

electronics

Cruising with the

BIG BOYS

See where they are with an AIS receiver

By Bill Howard

Being able to combine two hobbies can be the best of both worlds. In my case, I love cruising on the bay and I really like electronic gadgets. So here's the story. I have radar on my Carver 33 SS, which is nice to have when the weather turns nasty.

The radar does a nice job and with my Raymarine E series chartplotter I can overlay the radar image on top of the chart. At night or in bad weather the radar will paint a bridge, like the Key Bridge, but the bridge

blocks a radar return from anything on the other side of the bridge.

I wanted to see on the other side particularly if it happens to be a big boy coming up the Brewerton channel into Baltimore. The Automated Identification System (AIS) is the answer. The big boys along with the big tugs and tow vessels carry AIS equipment that transmits their position, speed and course information every few seconds. Great! Now all I had to do was spend a few thousand for a fancy AIS setup for the boat.

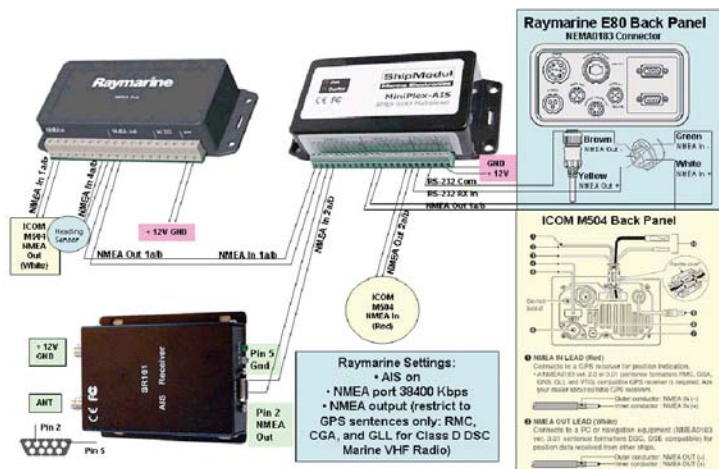
Well no, there is another way. I don't need the whole AIS setup on my boat. All I wanted to do is listen to the AIS signals from the big boys and see if maybe I might be getting in their way. With the setup I already



One of the big boys — the USNS Comfort, shown here docked in Baltimore.

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Caitlin Marie
Drawing 07-106

NMEA 0183 connections



had, it wasn't too tough on the wallet to buy an AIS receiver from Milltech Marine and hook it into my chartplotter through a ShipModul MiniPlex-AIS multiplexer. In fact I included a little chart that shows how the stuff is hooked up.

Some of the wiser than thou experts who have seen my little chart ask — why did you leave the Raymarine multiplexer in there, you don't need it. Yeah OK — but it was already there. I hate to see a perfectly good multiplexer go to waste. I can always use it as a backup. So anyway while the newer stuff is all NEMA 2000 or to the techies N2K, I'm still using the old tried and true NEMA 0183 data "sentences" to feed good stuff to the chartplotter.

The AIS stuff is so fast that a higher data speed is needed to properly handle the information, thus the need for the ShipModul multiplexer. Setup was pretty straightforward. The chartplotter already has an "AIS" mode meaning it can properly interpret (most of the time) the AIS data and place cute little triangles on the screen to show me where the big boys are, and which way they are headed. I also had to increase the NEMA 0183 input speed to the chartplotter by setting the Raymarine E80 to NEMA 0183HS (high-speed) or 38,400 bps instead of the usual 4,800 bps.

Funny thing about the chartplotter though is that it will spit all that high speed stuff right back out, and confuse the heck out of the VHF marine radio that just wants some of the simple GPS "sentences" at the old standard 4,800 bps speed. Fortunately the Raymarine E80

allows you to select which "sentences" you want to pass through. I picked the GPS "sentences" RMC, CGA and GLL to pass through and the ShipModule multiplexer has a low speed output that I can feed to the VHF marine radio. So the electronics were happy, I was happy, and those little triangles were all over the place.

Now here I was leaving the inner harbor heading to Rock Creek on a bad night (it was a dark and stormy night). I waited for a break in the weather and cranked up the engines for the run home. Everything was fine until a couple miles from the Key Bridge — the temperature dropped and the sky opened up. Heavy rain, wind and lightning were hitting all around us. I could see the Key Bridge on radar, but even the radar was having a hard time in the heavy rain. I could also see an AIS triangle headed my way from the other side of the bridge, so I gave him a wide berth as we passed on one whistle under the bridge, and all was well — except maybe all the other boaters on channel 16 telling the Coast Guard how much peril they were in.

Just for fun, I put up a website to show where the big boys with AIS are locally. Check it out at: www.chesbay-shiping.com

Bill Howard, a retired naval officer, and his wife Wilma live in Pasadena on Stoney Creek. Their boat, Caitlin Marie, is a Carver 33 SS kept on Rock Creek (www.carver33.com). Bill and Wilma enjoy cruising on the Chesapeake Bay just to make sure the dockside bars don't run out of their favorite drinks.