PILOT'S GUIDE

New Avionics & Equipment Round Up All the stuff you just gotta' have

While each of the 600,000+ pilots in the United States have their own, very individual, reasons for flying, there is one trait that we all have in common: "Stuff Envy." Don't kid yourself. You know you have a bad case of it or you wouldn't be reading this guide. You have to see what the newest gadgets, gizmos and gotta haves are. And if you see another pilot with something new, well, let's just say, it's not a pretty sight.

Had you been one of the lucky 1,650 attendees at this year's Aircraft Electronics Association Convention and Trade Show in Las Vegas, you'd still be recovering from the biggest outbreak of stuff envy the AEA convention has ever seen. There was literally something for everyone, from new autopilots and flight displays, to antennas, to web-based panel planners—you name it.

To help avoid an epidemic, we've picked 29 "Editor's Choice" products and put them into three categories: Pilot Stuff,

Cabin Stuff and Accessories & Stuff. Research shows that smaller exposures to new products, lessens the syndrome's effect on pilots. But be warned: if you are in a "stuff envy recovery program," do not read the rest of this story. If you do, the editors take no responsibility for any damages suffered by your bank account.

PILOT STUFF

Garmin

Our friends at Garmin have taken a big step in eliminating the problem of controlled flight into terrain by announcing they have added Terrain Awareness capability to their extremely popular, full-color GPSMAP 296 handheld.

You've got to see this one to believe it. Topographic data is depicted on the GPSMAP 296 as shaded contours in sectional chart-like detail, along with the extensive Jeppesen database is overlaid on the map so you see your flight path in relation to nearby navigation aids, special-

use airspace, and obstructions. The GPSMAP 296 is also WAAS-capable

for enhanced lateral/ vertical navigation. SRP is \$1,795. Pilots who are anxiously awaiting the future of

Garmin GPSMAP 296

"Free Flight" will be really excited about Garmin's new GDL 90. It's a broadband datalink transceiver that supports Automatic Dependent Surveillance-Broadcast (ADS-B) services and is the first product of its kind to bring the benefits of "Free Flight" to G.A. pilots. SRP for the GDL 90 is \$7,995.

For more information: www. garmin.com

Avidyne

The folks at Avidyne continue to maintain their position as an industry innovator with the announcement that the EX5000 MFD with integrated datalink



Avidyne EX500

capability is now available for aftermarket installation. The MFD can be configured in either portrait and landscape formats to allow more flexibility for installation into more aircraft types. Prices for the EX5000 MFD start at \$16,195.



The company has also announced the EX5000 now has the ability to display snow/mix (in pink) as part of its NEXRAD imagery. In addition, the company has introduced improvements in its datalink service, which reduce NEXRAD ground clutter and reduce NEXRAD and METAR age.

Also, in a move to help pilots better budget their access to Avidyne's Datalink services, pilots can choose between the "pay-as-you-go" or "unlimited use" programs. So with the option to pay-as-you-go, even infrequent fliers can take advantage of the wonderful safety benefits of uplinked information.

For more information: www.avidyne.com

Honeywell

Honeywell's engineering team has been pretty busy recently, introducing a total of five new products including the KSG 7200 ADHARS, DL 950 FMS Data Loader, a new Cabin Digital Audio Equalizer, the Ovation Integrated Cabin System, and new features for the popular KMD 250 multi-function display.

The newest display to accompany the popular KMD 550 and 850 MFDs, and part of the Bendix/King Integrated Hazard Avoidance System (IHAS) family, is the KMD 250 which offers traffic, terrain and new datalink weather capability. The threeinch high color moving map display now offers the weather conscious—SIGMETS, AIRMETS,



Honeywell KMD 250

Convective SIGMETS and Alert Weather Watches in text and graphical modes. The newest offering for the KMD 250 family is a unit which includes an internal GPS allowing it to operate as your primary navigator or as an automatic back up to your primary GPS. It's the ideal safety solution for any general aviation aircraft. Suggest list prices start at \$4,000. For more information: www.bendixking.com

PS Engineering Inc.

If you're looking for some great background music as you bore holes in the sky, check out PS-Engineering's new PXE-7300-SR (Sirius Radio) version of its popular In-Flight Entertainment System. It lets you enjoy pure digital, commercial-free music and entertainment wherever you fly. List price for the complete PXE-7300-SR system is \$2,695.



