

Publication of LP Approaches Begins in U.S.

The FAA published its first Localizer Performance (LP) procedure on January 13, 2011 at the Peter O. Knight Airport (TPF), Runway 36, in Tampa, Florida. A second at the Quad City International Airport (MLI), Runway 28, in Moline, Illinois was published on March 10, 2011.

Localizer Performance procedures are lateral-only approaches similar to Instrument Landing System localizer-only procedures but utilizing SBAS (WAAS) satellite information for more accurate lateral guidance. The FAA intends to publish LPs at locations where terrain or obstructions do not allow Localizer Performance with Vertical Guidance (LPV) minima. Charted as 'RNAV (GPS) LP' on the approach plate, these approaches have a narrower Obstacle Clearance Surface than other procedures, which in many cases allows a lower minima than lateral navigation (LNAV) procedures.

The first published LP approaches are just two examples of this. The LP approach at Tampa provides a Minimum Decision Altitude (MDA) that is 60 feet lower than the LNAV approach to the same runway; the approach published in Moline provides an MDA that is 40 feet lower than the LNAV approach to the same runway.

According to the FAA, over 20 additional LP approaches are pending publication in the next few months, including: Daytona Beach International Airport (DAB) in Daytona Beach, FL; Ardmore Downtown Executive Airport (1F0) in Ardmore, OK; and Lawrence J Timmerman Airport (MWC) in Milwaukee, WI.

With a necessary software update, operators of Universal's WAAS/SBAS-FMS will be able to utilize LP procedures. This update and inclusion of LP Procedures in the FMS database is scheduled for release in 2012.

Product News and Highlights

Change in Jeppesen's Data Collection Standard Improves TAWS Obstacle Data

A recent announcement by data supplier Jeppesen Sanderson, Inc states that an improvement in the company's data collection standards will result in a "noticeable" increase in obstacles around airports in the United States. As a supplier of source data to Universal Avionics, these changes at Jeppesen will convey, in some part, to Universal's TAWS Obstacle database.

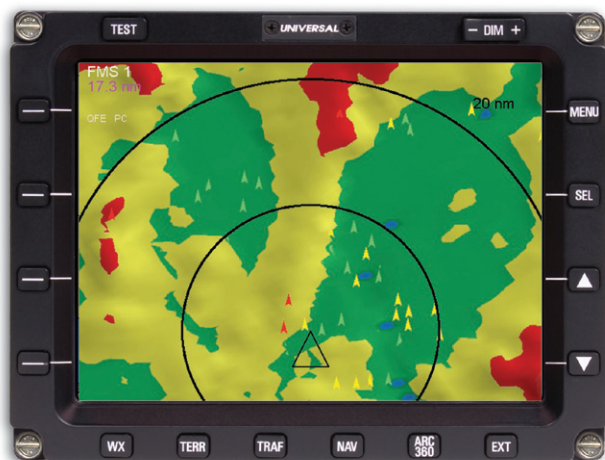
Once the source obstacle data from Jeppesen is received, Universal Avionics processes the data for duplicates and datums to ensure compatibility with the intended function. Even with complex database processing, the number of TAWS obstacles contained in the next release of the TAWS Obstacle database is expected to increase.

Displays to Support Popular Short Range Weather Radar

An upcoming software release for the MFD-640 Multi-Function Display and EFI-890R Advanced Flight Display will add interface support for a popular airborne radar, the Telephonics RDR-1600 Search and Rescue and Weather Avoidance Radar System.

With an operating range as low as 0.5 NM, the RDR-1600 is commonly installed on helicopter platforms alongside the MFD-640 and EFI-890R for special missions operations that require precise short range capabilities. These include applications such as maritime patrol, ship and oil rig location, and ground and coastline mapping.

FAA TSO approval for the MFD-640 software is scheduled September 2011 with approval for the EFI-890R to follow.



The next release of Universal Avionics TAWS Obstacle Database, Release Number 1103 is scheduled for July 11, 2011.

For more information, contact the NavData Services and PC Engineering department at (800) 321-5253 / (520) 295-2300 or email navdata@uasc.com.

TAWS Map View (20 NM range) - Obstacles displayed in different colors according to their altitude relative to the aircraft.

