

# Voyage of the *Ava T.*

## LESSONS LEARNED AS AN OLDER BOAT GETS A NEW OWNER AND NEW ELECTRONICS.



**P**ictured above is the helm of the good little vessel *Ava T.* as she approached the Cape Cod Canal shortly after dawn last Memorial Day. I

was helping her new owner—*PMY*'s very own, and very boat proud, Richard Thiel—make his first trip aboard this 1985 Jarvis Newman lobster yacht, a 300-mile delivery from Camden, Maine, to Stratford, Connecticut. Now an older boat in such transition is a somewhat fragile affair. System idiosyncrasies that may have been second nature to her old master must be relearned by the new one, and problems that festered while the boat awaited fresh enthusiasm tend

**The Raymarine C120 will eventually get the compass position and replace most of the gear.**

to pop up. In fact, *Ava* hadn't been cruised, let alone driven hard, in more than two years, and the voyage—problem wise—was epic.

Notice the duct tape around the window! From the bow you'd see that *both* forward opening windows are heavily bandaged. That "repair" had taken place the previous day during the

### Q&A

#### Will optional Class B AIS be adopted by the boating fraternity? N.S. via e-mail

It's really too soon to tell, but I suspect that Automatic Identity System (AIS) technology will eventually become a very desirable safety aid for even small yachts. For one thing, there are a lot of skippers out there, including yours truly, who have had never-to-be-forgotten stomach-churning near collisions in limited visibility, even in broad daylight. We're motivated! While the performance and usability of radar has gotten better, it will never by itself provide the breadth of data coming from an AIS transponder. Go to [www.aislive.com](http://www.aislive.com), a Dutch-based site that displays real-time AIS signals for much of the European coast and a few other areas high in the SOLAS commercial traffic that's already AIS equipped. You have to register, but the site really tells the AIS story. I just pulled up a map of the Dover Straits and can see 39 AIS-equipped ships going every which way, some at high

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### NEW MARINER WALKIE-TALKIE HEADSETS

I did not attempt to get Thiel to test (and model) these headsets during our delivery trip, but even on his 32-foot boat they might have been useful when picking up a mooring, docking, or even during a fuel filter drill. While they may tend to make a boater look unfashionably similar to a Soviet tank driver, they are an effective way to communicate without yelling. Working over two short-range (about 300 feet) AM frequencies, the self-contained headsets are fully duplex and, like a telephone, allow for simple simultaneous two-way conversation. The radio itself is in the left earphone, with a single on/off, hi/low volume switch. The right "earphone" contains only a nine-volt battery and can be worn on or off the ear. The pair I tested worked fine, though nearby ignition systems or computers will cause static. The headsets are not waterproof, but are a bargain at \$60 a pair with a padded case.

**Cruising Solutions** ☎ (800) 460-7456. [www.cruisingsolutions.com](http://www.cruisingsolutions.com).



### Q&A

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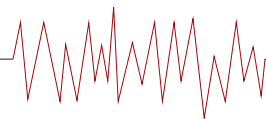
speed, within a 15-square-mile area. I can get the name, call sign, size, type, course, speed, and—in some cases—the cargo and destination of each vessel. The site even has linked portrait photos of many, a feature probably coming to the ships themselves soon. You can't see exactly how this data looks on the electronic chart and radar screens of participating vessels, but I know heading lines, tracks, rates of turn, and collision situation warnings can also be displayed. If you were negotiating those Straits in a yacht, wouldn't you at least want an AIS receiver to help you understand what's going on—better yet a Class B (non-SOLAS) AIS transponder so you too would be an icon on everyone's screens? After all, the smaller the yacht you're on, the worse radar or visual target you're apt to be.

You also might want to check out SeaLinks ([www.sealinks.net](http://www.sealinks.net)), a new company that's purportedly about to introduce the first Class B AIS, a design that should be easy to add to your bridge, as all the hardware is self-contained in its two-foot tubular antenna. SeaLinks already markets a simple AIS receiver for less than \$1,000 and is encouraging land-based users to stream the results to its own Web viewer (so far only Puget Sound, Washington is covered). The availability of AIS info on the Web brings up one worry that has developed about the technology, the perception that terrorists could horribly misuse it. It's a sad sign of our times that bad guys targeting missiles at tankers or megayachts wasn't a serious concern when AIS was developed in the late 90's. The authorities are working on ways to thwart this super-stomach-churning possibility; stay tuned for more information in a future column devoted to AIS.

