

NEW FROM PICO ENVIROTEC

PEIMAGGEN

MAGNETIC COEFFICIENT GENERATOR

Permits the generation of magnetic compensation coefficients in real-time



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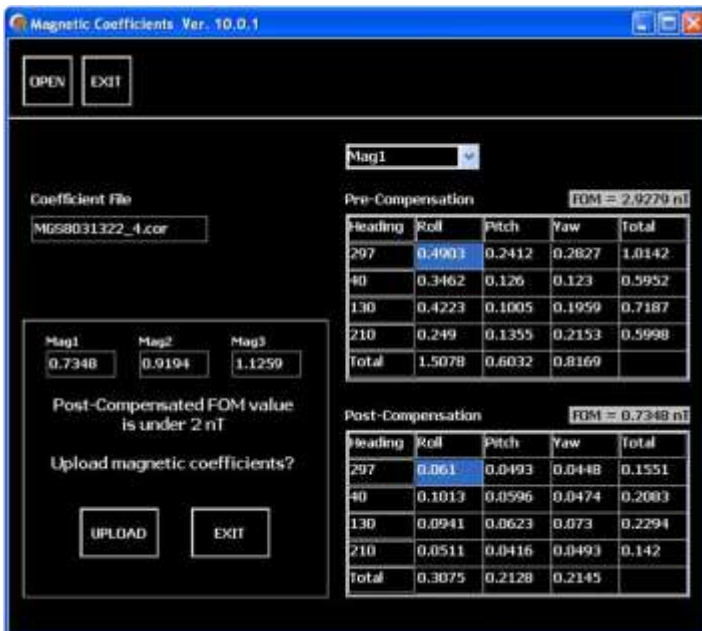
Permits the generation of magnetic compensation coefficients in real-time

PEIMAGGen is a fully-automated real-time magnetic compensation system that accounts for the effects of permanent and induced magnetism, eddy currents and heading errors from the installed magnetometers. PEIMAGGen uses a triaxial fluxgate magnetometer to monitor the aircraft's position and motion with respect to the ambient magnetic field while acquiring data from a set of rolls, pitches and yaws maneuvers flown along the cardinal headings. The maneuver data is automatically recorded, the coefficients are calculated, the aircraft Figure-of-Merit (FOM) is automatically calculated, displayed and recorded, and if acceptable the coefficients may be uploaded "on-the-fly" to the MMS-4 processor module.

- One pulse-per-second (1 pps) synchronization to GPS assures precise signal sampling without quantizing errors.
- Tri-axial fluxgate magnetometer sensor measures aircraft attitude
- Compensated and raw magnetic data provided
- Automated Figure-of-Merit (FOM) calculations of both the raw and compensated data with report
- **Coefficients uploaded "on-the-fly" to the MMS-4 processor module**

Easy steps for the automatic calculation of coefficients:

1. Select Compensation Test Flight option in the IMPAC data acquisition system
2. Indicate the start and end of each maneuver by simply clicking a button. The rest of the procedure is undertaken automatically by the system:
 - Data recording is automatic. Only maneuvers data will be recorded. A special channel for "maneuvers identification" is added to the data file.
 - Navigation guidance is provided automatically: the aircraft is locked on altitude and heading once the first maneuver begins.
 - The noise level of the maneuvers data is displayed on the same screen.
 - As soon as one set of heading maneuvers is completed, the headings for the next set of maneuvers are automatically calculated and provided for navigation.
3. Click COMPUTE after all four heading maneuvers are completed. A magnetic coefficients file is created. The FOM value for each sensor is calculated and displayed.
4. If the FOM value is satisfactory, click UPLOAD to load the calculated coefficients to the MMS4 processor for online magnetic compensation.
5. If the FOM value is unsatisfactory then the compensation procedure may be repeated to acquire a new set of coefficients



Features:

- Real-time compensation of aircraft pitch, roll, yaw and heading effects
- Up to four (4) high-sensitivity magnetometer inputs
- For helicopter-borne or fixed-wing systems
- 0.0002nT sensitivity and user-selectable sampling and data recording rates from 5 Hz to 50 Hz
- Robust and proven compensation algorithms