H&H Höcherl & Hackl
The electronic load

Release Notes for Firmware of H&H ERI Series Electronic Loads

Contact H&H to check possibility of firmware update for your specific device. Provide serial number.

Concerning Components:

AI: Analog Interface Board
DI: Data Interface Board
UI: User Interface Board
GI: GPIB Interface Board

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Firmware Release: AI2.0.3 DI2.0.1 UI2.0.2

Enhancements / Changed
- ➢ Optimized synchronization between voltage protection and ZV functionality.
- ➢ Optimized controlling of cooling fan.

Backwards Compatible
Hardware: Yes
Software: Yes

Firmware Release: AI2.0.2 DI2.0.1 UI2.0.2

Enhancements / Changed
- ➢ Optimized synchronization of device functions with remote shutdown.
- ➢ Optimized re-synchronization with external ADC after firmware update.
- ➢ Restricted control of USB logging function to local operation mode.
- ➢ Prevented start of USB logging controlled by the discharge function during execution of follow-up time.
- ➢ Added status "Fu logging" to the discharge main screen.
- ➢ Improved wrapping function in Technical Data dialog.
- ➢ Improved comparison of Toggle Settings in Mode dialogs.
- ➢ Enhanced Reset, Save and Recall commands.
- ➢ Enhanced cooling mode in Master mode.

Bugfixes / Corrected
- ➢ Corrected error in master-slave mode for checking type of slave devices.
- ➢ Fixed bug that in some cases unit "mmA" for the setting value was displayed.

Backwards Compatible
Hardware: Yes
Software: Yes

Firmware Release: AI2.0.1 DI2.0.0 UI2.0.1

Enhancements / Changed
- ➢ Added continuous execution of the data logging function for the main graph view.
- ➢ Added Main Screen and Graph Screen Settings dialogs to the menu content of slave devices.
- ➢ Added possibility to enter the relative adjustment points with one decimal place.
- ➢ Replaced temperature unit text "deg C" by "°C" in Cooling dialog window.

Backwards Compatible
Hardware: Yes
Software: Yes

Firmware Release: AI2.0.1 DI2.0.0 UI2.0.0

<u>Enhancements / Changed</u>
- ➢ Optimized controlling of cooling fan.

<u>Backwards Compatible</u>
Hardware: No – needs AI board with Rev. 5 or higher and corresponding regulation board
Software: Yes

Firmware Release: AI2.0.0 DI2.0.0 UI2.0.0

First firmware version for production series B

<u>New Features/Added</u>
- ➢ Added master-slave functionality.
- ➢ Added functionality for internal resistance measurement.
- ➢ Added functionality for calculation of calibration parameters.
- ➢ Added functionality for requesting slow or fast measurement values.
- ➢ Added functionality for getting status of memory positions for settings.
- ➢ Added parameters for faster and slow power regulation.
- ➢ Added functionality for diagnostic values.
- ➢ Added support for software bootloader.
- ➢ Added command/query for configuration of CAN termination.
- ➢ Added commands/queries for user-specific messages and signal tones.
- ➢ Added commands/queries for automated calibration.
- ➢ Added query for diagnostic values.
- ➢ Added help system for each screen in German and English language.
- ➢ Added screenshot functionality.
- ➢ Added rectangular functionality with function specific main screen.
- ➢ Added configurable Graph main screen.
- ➢ Added extended MPPT functionality.
- ➢ Added MPPT Graph main screen.
- ➢ Added a LIST function specific main screen.
- ➢ Added combined Discharge/List functionality.
- ➢ Added scaled value input for settings which are smaller than 1.0F (e.g. Rmax = 0.47 Ohm), these values are are now displayed with unit prefix "m" (e.g. 477 mOhm).
- ➢ Added Toggle Setting functionality for simple one-click changes on UI.
- ➢ Added displaying of max. resistance value in Technical Data screen.
- ➢ Added firmware versions and system unit mode to the exported setting file.
- ➢ Added Alarms dialog.
- ➢ Added validation of the internal memory positions before loading settings.
- ➢ Added possibility to update GPIB firmware during initial operation and in production mode.
- ➢ Added shortcut popup window.

<u>Enhancements / Changed</u>
- ➢ Extended measurement data buffer from 8,000 to 40,000.
- ➢ Extended number of setting memory positions.
- ➢ Extended discharge functionality.

- ➢ Extended list functionality.
- ➢ Extended trigger functionality.
- ➢ Extended error detection.
- ➢ Extended query for measurement values.
- ➢ Changed parameter list structure.
- ➢ Changed resolution of slow ADC from 18 to 23 bits.
- ➢ Changed resolution of fast ADC from 12 to 16 bits.
- ➢ Changed maximum value for list count (from 4.0E+09 to 999,999).
- ➢ Changed maximum value for dwell and ramp time (from 800,000s to 1,000s).
- ➢ Changed maximum value for sampling time (from 800,000s to 1,000s).
- ➢ Changed reset value for regulation state of voltage protection (from ON to OFF).
- ➢ Changed the directory name pattern for USB exports (new ERI_Sn12345).
- ➢ Extended sample time for USB data logging.
- ➢ Enhanced indication of RV and OV alarms in order to allow entering the menu during pending RV or OV conditions.

Bugfixes / Corrected
none

Backwards Compatible
Hardware: No - firmware only for ERI production series B
Software: No – see changes

Firmware Release: AI1.0.1 DI1.0.1 UI1.0.0

Enhancements / Changed
- ➢ Changed firmware startup sequence after hardware-specific changes on AI.

Backwards Compatible
Hardware: Yes
Software: Yes

Firmware Release: AI1.0.0 DI1.0.1 UI1.0.0

Enhancements / Changed
- ➢ Activated internal pull-up resistors for input signals of serial interface to optional GPIB components on DI

Backwards Compatible
Hardware: Yes
Software: Yes

Firmware Release: AI1.0.0 DI1.0.0 UI1.0.0

Initial Release