



Home » Lafayette Instrument » Lafayette Instrument LXEdge next generation Polygraph Software

User Guide ₹

Contents [hide]

- 1 Lafayette Instrument LXEdge next-generation Polygraph Software
- 2 Specifications
- 3 Frequently Asked Questions
- 4 Documents / Resources
 - 4.1 References



Lafayette Instrument LXEdge next-generation Polygraph Software



Specifications

• Product Name: LXEdge

• Version: 1.2.7.11

• Release Date: July 30, 2025

 Compatibility: PFs collected in LXEdge 1.2 and later will NOT open on older versions of LXEdge

Warning- Polygraph Files (PFs) collected in LXEdge 1.2 and later will NOT open on older versions of LXEdge. PFs collected on earlier versions of LXEdge will be able to be opened and reviewed in LXEdge 1.2 and later.

Major Updates

None

Minor Updates

- Allow recorded audio/video to be reviewed without needing to close and reopen the
 PF
- Use the global, instead of PF, setting for "Default Scorer". This allows someone reviewing PF on a different system to default to "Reviewer".
- Added ability to delete series if it does not contain charts
- Removed the "Delete", "Archive", and "E-mail" options from the 3-dots menu inside a PF
- Modifications related to Centering
 - Show smaller arrows that indicate the direction of the centering for charts created starting with this version. Charts created in earlier versions will now show a single line with arrows on both ends.
 - Significantly reduce the averaging time in the centering calculation
- Reimplemented the "Center All" button. Added setting that allows this to be shown or hidden
- For Paragon and Paragon X DAS, reduce the displayed trace amplitude by a factor of 6 for the PGauge and Aux1 sensors.
- · Updated many behind-the-scenes packages

Bug Fixes

• The chart would sometimes briefly pause when offsetting or responding to a question.

This could lead to dropped data around this time.

- Indication of which subtab was selected had stopped appearing on the Templates and Settings views.
- When running a chart, long question set names would cause scrolling to be needed to see all the question boxes.
- Changes to the Personal History and Series template could be lost following specific steps.

LXEdge Release Notes

- The chart would fail to open if it was created with two DAS units selected, but at least one of them was disconnected.
- Unexpected Series folders would appear in the Templates folder inside the user's LXEdge Directory.
- Related to the conversion from 1.1 to 1.2
 - Conversion would fail for a PF that does not contain charts
 - Conversion would fail when double-clicking on an .lxw file inside PF that requires conversion. The fix is to stop creating a backup of the PF before conversion.
- Related to NCCA Export and Import
 - NCCA export files for charts that had been converted from version 1.1 to 1.2 could have unusual sample rates o Properly handle missing data points in export and import o Slight timing differences from the original could occur when importing from an NCCA export file for the chart

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- In very rare cases, a section of non-critical chart data would be corrupted. This would cause a chart to fail to load. This was observed a single time, and the chart was able to be manually repaired. The bug allowing this has been fixed.
- Under rare circumstances, LXEdge would crash when attempting to select the question list for a chart.

- Under rare circumstances, LXEdge would crash with an error log indicating ESS could not be loaded.
- When importing from an NCCA export file, the EDA automatic trace was incorrectly being refiltered.
- When creating a new PF, it was possible to accidentally create and then navigate to a second new PF.

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Major Updates

- Added support for Paragon and Paragon X hardware.
- Added the ability to import question sets from Polygraph Professional software.
- Added the ability to enter notes associated with the PF.
- Show tooltips when hovering over series or charts in the PF navigation. These give information on the question sets used in the charts. Previously, the only way to view the question set associated with a chart was to navigate to the chart.
- Add the ability for the user to be notified when a new version of LXEdge availability I.A check for an updated version is made when the software starts.
 - Checking for an updated version is also made when going to the "About" page.
 - Can be enabled or disabled in settings.
 - Provides a link to the download page if an update is available.

Minor Updates

- Disallow trace centering from question onset until the end of the response onset window. This restriction was inadvertently removed in version 1.1.5.66.
- Added to the Upload tab the ability to modify stripping settings.
- For ESS scoring of EDA, change the values associated with minus and artifact selections to -2 and +2, respectively.
- On the home page, reduce the width of the Date column and increase the width of the PF Name column.
- Move the "Examiner" / "Reviewer" label to the top in the "Question Scoring View" on

the chart.

