



## Side Scan Mosaicking Multifrequency Update

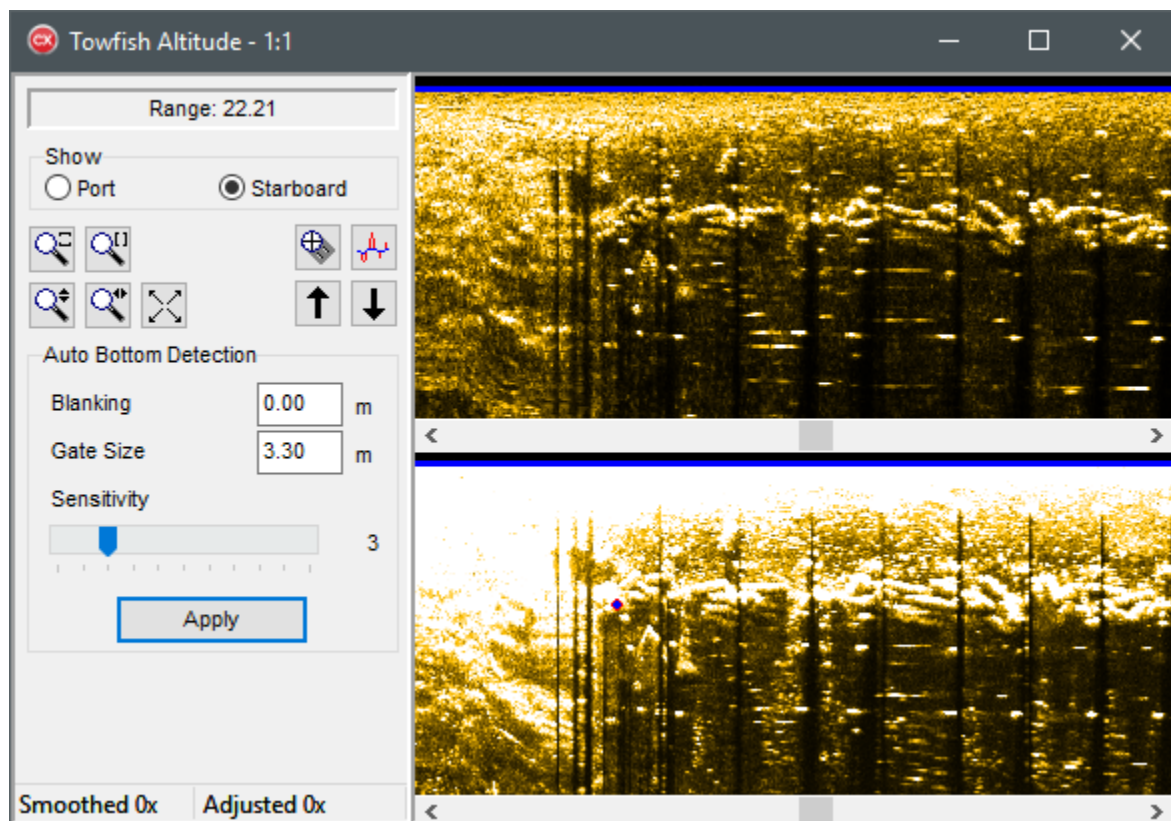
By Daniel Tobin

In the HYPACK® 2019 version of TARGETING AND MOSAICKING (HYSCAN), you will be able to load multi-frequency side scan data, and view and edit both frequencies simultaneously. To do this, simply load a multi-frequency dataset.

