



“We’re confident that the GTN series will set a new standard on what avionics for general aviation aircraft should be...”

DO YOU BELIEVE IN

MAGIC?

GARMIN BRINGS ITS MAGIC TOUCH TO THE AEA CONVENTION

STORY BY AVIONICS NEWS EDITORIAL STAFF

A little bit of magic appeared at the AEA's 54th Annual International Convention & Trade Show in March in Reno, Nev., when Garmin invited its dedicated network of dealers for a special gathering to introduce a new product destined to impact the future of avionics. Garmin indeed brought its magic wand to the full house in attendance, pointing it directly at the Part 23 retrofit market with the first-ever touchscreen panel-mounted stack.

"We were particularly excited to give AEA convention attendees, our dealers, the very first public look at these exciting new products," Jim Alpiser, Garmin's director of aviation aftermarket sales and marketing, assured the faithful. "Just like when we announced the GNS 430 and 530 at the 1998 AEA Convention, we think these products will be widely accepted by customers and set a new bar for general aviation airplanes. We are, once again, changing the course of aviation."

Following a history of successful product launches beginning with the best-selling GNS series of GPS/nav/comm products more than a dozen years ago, Garmin has evolved the cockpit crew interface with a

Continued on following page

Garmin's GTN
650 and GTN
750 Series
Touchscreen
Avionics are
Certified and
Ready to Fly



Garmin's new GTN 650/750 series (left) is smaller, with a bigger screen and touch-screen controls than the older, larger stack (right) with dials and knobs.

GARMIN GTN 650 AND GTN 750 SERIES

Continued from page 27

long line of wildly successful panel-mounted and portable navigators. With “make flying easier and safer” products going into everything from experimental and light sport to transport category aircraft, Garmin continues to work its magic.

After estimating the number of GNS series navigators already in circulation, the potential market for the new GTN series as the replacement is mind boggling. It came as little surprise a few months ago when the perennial panel-mounted sales leader announced its foray into the world of transport category aircraft.

Many may have wondered where this would leave the Part 23 market. Surely, the move to Part 25 signaled a declining focus on product development for retrofit and Part 23. Not so fast.

Some Nice ‘Touches’

These all new panel-mount units are certified and approved for installation in hundreds of makes and models of general aviation aircraft. The GTN 650 and GTN 750 feature new capabilities for GPS/nav/comm systems like touchscreen operation, graphical flight planning with victor airways and high-altitude jet routes, remote transponder, remote audio control (750 series only), SafeTaxi and electronic chart capabilities (750 series only).

Featuring high-resolution TFT optics with multi-function display capabilities and a new graphical user interface, the GTN design makes flight data much easier to access. Page navigation is more intuitive, with a new “shallower” menu structure and desktop-style “home” and “back” keys to simplify orientation. In fact, the user is rarely more than two taps away from all primary pages and functions. One can

quickly pan across the map display by simply swiping a finger across the screen. Integration capability for a wide array of avionics and sensors not only streamlines tuning and mode selection, but, in effect, allows pilots to utilize the GTN touchscreen as a virtual flight management system.

“As the successors to the very popular GNS 430W and 530W, the GTN 650 and 750 have big shoes to fill,” said Gary Kelley, Garmin’s vice president of marketing. “We’re confident that the GTN series will set a new standard on what avionics for general aviation aircraft should be, just as the GNS 430 and 530 did when they were announced in 1998. The GTN 650 and 750 are the first touchscreen avionics certified for general aviation aircraft. Although some may think the touchscreen operation is the most unique feature of

Continued on page 30

GARMIN GTN 650 AND GTN 750 SERIES

Continued from page 28

these systems, we believe the interface and expansive new capabilities are even more innovative.”

A Touch Of Glass... A Lot More Glass

The most notable physical difference between the GTN 650 and 750 is the screen size. The GTN 650 has the same exterior footprint as the GNS 430W, but has a 4.9-inch diagonal screen that has 53 percent more screen area than the GNS 430W. The GTN 750's large 6.9-inch diagonal screen has 98 percent more screen area than the GNS 530W, which makes it possible to view an entire chart via Garmin FliteCharts and ChartView, as well as display integrated audio and intercom functions with the new optional GMA 35 remote mount audio panel. In addition, both units display a greatly enhanced, higher resolution picture (GTN 650: 600x266 pixels; GTN 750: 600x708 pixels) that has over five times more pixels than the GNS 430W and 530W, respectively.

