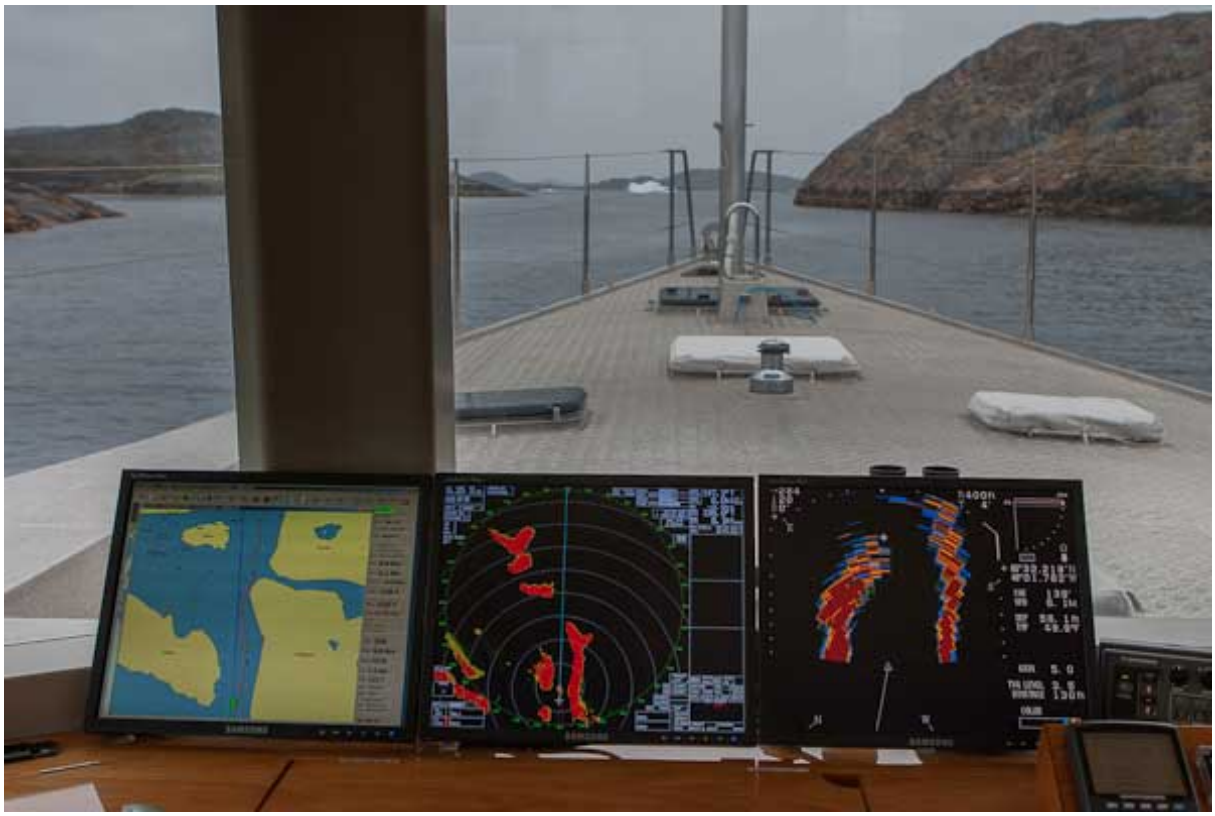
Sonar as a Piloting Tool

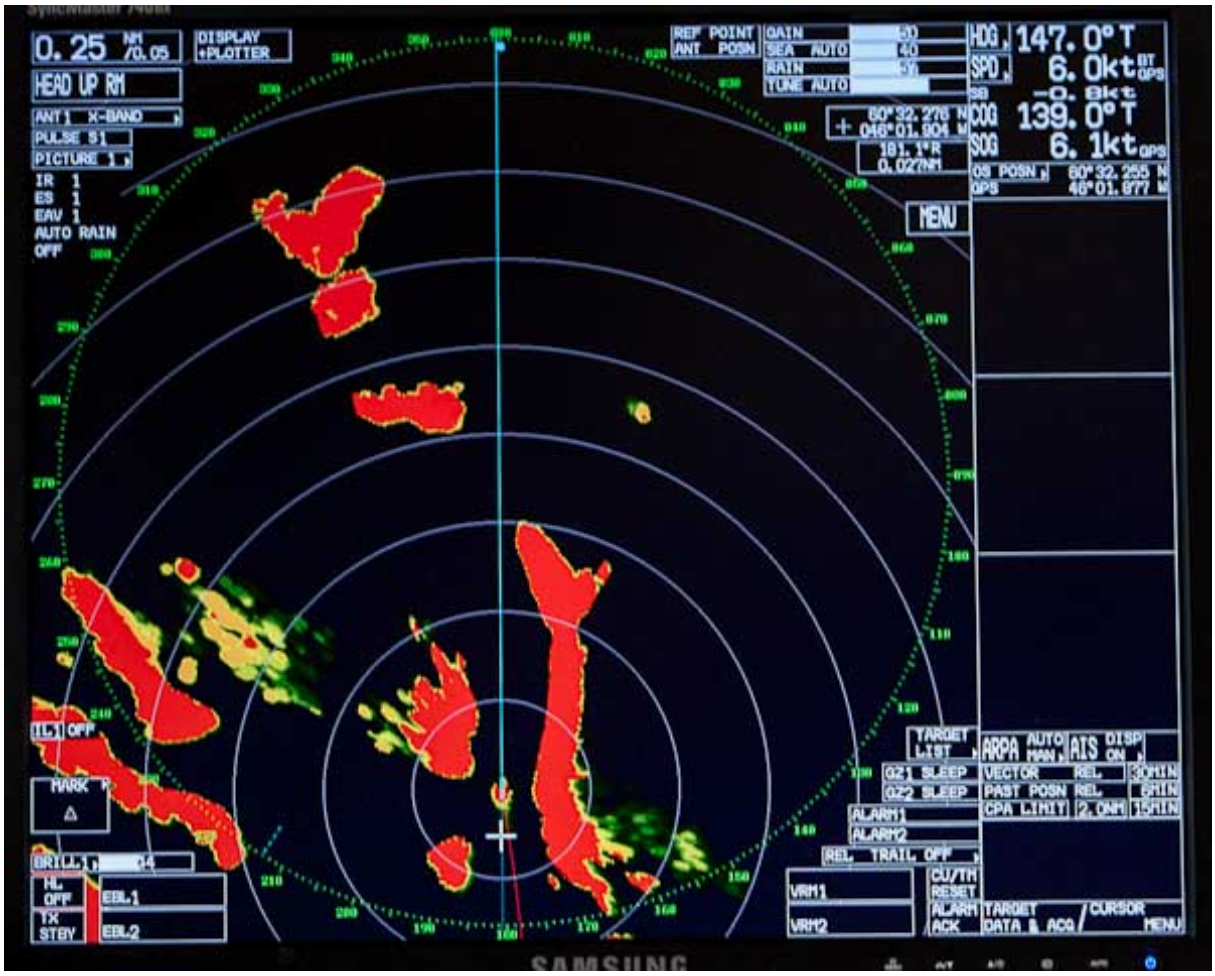


Over the years we've learned to take the data presented on charts with a degree of skepticism. The further from commercial shipping routes you go, the more true this becomes. An extreme example can be found in Greenland, where only a tiny percentage of the coast has been surveyed. That makes venturing away from a few small ports a risky endeavor. Yet the exquisite beauty, the remote wilderness setting, and the challenges presented by a lack of conventional charts create an allure that is compelling.

