Holland-Controls B.V.
Adam Smithstraat 6 7559 SW
Hengelo, The Netherlands
info@holland-controls.com
www.holland-controls.com

Phone +31 74 30 30 300

User Manual

HC-Plot v4.1

Contents

1 Introduction **4**

2 Getting Started **6**

3 Main Window **18**
3.1 Main Menu . . . 19
3.2 Main Status Bar . . . 19

4 Data View **21**
4.1 Terms and Descriptions . . . 22
4.2 Selection . . . 24
4.3 Context Menus . . . 25
4.4 Data View Status Bar . . . 25
4.5 Datasets . . . 27
4.6 Tags . . . 28
4.7 View . . . 30
4.8 Data . . . 37
4.9 Plots . . . 38
4.10 Axes . . . 41
4.11 Markers . . . 44
4.12 Statistics . . . 46
4.13 Drag and Drop . . . 54
4.14 Context Sensitive Delete . . . 55

5 Menus **57**
5.1 File . . . 57
5.2 Datasets . . . 64
5.3 Tags . . . 73
5.4 View . . . 88
5.5 Data . . . 120
5.6 Plots . . . 122
5.7 Axes . . . 125
5.8 Markers . . . 129
5.9 Statistics . . . 132
5.10 Settings . . . 134
5.11 Window . . . 138
5.12 Help . . . 142

6 Settings **145**
6.1 File Format . . . 145
6.2 Automatic Actions . . . 166
6.3 Default Data View . . . 170
6.4 Behaviour . . . 176
6.5 Recent Files . . . 207
6.6 Display . . . 208
6.7 Report Generation . . . 221

6.8 Warnings 238
6.9 Performance 240

7 Text File Format **245**
7.1 Comments 245
7.2 Columns Names and Descriptions 245
7.3 Timestamps 246
7.4 Whitespace 247
7.5 Example 248
7.6 Grammar 249

Index **250**

Chapter 1

Introduction

Next: Getting Started, section 2.

HC-Plot is a tool that is able to view, plot and analyze data that is organized in tabular form, i.e. organized in rows and columns. An example of such data is a log file containing multiple logged variables (or tags), where each column in the log file represents a variable and each row represents a timestamp. This data represents the values of the variables as they change over time.

With HC-Plot it is easy to inspect the variables at any point in time and make plots of the variables (over time) to ease analysis and to spot errors or compare variables. Many statistical operations, such as calculating the average or standard deviation, are supported to help with analyzing the data. Many facilities to interact with plots are supported, such as zooming, scrolling, multiple x and y axes, overlaying plots, etc...

The file format that HC-Plot uses by default is a comma separated text (CSV) file. This makes it easy to load data from other applications, such as Microsoft Excel. Although a plain CSV file can be used, HC-Plot also allows adding *meta* information to the file to provide additional information about the data in the file. For example, the format of the date and time can be specified as meta information, so human readable timestamps can be used in addition to e.g. a milliseconds or seconds only timestamps. This further increases the compatibility with data output from other applications.

The key features of HC-Plot are:

- Very large ($>$ 1GB) log files can be loaded efficiently. This makes it possible, for example, to analyze log files containing logging for an entire day with a sample rate of 10 ms.
- Any number of log files can be loaded and analyzed at the same time (only restricted by memory). This makes it possible to easily compare data and plots from different log files.
- Data from different log files can be plotted in the same view to further assist in comparing data from different plots by, for example, overlaying them to easily spot differences.
- Any number of, differently scaled, X and Y axes that can be individually zoomed and scrolled can be created. This allows overlaying plots in any desired way.
- Any number of markers can be created to mark and inspect data at *any* point on the plot, including at interpolated positions.
- A large number of statistical operations are supported. These operations are performed on the data *"on-the-fly"*, i.e. performed in real time, while analyzing data and moving markers. Any number of statistical operations can be performed in parallel. Most statistical operations supported by Microsoft Excel are supported by HC-Plot.
- Plots can be created quickly and fully automatically on smart, automatically scaled axes or manually by allowing the user full control about what gets plotted where and on which axes. This allows creating complex plots for complex analyses.
- Scatter plots, or plots with data on both x and y axes, i.e. no time on the x axis, are supported.

- Sorting, filtering and searching for variables is supported to easily find the variables you are looking for. This saves a lot of time when dealing with data with many variables.
- Any subset of the data can be exported to a separate file. This makes it possible to split log files into multiple files or to extract only the part you are interested in from a large logfile. This further eases repeated analysis sessions by preventing the need to load unneeded data.
- Drag and Drop is fully supported to easily (re-)assign variables to axes, (re-)assign axes to plots or moving plots to different axes. This allows creating complex plots easily and fast.
- The entire loaded dataset can be viewed in tabular form, similar to Microsoft Excel, to inspect the *exact* data contained in the datasets. This makes it easier to find and correct any errors present in a log file.
- The colour of many visual items, such as plots, axes and grids, can be changed to customize the view.

Chapter 2

Getting Started

Previous: Introduction, section 1.
Next: Main Window, section 3.

This chapter explains how to easily get started when using the application for the first time. It explains how to load files, make some plots and perform some analysis on the data.
For this getting started section, the *example.hcd* file that is distributed with HC-Plot is used. It is located in the application's executable directory.
If the application has been started before, some settings may no longer be at their default values. To make sure that the behaviour of HC-Plot matches the behaviour shown here, restore all settings to default by deleting the HCPlot.cfg file from the application's executable directory.
After starting the application *(without file arguments)*, the main application window is displayed, see figure 2.1.
The main application window is described in section 3.

Figure 2.1: The main application window after starting the application

From here a file can be loaded using the Load Dataset action from the File menu, see figure 2.2.
The Load Dataset action is described in section 5.1.2 and the File menu is described in section 5.1.
It is also possible to drag the file onto the main window from a file explorer to open it or to associate file extensions with HC-Plot and then double-click those files from within a file explorer to open them.

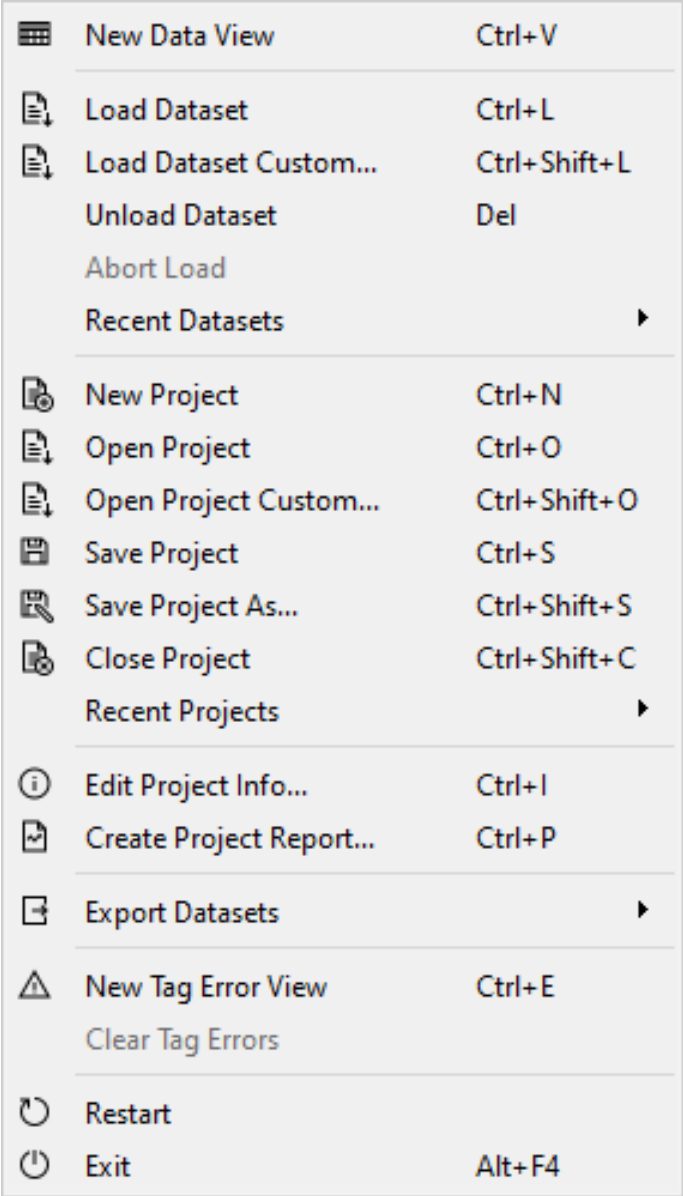


Figure 2.2: The File menu

Click the Load Dataset action and select and open the *example.hcd* file from the file open dialog that is shown.

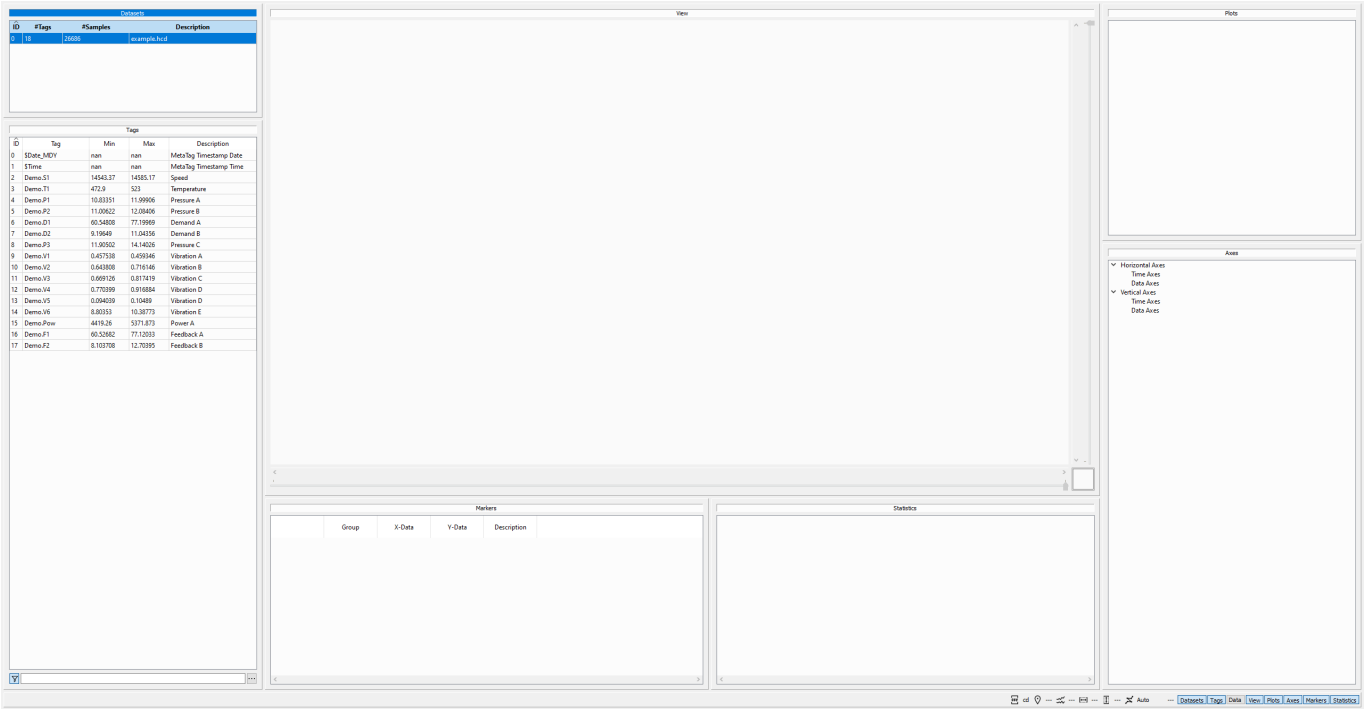


Figure 2.3: The first Data View window

The file will be loaded and because this is the first file that is opened during this session, a Data View window will be automatically opened and a dataset will be automatically selected, see figure 2.3.
The Data View window shows all information about the loaded *example.hcd* file in various sub-windows.
Note that the Data View window can be resized, minimized, maximized and restored. Multiple Data View windows can be opened using the New Data View action, see section 5.1.1.
it is recommended to maximize the Data View window before continuing. The Data View window is described in section 4.

The plots will not yet be displayed because the data to plot has not yet been selected. So some of the sub-windows will currently be empty. Later in this section the data will actually be plotted.

If this is the first time HC-Plot is started, not all sub-windows will be shown by default. The Plots, Axes and Data sub-windows are not shown. They can be enabled with the Show Plots Window, Show Axes Window and Show Data Window actions. The actions to show or hide a sub-window, as well as other sub-window specific actions, are found in main menus that correspond to the sub-windows, e.g. the Plots sub-window has a corresponding Plots main menu, see figure 2.4.
The size of the visible sub-windows can be changed using the splitters separating the sub-windows.
Before continuing, make sure to show all sub-windows so the Data View has the same visible sub-windows as shown in figure 2.5.

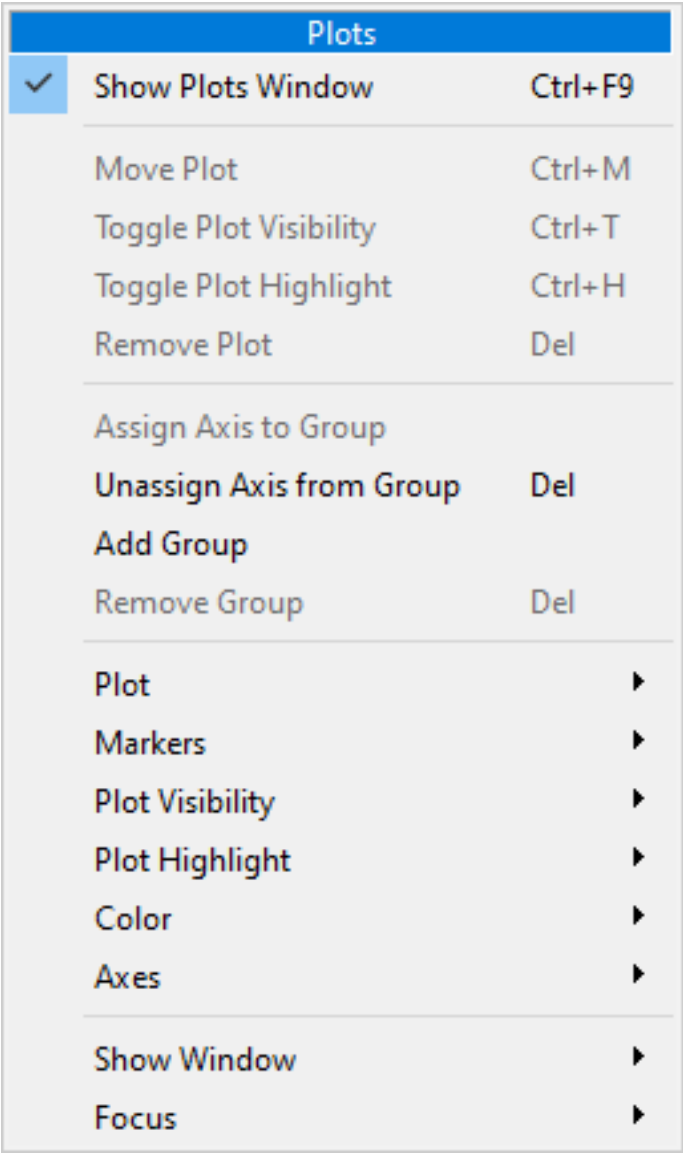


Figure 2.4: The Plots main menu that corresponds to the Plots sub-window

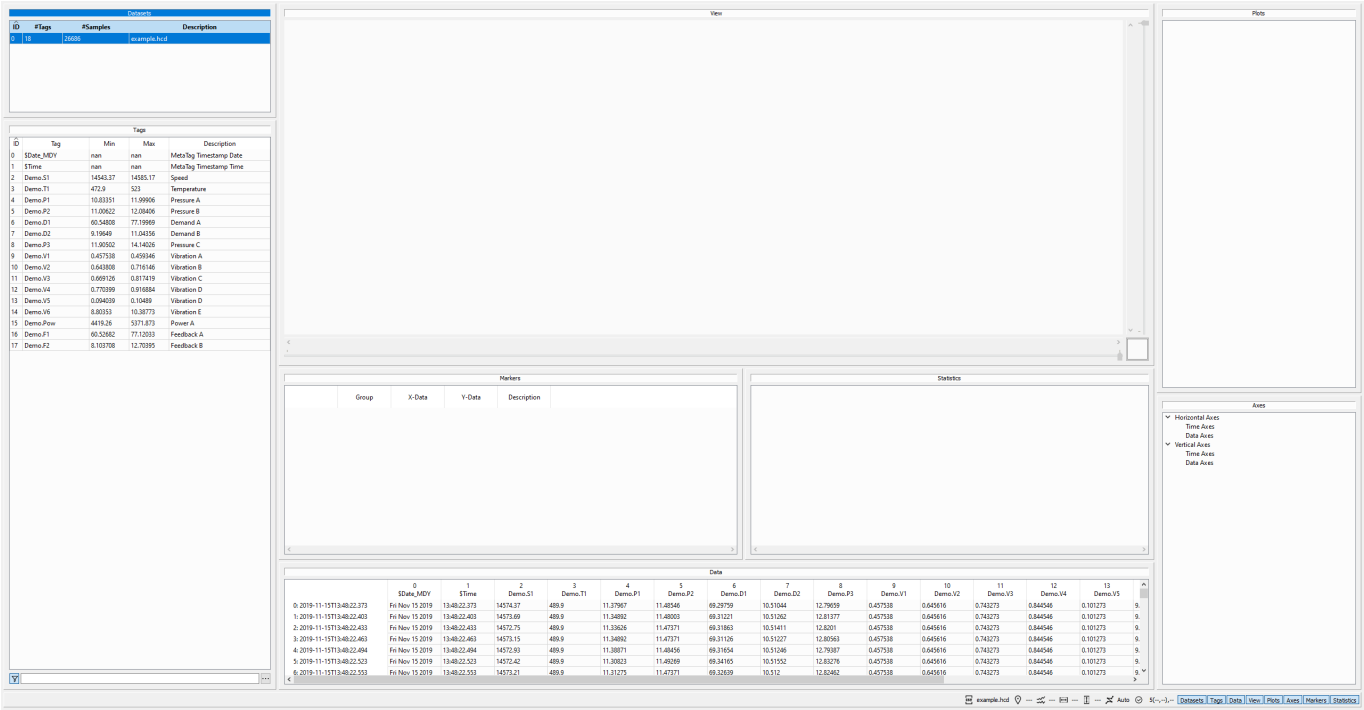


Figure 2.5: The first Data View window with all views enabled

The Datasets sub-window at the top left of the Data View window shows the currently loaded datasets. Currently only 1 dataset is loaded, namely *example.hcd*. This first dataset has been automatically selected. This sub-window can be used to switch between different loaded datasets by selecting the desired dataset in the table. But for this getting started section, only 1 dataset will be used.
The Datasets sub-window is explained in section 4.5.

Datasets

ID	#Tags	#Samples	Description
0	18	26686	example.hcd
1	18	26686	example2.hcd

Figure 2.6: The Datasets sub-window, showing two loaded datasets

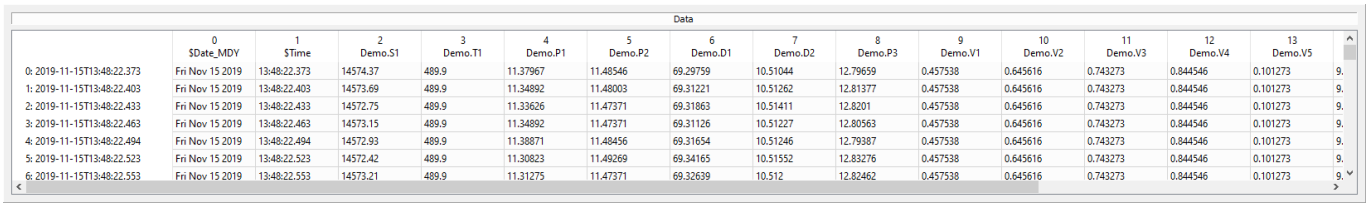
The Tags sub-window at the bottom left of the Data View window shows all items, or tags, that have been loaded from the currently selected dataset (*example.hcd*). Figure 2.7 shows (a part of) the Tags sub-window, listing the tags of the current dataset.
The Tags sub-window is explained in section 4.6.

Tags

ID	Tag	Min	Max	Description
0	$Date_MDY	nan	nan	MetaTag Timestamp Date
1	$Time	nan	nan	MetaTag Timestamp Time
2	Demo.S1	14543.37	14585.17	Speed
3	Demo.T1	472.9	523	Temperature
4	Demo.P1	10.83351	11.99906	Pressure A
5	Demo.P2	11.00622	12.08406	Pressure B
6	Demo.D1	60.54808	77.19969	Demand A
7	Demo.D2	9.19649	11.04356	Demand B
8	Demo.P3	11.90502	14.14026	Pressure C
9	Demo.V1	0.457538	0.459346	Vibration A
10	Demo.V2	0.643808	0.716146	Vibration B
11	Demo.V3	0.669126	0.817419	Vibration C
12	Demo.V4	0.770399	0.916884	Vibration D
13	Demo.V5	0.094039	0.10489	Vibration D
14	Demo.V6	8.80353	10.38773	Vibration E
15	Demo.Pow	4419.26	5371.873	Power A
16	Demo.F1	60.52682	77.12033	Feedback A
17	Demo.F2	8.103708	12.70395	Feedback B

Figure 2.7: The Tags sub-window, showing all tags in *example.hcd*

The Data sub-window at the bottom centre of the Data View window shows all loaded data from the currently selected dataset (*example.hcd*) in tabular form. Columns correspond to tags while rows correspond to timestamps. Figure 2.8 shows the Data sub-window, showing all data of the current dataset.
The Data sub-window is explained in section 4.8.



Data

	0 $Date_MDY	1 $Time	2 Demo.S1	3 Demo.T1	4 Demo.P1	5 Demo.P2	6 Demo.D1	7 Demo.D2	8 Demo.P3	9 Demo.V1	10 Demo.V2	11 Demo.V3	12 Demo.V4	13 Demo.V5	
0: 2019-11-15T13:48:22.373	Fri Nov 15 2019	13:48:22.373	14574.37	489.9	11.37967	11.48546	69.29759	10.51044	12.79659	0.457538	0.645616	0.743273	0.844546	0.101273	9.
1: 2019-11-15T13:48:22.403	Fri Nov 15 2019	13:48:22.403	14573.69	489.9	11.34892	11.48003	69.31221	10.51262	12.81377	0.457538	0.645616	0.743273	0.844546	0.101273	9.
2: 2019-11-15T13:48:22.433	Fri Nov 15 2019	13:48:22.433	14572.75	489.9	11.33626	11.47371	69.31863	10.51411	12.8201	0.457538	0.645616	0.743273	0.844546	0.101273	9.
3: 2019-11-15T13:48:22.463	Fri Nov 15 2019	13:48:22.463	14573.15	489.9	11.34892	11.47371	69.31126	10.51227	12.80563	0.457538	0.645616	0.743273	0.844546	0.101273	9.
4: 2019-11-15T13:48:22.494	Fri Nov 15 2019	13:48:22.494	14572.93	489.9	11.38871	11.48456	69.31654	10.51246	12.79387	0.457538	0.645616	0.743273	0.844546	0.101273	9.
5: 2019-11-15T13:48:22.523	Fri Nov 15 2019	13:48:22.523	14572.42	489.9	11.30823	11.49269	69.34165	10.51552	12.83276	0.457538	0.645616	0.743273	0.844546	0.101273	9.
6: 2019-11-15T13:48:22.553	Fri Nov 15 2019	13:48:22.553	14573.21	489.9	11.31275	11.47371	69.32639	10.512	12.82462	0.457538	0.645616	0.743273	0.844546	0.101273	9.

Figure 2.8: The Tags sub-window, showing all data in *example.hcd* in tabular form

At this point no other sub-window shows any data because no tags have been selected to be plotted. The next step is to actually plot some tags.

For this example, 15 tags are going to be plotted at the same time. To plot the multiple tags at the same time, **select tags 2 to 16 in the Tags sub-window**. This can easily be done by clicking on row 2, selecting tag 2, and then shift clicking on row 16. This should select all 15 tags (2 to 16). Now, while keeping this selection active, right click on the Tags sub-window to open the corresponding context menu, see figure 2.9. Note that this context menu corresponds to the Tags main menu.
The Tags main menu is described in section 5.3.

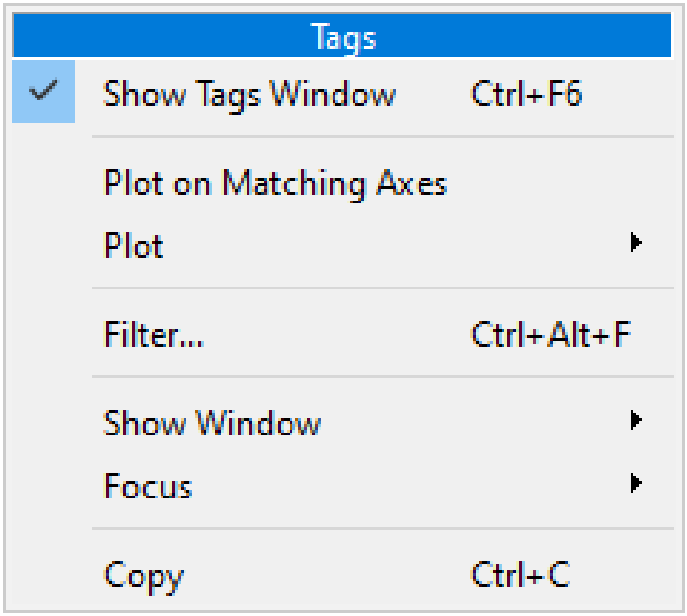


Figure 2.9: The Tags main menu that corresponds to the Tags sub-window

In this context menu, hover the mouse over the Plot on Matching Axes action, see section 5.3.3.1. **Notice that a short explanation of the action is displayed in the status bar at the bottom of the main window**. Click on this action to plot all selected tags. This action will automatically create suitable axes and will assign the tags to those axes depending on the range of the data in the tags.

At this point the plots should be displayed in the Data View window and it should look approximately the same as figure 2.10. Notice that the other sub-windows now also show data.

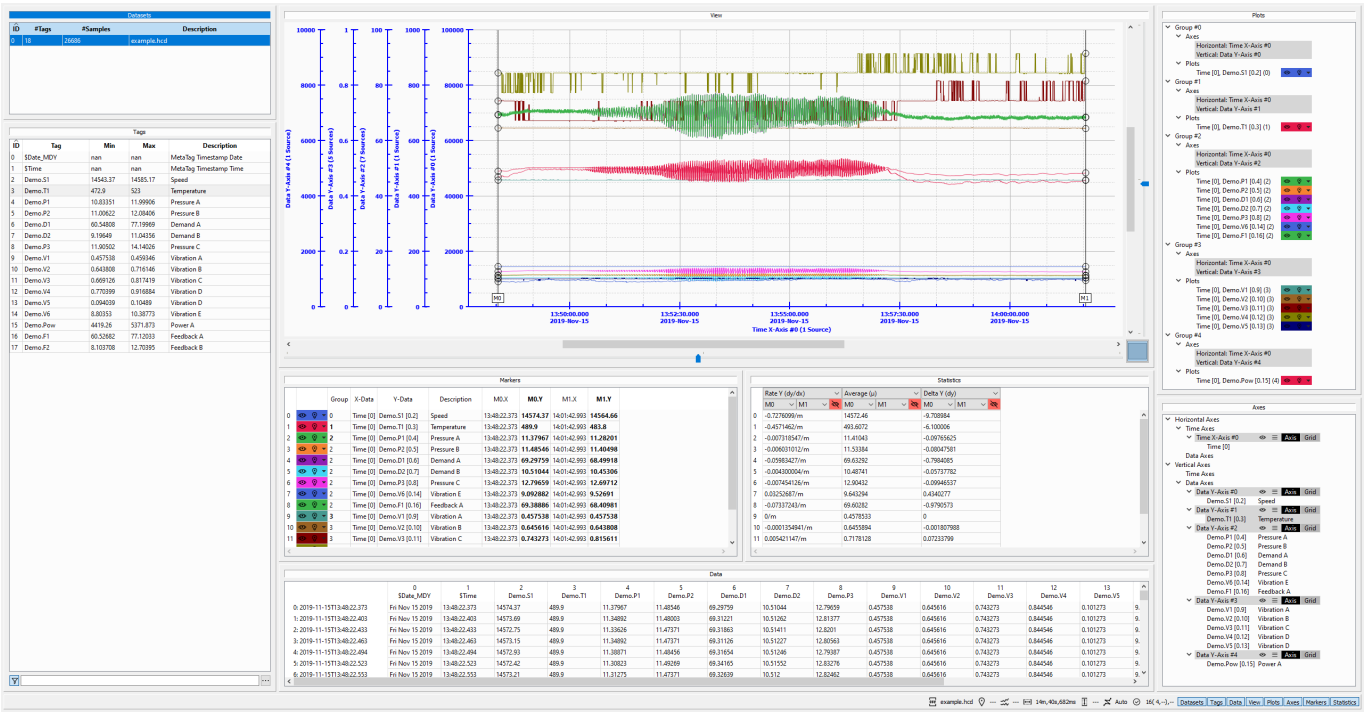


Figure 2.10: The first Data View window with plots

The View sub-window shows all plots on the (automatically generated) x and y axes. **Notice that two (line) markers, "M0" and "M1" are also automatically generated**, see figure 2.11.

The View sub-window is explained in section 4.7.

The Markers sub-window shows all currently created markers, *"M0"* and *"M1"*, and shows information about the x and y values of the marker intersections with all plots, see figure 2.12.

The Markers sub-window is explained in section 4.11.

The Statistics sub-window shows some (default) statistics that are being calculated for the data inbetween markers *"M0"* and *"M1"* for all plots, see figure 2.13.

The Statistics sub-window is explained in section 4.12.

The Axes sub-window shows all created axes, their orientation and type, and which tags are assigned to which axes, see figure 2.14.

The Axes sub-window is explained in section 4.10.

The Plots sub-window shows all created groups, plots, and which plots are assigned to which group, see figure 2.15.

The Plots sub-window is explained in section 4.9.

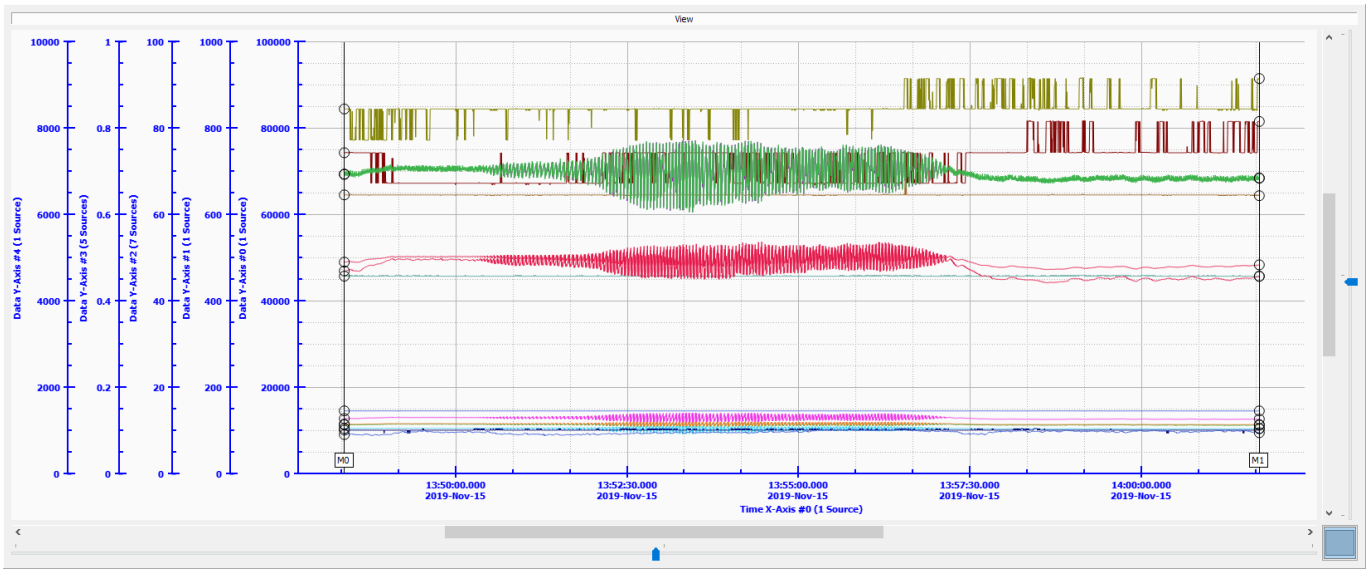
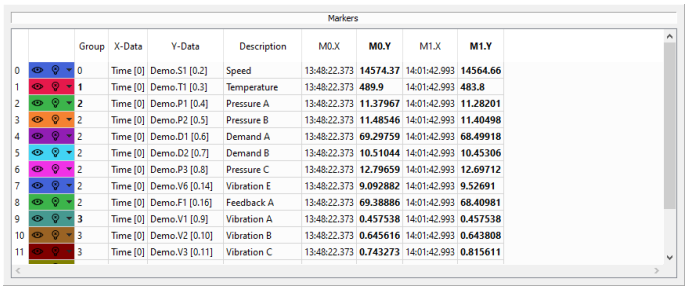


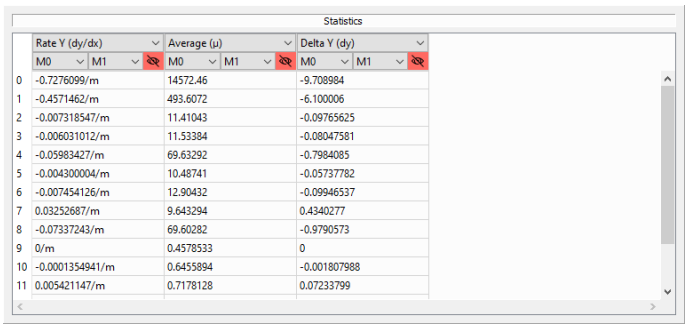
Figure 2.11: The View sub-window showing all plots and axes



Markers

		Group	X-Data	Y-Data	Description	M0.X	M0.Y	M1.X	M1.Y
0		0	Time [0]	Demo.S1 [0.2]	Speed	13:48:22.373	14574.37	14:01:42.993	14564.66
1		1	Time [0]	Demo.T1 [0.3]	Temperature	13:48:22.373	489.9	14:01:42.993	483.8
2		2	Time [0]	Demo.P1 [0.4]	Pressure A	13:48:22.373	11.37967	14:01:42.993	11.28201
3		2	Time [0]	Demo.P2 [0.5]	Pressure B	13:48:22.373	11.48546	14:01:42.993	11.40498
4		2	Time [0]	Demo.D1 [0.6]	Demand A	13:48:22.373	69.29759	14:01:42.993	68.49918
5		2	Time [0]	Demo.D2 [0.7]	Demand B	13:48:22.373	10.51044	14:01:42.993	10.45306
6		2	Time [0]	Demo.P3 [0.8]	Pressure C	13:48:22.373	12.79659	14:01:42.993	12.69712
7		2	Time [0]	Demo.V6 [0.14]	Vibration E	13:48:22.373	9.092882	14:01:42.993	9.52691
8		2	Time [0]	Demo.F1 [0.16]	Feedback A	13:48:22.373	69.38886	14:01:42.993	68.40981
9		3	Time [0]	Demo.V1 [0.9]	Vibration A	13:48:22.373	0.457538	14:01:42.993	0.457538
10		3	Time [0]	Demo.V2 [0.10]	Vibration B	13:48:22.373	0.645616	14:01:42.993	0.643808
11		3	Time [0]	Demo.V3 [0.11]	Vibration C	13:48:22.373	0.743273	14:01:42.993	0.815611

Figure 2.12: The Markers sub-window showing all plots and axes



Statistics

	Rate Y (dy/dx)	Average (μ)	Delta Y (dy)
	M0 M1	M0 M1	M0 M1
0	-0.7276099/m	14572.46	-9.708984
1	-0.4571462/m	493.6072	-6.100006
2	-0.007318547/m	11.41043	-0.09765625
3	-0.006031012/m	11.53384	-0.08047581
4	-0.05983427/m	69.63292	-0.7984085
5	-0.004300004/m	10.48741	-0.05737782
6	-0.007454126/m	12.90432	-0.09946537
7	0.03252687/m	9.643294	0.4340277
8	-0.07337243/m	69.60282	-0.9790573
9	0/m	0.4578533	0
10	-0.0001354941/m	0.6455894	-0.001807988
11	0.005421147/m	0.7178128	0.07233799

Figure 2.13: The Statistics sub-window showing all currently running statistics

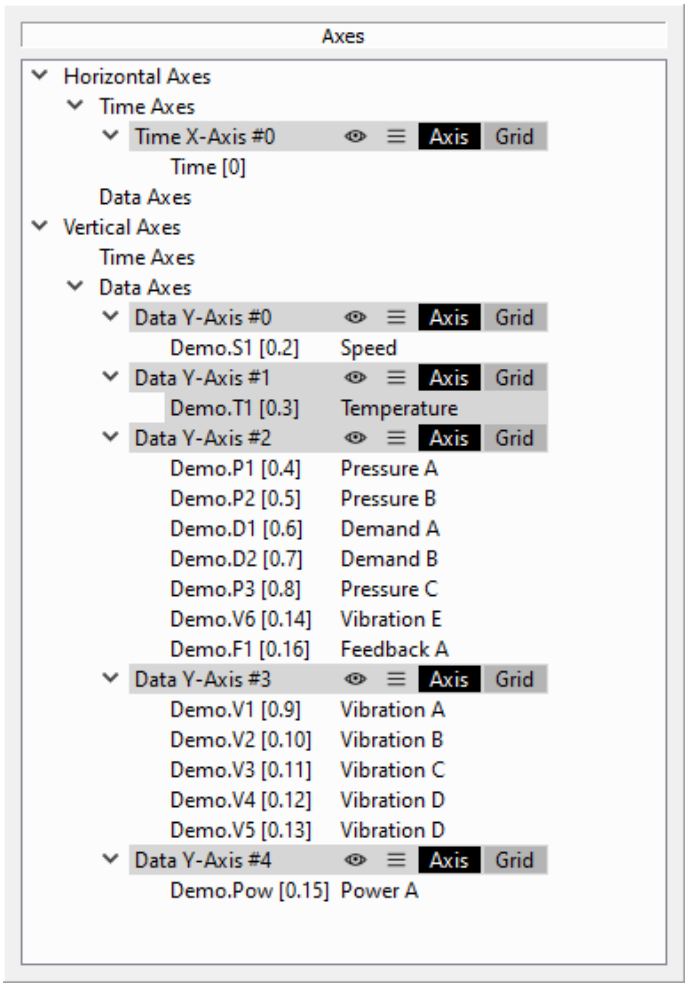


Figure 2.14: The Axes sub-window showing all axes and which tags are assigned to which axis

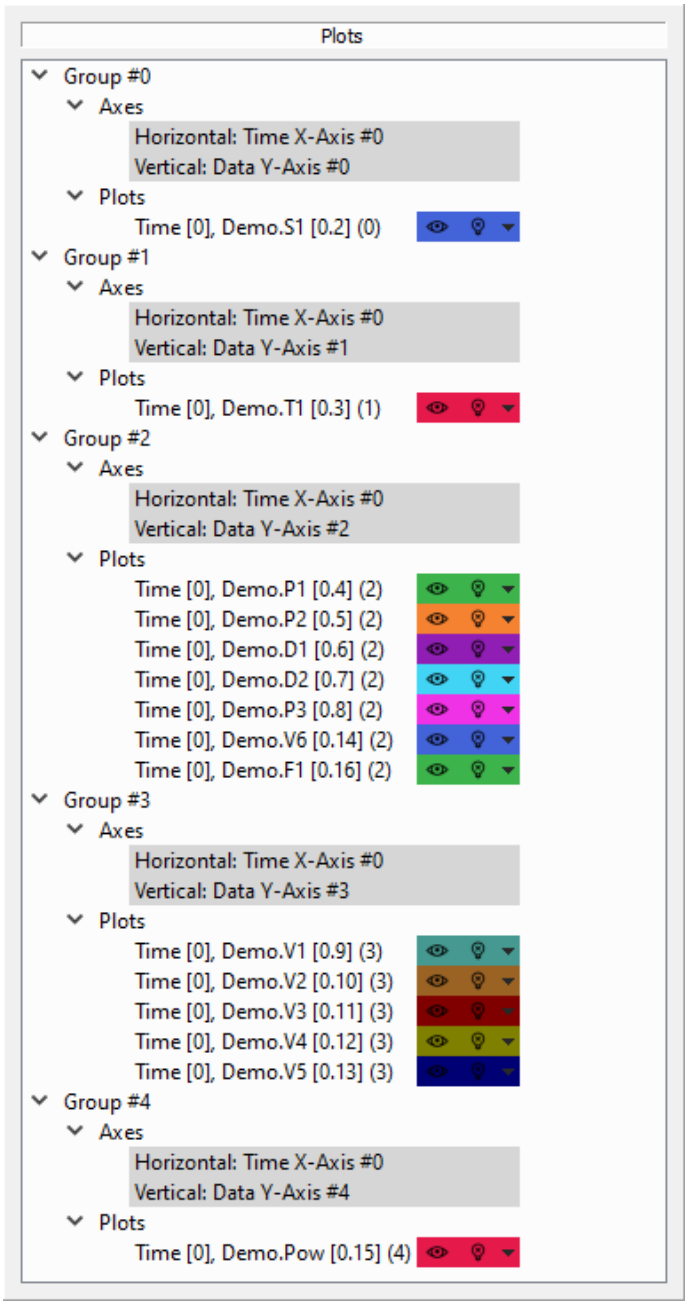


Figure 2.15: The Plots sub-window showing all plots and which plots are assigned to which group

Now experiment with the following in the View sub-window.

- Select and Deselect axes by clicking on them. Notice that multiple axes can be selected using ctrl click.
- Notice that the grid is only displayed for the selected axes.
- With some axes selected, scroll by left-click dragging the mouse and zoom using the mouse wheel.
  - Notice that zooming and scrolling is only possible for **selected** axes.
  - Notice that zooming/scrolling when the mouse is in the centre area, zooms and scrolls **all** selected axes.
  - Notice that zooming/scrolling when the mouse is on an axis, zooms and scrolls **only** that axis.
  - Notice when zooming in a lot, that, at some point, the individual data points are shown using shapes on the plot.
- Zoom in an alternative way by dragging a box with the shift key pressed. **Be sure to select axes first.**
- Zoom and scroll in an alternative way using the sliders at the bottom and right side of the View sub-window.
- With the mouse, point at a point on a plot to see the actual x and y values at that spot. This happens if the mouse is *"near"* an actual data point. A small circle will be shown at that location. *If no circle is showing, you are not near a data point, slowly move around the mouse until you see a circle.*
  - Do the same while keeping the *shift* key pressed to see information about all plots at that location.
  - Do the same while keeping the *ctrl* key pressed to be able to point at a point *between* actual data points. X and y values are *interpolated*. **You may need to zoom in a lot to be able to see this.**
  - Ctrl and Shift can be combined.
- Drag the markers, using left click drag on the rectangular handle, to a new location.
  - Notice that information in the Markers sub-window is updated to reflect the new position.
  - Notice that information in the Statistics sub-window is updated to reflect the new position.
- Select and Unselect markers by clicking on the rectangular handle.

This concludes the getting started section. With the information in this section you should be able to start analysing log files. Continue experimenting with other features and actions and remember that **a short explanation for actions is displayed in the status bar when the mouse is hovered over the menu item.**

For more information about frequently used terms in this manual see section 4.1.
For more information about all sub-windows see section 4.
For more information about all menus and actions see section 5.
For more information about drag and drop see section 4.13.
For more information about the format of text files that are supported see section 7.

Chapter 3

Main Window

Previous: Getting Started, section 2.
Next: Data View, section 4.

Figure 3.1: The main window

The main application window manages all top level windows of HC-Plot. It provides a main menu, see section 3.1, that provides all the actions and commmands that can be executed and a status bar, see section 3.2, that shows global status information and contextual help.

The Window menu, see section 5.11, contains actions that manage the positions and layout of the top level window. Top level windows can be automatically arranged or they can be changed to tabs in a tabbed view.
The most important top level window is the Data View window. This is the window that is normally used to view and analyse data. See section 4 for a description of that window. A new Data View window can be opened with the New Data View action, see section 5.1.1.

Another top level window is the Tag Error View window. This is the window that is shown (automatically) when errors ocur during file loading. It is possible to manually open a new Tag Error View window using the New Tag Error View action, see section 5.1.17.

3.1 Main Menu

Next: Main Status Bar, section 3.2.
Up: Main Window, section 3.

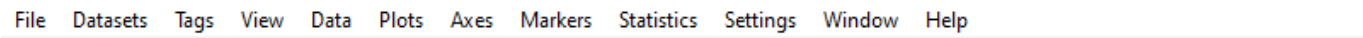


Figure 3.2: The main menu

The main menu, see figure 3.2, contains all the root menus of the application. *All* actions can be found and executed from within a menu found in the main menus, *even* if the most convenient way to execute the action is a shortcut key. If an action has a shortcut key, it is displayed next to the action in the menu. So to find which shortcut key is used for which action, find the action in the menu and look for the shortcut key listed there.
The main menu is described in more detail in section 5.

3.2 Main Status Bar

Previous: Main Menu, section 3.1.
Up: Main Window, section 3.

Figure 3.3: The main status bar

Figure 3.4: The main status bar (zoomed)

The main status bar, see figure 3.3, has two main functions:

1. Showing *global* status information.
2. Showing contextual help for menu items that are being selected.

The contextual help is shown in the bottom *left* of the statusbar and is shown when the user selects (but not yet executes) a menu item with the mouse or keyboard. It shows a short help message that explains in a single sentence what the action does. In addition, when a menu item is **disabled**, the status bar explains **why** the action is disabled. For example, a certain action may require a certain number of axes to be selected.
The right part of the status bar, see figure 3.4, shows the global status information and information about the current license. Note that the mouse may be hovered over individual items to get a short description.
It shows, from left to right:

Current Project If applicable, the name of the current project is shown here.

Number of Tags The *total* number of tags (or datasets columns) currently loaded in *all* datasets.

Number of Timestamps The *total* number of timestamps (or dataset rows) currently loaded in *all* datasets.

Number of Data Points The *total* number of datapoints (or samples) currently loaded in *all* datasets.

License information The validity of the license is shown with an icon. This can be: OK, Failed or Warning (when the license is about to expire). In addition it shows when the license expires (if applicable) and what the licensed version is (if applicable). This section can also be clicked to show more detailed information about the current license, see also section 5.12.3.

Chapter 4

Data View

Previous: Main Window, section 3.
Next: Menus, section 5.

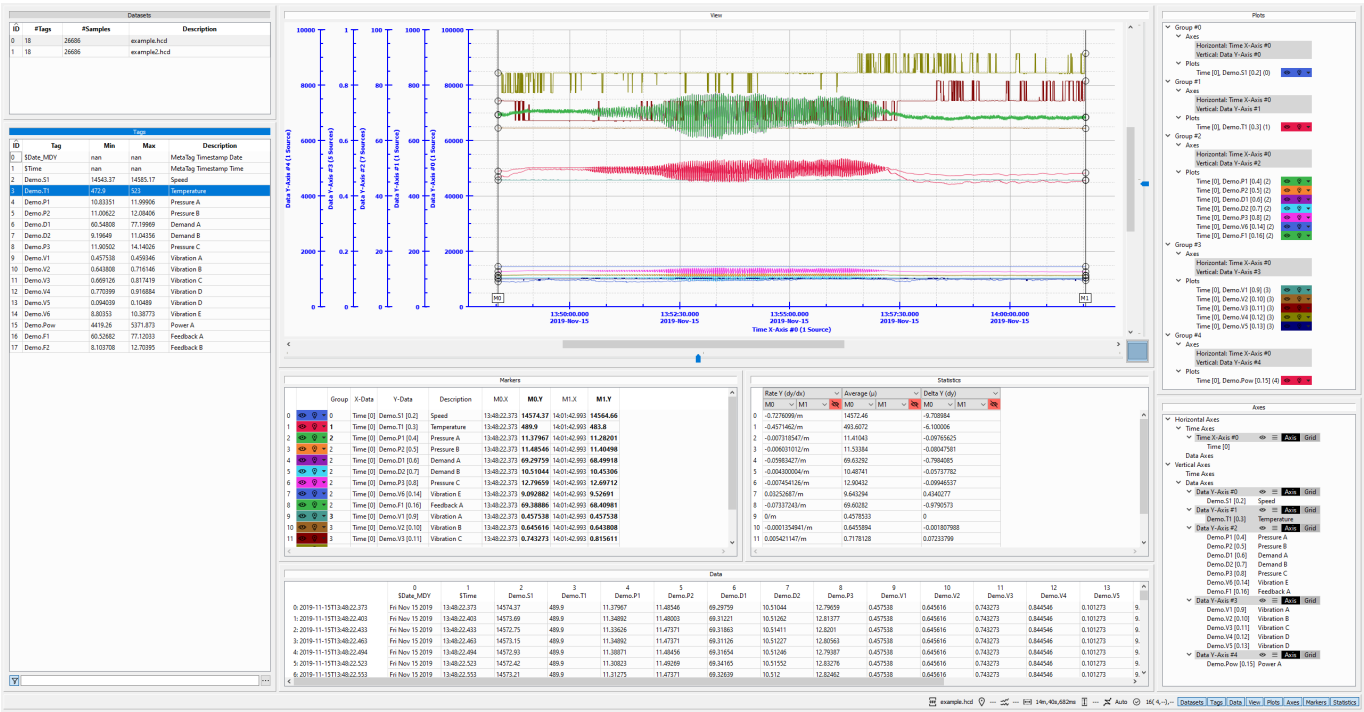


Figure 4.1: The Data View window

The Data View window, see figure 4.1, is used to display and analyse all the loaded data.
The New Data View menu item, see 5.1.1, is used to open new, additional, Data View windows.
By default, this window is automatically opened (and maximized) after loading the first dataset(s). But, just like any other window, this window can be resized, moved, minimized and maximized. This may be useful when multiple Data View windows are open.

Each Data View window is an independent view on the loaded data. In other words, each Data View window can be configured to display a different subset of the loaded data. For example one could configure each window to display data from a different dataset or display a different subset of tags in each window. Also, all the markers and statistics are specific to each window.

When loading datasets while a Data View is open, the window's contents are dynamically updated while loading the data. However, this causes the data to be loaded much slower. Therefore, it is recommended to load (very) large datasets without having a Data View window open.

Various sub-windows are used to display different types of data.
The Datasets sub-window, see section 4.5, displays all loaded datasets.
The Tags sub-window, see section 4.6, displays all loaded tags for the selected dataset.
The View sub-window, see section 4.7, displays all plotted tags.
The Data sub-window, see section 4.8, displays all raw data for the selected dataset in a grid.
The Plots sub-window, see section 4.9, displays all plot groups and plots in those groups.
The Axes sub-window, see section 4.10, displays all axes and tags associated with those axes.
The Markers sub-window, see section 4.11, displays all markers and plots associated with those markers.
The Statistics sub-window, see section 4.12, displays all statistics algorithms and calculated values.

Each sub-window has a bar at the top that will be coloured if and only if that sub-window has focus. The Data View also has its own status bar that displays status information for the whole window. See section 4.4 for a description of the status bar.

Note that the sub-windows are separated by horizontal and vertical *splitters* that can be used to resize any window to any size by dragging the splitter with the mouse.

4.1 Terms and Descriptions

Next: Selection, section 4.2.
Up: Data View, section 4.

This section describes some terms and descriptions that are used throughout the manual.

Dataset A Dataset is a collection of tags with values for each tag for different (incrementing) timestamps. Usually a dataset is simply a single input file. When multiple datasets are loaded, each dataset can be uniquely identified using a number (starting from zero). See section 4.5.

Tag A tag is another name for a single variable (or named item) in a dataset (input file). This usually corresponds to a single column in the input file. Within the dataset, each tag has multiple values, one for each timestamp. Tags are used as 'input/source' for plots. Within a dataset, a tag can be uniquely identified using a number (starting from zero). See section 4.6.

A tag has a (unique, within dataset) name and may have a description. When tags are referred to from outside the dataset, e.g. when they are assigned to a plot, their name is made unique by adding a postfix to the tag name. When the tag is use as data source, it shows the dataset number and tag number between brackets, e.g. *"TagName [1.16]"*. When the tag is used as time source, the name is changed to "Time" and it only shows the dataset number between brackets, e.g. *"Time[2]"* .

The word tag is often used interchangeably with the word (data/time) source.

Meta Tag A meta tag is a tag that does not contain "real" data, it is used to add meta information to an input file. It is used, for example, to identify the date and time columns in an input file. Since those two columns only define the timestamps of the actual "real" data and not add any data themselves, they are classified as meta tags. Inside the application they are still visible as tags but they cannot be plotted.

(Data/Time) Source A source is another word for tag but is used in the context of using the tag as an input for a (data/time) axis or for a plot.

The word source is often used interchangeably with the word tag.

Assigned Source (or Tag) An assigned source (or tag) is simply a source (or tag) that has been assigned to an axis.

Timestamp A timestamp is another word for the time information associated with a single value for a single tag. Each tag has multiple associated values at a specific time.

Sample A sample is a single value for a single tag at a specific time.

Data Point A data point is is synonymous with a sample. A data point is used more in a visual context, i.e. as a point on a plot that corresponds with an actual measured sample.

(Tag) Value A value is the number contained in the tag (variable) at a specific time (timestamp).

Axis A plot is made up of a horizontal (x-axis) and a vertical (y-axis). Multiple plots can share the same axes, e.g. different plots can use the same x-axis but have a different y-axis. A combination of a single x-axis and a single y-axis is called a plot group.

Plots are made by assigning tags (as source) to the x and y axes and assign the axes to a plot group.

See also sections 4.10 and 4.9.

Data Axis A data axis is an axis that uses the *values* of an assigned tag as input. This is usually (but not always) a y-axis.

Time Axis A time axis is an axis that uses the *timestamps* of an assigned tag as input. This is usually (but not always) an x-axis.

Leading Axis When multiple axes in the same direction, i.e. horizontal or vertical, are selected, the axis in that group that was selected *first*, is called the *leading axis*. In certain cases where only information about a single axis can be used, only the information of the leading axis is used. If no axis is selected in a specific direction then that direction does not have a leading axis.

(Plot) Group A combination of a single x-axis and a single y-axis is called a plot group. Each plot group can be identified by a unique number (starting from zero). A plot group can contain multiple plots, depending on how many sources are assigned to its axes. See the axis explanation for more information.

See section 4.9.

Plot When a plot group has both its x and y axis assigned and both those axes have assigned sources, plots are created (drawn) for all those sources. Points on the plot, i.e. the x,y values take the x and y value from the corresponding sources assigned to the corresponding axes. For example a, normal plot of "Tag1" is created by assigning "Tag1" (as a data source) to a data y-axis and assign the same "Tag1" (as a time source) to a time x-axis. Normally this assignment is done automatically but full manual assignment is possible.

When a plot is referred to, the unique name for both x and y sources is printed and, since the same plot may be part of multiple plot groups, the group id as well. For example: *"Time[1], TagName [1.16] (3)"* would mean: *The plot made up of the time information of dataset 1 on the x-axis, data of tag 16 of dataset 1 on the y-axis and inside plot group 3*.

See sections 4.9 and 4.10 and 4.7.

Scatter Plot A scatter plot is a plot where both the x and y axis are *data* axes, i.e., no time information is used and there is no time axis involved. Since the x-axis no longer only has strictly increasing values, a scatter plot can be a curve. Normally only points are drawn for scatter plots. No lines are drawn between the points.

Marker A marker is a general name for a visual element that *marks* or *selects* data on a plot. In general, they can be moved over the plot to different points on the plot and the value at the corresponding location can be read. There are two main types of markers:

Line Marker A line marker is a vertical line with a specified x-axis position that intersects all plots using that x-axis. The corresponding y-axis values of those intersections can be read. When new plots are added *after* the marker is already created, new intersections are automatically created. Thus, a line marker consists of multiple plot intersections that all share the same x-axis value. The individual intersections are also know as 'point markers'. A line marker, therefore, consists of multiple point markers that all share the same x-axis value.

Line markers can be individually moved to different positions.

Point Marker Every intersection on a line marker is a point marker. Point markers that are part of a line marker can not be moved, unless the whole line marker is moved. However, it is possible to create point markers that are not part of a line marker. In that case, they can be moved independently.

Mouse Marker A mouse marker is a temporary marker that is displayed when the mouse is used to point at a datapoint on a plot. A mouse marker displays a crossing horizontal and vertical line centered on the datapoint. The corresponding x and y values are displayed in rectangles near the lines at the display's edge.

Data Range The data range of an axis is range that spans from minimum to the maximum sample value of all sources assigned to that axis.

Visual Range The visual range of an axis is the displayed range of an axis. If the visual range is greater than the data range, the plot is zoomed out. If the visual range is smaller than the data range, the plot is zoomed in.

4.2 Selection

Previous: Terms and Descriptions, section 4.1.
Next: Context Menus, section 4.3.
Up: Data View, section 4.

Many operations or actions require a selection of items of some kind. For example some actions require a tag selection while others require an axis selection. In general, multiple types of items can be selected at the same time, e.g. it is possible to select some tags *and* some axes at the same time. Any selection of items is *always* specific to the currently active Data View window. This means that different selections can be active in different Data View windows.
Within a specific Data View window, the selections are *global* for all sub-windows. This means that it is possible to create a selection in one sub-window but use the selection in another sub-window. It is possible to create the same selection from within different sub-windows, e.g. axes can be selected in the Axes sub-window but also in the View sub-window. When selections can be made within different sub-windows, the selection visualisation will be kept consistent in all sub-windows if possible. For example, if axes are selected in the View sub-window, they will also be selected in the Axes sub-window.
The types of selections, and where they can be selected, are:

The Axes sub-window

Assigned Tag Selection See section 4.10.3.

Axis Selection See section 4.10.1.

Axis Type Selection See section 4.10.4.

Tag Selection See section 4.10.2.

The Data sub-window

Data Selection See section 4.8.1.

The Datasets sub-window

Dataset Selection See section 4.5.1.

The Markers sub-window

Marker Selection See section 4.11.1.

Plot Selection See section 4.11.2.

The Plots sub-window

Axis Selection See section 4.9.3.

Group Selection See section 4.9.1.

Plot Selection See section 4.9.2.

The Statistics sub-window

Statistic Selection See section 4.12.2.

The Tags sub-window

Tag Selection See section 4.6.1.

The View sub-window

Axis Selection See section 4.7.7.

Marker Selection See section 4.7.9.

Plot Selection See section 4.7.8.

4.3 Context Menus

Previous: Selection, section 4.2.
Next: Data View Status Bar, section 4.4.
Up: Data View, section 4.

All sub-windows have their own context menu that matches a specific main menu. The context menu of a sub-window contains actions that are useful in the context of that sub-window. Note that multiple menus may contain the same action if that action is usefull in multiple contexts. For example, the Remove Axis action, see 5.3.3.8.4.1, can be found in the Axes context menu, see 5.7, and the View context menu, see 5.4, because that action is applicable in both contexts.
The available context menu are:

The Axes Context Menu See 4.10.5.

The Data Context Menu See 4.8.2.

The Datasets Context Menu See 4.5.2.

The Markers Context Menu See 4.11.3.

The Plots Context Menu See 4.9.4.

The Statistics Context Menu See 4.12.3.

The Tags Context Menu See 4.6.2.

The View Context Menu See 4.7.10.

4.4 Data View Status Bar

Previous: Context Menus, section 4.3.
Next: Datasets, section 4.5.
Up: Data View, section 4.

Figure 4.2: The Data View status bar

Figure 4.3: The Data View status bar (zoomed)

The status bar of the Data View window, see figure 4.2, is always displayed at the bottom of the Data View window and shows *global* status information for the whole Data View window. The status information is specific or *local* to that window, i.e. each Data View window has its own status.
The status bar shows the following items from left to right: (see figure 4.3 for a zoomed in view)

Current Dataset This shows the current selected dataset.

Mouse X and Y coordinates This shows the X and Y coordinates of the mouse in terms of the axes of the plot that is *closest* to the mouse.

Nearest plot This shows which plot is *closest* to the mouse.

Visible X axis range This shows the *visible* range of the *leading* x-axis. See section 4.1.

Visible Y axis range This shows the *visible* range of the *leading* y-axis. See section 4.1.

Show Data Points status This shows the current status of the Show Data Points action. See 5.4.15.

Performance Indicator This shows a number of frame rates or update rates to give an indication of the overall performance of the application. It shows the following items from left to right:

Replots/s This shows how often the plots are replotted per second. The higher this number, the smoother zooming and scrolling plots is.

Marker replots/s This shows how often markers are replotted per second. The higher this number, the smoother moving markers is.

Focussed marker replots/s This shows how often focussed markers are replotted per second. The higher this number, the smoother moving focussed markers is.

Mouse updates/s This shows how often changes in the mouse position are handled per second. The higher this number, the quicker the feedback when moving the mouse.

Note that the mouse can be hovered over the individual items to show a statustip that shows information about the item.

If dashes are shown, there is no recent update rate information for this item. This happens for example when the plots are not redrawn for a long time.

The clickable icon to the left of the update rate numbers can be in three states:

Update rates OK When update rates are above desired minimums (or invalid)

Update rates Too Low When update rates are below desired minimums

Maximize Update Rate Mode Enabled When Maximize Update Rate Mode is enabled

The icon can be clicked to toggle Maximize Update Rate Mode. See also section 5.10.6.

See also the following options:

- Minimum Plot Update Rate: 6.9.2.
- Maximum Plot Update Rate: 6.9.3.
- Minimum Marker Update Rate: 6.9.4.
- Maximum Marker Update Rate: 6.9.5.
- Minimum Mouse Update Rate: 6.9.6.
- Maximum Mouse Update Rate: 6.9.7.
- Minimum Resize Update Rate: 6.9.8.
- Maximum Resize Update Rate: 6.9.9.
- Invalidate Update Rate Time: 6.9.10.
- Auto Maximize Update Rate Delay: 6.9.11.
- Enable Auto Maximize Update Rate Mode: 6.9.1.

Sub-window visibility buttons These buttons show which sub-windows are currently visibly (the buttons are checked if the corresponding sub-window is visible) and can be clicked to easily toggle the visibility of sub-windows.

4.5 Datasets

Previous: Data View Status Bar, section 4.4.
Next: Tags, section 4.6.
Up: Data View, section 4.

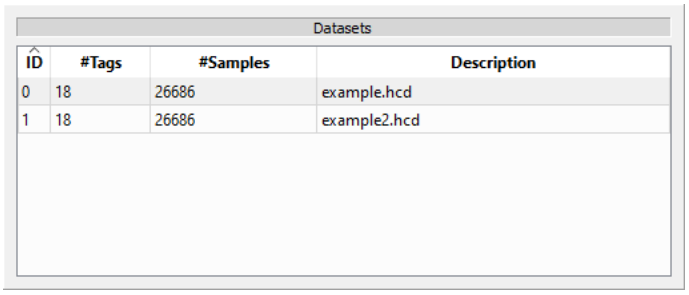


Figure 4.4: The Datasets subwindow

The Datasets sub-window, see figure 4.4, shows all currently loaded datasets. The last selected dataset is the active dataset. The contents of the active dataset are shown in the Tags sub-window, see section 4.6 and the Data sub-window, see section 4.8.
The datasets are shown in a table that shows one tag per row.
The columns of the sub-window are:

ID The unique identifier of the dataset. If other parts of the application refer to a dataset, this number is used. Note that it starts with zero.

#Tags The number of different tags in the dataset. Note that this includes any *meta* tags.

#Samples The number of loaded samples, or timestamps, for each tag.

Description The description of the dataset. This is usually the filename of the logfile without the path.

The bar at the top of the sub-window that shows the name of sub-window will be coloured if and only if this sub-window has focus. Each column can be sorted in ascending order or descending order by clicking on the column title. Clicking multiple times will cycle through the sorting options. Columns can also be moved by dragging the column titles.

The Datasets sub-window can be shown or hidden using the Show Datasets Window action, see section 5.2.7.4.

4.5.1 Dataset Selection

Next: Context Menu, section 4.5.2.
Up: Datasets, section 4.5.

Some operations require a selection of datasets, for example Unload Dataset, see section 5.2.4. A dataset selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Datasets can be selected by left clicking them. A group of datasets can be selected by selecting the first dataset and then shift clicking on the last dataset. Multiple groups of datasets can be selected by selecting the first dataset of a group with Ctrl and then shift clicking on the last dataset of that group. Any subset of datasets can be selected by Ctrl clicking any dataset. Ctrl clicking an already selected dataset will unselect it.

4.5.2 Context Menu

Previous: Dataset Selection, section 4.5.1.
Up: Datasets, section 4.5.

The Datasets sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Datasets main menu. See section 5.2.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.6 Tags

Previous: Datasets, section 4.5.
Next: View, section 4.7.
Up: Data View, section 4.

The Tags sub-window, see figure 4.5, shows all tags in the dataset that is currently selected in the Datasets sub-window, see section 4.5.
The tags are shown in a table that shows one tag per row.
The columns of the sub-window are:

ID The unique identifier of the tag. If other parts of the application refer to a tag by number, this number is used. Note that it starts with zero.

Tag The name of the tag (or *meta* tag).

Min The minimum value for this tag found in the whole dataset. Together with the Max column, this defines the data range for this tag. See section 4.1.

Max The maximum value for this tag found in the whole dataset. Together with the Min column, this defines the data range for this tag. See section 4.1.

Description The (optional) description of the tag.

At the bottom of the Tags sub-window, the current tag filter is displayed. The current filter can be edited here by simply typing the desired filter in the text box. The filter will be immediately applied. Only tags matching the filter will be displayed. The filter can be quickly enabled/disabled using the button on the left of the filter line. The button on the right of the filter line can be used to set more filtering options. For the filtering options see section 5.3.4.

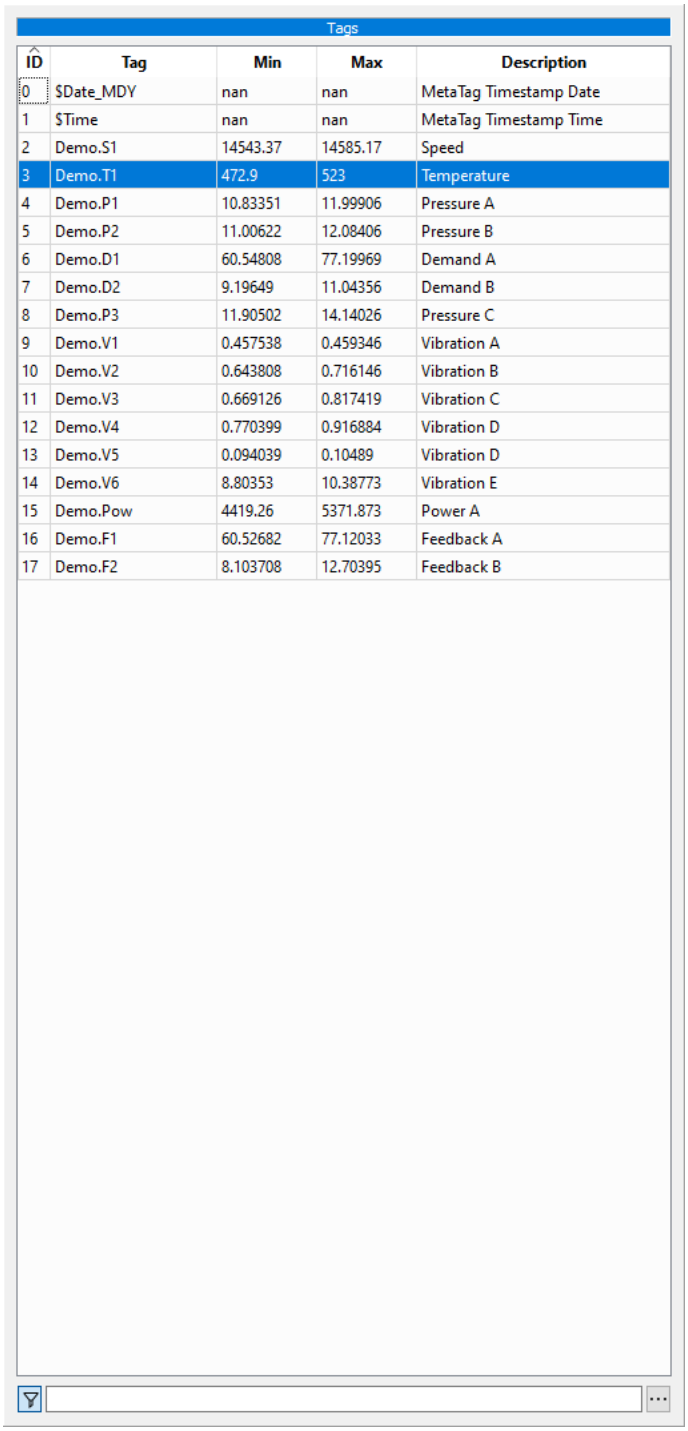
The Tags sub-window is normally the starting point for plotting tags by selecting the required tags and using the Plot on Matching Axes action, see section 5.3.3.1. A *single* tag can also quickly be plotted by **double clicking** the requested tag row. The Plot on Matching Axes action is then used automatically to plot this tag.
The bar at the top of the sub-window that shows the name of sub-window will be coloured if and only if this sub-window has focus. Each column can be sorted in ascending order or descending order by clicking on the column title. Clicking multiple times will cycle through the sorting options. Columns can also be moved by dragging the column titles.

The Tags sub-window can be shown or hidden using the Show Tags Window action, see section 5.2.7.4.

4.6.1 Tag Selection

Next: Context Menu, section 4.6.2.
Up: Tags, section 4.6.

Some operations require a selection of tags, for example Plot on Matching Axes, see section 5.3.3.1. A tag selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Tags can be selected by left clicking them. A group of tags can be selected by selecting the first tag and then shift clicking on the last tag. Multiple groups of tags can be selected by selecting the first tag of a group with Ctrl and then shift clicking on the last tag of that group. Any subset of tags can be selected by Ctrl clicking any tag. Ctrl clicking an already selected tag will unselect it.



Tags

ID	Tag	Min	Max	Description
0	$Date_MDY	nan	nan	MetaTag Timestamp Date
1	$Time	nan	nan	MetaTag Timestamp Time
2	Demo.S1	14543.37	14585.17	Speed
3	Demo.T1	472.9	523	Temperature
4	Demo.P1	10.83351	11.99906	Pressure A
5	Demo.P2	11.00622	12.08406	Pressure B
6	Demo.D1	60.54808	77.19969	Demand A
7	Demo.D2	9.19649	11.04356	Demand B
8	Demo.P3	11.90502	14.14026	Pressure C
9	Demo.V1	0.457538	0.459346	Vibration A
10	Demo.V2	0.643808	0.716146	Vibration B
11	Demo.V3	0.669126	0.817419	Vibration C
12	Demo.V4	0.770399	0.916884	Vibration D
13	Demo.V5	0.094039	0.10489	Vibration D
14	Demo.V6	8.80353	10.38773	Vibration E
15	Demo.Pow	4419.26	5371.873	Power A
16	Demo.F1	60.52682	77.12033	Feedback A
17	Demo.F2	8.103708	12.70395	Feedback B

Figure 4.5: The Tags subwindow

4.6.2 Context Menu

Previous: Tag Selection, section 4.6.1.
Up: Tags, section 4.6.

The Tags sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Tags main menu. See section 5.3.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.7 View

Previous: Tags, section 4.6.
Next: Data, section 4.8.
Up: Data View, section 4.