PS Engineering's PMA 8000

(Pricing does not include monthly Sirius subscription fee of \$12.95.)

The audio wizards at PS have also introduced the PMA8000, their new generation audio control panel, which they say was created to fill some of the "performance gaps" in other units. The new unit provides an audio selector panel for two VHF COMMs, a cellular phone interface, an IntelliVox 6-place stereo intercom, dual independent music inputs, and an internal marker beacon receiver with three-light indicator. SRP for the PMA8000 is \$1,995.

For more information: (865) 988-9800 or www.ps-engineering. com

Chelton Aviation Corp.

One product announcement that has the entire general aviation industry abuzz is Chelton Aviation's new AP-3C digital autopilot. Created expressly to provide an all-digital alternative



Chelton Aviation Corp.'s AP-3C

to the tired-old autofliers we're all used to, the new autopilot features a sophisticated blending of the latest digital and analog technologies to create a system that delivers a number of advantages over previous systems.

One of the most significant differences is something the system doesn't have—a pitch servo to

drive the elevator. Instead, the new AP-3C's attitude is controlled by servos driving the aircraft's current pitch trim system. Chelton's engineers have found

that this is a simpler way to keep the airplane "in trim" while the autopilot is doing the flying.

Another major leap forward for the AP-3C is a unique mode, which provides automatic, "onebutton" recovery from adverse attitudes. The company believes this will be a significant safety enhancement.

For more information: www.ps-engineering.com

Mid-Continent Instruments

If you do any amount of IFR flying, you really need to take a close look at Mid-Continent

Continued on following page...

Instrument's 4300 series Lifesaver Gyro electric attitude indicator with built-in battery backup. If you've ever had a vacuum or electrical system failure, this unit has to be really high on your "gotta' have list."



Mid-Continent Instrument Co.'s 4300-413 with inclinometer

According to the company, even if every other system in an aircraft's avionics panel goes dark, this innovative product powers on. The Lifesaver's builtin battery not only has power for the electric gyro, it also has selfcontained LED lighting so you can see which way is up—even in the dark. No other attitude indicator offers this kind of security, convenience and cost-benefit. Retail price for the Lifesaver Gyro with battery is \$4,450.

For more information: www. mcico.com

Rogerson Kratos

A long-time provider of advanced display systems to the helicopter market, Rogerson Kratos is now offering a line of electronic display products developed for fixed-wing aircraft. Their NEOAV EFIS 520 is the first of these new products.

According to the company, the EFIS 520 is "fully loaded," which means it includes TCAS II, EGPWS/TAWS and GPS display capabilities as standard features.



Rogerson Kratos EFIS 520 includes TCAS II

The flexible 5 ATI self-contained, plug-replaceable unit is designed to be easily interchangeable with most PFDs, and requires no separate hardware or aircraft wiring modifications. The unit is configurable to display dual EFIS (EADI/EHSI), single EFIS, single EHSI, dual EHSI, or single MFD. For more information: www.

rogersonkratos.com.

Rockwell Collins

As you would expect, high-end industry leader Rockwell Collins has been very busy; recent-

ly introducing a variety of new products for both the cockpit and cabin of today's business aircraft. New products include the IDS-3000 Integrated Display System, SAT-6100 SATCOM system, Airshow 4000 Moving Map and Information System and the Tailwind multi-region satellite television system.

Of particular interest is the



Rockwell Collins IDS-3000

IDS-3000. This unit provides biz aircraft operators with an easy and flexible way to replace current analog and CRT-based EFIS equipment with the latest in large-format LCD display technology increasing information availability and improving situational awareness. Among its many features, the IDS-3000 permits the display of electronic charts, enhanced maps, and real-time graphical weather, as well as integrating a variety of existing aircraft sensors, radios, flight management and autopilot systems.

For more information: www. rockwellcollins.com

NavAero Inc.

If you've got your heart set on a high-end Electronic Flight Bag (EFB), check out the newest offering from NavAero—the all new t•Bag C2 EFB. The company describes it as "the most cost effective way for aircraft owners to



navAero T•Bag C2 Electronic flight Bag

realize the benefits of an integrated Electronic Flight Bag." As vice president marketing and sales, Ken Crowhurst explained it, "The t•Bag C2 is designed to be used during all phases of flight by every aviation segment; GA, corporate and commercial flight crews."

