R:Charts 11

The Charting Solution for your R:BASE Database!

Help Manual

R:Charts 11

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by R:BASE Technologies, Inc.

R:Charts is the charting solution for R:BASE databases. R:Charts is flexible in allowing users to mix and match different series within charts, with one or more tables assigned to a chart. Charts can be displayed using several file formats including: BMP, JPG, GIF, EMF, WMF, PCX, EPS, SVG, and HTM.

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Part I

1 Introduction

1.1 Introducing R:Charts 11

R:Charts is the charting solution for R:BASE databases. R:Charts is flexible in allowing users to mix and match different series within charts, with one or more tables assigned to a chart. Charts can be displayed using several file formats including: BMP, JPG, GIF, EMF, WMF, PCX, EPS, SVG, and HTM.

Users can connect to a R:BASE database, choose the table or view that the chart will be based upon, and create and save the chart. The specific chart created will be saved in a file with the extension RBC. The RBC file extension is associated to R:Charts once installed on your computer.

The connection between the created chart file and R:BASE is the R:Charts Plugin file (.rbm). The R:BASE PLUGINS command uses the Plugin file to create a live data image of the data chart, that can be used in R:BASE forms and reports.

R:Charts files (.rbc) will most likely be based on R:BASE views, where a concentration of data will be displayed using few columns and rows. And, since R:BASE views are updated automatically when the table data changes, the chart image can be created on the fly to reflect the current data.

R:Charts supports the storage and implementation of EEP to predefine variables for chart files, and for before a chart file is opened. The R:BASE EEP Editor can be launched within R:Charts.

R:Charts offers **63** different series types (bar, pie, line, candle, etc.) that can be added to a chart, along with **42** available standard, financial, and extended functions, that can be applied to any group of data series.

Disclaimer: Please be advised that this help document is still undergoing updates to screen shots and descriptions, and is not yet complete. Some menu options will vary from the R:Charts 11 program.

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First Edition

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R:Charts 11
Single Seat License

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- Our support staff deals with advanced issues, therefore the person contacting RBTI for assistance should be the system administrator or have other R:BASE/SQL experience and be able to understand and implement the advice given.
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RBTI reserves the right to limit the amount of support time allotted to a maximum of 2 HOURS during the 30-Day Complimentary Technical Support Period. We also reserve the right to limit the quantity of calls from a particular Licensee to 30 MINUTES in a single day. Issues are dealt with on a case-by-case basis, and are handled at the discretion of the support agent assigned to the case. Complimentary Support is limited to INSTALLATION and ELEMENTARY CONVERSION related issues ONLY. Our support hours are from 10am. to 6pm. Eastern Time.

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R:BASE Technologies, Inc.
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Revised Monday, July 07, 2025

1.4 Complimentary Support

30 DAY LIMITED COMPLIMENTARY TECHNICAL SUPPORT

A. LICENSEE RESPONSIBILITIES.

1. To help us expedite the process and provide high quality assistance, the licensee must provide proof of purchase. Proof of purchase is defined as the following: registration number, purchase date, version and build number, and company or individual to which product is registered.

2. To have operating system, workstations, and local network installed and functional. R:BASE Technologies will NOT be responsible for resolving issues not pertaining to the software product.

3. Our support staff deals with advanced issues, therefore the person contacting R:BASE Technologies for assistance should be the system administrator or have other R:BASE/SQL experience and be able to understand and implement the advice given.

4. To have the database, application, and command files being reviewed, safely backed-up before attempting assistance. R:BASE Technologies will NOT be held responsible for lost data or corruption as a result of advice given.

B. R:BASE TECHNOLOGIES, INC. RESPONSIBILITIES.

1. To provide quality assistance in a timely manner to aid in the installation of the product and elementary conversion of database, application, and command files within 30 days of the date of purchase.

2. To provide a reasonable solution for any solvable issue. Not all issues may be solved, and therefore we will acknowledge the existence of known issues, or bugs, which we are presently aware of, that have no reasonable work-around.

R:BASE Technologies reserves the right to limit the amount of support time allotted to a maximum of 2 HOURS during the 30-Day Complimentary Technical Support period. We also reserve the right to limit the quantity of calls from a particular licensee to 30 MINUTES in a single day. Issues are dealt with on a case-by-case basis, and are handled at the discretion of the support agent assigned to the case. Complimentary Support is limited to INSTALLATION and ELEMENTARY CONVERSION related issues ONLY. Our support hours are Monday through Friday, from 10:00 AM to 6:00 PM (EST).

For application, design, or advanced conversion assistance, R:BASE Technologies offers Technical Support Plans of various types to meet your needs. Please visit the Support page at https://www.rbase.com/support for details and pricing.

Part II

2 Installation

2.1 System Requirements

The following system specifications are recommended for the optimal use of R:BASE and R:BASE-related software.

Workstation Hardware

- 2-Core 2GHz+ CPU
- 2 GB of available RAM (4 GB recommended)
- 2 GB of available hard disk space
- 1024x768 or higher resolution video adapter and display
- Standard mouse or compatible pointing device
- Standard keyboard

Server Hardware

- 2-Core 2GHz+ CPU
- 6 GB of available RAM (8 GB recommended)

Operating System

- Microsoft Windows 11 (Professional)
- Microsoft Windows 10 (Professional)
- Microsoft Windows Server 2025
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016

Network

- Ethernet infrastructure (Gigabyte recommended)
- Internet connection recommended, but not required, for license activation, software updates, and support
- Anti-virus programs should exclude the R:BASE program, and any add-on product, executable and database files

2.2 Things You Will Need

- License Key

  Before launching the installer, it is recommended that you have your 32-character License Key readily available. The License Key is provided in a document, with the email message, when the software was originally purchased. If you have lost or misplaced your License Key, please contact our Support Staff by email at support@rbase.com.

- Internet Access

  The computer where the software will be launched should have access to the Internet for activation. The Internet access is used to visit the R:BASE Technologies Web site to provide your required Activation Key.

  In instances where the software will be installed on a computer that is not connected to the Internet, you must then contact R:BASE Technologies to provide information displayed on the computer screen. Please contact our Product Activation Staff by email at activationkey@rbase.com. The Registration Number must be provided. The Registration Number is displayed on the invoice/order slip, and within the email, when the software was originally purchased.

2.3 Software Installation

The installation of R:Charts is fully automated, and does not require user intervention for the initial configuration.

Run the installer ".exe", provided by download, while physically sitting at the workstation to begin the installation process, and read the installer screens for licensing and other information as the program installs.

Installation Directory

C:\RBTI\RCharts11

Files Installed

RCharts11.exe
RBEngine11.dll
RCharts11.rbm
RCharts11.chm
RCharts11.pdf
License.rtf
ReadMe.txt

Requirements:

Plugin
The R:Charts 11 Plugin file (RCharts11.rbm) must be placed in the R:BASE 11 program directory (default: C:\RBTI\RBG11) or the runtime/compiled application directory.

2.4 Plugin Activation

R:BASE Plugins can be used to enhance, or extend R:BASE operations. Current R:BASE Plugins use the .RBM file extension.

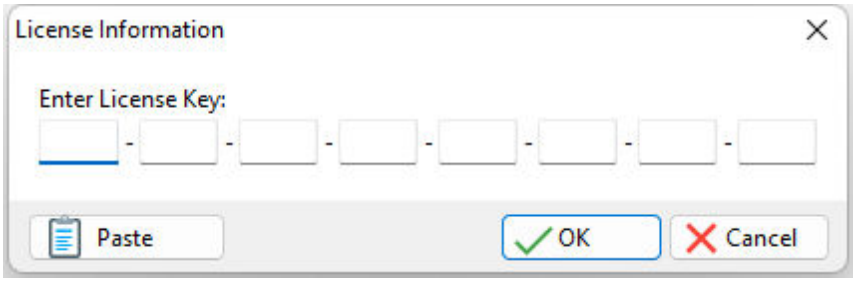
To begin using any plugin product, the plugin must be registered for use.

The license type for R:BASE and R:BASE plugin products must match. The license keys supplied with Single Seat and 5 Seat plugin products will only be accepted within Single Seat and 5 Seat versions of R:BASE, and are not accepted within R:Compiler for R:BASE or Runtime for R:BASE programs. The same license structure is also in place for Runtime License Keys for plugin products, where the key will not be accepted within Single Seat and 5 Seat Licenses R:BASE.

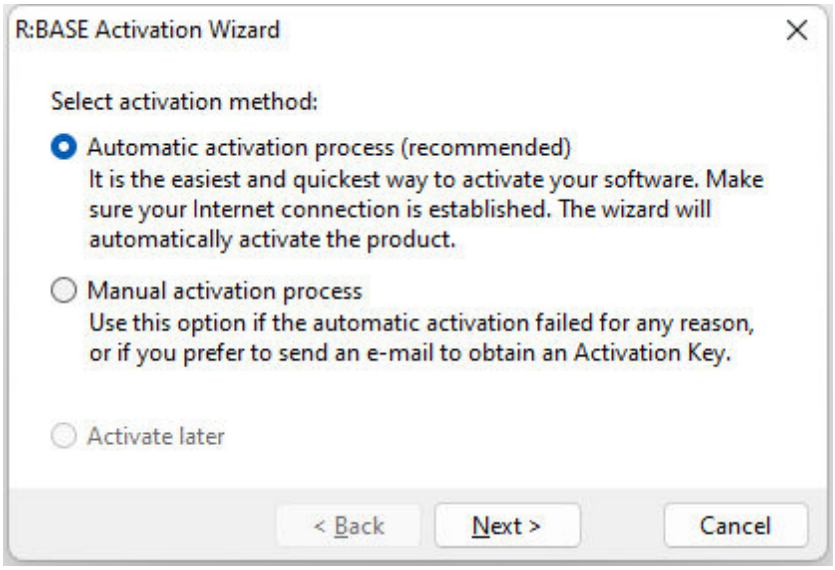
2.4.1 R:BASE

To begin using a plugin product, you must register the software within R:BASE by selecting "Help" > "Product Activation" from the main Menu Bar. In this window, select the "Add New" button where you can enter or copy and paste the License Key you received with your product.

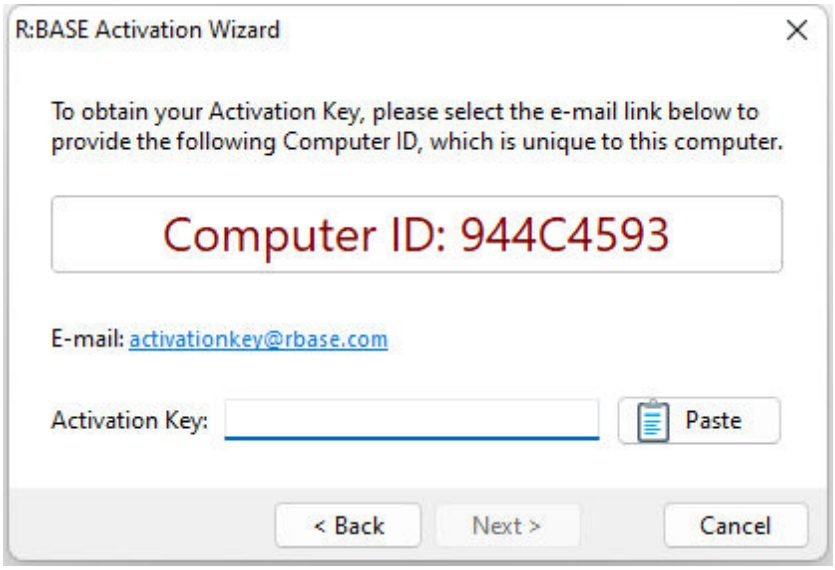
Only "Per Seat" License Keys are valid for this entry screen. All "Runtime" License Keys must be registered within R:Compiler for R:BASE or within Runtime for R:BASE separately.



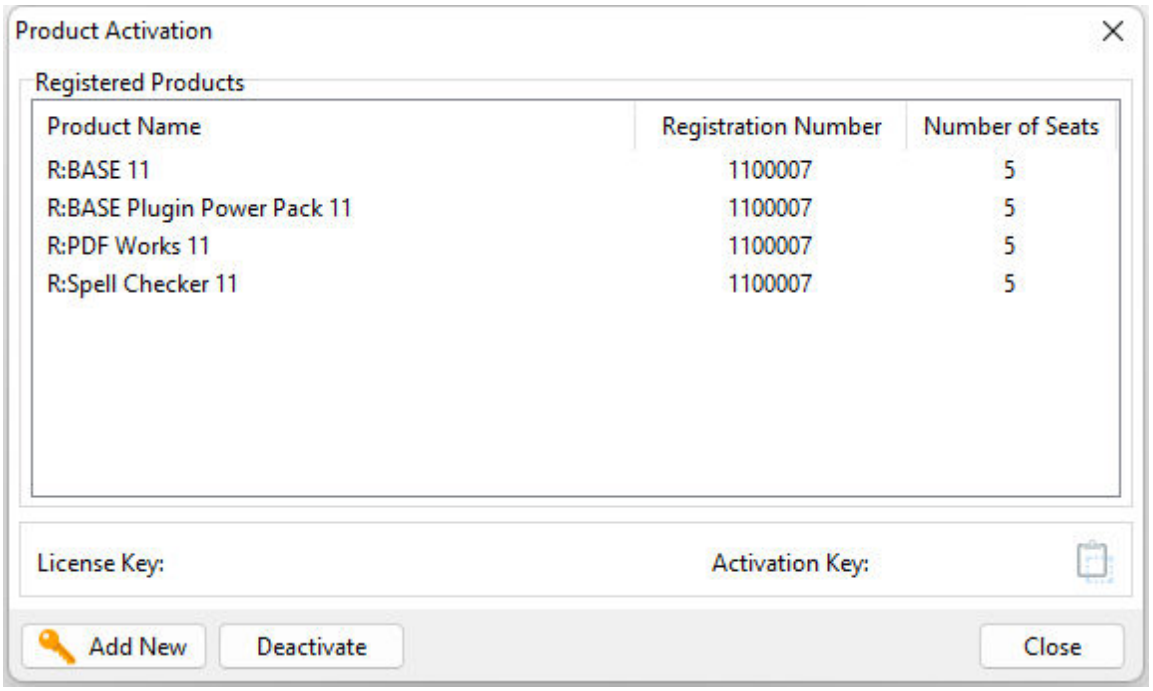
After entering the License Key, you will see a dialog to prompt for your activation method. The software can be activated automatically over the Internet, or manually by retrieving an Activation Key from R:BASE Technologies by email or over the phone. If you select "Later", you will be reminded each time R:BASE starts to activate your copy.



When activating the software manually, you select the e-mail link to launch your email client and send a pre-formatted message to R:BASE Technologies that will contain your License Key and the displayed Computer ID. You will need to provide your R:BASE Registration Number and Computer ID.



At any time, you can review your product information by starting R:BASE, and from the Menu Bar clicking on "Help" > "Product Activation". Your R:BASE Registration Number is displayed on the window. You can also enter additional License Keys for R:BASE add-on products.

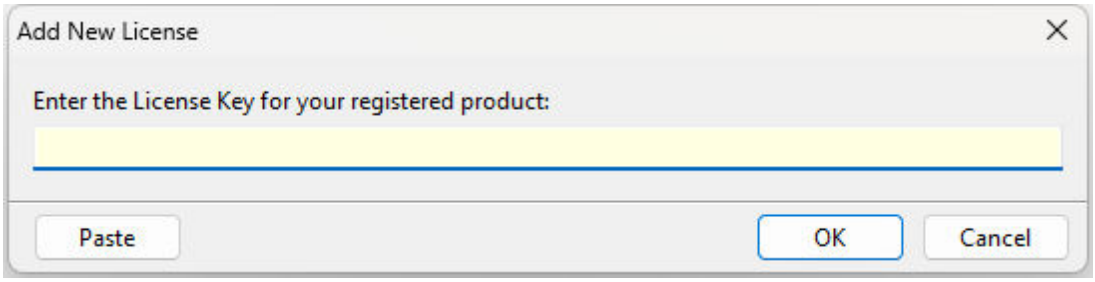


Please be advised that if you are activating multiple workstations, it is highly recommended that you keep records of the computer name, Computer ID and Activation Key for future reference. Access to this information will prove convenient in the event of a hardware failure or license transfer when uninstalling R:BASE.

Please see: Uninstall/Reinstall

2.4.2 R:Compiler for R:BASE

Runtime License Key
Runtime license keys for an R:BASE Plugin must be stored within the compiled executable. A specific Runtime License Key would be provided after your purchase of the Runtime software product. Adding a Runtime License to your project can be done by selecting the "Add License" button, and pasting the appropriate Runtime License Key into the displayed dialog window.



After a Runtime License is added as a resource, it will be assigned a "Resource ID". This ID consists of the word "License" and an incrementing value for the number of licenses added to the executable.

Plugin File (.RBM)

R:BASE Plugin files can be added and stored within the compiled executable or included within the R:BASE application directory. The Runtime license key pertaining to the R:BASE Plugin must be stored in the compiled executable.

Adding a Plugin to the list of resources can be performed by selecting the "Add Plugin" button on the Tool Bar. You will be prompted to locate the appropriate Plugin file with the .RBM file extension. After a Plugin file is added as a resource, it will be assigned a "Resource ID". This ID consists of the Plugin file name.

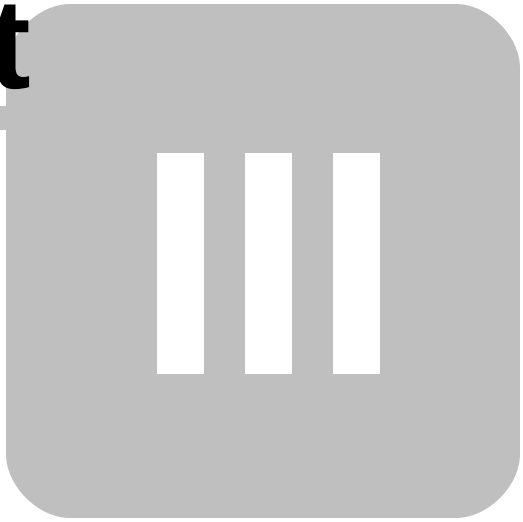
2.4.3 Runtime for R:BASE

After R:BASE Plugins are acquired for Runtime for R:BASE applications, the Plugin file must be included in the Runtime application folder, to be loaded when the Runtime application launches.

To load the Plugin, the License Key must be included into the Runtime for R:BASE session by adding the following PROPERTY command within the application startup file:

```
PROPERTY ADD_LICENSE ####-####-####-####-####-####-####-#### ' '
```

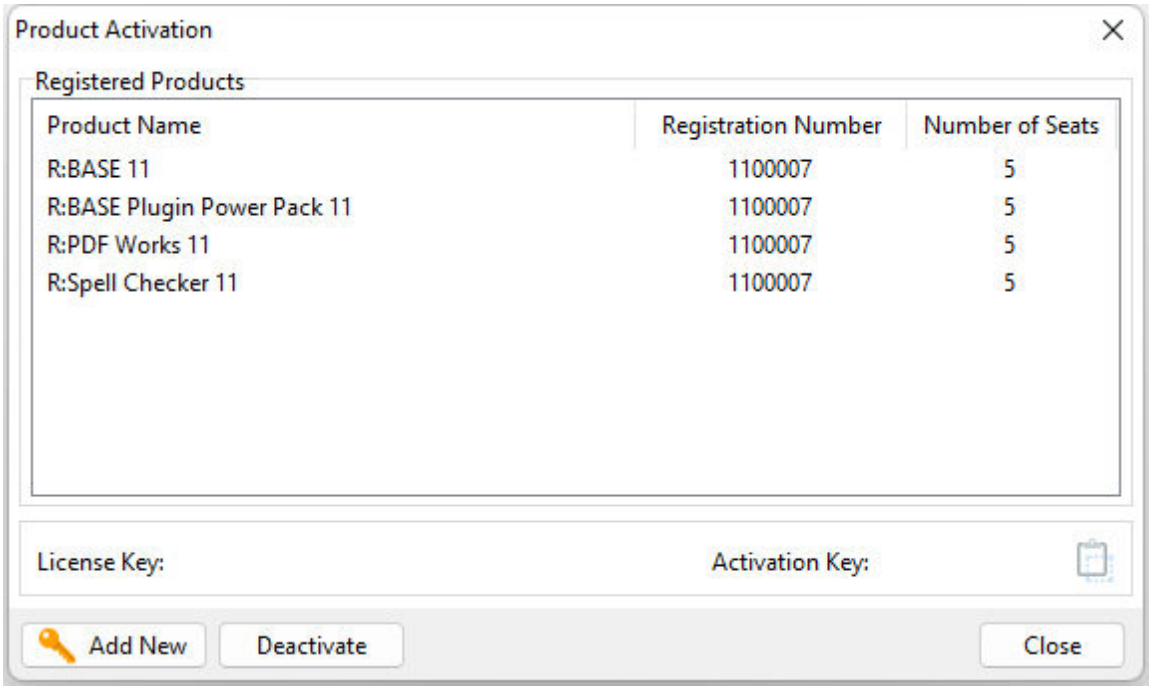
Part



3 Uninstall

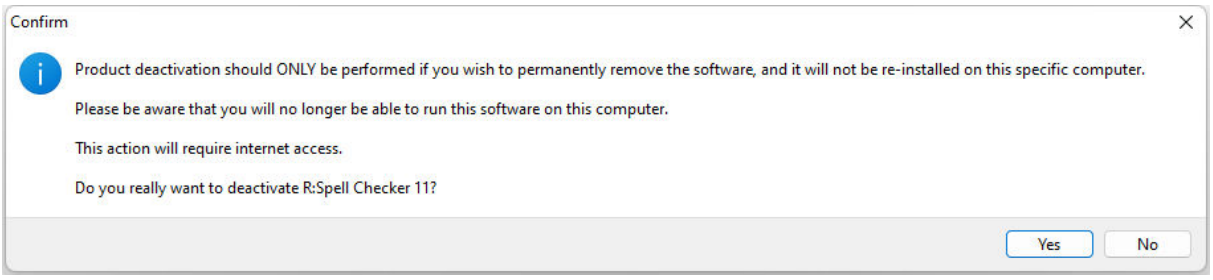
If a computer is no longer using R:Charts, through license transfer or hardware failure, the Activation Key that was used on that computer must be submitted to R:BASE Technologies so we can then remove the Activation Key from our log. We will disable the Key, which will then free up that used activation. Once a key is reported to us as no longer in use and deactivated, it can no longer be used on that computer.

Product deactivation can be performed automatically from within R:BASE. To review your product information select "Help" > "Product Activation" from the Menu Bar. Here, the License Key and Activation Key for a selected product is available for review.



If the License Key for your product is not readily available for the license transfer, select the "Copy License Key" button to send your License Key to the clipboard.

To deactivate a listed product, select it and press the "Deactivate" button. The below confirmation dialog will appear. After selecting "Yes", the product will be removed from the list.



After completing the deactivation of the product, it can be successfully reinstalled and activated.

Part IV

4 Using R:Charts

Charts can be built and implemented using the Chart Editor with no use of code. The Chart Editor is actually two editors in one as the chart may be thought of as being distinct from its data series contents. You may define the chart appearance, titles, legend characteristics and 3D aspect without having to include a data series. That gives you the ability to add and remove different data series types during development without having to redefine the whole chart look and feel, using an individual R:Charts file as a template.

When the R:Charts file is created, it is the chart axes that are the link between chart itself and the data series. A series has data, and its values will influence the label characteristics of the chart axes. The axes appearance, colors, grid frequency and label fonts may all be defined for the chart before adding data Series. Multiple series types can be added to the chart without being limited to a choice of predefined chart formats.

Part V

5 R:Charts Interface

When initially starting R:Charts a chart background is displayed. After selecting a series (chart type), before or after connecting to a database, a the series will be displayed with default random data. The chart series can then be modified be editing its properties.

The chart is divided into several parts or zones:

- **The Panel** - This is the chart background. It can be displayed in different solid colors or using tiled images and gradients. Clicking the right mouse button over the chart panel shows a popup menu with several options.
- **The Chart** - Depending on the activated tools or icons, the chart position, state, size, etc. can be modified. By double-clicking over the chart picture, a dialog box appears where all chart properties can be modified. By clicking the right mouse button over the chart, a popup menu appears that includes the Edit chart option and the common chart properties (border, color, dark 3D, gradient, transparent, visible).
- **The Title** - The title is displayed in the upper part of the panel. The title position can be changed the by dragging it with the mouse. The title text properties can be modified by double-clicking it or by clicking it with the right mouse button.
- **The Legend** - The legend is displayed in the upper right part of the panel, by default. It shows the series values. The legend can be dragged to a new position with the mouse. The legend properties can be defined by double-clicking on it or by clicking the right mouse button when over it.
- **The Tabs** - The tabs are displayed across the top of the R:Charts window. The "Chart" tab is displayed by default. The "Data" tab shows the series data; labels and values. From the "Data" tab users can add, delete and modify the series values, change the series color, change the order of the values, and show or not the label columns, the X columns and the series colors.
- **Apply Rotate/Zoom/Move/Depth to a Chart**

  Rotate
  To rotate a chart, enable the "Rotate" button on the tool bar. Then, click and hold the left mouse button over the chart area. While holding the left button, move the mouse cursor in a circular direction to rotate the chart.

  Zoom
  To zoom in/out for a chart, enable the "Zoom" button on the tool bar. Then, click and hold the left mouse button over the chart area. While holding the left button, move the mouse cursor up or down to apply a zoom.

  Move
  To move/scroll a chart, enable the "Move" button on the tool bar. Then, click and hold the left mouse button over the chart area. While holding the left button, move the mouse cursor move the chart.

  Depth
  To adjust the depth for a chart, enable the "Depth" button on the tool bar. Then, click and hold the left mouse button over the chart area. While holding the left button, move the mouse cursor up or down to increase/decrease the depth.

5.1 Main Toolbar

Button	Description
	Connects to a database, and displays the history for previously connected databases
	Disconnects from the current database
	Create a new chart

	Opens an existing chart
	Saves the current chart
	Saves the current chart as a new chart
	Assigns the database name and path
	Launches the default email program and attaches the displayed chart as an image
	Exports the displayed chart as an image
	Opens the Print Preview dialog for changing page specific settings
	Prints the current chart to the default printer
	View - toggles the display of toolbars *Legend* - displays the legend in the chart *Axes* - displays axes *Titles* - displays the chart title *Series List* - displays the Series panel *Properties* - displays the Properties panel *Chart Gallery* - displays the chart gallery along the right side *Status Bar* - displays the status bar across the bottom *Data* - display of the data: as a tab, it's own window, or hidden
	Displays the R:Charts in-line help documentation
	Displays current R:Charts information such as version, build
	Exits R:Charts

5.2 Chart Toolbar

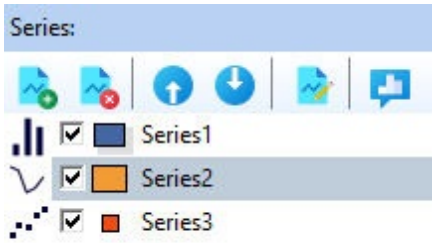
Button	Description
	Normal mode (deactivate navigation)
	Rotates the chart (up/down and left/right)*
	Moves the chart (up/down and left/right)*
	Zooms in and out of the chart*
	Increases or decreases 3D depth*
	Copies the displayed information to the clipboard. A copied chart will copy an image. Copied data will capture the displayed text.
	Enables/Disables 3D chart display
	Adds annotations to the chart
	Allows zooming in the chart to a captured location
	Enables/Disables scrolling of the chart
	Enables/Disables drawing lines on the chart
	Displays/Hides chart hints
	Adds a different color to each chart point

	Enables/Disables display of the series on the legend
	Displays/Hides chart marks for the series
	Add Data Source
	Remove Data Source
	Modify Data Source
	Edits the "On Before Design EEP"
	Edits the "On Before Design EEP", without opening the chart file (rbc)

* To achieve the navigation you require, select the appropriate button from the toolbar and then click and drag the left mouse button over the chart.

5.3 Series Panel

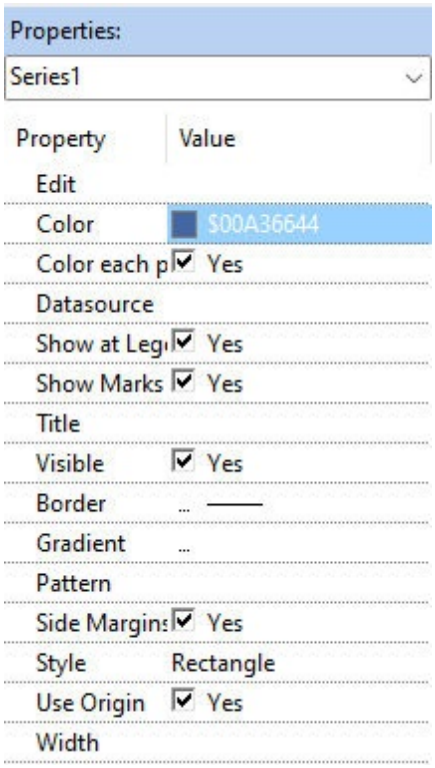
The Series panel assigns the chart type to the R:Charts chart file. The series are moveable by selecting the Move Up/Down buttons. The Edit button allows for the selected series to be modified. The Title button modifies the series title.



5.4 Object Inspector

The Object Inspector is available to access many properties for the selected portion of the displayed chart. The drop down combo-box contains all the parts of the chart, whose below properties are refreshed for the specified chart object. The object properties displayed also change when mouse-clicking on the chart object.

After changing any properties, the chart changes automatically. The properties are also available when editing the chart.



5.5 Chart Gallery

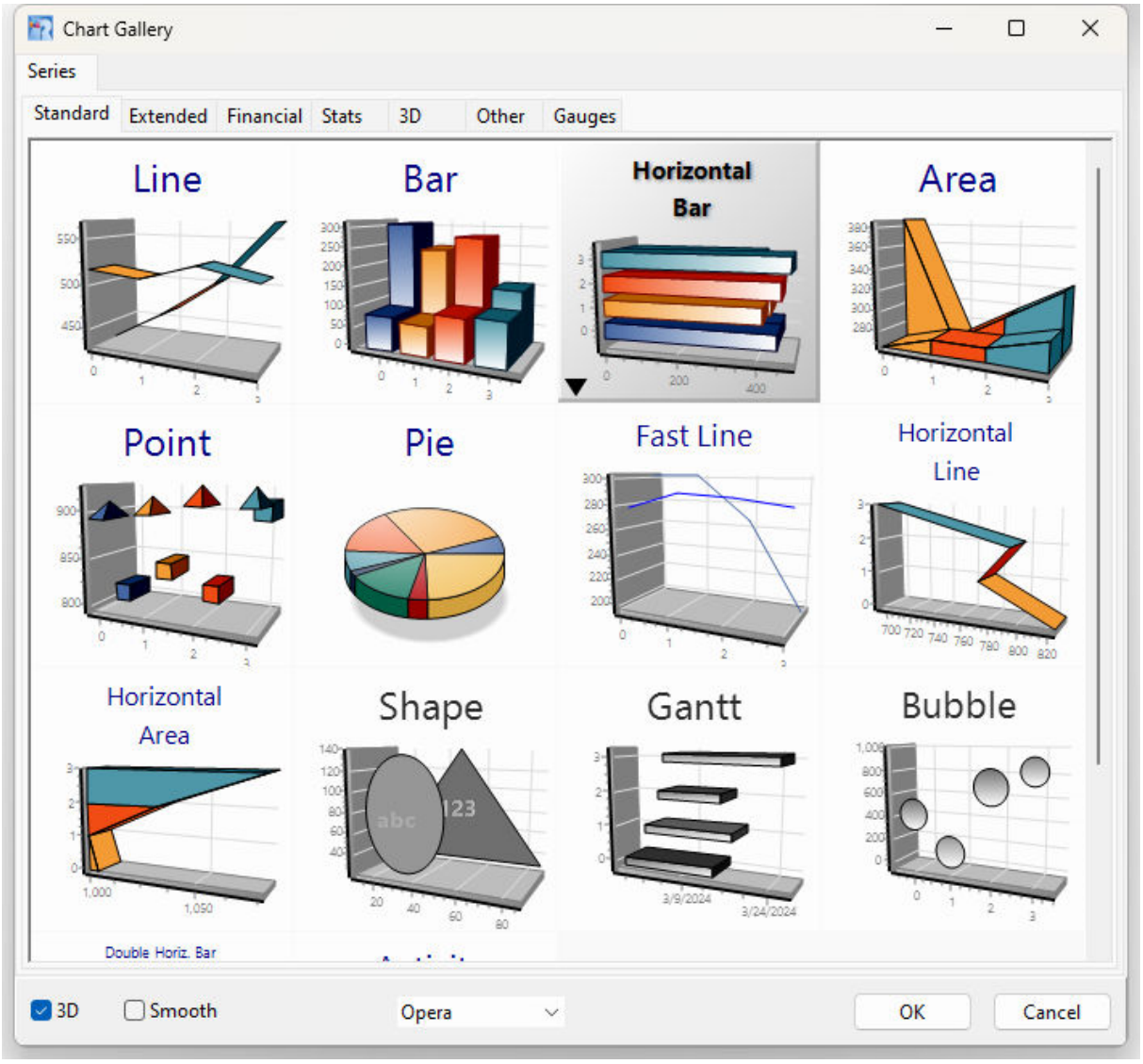
The Chart Gallery is displayed when first adding a series to a chart, and can also be displayed within the Chart Editor, by selecting the tabs "Chart" > "Series", and then choosing the "Change" button. The Chart Gallery is also available as a toolbar along the right side of the R:Charts window. Selecting any of the displayed charts will modify the selected series on the chart, while keeping the same defined properties.

The following series and function types are available to display upon a chart:

Series	Standard	Offers chart types which are likely to be called upon most frequently, e.g. Line, Bar, Pie, etc.	
	Extended	Includes more specialized Series types for planning or mapping applications, e.g. Arrow, Polar, Org Charts, Bezier, etc.	
	Financial	Includes specialized series types for financial applications	
	Stats	Includes chart Series types for statistical applications, e.g. Histogram, Error Bar, BoxPlot, etc.	
	3D	Include Series types which offer a 3 dimensional representation e.g. Surface, Waterfall, Tower, etc. These types take three (X, Y, Z) rather than two (X, Y) values.	
	Other	Includes various other types, e.g. Wind Rose, Delta Point, Line Point, etc.	
	Gauges	Offers a variety of gauges, such as Numerical, Linear, Circular, etc.	
Functions	Standard	Add Subtract Multiply Divide High Low	Average y = f(x) Median Mode Count Subset
	Financial	ADX R.S.I. Moving Average	Bollinger bands Compression Close Location Value

		Exponential Moving Average Momentum Momentum Division MACD Stochastic	On Balance Volume Commodity Channel Index Volume Oscillator SAR
	Extended	Average Exponential Standard Deviation Root Mean Square Cross Points Performance Variance Perimeter Smoothing	Curve Fitting Trend Exponential Trend Correlation Cumulative Downsampling Histogram

The "3D" check box adds a 3-dimensional aspect to the series. The "Smooth" check box removes the hard lines in the chart characteristics. The drop-down box offers several chart themes.



5.5.1 Series

The following series types are available to display upon a chart:

Standard	Offers chart types which are likely to be called upon most frequently, e.g. Line, Bar, Pie, etc.
Extended	Includes more specialized Series types for planning or mapping applications, e.g. Arrow, Polar, Org Charts, Bezier, etc.
Financial	Includes specialized series types for financial applications
Stats	Includes chart Series types for statistical applications, e.g. Histogram, Error Bar, BoxPlot, etc.
3D	Include Series types which offer a 3 dimensional representation e.g. Surface, Waterfall, Tower, etc. These types take three (X, Y, Z) rather than two (X, Y) values.
Other	Includes various other types, e.g. Wind Rose, Delta Point, Line Point, etc.
Gauges	Offers a variety of gauges, such as Numerical, Linear, Circular, etc.

5.5.1.1 Standard

The Standard Series offers chart types which are likely to be called upon most frequently, e.g. Line, Bar, Pie, etc.

Icon	Series
	Line
	Bar
	Horizontal Bar
	Area
	Point
	Pie
	Fast Line
	Horizontal Line
	Horizontal Area
	Shape
	Gantt
	Bubble
	Activity Gauge

5.5.1.1.1 Line / Horizontal Line

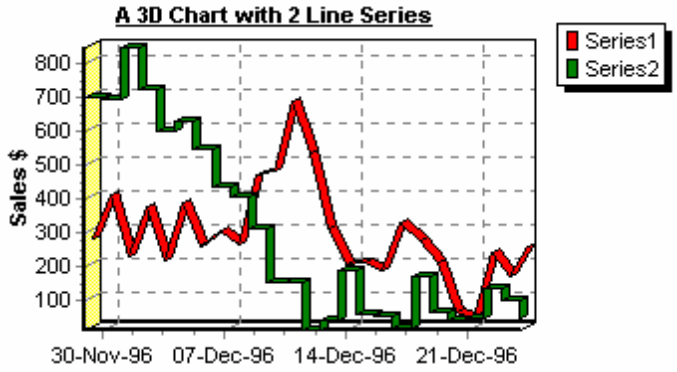
The Line and Horizontal Line Series display a line on a chart.

- Format
- Point
- General
- Marks
- Data Source

There are two line Series types available, Line and Fast Line. Which one should be used? Fast line is just what its name describes - it is fast. It is distinct from Line because to achieve speed - speed to add new

points to the Series - the price paid is that it forgoes some properties that the Line Series has. See the section on Fast Line for a description of those differences.

The following is a 3D Line Series showing one Series with the stairs property set to true. The stairs can be inverted.



5.5.1.1.1.1 Format

Format
Color - specifies the color used to display the line, using a color palette
Default Color - displays the default line color
Dark 3D - sets the series points filled with darker colors than the rest of the series
Color Each - enables/disables the coloring of each connecting Line of a series
Color Each line - enables/disables the coloring of each outline line for the series
Draw Style - determines how the line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve
Transparency - specifies the transparency for the line series
Pointer Behind - specifies if the pointer object is drawn behind the series

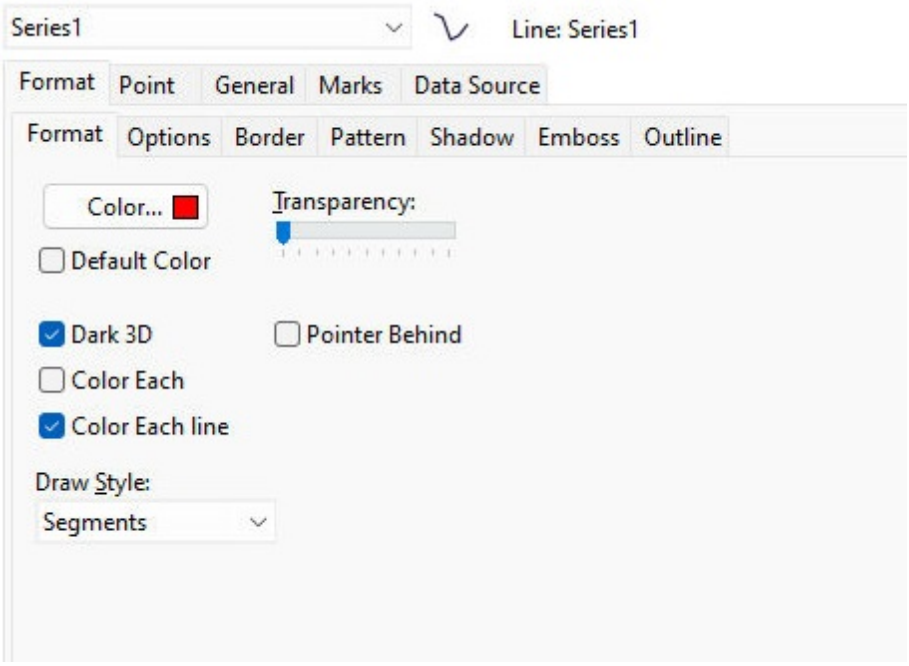
Options
Line Mode - controls the drawing of Line Series. In most normal situations, a series draws a line between each Line point. This makes the Line appear as a "mountain" shape. However, setting "Stairs" will make the Series draw 2 Lines between each pair of points, thus giving a "stairs" appearance. "Inverted" stairs, alters the directions of the stair.
Click Tolerance - sets the pixel proximity tolerance for mouse clicks
Clickable - determines whether the Line series accepts mouse clicks on the line drawn between points
Height 3D - determines the height in pixels of the 3D effect
Stack - sets the stacking options of Lines series;

- Overlap - Series displayed in same Z space (all Series take same Z-order position). This will result in overpainting of equal Series points.
- Stack - Stacks series one above the other. Series begin with lowest index order at bottom. Further Series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stack 100% - Plots take up full Bottom to Top space of the Chart Area resulting in a percentage division by Area to reflect Series values.

Treat nulls - determines how null values are displayed

Border
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the Series.
See **Border**

Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Outline - specifies an outline for the line. See **Border**



5.5.1.1.1.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

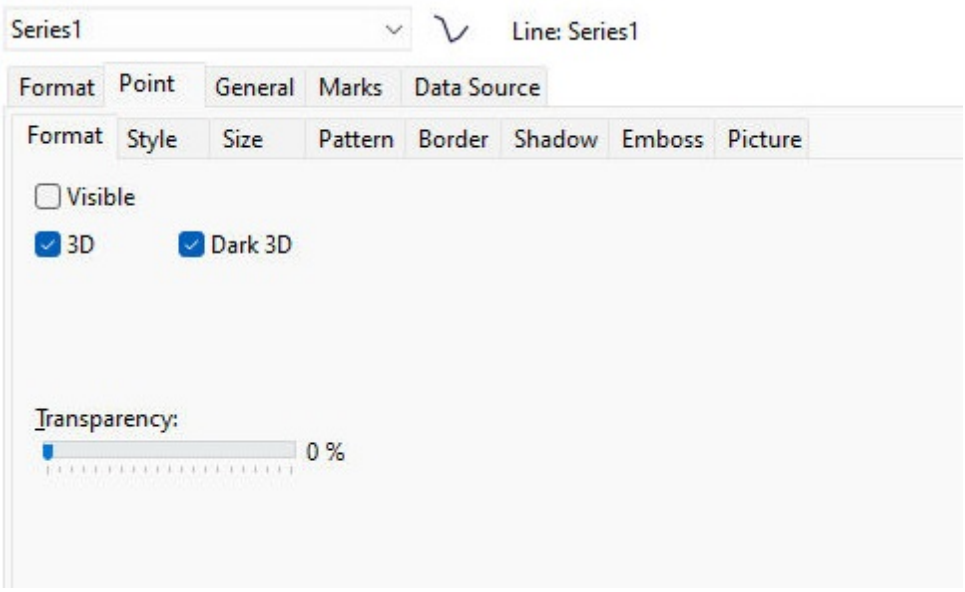
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

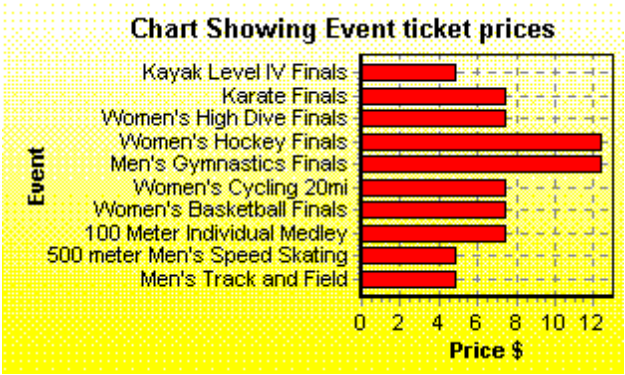


5.5.1.1.2 Bar / Horizontal Bar

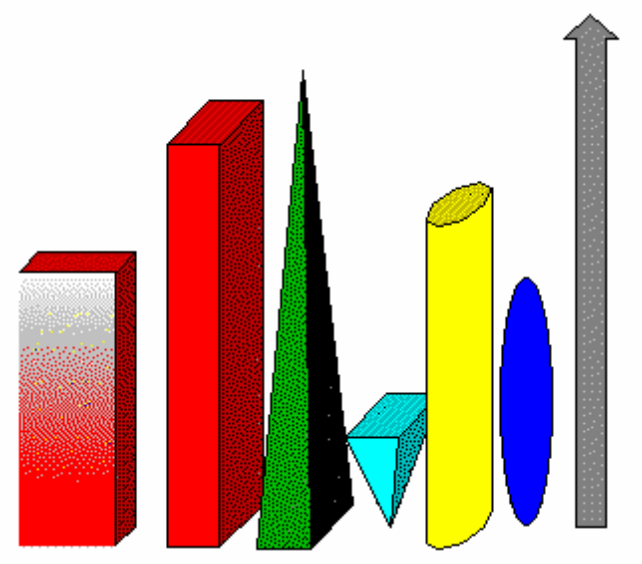
The Bar Series can include a Vertical Bar or Horizontal Bar.

- Format
- Stack
- General
- Marks
- Data Source

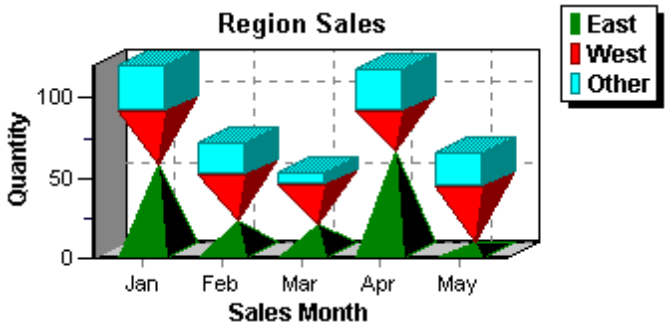
The Horizontal Bar Series shares the same properties as the Bar Series. Apart from any aesthetic requirement, one occurrence of the need to use a horizontal bar Series may be to adequately display long axis labels which are best read horizontally.



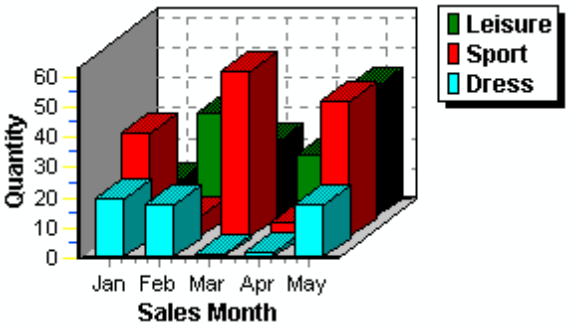
The Bar Series, in 2 or 3 dimensions, doesn't have to be represented by a rectangular bar. Choose a bar style for your Chart Series or 'mix and match' to suit your needs.

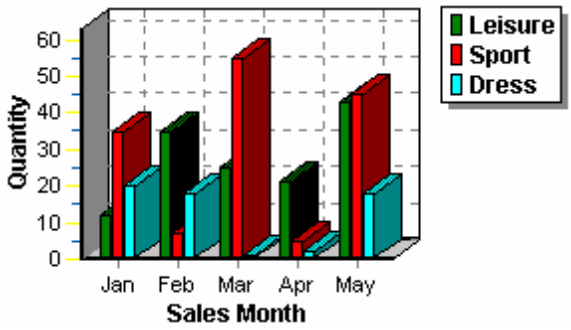


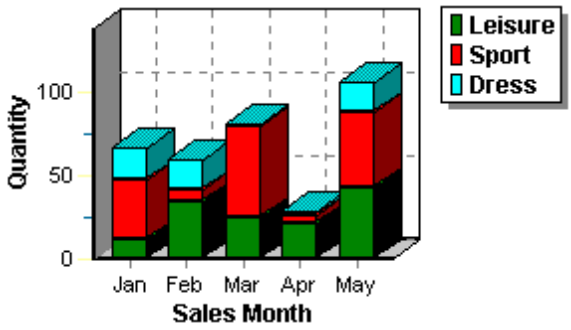
Mixing Bar Series styles may be useful for some applications. Below is a stacked bar example.

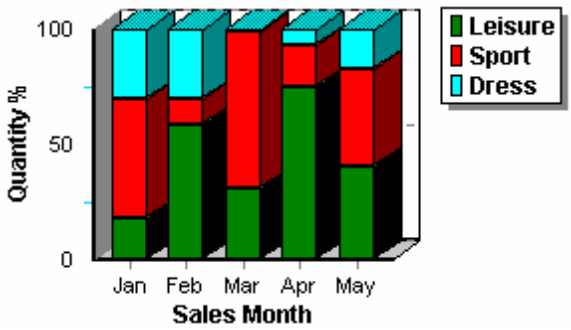


Below are samples displaying 3D Bar Series with four methods to display the same information.









