

Trending on ELECTRON

Say goodbye to multiple gauges at the helm.
Glass bridge systems for everyone are on the way.

There was a time, not too long ago, when being able to manipulate a digital chart that showed your boat's progress with a couple of push buttons seemed almost miraculous. That was before the proliferation of touch technology devices and slick smartphones, tablets and computers that respond to the swipe of a finger to turn a page, or a pinch to zoom in and out.

Glass helm technology is the latest leap forward in marine

electronics, and it's about more than just the cool factor. Imagine a helm with one smooth glass surface — no more mix of digital and analog gauges, no more living with an auto-pilot control where you wish you'd put your engine monitors. Everyone's getting in the game, so we talked to electronics expert **Ben Ellison** (www.panbo.com) and veteran electronics installer **Dave Laska** (www.llelectronics.com) to find out more about the latest developments in helm technologies and to learn what else is on the electronics horizon.

▼ Volvo Penta's Glass Cockpit system allows you to customize your helm with MFDs from Garmin, optimized for use with Volvo propulsion systems. Available in 8-, 12- and 15-inch sizes, the displays have integrated processors and cooling. www.volvopenta.com



ICS



◀ Furuno's new MU-T Multi Touch Monitor System offers edge-to-edge glass design and Projected Capacitive Touch technology. The displays are available in 17, 19 and 24 inches and feature maximum brightness. \$8,595-\$9,695. www.furunousa.com



▶ DeLorme's inReach SE adds a color screen and virtual keyboard to a satellite communicator that can send and receive text messages, trigger an SOS and interact with DeLorme's 24/7 search-and-rescue monitoring center. It also tracks and shares GPS coordinates. \$299.95. www.delorme.com



Though a lot of new product developments were announced at the recent Fort Lauderdale International Boat Show and the Marine Equipment Trade Show in Amsterdam, it seems the dominant focus in electronics right now is on glass helms.

BE: There's a new-generation multifunction display that has glass-bridge styling, an iPad-like multitouch screen interface and is capable of more functions than ever. As of the Fort Lauderdale show, Furuno, Garmin, Raymarine and Simrad each offered new "glass" systems, and while they all scale up well to big yachts, they're also proving popular on high-end center consoles, so I'm sure the manufacturers will be bringing their attributes down to smaller screens.

DL: All-glass helms are coming whether you want them or not. One advantage: less clutter. On a typical 5-year-old twin-diesel powerboat, the engine gauge package takes up more than 30 percent of the available space at the helm.

Another advantage is the ability to receive and display a wide range of engine data. Most new marine engines are electronically

controlled via the CAN bus protocol for better fuel economy and emissions compliance. Riding along with the electronic advancements on the CAN bus line is the ability to view layers and layers of engine data via a simple four-conductor wire.

Marine electronics manufacturers are working feverishly to bring to market next year new large-format nav displays that tap into an engine's data stream and bring up a wealth of engine information on bright, colorful, customizable gauges.

What is the level of interest in touch technology and pinch-to-zoom screens for plotters? Is there a downside to this technology on boats?

BE: Thanks largely to Steve Jobs and company, the level of interest is very high, and the good news is that touch-screen interfaces done right work better on boats than many skeptics predicted, even when the going gets bumpy. Nonetheless, knobs and buttons are still sometimes a faster, easier way to get something done, and one of the nicest aspects of the new glass bridge de-



▲ Simrad's NSO evo2 MO system has quad-core processors and offers quick connectivity with NS-series devices. Pilot House displays (16, 19 and 24 inches) are available in non-touch and high-bright Multi-Touch models from \$4,449 to \$10,000. NSO evo2 Black Box is \$5,695. www.simrad-yachting.com



◀ Bad Elf GPS has released a new model compatible with Apple devices that use the Lightning connector, including iPhone 5, 5s and 5c. The 66-channel GPS is accurate to 9 feet. \$129.99. www.bad-elf.com

▼ With its COMMANDMICIV remote-control handset, Icom America's IC-M400MB black-box VHF affords flexible, space-saving installation. Features include Class D Digital Selective Calling, active noise canceling and a soft-key user interface. \$499. www.icomamerica.com



signs is that all of them can be accessorized with remote keypads. So the new norm is to have fewer discrete controls at the helm, such as light switches or camera joysticks, but multiple control options for the screens where all the functions have gathered.

DL: Everyone wants the helm to work like an iPad because an iPad is fun and easy to use. If you mess up, simply exit the app and start over. Pinch-to-zoom and push-to-pan are becoming natural motions in our everyday world. However, if your hand is a bit shaky, the seas are rough or if boat speed is approaching 30 knots, a touch-screen-only unit takes a little more practice to control versus a hybrid unit that has both a touch screen and a cursor pad.

Talk a little about some of the innovative features found on the bridges of superyachts — are they part of a recreational boating future?