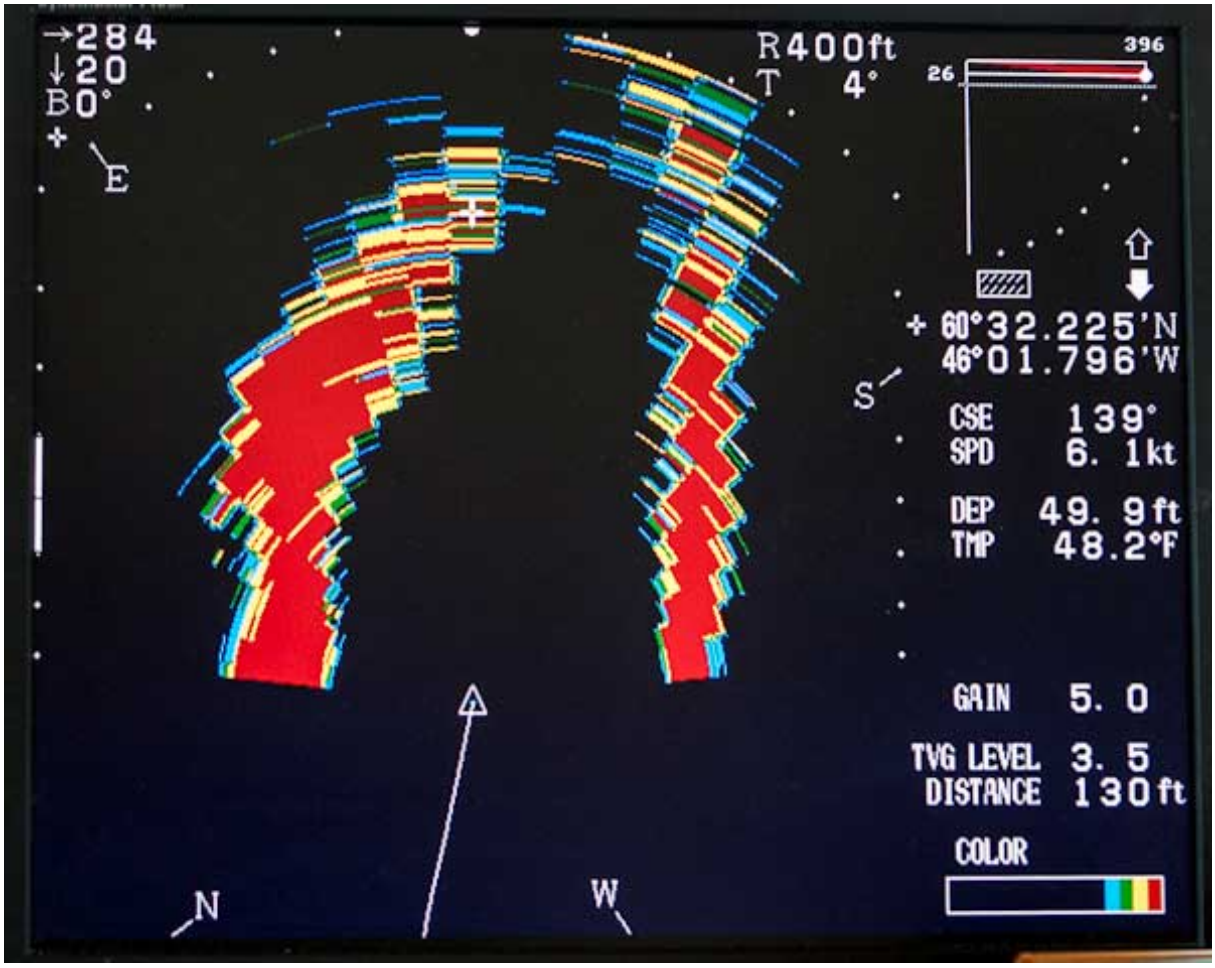
Enter the Furuno searchlight sonar, in our case a CH 270. While this is normally used as a fishing tool, it is also a wonderful navigation aid, allowing you to see underwater, like radar sees above. The CH270 makes it possible to work your way into some very tight spots, locations one would never venture without having a firm grasp of the underwater detail.

