

Hot New Avionics Offerings for 2006

BY DALE SMITH

To paraphrase a popular saying from the 1970s — “Avionics is where the action is.” Just look at most of the “new” airplanes introduced recently. If it has a propeller on it, chances are all the advancements are found in the instrument panel.

In fact, the marketing and sales people at Beechcraft, Cessna, Mooney and Piper should be sending the folks at Avidyne, Garmin and other manufacturers thank-you cards. While the airframe OEMs and their avionics partners certainly have brought new life into factory-new airplanes, there's also plenty of activity in the after-market segments.

The hottest and coolest in avionics, accessories and equipment were introduced at the 49th annual AEA International Convention & Trade Show in April 2006. In this *Pilot's Guide to Avionics*, these various new products are put into one of three categories: Cockpit Avionics; Cabin Entertainment & Communications; and Other Cool New Stuff.

COCKPIT AVIONICS

Avidyne Corp.

Avidyne introduced its new TAS600 family of “affordable active traffic” units featuring Ryan's Active Surveillance technology and Avidyne's exclusive heads-up audible position alerting, which keeps a pilot's attention outside the cabin by verbally calling out target bearing, range and relative position. These new TAS units also are certified for retrofit into many Garmin G1000-equipped aircraft.

In addition, Avidyne introduced a new “large-format” version of the MHAS6000 multi-hazard avoidance system featuring the FlightMax EX5000 MFD. The MHAS6000 offers a moving map that can show flight plans, traffic, lightning, terrain, obstacles and optional XM WX weather products, such as Nexrad and graphical Metar information.

For more information, contact Avidyne Corp. at 781-402-7400 or visit www.avidyne.com.



Avidyne's FlightMax EX5000 MFD



DAC's GVC39 video adapter unit

DAC International

DAC International announced two new products: the GPU64 with cursor control for displaying XMWX or WSI satellite weather on Universal's MFD 640 cockpit display; and the GVC39 video adapter unit for displaying weather on Universal cockpit displays, including the MFD 640. All 5-inch FMSs have graphic display capabilities and the EFI-890 large-format display unit. Both units provide the computer and software necessary to interface between the satellite weather receiver and the appropriate cockpit displays.

For more information, contact DAC International at 800-527-2531 or visit www.dacint.com.

Flight Display Systems

Flight Display Systems has a number of new in-flight entertainment products for 2006.



Flight Display Systems' low-profile cabin LCD display

Highlights include a new low-profile DVD/CD/MP3 player that is only 1-inch high so it can meet the limited space restrictions of many installations.

The company also has a variety of new low-profile cabin LCD display units ranging in size from 15 inches to 20 inches. To complete its new cabin entertainment offerings, Flight Display Systems also introduced a new three-channel wireless audio transmitter and wireless headphones.

In addition, the company unveiled a new satellite radio amplifier that can provide passengers with individual satellite outputs for up to four portable satellite receivers.

For more information, contact Flight Display Systems at 678-867-6717 or visit www.flightdisplay.com.

Garmin

Garmin's new product offerings include the new GMA 347 audio panel featuring an automatic digital voice recorder that continuously captures 2 ½ minutes of audio.



Garmin's GMA 347 audio panel

The company also introduced its new GMX 200 multi-function display unit that is nearly 20 percent larger than other MFDs, according to Garmin representatives. It features advanced back-lighting for improved color and contrast, which means clearer, brighter charts and graphical depictions.

Garmin recently entered the real-time weather avoidance market with its new GWX 68 four-color radar. The unit is compatible with the MX 20, GMX 200 or G1000 MFD, and features a vertical scanning mode for a more accurate weather picture.

For more information, contact Garmin at 913-397-8200 or visit www.garmin.com.

Honeywell

The hottest new product announcement from Honeywell, as far as GA pilots are concerned, is the Silver Crown Display upgrade. Honeywell has developed a program that enables avionics shops to offer customers an option to replace the outdated displays in their Silver Crown avionics with new



Honeywell's MCS-7200 multi-channel Satcom

LED or LCD technology displays. The new display options offer a number of advantages, including lower power consumption, longer life and better readability. Honeywell representatives said the program is being offered as a field upgrade for the majority of current Silver Crown panel-mount avionics.

Honeywell also unveiled the new MCS-7200 multi-channel Satcom and the RS-1721 cabin router switch for secure airborne LAN interface. In addition, the company introduced a software upgrade for the GNS-XLS FMS unit that offers a variety of advantages, including a 20MB memory expansion for worldwide databases, AC 90-100 compliance in the United States, and PRNAV compliance in Europe.

