

# THE UNIVERSAL<sup>®</sup> FLYER

## InSight™ Unveiled at NBAA2014

With much excitement and anticipation, we proudly unveiled our newest avionics suite, the InSight Integrated Flight Deck, during the NBAA2014 Business Aviation Convention and Exhibition in Orlando, Florida, USA. On Day One, Ted Naimer, Universal Avionics President and Chairman of the Board, introduced the new feature-rich system to convention attendees filling our booth and lining the aisle ways. The turnout for our announcement was incredible and we received an abundance of positive feedback, especially from folks that received demonstrations and/or visited our Cessna

Citation VII with InSight at the Static Display of Aircraft.

Thank you to everyone that stopped by during NBAA2014!

For those of you that were not able to join us, check out [www.uasc.com/products/insight.aspx](http://www.uasc.com/products/insight.aspx) to watch a video of our InSight unveiling from the show or to download a copy of the new InSight brochure.

We will also outline some key InSight details on page 3, but first, a word from our CEO, Paul DeHerrera.

### A Word from Our CEO

*Often, new and exciting advanced avionics are introduced to the marketplace and unless one is eyeing a new aircraft, they will never get to experience those new advancements. That ends now. Over the years, Universal Avionics has prided itself on developing advanced avionics solutions that support both forward fit and retrofit markets. Our solution, "InSight," is for YOU – those who already are flying a sweet machine, desiring to make it better for those companies who need a next generation solution.*

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## Product News and Company Highlights

### Matching Advanced Avionics to Customer Needs

#### TSO Approval Granted for SCN 1001/1101

The Federal Aviation Administration (FAA) has granted Technical Standard Order (TSO) approval for Universal Avionics SBAS-Flight Management System (FMS)/Multi-Missions Management System (MMMS) Software Control Number (SCN) 1001/1101. This major software release includes several new and enhanced features to improve operational efficiency and support special mission operations.

Among the enhanced features of SCN 1001/1101 is an improved user interface for activation and operation of search patterns. It also includes implementation of Airdrop, an optional module for the MMMS. Airdrop calculates an Air Release Point (ARP), and provides guidance and steering position offset where the delivery should exit the aircraft for a landing at the desired drop zone. FlexPerf™ Trip Performance is another optional module available with SCN 1001/1101 for the FMS and MMMS. FlexPerf provides advanced fuel saving predictions for aircraft performance in Climb, Cruise and Descent phases of flight.

Effective January 1, 2015 through December 31, 2015, customers may trade-in their prequalified competitors' FMS package for a dealer net credit allowance toward a Universal Avionics SBAS-FMS package.

For more information regarding this trade-in program or upgrading to SCN 1001/1101, please contact your Universal Avionics Regional Sales Manager by calling (800) 321-5253 • (520) 295-2300 or emailing [sales@uasc.com](mailto:sales@uasc.com).

#### New Training Section Available on UniNet

To help customers become more familiar with our FMS, we now offer online familiarization modules on UniNet, our customer portal. These short narrated videos explain various concepts and demonstrate procedures. Viewers may choose topics that range from theory of operation to practical "how to" procedures. Many modules also include links to additional helpful resources. Check them out under the Training tab at [www.uasc.com/UniNet](http://www.uasc.com/UniNet).

To schedule formal classroom training, please call (800) 255-0282 • (316) 524-9500 or email [kcornette@uasc.com](mailto:kcornette@uasc.com).

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## Customer Spotlight: Horizon Air

Horizon Air was established in 1981 and originally offered twice daily roundtrip flights from Seattle-Tacoma International Airport (SEA) to Yakima, Washington, USA. Today, the airline is a wholly-owned subsidiary of Alaska Airlines, and its route structure extends from Mexico to Fairbanks, Alaska, USA, with corporate headquarters located in Seattle, Washington, USA. There have been many aircraft types flown at Horizon Air over the years. Currently, the airline flies the Bombardier Q400, operating a total of 51 aircraft with 550 pilots, and conducting approximately 400 flights per day.

Recently, we spoke with Perry Solmonson, Horizon Air's Director of Flight Standards and Training. Perry has been flying for 37 years total with 25 years at Horizon Air. Since the mid-90's, Perry has been continuously improving the

capability of the installed Universal Avionics FMSs on the Horizon Air Q400 fleet. He currently operates dual UNS-1Ew SBAS-FMSs.

