Changes to Separation Minima in NY Oceanic Airspace

As of December 10th, the Federal Aviation Administration (FAA) has made changes to the separation minima throughout the New York Oceanic Control Area (CTA). Aircraft that are authorized, equipped and certified for Required Navigation Performance (RNP)-4, Controller–Pilot Data Link Communications (CPDLC) and Automatic Dependent Surveillance–Contract (ADS-C) can now be given reduced separation minima to their operations: 30 Nautical Mile (NM) lateral and 30 NM longitudinal. Aircraft that are authorized, equipped and certified for RNP-10, CPDLC and ADS-C (known as FANS-1/A+) are also provided with a change to their separation minima, and are now granted a 30 NM lateral and 50 NM longitudinal separation minimum. This is not a mandate for aircraft that are not equipped for RNP-4 or RNP-10 operations; the New York Air Route Traffic Control Center (ARTCC) will continue to make accommodations for aircraft that are not eligible for the reduced separation minima.

The Advanced Technologies and Oceanic Procedures (ATOP)/Ocean21 Ground Automation System is one of the enabling technologies for this program. It provides oceanic Air Traffic Controllers (ATC) with a set of automated decision support tools to assist in aircraft separation assurance, coordination, flight data management and controller-pilot communication. These reduced separation standards provide operators with significant operational and safety benefits. For example, there is an enhanced capability to accommodate requests for weather avoidance, enroute climbs to more fuel-efficient altitudes and other operational flexibilities. In addition, enhanced Communication, Navigation and Surveillance (CNS) systems allow both ATC and operators to better communicate and monitor flight plan conformance.

Continued on Page 2

Product News and Highlights

Matching Advanced Avionics to Customer Needs

FANS Solutions for Your Falcon® 50

The long-awaited, first FANS retrofit certification with Universal Avionics’ UniLink® UL-801 Communications Management Unit (CMU), is now a reality.

The installation package includes Universal Avionics’ UniLink UL-801 CMU with internal VHF VDL Mode 2 receiver, interfaced with dual UNS-1Lw Satellite-Based Augmentation System (SBAS)-Flight Management Systems (FMS) and International Communications Groups’ (ICG) NxtLink ICS-220A Iridium SatCom. This package provides the flight crew with two global voice channels and a dedicated data link channel to support ACARS, FANS 1/A+ messaging and CPDLC. Universal Avionics’ CVR-120A Cockpit Voice Recorder (CVR) is also part of the package, required for FANS 1/A+ data link message recording.

The certification of this integrated retrofit system in a Dassault Falcon 50 entitles international operators to utilize the significant time and cost advantages offered by flying in FANS preferred airspace. This solution provides a certified FANS system prior to the February 5, 2015 expanded airspace data link mandate.

For more information, please contact your Universal Avionics Regional Sales Manager or Supplemental Type Certificate (STC) holder and Universal Avionics Authorized Dealer, Chicago Jet Group. Additional information is also available at: www.uasc.com/falcon50.

Falcon 900B Flight Testing Now Complete

Flight testing for the first Falcon 900B with a Universal Avionics EFI-890R flight deck upgrade is now concluded with STC completion imminent. Upgraded through a partnership with Authorized Dealer, Duncan Aviation, the Universal Avionics Falcon 900B flight deck upgrade package includes the following components:

- 5 – EFI-890R 8.9” Advanced Flight Displays including one fully dedicated Engine Display (ED)
- 2 – Vision-1® Synthetic Vision Systems (SVS)
- 2 – Application Server Units (ASU) for Jeppesen charts, checklists and E-DOCS
- 3 – UNS-1Fw SBAS-FMS with 5” Control Display Units (CDU) (third optional)
- 2 – Radio Control Units (RCU) (optional)
- 1 – UniLink UL-801 CMU with integrated VDL Mode 2 VHF Radio (optional)

The flight deck upgrade provides significant weight and power savings, increased reliability and reduced maintenance costs. In addition, the upgrade ensures the aircraft is approved to fly in all airspace and gain compliance with emerging mandates.
Changes to Separation Minima in NY Oceanic Airspace (continued)

To be eligible to apply 30 NM lateral, 30 NM longitudinal and 50 NM lateral, 30 NM longitudinal and 50 NM longitudinal separation requirements, including the use of CPDLC and ADS–C in oceanic airspace. For more information, please refer to Part 3, Section 2 (International Oceanic Airspace Notices) of the August, 22 2013 edition of FAA Notices to Airmen – Domestic/International. Additional information concerning RNP operations can be found in the From the Flight Deck article on page 3.

Management of Multiple Approach Indicators in the FMS

Universal Avionics’ FMS navigation databases are developed from third party navigation source data. This source data includes multiple approach indicators, used to differentiate multiple approach procedures of the same type to the same runway. The multiple approach indicator is included in the approach title as it is displayed on the approach chart in the FMS, for example RNAV (GPS) Z Rwy 22.

**Applicability to Universal Avionics’ FMS**

Universal Avionics’ FMS models operating Software Control Number (SCN) 803/903 and earlier are not able to support multiple approach indicators. Upgrading to Universal Avionics’ SBAS-FMS (SCN 1000/1100 and later) provides the opportunity to accept these added procedures.

