

# THE UNIVERSAL FLYER<sup>®</sup>

## A Word from Our CEO

I would like to extend a personal thank you to our customers for helping us make 2015 a memorable year. Many of you have already completed the outfitting of your aircraft for Automatic Dependent Surveillance-Broadcast (ADS-B) and Future Air Navigation System (FANS), and we sincerely appreciate your continued dedication to our products. For those of you who are waiting on the sidelines, we understand, yet we encourage you to work with your local Authorized Dealers. As the deadline approaches, the number of qualified dealers with bandwidth to complete the update will be limited.

We are proud of the progress we made in offering and having three key products all certified and ready for the Federal Aviation Administration's (FAA) NextGen initiative; our Satellite-Based Augmentation System (SBAS)-Flight Management System (FMS) family, UniLink<sup>®</sup> Communications Management Unit (CMU) for FANS and Controller-Pilot Data Link Communications (CPDLC), and our line of Cockpit Voice and Flight Data Recorders (CVR/FDR) for recording the digital message sets. In addition, we joined forces with Rockwell Collins to offer the TDR-94(D) Mode S Transponder with our solution for a greatly reduced package price.

Like you, we look forward to 2016 with a great deal of positivity. The New Year is starting with a new website to showcase our latest products. In 2016, we will certify and take orders for our Attitude Heading Reference System (AHRS) and our newest Integrated Flight Deck, InSight<sup>®</sup>. An agreement has been inked with a major OEM for InSight and we will have a Supplemental Type Certificate (STC) for the Cessna Citation VII available in 2016 with many others to follow.

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## Product News and Company Highlights

Matching Advanced Avionics to Customer Needs

### Touch CDU iPad App for FMST Now Available

Our new Touch Control Display Unit (CDU) app for the Flight Management System Trainer (FMST) is now available for download from the Apple App Store. Available for the iPad, the Touch CDU app acts as a virtual Control Display Unit (CDU), allowing you to interact with the FMST desktop software program. It's a great fit for airlines, training facilities and more.

Supporting FMST v3.0 and later, the app includes 4" Flat Panel CDU (FPCDU), 5" FPCDU and Multi-functional CDU (MCDU) display options. It provides all of the interactive functionality of a physical FPCDU including data entry, Line Select Key (LSK) selection, and Function Key Selection – without the expense of purchasing the physical unit. It's a perfect complement to any in-house training or familiarization program for Universal Avionics FMS.

Current FMST subscribers require an update to their license key in order to enable the Wi-Fi connection between the Touch CDU app and computer.

Please contact your Universal Avionics Regional Sales Manager to upgrade your FMST license for Touch CDU. To learn more, visit: [www.uasc.com/shop/avionics/fms\\_trainer](http://www.uasc.com/shop/avionics/fms_trainer).



### New UniLink Desktop Training Software

During the NBAA2015 – Business Aviation Convention and Exhibition, we unveiled the UniLink Desktop Training Software. Expected to become available February 2016, the new software allows you to walk through a series of scenarios simulating two-way messaging using FANS technology:

- ATC Log On: The basics of logging on to Air Traffic Control (ATC).
- Oceanic Clearance: Requesting and receiving an oceanic clearance from CYQX.
- North Atlantic Crossing: Normal North Atlantic crossing from KFFL to EGGW.
- North Pacific Crossing: North Pacific crossing from KOAK to RJTT with reroutes.
- Weather Deviation: Weather Deviation enroute from PHNL to KLAX.
- SatCom Loss: Loss of SatCom function enroute from KVNY to PHTO.
- ATC Voice Request: ATC voice communication request enroute from KLAS to PHTO.
- Emergency Operations: Declaring an emergency enroute from PHOG to KTUS.
- Free Flight: Allows undirected exploration of UniLink FANS messaging.

The UniLink Trainer simulates both the UniLink CMU, and 4" or 5" FMS FPCDU or MCDU. For more information, check out: [www.uasc.com/shop/avionics/unilink\\_trainer](http://www.uasc.com/shop/avionics/unilink_trainer).

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## A Word from Our CEO (continued)

The harmonization efforts between the European Aviation Safety Agency (EASA) and the FAA will enable these products to be outfitted for international customers as soon as they are certified in the U.S. In addition, we have plans to enhance these new products and others to accommodate more aircraft types including rotorcraft and some government/special mission platforms.

Thank you again for making 2015 another successful year for Universal Avionics! We look forward to working with you in 2016 and beyond.

– Paul DeHerrera, CEO, Universal Avionics

## New RMA System Launched

We recently implemented a new Return Material Authorization (RMA) system. Completion of a RMA form is now required for all Universal Avionics equipment being sent in for repair and/or upgrade. Access this form on our website at: [www.uasc.com/RMA](http://www.uasc.com/RMA). When logging into the RMA website, please use your UniNet account information.

You will notice that some of the information will already be auto-filled for you. If you do not have a UniNet account, you may login as a guest, or register at [www.uasc.com/uninet/Register.aspx](http://www.uasc.com/uninet/Register.aspx). Completing and submitting this RMA information will generate an email, providing a link to the RMA form which you will then need to fill out and submit.

## Dealer Spotlight

### Global Aviation Technologies

Global Aviation Technologies (GAT) was formed in April 2002, providing engineering and integration support for out of production aircraft. In the early days, GAT was strictly an engineering firm, but it understood the certification process and soon certified many programs from GPS installations to Reduced Vertical Separation Minimum (RVSM) and Electronic Flight Instrument System (EFIS) upgrades. GAT quickly learned that customers also wanted installation kits to accompany the integration packages it designed and started to manufacture electrical subassemblies and wire harnesses.

Providing integration, certification and manufacturing support was great, but GAT was still missing a key component to providing their customers a "one-stop" shop for aircraft support.