- Allow renaming when archiving again a PF that had already been archived.
- Improvements to behavior related to expanding series and visibility of the "+" button for adding items to series.
- Added a setting that allows questions to be right justified when running and reviewing charts.
- Added a setting that allows caliper line thickness to be adjusted.
- Lock the PF when creating the archive.
- Mitigated lag that could occur when onsetting questions.
- Added a setting that allows the question timer to count up instead of down.
- Moved the Drug Reference info from the About tab to the Polygraph Drug Reference tab.
- Updates to Spanish translations.

- Icons would sometimes be missing for the "Notes", "Recorded Chart info", and "Sensor" buttons in the upper right corner of the chart.
- Resolve some issues with combined charts; removed tools from combined charts.
- When copying the entire templates folder to a different location, some PF templates could not be used because the software was looking for sub-templates (e.g., Personal History) in the previous location.
- Audio/Video recording would be stopped when navigating to the templates tab while inside PF. Resolved by preventing navigation to the templates tab while in PF.
- When trying to start a chart while Personal History was incomplete, the Personal History would be opened, but the related item in navigation would not be selected.
- When a series contained both Acquaintance and non-Acquaintance charts, some scoring-related actions might not be able to be performed as expected.
- Clicking on the slider for adjusting gain would move the value to either the minimum (0.1) or maximum (0.99) value.
- On a smaller screen, information could be displayed too high to be visible.
- An extra number appeared after the question set names in a PF template.
- Deleting an unrun chart within a PF could lead to "Chart could not be found" errors or unexpected chart numbering.

- When editing a PF template, using the button to close the question set would not prevent the chart from being added to the template.
- Under certain conditions, charts would open and zoom in onnn n other than 100%.
- A crash could occur when attempting to do actions like copying or archiving multiple times.
- A crash would occur when ending the chart and clicking on "OK" after already having ended the chart.
- In certain cases, NCCA export could cause a crash or create files with unexpected missing datapoints.
- EDA data in the NCCA export was not correct. This led to incorrect data when importing from NCCA export files. Test of Proportions could generate incorrect results because of incorrect determination of the number of artifacts and/or the number of relevant and comparison questions.

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Major Updates

None

Minor Updates

None

- Intermittent issues while running charts (were resolved when reviewing charts):
- Question ID and annotation would sometimes not appear.
- Large sections of the chart would be shaded gray (or some other color corresponding to settings).
- Questions would sometimes appear out of order in scoresheets.
- Issues related to reviewing the chart at a different time from when it was created:
- Centering events on traces might not appear, even though the associated annotation

would be present.

 Charts could appear to load very zoomed out, and questions might not zoom in when clicking.

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Major Updates

None

Minor Updates

 Changed LX6 initialization to default EDA circuit to constant current (GSR) versus constant voltage (GSC).

Bug Fixes

None

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Major Updates

None

Minor Updates

- Added heart and respiration rates to caliper statistics.
- Improve handling whenthe device is disconnected while previewing the chart. Users can no longer start a chart without sensor data present.

- Chart data could be lost in rare instances on certain machines due to the failure of sensor data to merge at the conclusion of running the chart. Resolved by:
 - Fixing some potential underlying causes
 - Keeping the .bin file containing the gridded data, even after the merge, should be complete
 - Checking for and resolving previous .bin file errors when loading the chart
- Artifacts could appear (rare, but frequency dependent on PC performance) in all sensors simultaneously. Resolved by using timing based on packet number from DAS when reviewing charts.
- If a question set was found to be missing while navigating to a chart, all charts for that series were reset. This could lead to an inability to review completed charts.
- A series in a PF template containing two or more different question sets would not work as expected when running a PF using this template.
- Clicking on the gain slider would move the value to either the minimum (0.1) or maximum (99.9) value.

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Major Updates

None

Minor Updates

- In the Scoresheet "Scoring Result" dropdown, changed "Reactions" to "Response".
- Added "Scoring Result" and "Countermeasures" to the Scoresheet PDF printout.
- Disabled adding notes during question onset. Adding notes at this time could prevent
 the Onset button from being re-enabled or cause the Onset shading for the question
 to persist through the duration of the chart while running.
- Enable stripping by default when adding new fields to Personal History or Series templates.

