

## Release Notes for Firmware of H&H QL Series Source-Sinks

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: AI1.3.0 DI1.3.0 UI1.3.0

### New Features/Added

- Added functionality for capacitor simulation.

### Enhancements / Changed

- Improved and restructured Errors screen.
- Added popup dialog for changing AC level, DC offset and frequency in main screens when AC output mode is set.

### Bugfixes / Corrected

- Fixed an error in the data viewer screen that prevented display of the measurement data.
- Fixed calculation of the resulting AC waveform in AC Waveform Graph dialog when a predefined DC offset was set.

### Backwards Compatible

Hardware: No, only from production series B

Software: Yes

## Firmware Release: AI1.2.2 DI1.2.0 UI1.2.1

### Enhancements / Changed

Enhanced initialization procedure of external DACs.

## Firmware Release: AI1.2.1 DI1.2.0 UI1.2.1

### Enhancements / Changed

- Optimized calibration procedure for external voltage measurement.

## Firmware Release: AI1.2.0 DI1.2.0 UI1.2.1

### Bugfixes / Corrected

- Corrected the evaluation and display of user manual version in Technical Data and Firmware Update selection dialog.

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

### New Features/Added

- Added UI-specific cycling function.
- Added functionality for measuring and calibrating external voltage.
- Added functionality for power and resistance regulation with external controlled level.

### Enhancements / Changed

- Removed Diagnostic dialog from the H&H Service menu.
- Updated download link for the manual QR code.

- Improved rounding of range end values for edit widgets.
- Updated display controller driver.
- Added displaying of externally applied immediate level value in main screen.
- Enhanced mouse wheel evaluation in order to run in GUIU task context.
- Added check and auto correction functions if output mode should be changed from AC to DC.
- Added confirmation popup window if actual function mode differs from desired modulator mode.
- Added notification in Graphical Data Viewer dialog if data sampling is not equidistant.
- Enhanced USB write operations to USB flash drives when running out of memory.

## Bugfixes / Corrected

- Corrected voltage measurement timeout error after reset command.

## Backwards Compatible

Hardware: Yes

Software: Yes

## Firmware Release: AI1.1.1 DI1.1.0 UI1.1.1

### Enhancements / Changed

- Improved reset procedure of the touch controller during startup.
- Enhanced user notification popup after changing from remote to local operation.
- Removed support for non-volatile diagnostic values.

## Backwards Compatible

Hardware: Yes

Software: Yes

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

Initial Release