For more information, contact Honeywell at 1-800-601-3099 or visit www.honeywell.com.

ICARUS Instruments

ICARUS Instruments Inc. introduced its new SAM (steering assist module) designed to provide roll steering control for nearly any general aviation autopilot system. Using an autopilot's heading mode, the SAM allows the autopilot to follow any GPS flight plan, includ-

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ICARUS Instrument's SAM (steering assist module)

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ing GPS approaches. The unit also provides a number of verbal annunciations, including crossing a waypoint, approaching a preset altitude, decision altitude alerts on an ILS approach, unsafe landing gear conditions and more.

The SAM is compatible with the Garmin 430/530/480 and the King KLN-90B, and is approved for use on more than 700 aircraft types ranging from Super Cubs to King Airs.

For more information, contact ICARUS Instruments at 301-891-0600 or visit www.icarusinstruments.com.

Kollsman



Kollsman's GAViS general aviation vision system

Kollsman Commercial Aviation Systems has lowered the cost of enhanced vision systems (EVs) with its new GAViS general aviation vision system. The system features an uncooled IR sensor, an integrated window assembly through which the IR sensor obtains its imagery, an aerodynamic enclosure and built-in electronics. The entire package is self-contained and mounted to the fuselage like aircraft antenna. This minimizes the complexity and cost of installation. The system provides a 30-degree field-of-view, which most closely replicates that of the human eye.

Kollsman representatives said the company currently is pursuing GAViS system STCs for single-engine turboprops up

through light jets and expects to announce approvals soon.

For more information, contact Kollsman at 603-889-2500 or visit www.kollsman.com.

Paperless Cockpit

Paperless Cockpit Inc. has brought out a new wireless Datalink Server that broadcasts WSI weather and GPS data throughout the aircraft via the 802.11b wireless network. This eliminates the complex wiring problems associated with bringing the benefits of electronic flight bags (EFBs) to many aircraft.

The company also rolled out its E-Board C2, which is a Class 1 or 2 wireless remote EFB. The C2 features an 8.4-inch touch screen with Paperless Cockpit's exclusive light-pipe technology, delivering a bright, crisp, clear display even in full sunlight conditions. The E-Board C2 provides access to a wide range of applications, such as WSI InFlight, electronic checklists, weight and balance and more.

For more information, contact Paperless Cockpit at 901-751-2687 or visit www.paperlesscockpit.com.

PS Engineering

PS Engineering Inc. introduced its new PMA8000B audio panel — a direct replacement/upgrade for the company's PMA8000 and the Garmin 340 audio panels. The new PMA8000B features a front-panel utility jack that permits the direct connection of a portable music source, such as



Paperless Cockpit's E-Board C2

an i-Pod, or a cellular phone or compatible terrain avoidance units. The unit also features a built-in internal recording system that captures the most recent 45 seconds from the selected Comm. Playback is through the pilot or pilot and co-pilot headphones only. The PMA8000B has six front-panel, smart-function keys allowing easy configuration of the audio panel functions.

For more information, contact PS Engineering at 865-988-9800 or visit www.ps-engineering.com.

Revue Thommen

Revue Thommen AG introduced two new instruments: a new standby altimeter and a MACH airspeed indicator. The new two-inch standby altimeter, the AD20, combines Swiss-made accuracy with state-of-the-art design. It is approved as a replacement in the Learjet 45 family of aircraft. STCs also are available for popular aircraft models such as King Airs, Cessna 441s and Twin



PS Engineering's PMA8000B



Revue Thommen's AD20 standby altimeter

Commanders, as well as Bell 206 and 412 helicopters.

Thommen's new MD21 MACH airspeed indicator features an optional integrated emergency battery with up to eight hours of operation.

For more information, contact Revue Thommen at 972-588-1811 or visit www.thommen.aero.

Sagem Avionics

Sagem Avionics unveiled its new integrated cockpit display system, which initially is targeted toward the retrofit market with an emphasis on helicopter applications. The Sagem system is built around an interchangeable control/display unit that can function as a PFD, engine management system or MFD. Along with a sunlight-readable, flat-panel color AMLCD display, the unit features an advanced symbol generator and graphics processor that provides "lightning-fast" screen refresh rates capable of updating all flight dynamics, engine performance, navigation informa-



Sagem's integrated cockpit display



Sky Connect's Tracker-MMU

tion and communication data in real-time.