5.5.1.1.2.1 Format

Options
Color Each - sets each chart bar in a different color
Color - specifies the color used to display the bar, using a color palette
Default - specifies the default color for the bars
Transparency - specifies the degree of transparency
Cylinder - adjusts the round edge for the cylinder and cone bar styles
Dark - defines the 3D bar shape with darker colors
Cone - defines a cone effect for the bar
Relative Gradient - applies a gradient effect when gradient is enabled for the pattern

Style - defines the Bar shape used to draw Bars

Size
% Bar Depth - determines the 3D depth of the bars
% Bar Width - determines the width of vertical bars in pixels
% Bar Offset - determines the bars horizontal displacement

Bar Side Margins - controls whether the first and last bar displayed will be separated from the chart rectangle by a margin. By default, margins are set to half the sum of all Bar Series bar widths.
Auto Mark Position - sets the mark position automatically
Marks on Bar - specifies if the marks are displayed on the bars, and location; Start, Center, or End

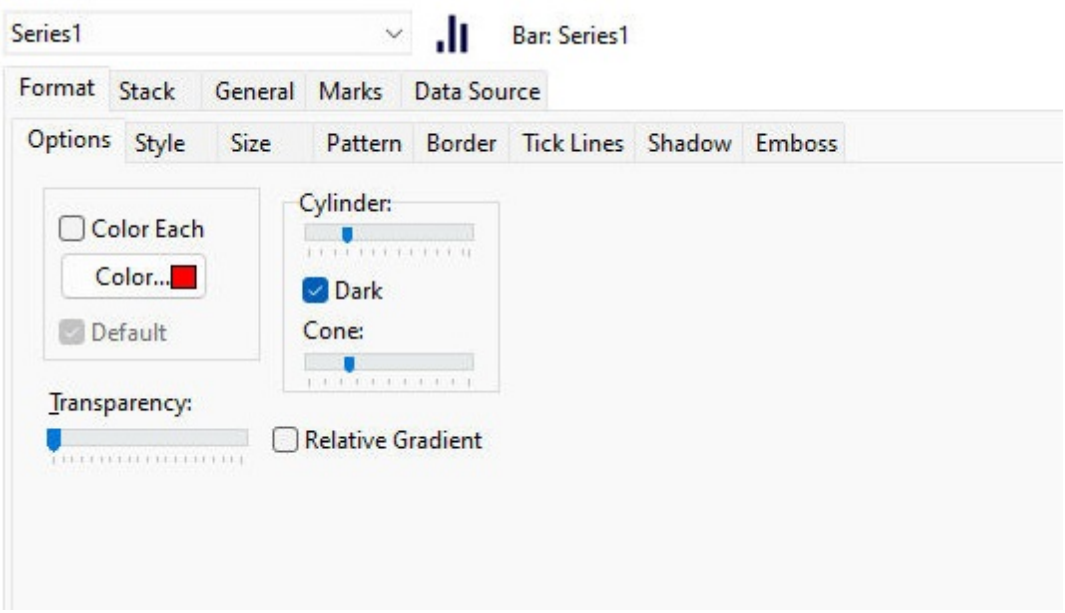
Pattern - See **Pattern**

Border

Options
Dark Border - controls whether the bar sides will be filled with shadowed colors
Bevel size - defines the frame of the bar border
Round - specifies whether the bar corners are rounded
Style - specifies the rounded bar style; None, At Value, Both Ends
Size - specifies the size to be used for round bar corners

Format - See **Border**

Tick Lines - defines the tick lines properties upon the bars. See **Border**
Shadow - See **Shadow**
Emboss - See **Emboss**

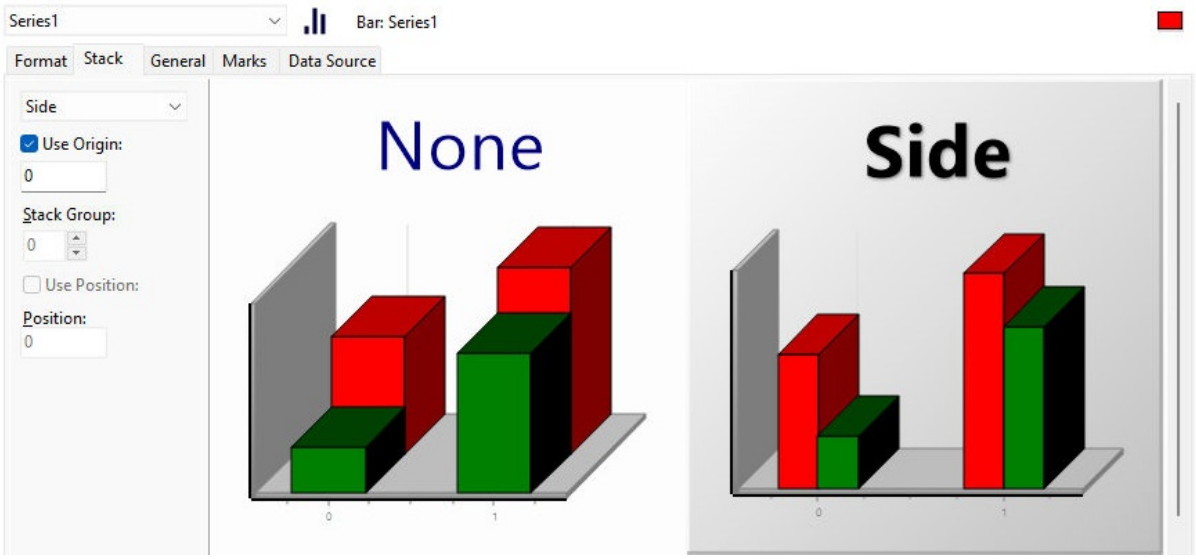


5.5.1.1.2.2 Stack

Stack - sets the stacking options of the series;
- None - no stacking is performed
- Side - with more than one bar series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the bar width will be divided by the number of bar series.
- Stacked - stacks series one above the other. Series begin with lowest index order at bottom. Further series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stack 100% - series are stacked as a percentage. Plots take up full bottom to top space of the chart area resulting in a percentage division by area to reflect the series values.
- Side All - all points from one series are displayed side-to-side with all points from other series
- Self Stack - points of the same series are stacked

Use Origin - determines the axis value used as a common bottom for all bars drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart

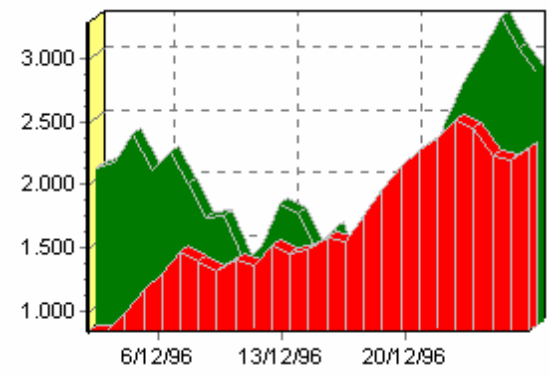
Use Position - specifies to use a custom position for the bar series, when Self Stack is selected and multiple series are defined in the chart
Position - specifies the minimum Y value for horizontal bar, and minimum X value for bar series, when Self Stack is selected and multiple series are defined in the chart



5.5.1.1.3 Area / Horizontal Area

An Area Series has similar characteristics to a line Series. The line is basically filled.

- Format
- Point
- General
- Marks
- Data Source



5.5.1.1.3.1 Format

Options
Area - controls the drawing of Area series. This makes the Area line appear as a "mountain" shape. However, setting "Stairs" will make the Series draw 2 Lines between each pair of points, thus giving a "stairs" appearance. "Inverted" stairs alters the directions of the stair. "Smoothed" produces smoothed lines between the series points.
Treat nulls - determines how null values are displayed
Transparency - specifies the area transparency

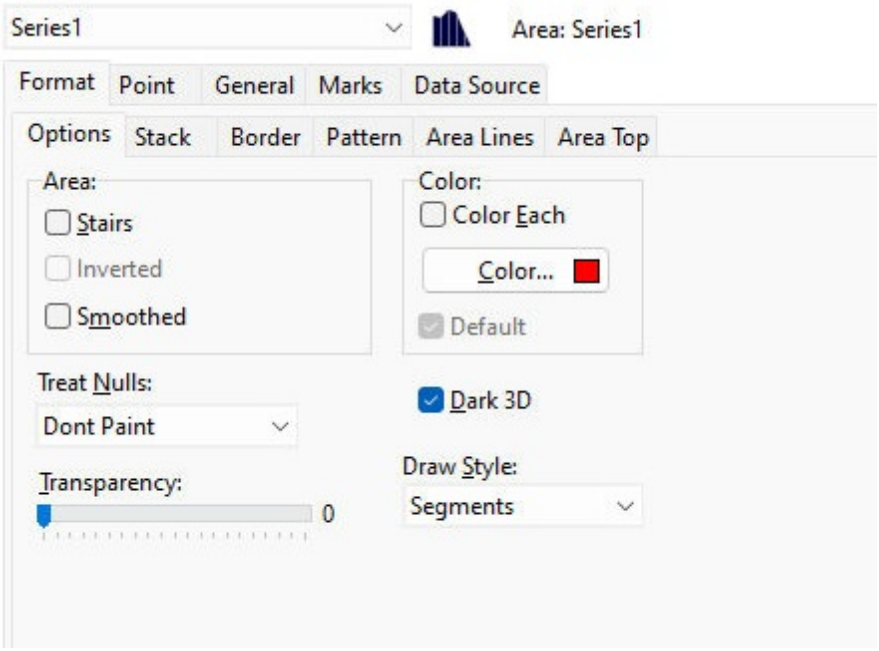
Color - specifies the color, using a color palette
Color Each - enables/disables the coloring of each area point
Default - specifies the default color for the area
Dark 3D - sets the series points filled with darker colors than the rest of the series
Draw Style - determines how the area line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve

Stack
Multiple Areas - If you have more than one Area Series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the area width will be divided by the number of Area Series.

- None - no stacking is performed
- Stacked - stacks series one above the other. Series begin with lowest index order at bottom. Further series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stacked 100% - area series are stacked as a percentage. Plots take up full bottom to top space of the chart area resulting in a percentage division by area to reflect the series values.

Use Origin - determines the axis value used as a common bottom for the area drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart

Border - See **Border**
Pattern - See **Pattern**
Area Lines - alters the area lines. See **Border**
Area Top - specifies the top surface area pattern. See **Pattern**



5.5.1.1.3.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

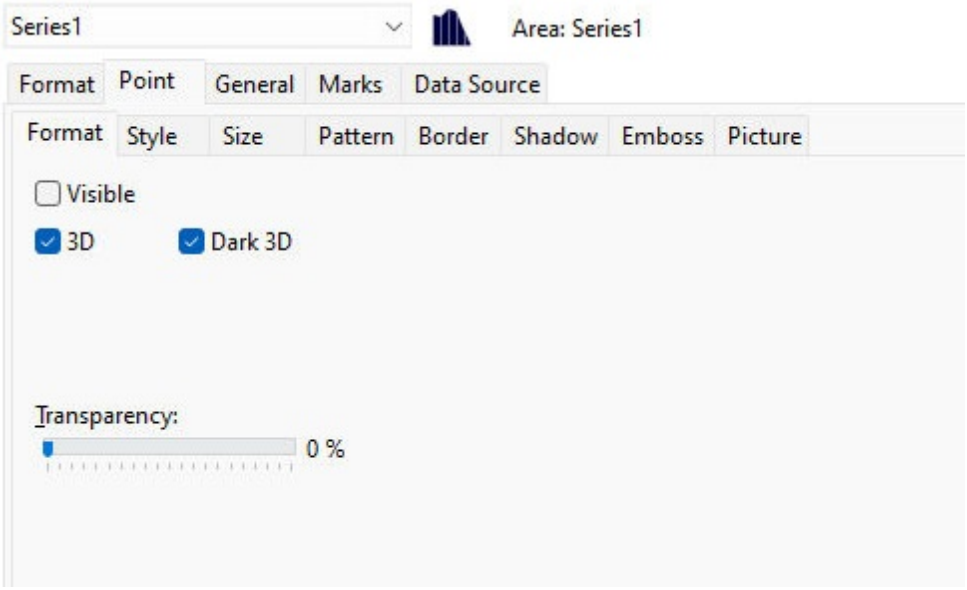
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

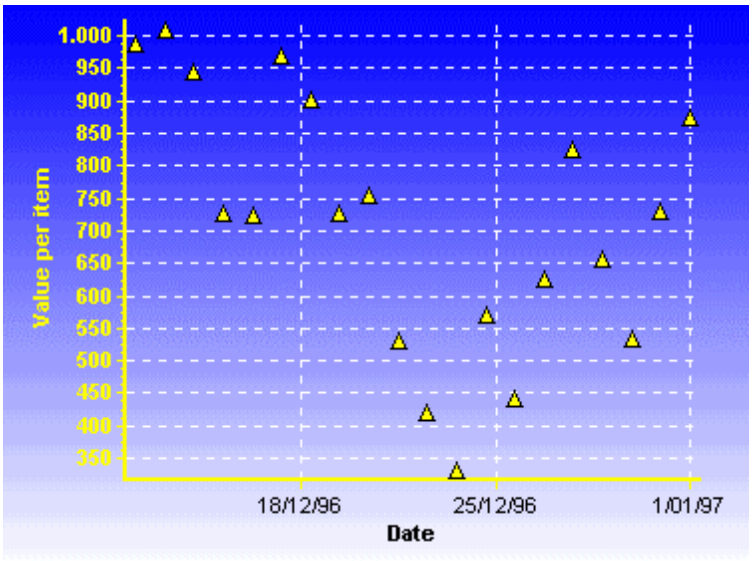
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.1.4 Point

A Point Series is similar in definition to a Line Series without the line.

- Format
- General
- Marks
- Data Source



5.5.1.1.4.1 Format

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Color Each - enables/disables the coloring of each point
Ignore nulls - ignore null values
Transparency - specifies the degree of transparency

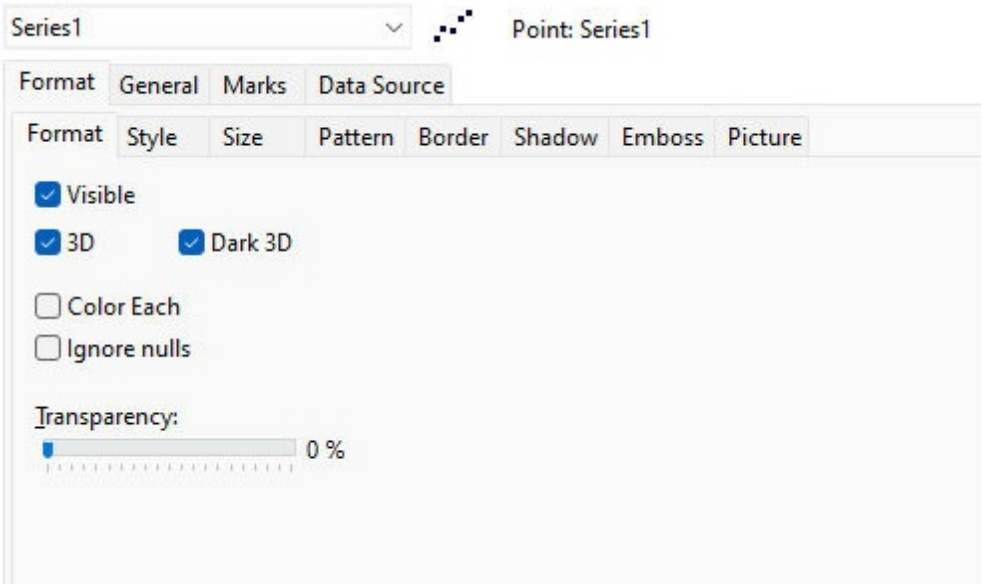
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

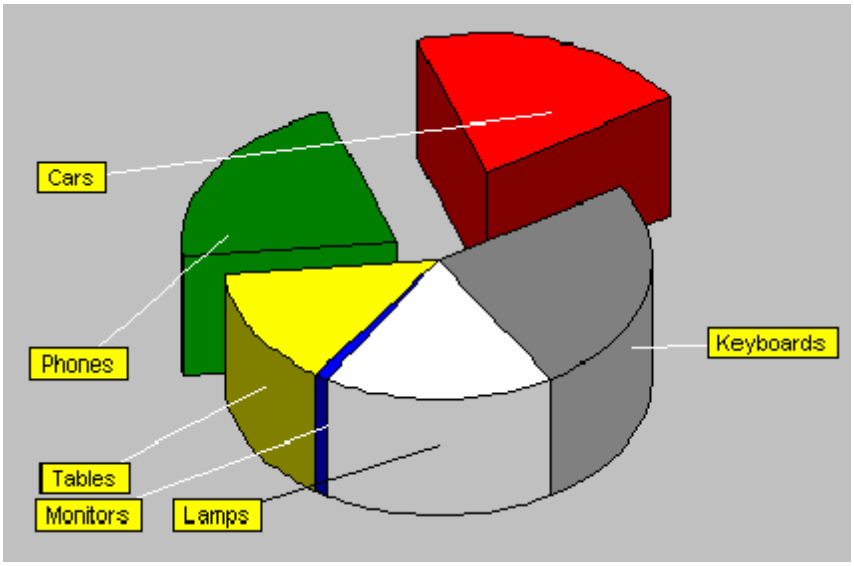
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.1.5 Pie

A Pie Series is unique in not needing any axis. It is possible to mix a Pie Series in a Chart with another Series that requires an axis.

- Format
- Circled
- General
- Marks
- Data Source



5.5.1.1.5.1 Format

Options
Explode biggest - separates the largest pie slice from the other slices

Total angle - determines the internal angle of the pie slice displayed
Multiple Pies - specifies if multiple pies are supported
Edge Style - determines the style on the pie chart edge: None, Flat, or Curved
Dark 3D - shows the pie 3D-effect areas in darker colors than the other Pie sectors
Patterns - shows the pie sections in different brush pattern styles
Transparency - specifies the degree of transparency

Border

Bevel
Percentage - specifies the bevel on as a percentage of the pie thickness
Bright - specifies the bevel brightness
Use Border - specifies the border for pie sections
Dark Border - shows shaded colors for the sides of the pie slices

Border - See **Border**

Group Slices

General
Style - defines different pie sections groups; Below % and Below Value
Value - specifies the value in which slices are grouped
Label - specifies the label for the grouped slices

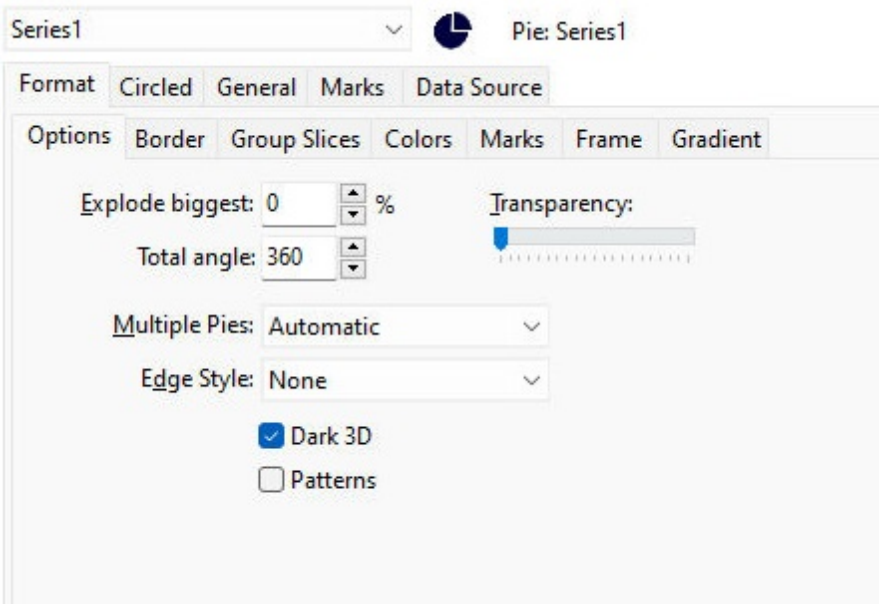
Legend - defines a sub-Legend. See **Legend**

Colors
Color palette - defines a themed color scheme for the pie slices
Color Each slice - enables/disables the coloring of each pie slice. When disabled, the Color button can be used to select a color

Marks
Inside Slice - specifies if the pie mark plots over the pie slice
Auto Mark Position - sets the slice marks automatically
Vertical center callout - specifies the mark leg will ends at the center to the mark shape, instead of the mark corner
Rotated - rotates the mark
Rotate Style - specifies the rotated mark style; Radial or Tangencial
Callout Leg size - increases the line width and expands the distance to the slice mark
Empty Slices - specifies whether to display empty pie slices

Frame - See Frame

Gradient
Gradient Bright - alters the brightness for the gradient, centered from within each pie slice
See **Gradient**

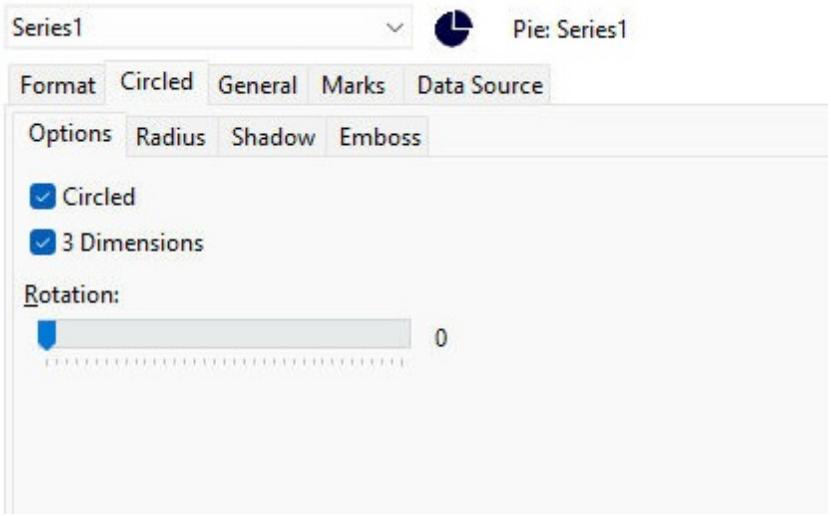


5.5.1.1.5.2 Circled

Options
Circled - determines whether the Pie Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the pie series in 3D
Rotation - sets the pie series rotation angle

Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.1.6 Fast Line

The Fast Line Series draws only at 2 Dimensions but draws very quickly. Performance will depend on the computer hardware. The Series type was originally conceived to tackle high volume requirements of technical and financial applications but serves well for any dataset of very high point volumes.

- Format
- General
- Marks
- Data Source

There are two line Series types available, Line and Fast Line. Fast Line is just what its name describes - it is fast. It is distinct from Line because to achieve speed - speed to add new points to the Series. The price paid is that it forgoes some properties that the Line Series has.

5.5.1.1.6.1 Format

Options
Line Mode - controls the drawing of line series. In most normal situations, a series draws a line between each Line point. This makes the Line appear as a "mountain" shape. However, setting "Stairs" will make the Series draw 2 Lines between each pair of points, thus giving a "stairs" appearance. "Inverted" stairs, alters the directions of the stair.
Treat Nulls - determines how null values are displayed
Draw All - When active, it shows all the Series points. When non-active it only draws the first point at any X pixel location. The option offers gains in speed when large numbers of points recur at one X location.
Draw Style - determines how the line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve

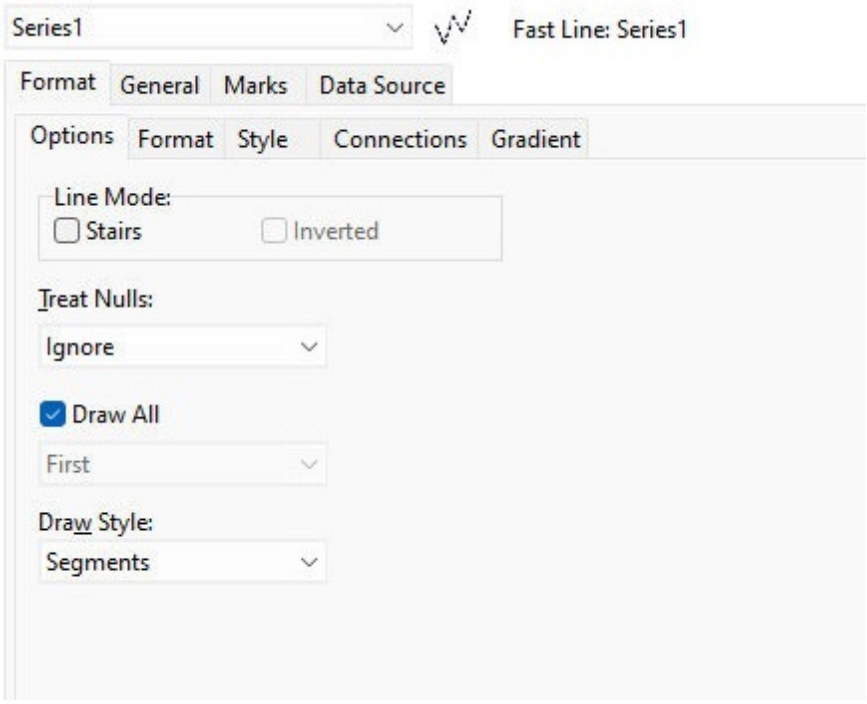
Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - specifies the pen width in pixels
Default Color - specifies to use the default color
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat
Join Style - specifies the style used to connect the join lines; round, bevel or miter

Note: Joined lines must contain widths greater than one pixel.

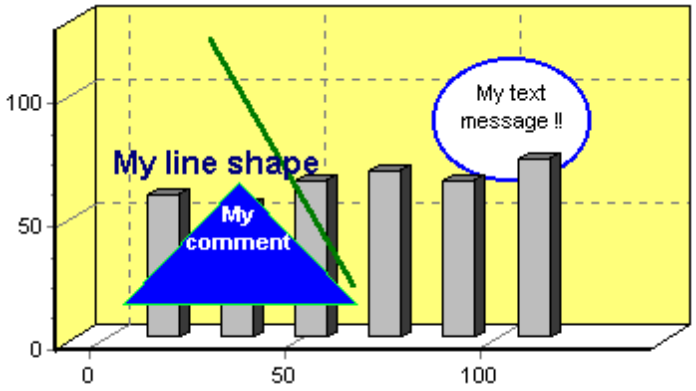
Gradient - See **Gradient**



5.5.1.1.7 Shape

Shape Series are useful for defining or adding any additional information to your Chart, perhaps in runtime as a result of receipt of exceptional data. You may add text to any shape you add to your Chart and relate the shape to another Series.

- Format
- General
- Marks
- Data Source



Each shape has two co-ordinates associated with it, top left and bottom right of the invisible rectangle that encloses the shape. You may add text to the box. These co-ordinates and messages could be updated at runtime by your code to dynamically put the shapes anywhere on your Chart.

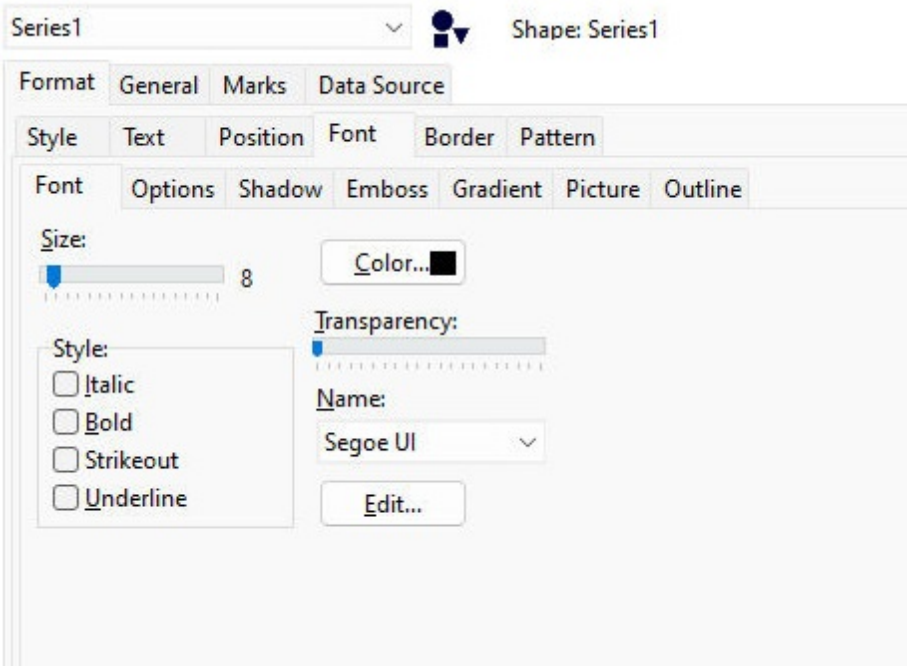
5.5.1.1.7.1 Format

Style
Style - defines the list of possible values for the Shape series
Round Rectangle - determines whether Shape series draws rounded rectangle corners. It has effect only when shape Style is Rectangle.
Color - specifies the color used to display the line, using a color palette
Transparent - controls whether Shape series will use the Shape Brush attributes to fill the interior of the Shape
Transparency - specifies the degree of transparency

Text
Text/Edit - displays customized strings inside shapes
Alignment - determines the vertical alignment of the text of a Shape series
Horiz. Alignment - determines the horizontal alignment of the text of a Shape series

Position
Units - determines the unit used to define the series position
Top/Left/Right/Bottom Positions - define the coordinates of the englobing Shape series rectangle

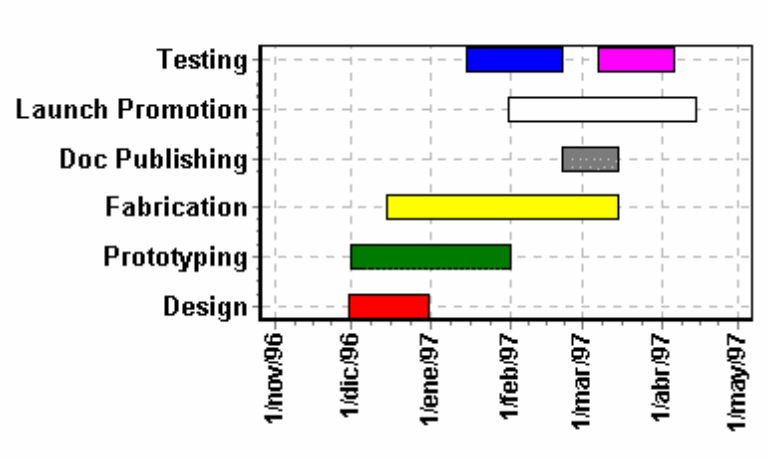
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the Shape series text
Border - See **Border**
Pattern - See **Pattern**



5.5.1.1.8 Gantt

Use the Gantt Chart as a planner or to track progress of a project or Series of activities. The Gantt Series draws bars that have start and end values which may be of datetime format. You may define a Y axis value for the vertical position of the bar and you may define 'next bar' to draw connection lines between the bars.

- Format
- Gantt
- General
- Marks
- Data Source



5.5.1.1.8.1 Format

Options
Height - defines the line height value
Color Each - defines each series value with a different color. If unchecked, the "Color" button determines a unique color for all series values.
Transparency - specifies the degree of transparency
Connecting Lines - defines the pen properties used to draw the optional lines that connect Gantt Bars.
See **Border**

Callout

Format
Visible - specifies whether or not the callouts are displayed
3D - sets the callouts in 3 Dimensions
Dark 3D - sets the callouts fill with darker colors than the rest of the Series
Transparency - specifies the degree of transparency

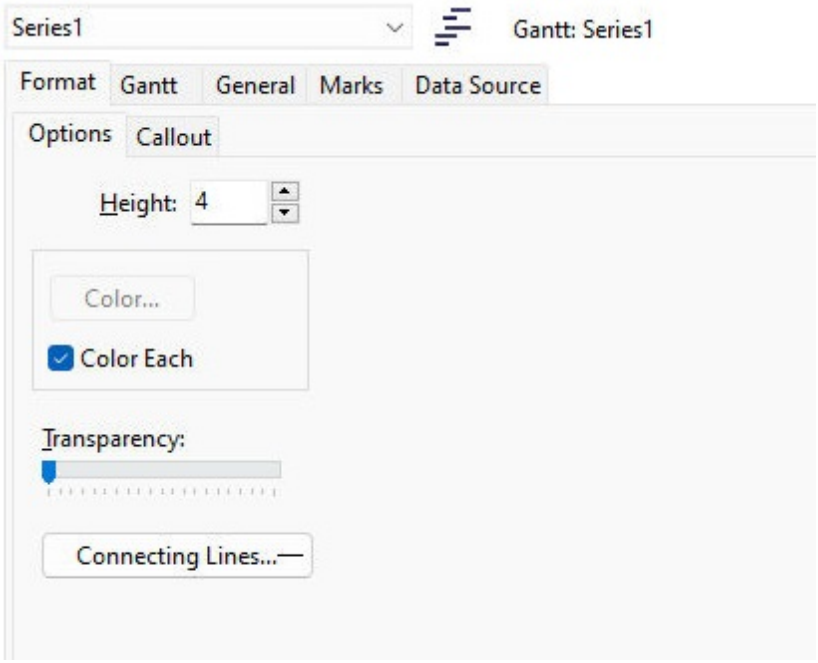
Style - specifies the style of the Series callouts as Square, Circular, Triangular, etc.

Size - specifies the callout size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the Series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the callouts
See **Pattern**

Border
Dark Pen - specifies the callout color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.1.8.2 Gantt

Format
Visible - specifies whether or not the Gantt bars are displayed
3D - sets the Gantt bars in 3 Dimensions
Dark 3D - sets the Gantt bars fill with darker colors than the rest of the Series
Transparency - specifies the degree of transparency

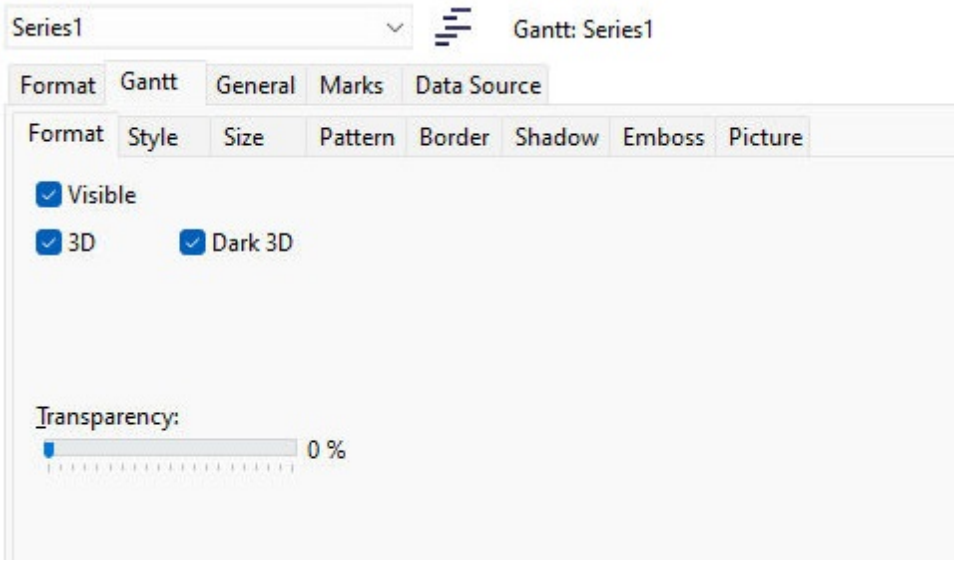
Style - specifies the style of the Gantt bars as Square, Circular, Triangular, etc.

Size - specifies the Gantt bar size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the Gantt bars
See **Pattern**

Border
Dark Pen - specifies the Gantt bar color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



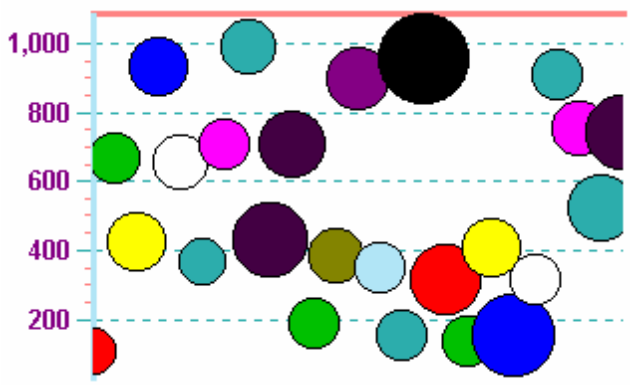
5.5.1.1.9 Bubble

The Bubble Series is useful for showing importance weighting. For example, comparing high volume selling product that, by income, doesn't bring in a revenue of the scale of another low volume seller. When viewing the chart at a glance, literally, big bubbles are seen as important. Bubble Series can be configured in variable shapes, triangles, and more.

- Format
- General
- Marks
- Data Source

The Bubble Series has three configurable parameters that define the value of the data in your Series.

- XValues
- YValues
- RadiusValues



5.5.1.1.9.1 Format

Format
3D - sets the bubble in 3 Dimensions
Dark 3D - sets the bubble fill with darker colors than the rest of the series
Color Each - enables/disables the coloring of each bubble

Ignore nulls - ignore null values
Transparency - specifies the degree of transparency

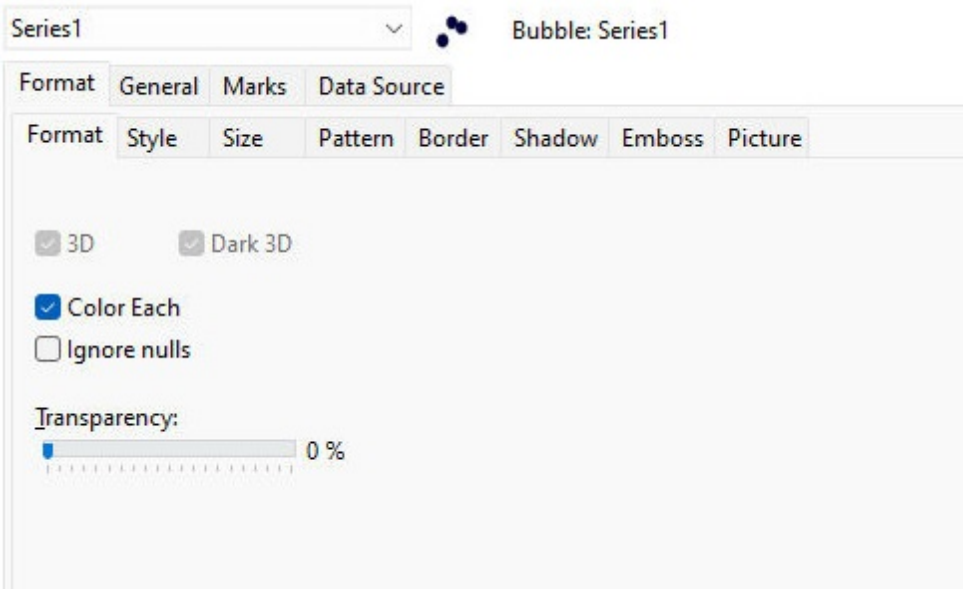
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



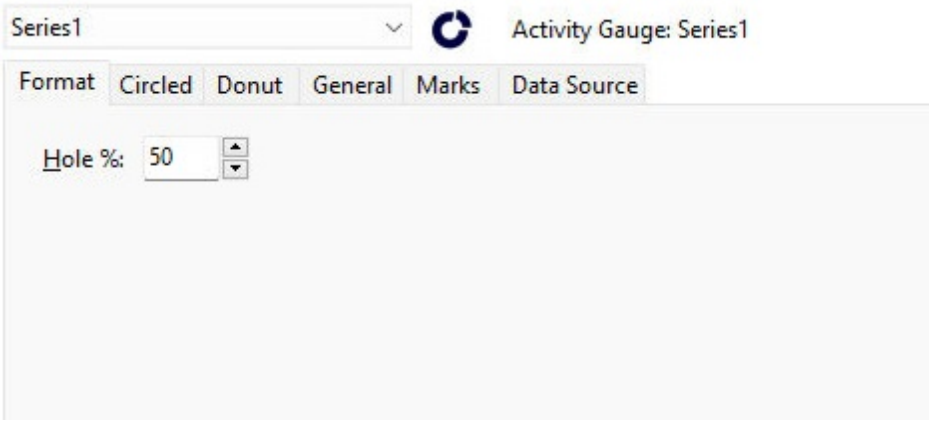
5.5.1.1.10 Activity Gauge

The Activity Gauge offer the means to compare task goals (100%) and current status (percentage shown by each task band). The Activity Values collection contains the values that you wish to plot.

- Format
- Circled
- Donut
- General
- Marks
- Data Source

5.5.1.1.10.1 Format

Hole % - determines the dimension of the middle hole for the series

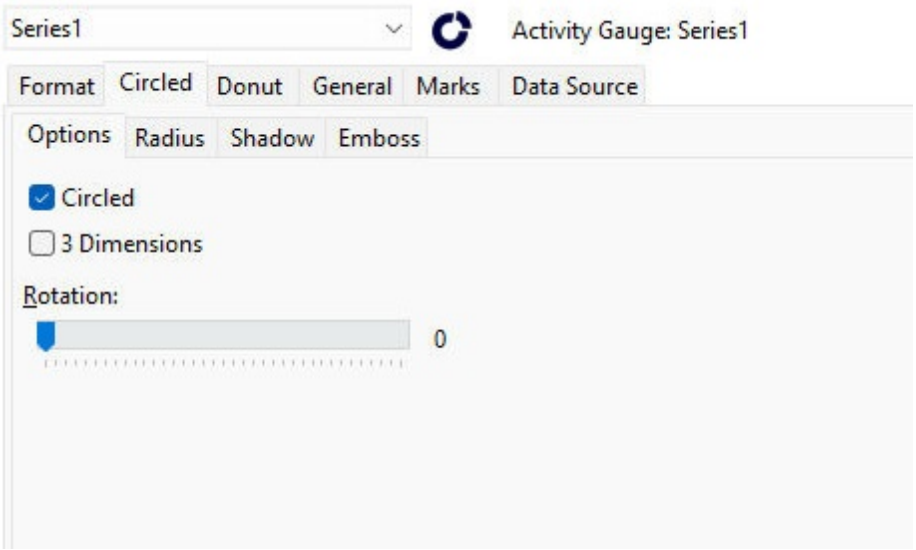


5.5.1.1.10.2 Circled

Options
Circled - determines whether the series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the series in 3D
Rotation - sets the series rotation angle

Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.1.10.3 Donut

Options
Explode biggest - separates the largest donut slice from the other slices
Total angle - determines the internal angle of the slices displayed
Multiple Pies - specifies if multiple pies are supported
Edge Style - determines the style on the donut chart edge: None, Flat, or Curved

Dark 3D - shows the donut 3D-effect areas in darker colors than the other sectors
Patterns - shows the donut sections in different brush pattern styles
Transparency - specifies the degree of transparency

Border

Bevel
Percentage - specifies the bevel on as a percentage of the donut thickness
Bright - specifies the bevel brightness
Use Border - specifies the border for donut sections
Dark Border - shows shaded colors for the sides of the donut slices

Border - See **Border**

Group Slices

General
Style - defines different donut sections groups; Below % and Below Value
Value - specifies the value in which slices are grouped
Label - specifies the label for the grouped slices

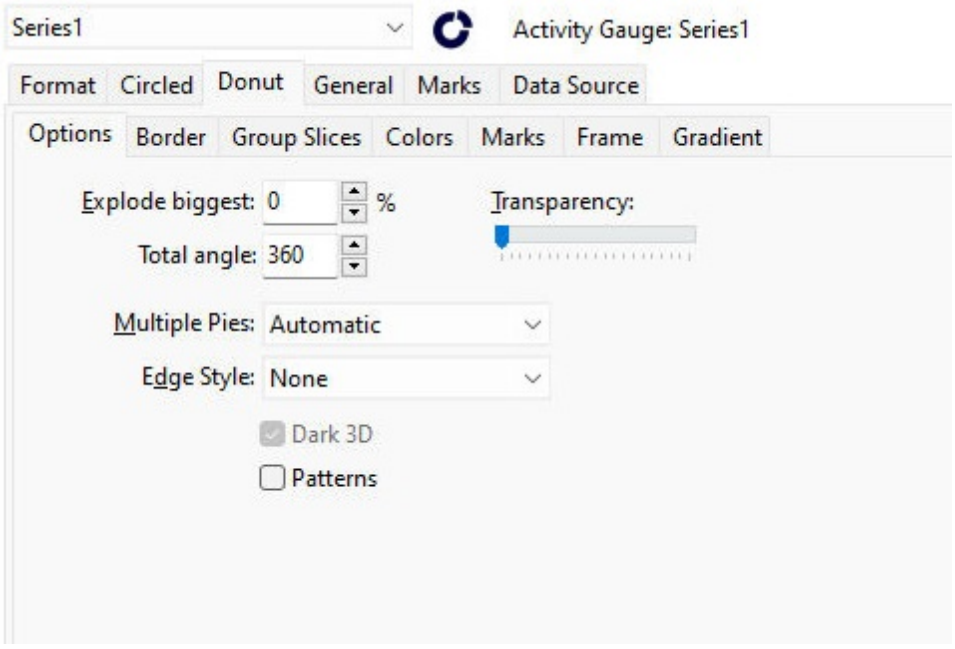
Legend - defines a sub-Legend. See **Legend**

Colors
Color palette - defines a themed color scheme for the donut slices
Color Each slice - enables/disables the coloring of each donut slice. When disabled, the Color button can be used to select a color

Marks
Inside Slice - specifies if the donut mark plots over the donut slice
Auto Mark Position - sets the slice marks automatically
Vertical center callout - specifies the mark leg will ends at the center to the mark shape, instead of the mark corner
Rotated - rotates the mark
Rotate Style - specifies the rotated mark style; Radial or Tangencial
Callout Leg size - increases the line width and expands the distance to the slice mark
Empty Slices - specifies whether to display empty donut slices

Frame - See Frame

Gradient
Gradient Bright - alters the brightness for the gradient, centered from within each pie slice
See **Gradient**



5.5.1.2 Extended

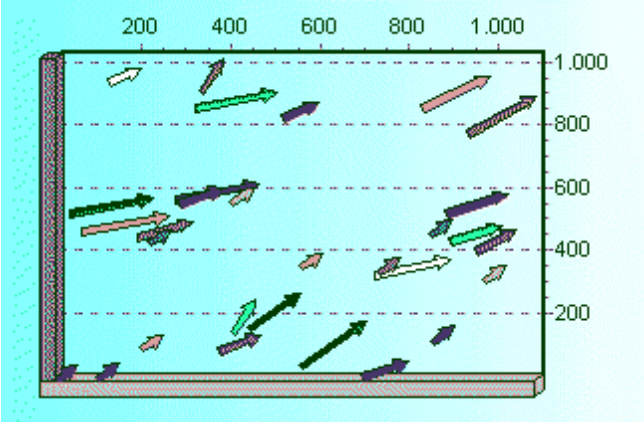
The Extended Series types include more specialized types for planning or mapping applications, e.g. Arrow, Polar, Org Charts, Bezier, etc.

Icon	Series
	Arrow
	Polar Polar Bar
	Radar
	Bezier
	Donut
	Smith
	Pyramid
	Map
	Org. Chart
	Tree Map

5.5.1.2.1 Arrow

The Arrow Series is useful for displaying start and end points of many individual events.

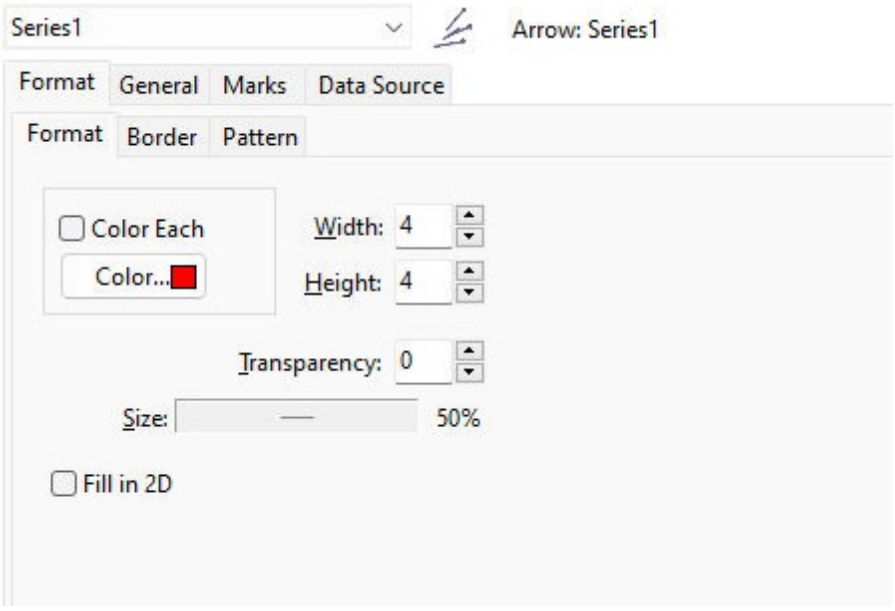
- Format
- General
- Marks
- Data Source



5.5.1.2.1.1 Format

Format
Color Each - defines each Arrow Series value with a different color. The "Color" button determines a unique color for all Series Arrows.
Width - determines the Arrow width size
Height - determines the Arrow height size
Transparency - specifies the transparency for the line series
Size - determines the Arrow size by defining the width and height values
Fill in 2D - specifies the arrows are filled when the chart is displayed in 2D

Border - See **Border**
Pattern - See **Pattern**

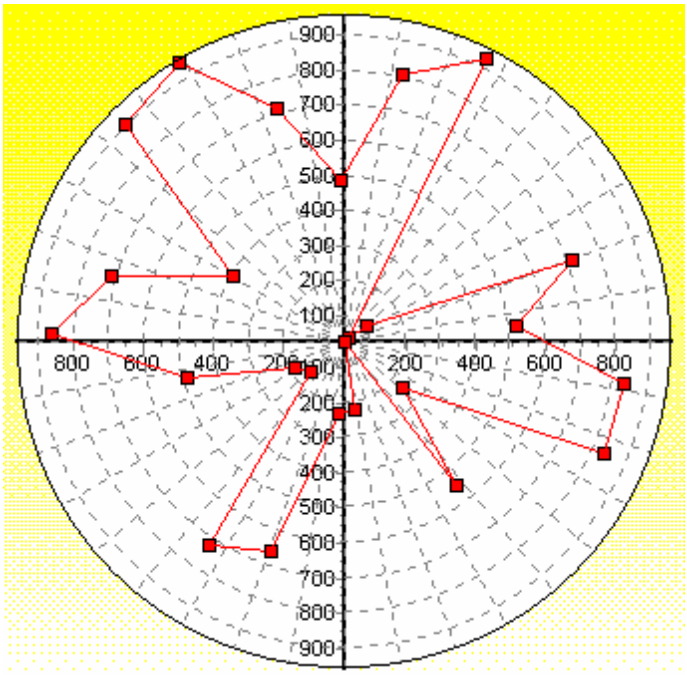


5.5.1.2.2 Polar / Polar Bar

The Polar series plots XValues as angular rotation from 0º. The second variable, YValues are plotted as distance from the origin.

