



Batronix Magnova[®] Changelog

Update notes

Please note that when upgrading from firmware version 1.3.1 to any other version, the update process must be performed via a USB stick. It is not possible to update over the internet at version 1.3.1.

Version 1.4.1 (10th April 2025)

New functionality:

- Added the option to subtract one FFT from another. This enables normalization of frequency responses or removal of background (far-field) noise using a second channel.
- Added the indicator for the trigger time to the zoom view.
- Added a loading screen for the latter half of the boot process.
- Added a shutdown message and an option to require confirmation when using the power button.
- Added the SYSTem:DATE/TIME/TZONE, SYSTem:ERRor and CURSor:[X/Y]:PDELta SCPI commands.

Optimizations:

- SCPI queries for measurement results now return more digits.
- Increased the update rate of the FFT under certain conditions.
- Implemented measures to prevent freezes when accessing non-reachable or invalid SMB shares.
- Added Save/Load buttons to the measurement dialog.
- Added a button to delete all measurements for the selected channel.
- Improved the decode table layout.

Bugfixes:

- Fixed incorrect probe detection at device startup.
- Fixed the SCPI *CLS command not performing a full clear.
- Fixed missing probe divider in area measurements.

Version 1.3.4 (6th March 2025)

New functionality:

- Added :ACQUIRE:BANDwidth and :CHAN[N]:FILTer SCPI commands.

Optimizations:

- Significantly increased decoding speed and update rates when analyzing longer time periods / greater memory depths.
- Mouse pointer control is now combined for all connected mice.

- The grid label adjust to the smallest font size required for any label on an axis.

Bugfixes:

- Fixed domain name resolution issues for both static and DHCP network configurations.
- Fixed an issue where time offset changes were reverted under certain conditions in history mode.
- Fixed individual measurement SCPI queries returning binary data instead of ASCII.
- Fixed a bug where failed SMB share access could cause the device to shut down.
- Fixed various trigger types potentially missing or misinterpreting events based on incomplete consideration of hysteresis levels.
- Fixed issue in sub-sample trigger point interpolation leading to decreased temporal resolution of waveform alignment.
- Fixed some rare stability issues.

Version 1.3.1 (12th February 2025)

New functionality:

- Added Single-N mode.
- Added cursor support on Math/Reference channels.
- Math channels can now be referenced in formulas.
- Made the sound volume adjustable.
- Added support for the Magnova foot switch.
- Added configurable hotkeys for keyboard usage.
- Added the functionality to set the FFT RBW by time scale.
- Added adjustable font size for the grid labels.

Optimizations:

- The FFT RBW is always visible.
- Peaks in the Peak Table and marker in the Marker Table can be touched to center on them.
- Trend charts reset only when absolutely necessary or on Clear.
- Added SCPI commands for X/Y.
- The math vertical settings are much less restricted now.
- The rotary knob button function can now also be activated using the right mouse button.
- Clarified the level setting for UART.

Bugfixes:

- Fixed crash when canceling an update.
- Fixed new math channels not being displayed correctly.
- Fixed static network configuration.

Version 1.2.1 (18th December 2024)

New functionality:

- Added official support for SCPI-based remote control functionality.
Corresponding introduction and documentation is provided at <https://www.batronix.com/magnova/en/downloads>.
- Added support for multiple selection as well as cut, copy and paste file browser operations.

Optimizations:

- Updated default hysteresis for Runt and Window trigger types to 2.5% (previously 0%).
- Raised maximum baud rate for CAN/CAN-FD decoding.
- Various minor optimizations.

Bugfixes:

- Fixed freeze issue when connecting to SMB shares as a guest.
- Fixed analog channel probe divider handling for math channels.
- Fixed inaccuracies in decoded data timestamps when exporting to CSV.
- Fixed changes in spectrogram source not being applied to the full extend.
- Fixed analog channel probe divider usage for the FFT.
- Fixed issue where files were not displayed upon initially opening the file browser.
- Several minor bugfixes.

Version 1.1.7 (20th November 2024)

New functionality:

- Added smooth touch and mouse drag support for scrollable elements, for example the measurement selection.
- Added a textual indicator to show whether the Invert setting is active for analog channels.

Optimizations:

- Decoders now move without displaying a guide line when changing vertical position.
- Optimized component names in Information window for unambiguous identification of currently installed Firmware (Package) version.

Bugfixes:

- Fixed incorrect processing of active downsampling factor.
- Fixed Math channel grid labels not being updated under certain conditions.
- Fixed incorrect channel deskew parameterization at 1.6 GSa/s.
A prior changelog incorrectly stated this issue was resolved.

Version 1.1.3 (7th November 2024)

New functionality:

- Replaced Welch window with Gaussian window with regard to the FFT functionality.

Bugfixes:

- Fixed FFT RBW always corresponding to bin frequency, not considering window specific bandwidth factors.
- Fixed LIN decoder not showing decoded data.

Version 1.1.2 (30th October 2024)

New functionality:

- Added background offset compensation functionality significantly reducing offset drift.¹
- Added graphical icons to simplify selection of appropriate automatic measurements.
- Added FFT gate selection functionality (memory or screen).
- Added display of currently utilized FFT support points.
- Added optional signal inversion of analog channels.
- Added optional GND coupling for analog channels.
- Added quick selection and display functionality representing HiRes mode in the status bar.
- Added "Default Settings" functionality allowing all measurement settings to be reset without resetting all general device settings, as would be the case when using "Factory Settings" functionality.
- Added ability to force a hard shutdown by holding the power button for approximately 5 seconds.

Optimizations:

- Optimized touch area next to the rotary knobs to prevent unintended touch inputs when interacting with rotary encoders.
- Optimized reactivity with regard to aborting Roll-Mode acquisitions at very large time scales.
- Optimized reactivity in cases of frequent channel baseline / offset changes.
- Optimized responsiveness of (physical) buttons so that even very fast clicks can be considered.
- Optimized XY intensity grading.
- Optimized storage device compatibility.
- Various minor improvements.

Bugfixes:

- Fixed Period Area (+, -, Abs., General) measurements not providing valid results.

- Fixed specific measurement stability issues.
- Fixed incorrect channel deskew parameterization at 1.6 GSa/s.
- Fixed some rare display and stability problems.
- Other minor bug fixes.

Version 1.0.7 (25th September 2024)

New functionality:

- New math functions and constants: abs, log, phi, v2.
- New function: Search now supports the "window" search type.
- New feature: The loading of the last settings can be skipped at startup by holding down the "Run/Stop" button and the top rotary knob.
- New setting: By default, the fan does not turn on until the unit is fully warmed up at an ambient temperature of about 40°C (104°F). A new setting now allows the fan to be turned on earlier to reduce offset drift if needed.

Optimizations:

- Optimization: Used memory is now displayed instead of free memory for USB sticks and internal memory.
- Optimization: Trigger time is restored after the search.
- Optimization: After loading setups, the probe readout is repeated to adjust the settings.

Bugfixes:

- Bug fix: Roll mode starts immediately (previously it could be delayed depending on the settings).
- Bug fix: The trigger channel setting 'AC Line' is now also saved in the settings data.
- Bug fix: The FFT display could crash when combining the dBV display with a probe divider factor.

Version 1.0.6 (9th September 2024)

- Initial release version

¹ This feature will not be enabled by default for devices delivered with firmware versions prior to 1.1.0 since it requires specific preconditions. Corresponding customers will be provided a step-by-step guide to activating offset compensation for existing devices.