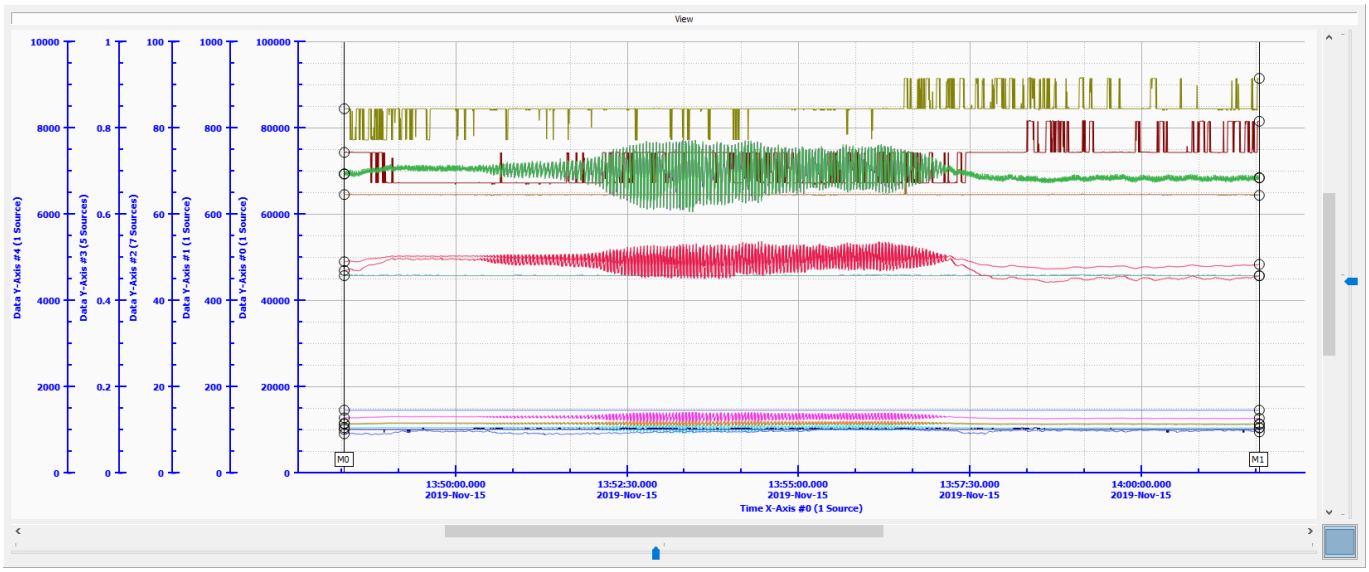


Figure 4.6: The View subwindow

The Plots sub-window, see figure 4.6, shows all current plots, axes and markers. It allows zooming, and scrolling the plots (by scrolling and zooming the corresponding axes). It is also used to interact with all the markers. The markers can be moved, highlighted and selected.
The Plots sub-window is composed of various sub-parts:

Plot View The main display area shows the plots, axes and markers. Also allows zooming and scrolling directly, from within the view, using the mouse. As an alternative the scrollbars and zoom sliders (see below) can be used for scrolling and zooming. See section 4.7.1.

Horizontal Scrollbar The horizontal scrollbar is used to horizontally scroll the selected axes. The position and size of the slider shows the approximate current zoom level and scroll position. See section 4.7.2.

Vertical Scrollbar The vertical scrollbar is used to vertically scroll the selected axes. The position and size of the slider shows the approximate current zoom level and scroll position. See section 4.7.3.

Horizontal Zoom Slider The horizontal zoom slider is used to horizontally zoom the selected axes. The position of the slider shows the approximate current zoom level. See section 4.7.4.

Vertical Zoom Slider The vertical zoom slider is used to vertically zoom the selected axes. The position of the slider shows the approximate current zoom level. See section 4.7.5.

Scroll/Zoom Box The Scroll/Zoom box or Range box displays the the relation between the data range and the visual range for the horizontal and vertical *leading* axes. See section 4.7.6.

4.7.1 Plot View

Next: Horizontal Scrollbar, section 4.7.2.
Up: View, section 4.7.

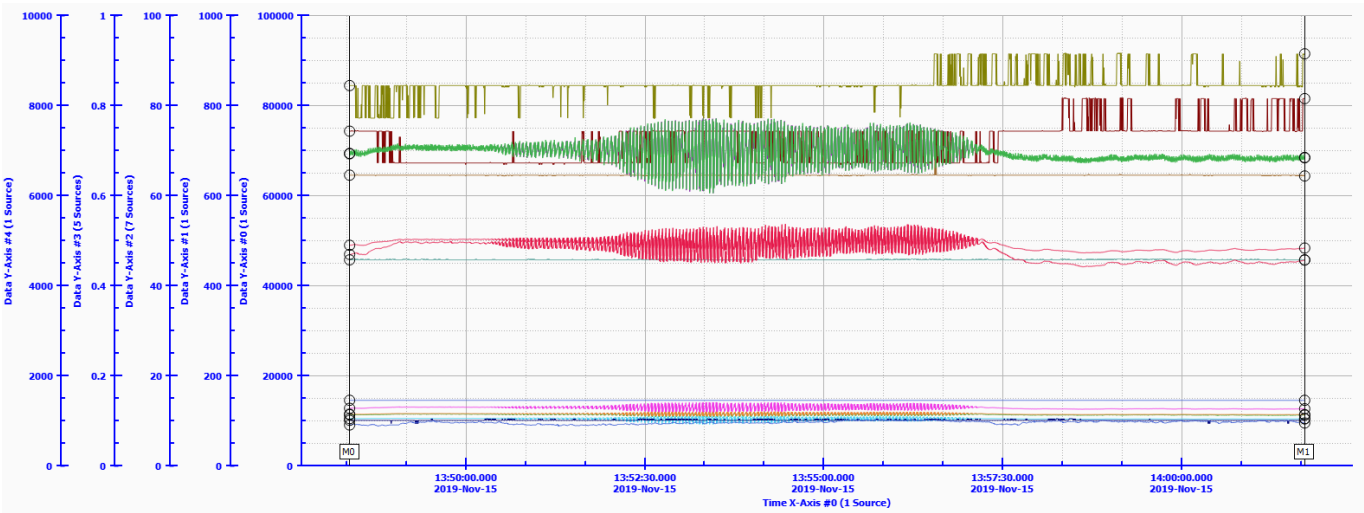


Figure 4.7: The main plot display

The Plot View display area, see figure 4.7 consists of:

Axes display section All horizontal and vertical axes are displayed at the bottom and left side of the display area respectively. See section 4.7.1.1.

Plot display section The center of the display displays all the plots. See section 4.7.1.2.

Marker and Marker Items display section The markers and marker items are also displayed in the plot display section but area *overlaid* on top of the displayed plots. See sections 4.7.1.3 and 4.7.1.4.

4.7.1.1 Axes

Next: Plots, section 4.7.1.2.
Up: Plot View, section 4.7.1.

All vertical axes, are displayed on the left side of the display area. All horizontal axes are displayed at the bottom of the display area. Every axis has a name, which can be changed using the Set Name action, see section 5.4.5.2.
Axis names are displayed to the left of vertical axes or below horizontal axes.
Each axis is divided into sections using *"ticks"* and *"sub-ticks"*. Every tick has a value associated with it that is the data value at that position on the axis. Sub-ticks do not have a value. Ticks and sub-ticks determine the visible grid that is displayed on the Plots display area, see section 4.7.1.2. The grid is displayed *only* for the selected axes. This means that multiple grid lines can be drawn if multiple axes are selected.
The axes can be interacted with in the following ways:

Selection Click to select/unselect a single axis. Ctrl select to select any amount of 4.7.7.

Scrolling While hovering the mouse over an axis: left click and drag to scroll only that axis. (The mouse cursor will change to an arrow to indicate this.

Zooming While hovering the mouse over an axis: use the mouse wheel to zoom in/out only that axis.

Zooming or scrolling an axis will effectively zoom or move all the plots associated with that axis.
In most cases, axes are added and removed automatically but axes can also be added and removed manually using the Add Axis action, see section 5.3.3.8.3.1 and the Remove Axis action, see section 5.3.3.8.4.1.
These actions, and other axis actions, can be found in the Axes menu, see section 5.4.5.

4.7.1.2 Plots

Previous: Axes, section 4.7.1.1.
Next: Markers, section 4.7.1.3.
Up: Plot View, section 4.7.1.

The Plots display area displays all plots and allows looking at and getting information about individual data points. See Mouse Marker in section 4.1.
A legend, showing the names and colors of all the current plots, is shown if it is enabled using the Show Legend action, see section 5.4.16.
Depending on the zoom level and the setting in the Show Data Points menu, see section 5.4.15, individual data points are displayed as small shapes on the plot. This makes it easy to find the exact measured data points and makes it easy to point at them to create a mouse marker at that location.

See section 4.1 for an explanation about terms used in this section.

Plots can be interacted with in the following ways:

Selection A single plot can be selected by left clicking on the plot. Any number of plots can be selected by ctrl left clicking on the desired plots *or* by dragging a box over multiple plots while keeping the *ctrl* key down. Single plots can be unselected by ctrl left clicking on them or all plots can be unselected by clicking anywhere in the display area. If the legend is visible, plots can be selected in a similar fashion by clicking on the corresponding items in the legend. *If a plot is selected, the axes belonging to that plot are automatically selected as well. This allows immediate scrolling and zooming of the selected plot because only selected axes are scrolled and zoomed.*

Zooming Plots can be zoomed in by moving the mouse to a position in the plot and scrolling the mouse wheel *or* drawing a box, indicating the desired zoom area, while holding the *shift key* and *left* mouse button down.

Note that zooming a plot effectively zooms the corresponding axes and **zooming is only possible for <u>selected</u> axes.**

Plots can also be zoomed in using the following actions (Note that normally the shortcuts of those actions are used):

1. Zoom In Horizontal. See section 5.4.5.1.9.1.
2. Zoom Out Horizontal. See section 5.4.5.1.9.2.
3. Zoom In Vertical. See section 5.4.5.1.9.3.
4. Zoom Out Vertical. See section 5.4.5.1.9.4.

Scrolling Plots an be scrolled or panned or moved by left clicking anywhere in the display area and dragging the mouse in the desired direction (while keeping the left mouse button down).

Note that scrolling a plot effectively scrolls he corresponding axes and **scrolling is only possible for <u>selected</u> axes.**

Plots can also be scrolled/panned using the following actions (Note that normally the shortcuts of those actions are used):

1. Pan Left. See section 5.4.5.1.8.1.
2. Pan Right. See section 5.4.5.1.8.2.
3. Pan Up. See section 5.4.5.1.8.3.
4. Pan Down. See section 5.4.5.1.8.4.

When the plot view has focus, the plots can also be scrolled/panned using the arrow keys without modifier. When using the previously mentioned scrolling actions, the plot view does not need to have focus but a modifier key needs to be used.

Mouse markers can be created by pointing at a datapoint on a plot. There are different mouse marker interaction modes:

Normal Normal (or default) mode only creates one mouse marker on the nearest valid data point on the nearest plot. When the mouse is moved a certain distance away from the datapoint, the mouse marker is removed again.

Interpolating Interpolation is enabled by holding down the *ctrl* key. This allows pointing at a location *between* valid datapoints to create a mouse marker at an interpolated position.

Multiple When the *shift* key is held down, multiple mouse markers are shown on *all* plots at the nearest (valid) x position. The mouse marker(s) are not removed until the *shift* key is released. This makes it easy to quickly scroll a mouse marker over the plots to analyze the corresponding values.

Selected Plots When the *alt* key is held down, a mouse marker is shown on all *selected* plots.

Combination The "Interpolating" and "Multiple" modes can be combined by holding both the *shift* and *ctrl* keys down. The "Interpolating" and "Selected Plots" modes can be combined by holding both the *alt* and *ctrl* keys down.

4.7.1.3 Markers

Previous: Plots, section 4.7.1.2.
Next: Marker Items, section 4.7.1.4.
Up: Plot View, section 4.7.1.

All markers are displayed on the Plots display area, see section 4.7.1.2, and are drawn *on top of* any plots, i.e. they are overlaid on top of the plots. Line markers are drawn as a vertical line with a rectangular *handle* at the bottom of the display area. The number displayed in the handle is the line marker number. If a line marker is moved outside the display area, e.g. using a scrollbar, the handle will stay in the view at the bottom left or right to indicate that the marker is outside the display area. An arrow will be drawn in the handle to indicate this. The marker can still be moved, e.g. back into view, using this "arrow" handle. The points where the line intersects the plots are drawn as small circles. These circles are also known as point markers. See section 4.1 for an explanation of line markers and point markers.

Values associated with the markers, i.e. the x and y coordinates, are also displayed in the Markers sub-window, see section 4.11.

The markers can be interacted with in the following ways:

Highlight A marker can be highlighted by hovering the mouse over the marker handle or over one of the point marker circles. If a marker is highlighted, the items are drawn with a thicker line to make it stand out. A highlighted marker is also *always* drawn on top of non-highlighted markers. This can be used to changed the draw order of markers when multiple markers are drawn on top of each other so they can both be viewed properly.

If a marker *handle* is highlighted, *all* point markers corresponding to that line marker will also automatically be highlighted. If a point marker is highlighted, the corresponding y axis value will be displayed in a box on the left (in case of an *even* marker number) or to to the right (in case of an *odd* marker number) of the display area. As soon as the mouse is no longer on top of the marker, it will be un-highlighted.

Selection The selection of a marker can be toggled by left clicking the marker. If the handle is clicked, the selection of all point markers corresponding to the that line marker will als be toggled. Individual point markers can be selected and unselected by clicking a point marker circle. See section 4.7.9.

When a marker is selected, its y value display box (normally only shown when the marker is highlighted) is always visible. Note that a point marker can also be unselected by clicking the y value display box.

Moving A marker can be moved by highlighting it and then left clicking it and moving the mouse. Moving a line marker will also automatically move all corresponding point markers. Point markers that are part of a line marker can *not* be moved. Point markers that are not part of a line marker *can* be moved.

Multiple markers can be moved at the same time by first selecting them and then using shift-click instead of click while moving the mouse.

Normally, markers are positioned on actual data values (or samples) and moving markers will only move them from one data point to another. If it is desired to move a marker in between two datapoints, this can be done using interpolation. *Interpolation can be enabled by pressing ctrl while moving a marker. This allows moving a marker anywhere.*

Markers can be added and removed using the Add Line Marker at Mouse Pos action, see section 5.4.3.6 and the Delete Marker action, see section 5.4.3.12.
These actions, and other marker actions, can be found in the Markers menu, see section 5.4.3.

4.7.1.4 Marker Items

Previous: Markers, section 4.7.1.3.
Up: Plot View, section 4.7.1.

Marker items are additional visual elements that can be attached to one or more point markers. Marker items can be added to point markers that belong to *different* plots, allowing analysis and comparison of data belonging to different plots which is not possible with statistics. For example, determining the delta y between different plots. Marker items are added and removed using the Marker Items menu, see section 5.4.3.8.
All marker items are displayed on the Plots display area, see section 4.7.1.2, and are drawn *on top of* any plots, i.e. they are overlaid on top of the plots.
The marker items can be interacted with in the following ways:

Highlight A marker item can be highlighted by hovering the mouse over any (non-line) part of the marker item. If a marker item is highlighted, the items are drawn with a thicker line to make it stand out. A highlighted marker item is also *always* drawn on top of non-highlighted marker items. This can be used to changed the draw order of marker items when multiple marker items are drawn on top of each other so they can both be viewed properly.

Different types of marker items may have different additional highlight effects. As soon as the mouse is no longer on top of the marker item, it will be un-highlighted.

Selection The selection of a marker item can be toggled by left clicking any non-line part of the marker item. Different types of marker items may have different visual selection effects.

Moving A marker item normally automatically moves with the point markers. Some part of marker items may be moveable, depending on the type of marker item. For example, the marker item created by the Add Note action, see section 5.4.3.8.1 has a moveable part. A moveable marker item part can be moved by highlighting it and then left clicking it and moving the mouse.

Markers item actions can be found in the Markers action, see section 5.4.3.

4.7.2 Horizontal Scrollbar

Previous: Plot View, section 4.7.1.
Next: Vertical Scrollbar, section 4.7.3.
Up: View, section 4.7.

Figure 4.8: The horizontal scroll/pan bar

The horizontal scrollbar, see figure 4.8, shows the approximate current scroll position and zoom level of the currently *selected horizontal* axes. It can also be used to actually scroll *all* currently *selected horizontal* axes but note that scrolling and zooming can also be done from within the view without interacting with the scrollbars. Moving the slider to the left will move the plots to the right while moving the slider to the right will move the plots to the left. If no horizontal axes are selected, this scrollbar is completely disabled. If the zoom level or scroll position is changed without using the scrollbar, the scrollbar will update its size and position to match the new scroll position and zoom level.

4.7.3 Vertical Scrollbar

Previous: Horizontal Scrollbar, section 4.7.2.
Next: Horizontal Zoom Slider, section 4.7.4.
Up: View, section 4.7.

Figure 4.9: The vertical scroll/pan bar

The vertical scrollbar, see figure 4.9, shows the approximate current scroll position and zoom level of the currently *selected vertical* axes. It can also be used to actually scroll *all* currently *selected vertical* axes but note that scrolling and zooming can also be done from within the view without interacting with the scrollbars. Moving the slider up will move the plots down while moving the slider down will move the plots up. If no vertical axes are selected, this scrollbar is completely disabled. If the zoom level or scroll position is changed without using the scrollbar, the scrollbar will update its size and position to match the new scroll position and zoom level.

4.7.4 Horizontal Zoom Slider

Previous: Vertical Scrollbar, section 4.7.3.
Next: Vertical Zoom Slider, section 4.7.5.
Up: View, section 4.7.

Figure 4.10: The horizontal zoom bar

The horizontal zoom slider, see figure 4.10, shows the approximate current zoom level of the currently *selected horizontal* axes. It can also be used to actually zoom *all* currently *selected horizontal* axes in or out but note that zooming can also be done from within the view without interacting with the zoom sliders. Zooming in is achieved by moving the slider to the right while zooming out is achieved by moving the slider to he left. If no horizontal axes are selected, this zoom slider is completely disabled. If the zoom level is changed without using the zoom slider, the zoom slider will update its position to match the new zoom level.

4.7.5 Vertical Zoom Slider

Previous: Horizontal Zoom Slider, section 4.7.4.
Next: Scroll/Zoom Box, section 4.7.6.
Up: View, section 4.7.

The vertical zoom slider, see figure 4.11, shows the approximate current zoom level of the currently *selected vertical* axes. It can also be used to actually zoom *all* currently *selected vertical* axes in or out but note that zooming can also be done from within the view without interacting with the zoom sliders. Zooming in is achieved by moving the slider up while zooming out is achieved

Figure 4.11: The vertical zoom bar

by moving the slider down. If no vertical axes are selected, this zoom slider is completely disabled. If the zoom level is changed without using the zoom slider, the zoom slider will update its position to match the new zoom level.

4.7.6 Scroll/Zoom Box

Previous: Vertical Zoom Slider, section 4.7.5.
Next: Axis Selection, section 4.7.7.
Up: View, section 4.7.

Figure 4.12: The scroll/zoom box

The scroll/zoom box, or range box, see figure 4.12, shows the relation between the data range and the visual range of the *leading* horizontal and vertical axes. It gives and indication about the current *viewport* on the data. This viewport will change as the zoom level and scroll position change. It can be used to quickly determine whether the view is very zoomed in or out or to quickly see which part of the data is being displayed.
The *data* range is displayed as a grey box while the *visible* range is displayed as a light blue box. Both boxes are displayed on top of eachother to indicate the relation between them. See section 4.1 for an explanation of *leading* axes and data/visual ranges

4.7.7 Axis Selection

Previous: Scroll/Zoom Box, section 4.7.6.
Next: Plot Selection, section 4.7.8.
Up: View, section 4.7.

Some operations require a selection of axes, for example Remove Axis, see section 5.3.3.8.4.1. An axis selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Axes can be selected by left clicking them. Any subset of axes can be selected by Ctrl clicking any axis. Ctrl clicking an already selected axis will unselect it.

4.7.8 Plot Selection

Previous: Axis Selection, section 4.7.7.
Next: Marker Selection, section 4.7.9.
Up: View, section 4.7.

Some operations require a selection of plots, for example Remove Plot, see section 5.3.3.9. A plot selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Plots can be selected by left clicking them. Any subset of plots can be selected by Ctrl clicking any plot. Ctrl clicking an already selected plot will unselect it. Any subset of plots can be selected by dragging a box around the desired plots while keeping the left mouse button down.

4.7.9 Marker Selection

Previous: Plot Selection, section 4.7.8.
Next: Context Menu, section 4.7.10.
Up: View, section 4.7.

Some operations require a selection of markers, for example Delete Marker, see section 5.4.3.12. A marker selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Markers can be selected by left clicking them. Selecting a marker while it is already selected will toggle the selected state.
A line marker can be selected by clicking the small box at the bottom of the marker line. An individual point on a marker can be selected by clicking the corresponding small circle on the marker line.

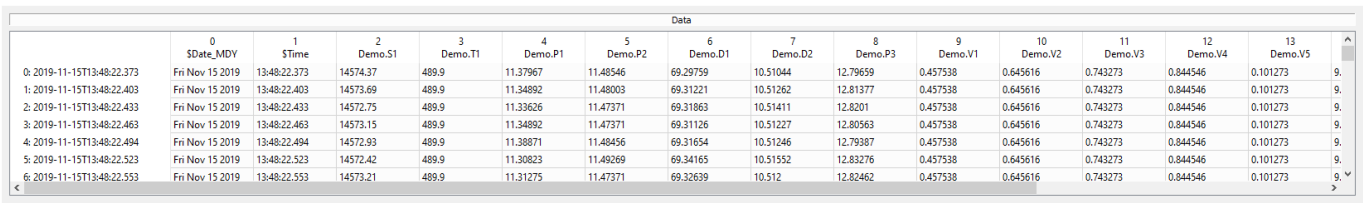
4.7.10 Context Menu

Previous: Marker Selection, section 4.7.9.
Up: View, section 4.7.

The View sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the View main menu. See section 5.4.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.8 Data

Previous: View, section 4.7.
Next: Plots, section 4.9.
Up: Data View, section 4.



Data

	0 $Date_MDY	1 $Time	2 Demo.S1	3 Demo.T1	4 Demo.P1	5 Demo.P2	6 Demo.D1	7 Demo.D2	8 Demo.P3	9 Demo.V1	10 Demo.V2	11 Demo.V3	12 Demo.V4	13 Demo.V5	
0: 2019-11-15T13:48:22.373	Fri Nov 15 2019	13:48:22.373	14574.37	489.9	11.37967	11.48546	69.29759	10.51044	12.79659	0.457538	0.645616	0.743273	0.844546	0.101273	9.
1: 2019-11-15T13:48:22.403	Fri Nov 15 2019	13:48:22.403	14573.69	489.9	11.34892	11.48003	69.31221	10.51262	12.81377	0.457538	0.645616	0.743273	0.844546	0.101273	9.
2: 2019-11-15T13:48:22.433	Fri Nov 15 2019	13:48:22.433	14572.75	489.9	11.33626	11.47371	69.31863	10.51411	12.8201	0.457538	0.645616	0.743273	0.844546	0.101273	9.
3: 2019-11-15T13:48:22.463	Fri Nov 15 2019	13:48:22.463	14573.15	489.9	11.34892	11.47371	69.31126	10.51227	12.80563	0.457538	0.645616	0.743273	0.844546	0.101273	9.
4: 2019-11-15T13:48:22.494	Fri Nov 15 2019	13:48:22.494	14572.93	489.9	11.38871	11.48456	69.31654	10.51246	12.79387	0.457538	0.645616	0.743273	0.844546	0.101273	9.
5: 2019-11-15T13:48:22.523	Fri Nov 15 2019	13:48:22.523	14572.42	489.9	11.30823	11.49269	69.34165	10.51552	12.83276	0.457538	0.645616	0.743273	0.844546	0.101273	9.
6: 2019-11-15T13:48:22.553	Fri Nov 15 2019	13:48:22.553	14573.21	489.9	11.31275	11.47371	69.32639	10.512	12.82462	0.457538	0.645616	0.743273	0.844546	0.101273	9.

Figure 4.13: The Data subwindow

The Data sub-window, see figure 4.13, shows all *raw* data in the dataset that is currently selected in the Datasets sub-window, see section 4.5.

It shows the data in tabular form. One row per timestamp and one column per tag. It can be used to analyze the *exact* contents of the selected dataset.

4.8.1 Data Selection

Next: Context Menu, section 4.8.2.
Up: Data, section 4.8.

Some operations require a selection of individual samples, for example Export Selected Data, see section 5.5.2. An individual sample selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Individual samples can be selected by left clicking them. A group of individual samples can be selected by selecting the first individual sample and then shift clicking on the last individual sample. Multiple groups of individual samples can be selected by selecting the first individual sample of a group with Ctrl and then shift clicking on the last individual sample of that group. Any subset of individual samples can be selected by Ctrl clicking any individual sample. Ctrl clicking an already selected individual sample will unselect it.

4.8.2 Context Menu

Previous: Data Selection, section 4.8.1.
Up: Data, section 4.8.

The Data sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Data main menu. See section 5.5.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.9 Plots

Previous: Data, section 4.8.
Next: Axes, section 4.10.
Up: Data View, section 4.

The Plots sub-window, see figure 4.14, shows all plot groups that are currently defined in the current Data View sub-window. For each plot group, the horizontal and vertical axes that are assigned to that group are shown, as well as all plots that are currently plotted in that group.
For easy identification, the color of each plot is also shown in the plot node (next to the plot text). This spot also includes an icon that shows whether the plot is currently visible or not. This icon can be clicked to toggle the visibility of the corresponding plot. See also section 5.4.12.3.
The information is displayed in a tree view. Each plot group corresponds to a root node. Each root plot group node contains an *Axes* node, containing the horizontal and vertical axes, and a *Plots* node, containing all the plots that are part of the group. Note that nodes may be collapsed/expanded by clicking on them.
So, the Plots sub-window shows a complete overview of all current plots and their relation with the plot groups and axes.

An individual plot is defined by its x and y axis and the (data or time) sources assigned to those axes. Multiple plots can share the same x and/or y axes. A plot group is the collection of all plots that are associated with a specific x and y axis. It is possible, and likely, that not all combinations of x and y axes are used in a group. This happens, for example, when two x and y axes are defined and some tags are only plotted on one x axis and some tags only on the other x axis. It is also possible, but unlikely and *not* recommended, that multiple groups share the same x *and* y axis. This will cause the same plots to be displayed twice (in exactly the same location and zoom level) and may cause unexpected behaviour.
It is normal for multiple groups to share a single axis, most likely the x-axis. This happens when multiple tags with different data ranges are each plotted on their own y-axis but all share the same x-axis since they are from the same dataset. This is the default behaviour when using the Plot on Matching Axes action, see section 5.3.3.1.

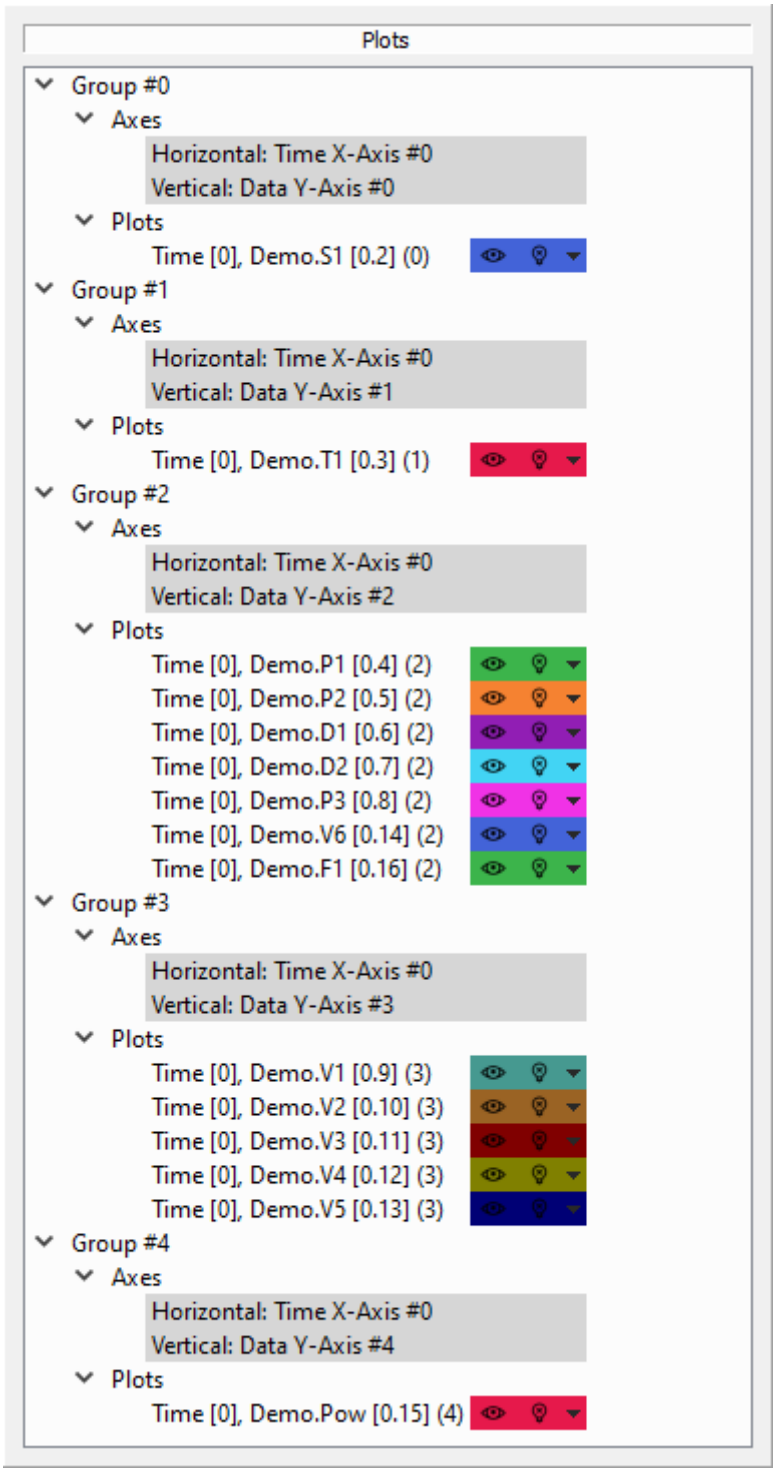


Figure 4.14: The Plots subwindow

When, due to the removal of an axis, a group no longer has both an x and y axis, that group is **automatically** *deleted to prevent the accumulation of empty groups.*

See also section 4.1 for an explanation of plot group and other used terms.

The Plots sub-window can be used to (amongst others):

- Easily locate and select plots.
- Find out which plots belong to which axes and which axes belong to which group.
- Easily select axes.
- Easily remove plots, remove axes, add or remove groups.
- Easily toggle the visibility of plots.

4.9.1 Group Selection

Next: Plot Selection, section 4.9.2.
Up: Plots, section 4.9.

Some operations require a selection of groups, for example Remove Group, see section 5.3.3.8.4.2. A group selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Groups can be selected by left clicking them. A group of groups can be selected by selecting the first group and then shift clicking on the last group. Multiple groups of groups can be selected by selecting the first group of a group with Ctrl and then shift clicking on the last group of that group. Any subset of groups can be selected by Ctrl clicking any group. Ctrl clicking an already selected group will unselect it.

4.9.2 Plot Selection

Previous: Group Selection, section 4.9.1.
Next: Axis Selection, section 4.9.3.
Up: Plots, section 4.9.

Some operations require a selection of plots, for example Remove Plot, see section 5.3.3.9. A plot selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Plots can be selected by left clicking them. A group of plots can be selected by selecting the first plot and then shift clicking on the last plot. Multiple groups of plots can be selected by selecting the first plot of a group with Ctrl and then shift clicking on the last plot of that group. Any subset of plots can be selected by Ctrl clicking any plot. Ctrl clicking an already selected plot will unselect it.

4.9.3 Axis Selection

Previous: Plot Selection, section 4.9.2.
Next: Context Menu, section 4.9.4.
Up: Plots, section 4.9.

Some operations require a selection of axes, for example Remove Axis, see section 5.3.3.8.4.1. An axis selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Axes can be selected by left clicking them. Any subset of axes can be selected by Ctrl clicking any axis. Ctrl clicking an already selected axis will unselect it.

4.9.4 Context Menu

Previous: Axis Selection, section 4.9.3.
Up: Plots, section 4.9.

The Plots sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Plots main menu. See section 5.6.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.10 Axes

Previous: Plots, section 4.9.
Next: Markers, section 4.11.
Up: Data View, section 4.

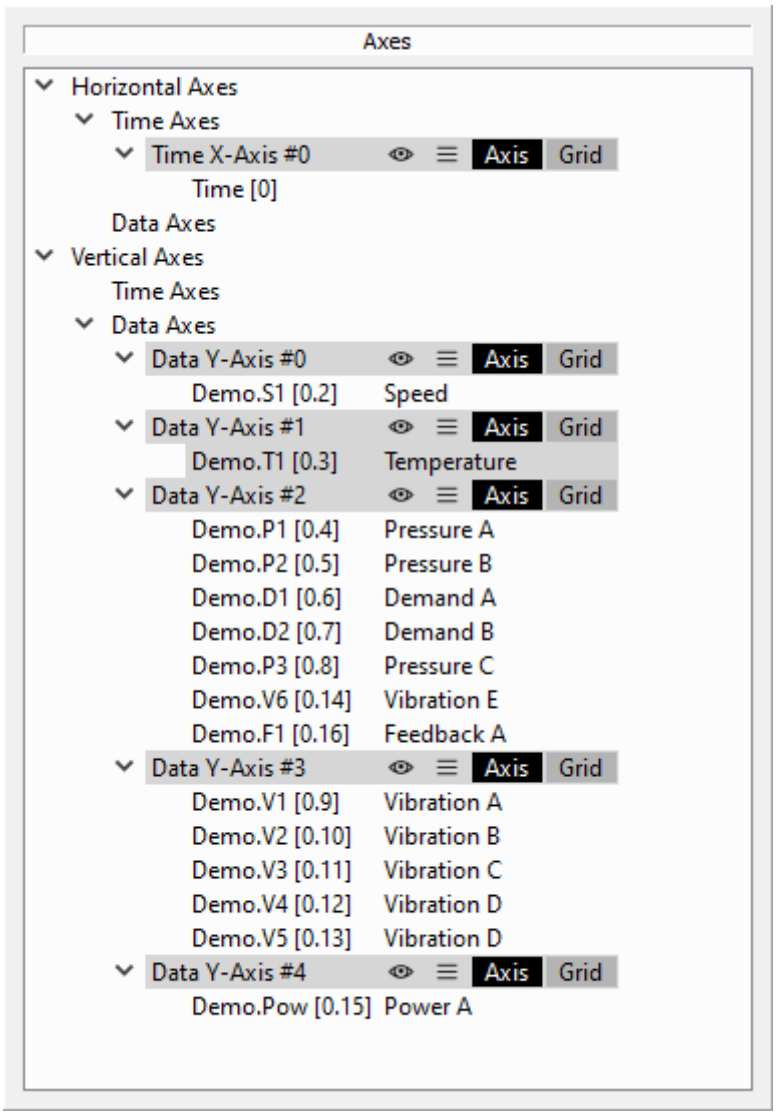


Figure 4.15: The Axes subwindow

The Axes sub-window, see figure 4.15, shows all axes that are currently defined in the current Data View sub-window. All information is shown in a tree view. Note that nodes may be collapsed/expanded by clicking on them.
An axis can either be horizontal or vertical. It can not be both and can never be changed. Axes, therefore, are grouped by direction. All horizontal axes are displayed in the Horizontal tree node and all vertical axes are displayed in the vertical tree node. In addition to the direction, axes can be of a different type. Axes can be a data axis or a time axis. See section 4.1 for an explanation about time and data axes. They can never have more than one type and the type can never be changed. Axes, therefore, are also grouped by type. All time axes are displayed in a *Time Axes* node and all data axes are displayed in a *Data Axes* node.
Each axis is also a node containing all the tags that are assigned as source to that axis. See section 4.1 for an explanation of assigned tags and data sources. So for each axis, all assigned sources (or tags) are displayed. When the source is a data source, i.e. the data is from a specific tag, the description of the tag, if present, is also displayed next to the tag name in a separate column.
So, the Axes sub-window shows a complete overview of all current axes and which data is assigned to which axis.

Note that an actual *plot* is create by assigning sources to an x axis and a y axis and combining an x axis and a y axis into a plot group. See section 4.9.

When, due to unassigning a source from an axis, an axis no longer has any assigned sources, that axis is **automatically** *deleted. This* **may** *in turn cause a plot group to be* **automatically** *deleted if the deleted axis part of a group.*

The Axes sub-window can be used to (amongst others):

- Easily select axes.
- Find out which tags are plotted on which axes.
- Easily add and remove axes.
- Easily remove plots by unassigning sources from axes.
- Easily moving a plot to a different axis by dragging a source to a different axis.
- Easily toggle the visibility of an axis.
- Easily change the grid show mode and the color of an axis or an axis grid.

Next to an axis name are a number of icons. From left to right they are:

- The 'eye' icon that can be used to toggle the visibility of an axis.
- The menu icon that opens a menu that can be used to change the colors of the axis and/or grid and to change the 'grid show mode' of the axis.
- The axis color button that shows the color of the axis and can be used to change the color of the axis.
- The grid color button that shows the color of the grid of an axis and can be used to change the color of the grid of the axis.

4.10.1 Axis Selection

Next: Tag Selection, section 4.10.2.
Up: Axes, section 4.10.

Some operations require a selection of axes, for example Remove Axis, see section 5.3.3.8.4.1. An axis selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Axes can be selected by left clicking them. Any subset of axes can be selected by Ctrl clicking any axis. Ctrl clicking an already selected axis will unselect it.

4.10.2 Tag Selection

Previous: Axis Selection, section 4.10.1.
Next: Assigned Tag Selection, section 4.10.3.
Up: Axes, section 4.10.

Some operations require a selection of tags, for example Plot on Matching Axes, see section 5.3.3.1. A tag selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Tags can be selected by left clicking them. A group of tags can be selected by selecting the first tag and then shift clicking on the last tag. Multiple groups of tags can be selected by selecting the first tag of a group with Ctrl and then shift clicking on the last tag of that group. Any subset of tags can be selected by Ctrl clicking any tag. Ctrl clicking an already selected tag will unselect it.

4.10.3 Assigned Tag Selection

Previous: Tag Selection, section 4.10.2.
Next: Axis Type Selection, section 4.10.4.
Up: Axes, section 4.10.

Some operations require a selection of assigned tags, for example Unassign Data Source from Axis, see section 5.3.3.8.2.1. An assigned tag selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Assigned tags can be selected by left clicking them. A group of assigned tags can be selected by selecting the first assigned tag and then shift clicking on the last assigned tag. Multiple groups of assigned tags can be selected by selecting the first assigned tag of a group with Ctrl and then shift clicking on the last assigned tag of that group. Any subset of assigned tags can be selected by Ctrl clicking any assigned tag. Ctrl clicking an already selected assigned tag will unselect it.
An assigned tag is a tag that is already assigned to an axis and is the combination of the tag and the axis it is assigned to. It can only be selected this sub-window.

4.10.4 Axis Type Selection

Previous: Assigned Tag Selection, section 4.10.3.
Next: Context Menu, section 4.10.5.
Up: Axes, section 4.10.

Some operations require a selection of axis type, for example Add Axis, see section 5.3.3.8.3.1. An axis type selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Axis type can be selected by left clicking them. A group of axis type can be selected by selecting the first axis type and then shift clicking on the last axis type. Multiple groups of axis type can be selected by selecting the first axis type of a group with Ctrl and then shift clicking on the last axis type of that group. Any subset of axis type can be selected by Ctrl clicking any axis type. Ctrl clicking an already selected axis type will unselect it.
An axis type is the combination of axis direction, i.e. horizontal or vertical, and axis type, e.g. data axis or time axis. An axis type can be selected by clicking on the Time Axes or Data Axes node in the tree view in either the Horizontal or Vertical tree.

4.10.5 Context Menu

Previous: Axis Type Selection, section 4.10.4.
Up: Axes, section 4.10.

The Axes sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Axes main menu. See section 5.7.

The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.11 Markers

Previous: Axes, section 4.10.
Next: Statistics, section 4.12.
Up: Data View, section 4.

Markers

		Group	X-Data	Y-Data	Description	M0.X	M0.Y	M1.X	M1.Y
0		0	Time [0]	Demo.S1 [0.2]	Speed	13:48:22.373	**14574.37**	14:01:42.993	**14564.66**
1		1	Time [0]	Demo.T1 [0.3]	Temperature	13:48:22.373	**489.9**	14:01:42.993	**483.8**
2		2	Time [0]	Demo.P1 [0.4]	Pressure A	13:48:22.373	**11.37967**	14:01:42.993	**11.28201**
3		2	Time [0]	Demo.P2 [0.5]	Pressure B	13:48:22.373	**11.48546**	14:01:42.993	**11.40498**
4		2	Time [0]	Demo.D1 [0.6]	Demand A	13:48:22.373	**69.29759**	14:01:42.993	**68.49918**
5		2	Time [0]	Demo.D2 [0.7]	Demand B	13:48:22.373	**10.51044**	14:01:42.993	**10.45306**
6		2	Time [0]	Demo.P3 [0.8]	Pressure C	13:48:22.373	**12.79659**	14:01:42.993	**12.69712**
7		2	Time [0]	Demo.V6 [0.14]	Vibration E	13:48:22.373	**9.092882**	14:01:42.993	**9.52691**
8		2	Time [0]	Demo.F1 [0.16]	Feedback A	13:48:22.373	**69.38886**	14:01:42.993	**68.40981**
9		3	Time [0]	Demo.V1 [0.9]	Vibration A	13:48:22.373	**0.457538**	14:01:42.993	**0.457538**
10		3	Time [0]	Demo.V2 [0.10]	Vibration B	13:48:22.373	**0.645616**	14:01:42.993	**0.643808**
11		3	Time [0]	Demo.V3 [0.11]	Vibration C	13:48:22.373	**0.743273**	14:01:42.993	**0.815611**

Figure 4.16: The Markers subwindow

The Markers sub-window, see figure 4.16, shows all markers that are currently defined in the current Data View sub-window. For each marker, the intersections with al affected plots are shown. For all the intersections, the x and y coordinates, i.e the values from the sources assigned to the axes of the plot, are shown. These values are automatically updated when the markers move. In other words, a marker shows the **data** value at a specific **time** specified by the marker position; Or: a marker *marks* a position on a plot.
Each row in the table corresponds to single plot and shows information about the plot and all the intersections with that plot and all the markers.
See also section 4.1 for an explanation of terms used in this section.

Currently, markers are only fully supported for "normal" plots with a horizontal **time** *x axis and a vertical* **data** *y axis. Using markers with other types of plots, e.g. scatter plots, is only supported in a very limited way.*

The first columns of the sub-window, showing information about the plots, are:

1st column The table row number.

2nd column The color of the plot belonging to this row, for easy identification. This column also contains an icon that shows whether the plot is visible or not. This icon can be clicked to toggle the visibility of the corresponding plot. See also section 5.4.12.3. This column also contains an icon that shows whether the plot is highlighted or not. This icon can be clicked to toggle the highlighting of the plot. Next to this icon is an arrow that can be clicked to open a menu that can be used to add individual highlighting options to the plot, configure existing highlighting or to change the color of the plot. See also section 5.4.13.2.

Group The group identifier of the group this plot belongs to. See section 4.9.

X-Data Shows which source is responsible for the input for the x axis of the plot belonging to this row. See section 4.1.

Y-Data Shows which source is responsible for the input for the y axis of the plot belonging to this row. See section 4.1.

Description The (optional) description of the **data** source for this plot.

The remaining columns show which markers are present. Each marker contains *two* columns: an x column, showing the x coordinate of the marker and a y column, showing the y coordinate of the marker. The column header shows the unique name of the marker and whether it is the x or y column. Note that marker numbers are starting from zero. For example, if the column header shows *"M1.Y"*, it means that this column is for marker 1, with name *"M1"* and for coordinate Y. The name *"M1"* is also used when displaying the markers in the View sub-window, see section 4.7.

A single marker (or intersection) can be thought of as a *point* marker while the complete marker column can be thought of as a *line* marker. See section 4.1 for an explanation about these types of markers.
When a marker is *specifically* created as a **point** marker, the text of the x and y elements will be underlined. A point marker can be created with, for example, the Add Point Marker at Mouse Pos action, see section 5.4.3.7.

New rows in this table will be added at the end or the beginning of the table. This is configurable using a setting. The order of the rows can be changed by dragging the selected rows to a new position. The selected rows will all be inserted *before* the position on which they are dropped. Moving rows to the end of the table can be achieved by dropping them after the last row (in the empty space of the table).The order can also be changed by manipulating the project view directly i.e. changing the corresponding row value in the correct project node.

A note about resizing table columns: Table columns can be resized but columns are automatically resized to fit their contents. So when a marker moves and some values change, the columns will be resized. So any manual resize actions will be undone. The only exception is the *description* column. Since that column can potentially be very large, it can be resized and will *not* be automatically resized.

The Markers sub-window can be used to (amongst others):

- Easily read tag values a specific times.
- Easily locate and select plots.
- Easily locate and select both point and line markers.
- Easily add and remove plots.
- Easily remove markers.
- Easily toggle the visibility of plots.

4.11.1 Marker Selection

Next: Plot Selection, section 4.11.2.
Up: Markers, section 4.11.

Some operations require a selection of markers, for example Remove Group, see section 5.3.3.8.4.2. A marker selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Markers can be selected by left clicking them. A group of markers can be selected by selecting the first marker and then shift clicking on the last marker. Multiple groups of markers can be selected by selecting the first marker of a group with Ctrl and then shift clicking on the last marker of that group. Any subset of markers can be selected by Ctrl clicking any marker. Ctrl clicking an already selected marker will unselect it.
An individual point on a marker, i.e a point marker, can be selected by clicking on an individual X or Y value in the table. The corresponding whole line marker can be selected by clicking on that column's header.

4.11.2 Plot Selection

Previous: Marker Selection, section 4.11.1.
Next: Context Menu, section 4.11.3.
Up: Markers, section 4.11.

Some operations require a selection of plots, for example Remove Plot, see section 5.3.3.9. A plot selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Plots can be selected by left clicking them. A group of plots can be selected by selecting the first plot and then shift clicking on the last plot. Multiple groups of plots can be selected by selecting the first plot of a group with Ctrl and then shift clicking on the last plot of that group. Any subset of plots can be selected by Ctrl clicking any plot. Ctrl clicking an already selected plot will unselect it.
A plot can be selected by clicking the left part of a row in the table. For example clicking on the plot color box or the description part will select the corresponding plot.

4.11.3 Context Menu

Previous: Plot Selection, section 4.11.2.
Up: Markers, section 4.11.

The Markers sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Markers main menu. See section 5.8.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.12 Statistics

Previous: Markers, section 4.11.
Next: Drag and Drop, section 4.13.
Up: Data View, section 4.

The Statistics sub-window, see figure 4.17, shows the currently enabled statistics in the current Data View sub-window. Statistics are displayed in tabular format. Each enabled statistic is displayed in its own column. statistic columns can be added and removed using the Add Statistic action, see section 5.9.2, and the Remove Statistic action, see section 5.9.3.

A statistic executes a statistical algorithm on values of a plot between two markers. The results of these calculations are displayed in the table. Note that a statistic will execute the algorithm for *all* plots that intersect the markers. The algorithms will be *automatically* re-run if any marker position changes. For example, a statistical algorithm could calculate the average y value of a plot over an x range specified by a begin and end marker.
Each statistic column has a header containing dropdown boxes that are used to:

1. Select the algorithm to be used, e.g, *Minimum* (dropdown box on 1st line). Note: The mouse can be hovered on this dropdown box to get a short explanation of the algorithm.

2. Select the *begin* marker (left dropdown box on 2nd line).

3. Select the *end* marker (right dropdown box on 2nd line).

The rows of a column show the calculated results for *each* plot that intersects the specified markers, one row per plot.

The rows of the table correspond **directly** *with the rows of the table of the Markers sub-window, i.e. statistic row* **i** *corresponds to the plot in row* **i** *in the marker table, see section 4.11. When scrolling the table, the corresponding marker table is also* **automatically** *scrolled to keep the rows in sync.*

Statistics

	Rate Y (dy/dx)		Average (μ)		Delta Y (dy)	
	M0	M1	M0	M1	M0	M1
0	-0.7276099/m		14572.46		-9.708984	
1	-0.4571462/m		493.6072		-6.100006	
2	-0.007318547/m		11.41043		-0.09765625	
3	-0.006031012/m		11.53384		-0.08047581	
4	-0.05983427/m		69.63292		-0.7984085	
5	-0.004300004/m		10.48741		-0.05737782	
6	-0.007454126/m		12.90432		-0.09946537	
7	0.03252687/m		9.643294		0.4340277	
8	-0.07337243/m		69.60282		-0.9790573	
9	0/m		0.4578533		0	
10	-0.0001354941/m		0.6455894		-0.001807988	
11	0.005421147/m		0.7178128		0.07233799	

Figure 4.17: The Statistics subwindow

4.12.1 Algorithms

Next: Statistic Selection, section 4.12.2.
Up: Statistics, section 4.12.

Various types of algorithms can be selected in the statistic header. This sections lists all of them. Most statistical algorithms supported by *Microsoft Excel* are supported. The explanations in the following sections use text from *wikipedia* and the manual of *Microsoft Excel*

4.12.1.1 No Algorithm

Next: Average, section 4.12.1.2.
Up: Statistic Selection, section 4.12.2.

This an algorithm that does not calculate anything. It is a convenenient way to quickly disable a statistic without removing it completely.

4.12.1.2 Average

Previous: No Algorithm, section 4.12.1.1.
Next: Standard deviation based on entire population, section 4.12.1.3.
Up: Statistic Selection, section 4.12.2.

In mathematics and statistics, the arithmetic mean, or simply the mean or average when the context is clear, is the sum of a collection of numbers divided by the count of numbers in the collection. The term 'arithmetic mean' is preferred in some contexts in mathematics and statistics because it helps distinguish it from other means, such as the geometric mean and the harmonic mean.

4.12.1.3 Standard deviation based on entire population

Previous: Average, section 4.12.1.2.
Next: Average Absolute Deviation, section 4.12.1.4.
Up: Statistic Selection, section 4.12.2.

The standard deviation is a measure of how widely values are dispersed from the average value (the mean). A low standard deviation indicates that the values tend to be close to the mean (also called the expected value) of the set, while a high standard deviation indicates that the values are spread out over a wider range. This is the population standard deviation.

4.12.1.4 Average Absolute Deviation

Previous: Standard deviation based on entire population, section 4.12.1.3.
Next: Linear Trend (Linear Regression) based on entire population, section 4.12.1.5.
Up: Statistic Selection, section 4.12.2.

The average absolute deviation about any certain point of a data set is the average of the absolute deviations or the positive difference of the given data and that certain value (generally central values). It is a summary statistic of statistical dispersion or variability.

4.12.1.5 Linear Trend (Linear Regression) based on entire population

Previous: Average Absolute Deviation, section 4.12.1.4.
Next: Delta Y, section 4.12.1.6.
Up: Statistic Selection, section 4.12.2.

Linear Trend (Linear Regression) based on entire population estimates the best fit regression line.It determines a straight line that best fits the data.It returns two values:1: The y value at the start of the line and2: The dy/dx slope of the line.

4.12.1.6 Delta Y

Previous: Linear Trend (Linear Regression) based on entire population, section 4.12.1.5.
Next: Delta X, section 4.12.1.7.
Up: Statistic Selection, section 4.12.2.

Delta Y is simply the difference between Y positions of two points.

4.12.1.7 Delta X

Previous: Delta Y, section 4.12.1.6.
Next: Rate Y, section 4.12.1.8.
Up: Statistic Selection, section 4.12.2.

Delta X is simply the difference between X positions of two points.

4.12.1.8 Rate Y

Previous: Delta X, section 4.12.1.7.
Next: Rate X, section 4.12.1.9.
Up: Statistic Selection, section 4.12.2.

Rate Y is the Delta Y devided by the Delta X (or the Slope or Rate of Change).

4.12.1.9 Rate X

Previous: Rate Y, section 4.12.1.8.
Next: Minimum, section 4.12.1.10.
Up: Statistic Selection, section 4.12.2.

Rate X is the Delta X devided by the Delta Y (or the inverse of Rate Y).

4.12.1.10 Minimum

Previous: Rate X, section 4.12.1.9.
Next: Maximum, section 4.12.1.11.
Up: Statistic Selection, section 4.12.2.

This algorithm calculates the minimum Y value between two points.

4.12.1.11 Maximum

Previous: Minimum, section 4.12.1.10.
Next: Minimum At, section 4.12.1.12.
Up: Statistic Selection, section 4.12.2.

This algorithm calculates the maximum Y value between two points.

4.12.1.12 Minimum At

Previous: Maximum, section 4.12.1.11.
Next: Maximum At, section 4.12.1.13.
Up: Statistic Selection, section 4.12.2.

This algorithm finds the minimum Y value between two points and returns the X value belonging to that Y value.

4.12.1.13 Maximum At

Previous: Minimum At, section 4.12.1.12.
Next: Range, section 4.12.1.14.
Up: Statistic Selection, section 4.12.2.

This algorithm finds the maximum Y value between two points and returns the X value belonging to that Y value.

4.12.1.14 Range

Previous: Maximum At, section 4.12.1.13.
Next: Median, section 4.12.1.15.
Up: Statistic Selection, section 4.12.2.

In statistics, the range of a set of data is the difference between the largest and smallest values. Difference here is specific, the range of a set of data is the result of subtracting the smallest value from largest value.

4.12.1.15 Median

Previous: Range, section 4.12.1.14.
Next: Median Absolute Deviation (MAD), section 4.12.1.16.
Up: Statistic Selection, section 4.12.2.

In statistics and probability theory, the median is the value separating the higher half from the lower half of a data sample, a population or a probability distribution. For a data set, it may be thought of as the ”middle” value. For example, the basic

advantage of the median in describing data compared to the mean (often simply described as the ”average”) is that it is not skewed so much by a small proportion of extremely large or small values, and so it may give a better idea of a ”typical” value.

4.12.1.16 Median Absolute Deviation (MAD)

Previous: Median, section 4.12.1.15.
Next: Mode, section 4.12.1.17.
Up: Statistic Selection, section 4.12.2.

The median absolute deviation (MAD) is a measure of statistical dispersion. Moreover, the MAD is a robust statistic, being more resilient to outliers in a data set than the standard deviation. In the standard deviation, the distances from the mean are squared, so large deviations are weighted more heavily, and thus outliers can heavily influence it. In the MAD, the deviations of a small number of outliers are irrelevant.

4.12.1.17 Mode

Previous: Median Absolute Deviation (MAD), section 4.12.1.16.
Next: Sample Count, section 4.12.1.18.
Up: Statistic Selection, section 4.12.2.

The mode of the data set S is the value of the data element that occurs most often. If there is more than one mode, only the first is returned If all the values occur only once then an error is returned. Like the statistical mean and median, the mode is a way of expressing, in a (usually) single number, important information about a random variable or a population. The numerical value of the mode is the same as that of the mean and median in a normal distribution, and it may be very different in highly skewed distributions.

4.12.1.18 Sample Count

Previous: Mode, section 4.12.1.17.
Next: Step Count, section 4.12.1.19.
Up: Statistic Selection, section 4.12.2.

This algorithm calculates the number of real samples between two points. This *excludes* interpolated start or end positions.

4.12.1.19 Step Count

Previous: Sample Count, section 4.12.1.18.
Next: Variance based on entire population, section 4.12.1.20.
Up: Statistic Selection, section 4.12.2.

This algorithm calculates the number of ’steps’ between two points. This *includes* interpolated start or end positions. This is the N used in various other algorithms e.g. average.

4.12.1.20 Variance based on entire population

Previous: Step Count, section 4.12.1.19.
Next: Covariance based on entire population, section 4.12.1.21.
Up: Statistic Selection, section 4.12.2.

The variance is a measure of the dispersion of the data around the mean and is the square of the standard deviation. This is the variance based on an entire population (see standard deviation).

4.12.1.21 Covariance based on entire population

Previous: Variance based on entire population, section 4.12.1.20.
Next: Coefficient of Variation based on entire population, section 4.12.1.22.
Up: Statistic Selection, section 4.12.2.

Covariance based on entire population. Covariance provides insight into how two variables are related to one another. More precisely, covariance refers to the measure of how two random variables in a data set will change together. A positive covariance means that the two variables at hand are positively related, and they move in the same direction. A negative covariance means that the variables are inversely related, or that they move in opposite directions.

4.12.1.22 Coefficient of Variation based on entire population

Previous: Covariance based on entire population, section 4.12.1.21.
Next: Skewness based on entire population, section 4.12.1.23.
Up: Statistic Selection, section 4.12.2.

In probability theory and statistics, the coefficient of variation, also known as relative standard deviation, is a standardized measure of dispersion of a probability distribution or frequency distribution. It is often expressed as a percentage, and is defined as the ratio of the standard deviation to the mean. The cooefficient of variation shows the extent of variability in relation to the mean. This is the coefficient of variation based on an entire population (see standard deviation).

4.12.1.23 Skewness based on entire population

Previous: Coefficient of Variation based on entire population, section 4.12.1.22.
Next: Excess Kurtosis based on entire population, section 4.12.1.24.
Up: Statistic Selection, section 4.12.2.

Skewness is a measure of symmetry. If the skewness of S is zero then the distribution represented by S is perfectly symmetric. If the skewness is negative, then the distribution is skewed to the left.If the skew is positive then the distribution is skewed to the right. This is the skewness based on an entire population (see standard deviation). Interpreting: If skewness is positive, the data are positively skewed. If skewness is negative the data are negatively skewed. If skewness is < -1 or > +1, the distribution can be called highly skewed. If skewness is between -1 and -0.5 or between +0.5 and +1, the distribution can be called moderately skewed. If skewness is between -0.5 and +0.5, the distribution can be called approximately symmetric.

4.12.1.24 Excess Kurtosis based on entire population

Previous: Skewness based on entire population, section 4.12.1.23.
Next: Geometric Mean, section 4.12.1.25.
Up: Statistic Selection, section 4.12.2.

Kurtosis provides a measurement about the extremities (i.e. tails) of the distribution of data. It therefore provides an indication of the presence of outliers. This is the kurtosis based on an entire population (see standard deviation). Interpreting: A normal distribution has kurtosis exactly 0. Any distribution with kurtosis 0 is called mesokurtic. A distribution with kurtosis < 0 is called platykurtic. Compared to a normal distribution, its tails are shorter and thinner, and often its central peak is lower and broader. A distribution with kurtosis >0 is called leptokurtic. Compared to a normal distribution, its tails are longer and fatter, and often its central peak is higher and sharper.

4.12.1.25 Geometric Mean

Previous: Excess Kurtosis based on entire population, section 4.12.1.24.
Next: Harmonic Mean, section 4.12.1.26.
Up: Statistic Selection, section 4.12.2.

In mathematics, the geometric mean is a mean or average, which indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum. The geometric mean is commonly used to provide a measure of average rate of growth. Note: only values > 0 are allowed.

4.12.1.26 Harmonic Mean

Previous: Geometric Mean, section 4.12.1.25.
Next: Squared Deviation, section 4.12.1.27.
Up: Statistic Selection, section 4.12.2.

In mathematics, the harmonic mean (sometimes called the subcontrary mean) is one of several kinds of average, and in particular, one of the Pythagorean means. Typically, it is appropriate for situations when the average of rates is desired. The harmonic mean can be expressed as the reciprocal of the arithmetic mean of the reciprocals of the given set of observations. The harmonic mean can be used to calculate an average speed.

4.12.1.27 Squared Deviation

Previous: Harmonic Mean, section 4.12.1.26.
Next: Median Sample Interval, section 4.12.1.28.
Up: Statistic Selection, section 4.12.2.

The sum of squares of deviations of data points from their sample mean.

4.12.1.28 Median Sample Interval

Previous: Squared Deviation, section 4.12.1.27.
Next: Mode Sample Interval, section 4.12.1.29.
Up: Statistic Selection, section 4.12.2.

Of all the delta T's between samples, half is smaller than or equal to this value and half is larger than or equal to this value.

4.12.1.29 Mode Sample Interval

Previous: Median Sample Interval, section 4.12.1.28.
Next: Average Sample Interval, section 4.12.1.30.
Up: Statistic Selection, section 4.12.2.

The delta T between samples that occurs most often.

4.12.1.30 Average Sample Interval

Previous: Mode Sample Interval, section 4.12.1.29.
Next: Min Sample Interval, section 4.12.1.31.
Up: Statistic Selection, section 4.12.2.

The average sample interval is the average time between samples. This is calculated as time / (num samples - 1)

4.12.1.31 Min Sample Interval

Previous: Average Sample Interval, section 4.12.1.30.
Next: Max Sample Interval, section 4.12.1.32.
Up: Statistic Selection, section 4.12.2.

The minimum delta T between samples. This algorithm can add visualizations to the plot.

4.12.1.32 Max Sample Interval

Previous: Min Sample Interval, section 4.12.1.31.
Next: Min Sample Interval, section 4.12.1.33.
Up: Statistic Selection, section 4.12.2.

The maximum delta T between samples. This algorithm can add visualizations to the plot.

4.12.1.33 Min Sample Interval

Previous: Max Sample Interval, section 4.12.1.32.
Next: Max Sample Interval, section 4.12.1.34.
Up: Statistic Selection, section 4.12.2.

The minimum delta T between samples. This algorithm can add visualizations to the plot.

4.12.1.34 Max Sample Interval

Previous: Min Sample Interval, section 4.12.1.33.
Next: MAD Sample Interval, section 4.12.1.35.
Up: Statistic Selection, section 4.12.2.

The maximum delta T between samples. This algorithm can add visualizations to the plot.

4.12.1.35 MAD Sample Interval

Previous: Max Sample Interval, section 4.12.1.34.
Next: Sample Interval Stability (2), section 4.12.1.36.
Up: Statistic Selection, section 4.12.2.

The median absolute deviation is a measure of statistical dispersion. Moreover, the MAD is a robust statistic, being more resilient to outliers in a data set than the standard deviation. In the standard deviation, the distances from the mean are squared, so large deviations are weighted more heavily, and thus outliers can heavily influence it. In the MAD, the deviations of a small number of outliers are irrelevant.

4.12.1.36 Sample Interval Stability (2)

Previous: MAD Sample Interval, section 4.12.1.35.
Next: Sample Interval Gaps (0.50), section 4.12.1.37.
Up: Statistic Selection, section 4.12.2.

Sample Interval Stability This gives an indication of the stability of the sample interval. This counts the number of sample intervals that deviate from the median sample interval by more than 2 times the absolute median deviation (MAD) or 1ms if the MAD is < 1ms. Lower values indicate a more stable sample rate. 0 is perfect stability. This algorithm can add visualizations to the plot. Note: This algorithm can be configured in settings.

4.12.1.37 Sample Interval Gaps (0.50)

Previous: Sample Interval Stability (2), section 4.12.1.36.
Up: Statistic Selection, section 4.12.2.

Sample Interval Gaps This algorithm counts the number of gaps in the sample intervals. A gap is defined as a sample interval that is > 1.5 times the median sample interval or < 0.5 times the median sample interval. This algorithm can add visualizations to the plot. Note: This algorithm can be configured in settings.

4.12.2 Statistic Selection

Previous: Algorithms, section 4.12.1.
Next: Context Menu, section 4.12.3.
Up: Statistics, section 4.12.

Some operations require a selection of statistics, for example Remove Statistic, see section 5.9.3. A statistic selection is always specific or *local* to a single Data View window but is global for anything inside that window. When multiple sub-windows can select the same item, the selection is kept consistent between all sub-windows if possible. Operations are always executed on the current active Data View window. Statistics can be selected by left clicking them. A group of statistics can be selected by selecting the first statistic and then shift clicking on the last statistic. Multiple groups of statistics can be selected by selecting the first statistic of a group with Ctrl and then shift clicking on the last statistic of that group. Any subset of statistics can be selected by Ctrl clicking any statistic. Ctrl clicking an already selected statistic will unselect it.
A statistic is considered selected if at least one item in the statistic's column is selected.

4.12.3 Context Menu

Previous: Statistic Selection, section 4.12.2.
Up: Statistics, section 4.12.

The Statistics sub-window can be right clicked to show this sub-window's specific context menu. The context menu matches the Statistics main menu. See section 5.9.
The coloured bar at the top of the context menu matches the name of the focus bar at the top of the sub-window.

4.13 Drag and Drop

Previous: Statistics, section 4.12.
Next: Context Sensitive Delete, section 4.14.
Up: Data View, section 4.

Many operations or actions can be performed in a more easy and intuitive way using drag and drop. This section describes all possible drag an drop actions. In general, a drag is started by left clicking an item and, while keeping the left mouse button down, drag it to another location. When at the desired location, the left mouse button can be released to drop the item. If the destination location accepts the drop, the desired operation is performed.
While dragging, a graphical representation of the item is created that moves with the mouse. The mouse cursor will change shape to indicate wether te destination can accept the drop. A "forbidden" icon will replace the normal mouse cursor if the item cannot be dropped at that location. If the item *can* be dropped, the mouse cursor is extended with a small arrow or a small plus sign, depending on the context.
The small arrow indicates that the dragged item is going to be *moved* or *assigned* to the new location. The small plus sign indicates that the dragged item is going to be *copied*, *duplicated* or *assigned* to the new location.

In situations where both modes could be applicable, e.g. either move or copy, the mode can be changed by **holding the ctrl key down**. *The small arrow will be changed into a small plus sign, or vice-versa.*

The possible drag operations are described below:

From Tags sub-window

To View sub-window A tag can be dropped onto:

- The central plot area to execute a Plot on Matching Axes action, see section 5.3.3.1.
- A horizontal or vertical axis to execute a Assign Data Source to Axis action, see section 5.3.3.8.1.1. Note that the receiving axis will be highlighted if it can accept a drop.

To Axes sub-window A tag can be dropped onto an axis to execute a Assign Data Source to Axis action, see section 5.3.3.8.1.1.

To Plots sub-window A tag can be dropped onto an axis to execute a Assign Data Source to Axis action, see section 5.3.3.8.1.1.

From Axes sub-window

To View sub-window An assigned source can be dropped onto an axis to *move* the assignment to another axis by executing a Assign Data Source to Axis action, see section 5.3.3.8.1.1, on the destination axis followed by a Unassign Data Source from Axis action, see section 5.3.3.8.2.1, on the source axis. It is also possible to *duplicate* the assigment by holding down ctrl, in that case the source assignment is not removed.

To Axes sub-window An assigned source can be dropped onto an axis to *move* the assignment to another axis by executing a Assign Data Source to Axis action, see section 5.3.3.8.1.1, on the destination axis followed by a Unassign Data Source from Axis action, see section 5.3.3.8.2.1, on the source axis. It is also possible to *duplicate* the assigment by holding down ctrl, in that case the source assignment is not removed.

To Plots sub-window The following items can be dragged:

- An assigned source can be dropped onto an axis to *move* the assignment to another axis by executing a Assign Data Source to Axis action, see section 5.3.3.8.1.1, on the destination axis followed by a Unassign Data Source from Axis action, see section 5.3.3.8.2.1, on the source axis. It is also possible to *duplicate* the assigment by holding down ctrl, in that case the source assignment is not removed.
- An axis can be dropped onto a group to assign an axis to a group by executing a Assign Axis to Group action, see section 5.3.3.8.1.2. The axis is assigned to the proper direction automatically depending on the direction of the axis.

From Plots sub-window

To View sub-window a plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed. Note that the receiving axis will be highlighted if it can accept a drop.

To Axes sub-window a plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed.

To Plots sub-window The following items can be dragged:

- A plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed.
- An axis can be dropped onto a group to assign an axis to a group by executing a Assign Axis to Group action, see section 5.3.3.8.1.2. The axis is assigned to the proper direction automatically depending on the direction of the axis.

From Markers sub-window

To View sub-window A plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed.

To Axes sub-window A plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed.

To Plots sub-window A plot can be dropped on an axis to execute a Move Plot action, see section 5.4.6. The plot can also be duplicated by holding down the ctrl, in that case the Duplicate Plot action, see section 5.3.3.10, is executed.

4.14 Context Sensitive Delete

Previous: Drag and Drop, section 4.13.
Up: Data View, section 4.

Pressing the 00007FF760BA46A6 key while in a Data View window activates the context sensitive delete function. The behaviour is different depending on which sub-window currently has the focus and which items are currently selected.
The following delete/remove functionalities can be activated depending on context:

- Remove Plot see secion 5.3.3.9.
- Delete Marker see secion 5.4.3.12.
- Remove Axis see secion 5.3.3.8.4.1.
- Delete Marker Items see secion 5.4.3.8.7.
- Unload Dataset see secion 5.2.4.
- Remove Statistic see secion 5.9.3.
- Remove Group see secion 5.3.3.8.4.2.
- Unassign Axis from Group see secion 5.3.3.8.2.2.
- Unassign Data Source from Axis see secion 5.3.3.8.2.1.

If it is not clear by context what needs to be deleted, a dialog will pop up that allows selection of what to delete exactly.

Chapter 5

Menus

Previous: Data View, section 4.

This chapter describes all the menus of the application and all actions in those menus. Every menu section has a picture of the corresponding menu. Actions of menus will each be described in their own sub section. If applicable, action shortcuts and mnemonics will be listed. All menus can be accessed from the main menu bar, see figure 5.1, or from context menus, accessed by right clicking on certain parts of the window. Some main menus are specific to a sub window, this is indicated by the coloured bar at the top of that menu. If a menu has a coloured bar, this menu can also be accessed by right clicking the subwindow with the same name.

All *actions can be found and executed from within a menu found in the main menus,* **even** *if the most convenient way to execute the action is a shortcut key. If an action has a shortcut key, it is displayed next to the action in the menu. So to find which shortcut key is used for which action, find the action in the menu and look for the shortcut key listed there.*

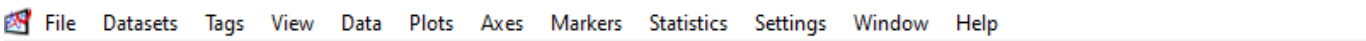


Figure 5.1: The main menu bar

The main menu bar contains the following menus:

The File menu, see section 5.1.
The Datasets menu, see section 5.2, corresponding to the Datasets sub-window, see section 4.5.
The Tags menu, see section 5.3, corresponding to the Tags sub-window, see section 4.6.
The View menu, see section 5.4, corresponding to the View sub-window, see section 4.7.
The Data menu, see section 5.5, corresponding to the Data sub-window, see section 4.8.
The Plots menu, see section 5.6, corresponding to the Plots sub-window, see section 4.9.
The Axes menu, see section 5.7, corresponding to the Axes sub-window, see section 4.10.
The Markers menu, see section 5.8, corresponding to the Markers sub-window, see section 4.11.
The Statistics menu, see section 5.9, corresponding to the Statistics sub-window, see section 4.12.
The Settings menu, see section 5.10.
The Window menu, see section 5.11.
The Help menu, see section 5.12.

5.1 File

Next: Datasets, section 5.2.
Up: Menus, section 5.

The File menu, see figure 5.2, contains the following items:

New Data View: see section 5.1.1.
Load Dataset: see section 5.1.2.
Load Dataset Custom...: see section 5.1.3.
Unload Dataset: see section 5.2.4.
Abort Load: see section 5.1.5.
Recent Datasets: see section 5.1.6.
New Project: see section 5.1.7.
Open Project: see section 5.1.8.
Open Project Custom...: see section 5.1.9.
Save Project: see section 5.1.10.
Save Project As...: see section 5.1.11.
Close Project: see section 5.1.12.
Recent Projects: see section 5.1.13.
Edit Project Info...: see section 5.1.14.
Create Project Report...: see section 5.1.15.
Export Datasets: see section 5.2.6.
New Tag Error View: see section 5.1.17.
Clear Tag Errors: see section 5.1.18.
Restart: see section 5.1.19.
Exit: see section 5.1.20.

The File main menu contains actions that are not specific to a single view on the loaded data; in other words, global actions. Actions such as loading files, exporting to files and opening new windows are found here.
Mnemonic: F

5.1.1 New Data View

Next: Load Dataset, section 5.1.2.
Up: File, section 5.1.

