



Dave Laska, of L&L Electronics in Branford, Conn., says if there are fewer than five things you dislike about your electronics and/or want to add to your setup, it's probably not time to upgrade.



Multifunction displays that integrate navigation data are the "new norm" at the helm.

# NAVIGATING

## TODAY'S *ELECTRONICS MARKET*

### A Q&A with veteran installer Dave Laska

• **What's the typical life cycle on navigation electronics?**

Manufacturers usually forecast a five-year "market" life cycle for a particular model or series before introducing a new model. The life cycle of the actual physical hardware, factoring in changes in technology, availability of replacement parts and cost of repair vs. replacement, usually works out to a period of five years after the model has been discontinued. Extrapolating this out, someone who purchased a new chart plotter during the first model-year release should expect to get 10 years of use from the technology. Someone who purchased the same unit toward the end of the product's market life, of course, would have a shorter period of time before advances in technology became apparent. One benefit to purchasing late in a model's market cycle is that costs usually are lower; by Year 4 or 5, they could be reduced by 20 percent for a given model.

• **When does it make sense to upgrade your electronics?**

Boating is a passion, but upgrading your navigational helm is two-thirds economics, one-third desire. Make a list of what you don't like about your current electronics and what features you would like to add to your helm (Sirius weather, AIS, radar overlay, etc.). Add in any safety benefits that an upgrade may offer and then look at the list. If there aren't at least five entries on your list, then it probably isn't time for an upgrade.

• **Are software enhancements a way to extend the useful life of a plotter or sonar, and how difficult are the upgrades to download and install?**

Fortunately, performing a software upgrade on most of today's navigational equipment is very simple. All that is usually required is a blank memory card and reader (readily available at Staples or Office Max) and a PC with an Internet connection. Type in

"software update" in the search function of the respective manufacturer's Web site and follow along. All of today's updates are self-loading, short of shutting the nav unit off accidentally during an update or pulling out the memory card during the read/write cycle.

Unfortunately, the first several software revisions for most of today's sophisticated nav electronics are usually dedicated to making a product work as advertised. A lot of the software feature upgrades usually have a fair number of "minor" fixes that ride along with the upgrade. That means registering your product warranty so you can be in the know when new software is available is extremely important.

• **Is there an advantage to staying within one brand family for all communications and navigational electronics?**

The trend in today's helm stations is layered integration. If you plan to add system core components such as Sirius or XM weather, radar overlay or video depth, don't switch teams. There is enough challenge to make integrated systems work as originally designed by the manufacturer

RICH ARMSTRONG

Night-vision technology like FLIR's hand-held First Mate is boosting skippers' confidence.



The amount of room on the helm console for mounting electronics is a basic consideration in choosing your system.

without injecting a possible mismatch.

It is OK to add NMEA 2000 sensors to a system, such as a GPS or ultrasonic wind sensor, provided that both the sensor and the multifunction display it is connecting to are NMEA 2000 "certified." There is a big difference in data land between certified and compliant, the latter leaving you exposed to probable data incompatibility.

Regarding communications equipment, there is no problem mixing and matching, as the data communications between a VHF and a GPS/chart plotter is very generic.

**• Are today's sophisticated electronics difficult for do-it-yourselfers to install?**

In the 1980s and '90s an installation was considered successful if the unit turned on and didn't smoke. For many midlevel multidisplay installations to be successful today, they not only require base mechanical and electrical skills, but also PC programming skills. Don't underestimate the importance of performing the system setup.

Here's a tip for do-it-yourselfers: label the cable.

Use blue painter's tape and a permanent marker if you do not have access to a wire labeler. Put an arrow on all data cables to denote which direction the data is transmitting. A few years back the only data we had to worry about was a single port of NMEA 0183 (in and out). Today, on most medium-sized helms, you will have to work with two ports of NMEA 0183, each with a different baud rate (4,800 for VHF's and autopilots, and 38,400 high speed for AIS interface), along with NMEA data at 10 Hz rate for compass interface to radar overlay.

**• When is it time to bring in a professional installer?**

If any of the above sounds foreign, bring in a pro. If you believe the installation might take you more than a weekend to complete, or if the sales tax on your purchase is more than \$500, you should at least price out a professional installation.

**• Are there warranty advantages to having a certified technician do the installation?**

Yes there are. Manufacturers are faced with the

challenge of designing a product that is technologically competitive but at the same time installable by the masses. They also know that more than 80 percent of warranty service claims are for installation-related issues.

