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RELEASE NOTES

DAARC500 (Gen-2)

DAS & Adaptive Aeromagnetic Real-Time Compensator

Host Firmware Release RMS11030-02-A

These release notes contain important information about the new firmware and how it will affect the performance of instruments in which it is installed. The notes outline functional enhancements, adaptive changes and, if applicable, problem corrections.

Please read this documentation carefully. References to pertinent sections in the product's user's guide are shown in square brackets.

Compatibility:

(D)AARC500 Front End – Requires firmware RMS1877-03-E or later

1. Dynamic compensation of on-board electronic (OBE) systems.

   The firmware incorporates new technology that allows real-time dynamic compensation of the effects of DC currents from OBE systems, such as radios, avionics, hydraulic pumps, intercoms, and other instrumentation. The compensation model is augmented by a suitable set of terms calculated by running a simple "calibration" procedure.

   The OBE compensation is carried out in real-time, for all the total-field and gradient signals in the system.

   OBE compensation offers important benefits to users – it simplifies operational requirements for survey operators, increases robustness and tolerance to electrical sources, and improves overall compensation performance. The technology will work both for devices with fixed-current and with variable-current draws.

   The new functionality is above-and-beyond the "conventional" (adaptive) real-time compensation in the DAARC500. Its use is entirely optional, and can be readily enabled/disabled as required under different conditions.

   [Note: The optional FE Analog Inputs option for the DAARC500 is required.]

   [User's Guide, Appendix K]

2. The firmware allows the custom-naming of SR (serial), ET (Ethernet, TCP/IP), and AN (analog) variables. The factory-default mnemonics (SR00–SR15, ET00–ET15 and AN00–AN31) can be changed to any user-defined (4-character) designation.

   The user-defined names are employed to identify the variables throughout the user interface – real-time graphic display, numerical display, etc. This simplifies the identification of specific signals (e.g., 'RALT', instead of 'AN01').

   [User's Guide, Sections 3.4.6, 3.4.8, 3.4.10]

3. The `monasc.txt` log file now includes, as an initial "header", system information identifying the Host and Front End subsystems. The information (which includes serial numbers, firmware revision numbers, maximum/minimum power-on temperatures, etc.) is useful to unambiguously identify the system to which a set of data files belongs.

   [User's Guide, Section 3.3.3]

4. Eliminated the restriction that in previous firmware releases forced the *standard* form of the numerical display, when the main program was re-started through a right-click on the desktop.

   With the new firmware the selection made in the user interface (*standard* or *custom* numerical display) is always observed, regardless of how the program is (re-)started.

   [User's Guide, Section 3.1.4]

5. Added protection to prevent a second instance of the main program from being started.

6. Added protection to prevent a second instance of the real-time graphic display from being started.