- When quickly navigating in PF, the last change to Personal History or Series
 information could be lost. Would sometimes lead to unexpected messages related to
 incomplete Personal History when starting the chart.
- When reviewing a chart with more than 7 minutes and 9 seconds of data, sensor data
 after this time would not be displayed. The data are still present in existing charts and
 will appear when opening in this release.
- When reviewing a PF created on a PC set to a different time zone, no values would appear for the RLE and PPG PA tools.
- A chart would fail to appear when navigating back to the chart after navigating elsewhere in the PF and then back to the same chart.
- On some systems, adding notes to a chart after confirming "end chart" would occasionally cause all sensor data to be lost.
- Issues when the language is set to Spanish
 - Examinee names did not appear in the PF grid on the Home Page
 - NCCA import failed
- In rare cases, archiving a PF that had been converted from 1.1 to 1.2 would cause
 LXEdge to shut down without warning.

LXEdge Release Notes

- In rare cases, when combining charts created in earlier versions of LXEge, some sensor data from one chart would push back the data from the next chart.
- Running a chart without traces appearing would cause a crash and subsequent inability to load this chart.
- PF conversion would fail for a PF containing an empty chart.

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Major Updates

- Major overhaul of sensor data processing; required significant changes to other areas.
- Significant improvements to chart performance related to the overhaul
- Sensor data is now stored in a gridded format

- When opened, PFs created in earlier versions will be converted to the new format.
- Added calipers
- Use updated algorithms in the calculation of pneumo line excursions used in calipers and the RLE Tool.
 - Excludes 3 33-second intervals centered on the question response
 - Based on filtered data (as displayed on the chart)
- Able to record from more than one DAS at a time
- Modifications to Sensor Settings
 - Now associated with specific hardware
 - Moved to the Devices tab
- Renamed some Sensors and Tools. Some of these changes will only be seen when newly installing or after deleting the Settings file.
 - "PLE" was changed to "PPG". This includes renaming to "PPG Pulse Amplitude"
 - "Abdominal Respiration" was renamed "P1"; "Abdominal RLE" was renamed "P1
 RLE"
 - "Thoracic Respiration" was renamed "P2"; "Thoracic RLE" was renamed "P2 RLE"
- Custom Reports
 - Added "Reports" tab to the Templates view. While inserting merge fields to a custom report, the Personal History and Series can be specified, allowing custom merge fields to be used.
- Scoresheet Printout
 - PDF is created, displayed, and saved in attachments. Automatically named as either "Examiner" or "Reviewer" along with a timestamp..
- LXCAT does not work with this version. Plan to reimplement in the future when needed.

Minor Updates

- Add the ability to show data centered or uncentered
- Add the ability to view Automatic and Manual EDA data at the same time
- Options for "Save File Data Rate" changed to 30 Hz, 60 Hz, 90 Hz, 180 Hz

LXEdge Release Notes

- Improve behavior related to adding a note to a chart. Double-clicking on the chart now brings up the note ready to start entering text without requiring another click inside the note.
- Add settings that allow the locations for the "Templates" and "Archives" folders to be specified separately from the "LXEdge Directory".
- Add a setting that determines whether to show or hide the examinee names on the Home page.
- Add a setting that determines whether to show or hide the default templates on the Home page.
- Add a setting that allows specifying the color annotations displayed on the chart.
- Add an option to strip the question set name.
- Photos taken using the recorder are always added to the PF, even if the Photo tab is not currently in view.
- Move biostatistics (., E resistance, heart rate, cuff pressure) below the chart.
- Reduce the default amplitude for simulator traces.
- Display a splash screen while LXEdge opens.

- The default question set "LEPET 4RQs" did not contain a sequence.
- The "3 dots" menu on the series could not be used when the media window was associated with the chart.
- The "Cancel" button in the "Save As" dialogue in question set editor incorrectly did the same thing as the "OK" button.
- In the Question set editor, the "Save" button would incorrectly be disabled after using the "Save As" button. This could lead to unsaved changes to the question set.
- While selecting question sequence(s), clicking on "Select" multiple times could lead to the addition of extra charts.
- A software crash could occur, or changes entered for Personal History and Series could be lost if making rapid changes and potentially navigating away and back.
- Chart playback could continue for several minutes after the end of the chart.
- Dragging the chart so the right edge of the chart was in negative time would cause media playback to be out of sync with the chart.
- The EDA and cardio statistics would continue updating even after the end of the chart.

• A crash could occur when attempting to archive under specific circumstances.