EGNOS SoL Paves Way for Procedure Publication

On March 2nd, the European Commission announced the activation of Europe's Satellite-Based Augmentation System (SBAS), signaling the availability of a new navigation capability for civil aircraft flying in European Airspace. The European Geostationary Navigation Overlay Service (EGNOS) Safety-Of-Life (SoL) service allows aircraft to use enhanced and corrected GPS for navigation.

With EGNOS certified for aircraft use, it joins two other SBAS systems already deployed: the FAA's Wide Area Augmentation System (WAAS) with coverage throughout North America, and Japan's Multi-functional Satellite Augmentation System (MSAS). A fourth system, India's GPS Aided Geo Augmented Navigation (GAGAN), is currently under development.

EGNOS: Benefits

Satellite-Based Augmentation Systems broadcast a reliable, augmented and corrected GPS signal that improves position accuracy from 50 meters to less than 2 meters. This provides a level of accuracy that can support RNAV/RNP approaches equivalent to Instrument Landing System (ILS) CAT-I (200 foot minima), without reliance on ground-based nav aids.

EGNOS offers more direct enroute flight plans, greater runway access capability, and reduced separation standards.

Aircraft Equipage

Because regional SBAS systems conform to the same standards, operators already

Experimental/Planned EGNOS Procedures

France

Limoges (22)
Clermond F(26)
Merville (04)
Vannes (22)
Le Bourget (27, 07)
Orly (02, 04, 06, 24, 26)
CDG (08, 09, 20, 26, 27)
Marseille (13, 31)
Albert Bray (09)
Angouleme (28)
Bordeaux (5, 23)
Valence (01)
Caen (31)
Calais (35)
Colmar (19)
Cannes (17, 35)
La Rochelle (28)
Melun (28)
Pau (31)
Saint Nazaire (08)
Saint Yan (33)
Tarbes (20)

UK

Southampton
Alderney
Gamston

Spain

Valencia (12)
San Sebastian (04)
Cuatro Vientos (10)
Santander (11, 29)
Cordoba (03, 21)
Granada (27)
Almeria (08, 26)
Salamanca (21)
Malaga (13, 31)
La Palma (01)

Poland

Mielec
Katowice

Switzerland

Les Eplatures
Altenrhein

Germany

Donauwoerth

Italy

Bologna
Florence
Naples
Perugia

equipped with an SBAS receiver can take advantage of EGNOS SoL immediately. According to the FAA, over 45,000 aircraft are already equipped with SBAS avionics.

Universal Avionics WAAS/SBAS-FMS receives and processes the EGNOS signal when configured for and operating in the EGNOS coverage area. When the internal SBAS receiver uses this corrected GPS data in its positioning solution, it provides a more accurate position solution than with GPS alone.

Note that enabling EGNOS corrections on UASC FMS systems may require additional installation or operational approvals. Customers wishing to enable EGNOS should consult with appropriate state authorities and follow appropriate guidance to achieve these approvals.

EGNOS Approaches

Europe's first operational LPV approach was flown into Pau Pyrénées Airport (LFBP) in France last March. Universal Avionics and its partners have logged hundreds of hours flight testing EGNOS procedures with its WAAS/SBAS-FMS.

The announcement of EGNOS SoL paves the way for further publication of EGNOS-based approaches by European member states. Several are already planned, as shown in the table to the left.



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.

Update

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Notes from Product Support

How Interpretation of U.S. State Sales Tax Policies Affect Your NavData Invoice

United States tax law requires a business to collect sales taxes for states in which it has nexus. Changes in state policies for determining nexus may translate to changes in customer invoices, as discussed herein.

What is “nexus”?

Businesses with a connection to or presence in a state is referred to as having “tax nexus” with that state. This means that a business must collect state sales taxes for sales made within the state.

How is nexus determined?

The amount and degree of business activity that must be present before a state can

require the collection of sales tax is determined by a loose set of principles. Generally, these are: owning property or facility in the state, having resident employees or soliciting business in the state.

States’ policies for determining nexus may be influenced by political and economic factors and change without notice. Universal Avionics conducts business throughout the U.S. (and worldwide) and regularly reviews its policies to ensure compliance with state tax policies.

