IGC 2024 Plenary Meeting

GNSS Flight Recorder Approvals Committee (GFAC)

Angel Casado, Miguel Madinabeita, Peter Purdie, Ian Strachan, Hans Trautenberg, John Warrington

Dickie Feakes, Tim Newport-Peace

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2024 Report to the Plenary

Dear Delegates

1. **GFAC Members** In April 2023 Ian Strachan retired from chairing the committee. He had held this position since the formation of GFAC in 1996, and was thanked by the Committee and many others in the gliding community for his long and effective service. Peter Purdie was approved by the President and Bureau to assume the chairmanship,. The current membership is :

Members	**Technical Advisers**
Peter **Purdie** (Chairman), UK	Dickie **Feakes**, UK
Angel **Casado**, Spain	Tim **Newport-Peace**, UK
Miguel **Madinabeitia**, Spain	
Hans **Trautenberg**, Germany	
Ian **Strachan**, UK	
John **Wharington**, Australia	

   1.1 **New members required.** In practice the 4 UK members and Technical advisers have carried out all the practical examination and testing of recorders submitted for approval, and also the revision and publication of documents. All 4 are over 80 years of age, and this is clearly an unsustainable situation. All delegates are requested to discuss with their NACs the nomination of suitable nominees to join the Committee. The main requirement is an understanding of IGC rules and procedures as they apply to GNSS Flight Recorders.

   1.2. **New member Nomination.** Andrej Fijavž has agreed to be nominated for Committee Membership. He is the Data Analyst for the Slovenian NAC, and in the Committee's opinion is highly qualified for membership. The Plenary are requested to approve his nomination.

2. **Committee operation in the current year.** Although no new recorder types have been approved, significant discussions have taken place with current manufacturers, and with other IGC Committees and Working Groups. All GFAC documents required data conversion to current standards, updating to reflect changes in other sections of the Sporting Code and changing to a new transferable single contact for the committee gfac@fai.org . The Chairman particularly thanks Angel Casado for taking on the maintenance of the GFAC section of the FAI Documents web site, and to Howard Mills, Chairman of the SC3D General Section Committee.

3. **GNSS Flight Recorders**. A total of 62 types of GNSS Flight Recorders (FRs) from 21 different manufacturers are currently IGC-approved. If different models within types are included, the number increases to 79.

Reference: www.fai.org/igc-documents

4. **FR Specification.** The last amendment to the IGC FR Specification was published in January 2022. Work continues on an amendment to be published in 2024. Items include the following:

   4.1 **Three-Letter Codes (TLCs).** Additional TLCs will be listed for use in IGC files

   4.2 **Post-flight security checks.** For the electronic signing of IGC files, the ECC (Elliptical Curve Cryptography) system is the preferred system

   4.3 **New data record types.** Two new record types are added to allow recording of data concurrently with the flight records required for flight verification, but which can be deleted without affecting the digital security signature.

   4.4 **Pressure Altitude Recording** Chapter 4 (Pressure Altitude recording and calibration) requires complete revision. (See item 5 below.)

5. **<u>Pressure Altitude Calibration</u>.** At the 2023 Plenary a proposal from Denmark and France to delete the requirement for periodic Pressure Altitude calibrations was opposed by GFAC and the Sporting Code Section 3D Main Section Committee, and the requirement was retained for Diamond Height and Records pending further investigation and discussion. GFAC has carried out a considerable amount of data analysis, and the results (which support the case for appropriate procedures ensuring Pressure Data accuracy) have been communicated to the Technical Experts who supported the proposal. GFAC has made suggestions for alternative methods of checking accuracy which are less onerous to owners of Flight Recorders. GFAC has also held discussions on defining a Flight Recorder Calibration standard and database. Discussions are also being held with manufacturers, since the existing accuracy requirements are based on the technology which existed when the earliest Flight Recorders were designed, and the improved sensors now available enable tighter accuracy requirements at the time of manufacture. If agreed they could facilitate simplified procedures for calibration.

Peter Purdie
Chairman IGC GNSS Flight Recorder Approval Committee (GFAC)