• On some systems, biostatistics would update inconsistently or even completely stop

updating.

• When set to Spanish, the incorrect version and copyright were being displayed and

stored with charts. Also, PFs could not be created or loaded.

Released: April 9, 2025

Minor Updates

• Completely removed the "Center All" button and function. It had been inadvertently re-

enabled while running charts starting in version 1.1.5.66.

Bug Fixes

When reviewing in a later version a chart that had been created in a version before

1.1.6.23, questions and other annotations would be missing from the chart after the

time of a "Center All".

Minor Updates

Add a check for missing media (audio and video) files when PF is opened. Previously,

this check was done when navigating to charts.

Add time zone information to the Chart Info.

Prevent closing LXEdge while a PF is open.

Bug Fixes

Audio would not play back for charts reviewed on a computer set to a different time

zone than the computer the charts were recorded.

• Charts could be displayed in an unexpected order..

• A message from the replay system about an incomplete attachment could occur when

navigating among items in the PF while recording was in progress.

• When the "Very Low" audio setting is used, the " initial" file is ing converted and

deleted if the PF is closed while audio is still being recorded.

 Through rare circumstances, the last minute or so of sensor data were not being displayed for all 3 charts in a PF.

RELEASE NOTES: LXEdge Version 1.1.6.23

Released: March 14, 2025

Major Updates

- Significant refinement to printing
 - Add the ability to split a printed chart into multiple pages. The setting determines
 whether to split or to shrink the chart to fit on one page.
 - Include a header with details of contents on every page.
 - Improve overall formatting and appearance.
 - Add the ability to print the questions asked, in the order they were asked, for each chart.
 - Removed the button that would print only the currently displayed chart.
 - Print process creates a PDF that is placed in the PF's attachments folder.
- Improvements to user experience related to enabling RLE and PPG Pulse Amplitude tools.
 - Tools can now be enabled on the Sensors tab in settings, where they should stay as set.
 - Tools (and all other sensors) can (and should) be enabled and positioned by going to the Chart tab with no PF open. Changes here impact new PFs going forward, but will not stay set retroactively.
 - If tools are enabled, they will appear right away when reviewing a chart.
 - Modified color scheme for the RLE and PPG tools. For a recommended score o, the dot will be red with a red border and red font. For a recommended score of +1, the dot will be green with a green border and green font. For a recommended score of zero, the dot will be white with a blue border in the PPG tool. For the RLE tool, a recommended score of zero will have a white dot with a blue border and blue font if the R/C ratio is less than 1.2:1, or gray with a blue border and blue font if the R/C ratio is greater than 1.6:1.
- Related to Audio/Video settings

- Added "Very Low" audio quality option. Creates files with sizes of about 0.2 MB / minute. Implemented using ffmpeg to shrink audio files after recording is complete.
- Show the audio quality options when capture mode is set to Audio for a camera.
- Resolved some issues with audio quality settings not being handled correctly.

Minor Updates

- Removed the Pneumo Line Length sensors.
- Change the "Review Video" function to "Review Media" and allow playback when only audio files are present.
- Create the file association between .lxw files and LXEdge as part of the install process. Previously association was created the first time LXEdge was started.
- Related to templates
 - In user-defined question set templates, only show the "New Folder" dialog when right-clicking on a folder..
 - Prevent dragging of folders in user-defined question set templates
 - Improve handling of attempting to access templates and folders that were deleted using File Explorer
 - Improve handling of some rare scenarios related to template naming and selection
 - Removed the "Clear Search" hotkey
- Related to PF Tools
 - Change the term "zip" to "archive".
- Changed the algorithm used to create checksums used in detecting changes to attachments and media files. The previous algorithm could be blocked in more secure environments.
- Reorder actions that happen when pressing the spacebar to mitigate potential delays.

Bug Fixes

When attempting to open a chart with audio/video, an error message could incorrectly
appear indicating the recording could not be used because it had been modified since
attaching. Was related to closing a PF without stopping recording.