- Format
- Point

- Circled
- General
- Marks
- Data Source



5.5.1.2.2.1 Format

Options
Angle Increment - defines the angle origin. By default it's zero, meaning angles start at the right most circle coordinate.
Radius Increment - determines the increment, in polar radius scales, used to draw the ring grid lines
Close Circle - controls whether a line will be drawn between the first and last Series points
Transparency - specifies the degree of transparency
Treat nulls - determines how null values are displayed
Pointer Behind - specifies if the pointer object is drawn behind the series
Draw Style - determines how the area line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve
Color - determines a unique color for all series
Default - specifies the default color for the area
Color Each - defines each series value with a different color
Color Each Line - defines each series line with a different color

Pen - specifies the kind of pen used to draw the lines connecting Polar points. See **Border**

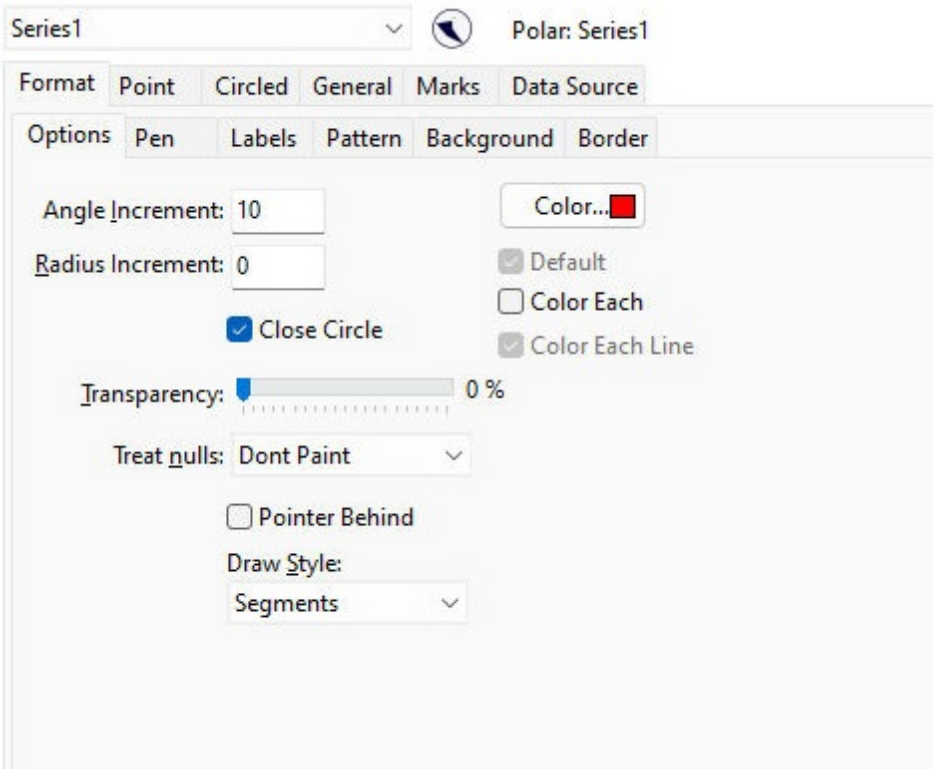
Labels

Options
Visible - controls whether the bounding perimeter labels will be displayed or not
Rotated - rotates labels around circle
Margin % - sets the distance for the label location to the bounding perimeter
ClockWise - enables/disables the display of the circle labels in a clockwise direction
Inside - enables/disables the display of the axis labels inside the circle area
Anti-overlap - specifies to avoids overlap

Format

Format - See **Format**
Border - See **Border**
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the Polar Series text.
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels

Pattern - See **Pattern**
Background - specifies the polar series background. See **Pattern**
Border - - sets the circle lines type. See **Border**



5.5.1.2.2.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the Polar series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the Series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

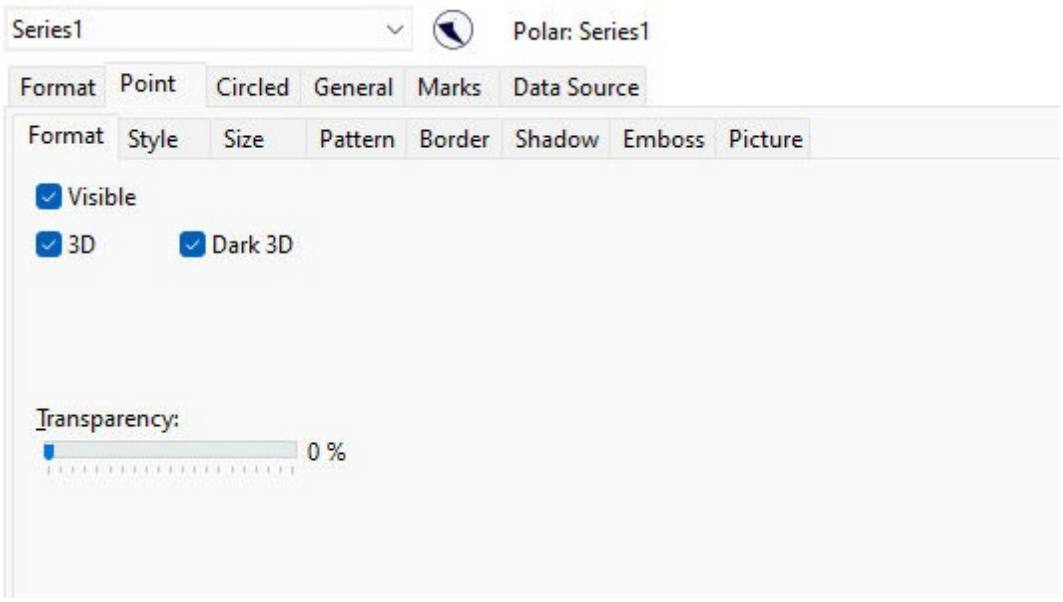
Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border

Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

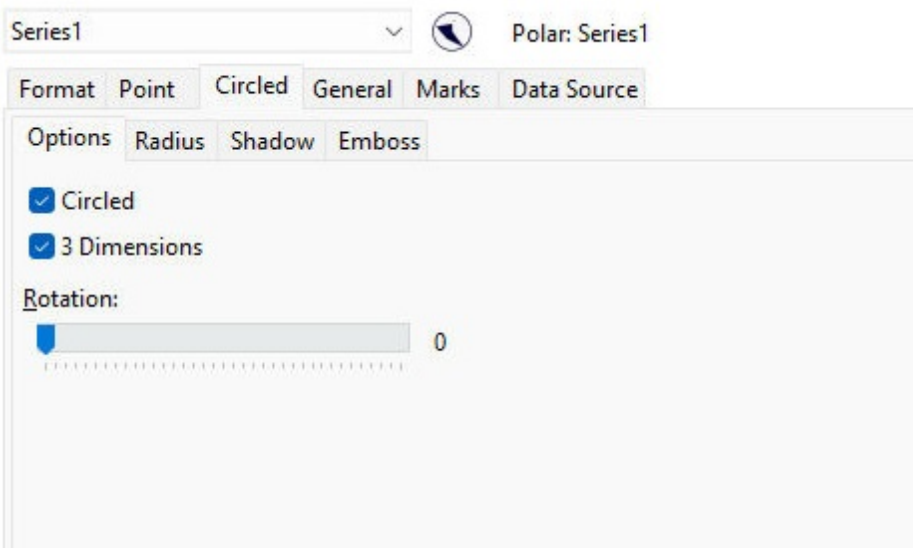


5.5.1.2.2.3 Circled

Options
Circled - determines whether the Pie Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the pie series in 3D
Rotation - sets the pie series rotation angle

Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

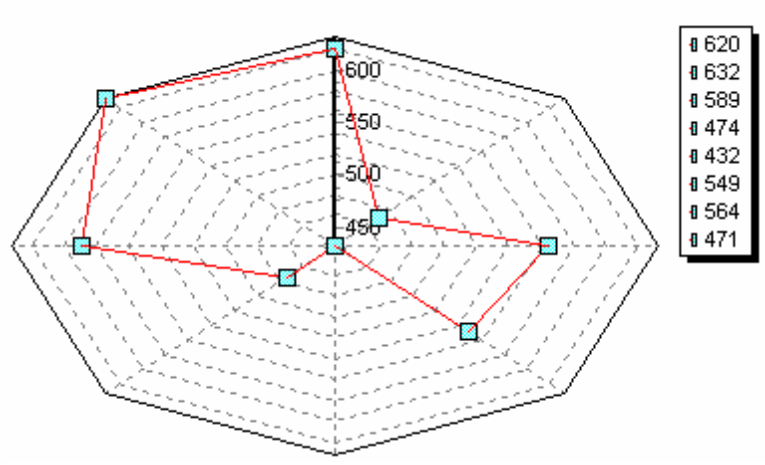
Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.2.3 Radar

All properties of Polar Series also apply to Radar. As with Polar series, Grid lines and labels are controlled by Left Axis and Bottom Axis axes. The first Series controls the Circle Pen. Both Polar and Radar can now fill the area bounded by points.

- Format
- Point
- Circled
- General
- Marks
- Data Source



5.5.1.2.3.1 Format

Options
Angle Increment - defines the angle origin. By default it's zero, meaning angles start at the right most circle coordinate.
Radius Increment - determines the increment, in polar radius scales, used to draw the ring grid lines
Close Circle - controls whether a line will be drawn between the first and last Series points
Transparency - specifies the degree of transparency

Treat nulls - determines how null values are displayed
Pointer Behind - specifies if the pointer object is drawn behind the series
Draw Style - determines how the area line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve
Color - determines a unique color for all series
Default - specifies the default color for the area
Color Each - defines each series value with a different color
Color Each Line - defines each series line with a different color

Pen - specifies the kind of pen used to draw the lines connecting Polar points. See **Border**

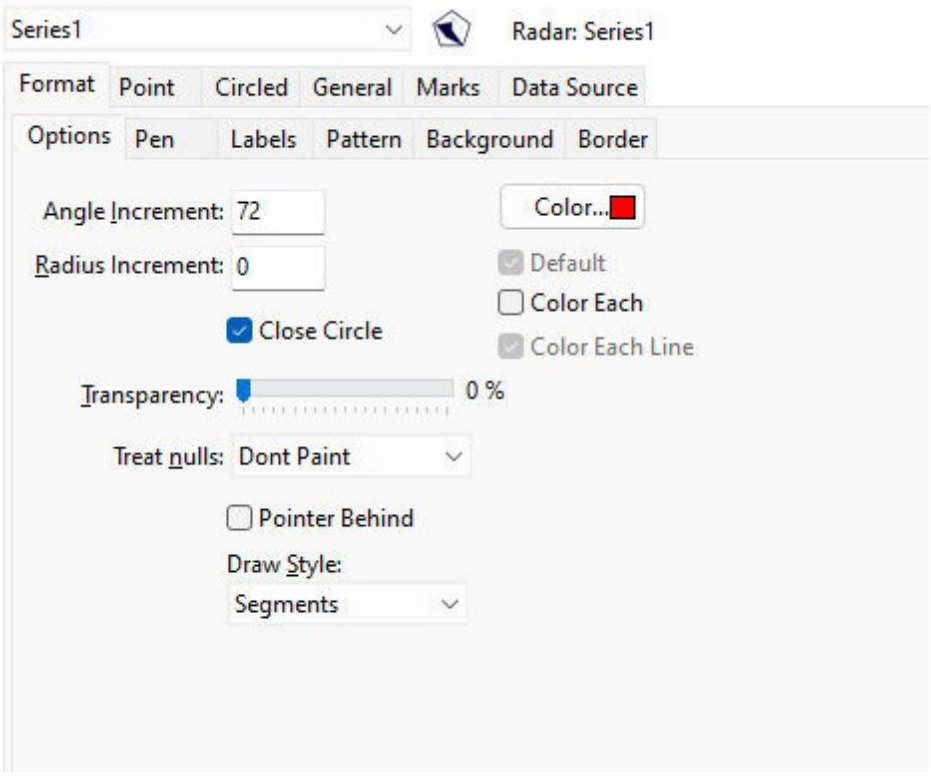
Labels

Options
Visible - controls whether the bounding perimeter labels will be displayed or not
Rotated - rotates labels around circle
Margin % - sets the distance for the label location to the bounding perimeter
ClockWise - enables/disables the display of the circle labels in a clockwise direction
Inside - enables/disables the display of the axis labels inside the circle area
Anti-overlap - specifies to avoids overlap

Format

Format - See **Format**
Border - See **Border**
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the Polar Series text.
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels

Pattern - See **Pattern**
Background - specifies the polar series background. See **Pattern**
Border - - sets the circle lines type. See **Border**



5.5.1.2.3.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

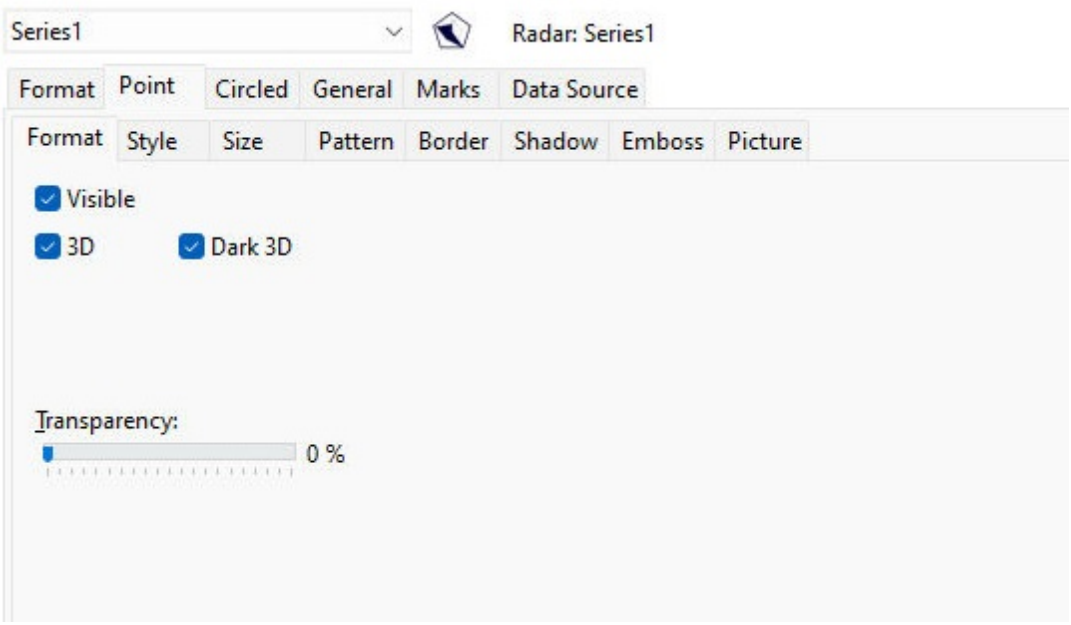
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.2.3.3 Circled

Options
Circled - determines whether the Pie Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the pie series in 3D
Rotation - sets the pie series rotation angle

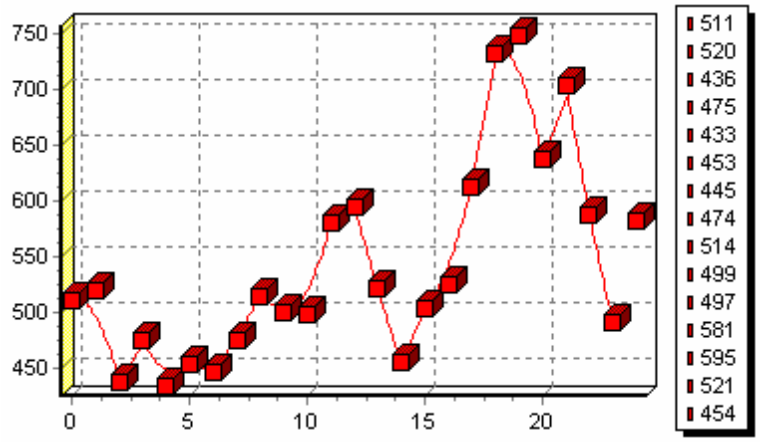
Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

Shadow - See **Shadow**
Emboss - See **Emboss**

5.5.1.2.4 Bezier

A Bezier line is a curve which passes over every 3 points of a Series. There are several ways to calculate the Bezier curve points.

- Format
- Point
- General
- Marks
- Data Source



5.5.1.2.4.1 Format

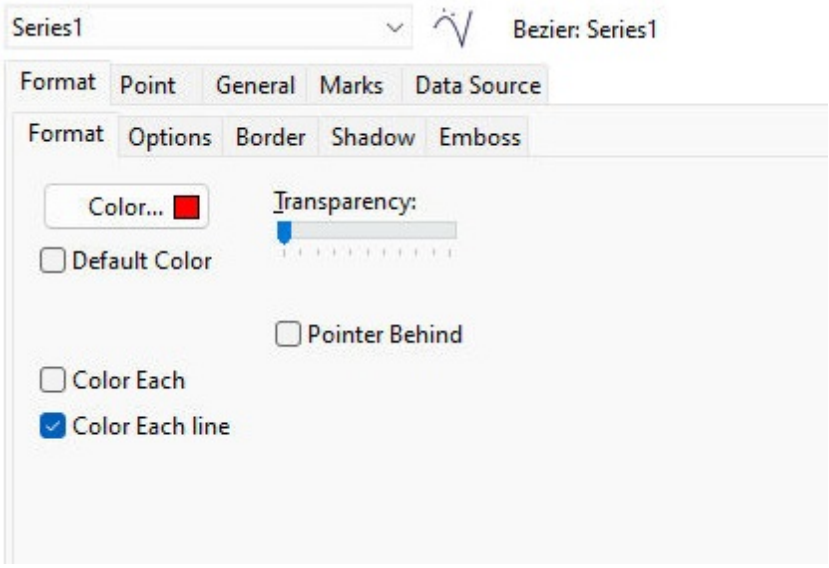
Format
Color - specifies the color used to display the line, using a color palette
Default Color - specifies the default color for the area
Color Each - defines each series value with a different color
Color Each Line - defines each series line with a different color
Transparency - specifies the degree of transparency
Pointer Behind - specifies if the pointer object is drawn behind the series

Options
Click Tolerance - sets the pixel proximity tolerance for mouse clicks
Clickable - determines whether the series accepts mouse clicks on the line drawn between points
Stack - sets the stacking options of the series;
- Overlap - Series displayed in same Z space (all Series take same Z-order position). This will result in over-painting of equal Series points.
- Stack - Stacks series one above the other. Series begin with lowest index order at bottom. Further Series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stack 100% - Plots take up full Bottom to Top space of the Chart Area resulting in a percentage division by Area to reflect Series values.

Treat nulls - determines how null values are displayed

Border - See **Border**
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.2.4.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

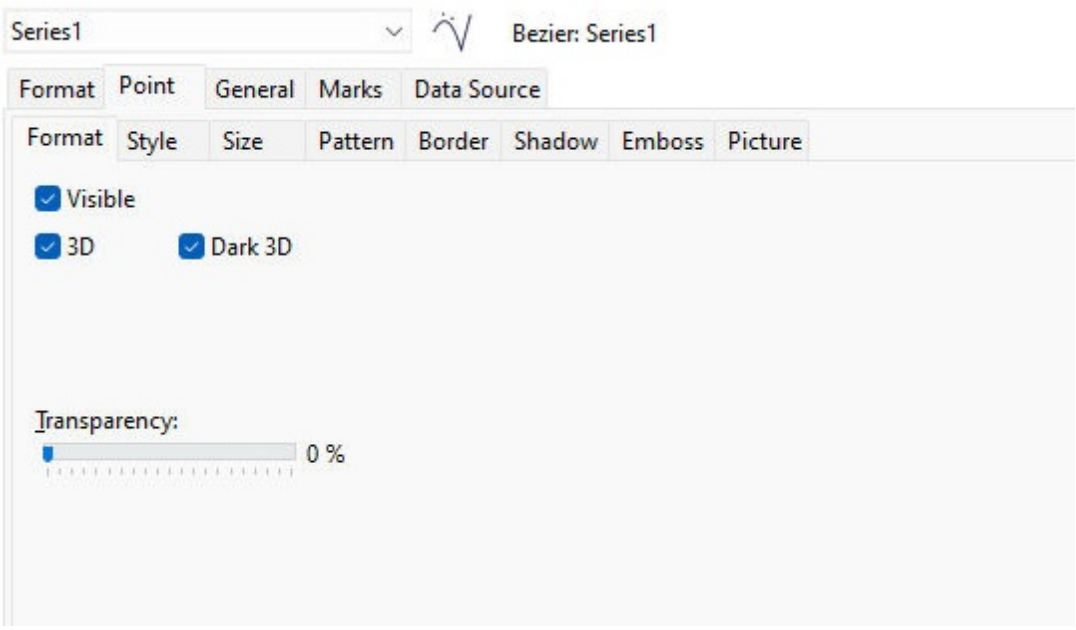
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

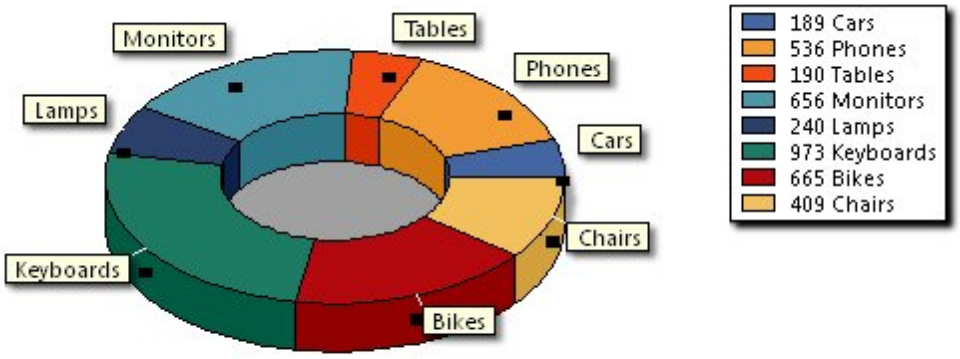
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.2.5 Donut

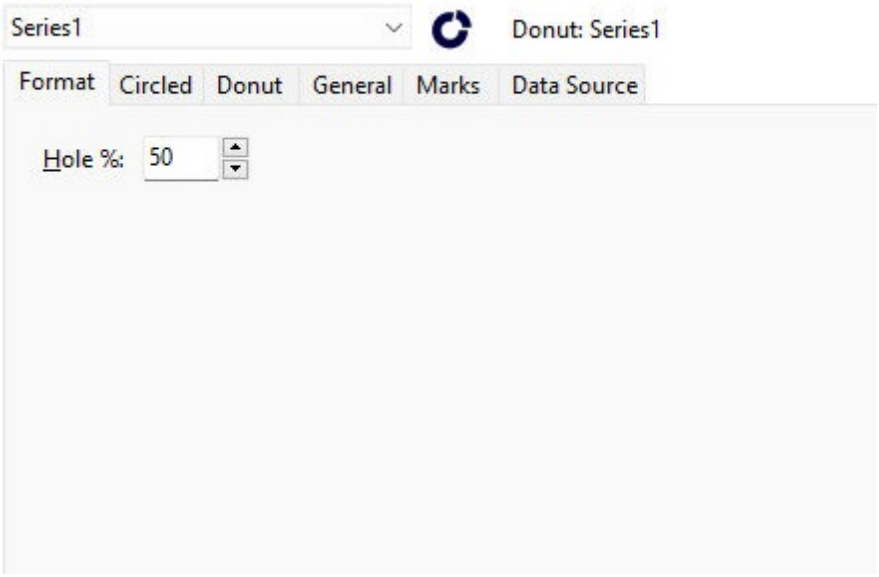
A Donut Series is like the Pie, where it does not need an axis. It is possible to mix a Donut Series in a chart with another series that requires an axis.

- Format
- Circled
- Donut
- General
- Marks
- Data Source



5.5.1.2.5.1 Format

Hole % - determines the dimension of the middle hole for the series

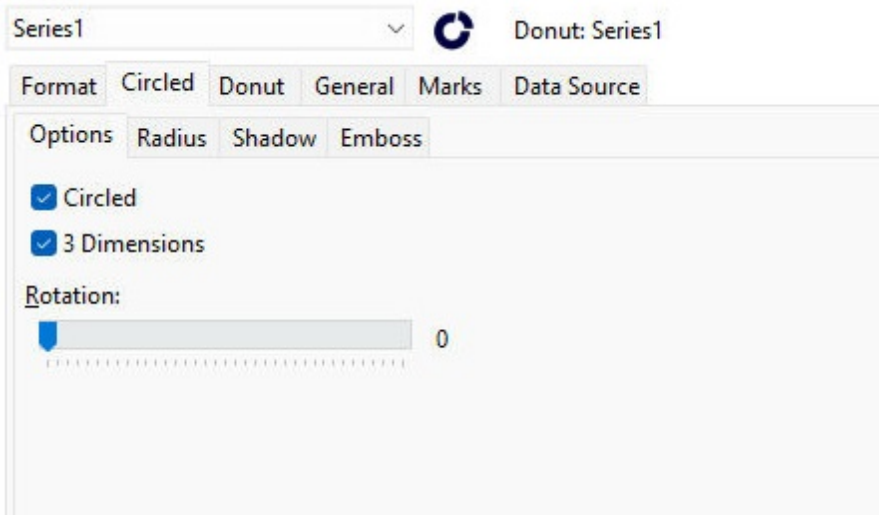


5.5.1.2.5.2 Circled

Options
Circled - determines whether the donut series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the donut series in 3D
Rotation - sets the donut series rotation angle

Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

Shadow - defines the offset shadow of the donut series. See **Shadow**
Emboss - See **Emboss**



5.5.1.2.5.3 Donut

Options
Explode biggest - separates the largest donut slice from the other slices
Total angle - determines the internal angle of the slices displayed
Multiple Pies - specifies if multiple pies are supported
Edge Style - determines the style on the donut chart edge: None, Flat, or Curved
Dark 3D - shows the donut 3D-effect areas in darker colors than the other sectors
Patterns - shows the donut sections in different brush pattern styles
Transparency - specifies the degree of transparency

Border

Bevel
Percentage - specifies the bevel on as a percentage of the donut thickness
Bright - specifies the bevel brightness
Use Border - specifies the border for donut sections
Dark Border - shows shaded colors for the sides of the donut slices

Border - See **Border**

Group Slices

General
Style - defines different donut sections groups; Below % and Below Value
Value - specifies the value in which slices are grouped
Label - specifies the label for the grouped slices

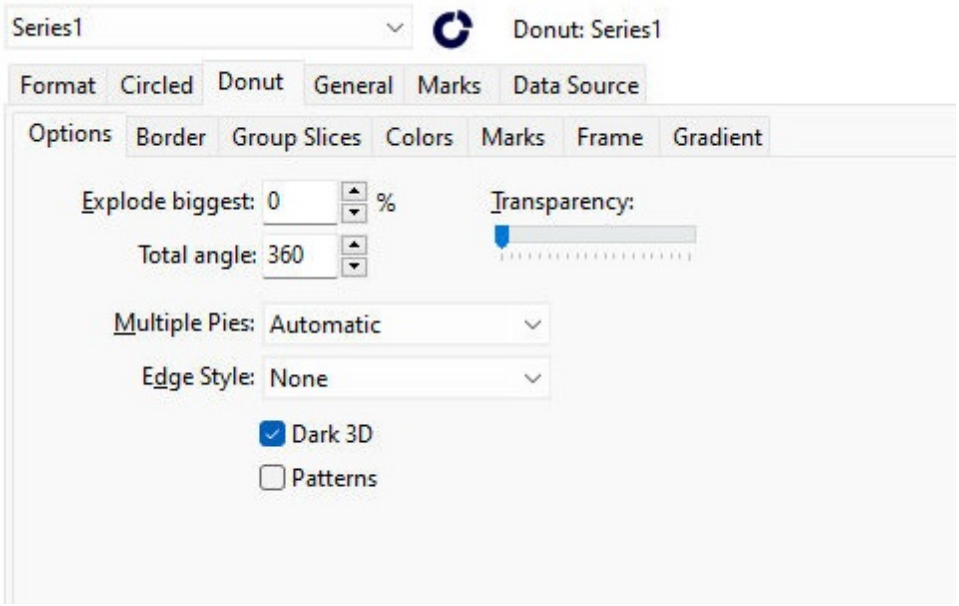
Legend - defines a sub-Legend. See **Legend**

Colors
Color palette - defines a themed color scheme for the donut slices
Color Each slice - enables/disables the coloring of each donut slice. When disabled, the Color button can be used to select a color

Marks
Inside Slice - specifies if the donut mark plots over the donut slice
Auto Mark Position - sets the slice marks automatically
Vertical center callout - specifies the mark leg will ends at the center to the mark shape, instead of the mark corner
Rotated - rotates the mark
Rotate Style - specifies the rotated mark style; Radial or Tangencial
Callout Leg size - increases the line width and expands the distance to the slice mark
Empty Slices - specifies whether to display empty donut slices

Frame - See Frame

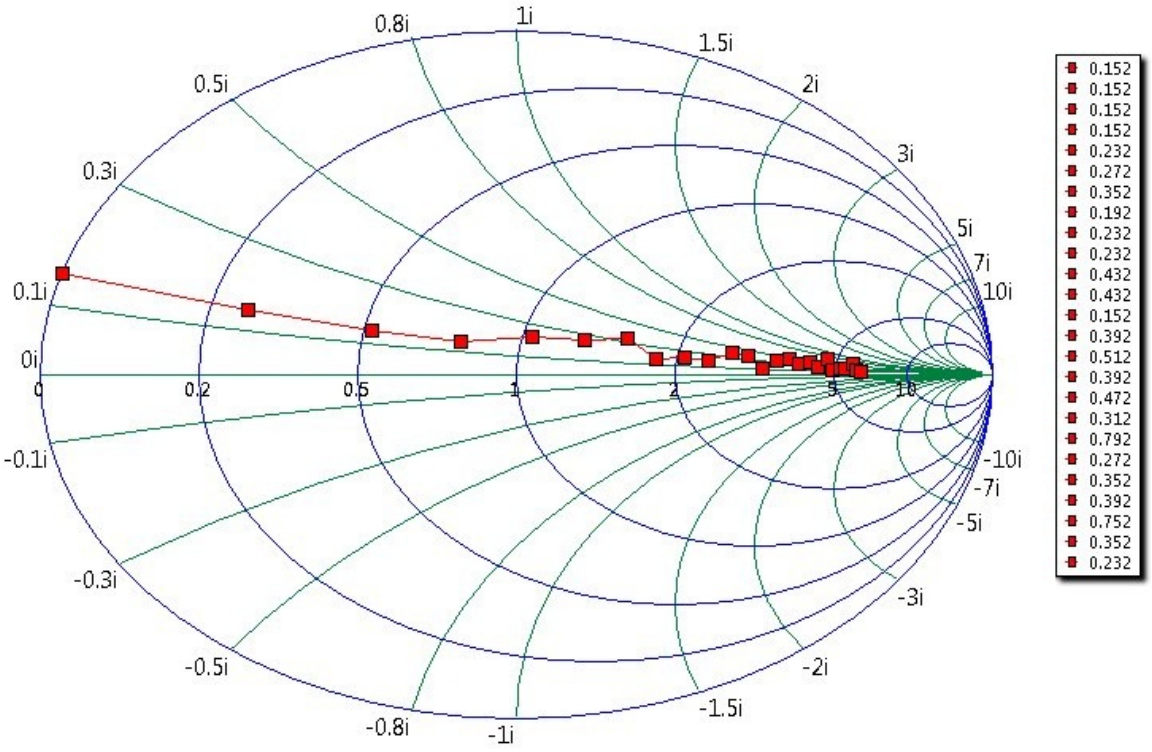
Gradient
Gradient Bright - alters the brightness for the gradient, centered from within each pie slice
See **Gradient**



5.5.1.2.6 Smith

The Smith chart is an aid for solving problems with transmission lines and matching circuits in electrical and electronics engineering, specializing in radio frequency (RF).

- Format
- Circled
- General
- Marks
- Data Source



5.5.1.2.6.1 Format

Smith
C Labels - shows or hides the C labels
R Labels - shows or hides the R labels
C Pen - defines the pen properties for the C lines. See **Border**
R Pen - defines the pen properties for the R lines. See **Border**
Color Each - enables/disables the coloring of each line section of the Smith series
Color Each Line - defines each series line with a different color
Imag. Symbol - defines the imaginary symbol displayed with reactant values.

Options
Transparency - specifies the degree of transparency
Treat nulls - determines how null values are displayed
Pointer Behind - specifies if the pointer object is drawn behind the series
Draw Style - determines how the area line series is rendered when Soft Chart is on and the chart is in 2D mode; Segments, All Curve

Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

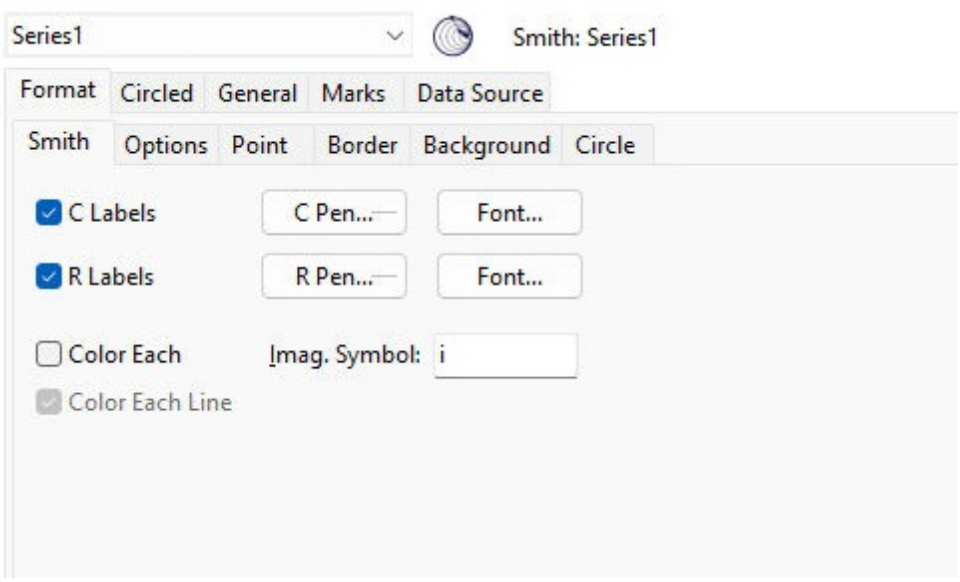
Pattern
Default Color - specifies the default color values for pattern

Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

Border - See **Border**
Background - specifies the series background. See **Pattern**
Circle - sets the circle lines type. See **Border**

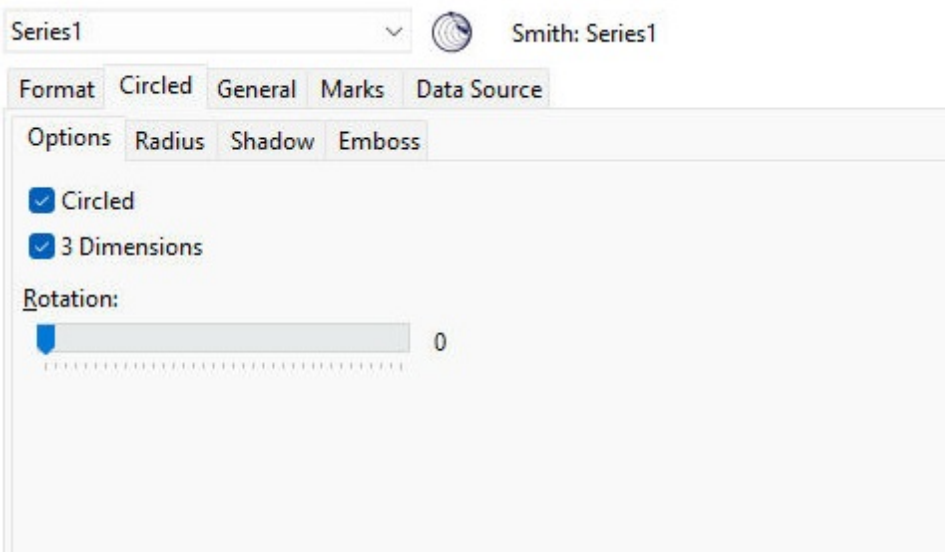


5.5.1.2.6.2 Circled

Options
Circled - determines whether the series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the series in 3D
Rotation - sets the series rotation angle

Radius
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically
Same for all Series - applies the radius values to all chart series

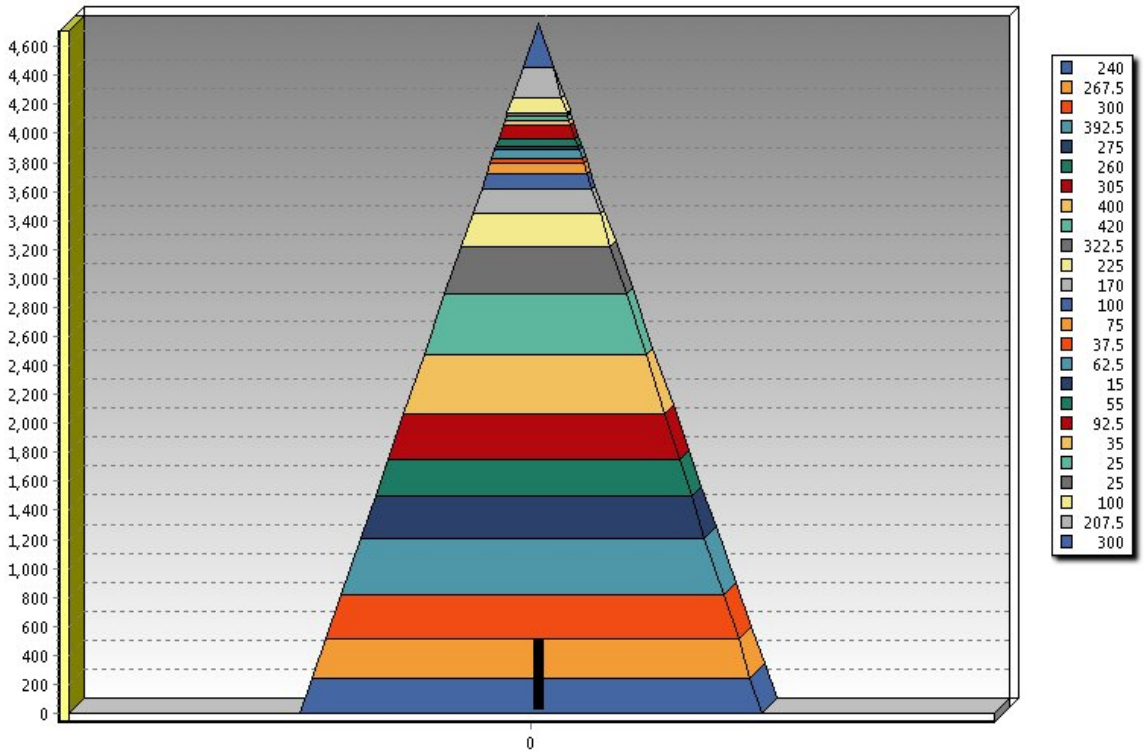
Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.2.7 Pyramid

The Pyramid Series displays a pyramid type chart.

- Format
- General
- Marks
- Data Source

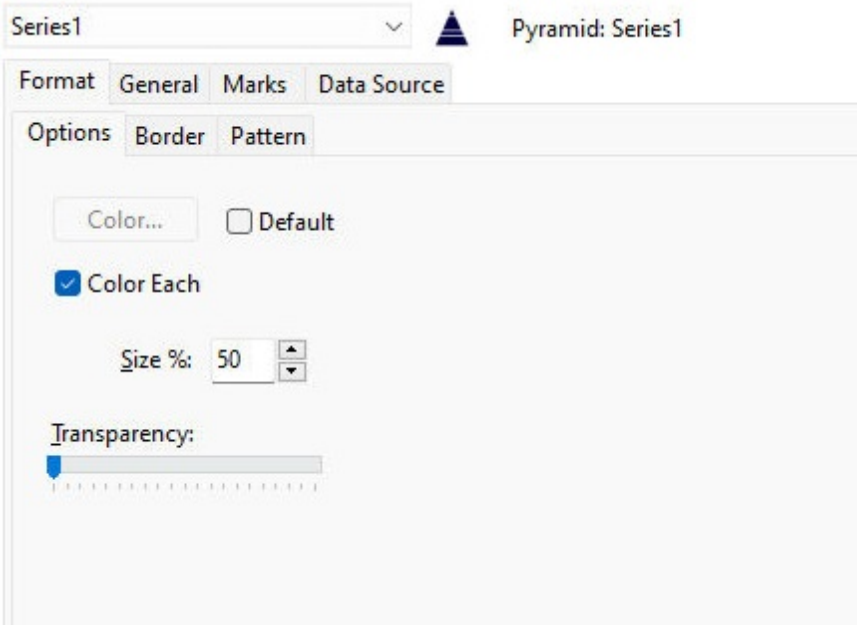


5.5.1.2.7.1 Format

Options

Color - specifies the color used to display the bars, using a color palette
Default - specifies the default color
Color Each - defines each bar with a different color. If unchecked, the "Color" button determines a unique color for all.
Size - sets the size of Pyramid base relative to the chart axis delimiting width
Transparency - specifies the degree of transparency

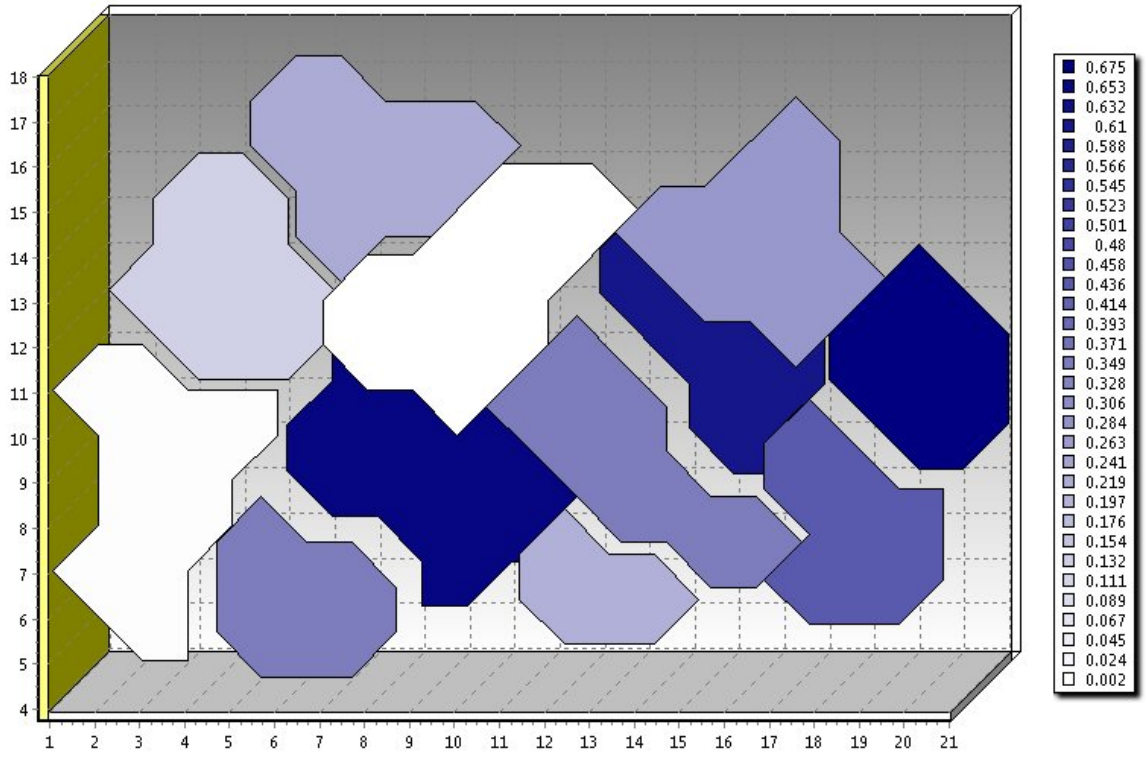
Border - defines the Pyramid border. See **Border**
Pattern - specifies the Pyramid fill pattern. See **Pattern**



5.5.1.2.8 Map

The Map Series displays polygons scaling XY coordinates to an axis, for GIS/MAP applications.

- Format
- Grid 3D
- General
- Marks
- Data Source



5.5.1.2.8.1 Format

Global

Options
Transparency - specifies the degree of transparency
Transparent - controls whether series will use the brush attributes to fill the interior
Render - specifies if the chart is rendered in 2D, 3D, or the default
Point size - defines the size in pixels of the rectangle used to display shapes that contain just a single XY point, instead of a polygon

Border - specifies the Map border. See **Border**
Pattern - specifies the series pattern. See **Pattern**

Pointer

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

Map Marks - specifies the mark type; Labels, Codes, or Both
Visible - specifies if the map marks are displayed
AutoSize - specifies the map mark rectangle width and height dimensions will be automatically calculated based on the width and height of the annotation text
UpperCase - specifies the mark labels use upper case characters
Centroids - specifies to center the marks within the shapes
Auto Text Color - specifies to automatically assign the mark text color

Legend - defines the Legend settings
Legend Style - defines the legend style; Color Palettes, Groups, Texts
Include Zero - includes zero values in the legend
Include Unnamed - includes unnamed marks in the legend
Sort - specifies the legend sorting; Text, Value, None
Inverted - displays the legend items in the opposite direction

Shapes
"+" and "-" buttons, Sort - adds or deletes points for the series. Sorting is also supported.

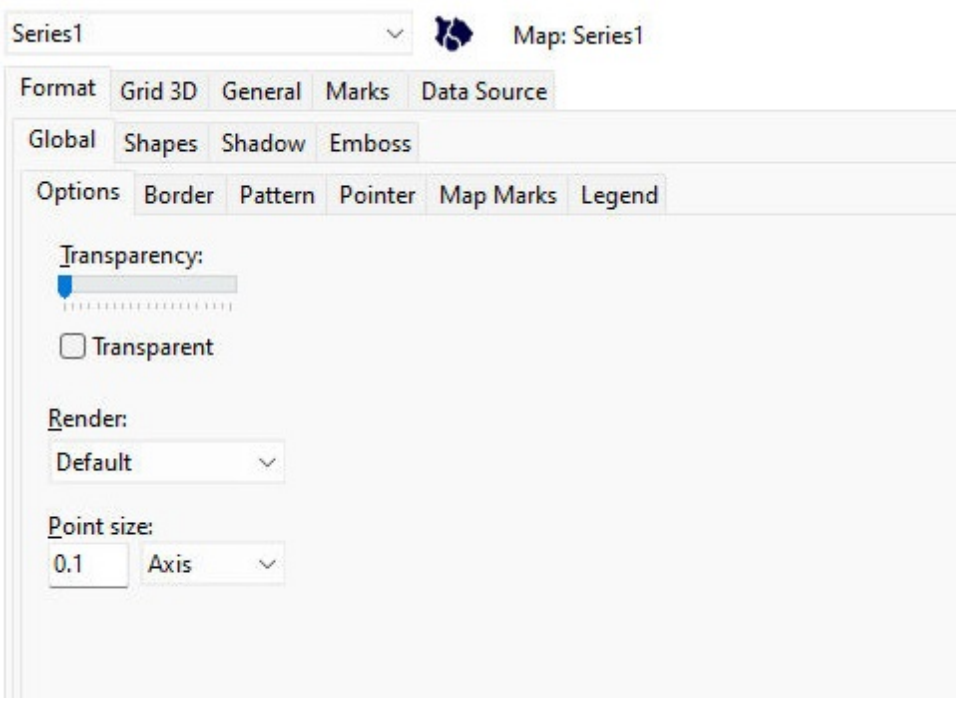
Values
Text - defines the text to be included in the Map portion/point
Code - defined a code to be included in the Map portion/point
Z - specifies the position on the Z axis of the selected point

Format
Closed - specifies to fill and close the shape for the selected Map point of the series
Visible - specifies if the selected Map point of the series is visible

Global Border - defines the border for the Map point. By setting the "Global" option, the border will be applied to the chart globally.
Global Pattern - defines the pattern for the Map point. By setting the "Global" option, the pattern will be applied to the chart globally.
Color - defines the color of the selected point/portion
Default - specifies the default color
Transparency - specifies the degree of transparency for the map shape

Points - defines the Series Map values manually by using the buttons. The arrow buttons navigate the rows. The "+" button is used to Add a new value. The "-" button is used to Delete a value.
Border - See **Border**
Pattern - See **Pattern**

Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.2.8.2 Grid 3D

The Grid 3D tab offers three different color modes to color the grid, which are enabled by selecting each tab.