**Display Management**

If the FMS does not support multiple approach indicators, only one of the procedures will be displayed as outlined:

- When A, B, C or 1, 2, 3 designators are present, the first procedure (A or 1) will be displayed (without the multiple approach indicator).
- When the X, Y, Z designators are present, the last procedure (Z) will be displayed (without the multiple approach indicator).
- In cases where an RNAV (RNP) or RNAV (GPS) procedure with “LPV Only” minima is designated as the Z procedure, the Y, X, etc. procedure will be contained in the database (displayed without the multiple approach indicator).

**Exceptions to the Display Guidelines**

Last updated on August 21, 2013, Jeppesen’s exception list highlights 65 exceptions to the display rules previously outlined. Operators who think that a procedure may be missing from the database should check the exception list located on Jeppesen’s website under Aviation Notices and Alerts. A copy of Jeppesen’s list of exceptions may also be obtained from Universal Avionics’ Sales and Marketing Administration Department. If NavTech is the database supplier, please contact the company directly for their list of exceptions.

**Contact Information**

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**Example of multiple approach indicator in approach numbers 6 and 7**

Universal Avionics’ product lines offer solutions for some of the most advanced industry technologies and requirements including RNP, CPDLC, ADS–C and FANS. For more information regarding these solutions, please contact your Universal Avionics Regional Sales Manager at (800) 321-5253 • (520) 295-2300 or sales@uasc.com.
From the Flight Deck
Discussing RNP with Universal Avionics’ Manager of Airworthiness and Flight Operations

For this issue of The Universal Flyer, we asked Paul Damschen, Universal Avionics’ Manager of Airworthiness and Flight Operations, to discuss RNP. Here’s what he had to say:

The Universal Flyer: What is RNP?
Paul: Required Navigation Performance (RNP) refers to the level of performance required for a specific procedure or a specific block of airspace identified by the responsible Air Traffic Control Organization. An RNP of 10 means that a navigation system must be able to calculate its position to within a circle with a radius of 10 NM with an acceptable level of integrity in the position calculation. Similarly, an RNP of 0.3 means the aircraft navigation system must be able to calculate its position to within a circle with a radius of 3 tenths of a NM. Collectively the position and the required integrity are known as Actual Navigation Performance (ANP). The aircraft must have both airworthiness and operational approval for RNP, and the operator must know the level of performance monitoring provided.

The Universal Flyer: What are the requirements for RNP?
Paul: In the US, the current RNP requirements include: RNP-10 as described in FAA order 8400.12c, RNP-4 as described in FAA Order 8400.33, Area Navigation (RNAV) (RNP AR) approach authorization as defined in Advisory Circular (AC) 90-101a, and Basic RNP capability achieved through TSO-C146 compliant equipment when installed under AC 20-138().

The Universal Flyer: Where can an operator find more information on RNP?

Did You Know?
Universal’s FMS Compares the Active Navigation Database to Pilot-Defined Data

During every power-up cycle, Universal Avionics’ FMS checks the active navigation database against all Pilot-Defined Data, such as routes and waypoints, to ensure there are no discrepancies within the defined data. For instance, if a Pilot Route that was created 6 months ago containing a navaid that is no longer a valid identifier in the current database due to removal or renaming, three distinct actions are triggered in the FMS: (1) The advisory message, PILOT ROUTE DB UPDATED, will be pushed, (2) The route name with the erroneous data when displayed among a list of all routes will flash, (3) The erroneous data will be replaced with a flashing *GAP* in the route. This can be corrected by deleting the *GAP* and inserting the correct data in the PILOT DATA pages of memory.
Avionics Solutions for Helicopters

Visit Universal Avionics’ Booth at Heli-Expo 2014 in Anaheim, CA

Universal Avionics has developed solutions for over 50 aircraft types, including rotary wing aircraft that require hardware to be approved and proven to withstand high-vibration environments. The company’s products combine to offer significant improvement in situational awareness while reducing pilot workload that is essential for the tactical requirements of rotary wing aircraft.

Operators will have the chance to view and operate Universal Avionics’ rotorcraft solutions during the 2014 Heli-Expo Trade Show and Exposition at the Anaheim Convention Center in Anaheim, California.

The show’s exhibit halls are open:
- Tuesday, February 25th | 10:30am – 5:00pm
- Wednesday, February 26th | 10:00am – 5:00pm
- Thursday, February 27th | 10:00am – 4:00pm

Make sure to schedule time to visit Universal Avionics’ Booth No. 4702 during the show.

Representatives will also be on hand to discuss the new flight deck for the NextGen MD Explorer® helicopter. Universal Avionics partnered with MD Helicopters in a two-year program to design and build this NextGen flight deck for the MD Explorer helicopter. The NextGen multi-purpose twin-engine helicopter features a single-pilot IFR-capable flight deck with display graphics that are video and mission display capable.

For more information regarding the NextGen flight deck for the MD Explorer, visit: www.uasc.com/md.

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