

TECHNICAL SPECIFICATION FOR IGC-APPROVED GNSS FLIGHT RECORDERS

AMENDMENT LIST NUMBER 8

Effective 1 February 2023

1. Page vi - under ECC, add: "and is therefore preferred compared to systems with longer key lengths."
 2. Page x - under PEV, add: "a mandatory facility"
 3. Page xi - under Proof Drive, change to: "the FR is driven in a vehicle over a course on the ground that includes Waypoints with accurately known co-ordinates."
 4. 1.3.4.2 - add: After an FR has been in service, later Pressure Altitude calibrations by the FR manufacturer (or an agent authorised by the manufacturer to make such calibrations, retaining FR security), should include re-setting FR Pressure Altitudes to figures to those that are as close as possible to minimum-error values. The original error figures before the re-set must also be preserved and made available in the form of a Correction Table for use with flights made before the re-set. The updated Correction Table must be used for flights after the re-set. (AL8).
 5. Chapter 4, page 16 - Pressure Altitude Recording, add: The duration of validity of a calibration is 5 years, whether carried out by a manufacturer or another facility approved by an NAC. A calibration carried out within a 2 month period following a soaring performance may also be used as supporting evidence. If during calibration by a manufacturer or other organisation approved by the manufacturer where pressure errors are adjusted, two calibration charts should be provided, the first before making changes marked "Valid only for flights before calibration date" and the second after corrections marked "Valid only for flights after the calibration date". (AL8)
 6. A2.3.1, add: In particular, no B-record fix lines must appear after the G-record because this could be false data added after the flight. If any B-record data is detected after the G-record, this must cause Validation of the IGC file to fail. (AL8)
 7. A4.1 to read: Not counting the last CRLF, a B record line includes 35 bytes for basic fix data, plus mandatory characters (defined in the I Record) including Environmental Noise Level (ENL), Fix Accuracy (FXA) in the form of the figure for Estimated Position Error (see the Glossary under EPE), MOP (Means of Propulsion), and Satellites In Use (SIU).
 8. A7 Table - Three-Letter Codes:
 - ABZ, correct to read ANZ
 - AOP, I and B records, Attitude Pitch Angle in degrees (for nose down or left roll angle, start with "-"), add
 - AOR, I and B records, Attitude Roll/Bank Angle in degrees (right positive, left negative), add
 - GSP line, add B and I-records to the list (making values B, E, I, J, K, L)
 - RAI line, add: Receiver Autonomous Integrity Monitoring
 - TRT line, add B and I-records to the list (making values B, E, I, J, K, L)
 - WSP line, middle column - change I, B, J, K to J, K, because WSP is not needed on each fix (B-record) line
 - VAT line, records to read J, K
- New codes:
- CU1 - Electrical Current, Amperes, of first propulsion battery where 2 batteries are installed (AL8)
 - CU2 - Electrical Current, Amperes, of second propulsion battery where 2 batteries are installed (AL8)
 - FFL - fuel flow, litres per minute (AL8)
 - HUM - Relative Humidity, percent (AL8)
 - LE1 - Battery Left, state of charge, percent, of first propulsion battery where 2 batteries are installed (AL8)
 - LE2 - Battery Left, state of charge, percent, of second propulsion battery where 2 batteries are installed (AL8)
 - NET - NETTO - NETT (=overall) Vertical Air Movement - Vertical speed of air in metres per second (AL8)
 - VO1 - Voltage of first propulsion battery where two batteries are installed (AL8)
 - VO2 - Voltage of second propulsion battery where two batteries are installed (AL8)
 - WVE - Wind Velocity - wind direction (degrees from True North) and strength (kph) such as "27022" meaning due West (270 degrees) at 22 kph. Record column to read J,K. (AL8)
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