Stabilized Touch 'n Go

The touchscreen GTN 650 and 750 both feature a shallow menu structure, desktop-like menu interface with intuitive icons, audio and visual feedback, and animation so that pilots know exactly how the systems are responding to their input. The GTN has a touchscreen alphanumeric keyboard and utilizes a “back” icon that allows for quick and easy operation.

Recognizing that hand stabilization will help make it even easier to enter data, both units have a finger

anchoring bezel – the curvy plastic swoosh that runs vertically up each side – and fingerboard at the bottom of the screen. For those who prefer traditional data entry via buttons and knobs, the GTN systems have a dual concentric knob for data entry, volume/squelch knob, and “home” button and “direct to” button so that pilots can do all the basic fundamentals – like establish a route and change COM frequencies – without using the touchscreen. With the home key, pilots are seldom more than two taps away from all primary pages and functions.

Swipe, Drag And Tap Your Next Flight Plan

The GTN series offers graphical flight planning capability, patent pending, so that pilots can edit an active flight plan route on the map and easily enter a new waypoint or modify the sequence by tapping or dragging a finger on the screen. Victor airways and high-altitude jet routes can be overlaid on the moving map, and airway segments can be selected onscreen for instant entry into a flight plan. The system also includes graphical flight planning, a unique “rubber band” feature that lets pilots select a flight plan leg on the screen and then alter it to accommodate a deviation or ATC amendment. In addition, pilots can pan across the map display by swiping a finger across the screen.

More Magic... Audio Panel and Transponder Perform Disappearing Act

Because the GTN offers a wide array of compatibility with select Garmin avionics and sensors, Gar-

min has made it possible to have a consistent and intuitive interface to other systems – such as audio and transponder – by creating simplified systems management functionality on the GTN flightdeck. Saving valuable panel space, Garmin's new GMA 35 remote mount audio processor (optional) interfaces with the GTN 750 and makes it possible for the GTN to be used as a touchscreen control head for the aircraft's audio and intercom functions. The GMA 35 helps streamline cockpit communications with record/playback capability for copying clearances. It also includes an internal microphone that senses the amount of ambient noise and automatically adjusts the cockpit speaker and the headset volume based on the level of noise in the cockpit. Garmin's GTX 32/33/33D remote transponders (optional) also interface with the GTN 650 or 750 so that pilots can control transponder function from the GTN's display. Optional versions of the GTX 33/33D mode S transponders are available which support ADS-B/Out.

Now You See It...

Thanks to built-in terrain, mapping and obstacle databases, the GTN provides a greatly enhanced, high resolution presentation of the surrounding area. A built-in terrain elevation database shows color-coded alerts when potential terrain conflicts are ahead. Also, full Class B TAWS alerting is available as an option. The WAAS equipped GTN 650 and 750 let pilots fly GPS-guided LPV glide-path approaches down to ILS-comparable minimums. In addition, precise course deviation and roll steering outputs can be coupled to select au-

topilots so that IFR flight procedures may be flown automatically.

Optional XM WX satellite weather, lightning, and traffic system inputs are also supported and may be overlaid on the moving map. In addition, XM radio is available as an option. The XM WX Satellite Weather and radio service is only available to U.S. and Canadian customers with a subscription and with an optional GDL 69A.

More Tricks Up The Sleeve

The standard GTN 650 and GTN 750 feature a 10-watt COM, and a field upgradeable 16-watt version is available as well. In mid-2011, Garmin will make available a GTN 725, which is similar to the GTN 750, and is a GPS/WAAS only unit. Also, a GTN 625 will be available that is a GPS/WAAS only unit, and a GTN 635 that is a GPS/WAAS unit with VHF communications radio.

