

Actisense

Actisense EBL Reader v3.28 Release Notes

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EBL Reader — Release Notes

Release notes for the EBL Reader Windows application.

Releases are listed newest first.

Version 3.28 — 2026-07-30

New features

- Source addresses, destination addresses and PGN numbers can now be shown in hexadecimal rather than decimal, so a log can be read alongside equipment that presents node addresses in hex — such as Maretron displays and their message viewer — without converting each value by hand. The option is Show Addresses as Hex on the Units menu, and is also on the right-click menu of the message list.
- The hexadecimal setting applies to the message list and message details, and is remembered between sessions. Decimal remains the default, and exported CSV files are always written in decimal, so existing spreadsheets and scripts are unaffected. Actisense Toolkit offers the same option, and each application remembers its own preference.

Version 3.27 — 2026-07-09

Bug fixes

- Fixed an issue where a live device that had not yet announced itself was left out of the replacement source addresses chosen for playback, so a replayed device could still collide with it. Devices that answer slowly, and devices that first appear after playback has started, were both missed: the addresses were decided once, at the moment Play was pressed, and never revisited. Playback now waits briefly on connecting for the network to settle before Play becomes available, and continues to adjust the replacement addresses as new devices appear during the replay.
- Fixed an issue where replaying a recorded log onto a live NMEA 2000 network could assign two logged devices the same new source address in the playback window, which is invalid and breaks the replay. Every replayed device is now given a genuinely unique address, even when a live device's original address is not yet visible on the connected bus.
- Fixed the source-address remap table in the playback window flickering and its scrollbar snapping back to the top as devices were discovered on the connected bus, which made it impossible to reach rows below the visible area. The table now refreshes in place and keeps its scroll position, updating a device's proposed address only when it actually changes.

Version 3.26 — 2026-06-15

New features

- Raymarine multifunction display CAN logs (.log files) can now be opened directly in EBL Reader. Each recorded NMEA 2000 frame is decoded and multi-frame fast packets (such as AIS and GNSS position data) are reassembled into their full PGNs, so the recording can be viewed, filtered, saved as an .ebf file and re-exported to any of EBL Reader's existing formats. Raymarine .log files are now selectable in the Open dialogue, and message timestamps are preserved at full millisecond resolution across the whole recording.

Version 3.25 — 2026-06-04

Bug fixes

- Fixed an issue where log files containing a large run of unreadable data (for example a serial capture that includes a period of baud-rate mismatch or line noise) failed to open with a "Buffer size too large" error, discarding the entire document. Such files now load fully, with the unreadable section shown as a series of small binary/text rows alongside the surrounding messages.

Version 3.24 — 2026-06-02

New features

- The Decoded CSV export can now roll decoded NMEA 2000 data up into a regular, evenly-sampled time-series table, controlled by a new "Time roll-up (sec, 0 = all data)" field in the export options dialogue; the default of 0 keeps the existing per-message output unchanged.
- Roll-up tables emit one row every N seconds across the whole log span, with one column per distinct parameter (split by PGN, source address, instance and type field — so for example water and air temperature from the same PGN appear as separate columns), carrying the last known good value forward and leaving cells blank before a parameter's first sample.

Improvements

- The Decoded CSV export now shows a progress dialogue with a working Cancel button instead of appearing to freeze, and the progress bar tracks the export smoothly to completion rather than pausing at 100%.
- The progress dialogue title now reflects the current operation — opening a file shows "Loading EBL file..." instead of "Exporting...".

Version 3.23 — 2026-05-12

Improvements

- The BEM Type column has been shortened so the column can be narrowed and more room is given to the message details. "BEM Response 0xA0F0::1" is now displayed as "BEMA0F0:1", with < indicating an incoming response and > an outgoing command.
- Column widths in the Message Details and main message panes are now preserved across filter changes and the User Units toggle.
- The File menu has been reorganised so that the new Open variants (Open Tx/Rx Pair... and the EBL export companion) sit immediately below the original "Open..." entry.
- NMEA 0183 sentences whose inner BST checksum fails to validate are now flagged as a bad-checksum row, rather than being silently accepted as a decoded BEM with garbage contents.

