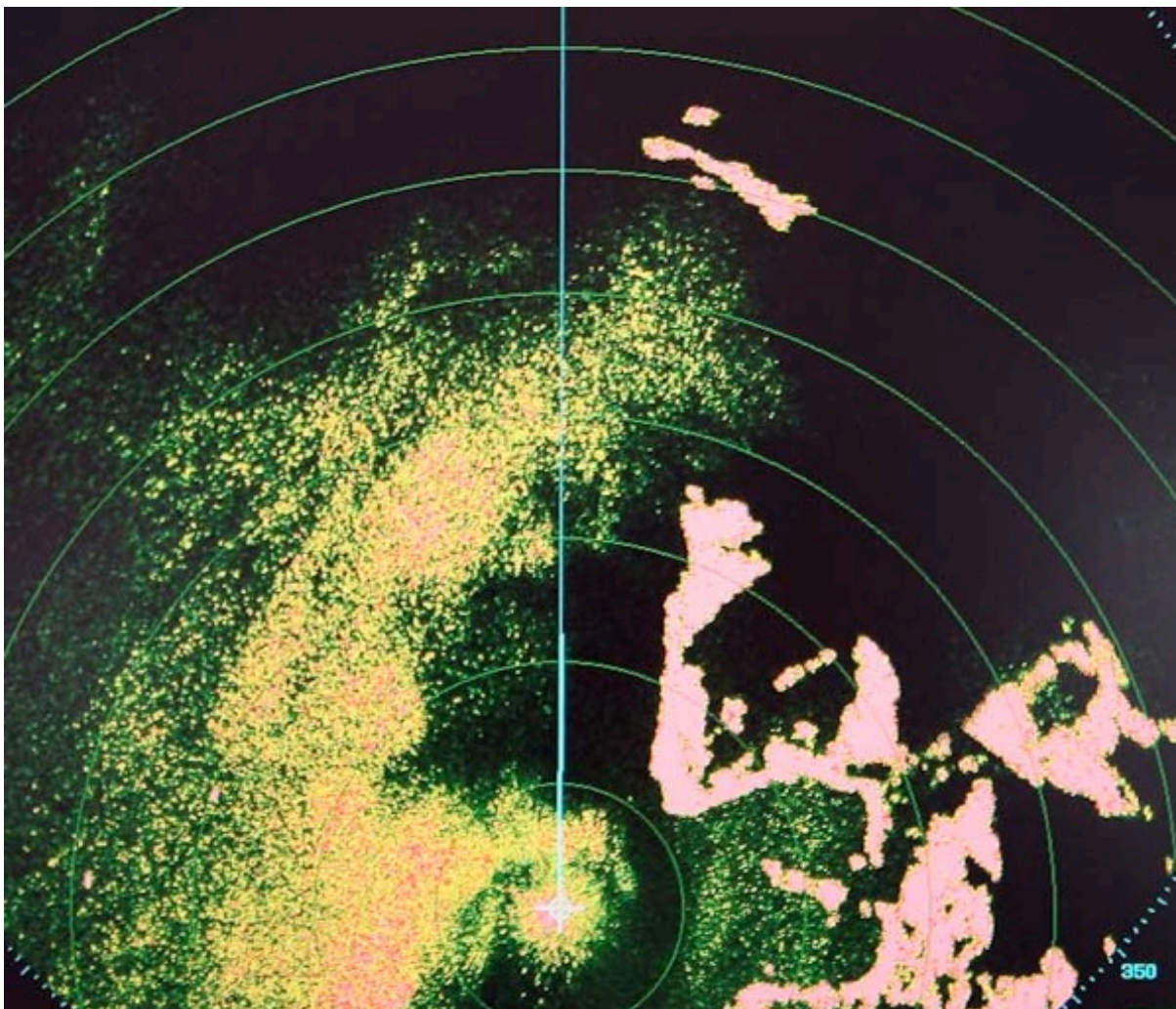
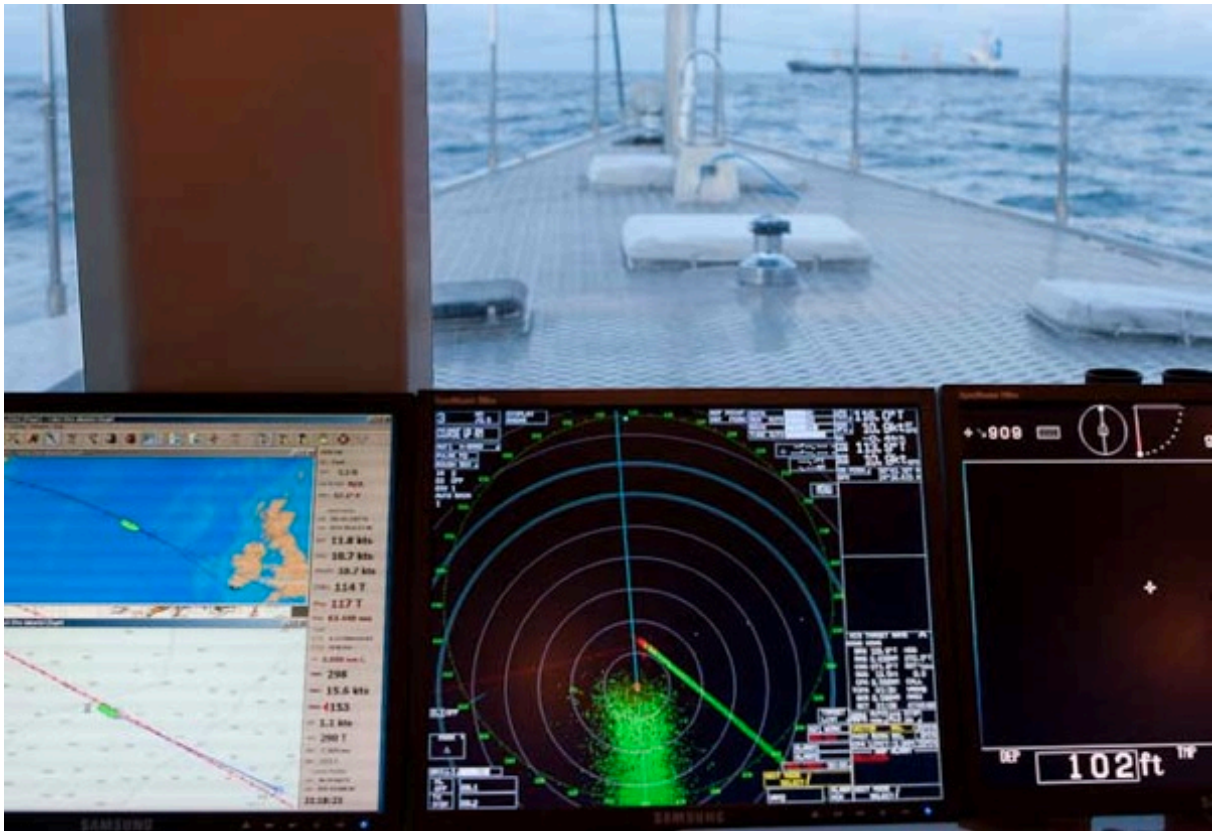