The first sequence of photos was taken aboard the FPB 83 *Wind Horse*, in Southern Greenland. We are headed for the Prince Christian Channels, and passing through a narrow channel we have been told is okay. It is blowing a gale outside, and the seas make it difficult to see ice, so we are threading our way carefully through this channel.

Although the chart does show a few soundings, we have been advised to be very careful. The sounding data is old, and the winter freezes move things around.



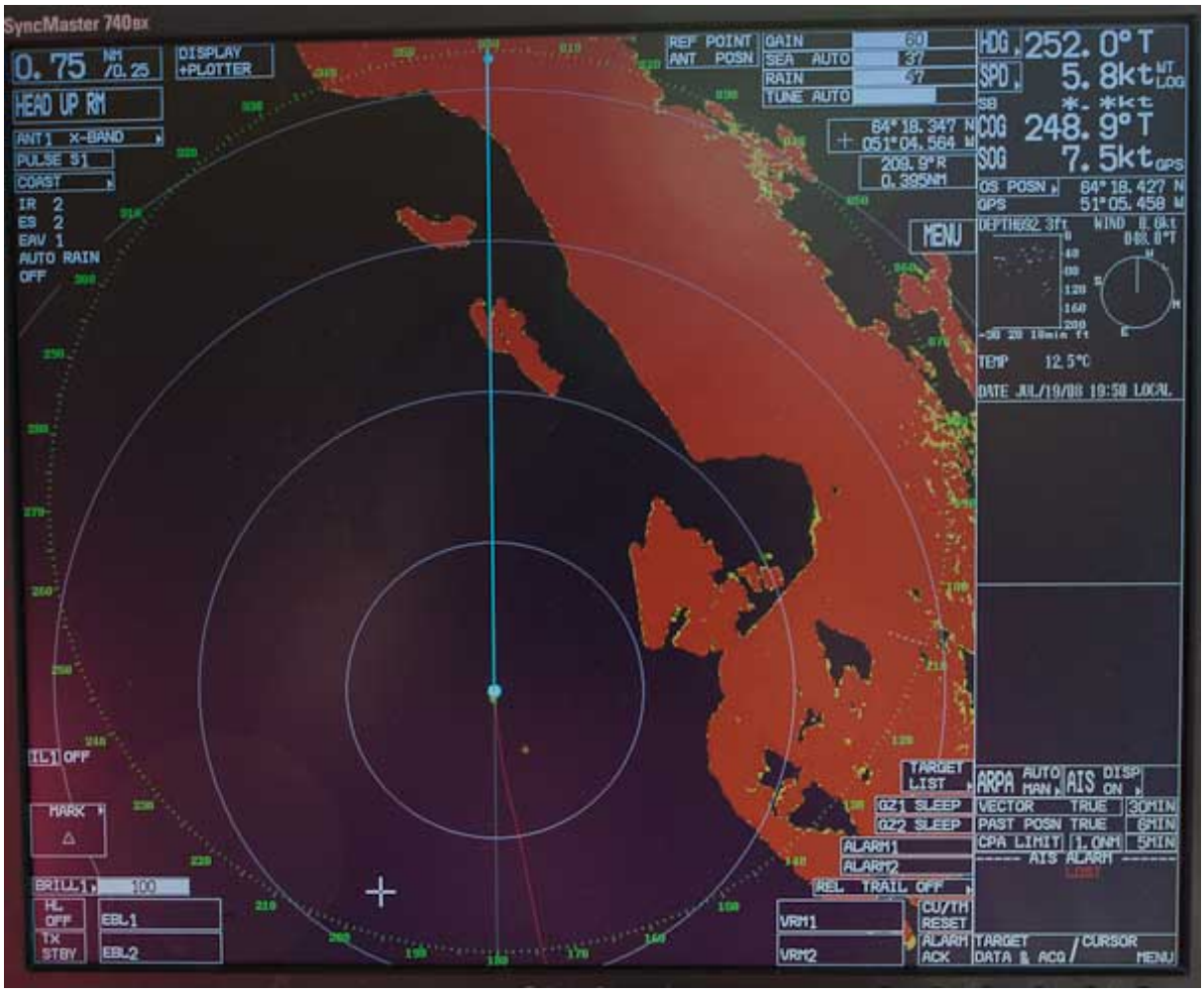
The Furuno 2117 BB radar has us centered in the channel. It is set on 1/4 mile range, and each range ring represents just 600 feet/180 meters in diameter, the channel being about one quarter of this. In the olden days, we'd lower the dinghy, and then check with a lead line to be sure we had a clear passage through the channel.