- While running or previewing a chart with more than 5 minutes of chart visible, the
 traces would not reach to the right edge of the chart. This was observed both when
 using a high-resolution 4k monitor and when stretching LXEdge across two monitors.
- EDA and Cardio details would sometimes be missing in the "Chart Info" associated with a chart.
- When editing a question set template, changes to ID induced by changing the Question Type were not immediately reflected in Sequences.
- Attempting to add a new question set template folder would fail when the LXEdge Directory was set to a location on OneDrive.
- When opening a PF, the item selected would not always match the item displayed.
- Bugs related to the Spanish version
 - The expand button in the PF template editor was not visible
 - Text in the header on the settings page was not updated right away
- Bugs related to combining charts
 - A crash would occur when attempting to Combine Charts when no charts were present..
 - LXEdge would attempt to display the video associated with the Combined Chart.s
- Playback of text-to-speech would fail intermittently on some systems.
- Media playback would sometimes fail to start or stop when expected.
- Duplicate warning messages would appear when navigating away from a chart with unsaved changes to questions.
- Related to PF Tools
 - Deleting a PF using PF Tools would occasionally fail if the user had previously played media associated with the PF.
 - o Crashes would sometimes occur when using the PF tools to e-mail a PF
- When editing a Personal History or Series template, clicking on "Close" or "Save" with an empty option present in a dropdown list field would cause the field to be completely deleted.

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- When editing a Personal History or Series template, clicking on "Close" or "Save" with an empty option present in a dropdown list field would cause the field to be completely deleted.

LXEdge Release Notes

- Multiple "_temp" and/or "_moving" files would sometimes be present inside a PF and/or its subfolders.
- On the Audio/Video tab, the Record checkbox would not be visible for microphones

with very long names.

 A crash could occur when quickly navigating away after ending a chart. Resolved by preventing navigation until the chart was finalized.

Major Updates

- Changes related to the "LXEdge Directory" setting:
 - The setting now applies to all users of a computer instead of just the current user.
 - Default is still set to the user's "Documents" folder, but LXEdge now properly accounts for file migration if the user later enables OneDrive.
 - The setting can now only be changed using the folder-selection dialogue.

Minor Updates

- Deleted PFs and templates are now placed in the Recycle Bin instead of being completely removed from the computer.
- Added file association between PF template (.lxw) and LXEdge. This allows doubleclicking on the .lxw file inside a PF to open the PF in LXEdge.
- Simplify steps for creating an Archive in PF Tools by removing the "Destination Location" textbox. Minor changes to text on PF tools.
- The clear search button (blue "X") is always shown in the Search bar.

- Resolve the issue that the "LXEdge Directory" setting would revert to the default value when installing a new version of LXEdge.
- Resolve the issue that enabling OneDrive could make it appear like templates and PFs were missing.
- Resolve the issue that the playback of text-to-speech in charts with the Speech Synthesis "Record to file" setting enabled would fail.
- Resolve the issue that running charts out of order would lead to the inability to open charts because of a chart internal inconsistency error.
- Resolve issues related to combining charts:
 - When combining charts created in earlier versions of LXEdge, the labels for all charts would be "Series 0".

- Rarely, traces could appear unusual near the beginning of a chart. This was primarily an issue with charts recorded using simulator data.
- Resolve issues related to templates:
 - When using the "Change" buttons while editing a PF Template, the information displayed would not update as expected.
 - On the Home Page, the amount of information displayed in the PF Template preview could change when navigating to different tabs and back.
 - The template list was not being updated as expected when deleting or renaming a template.
- Resolve issues related to template search:
 - Search would not clear when navigating from one template tab to another. This
 could make it appear that templates were missing.
 - Search would not work as expected after clearing a search that had only shown a single result.
- Resolve unexpected confirm dialogue and potential crash when deleting PF internally from the Navigation bar.

Frequently Asked Questions

What is the Lafayette LXEdge Polygraph Software?

The Lafayette LXEdge Polygraph Software is a next-generation polygraph system designed for use in forensic, clinical, and research environments. It provides accurate physiological data acquisition, analysis, and reporting tools, supporting multiple sensors for polygraph testing.

Is the LXEdge software easy to install and use?

The software is designed for user-friendliness. It features an intuitive interface with simple installation steps, and comprehensive training resources are available to ensure users can quickly get up to speed.

Documents / Resources



<u>Lafayette Instrument LXEdge next generation Polygraph Software [pdf] U</u> ser Guide

1.2.7.11, 1.2.6.7, 1.2.5.24, 1.2.4.9, 1.2.3.3, 1.2.2.24, 1.2.1.30, LXEdge ne xt generation Polygraph Software, LXEdge next, generation Polygraph Software, Polygraph Software

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