The company currently is working on a variety of helicopter and fixed-wing STC programs for the new display suite.

For more information, contact Sagem Avionics at 972-314-3600 or visit www.sagemavionics.com.

Sandel Avionics

Sandel introduced its new 4-inch SA4500 EADI and SN4500 EHSI. Created to be the perfect replacement for aging electro-mechanical instruments, both units feature the patented, bright 360-degree high-contrast display for readability in any lighting. Approved for use as a primary navigation system, the EHSI also features full-color moving map capability supporting GPS- or FMS-supplied waypoints, internal Jeppesen NavData database and more.

Sandel also developed a new solid-state directional gyro that serves as a drop-in replacement for a variety of popular spinning gyro instruments. The SG101 features XYZ, ARINC 429 and RS-232 outputs and adds a new



Sandel's SN4500 EHSI

Sandel-designed sealed magnetometer for stabilized magnetic heading.

For more information, contact Sandel Avionics at 760-727-4900 or visit www.sandel.com.

Sky Connect

Sky Connect has introduced the new Tracker-MMU (mission management unit), which is designed for both fixed-wing and helicopter applications. By interconnecting an Iridium satellite telephone with an aircraft's current audio panel, the MMU makes it a breeze to send standard text and numeric messages. It has a 99-name and phone-number memory with quick access via the rotary selector. This lowers pilot workload while preventing calls to unauthorized destinations.

For more information, contact Sky Connect at 703-404-4400 or visit www.skyconnect.aero.

Universal Avionics

Universal Avionics Systems Corp. introduced its new SureSight M-Series enhanced vision system (EVS). This low-cost uncooled infrared sensor allows pilots to see airport and runway conditions better in low/poor visibility situations. Because there is no additional power supply required, the ultra-compact camera is easily installed on the aircraft's nose, tail or belly, and the accompanying EVS images can be displayed on a Universal Avionics flat-panel display, MFD

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Universal Avionics System's application server unit (ASU)

or EFB.

Universal also introduced a new application server unit (ASU). The unit supports Jeppesen JeppView charts with overlaid green "own ship" aircraft symbol on geo-reference approach and airport charts displayed on a Universal MFD or EFB.

For more information, contact Universal Avionics Systems Corp. at 520-295-2300 or visit www.uasc.com.

Wulfsberg Electronics

Wulfsberg Electronics introduced its new FlightLine remote-mounted slide-in replacements for the Bendix, AlliedSignal and Wulfsberg Series III avionics. FlightLine is a complete suite of next-generation navigation and communications equipment. The units are smaller and lighter than the prior Series III boxes they replace, so operators realize a significant space, weight and cost savings.



Wulfsberg Electronics' FlightLine suite

The FlightLine head units feature a unique full-color LCD display for easy identification of active frequencies. An optional control display combines a Comm and a NAV tuner together in a single unit. FlightLine currently is available in an all-digital VHF Comm, NAV and DME. An ADF and Mode S transponder will be available soon.

For more information, contact Wulfsberg Electronics at 928-708-1550 or visit www.wulfsberg.com.

CABIN ENTERTAINMENT & COMMUNICATIONS

AirCell

AirCell Inc. introduced the new ST 3100 telephone handsets with full-color displays. They are direct plug replacements for current AirCell cabin phones. Available in both corded and cordless models, these new handsets feature easy-to-use graphical menus, superior noise-canceling technology, a handy earbud jack, built-in user programmable phonebook, and independent ringer and volume controls.

The company also announced the first multi-channel upgrade for its new Axxess system. The two-channel expansion transceiver allows for two additional, full-featured PBX channels of high-reliability Iridium services to any Axxess system. For "office-like" ease of operation, it also features IP-PBX intelligence.

For more information, contact

AirCell at 303-379-0271 or visit www.aircell.com.

Avionics Innovations

One of the hottest announcements for the cabin entertainment crowd is Avionics Innovations' new I.C.E. (integrated cabin entertainment) system. Designed for single-engine turboprops up through medium jets, the modular I.C.E. system provides exceptional entertainment quality and flexibility at a cool price. The complete system features a passenger control unit (PCU) with IR remote, built-in Sirius satellite radio receiver and two distinct channels, which enable passengers to listen to two different audio programs simultaneously. The PCU also controls the other components of the I.C.E. system, including the 7-inch widescreen LCD monitor and the unique "multi-regional" DVD/CD/MP3 player that can play DVDs produced in any format.