### STAGE 1: ALTITUDE VIEW

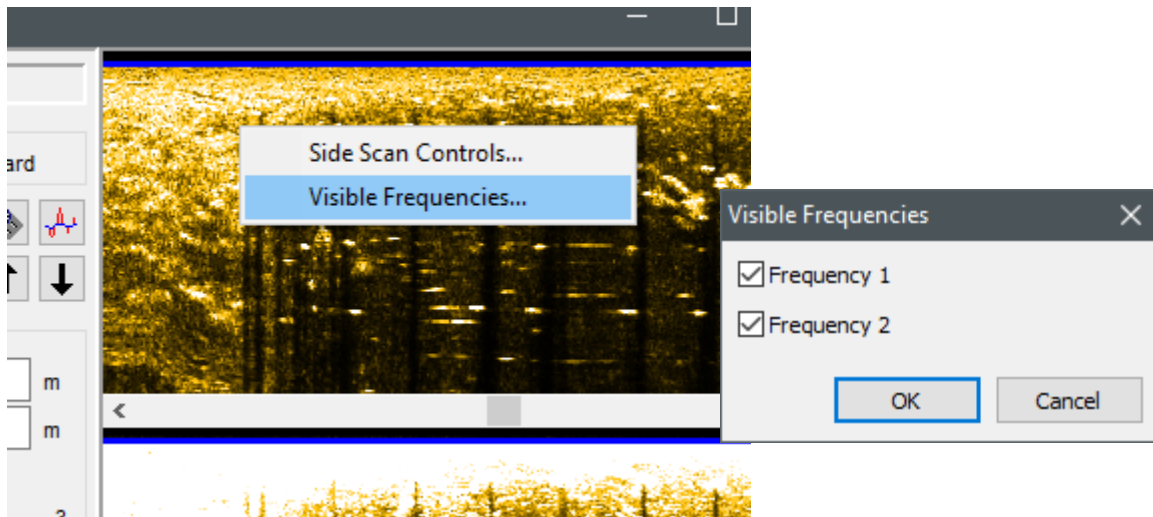
In Stage 1 Altitude view, both frequencies are visible, stacked on top of each other. As you move your mouse around one of the frequencies, an indicator will appear on the second frequency, marking the current mouse position. This can be useful when manually applying bottom tracking.

*FIGURE 1. Towfish Altitude View*



Scrolling, zooming, and bottom tracking are synchronized across both frequencies. If you wish to hide one of the frequencies, right-click and select “Visible Frequencies...”. From the pop-up window, select the frequencies you wish to see.

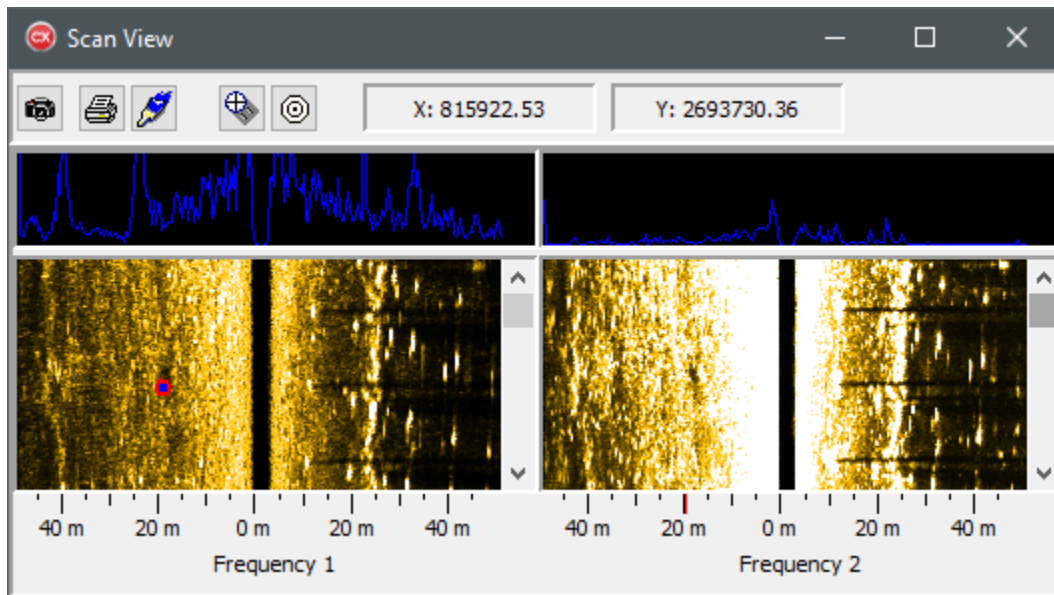
**FIGURE 2.** *Selecting Displayed Frequencies*



## STAGE 2 SCAN VIEW

Stage 2 Scan View is very similar: both frequencies appear adjacent to each other. Much like Stage 1, your cursor position is marked on the opposite frequency by an indicator. Scrolling is synchronized, and the “Visible Frequencies...” right-click option is available here as well.