The New Data View action opens a new Data View window. Each Data View window is an independent view on the loaded data. See section 4 for a description of the Data View window.
Mnemonic: D
Shortcut: Ctrl+V

5.1.2 Load Dataset

Previous: New Data View, section 5.1.1.
Next: Load Dataset Custom..., section 5.1.3.
Up: File, section 5.1.

The Load Dataset action requests a file to be loaded. The load request is put into a load queue and the load operation is performed in the background. While the load is in progress, the application can be used normally. Any open Data View windows are updated dynamically as the new data arrives (which slows down the load). Multiple load requests can be queued simultaneously, i.e. multiple file can be selected in in operation, but the files will be loaded sequentially. The action will show a dialog that can be used to select one or more files. When the first load request (of one or more files) has finished loading, a Data View window, see 4, is opened automatically and the first dataset is selected. See the Load Dataset Custom... action, section 5.1.3, for a load action that allows overriding default load settings.

For a description of the format of files that can be loaded see section 7.
Mnemonic: L
Shortcut: Ctrl+L

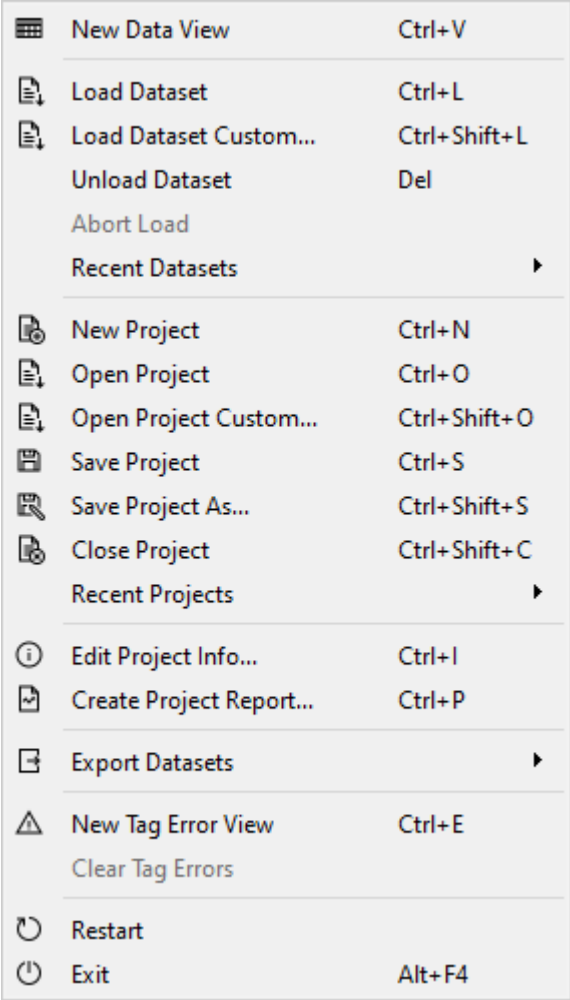


Figure 5.2: The File main menu

5.1.3 Load Dataset Custom...

Previous: Load Dataset, section 5.1.2.
Next: Unload Dataset, section 5.2.4.
Up: File, section 5.1.

The Load Dataset Custom... action requests a file to be loaded, similarly to the Load Dataset action, see section 5.1.2. But this action allows configuring or overriding certain default load settings. These settings may then also be saved as the new defaults for subsequent load operations. Before continuing with the load operation, a dialog is opened, see figure 5.3.

The following settings/parameters can be configured:
Data Column Separator: The character used to separate data columns.
Header Column Separator: The character used to separate header columns.
Decimal Point: The decimal point character.
Use Tag Descriptions: Whether or not to read tag descriptions.
Date Format: The date format, e.g. Month/Day/Year.
Timestamp Format: The timestamp format, e.g. multi column, single column, milliseconds, seconds etc...
Text Encoding: The text encoding, e.g. UTF8.

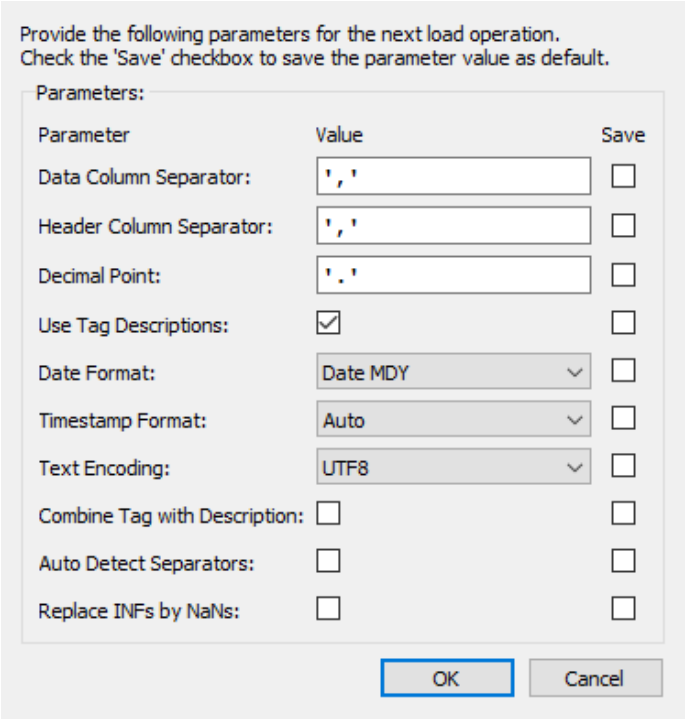


Figure 5.3: The Load Dataset Custom... dialog

Combine Tag with Description: Whether or not to combine the tag name and description into a single name.
Auto Detect Separators: If on, attempts to auto detect separators..
Replace INFs by NaNs: If on, replace all infinities (read or generated) by NaNs..

For a description of the format of files that can be loaded see section 7.
Mnemonic: C
Shortcut: Ctrl+Shift+L

5.1.4 Unload Dataset

Previous: Load Dataset Custom..., section 5.1.3.
Next: Abort Load, section 5.1.5.
Up: File, section 5.1.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.4.

5.1.5 Abort Load

Previous: Unload Dataset, section 5.2.4.
Next: Recent Datasets, section 5.1.6.
Up: File, section 5.1.

The Abort Load action aborts the current (if any) loading operation. This can be useful, for example, when loading a very large file and there are many errors in the file. Note that after aborting, the data will only be partially loaded. It is probably best to delete the partially loaded dataset after aborting.

This action is only enabled if a dataset is being loaded.
Mnemonic: A

5.1.6 Recent Datasets

Previous: Abort Load, section 5.1.5.
Next: New Project, section 5.1.7.
Up: File, section 5.1.

The Recent Datasets menu shows recently opened dataset files.Items in the menu can be used to quickly open recently used files again.
Mnemonic: D

5.1.7 New Project

Previous: Recent Datasets, section 5.1.6.
Next: Open Project, section 5.1.8.
Up: File, section 5.1.

The New Project action creates a new empty project. This is done by closing the current project and then saving the now empty state to a new file. See sections 5.1.12 and 5.1.11
The current project is shown in the status bar. See section 3.2.
Mnemonic: N
Shortcut: Ctrl+N

5.1.8 Open Project

Previous: New Project, section 5.1.7.
Next: Open Project Custom..., section 5.1.9.
Up: File, section 5.1.

The Open Project action opens a project. A file open dialog is shown which allows selecting the file to open. This action opens *only* the workspace from the project file. The global settings that are included in the project file are *not* loaded. If it is also required to load the global settings from the project file, the Open Project Custom... action, see 5.1.9, is required.
The current project is shown in the status bar. See section 3.2.
Before a project can be opened, the current project will be closed.
Mnemonic: O
Shortcut: Ctrl+O

5.1.9 Open Project Custom...

Previous: Open Project, section 5.1.8.
Next: Save Project, section 5.1.10.
Up: File, section 5.1.

The Open Project Custom... action opens a project. A file open dialog is shown which allows selecting the file to open. After a file is selected, a configuration dialog will be shown that allows configuring how to open the project. This configuration dialog allows, for example, loading the global settings from the project file.
The current project is shown in the status bar. See section 3.2.
Before a project can be opened, the current project will be closed.
Mnemonic: P
Shortcut: Ctrl+Shift+O

5.1.10 Save Project

Previous: Open Project Custom..., section 5.1.9.
Next: Save Project As..., section 5.1.11.
Up: File, section 5.1.

The Save Project action saves the current project. If the current project already has an associated file name, it will be saved in this file again. Otherwise, a file save dialog is shown and a filename can be selected. The information that is saved in the project file is the complete internal state *including* the global settings (These global settings are optionally opened when opening a project). The current project is shown in the status bar. See section 3.2.
Mnemonic: S
Shortcut: Ctrl+S

5.1.11 Save Project As...

Previous: Save Project, section 5.1.10.
Next: Close Project, section 5.1.12.
Up: File, section 5.1.

The Save Project As... action saves the current project. A file save dialog is shown and a filename must be selected. This allows saving the current project to a new file even if it already has an associated filename.
The current project is shown in the status bar. See section 3.2.
Mnemonic: S
Shortcut: Ctrl+Shift+S

5.1.12 Close Project

Previous: Save Project As..., section 5.1.11.
Next: Recent Projects, section 5.1.13.
Up: File, section 5.1.

The Close Project action closes the current project. Closing the current project will unload all currently loaded datasets and will close all currently open data views. A warning popup dialog will be shown that warns about this fact. If the current project has unsaved changes, the warning popup dialog allows saving the current project before closing it.
The current project is shown in the status bar. See section 3.2.
Mnemonic: C
Shortcut: Ctrl+Shift+C

5.1.13 Recent Projects

Previous: Close Project, section 5.1.12.
Next: Edit Project Info..., section 5.1.14.
Up: File, section 5.1.

The Recent Projects menu shows recently opened project files.Items in the menu can be used to quickly open recently used projects again.
Mnemonic: P

5.1.14 Edit Project Info...

Previous: Recent Projects, section 5.1.13.
Next: Create Project Report..., section 5.1.15.
Up: File, section 5.1.

The Edit Project Info... action views/edits the project information. This information is used when generating a (printed) report. See section 5.1.15.
The project can have a logo image and a (rich text) title and description. In addition each dataview can have a (rich text) title and description. Each data view has its own tab which contains the information for that data view.
Mnemonic: I
Shortcut: Ctrl+I

5.1.15 Create Project Report...

Previous: Edit Project Info..., section 5.1.14.
Next: Export Datasets, section 5.2.6.
Up: File, section 5.1.

The Create Project Report... action allows creation of a report. This report can be printed and saved to PDF and HTML. The report generation uses the information that is set using the Edit Project Info...action. See section 5.1.14.
In addition, it gathers information about plots, markers and statistics that will be added as tables to the document.A dialog will open that allows editing the rich text document, configuring the page size, enable/disable various options, etc...
Mnemonic: C
Shortcut: Ctrl+P

5.1.16 Export Datasets

Previous: Create Project Report..., section 5.1.15.
Next: New Tag Error View, section 5.1.17.
Up: File, section 5.1.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.6.

5.1.17 New Tag Error View

Previous: Export Datasets, section 5.2.6.
Next: Clear Tag Errors, section 5.1.18.
Up: File, section 5.1.

The New Tag Error View action opens a new Tag Error View window. This window will show any errors that occur during loading of a dataset. Normally this window is opened automatically when the first load error occurs but it is possible to open multiple error windows using this action.
For performance reasons, only a certain maximum number of errors can be maintained at the same time. If more errors than this maximum are occurring, they are not displayed. The last displayed error will mention this. Note that you can remove all current actions, see section 5.1.18.
Mnemonic: E
Shortcut: Ctrl+E

5.1.18 Clear Tag Errors

Previous: New Tag Error View, section 5.1.17.
Next: Restart, section 5.1.19.
Up: File, section 5.1.

The Clear Tag Errors action removes all errors from the Tag Error View window(s). See section 5.1.17.

Since the Tag Error View window only allows a certain maximum number of errors to be displayed, it might be useful to manually clear the errors to be able to receive and analyze more errors in case of a huge number of errors in a file. When starting a new load operation, this action is executed automatically.
This action is only enabled if at least one error has occurred.
Mnemonic: C

5.1.19 Restart

Previous: Clear Tag Errors, section 5.1.18.
Next: Exit, section 5.1.20.
Up: File, section 5.1.

The Restart action restarts the application. The user will be asked to confirm first.
Mnemonic: R

5.1.20 Exit

Previous: Restart, section 5.1.19.
Up: File, section 5.1.

The Exit action quits the application.
Mnemonic: x
Shortcut: Alt+F4

5.2 Datasets

Previous: File, section 5.1.
Next: Tags, section 5.3.
Up: Menus, section 5.

The Datasets menu, see figure 5.4, contains the following items:

Show Datasets Window: see section 5.2.7.3.
Load Dataset: see section 5.1.2.
Load Dataset Custom...: see section 5.1.3.
Unload Dataset: see section 5.2.4.
Abort Load: see section 5.1.5.
Export Datasets: see section 5.2.6.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.
Copy: see section 5.2.9.

The Datasets main menu contains actions that are specific to the Datasets sub-window, see section 4.5.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: s

5.2.1 Show Datasets Window

Up: Datasets, section 5.2.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.

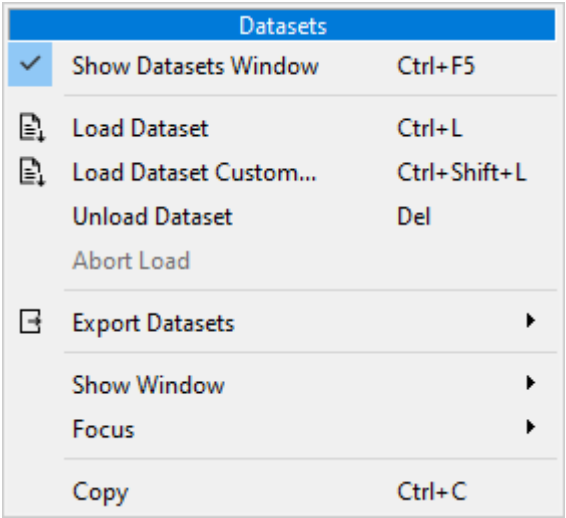


Figure 5.4: The Datasets main menu

The action is described in section 5.2.7.3.

5.2.2 Load Dataset

Previous: Show Datasets Window, section 5.2.7.3.
Up: Datasets, section 5.2.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.1.2.

5.2.3 Load Dataset Custom...

Up: Datasets, section 5.2.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.1.3.

5.2.4 Unload Dataset

Up: Datasets, section 5.2.

The Unload Dataset action deletes the selected datasets from memory. It does *not* delete the corresponding files.
This action is only enabled if at least one dataset is selected and no dataset is currently being loaded.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: U
Shortcut: Del

5.2.5 Abort Load

Up: Datasets, section 5.2.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.

The information for this action is repeated here for ease of reading and because it matches the application menu structure. The action is described in section 5.1.5.

5.2.6 Export Datasets

Next: Show Window, section 5.2.7.
Up: Datasets, section 5.2.

The Export Datasets menu, see figure 5.5, contains the following items:

Export Selected Datasets: see section 5.2.6.1.
Export All: see section 5.2.6.2.

The Export Datasets menu contains various actions to export complete datasets. To export only a selected part of a dataset, see section 5.4.3.11, or section 5.5.2.
Mnemonic: x

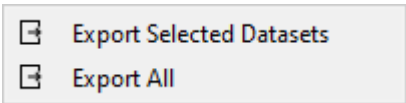


Figure 5.5: The Export Datasets sub menu

5.2.6.1 Export Selected Datasets

The Export Selected Datasets action exports the datasets that are selected in the Datasets subwindow, see section 4.5. Before exporting starts, a dialog is shown that allows configuring the export. See figure 5.6.

The following settings/parameters can be configured:
Data Column Separator: The character used to separate data columns.
Header Column Separator: The character used to separate header columns.
Decimal Point: The decimal point character.
Use Tag Descriptions: Whether or not to read tag descriptions.
Date Format: The date format, e.g. Month/Day/Year.
Timestamp Format: The timestamp format, e.g. multi column, single column, milliseconds, seconds etc...
Text Encoding: The text encoding, e.g. UTF8.
Combine Tag with Description: Whether or not to combine the tag name and description into a single name.
Replace INFs by NaNs: If on, export all infinities as NaNs..
Skip Lines containing INFs: If on, all lines containting INFs are skipped..
Skip Lines containing NaNs: If on, all lines containtin NaNs are skipped..

Output filename(s) will be automatically generated and the output files will be written to the same directory as the source files of the dataset(s). Note that multiple output files will be generated if data from multiple datasets is exported.
This action is only enabled if one or more datasets are selected.
Mnemonic: S

5.2.6.2 Export All

The Export All action exports all datasets that are currently loaded. All loaded datasets can be found in the Datasets subwindow, see section 4.5.

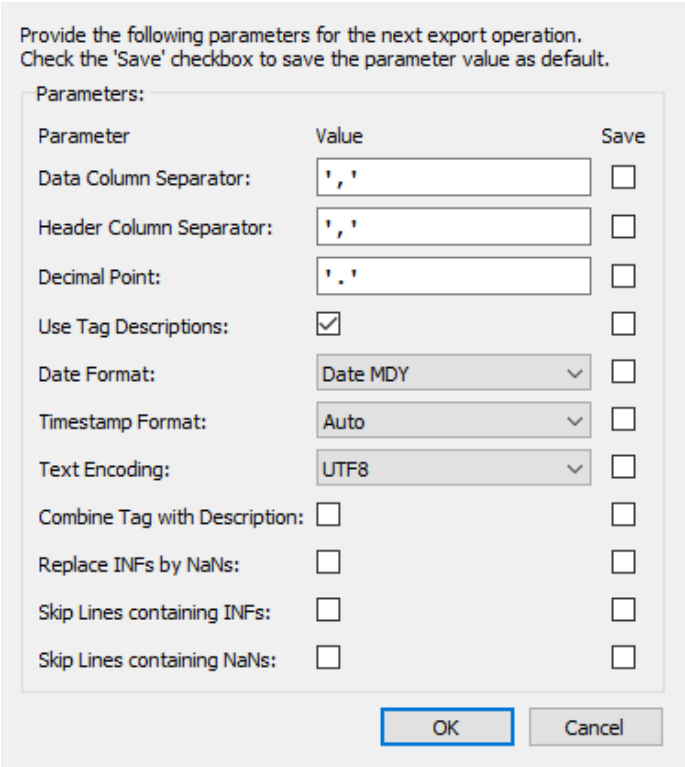


Figure 5.6: The Export Selected Datasets dialog

For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if at least one dataset is loaded.
Mnemonic: A

5.2.7 Show Window

Next: Focus, section 5.2.8.
Up: Datasets, section 5.2.

The Show Window menu, see figure 5.7, contains the following items:

Hide Other Windows: see section 5.2.7.1.
Show All Windows: see section 5.2.7.2.
Show Datasets Window: see section 5.2.7.3.
Show Tags Window: see section 5.2.7.4.
Show Data Window: see section 5.2.7.5.
Show View Window: see section 5.2.7.6.
Show Plots Window: see section 5.2.7.7.
Show Axes Window: see section 5.2.7.8.
Show Markers Window: see section 5.2.7.9.
Show Statistics Window: see section 5.2.7.10.

The Show Window menu contains all actions that show or hide sub-windows. They are all collected in a single menu for easy reference and to quickly find the corresponding shortcut key.
Mnemonic: S

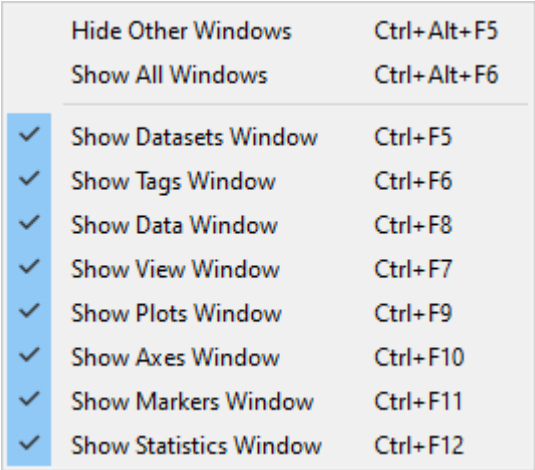


Figure 5.7: The Show Window sub menu

5.2.7.1 Hide Other Windows

Next: Show All Windows, section 5.2.7.2.
Up: Show Window, section 5.2.7.

The Hide Other Windows action hides all the sub-windows *but* the currently focused one. This is particularly useful for the View sub-window, see section 4.7, to quickly show only the plots.
Shortcut: Ctrl+Alt+F5

5.2.7.2 Show All Windows

Previous: Hide Other Windows, section 5.2.7.1.
Up: Show Window, section 5.2.7.

The Show All Windows action simply shows (or unhides) all sub-windows
Shortcut: Ctrl+Alt+F6

5.2.7.3 Show Datasets Window

Previous: Show All Windows, section 5.2.7.2.
Next: Show Tags Window, section 5.2.7.4.
Up: Show Window, section 5.2.7.

The Show Datasets Window action toggles the visibility of the Datasets sub-window, see section 4.5.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: s
Shortcut: Ctrl+F5

5.2.7.4 Show Tags Window

Next: Show Data Window, section 5.2.7.5.
Up: Show Window, section 5.2.7.

The Show Tags Window action toggles the visibility of the Tags sub-window, see section 4.6.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.

Mnemonic: T
Shortcut: Ctrl+F6

5.2.7.5 Show Data Window

Previous: Show Tags Window, section 5.2.7.4.
Next: Show View Window, section 5.2.7.6.
Up: Show Window, section 5.2.7.

The Show Data Window action toggles the visibility of the Data sub-window, see section 4.8.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: D
Shortcut: Ctrl+F8

5.2.7.6 Show View Window

Previous: Show Data Window, section 5.2.7.5.
Next: Show Plots Window, section 5.2.7.7.
Up: Show Window, section 5.2.7.

The Show View Window action toggles the visibility of the View sub-window, see section 4.7.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: V
Shortcut: Ctrl+F7

5.2.7.7 Show Plots Window

Previous: Show View Window, section 5.2.7.6.
Next: Show Axes Window, section 5.2.7.8.
Up: Show Window, section 5.2.7.

The Show Plots Window action toggles the visibility of the Plots sub-window, see section 4.9.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: P
Shortcut: Ctrl+F9

5.2.7.8 Show Axes Window

Previous: Show Plots Window, section 5.2.7.7.
Next: Show Markers Window, section 5.2.7.9.
Up: Show Window, section 5.2.7.

The Show Axes Window action toggles the visibility of the Axes sub-window, see section 4.10.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: A
Shortcut: Ctrl+F10

5.2.7.9 Show Markers Window

Previous: Show Axes Window, section 5.2.7.8.
Next: Show Statistics Window, section 5.2.7.10.
Up: Show Window, section 5.2.7.

The Show Markers Window action toggles the visibility of the Markers sub-window, see section 4.11.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: M
Shortcut: Ctrl+F11

5.2.7.10 Show Statistics Window

Previous: Show Markers Window, section 5.2.7.9.
Up: Show Window, section 5.2.7.

The Show Statistics Window action toggles the visibility of the Statistics sub-window, see section 4.12.
If the sub-window is visible, a checkmark is displayed before the action. Note that at least one subwindow must be visible at all times. In other words, this action is not enabled if it would hide the last visible sub-window.
Mnemonic: S
Shortcut: Ctrl+F12

5.2.8 Focus

Previous: Show Window, section 5.2.7.
Next: Copy, section 5.2.9.
Up: Datasets, section 5.2.

The Focus menu, see figure 5.8, contains the following items:

Focus Next Window: see section 5.2.8.1.
Focus Datasets: see section 5.2.8.2.
Focus Tags: see section 5.2.8.3.
Focus Data: see section 5.2.8.4.
Focus View: see section 5.2.8.5.
Focus Plots: see section 5.2.8.6.
Focus Axes: see section 5.2.8.7.
Focus Markers: see section 5.2.8.8.
Focus Statistics: see section 5.2.8.9.

The Focus menu contains all actions that focus sub-windows. If a sub-window has focus, user input, such as key presses, are directed to that sub-window. The bar at the top of a sub-window shows if the sub-window has focus. A coloured bar means that this sub-window has focus. Sub-windows can also get focus by simply clicking on them with the mouse. Only one sub-window can have focus i.e. multiple sub-windows can not have focus at the same time.
These actions are included if, for some reason, the mouse can not be used.
All focus actions are collected in a single menu for easy reference and to quickly find the corresponding shortcut key.
Mnemonic: F

5.2.8.1 Focus Next Window

Next: Focus Datasets, section 5.2.8.2.
Up: Focus, section 5.2.8.

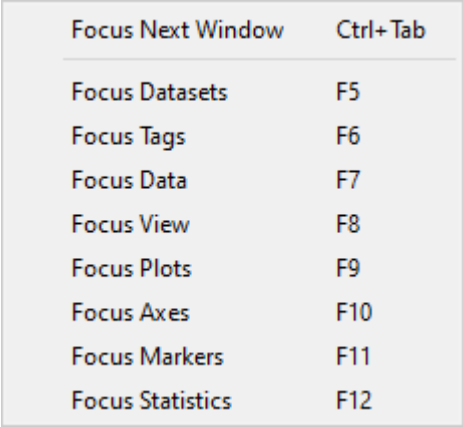


Figure 5.8: The Focus sub menu

The Focus Next Window action gives focus to the next sub-window. Using this action you can quickly cycle through all sub-windows when assigning focus.
Shortcut: Ctrl+Tab

5.2.8.2 Focus Datasets

Previous: Focus Next Window, section 5.2.8.1.
Next: Focus Tags, section 5.2.8.3.
Up: Focus, section 5.2.8.

The Focus Datasets action gives focus to the Datasets sub-window, see section 4.5.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: s
Shortcut: F5

5.2.8.3 Focus Tags

Previous: Focus Datasets, section 5.2.8.2.
Next: Focus Data, section 5.2.8.4.
Up: Focus, section 5.2.8.

The Focus Tags action gives focus to the Tags sub-window, see section 4.6.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: T
Shortcut: F6

5.2.8.4 Focus Data

Previous: Focus Tags, section 5.2.8.3.
Next: Focus View, section 5.2.8.5.
Up: Focus, section 5.2.8.

The Focus Data action gives focus to the Data sub-window, see section 4.8.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: D
Shortcut: F7

5.2.8.5 Focus View

Previous: Focus Data, section 5.2.8.4.
Next: Focus Plots, section 5.2.8.6.
Up: Focus, section 5.2.8.

The Focus View action gives focus to the View sub-window, see section 4.7.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: V
Shortcut: F8

5.2.8.6 Focus Plots

Previous: Focus View, section 5.2.8.5.
Next: Focus Axes, section 5.2.8.7.
Up: Focus, section 5.2.8.

The Focus Plots action gives focus to the Plots sub-window, see section 4.9.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: P
Shortcut: F9

5.2.8.7 Focus Axes

Previous: Focus Plots, section 5.2.8.6.
Next: Focus Markers, section 5.2.8.8.
Up: Focus, section 5.2.8.

The Focus Axes action gives focus to the Axes sub-window, see section 4.10.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: A
Shortcut: F10

5.2.8.8 Focus Markers

Previous: Focus Axes, section 5.2.8.7.
Next: Focus Statistics, section 5.2.8.9.
Up: Focus, section 5.2.8.

The Focus Markers action gives focus to the Markers sub-window, see section 4.11.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: M
Shortcut: F11

5.2.8.9 Focus Statistics

Previous: Focus Markers, section 5.2.8.8.
Up: Focus, section 5.2.8.

The Focus Statistics action gives focus to the Statistics sub-window, see section 4.12.
The bar at the top of the sub-window will become coloured to indicate that it has focus.
Mnemonic: S
Shortcut: F12

5.2.9 Copy

Previous: Focus, section 5.2.8.
Up: Datasets, section 5.2.

The Copy action copies all selected cells of the Datasets table to the clipboard. The cells will be formatted as text in CSV format. If the selected cells do not form a rectangle, empty cells will be added in the generated CSV text so that the generated CSV text forms a rectangle. Depending on settings, the horizontal and vertical headers of the table will be added to the CSV text. The CSV separator can be configured as well. See settings:

- Configure separator: See section 6.1.4.1
- Configure horizontal header: See section 6.1.4.2
- Configure horizontal header: See section 6.1.4.3

Mnemonic: C
Shortcut: Ctrl+C

5.3 Tags

Previous: Datasets, section 5.2.
Next: View, section 5.4.
Up: Menus, section 5.

The Tags menu, see figure 5.9, contains the following items:

Show Tags Window: see section 5.2.7.4.
Plot on Matching Axes: see section 5.3.3.1.
Plot: see section 5.3.3.
Filter...: see section 5.3.4.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.
Copy: see section 5.3.7.

The Tags main menu contains actions that are specific to the Tags sub-window, see section 4.6.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: T

5.3.1 Show Tags Window

Next: Plot on Matching Axes, section 5.3.3.1.
Up: Tags, section 5.3.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.4.

5.3.2 Plot on Matching Axes

Next: Plot, section 5.3.3.
Up: Tags, section 5.3.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.

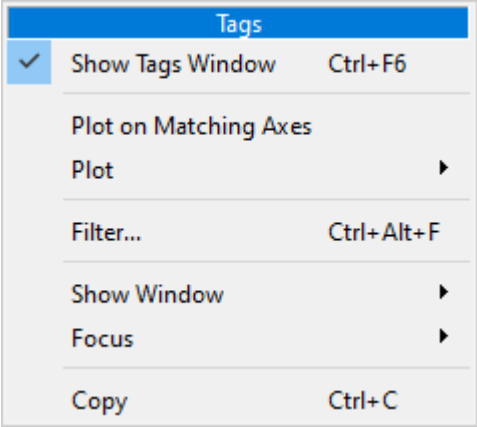


Figure 5.9: The Tags main menu

The information for this action is repeated here for ease of reading and because it matches the application menu structure. The action is described in section 5.3.3.1.

5.3.3 Plot

Previous: Plot on Matching Axes, section 5.3.3.1.
Next: Filter..., section 5.3.4.
Up: Tags, section 5.3.

The Plot menu, see figure 5.10, contains the following items:

Plot on Matching Axes: see section 5.3.3.1.
Move Plot: see section 5.4.6.
Plot on Selected Axes: see section 5.3.3.3.
Plot on Single New Axis: see section 5.3.3.4.
Plot on Multiple New Axes: see section 5.3.3.5.
Scatter Plot: see section 5.3.3.6.
Empty Plot: see section 5.3.3.7.
Manual Plot: see section 5.3.3.8.
Remove Plot: see section 5.3.3.9.
Duplicate Plot: see section 5.3.3.10.

The Plot menu contains all actions that create, move, remove or duplicate plots.Plot groups, see section 4.9, and axes, see section 4.10, can be created fully automatically or fully manually or anything in between.
Mnemonic: P

5.3.3.1 Plot on Matching Axes

Next: Move Plot, section 5.4.6.
Up: Plot, section 5.3.3.

The Plot on Matching Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6. It will automatically assign the tags to suitable axes, see secton 4.10, and assign axes to suitable groups, see section 4.9. If it cannot find suitable axes or groups, they will be created automatically.
Axes are selected based on the minimum and maximum values of the tag i.e. the data range of the tag. So the plots are grouped by data range. The grouping is based on *"nearest power of 10"*. For example: a tag with minimum value 3 and maximum value 9 is put in the range: 0 to 10 while a tag with mimimum 11 and maximum 45 is put in the range 0 to 100.

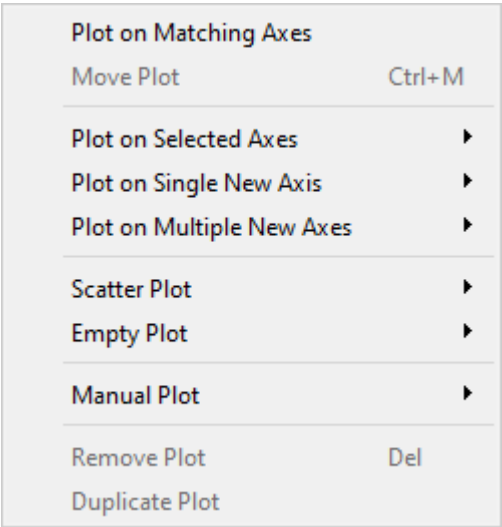


Figure 5.10: The Plot sub menu

Note: When plotting tags by double clicking the Tags sub-window or by dragging tags, this is the action that is executed.
This action is only enabled if at least one tag is selected.
Mnemonic: M

5.3.3.2 Move Plot

Next: Plot on Selected Axes, section 5.3.3.3.
Up: Plot, section 5.3.3.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.6.

5.3.3.3 Plot on Selected Axes

Previous: Move Plot, section 5.4.6.
Next: Plot on Single New Axis, section 5.3.3.4.
Up: Plot, section 5.3.3.

The Plot on Selected Axes menu, see figure 5.11, contains the following items:

Plot on Selected Y Axes: see section 5.3.3.3.1.
Plot on Selected X Axes: see section 5.3.3.3.2.
Plot on Selected X and Y Axes: see section 5.3.3.3.3.

The Plot on Selected Axes menu contains all plot actions that create plots while attempting to assign tags to the selected axes as much as possible.
Axes can be selected in the:

- View sub-window, see section 4.7.
- Axes sub-window, see section 4.10.
- Plots sub-window, see section 4.9.

If multiple axes are selected, tags will be assigned to all those axes. This means that multiple plots of the same tag may be created.
Mnemonic: P

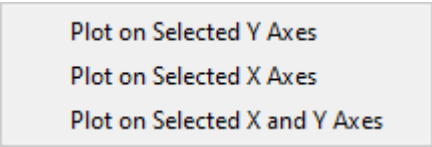


Figure 5.11: The Plot on Selected Axes sub menu

5.3.3.3.1 Plot on Selected Y Axes

Next: Plot on Selected X Axes, section 5.3.3.3.2.
Up: Plot on Selected Axes, section 5.3.3.3.

The Plot on Selected Y Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign tags to the selected Y axes. The other axes are assigned automatically. When multiple Y axes are selected, plots will be assigned to all those axes, this means multiple plots of the same tag will be created.
This action is only enabled if at least one tag is selected and at least one Y axis is selected.
Mnemonic: S

5.3.3.3.2 Plot on Selected X Axes

Previous: Plot on Selected Y Axes, section 5.3.3.3.1.
Next: Plot on Selected X and Y Axes, section 5.3.3.3.3.
Up: Plot on Selected Axes, section 5.3.3.3.

The Plot on Selected X Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign tags to the selected X axes. The other axes are assigned automatically.When multiple X axes are selected, plots will be assigned to all those axes, this means multiple plots of the same tag will be created.
This action is only enabled if at least one tag is selected and at least one X axis is selected.
Mnemonic: S

5.3.3.3.3 Plot on Selected X and Y Axes

Previous: Plot on Selected X Axes, section 5.3.3.3.2.
Up: Plot on Selected Axes, section 5.3.3.3.

The Plot on Selected X and Y Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign tags to the selected Y and X axes.When multiple X and Y axes are selected, plots will be assigned to all those axes, this means multiple plots of the same tag will be created.
This action is only enabled if at least one tag is selected and at least one Y axis and one X axis is selected.
Mnemonic: S

5.3.3.4 Plot on Single New Axis

Previous: Plot on Selected Axes, section 5.3.3.3.
Next: Plot on Multiple New Axes, section 5.3.3.5.
Up: Plot, section 5.3.3.

The Plot on Single New Axis menu, see figure 5.12, contains the following items:

Plot on Single New Y Axis: see section 5.3.3.4.1.
Plot on Single New X Axis: see section 5.3.3.4.2.
Plot on a Single New X and Y Axis: see section 5.3.3.4.3.

The Plot on Single New Axis menu contains all plot actions that create plots while attempting to assign all selected tags to a single, newly created axis (or axes). This new axis will be created automatically by this action. A new plot group, see section 4.9, will be created automatically as well.
Mnemonic: P

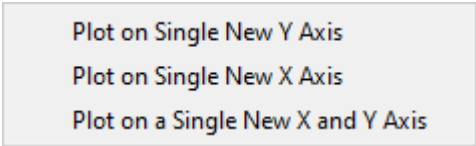


Figure 5.12: The Plot on Single New Axis sub menu

5.3.3.4.1 Plot on Single New Y Axis

Next: Plot on Single New X Axis, section 5.3.3.4.2.
Up: Plot on Single New Axis, section 5.3.3.4.

The Plot on Single New Y Axis action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign those tags to a single, newly created, Y axis. This new axis will be created automatically by this action. A new plot group, see section 4.9, will be created automatically as well. The other axes are assigned automatically.
This action is only enabled if at least one tag is selected.
Mnemonic: S

5.3.3.4.2 Plot on Single New X Axis

Previous: Plot on Single New Y Axis, section 5.3.3.4.1.
Next: Plot on a Single New X and Y Axis, section 5.3.3.4.3.
Up: Plot on Single New Axis, section 5.3.3.4.

The Plot on Single New X Axis action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign those tags to a single, newly created, X axis. This new axis will be created automatically by this action. A new plot group, see section 4.9, will be created automatically as well. The other axes are assigned automatically.
This action is only enabled if at least one tag is selected.
Mnemonic: S

5.3.3.4.3 Plot on a Single New X and Y Axis

Previous: Plot on Single New X Axis, section 5.3.3.4.2.
Up: Plot on Single New Axis, section 5.3.3.4.

The Plot on a Single New X and Y Axis action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign those tags to a single, newly created, Y axis and a single, newly created, X axis. These new axes will be created automatically by this action. A new plot group, see section 4.9, will be created automatically as well.
This action is only enabled if at least one tag is selected.
Mnemonic: S

5.3.3.5 Plot on Multiple New Axes

Previous: Plot on Single New Axis, section 5.3.3.4.
Next: Scatter Plot, section 5.3.3.6.
Up: Plot, section 5.3.3.

The Plot on Multiple New Axes menu, see figure 5.13, contains the following items:

Plot on Multiple New Y Axes: see section 5.3.3.5.1.
Plot on Multiple New X Axes: see section 5.3.3.5.2.
Plot on Multiple New X and New Y Axes: see section 5.3.3.5.3.

The Plot on Multiple New Axes menu contains all plot actions that create plots while attempting to assign *each* selected tag to its own, newly created axis (or axes). These new axes will be created automatically by this action. New plot groups, see section 4.9, will be created automatically as well.
Mnemonic: P

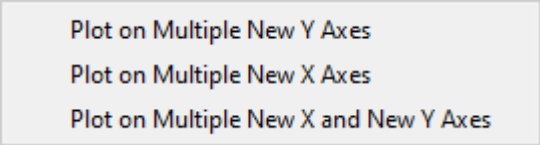


Figure 5.13: The Plot on Multiple New Axes sub menu

5.3.3.5.1 Plot on Multiple New Y Axes

Next: Plot on Multiple New X Axes, section 5.3.3.5.2.
Up: Plot on Multiple New Axes, section 5.3.3.5.

The Plot on Multiple New Y Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign *each* tag to its own, newly created, Y axis. These new axes will be created automatically by this action. New plot groups, see section 4.9, will be created automatically as well. The other axes are assigned automatically.
This action is only enabled if at least one tag is selected.
Mnemonic: M

5.3.3.5.2 Plot on Multiple New X Axes

Previous: Plot on Multiple New Y Axes, section 5.3.3.5.1.
Next: Plot on Multiple New X and New Y Axes, section 5.3.3.5.3.
Up: Plot on Multiple New Axes, section 5.3.3.5.

The Plot on Multiple New X Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign *each* tag to its own, newly created, X axis. These new axes will be created automatically by this action. New plot groups, see section 4.9, will be created automatically as well. The other axes are assigned automatically.
This action is only enabled if at least one tag is selected.
Mnemonic: M

5.3.3.5.3 Plot on Multiple New X and New Y Axes

Previous: Plot on Multiple New X Axes, section 5.3.3.5.2.
Up: Plot on Multiple New Axes, section 5.3.3.5.

The Plot on Multiple New X and New Y Axes action attempts to create new plots for all selected tags in the Tags sub-window, see section 4.6, while attempting to assign *each* tag to its own, newly created, Y axis and its own, newly created, X axis.These new axes will be created automatically by this action. New plot groups, see section 4.9, will be created automatically as well.
This action is only enabled if at least one tag is selected.
Mnemonic: M

5.3.3.6 Scatter Plot

Previous: Plot on Multiple New Axes, section 5.3.3.5.
Next: Empty Plot, section 5.3.3.7.
Up: Plot, section 5.3.3.

The Scatter Plot menu, see figure 5.14, contains the following items:

Scatter Plot on Matching Axes: see section 5.3.3.6.1.
Scatter Plot on Selected Axes: see section 5.3.3.6.2.

The Scatter Plot menu contains all plot actions that create scatter plots. Scatter plots are plots where both the X and Y axis are data axes. Normal plots have time on the X axis and data on the Y axis.This means that, for scatter plots, multiple points can have the same x coordinate. Scatter plots will not connect points with a line. Because each individual point of a scatter plot needs to be drawn, performance of scatter plots will bve much lower than normal plots. Expect a significant slow down when creating scatter plots for huge datasets.
Mnemonic: S

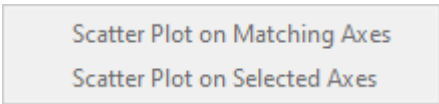


Figure 5.14: The Scatter Plot sub menu

5.3.3.6.1 Scatter Plot on Matching Axes

Next: Scatter Plot on Selected Axes, section 5.3.3.6.2.
Up: Scatter Plot, section 5.3.3.6.

The Scatter Plot on Matching Axes action attempts to create new scatter plots for selected tags in the Tags sub-window, see section 4.6. Because scatter plots have two data axes, *exactly* two tags must be selected. It will automatically assign the tags to suitable axes, see secton 4.10, and assign axes to suitable groups, see section 4.9. If it cannot find suitable axes or groups, they will be created automatically. The action will automatically determine which tag should be assigned to the X axis and which tag should be assigned to the Y axis. This is determined by the order in which tags are selected. The first selected tag is assigned to the X axis and the second selected tag is assigned to the Y axis. If more precise control is required, a manual plot is required. See section 5.3.3.8 for a description of manual plots.
For more information about matching axes, see section 5.3.3.1.
This action is only enabled if *exactly* two tags are selected.
Mnemonic: M

5.3.3.6.2 Scatter Plot on Selected Axes

Previous: Scatter Plot on Matching Axes, section 5.3.3.6.1.
Up: Scatter Plot, section 5.3.3.6.

The Scatter Plot on Selected Axes action attempts to create new scatter plots for selected tags in the Tags sub-window, see section 4.6, on the selected axes. Because scatter plots have two data axes, *exactly* two tags must be selected. It will attempt to assign

the tags to the selected axes, see secton 4.10, and assign axes to suitable groups, see section 4.9. The action will automatically determine which tag should be assigned to the X axis and which tag should be assigned to the Y axis. This is determined by the order in which tags are selected. The first selected tag is assigned to the X axis and the second selected tag is assigned to the Y axis. If more precise control is required, a manual plot is required. See section 5.3.3.8 for a description of manual plots.
For more information about matching axes, see section 5.3.3.1.
This action is only enabled if *exactly* two tags are selected *and* at least one X axis and at least one Y axis is selected.
Mnemonic: S

5.3.3.7 Empty Plot

Previous: Scatter Plot, section 5.3.3.6.
Next: Manual Plot, section 5.3.3.8.
Up: Plot, section 5.3.3.

The Empty Plot menu, see figure 5.15, contains the following items:

Empty Plot on New Y: see section 5.3.3.7.1.
Empty Plot on New X: see section 5.3.3.7.2.
Empty Plot on New X/Y: see section 5.3.3.7.3.
Empty Scatter Plot on New X/Y: see section 5.3.3.7.4.

The Empty Plot menu contains all plot actions that create empty plots. Empty plots are plots where only the plot groups, see section 4.9, and axes, see section 4.10, are created. The axes are assigned to plot groups but no tags are plotted yet. This is convenient if more control over the plot groups is required. One can easily create a new empty plot and then manually plot the desired tags in that group. This way, the automatic axis and group creation can be bypassed if, for some reason, this does not produce desired results.
Mnemonic: E

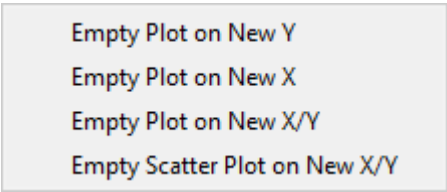


Figure 5.15: The Empty Plot sub menu

5.3.3.7.1 Empty Plot on New Y

Next: Empty Plot on New X, section 5.3.3.7.2.
Up: Empty Plot, section 5.3.3.7.

The Empty Plot on New Y action creates a new empty Y axis, see section 4.10, and a new plot group, see section 4.9. The new Y axis is assigned to the newly created plot group and an existing, automatically chosen, X axis is also assigned to this new plot group. If no such axis exist, it will be created. If one or more X axes are currently selected, a new Y axis and group is made for each selected X axis.
Mnemonic: E

5.3.3.7.2 Empty Plot on New X

Previous: Empty Plot on New Y, section 5.3.3.7.1.
Next: Empty Plot on New X/Y, section 5.3.3.7.3.
Up: Empty Plot, section 5.3.3.7.

The Empty Plot on New X action creates a new empty X axis, see section 4.10, and a new plot group, see section 4.9. The new X axis is assigned to the newly created plot group and an existing, automatically chosen, Y axis is also assigned to this new plot group. If no such axis exist, it will be created. If one or more Y axes are currently selected, a new X axis and group is made for each selected Y axis.
Mnemonic: E

5.3.3.7.3 Empty Plot on New X/Y

Previous: Empty Plot on New X, section 5.3.3.7.2.
Next: Empty Scatter Plot on New X/Y, section 5.3.3.7.4.
Up: Empty Plot, section 5.3.3.7.

The Empty Plot on New X/Y action creates a new empty X axis and a new empty Y axis, see section 4.10, and a new plot group, see section 4.9. The new axes are assigned to the newly created plot group.
Mnemonic: E

5.3.3.7.4 Empty Scatter Plot on New X/Y

Previous: Empty Plot on New X/Y, section 5.3.3.7.3.
Up: Empty Plot, section 5.3.3.7.

The Empty Scatter Plot on New X/Y action creates a new empty *data* X axis and a new empty *data* Y axis, see section 4.10, and a new plot group, see section 4.9. The new axes are assigned to the newly created plot group. These newly created axes and the newly created plot group can be used to plot scatter plots. See section 5.3.3.3.3 for an action than can do this.
Mnemonic: E

5.3.3.8 Manual Plot

Previous: Empty Plot, section 5.3.3.7.
Up: Plot, section 5.3.3.

The Manual Plot menu, see figure 5.16, contains the following items:

Assign: see section 5.3.3.8.1.
Unassign: see section 5.3.3.8.2.
Add: see section 5.3.3.8.3.
Remove: see section 5.3.3.8.4.

The Manual Plot menu contains actions that give full control over plot creation. Tags (data sources) can be manually assigned/unassigned to/from axes, see section 4.10. Axes can be manually assigned/unassigned to/from plot groups, see section 4.9. Axes and plot groups can be manually created and removed.
Mnemonic: M

5.3.3.8.1 Assign

Next: Unassign, section 5.3.3.8.2.
Up: Manual Plot, section 5.3.3.8.

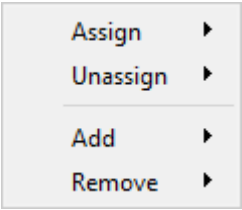


Figure 5.16: The Manual Plot sub menu

The Assign menu, see figure 5.17, contains the following items:

Assign Data Source to Axis: see section 5.3.3.8.1.1.
Assign Axis to Group: see section 5.3.3.8.1.2.

The Assign menu contains actions that can assign tags (data sources) to axes and assign axes to plot groups.
Mnemonic: s

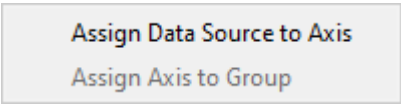


Figure 5.17: The Assign sub menu

5.3.3.8.1.1 Assign Data Source to Axis

Next: Assign Axis to Group, section 5.3.3.8.1.2.
Up: Assign, section 5.3.3.8.1.

The Assign Data Source to Axis action assigns an existing data source (tag) to an existing axis. Data sources can be assigned to a *data* axis or a *time* axis. When assigned to a data axis, the tag data is used as data; when assigned to a time axis, the tag timestamp data is used as data. This way normal plots and scatter plots can be created. For example, a normal plot has a time X axis and a data Y axis. If the same data source (tag) is assigned to both of these axes, a normal plot is created i.e. the tag provides the timestamps for the X axis and the data for the Y axis. Alternatively, A scatter plot can be created by assigning two, different, tags to a data X axis and a data Y axis.
Note that the plots will only be created if the axes that the data sources are assigned to are also themselves assigned to a plot group.
See also section 4.10 and section 4.9.
This action is only enabled if at least one data source (tag) is selected and at least one axis is selected.
Mnemonic: A

5.3.3.8.1.2 Assign Axis to Group

Previous: Assign Data Source to Axis, section 5.3.3.8.1.1.
Up: Assign, section 5.3.3.8.1.

The Assign Axis to Group action assigns an existing axis to an existing plot group. Axes are either horizontal (X) or vertical (Y). A single X axis and a single Y axis can be assigned to a plot group. When a plot group has both the X axis and Y axis assigned, and those axes also have data source assignments, the plots in that group are displayed.
Note that both data axes and time axes can be assigned to the plot group.This way, normal plots and scatter plots can be created.
See also section 4.10 and section 4.9.
This action is only enabled if at least one axis is selected and at least one group is selected.
Mnemonic: A

5.3.3.8.2 Unassign

Previous: Assign, section 5.3.3.8.1.
Next: Add, section 5.3.3.8.3.
Up: Manual Plot, section 5.3.3.8.

The Unassign menu, see figure 5.18, contains the following items:

Unassign Data Source from Axis: see section 5.3.3.8.2.1.
Unassign Axis from Group: see section 5.3.3.8.2.2.

The Unassign menu contains actions that can unassign tags (data sources) from axes and unassign axes from plot groups.
Mnemonic: U

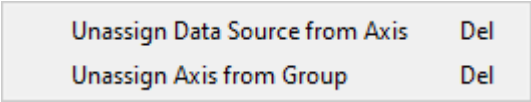


Figure 5.18: The Unassign sub menu

5.3.3.8.2.1 Unassign Data Source from Axis

Next: Unassign Axis from Group, section 5.3.3.8.2.2.
Up: Unassign, section 5.3.3.8.2.

The Unassign Data Source from Axis action unassigns an assigned data source (tag) from an existing axis. This will cause the corresponding plot to be removed from the View sub-window, see section 4.7. If, after the unassignment, the axis no longer has any data sources assigned, the axis will be automatically deleted.
See also section 4.10 and section 4.9.
This action is only enabled if at least one assigned data source (tag) is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: U
Shortcut: Del

5.3.3.8.2.2 Unassign Axis from Group

Previous: Unassign Data Source from Axis, section 5.3.3.8.2.1.
Up: Unassign, section 5.3.3.8.2.

The Unassign Axis from Group action unassigns an assigned axis from an existing plot group. This will cause the corresponding plot to be removed from the View sub-window, see section 4.7. If, after the unassignment, the plot group no longer has both the X and Y axes assigned, the plot group will be automatically deleted.
See also section 4.10 and section 4.9.
This action is only enabled if at least one axis is selected and at least one group is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: U
Shortcut: Del

5.3.3.8.3 Add

Previous: Unassign, section 5.3.3.8.2.
Next: Remove, section 5.3.3.8.4.
Up: Manual Plot, section 5.3.3.8.

The Add menu, see figure 5.19, contains the following items:

Add Axis: see section 5.3.3.8.3.1.
Add Group: see section 5.3.3.8.3.2.

The Add menu contains actions that can add(create) new axes and new plot groups.
Mnemonic: A

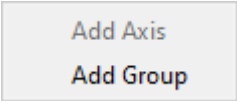


Figure 5.19: The Add sub menu

5.3.3.8.3.1 Add Axis

Next: Add Group, section 5.3.3.8.3.2.
Up: Add, section 5.3.3.8.3.

The Add Axis action creates a new empty axis of the specified type i.e. data axis or time axis. The axis type is selected by selecting a data axis node or a time axis node in the Axes sub-window. This will also determine if the new axis will be a horizontal or a vertical axis because the axis type nodes themselves are part of a horizontal or vertical node.
See also section 4.10
This action is only enabled if at least one axis type node is selected.
Mnemonic: A

5.3.3.8.3.2 Add Group

Previous: Add Axis, section 5.3.3.8.3.1.
Up: Add, section 5.3.3.8.3.

The Add Group action creates a new empty plot group, see section 4.9.
Mnemonic: A

5.3.3.8.4 Remove

Previous: Add, section 5.3.3.8.3.
Up: Manual Plot, section 5.3.3.8.

The Remove menu, see figure 5.20, contains the following items:

Remove Axis: see section 5.3.3.8.4.1.
Remove Group: see section 5.3.3.8.4.2.
Remove Plot: see section 5.3.3.9.

The Add menu contains actions that can remove(destroy) axes and plot groups.
Mnemonic: R

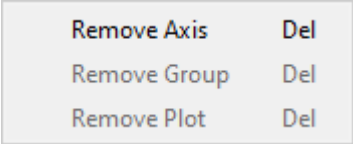


Figure 5.20: The Remove sub menu

5.3.3.8.4.1 Remove Axis

Next: Remove Group, section 5.3.3.8.4.2.
Up: Remove, section 5.3.3.8.4.

The Remove Axis action removes all selected axes. If those axes are assigned to a plot group, they are unassigned first. All associated plots are no longer displayed in the View sub-window, see section 4.7.
See also section 4.10 and section 4.9.
This action is only enabled if at least one axis is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: R
Shortcut: Del

5.3.3.8.4.2 Remove Group

Previous: Remove Axis, section 5.3.3.8.4.1.
Next: Remove Plot, section 5.3.3.9.
Up: Remove, section 5.3.3.8.4.

The Remove Group action removes all selected plot groups, see section 4.9.
Any axes that were assigned to this group are unassigned but *not* deleted. All associated plots are no longer displayed in the View sub-window, see section 4.7.
This action is only enabled if at least one plot group is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: R
Shortcut: Del

5.3.3.8.4.3 Remove Plot

Previous: Remove Group, section 5.3.3.8.4.2.
Up: Remove, section 5.3.3.8.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.9.

5.3.3.9 Remove Plot

Previous: Manual Plot, section 5.3.3.8.
Next: Duplicate Plot, section 5.3.3.10.
Up: Plot, section 5.3.3.

The Remove Plot action removes all selected plots. The plots will no longer be visible in the View sub-window, see section 4.7 and the corresponding data sources (tags) will be unassigned from their correseponding axes and corresponding plots will be removed from the Plots sub-window. After the operation, any empty axes or plot groups will be automatically removed. See also sections 4.9 and 4.10.

This action is only enabled if at least one plot is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: R
Shortcut: Del

5.3.3.10 Duplicate Plot

Up: Plot, section 5.3.3.

The Duplicate Plot action duplicates all selected plots to all selected axes, then *does not* removes the original plots. This effectively copies the plots to different axes. See sections 4.9 and 4.10.
The axis of the source plot may be selected as well. In this case this will simply be ignored. This is for ease of use, since selecting a plot will also automatically select the corresponding axes. If the original plot *should* be deleted, i.e. the plots should actually be moved, see section 5.4.6.
Drag and drop can also be used to duplicate plots by simply dragging a plot to a different axis while keeping the control key pressed. If no destination axes have been selected, it is assumed that the plots should be duplicated to new axes. A dialog is shown that allows specifying how to create the new axes. Note that it is allowed to select both Y and X axes options. See figure 5.21.

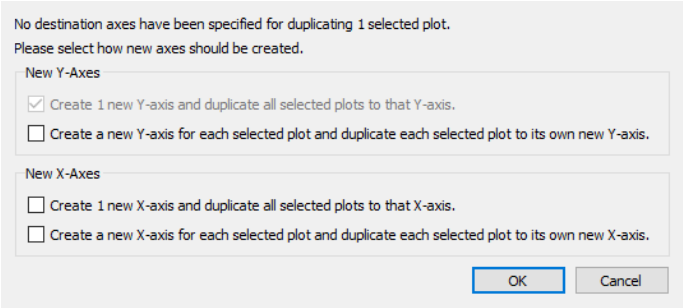


Figure 5.21: The Duplicate Plot dialog

Mnemonic: D

5.3.4 Filter...

Previous: Plot, section 5.3.3.
Up: Tags, section 5.3.

The Filter... action sets a tag display filter in the Tags sub-window, see section 4.6.
A tag display filter is used to limit which tags are being displayed. This can be used to easily find tags in a huge list. It can also be used to simply search for a tag. It opens a dialog where the actual filter pattern can be entered as well as other filter settings, see figure 5.22.
The filter pattern can be entered in the pattern textbox. If the auto apply checkbox is checked, the filter is automatically applied to the Tags sub-window while typing to get immediate filter feedback. If the auto apply checkbox is not checked, the filter has to be manually applied using the apply button. Note that to remove the filter, the pattern textbox can simply be cleared. The column dropdown box configures which column the filter should be applied on.
The pattern syntax dropdown box configures the syntax of the pattern. The syntax can be the following:

Wildcard This provides a simple pattern matching syntax similar to that used by shells (command interpreters) for "file globbing".

RegExp A rich Perl-like pattern matching syntax.

FixedString The pattern is a fixed string. This is equivalent to using the RegExp pattern on a string in which all metacharacters are escaped.

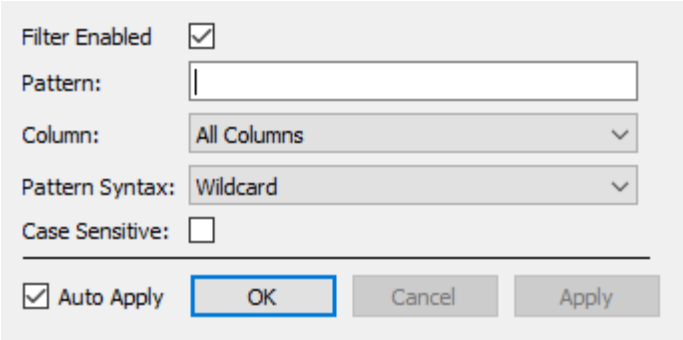


Figure 5.22: The Filter... dialog

When the case sensitive checkbox is checked, the filter pattern will be case sensitive, otherwise it is not. Pressing OK will accept the current filter and close the dialog, while pressing Cancel will restore the filter to the state it had before opening the dialog and close the dialog.
Mnemonic: F
Shortcut: Ctrl+Alt+F

5.3.5 Show Window

Previous: Filter..., section 5.3.4.
Up: Tags, section 5.3.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.3.6 Focus

Next: Copy, section 5.3.7.
Up: Tags, section 5.3.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.3.7 Copy

Up: Tags, section 5.3.

The Copy action copies all selected cells of the Tags table to the clipboard. The cells will be formatted as text in CSV format. If the selected cells do not form a rectangle, empty cells will be added in the generated CSV text so that the generated CSV text forms a rectangle. Depending on settings, the horizontal and vertical headers of the table will be added to the CSV text. The CSV separator can be configured as well. See settings:

- Configure separator: See section 6.1.4.1
- Configure horizontal header: See section 6.1.4.2
- Configure horizontal header: See section 6.1.4.3

Mnemonic: C
Shortcut: Ctrl+C

5.4 View

Previous: Tags, section 5.3.
Next: Data, section 5.5.
Up: Menus, section 5.

The View menu, see figure 5.23, contains the following items:

Show View Window: see section 5.2.7.6.
Plot: see section 5.3.3.
Markers: see section 5.4.3.
Marker Items: see section 5.4.3.8.
Axes: see section 5.4.5.
Move Plot: see section 5.4.6.
Toggle Plot Visibility: see section 5.4.12.3.
Toggle Plot Highlight: see section 5.4.13.2.
Remove Plot: see section 5.3.3.9.
Remove Axis: see section 5.3.3.8.4.1.
Range/Zoom: see section 5.4.5.1.
Plot Visibility: see section 5.4.12.
Plot Highlight: see section 5.4.13.
Color: see section 5.4.14.
Show Data Points: see section 5.4.15.
Show Legend: see section 5.4.16.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.

The View main menu contains actions that are specific to the View sub-window, see section 4.7.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: V

5.4.1 Show View Window

Up: View, section 5.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.6.

5.4.2 Plot

Next: Markers, section 5.4.3.
Up: View, section 5.4.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.3.3.

5.4.3 Markers

Up: View, section 5.4.

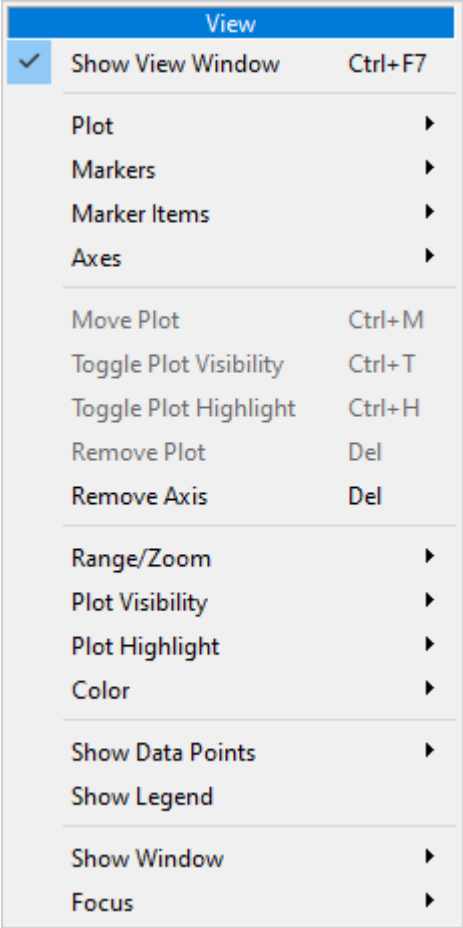


Figure 5.23: The View main menu

The Markers menu, see figure 5.24, contains the following items:

Set Marker Pos: see section 5.4.3.1.
Move Markers to Marker: see section 5.4.3.2.
Add Line Marker at Center: see section 5.4.3.3.
Add Line Marker at Begin: see section 5.4.3.4.
Add Line Marker at End: see section 5.4.3.5.
Add Line Marker at Mouse Pos: see section 5.4.3.6.
Add Point Marker at Mouse Pos: see section 5.4.3.7.
Marker Items: see section 5.4.3.8.
Zoom to Markers: see section 5.4.5.1.4.
Center on Marker: see section 5.4.5.1.5.
Export between Markers: see section 5.4.3.11.
Delete Marker: see section 5.4.3.12.
Delete Other Markers: see section 5.4.3.13.

The Markers menu contains actions that are related to markers, either creating them or performing other operations on/with them. See also sections 4.7 and 4.11.
Two types of markers exist:

Line Marker A line marker is positioned at a single position on the X axis and is visualized as a vertical line through all plots that

share a compatible X axis.

Point Marker A point marker is positioned at single data point on a single plot.

Mnemonic: M

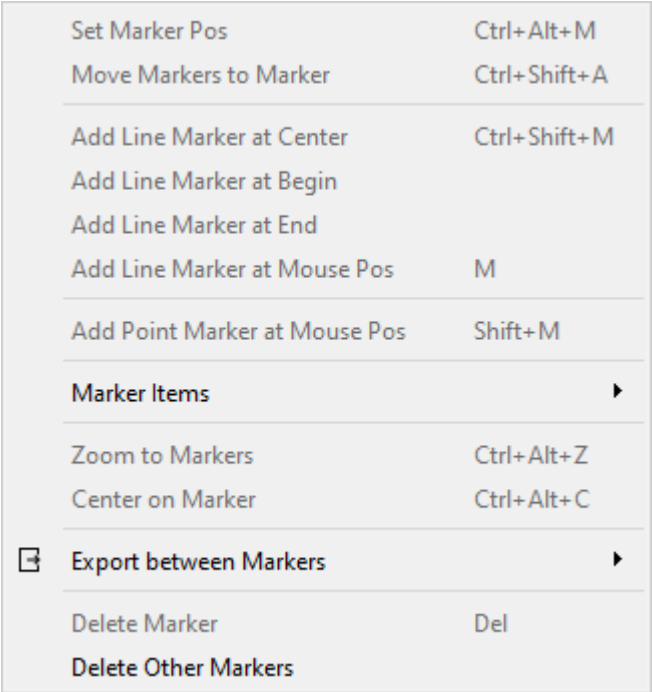


Figure 5.24: The Markers sub menu

5.4.3.1 Set Marker Pos

Next: Move Markers to Marker, section 5.4.3.2.
Up: Markers, section 5.4.3.

The Set Marker Pos action allows manually setting the exact position of one or more selected markers for all applicable x-axes. It opens a dialog that allows specifying the marker position for all selected markers. If a marker is on multiple x-axes, the dialog allows setting the position for each marker seperately for each applicable x-axis. See figure 5.25.

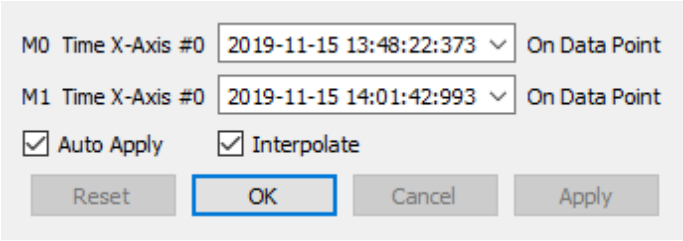


Figure 5.25: The Set Marker Pos dialog for a single x-axis

The dialog shows the axes for each marker and the current (editable) position of that marker on those axes. It also shows whether the marker is on a data point or on an interpolated point.

To move a marker to a position that is not on a data point, the interpolate checkbox must be checked. If the interpolated checkbox is unchecked, all markers will be moved to the nearest data points (when applied).
If the auto apply checkbox is checked, all changes to markers positions will be applied immediately.
The dialog contains the following buttons:

- The reset button resets the position(s) to the values they had before opening the dialog.
- The Ok button applies all changes and closes the dialog.
- The Cancel button undoes all unapplied changes and closes the dialog.
- The Apply button applies all unapplies changes without closing the dialog.

Mnemonic: P
Shortcut: Ctrl+Alt+M

5.4.3.2 Move Markers to Marker

Previous: Set Marker Pos, section 5.4.3.1.
Next: Add Line Marker at Center, section 5.4.3.3.
Up: Markers, section 5.4.3.

The Move Markers to Marker action attempts to align the selected markers by moving the markers. This is even possible if the markers belong to different x axes with different ranges. It will attempt to move the markers in such a way so that they appear to be in the same location visually. If it is not possible to move them in such a way, e.g. because it would move the markers outside the data range of their plots, an error message will be displayed. The first selected marker will be the destination marker i.e. the marker the other selected markers will move to. See also section 4.7 and section 4.11.
This action is only enabled if at least one marker is selected.
Mnemonic: M
Shortcut: Ctrl+Shift+A

5.4.3.3 Add Line Marker at Center

Previous: Move Markers to Marker, section 5.4.3.2.
Next: Add Line Marker at Begin, section 5.4.3.4.
Up: Markers, section 5.4.3.

The Add Line Marker at Center action creates a new vertical line marker on the selected plots. The newly created marker will be positioned at the center of the plots.
See also section 5.4.3
This action is only enabled if at least one plot is selected.
Mnemonic: L
Shortcut: Ctrl+Shift+M

5.4.3.4 Add Line Marker at Begin

Previous: Add Line Marker at Center, section 5.4.3.3.
Next: Add Line Marker at End, section 5.4.3.5.
Up: Markers, section 5.4.3.

The Add Line Marker at Begin action creates a new vertical line marker on the selected plots. The newly created marker will be positioned at the beginning (i.e. first data point) of the plots.
See also section 5.4.3
This action is only enabled if at least one plot is selected.
Mnemonic: L

5.4.3.5 Add Line Marker at End

Previous: Add Line Marker at Begin, section 5.4.3.4.
Next: Add Line Marker at Mouse Pos, section 5.4.3.6.
Up: Markers, section 5.4.3.

The Add Line Marker at End action creates a new vertical line marker on the selected plots. The newly created marker will be positioned at the end (i.e. last data point) of the plots.
See also section 5.4.3
This action is only enabled if at least one plot is selected.
Mnemonic: L

5.4.3.6 Add Line Marker at Mouse Pos

Previous: Add Line Marker at End, section 5.4.3.5.
Next: Add Point Marker at Mouse Pos, section 5.4.3.7.
Up: Markers, section 5.4.3.

The Add Line Marker at Mouse Pos action creates a new vertical line marker on the datapoint that is currently being pointed at by the mouse. The newly created marker will be positioned at the datapoint that is being pointed at.
See also section 5.4.3
This action is only enabled if at least one datapoint on a plot is currently being pointed at by the mouse.
Mnemonic: L
Shortcut: M

5.4.3.7 Add Point Marker at Mouse Pos

Previous: Add Line Marker at Mouse Pos, section 5.4.3.6.
Next: Marker Items, section 5.4.3.8.
Up: Markers, section 5.4.3.

The Add Point Marker at Mouse Pos action creates a new single datapoint marker on the datapoint that is currently being pointed at by the mouse. The newly created marker will be positioned at the datapoint that is being pointed at.
See also section 5.4.3
This action is only enabled if at least one datapoint on a plot is currently being pointed at by the mouse.
Mnemonic: P
Shortcut: Shift+M

5.4.3.8 Marker Items

Previous: Add Point Marker at Mouse Pos, section 5.4.3.7.
Next: Zoom to Markers, section 5.4.5.1.4.
Up: Markers, section 5.4.3.

The Marker Items menu, see figure 5.26, contains the following items:

Add Note: see section 5.4.3.8.1.
Edit Note: see section 5.4.3.8.2.
Add Dy/Dx Rectangle: see section 5.4.3.8.3.
Add Dy Line: see section 5.4.3.8.4.
Add Dx Line: see section 5.4.3.8.5.
Add Dy/Dx Line: see section 5.4.3.8.6.
Delete Marker Items: see section 5.4.3.8.7.
Delete Other Marker Items: see section 5.4.3.8.8.

The Marker Items menu contains actions that are related to marker items. Marker items are items that are connected to one or more marker data points and move with them but are not markers themselves. The marker data points can be on *different* plots. The marker items are used to attach additional (visual) information to existing markers.
Mnemonic: I

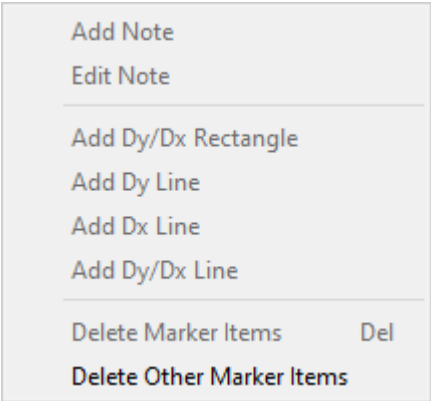


Figure 5.26: The Marker Items sub menu

5.4.3.8.1 Add Note

Next: Edit Note, section 5.4.3.8.2.
Up: Marker Items, section 5.4.3.8.

The Add Note action creates a note marker item. A note is connected to a single marker data point. A note is a piece of text that is associated with a single point on a plot. It will stay connected to that point until deleted. and moves with the plot when the view is zoomed or scrolled. It can also be moved independently of the plot but relative to it. Double-clicking the note marker allows editing it.
This action is only enabled if exactly one marker data point is selected.

5.4.3.8.2 Edit Note

Previous: Add Note, section 5.4.3.8.1.
Next: Add Dy/Dx Rectangle, section 5.4.3.8.3.
Up: Marker Items, section 5.4.3.8.

The Edit Note action edits all selected note marker items.
A note marker can also be edited by double clicking it.
See section 5.4.3.8.2.
This action is only enabled if at least one marker item is selected.

5.4.3.8.3 Add Dy/Dx Rectangle

Previous: Edit Note, section 5.4.3.8.2.
Next: Add Dy Line, section 5.4.3.8.4.
Up: Marker Items, section 5.4.3.8.