Thinking back on his experience with the Universal Avionics FMS, Perry recalls several highlights:

- 1998: Gained Part 121 OpSpec approval to conduct RNAV (GPS) approaches using the Universal Avionics UNS-1C FMS in their Dash-8-200 aircraft.
- 1999: Using the Precision VHF Omnidirectional Range (PVOR) feature, received a Federal Aviation Administration (FAA) Letter of Authorization (LOA) to conduct instrument departures and approaches with inoperative ground based nav aids – an industry first.

- 2006: Approved for RNAV (RNP) 0.3 SAAAR approaches at PDX.
- 2009: Gained FAA approval to conduct Wide Area Augmentation System (WAAS) Localizer Performance with Vertical Guidance (LPV) approaches – the first Part 121 operator to accomplish this.

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Perry's crew on their first day operating into Deadhorse, Prudhoe Bay, Alaska, USA

## Recent Service Bulletins and Letters

Visit UniNet today at [www.uasc.com/UniNet](http://www.uasc.com/UniNet) to download any of our Service Bulletins (SB) or Service Letters (SL), including the recently released ones listed to the right, from the Tech Pubs tab.

Be sure to check back in future issues of *The Universal Flyer* for new SB and SL releases.

SB / SL No.	Release Date	Title
SB3603	8/1/14	Introduction of SCN 30.2 for UniLink UL-800 and UL-801
SB3607	8/1/14	Introduction of VHF Data Radio (VDR) SCN 10.2 for UniLink UL-801
SB3615	8/12/14	Installation of Mod 2 into the Cursor Control Panel (CCP)
SB3507	9/29/14	Introduction of SCN 1001.0/1101.0 for the UNS-1Ew, -1Espw, -1Fw, -1Lw FMS/MMMS and LPV Monitor
SB3523	11/17/14	Rev A Announcement of the Availability of Vision-1™ Terrain Database 1202
SL2855	9/4/14	SBAS Flight Management System (FMSs) Compliance with AC 20-138D
SL2856	9/11/14	Instrument Approach Procedures (IAP) without a Published Vertical Descent Angle
SL2857	11/19/14	Jeppesen® eChart Data Changes Affecting the Accessible Data Unit (ADU) and Portable Accessible Data Unit (PADU)



### About

*The Universal Flyer* is a quarterly publication produced by Universal Avionics Systems Corporation. This newsletter provides information about Universal Avionics as a company, its products and services as well as regulatory and educational information relevant to the owners and operators of business, regional and air transport aircraft.

### Feedback

Your feedback is appreciated. Email your comments to: [universalflyer@uasc.com](mailto:universalflyer@uasc.com).

### Update

Receive *The Universal Flyer* by mail or email. Email [universalflyer@uasc.com](mailto:universalflyer@uasc.com) or call the Marketing department at (800) 321-5253 or (520) 295-2300 to update your profile.

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## From the Flight Deck

### Meet Universal Avionics Pilot Instructor – Customer Training

We are pleased to offer training for operators and technicians of Universal Avionics equipment. For results that are immediate and measurable, our customers are encouraged to take advantage of training courses offered at one of our two training centers; the Tucson, Arizona, USA Training Center or the Wichita, Kansas, USA Training Center.



Mike Michalski, Pilot Instructor – Customer Training

At our Wichita Training Center, you'll find Mike Michalski, Pilot Instructor – Customer Training. Mike develops courseware and conducts numerous FMS, Electronic Flight Instrument System (EFIS) and maintenance training sessions out of this location. When not instructing, Mike is providing customer support for operational questions, reviewing training manuals and creating presentations for both the classroom and conferences. Mike's favorite aspect of his job though is being able to create custom training courses to meet customers' specific needs.

First joining Universal Avionics in November 1997, Mike now has over 45 years of experience working in the Aerospace industry. Prior to joining Universal Avionics, Mike served 23 years as a United States Navy Pilot and worked 5 years as a Flight Safety Instructor. After becoming an Instructor, he realized that he had finally found the perfect career path as he truly enjoys working with customers and shedding light on what he is teaching.

Growing up in Philadelphia, Pennsylvania, Mike attended Drexel Institute of Technology. He's also lived in Italy, the Philippines and Japan for 3 years each.

Outside of the classroom, Mike enjoys collecting antique cameras and trying his hand at photography. His wife is also an Instructor and 8 months ago, they became grandparents.