For more information, contact Avionics Innovations at 760-788-2602 or visit www.avionicsinnovations.com.



Avionics Innovations' I.C.E. (integrated cabin entertainment) system

C&D Zodiac

C&D Zodiac Lighting introduced a new cabin lighting diffuser lens that maximizes the light output of standard LED cabin lighting systems. The new diffuser features a 100-lines per-inch diffraction grating that effectively homogenizes individual

LED elements into one single light source. Current lighting diffusers attenuate LED by as much as 66 percent. The new C&D Zodiac diffuser cuts that overall attenuation to less than 6 percent overall. The result is better, more consistent overall lighting distribution from any current LED lighting source.

For more information, contact C&D Zodiac Lighting at 501-833-3045 or visit www.cdzodiac.com.

Chelton Satcom

Chelton Satcom introduced the HGA-7001 new-generation Aero Satcom antenna. The HGA-7001 is a small, lightweight and affordable ARINC 781 high-gain antenna that incorporates the same leading-edge technology found in Chelton Satcom's state-of-the-art HGA-7000 antennas. The HGA-7001 is Inmarsat SwiftBroadband ready and features a new integrated antenna control unit that can accept variable aircraft AC power. It also has ARINC 429-compliant BSU functionality added to the current antenna internal controller.

For more information, contact Chelton Satcom at 972-221-1783 or visit www.cheltonsatcom.com.



Chelton's HGA-7001 Aero Satcom antenna

EMS Technologies

EMS Satcom, a division of EMS Technologies, introduced the latest version of its next-generation airborne broadband solution, the HSD-440 broadband terminal. The unit provides high-speed Swift64



EMS Satcom's HSD-440 broadband terminal

and SwiftBroadband Internet, low-speed SAT AFIS, ACARS and CPDLC data, along with full voice services all in one compact unit.

The company also announced it is collaborating with AirCell to ensure the compatibility of EMS Satcom's eNfusion HSD high-speed terminals with AirCell Axxess Satcom system. According to company representatives, users can expect a comprehensive broadband global communications solution via dual-channel or four-channel Swift64 high-speed Inmarsat datalinks.

For more information, contact EMS Satcom at 613-727-1771 or visit www.emssatcom.com.

EMTEQ

EMTEQ Lighting and Cabin Systems introduced the new Quasar full-spectrum LED "mood lighting" system — its latest "bright idea" in cabin lighting. According to EMTEQ representatives, the advantage to the Quasar system is it automatically calibrates the light's color to match any other lighting in the aircraft creating cabin ambiance. The Quasar system also features a sunrise/sunset sequence capability. When it is time for passengers to rest, the lighting slowly changes from full white to soft blues to simulate the setting sun. Later, it simulates the sunrise up through full brightness again.

For more information, contact

EMTEQ at 262-679-3450 or visit www.emteq.com.

International Communications Group

International Communications Group (ICG) announced it has developed the first Iridium-based ACARS messaging solution. The unit combines the benefits of global communications associated with the Iridium Satellite Network and the reliable, robust service associated with ACARS, all in a single, compact, lightweight, low-drag airborne satellite terminal. The system has demonstrated the ability to deliver weather graphics, as well as other conventional datalink services.



ICG's CIS-100 Iridium system

ICG also introduced the CIS-100, a new single-channel Iridium system for global voice and data. The system features full PBX functionality with three-handset capability, built-in GPS and an optional fax/data module.

In addition, the company announced Credit Card Calling capability over the Iridium Network so passengers can charge phone calls to their own credit cards instead of the aircraft's master account. This feature is especially attractive to fractional and air charter operators.

For more information, contact International Communications

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Group at 757-947-1030 or visit www.icg.aero.

NAT Seattle

NAT Seattle, formally Pentar Avionics, launched the latest addition to the JetLAN product line — the AS250 advanced airborne computer. The AS250 is a true avionics LRU that features an extensive memory, high-capacity storage, dual high-performance processors and networking features. The AS250 has a powerful dual-processor design, internal expansion slots, built-in 12-port Ethernet switch, interfaces to all Satcom systems, internal wired and wireless network ports, SwiftBroadband and more. The JetLAN AS250 can function as a network file server and/or router, server for EFBs, ACARS-based communications, operate as an in-flight safety monitoring system, provide data acquisition, analysis and storage and more.