The Add Dy/Dx Rectangle action creates a dy/dx rectangle item. The rectangle is defined by two selected marker data points (that may be on different plots) and moves with the plot when the view is zoomed or scrolled. The rectangle shows the dX line with the actual dX value, the dY line with the actual dY value and a line connecting the two data points with the actual dY/dX value.
This action is only enabled if exactly two marker data points are selected.

Mnemonic: R

5.4.3.8.4 Add Dy Line

Previous: Add Dy/Dx Rectangle, section 5.4.3.8.3.
Next: Add Dx Line, section 5.4.3.8.5.
Up: Marker Items, section 5.4.3.8.

The Add Dy Line action creates a dy line item. The line is defined by two selected marker data points (that may be on different plots) and moves with the plot when the view is zoomed or scrolled. The line shows the dy line with the actual dy value. The first point of the line is defined by the X coordinate of the second point and the Y coordinate of the first point. The second point of the line is defined by the X coordinate of the second point and the Y coordinate of the second point. In addition, a dotted line is drawn from the first data point to the second data point.
This action is only enabled if exactly two marker data points are selected.
Mnemonic: y

5.4.3.8.5 Add Dx Line

Previous: Add Dy Line, section 5.4.3.8.4.
Next: Add Dy/Dx Line, section 5.4.3.8.6.
Up: Marker Items, section 5.4.3.8.

The Add Dx Line action creates a dx line item. The line is defined by two selected marker data points (that may be on different plots) and moves with the plot when the view is zoomed or scrolled. The line shows the dx line with the actual dx value. The first point of the line is defined by the X coordinate of the first point and the Y coordinate of the first point. The second point of the line is defined by the X coordinate of the second point and the Y coordinate of the first point. In addition, a dotted line is drawn from the first data point to the second data point.
This action is only enabled if exactly two marker data points are selected.
Mnemonic: x

5.4.3.8.6 Add Dy/Dx Line

Previous: Add Dx Line, section 5.4.3.8.5.
Next: Delete Marker Items, section 5.4.3.8.7.
Up: Marker Items, section 5.4.3.8.

The Add Dy/Dx Line action creates a dy/dx line item. The line is defined by two selected marker data points (that may be on different plots) and moves with the plot when the view is zoomed or scrolled. The rectangle shows a dotted line connecting the two data points with the actual dY/dX value.
This action is only enabled if exactly two marker data points are selected.
Mnemonic: L

5.4.3.8.7 Delete Marker Items

Previous: Add Dy/Dx Line, section 5.4.3.8.6.
Next: Delete Other Marker Items, section 5.4.3.8.8.
Up: Marker Items, section 5.4.3.8.

The Delete Marker Items action deletes all selected marker items.
This action is only enabled if at least one marker item is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: D
Shortcut: Del

5.4.3.8.8 Delete Other Marker Items

Previous: Delete Marker Items, section 5.4.3.8.7.
Up: Marker Items, section 5.4.3.8.

The Delete Other Marker Items action deletes all marker items except the selected marker items.
Mnemonic: O

5.4.3.9 Zoom to Markers

Previous: Marker Items, section 5.4.3.8.
Next: Center on Marker, section 5.4.5.1.5.
Up: Markers, section 5.4.3.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.5.1.4.

5.4.3.10 Center on Marker

Previous: Zoom to Markers, section 5.4.5.1.4.
Next: Export between Markers, section 5.4.3.11.
Up: Markers, section 5.4.3.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.5.1.5.

5.4.3.11 Export between Markers

Previous: Center on Marker, section 5.4.5.1.5.
Next: Delete Marker, section 5.4.3.12.
Up: Markers, section 5.4.3.

The Export between Markers menu, see figure 5.27, contains the following items:

Export All Tags between Markers: see section 5.4.3.11.1.
Export Plots between Markers: see section 5.4.3.11.2.
Export Selected Plots between Markers: see section 5.4.3.11.3.
Export All Tags of Selected Datasets between Markers: see section 5.4.3.11.4.

The Export between Markers menu contains actions that export data specified by a marker range to one or more files. The marker range is specified by a begin and end marker.

For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
See also section 4.11.
Mnemonic: x

5.4.3.11.1 Export All Tags between Markers

Next: Export Plots between Markers, section 5.4.3.11.2.
Up: Export between Markers, section 5.4.3.11.

The Export All Tags between Markers action exports data of *all currently loaded* tags that falls within a range specified by a begin and end marker, to one or more files. See also sections: 4.6, and 4.11.

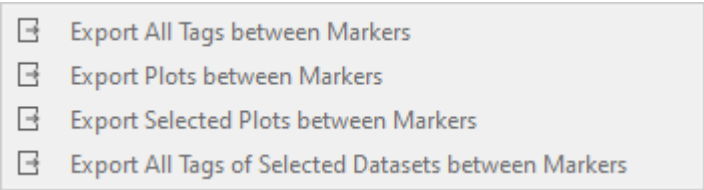


Figure 5.27: The Export between Markers sub menu

For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if *exactly* two markers are selected.
Mnemonic: A

5.4.3.11.2 Export Plots between Markers

Previous: Export All Tags between Markers, section 5.4.3.11.1.
Next: Export Selected Plots between Markers, section 5.4.3.11.3.
Up: Export between Markers, section 5.4.3.11.

The Export Plots between Markers action exports data of *all visible* plots that falls within a range specified by a begin and end marker, to one or more files. See also sections: 4.7, and 4.11.
For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if *exactly* two markers are selected.
Mnemonic: P

5.4.3.11.3 Export Selected Plots between Markers

Previous: Export Plots between Markers, section 5.4.3.11.2.
Next: Export All Tags of Selected Datasets between Markers, section 5.4.3.11.4.
Up: Export between Markers, section 5.4.3.11.

The Export Selected Plots between Markers action exports data of *all selected* plots that falls within a range specified by a begin and end marker, to one or more files. See also sections: 4.7, and 4.11.
For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if *exactly* two markers are selected.
Mnemonic: S

5.4.3.11.4 Export All Tags of Selected Datasets between Markers

Previous: Export Selected Plots between Markers, section 5.4.3.11.3.
Up: Export between Markers, section 5.4.3.11.

The Export All Tags of Selected Datasets between Markers action exports data of *all tags of currently selected* datasets that falls within a range specified by a begin and end marker, to one or more files. See also sections: 4.5, and 4.11.
For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if *exactly* two markers are selected.
Mnemonic: A

5.4.3.12 Delete Marker

Previous: Export between Markers, section 5.4.3.11.
Next: Delete Other Markers, section 5.4.3.13.
Up: Markers, section 5.4.3.

The Delete Marker action deletes all selected markers. See also sections: 4.7, and 4.11.
This action is only enabled if at least one marker is selected.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: D
Shortcut: Del

5.4.3.13 Delete Other Markers

Previous: Delete Marker, section 5.4.3.12.
Up: Markers, section 5.4.3.

The Delete Other Markers action deletes all markers except the currently selected ones. See also sections: 4.7, and 4.11.
This action is only enabled if at least one marker is selected.
Mnemonic: O

5.4.4 Marker Items

Previous: Markers, section 5.4.3.
Next: Axes, section 5.4.5.
Up: View, section 5.4.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.3.8.

5.4.5 Axes

Up: View, section 5.4.

The Axes menu, see figure 5.28, contains the following items:

Range/Zoom: see section 5.4.5.1.
Set Name: see section 5.4.5.2.
Add Axis: see section 5.3.3.8.3.1.
Remove Axis: see section 5.3.3.8.4.1.
Lock Axes: see section 5.4.5.5.
Unlock Axes: see section 5.4.5.6.
Show/Hide Axes: see section 5.4.5.7.
Grid Show Mode: see section 5.4.5.8.
Select Axes: see section 5.4.5.9.

The Axes menu contains actions that are related to axes, see section 4.10. Actions such as zooming, panning, adding and removing axes, and changing properties of axes are found in this menu.
Mnemonic: A

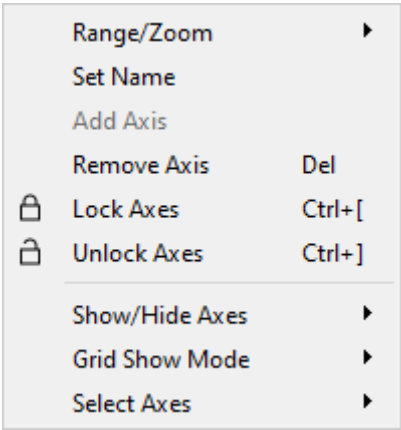


Figure 5.28: The Axes sub menu

5.4.5.1 Range/Zoom

Next: Set Name, section 5.4.5.2.
Up: Axes, section 5.4.5.

The Range/Zoom menu, see figure 5.29, contains the following items:

Set Range: see section 5.4.5.1.1.
Align Markers and Equalize Range: see section 5.4.5.1.2.
Align Markers but Keep Range: see section 5.4.5.1.3.
Zoom to Markers: see section 5.4.5.1.4.
Center on Marker: see section 5.4.5.1.5.
Reset Range/Zoom: see section 5.4.5.1.6.
Reset Range/Zoom to Best Fit: see section 5.4.5.1.7.
Pan: see section 5.4.5.1.8.
Zoom: see section 5.4.5.1.9.

The Range/Zoom menu contains actions that are related to zooming, panning and changing the range of axes, see section 4.10.
Mnemonic: R

5.4.5.1.1 Set Range

Next: Align Markers and Equalize Range, section 5.4.5.1.2.
Up: Range/Zoom, section 5.4.5.1.

The Set Range action allows manually setting an exact range to all selected axes, where the direction of all selected axes is the same. It opens a dialog that allows specifying the new range for all axes, either by setting the begin and end range (first and second value entry columns) or by setting the range directly (third value entry column).
The opened dialog will be different depending on how many axes are selected. Three different dialog types exist: one for a single axis, see figure 5.30, one for two axes, see figure 5.31, and one for more than two axes, see figure 5.32.
The more axes are selected, the more options are available in the dialog.
When setting the range directly, positive values will be added to the begin value while negative values will be subtracted from the end value instead. Note that the negative value will be replaced with a positive value after entry is complete.
Values that have been modified and are valid but not yet applied will turn green. If a certain combination of entered values would lead to an invalid range for any axes, the values that cause the invalid range will turn red. Hovering the mouse over the violating entry will reveal more detailed information about why the value is invalid.

Figure 5.29: The Range/Zoom sub menu

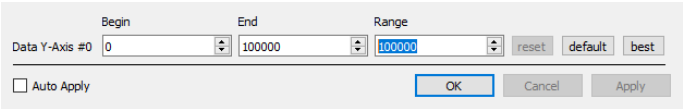


Figure 5.30: The Set Range dialog for a single axis

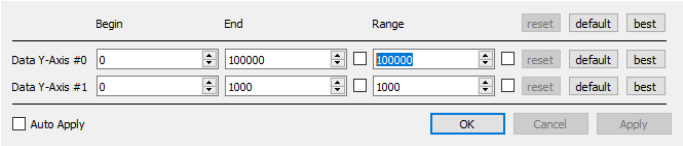


Figure 5.31: The Set Range dialog for two axes

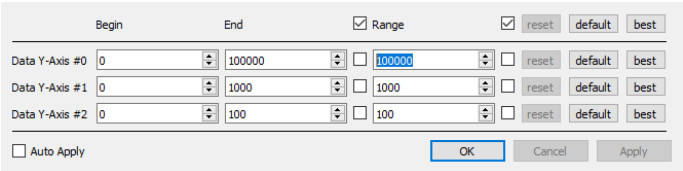


Figure 5.32: The Set Range dialog for more than 2 axes

Clicking on a checkbox (if available), next to the end entry or next to the range entry, marks the begin and end values or the range value for that axis as either the *leading* values or the *following* values. The first clicked checkbox will be the leader while the next clicked checkboxes on other axes will be the followers. A checkbox can be clicked again to remove the leader or follower state for that axis.
When a value is marked as a follower, it changes its value to the value of the leader and becomes read only. When a leading value is changed, the following values will copy the leading value so they always keep the same value. This is useful to quickly align axes.

When entering values for a time axis, the time duration can be entered using the days, minutes, hours, seconds, milliseconds syntax e.g. 1d, 4m, 5s, 3ms. Note that any part may be omitted e.g. 1s, 5ms is valid as well.

Each axis row has a number of buttons that offer convenience functions:

- The reset button resets the range of the corresponding axis back to the state it had before opening the dialog.
- The default button will reset the range of the corresponding axis back to the default range for that axis, see section 5.4.5.1.6
- The best button will reset the range of the corresponding axis back to the best-fit range for that axis, see section 5.4.5.1.7

When more than one axis are selected, an additional row of buttons becomes available at the top of the dialog. When these buttons are pressed, the corresponding action is excuted for all axes automatically.

Finally, at the bottom of the dialog are the Auto Apply checkbox and the OK, Cancel and Apply buttons. If the Auto Apply checkbox is checked, all changes are immediately applied to the view so the results are visible immediately. If not checked, the changes have to be manually applied using the Apply button. The OK button applies all changes and closes the dialog. The Cancel button restores all values back to the values they had before opening the dialog. The Apply button applies all changes but does not close the dialog.
Note that changes cannot be applied if there are invalid, i.e. red, entries.

See also sections: 4.7, and 4.10.
This action is only enabled if at least one axis is selected and all selected axes are either horizontal or vertical i.e. no mixed directions.
Mnemonic: S
Shortcut: Ctrl+Alt+R

5.4.5.1.2 Align Markers and Equalize Range

Previous: Set Range, section 5.4.5.1.1.
Next: Align Markers but Keep Range, section 5.4.5.1.3.
Up: Range/Zoom, section 5.4.5.1.

The Align Markers and Equalize Range action attempts to align the selected markers by scrolling the axes. In addition, the size of the ranges of the affected axes are equalized i.e. the zoom factors of the axes will be equalized. The first selected marker will be the destination marker i.e. the marker the other selected markers will move to. See also section 4.7 and section 4.10 and section 4.11.
This action is only enabled if at least one marker is selected.
Mnemonic: A
Shortcut: Ctrl+A

5.4.5.1.3 Align Markers but Keep Range

Previous: Align Markers and Equalize Range, section 5.4.5.1.2.
Up: Range/Zoom, section 5.4.5.1.

The Align Markers and Equalize Range action attempts to align the selected markers by scrolling the axes. The size of the ranges of the affected axes are not equalized i.e. the zoom factors of the axes are not modified. The first selected marker will be the destination marker i.e. the marker the other selected markers will move to. See also section 4.7 and section 4.10 and section 4.11.
This action is only enabled if at least one marker is selected.
Mnemonic: K
Shortcut: Ctrl+Alt+A

5.4.5.1.4 Zoom to Markers

Previous: Align Markers but Keep Range, section 5.4.5.1.3.
Up: Range/Zoom, section 5.4.5.1.

The Zoom to Markers action sets the range of the view, see section 4.7, to the range bounded by two selected markers, see section 4.11.
This effectively zooms in the view to the marker range.
This action is only enabled if *exactly* two markers are selected.
Mnemonic: Z
Shortcut: Ctrl+Alt+Z

5.4.5.1.5 Center on Marker

Next: Reset Range/Zoom, section 5.4.5.1.6.
Up: Range/Zoom, section 5.4.5.1.

The Center on Marker action sets the range of the view, see section 4.7, so that the selected markers, see section 4.11 is in the center of the view. This effectively centers the view around the selected marker.
This action is only enabled if *exactly* one marker is selected.
Mnemonic: C
Shortcut: Ctrl+Alt+C

5.4.5.1.6 Reset Range/Zoom

Next: Reset Range/Zoom to Best Fit, section 5.4.5.1.7.
Up: Range/Zoom, section 5.4.5.1.

The Reset Range/Zoom sets the range of all selected axes back to default. The default range for data axes is based on the minimum and maximum values of all the tags that are associated with this axis. It is set to the *nearest power of 10* range of the minimum and maximum. For example, if the minimum is 3 and the maximum is 9 then the default range is 0 to 10. When the minimum is 6 and the maximum is 45, the default range is 0 to 100. This mechanism is also used when default plotting tags, see action Plot on Matching Axes in section 5.3.3.1.
The default range for time axes is the range where all data, of the tags associated with the axes, is visible with a small margin (5%) on both sides. See also section 4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: R
Shortcut: Ctrl+R

5.4.5.1.7 Reset Range/Zoom to Best Fit

Previous: Reset Range/Zoom, section 5.4.5.1.6.
Next: Pan, section 5.4.5.1.8.
Up: Range/Zoom, section 5.4.5.1.

The Reset Range/Zoom sets the range of all selected axes back to best fit. The best fit range for all axes is the range where all data, of the tags associated with the axes, is visible with a small margin (5%) on both sides. See also section 4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: R
Shortcut: Ctrl+Shift+R

5.4.5.1.8 Pan

Previous: Reset Range/Zoom to Best Fit, section 5.4.5.1.7.
Next: Zoom, section 5.4.5.1.9.
Up: Range/Zoom, section 5.4.5.1.

The Pan menu, see figure 5.33, contains the following items:

Pan Left: see section 5.4.5.1.8.1.
Pan Right: see section 5.4.5.1.8.2.
Pan Up: see section 5.4.5.1.8.3.
Pan Down: see section 5.4.5.1.8.4.

The Pan menu contains actions that are related to panning the view, see section 4.10 and section 4.7. Note that normally these actions are not used directly, the mouse and shortcut keys will be used instead. The actions are provided here to easily find the shortcuts for them.
Mnemonic: P

Figure 5.33: The Pan sub menu

5.4.5.1.8.1 Pan Left

Next: Pan Right, section 5.4.5.1.8.2.
Up: Pan, section 5.4.5.1.8.

The Pan Left action pans the selected axes to the left by a fixed amount, called a single step, as if the horizontal panning slider is used with the mouse. See section 4.7.
Mnemonic: L
Shortcut: Alt+Left

5.4.5.1.8.2 Pan Right

Previous: Pan Left, section 5.4.5.1.8.1.
Next: Pan Up, section 5.4.5.1.8.3.
Up: Pan, section 5.4.5.1.8.

The Pan Right action pans the selected axes to the right by a fixed amount, called a single step, as if the horizontal panning slider is used with the mouse. See section 4.7.
Mnemonic: R
Shortcut: Alt+Right

5.4.5.1.8.3 Pan Up

Previous: Pan Right, section 5.4.5.1.8.2.
Next: Pan Down, section 5.4.5.1.8.4.
Up: Pan, section 5.4.5.1.8.

The Pan Up action pans the selected axes up by a fixed amount, called a single step, as if the vertical panning slider is used with the mouse. See section 4.7.
Mnemonic: U
Shortcut: Alt+Up

5.4.5.1.8.4 Pan Down

Previous: Pan Up, section 5.4.5.1.8.3.
Up: Pan, section 5.4.5.1.8.

The Pan Down action pans the selected axes down by a fixed amount, called a single step, as if the vertical panning slider is used with the mouse. See section 4.7.
Mnemonic: D
Shortcut: Alt+Down

5.4.5.1.9 Zoom

Previous: Pan, section 5.4.5.1.8.
Up: Range/Zoom, section 5.4.5.1.

The Zoom menu, see figure 5.34, contains the following items:

Zoom In Horizontal: see section 5.4.5.1.9.1.
Zoom Out Horizontal: see section 5.4.5.1.9.2.
Zoom In Vertical: see section 5.4.5.1.9.3.
Zoom Out Vertical: see section 5.4.5.1.9.4.

The Zoom menu contains actions that are related to zooming the view, see section 4.10 and section 4.7. These zoom actions zoom in and out a fixed amount, called a single step, as if the zoom slider is used with the mouse.
Note that normally these actions are not used directly, the mouse and shortcut keys will be used instead. The actions are provided here to easily find the shortcuts for them.
Mnemonic: Z

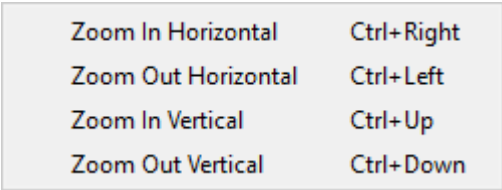


Figure 5.34: The Zoom sub menu

5.4.5.1.9.1 Zoom In Horizontal

Next: Zoom Out Horizontal, section 5.4.5.1.9.2.
Up: Zoom, section 5.4.5.1.9.

The Zoom In Horizontal action horizontally zooms in the selected axes by a fixed amount, called a single step, as if the horizontal zoom slider is used with the mouse. See section 4.7.
Mnemonic: H
Shortcut: Ctrl+Right

5.4.5.1.9.2 Zoom Out Horizontal

Previous: Zoom In Horizontal, section 5.4.5.1.9.1.
Next: Zoom In Vertical, section 5.4.5.1.9.3.
Up: Zoom, section 5.4.5.1.9.

The Zoom Out Horizontal action horizontally zooms out the selected axes by a fixed amount, called a single step, as if the horizontal zoom slider is used with the mouse. See section 4.7.
Mnemonic: o
Shortcut: Ctrl+Left

5.4.5.1.9.3 Zoom In Vertical

Previous: Zoom Out Horizontal, section 5.4.5.1.9.2.
Next: Zoom Out Vertical, section 5.4.5.1.9.4.
Up: Zoom, section 5.4.5.1.9.

The Zoom In Vertical action vertically zooms in the selected axes by a fixed amount, called a single step, as if the vertical zoom slider is used with the mouse. See section 4.7.
Mnemonic: V
Shortcut: Ctrl+Up

5.4.5.1.9.4 Zoom Out Vertical

Previous: Zoom In Vertical, section 5.4.5.1.9.3.
Up: Zoom, section 5.4.5.1.9.

The Zoom Out Vertical action vertically zooms out the selected axes by a fixed amount, called a single step, as if the vertical zoom slider is used with the mouse. See section 4.7.
Mnemonic: e
Shortcut: Ctrl+Down

5.4.5.2 Set Name

Previous: Range/Zoom, section 5.4.5.1.
Up: Axes, section 5.4.5.

The Set Name sets the name of the selected axes. It will open an input text dialog where the new name can be entered. If possible, a name will be automatically suggested. For example when only one tag is plotted, the suggested name of the axis will be the tag description. The new name will now be displayed in the view next to the corresponding axis. See section 4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: N

5.4.5.3 Add Axis

Previous: Set Name, section 5.4.5.2.
Up: Axes, section 5.4.5.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.3.1.

5.4.5.4 Remove Axis

Next: Lock Axes, section 5.4.5.5.
Up: Axes, section 5.4.5.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.4.1.

5.4.5.5 Lock Axes

Next: Unlock Axes, section 5.4.5.6.
Up: Axes, section 5.4.5.

The Lock Axes locks the selected axes. Locked axes cannot be independently scrolled or zoomed. Scrolling or zooming one axis will automatically scroll or zoom the locked axes the same way. See section 4.7. and section 4.10.
This action is only enabled if at least two axes are selected.
Mnemonic: L
Shortcut: Ctrl+[

5.4.5.6 Unlock Axes

Previous: Lock Axes, section 5.4.5.5.
Next: Show/Hide Axes, section 5.4.5.7.
Up: Axes, section 5.4.5.

The Unlock Axes unlocks the selected axes. Locked axes cannot be independently scrolled or zoomed. Scrolling or zooming one axis will automatically scroll or zoom the locked axes the same way. See section 4.7. and section 4.10.
This action is only enabled if at least one axis are selected.
Mnemonic: U
Shortcut: Ctrl+]

5.4.5.7 Show/Hide Axes

Previous: Unlock Axes, section 5.4.5.6.
Next: Grid Show Mode, section 5.4.5.8.
Up: Axes, section 5.4.5.

The Show/Hide Axes menu, see figure 5.35, contains the following items:

Hide Axes: see section 5.4.5.7.1.
Show Axes: see section 5.4.5.7.2.
Hide Other Axes: see section 5.4.5.7.3.
Show Other Axes: see section 5.4.5.7.4.
Show All Axes: see section 5.4.5.7.5.
Hide All Axes: see section 5.4.5.7.6.

The Show/Hide Axes menu contains actions that are related to showing and hiding axes, see section 4.10. When many different axes are added, they may take up a lot of space in the view, see section 4.7. In this case, it may be desirable to hide certain axes.
Mnemonic: S

Figure 5.35: The Show/Hide Axes sub menu

5.4.5.7.1 Hide Axes

Next: Show Axes, section 5.4.5.7.2.
Up: Show/Hide Axes, section 5.4.5.7.

The Hide Axes action hides all selected axes i.e. they will no longer be visible in the view. See section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: H

5.4.5.7.2 Show Axes

Previous: Hide Axes, section 5.4.5.7.1.
Next: Hide Other Axes, section 5.4.5.7.3.
Up: Show/Hide Axes, section 5.4.5.7.

The Show Axes action shows all selected axes (if they are hidden) i.e. they will be visible in the view. See section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: S

5.4.5.7.3 Hide Other Axes

Previous: Show Axes, section 5.4.5.7.2.
Next: Show Other Axes, section 5.4.5.7.4.
Up: Show/Hide Axes, section 5.4.5.7.

The Hide Other Axes action hides all axes *except* the selected axes i.e. they will no longer be visible in the view. See section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: O

5.4.5.7.4 Show Other Axes

Previous: Hide Other Axes, section 5.4.5.7.3.
Next: Show All Axes, section 5.4.5.7.5.
Up: Show/Hide Axes, section 5.4.5.7.

The Show Other Axes action shows all axes (if they are hidden) *except* the selected axes i.e. they will be visible in the view. See section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: t

5.4.5.7.5 Show All Axes

Previous: Show Other Axes, section 5.4.5.7.4.
Next: Hide All Axes, section 5.4.5.7.6.
Up: Show/Hide Axes, section 5.4.5.7.

The Show All Axes action shows all axes i.e. they will be visible in the view. See section4.7 and section 4.10.
Mnemonic: A

5.4.5.7.6 Hide All Axes

Previous: Show All Axes, section 5.4.5.7.5.
Up: Show/Hide Axes, section 5.4.5.7.

The Hide Other Axes action hides all axes i.e. they will no longer be visible in the view. See section4.7 and section 4.10.
Mnemonic: I

5.4.5.8 Grid Show Mode

Previous: Show/Hide Axes, section 5.4.5.7.
Next: Select Axes, section 5.4.5.9.
Up: Axes, section 5.4.5.

The Grid Show Mode menu, see figure 5.36, contains the following items:

Show when Selected: see section 5.4.5.8.1.
Show Always: see section 5.4.5.8.2.
Show Never: see section 5.4.5.8.3.

The Grid Show Mode menu contains actions that are related to showing and hiding the grid, see section 4.10. The (axis) grids can be shown depending on the axes being selected or not or simply always shown or always hidden.
Mnemonic: G

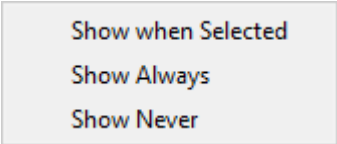


Figure 5.36: The Grid Show Mode sub menu

5.4.5.8.1 Show when Selected

Next: Show Always, section 5.4.5.8.2.
Up: Grid Show Mode, section 5.4.5.8.

The Show when Selected action configures the selected axes so that the axis grid is only visible when the corresponding axis is selected. See section4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: S

5.4.5.8.2 Show Always

Previous: Show when Selected, section 5.4.5.8.1.
Next: Show Never, section 5.4.5.8.3.
Up: Grid Show Mode, section 5.4.5.8.

The Show Always action configures the selected axes so that the axis grid is *always* visible, *even* when the corresponding axis is not selected. See section4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: A

5.4.5.8.3 Show Never

Previous: Show Always, section 5.4.5.8.2.
Up: Grid Show Mode, section 5.4.5.8.

The Show Never action configures the selected axes so that the axis grid is *never* visible, *even* when the corresponding axis is selected. See section4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: N

5.4.5.9 Select Axes

Previous: Grid Show Mode, section 5.4.5.8.
Up: Axes, section 5.4.5.

The Select Axes menu, see figure 5.37, contains the following items:

Select All Axes: see section 5.4.5.9.1.
Select all Horizontal Axes: see section 5.4.5.9.2.
Select all Vertical Axes: see section 5.4.5.9.3.
Deselect All Axes: see section 5.4.5.9.4.
Deselect all Horizontal Axes: see section 5.4.5.9.5.
Deselect all Vertical Axes: see section 5.4.5.9.6.

The Select Axes menu contains actions that are related to selecting and deselecting axes, see section 4.10.
Mnemonic: A

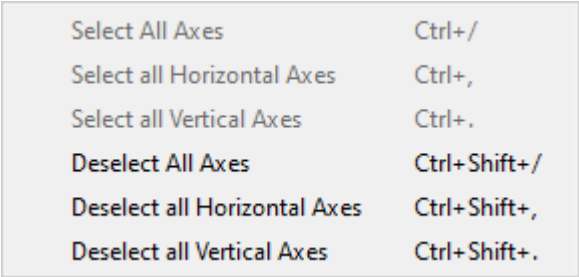


Figure 5.37: The Select Axes sub menu

5.4.5.9.1 Select All Axes

Next: Select all Horizontal Axes, section 5.4.5.9.2.
Up: Select Axes, section 5.4.5.9.

The Select All Axes action selects all unselected axes. See section 4.7. and section 4.10.
This action is only enabled if at least one axis is not selected.
Mnemonic: A
Shortcut: Ctrl+/

5.4.5.9.2 Select all Horizontal Axes

Previous: Select All Axes, section 5.4.5.9.1.
Next: Select all Vertical Axes, section 5.4.5.9.3.
Up: Select Axes, section 5.4.5.9.

The Select all Horizontal Axes action selects all unselected horizontal axes. See section 4.7. and section 4.10.
This action is only enabled if at least one horizontal axis is not selected.
Mnemonic: H
Shortcut: Ctrl+,

5.4.5.9.3 Select all Vertical Axes

Previous: Select all Horizontal Axes, section 5.4.5.9.2.
Next: Deselect All Axes, section 5.4.5.9.4.
Up: Select Axes, section 5.4.5.9.

The Select all Vertical Axes action selects all unselected vertical axes. See section 4.7. and section 4.10.
This action is only enabled if at least one vertical axis is not selected.
Mnemonic: V
Shortcut: Ctrl+.

5.4.5.9.4 Deselect All Axes

Previous: Select all Vertical Axes, section 5.4.5.9.3.
Next: Deselect all Horizontal Axes, section 5.4.5.9.5.
Up: Select Axes, section 5.4.5.9.

The Deselect All Axes action deselects all selected axes. See section 4.7. and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: A
Shortcut: Ctrl+Shift+/

5.4.5.9.5 Deselect all Horizontal Axes

Previous: Deselect All Axes, section 5.4.5.9.4.
Next: Deselect all Vertical Axes, section 5.4.5.9.6.
Up: Select Axes, section 5.4.5.9.

The Deselect all Horizontal Axes action deselects all selected horizontal axes. See section 4.7. and section 4.10.
This action is only enabled if at least one horizontal axis is selected.
Mnemonic: H
Shortcut: Ctrl+Shift+,

5.4.5.9.6 Deselect all Vertical Axes

Previous: Deselect all Horizontal Axes, section 5.4.5.9.5.
Up: Select Axes, section 5.4.5.9.

The Deselect all Vertical Axes action deselects all selected vertical axes. See section 4.7. and section 4.10.
This action is only enabled if at least one vertical axis is selected.
Mnemonic: V
Shortcut: Ctrl+Shift+.

5.4.6 Move Plot

Previous: Axes, section 5.4.5.
Next: Toggle Plot Visibility, section 5.4.12.3.
Up: View, section 5.4.

The Move Plot action duplicates all selected plots to all selected axes, then removes the original plots. This effectively moves the plots to different axes. See sections 4.9 and 4.10.
The axis of the source plot may be selected as well. In this case this will simply be ignored. This is for ease of use, since selecting a plot will also automatically select the corresponding axes. If the original plot should *not* be deleted, i.e. the plots should actually be duplicated, see section 5.3.3.10.
Drag and drop can also be used to move plots by simply dragging a plot to a different axis.
If no destination axes have been selected, it is assumed that the plots should be moved to new axes. A dialog is shown that allows specifying how to create the new axes. Note that it is allowed to select both Y and X axes options. See figure 5.38.

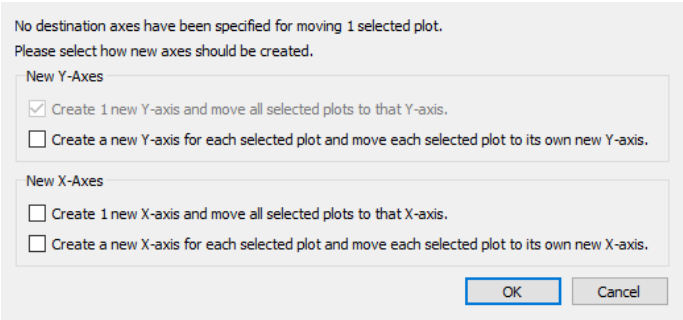


Figure 5.38: The Move Plot dialog

Mnemonic: M
Shortcut: Ctrl+M

5.4.7 Toggle Plot Visibility

Next: Toggle Plot Highlight, section 5.4.13.2.
Up: View, section 5.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.12.3.

5.4.8 Toggle Plot Highlight

Previous: Toggle Plot Visibility, section 5.4.12.3.
Up: View, section 5.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.13.2.

5.4.9 Remove Plot

Previous: Toggle Plot Highlight, section 5.4.13.2.
Up: View, section 5.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.9.

5.4.10 Remove Axis

Up: View, section 5.4.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.4.1.

5.4.11 Range/Zoom

Next: Plot Visibility, section 5.4.12.
Up: View, section 5.4.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.5.1.

5.4.12 Plot Visibility

Next: Plot Highlight, section 5.4.13.
Up: View, section 5.4.

The Plot Visibility menu, see figure 5.39, contains the following items:

Show Plot: see section 5.4.12.1.
Hide Plot: see section 5.4.12.2.
Toggle Plot Visibility: see section 5.4.12.3.

The Plot Visibility menu contains actions that are related to showing and hiding plots, see section 4.7.
Mnemonic: V

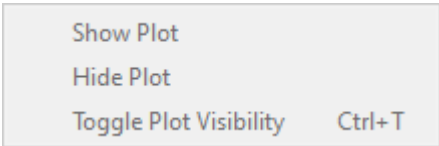


Figure 5.39: The Plot Visibility sub menu

5.4.12.1 Show Plot

Next: Hide Plot, section 5.4.12.2.
Up: Plot Visibility, section 5.4.12.

The Show Plot action shows all selected plots. The plots will be made visible in the View sub-window again if they were hidden, see section 4.7.
The visibility of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the visiblity of the selected plots.
See also the following options:

- Hide Point Markers when a Plot is Hidden: 6.4.9.1.
- Disable Mouse Markers for Hidden Plots: 6.4.9.2.
- Disable Info about Hidden Plots: 6.4.9.3.
- Hide Marker Items when all Plots are Hidden: 6.4.9.5.
- Hide Marker Items when any Plot is Hidden: 6.4.9.4.

This action is only enabled if at least one plot is selected.
Mnemonic: S

5.4.12.2 Hide Plot

Previous: Show Plot, section 5.4.12.1.
Up: Plot Visibility, section 5.4.12.

The Show Plot action hides all selected plots. The plots will no longer be visible in the View sub-window, see section 4.7.
The visibility of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the visiblity of the selected plots.
See also the following options:

- Hide Point Markers when a Plot is Hidden: 6.4.9.1.
- Disable Mouse Markers for Hidden Plots: 6.4.9.2.
- Disable Info about Hidden Plots: 6.4.9.3.
- Hide Marker Items when all Plots are Hidden: 6.4.9.5.
- Hide Marker Items when any Plot is Hidden: 6.4.9.4.

This action is only enabled if at least one plot is selected.
Mnemonic: H

5.4.12.3 Toggle Plot Visibility

Previous: Hide Plot, section 5.4.12.2.
Up: Plot Visibility, section 5.4.12.

The Show Plot action toggles the visibility of all selected plots. The plots will shown or hidden in the View sub-window, see section 4.7.
The visibility of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the visiblity of the selected plots.
See also the following options:

- Hide Point Markers when a Plot is Hidden: 6.4.9.1.
- Disable Mouse Markers for Hidden Plots: 6.4.9.2.
- Disable Info about Hidden Plots: 6.4.9.3.
- Hide Marker Items when all Plots are Hidden: 6.4.9.5.
- Hide Marker Items when any Plot is Hidden: 6.4.9.4.

This action is only enabled if at least one plot is selected.
Mnemonic: T
Shortcut: Ctrl+T

5.4.13 Plot Highlight

Previous: Plot Visibility, section 5.4.12.
Next: Color, section 5.4.14.
Up: View, section 5.4.

The Plot Highlight menu, see figure 5.40, contains the following items:

Unhighlight Plot: see section 5.4.13.1.
Toggle Plot Highlight: see section 5.4.13.2.
Highlight Plot Fill: see section 5.4.13.3.
Highlight Plot Line: see section 5.4.13.4.
Highlight Plot Samples: see section 5.4.13.5.
Set Fill Highlight Transparency: see section 5.4.13.6.
Set Line Highlight Width: see section 5.4.13.7.

The Plot Highlight menu contains actions that are related to higlighting plots in various ways, see section 4.7.
Mnemonic: H

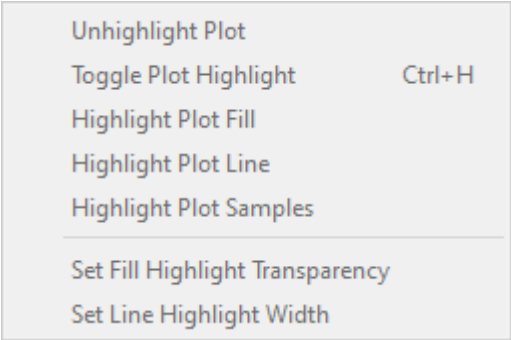


Figure 5.40: The Plot Highlight sub menu

5.4.13.1 Unhighlight Plot

Up: Plot Highlight, section 5.4.13.

The Unhighlight Plot action removes the highlighting of all selected plots. If nothing is highlighted currently, the highlighting is toggled instead. The plots will be highlighted or unhighlighted in the View sub-window, see section 4.7.
The highlight status of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the highlighting of the selected plots. The clickable icon can also be long pressed to show a menu with all the highlight options.
See also the following higlight options:

- Plot Highlight Fill Alpha Default: 6.4.8.2.
- Plot Highlight Toggle Default Mode: 6.4.8.1.

This action is only enabled if at least one plot is selected.
Mnemonic: U

5.4.13.2 Toggle Plot Highlight

Previous: Unhighlight Plot, section 5.4.13.1.
Next: Highlight Plot Fill, section 5.4.13.3.
Up: Plot Highlight, section 5.4.13.

The Toggle Plot Highlight action toggles the highlighting of all selected plots. The plots will be unhighlighted in the View sub-window again if they were highlighted, see section 4.7.
The highlight status of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the highlighting of the selected plots. The clickable icon can also be long pressed to show a menu with all the highlight options.
See also the following higlight options:

- Plot Highlight Fill Alpha Default: 6.4.8.2.
- Plot Highlight Toggle Default Mode: 6.4.8.1.

This action is only enabled if at least one plot is selected.
Mnemonic: T
Shortcut: Ctrl+H

5.4.13.3 Highlight Plot Fill

Next: Highlight Plot Line, section 5.4.13.4.
Up: Plot Highlight, section 5.4.13.

The Highlight Plot Fill action adds the Fill highlight type all selected plots. If that highlight type is alreadt added, it will be removed instead. The plots will be highlighted in the View sub-window again if they were unhighlighted, see section 4.7.
The Fill highlight type will fill in the area between the plot line and the line at y=0.
The highlight status of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the highlighting of the selected plots. The clickable icon can also be long pressed to show a menu with all the highlight options.
See also the following higlight options:

- Plot Highlight Fill Alpha Default: 6.4.8.2.
- Plot Highlight Toggle Default Mode: 6.4.8.1.

This action is only enabled if at least one plot is selected.
Mnemonic: F

5.4.13.4 Highlight Plot Line

Previous: Highlight Plot Fill, section 5.4.13.3.
Next: Highlight Plot Samples, section 5.4.13.5.
Up: Plot Highlight, section 5.4.13.

The Highlight Plot Line action adds the Line highlight type all selected plots. If that highlight type is alreadt added, it will be removed instead. The plots will be highlighted in the View sub-window again if they were unhighlighted, see section 4.7.
The Line highlight type will make the line of the plot thicker.
The highlight status of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the highlighting of the selected plots. The clickable icon can also be long pressed to show a menu with all the highlight options.
See also the following higlight options:

- Plot Highlight Fill Alpha Default: 6.4.8.2.
- Plot Highlight Toggle Default Mode: 6.4.8.1.

This action is only enabled if at least one plot is selected.
Mnemonic: L

5.4.13.5 Highlight Plot Samples

Previous: Highlight Plot Line, section 5.4.13.4.
Next: Set Fill Highlight Transparency, section 5.4.13.6.
Up: Plot Highlight, section 5.4.13.

The Highlight Plot Samples action adds the Samples highlight type all selected plots. If that highlight type is alreadt added, it will be removed instead. The plots will be highlighted in the View sub-window again if they were unhighlighted, see section 4.7.
The Samples highlight type will highlight all the samples of the plot on the plot.
The highlight status of the plot is also indicated, using a clickable icon, in the Markers and Plots sub-windows (in the column that also displays the colour of the plot). See sections 4.11 and 4.9.
This clickable icon can also be used as a shortcut to quickly toggle the highlighting of the selected plots. The clickable icon can also be long pressed to show a menu with all the highlight options.
See also the following higlight options:

- Plot Highlight Fill Alpha Default: 6.4.8.2.
- Plot Highlight Toggle Default Mode: 6.4.8.1.

This action is only enabled if at least one plot is selected.
Mnemonic: S

5.4.13.6 Set Fill Highlight Transparency

Previous: Highlight Plot Samples, section 5.4.13.5.
Next: Set Line Highlight Width, section 5.4.13.7.
Up: Plot Highlight, section 5.4.13.

The Set Fill Highlight Transparency action sets the transparency (alpha) value for the Samples highlight type for all selected plots. A dialog will open that allows the user to enter a value.

5.4.13.7 Set Line Highlight Width

Previous: Set Fill Highlight Transparency, section 5.4.13.6.
Up: Plot Highlight, section 5.4.13.

The Set Line Highlight Width action sets the line width for the Line highlight type for all selected plots. A dialog will open that allows the user to enter a value.

5.4.14 Color

Previous: Plot Highlight, section 5.4.13.
Next: Show Data Points, section 5.4.15.
Up: View, section 5.4.

The Color menu, see figure 5.42, contains the following items:

Set Plot Color: see section 5.4.14.1.
Reset Plot Color: see section 5.4.14.2.
Set Background Color: see section 5.4.14.3.
Reset Background Color: see section 5.4.14.4.
Set Axis Color: see section 5.4.14.5.
Reset Axis Color: see section 5.4.14.6.
Set Grid Color: see section 5.4.14.7.
Reset Grid Color: see section 5.4.14.8.
Reset All Colors: see section 5.4.14.9.

The Color menu contains actions that change the color of various items in the view, see section 4.7.

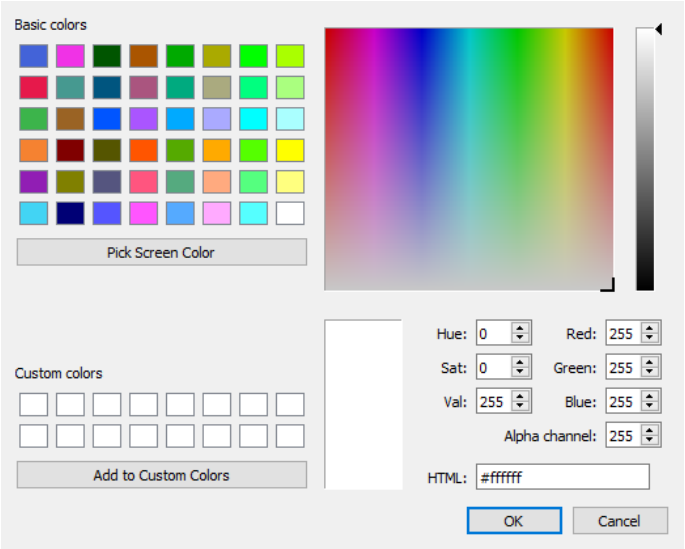


Figure 5.41: The Color dialog

The actions will open a dialog, see figure 5.41, that is used to select the desired color. Colors are immediately applied to the view while making changes in the dialog. Pressing OK will apply the color and close the dialog. Pressing Cancel will restore the color to the color it was before opening the dialog and close the dialog.
Mnemonic: C

5.4.14.1 Set Plot Color

Next: Reset Plot Color, section 5.4.14.2.
Up: Color, section 5.4.14.

The Set Plot Color action allows changing the color of the selected plots. The color is selected using a color selection dialog as explained in section 5.4.14.
See also section 4.7 and section 4.9.
This action is only enabled if at least one plot is selected.
Mnemonic: P

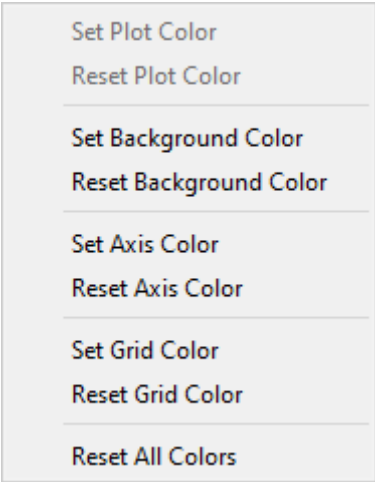


Figure 5.42: The Color sub menu

5.4.14.2 Reset Plot Color

Previous: Set Plot Color, section 5.4.14.1.
Next: Set Background Color, section 5.4.14.3.
Up: Color, section 5.4.14.

The Reset Plot Color action resets the color of the selected plots back to default. The default color is the color assigned during creation of the plots.
See also section 4.7 and section 4.9.
This action is only enabled if at least one plot is selected.
Mnemonic: C

5.4.14.3 Set Background Color

Previous: Reset Plot Color, section 5.4.14.2.
Next: Reset Background Color, section 5.4.14.4.
Up: Color, section 5.4.14.

The Set Background Color action allows changing the color of the background of the plots. The color is selected using a color selection dialog as explained in section 5.4.14.
See also section 4.7.
Mnemonic: B

5.4.14.4 Reset Background Color

Previous: Set Background Color, section 5.4.14.3.
Next: Set Axis Color, section 5.4.14.5.
Up: Color, section 5.4.14.

The Reset Background Color action resets the color of the background of the plots back to default. The default color is the color assigned during creation of the background.
See also section 4.7.
Mnemonic: B

5.4.14.5 Set Axis Color

Previous: Reset Background Color, section 5.4.14.4.
Next: Reset Axis Color, section 5.4.14.6.
Up: Color, section 5.4.14.

The Set Axis Color action allows changing the color of the selected axes. The color is selected using a color selection dialog as explained in section 5.4.14.
See also section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: A

5.4.14.6 Reset Axis Color

Previous: Set Axis Color, section 5.4.14.5.
Next: Set Grid Color, section 5.4.14.7.
Up: Color, section 5.4.14.

The Reset Axis Color action resets the color of the selected axes back to default. The default color is the color assigned during creation of the axes.
See also section 4.7 and section 4.10.
This action is only enabled if at least one axis is selected.
Mnemonic: C

5.4.14.7 Set Grid Color

Previous: Reset Axis Color, section 5.4.14.6.
Next: Reset Grid Color, section 5.4.14.8.
Up: Color, section 5.4.14.

The Set Grid Color action allows changing the color of the grid. The color is selected using a color selection dialog as explained in section 5.4.14.
See also section 4.7.
Mnemonic: G

5.4.14.8 Reset Grid Color

Previous: Set Grid Color, section 5.4.14.7.
Next: Reset All Colors, section 5.4.14.9.
Up: Color, section 5.4.14.

The Reset Grid Color action resets the color of the grid back to default. The default color is the color assigned during creation of the grid.
See also section 4.7.
Mnemonic: C

5.4.14.9 Reset All Colors

Previous: Reset Grid Color, section 5.4.14.8.
Up: Color, section 5.4.14.

The Reset All Colors action resets all colors back to default. The default colors are the colors assigned duting creation of the visual items.
See also section 4.7.

5.4.15 Show Data Points

Previous: Color, section 5.4.14.
Next: Show Legend, section 5.4.16.
Up: View, section 5.4.

The Show Data Points menu, see figure 5.43, contains the following items:

Auto: see section 5.4.15.1.
Always Show: see section 5.4.15.2.
Never Show: see section 5.4.15.3.

The Show Data Points menu contains actions that are related to showing and hiding data points, see section 4.7. Data points are the individual samples of the tags in the dataset, they can be shown as small circles on the plots so they can be easily identified. However, for larger plots they can reduce performance if many of them need to be drawn.. The data points can be shown depending on *data point per pixel ratio* or simply always shown or always hidden.
Mnemonic: D

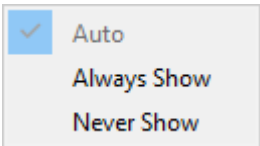


Figure 5.43: The Show Data Points sub menu

5.4.15.1 Auto

Next: Always Show, section 5.4.15.2.
Up: Show Data Points, section 5.4.15.

The Auto action sets the show data points mode to automatic. This means that it will be automatically determined whether the data points will be shown or not. The number of data points per pixel is approximated and if the pixel distance between two data points is above a certain threshold, the data points are shown. This attempts to display the data points only if they can be individually interacted with. This is done for performance reasons.This action is checked if this is the current selection and is only enabled if not already checked.
See also section 4.7.

5.4.15.2 Always Show

Previous: Auto, section 5.4.15.1.
Next: Never Show, section 5.4.15.3.
Up: Show Data Points, section 5.4.15.

The Always Show action sets the show data points mode to always. This means that data points will always be shown. Note that this may impact performance tremendously for large plots. This action is checked if this is the current selection and is only enabled if not already checked.
See also section 4.7.

5.4.15.3 Never Show

Previous: Always Show, section 5.4.15.2.
Up: Show Data Points, section 5.4.15.

The Never Show action sets the show data points mode to never. This means that data points will never be shown. This action is checked if this is the current selection and is only enabled if not already checked.
See also section 4.7.

5.4.16 Show Legend

Previous: Show Data Points, section 5.4.15.
Up: View, section 5.4.

The Show Legend action toggles the visibility of the legend in the view. The legend shows all current plots in the view and can also be used to quickly select individual plots. If the legend is shown, this action will have a checkmark.
See also section 4.7.
Mnemonic: L

5.4.17 Show Window

Previous: Show Legend, section 5.4.16.
Up: View, section 5.4.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.4.18 Focus

Up: View, section 5.4.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.5 Data

Previous: View, section 5.4.
Next: Plots, section 5.6.
Up: Menus, section 5.

The Data menu, see figure 5.44, contains the following items:

Show Data Window: see section 5.2.7.5.
Export Selected Data: see section 5.5.2.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.
Copy: see section 5.5.5.

The Data main menu contains actions that are specific to the Data sub-window, see section 4.8.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: D

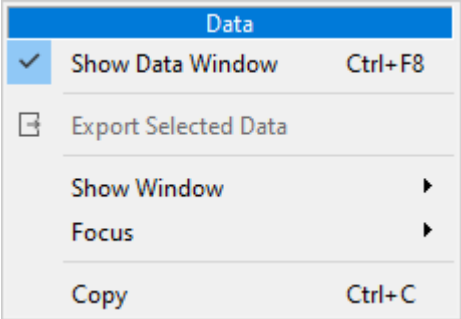


Figure 5.44: The Data main menu

5.5.1 Show Data Window

Next: Export Selected Data, section 5.5.2.
Up: Data, section 5.5.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.5.

5.5.2 Export Selected Data

Up: Data, section 5.5.

The Export Selected Data action exports all selected data in the Data sub-window to a file.

For more information about the export configuration dialog and about how output files are being generated see section 5.2.6.1.
This action is only enabled if data is selected in the Data sub-window.
Mnemonic: S

5.5.3 Show Window

Previous: Export Selected Data, section 5.5.2.
Up: Data, section 5.5.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.5.4 Focus

Next: Copy, section 5.5.5.
Up: Data, section 5.5.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.5.5 Copy

Up: Data, section 5.5.

The Copy action copies all selected cells of the Data table to the clipboard. The cells will be formatted as text in CSV format. If the selected cells do not form a rectangle, empty cells will be added in the generated CSV text so that the generated CSV text forms a rectangle. Depending on settings, the horizontal and vertical headers of the table will be added to the CSV text. The CSV separator can be configured as well. See settings:

- Configure separator: See section 6.1.4.1
- Configure horizontal header: See section 6.1.4.2
- Configure horizontal header: See section 6.1.4.3

Mnemonic: C
Shortcut: Ctrl+C

5.6 Plots

Previous: Data, section 5.5.
Next: Axes, section 5.7.
Up: Menus, section 5.

The Plots menu, see figure 5.45, contains the following items:

Show Plots Window: see section 5.2.7.7.
Move Plot: see section 5.4.6.
Toggle Plot Visibility: see section 5.4.12.3.
Toggle Plot Highlight: see section 5.4.13.2.
Remove Plot: see section 5.3.3.9.
Assign Axis to Group: see section 5.3.3.8.1.2.
Unassign Axis from Group: see section 5.3.3.8.2.2.
Add Group: see section 5.3.3.8.3.2.
Remove Group: see section 5.3.3.8.4.2.
Plot: see section 5.3.3.
Markers: see section 5.4.3.
Plot Visibility: see section 5.4.12.
Plot Highlight: see section 5.4.13.
Color: see section 5.4.14.
Axes: see section 5.4.5.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.

The Plots main menu contains actions that are specific to the Plots sub-window, see section 4.9.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: P

5.6.1 Show Plots Window

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.7.

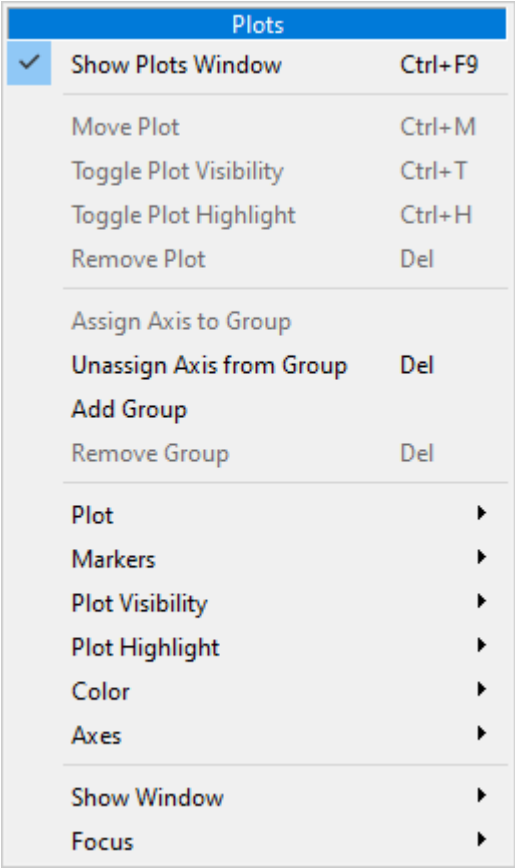


Figure 5.45: The Plots main menu

5.6.2 Move Plot

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.6.

5.6.3 Toggle Plot Visibility

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.12.3.

5.6.4 Toggle Plot Highlight

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.13.2.

5.6.5 Remove Plot

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.9.

5.6.6 Assign Axis to Group

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.1.2.

5.6.7 Unassign Axis from Group

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.2.2.

5.6.8 Add Group

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.3.2.

5.6.9 Remove Group

Up: Plots, section 5.6.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.4.2.

5.6.10 Plot

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.3.3.

5.6.11 Markers

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.3.

5.6.12 Plot Visibility

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.12.

5.6.13 Plot Highlight

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.13.

5.6.14 Color

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.14.

5.6.15 Axes

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.5.

5.6.16 Show Window

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.6.17 Focus

Up: Plots, section 5.6.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.7 Axes

Previous: Plots, section 5.6.
Next: Markers, section 5.8.
Up: Menus, section 5.

The Axes menu, see figure 5.46, contains the following items:

Show Axes Window: see section 5.2.7.8.
Move Source to Axes: see section 5.7.2.
Duplicate Source to Axes: see section 5.7.3.
Add Axis: see section 5.3.3.8.3.1.
Remove Axis: see section 5.3.3.8.4.1.
Assign Data Source to Axis: see section 5.3.3.8.1.1.
Unassign Data Source from Axis: see section 5.3.3.8.2.1.
Plot: see section 5.3.3.
Axes: see section 5.4.5.
Plot Visibility: see section 5.4.12.
Plot Highlight: see section 5.4.13.
Color: see section 5.4.14.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.

The Axes main menu contains actions that are specific to the Axes sub-window, see section 4.10.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: A

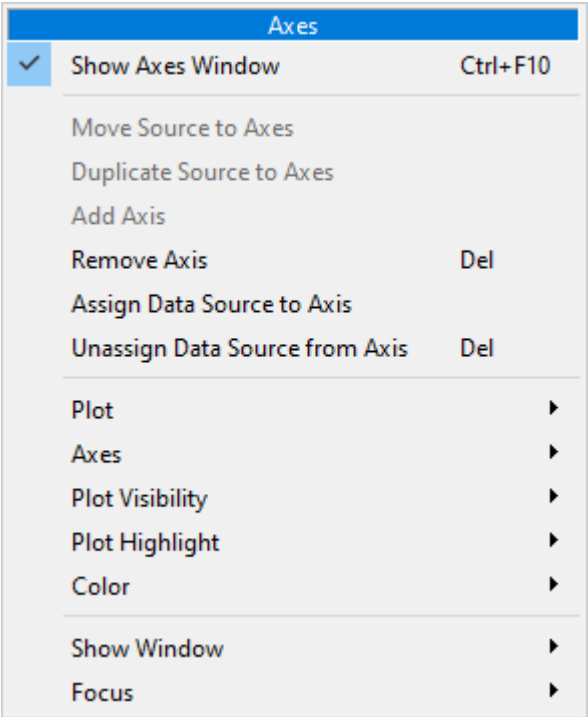


Figure 5.46: The Axes main menu

5.7.1 Show Axes Window

Next: Move Source to Axes, section 5.7.2.
Up: Axes, section 5.7.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.8.

5.7.2 Move Source to Axes

Next: Duplicate Source to Axes, section 5.7.3.
Up: Axes, section 5.7.

The Move Source to Axes action moves the selected assigned data sources (tags) from their current axes to the selected axes, see section 4.10. The data sources are first also assigned to the selected axes, then they are unassigned from their current axes. This effectively re-assigns the sources.
This action is only enabled if atleast one *assigned* source is selected and at least one *compatible* axis is selected.
Mnemonic: M

5.7.3 Duplicate Source to Axes

Previous: Move Source to Axes, section 5.7.2.
Up: Axes, section 5.7.

The Duplicate Source to Axes action duplicates the selected assigned data sources (tags) to the selected axes, see section 4.10. The data sources are assigned to the selected axes. They are *not* unassigned from their current axes. This effectively duplicates the source assignments.
This action is only enabled if atleast one *assigned* source is selected and at least one *compatible* axis is selected.
Mnemonic: D

5.7.4 Add Axis

Previous: Duplicate Source to Axes, section 5.7.3.
Up: Axes, section 5.7.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.3.1.

5.7.5 Remove Axis

Up: Axes, section 5.7.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.4.1.

5.7.6 Assign Data Source to Axis

Up: Axes, section 5.7.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.1.1.

5.7.7 Unassign Data Source from Axis

Up: Axes, section 5.7.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.8.2.1.

5.7.8 Plot

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.3.3.

5.7.9 Axes

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.5.

5.7.10 Plot Visibility

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.12.

5.7.11 Plot Highlight

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.13.

5.7.12 Color

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.14.

5.7.13 Show Window

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.7.14 Focus

Up: Axes, section 5.7.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.8 Markers

Previous: Axes, section 5.7.
Next: Statistics, section 5.9.
Up: Menus, section 5.

The Markers menu, see figure 5.47, contains the following items:

Show Markers Window: see section 5.2.7.9.
Markers: see section 5.4.3.
Plot: see section 5.3.3.
Move Plot: see section 5.4.6.
Toggle Plot Visibility: see section 5.4.12.3.
Toggle Plot Highlight: see section 5.4.13.2.
Remove Plot: see section 5.3.3.9.
Plot Visibility: see section 5.4.12.
Plot Highlight: see section 5.4.13.
Color: see section 5.4.14.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.
Copy: see section 5.8.13.

The Markers main menu contains actions that are specific to the Markers sub-window, see section 4.11.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: M

5.8.1 Show Markers Window

Up: Markers, section 5.8.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.9.

5.8.2 Markers

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.3.

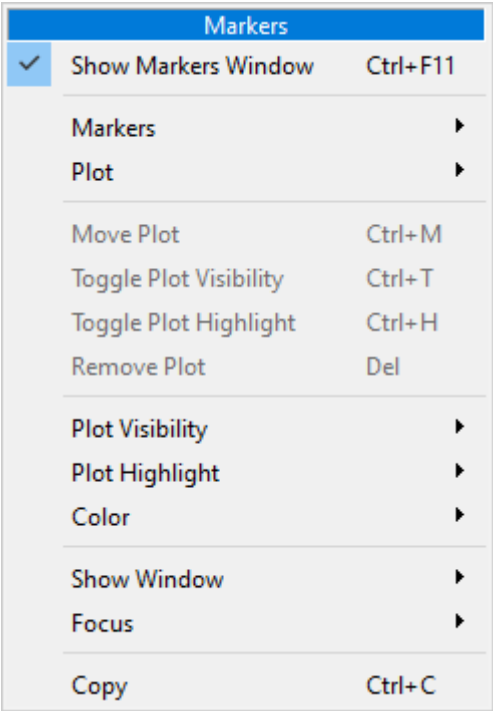


Figure 5.47: The Markers main menu

5.8.3 Plot

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.3.3.

5.8.4 Move Plot

Up: Markers, section 5.8.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.6.

5.8.5 Toggle Plot Visibility

Up: Markers, section 5.8.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.12.3.

5.8.6 Toggle Plot Highlight

Up: Markers, section 5.8.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.4.13.2.

5.8.7 Remove Plot

Up: Markers, section 5.8.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.3.3.9.

5.8.8 Plot Visibility

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.12.

5.8.9 Plot Highlight

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.13.

5.8.10 Color

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.4.14.

5.8.11 Show Window

Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.8.12 Focus

Next: Copy, section 5.8.13.
Up: Markers, section 5.8.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.8.13 Copy

Up: Markers, section 5.8.

The Copy action copies all selected cells of the Markers table to the clipboard. The cells will be formatted as text in CSV format. If the selected cells do not form a rectangle, empty cells will be added in the generated CSV text so that the generated CSV text forms a rectangle. Depending on settings, the horizontal and vertical headers of the table will be added to the CSV text. The CSV separator can be configured as well. See settings:

- Configure separator: See section 6.1.4.1
- Configure horizontal header: See section 6.1.4.2
- Configure horizontal header: See section 6.1.4.3

Mnemonic: C
Shortcut: Ctrl+C

5.9 Statistics

Previous: Markers, section 5.8.
Next: Settings, section 5.10.
Up: Menus, section 5.

The Statistics menu, see figure 5.48, contains the following items:

Show Statistics Window: see section 5.2.7.10.
Add Statistic: see section 5.9.2.
Remove Statistic: see section 5.9.3.
Show Window: see section 5.2.7.
Focus: see section 5.2.8.
Copy: see section 5.9.6.

The Statistics main menu contains actions that are specific to the Statistics sub-window, see section 4.12.
The coloured bar at the top of this menu, which matches the bar of the corresponding sub-window, indicates this. Right clicking on that sub-window will also open this menu.
Mnemonic: S

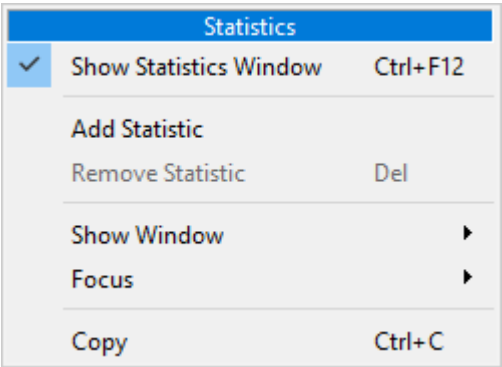


Figure 5.48: The Statistics main menu

5.9.1 Show Statistics Window

Next: Add Statistic, section 5.9.2.
Up: Statistics, section 5.9.

Certain actions can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this action is repeated here for ease of reading and because it matches the application menu structure.
The action is described in section 5.2.7.10.

5.9.2 Add Statistic

Next: Remove Statistic, section 5.9.3.
Up: Statistics, section 5.9.

The Add Statistic action adds a new statistic, and thus a new column, to the Statistics sub-window.
See also section 4.12.
Mnemonic: A

5.9.3 Remove Statistic

Previous: Add Statistic, section 5.9.2.
Up: Statistics, section 5.9.

The Remove Statistic action removes the selected statistics, and thus the statistic columns, from the Statistics sub-window. A statistic can be selected by selecting any data cell (table element) in the corresponding statistic column.
See also section 4.12.
See also the Context Sensitive Delete functionality in section 4.14.
Mnemonic: R
Shortcut: Del

5.9.4 Show Window

Previous: Remove Statistic, section 5.9.3.
Up: Statistics, section 5.9.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.7.

5.9.5 Focus

Next: Copy, section 5.9.6.
Up: Statistics, section 5.9.

Certain sub-menus can be found in multiple menus so they are easily accessible in multiple contexts.
The information for this sub-menu is repeated here for ease of reading and because it matches the application menu structure.
The sub-menu is described in section 5.2.8.

5.9.6 Copy

Up: Statistics, section 5.9.

The Copy action copies all selected cells of the Statistics table to the clipboard. The cells will be formatted as text in CSV format. If the selected cells do not form a rectangle, empty cells will be added in the generated CSV text so that the generated CSV text

forms a rectangle. Depending on settings, the horizontal and vertical headers of the table will be added to the CSV text. The CSV separator can be configured as well. See settings:

- Configure separator: See section 6.1.4.1
- Configure horizontal header: See section 6.1.4.2
- Configure horizontal header: See section 6.1.4.3

Mnemonic: C
Shortcut: Ctrl+C

5.10 Settings

Previous: Statistics, section 5.9.
Next: Window, section 5.11.
Up: Menus, section 5.

The Settings menu, see figure 5.49, contains the following items:

Settings...: see section 5.10.1.
Configure Shortcuts and Toolbars...: see section 5.10.2.
Import Settings...: see section 5.10.3.
Export Settings...: see section 5.10.4.
Project View: see section 5.10.5.
Maximize Update Rate Mode: see section 5.10.6.

The Settings menu contains actions that can be used to configure various aspects of HC-Plot. It includes, amongst others, the application settings and shortcut & toolbar settings. The actions to export and import settings are found here as well.
Mnemonic: g

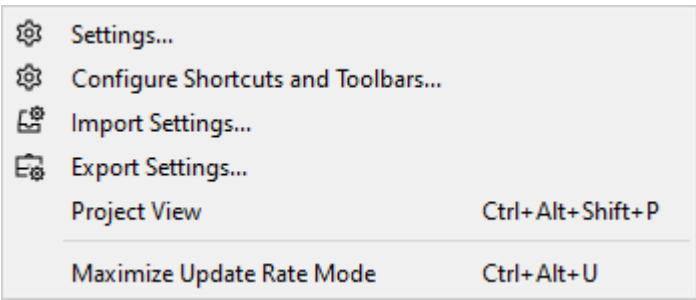


Figure 5.49: The Settings main menu

5.10.1 Settings...

Next: Configure Shortcuts and Toolbars..., section 5.10.2.
Up: Settings, section 5.10.

The Settings... action opens the settings dialog. Various application settings and options can be configured here. See figure 5.50. The left section of this dialog shows all the different setting categories. Different setting categories can be selected here. The right section shows the settings of the the currently selected settings category.
Every setting consists of the name of the setting, the value of the setting and, if available, the corresponding command line option for this setting. Command line options can be used to **temporarily override** settings. **Temporarily overriden settings are**

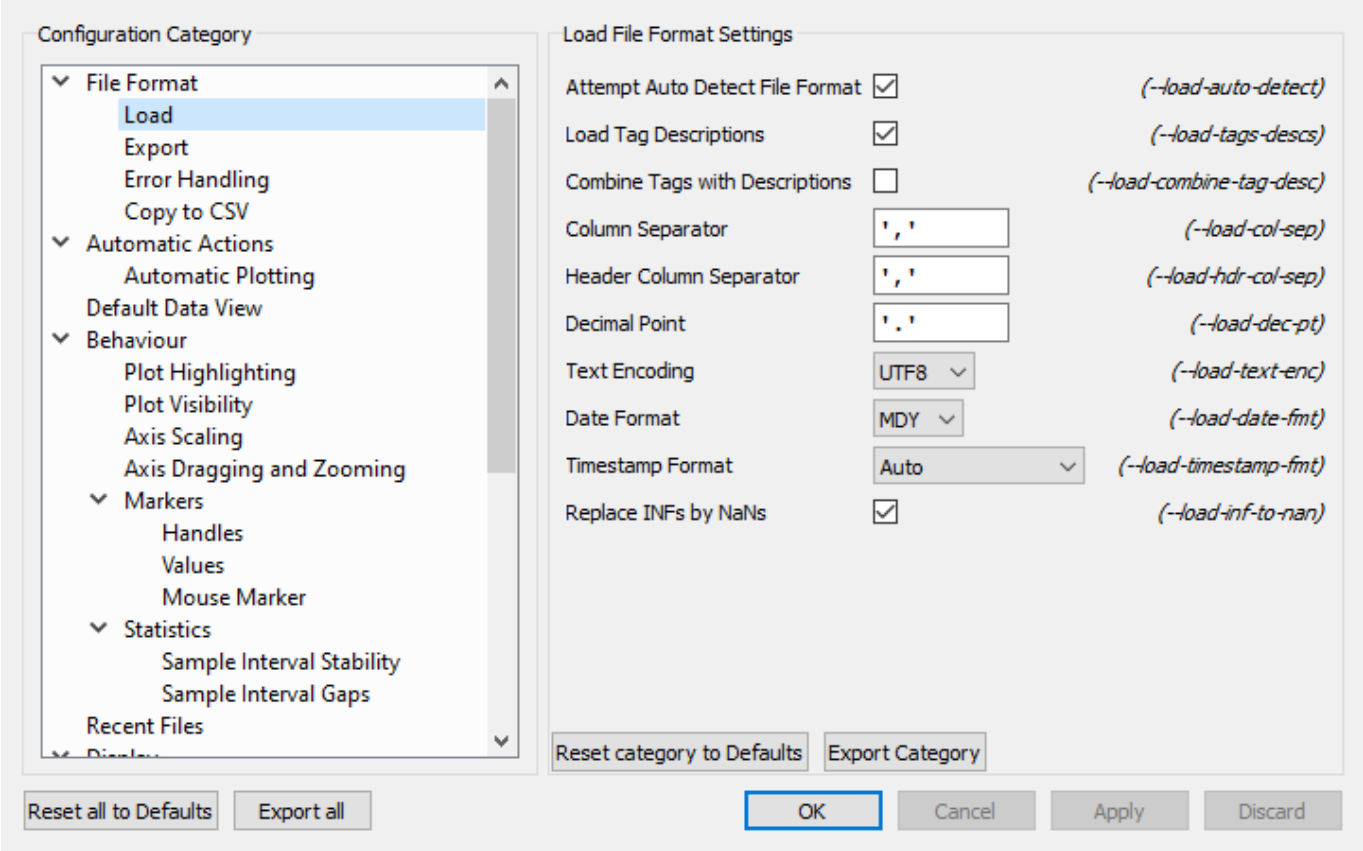


Figure 5.50: The Settings... dialog

only valid for this execution of the application and are not saved. When a setting is overridden a small textual indication is shown next to the setting.
Every category page has a reset button that, when clicked, resets all settings of the page back to their default values. At the bottom of the dialog is a reset button that resets all settings of all pages back to their default values. Note that the restore settings still needs to be applied using the OK button.Every category page also has an export button that, when clicked, allows exporting the settings of the page to a file. At the bottom of the dialog is an export button that exports all settings.The settings file can be imported using the Import Settings...action. See section 5.10.3.
Finally, at the bottom of the dialog, are the OK and Cancel button. The OK button applies and accepts all settings and closes the dialog. The cancel button undoes all changes and closes the dialog.
All settings, **unless temporarily overridden**, will be saved to the configuration file and remembered and restored when the application is shutdown/restarted.