Got a marine electronics question? Write to *Electronics Q&A, Power & Motoryacht*, 260 Madison Ave., 8th Fl., New York, NY 10016. Fax: (917) 256-2282. e-mail: [PMYElectronics@primedia.com](mailto:PMYElectronics@primedia.com). For fastest response, visit the *Electronics Forum* at [www.powerandmotoryacht.com](http://www.powerandmotoryacht.com). No phone calls, please.

first two of four (!) unplanned pit stops. When chop driven by 25-knot westerlies drenched the pilothouse, we presumed that the leaking was due to bad gaskets. We pulled in again for more taping when presented with wet, irrefutable evidence that the fixed glazing compound itself was porous. I won't embarrass Thiel by describing how he tried to redo the glazing only to find the old stuff to be a nasty liquid goop and himself to be miming Brer Rabbit and the Tar Baby, much to the amusement of Boothbay Harbor yachtsmen. We had at least learned how the dust covers for the electronics made handy drip catchers and we'd certainly confirmed the adage that one mustn't voyage without duct tape.

I digress. My main intent is to discuss the electronics evolution taking place on *Ava* (but there will be more gory delivery details). Imagine the helm photo without the big Raymarine C120



**The C120 offers excellent control of chart windows, as well as custom display pages.**

multifunction display (MFD) and the loose wires associated with its very temporary install. You're seeing the boat's electronics as purchased. A good surveyor named Steven Bunnell determined that the Furuno 1700 radar, the Garmin 225 plotter, and the Datamarine Dart depth/speed/log were all operational. (He would have needed a fire hose to uncover the window problem.) In fact, the 225 and Dart were new in 1999, much younger than most everything else on *Ava*. Nonetheless, Thiel had reasons to consider replacing the whole lot with one MFD.

For one, the Garmin's screen is small for detailed chart work and its zoom/pan speed very 1999, i.e. slow. For another, it uses G Charts, which though still sold, don't work in Garmin's new plotters, don't compare to the latest formats, and are expensive to boot. The Datamarine company seems nearly moribund, suggesting that parts and service would be hard to come by. Finally, venerable as the Furuno CRT radar might be, aesthetically it's like having a toaster oven on your living room mantel. The chaos of electronics boxes around the helm truly detracts from *Ava's* handsome cherry-trimmed pilothouse, plus the ergonomics are poor. Eyes up to the plotter, eyes left to the radar, eyes down to

sounder...you could get cross-eyed on a long cruise.

Above all, it being 2004, Thiel couldn't help but contemplate a wide selection of multifunction machines that seductively promised to organize all his navigation tasks onto one clean-looking, integrated, easy-to-operate

screen. He went for it. Several factors led him to the Raymarine C120: the flexibility to start using it as a plotter right away and later add radar, fishfinder, autopilot, and instrument functions as desired; support for Navionics Gold charts, meaning he could get a single XL3 card that covered everything from Maine to the Hudson River in the latest format; and, perhaps most important, the whopping 12-inch screen especially pleasing to older eyes and also encased sveltely enough to fit neatly into *Ava's* helm.

I put my two cents in as well, suggesting that whereas Raymarine had more or less started from scratch with the C Series, he'd be getting the latest in technology

and interface design. But, I added, since it was so new, it would likely be a bit buggy at first and would need a few software updates to reach its full potential. Truer than I knew! On day one—as we dealt with drips and dodged the spume by weaving through Maine's complicated outer islands—the C120 went twitchy. We'd be setting a waypoint or changing the chart presentation when it would reset (crash) and then start right back up again. Sometimes it happened when we weren't even touching it, sometimes it happened over and over for a few minutes. It was disconcerting.

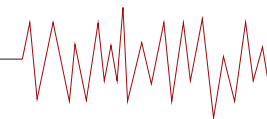
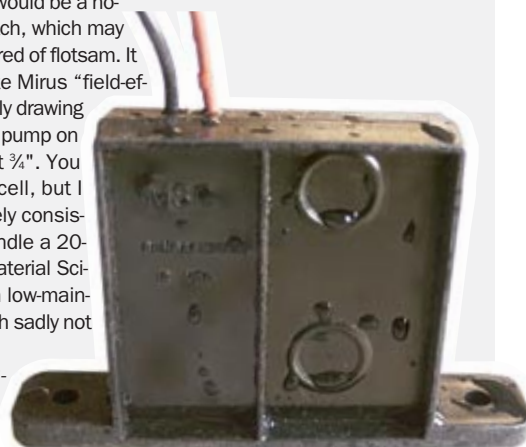
But when the C120 was good, it was very good. In that opening photo the machine had been working fine for many hours, despite my Curious George tendency to push buttons until all possibilities are exhausted. I particularly liked how I could set up two differently zoomed scrolling chart windows, course up to match the radar, with the boat two-thirds toward the bottom for maximum look-ahead. Thus I almost always had all the local detail and big picture information I wanted without ever needing to zoom or pan. I was also impressed with the C120's comprehensible menu system and powerful route-making routines.