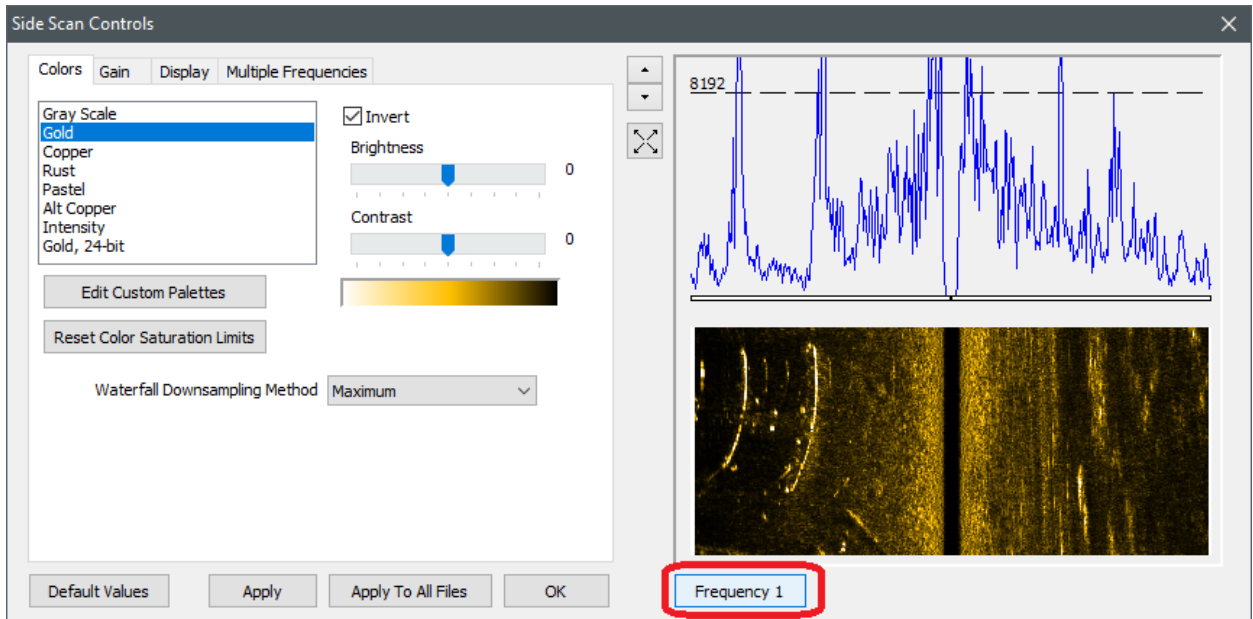
**FIGURE 3.** *Dual Frequency Data in Scan View*



At the bottom, each frequency is labeled. If your dataset has frequency information, the actual frequency will be labeled here rather than just a number.

Each frequency now has their own gain and color options. Select VIEW-SIDE SCAN CONTROLS. A button at the bottom to the right lets you switch which frequency you’re seeing in the preview window.

**FIGURE 4.** *Selecting the Display Frequency in the Side Scan Controls Display*



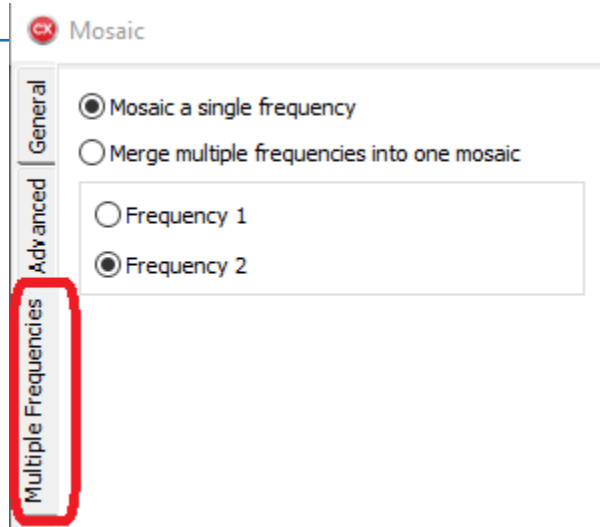
In Stage 2 Scan View, if you right-click and select “Side Scan Controls...”, the preview will automatically use whichever frequency you right-clicked in.