For more information, contact NAT Seattle at 425-424-3370 or visit www.natseattle.com.



NAT Seattle's JetLAN AS250 advanced airborne computer

Rosen Aviation

Rosen Aviation is offering its new RosenView passenger information system. Designed for light to medium business jets,



RosenView passenger information system

the RosenView system provides world map coverage with detailed North American and European city and road displays. Along with the built-in database, the RosenView also enables easy operator customization with no manufacturer support required. Featuring dedicated interfaces for pilots and passengers, the system also can be used by flight crews to provide pre-takeoff and landing briefings. Control is provided throughout the cabin with a standard cabin management system.

Company representatives said the RosenView is now standard equipment on the Gulfstream 150 business jet.

For more information, contact Rosen Aviation at 541-342-3802 or visit www.rosenaviation.com.

Thrane & Thrane

Thrane & Thrane introduced the newest version of its high-speed cabin communications family, the Aero-HSD+ with SwiftBroadband capability. The Aero-HSD+ combines the global voice, fax and PC modem data capabilities of the Inmarsat Aero-H+ services with the new Inmarsat SwiftBroadband aeronautical high-speed data services to provide a single source for



Thrane & Thrane's Aero-HSD+

high-end cabin communications needs. The Aero-HSD-SBB+ offers an extremely reliable alternative to VHF/HF communications and provides an added safety parameter for global passengers and crew communications.

For more information, contact Thrane & Thrane at 45-39-55-8800 or visit www.tt.dk.

Wingspeed

Created to meet the growing demand for high-speed communications, Wingspeed Corp. continues to expand the "network in the sky" by introducing its new XLLink communications system. Now, aircraft and helicopter operators will have access, via the Iridium Satellite Network, to a range of affordable services, including two-way text messaging, voice calling, flight tracking, passenger phone and e-mail, along with ACARS-type data services, such as real-time Nexrad



Wingspeed's XLLink communications system

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weather images.

XLLink also is fully integrated with Flight Explorer. All operators need to do is log on to Flight Explorer, then click on the appropriate aircraft symbol and they are instantly connected.

For more information, contact Wingspeed Corp. at 978-318-0600 or visit www.wingspeed-corp.com.

OTHER COOL NEW STUFF

Buller Enterprises

As a complement unit to its popular Panel Pro 4824a, computer-controlled instrument panel cutter, Buller Enterprises Inc. introduced the new Measure Pro interactive measuring accessory that quickly and easily digitizes holes, complex curves, panel-mount hole locations and diameters, and other points on existing instrument panels. With its easy-to-use touch probe and proprietary software, the Measure Pro and Panel Pro 4824a can save shops countless hours in re-measuring and re-cutting panels.

For more information, contact Buller Enterprises at 701-255-7640 or visit www.bullerent.com.

EADS Barfield

EADS Barfield announced its new CT12A cable tensiometer — proof that any product can benefit from advancements in technology. Barfield's new tensiometer features a four-digit LCD readout with selectable backlighting, simple three-button operation, single- and multiple-cable capability and more. The CT12A also provides accurate and precise readings in Newtons or pounds over a wide range of cable sizes from 1/16 inch to 1/4



EADS Barfield's CT12A cable tensiometer (U.S. standard) and from CWT3 to CWT45 (European standard).

For more information, contact EADS Barfield at 305-894-5400 or visit www.barfieldinc.com.

One Mile Up

One Mile Up Inc. announced a number of new products to complement its popular Panel Planning software. Building on the theme of "more space means more revenue," the company introduced its GSMS software package that helps avionics and maintenance shop managers better plan aircraft placement inside their hangars to maximize available space. The GSMS program also has a function to help managers chart which days during the week have the highest shop activities and also a streamlined way of tracking each customer's aircraft, including the scope of the work to be completed.

For more information, contact One Mile Up Inc. at 703-642-



One Mile Up's GSMS software program

1177 or visit www.onemileup.com.

Trans-Cal Industries



Trans-Cal's EET-100 tester

Trans-Cal Industries Inc. unveiled its new EET-100 encoder emulator and tester. Created to cut troubleshooting time and eliminate misdiagnosing altitude encoder/transponder problems, the EET-100 gives avionics technicians a clean, quick and reasonably priced tool for emulating altitude encoder output by providing a "known good" altitude code source to aid in isolating each data bit, D2 through C4.

For more information, contact Trans-Cal Industries at 818-787-1221 or visit www.trans-cal.com. ■