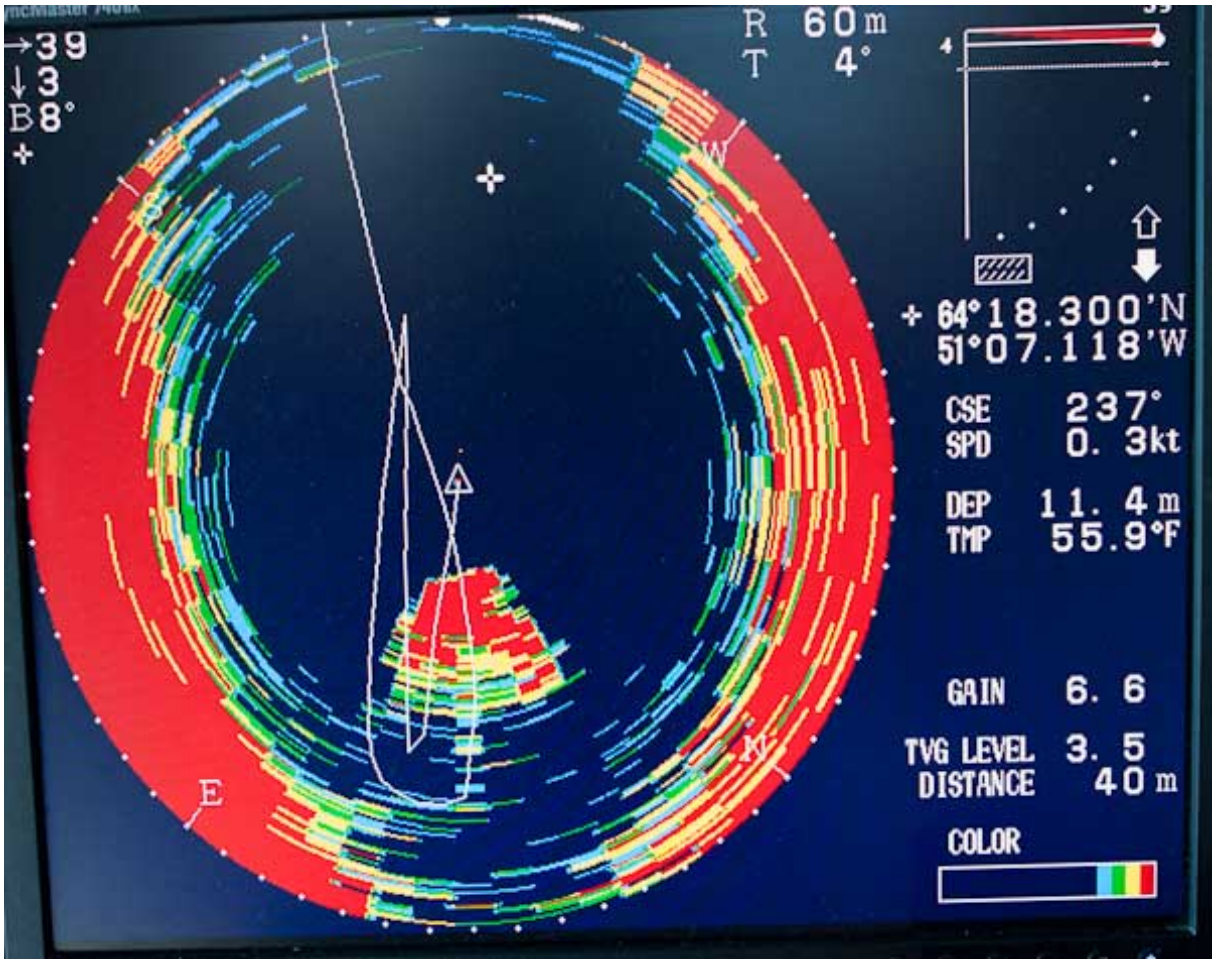
Now we light off the Furuno CH270 sonar and have a look ahead. The sides of the channel are clearly outlined, and the center looks clear. So we forge slowly ahead.

