RMS INSTRUMENTS
For Geophysical Exploration

RELEASE NOTES

AARC51

Adaptive Aeromagnetic Real-Time Compensator

Host Firmware Release RMS11093-01-E

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 RMS1877-04-E or later*

AARC5XX Support Software – *Requires v. Apr/2018 or later*

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1. Incorporated support for the next-generation processor used in AARC51 systems with hardware revision 2.00 or later (HW Rev. ≥ 2.00).

    [User's Guide: Section 1.1]

2. The maximum data output & recording rate (F_{SH}) has increased from 40 to 80 Hz in systems with HW Rev. ≥ 2.00.

    [User's Guide: Section 3.4.1.1]

3. Incorporated support for HW Rev. ≥ 2.10. Systems with this hardware include embedded barometric-pressure and temperature sensors. Two analog input channels (FE-Analog Ch.02 and 03), previously unavailable, are dedicated to this purpose. An additional two analog input channels, also supported in previous releases (FE-Analog Ch.00 and 01), remain available for general-purpose use.

    With HW Rev. ≥ 2.10 the embedded barometric pressure sensor may be used for Altitude-Controlled Calibrations (ACCs). Additionally, the signals associated with the embedded sensors are scaled directly in 'mbar' (Ch.02) and '°C' (Ch.03) in all numerical and graphical output through the user interface.

    [User's Guide: Sections 2.3.5, 3.5.3, 4.1.6]

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4.   The *margin* parameter associated with ACCs is now interpreted as 'counts' (or 'meters'), instead of '%'. This avoids potential ambiguities, for example, in the event of flight altitudes being below sea-level.

[User's Guide: Sections 3.5.3]

5.   Support of *sweep mode* for frequency-domain analysis functions. Sequentially processes and displays sliding windows of data (PSD, coherence), from start to end of a file. Very useful, for example, in troubleshooting installations when trying to identify short bursts of interference that may occur only occasionally.

[User's Guide: Section 3.9.3]

6.   New keyboard hot-key, 'CTL+ALT+Q'. Triggers an orderly and safe shutdown of the system. Accepted regardless of whether the system is idle or in run-mode.

[User's Guide: Section 3.8.2]

7.   Minor/cosmetic: The default value of the *gradient-gain* parameter for adaptive mode has changed from 120 to 1. The initial label 'Count' (in red) on the main window has changed to '0' (in black). Potential redundant replication of messages in the text section of the main user interface window is now avoided.