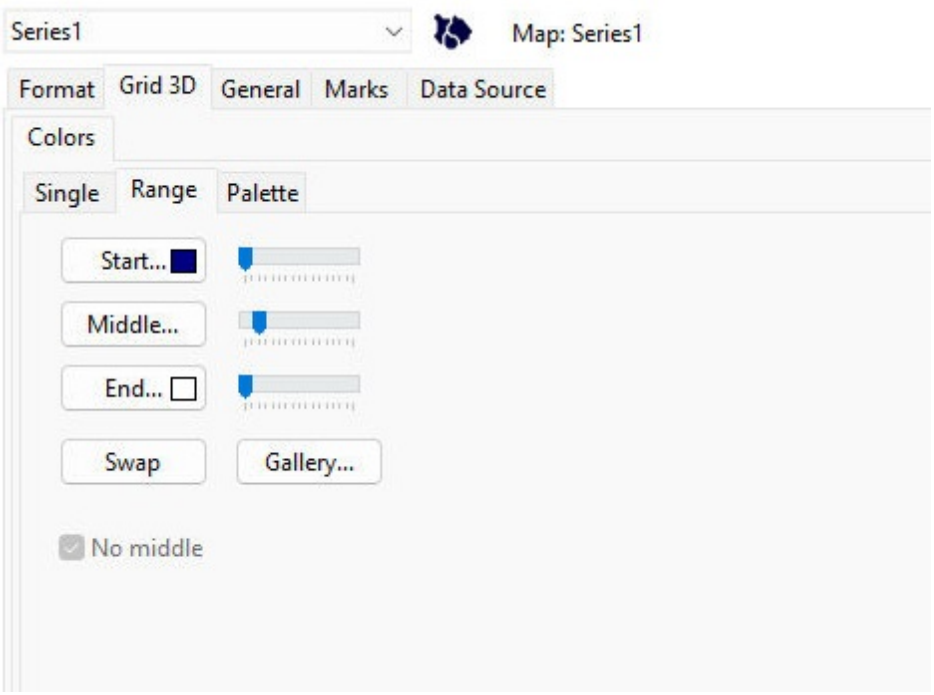
Single - defines only one color for all the series values
Color Each - defines each series value with a different color
Color - specifies the color used to display the line, using a color palette

Range
Start - specifies the start color of the series points
Middle - specifies the middle color of the series points
End - specifies the end color of the series points
Swap - swaps the three defined colors
Gallery - provides several default gradients to choose from, with a preview panel
No middle - removes the middle color

Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show in the legend

Palette
Style - specifies the color style for the points
Invert - inverts/reverses the color style
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Load palette - loads a saved custom palette
Save palette - saves the current custom palette
New palette - adds a new custom color palette

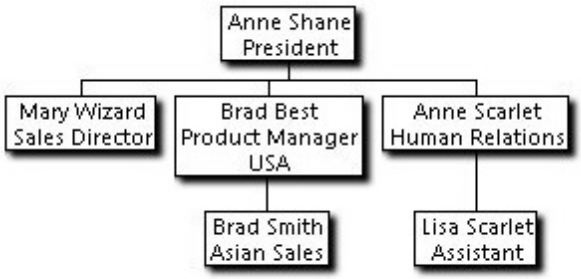
Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show in the legend



5.5.1.2.9 Org. Chart

The Org. Chart provides an organization chart diagram that shows the structure of an organization and the relationships and relative ranks of its parts and positions/jobs. Items are automatically positioned and auto-sized depending on their text length and font size attributes.

- Format
- General
- Marks
- Data Source



5.5.1.2.9.1 Format

Options
Spacing - defines the horizontal and vertical pixel values used as space between items
Line style - determines how to draw lines between items and their child items; Squared or Diagonal

Nodes
"+" and "-" buttons - adds and deletes rectangle items

Text
Text - sets the text to display inside the rectangle
Visible - specifies if the rectangle item is displayed
Edit - opens the Text Editor to edit, copy, load, and save characters
Cursor - defines a cursor type when the mouse passes into the rectangle item
Text alignment - determines the position of the text in the rectangle item
Use default format - specifies to use the default formatting for the rectangle text characters. If unchecked, the below "Format" options are made available.

Size
Automatic - specifies an automatic rectangle size, if checked
Width - specifies the rectangle width
Height - specifies the rectangle height
Clip Text - specifies if the text is cut off

Format

Margins
Units - specifies the units for adjusting the rectangle margins
Left - specifies the left margin value for the rectangle
Top - specifies the top margin value for the rectangle
Right - specifies the right margin value for the rectangle
Bottom - specifies the bottom margin value for the rectangle

Format - See **Format**
Border - See **Border**
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the text.
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels

Lines

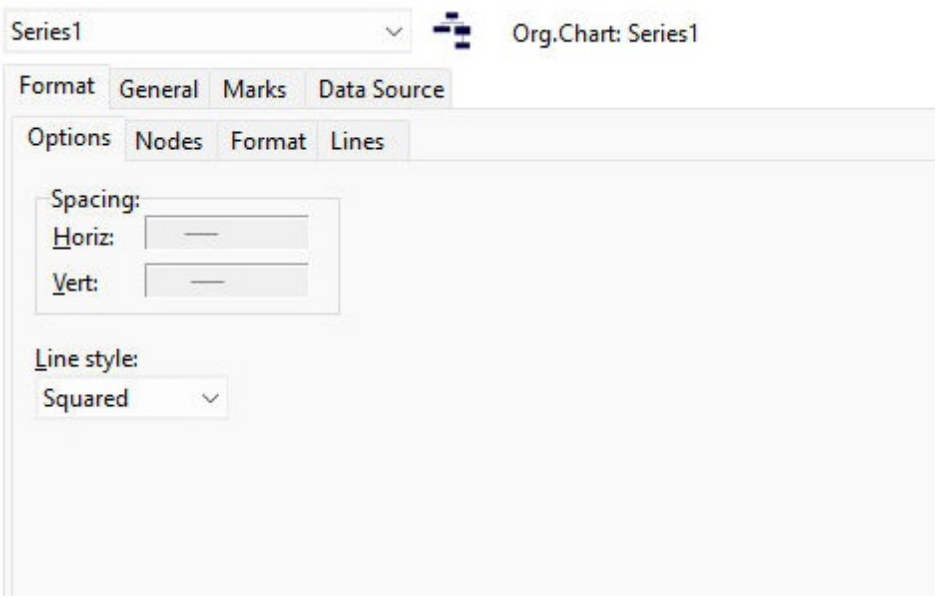
Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - specifies the pen width in pixels
Default Color - specifies to use the default color
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat
Join Style - specifies the style used to connect the join lines; round, bevel or miter

Note: Joined lines must contain widths greater than one pixel.

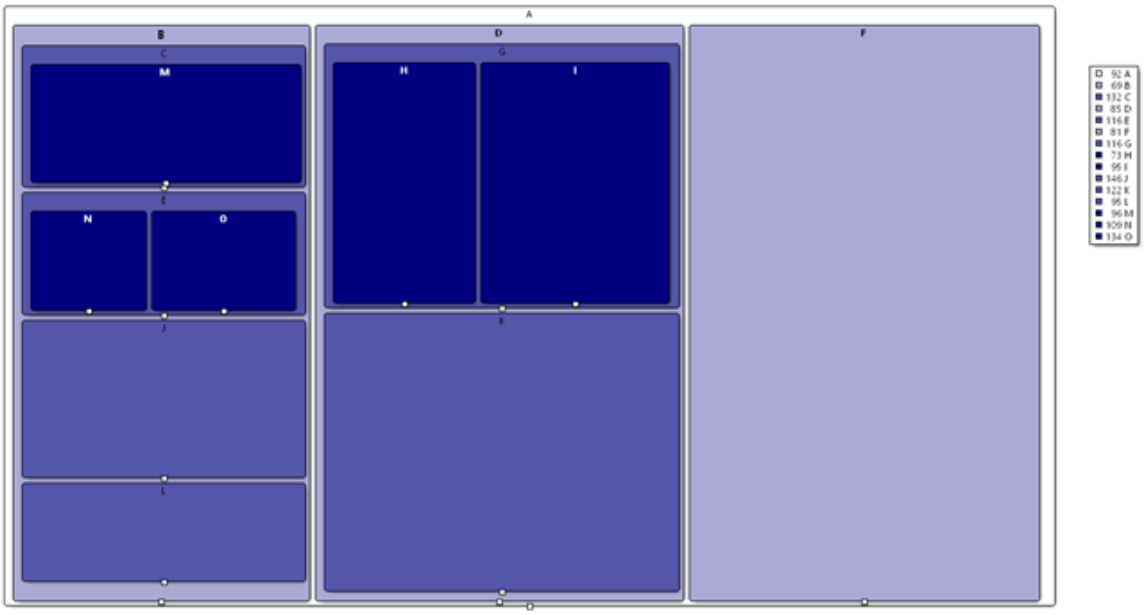
Gradient - See **Gradient**



5.5.1.2.10 Tree Map

The Tree Map displays hierarchical (tree-structured) data as a set of nested rectangles. Each branch of the tree is given a rectangle, which is then tiled with smaller rectangles representing sub-branches. A leaf node's rectangle has an area proportional to a specified dimension on the data.

- Format
- General
- Marks
- Data Source



5.5.1.2.10.1 Format

Options
Tiling style - When set to Slice & Dice, the nested rectangles appear in vertical groups, whereas when set to Strip the groups appear horizontally.
Text alignment - determines the position of the text in the tile
Color each point- defines each tile with a different color
Color Style - When set to Level, nested rectangles are painted the the same level with the same palette color. However, when set to Value those rectangles with a similar value will be painted the same color.

Spacing
Spacing - defines the horizontal and vertical pixel values used as space between tiles

Nodes
"+" and "-" buttons - adds and deletes tiles

Text
Text - sets the text to display inside the tile
Visible - specifies if the tile is displayed
Edit - opens the Text Editor to edit, copy, load, and save characters
Cursor - defines a cursor type when the mouse passes into the tile
Text alignment - determines the position of the text in the tile
Use default format - specifies to use the default formatting for the tile text characters. If unchecked, the below "Format" options are made available.

Size
Automatic - specifies an automatic rectangle size, if checked
Width - specifies the rectangle width
Height - specifies the rectangle height
Clip Text - specifies if the text is cut off

Format

Margins
Units - specifies the units for adjusting the rectangle margins
Left - specifies the left margin value for the rectangle
Top - specifies the top margin value for the rectangle
Right - specifies the right margin value for the rectangle
Bottom - specifies the bottom margin value for the rectangle

Format - See **Format**
Border - See **Border**
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the text.
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels

Lines

Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - specifies the pen width in pixels
Default Color - specifies to use the default color
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat

Join Style - specifies the style used to connect the join lines; round, bevel or miter

Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**

Palette

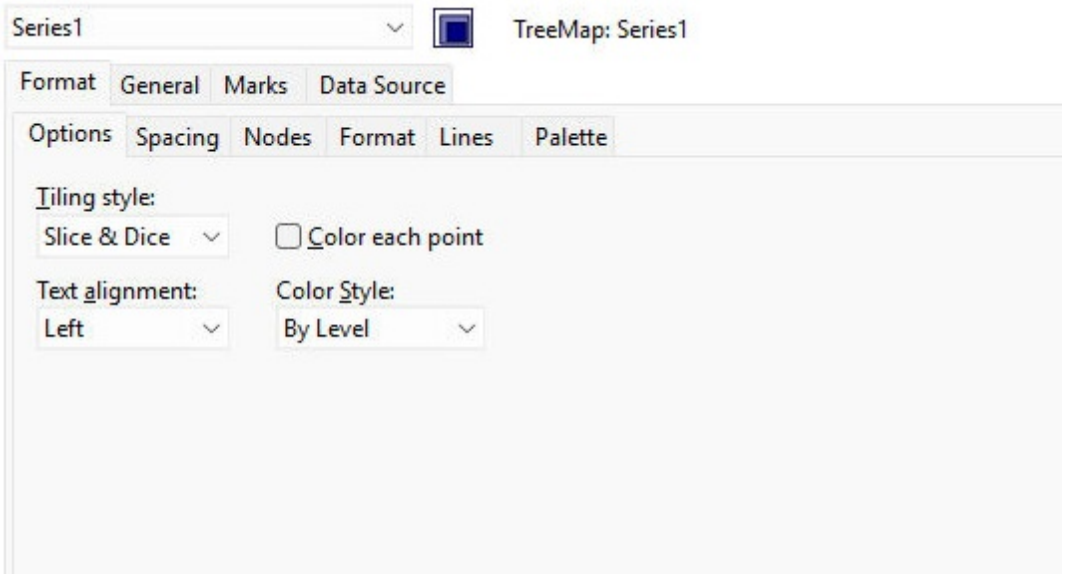
Single - defines only one color for all the series values
Color Each - defines each series value with a different color
Color - specifies the color used to display the line, using a color palette

Range
Start - specifies the start color of the series points
Middle - specifies the middle color of the series points
End - specifies the end color of the series points
Swap - swaps the three defined colors
Gallery - provides several default gradients to choose from, with a preview panel
No middle - removes the middle color

Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show in the legend

Palette
Style - specifies the color style for the points
Invert - inverts/reverses the color style
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Load palette - loads a saved custom palette
Save palette - saves the current custom palette
New palette - adds a new custom color palette

Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show in the legend



5.5.1.3 Financial

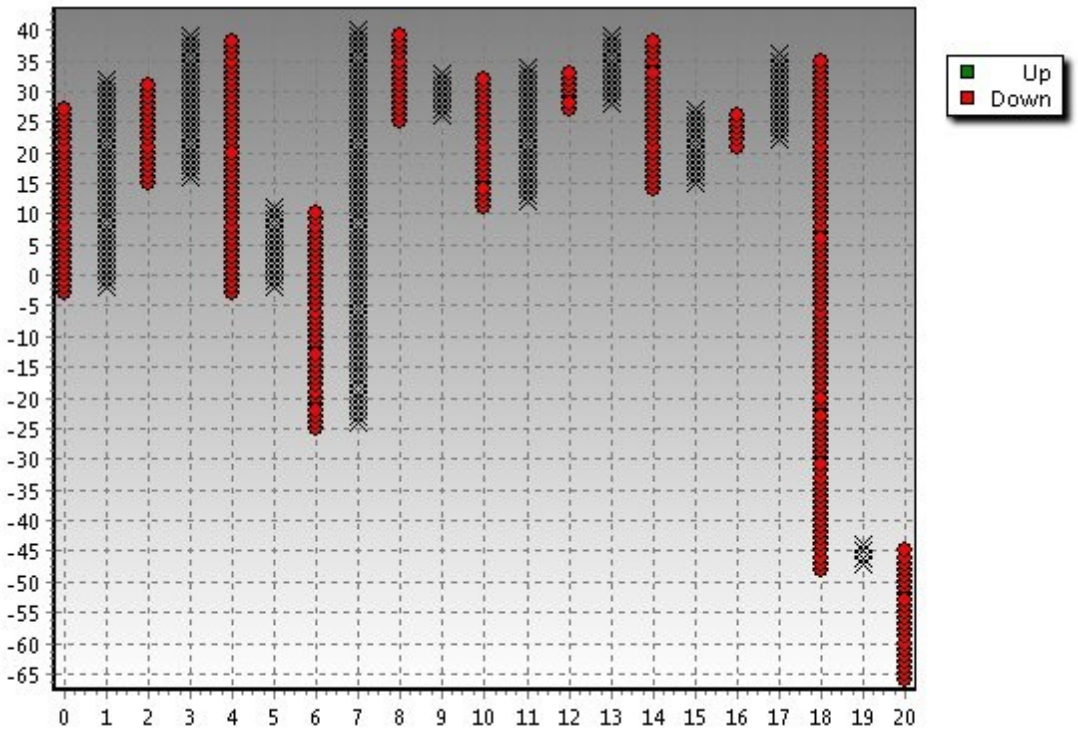
The Financial Series include more specialized series types for financial applications.

Icon	Series
	Point & Figure
	Candle
	Volume
	Darvas
	Renko
	Kagi
	EquiVolume

5.5.1.3.1 Point & Figure

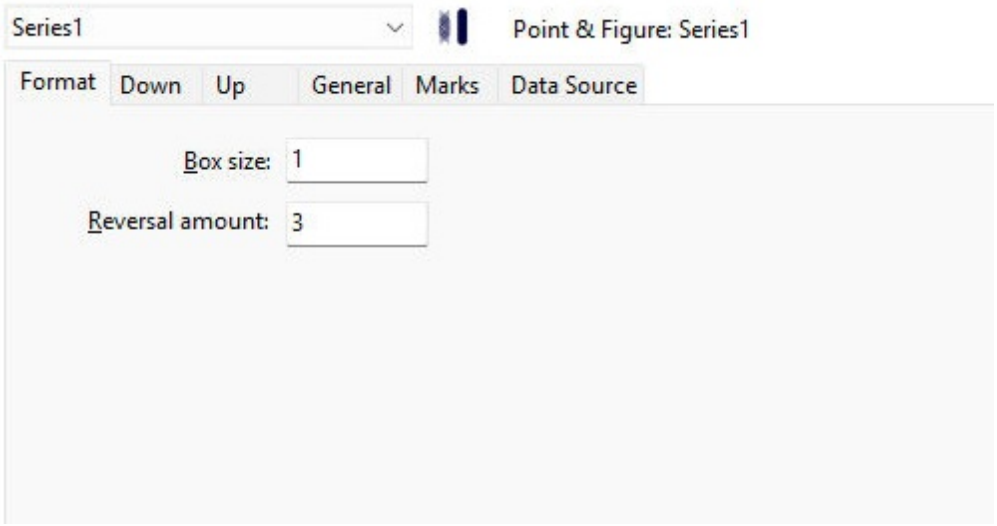
The Point & Figure Series is made of X's and O's symbols representing filtered price movements over time.

- Format
- Down
- Up
- General
- Marks
- Data Source



5.5.1.3.1.1 Format

Box size - determines the amount in price scales that is multiplied by the Reversal Amount property. Reversal Amount by Box Size defines the maximum price difference allowed before adding a new column of symbols. Box Size itself defines the minimum change in price to draw a new symbol in the same column.
Reversal amount - determines the number that is multiplied by Box Size property. Reversal Amount by Box Size defines the maximum price difference allowed before adding a new column of symbols.



5.5.1.3.1.2 Down

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

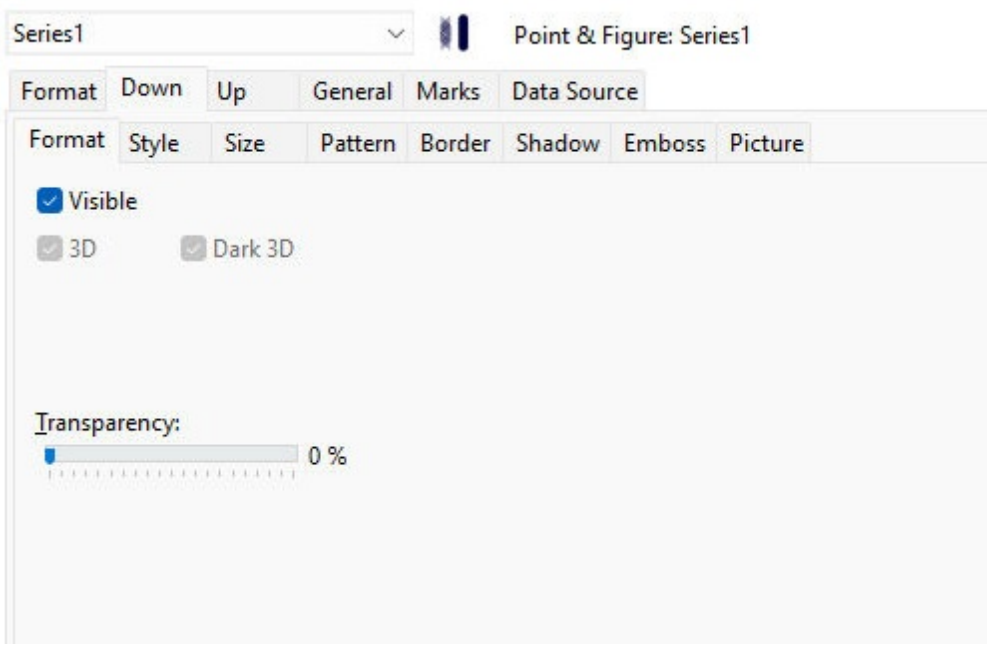
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.3.1.3 Up

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

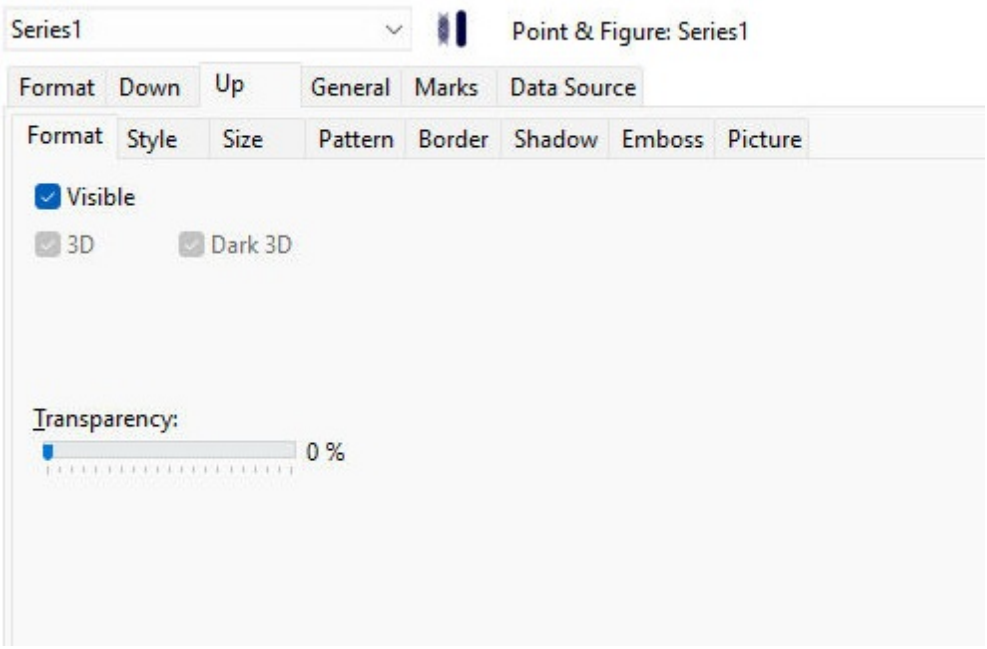
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

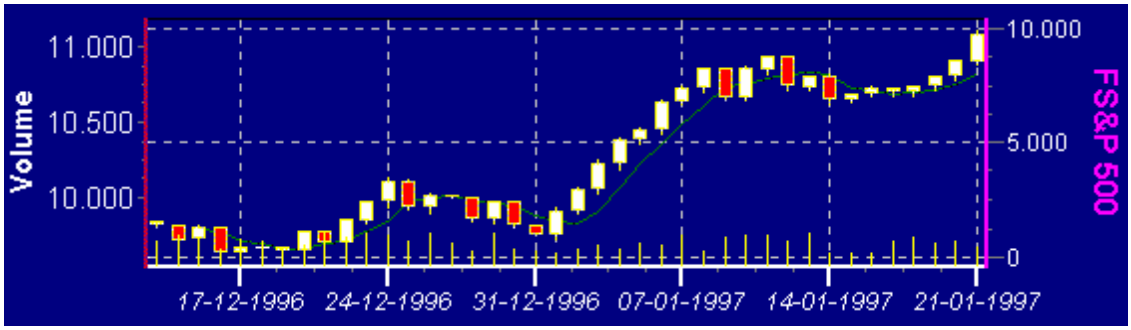
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



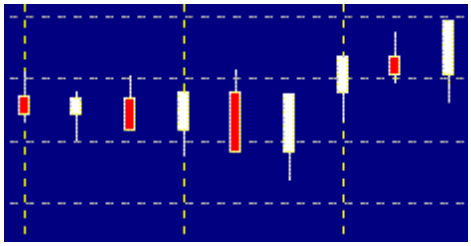
5.5.1.3.2 Candle

The Candle series is ideally suited to tracking financial market information. Its properties include High Values, Low Values, Open Values and Close Values and Date Values.

- Format
- General
- Marks
- Data Source



If you look at the figure of the zoomed candle you can see how the financial information is tracked. White bars reflect the market rising, high end of the white bar being the day close. The red bars identify a fall in the market. The thinner lines show the day's high and lows.



5.5.1.3.2.1 Format

Options
Style - defines the possible styles of the Candle series (how Candle points will be drawn)
Show Open - controls whether open prices will be displayed
Show Close - controls whether close prices will be displayed
Draw 3D - sets the candle in 3 Dimensions
Dark 3D - shows the 3D portion of the points as shaded
Remove Gaps - removes holidays/non-trading days from the series
Transparency - specifies the degree of transparency

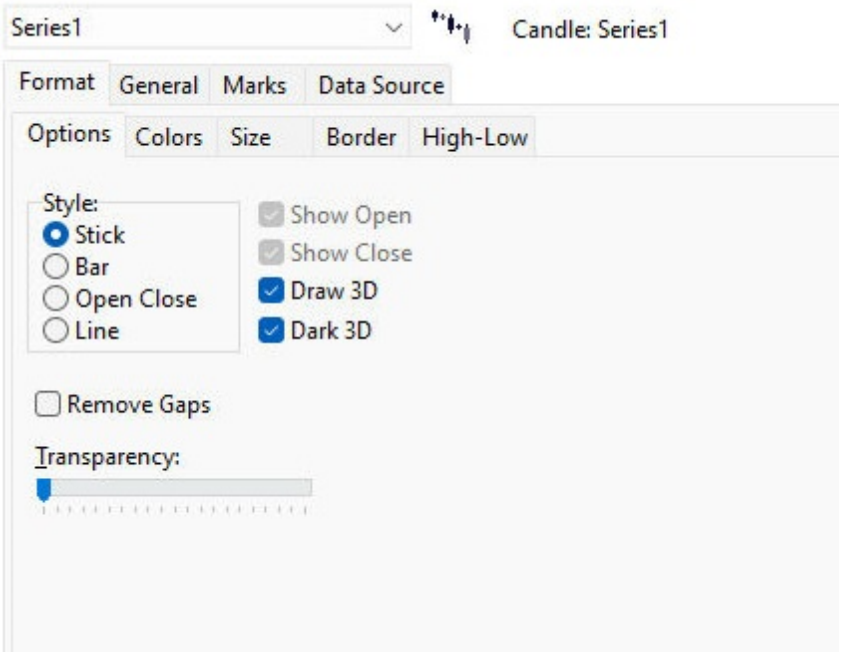
Colors
Color Style - specifies the color style; "Relative to Open" or "Relative to previous Close"

Colors
Up Close - selects the up color of the series
Down Close - selects the down color of the series

Gradients
Up Close/Down Close - specifies the gradient properties for the up/down colors. See **Gradient**

Size
Automatic Width - specifies to automatically draw the candle size
Candle Width - specifies the horizontal candle size, in pixels
Candle Depth - specifies the depth of the candles in the series in the Z plane when 3D is set to true
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Border - defines the candle border. The border color may be the same as the candle. See **Border**
High-Low - defines the high low line properties. The line color may be the same as the candle. See **Border**

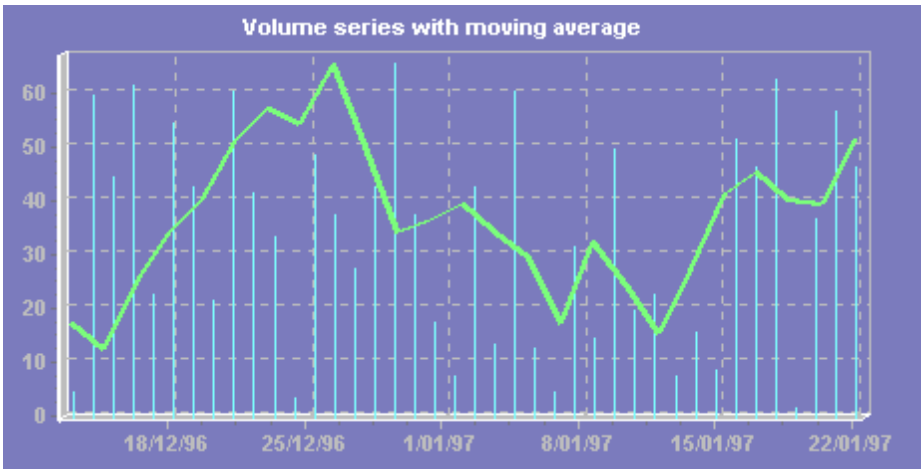


5.5.1.3.3 Volume

The Volume series is another series with origins in financial markets. It behaves very much like a bar series except that each bar is represented as a thin line and the bars cannot be stacked.

- Format

- General
- Marks
- Data Source



5.5.1.3.3.1 Format

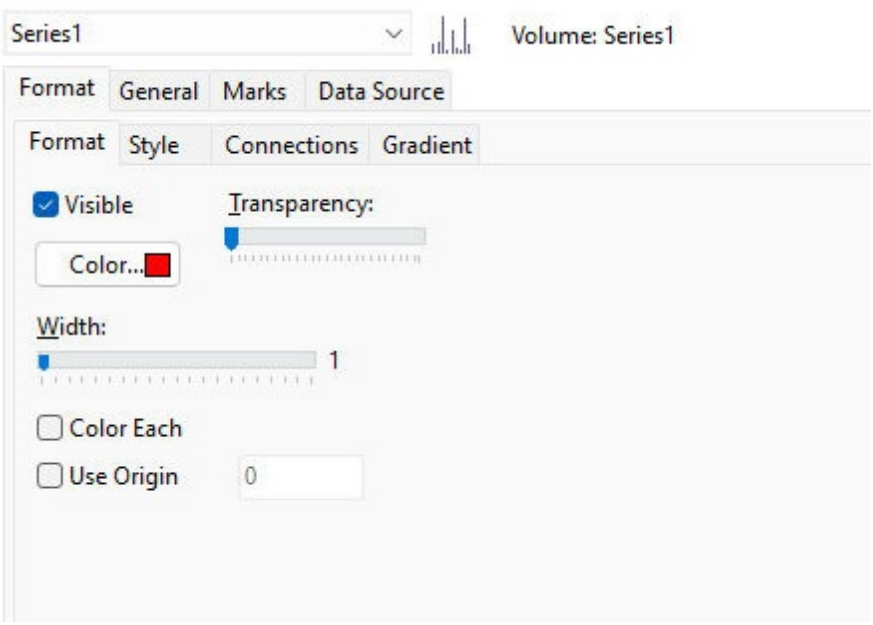
Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - determines the volume line width
Color Each - plots each volume point in a different color
Use Origin - enables/disables the setting of the Y value that defines the bottom position for volume points
Origin - sets the origin for the Y value
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat
Join Style - specifies the style used to connect the join lines; round, bevel or miter

Note: Joined lines must contain widths greater than one pixel.

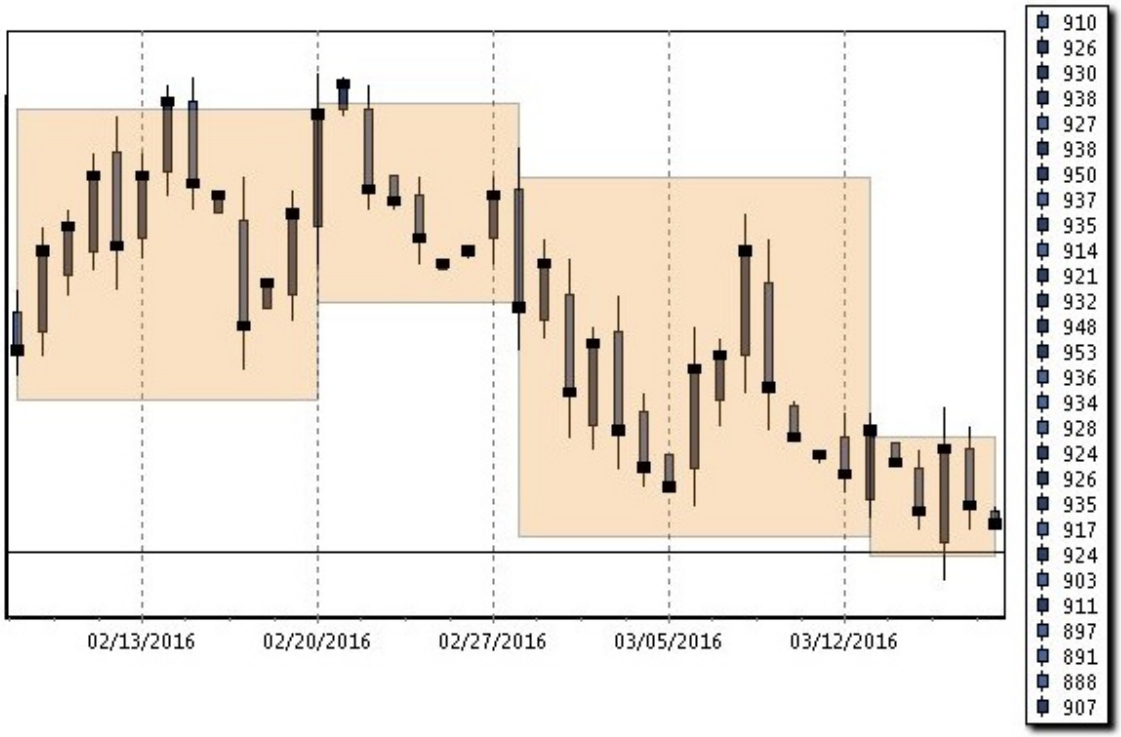
Gradient - See **Gradient**



5.5.1.3.4 Darvas

The Darvas Boxes is a momentum strategy chart for use with a trading stocks. The boxes are used to normalize a trend. A "buy" signal would be indicated when the price of the stock exceeds the top of the box. A "sell" signal would be indicated when the price of the stock falls below the bottom of the box.

- Format
- General
- Marks
- Data Source



5.5.1.3.4.1 Format

Options
Style - defines the possible styles of the Darvas series (how points will be drawn)
Show Open - controls whether open prices will be displayed
Show Close - controls whether close prices will be displayed
Draw 3D - sets the candle in 3 Dimensions
Dark 3D - shows the 3D portion of the points as shaded
Remove Gaps - removes holidays/non-trading days from the series
Transparency - specifies the degree of transparency

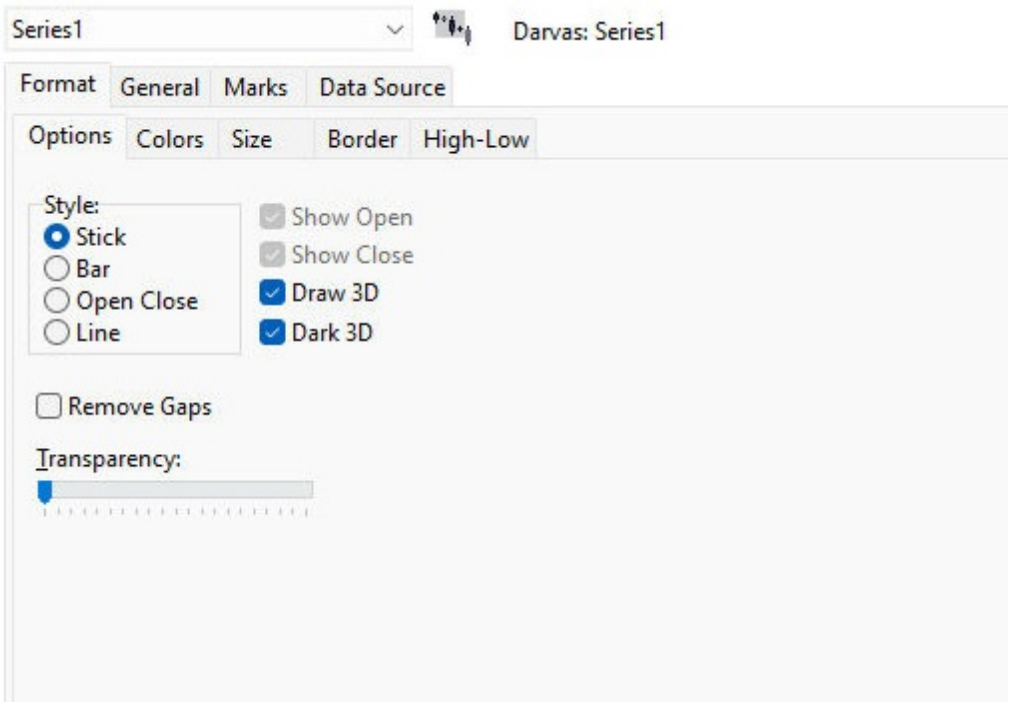
Colors
Color Style - specifies the color style; "Relative to Open" or "Relative to previous Close"

Colors
Up Close - selects the up color of the series
Down Close - selects the down color of the series

Gradients
Up Close/Down Close - specifies the gradient properties for the up/down colors. See **Gradient**

Size
Automatic Width - specifies to automatically draw the candle size
Candle Width - specifies the horizontal candle size, in pixels
Candle Depth - specifies the depth of the candles in the series in the Z plane when 3D is set to true
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Border - defines the candle border. The border color may be the same as the candle. See **Border**
High-Low - defines the high low line properties. The line color may be the same as the candle. See **Border**



Options
Style - defines the possible values of the Darvas series (how points will be drawn)
Show Open - controls whether open prices will be displayed
Show Close - controls whether close prices will be displayed
Draw 3D - sets the Darvas in 3 Dimensions
Dark 3D - shows the 3D portion of the Points as shaded
Candle Width - specifies the horizontal candle Size. It is based on pixels for screen charts.
Border - defines the Darvas border, using the Border Editor
High-Low - defines the high low line properties, using the Border Editor

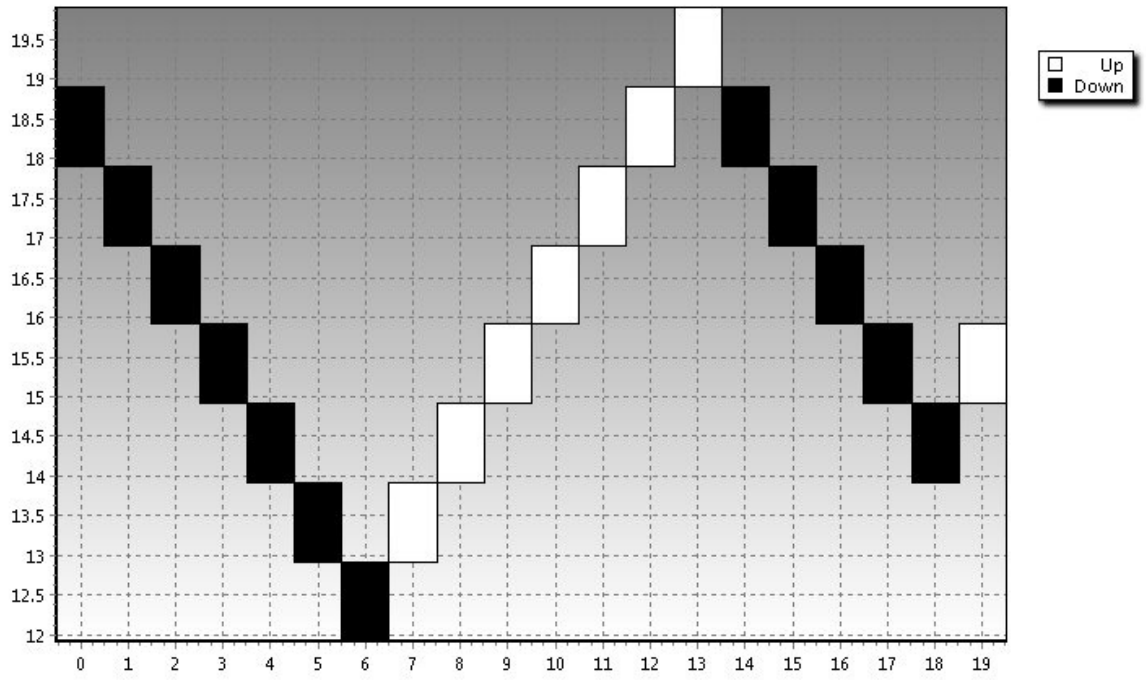
Colors
Up Close - selects the Up color of the series
Gradient - specifies the gradient properties for the Up color, using the Gradient Editor
Down Close - selects the down color of the series
Gradient - specifies the gradient properties for the down color, using the Gradient Editor
Color Style - specifies the color style; "Relative to Open" or "Relative to previous Close"

5.5.1.3.5 Renko

The Renko charts is a financial indicator used as a trend following technique. The Renko chart line bricks are drawn in the direction of the prior move only if prices move by a minimum "Box Size" amount, which is equivalent to the box size that are always equal in size.

Renko charts are always based on the closing prices. Renko bricks are drawn after comparing, that day's close with the previous brick (high or low). A "box size" which determines the minimum price change to show is specified.

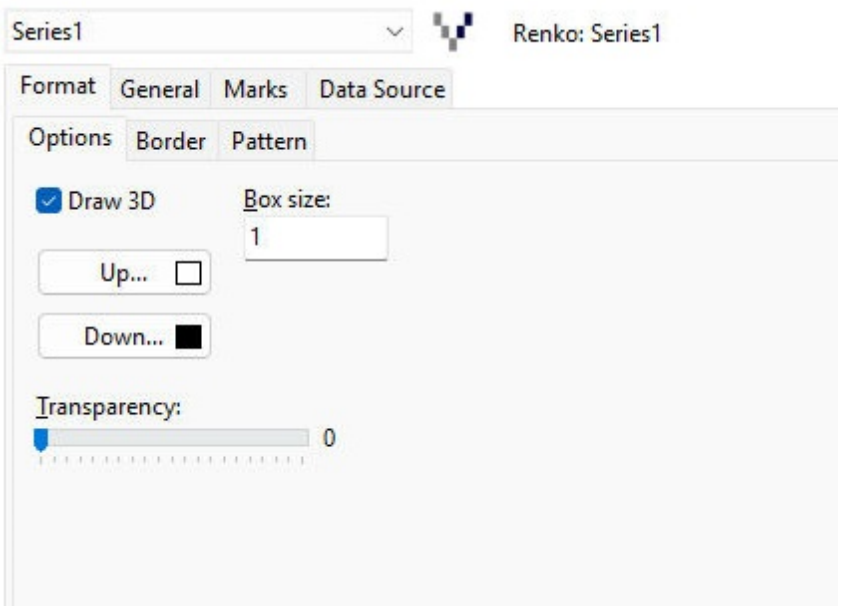
- Format
- General
- Marks
- Data Source



5.5.1.3.5.1 Format

Options
Draw 3D - sets the boxes in 3 Dimensions
Up - color used to fill the bricks when trend is up
Down - color used to fill the bricks when trend is down
Box Size - defines the amount to consider as the minimum price change to switch from a Up brick to a Down brick an vice-versa
Transparency - specifies the degree of transparency

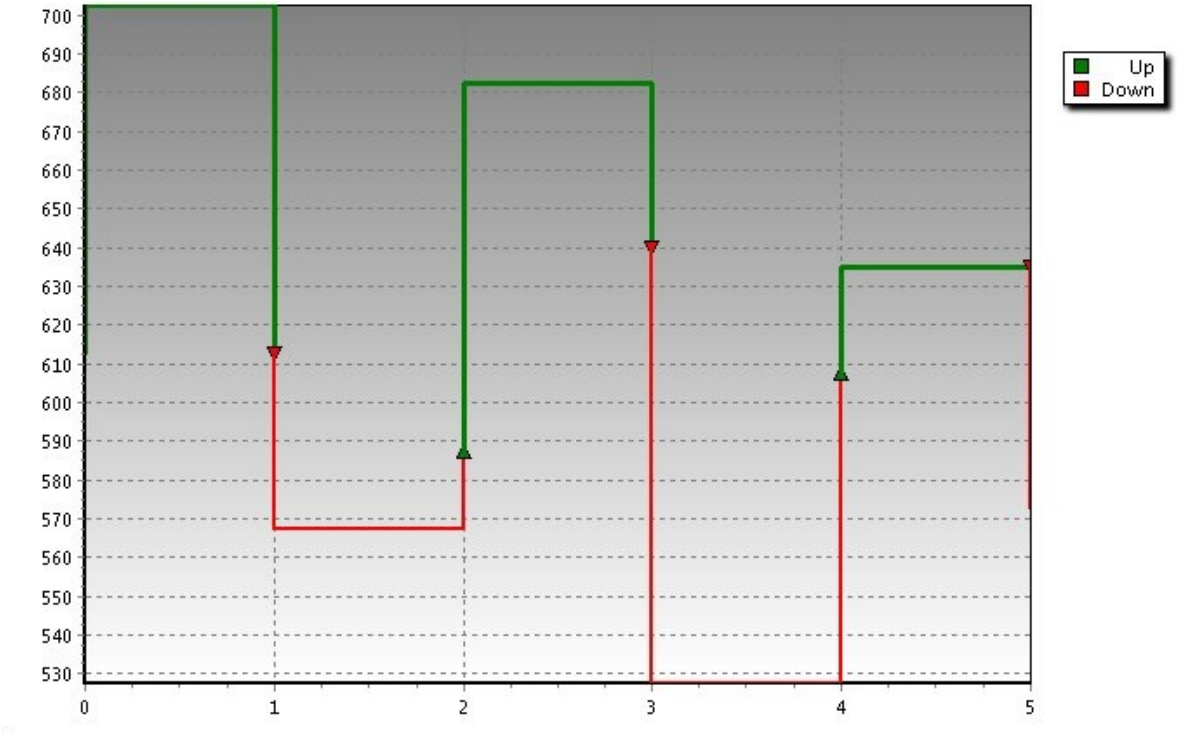
Border - defines the border for the bricks. See **Border**
Pattern - defines the border for the bricks. See **Pattern**



5.5.1.3.6 Kagi

Kagi charts, at first glance, look like swing charts. Like swing charts, they have no time axis and are made up of a series of vertical lines, however in the case of kagi charts, the vertical lines are based solely on the action of closing prices, not a bar's high and low prices. Another difference is that the thickness of a kagi chart line changes when closing prices penetrate the previous column top or bottom.

