

# Grapher 22 New Features

The latest Grapher Release is focused on providing critical improvements and bug fixes to the Grapher experience, aiming to reduce unexpected crashes and improve the expected behavior of some of your favorite features!

## New Features and Improvements

### Automation

- Polar Function Plot: Improved recalculation of points when switching between types.
- Box Plot: Now allows the option to skip repeat error messages in automation.

### Fit Plots

- Preserves fit plot objects even when the linked data file is missing.
- Default polar angle limits now align with its owner plot's clipping settings.

### Graph Gallery

- Added tags for "3D Pie Chart.grf" and "Stacked + Adjacent Bar Charts.gpj."
- Improved loading speed.
- Mouse scroll now jumps two lines instead of three.

### Labels

- Label/numeric format now correctly rounds numbers ending in 5 up.
- Reset Positions for Plot Labels now applies to multiple selected plots at once.
- Axis labels now auto-update tick spacing when opening older GPJ files with a break.

### Performance Improvements

- Built an advanced axis position calculator to reduce overhead and improve performance.
- Speeded up the process of accumulating unaccounted data extents for axes.
- Improved the speed of building line plot points.
- Code improvement: Utilized `std::jthread` to create texture patterns in parallel for 3D drawing.

### General Improvements

- Added new sample files for v22.
- Implemented a "Do not show me this dialog box in the future" feature for some existing warning dialogs.
- In Remap Worksheets, the file name is now displayed before the path in the "Worksheets in use" column.
- When spacing is unlinked in Link Axis, it now reverts to "Auto" instead of "Custom."
- Added an indication for Data Filter to show it is being used without having to enter the dialog.

### Fixes

- Fixed an issue with CSV Import where data after special characters that should stop import is no longer imported.
- Addressed various automation/recorder bugs for improved functionality.