To learn more about our training offered, or to speak with Mike, call (316) 524-9500 • (800) 255-0282.

Look for Mike to provide unique pilot tips and tricks for Universal Avionics equipment in future issues of *The Universal Flyer*. Paul Damschen, Universal Avionics Manager of Airworthiness and Flight Operations is also a regular contributor to "From the Flight Deck."

## InSight™ Unveiled at NBAA2014 (continued)

### The InSight Family

Based around four primary components, InSight embodies Universal's time-proven building-block type architecture, allowing you to design your ideal flight deck.

Primary hardware components include a 10.4" EFI-1040 Display acting as PFD and/or MFD, Electronic Control Display Unit (ECDU), Alphanumeric Keyboard (ANK) and Data Concentrator Unit (DCU) II. With InSight, you may choose from two to five displays to best fit your aircraft.

The centerpiece of the InSight system is the high-resolution LCD, LED-backlit EFI-1040 Display, offering multiple processors/partitioning and an Ethernet-based architecture.



The InSight Family: EFI-1040 Display, ECDU, ANK and DCU II

As part of the planned growth for the system, the EFI Display is designed to be compatible with multiple LCD sizes and orientations to provide extensive aircraft installation flexibility.

Pilot interface and control of the system is conveniently provided through the ECDU, a 5.0" flat panel display, and a Cursor Control Panel (CCP). The ECDU combines the control of flight displays, FMS, radios, weather, traffic and terrain into one pilot intuitive device.

The ANK allows for alphanumeric entries, FMS function keys and database uploading.

A second generation data concentrator, the DCU II, provides analog/digital conversion/concentration.

### Key Features

The highlight of the InSight system is the embedded next generation Synthetic Vision System (SVS) with advanced mapping capability and intuitive system-wide graphical pilot interface with 'Point & Click' navigation. The SVS features sharp and realistic portrayal of ice-capped mountains and deep blue seas, providing even more advanced graphics than

our industry-leading Vision-1® product. InSight's SVS pictures vivid airport, taxiway and runway depiction and multi-layered moving maps include terrain obstacles, urban area outlines and special use airspace for enhanced situational awareness.

Additional embedded critical functionality includes electronic charts, radio control and broadcast weather.

### Certification

The first installation of InSight is on our Cessna Citation VII with the STC expected in the second quarter of 2015. For more information, visit [www.uasc.com/insight/citation](http://www.uasc.com/insight/citation).

The InSight system is also ideal for forward-fit applications. MD Helicopters, Inc. is the launch OEM customer with the InSight Integrated Flight Deck on the Next Generation MD Explorer® helicopter.

### More Information

For additional information, please contact your Universal Avionics Regional Sales Manager by calling (800) 321-5253 • (520) 295-2300 or emailing [sales@uasc.com](mailto:sales@uasc.com).

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## Customer Spotlight: Horizon Air (continued)

- 2011: Approved for RNAV (RNP) 0.3 AR – the first operator to gain RNP AR approval using WAAS as the primary navigation sensor.
- 2013: Approved for RNAV (RNP) 0.1 AR – at which time, only Alaska Airlines and Southwest Airlines were FAA approved for. Horizon Air's Q400 was the only other aircraft type to obtain 0.1 approval other than the Boeing 737NG.

Another highlight that quickly comes to Perry's mind – an "LPV save" on the very first day. According to Perry, "on the second leg we flew revenue operations with the UNS-1Ew in November 2009 and the ILS approach into PDX runway 10R was inoperative and the weather was below minimums for the other non-precision approaches to that runway."

He added that "using LPV, the crew completed the flight with no issues while other aircraft had to cancel their approach to 10R and fly an approach to 10L."

Using RNP AR approaches, Horizon Air's unstabilized approach error rate has dropped to virtually zero. The airline also experiences the lowest possible minimums at terrain- and obstacle-challenged airports with the UNS-1Ew SBAS-FMS. In addition, Horizon Air experiences 100% lateral and vertical path guidance to every runway end in their route structure, which specifically addresses Controlled Flight Into Terrain (CFIT) issues associated with non-precision approaches.

To be featured in our "Customer Spotlight" article series in future issues of *The Universal Flyer*, email us at [universalflyer@uasc.com](mailto:universalflyer@uasc.com).

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