- Format
- General
- Marks
- Data Source



5.5.1.3.6.1 Format

Up/Down - specifies pen properties used to draw lines when a trend is up and down

Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - determines the volume line width
Transparency - specifies the transparency
Default Color - specifies the default color

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat
Join Style - specifies the style used to connect the join lines; round, bevel or miter

Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**

Buy/Sell - specifies properties for buy and sell signals

Format
Visible - specifies whether or not the points are displayed
3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the Series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

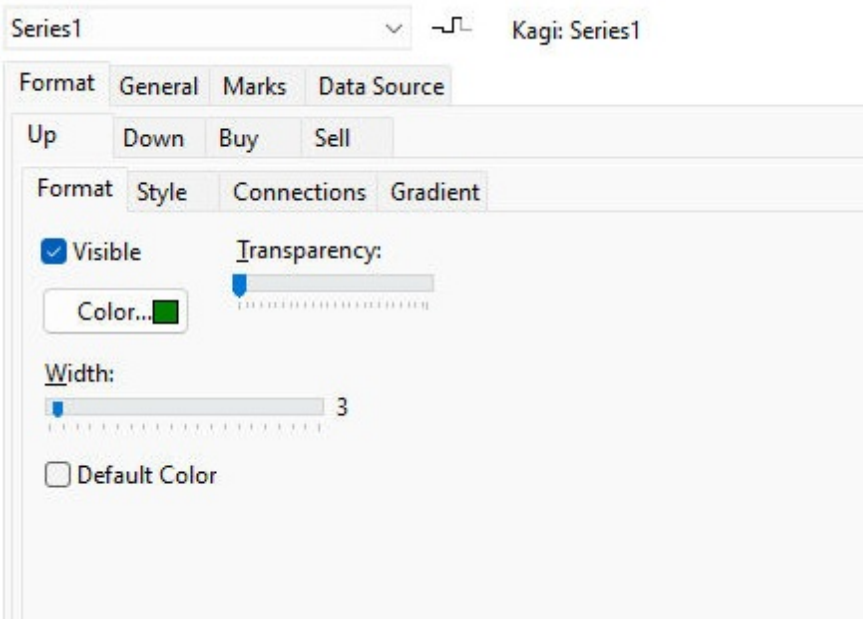
Size - specifies the pointer size (in units), width, height, and depth

Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series' trend

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

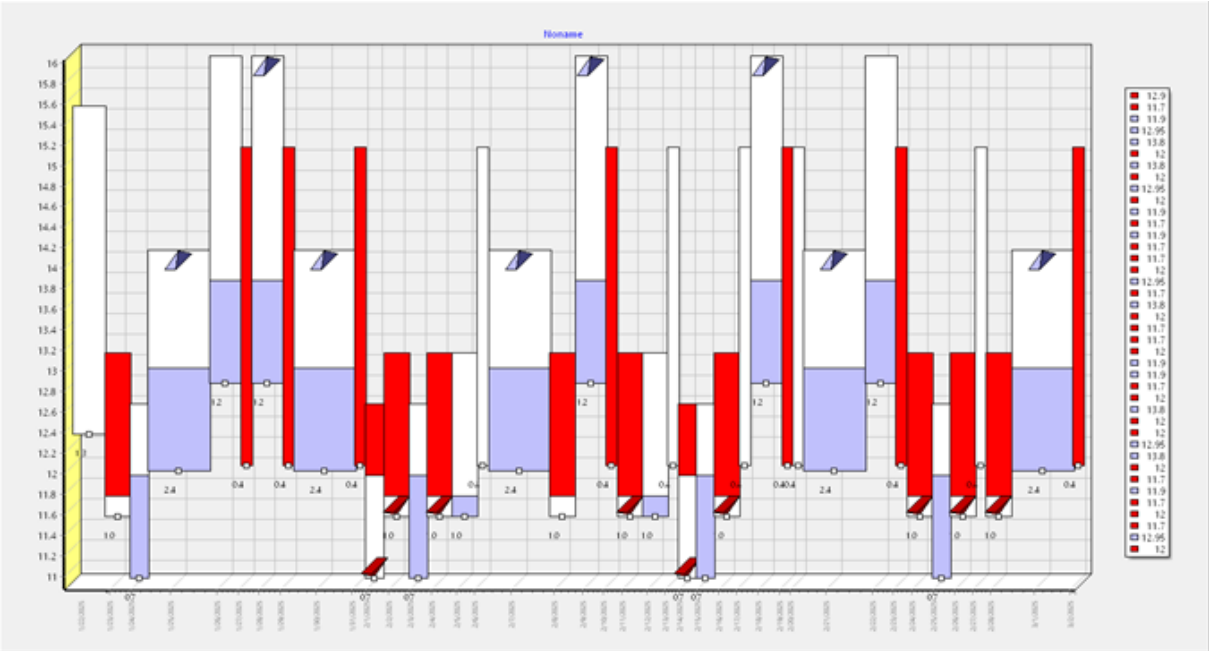
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.3.7 EquiVolume

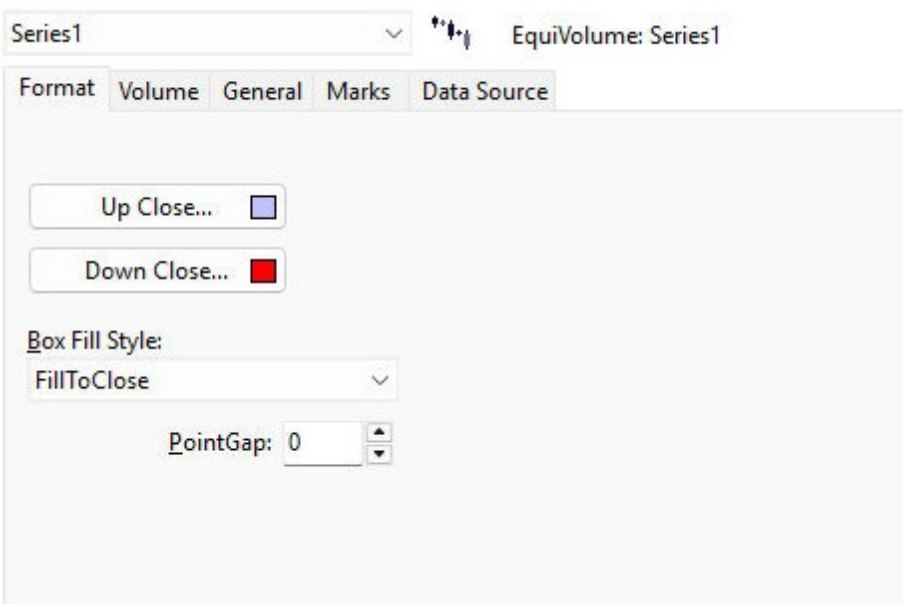
The Equivolume series show the price ranges and trading volumes of a security as rectangular bars with varying height and width.

- Format
- Volume
- General
- Marks
- Data Source



5.5.1.3.7.1 Format

Up Close - selects the up color of the series
Down Close - selects the down color of the series
Box Fill Style - specifies the box fill style; FillToClose or Outline
PointGap - specifies spacing between points



5.5.1.3.7.2 Volume

Format
Visible - specifies whether or not the points are displayed

3D - sets the series in "3D"
Dark 3D - sets the series fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

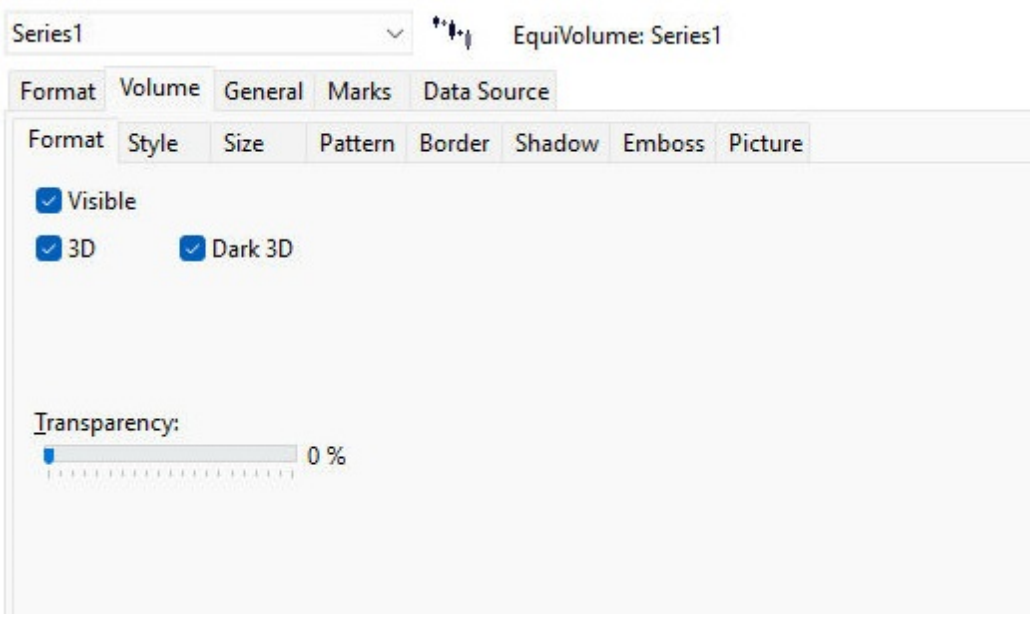
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series' trend

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.4 Stats

The Stats Series include chart types for statistical applications, e.g. Histogram, Error Bar, BoxPlot, etc.

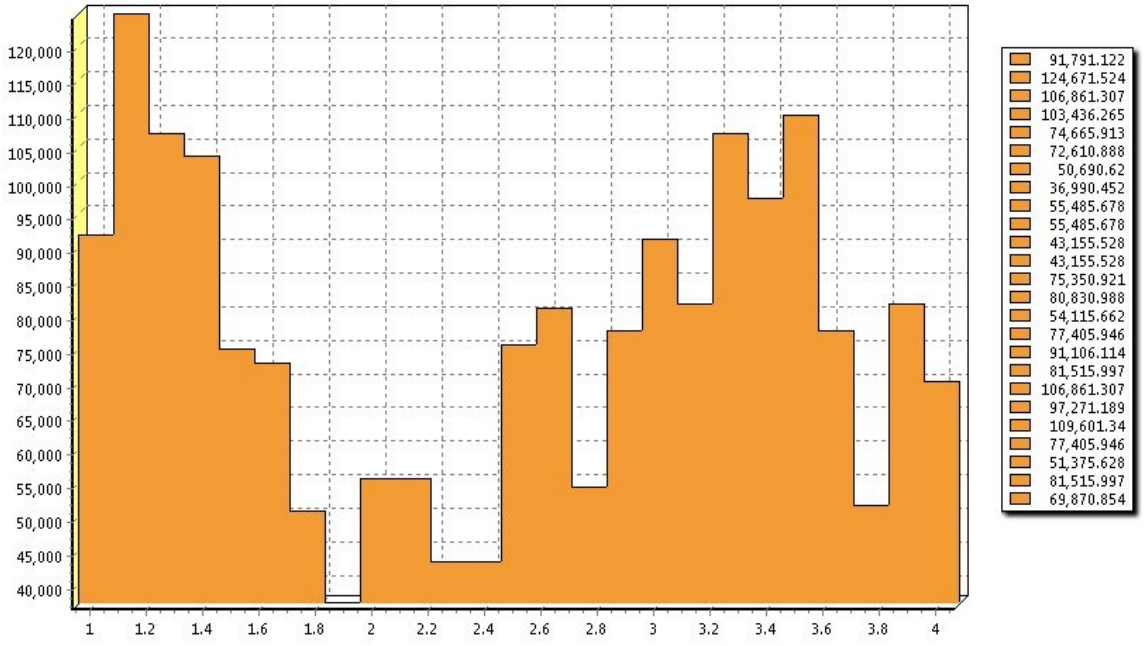
Icon	Series
	Histogram
	Horizontal Histogram
	Error Bar
	Error
	High-Low
	BoxPlot

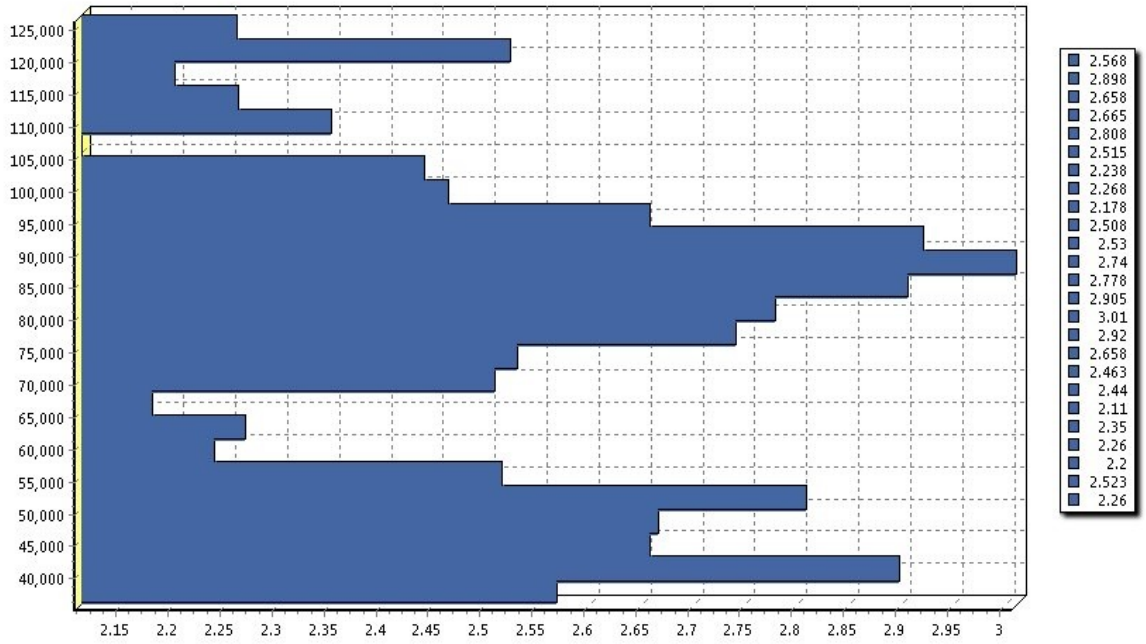
	Horizontal BoxPlot
	Violin
	Horizontal Violin
	Beeswarm
	Horizontal Beeswarm
	VolumePipe
	Funnel
	HighLow Line
	Ternary
	Error Point
	Error Point3D

5.5.1.4.1 Histogram / Horizontal Histogram

The Histogram and Horizontal Histogram Series display a graphical representation of the distribution of numerical data.

- Format
- General
- Marks
- Data Source

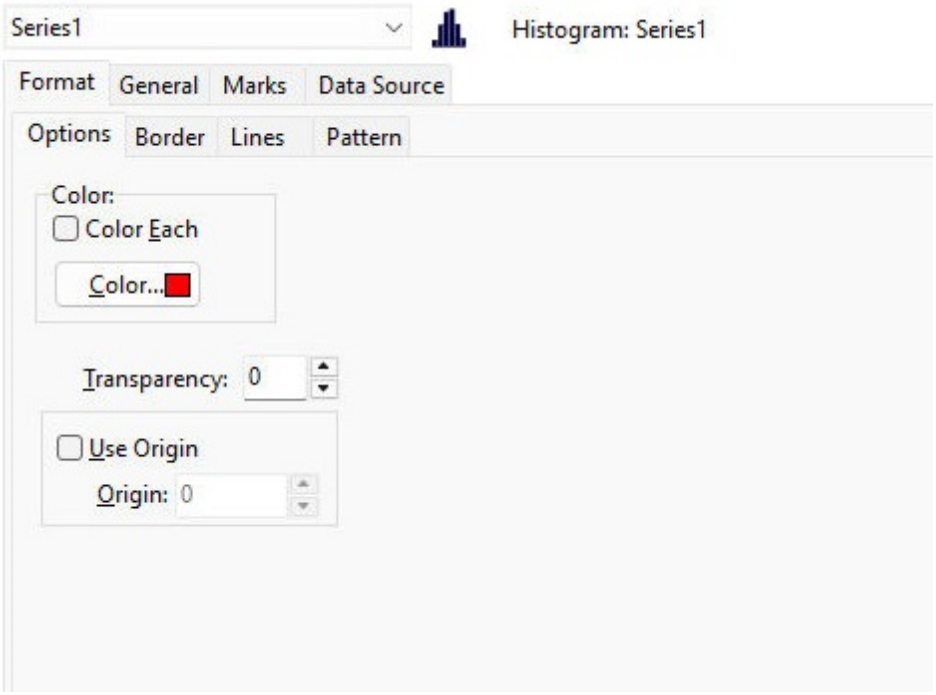




5.5.1.4.1.1 Format

Options
Color Each - enables/disables the coloring of multiple bars within the area
Color - specifies a single color, using a color palette
Transparency - sets the transparency level from 0 to 100%
Use Origin - determines the axis value used as a common bottom for all bars drawn
Origin - sets the origin axis value

Border - specifies the Histogram border. See **Border**
Lines - alters the Histogram lines. See **Border**
Pattern - specifies the Histogram pattern. See **Pattern**

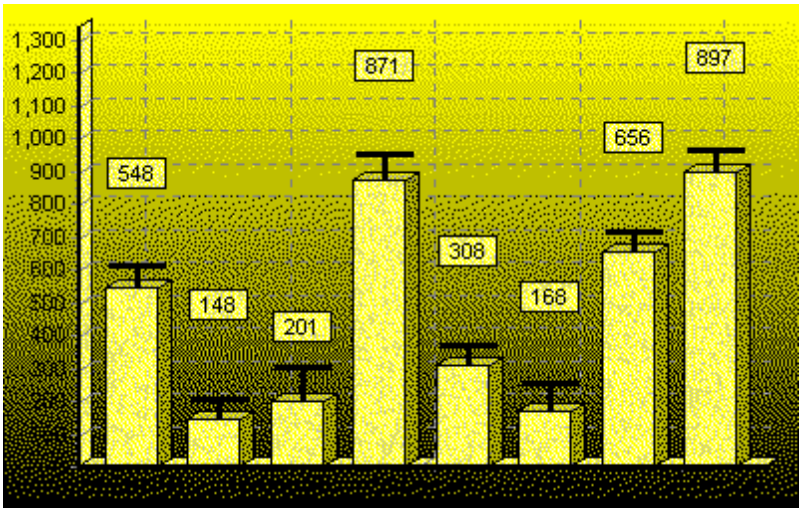


5.5.1.4.2 Error Bar

The Error Bar Series displays a graphical representation of the variability of data and are used on graphs to indicate the error, or uncertainty in a reported measurement.

- Format
- Stack
- Bar
- General
- Marks
- Data Source

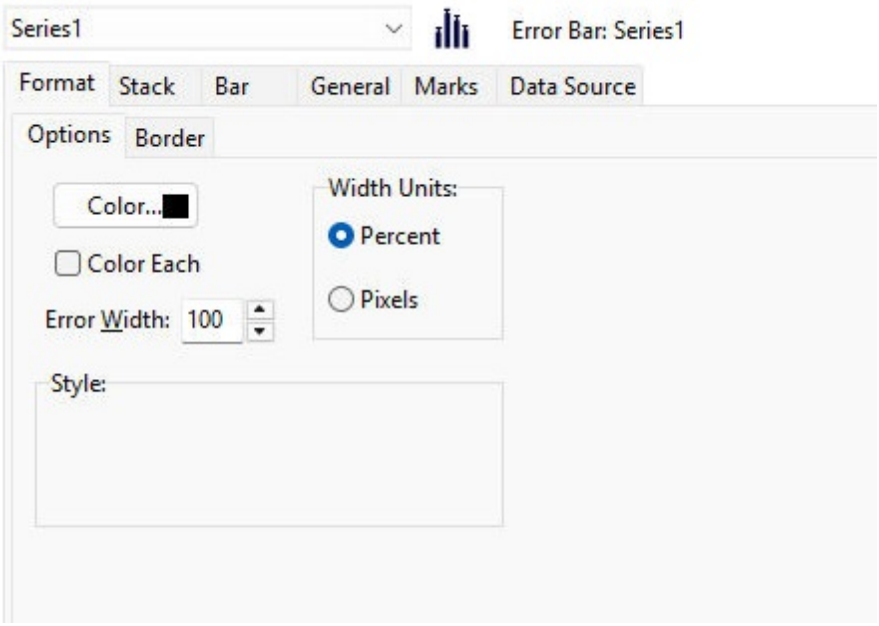
The height of the "T" on top of the bars of the series show the size of the error. Error Bar series may be applied to any data that has a real and estimated value, a success and failure level, etc.



5.5.1.4.2.1 Format

Options
Color - specifies a single color, using a color palette
Color Each - enables/disables the coloring of multiple bars in a different color within the area
Error Width - determines the horizontal size of the Error "T". Size is expressed either in pixels or as a percentage of the Bar width depending on the Error Width Units property. By default, the Error "T" width is 100% of the Bar width.
Width Units - determines whether Error Width property is expressed either in pixels or as a percentage of the Bar width. By default, the Error "T" width is 100% of the Bar width.

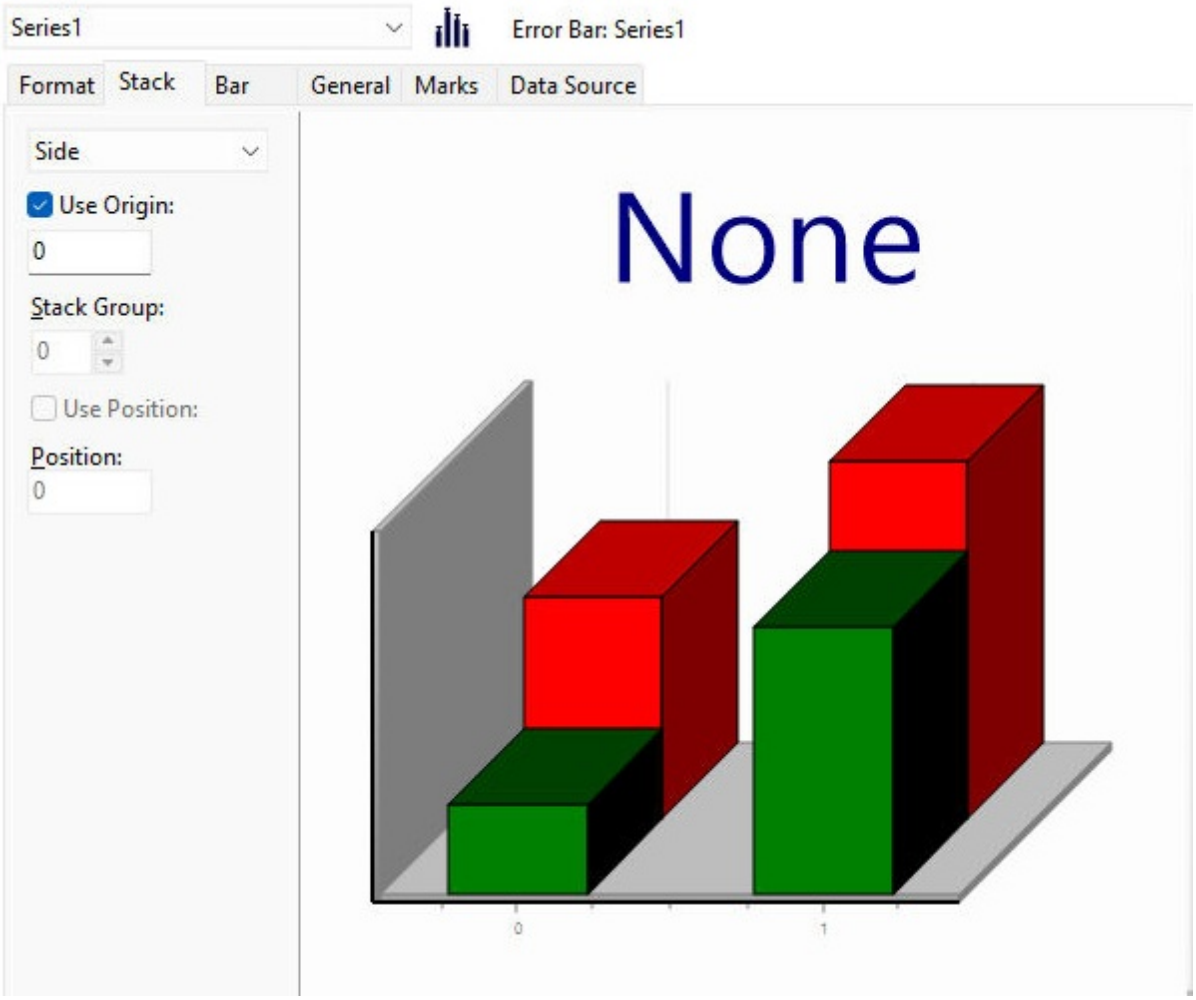
Border - specifies the Error Bar border. See **Border**



5.5.1.4.2.2 Stack

Stack - sets the stacking options of the series;
- None - no stacking is performed
- Side - with more than one bar series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the bar width will be divided by the number of bar series.
- Stacked - stacks series one above the other. Series begin with lowest index order at bottom. Further series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stack 100% - series are stacked as a percentage. Plots take up full bottom to top space of the chart area resulting in a percentage division by area to reflect the series values.
- Side All - all points from one series are displayed side-to-side with all points from other series
- Self Stack - points of the same series are stacked

Use Origin - determines the axis value used as a common bottom for all bars drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart
Use Position - specifies to use a custom position for the bar series, when Self Stack is selected and multiple series are defined in the chart
Position - specifies the minimum Y value for horizontal bar, and minimum X value for bar series, when Self Stack is selected and multiple series are defined in the chart



5.5.1.4.2.3 Bar

Options
Color Each - sets each chart bar in a different color
Color - specifies the color used to display the bar, using a color palette
Default - specifies the default color for the bars
Transparency - specifies the degree of transparency
Cylinder - adjusts the round edge for the cylinder and cone bar styles
Dark - defines the 3D bar shape with darker colors
Cone - defines a cone effect for the bar
Relative Gradient - applies a gradient effect when gradient is enabled for the pattern

Style - defines the Bar shape used to draw Bars

Size
% Bar Depth - determines the 3D depth of the bars
% Bar Width - determines the width of vertical bars in pixels
% Bar Offset - determines the bars horizontal displacement
Bar Side Margins - controls whether the first and last bar displayed will be separated from the chart rectangle by a margin. By default, margins are set to half the sum of all Bar Series bar widths.
Auto Mark Position - sets the mark position automatically
Marks on Bar - specifies if the marks are displayed on the bars, and location; Start, Center, or End

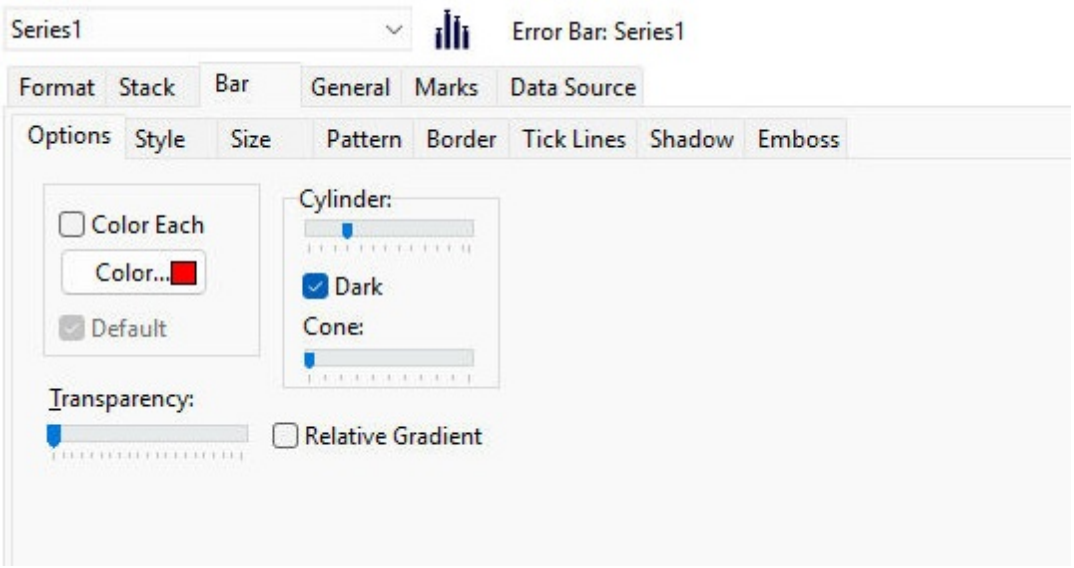
Pattern - See **Pattern**

Border

Options
Dark Border - controls whether the bar sides will be filled with shadowed colors
Bevel size - defines the frame of the bar border
Round - specifies whether the bar corners are rounded
Style - specifies the rounded bar style; None, At Value, Both Ends
Size - specifies the size to be used for round bar corners

Format - See **Border**

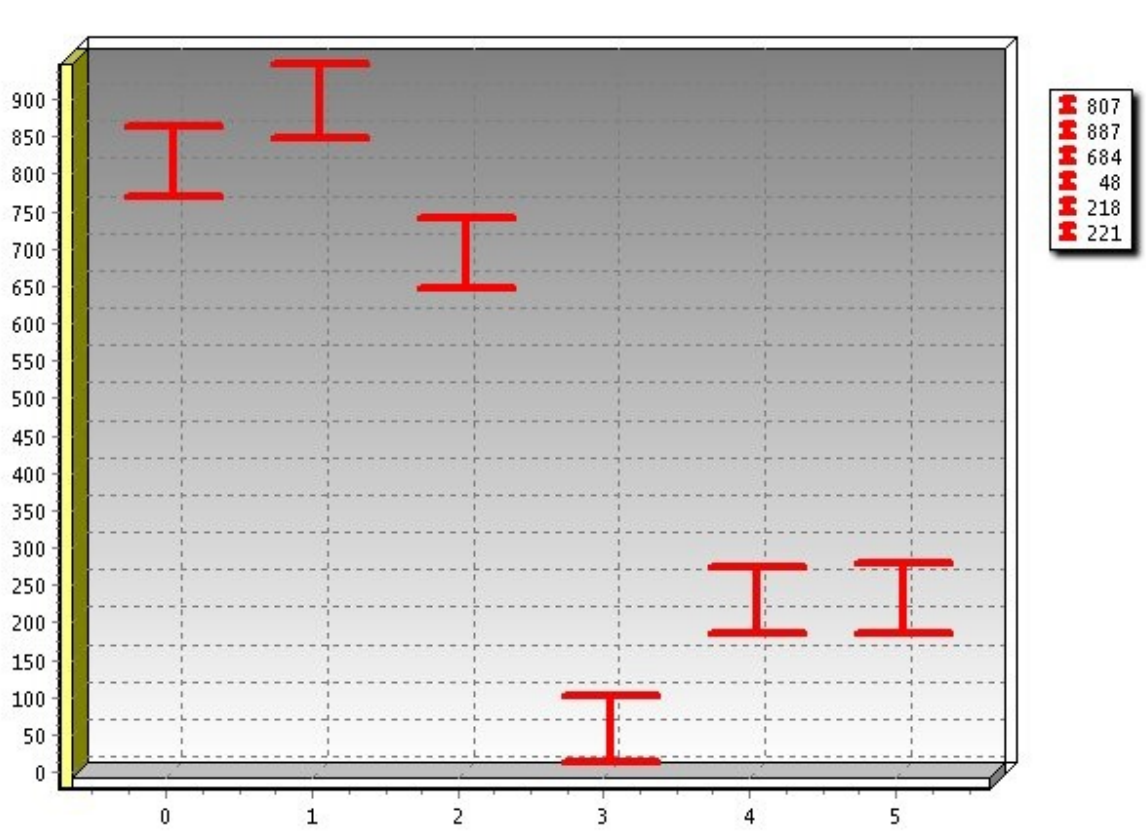
Tick Lines - defines the tick lines properties upon the bars. See **Border**
Shadow - See **Shadow**
Emboss - See **Emboss**



5.5.1.4.3 Error

The Error Series displays a graphical representation of the variability of data and are used on graphs to indicate the error, or uncertainty in a reported measurement.

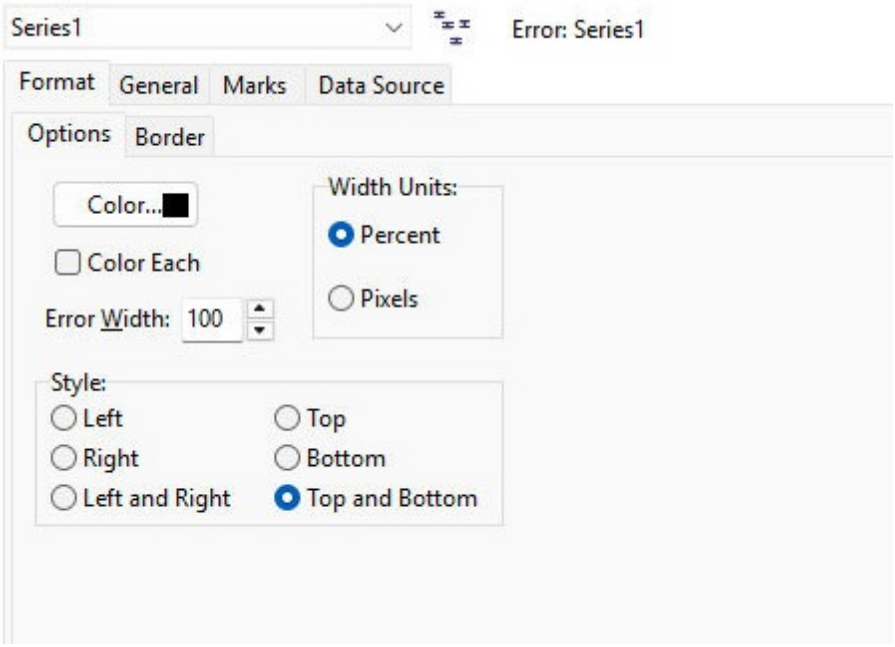
- Format
- General
- Marks
- Data Source



5.5.1.4.3.1 Format

Options
Color - specifies a single color, using a color palette
Color Each - plots each series point in a different color
Error Width - determines the horizontal size of the Error "T". Size is expressed either in pixels or as a percentage of the Bar width depending on the Width Units property. By default, the Error "T" width is 100% of the bar's width.
Width Units - determines whether Error Width property is expressed either in pixels or as a percentage of the bar width. By default, the Error "T" width is 100% of the bar width.
Style - defines the Error Series style

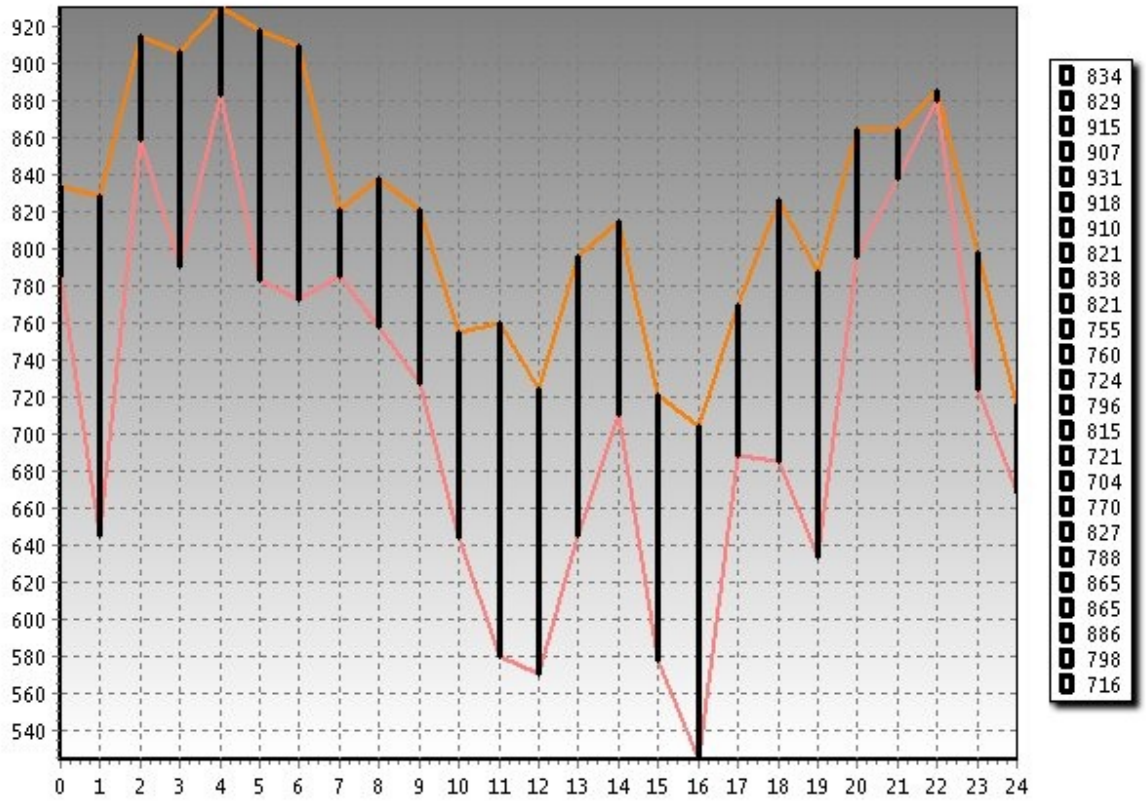
Border - specifies the border of the series points. See **Border**



5.5.1.4.4 High-Low

The High-Low Series is typically used to illustrate movements in the price of a financial instrument over time. Each vertical line on the chart shows the price range (the highest and lowest prices) over one unit of time, e.g., one day or one hour.

- Format
- General
- Marks
- Data Source



5.5.1.4.4.1 Format

Options
Color - defines the color of the lines which connect the high to low, using a color palette
Color Each - plots each series point in a different color
Transparency - sets the transparency level from 0 to 100%

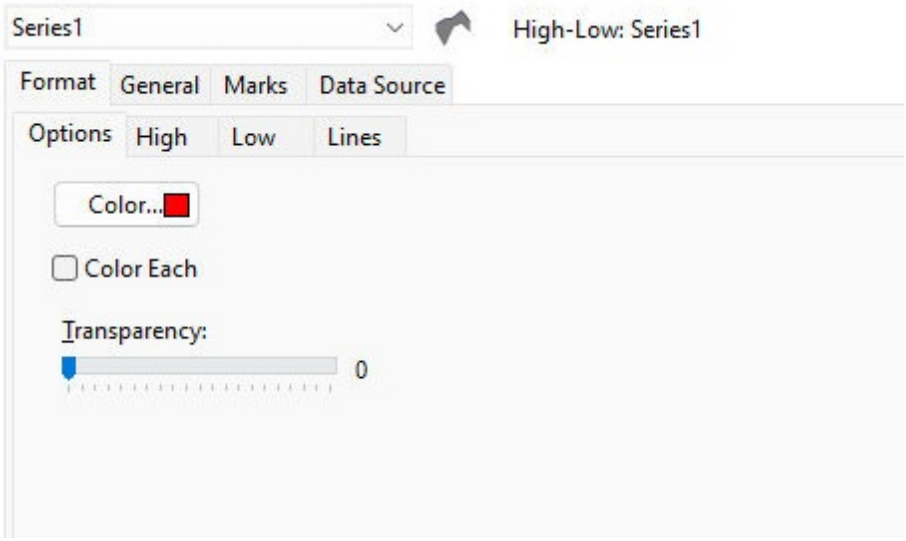
High - defines the properties for the High values of the series

Border - See **Border**
Pattern - See **Pattern**

Low - defines the properties for the Low values of the series

Border - See **Border**
Pattern - See **Pattern**

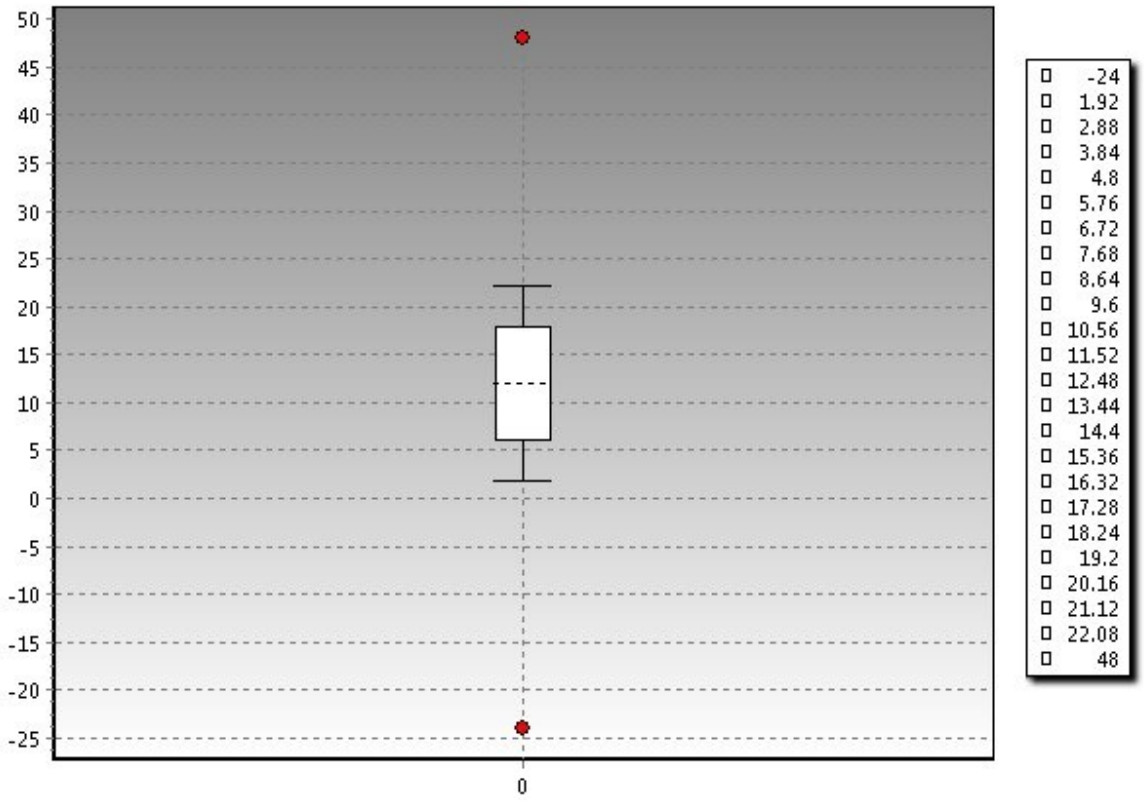
Lines - specifies the pen used to draw the High-Low Series lines. See **Border**



5.5.1.4.5 BoxPlot / Horizontal BoxPlot

The BoxPlot and Horizontal BoxPlot Series provide a convenient way of graphically depicting groups of numerical data through their quartiles.

- Format
- MildOut
- ExtrOut
- Box
- General
- Marks
- Data Source

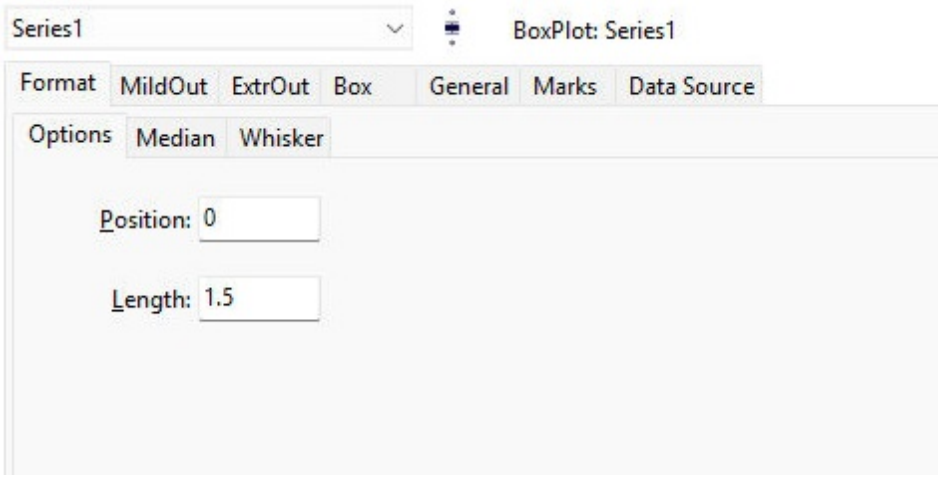


5.5.1.4.5.1 Format

Options
Position - specifies the position of box Series: horizontal axis position or vertical axis position
Length - defines the length of the whiskers as a function of the inter-quartike range (IQR). Default value for Whisker Length is 1.50.

Median - determines the pen used to represent the color and style of the median line. See **Border**

Whisker - determines the pen to represent the color and style of the whisker lines. See **Border**



5.5.1.4.5.2 MildOut

Use the MildOut property settings to control the appearance of mild outlier points.

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

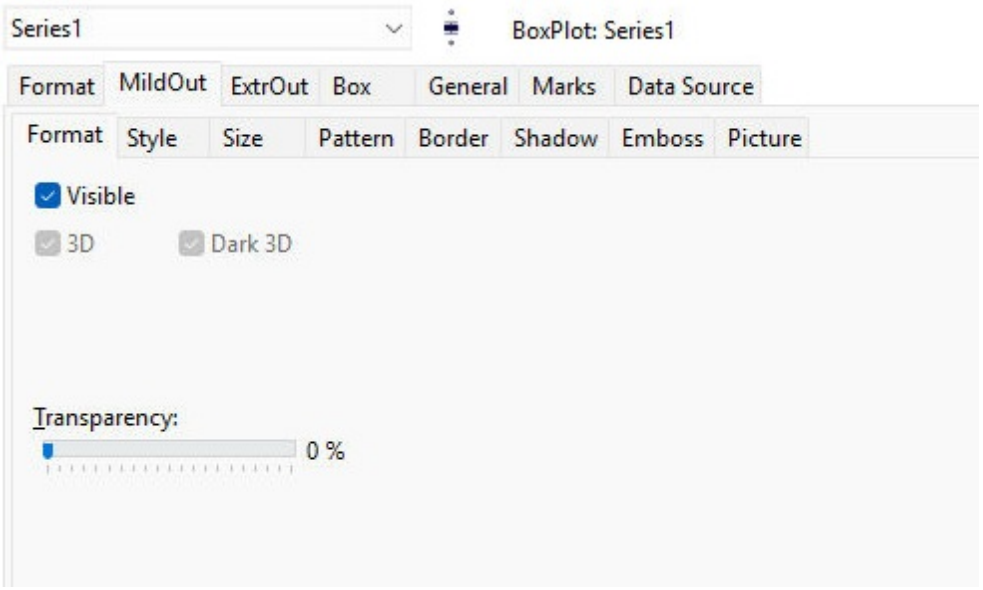
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.4.5.3 ExtrOut

Use the ExtrOut property settings to control the appearance of the extreme range of outer points.