According to Crowhurst, "The t•Bag C2 EFB operates on Windows XP Professional **Continued on page 18...**

platform and will run virtually all leading aviation software including real-time satellite weather, electronic manuals, terrain-avoidance, moving maps, performance and flight planning and more—all the information you need to make each flight safer, easier and more enjoyable for you and your passengers." NavAero quotes the current SRP for the t•Bag C2 starting at under \$3,500.

For more information: www. navaero.com

ARINC Inc.

While we're on the subject of EFBs, ARINC has introduced one dandy bag of their own—the new eFlightDeck—the first Class II EFB system with a completely open architecture, which means the fully customizable system is designed to work on most commercial airframes, and is also capable of running airline proprietary flight applications, as well as today's Windows-based flight software.

eFlightDeck features an intuitive touch-screen interface designed for pilots with fingertip file management, application launching, drag, zoom and optimal communications functions all without a cumbersome stylus.

"eFlightDeck revolutionizes the management of onboard information by combining today's best-



ARINC eFlight Deck

in-class EFB technology, custom applications and commercial applications with an integrated system," said Ed Montgomery, ARINC vice president, Aviation and Air Traffic Services. "The Class II EFB with open architecture is designed to be futureproof." With any luck, it won't be long until these advanced features are available on all EFBs.

For more information: www. arinc.com

Weather Services International (WSI)

How about something really cool, and valuable, to display on your new EFB? WSI has introduced the new v3.0 version of their popular WSI InFlight Display Client Software. InFlight delivers a variety of displays including; WSI's NOWrad radar mosaic, Canadian Radar, Graphical METARs, TAFs, SPECIs, SIGMETs and AIRMETs, Graphical TFRs and more.



Screen shot from WSI's InFlight Display Client Software

The best part is, InFlight is compatible with many MFDs, Electronic Flight Bags, Laptops and handheld Pocket PCs, making this amazing array of information available to pilots flying everything from piston singles to high-end corporate jets. For a limited time, WSI is offering a FREE 30-day Web trial of the new package. See their website for details.

For information: www.wsi.com

DAC International

Now that you've got your EFB, you have to have a way to access the data from your aircraft's systems right? Well, check out DAC's new GDC34 ARINC 429 to RS-232 converter. The GDC34 has been created to provide a fast and easy interface between RS-323-based Electronic Flight Bags and the ARINC 429-based high-end systems on the majority of business aircraft. By providing this convenient link, the GDC34 provides the EFB with position, speed, track and other valuable information available through the aircraft's Flight Management System. Synchronizing FMS bus speeds and EFB formats is not a problem with the GDC34-with four available versions. the GDC34 can utilize either high- or low-speed FMS data.



DAC's GDC34 ARINC 429 to RS-232 Converter

For more information: www. dacint.com

Max-Viz Inc.

OK, so they're only available on the way upper end of the business jet scale, but it's hard to find any hotter avionics topic right now than enhanced vision and Max-Viz through its proverbial log on that fire with the introduction



Max-Viz EVS-1000

of their new EVS-1000 system. According to the company, the EVS-1000 is "aviation's most affordable EVS for helicopters, military and commercial aircraft."

Using a high-performance long-wave sensor, the EVS-1000 enables pilots to see through darkness, smoke and smog, along with various levels of rain, snow and fog. The compact and lightweight sensor displays a clear 53 degree by 40 degree field-of-view, ahead and below the sensor's position. A Max-Viz representative also stated that the EVS-1000 is compatible with any current cockpit display system or the images can be displayed on compact, flat-panel LCDs mounted on articulating arms for out-of-the-way storage. For information:

www.max-viz.com

Universal Avionics

If you're lucky enough to fly a turboprop or mid-size jet, you'll want to check into Universal's



Universal Avionics' 890R Display Suite

new 890R, flat panel retrofit display suite. "The 890R suite offers greater flexibility while minimizing the cost and complications associated with full avionics suite replacements offered by competitors," explained Don Berlin, vice president of marketing.