## STAGE 3: MOSAICKING

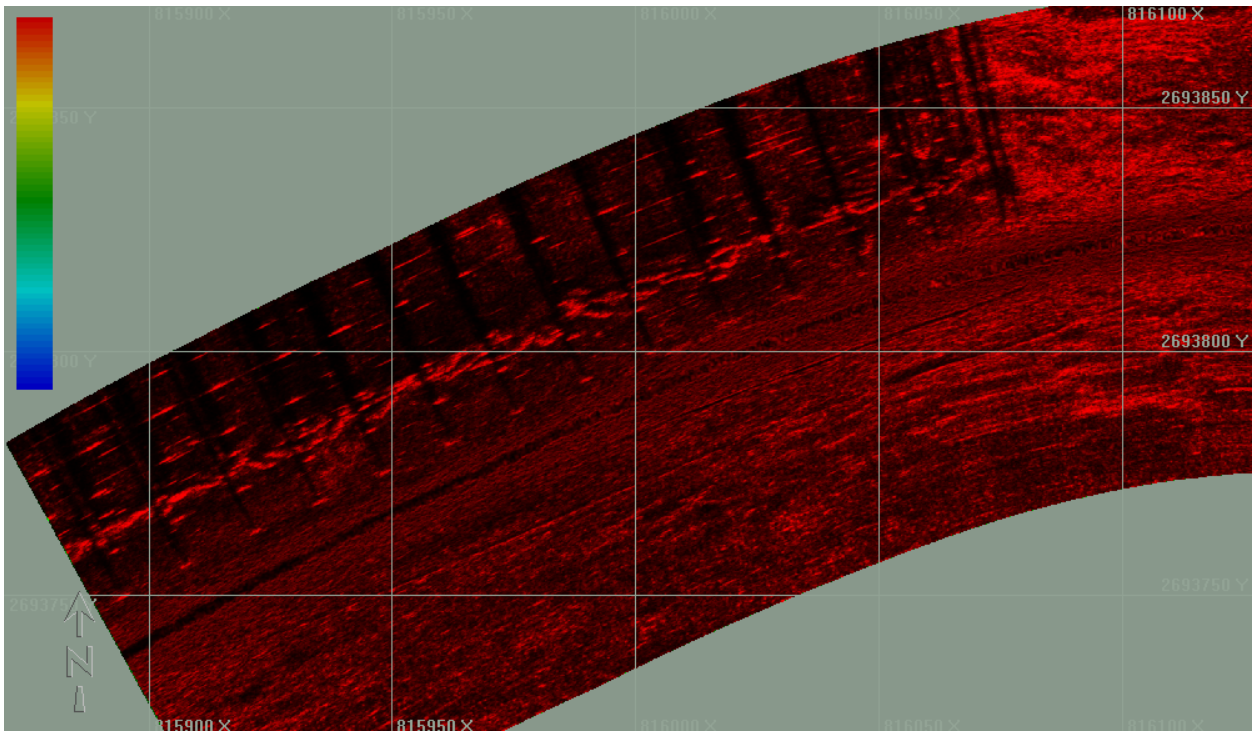
In Stage 3 Mosaicking, there’s a new tab along the left side for multi-frequency data.

**FIGURE 5.** *Multifrequency Tab*

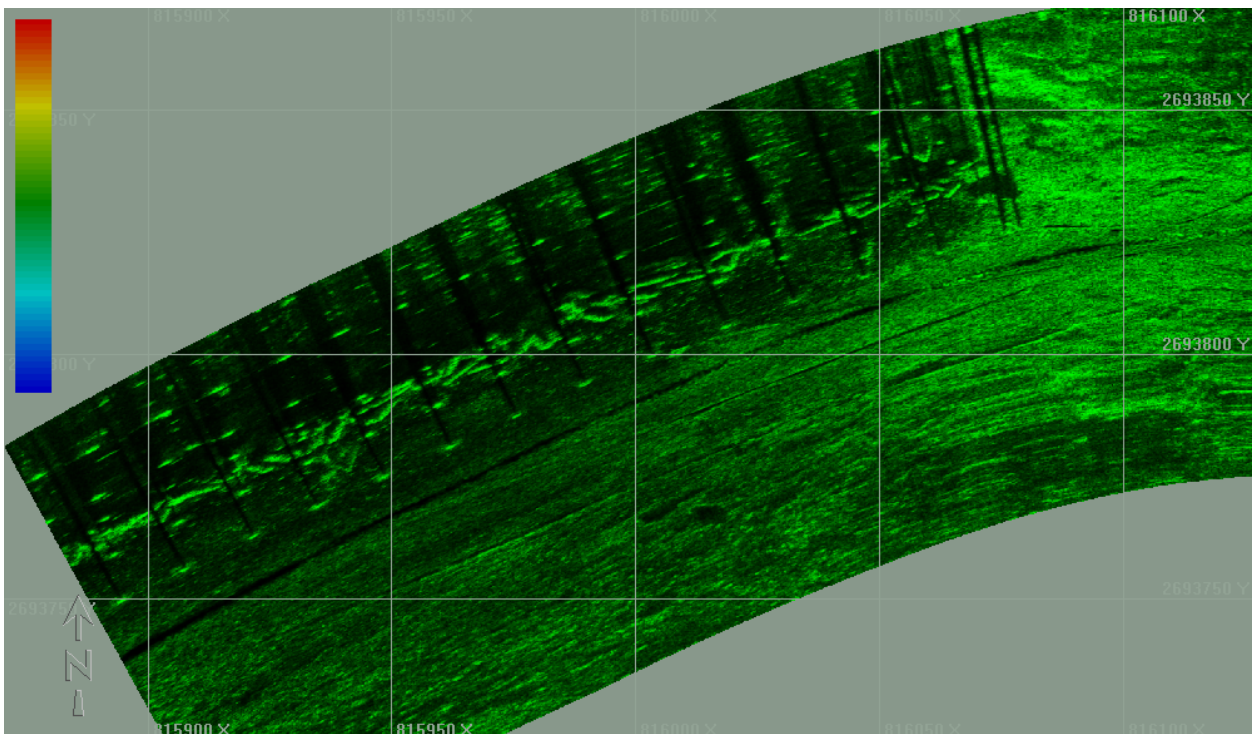
The first option lets you choose one frequency to mosaic. The second will combine all frequencies into one mosaic, with each one assigned either red, green, or blue.



