

Featured Article – February 2004

Computers On-board

Despite the fact that I think of myself as a computer guy, I am not very automated on the boat. Several members can send and receive emails over their cell phones or personal digital assistant (PDA). Some members run their business from their boats while anchored out in the middle of nowhere. A few integrate their computers with the global positioning system (GPS) and autopilot to control the boat's cruise. I have a computer on board so I can pretend to be at work while stretching the weekend into Monday. If you are thinking of buying a computer for your boat, here are some tips that you might consider.

What Do I Need To Buy?

Before you can answer the above question, you have to ask another question – what do I want to do on board? If you need to keep in touch, you'll need some kind of radio with a computing device. For example, if you are checking email and have great eyesight and nimble fingers, your cell phone may be all you need. The eyesight and nimble fingers refer to the small screen and buttons on most cell phones. A small step up is a PDA with an integrated cell phone. John C. Dvorak, in PC Magazine (December 29, 2003) said, "Now that the cell phone can be a pocket computer that has MP3 capabilities, the ability to stream movies, PDA features, a built-in camera and voice recorder, an AM/FM radio, a Web browser, and can be a GameBoy killer, you can think of it as the ultimate computer. Add some GPS capabilities, mapping, a TV tuner and other features (hence the need for a hard disk), and you are not too far away from a cell phone becoming a PC." Please be aware that you generally PAY for this level of connection. Prices range from about \$39.00 per month up to \$1500.00 per month. Also, finding a cell on a body of water can become challenging, depending on your carrier and location. More on this later. Amateur radio operators can use "free" radio resources to communicate, via voice or data, almost anywhere in the world. This communications must be non-commercial or emergency service only. I frequently carry an amateur radio with me to use the complimentary phone connections.

If you don't need the communication connection a cell phone gives you, but would still like the integration a computer can provide your boat, you'll need a notebook or laptop computer. Notebook computers are thinner and lighter than laptops, although the difference is more in terminology than in reality. You could use a desktop computer if it is properly secured. Notebook computers are easier to secure. Most notebooks today are as powerful as most desktops. You'll need a lot of memory, both RAM and storage. I generally recommend to my business clients a minimum of 512 M of RAM, with a graphics accelerator. You can buy a less expensive notebook and add memory, IF IT IS A GOOD QUALITY NOTEBOOK. Some cheaper notebooks do not let you add RAM. You'll need a CD – ROM to update the GPS charts now – a DVD drive is nice and can serve much the same purpose. I recommend a hard drive of 40G. You will need much more hard disk storage for the charts if you do much cruising. You can add external hard disk drives for less cost than getting a single huge internal hard disk drive. You can get a 120G external hard drive for less than \$300 or you can get an 80G external hard drive for about \$150. These are good quality drives. One of the nice things about the external hard drives is that you can have one for your photos, one for your charts, one for your digital video clips, and never clutter up your main hard drive. Use the main hard drive for your standard programs. External hard drives are faster than other external types of drives and much faster than CD – ROM drives.

I'm going to go out on a limb here. I recommend Toshiba Satellite notebook computers. Prices will vary, but expect to spend around \$1,000.00 for a Toshiba notebook with the extra memory needed. You will spend more to add software, of course. I never recommend the extended warranty, especially from the retailer. Toshiba has a less expensive extended warranty if you really want one. There is a type of notebook called a ruggedized notebook. This is a computer that has been specially prepared for toxic environments. Some are waterproof. I don't think this is a good investment. A waterproof computer is best if it floats. You will probably be using your computer in the salon or bridge where it is protected from the elements. Notebooks are somewhat more rugged than desktops anyway. Save your money for your next new computer in three years or so.

Now What?

Now you'll need to connect the computer to the devices you want to operate. My old GPS requires that I fabricate a connection cord from my computer's serial port. You wonder why I have never automated. The newer equipment connects with the computer using a USB (universal serial bus) connection. You can buy connectors that link your computer's USB ports with the equipment's RS232 (parallel) or serial ports. That makes life a little easier. Be careful of your connections. One of my favorite stories is about someone who had his auto-helm professionally installed, went to make a 5-degree course correction and made a 355-degree turn. He had to flip flop the wires to prevent this in the future.

What's Coming?

The Dvorak article does a nice job of setting out where cell phones are going. Let me tell you about a new technology that is just now emerging. It's called WISP's or Wireless Internet Service Providers. These are line-of-sight radios (like the marine band VHF radios) that carry the Internet, telephone traffic, and cable TV programs. The FCC has a commitment to making the WISP's widely available in the US. At some time in the future, you could add a small (2 square feet) antenna to your boat and get broadband (high speed) Internet access, almost free telephone service to anywhere in the world, and cable TV for about the price you pay for home-based broadband connection today – around \$45 per month. Boats are perfect for this kind of technology because the water does not have the barriers (trees and buildings) that interfere with wireless transmissions on land.

The reality will never meet the expectations that I've outlined above, but the telephone companies and cable TV companies are paying a lot of attention to this.

Again, my thanks to Ray Starsman who suggested this article.