Meanwhile, various older boat issues

## NEW SENSASWITCH BILGEPUMP CONTROLLER

Yet another problem we experienced on *Ava T.* (see "Voyage of the *Ava T.*," this column) was a sticky bilge-pump float switch. It caused the house battery to run down the night before our departure and added to our underway anxieties, as we had to leave the pump off "automatic" for fear of burning out its motor. A solution would be a no-moving-parts control like this SensaSwitch, which may never need to be replaced, let alone cleared of flotsam. It contains a pair of fully sealed solid-state Mirus "field-effect" cells that can detect water while only drawing a few microamps. The top cell turns the pump on at two inches, the bottom turns it off at ¾". You can test it by holding a finger to each cell, but I added water repeatedly with impressively consistent results. A SensaSwitch able to handle a 20-amp, 12-volt pump costs about \$35. Material Sciences is also using Mirus technology in low-maintenance tank-monitoring systems (though sadly not for fuel and long-life cockpit switches).

**Material Sciences** ☎ (847) 718-8082. [www.msc-emd.com](http://www.msc-emd.com).



## NEW OCEAN-CLOCKS TIDE TABLE CLOCK

Tide clocks don't really qualify as marine electronics, but I want to make amends for past skepticism regarding the genre. My gripe was that the extra hand on any tide clock (or watch) only tracks lunar orbit time, which may be the most powerful constituent in a tide prediction formula but is only one of dozens. For instance, in places where lunar declination is also a major factor, like the U.S. Gulf Coast, there's often just one high tide per day, and a tide clock is nearly useless. It really takes a PC or plotter processor to reliably predict tides everywhere to the minute. On the other hand, to-the-minute accuracy is a bit of an illusion as tides change very slowly near high and low, and for many of us on the Atlantic and northern Pacific Coasts, those highs and lows are closely associated with the moon's orbit.

Ocean-Clocks' clever new localized design not only focuses on areas where lunar time works well, it also gives you a sense of the tidal relationships in that area. The Cape Cod version I tried made graphic sense of the relative tide at 20 Massachusetts stations from New Bedford to Provincetown, more than making up for its plus/minus one hour maximum inaccuracy. Plus, with a little figuring, it also tracked the moon's passing. U.S. distributor Windward Instruments offers these clocks in several case styles for 17 East Coast regions, plus Washington's Puget Sound, with the hunky solid brass design shown costing \$349.

**Windward Instruments** ☎ (800) 210-0492. [www.bellclocks.com](http://www.bellclocks.com).



were cropping up. The sounder's transducer only saw bottom intermittently, and the info coming from the fuel tank senders was confusingly flaky. We did make our planned diesel stop in the Canal, but later felt the signs of a clogged fuel filter, not entirely unanticipated given how long the fuel in her tanks had been sitting. While we had the spare filters and tools, unplanned pit stop number three into Pt. Judith was required for calm conditions and a borrowed bucket.

We made it well into Long Island Sound before the C120 started seriously acting up again. That's when Thiel's sunny disposition, and confidence in the machine, also crashed. Words were spoken, and for an instant I pictured him chucking the MFD right over the stern. Now, truth be told, what really darkened the mood was not so much the C120 as hitting some unidentified object that felt like it had bent the prop and/or

1/2 AD





rudder. We did a slow shimmy into Clinton, Connecticut, where we at least got to grumble over good food and drink. We lamented the “between a rock and a hard place” state of marine electronics. While the Furuno and Garmin had performed solidly, each was indeed limited in various ways. For instance, both were too bright at night (whereas the C120 has sterling brightness control). And neither of us was surprised that various older sensors like the depth transducer were worse than limited. On the other hand, the “latest and greatest” didn’t inspire confidence either, seeming to suffer from the same Version 1.0 unreliability we became all too familiar with during the evolution of PCs.

In fact, we later learned that Raymarine had already fixed the reset problem, attributed to a PC-sounding “too many



**Old (and sometimes new) boat sensor/bulb problems: We were confused as to why these gauges didn’t read the same, we knew both should be lit.**

polygons” issue and largely limited to machines running the New England XL3 card. Thiel received an update card and made friends again with his MFD, which got properly mounted front and center, eventually to be inset in cherry. The Garmin’s already been e-Bayed to a guy in Alaska, and while Thiel will likely

let the C Series mature a bit before superceding the Furuno toaster oven (which performs flawlessly), I’m sure that a strikingly neat and functional helm will ultimately be achieved.

But back in Clinton it was a couple of mopey guys who watched *Ava* get hauled that last morning, only to discover that whatever had caught in the running gear was gone, no great damage done. Spirits lifted, bodies finally rested, the last leg to Stratford was gleeful, even as the Cummins hinted at more filter problems. When the *Ava T.* conked out just 300 yards from her slip, it seemed the perfectly ironic conclusion to a voyage that had been challenging and instructive, yet somehow a boatload of fun. When the yard guys showed up in their towing skiff, we were laughing so hard we had a hard time handling our lines. 🍷