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

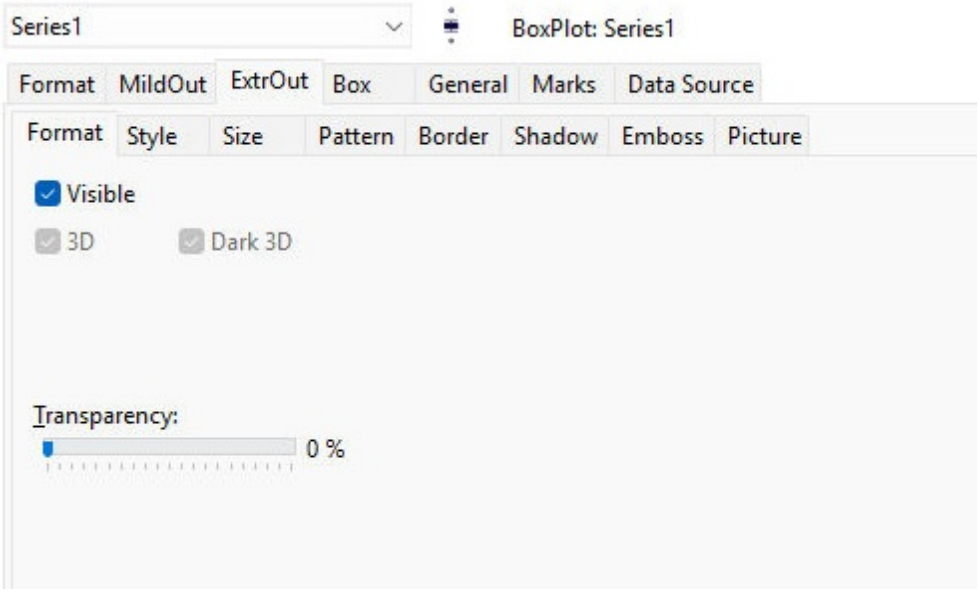
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.4.5.4 Box

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

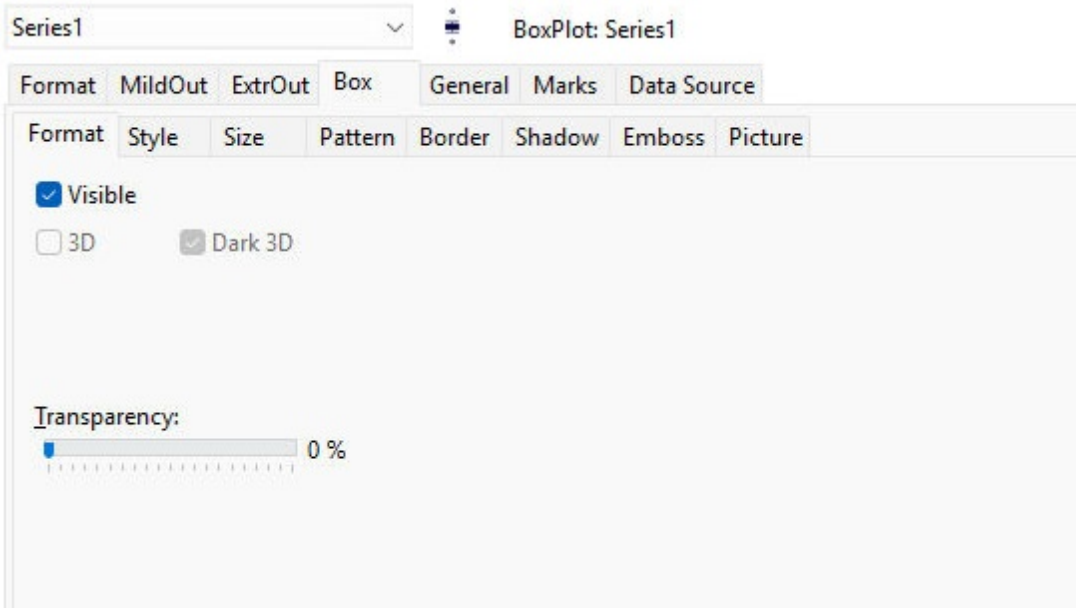
Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**

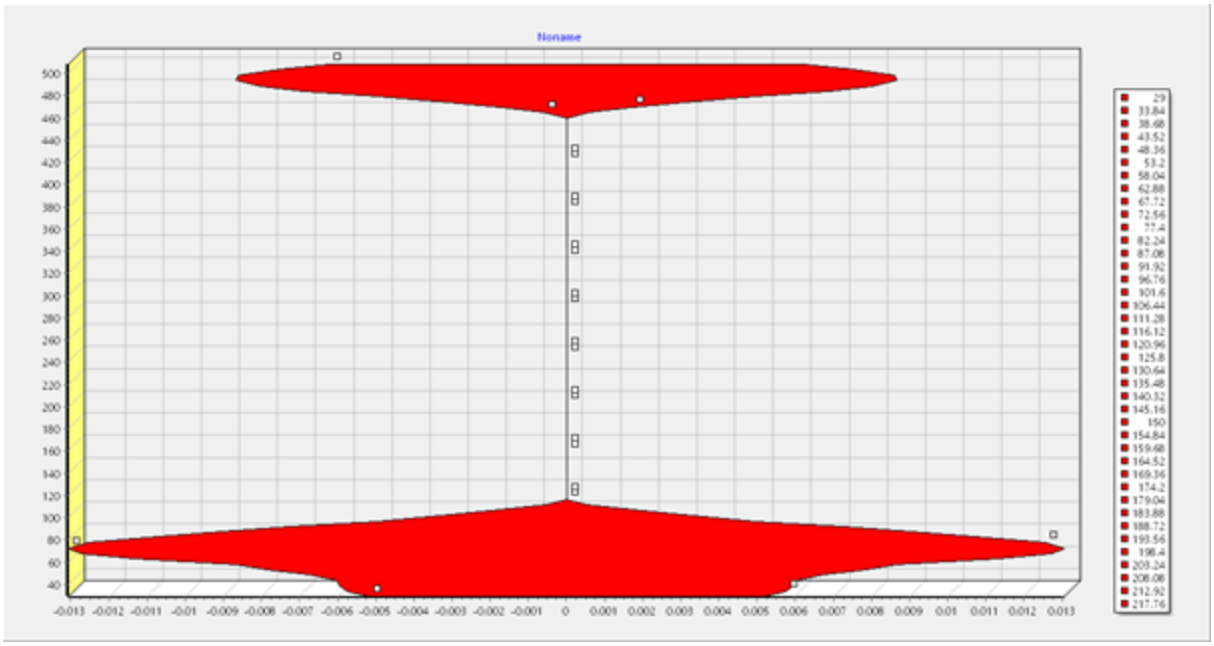
Emboss - See **Emboss**
Picture - See **Picture**

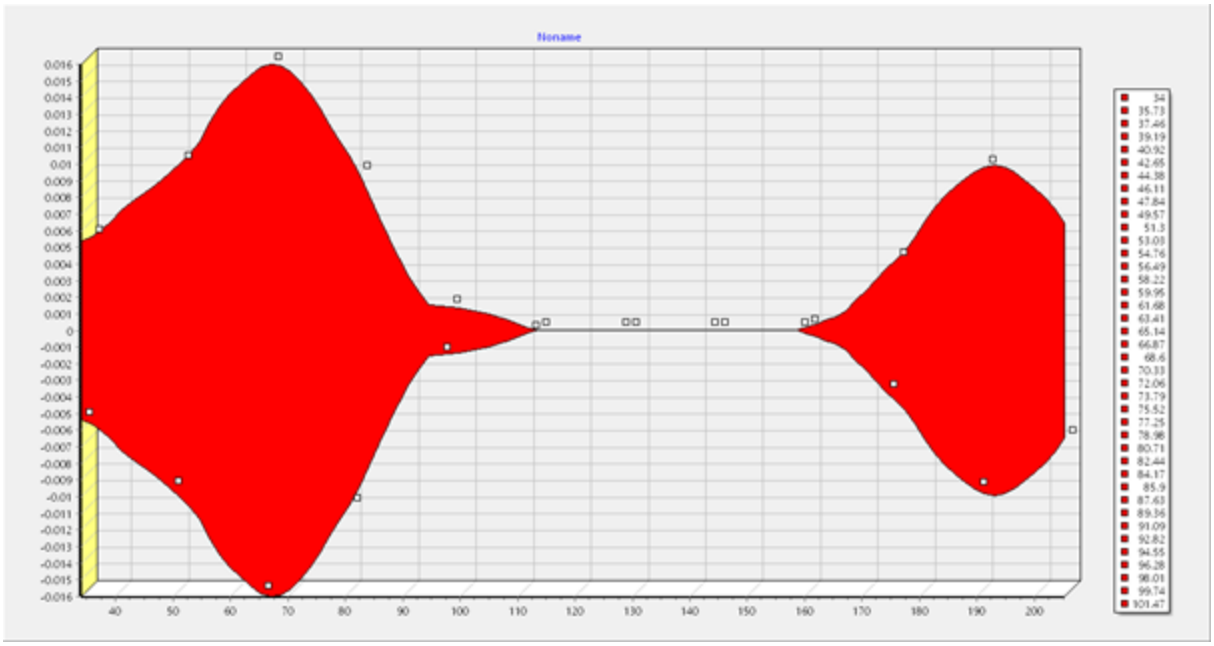


5.5.1.4.6 Violin / Horizontal Violin

The Violin and Horizontal Violin Series visualize the distribution of a numeric variable for one or several groups. Violin series are similar to BoxPlots.

- Format
- Violin
- Point
- General
- Marks
- Data Source





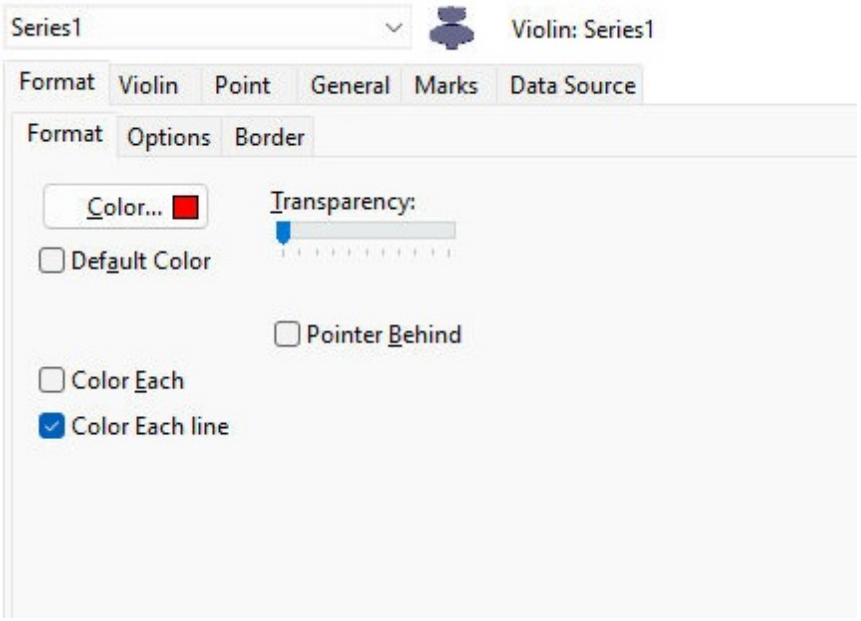
5.5.1.4.6.1 Format

Format
Color - specifies the color used to display the line, using a color palette
Default Color - displays the default line color
Color Each - enables/disables the coloring of each connecting line of the series
Color Each line - enables/disables the coloring of each outline line for the series
Transparency - specifies the transparency for the line series
Pointer Behind - specifies if the pointer object is drawn behind the series

Options
Click Tolerance - sets the pixel proximity tolerance for mouse clicks
Clickable - determines whether the Line series accepts mouse clicks on the line drawn between points
Stack - sets the stacking options of Lines series;
- Overlap - Series displayed in same Z space (all Series take same Z-order position). This will result in overpainting of equal Series points.
- Stack - Stacks series one above the other. Series begin with lowest index order at bottom. Further Series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.
- Stack 100% - Plots take up full Bottom to Top space of the Chart Area resulting in a percentage division by Area to reflect series values.

Treat nulls - determines how null values are displayed

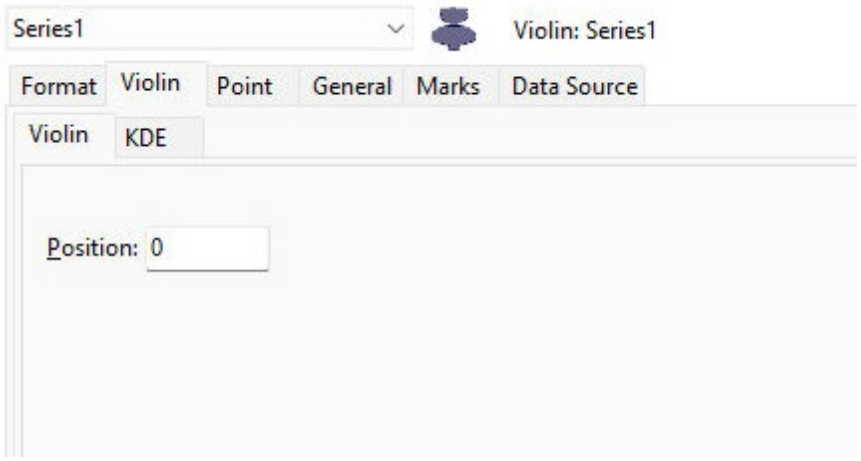
Border
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series
See **Border**



5.5.1.4.6.2 Violin

Violin
Position - specifies the series position in the chart

KDE
Resolution -
Bandwidth -
Width - specifies
Clamp - specifies... ;MinMax or Manual
ClampMin -
ClampMax -



5.5.1.4.6.3 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series

Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

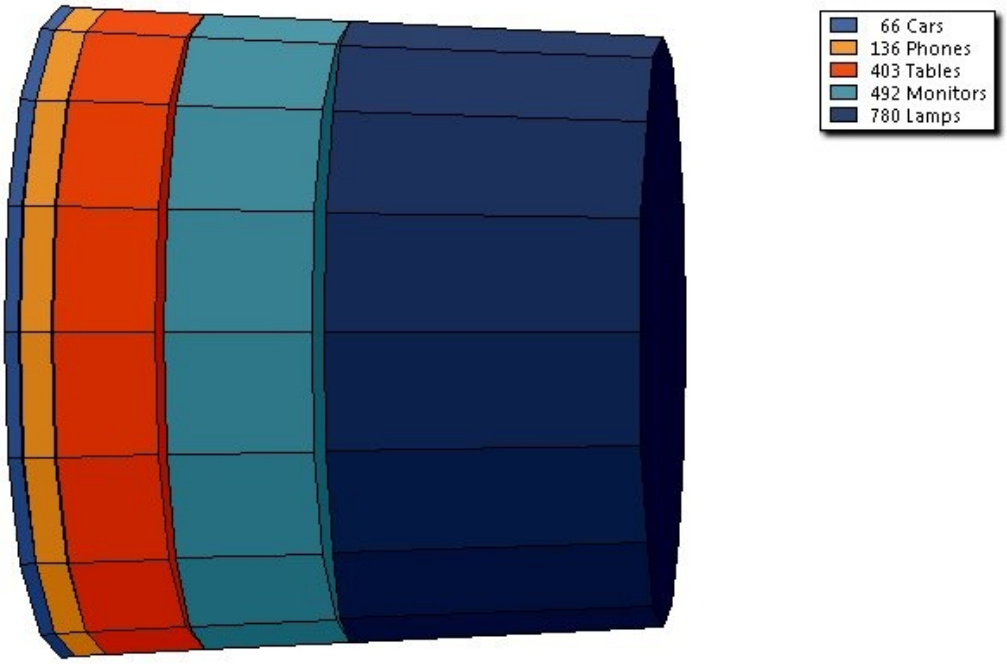
Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

5.5.1.4.7 VolumePipe

The VolumePipe Series represents values by the front-plane area associated with each point.

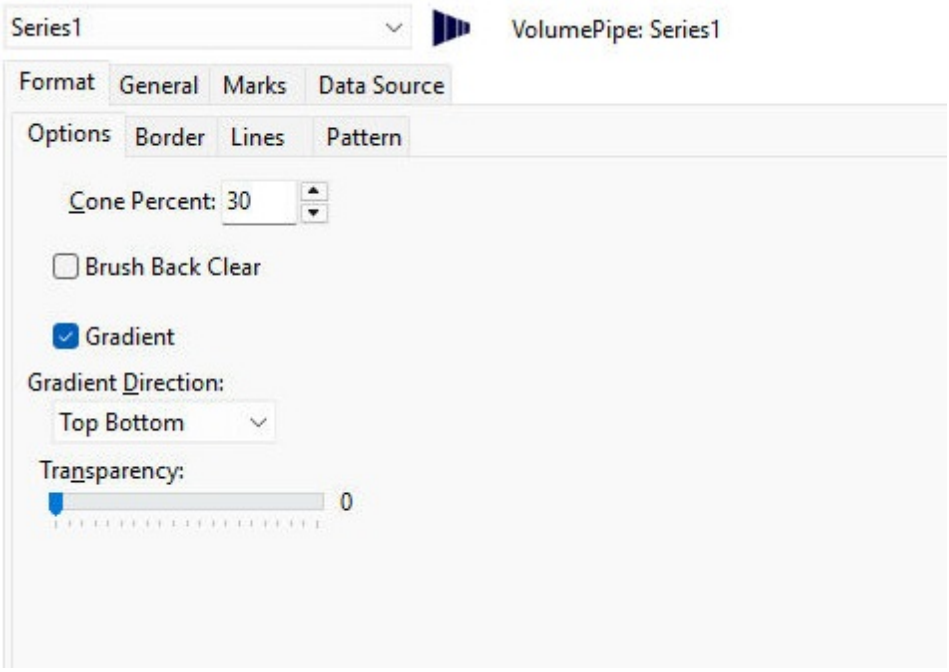
- Format
- General
- Marks
- Data Source



5.5.1.4.7.1 Format

Options
Cone percent - sets the percentage from 0 to 100 of truncated cone visual effect. The Cone Percent taper may be adjusted for the series that will affect the relative width of point areas so that values nearer the tip of the cone take up more width relative to those further from the tip.
Brush Back Clear - sets the back pattern color will be set to none
Gradient - sets a gradient for the defined color formatting
Gradient Direction - applies gradient the direction

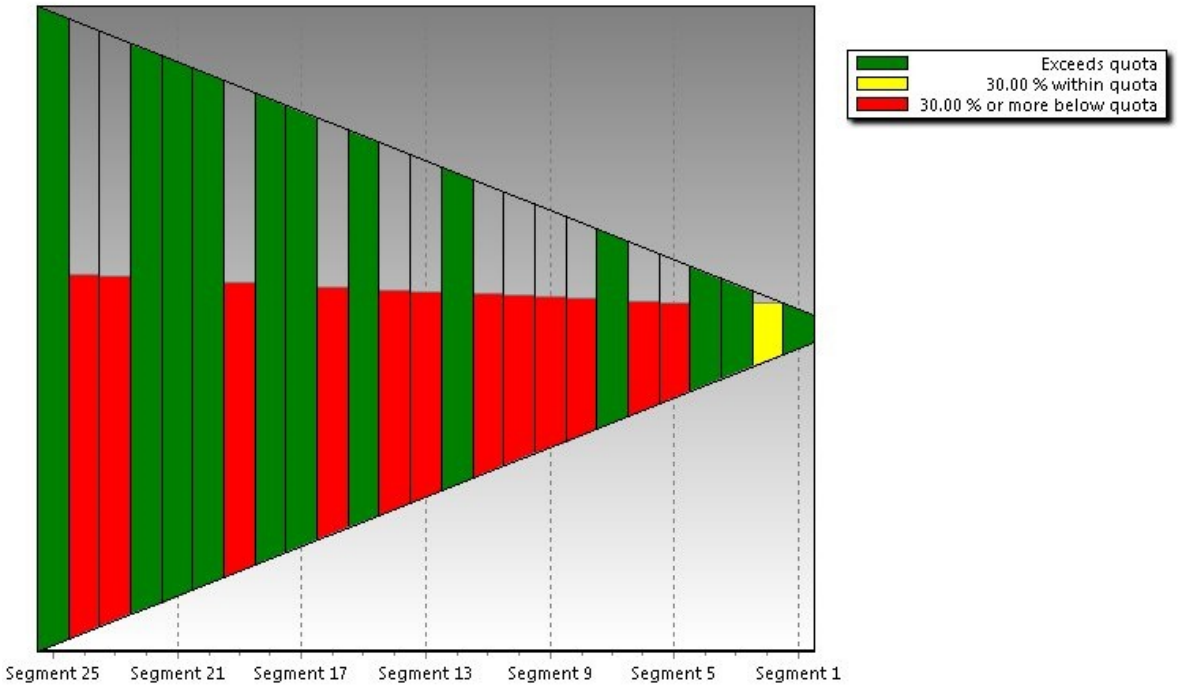
Border - determines the border properties. See **Border**
Lines - determines the pen properties. See **Border**
Pattern - defines the pattern style. See **Pattern**



5.5.1.4.8 Funnel

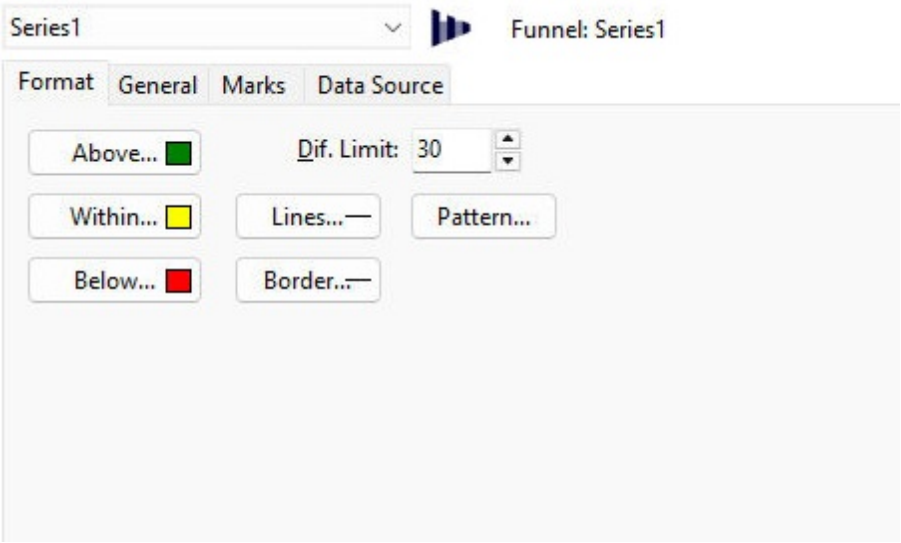
A Funnel Series is often used to represent stages in a sales process and show the amount of potential revenue for each stage.

- Format
- General
- Marks
- Data Source



5.5.1.4.8.1 Format

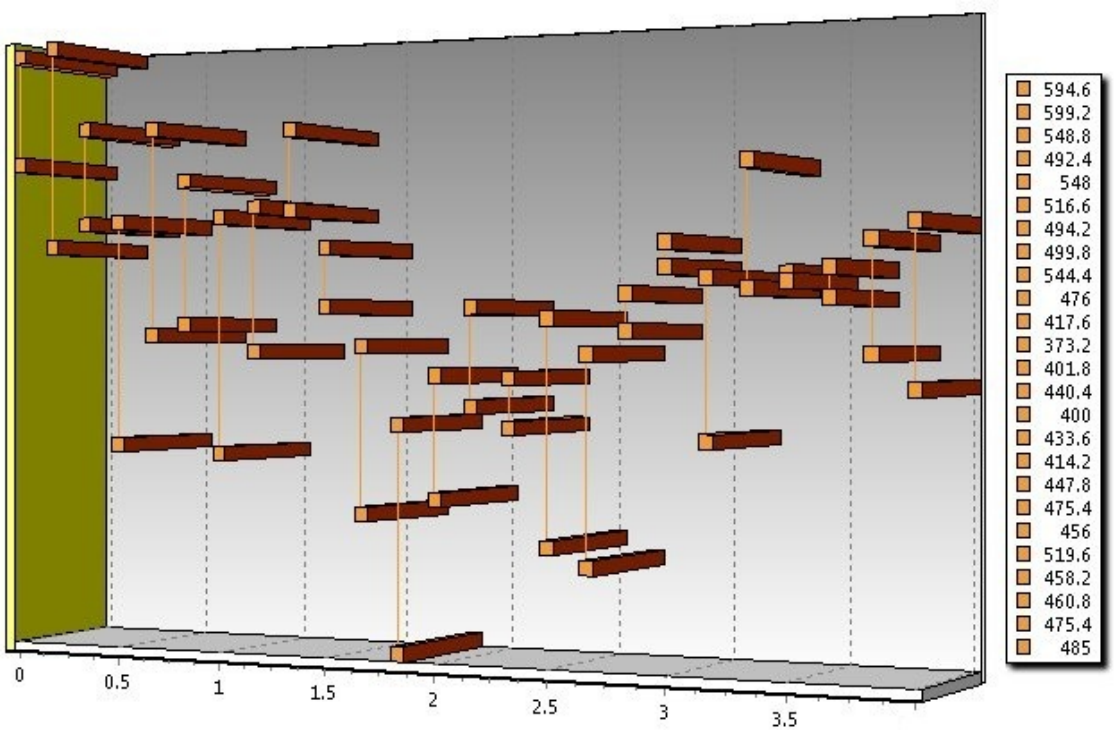
Above - defines the color used to paint the Funnel segment if Opportunity value is greater than Quote value
Within - defines the color used to paint the Funnel segment if Opportunity value is within Difference Limit % below the Quote value
Below - defines the color used to paint the Funnel segment if Opportunity value is more than the Difference Limit % below the Quote value
Difference Limit - defines the difference (expressed in Quote percentage) used by the internal algorithm to define the Funnel segment color
Lines - defines the Funnel Series value lines. See **Border**
Pattern - defines the pattern used to fill in the series. See **Pattern**
Border - defines the Funnel Series border. See **Border**



5.5.1.4.9 HighLow Line

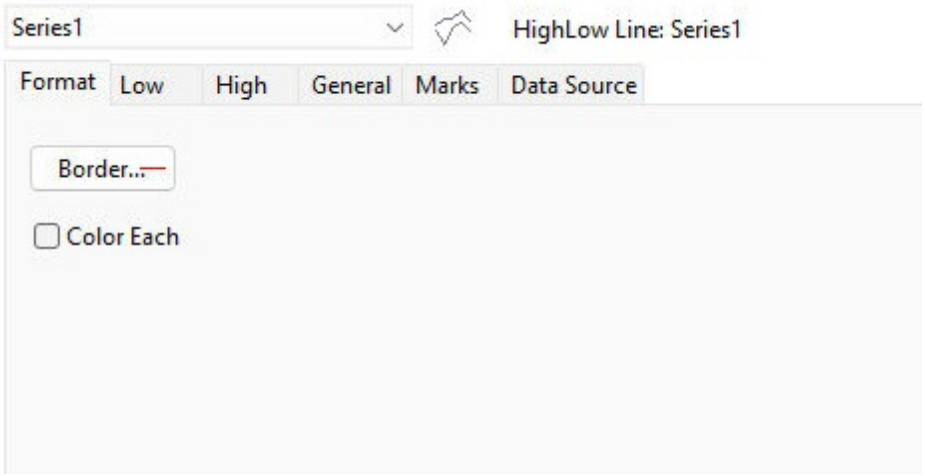
The High-Low Line series displays vertical lines that go from a Low value to a High value for each point in the series. The HighLow Line series can point out how close actual values came to the goal points.

- Format
- Low
- High
- General
- Marks
- Data Source



5.5.1.4.9.1 Format

Border - specifies the series border, using the Border Editor
Color Each - plots each series point in a different color



5.5.1.4.9.2 Low

Use the Low property settings to configure the optional symbol pointer to draw at each series point "Low" value position.

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

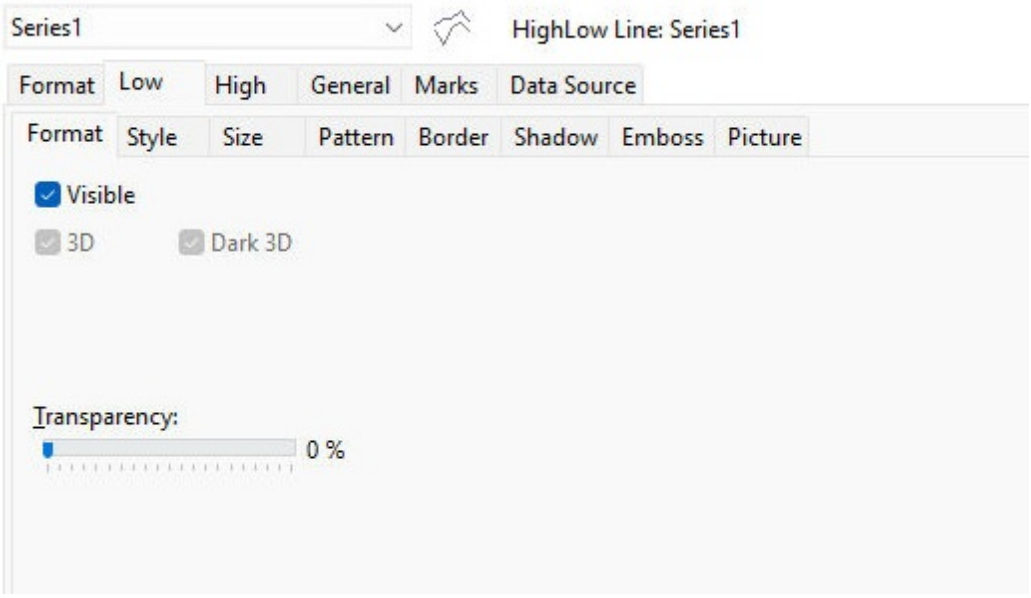
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.4.9.3 High

Use the High property settings to configure the optional symbol pointer to draw at each series point "High" value position.

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

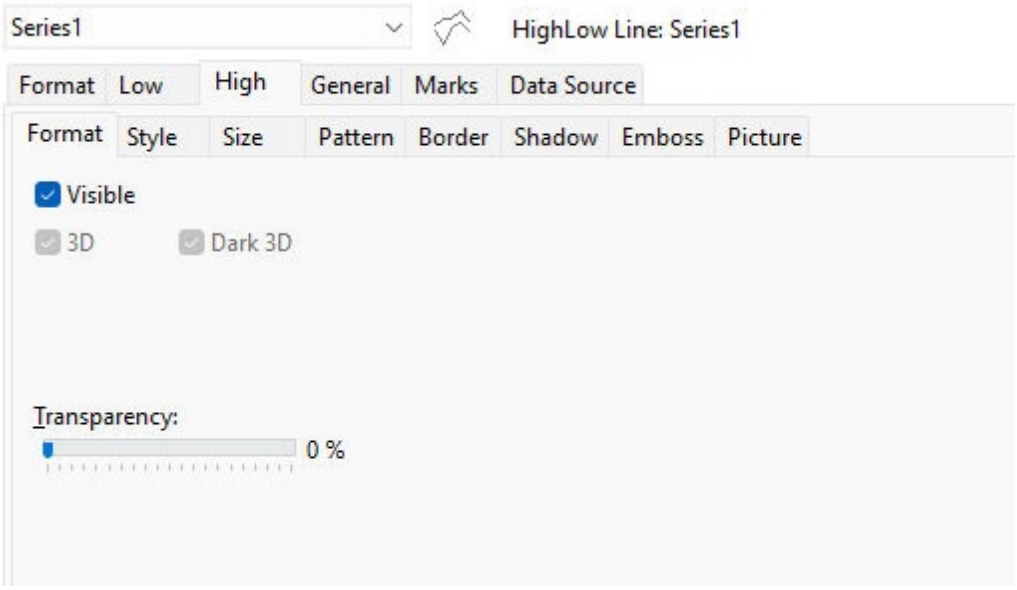
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

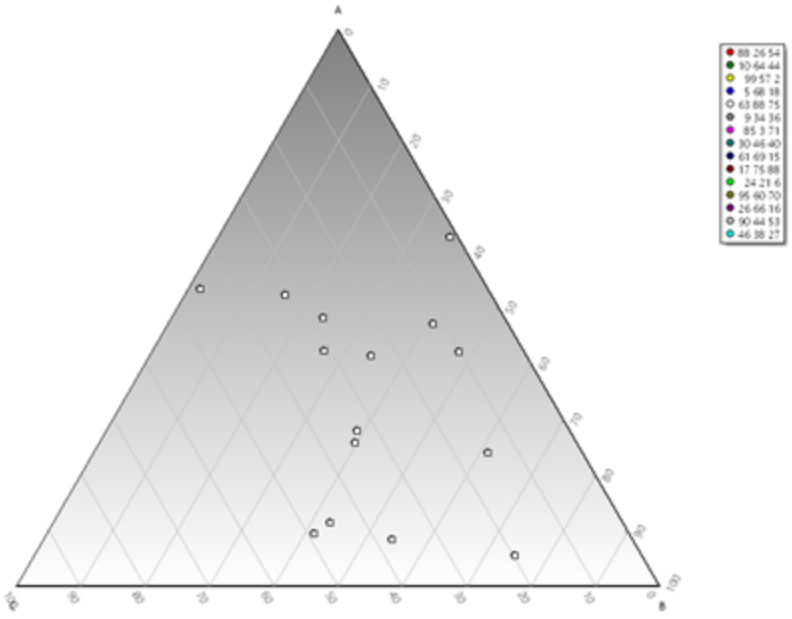
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.4.10 Ternary

The Ternary series is used to represent the relative percentage of three components. The three components will sum to 100%, or will be normalized by R:Charts to 100%. The Ternary series can plot relative position, value 'size' as point radius, and use a color gradient scale to add weighting information.

- Format
- Grid 3D
- General
- Marks
- Data Source



5.5.1.4.10.1 Format

Options
Ternary Style - sets the Ternary series to display Points, or Radius and weighting sensitive Bubbles.
Legend Style - specifies different Legend content for the Ternary series
Axis Increment - specifies the axis scale for all three bounding Axes. Valid values: 1,2,5,10,20,25, and 50
Transparency - specifies the degree of transparency
Default Color - specifies the default color
Color each point - enables/disables the coloring of each point
Rotated Labels - When True, Ternary text labels are rotated accordingly to their position in the chart. When False, labels aren't rotated and they are displayed all in the same alignment.

Pointer

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

Border - See **Border**

Vertex

Text
Title A - specifies the vertex title for corner A
Title B - specifies the vertex title for corner B
Title C - specifies the vertex title for corner C

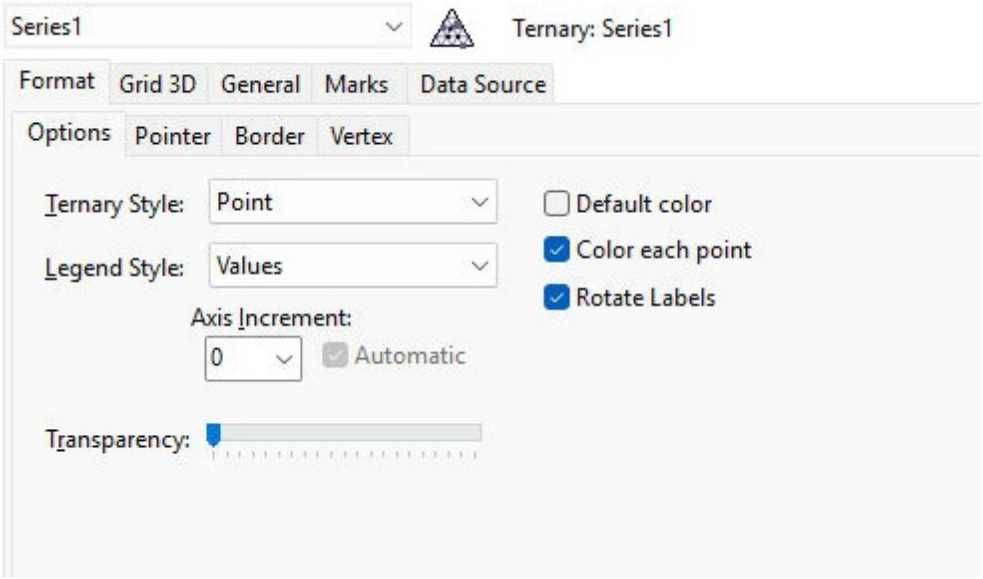
Format

Options
Visible - displays or hides the vertex titles
Alignment - determines the position of the text in the vertex tiles
Format - specifies to output normal plain text or text that might contain HTML formatting tags

Margins
Units - specifies the units for adjusting the margins
Left - specifies the left margin value
Top - specifies the top margin value
Right - specifies the right margin value
Bottom - specifies the bottom margin value

Format - See **Format**
Border - See **Border**

Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the text.
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels



5.5.1.4.10.2 Grid 3D

The Grid 3D tab offers three different color modes to color the series, which are enabled by selecting each tab.

Single - defines only one color for all the series values
Color Each - defines each series value with a different color
Color - specifies the color used to display the line, using a color palette

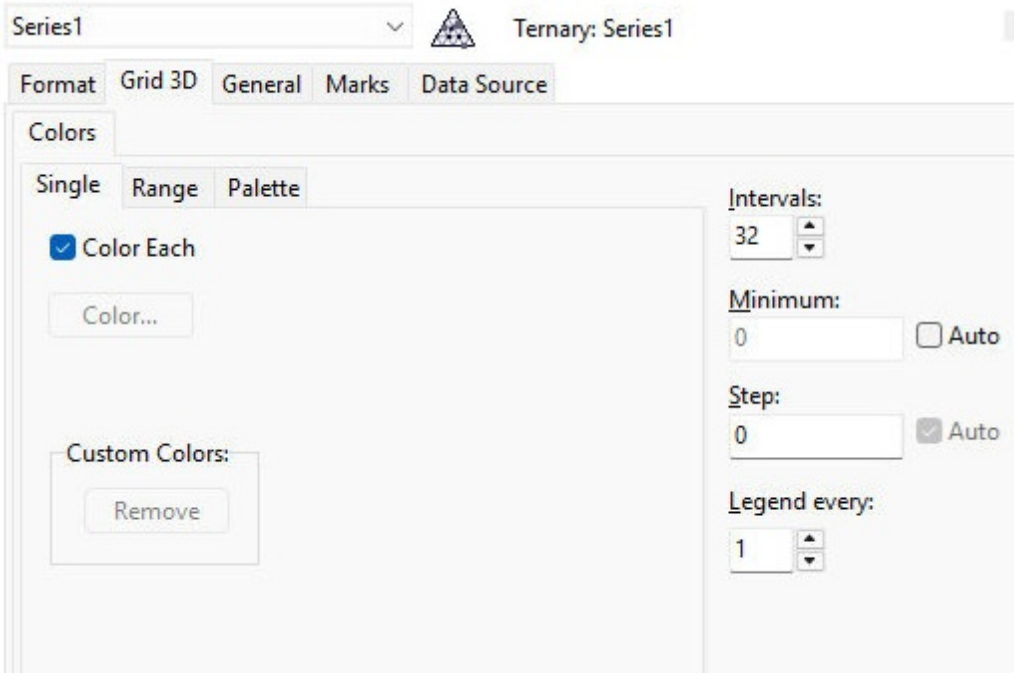
Range
Start - specifies the start color of the series points
Middle - specifies the middle color of the series points
End - specifies the end color of the series points
Swap - swaps the three defined colors
Gallery - provides several default gradients to choose from, with a preview panel
No middle - removes the middle color

Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show in the legend

Palette
Style - specifies the color style for the points
Invert - inverts/reverses the color style
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Load palette - loads a saved custom palette
Save palette - saves the current custom palette
New palette - adds a new custom color palette

Intervals - sets the interval amount between palette colors
Minimum - sets the minimum step value
Step - sets the value for the step between points

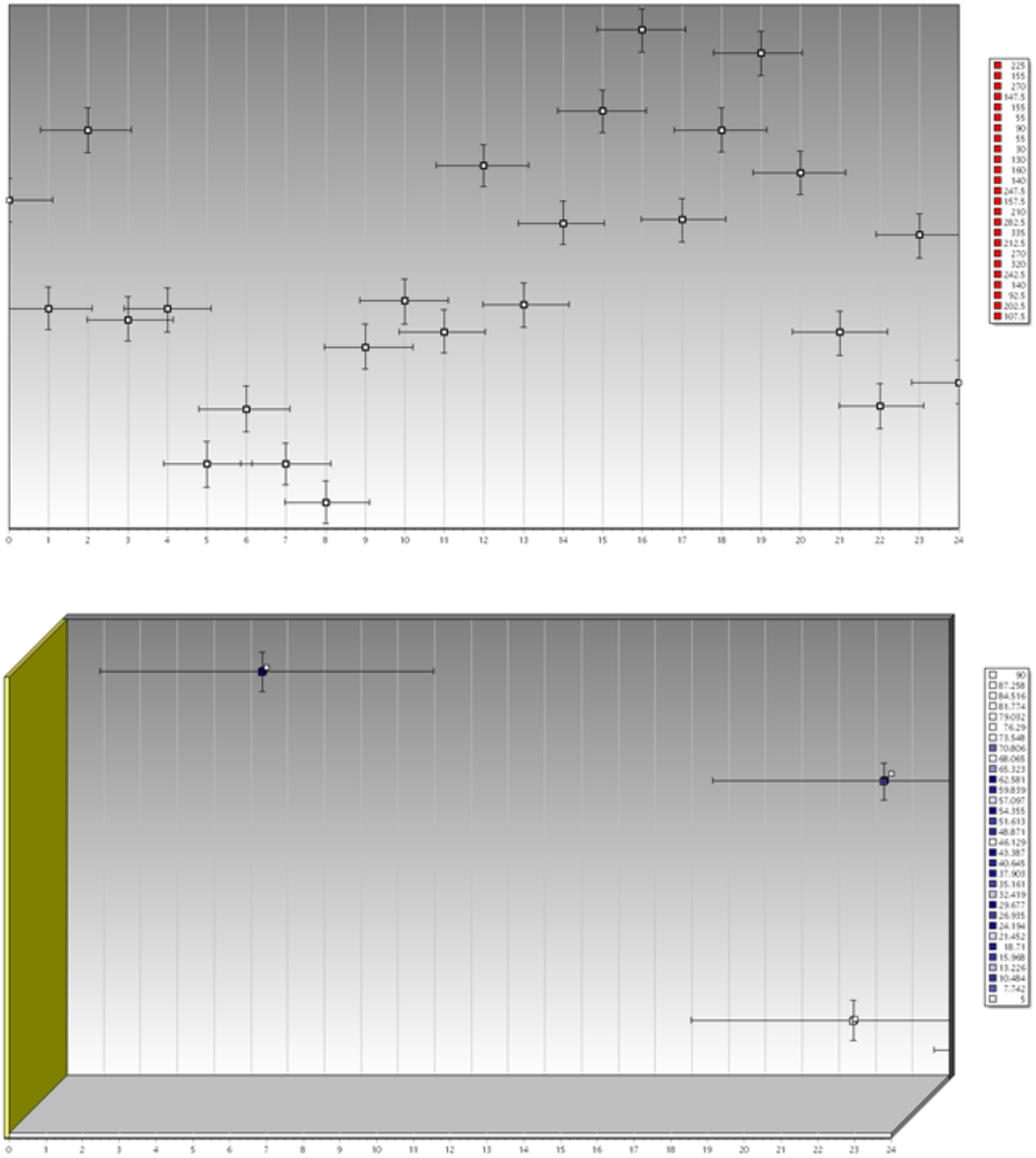
Legend every - defines the gap between each palette color to show in the legend



5.5.1.4.11 Error Point / Error Point3D

The Error Point and Error Point3D series displays horizontal and vertical error values in both positive and negative directions.

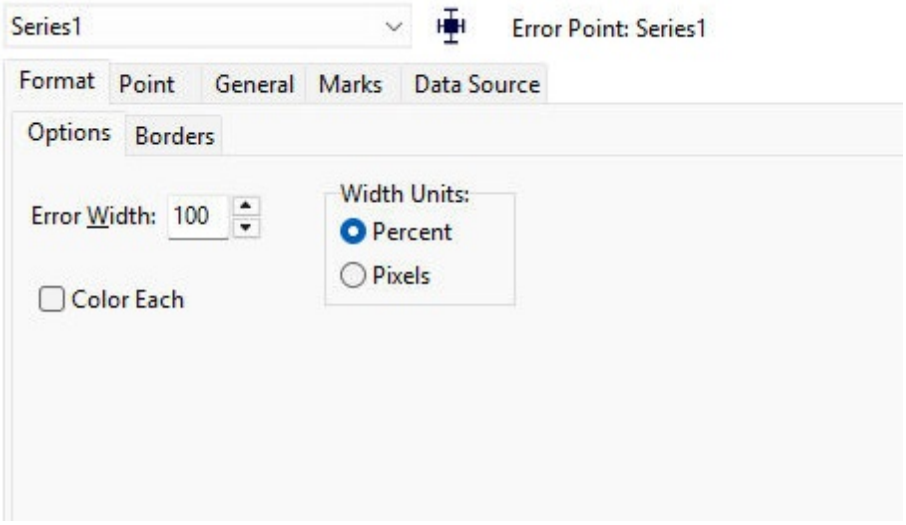
- Format
- Point
- General
- Marks
- Data Source



5.5.1.4.11.1 Format

Options
Error Width - determines the horizontal size of the Error Point. Size is expressed either in pixels or as a percentage of the width depending on the Width Units property. By default, the Error Point width is 100% of the point's width.
Width Units - determines whether Error Width property is expressed either in pixels or as a percentage of the point width. By default, the Error Point width is 100% of the point width.
Color Each - plots each series point in a different color

Borders - specifies the border properties for the Left, Top, Right, and Bottom points



5.5.1.4.11.2 Point

Format
Visible - specifies whether or not the points are displayed
3D - sets the points in 3 Dimensions
Dark 3D - sets the points fill with darker colors than the rest of the series
Transparency - specifies the degree of transparency

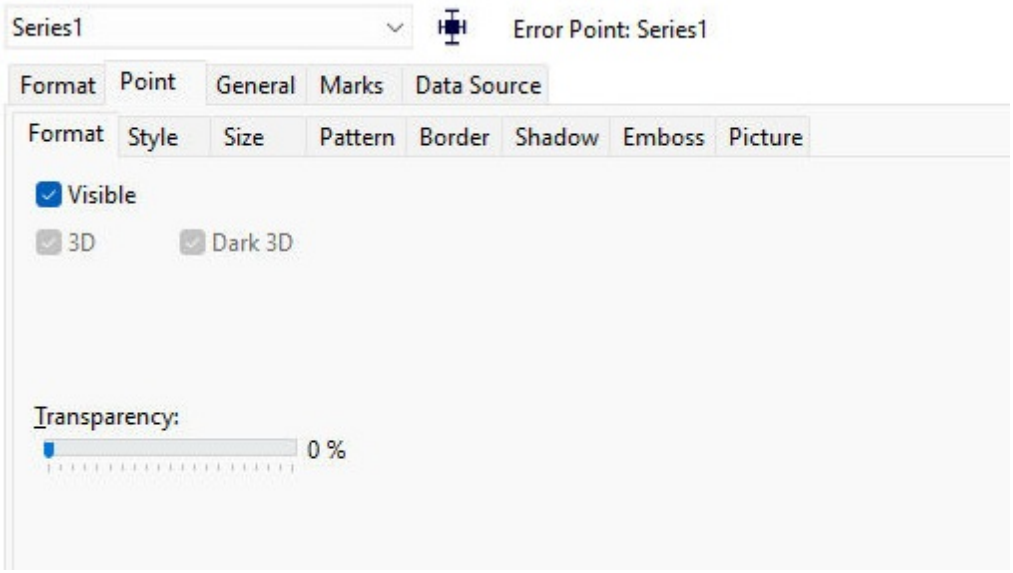
Style - specifies the style of the series points as Square, Circular, Triangular, etc.

Size - specifies the pointer size (in units), width, height, and depth
Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the series

Pattern
Default Color - specifies the default color values for pattern
Use Full Gradient - uses the full gradient colors within the pointer
See **Pattern**

Border
Dark Pen - specifies the pointer color is made darker for better visual effect
See **Border**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



5.5.1.5 3D

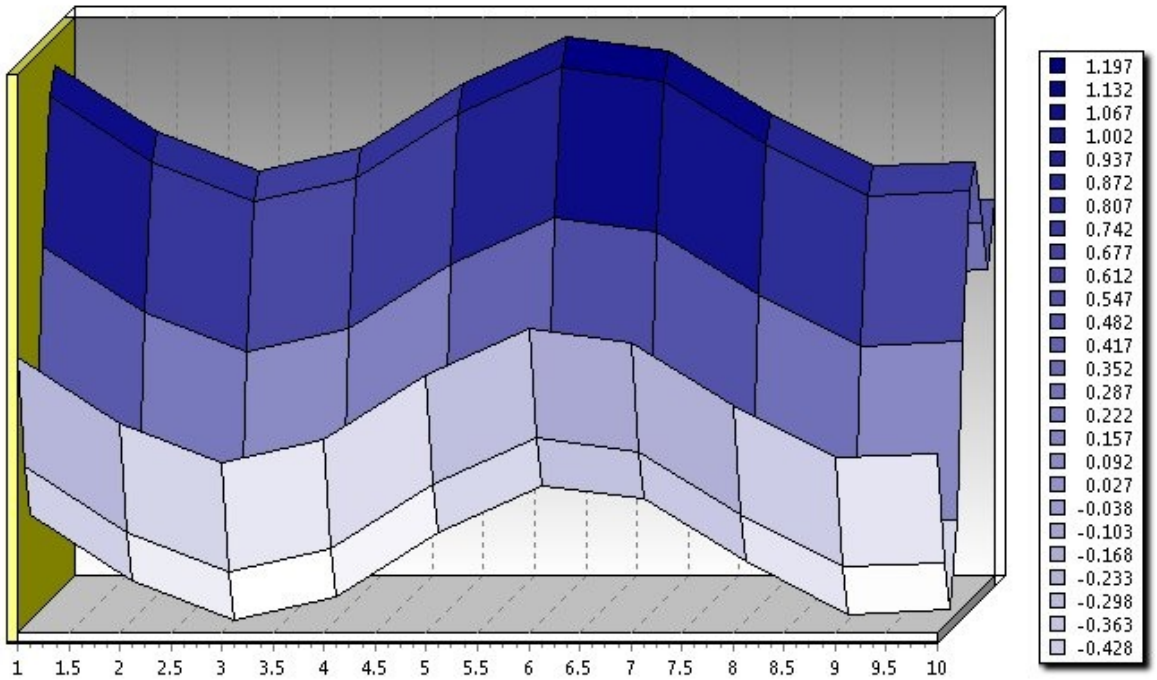
The 3D Series include chart types which offer a 3 dimensional representation e.g. Surface, Waterfall, Tower, etc. These types take three (X, Y, Z) rather than two (X, Y) values.

Icon	Series
	Surface
	Contour
	Water Fall
	Color Grid
	Vector 3D
	Tower
	Iso-Surface
	Point3D
	Bubble 3D
	Triangle Surface
	Polar Grid

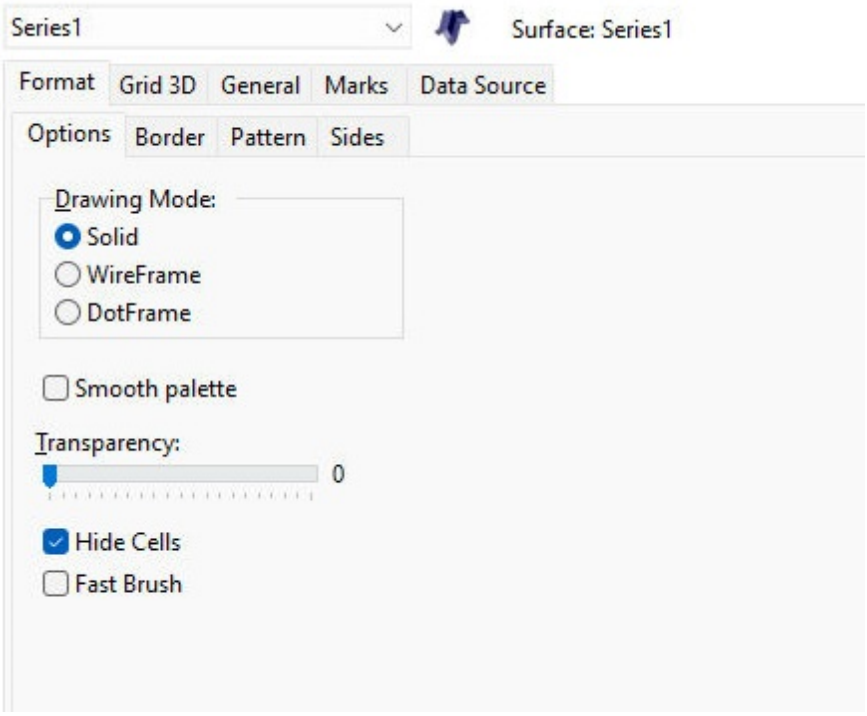
5.5.1.5.1 Surface

The Surface Series use coordinates in 3 planes. The Surface series support null values as "none" data points, which appear as holes in the surface.