AIS-The Ultimate Safety Tool



When you think about equipping a new yacht with electronics, or upgrading an older vessel, it quickly becomes apparent some choices have to be made. There is rarely enough space (or budget) for everything on the wish list. The photo above will help to prioritize things. There is a large ship somewhere inside the heavy rain squall on the left side of the screen. If we cannot see the ship, what are the odds they will see a yacht in rain or sea clutter?

That's where AIS comes in. Most ships today carry AIS, as do some yachts. The AIS signal, which broadcasts pertinent data over a VHF-like frequency, is used together with your own position, speed, and heading, to calculate a point of closest approach. The AIS, your chart plotter, or radar, then displays this information.



The photo above was taken halfway between Greenland and Ireland, in the North Atlantic. The radar shows the ship crossing our bow.

AIS TARGET NAME A		
KANG HONG		
BRG	156.2° T	HDG
RNG	0.876NM	070.0° T
COG	071.1° T	ROT°/min
SOG	13.4kt	0.0
CPA	0.617NM	CALL
TCPA	04:03	VRBA8
BCR	0.617NM	MMSI
BCT	03:48	477995400

We have our Furuno AIS 150 connected to our Furuno 2117 radar, and when needed, we can call up the AIS data on any target. The panel above shows the name of the ship, range, bearing, course over ground, speed, and closest point of approach (CPA). The target name, call sign, and MMSI number allow us to hail the ship and discuss an upcoming crossing situation.



The next photo is adjacent to Gibraltar, one of the busier and more constricted waterways of the world. Here we are threading our way through a group of anchored and moving ships. The AIS data is easier to interpret, and responds faster to course changes than does radar.



If you think the Gibraltar area is crowded, take a look at the English Channel. This shows us in the traffic separation zone between two lanes of ships, crossing from the Channel Islands towards the Thames River leading to London.

The lines projecting from the bows of the ships are the computed interceptions with us, based on their and our current speed and heading. Our crossing of this traffic is more than a little tight, akin to running across a busy highway.



While AIS is an efficient means of improving yacht safety in moderate weather, it becomes even more valuable as the weather deteriorates. In dirty conditions you have to assume that your yacht's radar and visual image is going to be lost in sea clutter (even if you are using a radar reflector). And while you may be keeping a sharp watch for traffic, a small mistake, a minute of inattention, can lead to disaster. Lest you think we over-dramatize let us relate a tragic story that involved friends of ours.

They were closing with the coast of New Zealand, coming down at the end of the season from Fiji. It was evening, blowing a gale, with intermittent showers. One of the two adults aboard was on watch, as her mate and two children slept in their bunks. She went below for a few minutes to brew a cup of tea, and to warm up. During this brief interlude a ship, which had not shown up on their radar, ran them down. The mother survived, her two children and husband did not. The ship, later traced to Korea, was not even aware they had hit the yacht. With AIS they would have known about the ship's presence and the ship would have been aware of them.

We started out talking about prioritizing electronics. From where we stand the first priority, after GPS and radar, is an AIS transceiver. It is cheap insurance.