In November 2014, Global Aviation Maintenance (GAM), a wholly owned subsidiary of GAT, was formed to provide aircraft maintenance support for legacy and out of production aircraft. GAM has been extremely beneficial, allowing FAA Certification of the CRS #7GTR271C, opening the door for avionics dealerships and allowing GAT to provide nose to tail support for customers.

GAT has had a relationship with Universal Avionics since 2003, and officially became an Authorized Dealer in September 2015. The company cut its teeth on a FMS installation for the Learjet legacy aircraft. It now owns Universal Avionics FMS STCs for the Learjet 31/31A/35/35A/36/36A and Challenger CL600/601. In addition, the company has accomplished certifications for third party maintenance facilities such as an EFI-890R

Advanced Flight Display upgrade for a Challenger CL600.

Currently, GAT is working on ADS-B and FANS 1/A upgrades for the Hawker 4000 aircraft. It anticipates work on other models as demand continues to pick up.

**Woody Cottner, Vice President Business Development, GAT**

*The support Universal Avionics provides is second to none. Recently, we were certifying dual UNS-1Lw SBAS-FMSs on a Challenger CL601. This was a unique program with its own set of challenges. We had completed conformity and were preparing for certification flight test when the FAA chose not to delegate the flight test for this program. We had the FAA on the aircraft as well as the customer's chief pilot on a Saturday with two flights flown.*

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### 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

### Discussing Temperature Compensation with Universal Avionics Pilot Instructor – Customer Training

The FAA has reissued Notices to Airmen (NOTAM) for more than 300 U.S. airports where it is required for crew to perform temperature compensation for various segments of the approach. This follows an effort to increase awareness of the dangers inherent in operating at certain airports in extreme cold temperatures. It is separate from Area Navigation (RNAV) (GPS) approaches that may already include hot and cold temperature limitations with regard to baro-guided (AC-90-105) Lateral Navigation (LNAV)/Vertical Navigation (VNAV) Decision Altitude (DA) minimums.

Since the release of FMS Software Control Number (SCN) 601.1 on September 5, 1996, there has been a FMS configuration option to allow the Flight Plan Menu to display a TEMP COMP option to adjust barometric altimeter VNAV paths when the airport temperature is 0°C to -70°C. This function may be used to automatically calculate compensated altitudes for all segments of an approach – intermediate, final and missed – for all SCN 601.1 through 803.X. For those aircraft not configured, FAA interpolation charts are published to manually calculate compensated altitude values.



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Temperature Compensation Page 1

However, in SCN 1000.0/1100.0 through 1000.7/1100.7, an anomaly exists when executing a RNAV (GPS) approach if the Level of Service (LOS) is either Localizer Performance with Vertical Guidance (LPV) or LNAV/VNAV. Since Universal Avionics FMS uses a geo-satellite derived VNAV path (no temp comp required), when either of these two LOS's are annunciated, the FMS will appropriately cancel the temperature compensation function and values at the Final Approach Fix (FAF). Should the missed approach procedure be executed, TEMP COMP values will not be automatically restored, and certain airports listed may require that compensation be applied to that segment.

## 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.



One of two actions may be taken by the crew to assure proper compliance with the cold temperature compensation:

1. Use the FAA Cold Temperature Error Table (AIM 7-2-3) to manually calculate required values for the missed approach segment,
2. Or, after activating TEMP COMP and before reaching the FAF, review the flight plan for required compensated altitude values in the missed approach segment to be used if necessary (as shown in the three screenshots to the right).



This anomaly only applies to the SBAS/GPS glideslope. Temp Comp works normally with LNAV LOS baro-glideslope and all other FMS approaches that use a baro-glideslope.

This anomaly was corrected in FMS SCN 1000.8/1100.8 and later. More information is available in Universal Avionics Service Letter (SL) No. 2859.

For additional questions, please contact:

Universal Avionics Support  
 Tel: (520) 573-7627 · (800) 595-5906  
 Email: [customersupport@uasc.com](mailto:customersupport@uasc.com)



Mike Michalski, Pilot Instructor – Customer Training

SB / SL No.	Release Date	Title
SL2859	12/7/15	Use of Temperature Compensation with SBAS Flight Management Systems
SB3638	10/27/15	Installation of Mod 5 in the CVFDR and FDR
SB3630	9/18/15	Announcement of the Availability of TAWS Terrain Database 1401
SB3631	9/18/15	Announcement of the Availability of Vision-1® Terrain Database 1401
SB3634	8/19/15	Announcement of the Availability Geographic Database UN105 for UniLink UL-80X

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## Dealer Spotlight (continued)

*After the second flight, the customer requested onsite support, but it was impossible due to the time of day. This was a problem as the FAA could not extend the support until Monday due to other commitments.*

*Therefore, we called Troy Adams, Universal Avionics Field Service Engineer, and the maintenance team downloaded the last flight for Troy to evaluate. His evaluation revealed the root cause of the issue and he provided suggestions for resolution.*

*I credit the program's success past this road block to Troy. We were able to complete the certification program with the aircraft being returned to the customer. This is one of many instances where Universal went above and beyond to ensure customer satisfaction.*

*GAT truly values the relationship with Universal Avionics over the years.*

*The support has been consistent and there is comfort in knowing Universal stands behind its products and will not leave you hanging. Having a dealership is just icing on the cake. It has been an enjoyable ride and we look forward to many more years of collaboration with Universal Avionics.*



Universal Avionics CEO, Paul DeHerrera (left) and Southwest Regional Sales Manager, Tom Wright (right) presenting an official Universal Avionics Authorized Dealer plaque to Woody Cottner, Vice President Business Development, GAT (middle)

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