Bug fixes

- Per-element timestamps and message order are no longer scrambled in single-file rx logs or merged Tx/Rx pair views; the precise BST timestamps in `.rx.ebl` captures are now preserved correctly when interleaved with EBL TimeUTC tags.
- In combined Rx+Tx log view, the columns for PGN, source address and other message metadata are now shown correctly.
- BST messages that were split mid-frame by an injected EBL timestamp tag (occasionally written by ActisenseComms DLL and NMEA Reader v2.124) now rejoin and decode as a single BST row instead of two binary rows.
- BST 94 PC-to-gateway messages with no specific source address are now correctly filtered out of received traffic.
- String and other unitless fields are no longer rendered as empty when User Units mode is enabled.
- Integer and reserved-bit fields (for example "ISO Self Configurable" in PGN 60928 ISO Address Claim) now render correctly in release builds.
- BST-BEM Hardware Info field 7 (Hardware Version) now renders correctly for newer products using the PCB/BOM format; legacy NGT-1 and NGW-1 encoding is preserved unchanged.
- Tx/Rx pair merges no longer emit a stray `0D 0A` row after every NMEA 0183 sentence in the merged file.
- NMEA 0183 rows now populate the Type column when the host log uses NMEA 2000 or BST headers (mixed-protocol logs); standard sentences read "NMEA0183" and Actisense BST-encapsulated wrappers read "PARLB".
- `!PARLB` sentences are now decoded and presented like other BST-wrapped messages, with a toggle in the details pane to drill between the inner BEM fields and the raw `!PARLB` sentence bytes.
- Merged Rx+Tx log files now correctly preserve NMEA 0183 messages as raw NMEA 0183 on disk instead of wrapping them in an EBL BST raw-frame envelope.

Version 3.22 — 2026-04-24

Bug fixes

- Columns added in newer releases (for example the ASCII byte column from v3.14) are no longer hidden after upgrading from an older version. The Message Details pane now detects a stale saved column profile and rebuilds it so every current column is visible by default.

Version 3.21 — 2026-04-22

Bug fixes

- The Source Address Tracker now refreshes its UI with new source-address data, instead of appearing not to work.

Version 3.20 — 2026-04-21

New features

- **Tools > Playback** — replay the active document's CAN frames onto a live bus via a USB/serial Actisense gateway or a TCP endpoint. The dialog provides connection setup (TCP or Serial), output format (BST95 or ASCII), playback speed (0.5x, 1x, 2x), Loop, Rx/Tx direction filters, a progress bar, and a source-address / NAME remap table. Playback respects the active document filters, so the user can curate exactly what gets replayed.
- **NAME-spoof on Playback (enabled by default)** — when the logged devices are still present on the target bus, replaying their Address Claim could previously confuse listening device maps. Playback now rewrites the System Instance field in each replayed PGN 60928 to a distinct value so each replayed NAME is unique against the live bus. The proposed remap (Original Source Address, New Source Address, New System Instance) is shown in the remap table and can be edited before starting playback.
- **Live bus-state capture on Connect** — Playback fires a global PGN 60928 address-claim request on Connect and listens on the reverse stream, so the remap proposal reflects what is actually on the bus when Play is pressed.

Version 3.19 — 2026-04-21

New features

- EBL Reader can now display the embedded 64-bit EBL timestamps for debug purposes.

Version 3.18 — 2026-04-19

New features

- File > Open Tx/Rx Pair — pick one of a `.rx.ebl` / `.tx.ebl` pair, the other is located automatically and a timestamp-ordered `<name>.merged.ebl` file is produced and opened.
- Tx rows are tinted light blue and Rx rows pale green in the message list.
- Added View > Hide Tx Messages and View > Hide Rx Messages toggles.
- Direction is now persisted in the merged file via a new EBL metatag, so reopening a merged file later still shows the row colours.