The next example is the fjord complex inland from the main village of Nuuk, in Central Greenland.

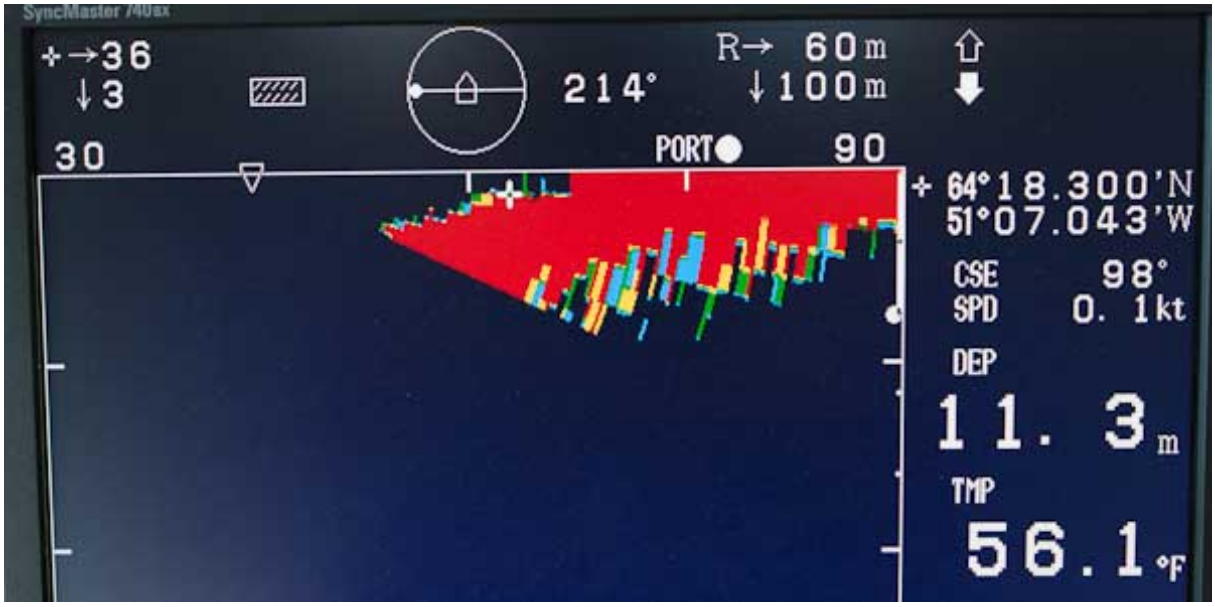
The chart has no soundings, and we are bereft of local knowledge. But the shape looks inviting, we are tired after a long day of conning through ice fields, and with the CH270 sonar leading the way we slowly work our way forward.



The radar image ties pretty well to the chart.



Centered now in the anchorage, the CH270 shows the anchorage is clear. The target astern (red) is actually wake and/or turbulence from turning the boat in place, as you can see with the track.



We often switch from horizontal sweeps (as in all of the previous sonar images) to vertical mode (shown above), to show us the bottom profile. We are looking here to port. Note the steep shelving, and the shallow shelf along the shore.

Wind Horse now well-protected behind a small barrier islet. Wind or current may bring ice from nearby tidewater glaciers into the vicinity, but we are secure in this anchorage.