Universal Avionics' family of flat panel integrated displays incorporates the latest technology in cockpit instrumentation providing distinct advantages in sunlight readability, resolution and viewing angles. They accept inputs directly from a variety of analog and digital sources without external symbol generators or complex switching arrays, and include the ability to display command bars and flight director/autopilot annunciations.

The 890Rs will also interface with existing weather radars, TCAS, and other systems. They also support VGA-video for the display of Universal Avionics' TAWS and Vision-1 systems.

For more information: www.uni-versalavionics.com

Aviation Communication & Surveillance Systems (ACSS)

ACSS has introduced two new products aimed at the top-end of the corporate market; the new TAWS+ unit and the new T²CAS. The unique thing about the TAWS+ is, being a stand-alone two-MCU, it can deliver Terrain Awareness Warning information onto a variety of popular radar display units and multifunction indicators, which minimizes installation complexity and cost.

The T²CAS unit is one of the first to combine actual aircraft climb performance-based TAWS information into the TCAS 2000 LRU. T²CAS is the only TAWS to provide terrain avoidance alerts based on actual aircraft performance data, virtually eliminating nuisance warnings. Because the



ACSS T²CAS

alerts are performance based, the system will alter the alert timing to give the flight crews ample time to plan terrain avoidance maneuvers.

Along with optional Windshear and GPS, the system provides a powerful combination of functionality. T²CAS meets and exceeds all the terrain safety features required by the TAWS TSO-C151a and Windshear C117a standards.

For more information: www.L-3com.com/ACSS

Shadin Co. Inc.

Shadin introduced their new Air Data/Attitude and Heading Reference System (ADAHARS), which is designed for higher-end corporate operators. The new ADAHARS is a combined AHRS and airdata system with the added advantage of a fuel-flow interfacing unit—it's an impressive amount of capabilities packed into a single unit.

The system created for use with any EFIS display unit with ARINC interface and its fuel flow interfacing



Shadin Co. ADAHARS

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works with most popular fuel flow transmitters. The complete package includes the Shadin Air Data Computer, Altitude Sensor and a Remote Magnetic Field Sensor.

For more information: www. shadin.com

CABIN STUFF

Alto Technologies Corp.

As cabin entertainment and information systems become more sophisticated, they need speakers that can recreate that "theatre" sound. Alto Technologies introduced a variety of new mid/high frequency compact loudspeakers specially created to fill this need. Their new offerings include the ASP512 loudspeaker, ASW500 bases reflex subwoofer and the AA626 audio amplifier.

Highlighting the trio is the A626 amplifier, which features higher resolution and greater ability to overcome the difficult acoustics of an aircraft's interior. Available in AC or DC versions, the 6-channel amplifier produces a true 240 watts RMS total.

Dan Hamilton, Alto's president, said that the key to getting exceptional audio in any aircraft is correctly matching components. To help shops achieve their customers' entertainment goals, Alto offers its "Aviation Entertainment System" which custom matches each audio component for the individual aircraft's interior to ensure great



sound is delivered into the cabin. For information: www.altoaudio.com

EMS Technologies

EMS Technologies took full advantage of the AEA spotlight to take yet another step in becoming one of the recognized leaders in airborne wireless technologies with the introduction of two new products: the CNX Cabin Network Xcelerator and the AMT-3800 high gain antenna. Designed to support the most stringent requirements of multi-channel Aero-H, Swift64 and emerging BGAN operations, the compact, fuselage mounted AMT-3800 allows the seamless delivery of these advanced services into the cabins of smaller business iets.



EMS 406-1 ELT Emergency Locator Transmitter

EMS Technologies also introduced their new 406-1 ELT. Weighing just 2.10 pounds, the compact unit operates at both 406 MHz and 121.5 MHz and is COSPAS-SARSAT certified making it fully compliant with the new ELT requirements.

For more information: www. ems-t.com

Sirius Technologies Flight Display

Another leading contender in the ever-growing cabin entertainment system market is Sirius Technologies. The company has recently introduced a variety of products for use in anything from cabin-class singles up



Sirius Technologies' DVD/CD/MP3 player

through long-range corporate jets. The offerings include new LCD monitors, a compact DVD/ CD/MP3 player, a new video amplifier and enhanced colors for their moving map displays.