- Format
- Grid 3D
- General
- Marks
- Data Source



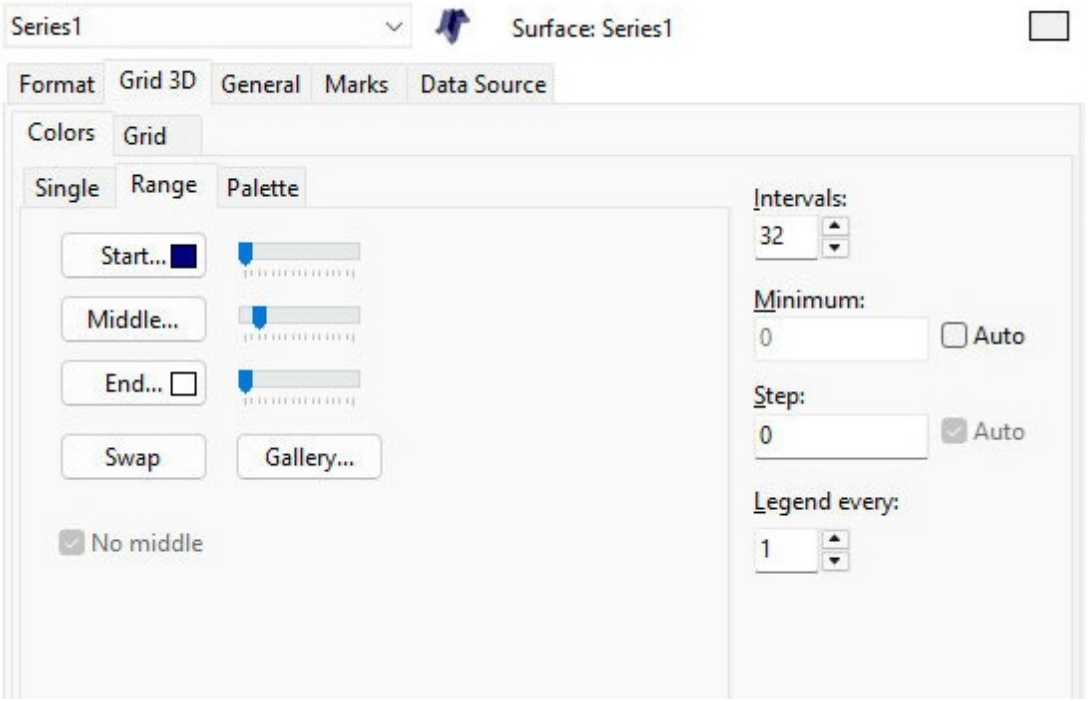
5.5.1.5.1.1 Format



Pen - determine the kind of pen used to draw the Surface polygons, using the Border Editor
Brush - determine the kind of brush that will be used to draw the Surface polygons, using the Pattern Editor
Drawing Mode - determines the way the Surface series is drawn

Smooth Palette - determines the cell colors of a Surface Series
Side Brush - specifies the color and pattern used when filling in the sides of a surface series, using the Pattern Editor
Side Lines - determines the kind of lines displayed for sides of the Series, using the Border Editor
Transparency - sets the transparency level from 0 to 100%
Fast Brush - When True, and only on selected Windows versions (XP, 2000, 2003, etc), the surface paints cells using a simple (and faster to select) solid brush color. On large size surfaces, Fast Brush should increment the display speed a good percentage.
Hide Cells - Depending on some aspect settings like rotation, elevation, 3D percent, etc.. some surface cells can be painted baldy. Setting this property to "True" these specific cells will be repainted.

5.5.1.5.1.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

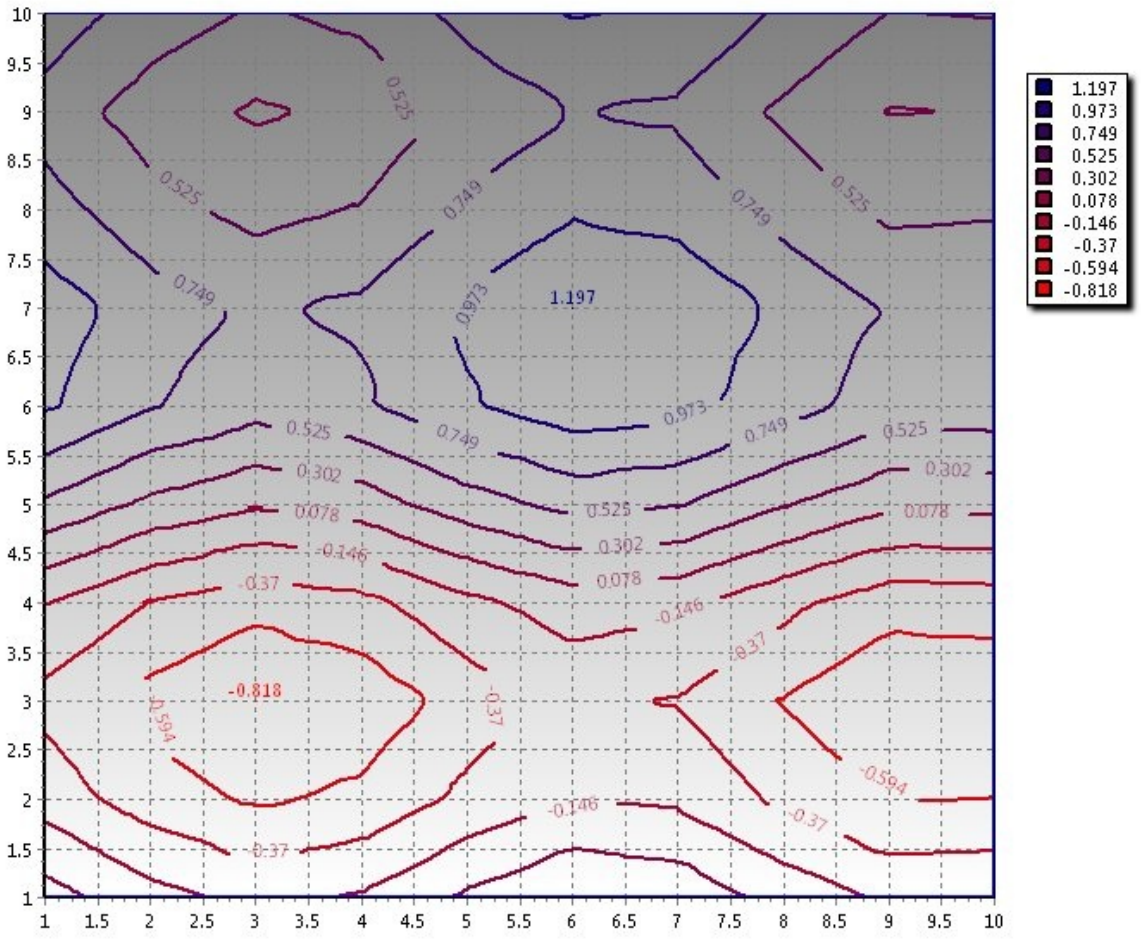
Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

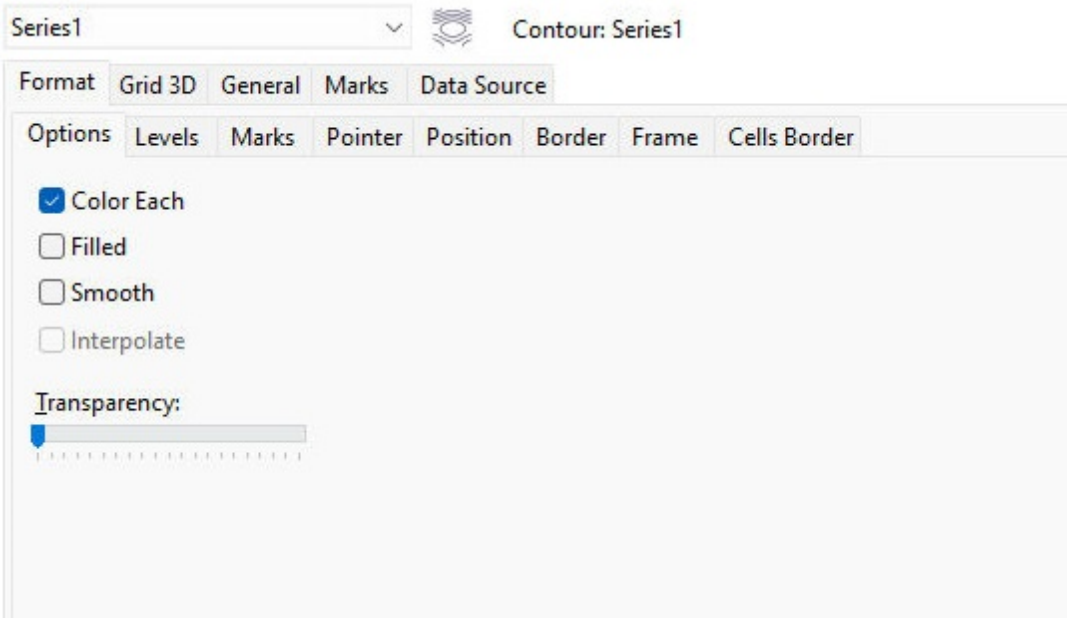
5.5.1.5.2 Contour

The Contour Series calculates and displays "isolines" from a custom array of XYZ points. The Contour Series, by default, shows at the Legend one item for each corresponding Contour Level. Each Level can be colored using a different color.

- Format
- Grid 3D
- General
- Marks
- Data Source



5.5.1.5.2.1 Format



Options Tab
Pen - determine the kind of pen used to draw the contour isolines, using the Border Editor
Frame - specifies the properties of the series frame, using the Border Editor
Color Each - plots each Series point in a different color
Transparency - sets the transparency level from 0 to 100%
Smooth - determines the properties to use to apply "smoothing" to contour level lines
Interpolate - adds estimates between displays values

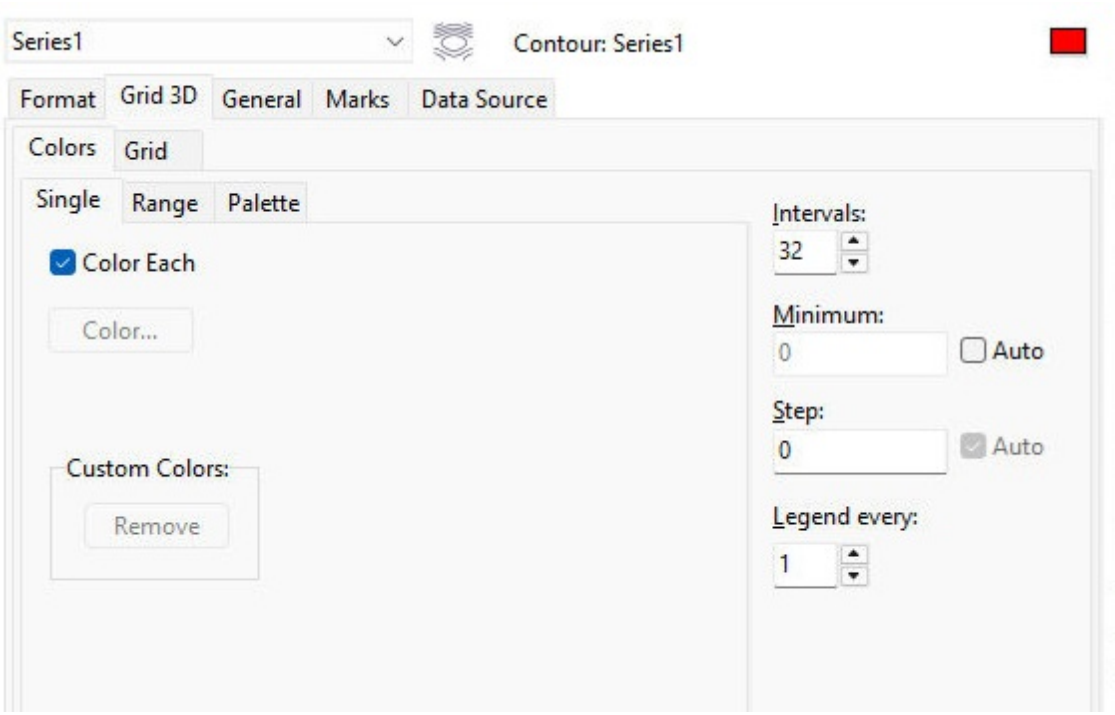
Levels Tab
Automatic - set the level number automatically
Number - defines the number of levels for the Contour Series
Level - adjusts Contour Level characteristics by selecting Level by index

Marks Tab
Visible - determines whether contour marks will be displayed or not
Density - specifies density of marks
Margin - specifies margin between displayed marks
Font Color level - applies mark font color to match contour level
Color - defines the font color of the mark
At segments - places marks at each segment
Anti overlap - prevents mark from overlapping

Pointer Tab
Visible - plots a Series Pointer at each calculated Segment point
3D - sets the Series Pointers in "3D"
Dark 3D - sets the Series Pointers fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series Pointers as Square, Circular, Triangular, etc.
Width - specifies the Pointer width size
Height - specifies the Pointer height size
Pattern - specifies the Pointer pattern, using the Pattern Editor
Border - specifies the Pointer border, using the Border Editor
Default - specifies the default values for pattern and border
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

Position Tab
Levels position - sets the Series Vertical position in function of the levels
Vertical position - defines the Series Vertical position

5.5.1.5.2.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

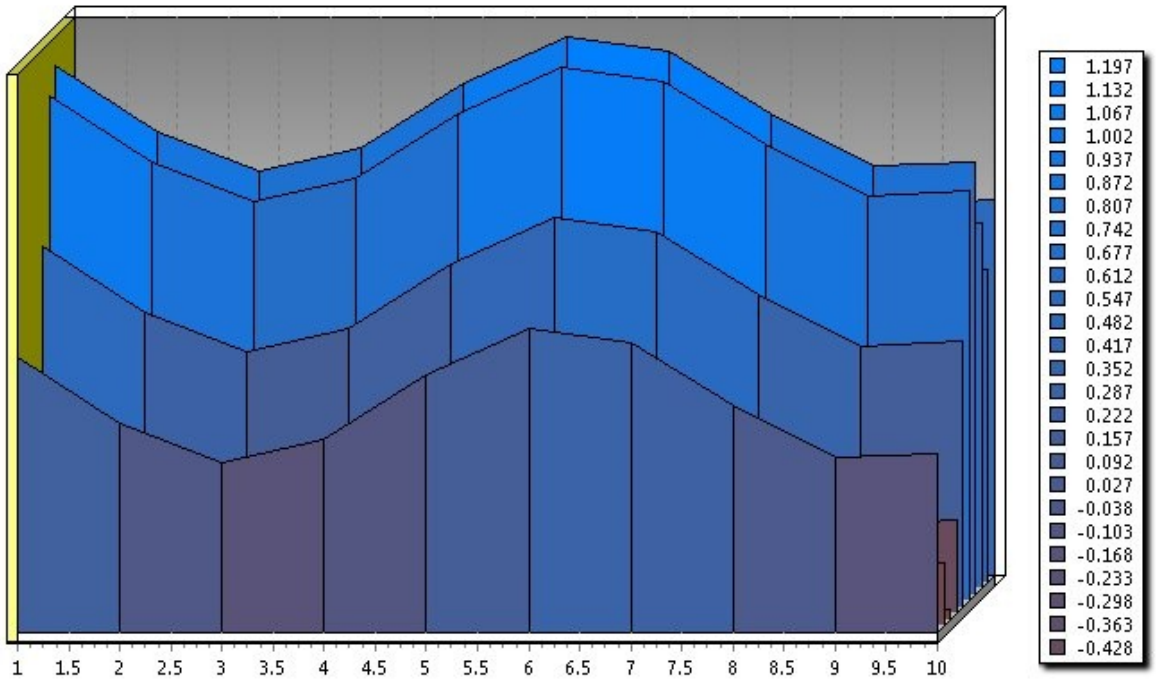
Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

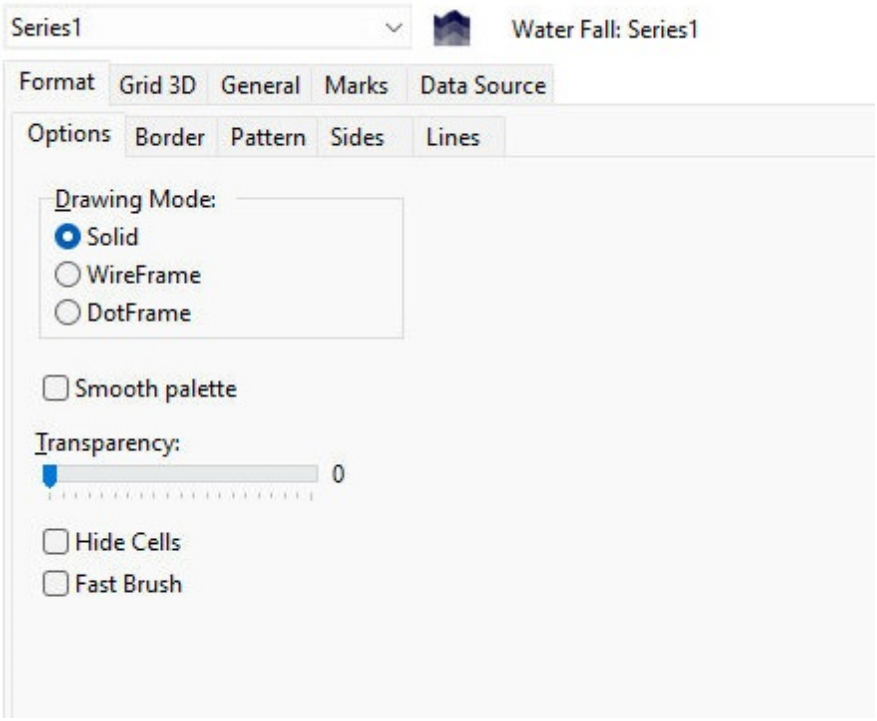
5.5.1.5.3 Water Fall

The Water Fall series is like the Surface series, but made of vertical areas. It draws vertical "slices", one for each Z row in the surface.

- Format
- Grid 3D
- General
- Marks
- Data Source

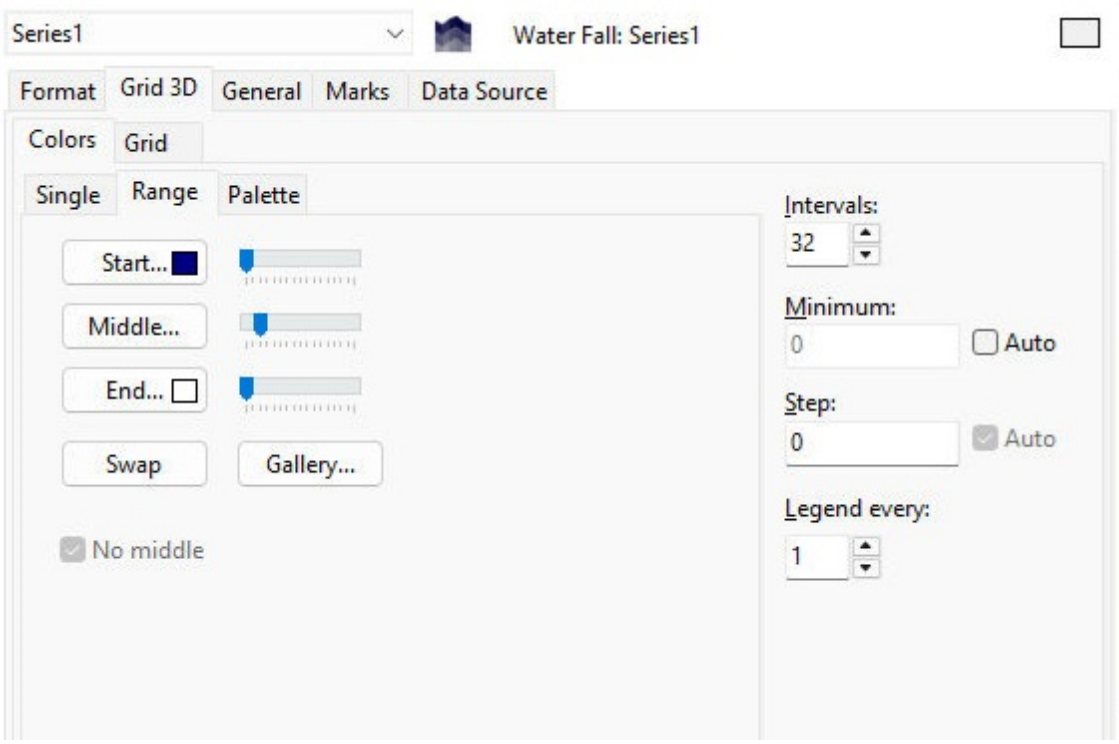


5.5.1.5.3.1 Format



Pen - determine the kind of pen used to draw the polygons, using the Border Editor
Brush - determine the kind of brush that will be used to draw the polygons, using the Pattern Editor
Drawing Mode - sets the kind of drawing for the Water Fall
Smooth Palette - determines the cell colors of a Series using only one corner color
Side Brush - specifies the color and pattern used when filling in the sides of a surface series, using the Pattern Editor
Side Lines - determines the kind of lines displayed for sides of the Series, using the Border Editor
Transparency - sets the transparency level from 0 to 100%
Fast Brush - When True, and only on selected Windows versions (XP, 2000, 2003, etc), the surface paints cells using a simple (and faster to select) solid brush color. On large size surfaces, Fast Brush should increment the display speed a good percentage.
Lines - determines the kind of lines displayed for connecting the Series points, using the Border Editor
Hide Cells - Depending on some aspect settings like rotation, elevation, 3D percent, etc.. some surface cells can be painted baldy. Setting this property to "True" these specific cells will be repainted.

5.5.1.5.3.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

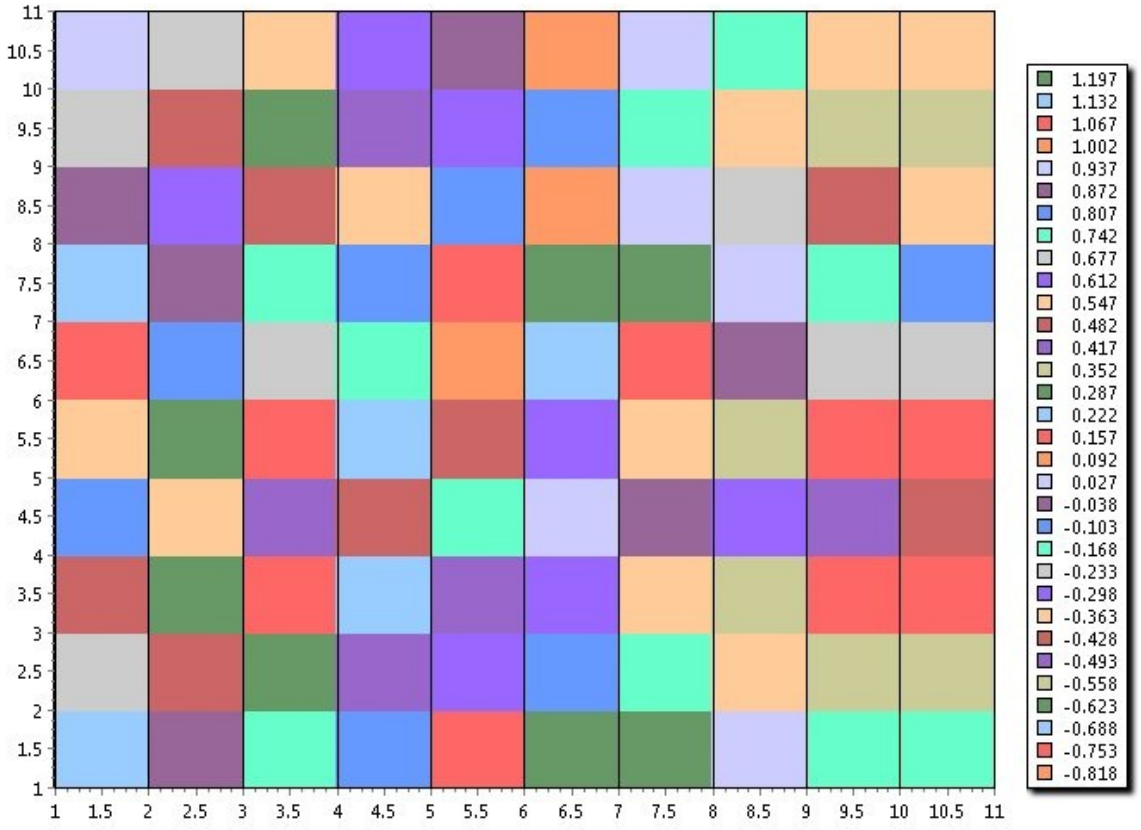
Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid dept

Irregular - determines whether X and Z values are equi-distant or not.

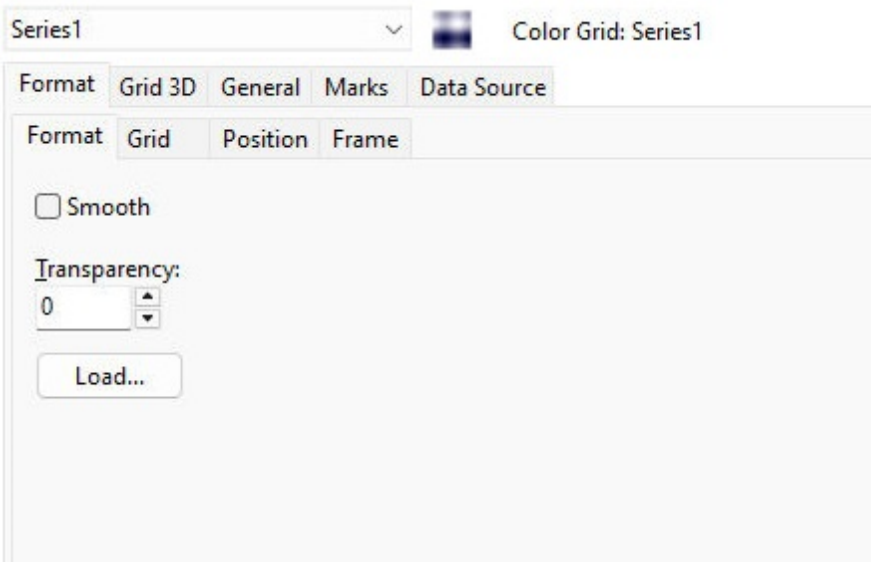
5.5.1.5.4 Color Grid

The Color Grid Series displays grid of colored cells. Every cell is determined by a pair of XZ coordinates. The "Y" value of the cell is used to calculate the cell's color from a color palette.

- Format
- Grid 3D
- General
- Marks
- Data Source



5.5.1.5.4.1 Format

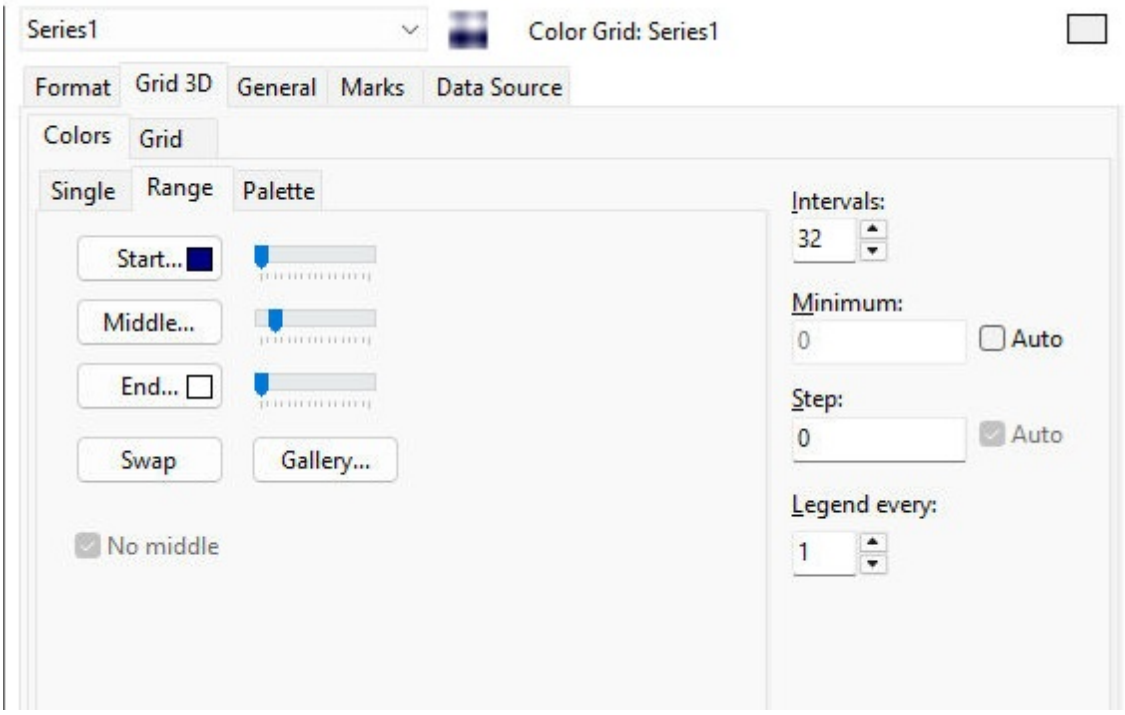


Format Tab
Frame - specifies the properties of the series frame, using the Border Editor
Smooth - the color grid display is done using the internal "smooth stretch" algorithm to improve the number of colors in the grid bitmap
Transparency - sets the transparency level from 0 to 100%
Load - loads a bitmap image for the series

Grid Tab
Grid - define the kind of pen used to draw the Grid lines, using the Border Editor
Grid Every X - indicates how many lines to skip when drawing the vertical grid lines
Grid Every Z - indicates how many lines to skip when drawing the horizontal grid lines

Position Tab
Position - modifies the position of the Series when the Series is viewed in a 3D Chart respective to which plane the Series is being viewed
Plane - sets the plane to which you wish to rotate the Color Grid Series in a 3D Chart
Centered - controls how will be "X" and "Z" values considered. When checked, X and Z values determine the center point of each grid cell. When unchecked, the X and Z values define the "corner" values of grid cells. Thus, when unchecked, there will be one less column and one less row of grid cells.

5.5.1.5.4.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

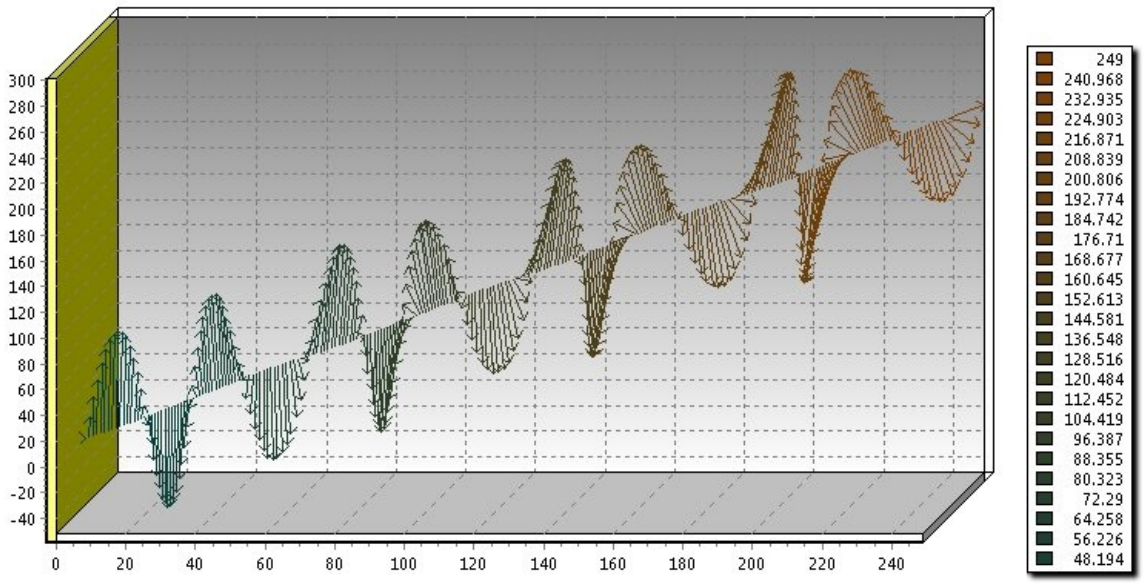
Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

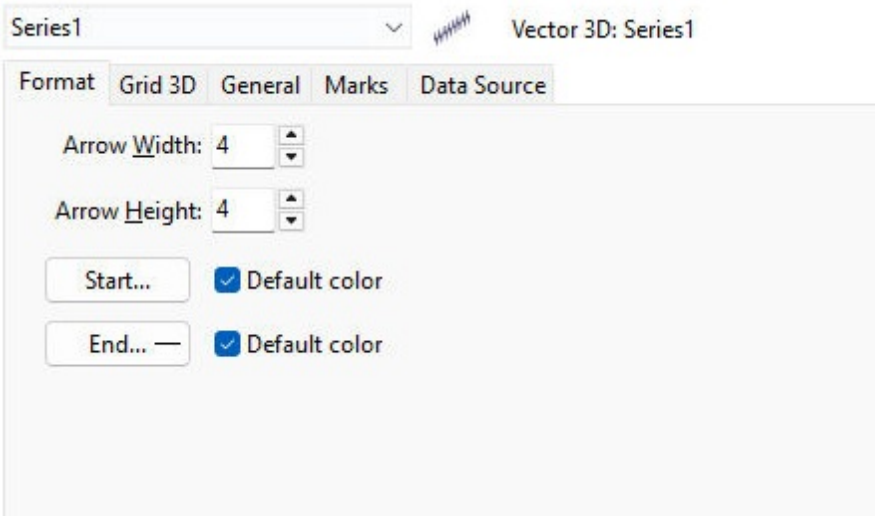
5.5.1.5.5 Vector 3D

The Vector3D Series displays points that have individual XYZ origin and XYZ ending coordinates (in axis values). Points are displayed as vector lines in 3D space. Vector lines can be optionally displayed with arrow shapes at start or end vector coordinates.

- Format
- Grid 3D
- General
- Marks
- Data Source



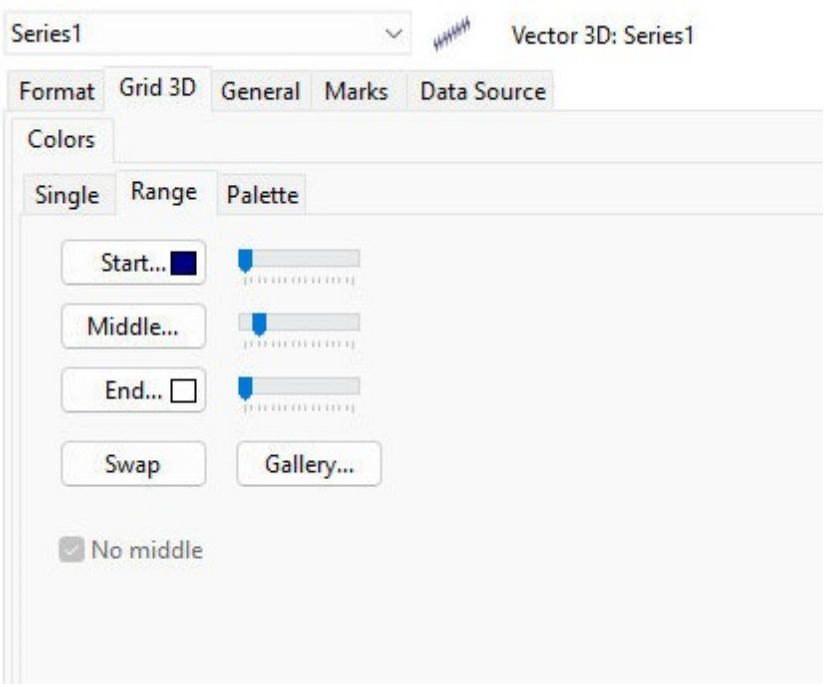
5.5.1.5.5.1 Format



Arrow Width - specifies the amount in pixels of arrow width

Arrow Height - specifies the amount in pixels of arrow height
Start - specifies the pen setting used to display arrows at the starting coordinate of vector lines, using the Border Editor
Default color - specifies to use the default start color
End - specifies the pen settings used to display arrows at the ending coordinate of vector lines, using the Border Editor
Default color - specifies to use the default end color

5.5.1.5.5.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified

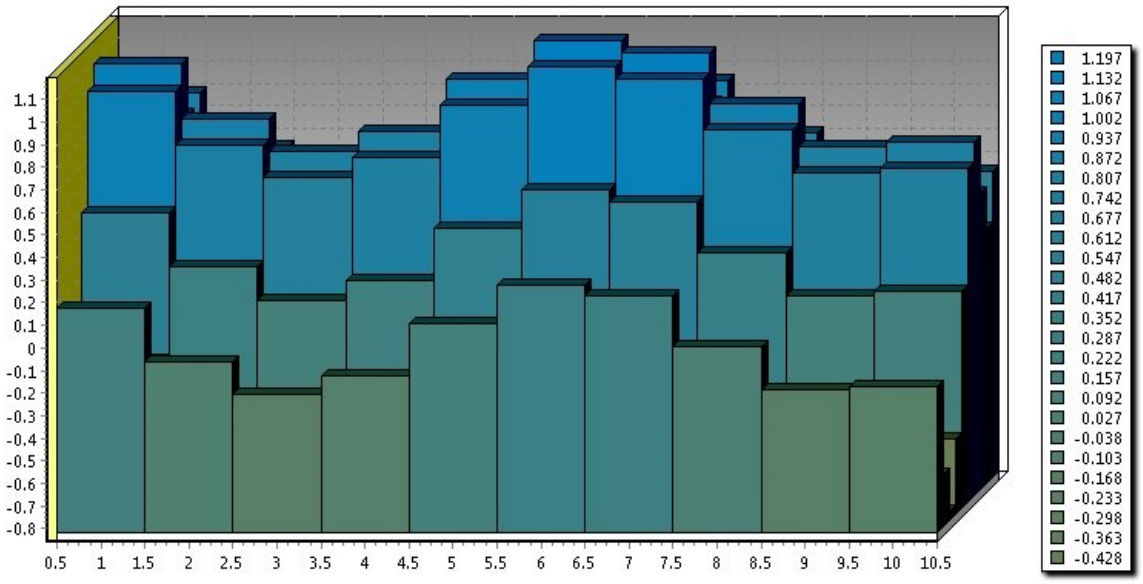
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

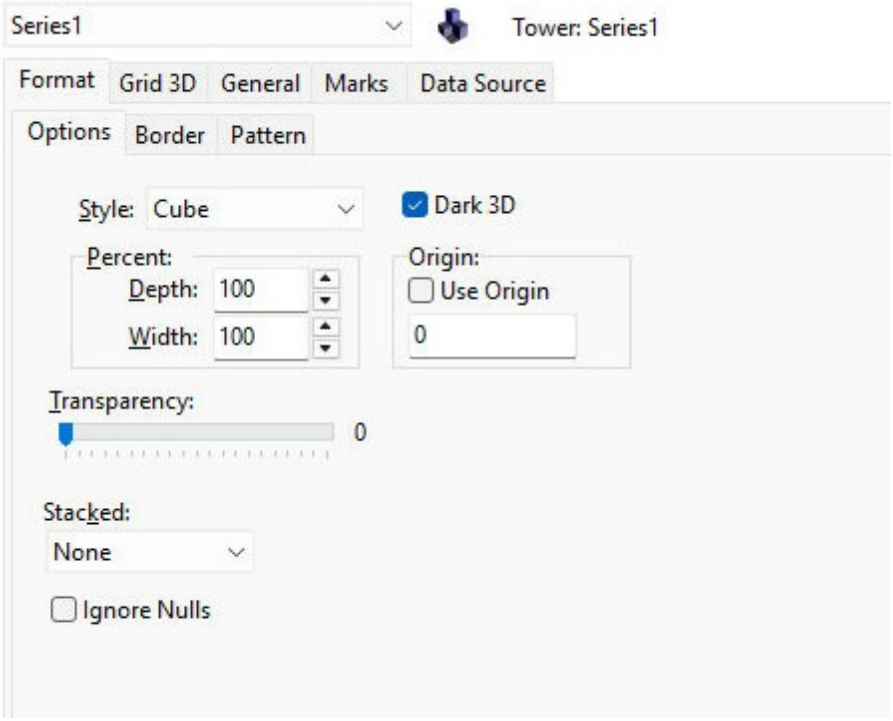
5.5.1.5.6 Tower

The Tower Series displays a 3D grid of "tower" points. Each point can be a Cube, Pyramid, Cone, Cylinder, etc, using the Tower Style property.

- Format
- Grid 3D
- General
- Marks
- Data Source

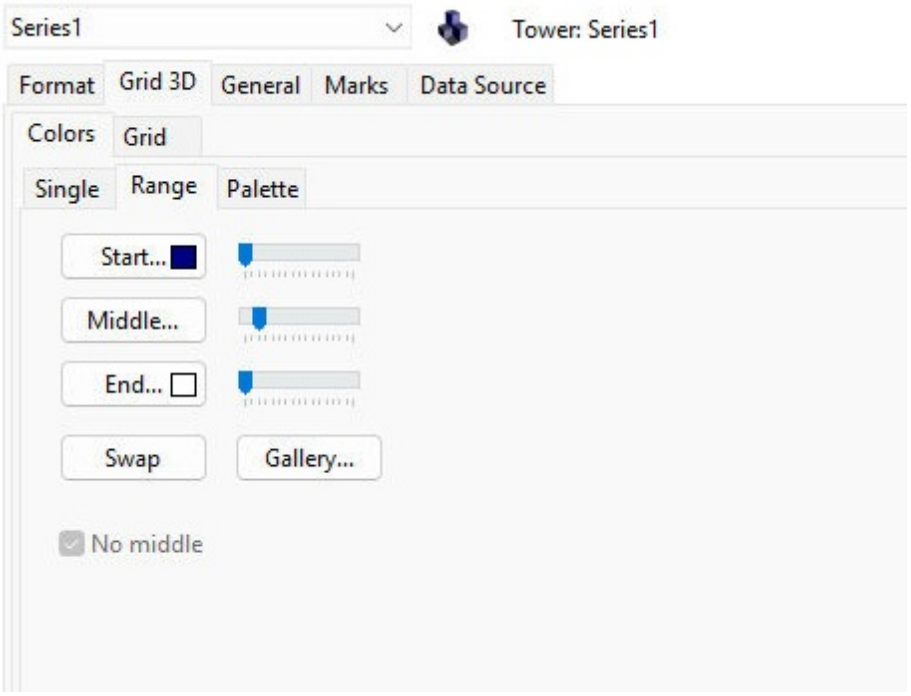


5.5.1.5.6.1 Format



Border - determines the border properties, using the Border Editor
Pattern - defines the pattern style, using the Pattern Editor
Dark 3D - sets the series fill with darker colors than the rest of the Series
Style - determines the style of the series points as Square, Circular, Triangular, etc.
Percent Depth - determines the depth percent of the bars, in pixels
Percent Width - determines the width percent of the bars, in pixels
Use Origin - determines the axis value used as a common bottom for all bars drawn
Transparency - sets the transparency level from 0 to 100%

5.5.1.5.6.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

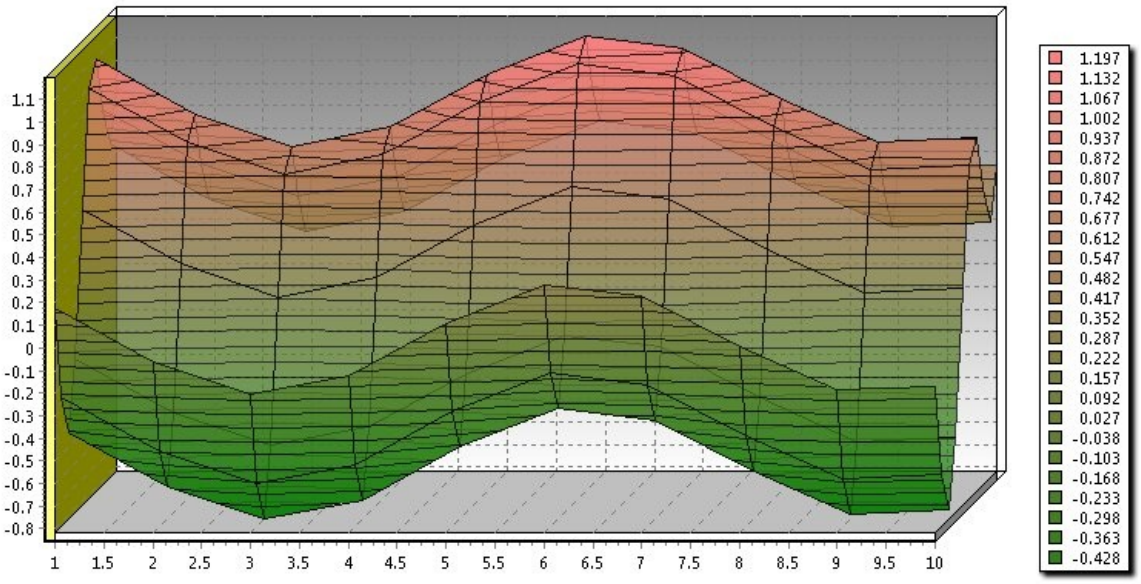
5.5.1.5.7 Iso-Surface

The Iso-Surface series is very similar to a Surface Series. It draws a 3D XYZ mesh of X by Z regular-spaced grid elements using the Y value as elevation value.

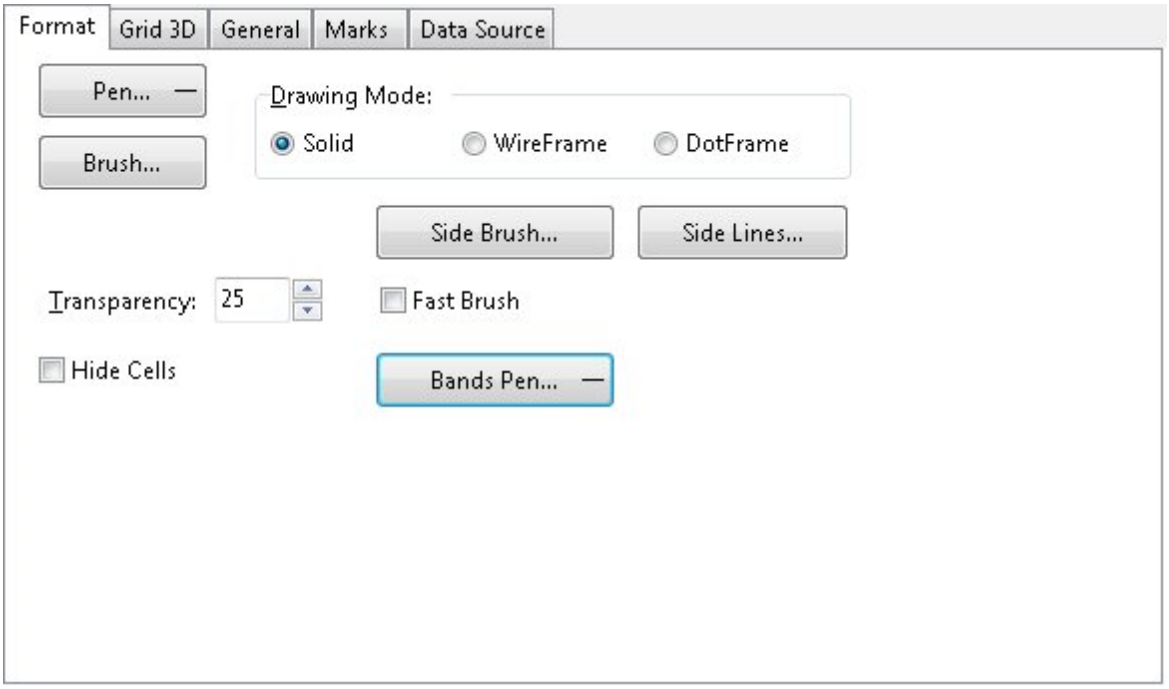
The difference between a Surface and Iso-Surface series is that Iso-Surface fill each "cell" in a different way then Surface. Surface series simply paints the interior of a cell using a calculated color based on each cell Y value.

Iso-surface, in contrast, fills each cell with "horizontal" bands of multiple colors depending on the cell slope and the number of palette colors. An iso-surface series can be seen like a filled contour series displayed in 3D mode.