For a description of all options and settings that can be configured see section 6.
Mnemonic: S

5.10.2 Configure Shortcuts and Toolbars...

Previous: Settings..., section 5.10.1.
Next: Import Settings..., section 5.10.3.
Up: Settings, section 5.10.

The Configure Shortcuts and Toolbars... action opens a dialog that allows defining custom toolbars and (re-)define shortcuts for

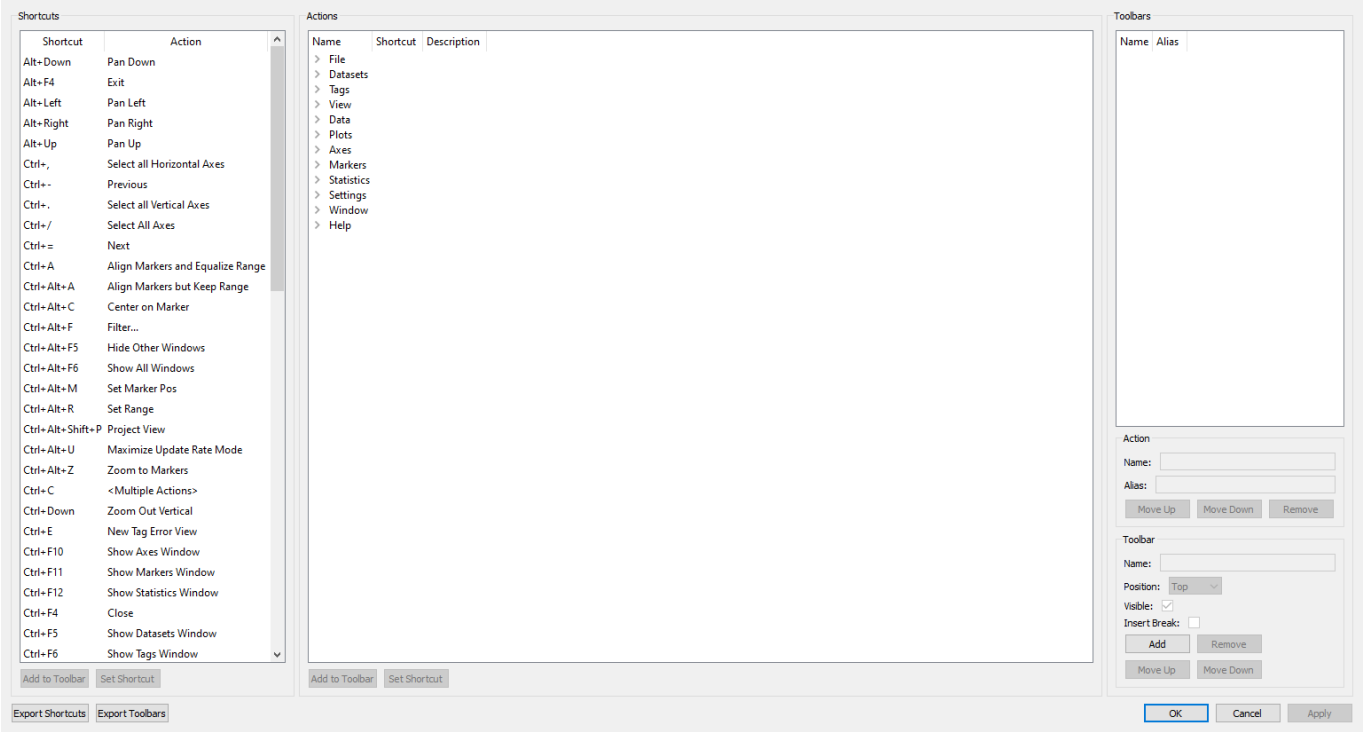


Figure 5.51: The Configure Shortcuts and Toolbars... dialog

actions. See figure 5.51.
The toolbar section on the right has buttons to add and remove toolbars as well as change the ordering of toolbars. A toolbar has the following editable properties.

- A name that is always displayed at the top of the toolbar.
- A position that indicates the position of the toolbar. Note: The position can also be changed outside this dialog by just dragging the toolbar to a new position.
- A visible flag. This indicates whether the toolbar should be visible or not.
- An *insert break* flag. This indicates whether the toolbar should be displayed in the next row/column at that position or not.

The action section on the right has buttons to remove actions from the toolbar or change the order of actions on a toolbar. A toolbar action has the following editable actions.

- An alias that, if not empty, is displayed on the toolbar instead of the action name. If the alias is empty, the name of the action is displayed on the toolbar. Note: When hovering the mouse on an item on a toolbar, the name of the action is shown in the tooltip together with the shortcut of the action.

A selected action can be added to a selected toolbar by pressing the corresponding button in the Shortcuts or Actions section. Double clicking an action will also add it to the selected toolbar.
The shortcut of a selected action can be changed by pressing the corresponding button in the Shortcuts or Actions section.
Mnemonic: S

5.10.3 Import Settings...

Previous: Configure Shortcuts and Toolbars..., section 5.10.2.
Next: Export Settings..., section 5.10.4.
Up: Settings, section 5.10.

The Import Settings... action allows importing a settings file. This settings file can contain all settings or a subset of all settings.The settings file can be exported using the Export Settings...action. See section 5.10.4.
In addition, a subset of settings may be exported using the export buttons in the settings dialog. See section 5.10.1.
Mnemonic: I

5.10.4 Export Settings...

Previous: Import Settings..., section 5.10.3.
Next: Project View, section 5.10.5.
Up: Settings, section 5.10.

The Export Settings... action allows importing all settings to a settings file.The settings file can be imported using the Import Settings...action. See section 5.10.3.
In addition, a subset of settings may be exported using the export buttons in the settings dialog. See section 5.10.1.
Mnemonic: E

5.10.5 Project View

Previous: Export Settings..., section 5.10.4.
Next: Maximize Update Rate Mode, section 5.10.6.
Up: Settings, section 5.10.

The Project View action toggles the visibility of the project window. The project window shows everything that is saved in the current project. The project window is docked but can be moved to the left or right side of the screen.
Mnemonic: P
Shortcut: Ctrl+Alt+Shift+P

5.10.6 Maximize Update Rate Mode

Previous: Project View, section 5.10.5.
Up: Settings, section 5.10.

The Maximize Update Rate Mode action toggles the Maximize Update Rate Mode.
If Maximize Update Rate Mode is enabled, certain features of the application are disabled to attempt to maximize update rates. Note that, depending on settings, this mode can be enabled automatically.
Maximize Update Rate Mode can also be toggled in the status bar. See section 4.4.
See also the following options:

- Minimum Plot Update Rate: 6.9.2.
- Maximum Plot Update Rate: 6.9.3.
- Minimum Marker Update Rate: 6.9.4.
- Maximum Marker Update Rate: 6.9.5.
- Minimum Mouse Update Rate: 6.9.6.
- Maximum Mouse Update Rate: 6.9.7.
- Minimum Resize Update Rate: 6.9.8.

- Maximum Resize Update Rate: 6.9.9.
- Invalidate Update Rate Time: 6.9.10.
- Auto Maximize Update Rate Delay: 6.9.11.
- Enable Auto Maximize Update Rate Mode: 6.9.1.

Shortcut: Ctrl+Alt+U

5.11 Window

Previous: Settings, section 5.10.
Next: Help, section 5.12.
Up: Menus, section 5.

The Window menu, see figure 5.52, contains the following items:

Tile: see section 5.11.1.
Cascade: see section 5.11.2.
Tabbed View: see section 5.11.3.
Tab Position: see section 5.11.4.
Minimize: see section 5.11.5.
Maximize: see section 5.11.6.
Restore: see section 5.11.7.
Close: see section 5.11.8.
Close all: see section 5.11.9.
Next: see section 5.11.10.
Previous: see section 5.11.11.

The Window main menu contains actions that interact with open windows in the main window, see section 3. It contains:

- The standard window resize operations: Minimize, Maximize and Restore.
- the standard window layout operations: Tile and Cascade.
- Operations to close windows.
- Operations to quickly cycle between open windows or to activate a window directly by pressing its shortcut number key.
- Operations that deal with the tabbed view.

Mnemonic: W

5.11.1 Tile

Next: Cascade, section 5.11.2.
Up: Window, section 5.11.

The Tile action changes the layout of all currently open windows. All open windows are arranged in a tile pattern.
See also section 3.

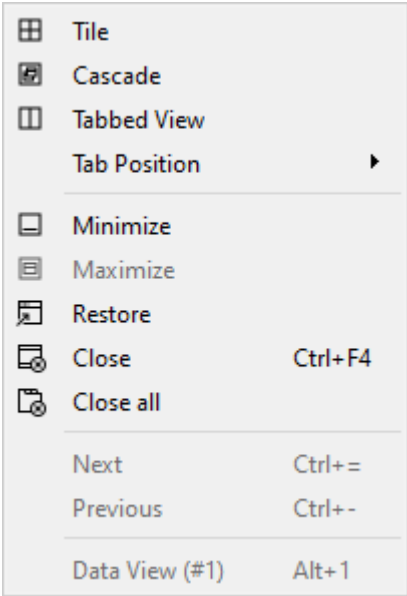


Figure 5.52: The Window main menu

5.11.2 Cascade

Previous: Tile, section 5.11.1.
Next: Tabbed View, section 5.11.3.
Up: Window, section 5.11.

The Cascade action changes the layout of all currently open windows. All open windows are arranged in a cascade pattern.
See also section 3.

5.11.3 Tabbed View

Previous: Cascade, section 5.11.2.
Next: Tab Position, section 5.11.4.
Up: Window, section 5.11.

The Tabbed View action enabled or disables tabbed mode. When tabbed mode is enabled, all open windows will be arranged in a tabular view. All windows will be resized to fit (almost) the whole main window and tabs will be added. By clicking the tabs, the corresponding window can be activated. Tabs can be moved by dragging them to a different position. When tabbed mode is enabled, this action will have a checkmark.
See also section 3.

5.11.4 Tab Position

Previous: Tabbed View, section 5.11.3.
Next: Minimize, section 5.11.5.
Up: Window, section 5.11.

The Tab Position menu, see figure 5.53, contains the following items:

Tabs Above: see section 5.11.4.1.
Tabs Below: see section 5.11.4.2.
Tabs Right: see section 5.11.4.3.
Tabs Left: see section 5.11.4.4.

The Tab Position menu contains actions that change the location of the tabs when tabbed mode is enabled, see section 5.11.3. The tabs can be positioned above, below, to the left or to the right of the window.
Mnemonic: T

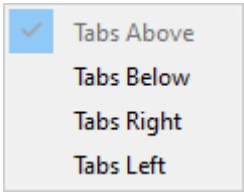


Figure 5.53: The Tab Position sub menu

5.11.4.1 Tabs Above

Next: Tabs Below, section 5.11.4.2.
Up: Tab Position, section 5.11.4.

The Tabs Above action puts the tabs at the top of the window when tabbed mode is enabled. When this option is selected, this action will have a checkmark.
See also section 3.

5.11.4.2 Tabs Below

Previous: Tabs Above, section 5.11.4.1.
Next: Tabs Right, section 5.11.4.3.
Up: Tab Position, section 5.11.4.

The Tabs Below action puts the tabs at the bottom of the window when tabbed mode is enabled. When this option is selected, this action will have a checkmark.
See also section 3.

5.11.4.3 Tabs Right

Previous: Tabs Below, section 5.11.4.2.
Next: Tabs Left, section 5.11.4.4.
Up: Tab Position, section 5.11.4.

The Tabs Right action puts the tabs to the right of the window when tabbed mode is enabled. When this option is selected, this action will have a checkmark.
See also section 3.

5.11.4.4 Tabs Left

Previous: Tabs Right, section 5.11.4.3.
Up: Tab Position, section 5.11.4.

The Tabs Left action puts the tabs to the left of the window when tabbed mode is enabled. When this option is selected, this action will have a checkmark.
See also section 3.

5.11.5 Minimize

Previous: Tab Position, section 5.11.4.
Next: Maximize, section 5.11.6.
Up: Window, section 5.11.

The Minimize action minimizes the currently active window. Minimizing a window means collapsing the window into a very small representation of the window. The window is still open and active but it takes up very little screen space.
See also section 3.

5.11.6 Maximize

Previous: Minimize, section 5.11.5.
Next: Restore, section 5.11.7.
Up: Window, section 5.11.

The Maximize action maximizes the currently active window. Maximizing window means enlarging the window to fit the size of the entire main window. The titlebar disappears. Essentially the space used by the window is maximized.
See also section 3.

5.11.7 Restore

Previous: Maximize, section 5.11.6.
Next: Close, section 5.11.8.
Up: Window, section 5.11.

The Restore action restores the currently active window to its original size. If the window was in its default state and is maximized or minimized, restoring the window returns the window to its default state. If the window maximized and then minimized, restoring the window returns the window to the maximized state.
See also section 3.

5.11.8 Close

Previous: Restore, section 5.11.7.
Next: Close all, section 5.11.9.
Up: Window, section 5.11.

The Close action closes the currently active window. A closed window is completely deleted along with its contents. Note that closing a Data View window does *not* delete any loaded tags since the windows are completely independent of the loaded data. For deleting tags see section 5.2.4.
See also section 3.
Shortcut: Ctrl+F4

5.11.9 Close all

Previous: Close, section 5.11.8.
Next: Next, section 5.11.10.
Up: Window, section 5.11.

The Close all action closes all currently active windows. A closed window is completely deleted along with its contents. Note that closing a Data View window does *not* delete any loaded tags since the windows are completely independent of the loaded data. For deleting tags see section 5.2.4.
See also section 3.

5.11.10 Next

Previous: Close all, section 5.11.9.
Next: Previous, section 5.11.11.
Up: Window, section 5.11.

The Next action activates the next available window. Together with the Previous action, see section 5.11.11, it is possible to quickly cycle between windows.
See also section 3.
Shortcut: Ctrl+=

5.11.11 Previous

Previous: Next, section 5.11.10.
Up: Window, section 5.11.

The Previous action activates the previous available window. Together with the Next action, see section 5.11.10, it is possible to quickly cycle between windows.
See also section 3.
Shortcut: Ctrl+-

5.12 Help

Previous: Window, section 5.11.
Up: Menus, section 5.

The Help menu, see figure 5.54, contains the following items:

Open Manual...: see section 5.12.1.
Contact Us...: see section 5.12.2.
License Status...: see section 5.12.3.
Version History...: see section 5.12.4.
About...: see section 5.12.5.

The Help main menu contains actions that offer help or show information about the application.
Mnemonic: H

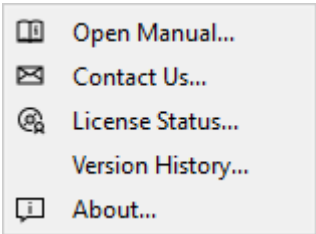


Figure 5.54: The Help main menu

5.12.1 Open Manual...

Next: Contact Us..., section 5.12.2.
Up: Help, section 5.12.

The Open Manual... action opens the user manual. The user manual is a PDF file that should be located in the same directory as the application's executable. A PDF viewer application must be installed on the system to be able to open it.
Mnemonic: M

5.12.2 Contact Us...

Previous: Open Manual..., section 5.12.1.
Next: License Status..., section 5.12.3.
Up: Help, section 5.12.

The Contact Us... action opens a contact form that can be used to contact Holland-Controls B.V.. The contact telephone number and e-mail address is also displayed in the form.
Mnemonic: C

5.12.3 License Status...

Previous: Contact Us..., section 5.12.2.
Next: Version History..., section 5.12.4.
Up: Help, section 5.12.

The License Status... action opens a window that shows information about the state of the current license. From here it is also possible to contact Holland-Controls B.V. to easily receive a trial license or renew your license.
Mnemonic: L

5.12.4 Version History...

Previous: License Status..., section 5.12.3.
Next: About..., section 5.12.5.
Up: Help, section 5.12.

The Version History... action opens a dialog that shows the version history. The version history shows the changes and bug fixes between versions of the application.
Mnemonic: V

5.12.5 About...

Previous: Version History..., section 5.12.4.
Up: Help, section 5.12.

The About... action opens the about dialog, see figure 5.55.
The dialog shows information about the application, it shows:

- Information about the exact version of the application.
- Information about the license of the application: i.e. The licensed user, expiration date, installed features.
- Information about the third-party licenses used in in the application.

Mnemonic: A

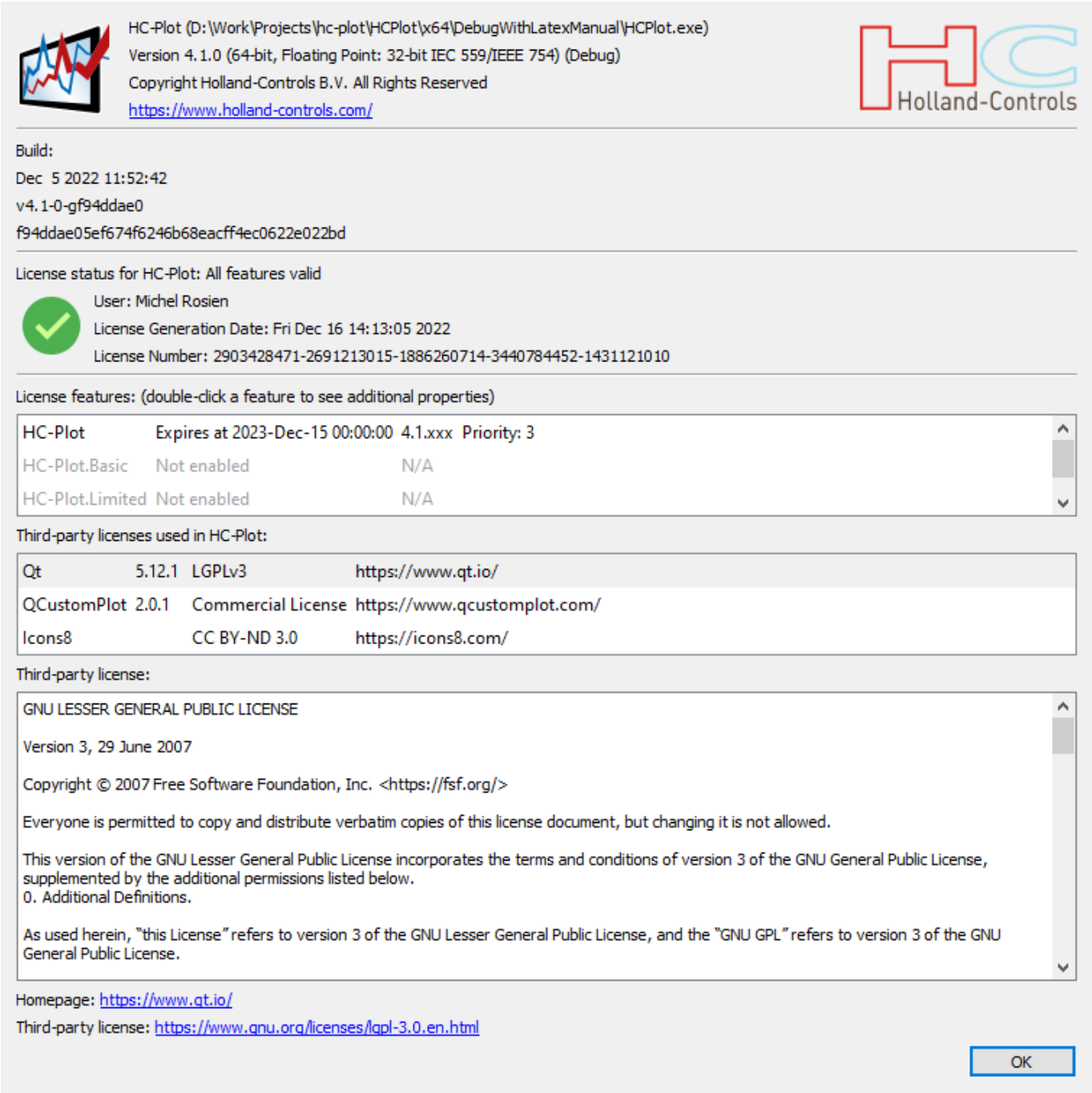


Figure 5.55: The About... dialog

Chapter 6

Settings

Next: Text File Format, section 7.

6.1 File Format

Next: Automatic Actions, section 6.2.
Up: Settings, section 6.

Figure 6.1 shows the File Format configuration category.
Category description:
File Format Settings

The File Format category contains no items.
The File Format category contains the following sub categories:

- Load: See section 6.1.1
- Export: See section 6.1.2
- Error Handling: See section 6.1.3
- Copy to CSV: See section 6.1.4

6.1.1 Load

Next: Export, section 6.1.2.
Up: File Format, section 6.1.

Figure 6.2 shows the Load configuration category.
Category description:
Load File Format Settings

The Load category contains the following items:

- Attempt Auto Detect File Format: See section 6.1.1.1
- Load Tag Descriptions: See section 6.1.1.2
- Combine Tags with Descriptions: See section 6.1.1.3
- Column Separator: See section 6.1.1.4

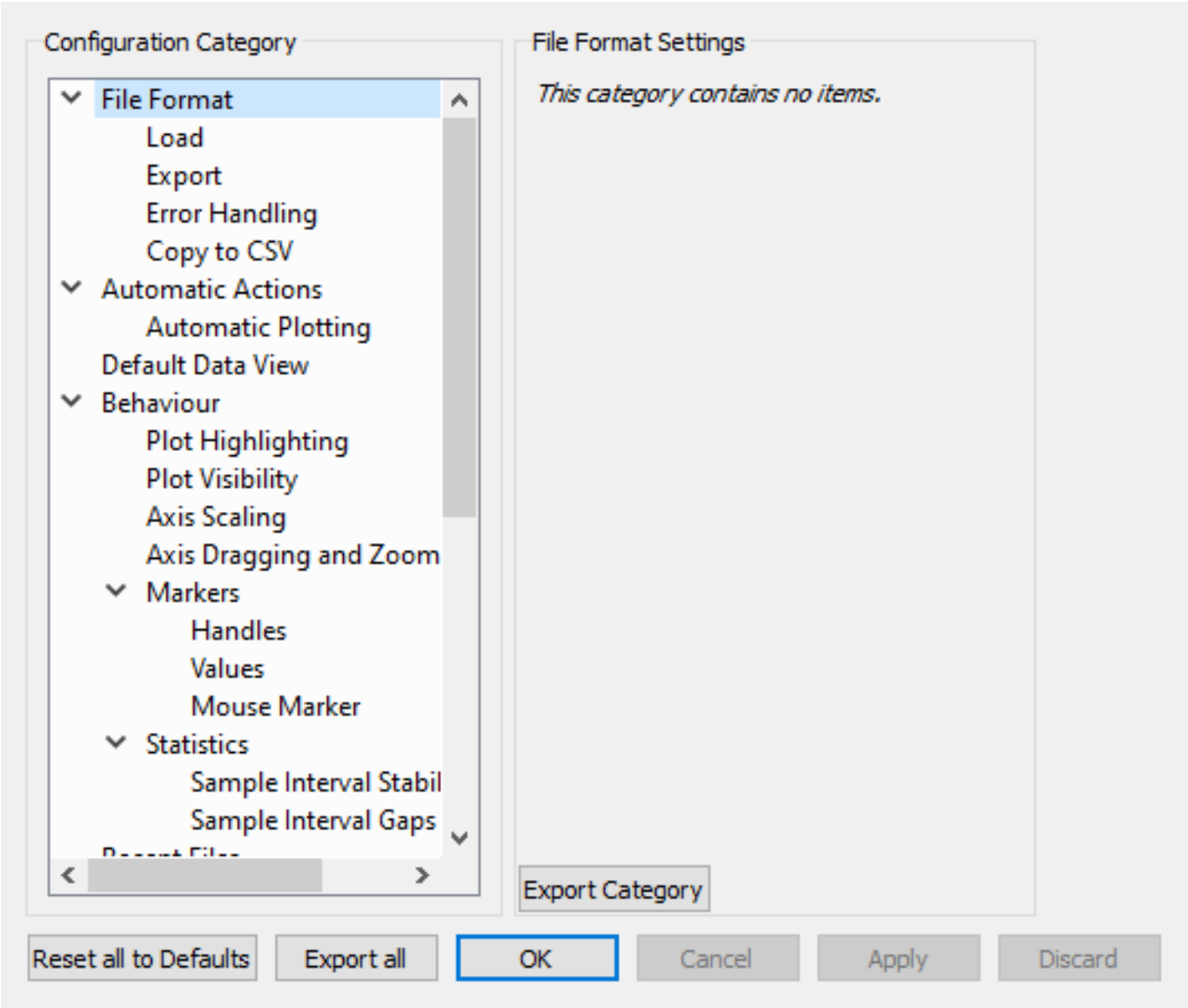


Figure 6.1: Configuration category: File Format

- Header Column Separator: See section 6.1.1.5
- Decimal Point: See section 6.1.1.6
- Text Encoding: See section 6.1.1.7
- Date Format: See section 6.1.1.8
- Timestamp Format: See section 6.1.1.9
- Replace INFs by NaNs: See section 6.1.1.10

The Load category contains no sub categories.

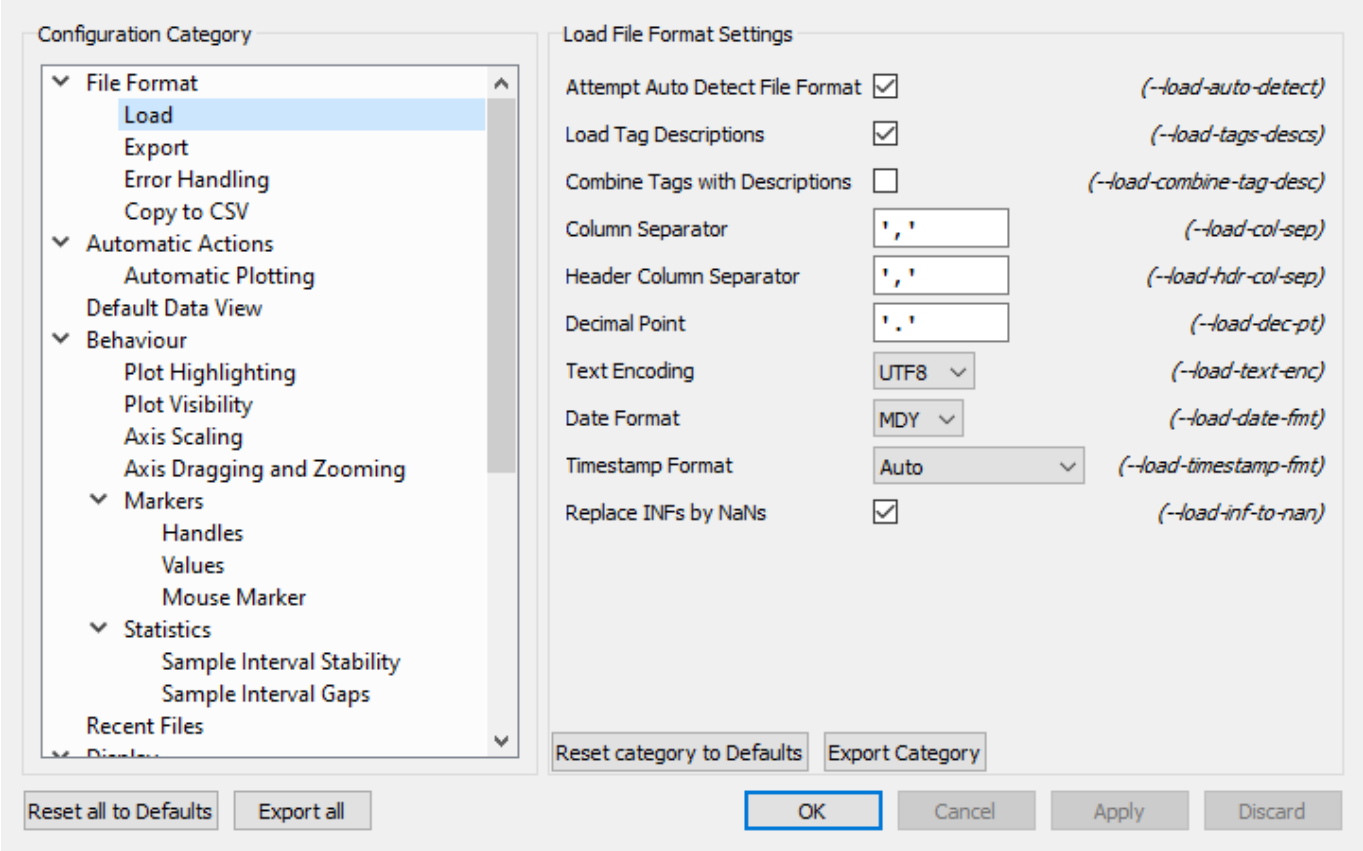


Figure 6.2: Configuration category: Load

6.1.1.1 Attempt Auto Detect File Format

Next: Load Tag Descriptions, section 6.1.1.2.
Up: Load, section 6.1.1.

Attempt to auto-detect the file format when loading files.

If this setting on, an attempt is made to auto detect certain properties of an input file. This includes the various separator character and the decimal point character. Note that the date format and the text encoding is not automatically detected. These auto detected settings will then override the normal settings for this load only. If this setting is off, no such auto detection is attempted.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –load-auto-detect, args: bool

6.1.1.2 Load Tag Descriptions

Previous: Attempt Auto Detect File Format, section 6.1.1.1.
Next: Combine Tags with Descriptions, section 6.1.1.3.
Up: Load, section 6.1.1.

Whether or not to load tag descriptions.

Input files may contain additional descriptions for tags. If this option is on, those additional descriptions will be loaded and the application will know about them. If this option is off, the additional descriptions will be ignored.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –load-tags-descs, args: bool

6.1.1.3 Combine Tags with Descriptions

Previous: Load Tag Descriptions, section 6.1.1.2.
Next: Column Separator, section 6.1.1.4.
Up: Load, section 6.1.1.

Whether or not to combine the tag name and description.

When this setting is on, the description will be appended to the tag name when loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –load-combine-tag-desc, args: bool

6.1.1.4 Column Separator

Previous: Combine Tags with Descriptions, section 6.1.1.3.
Next: Header Column Separator, section 6.1.1.5.
Up: Load, section 6.1.1.

The character used as column separator when loading files.

Arguments: char : 'char'
Default:

```
','
```

Command line Option (long): –load-col-sep, args: char

6.1.1.5 Header Column Separator

Previous: Column Separator, section 6.1.1.4.
Next: Decimal Point, section 6.1.1.6.
Up: Load, section 6.1.1.

The character used as header column separator when loading files.

Arguments: char : 'char'
Default:

```
','
```

Command line Option (long): –load-hdr-col-sep, args: char

6.1.1.6 Decimal Point

Previous: Header Column Separator, section 6.1.1.5.
Next: Text Encoding, section 6.1.1.7.
Up: Load, section 6.1.1.

The character used as decimal point when loading files.

Arguments: char : 'char'
Default:

```
'.'
```

Command line Option (long): –load-dec-pt, args: char

6.1.1.7 Text Encoding

Previous: Decimal Point, section 6.1.1.6.
Next: Date Format, section 6.1.1.8.
Up: Load, section 6.1.1.

The text encoding used when loading files.

The text encoding of files e.g. UTF8 or ANSI is not auto detected. It can be configured using this setting. When loading a file, the configured text encoding is assumed.

Arguments: enum : ASCII|ANSI|UTF8
Default:

```
UTF8
```

Command line Option (short): -e, args: ASCII|ANSI|UTF8
Command line Option (long): –load-text-enc, args: enum

6.1.1.8 Date Format

Previous: Text Encoding, section 6.1.1.7.
Next: Timestamp Format, section 6.1.1.9.
Up: Load, section 6.1.1.

The date format (e.g. Month-Day-Year) used when loading files.

When loading files, the date format can not be auto detected. The date format can be configured using this setting. All combinations of Month-Day-Year are supported.

Arguments: enum : YMD|YDM|MYD|MDY|DYM|DMY
Default:

```
MDY
```

Command line Option (short): -d, args: YMD|YDM|MYD|MDY|DYM|DMY
Command line Option (long): –load-date-fmt, args: enum

6.1.1.9 Timestamp Format

Previous: Date Format, section 6.1.1.8.
Next: Replace INFs by NaNs, section 6.1.1.10.
Up: Load, section 6.1.1.

The timestamp format used when loading files.

The timestamp format used when loading files e.g. multi column, single column, seconds, milliseconds etc...

Arguments: enum : Auto|DateTime2Column|DateTime1Column|TimeDate1Column|AbsoluteMs|RelativeMs|AbsoluteSec|RelativeSec|ISO860
Default:

```
Auto
```

Command line Option (long): –load-timestamp-fmt, args: enum

6.1.1.10 Replace INFs by NaNs

Previous: Timestamp Format, section 6.1.1.9.
Up: Load, section 6.1.1.

Replace infinity values by NaN values when reading

When this option is enabled, all infinite values, read or generated, will be stored internally as NaNs. This has the effect that these numbers will cause 'holes' in the plot instead of creating infinite axes.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –load-inf-to-nan, args: bool

6.1.2 Export

Previous: Load, section 6.1.1.
Next: Error Handling, section 6.1.3.
Up: File Format, section 6.1.

Figure 6.3 shows the Export configuration category.
Category description:
Export File Format Settings

The Export category contains the following items:

- Export Tag Descriptions: See section 6.1.2.1
- Combine Tags with Descriptions: See section 6.1.2.2
- Column Separator: See section 6.1.2.3
- Header Column Separator: See section 6.1.2.4
- Decimal Point: See section 6.1.2.5
- Text Encoding: See section 6.1.2.6

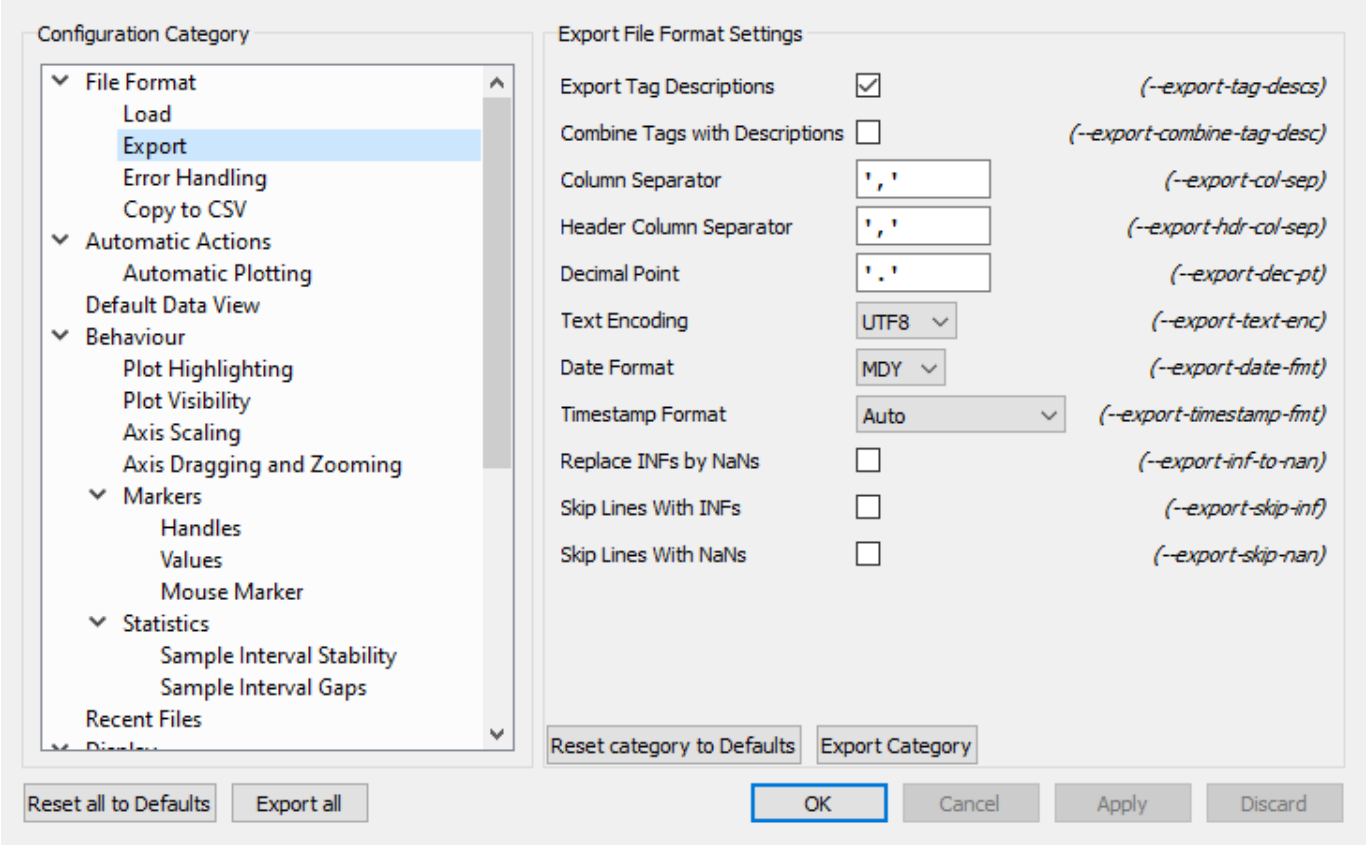


Figure 6.3: Configuration category: Export

- Date Format: See section 6.1.2.7
- Timestamp Format: See section 6.1.2.8
- Replace INFs by NaNs: See section 6.1.2.9
- Skip Lines With INFs: See section 6.1.2.10
- Skip Lines With NaNs: See section 6.1.2.11

The Export category contains no sub categories.

6.1.2.1 Export Tag Descriptions

Next: Combine Tags with Descriptions, section 6.1.2.2.
Up: Export, section 6.1.2.

Whether or not to export tag descriptions.

If this option is on, additional descriptions for tags will also be in exported files. If this option is off, the additional descriptions will not be exported.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –export-tag-descs, args: bool

6.1.2.2 Combine Tags with Descriptions

Previous: Export Tag Descriptions, section 6.1.2.1.
Next: Column Separator, section 6.1.2.3.
Up: Export, section 6.1.2.

Whether or not to combine the tag name and description.

When this setting is on, the description will be appended to the tag name when exporting.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –export-combine-tag-desc, args: bool

6.1.2.3 Column Separator

Previous: Combine Tags with Descriptions, section 6.1.2.2.
Next: Header Column Separator, section 6.1.2.4.
Up: Export, section 6.1.2.

The character used as column separator when exporting files.

Arguments: char : 'char'
Default:

`','`

Command line Option (long): –export-col-sep, args: char

6.1.2.4 Header Column Separator

Previous: Column Separator, section 6.1.2.3.
Next: Decimal Point, section 6.1.2.5.
Up: Export, section 6.1.2.

The character used as header column separator when exporting files.

Arguments: char : 'char'
Default:

`','`

Command line Option (long): –export-hdr-col-sep, args: char

6.1.2.5 Decimal Point

Previous: Header Column Separator, section 6.1.2.4.
Next: Text Encoding, section 6.1.2.6.
Up: Export, section 6.1.2.

The character used as decimal point when exporting files.

Arguments: char : 'char'
Default:

```
'.'
```

Command line Option (long): –export-dec-pt, args: char

6.1.2.6 Text Encoding

Previous: Decimal Point, section 6.1.2.5.
Next: Date Format, section 6.1.2.7.
Up: Export, section 6.1.2.

The text encoding used when exporting files.

This setting determines the encoding of text e.g. UTF8 or ANSI in exported files.

Arguments: enum : ASCII|ANSI|UTF8
Default:

```
UTF8
```

Command line Option (long): –export-text-enc, args: enum

6.1.2.7 Date Format

Previous: Text Encoding, section 6.1.2.6.
Next: Timestamp Format, section 6.1.2.8.
Up: Export, section 6.1.2.

The date format (e.g. Month-Day-Year) used when exporting files.

The format of dates in exported files can be configured using this setting. All combinations of Month-Day-Year are supported.

Arguments: enum : YMD|YDM|MYD|MDY|DYM|DMY
Default:

```
MDY
```

Command line Option (long): –export-date-fmt, args: enum

6.1.2.8 Timestamp Format

Previous: Date Format, section 6.1.2.7.
Next: Replace INFs by NaNs, section 6.1.2.9.
Up: Export, section 6.1.2.

The timestamp format used when exporting files.

The timestamp format used when exporting files e.g. multi column, single column, seconds, milliseconds etc...

Arguments: enum : Auto|DateTime2Column|DateTime1Column|TimeDate1Column|AbsoluteMs|RelativeMs|AbsoluteSec|RelativeSec|ISO860
Default:

```
Auto
```

Command line Option (long): –export-timestamp-fmt, args: enum

6.1.2.9 Replace INFs by NaNs

Previous: Timestamp Format, section 6.1.2.8.
Next: Skip Lines With INFs, section 6.1.2.10.
Up: Export, section 6.1.2.

Replace infinity values by NaN values when exporting

When this option is enabled, all infinite values, will be exported as NaNs.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –export-inf-to-nan, args: bool

6.1.2.10 Skip Lines With INFs

Previous: Replace INFs by NaNs, section 6.1.2.9.
Next: Skip Lines With NaNs, section 6.1.2.11.
Up: Export, section 6.1.2.

Skip lines containing infinite values when exporting

When this option is enabled, all lines that contain an infinite value, will be skipped.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –export-skip-inf, args: bool

6.1.2.11 Skip Lines With NaNs

Previous: Skip Lines With INFs, section 6.1.2.10.
Up: Export, section 6.1.2.

Skip lines containing NaN values when exporting

When this option is enabled, all lines that contain a NaN value, will be skipped.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –export-skip-nan, args: bool

6.1.3 Error Handling

Previous: Export, section 6.1.2.
Next: Copy to CSV, section 6.1.4.
Up: File Format, section 6.1.

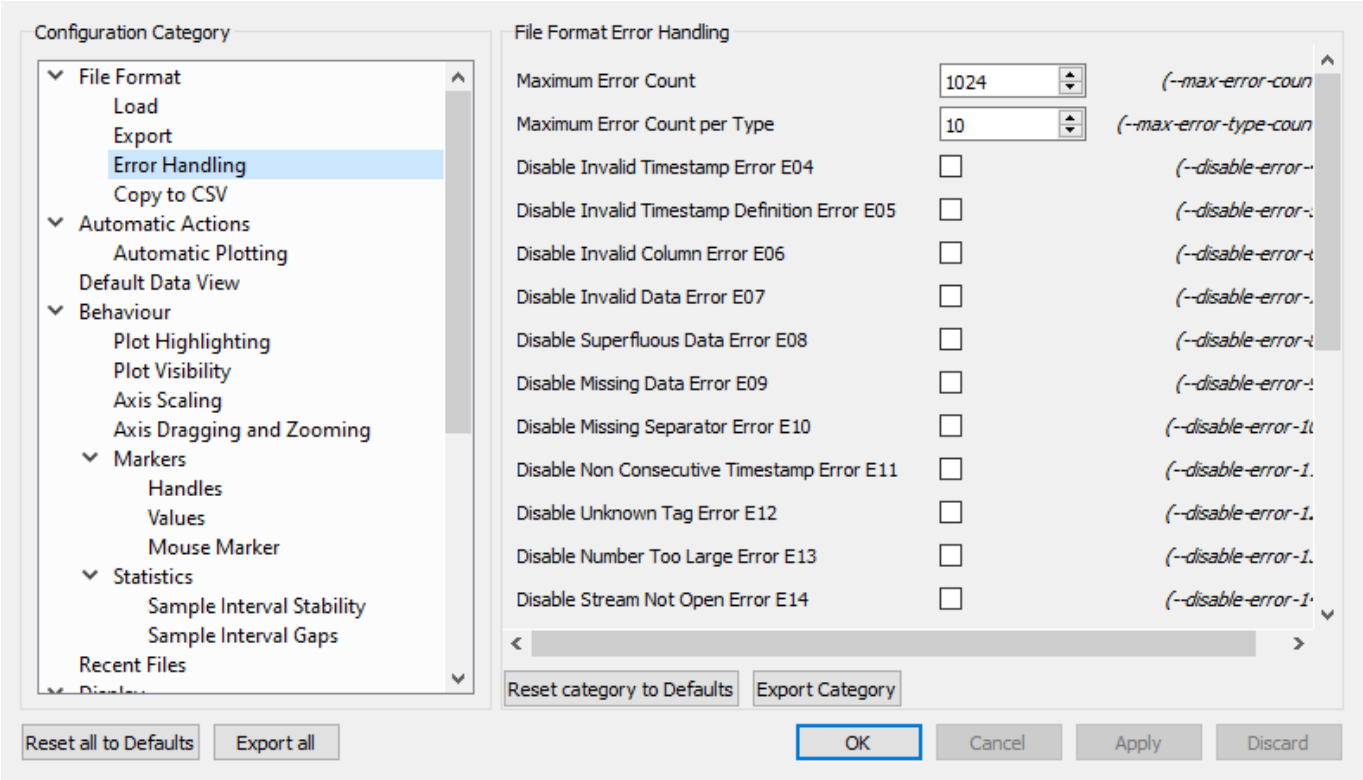


Figure 6.4: Configuration category: Error Handling

Figure 6.4 shows the Error Handling configuration category.
Category description:
File Format Error Handling

The Error Handling category contains the following items:

- Maximum Error Count: See section 6.1.3.1
- Maximum Error Count per Type: See section 6.1.3.2
- Disable Invalid Timestamp Error E04: See section 6.1.3.3
- Disable Invalid Timestamp Definition Error E05: See section 6.1.3.4
- Disable Invalid Column Error E06: See section 6.1.3.5
- Disable Invalid Data Error E07: See section 6.1.3.6
- Disable Superfluous Data Error E08: See section 6.1.3.7
- Disable Missing Data Error E09: See section 6.1.3.8

- Disable Missing Separator Error E10: See section 6.1.3.9
- Disable Non Consecutive Timestamp Error E11: See section 6.1.3.10
- Disable Unknown Tag Error E12: See section 6.1.3.11
- Disable Number Too Large Error E13: See section 6.1.3.12
- Disable Stream Not Open Error E14: See section 6.1.3.13
- Disable Fatal Error Error E15: See section 6.1.3.14
- Disable Auto Detect Failed Error E16: See section 6.1.3.15
- Disable Tag Name Too Long Error E17: See section 6.1.3.16
- Disable Tag Description Too Long Error E18: See section 6.1.3.17
- Disable Unknown Meta Tag Error E19: See section 6.1.3.18
- Disable Too Many Digits Error E20: See section 6.1.3.19
- Disable Extra Data Skipped Error E21: See section 6.1.3.20
- Disable Pos Infinity Generated Error E22: See section 6.1.3.21
- Disable Neg Infinity Generated Error E23: See section 6.1.3.22
- Disable Pos Infinity Probably Generated Error E24: See section 6.1.3.23
- Disable Infinity Replaced By Nan Error E25: See section 6.1.3.24
- Disable Too Much Data For License Error E26: See section 6.1.3.25

The Error Handling category contains no sub categories.

6.1.3.1 Maximum Error Count

Next: Maximum Error Count per Type, section 6.1.3.2.
Up: Error Handling, section 6.1.3.

The maximum number of errors that will be reported.

When, during file loading, the number of detected errors has reached or exceeds this number, subsequent errors will be skipped and not displayed. Note: a very large number of errors will reduce performance during file loading.

Arguments: int : min:1,max:-
Default:

1024

Command line Option (long): –max-error-count, args: int

6.1.3.2 Maximum Error Count per Type

Previous: Maximum Error Count, section 6.1.3.1.
Next: Disable Invalid Timestamp Error E04, section 6.1.3.3.
Up: Error Handling, section 6.1.3.

The maximum number of errors of a specific type that will be reported.

When, during file loading, the number of detected errors of a specific type has reached or exceeds this number, subsequent errors of this specific type will be skipped and not displayed. Errors of other types will still be displayed (if the number of those errors are also less than this number). Note: a very large number of errors will reduce performance during file loading.

Arguments: int : min:1,max:-
Default:

```
10
```

Command line Option (long): –max-error-type-count, args: int

6.1.3.3 Disable Invalid Timestamp Error E04

Previous: Maximum Error Count per Type, section 6.1.3.2.
Next: Disable Invalid Timestamp Definition Error E05, section 6.1.3.4.
Up: Error Handling, section 6.1.3.

Check to disable error 'Invalid Timestamp'

If this setting is checked, error 'Invalid Timestamp' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-4, args: bool

6.1.3.4 Disable Invalid Timestamp Definition Error E05

Previous: Disable Invalid Timestamp Error E04, section 6.1.3.3.
Next: Disable Invalid Column Error E06, section 6.1.3.5.
Up: Error Handling, section 6.1.3.

Check to disable error 'Invalid Timestamp Definition'

If this setting is checked, error 'Invalid Timestamp Definition' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-5, args: bool

6.1.3.5 Disable Invalid Column Error E06

Previous: Disable Invalid Timestamp Definition Error E05, section 6.1.3.4.
Next: Disable Invalid Data Error E07, section 6.1.3.6.
Up: Error Handling, section 6.1.3.

Check to disable error 'Invalid Column'

If this setting is checked, error 'Invalid Column' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-6, args: bool

6.1.3.6 Disable Invalid Data Error E07

Previous: Disable Invalid Column Error E06, section 6.1.3.5.
Next: Disable Superfluous Data Error E08, section 6.1.3.7.
Up: Error Handling, section 6.1.3.

Check to disable error 'Invalid Data'

If this setting is checked, error 'Invalid Data' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-7, args: bool

6.1.3.7 Disable Superfluous Data Error E08

Previous: Disable Invalid Data Error E07, section 6.1.3.6.
Next: Disable Missing Data Error E09, section 6.1.3.8.
Up: Error Handling, section 6.1.3.

Check to disable error 'Superfluous Data'

If this setting is checked, error 'Superfluous Data' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-8, args: bool

6.1.3.8 Disable Missing Data Error E09

Previous: Disable Superfluous Data Error E08, section 6.1.3.7.
Next: Disable Missing Separator Error E10, section 6.1.3.9.
Up: Error Handling, section 6.1.3.

Check to disable error 'Missing Data'

If this setting is checked, error 'Missing Data' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-9, args: bool

6.1.3.9 Disable Missing Separator Error E10

Previous: Disable Missing Data Error E09, section 6.1.3.8.
Next: Disable Non Consecutive Timestamp Error E11, section 6.1.3.10.
Up: Error Handling, section 6.1.3.

Check to disable error 'Missing Separator'

If this setting is checked, error 'Missing Separator' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-10, args: bool

6.1.3.10 Disable Non Consecutive Timestamp Error E11

Previous: Disable Missing Separator Error E10, section 6.1.3.9.
Next: Disable Unknown Tag Error E12, section 6.1.3.11.
Up: Error Handling, section 6.1.3.

Check to disable error 'Non Consecutive Timestamp'

If this setting is checked, error 'Non Consecutive Timestamp' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-11, args: bool

6.1.3.11 Disable Unknown Tag Error E12

Previous: Disable Non Consecutive Timestamp Error E11, section 6.1.3.10.
Next: Disable Number Too Large Error E13, section 6.1.3.12.
Up: Error Handling, section 6.1.3.

Check to disable error 'Unknown Tag'

If this setting is checked, error 'Unknown Tag' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-12, args: bool

6.1.3.12 Disable Number Too Large Error E13

Previous: Disable Unknown Tag Error E12, section 6.1.3.11.
Next: Disable Stream Not Open Error E14, section 6.1.3.13.
Up: Error Handling, section 6.1.3.

Check to disable error 'Number Too Large'

If this setting is checked, error 'Number Too Large' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-13, args: bool

6.1.3.13 Disable Stream Not Open Error E14

Previous: Disable Number Too Large Error E13, section 6.1.3.12.
Next: Disable Fatal Error Error E15, section 6.1.3.14.
Up: Error Handling, section 6.1.3.

Check to disable error 'Stream Not Open'

If this setting is checked, error 'Stream Not Open' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-14, args: bool

6.1.3.14 Disable Fatal Error Error E15

Previous: Disable Stream Not Open Error E14, section 6.1.3.13.
Next: Disable Auto Detect Failed Error E16, section 6.1.3.15.
Up: Error Handling, section 6.1.3.

Check to disable error 'Fatal Error'

If this setting is checked, error 'Fatal Error' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-15, args: bool

6.1.3.15 Disable Auto Detect Failed Error E16

Previous: Disable Fatal Error Error E15, section 6.1.3.14.
Next: Disable Tag Name Too Long Error E17, section 6.1.3.16.
Up: Error Handling, section 6.1.3.

Check to disable error 'Auto Detect Failed'

If this setting is checked, error 'Auto Detect Failed' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-16, args: bool

6.1.3.16 Disable Tag Name Too Long Error E17

Previous: Disable Auto Detect Failed Error E16, section 6.1.3.15.
Next: Disable Tag Description Too Long Error E18, section 6.1.3.17.
Up: Error Handling, section 6.1.3.

Check to disable error 'Tag Name Too Long'

If this setting is checked, error 'Tag Name Too Long' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-17, args: bool

6.1.3.17 Disable Tag Description Too Long Error E18

Previous: Disable Tag Name Too Long Error E17, section 6.1.3.16.
Next: Disable Unknown Meta Tag Error E19, section 6.1.3.18.
Up: Error Handling, section 6.1.3.

Check to disable error 'Tag Description Too Long'

If this setting is checked, error 'Tag Description Too Long' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-18, args: bool

6.1.3.18 Disable Unknown Meta Tag Error E19

Previous: Disable Tag Description Too Long Error E18, section 6.1.3.17.
Next: Disable Too Many Digits Error E20, section 6.1.3.19.
Up: Error Handling, section 6.1.3.

Check to disable error 'Unknown Meta Tag'

If this setting is checked, error 'Unknown Meta Tag' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-19, args: bool

6.1.3.19 Disable Too Many Digits Error E20

Previous: Disable Unknown Meta Tag Error E19, section 6.1.3.18.
Next: Disable Extra Data Skipped Error E21, section 6.1.3.20.
Up: Error Handling, section 6.1.3.

Check to disable error 'Too Many Digits'

If this setting is checked, error 'Too Many Digits' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-20, args: bool

6.1.3.20 Disable Extra Data Skipped Error E21

Previous: Disable Too Many Digits Error E20, section 6.1.3.19.
Next: Disable Pos Infinity Generated Error E22, section 6.1.3.21.
Up: Error Handling, section 6.1.3.

Check to disable error 'Extra Data Skipped'

If this setting is checked, error 'Extra Data Skipped' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-21, args: bool

6.1.3.21 Disable Pos Infinity Generated Error E22

Previous: Disable Extra Data Skipped Error E21, section 6.1.3.20.
Next: Disable Neg Infinity Generated Error E23, section 6.1.3.22.
Up: Error Handling, section 6.1.3.

Check to disable error 'Pos Infinity Generated'

If this setting is checked, error 'Pos Infinity Generated' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-22, args: bool

6.1.3.22 Disable Neg Infinity Generated Error E23

Previous: Disable Pos Infinity Generated Error E22, section 6.1.3.21.
Next: Disable Pos Infinity Probably Generated Error E24, section 6.1.3.23.
Up: Error Handling, section 6.1.3.

Check to disable error 'Neg Infinity Generated'

If this setting is checked, error 'Neg Infinity Generated' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-23, args: bool

6.1.3.23 Disable Pos Infinity Probably Generated Error E24

Previous: Disable Neg Infinity Generated Error E23, section 6.1.3.22.
Next: Disable Infinity Replaced By Nan Error E25, section 6.1.3.24.
Up: Error Handling, section 6.1.3.

Check to disable error 'Pos Infinity Probably Generated'

If this setting is checked, error 'Pos Infinity Probably Generated' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-24, args: bool

6.1.3.24 Disable Infinity Replaced By Nan Error E25

Previous: Disable Pos Infinity Probably Generated Error E24, section 6.1.3.23.
Next: Disable Too Much Data For License Error E26, section 6.1.3.25.
Up: Error Handling, section 6.1.3.

Check to disable error 'Infinity Replaced By Nan'

If this setting is checked, error 'Infinity Replaced By Nan' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –disable-error-25, args: bool

6.1.3.25 Disable Too Much Data For License Error E26

Previous: Disable Infinity Replaced By Nan Error E25, section 6.1.3.24.
Up: Error Handling, section 6.1.3.

Check to disable error 'Too Much Data For License'

If this setting is checked, error 'Too Much Data For License' will be disabled and ignored during file loading.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –disable-error-26, args: bool

6.1.4 Copy to CSV

Previous: Error Handling, section 6.1.3.
Up: File Format, section 6.1.

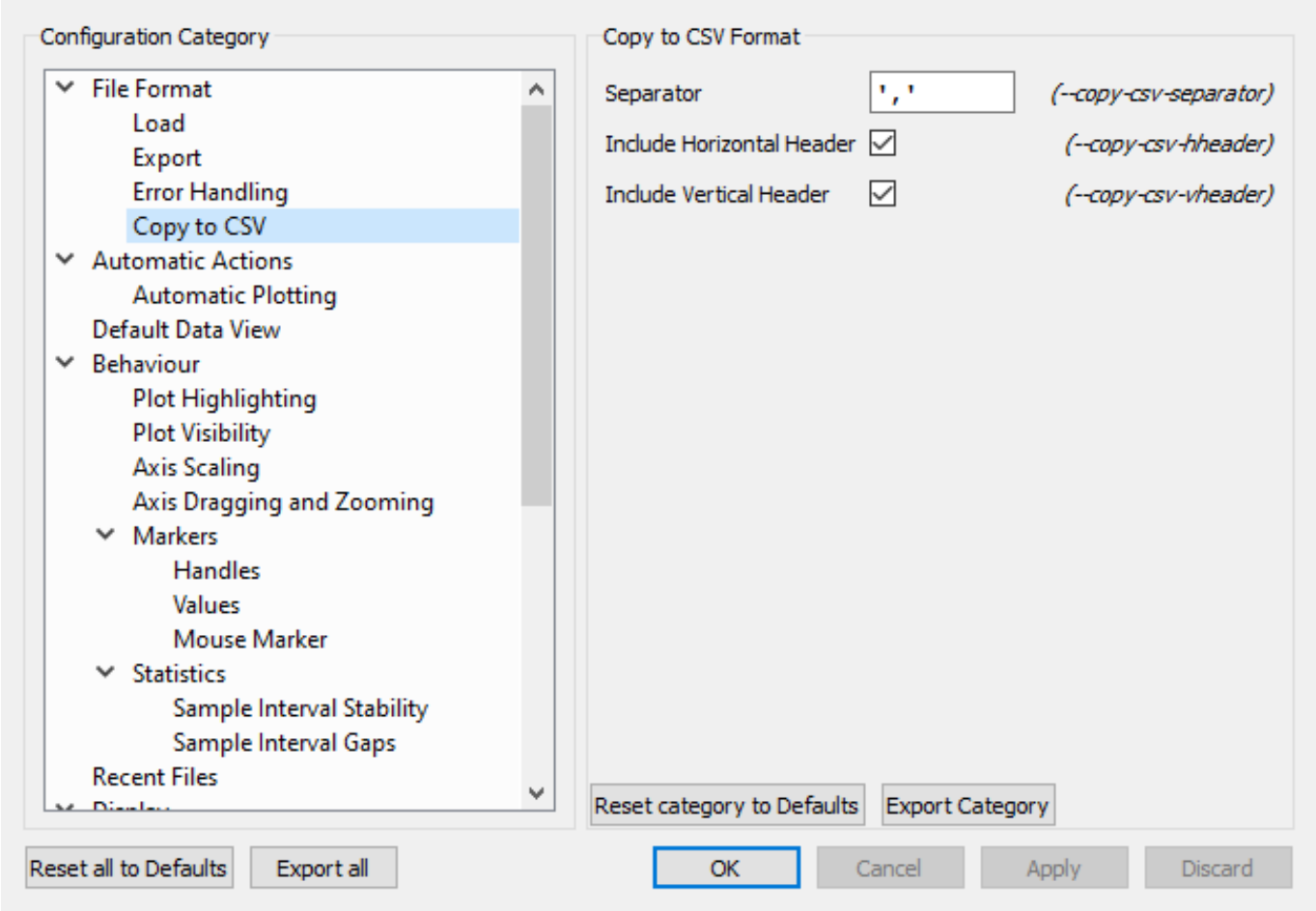


Figure 6.5: Configuration category: Copy to CSV

Figure 6.5 shows the Copy to CSV configuration category.
Category description:
Copy to CSV Format

The Copy to CSV category contains the following items:

- Separator: See section 6.1.4.1
- Include Horizontal Header: See section 6.1.4.2
- Include Vertical Header: See section 6.1.4.3

The Copy to CSV category contains no sub categories.

6.1.4.1 Separator

Next: Include Horizontal Header, section 6.1.4.2.
Up: Copy to CSV, section 6.1.4.

The character that separates columns.

This setting determines the character that is used to separate columns in the CSV output.

Arguments: char : 'char'
Default:

```
','
```

Command line Option (long): –copy-csv-separator, args: char

6.1.4.2 Include Horizontal Header

Previous: Separator, section 6.1.4.1.
Next: Include Vertical Header, section 6.1.4.3.
Up: Copy to CSV, section 6.1.4.

Whether or not to include the horizontal header.

When this setting is true, the horizontal header is included in the CSV output (if applicable). This includes any necessary indentation.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –copy-csv-hheader, args: bool

6.1.4.3 Include Vertical Header

Previous: Include Horizontal Header, section 6.1.4.2.
Up: Copy to CSV, section 6.1.4.

Whether or not to include the vertical header.

When this setting is true, the vertical header is included in the CSV output (if applicable). This includes any necessary indentation.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –copy-csv-vheader, args: bool

6.2 Automatic Actions

Previous: File Format, section 6.1.
Next: Default Data View, section 6.3.
Up: Settings, section 6.

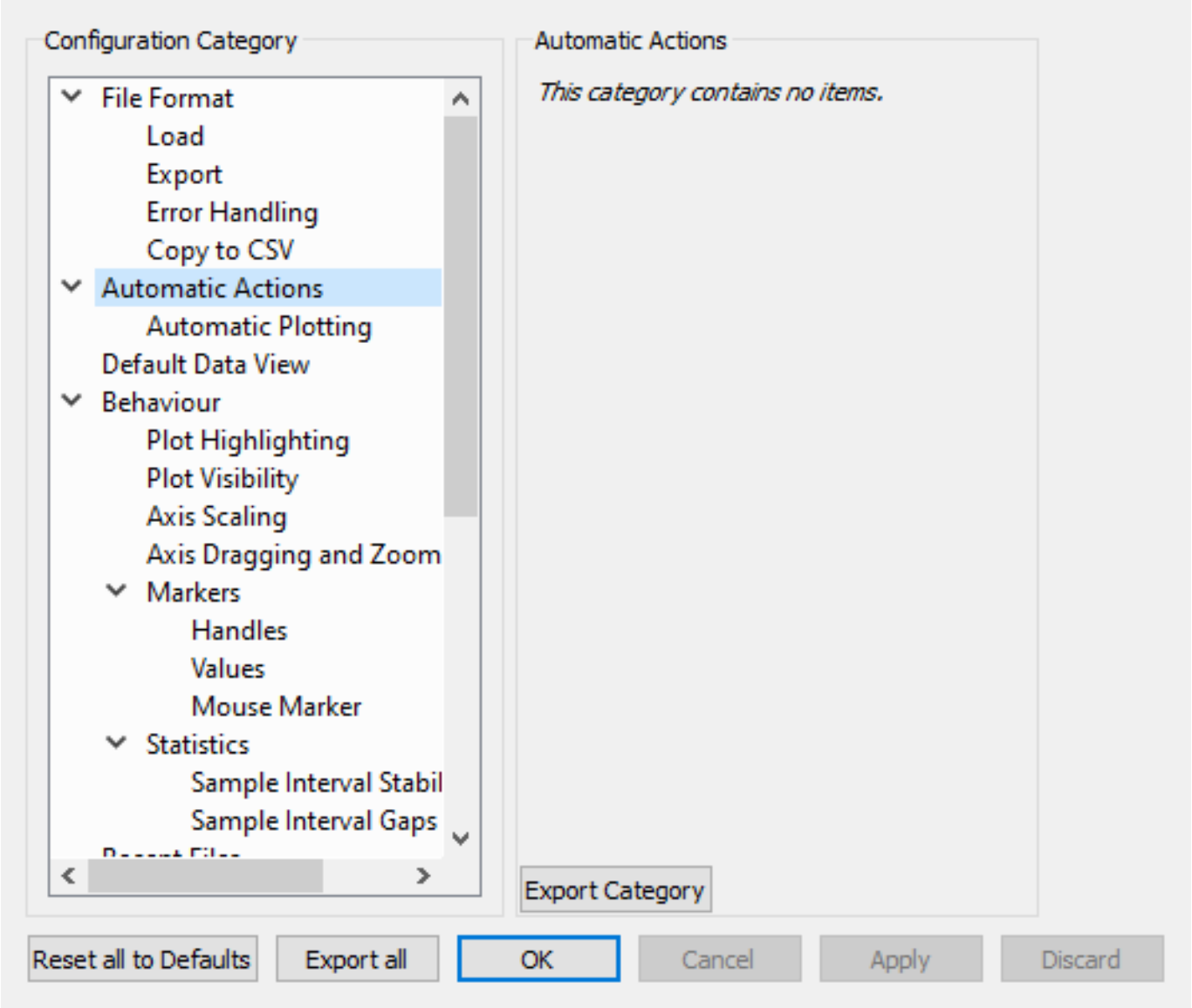


Figure 6.6: Configuration category: Automatic Actions

Figure 6.6 shows the Automatic Actions configuration category.
Category description:
Automatic Actions

Category detailed description:
Automatic actions e.g. during application startup or after loading a dataset

The Automatic Actions category contains no items.
The Automatic Actions category contains the following sub categories:

- Automatic Plotting: See section 6.2.1

6.2.1 Automatic Plotting

Up: Automatic Actions, section 6.2.

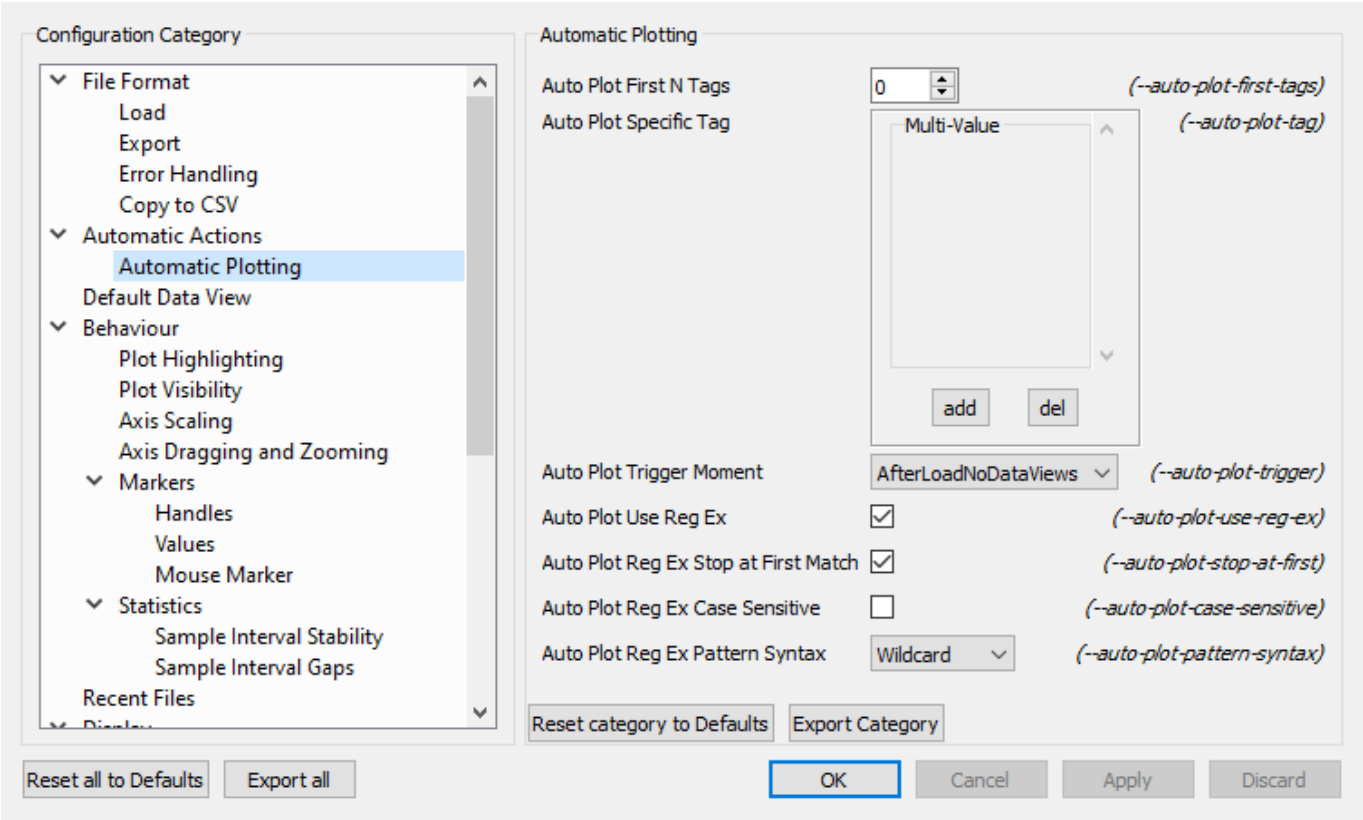


Figure 6.7: Configuration category: Automatic Plotting

Figure 6.7 shows the Automatic Plotting configuration category.
Category description:
Automatic Plotting
Category detailed description:
Automatic plotting of tags e.g. after application startup or after loading a datset

The Automatic Plotting category contains the following items:

- Auto Plot First N Tags: See section 6.2.1.1
- Auto Plot Specific Tag: See section 6.2.1.2
- Auto Plot Trigger Moment: See section 6.2.1.3

- Auto Plot Use Reg Ex: See section 6.2.1.4
- Auto Plot Reg Ex Stop at First Match: See section 6.2.1.5
- Auto Plot Reg Ex Case Sensitive: See section 6.2.1.6
- Auto Plot Reg Ex Pattern Syntax: See section 6.2.1.7

The Automatic Plotting category contains no sub categories.

6.2.1.1 Auto Plot First N Tags

Next: Auto Plot Specific Tag, section 6.2.1.2.
Up: Automatic Plotting, section 6.2.1.

After loading a file (and other conditions depending on other settings), automatically plot the first <n> tags of the last loaded dataset.

If this setting is > 0 and after a file load no data view windows are opened yet, a data view window is opened automatically and the first N tags of the loaded file are automatically plotted. If this setting is 0, nothing is automatically plotted.

Arguments: int : min:0,max:4096
Default:

0

Command line Option (long): –auto-plot-first-tags, args: int

6.2.1.2 Auto Plot Specific Tag

Previous: Auto Plot First N Tags, section 6.2.1.1.
Next: Auto Plot Trigger Moment, section 6.2.1.3.
Up: Automatic Plotting, section 6.2.1.

After loading a file (and other conditions depending on other settings), automatically plot this specific tag of the last loaded dataset. This option can be specified multiple times.

If this setting is specified and after a file load no data view windows are opened yet, a data view window is opened automatically and the specified tags of the loaded file are automatically plotted. This option can be specified multiple times. Note: A regular expression or wildcard can be used when specifying the tag names, depending on other settings.

Arguments: string : string (multiple)
Default:

[]

Command line Option (long): –auto-plot-tag, args: string

6.2.1.3 Auto Plot Trigger Moment

Previous: Auto Plot Specific Tag, section 6.2.1.2.
Next: Auto Plot Use Reg Ex, section 6.2.1.4.
Up: Automatic Plotting, section 6.2.1.

When the auto plot functionality is triggered.

The auto plot trigger mode determines when the auto plot functionality is triggered.