Version 3.17 — 2026-04-19

New features

- Added a time-range filter to limit the visible messages to a selected period.

Improvements

- A progress dialogue is now shown while a file loads.

Bug fixes

- Fixed column-sizing issues in the main document pane.
- Fixed NGT-1 rx/tx timestamp display issues.

Version 3.16 — 2026-04-18

New features

- Added an "Open Web Browser" button to the toolbar, which launches the user's default browser.

Bug fixes

- Stability release: addressed a range of stability issues identified during routine review.

Version 3.15 — 2026-04-16

Improvements

- EBL file export now defaults the filename to `<original>_modified.ebl` to avoid accidentally overwriting the source file.
- The right-click decoded CSV export now shows the export options dialog (user units, GPS position columns, GPS source, null handling), matching the File > Export path.

Bug fixes

- Fixed a potential crash when saving a document if the underlying file operation failed.
- The right-click export no longer proceeds with an empty filename when the user cancels the Save dialog.
- The file-not-found message no longer shows uninitialised error details when opening a missing file from the recent files list.

Version 3.14 — 2026-04-16

New features

- Added an ASCII column to the array byte display, showing printable characters or standard control code names (NUL, SOH, DLE, etc.) alongside the existing Hex and Decimal columns.
- Added an EBL file export option, allowing the current filtered view (respecting PGN, source-address and time-range filters) to be re-exported to a new **.eb1** file. This makes it straightforward to curate EBL files for simulation purposes.

Version 3.13 — 2026-04-15

New features

- Added an N2K ASCII export format. Exports complete reassembled NMEA 2000 messages in the Actisense N2K ASCII format (**.txt**). Fast-packet frame parts are skipped; only complete messages are exported. Respects all active filters.
- Added a decoded CSV export options dialog with user units, GPS position columns, GPS source selection, and null-data handling.
- Added an optional diagnostic log for decoded CSV export to aid troubleshooting. A **.n2kdecoded.log** file is generated alongside the CSV when enabled.

Improvements

- Decoded CSV position columns now use clean numeric values (degree symbol stripped) with headers "Latitude (Degrees)" and "Longitude (Degrees)" for spreadsheet compatibility.

Version 3.12 — 2026-04-14

New features

- Added PGN group filtering to the filter pane, allowing entire categories of PGNs (Navigation, Engine, Electrical, Environmental, AIS, Entertainment, System/Network, Proprietary) to be enabled or disabled with a single checkbox. Group checkboxes show the PGN count per group and stay in sync with individual PGN filter changes.
- Added user-unit options to display values in units other than the NMEA 2000 defaults.
- Added a toolbar button to toggle user units on or off.

Bug fixes

- Fixed latitude/longitude unit display; three options are now offered: Degrees, Degrees/Minutes, and Degrees/Minutes/Seconds.
- Fixed latitude/longitude NMEA 2000 unit display for radians.

Version 3.11 — 2026-04-10

New features

- Added source-address filtering to the filter pane, allowing messages from specific devices on the NMEA 2000 network to be isolated. Works in combination with the existing PGN filter.
- Added a CAN Frame ASCII export format.
- Added decoding for NMEA Complex Request, Command and Acknowledge (PGN 126208).
- Added the ability to select the timestamp source from alternatives present in the file.

Improvements

- The dual filter grid panes have been replaced with a unified tree control using native checkboxes for PGN and source-address filtering.
- MDT CSV export is now a separate export option, only shown when the document contains MDT data.
- Internal element storage has been reworked to use BST container architecture, enabling messages to be displayed at any decode level.
- Optimised EBL export performance for large files.
- Added decode support for BST-N2K D0 messages.
- Added support for loading content generated by ESP32-based devices.

Bug fixes

- Raw BST D0 files (without EBL tags) are now correctly decoded.
- Fixed combined data file loading and file type detection.
- Fixed errors in CSV export of MDT data.
- Fixed field rendering for PGN 129540 (GNSS Satellites in View).