The GTN 650 and GTN 750 received FAA TSO authorization in March and are STC approved on a broad model list covering most Part 23 fixed wing aircraft. The first units were on display and available for purchase at the Sun 'n Fun Fly-in, March 29 to April 3. The GTN 650 is expected to be available at a suggested retail price of \$11,495 and the GTN 750 is expected to be available at a suggested retail price of \$16,995. The GMA 35 remote audio processor is expected to be available at a suggested retail price of \$2,995.

It's Not An Illusion

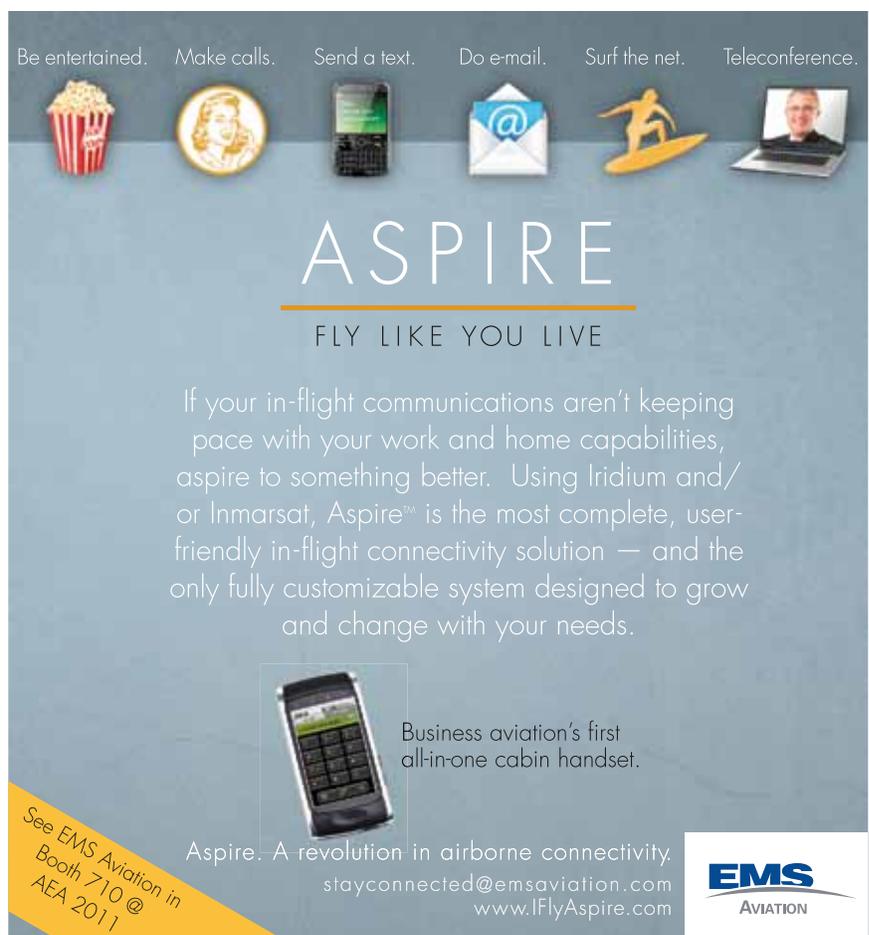
In 1989, Gary Burrell and Dr. Min Kao formed a company to carry out a vision that GPS would change the face of navigation. Garmin's goal today, as it was then, remains

simple: To create navigation and communication devices that can enrich its customers' lives. The GTN 650 and GTN 750 series continues to nurture the implementation of that vision.

Over its 21-year history, Garmin has continued to bring many innovative and market "firsts" to the aviation industry. Today, with more than 8,000 employees and 20 offices worldwide, Garmin is a global leader in GPS. Garmin is one of the few AEA associate member companies that have been recognized by its dealers multiple times as the Associate Member of the Year. □

EDITOR'S NOTE:

Do you have more questions about the Garmin GTN650 and 750? Of course you do, and so do we. Be sure to read the June issue of Avionics News which will cover complete details of the Garmin GTN650 and 750, plus a host of other exciting avionics introduced at the AEA Convention & Trade Show in Reno in March.



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