

## Release Notes for Firmware of H&H PLA 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

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## Firmware Release: AI2.3.1 DI2.3.0 UI2.3.1

### New Features/Added

- n. a.

### Enhancements/Changed

- Enhanced UI Test by buzzer test

### Bugfixes/Corrected

- n. a.

### Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.3.1 DI2.3.0 UI2.3.0

### New Features/Added

- n. a.

### Enhancements/Changed

- n. a.

### Bugfixes/Corrected

- Corrected external RAM initialization.

### Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.3.0 DI2.3.0 UI2.3.0

### New Features/Added

- Added functionality for external voltage/level measurement.
- Added functionality for external control with active power or resistance regulation mode.
- Added time and date configuration to System menu.
- Added USB Logging functionality.

### Enhancements/Changed

- n. a.

### Bugfixes/Corrected

- n. a.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.2.2 DI2.2.1 UI2.2.2

### New Features/Added

n. a.

### Enhancements/Changed

- Improved behavior of the user interface in connection with commissioning tester.

### Bugfixes/Corrected

- Corrected error in address calculation for CAN bus protocol response messages.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.2.2 DI2.2.0 UI2.2.1

### New Features/Added

n. a.

### Enhancements/Changed

- Extended driver for supporting substitute external flash on AI.

### Bugfixes/Corrected

n. a.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.2.1 DI2.2.0 UI2.2.1

### New Features/Added

- Added settings export to and settings import from a USB flash drive.
- Added functionality to modify float values in "Coarse" (when input is off, UV, OCP, UVP or WDP is active) or "Fine" (when load current can actually be controlled to the nominal setting) mode.

## Enhancements/Changed

- Improved blinking behavior during changing preset values.
- Some minor firmware module enhancements

## Bugfixes / Corrected

- Fixed bug which avoided the correct displaying of the function mode in the user interface after a remote function mode change.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.2.1 DI2.2.0 UI2.2.0

## Bugfixes / Corrected

- Corrected sporadic memory module failure.

## Backwards Compatible

Hardware: supports version 10 of PLA Analog Interface

Software: Yes

## Firmware Release: AI2.2.0 DI2.2.0 UI2.2.0

## New Features/Added

- Added list-synchronous data acquisition in digital remote operation.

## Enhancements/Changed

- Added functionality for indicating HSE error at startup.
- Added the possibility to edit all the available interface settings via the user interface.
- Changed the execution procedure of a diagnostic function.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.1.1 DI2.1.0 UI2.1.4

## New Features/Added

n. a.

## Enhancements/Changed

- Changed the calculation method of the encoder step widths for the immediate resistance level input in order to increase the accuracy with decreasing resistance level.
- Increased the display accuracy for the immediate resistance preset level.

## Bugfixes/Corrected

- Corrected bug which returned always the length of a list in current mode even for list mode voltage, power and resistance.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.1.1 DI2.1.0 UI2.1.3

### New Features/Added

- Added the ability to change the positions of the adjustment points for the calibration process of each signal.
- Added functionality for saving and reloading calibration parameter to/from an attached USB flash drive.

### Enhancements/Changed

- Improved displaying of Questionable Status signals in operating mode CV in order to display the Questionable signals on the right display only in main screen.

### Bugfixes/Corrected

n. a.

### Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.1.0 DI2.1.0 UI2.1.2

### New Features/Added

n. a.

### Enhancements/Changed

- Minor changes and enhancements

### Bugfixes/Corrected

- Corrected an error in the format function for the measurement and setting values

### Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.1.0 DI2.1.0 UI2.1.1

### New Features/Added

n. a.

### Enhancements/Changed

n. a.

### Bugfixes/Corrected

- Corrected an error in the UI autoranging function which stalled the UI firmware execution if the AI does not respond to UI requests during startup.

### Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI2.1.0 DI2.1.0 UI2.1.0

### New Features/Added

- Added MPP Tracking functionality

### Enhancements/Changed

- Optimized software regulators for operation with undervoltage protection
- Improved autoranging function for displaying setting, protection and measurement values

### Bugfixes/Corrected

- Corrected power-on value, reading and clearing of Standard Event Status

### Backwards Compatible

Hardware: Yes

Software: Yes

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

### New Features/Added

n. a.

### Enhancements/Changed

- Optimized handling of channel/request errors

## Bugfixes/Corrected

n. a.

## Backwards Compatible

Hardware: Yes

Software: Yes

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

### New Features/Added

- Added Master-Slave functionality with Subsystem SYSTem:UNIT

### Enhancements / Changed

- Changed keystroke analysis to "pressed" instead of "released"

### Bugfixes / Corrected

- Several minor bugfixes

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI1.2.0 DI1.2.0 UI1.2.0

### New Features/Added

- Added watchdog functionality

### Enhancements / Changed

- Enhanced debounce mechanism for RV and OV events
- Added functionality for reloading specific parameters leaving calibration/production state.

### Bugfixes / Corrected

- Corrected error in LAN socket initialization with user-defined port

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI1.1.0 DI1.1.0 UI1.1.0

## New Features/Added

- Added functionality for UI curves
- Added functionality for temporarily deactivating load input if overvoltage is detected
- Added alarm buzzer signal on overvoltage and reverse voltage conditions
- Added functionality for displaying "ERR", if an error event is received on the system bus
- Added Settings menu and Power On Settings.

## Enhancements / Changed

- Changed blinking behavior (display switching between full and half LED intensity)

## Bugfixes / Corrected

n. a.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI1.0.4 DI1.0.2 UI1.0.3

## New Features/Added

- Initial release
- Operating modes CC, CP, CR, CV
- List function with ramp times for 100 elements in all operating modes

## Enhancements / Changed

n. a.

## Bugfixes / Corrected

n. a.

## Backwards Compatible

Hardware: Yes

Software: Yes