How does this effect me?

Several years ago, Universal’s tax consultant advised that the company has nexus with

Arizona and California, which prompted collection of sales tax for those states.

More recently, it was determined that nexus exists with North Carolina and Florida. Customers in those states will notice state sales tax on invoices billed after March 1, 2011.

This change will largely be noticed in Navigation Database invoices, which are billed on a cyclical (yearly) basis. Generally, customers who download the Navigation Database from UniNet will not be affected by this change even if they reside in one of these states.

For this and other billing concerns, call Universal at (800) 321-5300 or (520) 295-2300.

New Marketing Managers Join Sales Team

Greg Potter Heads Up Western U.S. Region



Greg comes to Universal with over 28 years of experience in the aviation industry. He started his aviation career in the U.S. Army and then transitioned to a civilian career where he worked in various sales roles at Hughes Helicopters, Goodyear Aerospace and Rockwell Collins.

Greg holds a BA in Business Administration, Marketing from Cal Poly, San Luis Obispo. He is currently the President of the Southern California Chapter of the Professional Aviation Maintenance Association (PAMA).

Based in the Los Angeles vicinity, Greg will be responsible for the growth and development of product sales in the Western U.S. region, which includes California, Oregon, Washington, Idaho and Alaska.

Charlie Carroll Supports Southeast U.S. Region



With over 30 years’ experience, Charlie brings extensive knowledge of avionics to his new position. Prior to joining Universal Avionics, Charlie worked in corporate aviation for many years managing avionics service and upgrades for various flight departments. As an entrepreneur, he owned and managed CCAvionics, Inc.,

in which he gained extensive experience modifying corporate aircraft with Universal Avionics equipment.

Based in Newnan, Georgia, Charlie will be responsible for the overall growth and development of Universal product sales in the Southeast U.S. region, which includes Louisiana, Mississippi, Alabama, Georgia, Florida, North and South Carolina.

Software and Hardware Updates

EFI-890R

SCN 1017.0.8 expected in July. Minor software release adds Garmin WAAS interface on PC-12 among other improvements.

MFD-640

SCN 1011.5.2 expected in September. This minor software change adds support for RDR-1600 weather radar, as well as other improvements.

FMS

SCN 1000.6/1100.6 expected 3rd quarter. This minor software change includes Precision Approach Subsystem (PAS) SCN 10.2, which allows the testing of LOS discrettes via the CDU among other improvements.

SCN 803.3 expected 4th quarter. This minor change addresses a GLS update for long-time customer, Widerøe among other improvements.

Service Bulletins are published for all software releases and hardware modifications. Visit www.uasc.com to view the Service Bulletin for the software and hardware updates listed here, in addition to associated Service Letters and archived Bulletins.

Utility Increases for Lear 31A Fleet Equipped with WAAS

WAAS LPV Makes a Difference for Operator Sanderson Farms

Nationally-recognized chicken producer Sanderson Farms relies on a fleet of business jets to help manage its U.S.-based operations, which includes seven hatcheries, six feed mills, and nine poultry plants. Travel to its facilities from company headquarters in Laurel, MS is supported by two Learjet 31A's, a Gulfstream G150 and a King Air B200 aircraft. Both Learjets were updated with dual UNS-I Ew WAAS/SBAS-FMS last year. The upgrade, which included WAAS LPV capability, was completed by Duncan Aviation in Lincoln, Nebraska.

Sanderson relies on WAAS LPV approaches to land in remote areas, often in inclement weather, where only an LPV allows a landing at the airport.

“As anyone who has flown an approach to minimums knows, sometimes that extra 50-100 feet can make all the difference...”

Zane Lambert, head of Sanderson's flight department in Laurel, MS attests to the merits of WAAS. “Teaming with Universal Avionics and Duncan Aviation for a WAAS/LPV solution for our Learjet 31A's was an easy decision for Sanderson Farms. Flying each aircraft 500+ hours a year, often to airports with only satellite-based approaches, WAAS just made sense.

As anyone who has flown an approach to minimums knows, sometimes that extra 50-100 feet can make all the difference – and it has for us more than once.”

For Sanderson Farms, the benefit of greater aircraft capability and access to smaller airports translates into real business opportunity.

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