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RELEASE NOTES

DAARC500

Adaptive Aeromagnetic Real-Time Compensator

Host Firmware Release RMS11030-04-H

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.

FULL* Compatibility:

(D)AARC500 Front End Firmware: *≥ RMS1877-05-D*

HW Revision: *≥ 2.10*

(D)AARC5XX Support Software: *≥ Apr/2025*

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[*]   *To asses partial compatibility with other releases, or for non-active products, refer to Application Note*
DAARC5XX-035 – (D)AARC5XX Compatibility Chart:
http://www.rmsinst.com/servicesupport/releasenotes/Compatibility%20Chart.pdf

1. Support for a new Front-End transfer function (MA825s). It complements a comprehensive collection of both pre-defined and customizable transfer functions, carefully designed for airborne geophysical applications. MA825s has a bandwidth directly proportional to the host sampling rate and excellent attenuation beyond the pass-band. This replaces a previously 'reserved' option.

   [Section 3.4.1]

2. The Event-3 tag in recorded and transmitted data packets may now, optionally, reflect host-subsystem-generated warnings (in addition to front-end-generated errors).

   When transmitted in real-time to a navigation system (Ag-Nav), this provides pilots/operators with a simple 'green-light/red-light' indication of system readiness.

   [Sections 2.4.1.2, 3.4.1]

3. Two cells in the custom numerical display now allow real-time monitoring of any system variable, with user-defined alarm thresholds and trigger modes. Complements similar functionality in place for monitoring quality-control signals for total-field magnetometers as well as the fluxgate magnetometer.

   [Section 3.3.2]

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4. The firmware now supports real-time calculation and display of the largest gradient measured along the calibration flight path by any one of the total-field magnetometer sensors in the system.

    This is a useful quality-control measure: excessive gradients during a calibration will inevitably lead to poor results.

    [Section 3.3.1]

5. To this point, the *line number* included in data packets from a navigation system has been captured by the DAARC500 via any one of the 8 general-purpose serial I/O channels available, with the full packet in turn recorded in the corresponding 's-file'. New functionality optionally allows the additional extraction of the line number and its recording in the 'd-file', which in some cases is preferable for subsequent data exporting and merging.

    [Sections 2.4.1.2, 3.4.1]

6. Miscellaneous cosmetic/streamlining changes.