These new products are keeping with the company's commitment to providing operators with the most entertainment options possible while at the same time controlling purchase and installation costs. "Our lightweight displays and low-profile components make installation easier and now that our components are STC'd and PMA'd we are looking forward to making them available for a wider variety of aircraft types," explained the company's spokesperson.

For more information: www. flightdisplays.com

WingSpeed Corp.

WingSpeed threw its proverbial hat in the high-speed data access products ring with the introduction of its new XLLink System—the first affordable, open, multi-mode voice and data communications system for large business aircraft.

"Advanced, low-cost, airground communications will allow the industry to realize



WingSpeed XLLink System ACU

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the improvements in safety, efficiency, convenience and cost-effectiveness that are so urgently needed in the highly competitive aviation industry and our increasingly crowded skies," said WingSpeed president Jim Becker. "The XLLink will give passengers access to more affordable air-to-ground highspeed communications."

The XLLink is part of the company's development of the "Open Network In The Sky." Utilizing the Iridium satellite network, the system beams a wide range of advanced flight information and services into the aircraft including real-time aircraft position reporting, remote monitoring of aircraft status for security purposes, and more.

For more information: www. wingspeedcorp.com

AirCell Inc.

As executives and VIPs make more and longer flights, their ability to keep in constant touch with the world below becomes increasingly critical. AirCell is answering the call with its new ST 3120. dual-channel global satellite transceiver. According to the company, the new Iridium transceiver is designed to be an affordable SATCOM solution that expands the capabilities of the MagnaStar airborne telephone by providing two-channels of worldwide voice and data communications.

The ST 3120 interfaces with the C-750 and C-2000 MagnaStar telecommunications units and cabin equipment and offers extensive installation flexibility. The company also stated that the new ST 3120 offers full accessibility to AirCell's various service providers including



AirCell's ST 3120, two-channel Iridium SATCOM

Universal Avionics, Rockwell Collins, Tenzing and MedAire. For more information: www.aircell.com

Audio International Inc.

Another company with its sights set squarely on the highend market is Audio International. They've introduced a variety of new products including a SATCOM system, a wireless incabin Local Area Network (LAN) system, a full cabin telephony system, and a fully interactive AI Moving Map application.

While all the products are outstanding in their own rights, according to the company, the big draw is the new interactive AI Moving Map, which provides on-demand flight and location data and interactive map/atlas capabilities directly to individual on-board passengers.

Unlike other map applications that employ typically cumbersome disc-operated devices, the Atlas Server's hard drive allevi-



Audio International's SAT-100 / 200 Iridium communication system

ates the need to switch discs in the middle of a program. Al Moving Map also features onboard data such as air speed and altitude in configurable graph and text modes.

For more information: www. audiointl.com

Chelton Inc.

Chelton SATCOM is offering up four new products destined for the high-end cabin-class market: the HGA-6000 Aero-H/ Swift64 antenna, the HSD-6000 and HSD-7000 multi-channel highspeed data SATCOM antenna and the SDU-7300 Swift64 Satellite Display Unit.

As usual the smallest product got the biggest buzz as everyone wants to see the HGA-6000-the antenna that Chelton touts as "the world's smallest and lightest multi-channel Aero-H/H+ and Swift64 antenna." While it's small in size, it is big in capabilities. The AGA-6000 is the SATCOM industry's first Inmarsat High Gain Antenna to incorporate an ARINC 741 compatible Beam Steering Unit. This feature lowers the antenna box count to two units-saving operators weight and installation costs. The HGA-6000 is scheduled for shipment in the third-quarter of this year.

For more information: www. cheltonsatcom.com



Chelton HSD-6000 High Speed Data SATCOM

Thrane & Thrane A/S

Thrane & Thrane, a leader in the development of cabin-class, Inmarsat satellite communica-



Thrane & Thrane Aero-HSD+

tions terminals, has introduced its new Aero-HSD+, a unique, multi-channel voice, fax and high-speed data solution, integrating both Aero-H+ and Swift64 Inmarsat services into one compact, lightweight unit. To provide optimum flexibility, the Aero-HSD+ offers secure and reliable data communications at speeds up to 64 kbps. This means that airborne executives can enjoy fast and cost-effective access to a variety of services including voice, e-mail, and the Internet. all while the flight crew maintains continuous contact with groundbased information systems.