In an effort to increase customer satisfaction through properly installed equipment, Raymarine offers a free second year of "on-board at your dock" parts and labor warranty on qualifying products installed by a certified Raymarine installer. The product can be purchased from a catalog house, but the installation needs to be done by a Raymarine installer to receive the second year of on-board warranty.

Simrad/Navico is taking a similar approach with its new NS8 and NS12 Northstar series multifunction displays. If the product is installed by an authorized Simrad/Navico dealer and becomes defective within the first year of service, Simrad will overnight — at its expense — a new unit for immediate exchange.

**• How do you answer a boater who asks, "Which brand should I buy?"**

When someone asks me, "Which brand is the best?" I start by explaining that this is not a simple one- or two-word answer. I usually ask them for the brand of equipment they are currently using and what they like and dislike about the unit. If it is a new boater, I determine how technically savvy they are and what is important to them — gadgets or simplicity? I also ask what type and model boat they have. This tells me how much helm space I have to work with, and from experience what physically fits the helm. There is no sense recommending Brand A if it won't fit the helm.

Today's customers usually do their Internet research and product comparisons before they head out to a boat show or a retail showroom. They have a fairly good idea of what product they want, based on Web site "propaganda," and are mostly looking for validation and personal recommendations prior to their final purchasing decision. For products within the same price category, there really aren't any bad choices. Some products might be easier to install on certain boats. Certain products are considered staples on certain boat lines. And there are definite cosmetic differences between manufacturers. But at the end of the day the choice of equipment is truly subjective. The trick is to find a salesperson/source with local knowledge (knowledge of your particular boat and cruising area) that is not a champion of just one manufacturer's line, but a trained expert of many.

**• Where is a good place to get a referral regarding a competent or certified installer?**

Start with the manufacturer's Web site. Look over the authorized dealer list and call the manufacturer, asking for the telephone number of the factory's regional sales representative. Call the factory rep — don't e-mail or you'll get a generic answer. Describe your project and ask him or her to refer two companies in the area that are doing the caliber of work that will match your particular needs.

Research the authorized dealer's Web site. Is it professional, informative and up to date? If you see an installer working in your marina, walk by the boat being worked on. Is there deck or floor protection in place? Ask for a business card.

You can also ask your marina manager for a referral. Many marinas partner with area professionals on installations. Let the installer know the job was

referred by the marina manager. Subcontractors typically go to great lengths to keep marina managers satisfied and in return can count on referral work year-round, not just during the high season.

• **What are the biggest changes you've seen in electronics in the last 10 years?**

Radars are getting smaller, and chart plotters are getting larger. Chart clarity and intelligibility increases every year. Everything now is customizable to be tailored to your particular navigational preference. The acceptance of NMEA 2000 data is a big change in the way data is transferred between different manufacturers' units. As far as the "best" changes in the past five years, I believe live Sirius/XM weather video data and AIS target information are the new building blocks for future integrated helms.

I am sure we'll soon see fog detection/visibility reports added to satellite weather service. How nice would it be to know where a fog bank is situated, its size and its density prior to leaving the dock? Welcome AIS enhancements would be on-screen targets of different colors for different types of vessels (red for tugs in tow, yellow for ferries, etc.) as well as scalable icons representing different size vessels.



Laska recommends staying with one manufacturer's equipment if you plan to add system core components.

Today's system gives one size icon for a 30-foot pilot boat or a 450-foot container ship.

• **Can you identify some other future trends?**

Smaller and more powerful technology (power equals integration).

Redundancy and backup system engineering is starting to push its way into the forefront. Manufacturers are realizing that if a \$300 GPS sensor becomes defective, it will take down their \$20,000 inte-

grated multidisplay nav systems. Current trends are allowing multiple GPS sensors to be connected to an integrated system, with automatic changeover should the primary GPS sensor fail.

Other trends or changes include digital radar (be it HD or Super HD), which absolutely increases radar performance in heavy, wet fog or storm cell downpours. The Automatic Gain, Sea Clutter and Rain Clutter settings of these new digital radars are so good that even if an operator elects to manually tune the radar set, the increase in image enhancement is minimal at best.

The emergence of thermal and low-light-enhancement night vision systems in the recreational market is helping to extend cruising confidence when the day goes a little long and the skipper is faced with returning to port after sunset. The video images of the Generation 4 night vision systems are nothing short of phenomenal. ■

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