Arguments: enum : AfterLoadNoDataViews|AfterLoadAlways
Default:

```
AfterLoadNoDataViews
```

Command line Option (long): –auto-plot-trigger, args: enum

6.2.1.4 Auto Plot Use Reg Ex

Previous: Auto Plot Trigger Moment, section 6.2.1.3.
Next: Auto Plot Reg Ex Stop at First Match, section 6.2.1.5.
Up: Automatic Plotting, section 6.2.1.

Whether or not the auto plot functionality uses a regular expression when mathching tag names.

If this option is enabled, the auto plot functionality uses a regular expression when matchin tag names. If this option is disabled, the tag names are matched literally.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –auto-plot-use-reg-ex, args: bool

6.2.1.5 Auto Plot Reg Ex Stop at First Match

Previous: Auto Plot Use Reg Ex, section 6.2.1.4.
Next: Auto Plot Reg Ex Case Sensitive, section 6.2.1.6.
Up: Automatic Plotting, section 6.2.1.

Whether or not the auto plot functionality, when using a regular expression, stops at the first matching tag.

If this option is enabled, the auto plot functionality, when using a regular expression, will stop searching after the first matching tag is found. Otherwise it will find all matching tags. Only applicable if auto plot is using a regular expression.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –auto-plot-stop-at-first, args: bool

6.2.1.6 Auto Plot Reg Ex Case Sensitive

Previous: Auto Plot Reg Ex Stop at First Match, section 6.2.1.5.
Next: Auto Plot Reg Ex Pattern Syntax, section 6.2.1.7.
Up: Automatic Plotting, section 6.2.1.

Whether or not the auto plot tag names are case sensitive when using a regular expression.

If this option is enabled, the tag names for the auto plot functionality are case sensitive when using a regular expression. Only applicable if auto plot is using a regular expression.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –auto-plot-case-sensitive, args: bool

6.2.1.7 Auto Plot Reg Ex Pattern Syntax

Previous: Auto Plot Reg Ex Case Sensitive, section 6.2.1.6.
Up: Automatic Plotting, section 6.2.1.

The pattern syntax used when auto plot uses a regular expression.

The pattern syntax used when auto plot uses a regular expression. Only applicable if auto plot is using a regular expression.

Arguments: enum : Wildcard|RegEx|FixedString
Default:

`Wildcard`

Command line Option (long): –auto-plot-pattern-syntax, args: enum

6.3 Default Data View

Previous: Automatic Actions, section 6.2.
Next: Behaviour, section 6.4.
Up: Settings, section 6.

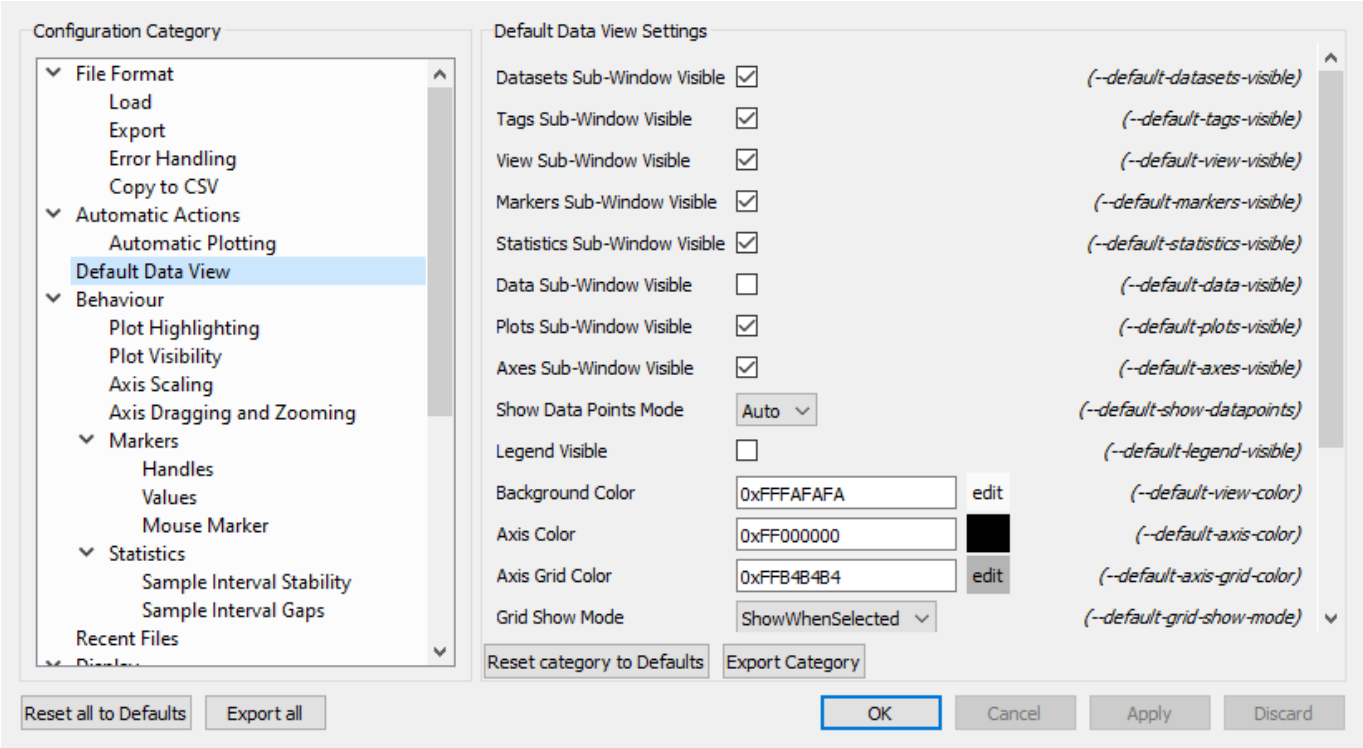


Figure 6.8: Configuration category: Default Data View

Figure 6.8 shows the Default Data View configuration category.

Category description:
Default Data View Settings
Category detailed description:
Settings used for a newly created data view

The Default Data View category contains the following items:

- Datasets Sub-Window Visible: See section 6.3.1
- Tags Sub-Window Visible: See section 6.3.2
- View Sub-Window Visible: See section 6.3.3
- Markers Sub-Window Visible: See section 6.3.4
- Statistics Sub-Window Visible: See section 6.3.5
- Data Sub-Window Visible: See section 6.3.6
- Plots Sub-Window Visible: See section 6.3.7
- Axes Sub-Window Visible: See section 6.3.8
- Show Data Points Mode: See section 6.3.9
- Legend Visible: See section 6.3.10
- Background Color: See section 6.3.11
- Axis Color: See section 6.3.12
- Axis Grid Color: See section 6.3.13
- Grid Show Mode: See section 6.3.14
- Default Statistics: See section 6.3.15

The Default Data View category contains no sub categories.

6.3.1 Datasets Sub-Window Visible

Next: Tags Sub-Window Visible, section 6.3.2.
Up: Default Data View, section 6.3.

Whether or not the datasets sub-window is visible.

If this option is enabled, the datasets sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –default-datasets-visible, args: bool

6.3.2 Tags Sub-Window Visible

Previous: Datasets Sub-Window Visible, section 6.3.1.
Next: View Sub-Window Visible, section 6.3.3.
Up: Default Data View, section 6.3.

Whether or not the tags sub-window is visible.

If this option is enabled, the tags sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –default-tags-visible, args: bool

6.3.3 View Sub-Window Visible

Previous: Tags Sub-Window Visible, section 6.3.2.
Next: Markers Sub-Window Visible, section 6.3.4.
Up: Default Data View, section 6.3.

Whether or not the view sub-window is visible.

If this option is enabled, the view sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –default-view-visible, args: bool

6.3.4 Markers Sub-Window Visible

Previous: View Sub-Window Visible, section 6.3.3.
Next: Statistics Sub-Window Visible, section 6.3.5.
Up: Default Data View, section 6.3.

Whether or not the markers sub-window is visible.

If this option is enabled, the markers sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –default-markers-visible, args: bool

6.3.5 Statistics Sub-Window Visible

Previous: Markers Sub-Window Visible, section 6.3.4.
Next: Data Sub-Window Visible, section 6.3.6.
Up: Default Data View, section 6.3.

Whether or not the statistics sub-window is visible.

If this option is enabled, the statistics sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –default-statistics-visible, args: bool

6.3.6 Data Sub-Window Visible

Previous: Statistics Sub-Window Visible, section 6.3.5.
Next: Plots Sub-Window Visible, section 6.3.7.
Up: Default Data View, section 6.3.

Whether or not the data sub-window is visible.

If this option is enabled, the data sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –default-data-visible, args: bool

6.3.7 Plots Sub-Window Visible

Previous: Data Sub-Window Visible, section 6.3.6.
Next: Axes Sub-Window Visible, section 6.3.8.
Up: Default Data View, section 6.3.

Whether or not the plots sub-window is visible.

If this option is enabled, the plots sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –default-plots-visible, args: bool

6.3.8 Axes Sub-Window Visible

Previous: Plots Sub-Window Visible, section 6.3.7.
Next: Show Data Points Mode, section 6.3.9.
Up: Default Data View, section 6.3.

Whether or not the axes sub-window is visible.

If this option is enabled, the axes sub-window is visible

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –default-axes-visible, args: bool

6.3.9 Show Data Points Mode

Previous: Axes Sub-Window Visible, section 6.3.8.
Next: Legend Visible, section 6.3.10.
Up: Default Data View, section 6.3.

Show Data Points Mode

Whether or not to (always) show data points (samples).

Arguments: enum : Off|On|Auto
Default:

`Auto`

Command line Option (long): –default-show-datapoints, args: enum

6.3.10 Legend Visible

Previous: Show Data Points Mode, section 6.3.9.
Next: Background Color, section 6.3.11.
Up: Default Data View, section 6.3.

Whether or not the legend is visible.

If this option is enabled, the legend is shown in the view sub-window.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`false`

Command line Option (long): –default-legend-visible, args: bool

6.3.11 Background Color

Previous: Legend Visible, section 6.3.10.
Next: Axis Color, section 6.3.12.
Up: Default Data View, section 6.3.

Plot Background Color

The color of the background of the plots.

Arguments: color : hex-uint64
Default:

`0xFFFAFAFA`

Command line Option (long): –default-view-color, args: color

6.3.12 Axis Color

Previous: Background Color, section 6.3.11.
Next: Axis Grid Color, section 6.3.13.
Up: Default Data View, section 6.3.

Axis Color

The color of one of the axis of the plots.

Arguments: color : hex-uint64
Default:

`0xFF000000`

Command line Option (long): –default-axis-color, args: color

6.3.13 Axis Grid Color

Previous: Axis Color, section 6.3.12.
Next: Grid Show Mode, section 6.3.14.
Up: Default Data View, section 6.3.

Axis Grid Color

The color of the grid of one of the axis of the plots.

Arguments: color : hex-uint64
Default:

`0xFFB4B4B4`

Command line Option (long): –default-axis-grid-color, args: color

6.3.14 Grid Show Mode

Previous: Axis Grid Color, section 6.3.13.
Next: Default Statistics, section 6.3.15.
Up: Default Data View, section 6.3.

Axis Grid Show Mode

Whether or not the grid of the axis is visible.

Arguments: enum : ShowWhenSelected|ShowAlways|ShowNever
Default:

`ShowWhenSelected`

Command line Option (long): –default-grid-show-mode, args: enum

6.3.15 Default Statistics

Previous: Grid Show Mode, section 6.3.14.
Up: Default Data View, section 6.3.

The default statistics.

The statistic algorithms added by default when opening a new data view.

Arguments: enum : enum (multiple)
Default:

```
[RateY,Average,DeltaY]
```

Command line Option (long): –default-statistics, args: enum

6.4 Behaviour

Previous: Default Data View, section 6.3.
Next: Recent Files, section 6.5.
Up: Settings, section 6.

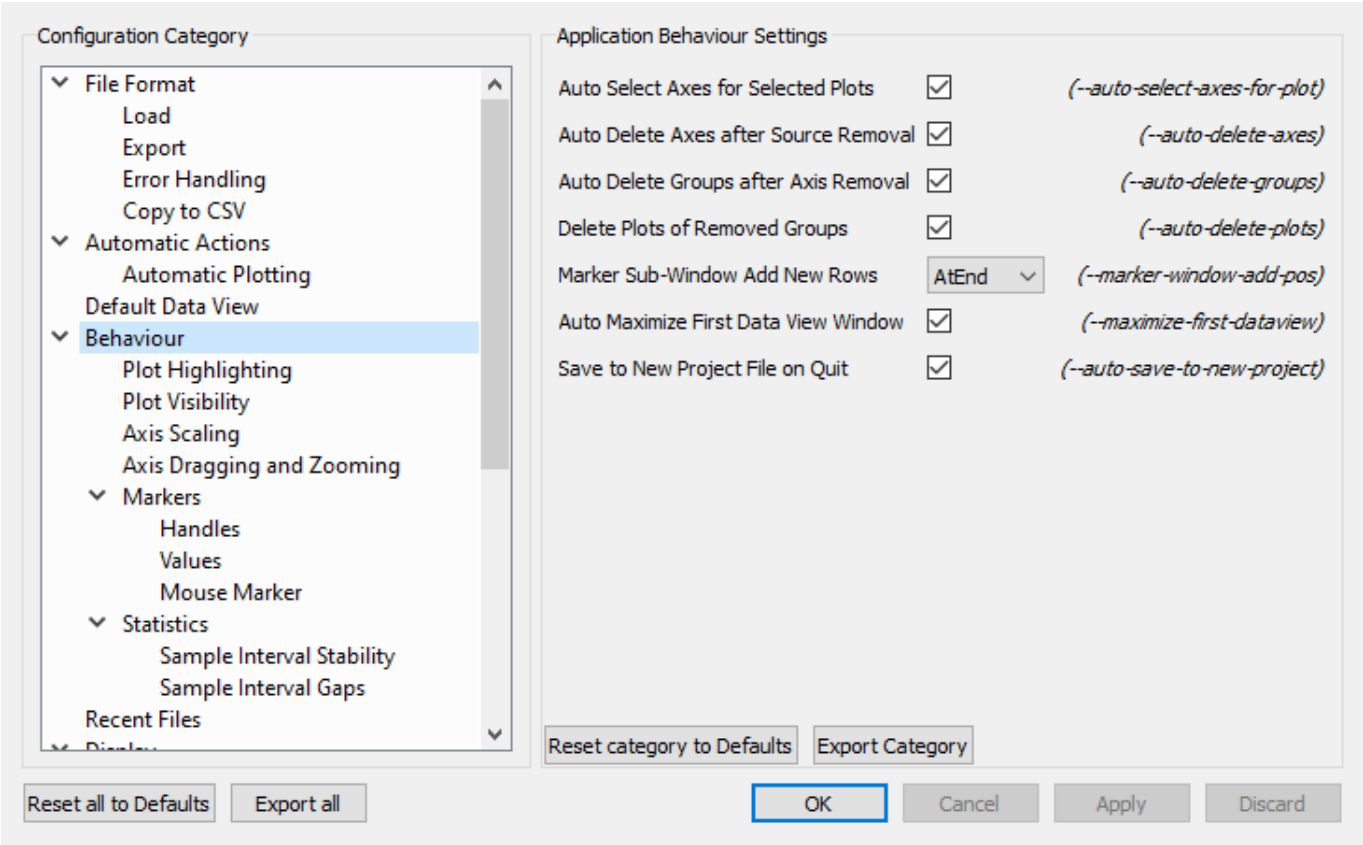


Figure 6.9: Configuration category: Behaviour

Figure 6.9 shows the Behaviour configuration category.
Category description:
Application Behaviour Settings.

The Behaviour category contains the following items:

- Auto Select Axes for Selected Plots: See section 6.4.1
- Auto Delete Axes after Source Removal: See section 6.4.2

- Auto Delete Groups after Axis Removal: See section 6.4.3
- Delete Plots of Removed Groups: See section 6.4.4
- Marker Sub-Window Add New Rows: See section 6.4.5
- Auto Maximize First Data View Window: See section 6.4.6
- Save to New Project File on Quit: See section 6.4.7

The Behaviour category contains the following sub categories:

- Plot Highlighting: See section 6.4.8
- Plot Visibility: See section 6.4.9
- Axis Scaling: See section 6.4.10
- Axis Dragging and Zooming: See section 6.4.11
- Markers: See section 6.4.12
- Statistics: See section 6.4.13

6.4.1 Auto Select Axes for Selected Plots

Next: Auto Delete Axes after Source Removal, section 6.4.2.
Up: Behaviour, section 6.4.

Auto Select Axes for Selected Plots

When a plot gets selected, automatically select the corresponding axes.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –auto-select-axes-for-plot, args: bool

6.4.2 Auto Delete Axes after Source Removal

Previous: Auto Select Axes for Selected Plots, section 6.4.1.
Next: Auto Delete Groups after Axis Removal, section 6.4.3.
Up: Behaviour, section 6.4.

Automatically delete axes after their last source has been removed.

When removing sources (e.g. tags) from axes, it may happen that an axis wil no longer have any tags assigned to them. They will be completely empty. If setting is on, an axis will automatically be removed if its last source is removed. If this setting is off, the empty axis will not be removed.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –auto-delete-axes, args: bool

6.4.3 Auto Delete Groups after Axis Removal

Previous: Auto Delete Axes after Source Removal, section 6.4.2.
Next: Delete Plots of Removed Groups, section 6.4.4.
Up: Behaviour, section 6.4.

Automatically delete groups after an axis has been removed.

When an axis is removed (unassigned) from a group, that group can no longer have any plots because both axes must be assigned for that. If this setting is on, a group will be automatically deleted after an axis is removed. If this setting is off, the group will not be removed.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –auto-delete-groups, args: bool

6.4.4 Delete Plots of Removed Groups

Previous: Auto Delete Groups after Axis Removal, section 6.4.3.
Next: Marker Sub-Window Add New Rows, section 6.4.5.
Up: Behaviour, section 6.4.

When removing a group, also delete all the plots of the Groups

If this setting is enabled, all plots of a group will be removed before that group is removed. If the setting is not enabled, data sources will remain assigned to the axis of the removed group.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –auto-delete-plots, args: bool

6.4.5 Marker Sub-Window Add New Rows

Previous: Delete Plots of Removed Groups, section 6.4.4.
Next: Auto Maximize First Data View Window, section 6.4.6.
Up: Behaviour, section 6.4.

New rows are added to this position in the marker sub-window.

This setting determines the position at which new rows are added to the marker sub-window.

Arguments: enum : AtEnd|AtBegin
Default:

`AtEnd`

Command line Option (long): –marker-window-add-pos, args: enum

6.4.6 Auto Maximize First Data View Window

Previous: Marker Sub-Window Add New Rows, section 6.4.5.
Next: Save to New Project File on Quit, section 6.4.7.
Up: Behaviour, section 6.4.

Automatically maximize the first data view window that is opened.

If this setting is enabled, the first data view window that is opened, will be automatically maximized.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –maximize-first-dataview, args: bool

6.4.7 Save to New Project File on Quit

Previous: Auto Maximize First Data View Window, section 6.4.6.
Next: Plot Highlighting, section 6.4.8.
Up: Behaviour, section 6.4.

Ask and possibly save the internal state to a new project file when quiting the application.

When quiting the application and there is no current project, ask the user if the internal state should be saved to a new project file. If this setting is off, the internal state is *not* saved to a project file.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –auto-save-to-new-project, args: bool

6.4.8 Plot Highlighting

Previous: Save to New Project File on Quit, section 6.4.7.
Next: Plot Visibility, section 6.4.9.
Up: Behaviour, section 6.4.

Figure 6.10 shows the Plot Highlighting configuration category.
Category description:
Plot Highlighting Settings
Category detailed description:
Settings related to highlighting plots

The Plot Highlighting category contains the following items:

- Plot Highlight Toggle Default Mode: See section 6.4.8.1
- Plot Highlight Fill Alpha Default: See section 6.4.8.2
- Plot Highlight Line Width Default: See section 6.4.8.3

The Plot Highlighting category contains no sub categories.

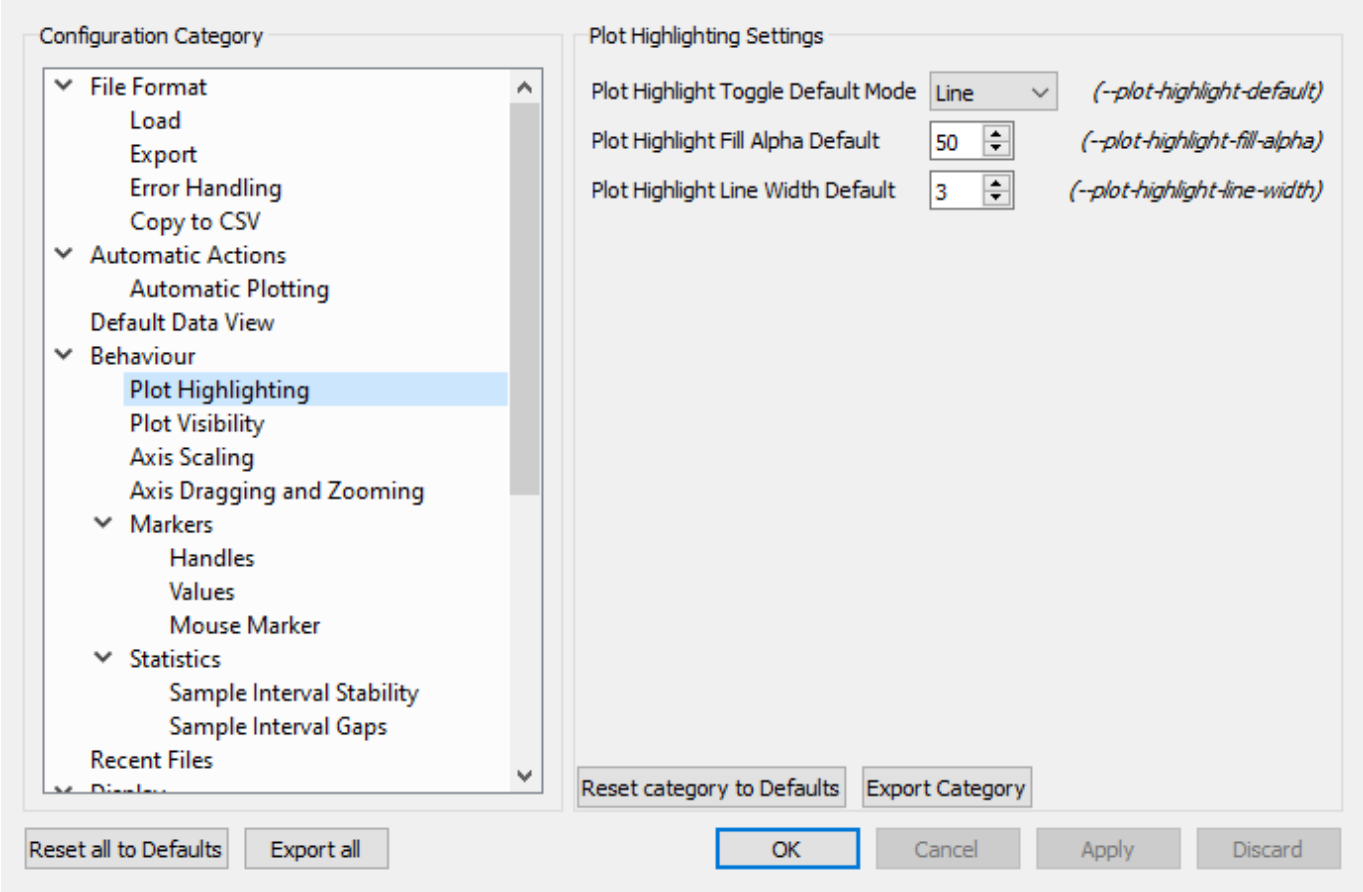


Figure 6.10: Configuration category: Plot Highlighting

6.4.8.1 Plot Highlight Toggle Default Mode

Next: Plot Highlight Fill Alpha Default, section 6.4.8.2.
Up: Plot Highlighting, section 6.4.8.

The default highlight mode to use when toggling highlighting of plots.

This settings determines the default highlight mode to use when toggling the highlight plots. When a highlight state is chosen manually this is overridden.

Arguments: enum : Fill|Line|Samples
Default:

```
Line
```

Command line Option (long): –plot-highlight-default, args: enum

6.4.8.2 Plot Highlight Fill Alpha Default

Previous: Plot Highlight Toggle Default Mode, section 6.4.8.1.
Next: Plot Highlight Line Width Default, section 6.4.8.3.
Up: Plot Highlighting, section 6.4.8.

When highlighting plots using the Fill method, this is the default alpha (transparancy) value for the fill color.

This setting specifies the default alpha value for the fill color when using the Fill method for highlighing plots. The alpha channel of a color specifies the transparency effect, 0 represents a fully transparent color, while 255 represents a fully opaque color.

Arguments: int : min:0,max:255
Default:

50

Command line Option (long): –plot-highlight-fill-alpha, args: int

6.4.8.3 Plot Highlight Line Width Default

Previous: Plot Highlight Fill Alpha Default, section 6.4.8.2.
Up: Plot Highlighting, section 6.4.8.

When highlighting plots using the Line method, this is the default line width.

This setting specifies the default line width when using the Line method for highlighing plots.

Arguments: int : min:2,max:128
Default:

3

Command line Option (long): –plot-highlight-line-width, args: int

6.4.9 Plot Visibility

Previous: Plot Highlighting, section 6.4.8.
Next: Axis Scaling, section 6.4.10.
Up: Behaviour, section 6.4.

Figure 6.11 shows the Plot Visibility configuration category.
Category description:
Plot Visibility Settings
Category detailed description:
Settings related to the visibility of plots

The Plot Visibility category contains the following items:

- Hide Point Markers when a Plot is Hidden: See section 6.4.9.1
- Disable Mouse Markers for Hidden Plots: See section 6.4.9.2
- Disable Info about Hidden Plots: See section 6.4.9.3
- Hide Marker Items when any Plot is Hidden: See section 6.4.9.4
- Hide Marker Items when all Plots are Hidden: See section 6.4.9.5

The Plot Visibility category contains no sub categories.

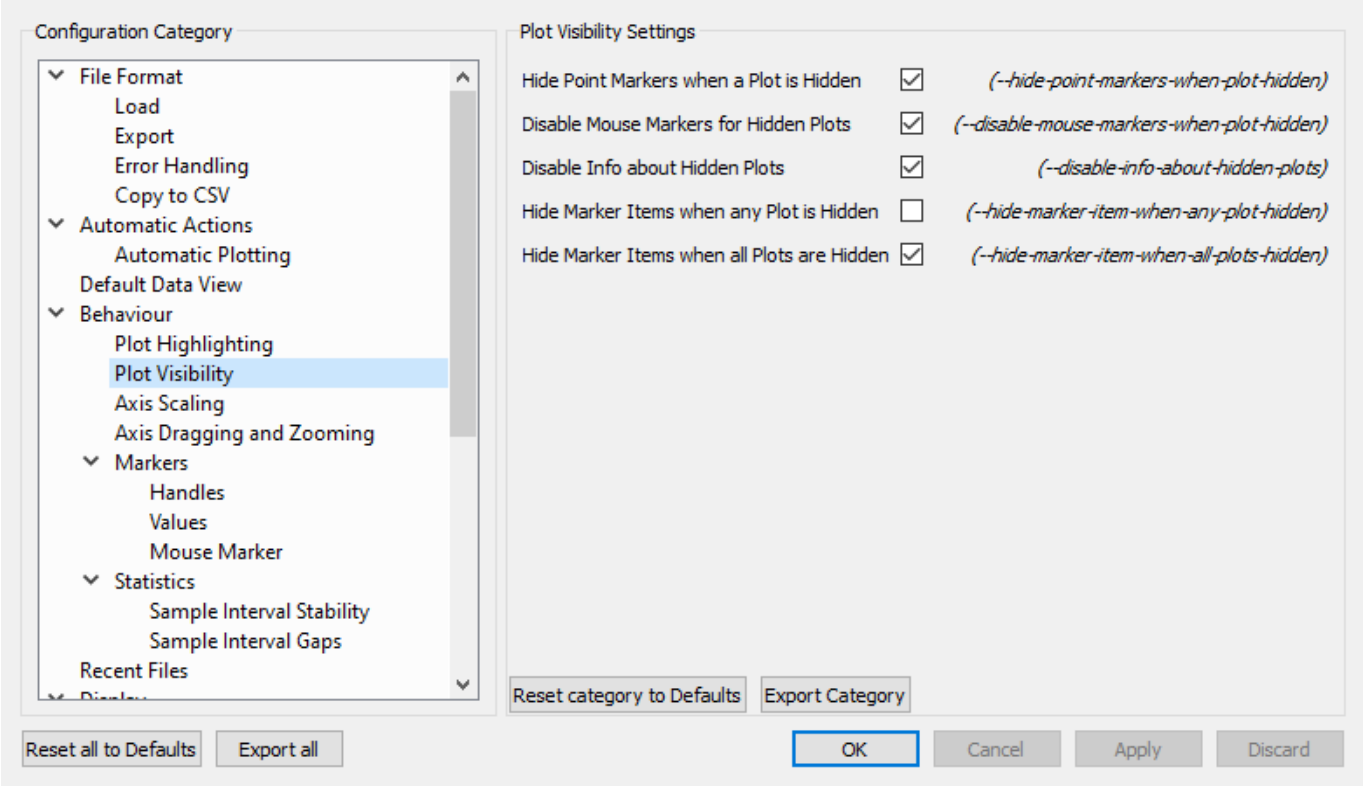


Figure 6.11: Configuration category: Plot Visibility

6.4.9.1 Hide Point Markers when a Plot is Hidden

Next: Disable Mouse Markers for Hidden Plots, section 6.4.9.2.
Up: Plot Visibility, section 6.4.9.

When a plot is hidden, hide all point markers associated with that plot as well.

If this setting is on, all point markers associated with a plot will be hidden when that plot is hidden. When the plot is shown again, the point markers will be shown again as well. If this setting is off, the point markers will remain visible (and can be interacted with) even when the associated plot is invisible.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –hide-point-markers-when-plot-hidden, args: bool

6.4.9.2 Disable Mouse Markers for Hidden Plots

Previous: Hide Point Markers when a Plot is Hidden, section 6.4.9.1.
Next: Disable Info about Hidden Plots, section 6.4.9.3.
Up: Plot Visibility, section 6.4.9.

When a plot is hidden, disable mouse markers for that plot.

If this setting is on, mouse markers can no longer be created for hidden plots. This means that it is not possible to point at a graph and highlight a specific point / sample on the plot. If this setting is off, mouse markers can still be created for hidden plots and specific points on the plot can be highlighted even when the plot is hidden.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –disable-mouse-markers-when-plot-hidden, args: bool

6.4.9.3 Disable Info about Hidden Plots

Previous: Disable Mouse Markers for Hidden Plots, section 6.4.9.2.
Next: Hide Marker Items when any Plot is Hidden, section 6.4.9.4.
Up: Plot Visibility, section 6.4.9.

When a plot is hidden, disable certain information, e.g. status bar info, for that plot.

If this setting is on, certain information about a plot, e.g. status bar info, is not available when that plot is hidden. When the plot is shown again, information will be available again. If this setting is off, information about hidden plots remains available and keeps begin updated.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –disable-info-about-hidden-plots, args: bool

6.4.9.4 Hide Marker Items when any Plot is Hidden

Previous: Disable Info about Hidden Plots, section 6.4.9.3.
Next: Hide Marker Items when all Plots are Hidden, section 6.4.9.5.
Up: Plot Visibility, section 6.4.9.

Hide a marker item if *at least one* plot it connects to is hidden.

If this setting is on, markers items will be hidden if *at least one* plot they connect to is hidden. If this setting is off, markers items will remain visible even if plots they connect to are hidden.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
false
```

Command line Option (long): –hide-marker-item-when-any-plot-hidden, args: bool

6.4.9.5 Hide Marker Items when all Plots are Hidden

Previous: Hide Marker Items when any Plot is Hidden, section 6.4.9.4.
Up: Plot Visibility, section 6.4.9.

Hide a marker item if *all* plots it connects to are hidden.

If this setting is on, markers items will be hidden if *all* plots they connect to are hidden. If this setting is off, markers items will remain visible even if plots they connect to are hidden.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –hide-marker-item-when-all-plots-hidden, args: bool

6.4.10 Axis Scaling

Previous: Plot Visibility, section 6.4.9.
Next: Axis Dragging and Zooming, section 6.4.11.
Up: Behaviour, section 6.4.

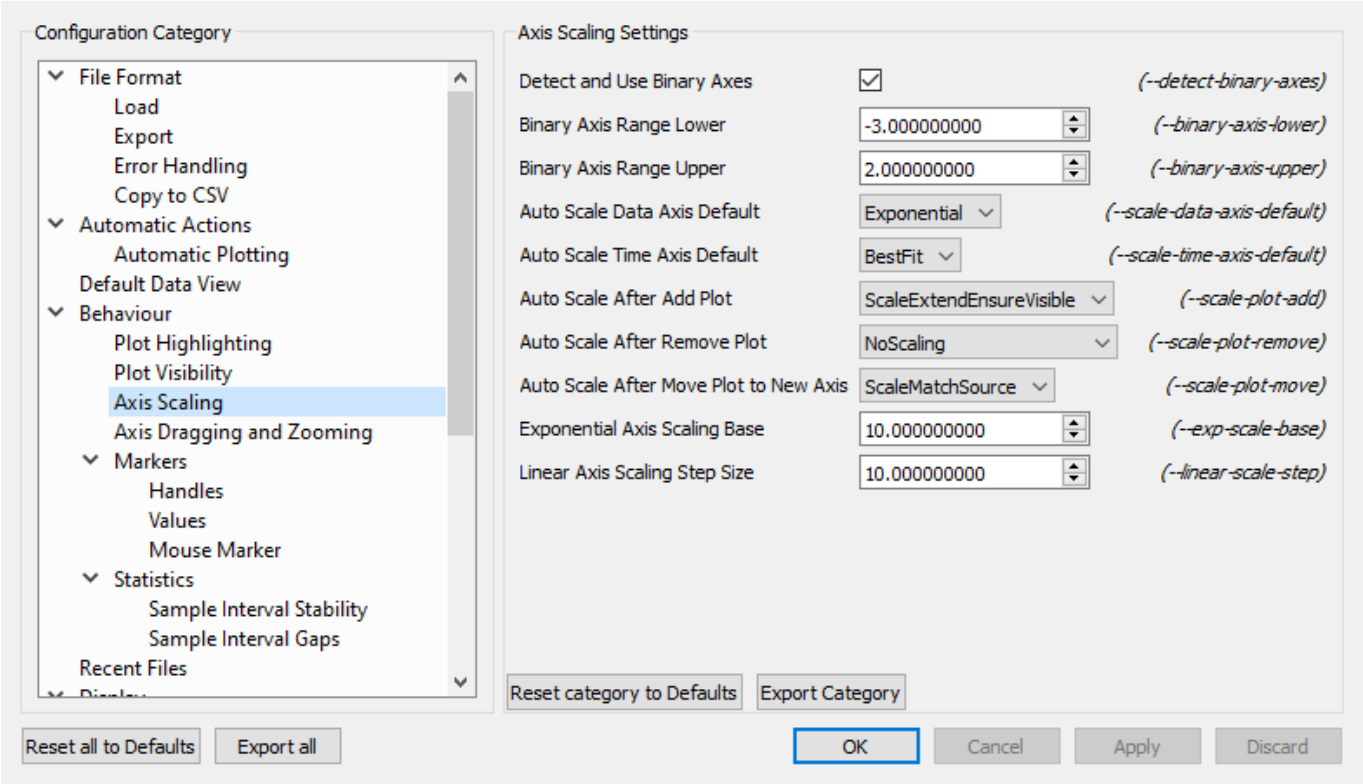


Figure 6.12: Configuration category: Axis Scaling

Figure 6.12 shows the Axis Scaling configuration category.
Category description:
Axis Scaling Settings
Category detailed description:
Settings related to automatic scaling of axes

The Axis Scaling category contains the following items:

- Detect and Use Binary Axes: See section 6.4.10.1
- Binary Axis Range Lower: See section 6.4.10.2
- Binary Axis Range Upper: See section 6.4.10.3

- Auto Scale Data Axis Default: See section 6.4.10.4
- Auto Scale Time Axis Default: See section 6.4.10.5
- Auto Scale After Add Plot: See section 6.4.10.6
- Auto Scale After Remove Plot: See section 6.4.10.7
- Auto Scale After Move Plot to New Axis: See section 6.4.10.8
- Exponential Axis Scaling Base: See section 6.4.10.9
- Linear Axis Scaling Step Size: See section 6.4.10.10

The Axis Scaling category contains no sub categories.

6.4.10.1 Detect and Use Binary Axes

Next: Binary Axis Range Lower, section 6.4.10.2.
Up: Axis Scaling, section 6.4.10.

Attempt to detect binary data and scale axes accordingly.

When this option is enabled, an attempt is made to detect if data is binary. Data is considered binary if the minimum and the maximum is exactly 0.0 or 1.0. Note that this is not always correct as normal data could also have a minimum of 0.0 and a maximum of 1.0 for example.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –detect-binary-axes, args: bool

6.4.10.2 Binary Axis Range Lower

Previous: Detect and Use Binary Axes, section 6.4.10.1.
Next: Binary Axis Range Upper, section 6.4.10.3.
Up: Axis Scaling, section 6.4.10.

The lower value of the binary axis range.

A binary axis has a configurable range from lower to upper. This value is the lower value of the range. Make sure that the lower value is lower than the upper value. Note: The axes need to be rescaled (e.g. range reset) for this change to take effect.

Arguments: double : min:-,max:-
Default:

```
-3
```

Command line Option (long): –binary-axis-lower, args: double

6.4.10.3 Binary Axis Range Upper

Previous: Binary Axis Range Lower, section 6.4.10.2.
Next: Auto Scale Data Axis Default, section 6.4.10.4.
Up: Axis Scaling, section 6.4.10.

The upper value of the binary axis range.

A binary axis has a configurable range from lower to upper. This value is the upper value of the range. Make sure that the upper value is higher than the lower value. Note: The axes need to be rescaled (e.g. range reset) for this change to take effect.

Arguments: double : min:-,max:-
Default:

2

Command line Option (long): –binary-axis-upper, args: double

6.4.10.4 Auto Scale Data Axis Default

Previous: Binary Axis Range Upper, section 6.4.10.3.
Next: Auto Scale Time Axis Default, section 6.4.10.5.
Up: Axis Scaling, section 6.4.10.

The default auto scale mode for data axes.

This setting determines the default auto scale method for data axes. This is used, amongst others, to reset the scaling of axes

Arguments: enum : Exponential|Linear
Default:

`Exponential`

Command line Option (long): –scale-data-axis-default, args: enum

6.4.10.5 Auto Scale Time Axis Default

Previous: Auto Scale Data Axis Default, section 6.4.10.4.
Next: Auto Scale After Add Plot, section 6.4.10.6.
Up: Axis Scaling, section 6.4.10.

The default auto scale mode for time axes.

This setting determines the default auto scale method for time axes. This is used, amongst others, to reset the scaling of axes

Arguments: enum : BestFit
Default:

`BestFit`

Command line Option (long): –scale-time-axis-default, args: enum

6.4.10.6 Auto Scale After Add Plot

Previous: Auto Scale Time Axis Default, section 6.4.10.5.
Next: Auto Scale After Remove Plot, section 6.4.10.7.
Up: Axis Scaling, section 6.4.10.

How to (re-)scale the axes after a plot is added.

This setting determines how axes should be (re-)scaled after a plot has been added.

Arguments: enum : NoScaling|ScaleResetDefault|ScaleBestFit|ScaleExtendEnsureVisible
Default:

`ScaleExtendEnsureVisible`

Command line Option (long): –scale-plot-add, args: enum

6.4.10.7 Auto Scale After Remove Plot

Previous: Auto Scale After Add Plot, section 6.4.10.6.
Next: Auto Scale After Move Plot to New Axis, section 6.4.10.8.
Up: Axis Scaling, section 6.4.10.

How to (re-)scale the axes after a plot is removed.

This setting determines how axes should be (re-)scaled after a plot has been removed.

Arguments: enum : NoScaling|ScaleResetDefault|ScaleBestFit|ScaleReduceEnsureVisible
Default:

`NoScaling`

Command line Option (long): –scale-plot-remove, args: enum

6.4.10.8 Auto Scale After Move Plot to New Axis

Previous: Auto Scale After Remove Plot, section 6.4.10.7.
Next: Exponential Axis Scaling Base, section 6.4.10.9.
Up: Axis Scaling, section 6.4.10.

How to (re-)scale new axes after a plot is moved to them.

This setting determines how to scale newly created axes after moving plots to them.

Arguments: enum : ScaleDefault|ScaleBestFit|ScaleMatchSource
Default:

`ScaleMatchSource`

Command line Option (long): –scale-plot-move, args: enum

6.4.10.9 Exponential Axis Scaling Base

Previous: Auto Scale After Move Plot to New Axis, section 6.4.10.8.
Next: Linear Axis Scaling Step Size, section 6.4.10.10.
Up: Axis Scaling, section 6.4.10.

The base of the exponential function used for exponential axis scaling.

This value is the base value for the exponential axis scaling, e.g. when base = 10, the scaling will be 1, 10, 100, 1000 etc... Note: The axes need to be rescaled (e.g. range reset) for this change to take effect.

Arguments: double : min:-,max:-
Default:

```
10
```

Command line Option (long): –exp-scale-base, args: double

6.4.10.10 Linear Axis Scaling Step Size

Previous: Exponential Axis Scaling Base, section 6.4.10.9.
Up: Axis Scaling, section 6.4.10.

The step size of the linear function used for linear axis scaling.

This value is thestep size for the linear axis scaling, e.g. when step size = 10, the scaling will be 10, 20, 30 etc... Note: The axes need to be rescaled (e.g. range reset) for this change to take effect.

Arguments: double : min:-,max:-
Default:

```
10
```

Command line Option (long): –linear-scale-step, args: double

6.4.11 Axis Dragging and Zooming

Previous: Axis Scaling, section 6.4.10.
Next: Markers, section 6.4.12.
Up: Behaviour, section 6.4.

Figure 6.13 shows the Axis Dragging and Zooming configuration category.
Category description:
Axis Dragging and Zooming
Category detailed description:
Settings related to the dragging and zooming of axes

The Axis Dragging and Zooming category contains the following items:

- Zoom Selected Axes Only: See section 6.4.11.1
- Drag Selected Axes Only: See section 6.4.11.2
- Allow Drag with no Selected Axes: See section 6.4.11.3
- Allow Zoom with no Selected Axes: See section 6.4.11.4

The Axis Dragging and Zooming category contains no sub categories.

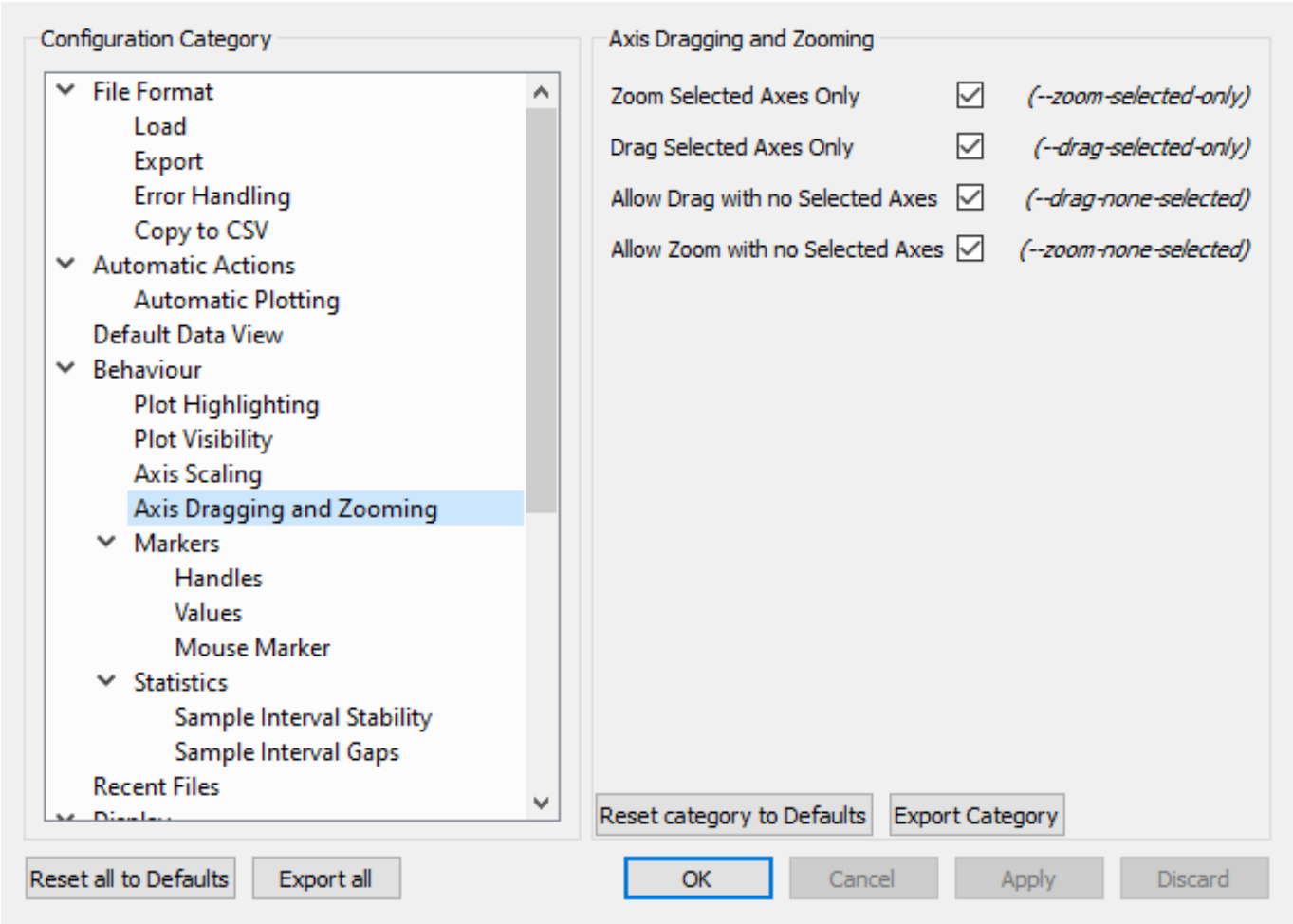


Figure 6.13: Configuration category: Axis Dragging and Zooming

6.4.11.1 Zoom Selected Axes Only

Next: Drag Selected Axes Only, section 6.4.11.2.
Up: Axis Dragging and Zooming, section 6.4.11.

Zoom Selected Axes Only

If this option is checked, zooming can only be done with slected axes. If this option is not checked, all axes can always be zoomed.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –zoom-selected-only, args: bool

6.4.11.2 Drag Selected Axes Only

Previous: Zoom Selected Axes Only, section 6.4.11.1.
Next: Allow Drag with no Selected Axes, section 6.4.11.3.
Up: Axis Dragging and Zooming, section 6.4.11.

Drag Selected Axes Only

If this option is checked, dragging can only be done with slected axes. If this option is not checked, all axes can always be dragged.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –drag-selected-only, args: bool

6.4.11.3 Allow Drag with no Selected Axes

Previous: Drag Selected Axes Only, section 6.4.11.2.
Next: Allow Zoom with no Selected Axes, section 6.4.11.4.
Up: Axis Dragging and Zooming, section 6.4.11.

Allow dragging even if no axes are selected.

If this option is checked, dragging can be perfomed even when no axes are selected. In this case it is assumed that all axes are selected.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –drag-none-selected, args: bool

6.4.11.4 Allow Zoom with no Selected Axes

Previous: Allow Drag with no Selected Axes, section 6.4.11.3.
Up: Axis Dragging and Zooming, section 6.4.11.

Allow zooming even if no axes are selected.

If this option is checked, zooming can be perfomed even when no axes are selected. In this case it is assumed that all axes are selected.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –zoom-none-selected, args: bool

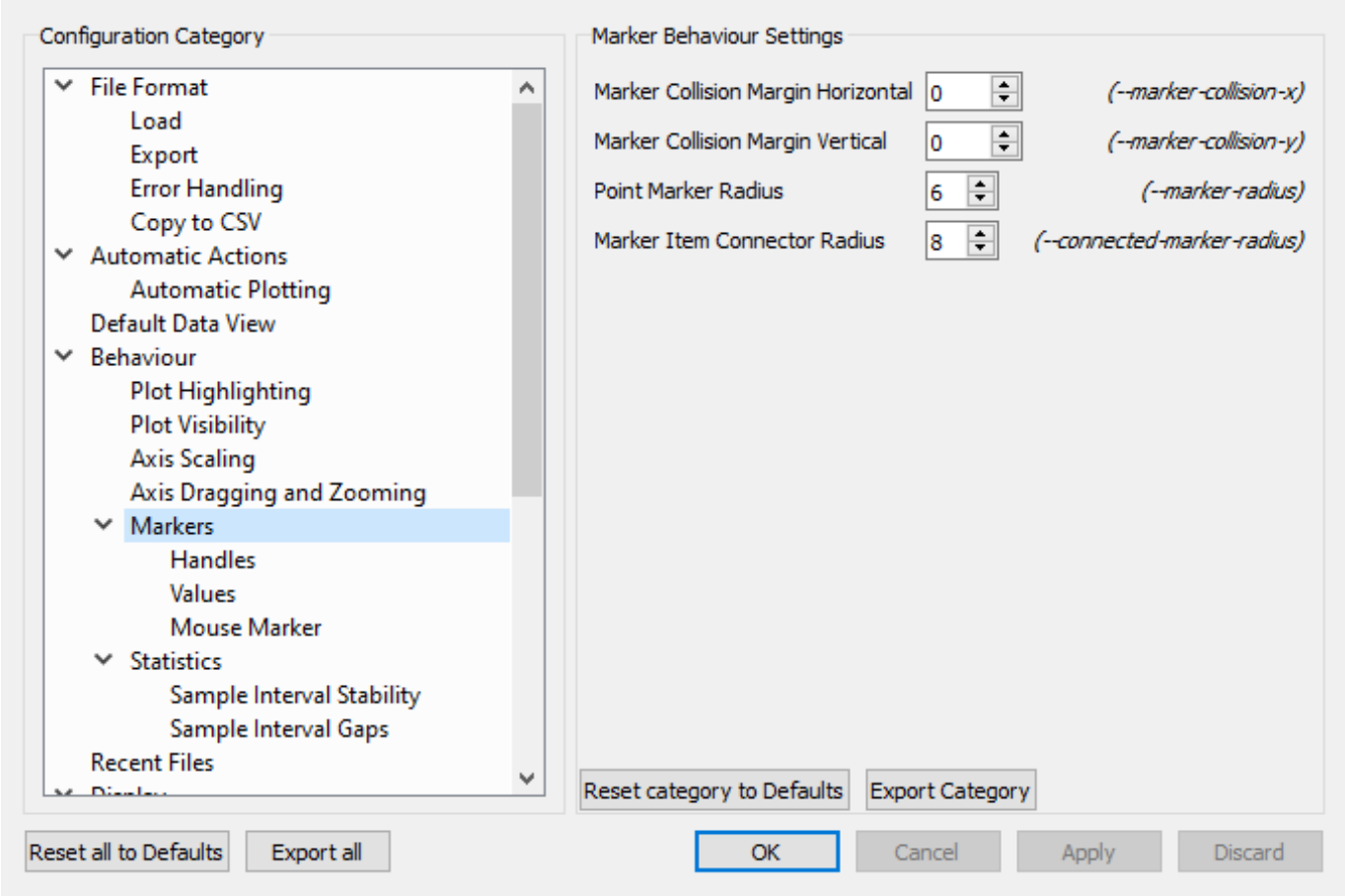


Figure 6.14: Configuration category: Markers

6.4.12 Markers

Previous: Axis Dragging and Zooming, section 6.4.11.
Next: Statistics, section 6.4.13.
Up: Behaviour, section 6.4.

Figure 6.14 shows the Markers configuration category.
Category description:
Marker Behaviour Settings
Category detailed description:
Settings used to configure marker behaviour.

The Markers category contains the following items:

- Marker Collision Margin Horizontal: See section 6.4.12.1
- Marker Collision Margin Vertical: See section 6.4.12.2
- Point Marker Radius: See section 6.4.12.3
- Marker Item Connector Radius: See section 6.4.12.4

The Markers category contains the following sub categories:

- Handles: See section 6.4.12.5
- Values: See section 6.4.12.6
- Mouse Marker: See section 6.4.12.7

6.4.12.1 Marker Collision Margin Horizontal

Next: Marker Collision Margin Vertical, section 6.4.12.2.
Up: Markers, section 6.4.12.

Two marker elements collide even when this many pixels are still between them horizontally.

This setting determines when marker elements are considered in collision. Increasing this means they are considered in collision from a greater distance (horizontally). Use this to let the marker use its alternative position earlier. The value is in pixels.

Arguments: int : min:0,max:9999
Default:

0

Command line Option (long): –marker-collision-x, args: int

6.4.12.2 Marker Collision Margin Vertical

Previous: Marker Collision Margin Horizontal, section 6.4.12.1.
Next: Point Marker Radius, section 6.4.12.3.
Up: Markers, section 6.4.12.

Two marker elements collide even when this many pixels are still between them vertically.

This setting determines when marker elements are considered in collision. Increasing this means they are considered in collision from a greater distance (vertically). Use this to let the marker use its alternative position earlier. The value is in pixels.

Arguments: int : min:0,max:9999
Default:

0

Command line Option (long): –marker-collision-y, args: int

6.4.12.3 Point Marker Radius

Previous: Marker Collision Margin Vertical, section 6.4.12.2.
Next: Marker Item Connector Radius, section 6.4.12.4.
Up: Markers, section 6.4.12.

The radius of the point marker circle in pixels.

This setting configures the size of the point marker circles. The value is the radius of the circle in pixels.

Arguments: int : min:1,max:64
Default:

6

Command line Option (long): –marker-radius, args: int

6.4.12.4 Marker Item Connector Radius

Previous: Point Marker Radius, section 6.4.12.3.
Next: Handles, section 6.4.12.5.
Up: Markers, section 6.4.12.

The radius of the marker item connector circles.

This setting configures the size of the marker item connector circles. The value is the radius of the circle in pixels.

Arguments: int : min:1,max:64
Default:

8

Command line Option (long): –connected-marker-radius, args: int

6.4.12.5 Handles

Previous: Marker Item Connector Radius, section 6.4.12.4.
Next: Values, section 6.4.12.6.
Up: Markers, section 6.4.12.

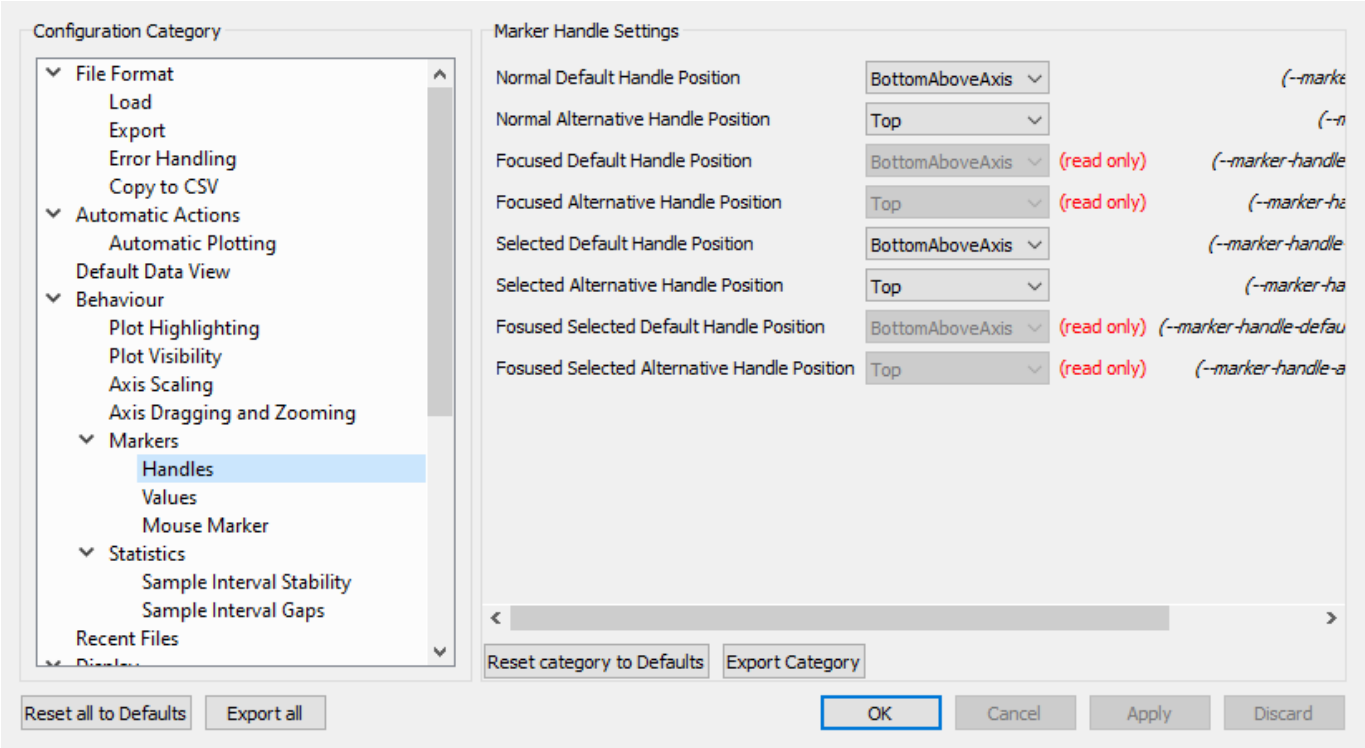


Figure 6.15: Configuration category: Handles

Figure 6.15 shows the Handles configuration category.
Category description:
Marker Handle Settings
Category detailed description:
Settings used to configure marker handle behaviour.

The Handles category contains the following items:

- Normal Default Handle Position: See section 6.4.12.5.1
- Normal Alternative Handle Position: See section 6.4.12.5.2
- Focused Default Handle Position: See section 6.4.12.5.3
- Focused Alternative Handle Position: See section 6.4.12.5.4
- Selected Default Handle Position: See section 6.4.12.5.5
- Selected Alternative Handle Position: See section 6.4.12.5.6
- Fosused Selected Default Handle Position: See section 6.4.12.5.7
- Fosused Selected Alternative Handle Position: See section 6.4.12.5.8

The Handles category contains no sub categories.

6.4.12.5.1 Normal Default Handle Position

Next: Normal Alternative Handle Position, section 6.4.12.5.2.
Up: Handles, section 6.4.12.5.

Normal Default Handle Position

The default handle position for markers when they are not focused or selected. This position is used if there are no problems with this position.

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`BottomAboveAxis`

Command line Option (long): –marker-handle-default-pos, args: enum

6.4.12.5.2 Normal Alternative Handle Position

Previous: Normal Default Handle Position, section 6.4.12.5.1.
Next: Focused Default Handle Position, section 6.4.12.5.3.
Up: Handles, section 6.4.12.5.

Normal Alternative Handle Position

The alternative handle position for markers when they are not focused or selected. This position is used if the default handle position can not be used.

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`Top`

Command line Option (long): –marker-handle-alt-pos, args: enum

6.4.12.5.3 Focused Default Handle Position

Previous: Normal Alternative Handle Position, section 6.4.12.5.2.
Next: Focused Alternative Handle Position, section 6.4.12.5.4.
Up: Handles, section 6.4.12.5.

Focused Default Handle Position

The default position for marker handles when they have focus i.e. the mouse is pointing at them. This position is used if there are no problems with this position (and the marker is focused).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`BottomAboveAxis`

Command line Option (long): –marker-handle-default-pos-focused, args: enum

6.4.12.5.4 Focused Alternative Handle Position

Previous: Focused Default Handle Position, section 6.4.12.5.3.
Next: Selected Default Handle Position, section 6.4.12.5.5.
Up: Handles, section 6.4.12.5.

Focused Alternative Handle Position

The alternative position for marker handles when they have focus i.e. the mouse is pointing at them. This position is used if the default value position can not be used (and the marker is focused).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`Top`

Command line Option (long): –marker-handle-alt-pos-focused, args: enum

6.4.12.5.5 Selected Default Handle Position

Previous: Focused Alternative Handle Position, section 6.4.12.5.4.
Next: Selected Alternative Handle Position, section 6.4.12.5.6.
Up: Handles, section 6.4.12.5.

Selected Default Handle Position

The default position for marker handles when they are selected. This position is used if there are no problems with this position (and the marker is selected).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`BottomAboveAxis`

Command line Option (long): –marker-handle-default-pos-selected, args: enum

6.4.12.5.6 Selected Alternative Handle Position

Previous: Selected Default Handle Position, section 6.4.12.5.5.
Next: Fosused Selected Default Handle Position, section 6.4.12.5.7.
Up: Handles, section 6.4.12.5.

Selected Alternative Handle Position

The alternative position marker handles when they are selected. This position is used if the default value position can not be used (and the marker is selected).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`Top`

Command line Option (long): –marker-handle-alt-pos-selected, args: enum

6.4.12.5.7 Fosused Selected Default Handle Position

Previous: Selected Alternative Handle Position, section 6.4.12.5.6.
Next: Fosused Selected Alternative Handle Position, section 6.4.12.5.8.
Up: Handles, section 6.4.12.5.

Focused Selected Default Handle Position

The default position for marker handles when they are selected and have focus. This position is used if there are no problems with this position (and the marker is selected and has focus).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`BottomAboveAxis`

Command line Option (long): –marker-handle-default-pos-focus-selected, args: enum

6.4.12.5.8 Fosused Selected Alternative Handle Position

Previous: Fosused Selected Default Handle Position, section 6.4.12.5.7.
Up: Handles, section 6.4.12.5.

Fosused Selected Alternative Handle Position

The alternative position for marker handles when they are selected and have focus. This position is used if the default value position can not be used (and the marker is selected and has focus).

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`Top`

Command line Option (long): –marker-handle-alt-pos-focus-selected, args: enum

6.4.12.6 Values

Previous: Handles, section 6.4.12.5.
Next: Mouse Marker, section 6.4.12.7.
Up: Markers, section 6.4.12.

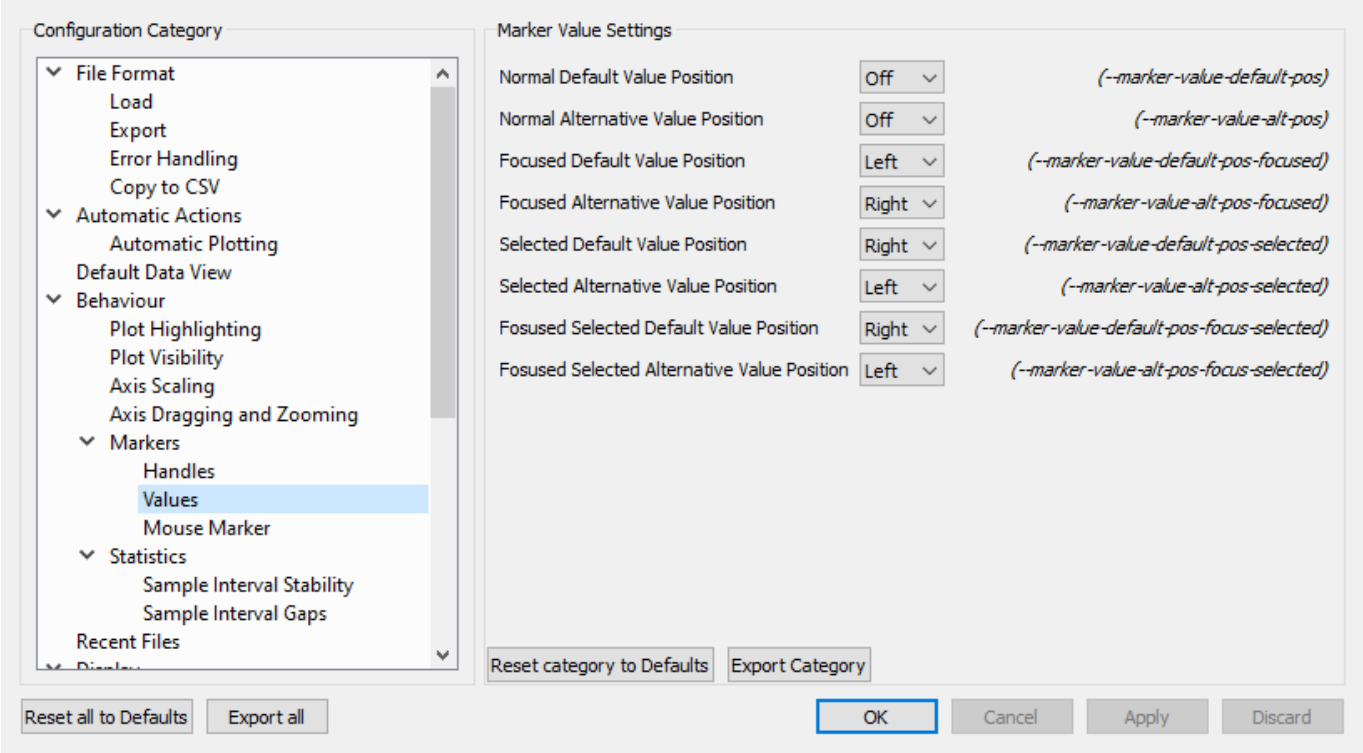


Figure 6.16: Configuration category: Values

Figure 6.16 shows the Values configuration category.
Category description:
Marker Value Settings
Category detailed description:
Settings used to configure marker value behaviour.

The Values category contains the following items:

- Normal Default Value Position: See section 6.4.12.6.1
- Normal Alternative Value Position: See section 6.4.12.6.2
- Focused Default Value Position: See section 6.4.12.6.3
- Focused Alternative Value Position: See section 6.4.12.6.4
- Selected Default Value Position: See section 6.4.12.6.5
- Selected Alternative Value Position: See section 6.4.12.6.6
- Fosused Selected Default Value Position: See section 6.4.12.6.7
- Fosused Selected Alternative Value Position: See section 6.4.12.6.8

The Values category contains no sub categories.

6.4.12.6.1 Normal Default Value Position

Next: Normal Alternative Value Position, section 6.4.12.6.2.
Up: Values, section 6.4.12.6.

Normal Default Value Position

The default position for displayed marker values when they are not focused or selected. This position is used if there are no problems with this position.

Arguments: enum : Off|Left|Right
Default:

```
Off
```

Command line Option (long): –marker-value-default-pos, args: enum

6.4.12.6.2 Normal Alternative Value Position

Previous: Normal Default Value Position, section 6.4.12.6.1.
Next: Focused Default Value Position, section 6.4.12.6.3.
Up: Values, section 6.4.12.6.

Normal Alternative Value Position

The alternative position for displayed marker values when they are not focused or selected. This position is used if the default value position can not be used.

Arguments: enum : Off|Left|Right
Default:

```
Off
```

Command line Option (long): –marker-value-alt-pos, args: enum

6.4.12.6.3 Focused Default Value Position

Previous: Normal Alternative Value Position, section 6.4.12.6.2.
Next: Focused Alternative Value Position, section 6.4.12.6.4.
Up: Values, section 6.4.12.6.

Focused Default Value Position

The default position for displayed marker values when they have focus i.e. the mouse is pointing at them. This position is used if there are no problems with this position (and the marker is focused).

Arguments: enum : Off|Left|Right
Default:

```
Left
```

Command line Option (long): –marker-value-default-pos-focused, args: enum

6.4.12.6.4 Focused Alternative Value Position

Previous: Focused Default Value Position, section 6.4.12.6.3.
Next: Selected Default Value Position, section 6.4.12.6.5.
Up: Values, section 6.4.12.6.

Focused Alternative Value Position

The alternative position for displayed marker values when they have focus i.e. the mouse is pointing at them. This position is used if the default value position can not be used (and the marker is focused).

Arguments: enum : Off|Left|Right
Default:

`Right`

Command line Option (long): –marker-value-alt-pos-focused, args: enum

6.4.12.6.5 Selected Default Value Position

Previous: Focused Alternative Value Position, section 6.4.12.6.4.
Next: Selected Alternative Value Position, section 6.4.12.6.6.
Up: Values, section 6.4.12.6.

Selected Default Value Position

The default position for displayed marker values when they are selected. This position is used if there are no problems with this position (and the marker is selected).

Arguments: enum : Off|Left|Right
Default:

`Right`

Command line Option (long): –marker-value-default-pos-selected, args: enum

6.4.12.6.6 Selected Alternative Value Position

Previous: Selected Default Value Position, section 6.4.12.6.5.
Next: Fosused Selected Default Value Position, section 6.4.12.6.7.
Up: Values, section 6.4.12.6.

Selected Alternative Value Position

The alternative position for displayed marker values when they are selected. This position is used if the default value position can not be used (and the marker is selected).

Arguments: enum : Off|Left|Right
Default:

`Left`

Command line Option (long): –marker-value-alt-pos-selected, args: enum

6.4.12.6.7 Fosused Selected Default Value Position

Previous: Selected Alternative Value Position, section 6.4.12.6.6.
Next: Fosused Selected Alternative Value Position, section 6.4.12.6.8.
Up: Values, section 6.4.12.6.

Focused Selected Default Value Position

The default position for displayed marker values when they are selected and have focus. This position is used if there are no problems with this position (and the marker is selected and has focus).

Arguments: enum : Off|Left|Right
Default:

```
Right
```

Command line Option (long): –marker-value-default-pos-focus-selected, args: enum

6.4.12.6.8 Fosused Selected Alternative Value Position

Previous: Fosused Selected Default Value Position, section 6.4.12.6.7.
Up: Values, section 6.4.12.6.

Fosused Selected Alternative Value Position

The alternative position for displayed marker values when they are selected and have focus. This position is used if the default value position can not be used (and the marker is selected and has focus).

Arguments: enum : Off|Left|Right
Default:

```
Left
```

Command line Option (long): –marker-value-alt-pos-focus-selected, args: enum

6.4.12.7 Mouse Marker

Previous: Values, section 6.4.12.6.
Up: Markers, section 6.4.12.

Figure 6.17 shows the Mouse Marker configuration category.
Category description:
Mouse Marker Settings
Category detailed description:
Settings used to configure mouse marker behaviour.

The Mouse Marker category contains the following items:

- Default Mouse Marker X-Axis Value Position: See section 6.4.12.7.1
- Alternative Mouse Marker X-Axis Value Position: See section 6.4.12.7.2
- Default Mouse Marker Y-Axis Value Position: See section 6.4.12.7.3
- Alternative Mouse Marker Y-Axis Value Position: See section 6.4.12.7.4

The Mouse Marker category contains no sub categories.

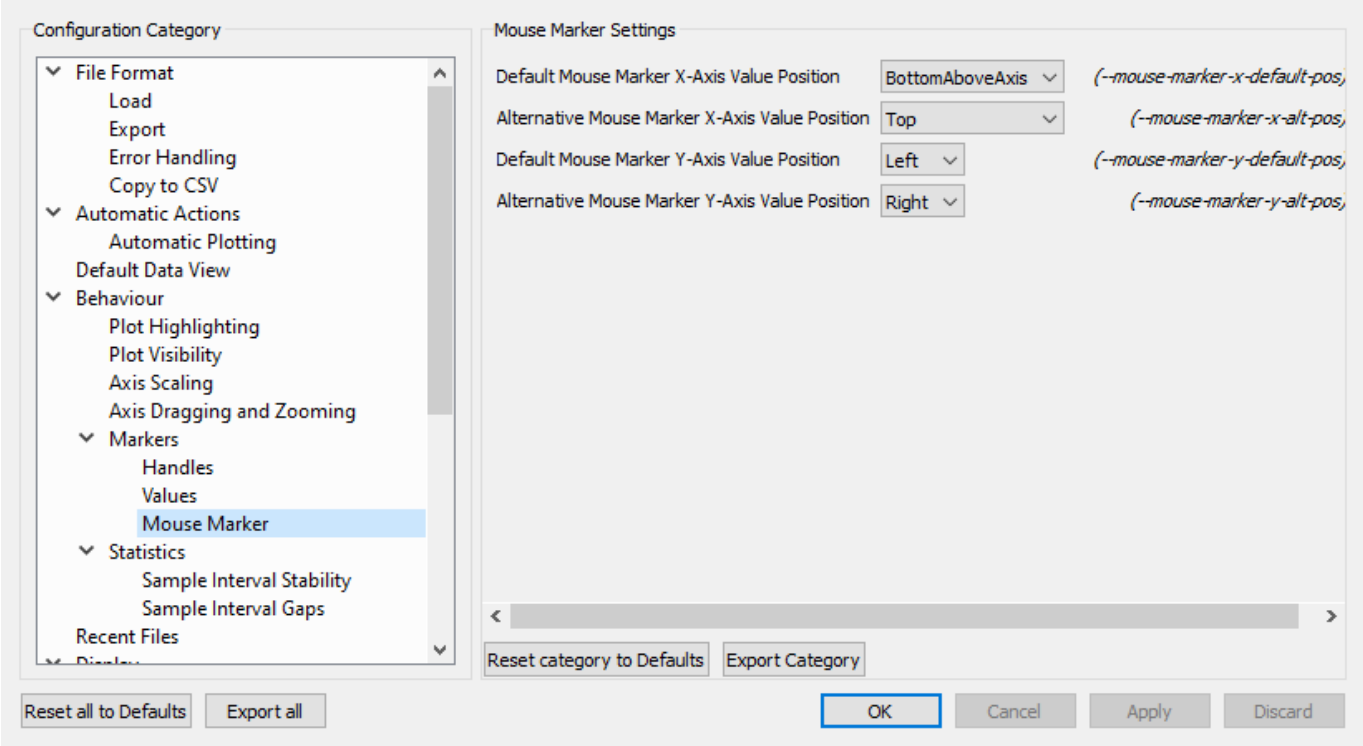


Figure 6.17: Configuration category: Mouse Marker

6.4.12.7.1 Default Mouse Marker X-Axis Value Position

Next: Alternative Mouse Marker X-Axis Value Position, section 6.4.12.7.2.
Up: Mouse Marker, section 6.4.12.7.

Default Mouse Marker X-Axis Value Position

The default position for mouse marker x-axis values. This position is used if there are no problems with this position.

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top
Default:

`BottomAboveAxis`

Command line Option (long): –mouse-marker-x-default-pos, args: enum

6.4.12.7.2 Alternative Mouse Marker X-Axis Value Position

Previous: Default Mouse Marker X-Axis Value Position, section 6.4.12.7.1.
Next: Default Mouse Marker Y-Axis Value Position, section 6.4.12.7.3.
Up: Mouse Marker, section 6.4.12.7.

Alternative Mouse Marker X-Axis Value Position

The alternative position for mouse marker x-axis values. This position is used if the default position can not be used.

Arguments: enum : Off|BottomAboveAxis|BottomBelowAxis|Top

Default:

`Top`

Command line Option (long): –mouse-marker-x-alt-pos, args: enum

6.4.12.7.3 Default Mouse Marker Y-Axis Value Position

Previous: Alternative Mouse Marker X-Axis Value Position, section 6.4.12.7.2.
Next: Alternative Mouse Marker Y-Axis Value Position, section 6.4.12.7.4.
Up: Mouse Marker, section 6.4.12.7.

Default Mouse Marker Y-Axis Value Position

The default position for mouse marker y-axis value. This position is used if there are no problems with this position.

Arguments: enum : Off|Left|Right
Default:

`Left`

Command line Option (long): –mouse-marker-y-default-pos, args: enum

6.4.12.7.4 Alternative Mouse Marker Y-Axis Value Position

Previous: Default Mouse Marker Y-Axis Value Position, section 6.4.12.7.3.
Up: Mouse Marker, section 6.4.12.7.

Alternative Mouse Marker Y-Axis Value Position

The alternative position for mouse marker y-axis value. This position is used if the default position can not be used.

Arguments: enum : Off|Left|Right
Default:

`Right`

Command line Option (long): –mouse-marker-y-alt-pos, args: enum

6.4.13 Statistics

Previous: Markers, section 6.4.12.
Up: Behaviour, section 6.4.

Figure 6.18 shows the Statistics configuration category.
Category description:
Statistics Behaviour Settings.

The Statistics category contains the following items:

- Population or Sample: See section 6.4.13.1
- Number of Deviation Lines: See section 6.4.13.2

The Statistics category contains the following sub categories:

- Sample Interval Stability: See section 6.4.13.3
- Sample Interval Gaps: See section 6.4.13.4

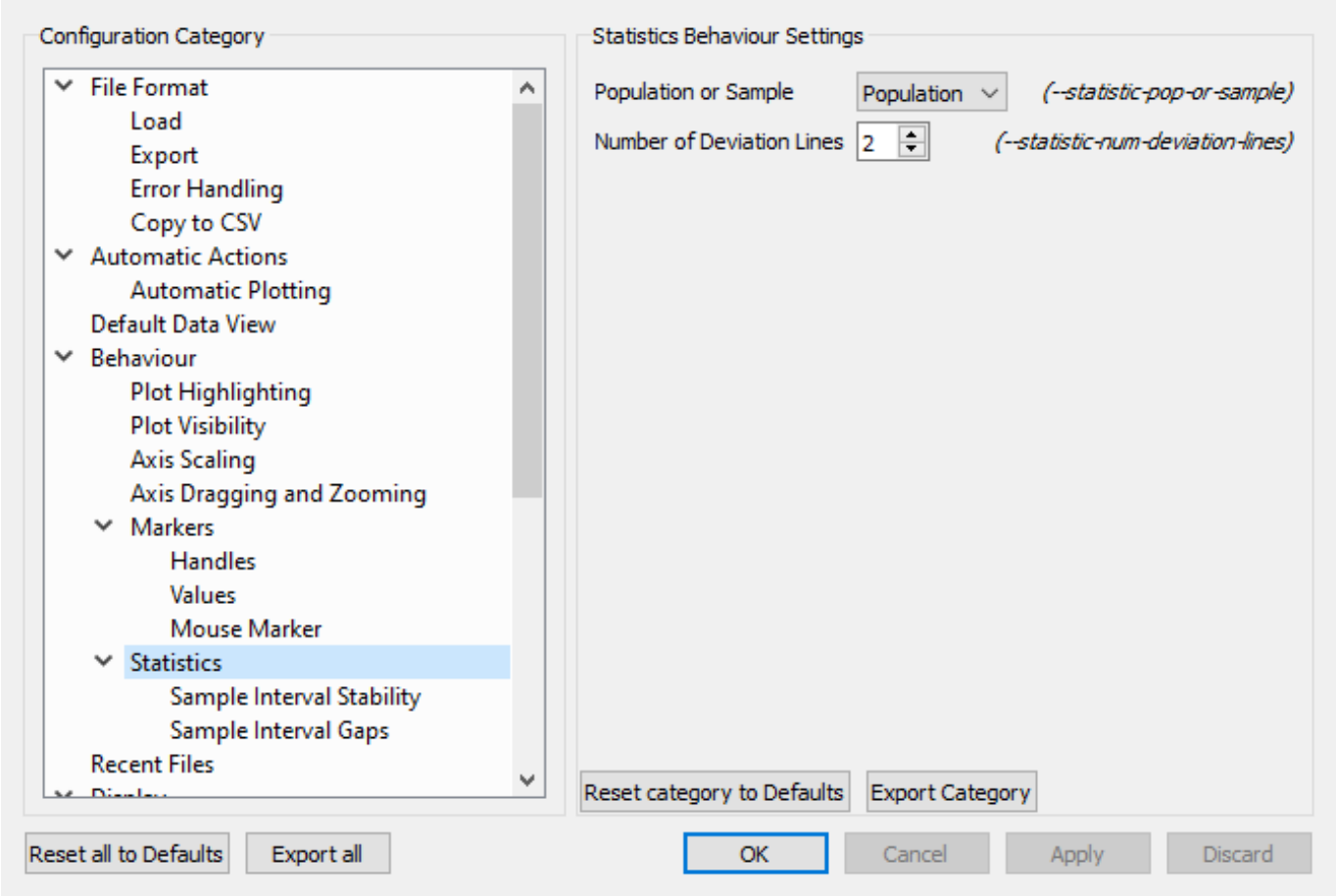


Figure 6.18: Configuration category: Statistics

6.4.13.1 Population or Sample

Next: Number of Deviation Lines, section 6.4.13.2.
Up: Statistics, section 6.4.13.

Whether to use the population or sample configuration for algorithms that require it (such as standard deviation).

Certain algorithms need the population or sample configuration. These algorithms are for example: standard deviation, variance, covariance, skewness, kurtosis and coefficient of variation. Basically any algorithm that needs one (or more) of these algorithms need this parameter. This setting determines whether to divide by N (population) or by N-1 (sample).

Arguments: enum : Population|Sample
Default:

```
Population
```

Command line Option (long): –statistic-pop-or-sample, args: enum

6.4.13.2 Number of Deviation Lines

Previous: Population or Sample, section 6.4.13.1.
Next: Sample Interval Stability, section 6.4.13.3.
Up: Statistics, section 6.4.13.

Number of deviation lines shown with algorithms (e.g. standard deviation).

The number of horizontal deviation lines shown with algorithms that calculated deviations, such as standard deviation, median absolute deviation or average absolute deviation. The lines are only shown when visualizations are enabled for the algorithm.

Arguments: int : min:1,max:16
Default:

2

Command line Option (long): –statistic-num-deviation-lines, args: int

6.4.13.3 Sample Interval Stability

Previous: Number of Deviation Lines, section 6.4.13.2.
Next: Sample Interval Gaps, section 6.4.13.4.
Up: Statistics, section 6.4.13.

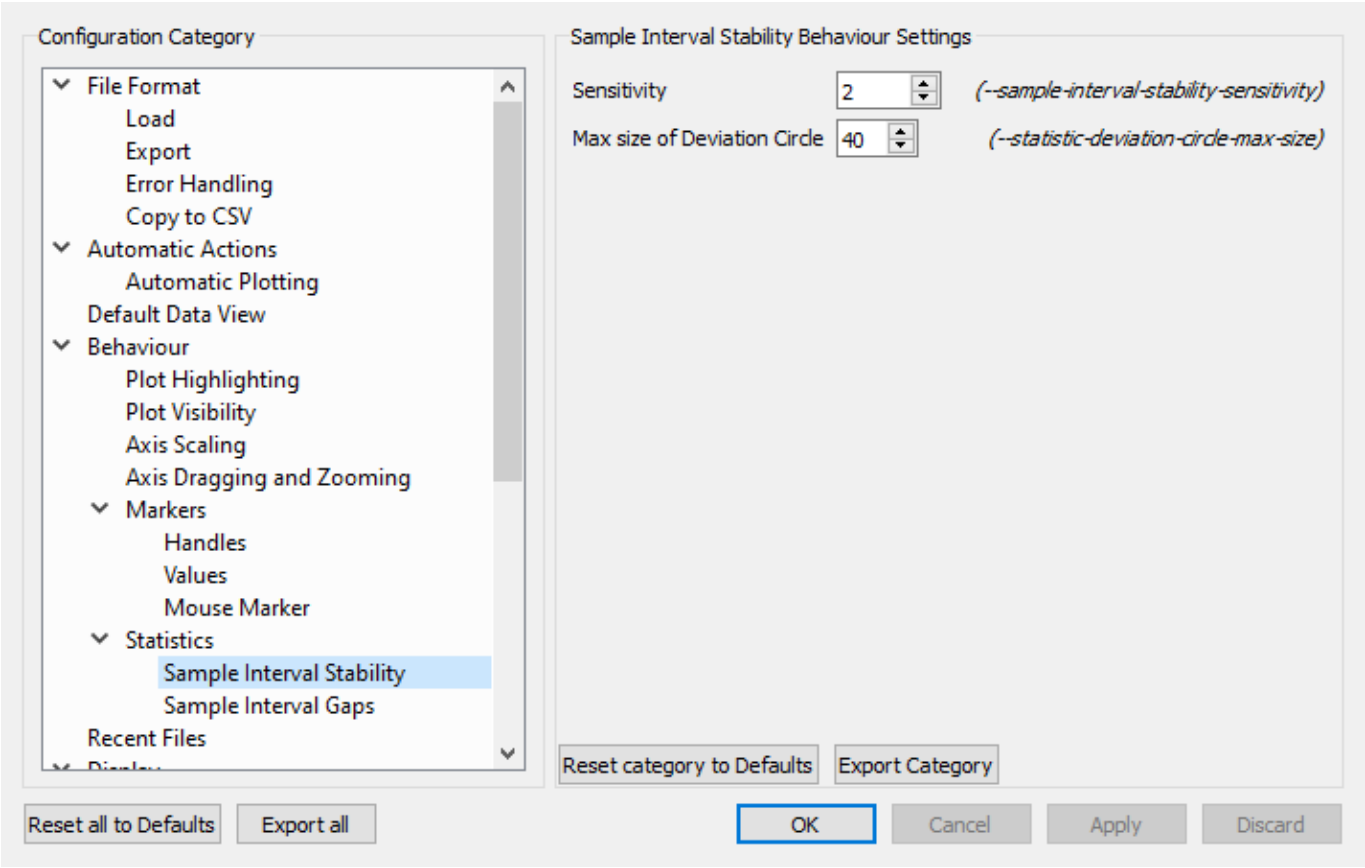


Figure 6.19: Configuration category: Sample Interval Stability

Figure 6.19 shows the Sample Interval Stability configuration category.
Category description:
Sample Interval Stability Behaviour Settings.

The Sample Interval Stability category contains the following items:

- Sensitivity: See section 6.4.13.3.1
- Max size of Deviation Circle: See section 6.4.13.3.2

The Sample Interval Stability category contains no sub categories.

6.4.13.3.1 Sensitivity

Next: Max size of Deviation Circle, section 6.4.13.3.2.
Up: Sample Interval Stability, section 6.4.13.3.

Sensitivity value. The higher the value, the less sensitive. 1 being the most sensitive.

A sample interval is considered unstable if it deviates from the median sample interval by more than this setting times the median absolute deviation of the sample intervals. The higher this setting, the less sensitive. 1 is the most sensitive.

Arguments: int : min:1,max:65535
Default:

2

Command line Option (long): –sample-interval-stability-sensitivity, args: int

6.4.13.3.2 Max size of Deviation Circle

Previous: Sensitivity, section 6.4.13.3.1.
Up: Sample Interval Stability, section 6.4.13.3.

Max size in pixels of the circles that indicate a deviation of the median sample interval.

When a sample interval deviates from the median sample interval then a circle is drawn. The size of the circle depends on how much the interval deviates but the maximum size is specified by this setting.

Arguments: int : min:8,max:512
Default:

40

Command line Option (long): –statistic-deviation-circle-max-size, args: int

6.4.13.4 Sample Interval Gaps

Previous: Sample Interval Stability, section 6.4.13.3.
Up: Statistics, section 6.4.13.

Figure 6.20 shows the Sample Interval Gaps configuration category.
Category description:
Sample Interval Stability Gaps Settings.

The Sample Interval Gaps category contains the following items:

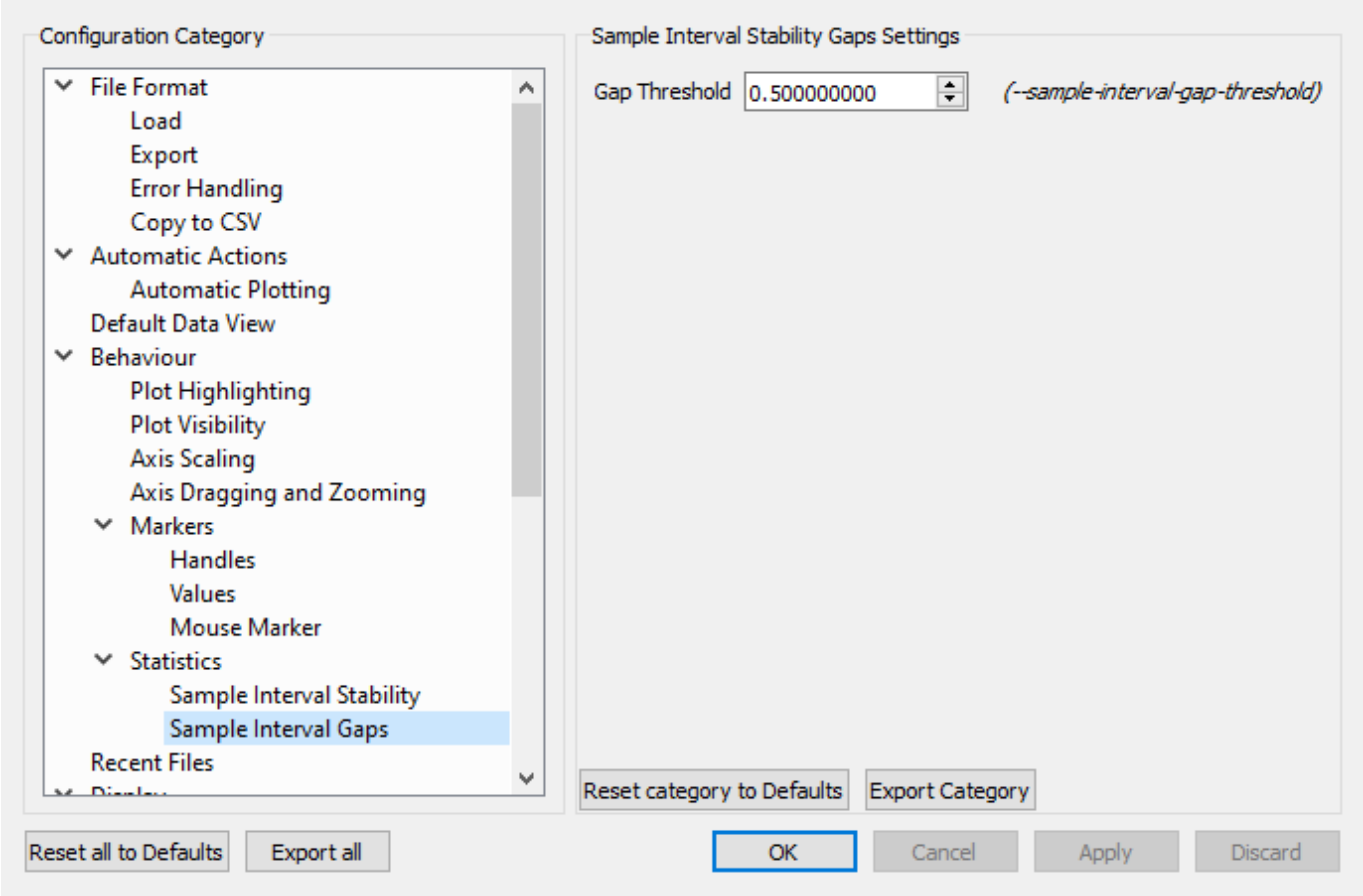


Figure 6.20: Configuration category: Sample Interval Gaps

- Gap Threshold: See section 6.4.13.4.1

The Sample Interval Gaps category contains no sub categories.

6.4.13.4.1 Gap Threshold

Up: Sample Interval Gaps, section 6.4.13.4.

The gap threshold determines when a gap is detected. Lower thresholds will find more gaps.

If x is the treshold, then a gap is defined as a sample interval that is more than (1 + x) times the median sample interval or less than (1 - x) times the median sample interval.

Arguments: double : min:0,max:65535
Default:

```
0.5
```

Command line Option (long): –sample-interval-gap-threshold, args: double

6.5 Recent Files

Previous: Behaviour, section 6.4.
Next: Display, section 6.6.
Up: Settings, section 6.

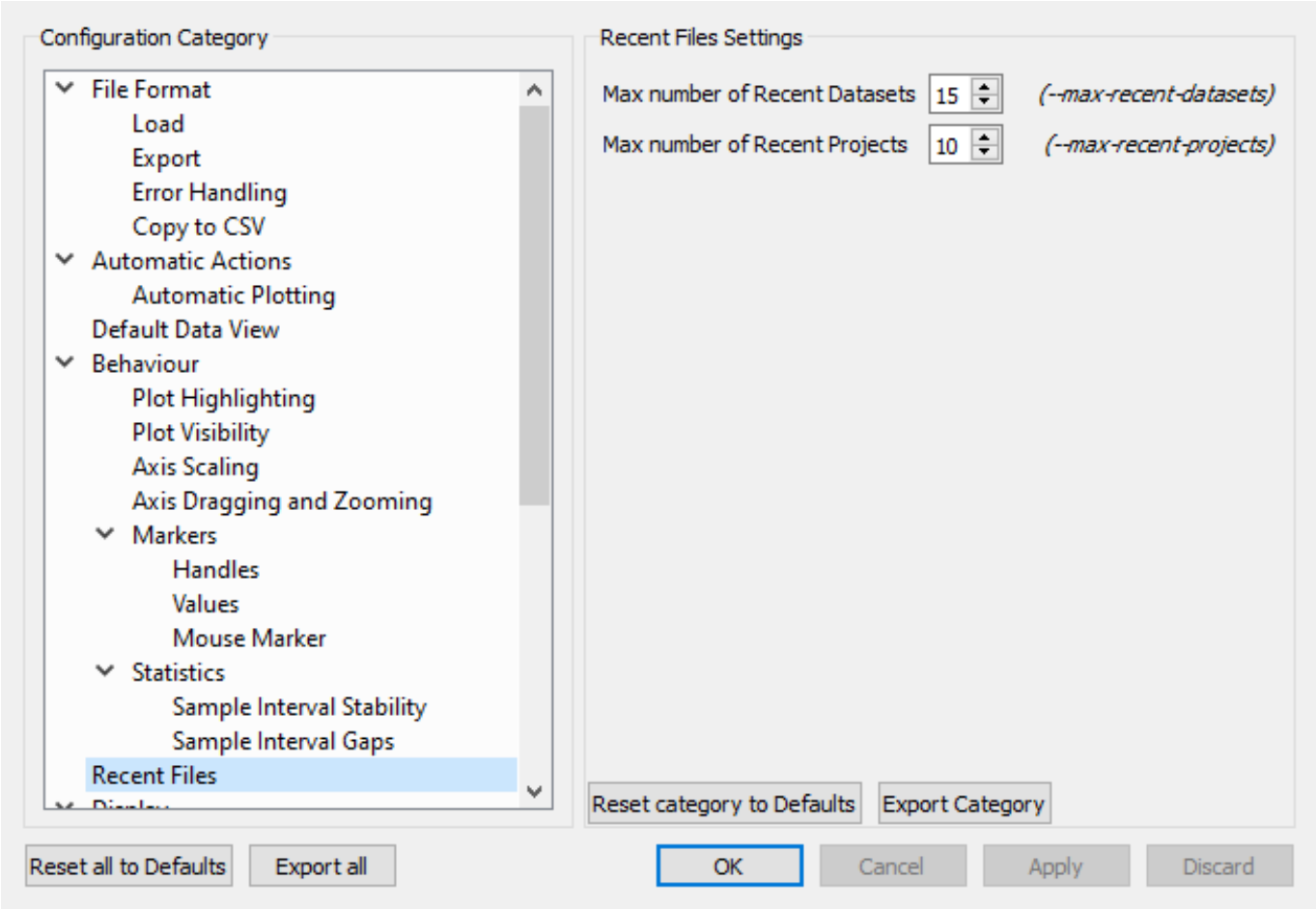


Figure 6.21: Configuration category: Recent Files

Figure 6.21 shows the Recent Files configuration category.
Category description:
Recent Files Settings
Category detailed description:
Settings related to the recent files lists

The Recent Files category contains the following items:

- Max number of Recent Datasets: See section 6.5.1
- Max number of Recent Projects: See section 6.5.2

The Recent Files category contains no sub categories.

6.5.1 Max number of Recent Datasets

Next: Max number of Recent Projects, section 6.5.2.
Up: Recent Files, section 6.5.

The maximum number of recent datasets.

The maximum number of recent datasets that can be displayed in the recent datasets menu.

Arguments: int : min:0,max:64
Default:

```
15
```

Command line Option (long): –max-recent-datasets, args: int

6.5.2 Max number of Recent Projects

Previous: Max number of Recent Datasets, section 6.5.1.
Up: Recent Files, section 6.5.

The maximum number of recent projects.

The maximum number of recent projects that can be displayed in the recent projects menu.

Arguments: int : min:0,max:32
Default:

```
10
```

Command line Option (long): –max-recent-projects, args: int

6.6 Display

Previous: Recent Files, section 6.5.
Next: Report Generation, section 6.7.
Up: Settings, section 6.

Figure 6.22 shows the Display configuration category.
Category description:
Application Display Settings.

The Display category contains the following items:

- Data Source Display Fmt: See section 6.6.1
- Time Source Display Fmt: See section 6.6.2
- Plot Name Display Fmt: See section 6.6.3
- Data Axis Default Name Display Fmt: See section 6.6.4
- Binary Axis Default Name Display Fmt: See section 6.6.5
- Time Axis Default Name Display Fmt: See section 6.6.6
- Axis Source Count Display Fmt: See section 6.6.7

The Display category contains the following sub categories:

- Date and Time: See section 6.6.8

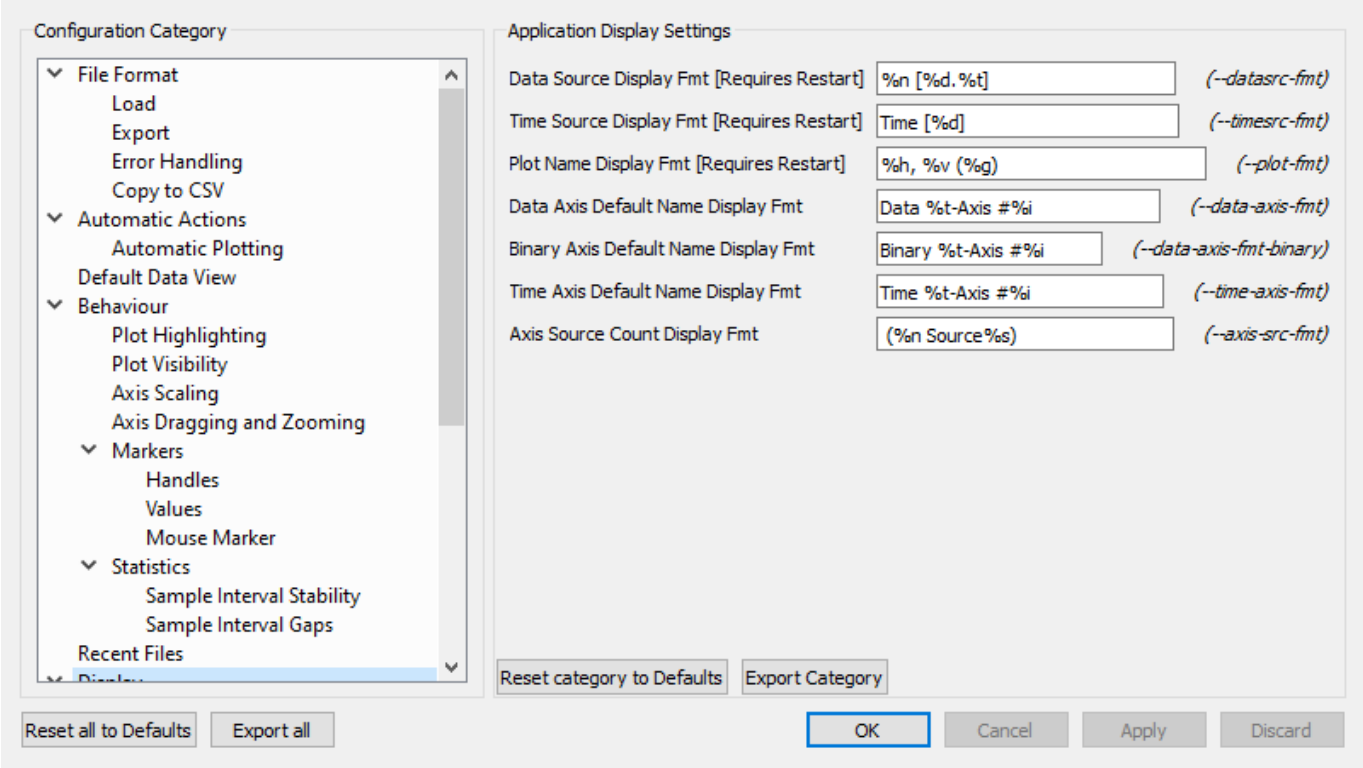


Figure 6.22: Configuration category: Display

6.6.1 Data Source Display Fmt

Next: Time Source Display Fmt, section 6.6.2.
Up: Display, section 6.6.

Display format for data sources e.g. TAG01 [1.4]

This setting allows configuring the display format for data sources (usually vertical axes). The following variable names are supported: Example: ” Arguments: string : string

Default:

```
%n [%d.%t]
```

Command line Option (long): –datasrc-fmt, args: string
Note: After changing this, a restart is required before it is applied.

6.6.2 Time Source Display Fmt

Previous: Data Source Display Fmt, section 6.6.1.
Next: Plot Name Display Fmt, section 6.6.3.
Up: Display, section 6.6.

Display format for time sources e.g. Time [1]

This setting allows configuring the display format for time sources (usually horizontal axes). The following variable names are supported: Example: ”Time [Arguments: string : string

Default:

`Time [%d]`

Command line Option (long): –timesrc-fmt, args: string
Note: After changing this, a restart is required before it is applied.

6.6.3 Plot Name Display Fmt

Previous: Time Source Display Fmt, section 6.6.2.
Next: Data Axis Default Name Display Fmt, section 6.6.4.
Up: Display, section 6.6.

Display format for plot names e.g. Time [1], TAG01 [1.4] (1)

This setting allows configuring the display format for plot names. The following variable names are supported: Example: ”

Arguments: string : string
Default:

`%h, %v (%g)`

Command line Option (long): –plot-fmt, args: string
Note: After changing this, a restart is required before it is applied.

6.6.4 Data Axis Default Name Display Fmt

Previous: Plot Name Display Fmt, section 6.6.3.
Next: Binary Axis Default Name Display Fmt, section 6.6.5.
Up: Display, section 6.6.

Display format for default name of a data axis e.g. Data Y-Axis #1

This setting allows configuring the display format for default data axes (usually vertical). The following variable names are supported: Example: ”Data Arguments: string : string

Default:

`Data %t-Axis #%i`

Command line Option (long): –data-axis-fmt, args: string

6.6.5 Binary Axis Default Name Display Fmt

Previous: Data Axis Default Name Display Fmt, section 6.6.4.
Next: Time Axis Default Name Display Fmt, section 6.6.6.
Up: Display, section 6.6.

Display format for default name of a binary data axis e.g. Binary Y-Axis #1

This setting allows configuring the default display format for binary data axes (usually vertical). The following variable names are supported: Example: ”Binary Arguments: string : string

Default:

`Binary %t-Axis #%i`

Command line Option (long): –data-axis-fmt-binary, args: string

6.6.6 Time Axis Default Name Display Fmt

Previous: Binary Axis Default Name Display Fmt, section 6.6.5.
Next: Axis Source Count Display Fmt, section 6.6.7.
Up: Display, section 6.6.

Display format for default name of a time axis e.g. Data Y-Axis #1

This setting allows configuring the display format for default time axes (usually horizontal). The following variable names are supported: Example: "Time Arguments: string : string

Default:

```
Time %t-Axis #%i
```

Command line Option (long): –time-axis-fmt, args: string

6.6.7 Axis Source Count Display Fmt

Previous: Time Axis Default Name Display Fmt, section 6.6.6.
Next: Date and Time, section 6.6.8.
Up: Display, section 6.6.

Display format for the source count display of an axis e.g. (3 Sources)

This setting allows configuring the display format for The source count. Note: This may be empty (then the source count is not displayed). The following variable names are supported: Example: "(Arguments: string : string

Default:

```
(%n Source%s)
```

Command line Option (long): –axis-src-fmt, args: string

6.6.8 Date and Time

Previous: Axis Source Count Display Fmt, section 6.6.7.
Up: Display, section 6.6.

Figure 6.23 shows the Date and Time configuration category.
Category description:
Date and Time Settings.

The Date and Time category contains the following items:

- Timestamp Text Format Multi Line: See section 6.6.8.1
- Timestamp Text Format Single Line: See section 6.6.8.2

The Date and Time category contains the following sub categories:

- Variable Length Date and Time: See section 6.6.8.3
- Date and Time for Data Window: See section 6.6.8.4

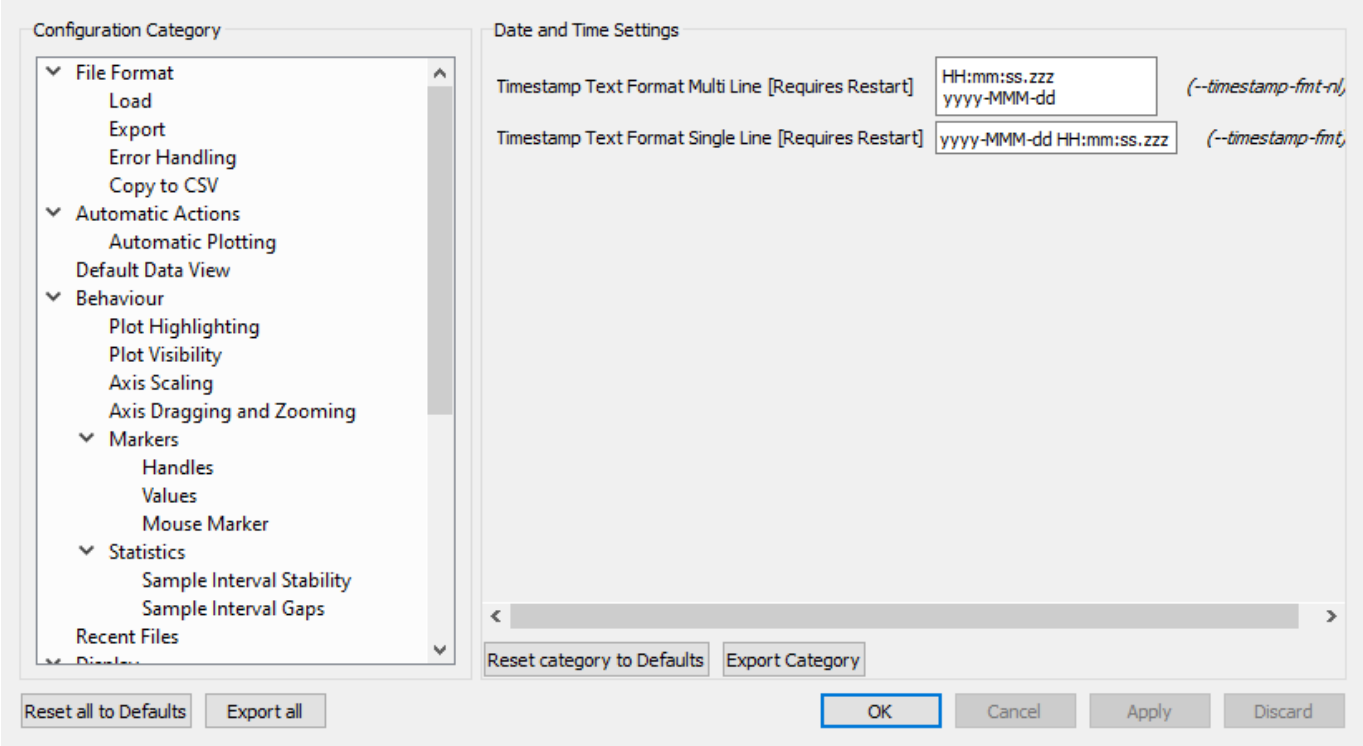


Figure 6.23: Configuration category: Date and Time

6.6.8.1 Timestamp Text Format Multi Line

Next: Timestamp Text Format Single Line, section 6.6.8.2.
Up: Date and Time, section 6.6.8.

Text format for (full) timestamps used in a multiline context

This is the text format for multiline full (date and time) timestamps. Used in, for example, the timestamps for x-axes and the detailed timestamp in the mouse marker. The timestamp may be multi line so a newline can be used in the timestamp format.
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
HH:mm:ss.zzz
yyyy-MMM-dd
```

Command line Option (long): –timestamp-fmt-nl, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.2 Timestamp Text Format Single Line

Previous: Timestamp Text Format Multi Line, section 6.6.8.1.
Next: Variable Length Date and Time, section 6.6.8.3.
Up: Date and Time, section 6.6.8.

Text format for (full) timestamps used in a single line context

This is the text format for single line full (date and time) timestamps. Used in, for example, the timestamps on the status bar. The timestamp may not be multi line so a newline should not be used in the timestamp format.
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
yyyy-MMM-dd HH:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3 Variable Length Date and Time

Previous: Timestamp Text Format Single Line, section 6.6.8.2.
Next: Date and Time for Data Window, section 6.6.8.4.
Up: Date and Time, section 6.6.8.

Figure 6.24 shows the Variable Length Date and Time configuration category.
Category description:
Variable Length Date and Time Settings.

The Variable Length Date and Time category contains the following items:

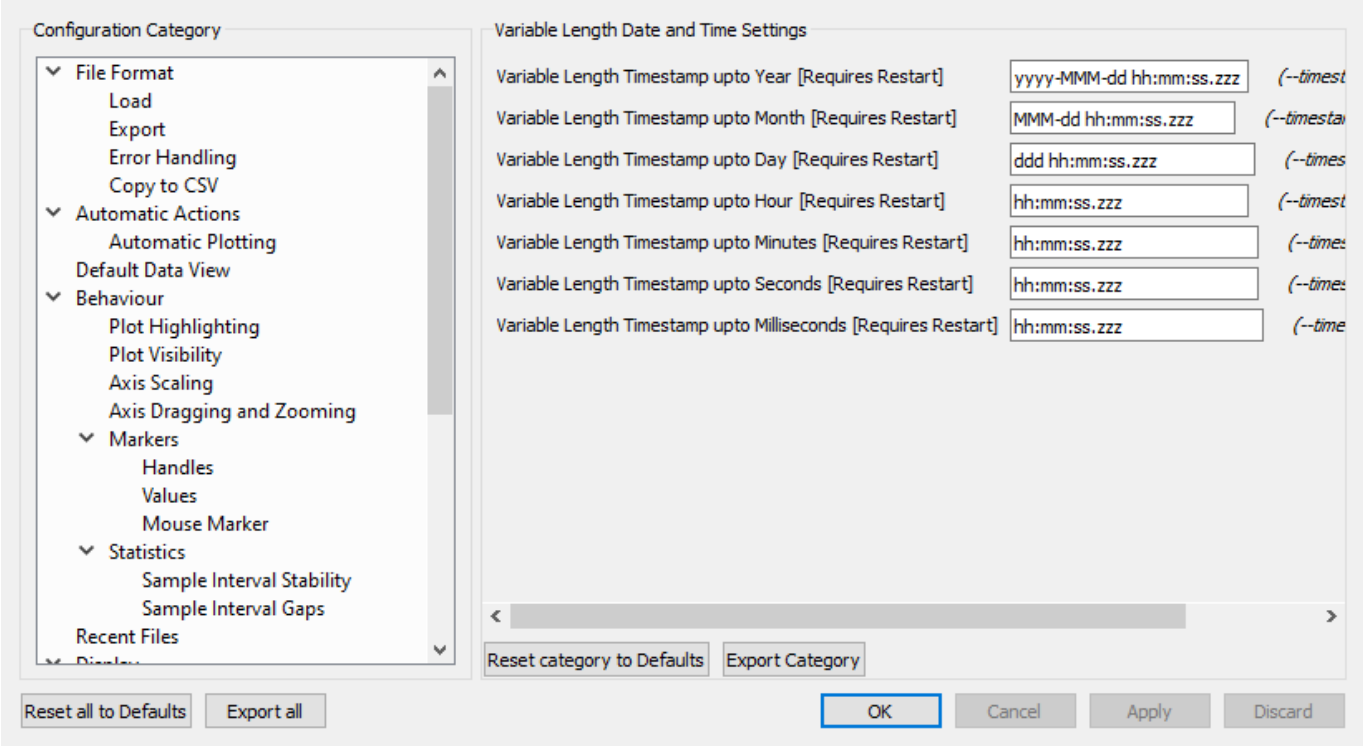


Figure 6.24: Configuration category: Variable Length Date and Time

- Variable Length Timestamp upto Year: See section 6.6.8.3.1
- Variable Length Timestamp upto Month: See section 6.6.8.3.2
- Variable Length Timestamp upto Day: See section 6.6.8.3.3
- Variable Length Timestamp upto Hour: See section 6.6.8.3.4
- Variable Length Timestamp upto Minutes: See section 6.6.8.3.5
- Variable Length Timestamp upto Seconds: See section 6.6.8.3.6
- Variable Length Timestamp upto Milliseconds: See section 6.6.8.3.7

The Variable Length Date and Time category contains no sub categories.

6.6.8.3.1 Variable Length Timestamp upto Year

Next: Variable Length Timestamp upto Month, section 6.6.8.3.2.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto year

This is the text format that is used in variable length timestamps upto year. These are used in e.g. Markers and Statistics These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero

(01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
yyyy-MMM-dd hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-year, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.2 Variable Length Timestamp upto Month

Previous: Variable Length Timestamp upto Year, section 6.6.8.3.1.
Next: Variable Length Timestamp upto Day, section 6.6.8.3.3.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto month

This is the text format that is used in variable length timestamps upto month. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
MMM-dd hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-month, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.3 Variable Length Timestamp upto Day

Previous: Variable Length Timestamp upto Month, section 6.6.8.3.2.
Next: Variable Length Timestamp upto Hour, section 6.6.8.3.4.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto day

This is the text format that is used in variable length timestamps upto day. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
ddd hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-day, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.4 Variable Length Timestamp upto Hour

Previous: Variable Length Timestamp upto Day, section 6.6.8.3.3.
Next: Variable Length Timestamp upto Minutes, section 6.6.8.3.5.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto hour

This is the text format that is used in variable length timestamps upto hour. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second,

to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-hour, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.5 Variable Length Timestamp upto Minutes

Previous: Variable Length Timestamp upto Hour, section 6.6.8.3.4.
Next: Variable Length Timestamp upto Seconds, section 6.6.8.3.6.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto minutes

This is the text format that is used in variable length timestamps upto minutes. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-min, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.6 Variable Length Timestamp upto Seconds

Previous: Variable Length Timestamp upto Minutes, section 6.6.8.3.5.
Next: Variable Length Timestamp upto Milliseconds, section 6.6.8.3.7.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto seconds

This is the text format that is used in variable length timestamps upto seconds. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
hh:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-var-sec, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.3.7 Variable Length Timestamp upto Milliseconds

Previous: Variable Length Timestamp upto Seconds, section 6.6.8.3.6.
Up: Variable Length Date and Time, section 6.6.8.3.

Text format for variable length timestamps upto milliseconds

This is the text format that is used in variable length timestamps upto milliseconds. These are used in e.g. Markers and Statistics
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

`hh:mm:ss.zzz`

Command line Option (long): –timestamp-fmt-var-ms, args: string
Note: After changing this, a restart is required before it is applied.

6.6.8.4 Date and Time for Data Window

Previous: Variable Length Date and Time, section 6.6.8.3.
Up: Date and Time, section 6.6.8.

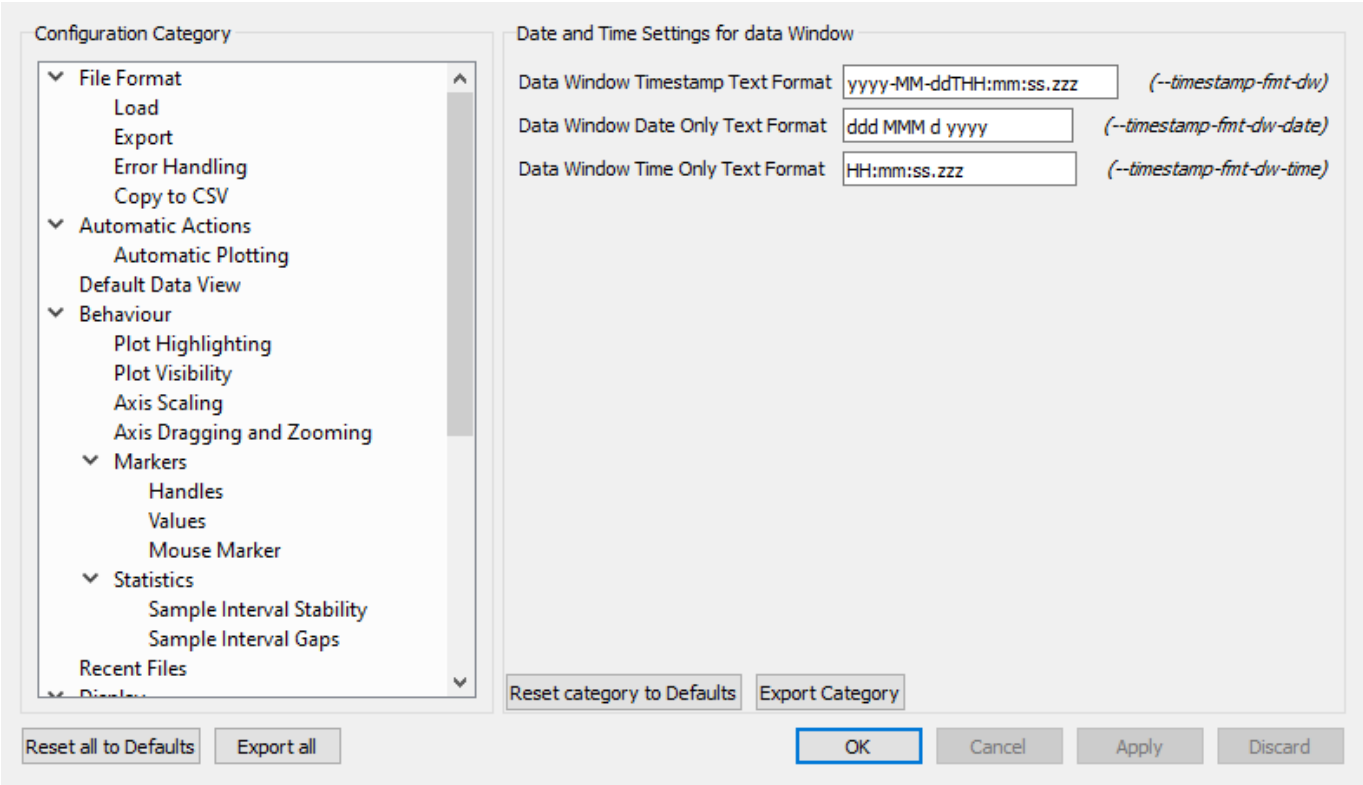


Figure 6.25: Configuration category: Date and Time for Data Window

Figure 6.25 shows the Date and Time for Data Window configuration category.
Category description:
Date and Time Settings for data Window.

The Date and Time for Data Window category contains the following items:

- Data Window Timestamp Text Format: See section 6.6.8.4.1
- Data Window Date Only Text Format: See section 6.6.8.4.2
- Data Window Time Only Text Format: See section 6.6.8.4.3

The Date and Time for Data Window category contains no sub categories.

6.6.8.4.1 Data Window Timestamp Text Format

Next: Data Window Date Only Text Format, section 6.6.8.4.2.
Up: Date and Time for Data Window, section 6.6.8.4.

Text format for timestamps used in the data sub-window

This is the text format that is used for the timestamps in the timestamp column in the data sub-window.
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes ("'") are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
yyyy-MM-ddTHH:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-dw, args: string

6.6.8.4.2 Data Window Date Only Text Format

Previous: Data Window Timestamp Text Format, section 6.6.8.4.1.
Next: Data Window Time Only Text Format, section 6.6.8.4.3.
Up: Date and Time for Data Window, section 6.6.8.4.

Text format for date only entries in the data sub-window

This is the text format that is used in date only columns in the data sub-window.
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST')

Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
ddd MMM d yyyy
```

Command line Option (long): –timestamp-fmt-dw-date, args: string

6.6.8.4.3 Data Window Time Only Text Format

Previous: Data Window Date Only Text Format, section 6.6.8.4.2.
Up: Date and Time for Data Window, section 6.6.8.4.

Text format for time only entries in the data sub-window

This is the text format that is used in time only columns in the data sub-window.
These expressions may be used for the date: d the day as number without a leading zero (1 to 31) dd the day as number with a leading zero (01 to 31) ddd the abbreviated localized day name (e.g. 'Mon' to 'Sun'). dddd the long localized day name (e.g. 'Monday' to 'Sunday'). M the month as number without a leading zero (1-12) MM the month as number with a leading zero (01-12) MMM the abbreviated localized month name (e.g. 'Jan' to 'Dec'). MMMM the long localized month name (e.g. 'January' to 'December'). yy the year as two digit number (00-99) yyyy the year as four digit number
These expressions may be used for the time: h the hour without a leading zero (0 to 23 or 1 to 12 if AM/PM display) hh the hour with a leading zero (00 to 23 or 01 to 12 if AM/PM display) H the hour without a leading zero (0 to 23, even with AM/PM display) HH the hour with a leading zero (00 to 23, even with AM/PM display) m the minute without a leading zero (0 to 59) mm the minute with a leading zero (00 to 59) s the whole second without a leading zero (0 to 59) ss the whole second with a leading zero where applicable (00 to 59) z the fractional part of the second, to go after a decimal point, without trailing zeroes (0 to 999). Thus 's.z' reports the seconds to full available (millisecond) precision without trailing zeroes. zzz the fractional part of the second, to millisecond precision, including trailing zeroes where applicable (000 to 999). AP or A use AM/PM display. A/AP will be replaced by either 'AM' or 'PM'. ap or a use am/pm display. a/ap will be replaced by either 'am' or 'pm'. t the timezone (for example 'CEST') Any sequence of characters that are enclosed in single quotes will be treated as text and not be used as an expression. Two consecutive single quotes (''''') are replaced by a singlequote in the output. Formats without separators (e.g. "HHmm") are currently not supported.

Arguments: string : string
Default:

```
HH:mm:ss.zzz
```

Command line Option (long): –timestamp-fmt-dw-time, args: string

6.7 Report Generation

Previous: Display, section 6.6.
Next: Warnings, section 6.8.
Up: Settings, section 6.

Figure 6.26 shows the Report Generation configuration category.
Category description:
Report Generation Settings
Category detailed description:
Settings related to Report Generation

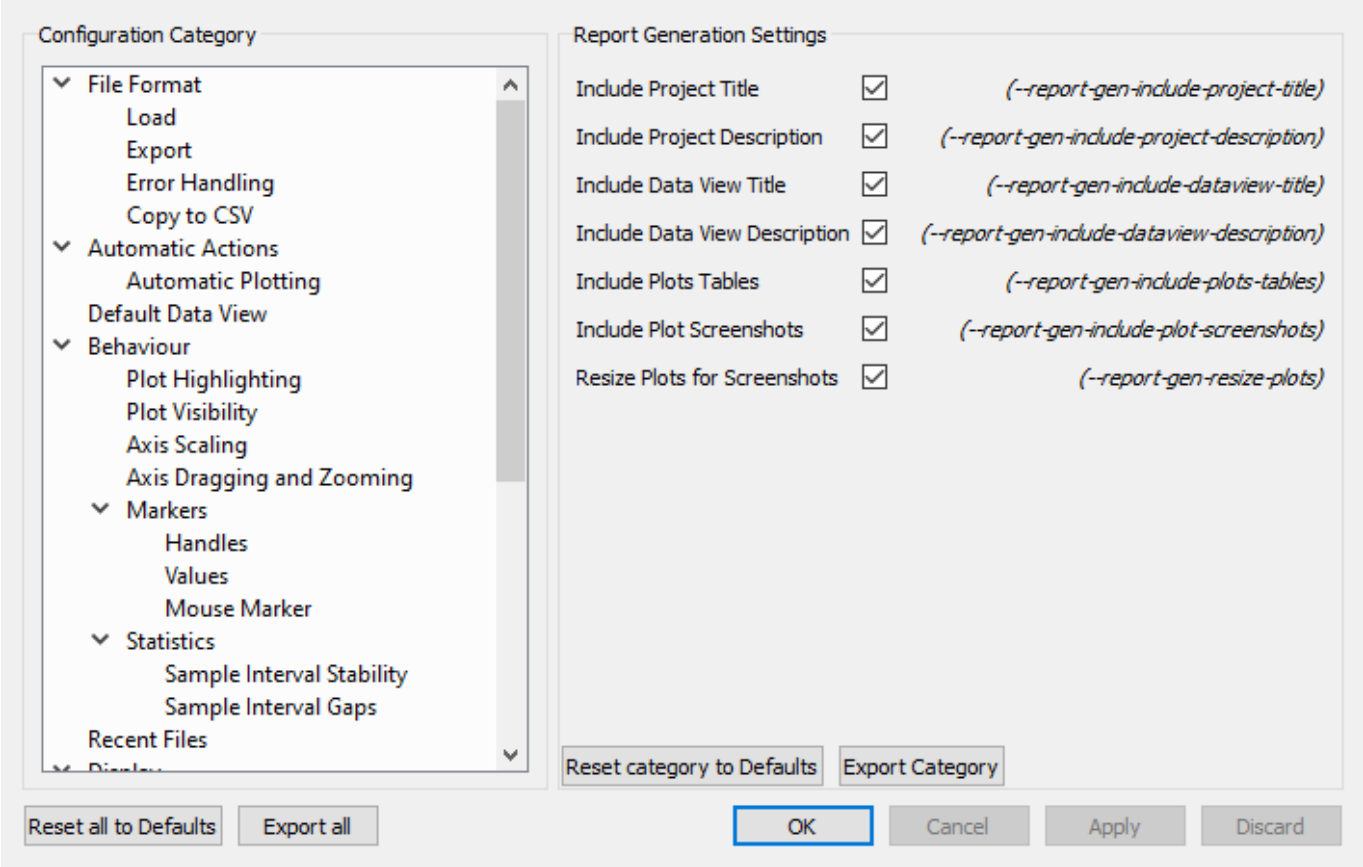


Figure 6.26: Configuration category: Report Generation

The Report Generation category contains the following items:

- Include Project Title: See section 6.7.1
- Include Project Description: See section 6.7.2
- Include Data View Title: See section 6.7.3
- Include Data View Description: See section 6.7.4
- Include Plots Tables: See section 6.7.5
- Include Plot Screenshots: See section 6.7.6
- Resize Plots for Screenshots: See section 6.7.7

The Report Generation category contains the following sub categories:

- Markers: See section 6.7.8
- Statistics: See section 6.7.9
- Logo: See section 6.7.10
- Page Setup: See section 6.7.11
- Default Info: See section 6.7.12

6.7.1 Include Project Title

Next: Include Project Description, section 6.7.2.
Up: Report Generation, section 6.7.

Include the project title in the document

If this setting is enabled, the project title will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-project-title, args: bool

6.7.2 Include Project Description

Previous: Include Project Title, section 6.7.1.
Next: Include Data View Title, section 6.7.3.
Up: Report Generation, section 6.7.

Include the project description in the document

If this setting is enabled, the project description will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-project-description, args: bool

6.7.3 Include Data View Title

Previous: Include Project Description, section 6.7.2.
Next: Include Data View Description, section 6.7.4.
Up: Report Generation, section 6.7.

Include data view titles in the document

If this setting is enabled, all data view titles will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-dataview-title, args: bool

6.7.4 Include Data View Description

Previous: Include Data View Title, section 6.7.3.
Next: Include Plots Tables, section 6.7.5.
Up: Report Generation, section 6.7.

Include data view description in the document

If this setting is enabled, all data view descriptions will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-dataview-description, args: bool

6.7.5 Include Plots Tables

Previous: Include Data View Description, section 6.7.4.
Next: Include Plot Screenshots, section 6.7.6.
Up: Report Generation, section 6.7.

Include plots tables in the document

If this setting is enabled, tables showing all plots current plots will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-plots-tables, args: bool

6.7.6 Include Plot Screenshots

Previous: Include Plots Tables, section 6.7.5.
Next: Resize Plots for Screenshots, section 6.7.7.
Up: Report Generation, section 6.7.

Include plot screenshots in the document

If this setting is enabled, screenshots of all plots will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-plot-screenshots, args: bool

6.7.7 Resize Plots for Screenshots

Previous: Include Plot Screenshots, section 6.7.6.
Next: Markers, section 6.7.8.
Up: Report Generation, section 6.7.

Resize the plots before taking the screenshots.

If this setting is enabled, the plots will be temporarily resized to the page size before taking the screenshots. This prevents the need to scale the screenshots later which may cause blurry images. Note that image may not be exactly the same after resizing.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-resize-plots, args: bool

6.7.8 Markers

Previous: Resize Plots for Screenshots, section 6.7.7.
Next: Statistics, section 6.7.9.
Up: Report Generation, section 6.7.

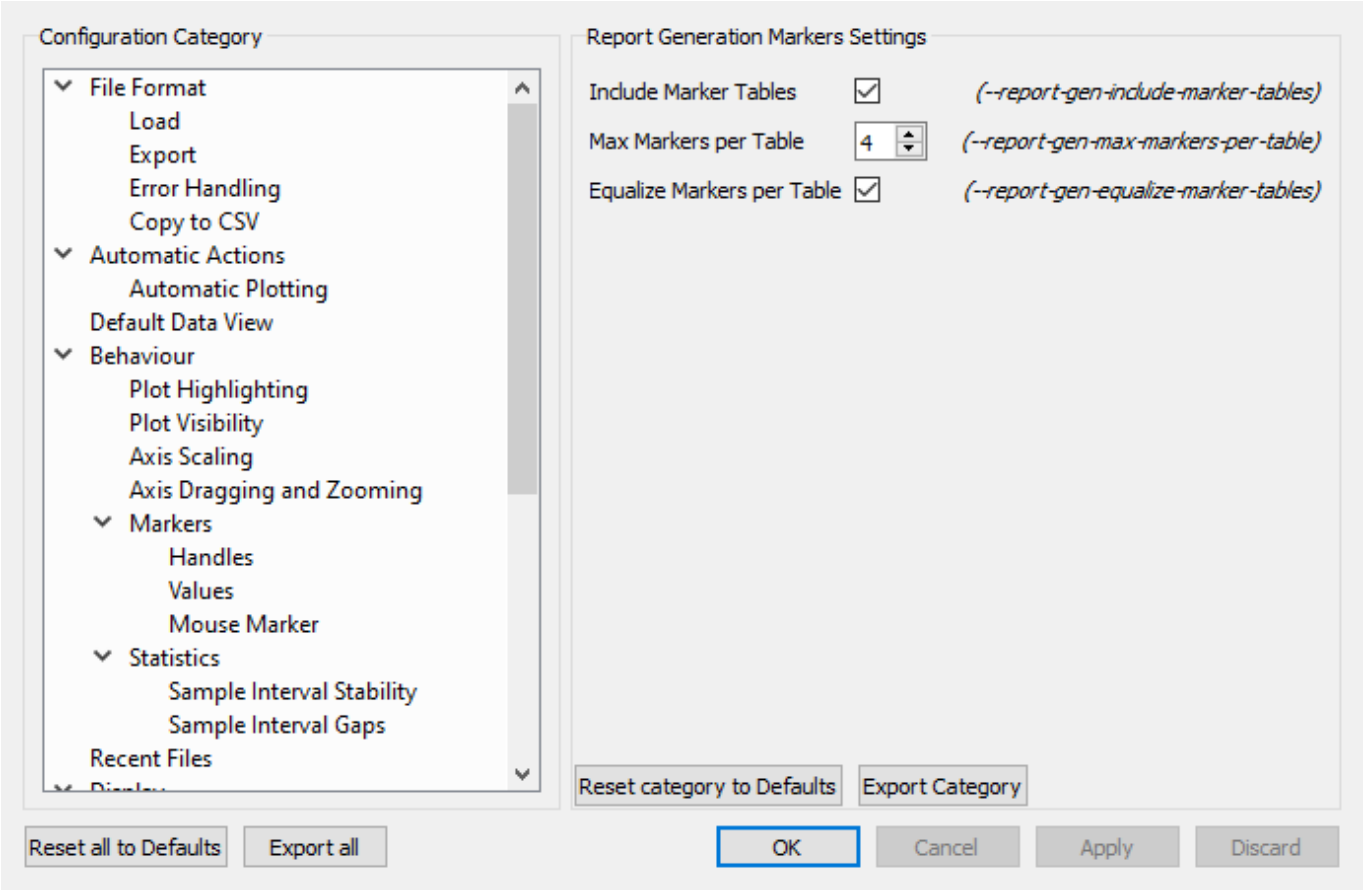


Figure 6.27: Configuration category: Markers

Figure 6.27 shows the Markers configuration category.
Category description:
Report Generation Markers Settings
Category detailed description:
Report Generation Settings related to Markers

The Markers category contains the following items:

- Include Marker Tables: See section 6.7.8.1
- Max Markers per Table: See section 6.7.8.2
- Equalize Markers per Table: See section 6.7.8.3

The Markers category contains no sub categories.

6.7.8.1 Include Marker Tables

Next: Max Markers per Table, section 6.7.8.2.
Up: Markers, section 6.7.8.

Include marker tables to the document

If this setting is enabled, tables showing all markers, and their position and value, will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –report-gen-include-marker-tables, args: bool

6.7.8.2 Max Markers per Table

Previous: Include Marker Tables, section 6.7.8.1.
Next: Equalize Markers per Table, section 6.7.8.3.
Up: Markers, section 6.7.8.

Maximum number of markers per table

If there are more than this maximum number of markers in a table, the table will be split into multiple tables.

Arguments: int : min:1,max:32
Default:

```
4
```

Command line Option (long): –report-gen-max-markers-per-table, args: int

6.7.8.3 Equalize Markers per Table

Previous: Max Markers per Table, section 6.7.8.2.
Up: Markers, section 6.7.8.

Equalize the number of markers per table

If this setting is enabled then if more than one table is needed to display all the markers, the number of markers in each table is kept the same if possible. Otherwise the tables will be made as large as possible.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –report-gen-equalize-marker-tables, args: bool

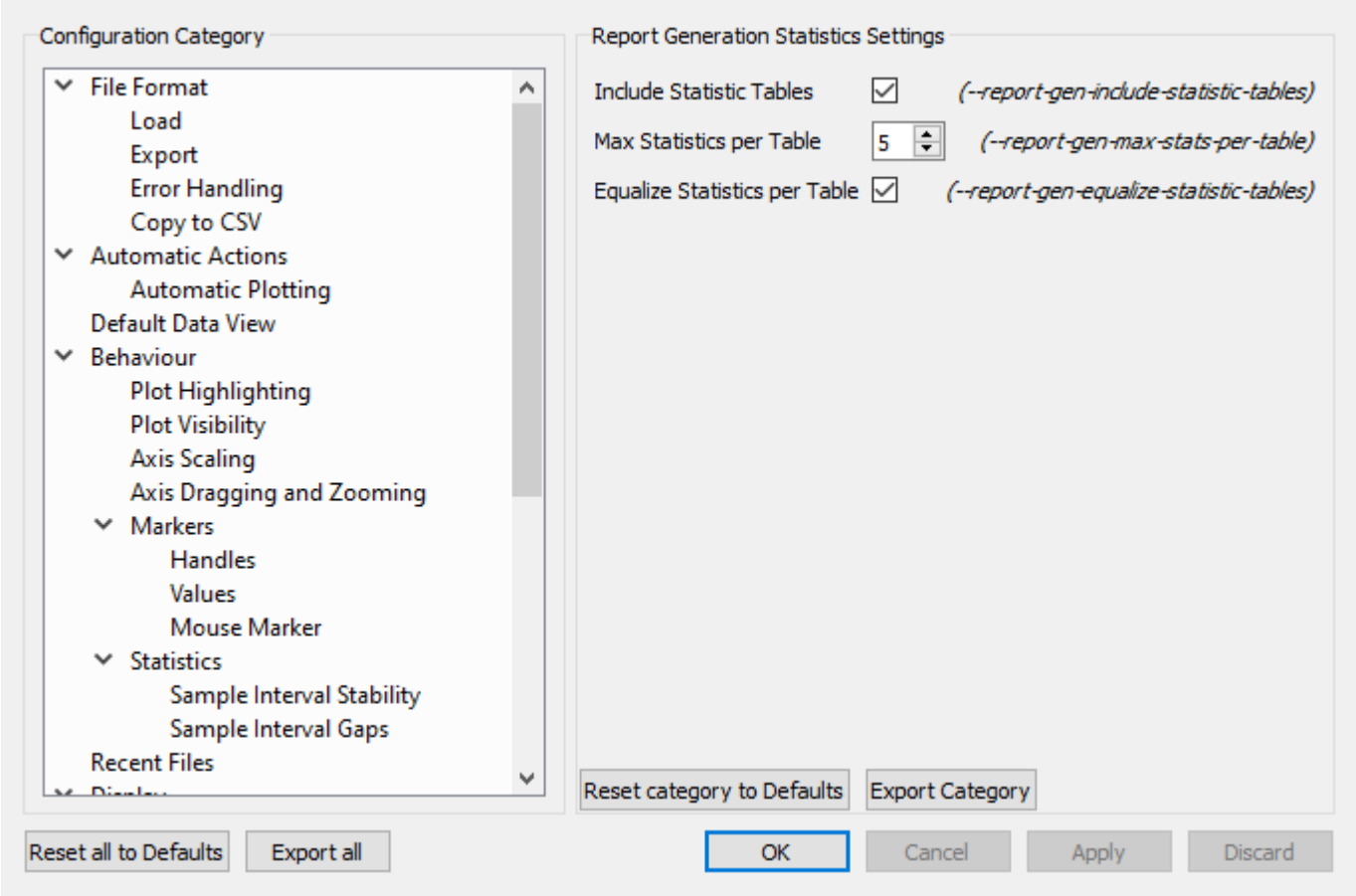


Figure 6.28: Configuration category: Statistics

6.7.9 Statistics

Previous: Markers, section 6.7.8.
Next: Logo, section 6.7.10.
Up: Report Generation, section 6.7.

Figure 6.28 shows the Statistics configuration category.
Category description:
Report Generation Statistics Settings
Category detailed description:
Report Generation Settings related to Statistics

The Statistics category contains the following items:

- Include Statistic Tables: See section 6.7.9.1
- Max Statistics per Table: See section 6.7.9.2
- Equalize Statistics per Table: See section 6.7.9.3

The Statistics category contains no sub categories.

6.7.9.1 Include Statistic Tables

Next: Max Statistics per Table, section 6.7.9.2.
Up: Statistics, section 6.7.9.

Include statistic tables to the document

If this setting is enabled, tables showing all statistics, and their and values, will be added to the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –report-gen-include-statistic-tables, args: bool

6.7.9.2 Max Statistics per Table

Previous: Include Statistic Tables, section 6.7.9.1.
Next: Equalize Statistics per Table, section 6.7.9.3.
Up: Statistics, section 6.7.9.

Maximum number of statistics per table

If there are more than this maximum number of statistics in a table, the table will be split into multiple tables.

Arguments: int : min:1,max:32
Default:

```
5
```

Command line Option (long): –report-gen-max-stats-per-table, args: int

6.7.9.3 Equalize Statistics per Table

Previous: Max Statistics per Table, section 6.7.9.2.
Up: Statistics, section 6.7.9.

Equalize the number of statistics per table

If this setting is enabled then if more than one table is needed to display all the statistics, the number of statistics in each table is kept the same if possible. Otherwise the tables will be made as large as possible.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –report-gen-equalize-statistic-tables, args: bool

6.7.10 Logo

Previous: Statistics, section 6.7.9.
Next: Page Setup, section 6.7.11.
Up: Report Generation, section 6.7.

Figure 6.29 shows the Logo configuration category.

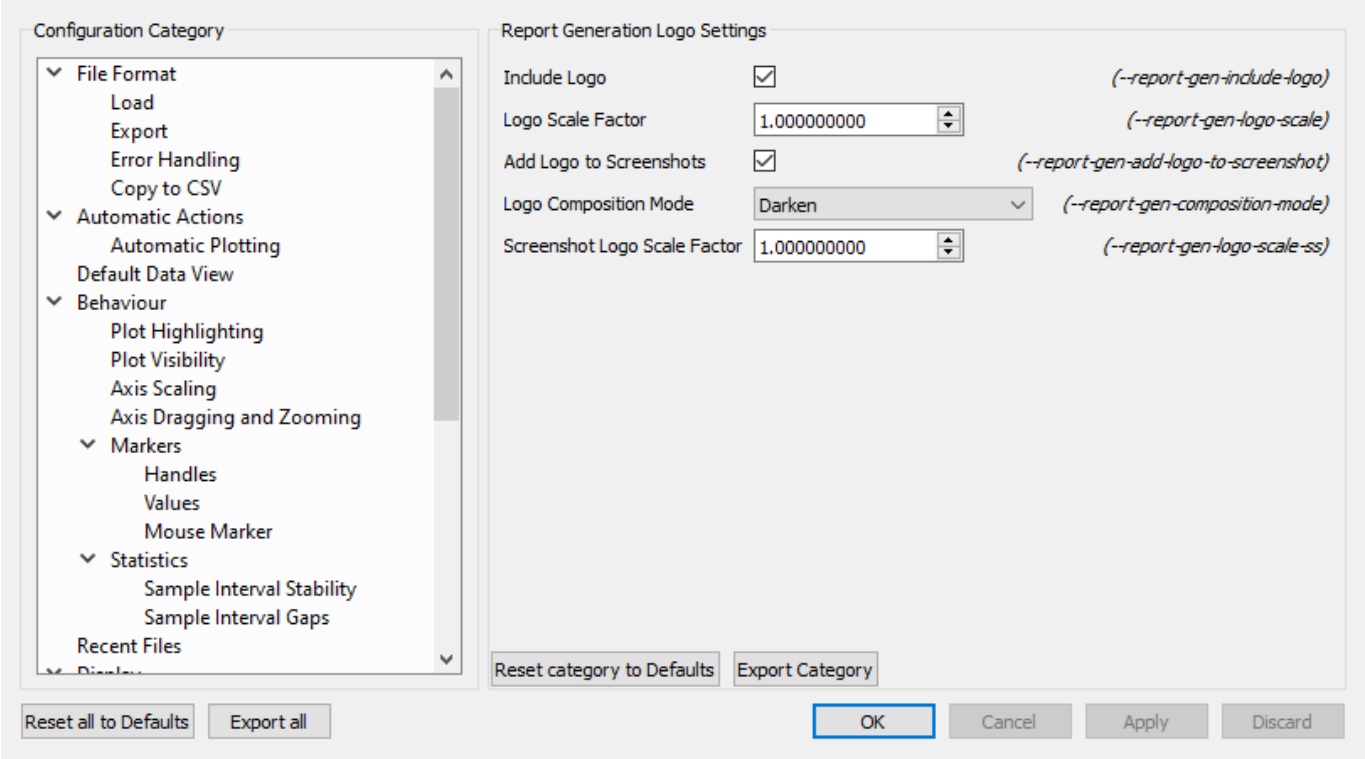


Figure 6.29: Configuration category: Logo

Category description:
Report Generation Logo Settings
Category detailed description:
Report Generation Settings related to the logo

The Logo category contains the following items:

- Include Logo: See section 6.7.10.1
- Logo Scale Factor: See section 6.7.10.2
- Add Logo to Screenshots: See section 6.7.10.3
- Logo Composition Mode: See section 6.7.10.4
- Screenshot Logo Scale Factor: See section 6.7.10.5

The Logo category contains no sub categories.

6.7.10.1 Include Logo

Next: Logo Scale Factor, section 6.7.10.2.
Up: Logo, section 6.7.10.

Include a logo image at the top of the document

If this setting is enabled, the logo image will be printed at the top of the document.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-include-logo, args: bool

6.7.10.2 Logo Scale Factor

Previous: Include Logo, section 6.7.10.1.
Next: Add Logo to Screenshots, section 6.7.10.3.
Up: Logo, section 6.7.10.

Logo Scale Factor

The height and width of the logo are multiplied by the scale factor.

Arguments: double : min:1e-06,max:1e+06
Default:

`1`

Command line Option (long): –report-gen-logo-scale, args: double

6.7.10.3 Add Logo to Screenshots

Previous: Logo Scale Factor, section 6.7.10.2.
Next: Logo Composition Mode, section 6.7.10.4.
Up: Logo, section 6.7.10.

Add the logo image to the plot screenshots

If this setting is enabled, the logo image will be added to the upper right of the plot screenshots.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

`true`

Command line Option (long): –report-gen-add-logo-to-screenshot, args: bool

6.7.10.4 Logo Composition Mode

Previous: Add Logo to Screenshots, section 6.7.10.3.
Next: Screenshot Logo Scale Factor, section 6.7.10.5.
Up: Logo, section 6.7.10.

Logo Composition Mode

The image compositon mode used when merging the logo with the screenshots.

Arguments: enum : SourceOver|DestinationOver|Clear|Source|Destination|SourceIn|DestinationIn|SourceOut|DestinationOut|SourceAtop|D
Default:

`Darken`

Command line Option (long): –report-gen-composition-mode, args: enum

6.7.10.5 Screenshot Logo Scale Factor

Previous: Logo Composition Mode, section 6.7.10.4.
Up: Logo, section 6.7.10.

Screenshot Logo Scale Factor

The height and width of the logos in screenshots are multiplied by the scale factor.

Arguments: double : min:1e-06,max:1e+06
Default:

1

Command line Option (long): –report-gen-logo-scale-ss, args: double

6.7.11 Page Setup

Previous: Logo, section 6.7.10.
Next: Default Info, section 6.7.12.
Up: Report Generation, section 6.7.

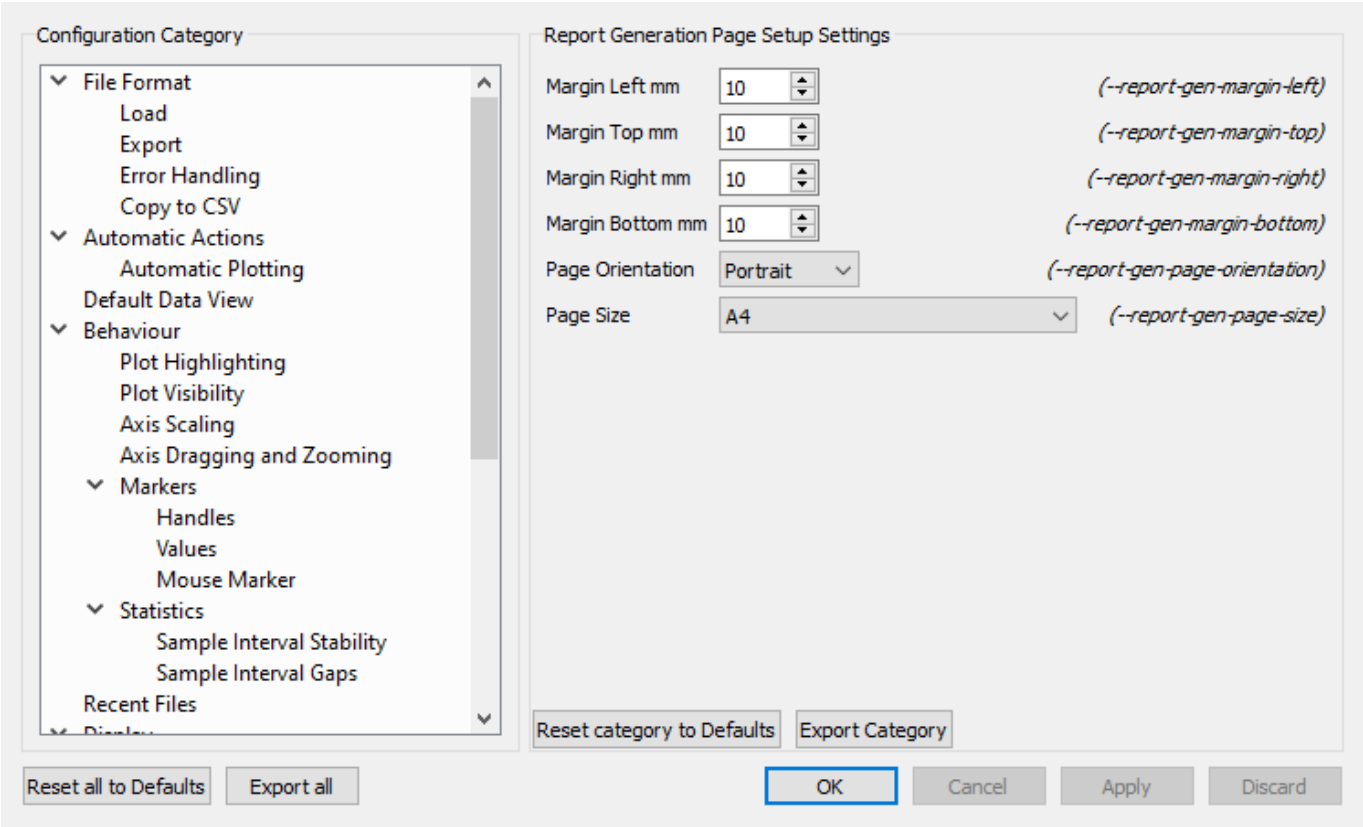


Figure 6.30: Configuration category: Page Setup

Figure 6.30 shows the Page Setup configuration category.
Category description:
Report Generation Page Setup Settings

Category detailed description:
Report Generation Settings related to the Page Setup

The Page Setup category contains the following items:

- Margin Left mm: See section 6.7.11.1
- Margin Top mm: See section 6.7.11.2
- Margin Right mm: See section 6.7.11.3
- Margin Bottom mm: See section 6.7.11.4
- Page Orientation: See section 6.7.11.5
- Page Size: See section 6.7.11.6

The Page Setup category contains no sub categories.

6.7.11.1 Margin Left mm

Next: Margin Top mm, section 6.7.11.2.
Up: Page Setup, section 6.7.11.

Left margin in mm

The left margin in mm when printing.

Arguments: int : min:0,max:99999
Default:

```
10
```

Command line Option (long): –report-gen-margin-left, args: int

6.7.11.2 Margin Top mm

Previous: Margin Left mm, section 6.7.11.1.
Next: Margin Right mm, section 6.7.11.3.
Up: Page Setup, section 6.7.11.

Top margin in mm

The top margin in mm when printing.

Arguments: int : min:0,max:99999
Default:

```
10
```

Command line Option (long): –report-gen-margin-top, args: int

6.7.11.3 Margin Right mm

Previous: Margin Top mm, section 6.7.11.2.
Next: Margin Bottom mm, section 6.7.11.4.
Up: Page Setup, section 6.7.11.

Right margin in mm

The right margin in mm when printing.

Arguments: int : min:0,max:99999
Default:

```
10
```

Command line Option (long): –report-gen-margin-right, args: int

6.7.11.4 Margin Bottom mm

Previous: Margin Right mm, section 6.7.11.3.
Next: Page Orientation, section 6.7.11.5.
Up: Page Setup, section 6.7.11.

Bottom margin in mm

The bottom margin in mm when printing.

Arguments: int : min:0,max:99999
Default:

```
10
```

Command line Option (long): –report-gen-margin-bottom, args: int

6.7.11.5 Page Orientation

Previous: Margin Bottom mm, section 6.7.11.4.
Next: Page Size, section 6.7.11.6.
Up: Page Setup, section 6.7.11.

Page Orientation

The page orientation when printing.

Arguments: enum : Portrait|Landscape
Default:

```
Portrait
```

Command line Option (long): –report-gen-page-orientation, args: enum

6.7.11.6 Page Size

Previous: Page Orientation, section 6.7.11.5.
Up: Page Setup, section 6.7.11.

Page Size

The page orientation when printing.

Arguments: enum : A4|B5|Letter / ANSI A|Legal|Executive (7.5 x 10 in)|A0|A1|A2|A3|A5|A6|A7|A8|A9|B0|B1|B10|B2|B3|B4|B6|B7|B8|B9|Er C5|Envelope US 10|Envelope DL|Folio (8.27 x 13 in)|Ledger / ANSI B|Tabloid / ANSI B|A10|A3 Extra|A4 Extra|A4 Plus|A4 Small|A5 Extra|B5 Extra|JIS B0|JIS B1|JIS B2|JIS B3|JIS B4|JIS B5|JIS B6|JIS B7|JIS B8|JIS B9|JIS B10|ANSI C|ANSI D|ANSI E|Legal Extra|Letter Extra|Letter Plus|Letter Small|Tabloid Extra|Architect A|Architect B|Architect C|Architect D|Architect E|7 x 9 in|8 x 10 in|9 x 11 in|9 x 12 in|10 x 11 in|10 x 13 in|10 x 14 in|12 x 11 in|15 x 11 in|Executive (7.25 x 10.5 in)|Note|Quarto|Statement|Super A|Super B|Postcard|Double Postcard|PRC 16K|PRC 32K|PRC 32K Big|Fan-fold US (14.875 x 11 in)|Fan-fold German (8.5 x 12 in)|Fan-fold German Legal (8.5 x 13 in)|Envelope B4|Envelope B5|Envelope B6|Envelope C0|Envelope C1|Envelope C2|Envelope C3|Envelope C4|Envelope C6|Envelope C65|Envelope C7|Envelope US 9|Envelope US 11|Envelope US 12|Envelope US 14|Envelope Monarch|Envelope Personal|Envelope Chou 3|Envelope Chou 4|Envelope Invite|Envelope Italian|Envelope Kaku 2|Envelope Kaku 3|Envelope PRC 1|Envelope PRC 2|Envelope PRC 3|Envelope PRC 4|Envelope PRC 5|Envelope PRC 6|Envelope PRC 7|Envelope PRC 8|Envelope PRC 9|Envelope PRC 10|Envelope You 4
Default:

```
A4
```

Command line Option (long): –report-gen-page-size, args: enum

6.7.12 Default Info

Previous: Page Setup, section 6.7.11.
Up: Report Generation, section 6.7.

Figure 6.31 shows the Default Info configuration category.
Category description:
Default Information
Category detailed description:
The default information.

The Default Info category contains no items.
The Default Info category contains the following sub categories:

- Default Project Info: See section 6.7.12.1
- Default Data View Info: See section 6.7.12.2

6.7.12.1 Default Project Info

Next: Default Data View Info, section 6.7.12.2.
Up: Default Info, section 6.7.12.

Figure 6.32 shows the Default Project Info configuration category.
Category description:
Default Project Information
Category detailed description:
The default project information.

The Default Project Info category contains the following items:

- Default Project Info Logo Path: See section 6.7.12.1.1
- Default Project Info Title: See section 6.7.12.1.2
- Default Project Info Description: See section 6.7.12.1.3

The Default Project Info category contains no sub categories.

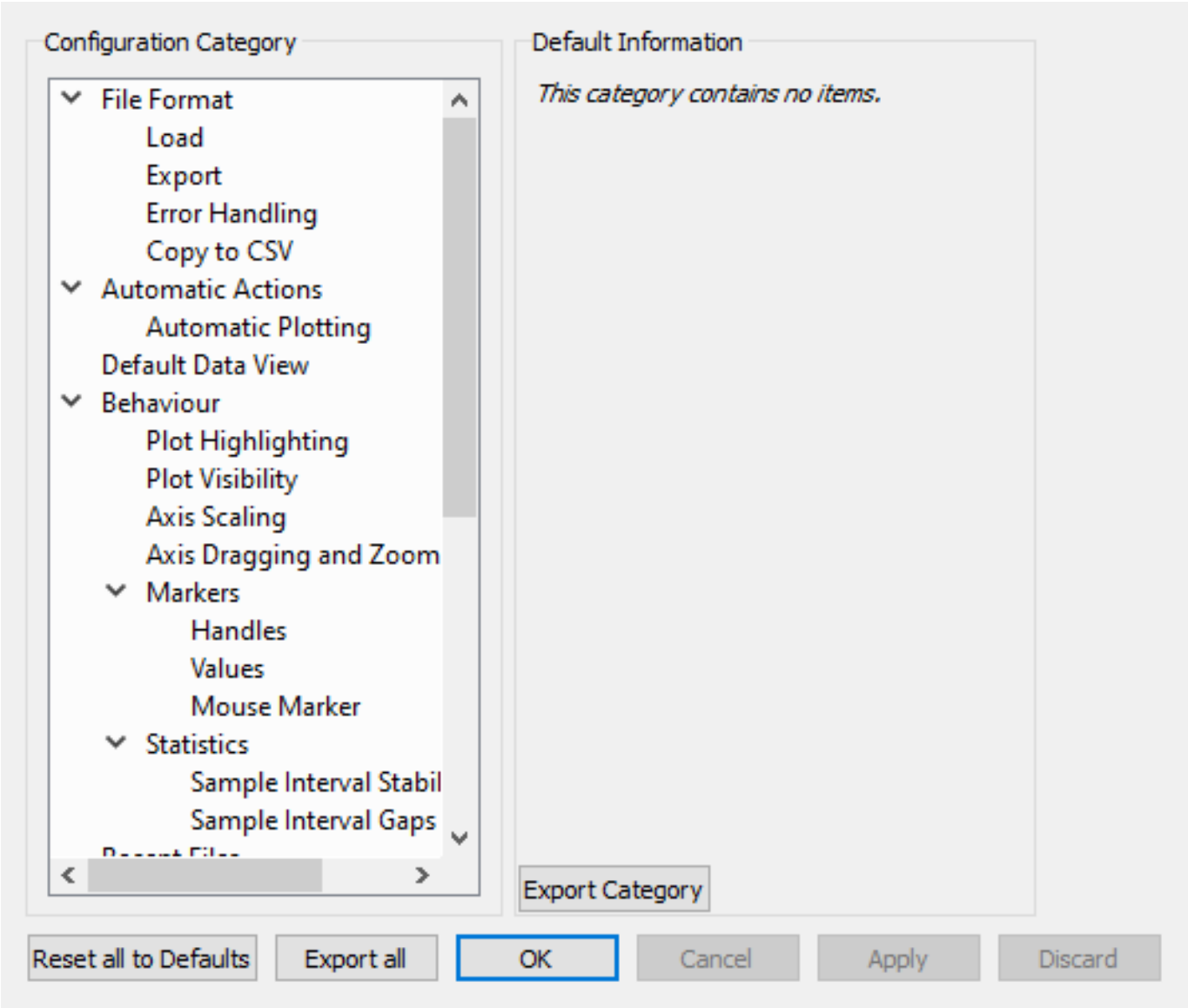


Figure 6.31: Configuration category: Default Info

6.7.12.1.1 Default Project Info Logo Path

Next: Default Project Info Title, section 6.7.12.1.2.
Up: Default Project Info, section 6.7.12.1.

Default Project Info Logo Path

The default path to the project logo.

Arguments: string : string
Default:

`<exe_dir>/HC.png`

Command line Option (long): –default-project-info-logo, args: string

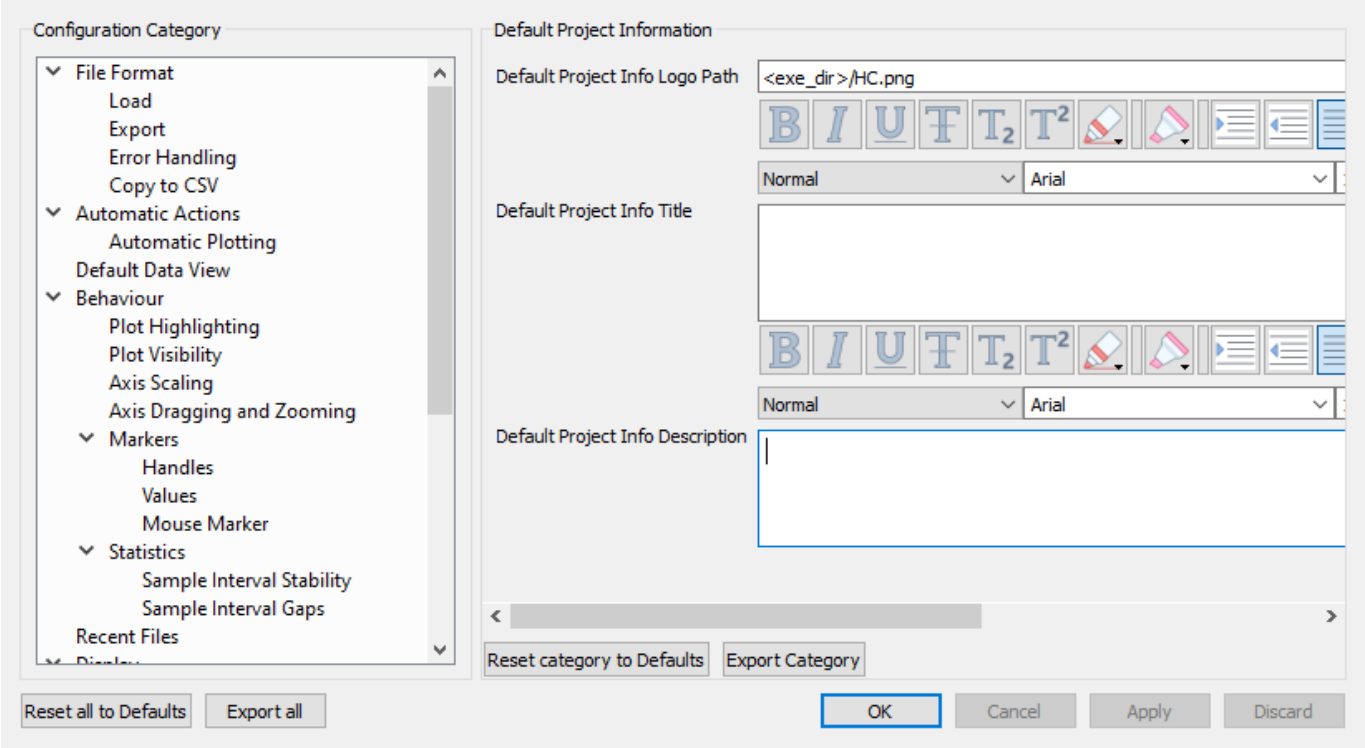


Figure 6.32: Configuration category: Default Project Info

6.7.12.1.2 Default Project Info Title

Previous: Default Project Info Logo Path, section 6.7.12.1.1.
Next: Default Project Info Description, section 6.7.12.1.3.
Up: Default Project Info, section 6.7.12.1.

Default Project Info Title

The default project title.

Arguments: string : string
Default:

Command line Option (long): –default-project-info-title, args: string

6.7.12.1.3 Default Project Info Description

Previous: Default Project Info Title, section 6.7.12.1.2.
Up: Default Project Info, section 6.7.12.1.

Default Project Info Description

The default project description.

Arguments: string : string

Default:

Command line Option (long): –default-project-info-desc, args: string

6.7.12.2 Default Data View Info

Previous: Default Project Info, section 6.7.12.1.
Up: Default Info, section 6.7.12.

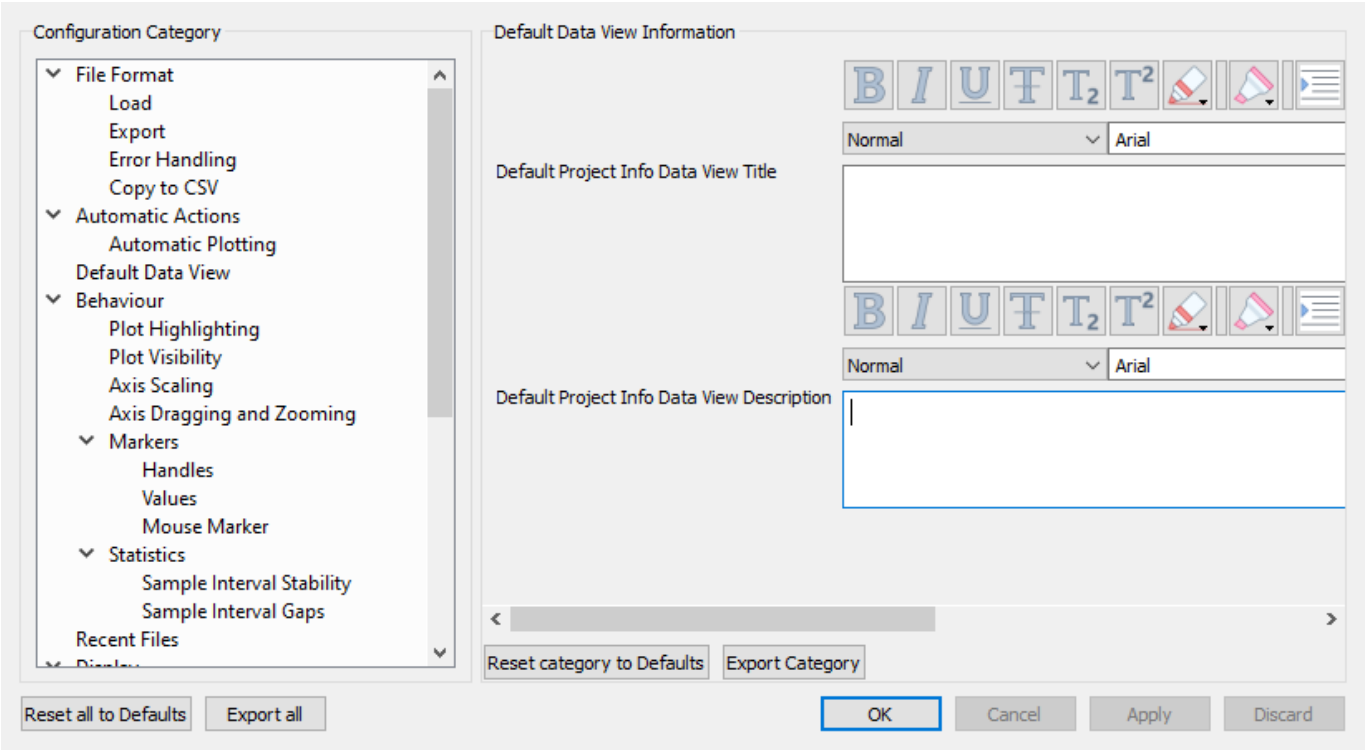


Figure 6.33: Configuration category: Default Data View Info

Figure 6.33 shows the Default Data View Info configuration category.
Category description:
Default Data View Information
Category detailed description:
The default data view information.

The Default Data View Info category contains the following items:

- Default Project Info Data View Title: See section 6.7.12.2.1
- Default Project Info Data View Description: See section 6.7.12.2.2

The Default Data View Info category contains no sub categories.

6.7.12.2.1 Default Project Info Data View Title

Next: Default Project Info Data View Description, section 6.7.12.2.2.
Up: Default Data View Info, section 6.7.12.2.

Default Project Info Data View Title

The default project data view title.

Arguments: string : string
Default:

Command line Option (long): –default-project-info-dv-title, args: string

6.7.12.2.2 Default Project Info Data View Description

Previous: Default Project Info Data View Title, section 6.7.12.2.1.
Up: Default Data View Info, section 6.7.12.2.

Default Project Info Data View Description

The default project data view description.

Arguments: string : string
Default:

Command line Option (long): –default-project-info-dv-description, args: string

6.8 Warnings

Previous: Report Generation, section 6.7.
Next: Performance, section 6.9.
Up: Settings, section 6.

Figure 6.34 shows the Warnings configuration category.
Category description:
Warnings Settings
Category detailed description:
Settings related to warnings

The Warnings category contains the following items:

- Warn if License almost Expired: See section 6.8.1
- License almost Expired Threshold Days: See section 6.8.2

The Warnings category contains no sub categories.

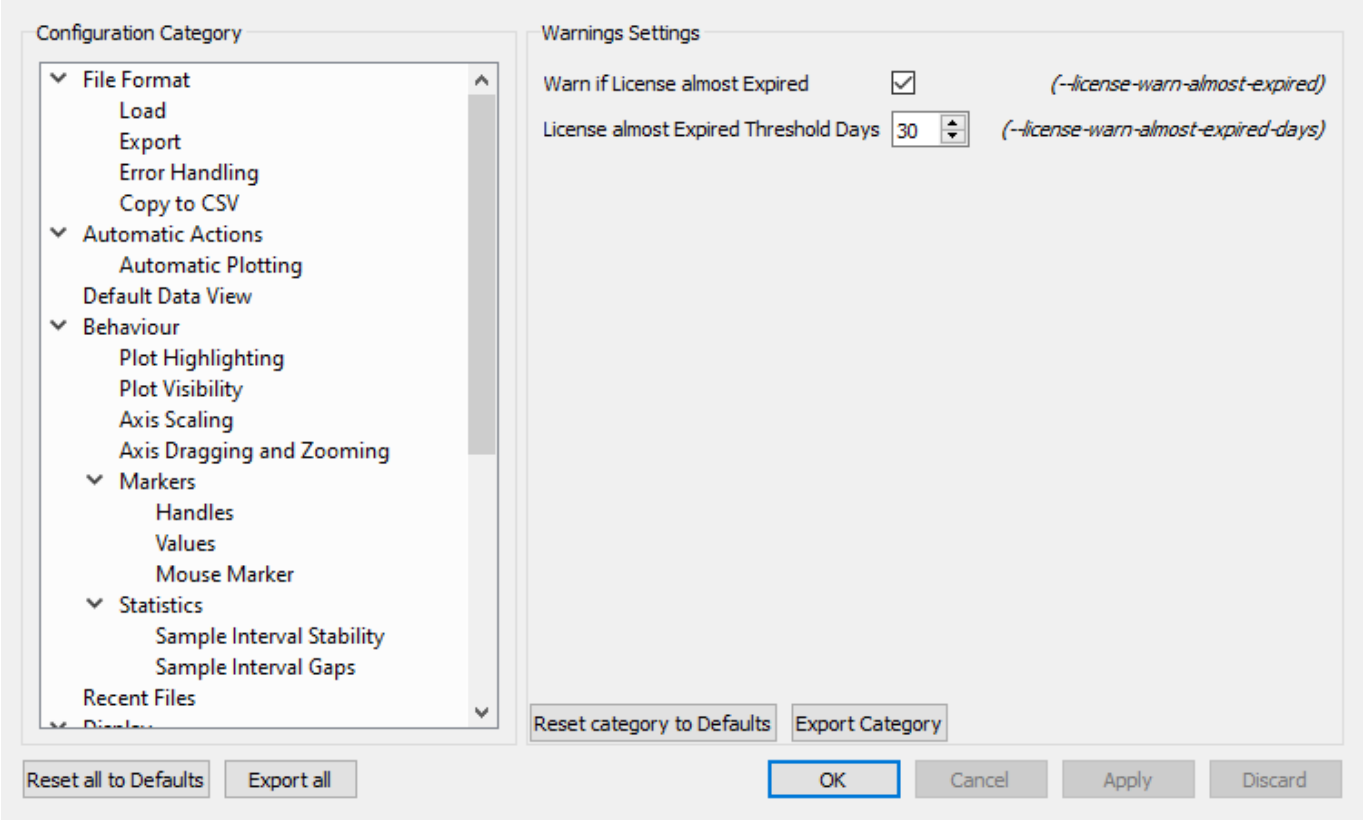


Figure 6.34: Configuration category: Warnings

6.8.1 Warn if License almost Expired

Next: License almost Expired Threshold Days, section 6.8.2.
Up: Warnings, section 6.8.

Show a warning if the license is almost expired

If this setting is enabled, a warning will show if the license is almost expired. This warning is shown at startup.

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –license-warn-almost-expired, args: bool

6.8.2 License almost Expired Threshold Days

Previous: Warn if License almost Expired, section 6.8.1.
Up: Warnings, section 6.8.

License is considered almost expired if days remaining is less than this threshold

The licenses is considered almost expired if the days remaining until the license expires is less than this setting.

Arguments: int : min:1,max:999
Default:

30

Command line Option (long): –license-warn-almost-expired-days, args: int

6.9 Performance

Previous: Warnings, section 6.8.
Up: Settings, section 6.

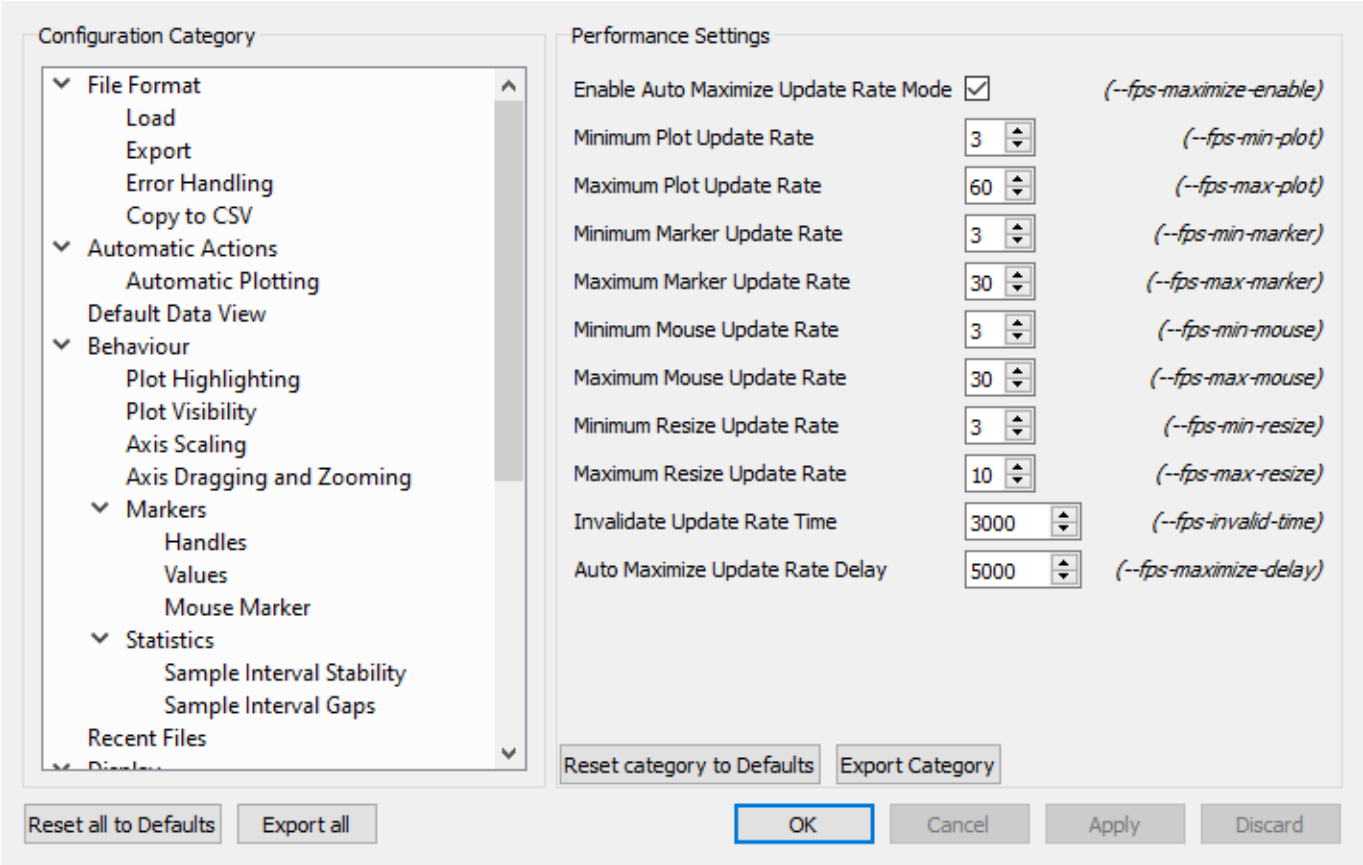


Figure 6.35: Configuration category: Performance

Figure 6.35 shows the Performance configuration category.
Category description:
Performance Settings
Category detailed description:
Settings related to performance

The Performance category contains the following items:

- Enable Auto Maximize Update Rate Mode: See section 6.9.1
- Minimum Plot Update Rate: See section 6.9.2

- Maximum Plot Update Rate: See section 6.9.3
- Minimum Marker Update Rate: See section 6.9.4
- Maximum Marker Update Rate: See section 6.9.5
- Minimum Mouse Update Rate: See section 6.9.6
- Maximum Mouse Update Rate: See section 6.9.7
- Minimum Resize Update Rate: See section 6.9.8
- Maximum Resize Update Rate: See section 6.9.9
- Invalidate Update Rate Time: See section 6.9.10
- Auto Maximize Update Rate Delay: See section 6.9.11

The Performance category contains no sub categories.

6.9.1 Enable Auto Maximize Update Rate Mode

Next: Minimum Plot Update Rate, section 6.9.2.
Up: Performance, section 6.9.

Automatically enable Maximize Update Rate mode when update rates are too low

If this setting is enabled, Maximize Update Rate mode will be automatically enabled if update rates are too low for too long. If this setting is disabled, Maximize Update Rate mode will not be automatically enabled (It can still be enabled manually).

Arguments: bool : true|false|on|off|yes|no|1|0
Default:

```
true
```

Command line Option (long): –fps-maximize-enable, args: bool

6.9.2 Minimum Plot Update Rate

Previous: Enable Auto Maximize Update Rate Mode, section 6.9.1.
Next: Maximum Plot Update Rate, section 6.9.3.
Up: Performance, section 6.9.

Minimum desired plot update rate

This setting specified the minimum desired update rate when drawing plots.

Arguments: int : min:1,max:99
Default:

3

Command line Option (long): –fps-min-plot, args: int

6.9.3 Maximum Plot Update Rate

Previous: Minimum Plot Update Rate, section 6.9.2.
Next: Minimum Marker Update Rate, section 6.9.4.
Up: Performance, section 6.9.

Maximum desired plot update rate

This setting specified the maximum desired update rate when drawing plots.

Arguments: int : min:1,max:99
Default:

60

Command line Option (long): –fps-max-plot, args: int

6.9.4 Minimum Marker Update Rate

Previous: Maximum Plot Update Rate, section 6.9.3.
Next: Maximum Marker Update Rate, section 6.9.5.
Up: Performance, section 6.9.

Minimum desired marker update rate

This setting specified the minimum desired update rate when drawing markers.

Arguments: int : min:1,max:99
Default:

3

Command line Option (long): –fps-min-marker, args: int

6.9.5 Maximum Marker Update Rate

Previous: Minimum Marker Update Rate, section 6.9.4.
Next: Minimum Mouse Update Rate, section 6.9.6.
Up: Performance, section 6.9.

Maximum desired marker update rate

This setting specified the maximum desired update rate when drawing markers.

Arguments: int : min:1,max:99
Default:

30

Command line Option (long): –fps-max-marker, args: int

6.9.6 Minimum Mouse Update Rate

Previous: Maximum Marker Update Rate, section 6.9.5.
Next: Maximum Mouse Update Rate, section 6.9.7.
Up: Performance, section 6.9.

Minimum mouse plot update rate

This setting specified the minimum desired update rate when handling mouse events.

Arguments: int : min:1,max:99
Default:

3

Command line Option (long): –fps-min-mouse, args: int

6.9.7 Maximum Mouse Update Rate

Previous: Minimum Mouse Update Rate, section 6.9.6.
Next: Minimum Resize Update Rate, section 6.9.8.
Up: Performance, section 6.9.

Maximum mouse plot update rate

This setting specified the maxiumum desired update rate when handling mouse events.

Arguments: int : min:1,max:99
Default:

30

Command line Option (long): –fps-max-mouse, args: int

6.9.8 Minimum Resize Update Rate

Previous: Maximum Mouse Update Rate, section 6.9.7.
Next: Maximum Resize Update Rate, section 6.9.9.
Up: Performance, section 6.9.

Minimum desired resize update rate

This setting specified the minimum desired update rate when resizing plots.

Arguments: int : min:1,max:99
Default:

3

Command line Option (long): –fps-min-resize, args: int

6.9.9 Maximum Resize Update Rate

Previous: Minimum Resize Update Rate, section 6.9.8.
Next: Invalidate Update Rate Time, section 6.9.10.
Up: Performance, section 6.9.

Maximum desired resize update rate

This setting specified the maximum desired update rate when resizing plots.

Arguments: int : min:1,max:99
Default:

10

Command line Option (long): –fps-max-resize, args: int

6.9.10 Invalidate Update Rate Time

Previous: Maximum Resize Update Rate, section 6.9.9.
Next: Auto Maximize Update Rate Delay, section 6.9.11.
Up: Performance, section 6.9.

Time, in milliseconds, before update rates are invalidated

If the reported update rates do not change for the specified amount of milliseconds, they are invalidated because they are too old.

Arguments: int : min:100,max:100000
Default:

3000

Command line Option (long): –fps-invalid-time, args: int

6.9.11 Auto Maximize Update Rate Delay

Previous: Invalidate Update Rate Time, section 6.9.10.
Up: Performance, section 6.9.

Time, in milliseconds, before Maximize Update Rate mode is enabled

If update rates are below the desired minimums, Maximize Update Rate mode is automatically enabled after the specified amount of milliseconds. The delay is reset everytime the update rate are high enough again.

Arguments: int : min:1000,max:100000
Default:

5000

Command line Option (long): –fps-maximize-delay, args: int

Chapter 7

Text File Format

Previous: Settings, section 6.

This chapter describes the format of text files that can be opened by HC-Plot. The format used is a text file format similar to a comma separated file (CSV) but with extensions.

A file consists of a number of lines. Each line consists of a number of floating point numbers, e.g. 5, 3.4 or 5.67e5, separated by a separator character (usually *","* or *";"*). This character is normally automatically detected but it can be configured manually. *Note that the space character is allowed.* Each number in the line is the value for that *column* so in that sense, the file consists of rows and columns of numbers.
Optionally, info (or header) lines may be added. Normally the file contains exactly one info line at the top of the file. This line describes the name of the columns of the lines that follow. An info line consists of a number of column descriptions separated by a separator character (usually *","* or *";"*). This character is normally automatically detected but it can be configured manually. *Note that the space character is allowed.* Each column in the header describes the matching column of numbers in the following lines.

7.1 Comments

Next: Columns Names and Descriptions, section 7.2.
Up: Text File Format, section 7.

A line starting with a "$" *and* a space (" ") is a comment line and will be ignored.

7.2 Columns Names and Descriptions

Previous: Comments, section 7.1.
Next: Timestamps, section 7.3.
Up: Text File Format, section 7.

When an info (or header) line is used, each column can have a name and an optional description. The name and the description are separated by an auto detected, configurable separator character. Usually this character is a space (" ").
If the separator character, e.g a space, is required in the *name* then quoting is required. It is possible to surround the name (and/or the description) with matching quote characters, i.e. **"** or **'** This way e.g. spaces can be used as part of the name. Characters can also be *escaped* using the escape character:
to force them to be part of the name (or description). For example, to include a quote character in the name use: \"

Other applications, such as Microsoft Excel, may not support descriptions. To make sure those applications do not get confused when reading a text file with this format, it is possible to surround the name *and* decription with quotes so those applications

see the name and description as a single column. HC-Plot will ignore these outer quotes and will still recognize the descriptions. Nested quoting with different quote characters may be used to still allow the separator character as part of the name.
For example a description with nested quotes *and* escaped characters could be: '"Name With Quote:\"' 'Example Description"'

7.3 Timestamps

Previous: Columns Names and Descriptions, section 7.2.
Next: Whitespace, section 7.4.
Up: Text File Format, section 7.

Each row *must* have a timestamp. If nothing is specified in the info line, it is assumed that the first column contains the timestamp in seconds or milliseconds. A simple attempt is made to automatically detect whether it is milliseconds by looking at the size of the number. If it is larger than a certain threshold, milliseconds are assumed, otherwise seconds are assumed.
Alternatively special column names (or meta-names) may be used to mark columns as having a human readable date or time. Each special name always starts with the meta character: "$"
The following special names are supported:

$Date Indicates that this column contains human readable dates with the *default (configurable)* month, day, year order such as 08/22/2015

$Time Indicates that this column contains human readable times such as: 14:00:53.018

$DateTime Indicates that this column contains human readable dates followed by times with the *default (configurable)* month, day, year order such as 08/22/2015 The dates and times can be separated by any number of non-digit characters

$TimeDate Indicates that this column contains human readable times followed by dates with the *default (configurable)* month, day, year order such as 08/22/2015 The times and dates can be separated by any number of non-digit characters

$Date_YMD Indicates that this column contains human readable dates in forced Year, Month, Day order such as 2015/22/08

$Date_YDM Indicates that this column contains human readable dates in forced Year, Day, Month order such as 2015/08/22

$Date_MYD Indicates that this column contains human readable dates in forced Month, Year, Day order such as 08/2015/22

$Date_MDY Indicates that this column contains human readable dates in forced Month, Day, Year order such as 08/22/2015

$Date_DYM Indicates that this column contains human readable dates in forced Day, Year, Month order such as 22/2015/08

$Date_DMY Indicates that this column contains human readable dates in forced Day, Month, Year order such as 22/08/2015

$AbsoluteMs Indicates that this column contains an absolute timestamp in milliseconds. Absolute is relative to the UNIX epoch. The milliseconds are always positive whole numbers i.e. positive integers.

$RelativeMs Indicates that this column contains an relative timestamp in milliseconds. Relative is relative to the last modification time of the log file. The milliseconds are always positive **or negative** whole numbers i.e. integers.

$AbsoluteSec Indicates that this column contains an absolute timestamp in seconds. Absolute is relative to the UNIX epoch. The seconds are always positive floating point values.

$RelativeSec Indicates that this column contains an relative timestamp in seconds. Relative is relative to the last modification time of the log file. The seconds are always positive **or negative** floating point values.

The various date specifiers, such as _YMD, can also be used with $DateTime and $TimeDate.
Note that various separators may be used for the date and time fields, see section 7.6, for details.

As mentioned before, if none of these meta names are used to specify the date and time columns, it is assumed that the first column contains the time information.
In this case, numbers in the first column are interpreted as folows:

- If a value is a positive integer and > 31576176000 (1-1-1971) it is considered an **absolute millisecond** timestamp since the epoch.
- If a value is a positive integer and <= 31576176000 it is considered a timestamp in **seconds relative** to the last modification time of the file.
- If a value is a positive floating point value it is is considered a timestamp in **seconds relative** to the last modification time of the file.
- If a value is a **negative** integer it is considered a timestamp in **seconds relative** to the last modification time of the file.
- If a value is a **negative** floating point value it is considered a timestamp in **seconds relative** to the last modification time of the file.

7.4 Whitespace

Previous: Timestamps, section 7.3.
Next: Example, section 7.5.
Up: Text File Format, section 7.

Any whitespace without meaning is ignored, i.e. any amount of whitespace may be added to layout the file as desired. See section 7.6, for details.

7.5 Example

Previous: Whitespace, section 7.4.
Next: Grammar, section 7.6.
Up: Text File Format, section 7.

An example of a file is:

```
$Date_MDY, $Time, "Demo.S1 Speed", "Demo.T1 Temperature", "Demo.P1 Pressure A", "Demo.P2 Pressure B"
11-15-2019, 13:48:22.373, 14574.373,  489.899994, 11.3796654, 11.4854603
11-15-2019, 13:48:22.403, 14573.6855, 489.899994, 11.3489218, 11.4800348
11-15-2019, 13:48:22.433, 14572.7461, 489.899994, 11.3362627, 11.4737053
11-15-2019, 13:48:22.463, 14573.1533, 489.899994, 11.3489218, 11.4737053
11-15-2019, 13:48:22.494, 14572.9326, 489.899994, 11.3887081, 11.4845562
11-15-2019, 13:48:22.523, 14572.4189, 489.899994, 11.3082323, 11.4926939
11-15-2019, 13:48:22.553, 14573.2109, 489.899994, 11.3127527, 11.4737053
11-15-2019, 13:48:22.583, 14573.0879, 489.899994, 11.3724318, 11.493598
11-15-2019, 13:48:22.613, 14573.9434, 490,        11.3507309, 11.4809389
11-15-2019, 13:48:22.643, 14574.4297, 490,        11.3407841, 11.4845562
11-15-2019, 13:48:22.673, 14575.2949, 490,        11.2856264, 11.4646626
11-15-2019, 13:48:22.703, 14574.6846, 490,        11.3245077, 11.4737053
11-15-2019, 13:48:22.733, 14574.2939, 490,        11.4076967, 11.4718971
11-15-2019, 13:48:22.763, 14572.8848, 490,        11.3489218, 11.4782267
11-15-2019, 13:48:22.793, 14573.5391, 490,        11.351635,  11.4691839
11-15-2019, 13:48:22.823, 14572.8633, 490,        11.3245077, 11.4737053
11-15-2019, 13:48:22.853, 14573.0078, 490,        11.3416882, 11.4691839
```

7.6 Grammar

Previous: Example, section 7.5.
Up: Text File Format, section 7.

$<file>$ ::= $<lines>$ **end-of-file**
$<lines>$ ::= $<wsline>$ **newline** $<lines>$ | $<wsline>$
$<wsline>$ ::= $<whitespace>$ $<line>$ $<whitespace>$
$<line>$ ::= $<infoLine>$ | $<dataLine>$ | ϵ

$<infoLine>$ ::= $<infoCols>$
$<infoCols>$ ::= $<infoCol>$ $<infoColSep>$ $<infoCols>$ | $<infoCol>$
$<infoColSep>$ ::= $<whitespace>$ $<infoColSepChar>$ $<whitespace>$
$<infoColSepChar>$ ::= **auto-detected and configurable character, usually: ',' or ';' or ' '**
$<infoCol>$ ::= $<infoName>$ $<infoOptDescription>$
$<infoOptDescription>$ ::= $<infoDescriptionSepChar>$ $<infoDescription>$ | ϵ
$<infoDescriptionSepChar>$ ::= **auto-detected and configurable character, usually: ' '**
$<infoName>$ ::= $<text>$ | (**"$"** $<infoMetaName>$) | (**"$" " "** $<comment>$)
$<infoDescription>$ ::= $<text>$
$<infoMetaName>$ ::= **"Time"** | **"Date"** | **"DateTime"** | **"TimeDate"** | **"AbsoluteMs"** | **etc...(case insensitive)**
$<comment>$ ::= $<textChar>$ $<comment>$ | ϵ

$<text>$ ::= $<textChar>$ $<text>$ | $<textChar>$
$<textChar>$ ::= $<quoteChar>$ | $<escapeChar>$ | $<nonSpecialChar>$
$<quoteChar>$ ::= **"""** | **""**
$<escapeChar>$ ::= **"\"** $<anyChar>$
$<nonSpecialChar>$ ::= **any, non-quote, non-escape character**
$<anyChar>$ ::= **any, including quote or escape, character**

$<dataLine>$ ::= $<metaCols>$ $<dataCols>$
$<metaCols>$ ::= $<metaCol>$ $<colSep>$ $<metaCols>$ | ϵ
$<dataCols>$ ::= $<dataCol>$ $<colSep>$ $<dataCols>$ | $<dataCol>$
$<colSep>$ ::= $<whitespace>$ $<colSepChar>$ $<whitespace>$
$<colSepChar>$ ::= **auto-detected and configurable character, usually: ',' or ';' or ' '**

$<metaCol>$ ::= $<metaTime>$ | $<metaDate>$
$<metaTime>$ ::= $<digits>$ $<timeSep>$ $<digits>$ $<metaTimeS>$
$<metaTimeS>$ ::= $<timeSep>$ $<digits>$ $<metaTimeMS>$ | ϵ
$<metaTimeMS>$ ::= $<timeSep>$ $<digits>$ | ϵ
$<timeSep>$ ::= **":"** | **"."** | **"-"** | **"/"** | **"\"**
$<metaDate>$ ::= $<digits>$ $<dateSep>$ $<digits>$ $<dateSep>$ $<digits>$
$<dateSep>$ ::= **"-"** | **"/"** | **"\"** | **":"** | **"."**

$<dataCol>$ ::= $<floatingPointNumber>$

$<floatingPointNumber>$ ::= $<sign>$ $<digits>$ $<fraction>$ $<exponent>$
$<fraction>$ ::= $<fractionChar>$ $<digits>$ | ϵ
$<fractionChar>$ ::= **auto-detected and configurable character, usually: '.' or ','**
$<exponent>$ ::= (**"e"** | **"E"**) $<sign>$ $<digits>$ | ϵ
$<digits>$ ::= $<digit>$ $<digits>$ | $<digit>$
$<sign>$ ::= **"-"** | **"-"** | ϵ
$<digit>$ ::= **"0"** | **"1"** | **"2"** | **"3"** | **"4"** | **"5"** | **"6"** | **"7"** | **"7"** | **"9"**
$<whitespace>$ ::= $<whitespaceChar>$ $<whitespace>$ | ϵ
$<whitespaceChar>$ ::= **" "** | **TAB**

Index

–auto-delete-axes, 177
–auto-delete-groups, 178
–auto-delete-plots, 178
–auto-plot-case-sensitive, 170
–auto-plot-first-tags, 168
–auto-plot-pattern-syntax, 170
–auto-plot-stop-at-first, 169
–auto-plot-tag, 168
–auto-plot-trigger, 169
–auto-plot-use-reg-ex, 169
–auto-save-to-new-project, 179
–auto-select-axes-for-plot, 177
–axis-src-fmt, 211
–binary-axis-lower, 185
–binary-axis-upper, 186
–connected-marker-radius, 193
–copy-csv-hheader, 165
–copy-csv-separator, 165
–copy-csv-vheader, 166
–data-axis-fmt, 210
–data-axis-fmt-binary, 210
–datasrc-fmt, 209
–default-axes-visible, 174
–default-axis-color, 175
–default-axis-grid-color, 175
–default-data-visible, 173
–default-datasets-visible, 171
–default-grid-show-mode, 175
–default-legend-visible, 174
–default-markers-visible, 172
–default-plots-visible, 173
–default-project-info-desc, 237
–default-project-info-dv-description, 238
–default-project-info-dv-title, 238
–default-project-info-logo, 235
–default-project-info-title, 236
–default-show-datapoints, 174
–default-statistics, 176
–default-statistics-visible, 173
–default-tags-visible, 172
–default-view-color, 174
–default-view-visible, 172
–detect-binary-axes, 185
–disable-error-10, 159
–disable-error-11, 159
–disable-error-12, 160
–disable-error-13, 160
–disable-error-14, 160
–disable-error-15, 160
–disable-error-16, 161
–disable-error-17, 161
–disable-error-18, 161
–disable-error-19, 162
–disable-error-20, 162
–disable-error-21, 162
–disable-error-22, 163
–disable-error-23, 163
–disable-error-24, 163
–disable-error-25, 163
–disable-error-26, 164
–disable-error-4, 157
–disable-error-5, 157
–disable-error-6, 158
–disable-error-7, 158
–disable-error-8, 158
–disable-error-9, 159
–disable-info-about-hidden-plots, 183
–disable-mouse-markers-when-plot-hidden, 183
–drag-none-selected, 190
–drag-selected-only, 190
–exp-scale-base, 188
–export-col-sep, 152
–export-combine-tag-desc, 152
–export-date-fmt, 153
–export-dec-pt, 153
–export-hdr-col-sep, 152
–export-inf-to-nan, 154
–export-skip-inf, 154
–export-skip-nan, 154
–export-tag-descs, 152
–export-text-enc, 153
–export-timestamp-fmt, 154
–fps-invalid-time, 244
–fps-max-marker, 242

–fps-max-mouse, 243
–fps-max-plot, 242
–fps-max-resize, 244
–fps-maximize-delay, 244
–fps-maximize-enable, 241
–fps-min-marker, 242
–fps-min-mouse, 243
–fps-min-plot, 241
–fps-min-resize, 243
–hide-marker-item-when-all-plots-hidden, 184
–hide-marker-item-when-any-plot-hidden, 183
–hide-point-markers-when-plot-hidden, 182
–license-warn-almost-expired, 239
–license-warn-almost-expired-days, 240
–linear-scale-step, 188
–load-auto-detect, 147
–load-col-sep, 148
–load-combine-tag-desc, 148
–load-date-fmt, 149
–load-dec-pt, 149
–load-hdr-col-sep, 148
–load-inf-to-nan, 150
–load-tags-descs, 148
–load-text-enc, 149
–load-timestamp-fmt, 150
–marker-collision-x, 192
–marker-collision-y, 192
–marker-handle-alt-pos, 194
–marker-handle-alt-pos-focus-selected, 196
–marker-handle-alt-pos-focused, 195
–marker-handle-alt-pos-selected, 196
–marker-handle-default-pos, 194
–marker-handle-default-pos-focus-selected, 196
–marker-handle-default-pos-focused, 195
–marker-handle-default-pos-selected, 195
–marker-radius, 192
–marker-value-alt-pos, 198
–marker-value-alt-pos-focus-selected, 200
–marker-value-alt-pos-focused, 199
–marker-value-alt-pos-selected, 199
–marker-value-default-pos, 198
–marker-value-default-pos-focus-selected, 200
–marker-value-default-pos-focused, 198
–marker-value-default-pos-selected, 199
–marker-window-add-pos, 178
–max-error-count, 156
–max-error-type-count, 157
–max-recent-datasets, 208
–max-recent-projects, 208
–maximize-first-dataview, 179
–mouse-marker-x-alt-pos, 202
–mouse-marker-x-default-pos, 201
–mouse-marker-y-alt-pos, 202
–mouse-marker-y-default-pos, 202
–plot-fmt, 210
–plot-highlight-default, 180
–plot-highlight-fill-alpha, 181
–plot-highlight-line-width, 181
–report-gen-add-logo-to-screenshot, 230
–report-gen-composition-mode, 230
–report-gen-equalize-marker-tables, 226
–report-gen-equalize-statistic-tables, 228
–report-gen-include-dataview-description, 224
–report-gen-include-dataview-title, 223
–report-gen-include-logo, 230
–report-gen-include-marker-tables, 226
–report-gen-include-plot-screenshots, 224
–report-gen-include-plots-tables, 224
–report-gen-include-project-description, 223
–report-gen-include-project-title, 223
–report-gen-include-statistic-tables, 228
–report-gen-logo-scale, 230
–report-gen-logo-scale-ss, 231
–report-gen-margin-bottom, 233
–report-gen-margin-left, 232
–report-gen-margin-right, 233
–report-gen-margin-top, 232
–report-gen-max-markers-per-table, 226
–report-gen-max-stats-per-table, 228
–report-gen-page-orientation, 233
–report-gen-page-size, 234
–report-gen-resize-plots, 225
–sample-interval-gap-threshold, 206
–sample-interval-stability-sensitivity, 205
–scale-data-axis-default, 186
–scale-plot-add, 187
–scale-plot-move, 187
–scale-plot-remove, 187
–scale-time-axis-default, 186
–statistic-deviation-circle-max-size, 205
–statistic-num-deviation-lines, 204
–statistic-pop-or-sample, 203
–time-axis-fmt, 211
–timesrc-fmt, 210
–timestamp-fmt, 213
–timestamp-fmt-dw, 220
–timestamp-fmt-dw-date, 221
–timestamp-fmt-dw-time, 221
–timestamp-fmt-nl, 213
–timestamp-fmt-var-day, 216
–timestamp-fmt-var-hour, 217
–timestamp-fmt-var-min, 217
–timestamp-fmt-var-month, 215
–timestamp-fmt-var-ms, 219
–timestamp-fmt-var-sec, 218
–timestamp-fmt-var-year, 215

–zoom-none-selected, 190
–zoom-selected-only, 189
-d, 149
-e, 149

abort, 60
abort load, 60, 61
about..., 143
add, 83, 84
add axis, 84
add dx line, 94
add dy line, 94
add dy/dx line, 94
add dy/dx rectangle, 93, 94
add group, 84
add line marker at begin, 91
add line marker at center, 91
add line marker at end, 92
add line marker at mouse pos, 92
add logo to screenshots, 230
add note, 93
add point marker at mouse pos, 92
add statistic, 133
algorithm, 46
algorithms, 47
align markers, 91, 100
align markers and equalize range, 100
align markers but keep range, 100
allow drag with no selected axes, 190
allow zoom with no selected axes, 190
alternative mouse marker x-axis value position, 201
alternative mouse marker y-axis value position, 202
always show, 119
assign, 81, 82
assign axis to group, 82
assign data source to axis, 82
assigned source, 22, 23
assigned tag selection, 43
assigned tags selection, 43
attempt auto detect file format, 147
auto, 119
auto delete axes after source removal, 177
auto delete groups after axis removal, 178
auto maximize first data view window, 179
auto maximize update rate delay, 244
auto plot first n tags, 168
auto plot reg ex case sensitive, 169
auto plot reg ex pattern syntax, 170
auto plot reg ex stop at first match, 169
auto plot specific tag, 168
auto plot trigger moment, 168
auto plot use reg ex, 169
auto scale after add plot, 187
auto scale after move plot to new axis, 187
auto scale after remove plot, 187
auto scale data axis default, 186
auto scale time axis default, 186
auto select axes for selected plots, 177
automatic actions, 166
automatic plotting, 167
average, 47
average absolute deviation, 48
average sample interval, 52
axes, 24, 31, 41, 42, 97, 125, 126
axes context menu, 25, 43
axes interaction, 31
axes selection, 31, 36, 40, 42
axes sub-window visible, 173
axis, 23, 30, 42
axis color, 175
axis data, 23, 42
axis dragging and zooming, 188
axis grid color, 175
axis horizontal, 23, 42
axis leading, 23
axis scaling, 184
axis selection, 36, 40, 42
axis source count display fmt, 211
axis time, 23, 42
axis type selection, 43
axis vertical, 23, 42

background color, 174
behaviour, 176
best fit range, 101
binary axis default name display fmt, 210
binary axis range lower, 185
binary axis range upper, 186

cascade, 139
center on marker, 101
change color, 116
clear tag errors, 63, 64
close, 141
close all, 141, 142
close project, 62
coefficient of variation based on entire population, 51
color, 115, 116
column separator, 148, 152
columns names and descriptions, 245
combine tags with descriptions, 148, 152
comment, 63
comments, 245
configure shortcuts and toolbars..., 135, 136
contact us..., 143
context menu, 27, 29, 37, 38, 41, 43, 46, 54

context menu axes, 25, 43
context menu data, 25, 38
context menu datasets, 25, 28
context menu markers, 25, 46
context menu plots, 25, 41
context menu statistics, 25, 54
context menu tags, 25, 30
context menu view, 25, 37
context menus, 25
context sensitive delete, 55
copy, 73, 87, 121, 122, 132–134
copy as csv, 73, 87, 122, 132, 133
copy data table to clipboard, 122
copy datasets table to clipboard, 73
copy markers table to clipboard, 132
copy statistics table to clipboard, 133
copy tags table to clipboard, 87
copy to clibboard, 73, 87, 122, 132, 133
copy to csv, 164
covariance based on entire population, 51
create plot, 74, 75, 77, 78
create project report..., 63
create scatter plot, 79
csv, 73, 87, 122, 132, 133

data, 24, 37, 120
data axis, 23, 42, 79, 82, 84
data axis default name display fmt, 210
data context menu, 25, 38
data point, 23, 119
data range, 24, 74
data selection, 38
data source, 22, 81–83, 85, 127
data source display fmt, 209
data sub-window visible, 173
data view, 21, 58
data view status bar, 25
data window date only text format, 220
data window time only text format, 221
data window timestamp text format, 220
dataset, 22
dataset selection, 27
datasets, 24, 27, 64
datasets context menu, 25, 28
datasets selection, 27
datasets sub-window visible, 171
date and time, 211
date and time for data window, 219
date format, 149, 153
decimal point, 149, 153
default data view, 170
default data view info, 237
default info, 234
default mouse marker x-axis value position, 201
default mouse marker y-axis value position, 202
default plot, 101
default project info, 234
default project info data view description, 238
default project info data view title, 238
default project info description, 236
default project info logo path, 235
default project info title, 236
default range, 101
default statistics, 175
delete, 55
delete marker, 97
delete marker items, 94
delete other marker items, 95
delete other markers, 97
delete plot, 74
delete plots of removed groups, 178
delete tag, 141, 142
delta x, 48
delta y, 48
deselect all axes, 109
deselect all horizontal axes, 109
deselect all vertical axes, 109
deselect axis, 108
detect and use binary axes, 185
disable auto detect failed error e16, 161
disable extra data skipped error e21, 162
disable fatal error error e15, 160
disable infinity replaced by nan error e25, 163
disable info about hidden plots, 183
disable invalid column error e06, 158
disable invalid data error e07, 158
disable invalid timestamp definition error e05, 157
disable invalid timestamp error e04, 157
disable missing data error e09, 158
disable missing separator error e10, 159
disable mouse markers for hidden plots, 182
disable neg infinity generated error e23, 163
disable non consecutive timestamp error e11, 159
disable number too large error e13, 160
disable pos infinity generated error e22, 162
disable pos infinity probably generated error e24, 163
disable stream not open error e14, 160
disable superfluous data error e08, 158
disable tag description too long error e18, 161
disable tag name too long error e17, 161
disable too many digits error e20, 162
disable too much data for license error e26, 164
disable unknown meta tag error e19, 161
disable unknown tag error e12, 159
disabled menu item, 19
display, 208

double click, 28, 75
drag, 86, 110
drag and drop, 54
drag selected axes only, 190
dragging, 75
drop, 86, 110
duplicate plot, 74, 86
duplicate source to axes, 127

edit note, 93
edit project info..., 62, 63
empty plot, 80
empty plot on new x, 80, 81
empty plot on new x/y, 81
empty plot on new y, 80
empty scatter plot on new x/y, 81
enable auto maximize update rate mode, 241
equalize markers per table, 226
equalize statistics per table, 228
error, 63
error handling, 155
exact marker position, 90
exact range, 98
example, 248
excel, 47
excess kurtosis based on entire population, 51
exit, 64
exponential axis scaling base, 187
export, 66, 95, 96, 150
export all, 66, 67
export all tags between markers, 95, 96
export all tags of selected datasets between markers, 96
export between markers, 95
export data, 121
export datasets, 66
export plots between markers, 96
export selected data, 121
export selected datasets, 66
export selected plots between markers, 96
export settings..., 137
export tag descriptions, 151

file, 57–59
file comments, 245
file format, 145, 245
file grammar, 245
filter, 86
filter..., 86, 87
focus, 70
focus axes, 72
focus bar, 28, 30, 37, 38, 41, 44, 46, 54
focus data, 71
focus datasets, 71
focus markers, 72
focus next window, 70, 71
focus plots, 72
focus statistics, 72
focus tags, 71
focus view, 72
focused alternative handle position, 195
focused alternative value position, 199
focused default handle position, 195
focused default value position, 198
format file, 245
fosused selected alternative handle position, 196
fosused selected alternative value position, 200
fosused selected default handle position, 196
fosused selected default value position, 200
fps, 26
frames per second, 26

gap threshold, 206
geometric mean, 51
getting started, 6
grammar, 245, 249
greyed out menu item, 19
grid, 31, 107
grid show mode, 42, 107, 175
group, 23, 38
group selection, 40
groups selection, 40

handle marker, 33
handles, 193
harmonic mean, 52
header column separator, 148, 152
help, 142
hide, 68–70
hide all axes, 107
hide axes, 106
hide axis, 105
hide data points, 119
hide grid, 107
hide legend, 120
hide marker items when all plots are hidden, 183
hide marker items when any plot is hidden, 183
hide other axes, 106
hide other windows, 68
hide plot, 111, 112
hide point markers when a plot is hidden, 182
highlight plot, 113
highlight plot fill, 114
highlight plot line, 114, 115
highlight plot samples, 115
horizontal axis, 23, 42
horizontal scrollbar, 34

horizontal zoom slider, 35

import settings..., 137
include data view description, 223
include data view title, 223
include horizontal header, 165
include logo, 229
include marker tables, 226
include plot screenshots, 224
include plots tables, 224
include project description, 223
include project title, 223
include statistic tables, 228
include vertical header, 165
individual samples selection, 38
interaction axes, 31
interaction marker, 33
interaction marker item, 34
interaction mouse marker, 33
interaction plot, 32
interpolating mouse marker, 33
interpolation, 34
introduction, 4
invalidate update rate time, 244

leading axis, 23
legend, 32, 120
legend visible, 174
license almost expired threshold days, 239
license status..., 143
line marker, 23, 33, 45, 90–92
linear axis scaling step size, 188
linear trend (linear regression) based on entire population, 48
load, 145
load dataset, 58
load dataset custom..., 59, 60
load tag descriptions, 147
lock axes, 105
logo, 228
logo composition mode, 230
logo scale factor, 230

mad sample interval, 53
main menu, 19
main status bar, 19
main window, 18
manual marker position, 90
manual plot, 79–81
manual range, 98
margin bottom mm, 233
margin left mm, 232
margin right mm, 233
margin top mm, 232
marker, 23, 30, 31, 33, 44
marker collision margin horizontal, 192
marker collision margin vertical, 192
marker handle, 33
marker highlight, 33
marker interaction, 33
marker item, 31, 34, 93
marker item connector radius, 193
marker item highlight, 34
marker item interaction, 34
marker item move, 34
marker item selection, 34
marker items, 34, 92, 93
marker line, 23, 33, 45
marker mouse, 24, 32
marker move, 33
marker move multiple, 34
marker point, 23, 24, 33, 45
marker position exact, 90
marker position manual, 90
marker row order, 45
marker selection, 33, 37, 45
marker sub-window add new rows, 178
markers, 24, 33, 44, 88, 89, 129, 191, 225
markers context menu, 25, 46
markers selection, 37, 45
markers sub-window visible, 172
matching axes, 74, 79, 80
max markers per table, 226
max number of recent datasets, 208
max number of recent projects, 208
max sample interval, 53
max size of deviation circle, 205
max statistics per table, 228
maximize, 141
maximize update rate mode, 137, 138
maximum, 49
maximum at, 49
maximum error count, 156
maximum error count per type, 157
maximum marker update rate, 242
maximum mouse update rate, 243
maximum plot update rate, 242
maximum resize update rate, 243
median, 49
median absolute deviation (mad), 50
median sample interval, 52
menus, 57
meta tag, 22, 27, 28
microsoft excel, 47
min sample interval, 52, 53
minimize, 141

minimum, 49
minimum at, 49
minimum marker update rate, 242
minimum mouse update rate, 242
minimum plot update rate, 241
minimum resize update rate, 243
mode, 50
mode sample interval, 52
mouse marker, 24, 32, 200
mouse marker interaction, 33
mouse marker interpolating, 33
mouse marker multiple, 33
mouse marker selected plots only, 33
move marker, 33
move marker item, 34
move markers to marker, 91
move plot, 74, 110
move source to axes, 127
multiple marker move, 34

name axis, 104
never show, 119, 120
new data view, 58
new project, 61
new tag error view, 63
next, 142
no algorithm, 47
normal alternative handle position, 194
normal alternative value position, 198
normal default handle position, 194
normal default value position, 198
note, 93
note marker, 93
number of deviation lines, 204

open manual..., 143
open project, 61
open project custom..., 61

page orientation, 233
page setup, 231
page size, 233
pan, 101, 102
pan down, 103
pan left, 102
pan plot, 32
pan right, 102
pan up, 102
panning, 102
panning slider, 102, 103
performance, 240
plot, 23, 30, 74
plot group, 23, 38
plot highlight, 113
plot highlight fill alpha default, 180
plot highlight line width default, 181
plot highlight toggle default mode, 180
plot highlighting, 179
plot interaction, 32
plot name display fmt, 210
plot on a single new x and y axis, 77
plot on matching axes, 74, 75
plot on multiple new axes, 78
plot on multiple new x and new y axes, 78, 79
plot on multiple new x axes, 78
plot on multiple new y axes, 78
plot on selected axes, 75
plot on selected x and y axes, 76
plot on selected x axes, 76
plot on selected y axes, 76
plot on single new axis, 76, 77
plot on single new x axis, 77
plot on single new y axis, 77
plot pan, 32
plot scatter, 23
plot scroll, 32
plot selection, 32, 37, 40, 46
plot view, 31
plot visibility, 111, 181
plot zoom, 32
plots, 24, 32, 38, 122
plots context menu, 25, 41
plots selection, 37, 40, 46
plots sub-window visible, 173
point marker, 23, 24, 33, 45, 90, 92
point marker radius, 192
population or sample, 203
previous, 142
project view, 137

range, 49, 74, 101
range best fit, 101
range data, 24
range default, 101
range exact, 98
range manual, 98
range visual, 24
range/zoom, 98
rate x, 49
rate y, 48
recent datasets, 61
recent files, 61, 207
recent projects, 62
remove, 84
remove axis, 85
remove group, 85

remove marker, 97
remove plot, 74, 85, 86
remove statistic, 133
reorder plots, 45
reordering, 45
replace infs by nans, 150, 154
report generation, 221
reset all colors, 118
reset axis color, 118
reset background color, 117
reset grid color, 118
reset plot color, 117
reset range/zoom, 101
reset range/zoom to best fit, 101
resize plots for screenshots, 224
restart, 64
restore, 141

sample, 23
sample count, 50
sample interval gaps, 205
sample interval gaps (0.50), 53
sample interval stability, 204
sample interval stability (2), 53
save project, 62
save project as..., 62
save to new project file on quit, 179
scatter plot, 23, 79, 82
scatter plot on matching axes, 79
scatter plot on selected axes, 79, 80
screenshot logo scale factor, 231
scroll, 34, 35
scroll axis, 31
scroll horizontally, 34
scroll plot, 32
scroll vertically, 35
scroll/zoom box, 36
select all axes, 108
select all horizontal axes, 108, 109
select all vertical axes, 109
select axes, 108
select axis, 75, 108
selected alternative handle position, 196
selected alternative value position, 199
selected default handle position, 195
selected default value position, 199
selection, 24
selection assigned tags, 43
selection axes, 31, 36, 40, 42
selection axis type, 43
selection datasets, 27
selection groups, 40
selection individual samples, 38
selection marker, 33
selection marker item, 34
selection markers, 37, 45
selection plot, 32
selection plots, 37, 40, 46
selection statistics, 54
selection tags, 28, 43
sensitivity, 205
separator, 165
set axis color, 118
set background color, 117
set color, 116
set fill highlight transparency, 115
set grid color, 118
set line highlight width, 115
set marker pos, 90, 91
set marker position, 90
set name, 104
set plot color, 116
set range, 98, 100
settings, 134, 145
settings..., 134, 135
shortcuts, 136
show, 68–70
show all axes, 106
show all windows, 68
show always, 107
show axes, 106
show axes window, 69
show axis, 105
show data points, 119
show data points mode, 174
show data window, 69
show datasets window, 68
show grid, 107
show legend, 120
show markers window, 70
show never, 108
show other axes, 106
show plot, 111, 112
show plots window, 69
show statistics window, 70
show tags window, 68, 69
show view window, 69
show when selected, 107
show window, 67
show/hide axes, 105
skewness based on entire population, 51
skip lines with infs, 154
skip lines with nans, 154
source, 22
source assigned, 22
squared deviation, 52

standard deviation based on entire population, 48
statistic algorithm, 46
statistic selection, 54
statistics, 24, 46, 132, 202, 227
statistics context menu, 25, 54
statistics selection, 54
statistics sub-window visible, 172
statusbar data view, 26
step count, 50
sub-window visibility, 26

tab position, 139, 140
tabbed mode, 139
tabbed view, 139
tabs above, 140
tabs below, 140
tabs left, 140, 141
tabs right, 140
tag, 22
tag filter, 86
tag meta, 22
tag selection, 28, 43
tags, 25, 28, 73
tags context menu, 25, 30
tags selection, 28, 43
tags sub-window visible, 172
terms and descriptions, 22
text encoding, 149, 153
text file format, 245
ticks, 31
tile, 138
time axis, 23, 42, 79, 82, 84
time axis default name display fmt, 211
time source, 22
time source display fmt, 209
timestamp, 246
timestamp format, 150, 153
timestamp text format multi line, 212
timestamp text format single line, 213
timestamps, 246
toggle plot highlight, 114
toggle plot visibility, 112
toolbars, 136

unassign, 83
unassign axis from group, 83
unassign data source from axis, 83
unhighlight plot, 113
unload dataset, 65
unlock axes, 105

values, 197
variable length date and time, 213
variable length timestamp upto day, 216
variable length timestamp upto hour, 216
variable length timestamp upto milliseconds, 218
variable length timestamp upto minutes, 217
variable length timestamp upto month, 215
variable length timestamp upto seconds, 217
variable length timestamp upto year, 214
variance based on entire population, 50
version history..., 143
vertical axis, 23, 42
vertical scrollbar, 35
vertical zoom slider, 35
view, 25, 30, 88
view context menu, 25, 37
view sub-window visible, 172
visibility, 68–72
visual range, 24

warn if license almost expired, 239
warnings, 238
whitespace, 247
wikipedia, 47
window, 138

x-axis, 23

y-axis, 23

zoom, 35, 98, 101, 103
zoom axis, 31
zoom horizontal, 103, 104
zoom horizontally, 35
zoom in horizontal, 103
zoom in vertical, 104
zoom out horizontal, 103, 104
zoom out vertical, 104
zoom plot, 32
zoom selected axes only, 189
zoom slider, 103, 104
zoom to markers, 100, 101
zoom vertical, 104
zoom vertically, 35