"One more thing that avionics shops and end-users will find different about the Aero-HSD+," explained Scott Brooks, Thrane & Thrane's aeronautical sales manager for North America, "is that this is the first of our products that can be purchased and installed by someone other than the aircraft's OEM. We think it is going to be extremely popular with a variety of customers."

For more information: www. tt.dk

EMTEQ

EMTEQ has come up with yet another "bright idea" with the introduction of the new Multi-White Wash ELW70 LED interior lighting system. By utilizing state-of-the-art Chip-on-Board technology, the Multi-White Wash lighting system provides color



variations of white that are brighter and more consistent than other lighting solutions. EMTEQ's unique calibration feature ensures consistency of color and intensity throughout the cabin. The white color options are available as pre-programmed, standardized settings or can be customized to the customer's individual preferences.

Other benefits of the Multi-White Wash LED lights are a more than 50-percent increase in intensity over conventional LED lights, and it offers full compatibility with all current cabin management systems.

For more information: www. emteq.com

ACCESSORIES AND STUFF

One Mile Up

Now that you've seen all kinds of cool new avionics, you can begin the fun part—figuring out how to get it all into your panel. Well, with the introduction of Panel Planner Java Enterprise software package, the folks at One Mile Up have created a solution that will make the task faster and a lot more fun!

The Panel Planner gives you the power to design and build instrument

panels in record time.

One Mile Up Panel Planner Java

Simply drag full-color, photorealistic instruments, avionics and cockpit controls into place on an aircraft panel template or scanned photograph. Panel Planner tracks total cost, total weight, and peak current, generates an equipment list, and even prints actual-size hole-cutting templates and color mock-ups on your desktop printer.

For more information: www.onemileup.com

Comant Industries

While they may seem to be very pedestrian, antennas are really becoming very cool tools. Take the new ComDat CI 2680-400 "combination antenna." For example, the CI 2680-400 encompasses what the ComDat concept is all about. It combines three separate antenna functions into one blade-style unit: GPS, satellite radio/weather uplink systems, and VHF communications.



Comant's 2860 ComDat antenna

By combining three antennas into one, installers will save time and money on every system because the Comant units mount directly in the footprint of the single-use antenna they replace. And since you're reducing the

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number of antennas, pilots benefit from the cumulative reduction in overall drag, which results in improved performance and fuel economy.

For more information: www. comant.com

Sky Connect, LLC.

If you've got your heart set on joining the short list of people who have successfully flown around the world solo, you may want to take a close look at Sky Connect's TRACKER—the "world's first seamless global flight tracking system providing polar-to-polar coverage."



Sky Connect's Sky TRACKER

According to the company, the TRACKER is the easiest way to have a full-time "high-in-the-sky" view of the location, track, and status of any aircraft operating under any circumstances. Each TRACKER-equipped aircraft transmits real-time position reports via satellite to any authorized PC.

Sky Connect has partnered with FLIGHT EXPLORER to bring unprecedented flight-following capabilities to the desktops of any company or operator. Sky Connect TRACKER can also be installed, along with an Iridium telephone systems including Sky Connect EXECUTIVE, Sky Connect FLIGHTDECK, and Sky Connect CLASSIC.

For more information: www.skyconnect.aero



Radiorax mounting system

Radiorax Aviation Systems

Now that you've spent the family fortune and made your panel the envy of every other pilot on the ramp, you need to make one more purchase—the new Securax avionics security cover from Radiorax.

Even if you have older, "coffee grinder" radios, this is something that's really worth the

money. The Securax system covers the entire avionics stack with a sturdy, attractive unit that locks into place protecting the avionics should someone

break into your aircraft—unfortunately avionics theft is an all-toorapidly growing problem. When it's time to fly, the Securax cover is easily removed with a quick turn of the tamper-proof Medeco locking system. The system can be easily customized to fit over any size panel-mounted avionics installation and provides a level of protection and peace of mind that was previously unavailable for

aircraft owners.

For more information: www. radiorax.com

Once you've visited the manufacturers websites, visit your favorite avionics shop to talk sales and installation—it's the best prescription for "stuff envy."