BE: That's where the glass bridge concept started and probably where the cutting edge will always be. One of the hot systems these days is multitouch software that lets one screen control all of the others on board. For instance, you can flick radar, charting and other apps around the bridge like Tom Cruise in "Minority Report," or write "coffee, please" with your finger over a video source that's also playing in the galley.

This year we're going to see big-yacht IP camera features come to medium and small boats. Even a little Raymarine a-Series will



▲ Raymarine's new LightHouse II operating system features a simple menu, drag-and-drop customization, and quick access to your plotter's most important features. If you own a third-generation a, c, e or gS Series display you can update your software to LightHouse II free. www.raymarine.com



◀ B&G's V50 fixed-mount VHF features an integrated dual-channel AIS receiver, and an optional wireless handset (H50) offers mobility anywhere on the boat. The waterproof radio also has integrated Digital Selective Calling and TrackYourBuddy DSC position polling. \$399 (\$169 for H50 handset). www.bandg.com



▼ The Standard Horizon HX150 5-watt handheld VHF radio floats, and it has an oversize LCD, a backlit keypad and a Li-Ion battery that delivers more than 10 hours of operation. Features include programmable scan, dual watch, channel 16 Priority Scan and NOAA weather channels. \$99.99. www.standardhorizon.com

soon support a relatively inexpensive single-cable camera that will allow recording/playback and network with other Raymarine screens on board. The other manufacturers will follow, and it won't be too long before you'll be able to zip your video — and still [images] — memories over to your phone or tablet via the MFD's Wi-Fi, or maybe even see what the camera sees while you're ashore.

DL: On boats over 30 feet, the trend next year will continue to be HDMI-grade wide-screen glass. The top tier of these new monitors are reaching into the 24-inch territory. And when you start viewing a navigational chart on a monitor that large, at a distance of 2 to 4 feet (nominal arm's length), you are going to want very detailed screen resolution. To help convince you that these \$5,000-plus monitors are

a must-have, manufacturers have bumped up the screen resolution from last year's DVI standard into the HDMI arena.

Although a 24-inch monitor is unrealistic at many helms, the wide-screen and HDMI components of this trend are already entering the market in the 16-inch size. We have done plenty of helm makeovers this year at L&L Electronics in Branford, Conn., with multifunction displays as large as 16 inches on boats that are barely more than 30 feet, and the feedback has been very positive.

What other new technologies have impressed you recently?

BE: Raymarine surprised everyone in Lauderdale by demonstrating an entirely redesigned LightHouse II software that will display



◀ Virb, Garmin's new 1080p action camera, also shoots enhanced HD video. It's encased in a knock-resistant and waterproof housing, and has a rechargeable lithium-ion battery with a recording life of three hours. A 1.4-inch Chroma display lets you play back what you've captured. \$299.99. www.garmin.com



▲ Lowrance HDS-12 Gen2 Touch is a wide-screen fishfinder and chart plotter with a touch-screen interface, built-in StructureScan HD sonar imaging and a StructureMap HD option that lets you create your own charts. From \$3,349. www.lowrance.com

free NOAA vector and paper-like raster charts. It has numerous other features and will be a free update to all a-, c-, e- and gS Series multifunction displays. At METS, Simrad introduced the evo2 version of NSS MFDs — 7-, 9-, 12-, and 16-inch sizes with styling and updated multitouch interface, much like the NSO evo2 black box and dual monitor systems already shown in the United States. Garmin is expanding its popular 700 series with 10-inch siblings, added networking abilities and also both DownVu and SideVu hi-res structure sonar options. Garmin also entirely redesigned its 18- and 24-inch radomes up to xHD level without much added cost and is integrating Nexus sailing instrument systems with its own displays.

DL: The hi-def war is heating up in the video depth sounder arena. There are manufacturers that are very much on top of their game in 3D underwater imaging, producing Jacques Cousteau-grade images of wrecks and bottom detail that until a scant two

years ago were left only to our imaginations. I predict that the industry very soon will have affordable forward-looking sonar, with operational images that don't look like a decoded Randot vision test.

Bad Elf has come out with a new GPS for Lightning connector Apple products. Could you describe what it does?

BE: It's simply the original Bad Elf iPhone/iPad GPS with the new Lightning connector that Apple painfully surprised all of its accessory manufacturers with. Frankly, I favor the Bad Elf Pro, which uses Bluetooth, so it's going to keep on working even if Apple changes connectors again, which is rumored. The Pro also offers superb GPS performance and can be used standalone and as a logger, plus Android support is purportedly coming, as well as an accessory that can add NMEA 0183 boat data, like depth and wind, to the Bluetooth stream. ■

▼ The GPSMap 8000 Glass Helm is Garmin's newest and most advanced series of MFDs. The 8-inch SVGA and 12- and 15-inch XGA monitors are multi-touch and pinch-to-zoom. The GPSMap 8500 black box series is compatible with Garmin's 15-inch XGA and 19-inch SXGA displays. \$4,099 to \$6,999. www.garmin.com