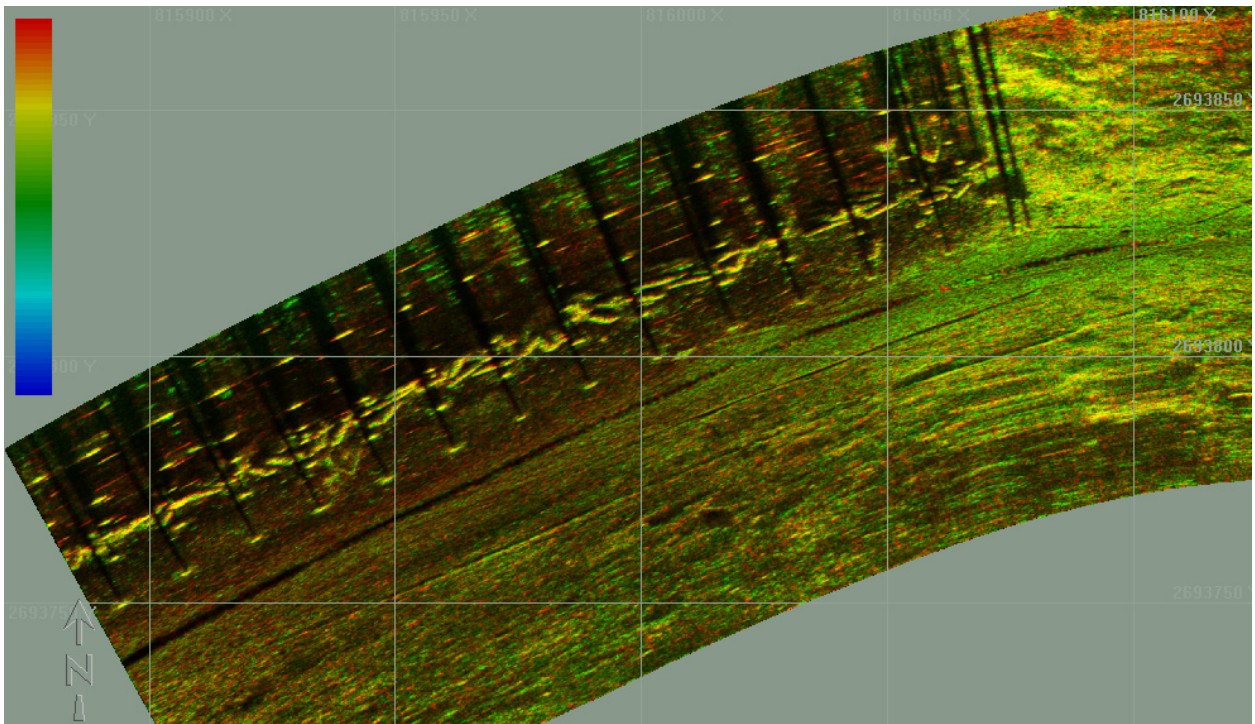
**FIGURE 6. Frequency 1 in Red:**



**FIGURE 7. Frequency 2 in Green:**



**FIGURE 8.** *Frequencies 1 and 2 Combined:*



Areas with a stronger return in Frequency 1 will appear more red, and areas in green have a stronger Frequency 2 return.