Version 3.10 — 2026-03-31

New features

- Added a wrapping-level control with toolbar toggle buttons, so the user can choose the decoding depth shown for BST-BEM messages sent over NMEA 2000.

Improvements

- Remote commands now display source address, destination address and PGN in the message view.
- Added message-type rendering for MDT and BST-FT commands.

Version 3.9 — 2026-03-30

New features

- Added ASCII CAN frame decoding, with provision for decoding other ASCII types.

Improvements

- Improved rendering of NVS values.
- Extended BEM type rendering.

Version 3.6 — 2025-08-11

Improvements

- The View menu now reads "Show..." rather than "Hide..." for fast-packet filters, for clarity.
- Fast-packet PGNs are removed from the filter view when both types of fast-packet message are disabled.

Bug fixes

- The fast-packet PGN filter now correctly hides both reassembled fast-packet messages and individual fast-packet frames when both options are disabled.

Version 3.5 — 2025-08-01

New features

- Added a context menu on the message view that allows a time offset to be selected. The offset applies to both the document view and the exported file.

Bug fixes

- Fixed a further instability when changing PGN filter settings rapidly.

Version 3.4 — 2025-07-28

Improvements

- Fixed display scaling on high-resolution screens, including when dragging windows between screens of different resolutions.
- Improved handling of large files, especially the large composite files produced by the Open Multiple option.
- Maximum file size has been increased to around 500 MB, subject to available memory. The largest files can only be opened by the 64-bit build of EBL Reader; the 32-bit build has a smaller memory limit.
- More efficient handling of indexed elements.
- CSV export is now capped at 1,000,000 lines to keep exported files loadable in spreadsheet applications. The `.xlsx` format has a 1,048,576-row limit per sheet; to export more data, apply view filters to reduce the message set before exporting.

Bug fixes

- Fixed a crash that could occur when changing the size of the view window due to filter changes near the end of a file.

Version 3.3 — 2025-07-26

Improvements

- The installer no longer offers to launch EBL Reader after installation. Launching from the installer ran with elevated permissions, which prevented Windows from showing network drives. Use the Start menu or desktop shortcut instead to retain full access to network drives.
- Message timestamps are now expressed as seconds from the beginning of the file with millisecond resolution.
- Internal BST timestamps recorded in the EBL file are used in preference to the original PC clock time, giving much more precise per-message timestamps where the data supports it.
- The help system is now HTML-based, avoiding the previous accessibility issues over network drives and enabling the same help to be published online.
- Stability and memory-footprint improvements when working with large EBL files.
- Improved the cancellation of a long file parse: the user can close the document window to cancel before the file has finished loading.

Bug fixes

- Fixed the per-frame CAN packet filter when PGNs are deselected.

Version 3.2 — 2025-07-26

Bug fixes

- Closing EBL Reader (or the file window) during a large file read no longer hangs the application; a cleaner abort method has been added to the parser.
- Fixed an issue with the EBL Reader filter not working correctly.

Version 3.1 — 2025-07-26

Improvements

- Disabled the "Recently used menus" option in the menu bar, so all menu items are shown.
- The composite output file name now includes the number of files in the composite (for example `Composite_Of_2_Files_20250709_112842`) along with a timestamp.
- A message box is now shown at the end of an Open Multiple operation, listing the composite file produced.

Bug fixes

- Fixed a crash when an EBL file contained sentences whose Sentence or Field definitions were missing from the Actisense NMEA 0183 database.
- NMEA 0183 sentences and fields with missing definitions are now displayed with the missing field definitions shown as their original strings with no type or units information.
- Fixed an issue where opening a missing file caused EBL Reader to show incorrect information and left the missing file on the Most Recently Used list.

Version 3.0 — 2025-07-26

New features

- First v3 release: rebuilt against version 3.003 of the NMEA 2000 database.

Bug fixes

- Fixed a crash when an EBL file contained sentences whose Sentence or Field definitions were missing from the Actisense NMEA 0183 database.
- NMEA 0183 sentences and fields with missing definitions are now displayed with the missing field definitions shown as their original strings with no type or units information.