

# *Technical Newsletter*

**D200702000005****System:** PRIMUS II Radios**Product:** RCZ-833K Communication Unit**Part No.:** 7510700-665**Title/Purpose:** COM Configuration Strap Settings Required for Correct Reporting of Pre-Selected Altitude on GEX/Global 5000 Aircraft Fitted with Enhanced Surveillance Transponders

## **Transmittal Information**

Honeywell Pub. No. D200702000005

## **Summary**

This is the initial release of Technical Newsletter Pub. No. D200702000005.

## **Revision History**

Technical Newsletter Pub. No. D200702000005 has had no revisions as summarized in Table 1.

**Table 1. Technical Newsletter Revisions**

<b>Revision</b>	<b>Date of Release</b>
Initial Release	16 February 2007

## **1. Introduction/Background**

Enhanced Surveillance transponders are required per European mandate on March 31, 2005. Enhanced Surveillance (EHS) is intended to provide additional information to air traffic controllers about the aircraft's current state and intent, primarily to maintain or improve safety and capacity levels while airspace densities continue to climb. The Downlink Aircraft Parameters (DAPs) provided are:

- Magnetic Heading
- Indicated Airspeed
- Mach

16 February 2007

D200702000005  
Page 1 of 4

# Honeywell

## TECHNICAL NEWSLETTER

- True Airspeed (not a required parameter)
- Vertical Rate (barometric rate of climb/decent)
- Roll Angle
- Track Angle Rate
- True Track Angle
- Ground Speed
- Selected Altitude
- Barometric Pressure Setting (Baro Correction)
- Inertial Vertical Velocity (not a required parameter)

This upgrade introduces VHF COM RCZ-833K Part No. 7510700-665, which incorporates software changes to the diversity transponder contained within the VHF COM radio necessary to implement EHS functionality. The Bombardier Global Express (GEX)/Global 5000 also require a configuration strapping change to both COM 1 and COM 2 radio configuration modules.

Instructions for modifying the COM configuration straps are provided in the Bombardier Service Bulletins provided to GEX/Global 5000 operators when upgrading to the EHS transponder. Refer to the following documents:

- Bombardier GEX Service Bulletin No. 700-34-009
- Bombardier Global 5000 Service Bulletin No. 700-1A11-34-014

Table 2 provides information on the COM strap settings for both pre- and post-EHS installation.

**Table 2. COM Strap Settings**

RCZ/XPDR Type	RCZ COM Straps (W6, W7, W8)	Definition
<b><u>Non-EHS</u></b> -765, -766	(GND, GND, OPEN)	Aircraft Maximum True Airspeed Range = 301-600 Knots
<b><u>EHS</u></b> -665	(OPEN, OPEN, OPEN)	Aircraft Maximum True Airspeed Range = 301-600 Knots  <b>AND</b> Indicates to Transponder that Label 102 Selected Altitude uses non-ARINC Standard format (for Bombardier GEX and Global 5000 aircraft only)

# Honeywell

## TECHNICAL NEWSLETTER

### 2. Anomaly

GEX customers have reported that during aircraft ground testing of the Enhanced Surveillance transponder installation it was found that the Pre-Selected Altitude value broadcast was 80% of the value displayed on the cockpit PFDs. For example, with the Pre-Selected Altitude set to 10,000 feet, the transponder transmitted a Pre-Selected Altitude of 8,000 feet. The PFD displayed altitude was the correct value and the transmitted value was in error.

This anomaly will occur when the COM configuration straps have not been modified as required per the Bombardier Service Bulletin (refer to Table 2). The described anomaly is unique to GEX/Global 5000 aircraft fitted with Enhanced Surveillance transponders in Integrated COM Units, Part No. 7510700-665, and does not affect other aircraft types.

Some Global 5000 operators may have overlooked the COM strapping instructions in the Bombardier Global 5000 Service Bulletin, which points to a separate drawing in which the print is difficult to read. Also, both this service bulletin and the bulletin for the Global Express do not include a step to verify that strap W8 is cut (OPEN). Additionally, the Honeywell Operation and Installation Manual (OIM) for the PRIMUS II system, Pub. No. A15-3800-001, has not yet been updated to include the configuration strapping changes unique to the GEX/Global 5000.

### 3. Corrective Action

Bombardier is releasing an update to both service bulletins to include an additional step to verify that COM configuration strap W8 is cut (OPEN); additionally, the Global 5000 service bulletin will include the COM configuration strap modification details within its text, rather than referring to another drawing.

- Bombardier GEX Service Bulletin No. 700-34-009
- Bombardier Global 5000 Service Bulletin No. 700-1A11-34-014

Honeywell will update and release the OIM for the PRIMUS II system, Pub. No. A15-3800-001, to include the COM configuration strap modification for GEX/Global 5000.

# Honeywell

## TECHNICAL NEWSLETTER

Prepared by: Signature on File in Technical Publications

John Lescure

Field Service Engineer/Product Engineer

Approved by: Signature on File in Technical Publications

John Fienhage

Customer Service Manager

Approved by: Signature on File in Technical Publications

Rich Hesch

Customer Services Quality Manager

Approved by: Signature on File in Technical Publications

Ian Parr

Modification Board Chairperson

16 February 2007

D200702000005

Page 4 of 4