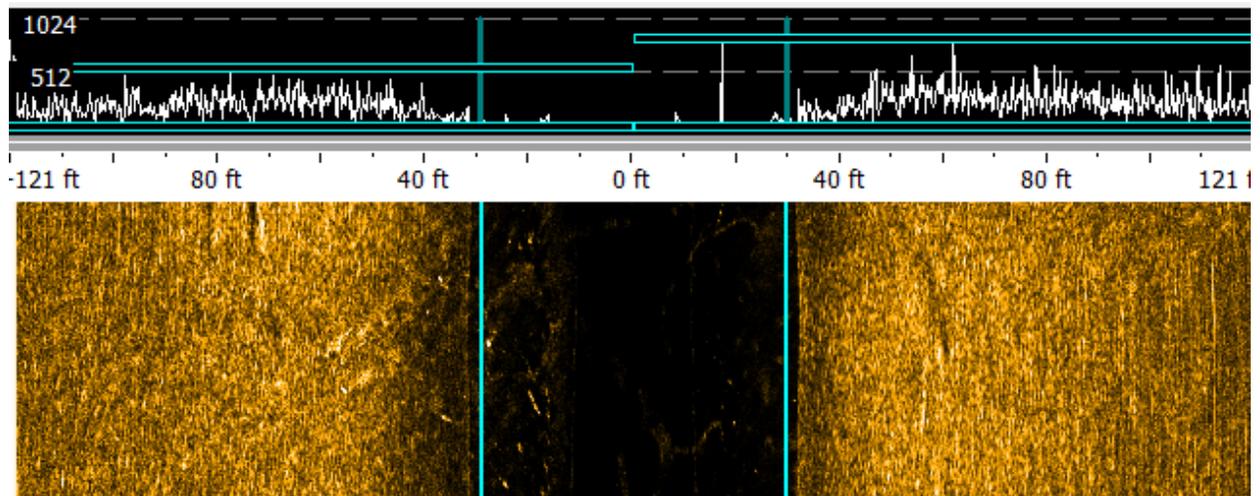
It's important to make sure that you have a strong input signal into SIDE SCAN SURVEY in order to get the clearest imagery possible. Low input signal can lead to many issues, such as lack of detail and ugly artifacts in your final imagery.

Here's an example of how low input signal can result in an odd stairstepping artifact when gain is applied:



You can see clear vertical stripes at even intervals in the imagery. This is because, when SIDE SCAN SURVEY applies gain, it applies it in steps. When you have a very low input signal, these steps become very spread apart and very obvious.

Here's the same data, but the input signal has been adjusted to be at a reasonable level:

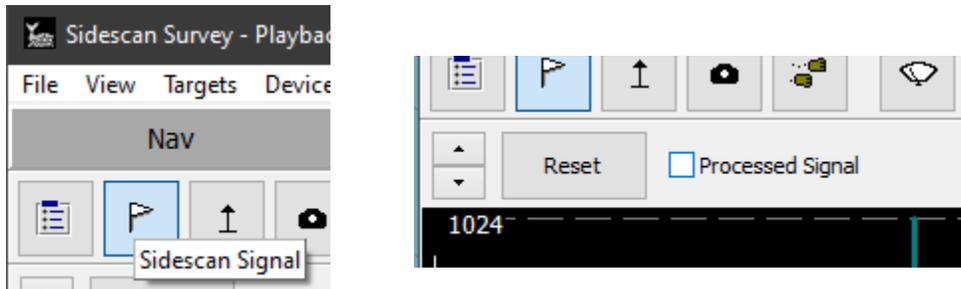


The imagery is much brighter and sharper, and there is no stairstepping visible. The gain steps occur much more frequently and with a smaller difference in the signal when the input signal is high making them very hard or impossible to see – this is the intended effect.

CHECKING INPUT SIGNAL STRENGTH

Now that we've identified the importance of a high input signal, we need to find out how to actually see our input signal:

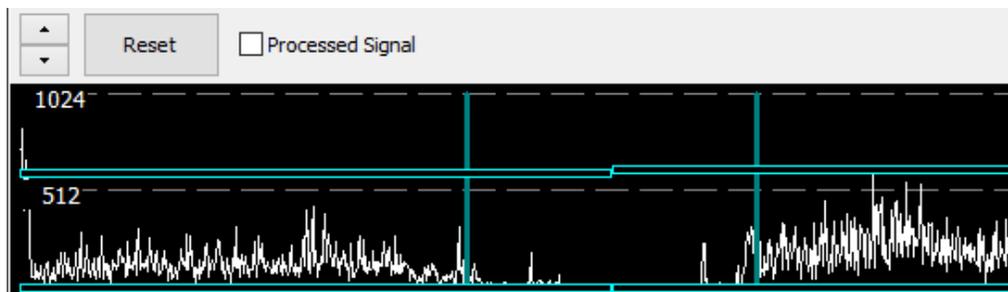
1. **Open the Sidescan Signal graph** and turn off the “Processed Signal” option:



That step is important, as if the “Processed Signal” option is checked, it will show what your signal looks like *after gains have been applied*. We want to see what our input signal looks like, so we turn that off.

2. **Adjust the display with the buttons on the left until the signal goes roughly halfway up the graph:**

Viewing your Signal Display

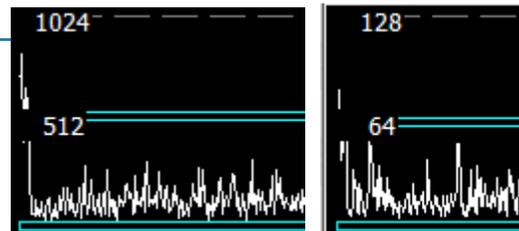


Now we have a general idea of where our signal falls in a range.

3. **Look at the scale values on the left** to determine if we have a high (good) or low (bad) input signal.

Good Input Signal (left), Bad Input Signal (right)

High numbers indicate a good, high input signal. Values over 200 can be considered high. If you see low numbers for the scale, that indicates a low input signal. Values under 200 can be considered low, and the lower they are, the more obvious the stairstepping can be once gain is applied.

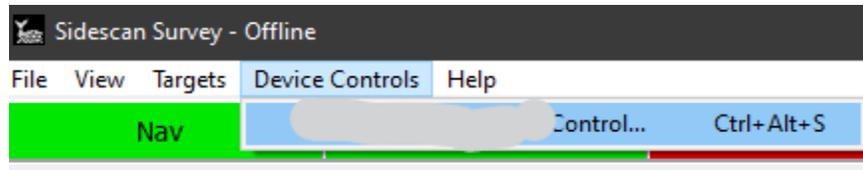


4. **Increase your input signal as necessary.**

ADJUSTING INPUT SIGNAL STRENGTH

To increase your input signal, use either the Device Controls in SIDE SCAN SURVEY or your manufacturer's software, if you're using that to control the sonar.

Accessing the Device Controls in SIDE SCAN SURVEY



The exact method to increase the signal strength varies between sonars, so please contact your sonar manufacturer or HYPACK Support for detailed instructions.