



RELEASE NOTES

DAARC500 DAS & Adaptive Aeromagnetic Real-Time Compensator

Host Firmware Release RMS1936-02-B

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 include information about enhancements, adaptive changes, and corrections to known problems. Please read this documentation carefully.

Compatibility:

(D)AARC500 Front End – Requires firmware RMS1877-02-A or later

1. The DAARC500 now allows access to its file systems through the 1-Gbps Ethernet port (J16), using the industry-standard File Transfer Protocol (FTP). This permits direct, fast transfer of data files to processing computers.
2. The firmware now supports both the standard RMS2938 DAS Analog Signal Conditioning Interface, configured for 16 differential channels, and the optional RMS2938-1 which is configured for 32 single-ended channels.
3. In previous versions of the firmware, the *current accumulation matrix* indicator shown on the main screen was misleading when one or more accumulation matrices had been loaded. This has been improved, by including information that allows identifying when the current matrix was loaded from the set `mat1.x – mat8.x`, when it was loaded from a (single) matrix other than those in that set, or when it was derived from the combination of several matrices.
4. The real-time graphic display now permanently shows mnemonics identifying each of the four traces.
5. Added a new command to the *remote control* interface to allow retrieval of a solution from any one of the accumulation matrices `mat1.x – mat8.x`.
6. After loading one or more accumulation matrices, the corresponding (LSQ) solution is now automatically calculated. In the past, calculation of the solution had to be requested explicitly.
7. When *adaptive compensation* is stopped, in addition to displaying results and statistics for the resulting calibration, the system now also displays a table comparing performance before and after adaptation. This is very helpful to operators for quickly evaluating the merits of the adaptive compensation.

8. Improved warnings and system behaviour when the recording medium is about to become full.
9. After re-initializing RLSQ initial conditions, a message to that effect is displayed in the text section of the user interface, it is sent out to the remote control port, and it is included in the text file `monasc.txt`.
10. The fiducial number [msec-after-midnight] recorded and transmitted in data packets, now resets to 0 after reaching 86,400,000 msec.
11. Adjusted the trigger point at which the handshaking signal used for serial data reception becomes non-active (negative). It provides a comfortable margin (> 5%) to allow for an external device to respond to the signal. The margin was unnecessarily conservative in previous versions of the firmware.
12. In calibration mode, while the block counter is decrementing (filter settling time) the number is now shown in red colour. Once it starts incrementing, it switches to green. The same applies in 80- and 160-Hz test modes.