- Format
- Grid 3D
- General
- Marks
- Data Source

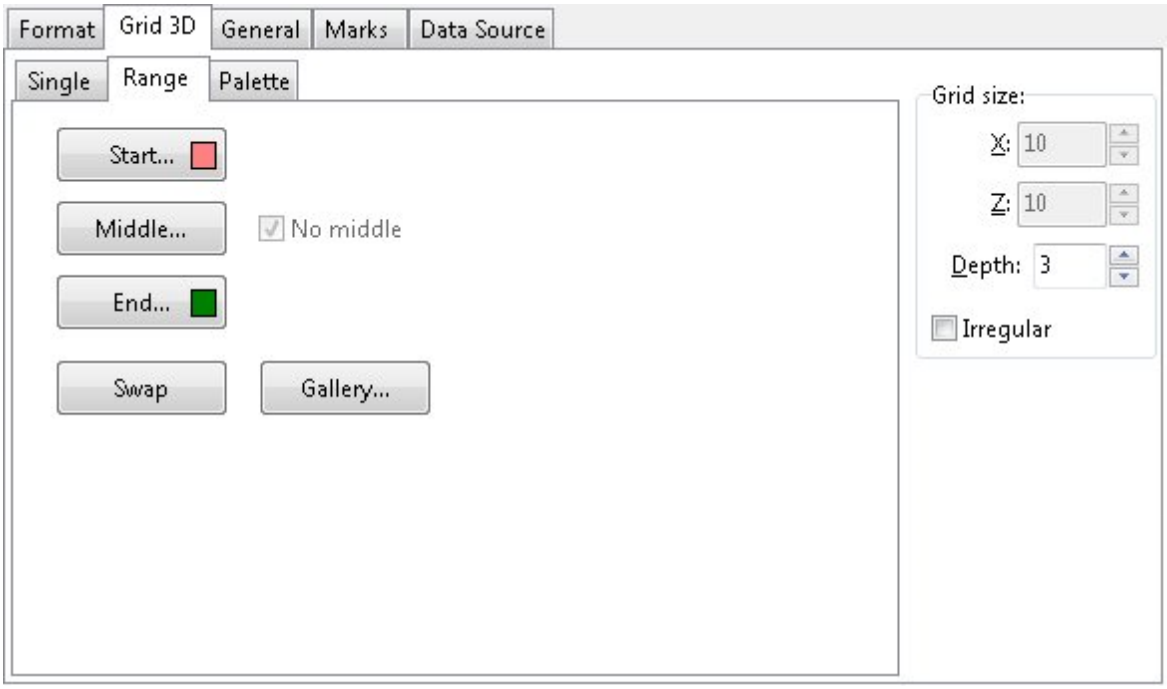


5.5.1.5.7.1 Format



Pen - determine the kind of pen used to draw the Surface polygons, using the Border Editor
Brush - determine the kind of brush that will be used to draw the Surface polygons, using the Pattern Editor
Drawing Mode - determines the way the Surface series is drawn
Side Brush - specifies the color and pattern used when filling in the sides of a surface series, using the Pattern Editor
Side Lines - determines the kind of lines displayed for sides of the Series, using the Border Editor
Transparency - sets the transparency level from 0 to 100%
Fast Brush - When True, and only on selected Windows versions (XP, 2000, 2003, etc), the surface paints cells using a simple (and faster to select) solid brush color. On large size surfaces, Fast Brush should increment the display speed a good percentage.
Hide Cells - Depending on some aspect settings like rotation, elevation, 3D percent, etc.. some surface cells can be painted baldy. Setting this property to "True" these specific cells will be repainted.
Bands Pen - sets the pen characteristics used to draw the iso-lines at surface side walls

5.5.1.5.7.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

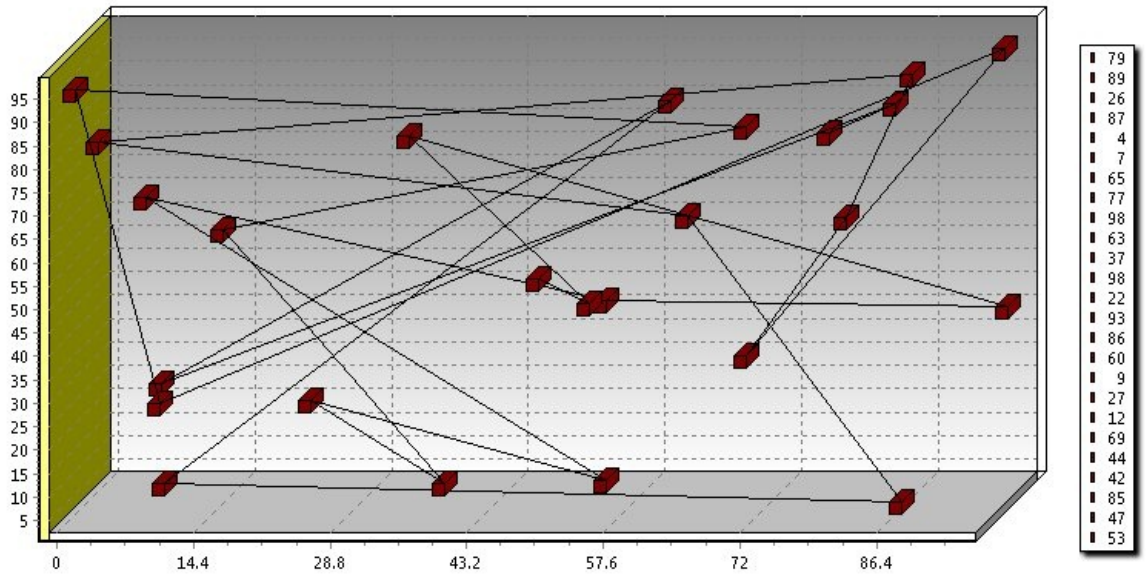
Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

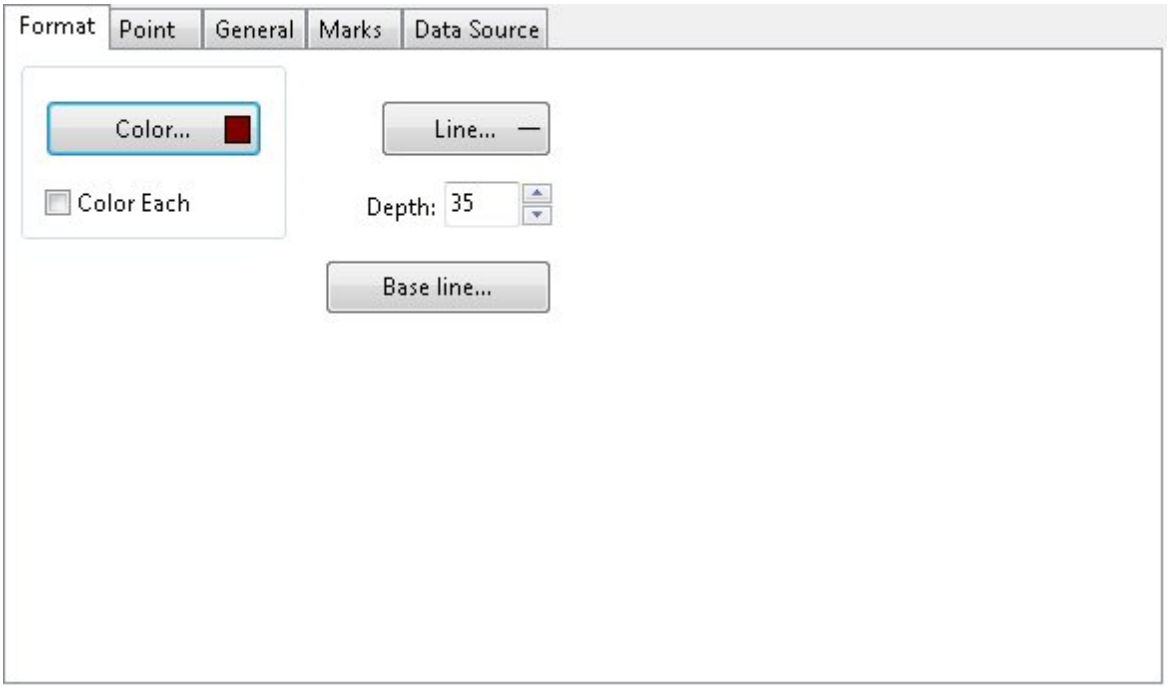
5.5.1.5.8 Point3D

Unlike Surface or Contour Series, the Point 3D Series does not impose any limit on the X,Y,Z coordinates or number of points. Think as it is the same as a normal Point Series, with each point located inside the chart axes in a different XYZ position.

- Format
- Point
- General
- Marks
- Data Source

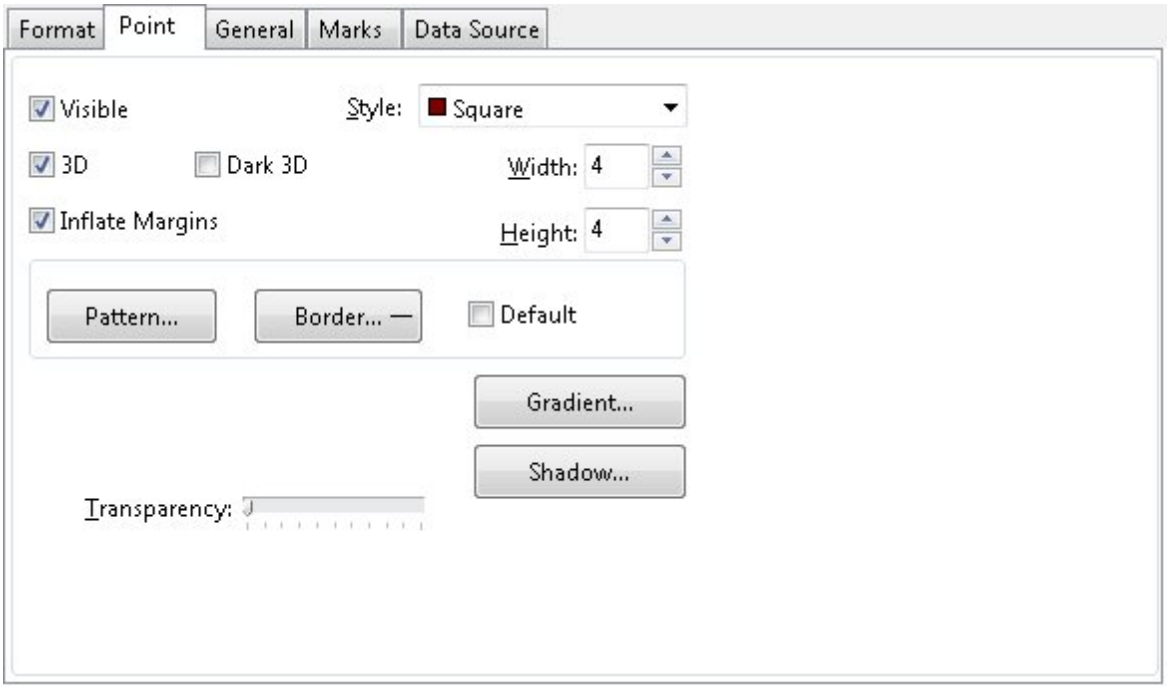


5.5.1.5.8.1 Format



Color - specifies the series color
Color Each - enables/disables the coloring of each point
Line - defines the kind of pen used to draw the line connecting the Series points
Depth - defines the depth of the Series Points
Base line - defines the kind of pen used to draw the base line connecting the Series points

5.5.1.5.8.2 Point



Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

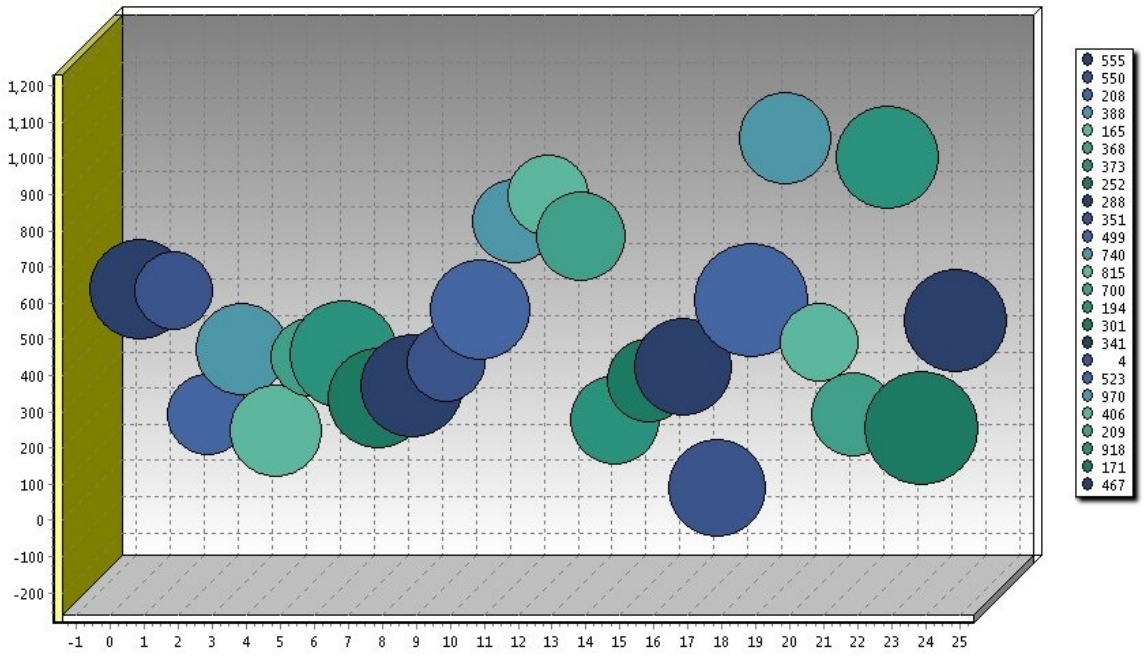
5.5.1.5.9 Bubble 3D

The Bubble 3D Series is useful for showing importance weighting. For example, comparing high volume selling product that, by income, doesn't bring in a revenue of the scale of another low volume seller. When viewing the chart at a glance, literally, big bubbles are seen as important. Bubble Series can be configured in variable shapes, triangles, and more.

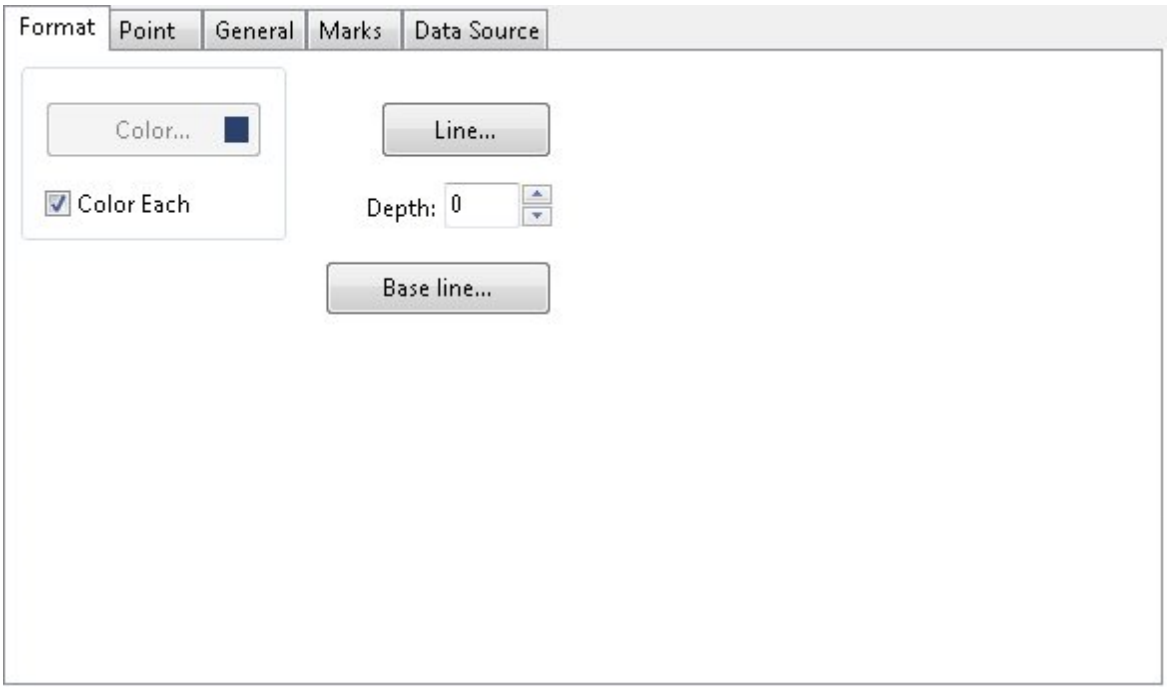
- Format
- Point
- General
- Marks
- Data Source

The Bubble 3D Series has three configurable parameters that define the value of the data in your Series.

- XValues
- YValues
- RadiusValues

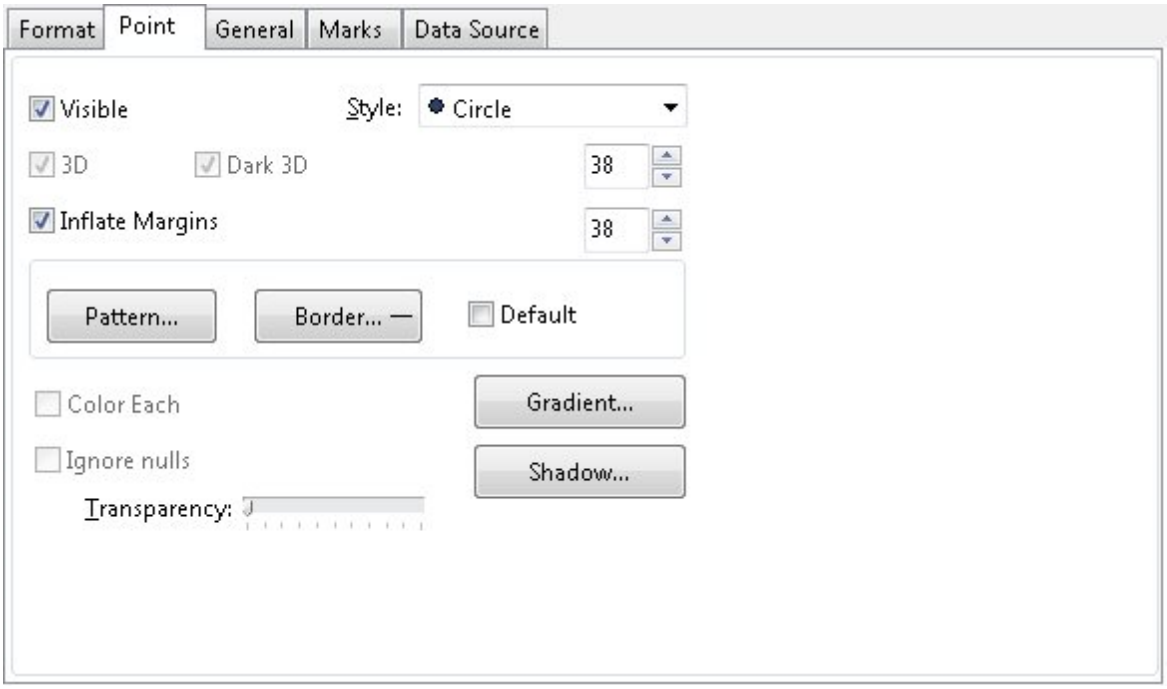


5.5.1.5.9.1 Format



Color - specifies the series color
Color Each - enables/disables the coloring of each point
Line - defines the kind of pen used to draw the line connecting the Series points
Depth - defines the depth of the Series points
Base line - defines the kind of pen used to draw the base line connecting the Series points

5.5.1.5.9.2 Point

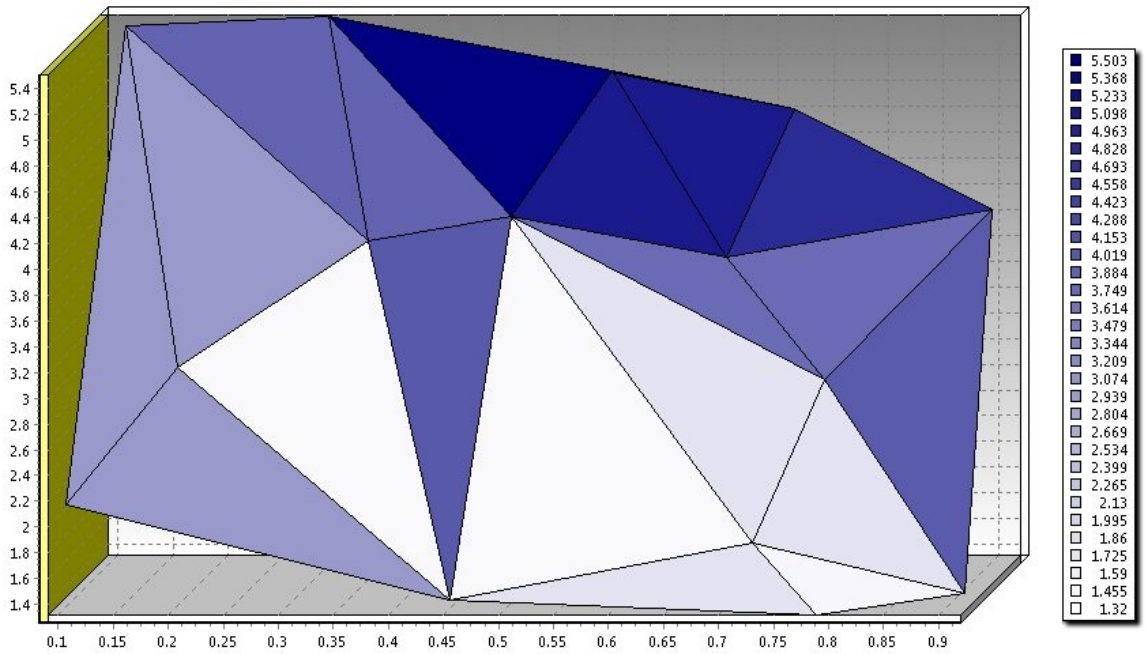


Visible - shows or hides the Series points
3D - sets the Series points in "3D"
Dark 3D - sets the Series points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Color Each - enables/disables the coloring of each point
Ignore Nulls - ignore null values
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

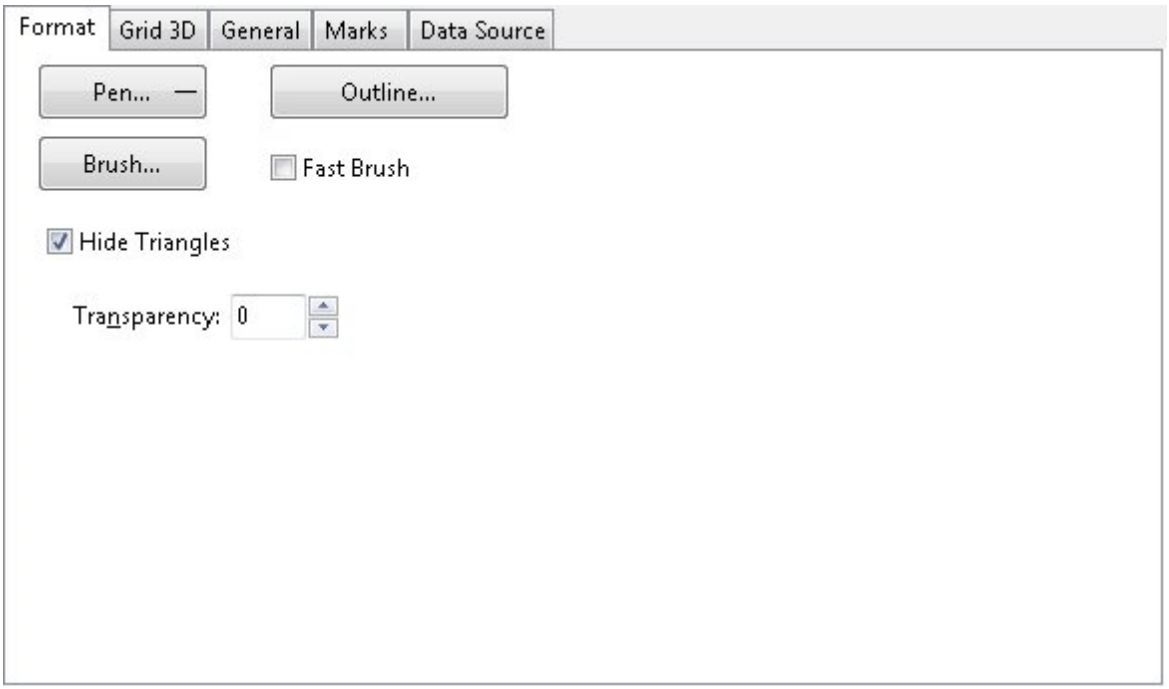
5.5.1.5.10 Triangle Surface

The Triangle Surface Series use coordinates in 3 planes. The Surface series support null values as "none" data points, which appear as holes in the surface.

- Format
- Grid 3D
- General
- Marks
- Data Source



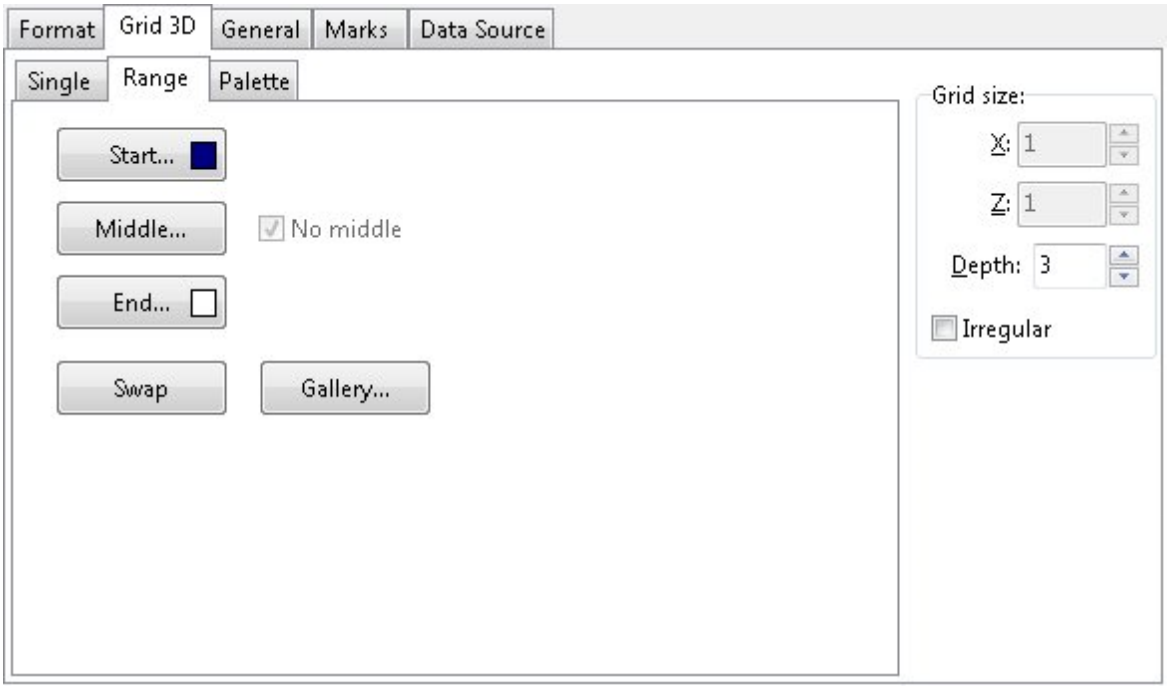
5.5.1.5.10.1 Format



Pen - determine the kind of pen used to draw the Triangle Surface triangles, using the Border Editor
Brush - determine the kind of brush that will be used to draw the Triangle Surface triangles, using the Pattern Editor
Outline - determine the Series border, using the Border Editor

Fast Brush - When True, and only on selected Windows versions (XP, 2000, 2003, etc), the surface paints cells using a simple (and faster to select) solid brush color. On large size surfaces, Fast Brush should increment the display speed a good percentage.
Hide Triangles - Depending on some aspect settings like rotation, elevation, 3D percent, etc.. some surface cells can be painted baldy. Setting this property to "True" these specific cells will be repainted.
Transparency - sets the transparency level from 0 to 100%

5.5.1.5.10.2 Grid 3D



The Grid 3D tab offers three different color modes to color the Grid 3D, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style

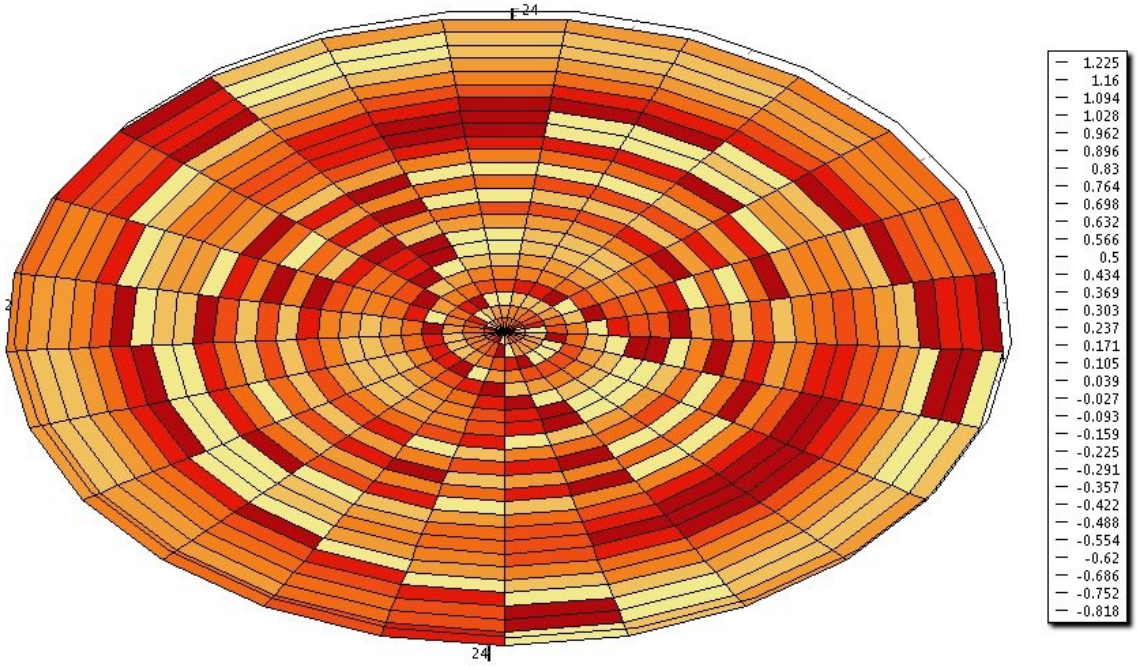
New - adds a new color style

Grid size
X - defines the Grid size on the X axis
Y - defines the Grid size on the Y axis
Depth - defines the Grid depth
Irregular - determines whether X and Z values are equi-distant or not.

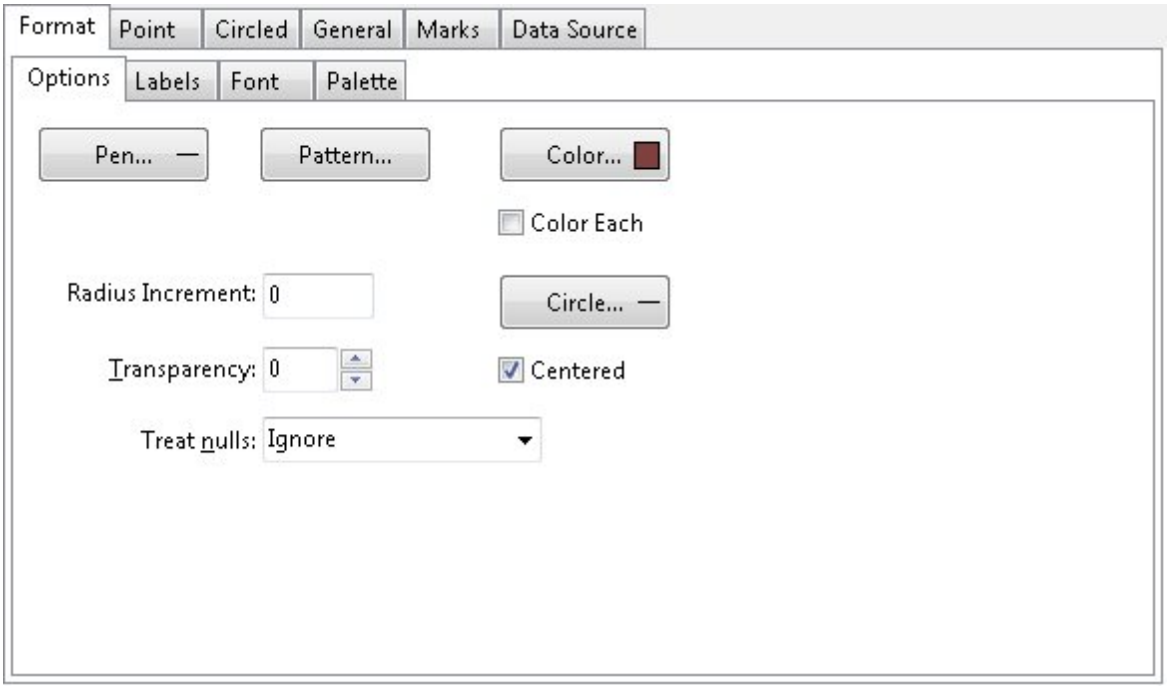
5.5.1.5.11 Polar Grid

The Polar Grid Series plots XValues as angular rotation from 0º upon a 3 dimensional grid. The second variable, YValues are plotted as distance from the origin.

- Format
- Point
- Circled
- General
- Marks
- Data Source



5.5.1.5.11.1 Format



Options Tab
Pen - specifies the kind of pen used to draw the lines connecting Polar points, using the Border Editor
Pattern - specifies the Series pattern, using the Pattern Editor
Radius Increment - determines the increment, in polar radius scales, used to draw the ring grid lines
Transparency - specifies the degree of transparency
Color - specifies the series color
Color Each - defines each Series value with a different color.
Circle - sets the circle lines type, using the Border Editor
Centered - controls how will be "X" and "Z" values considered. When checked, X and Z values determine the center point of each grid cell. When unchecked, the X and Z values define the "corner" values of grid cells. Thus, when unchecked, there will be one less column and one less row of grid cells.
Treat nulls - determines how null values are displayed

Labels Tab
Visible - controls whether the bounding perimeter labels will be displayed or not
Rotated - rotates labels around circle
ClockWise - enables/disables the display of the circle labels in a clockwise direction
Inside - enables/disables the display of the axis labels inside the circle area
Margin % - sets the distance for the label location to the bounding perimeter

Font Tab
Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the Polar Series text.

Palette Tab
The Palette tab offers three different color modes to color the series, which are enabled by selecting either tab.

Single
Defines only one color for all the Series values. By clicking on the Color button, a color palette will be displayed to select the color.

Range
Start - specifies the start color of the Series points
Middle - specifies the middle color of the Series points

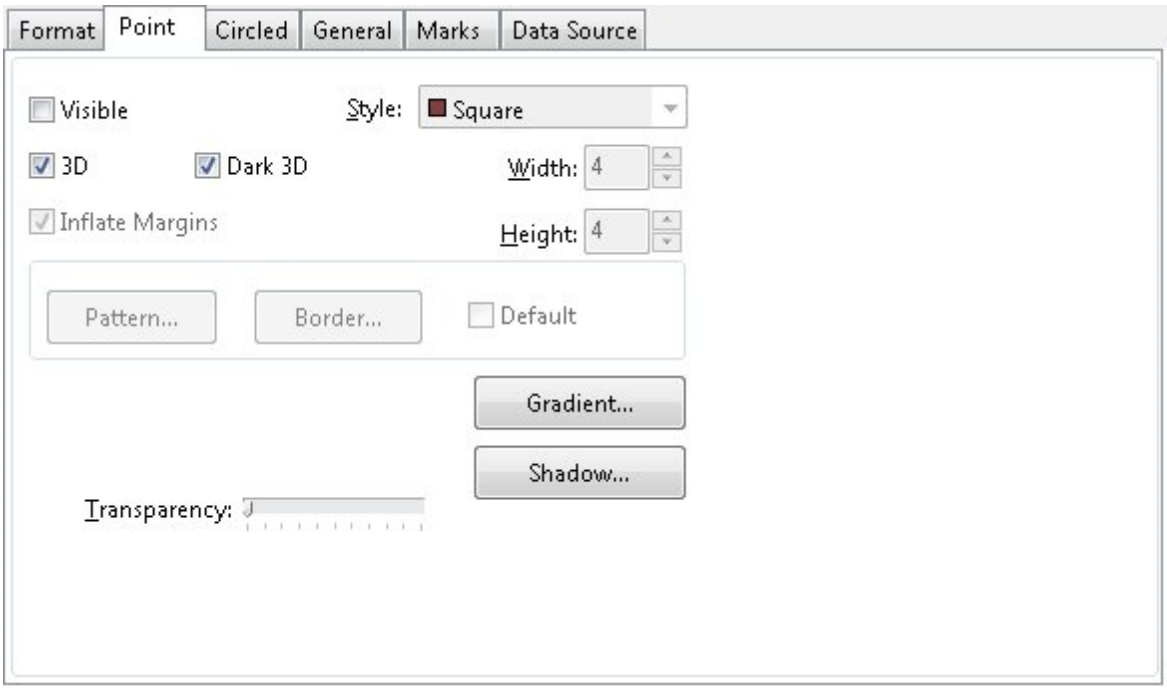
End - specifies the end color of the Series points
Swap - swaps the three defined colors
No middle - removes the middle color
Gallery - provides several default gradients to choose from, with a preview panel

Palette

Steps
Steps - sets the number of steps between each point
Minimum - sets the minimum step value
Step - sets the value for the step between points
Legend every - defines the gap between each palette color to show at legend

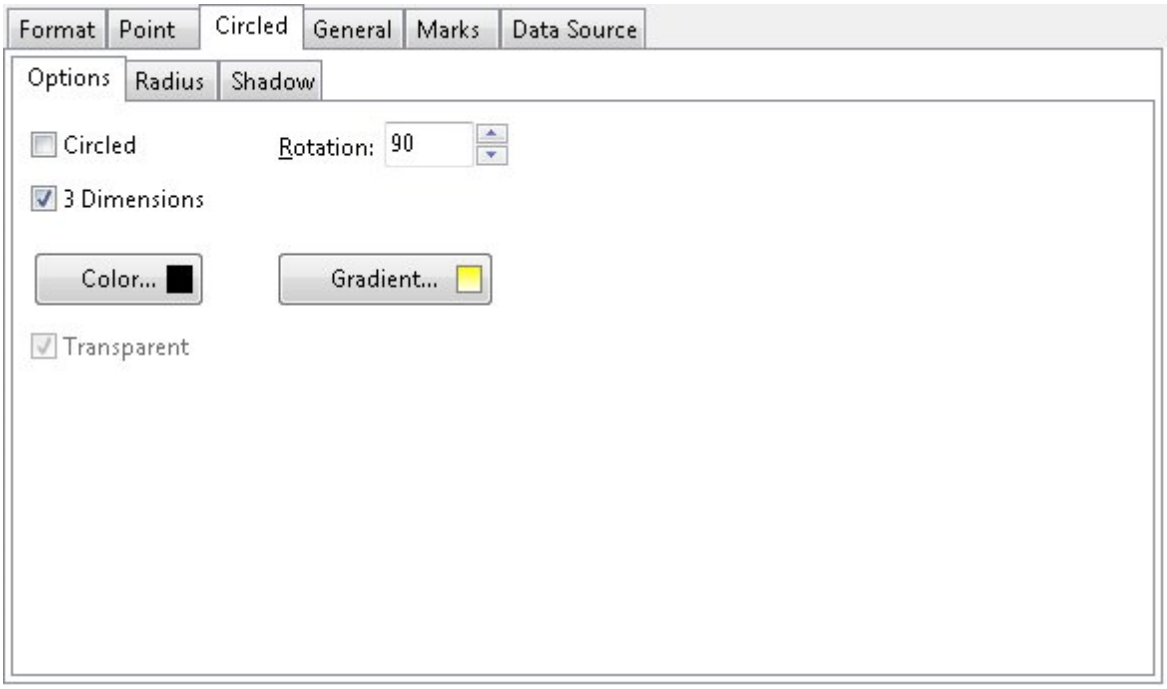
Colors
Style - specifies the color style for the points
Custom Palette - when the Style is set to Custom, a custom palette can be specified
Invert - inverts/reverses the color style
New - adds a new color style

5.5.1.5.11.2 Point



Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

5.5.1.5.11.3 Circled



Options Tab
Circled - determines whether the Polar Grid Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the Polar Grid Series in 3D
Rotation - sets the Polar Grid Series rotation angle
Color - defines the circled color
Gradient - specifies the gradient properties for the Polar Grid Series background, using the Gradient Editor
Transparent - controls whether Polar Grid Series will be transparent

Radius Tab
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically

Shadow Tab
Defines the offset shadow of the Polar Grid Series. Refer to the Shadow Editor for property descriptions.

5.5.1.6 Other

The Other tab includes various other types, e.g. Wind Rose, Delta Point, Line Point, etc.

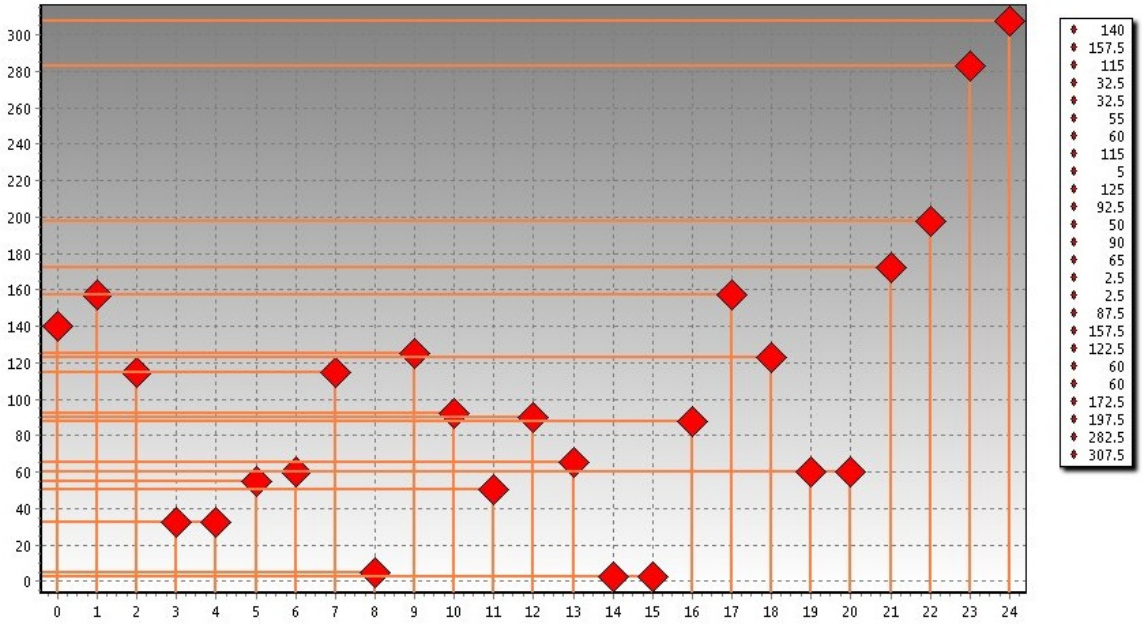
Icon	Series
	Line Point
	Bar Join
	Bar 3D
	Big Candle
	Image Bar
	Image Point

	Delta Point
	Wind Rose

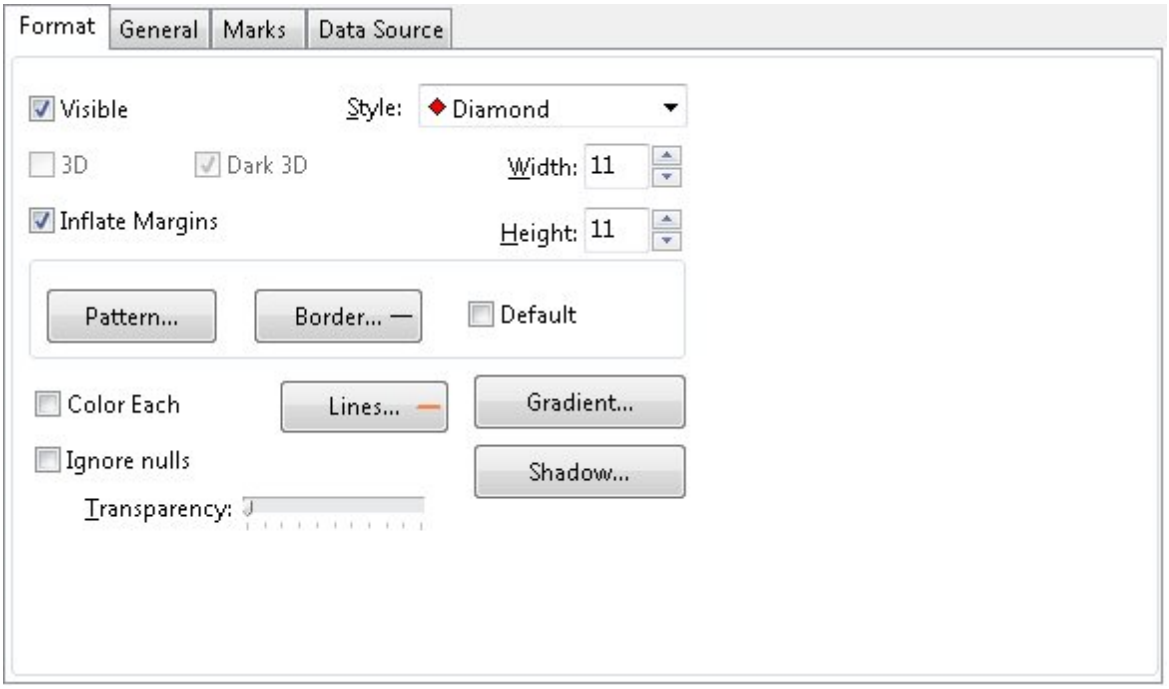
5.5.1.6.1 Line Point

The Line Point Series combines the features of the Line and Point Series.

- Format
- General
- Marks
- Data Source



5.5.1.6.1.1 Format

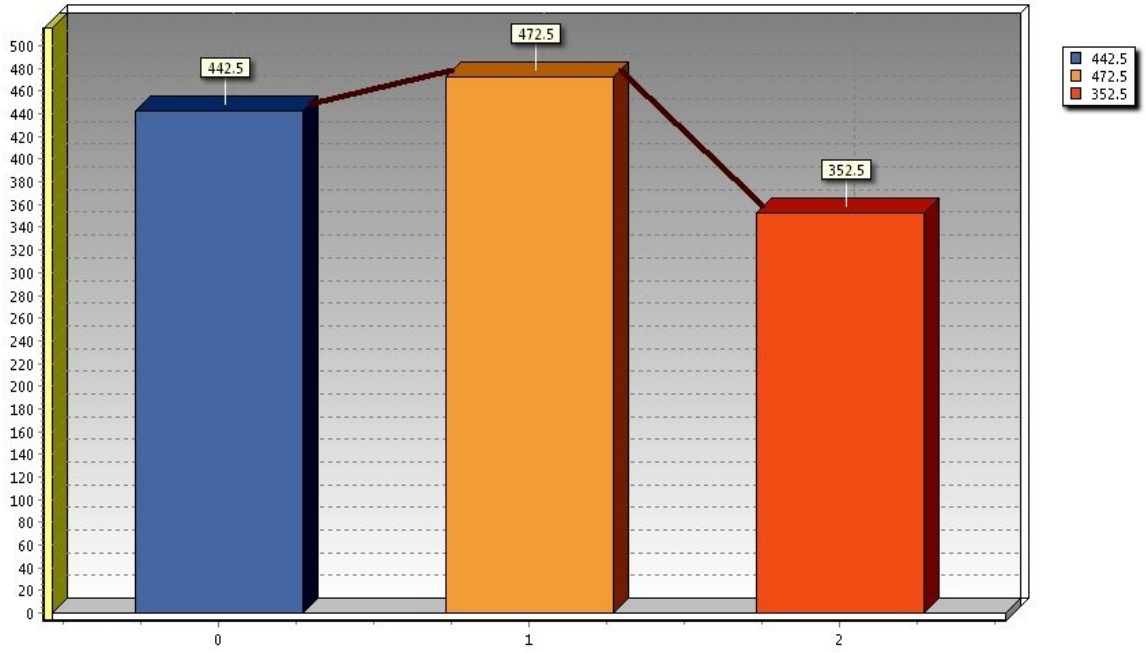


Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Color Each - enables/disables the coloring of each point
Ignore Nulls - ignore null values
Lines - define the pen used to draw the lines connecting the series points, using the Border Editor
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

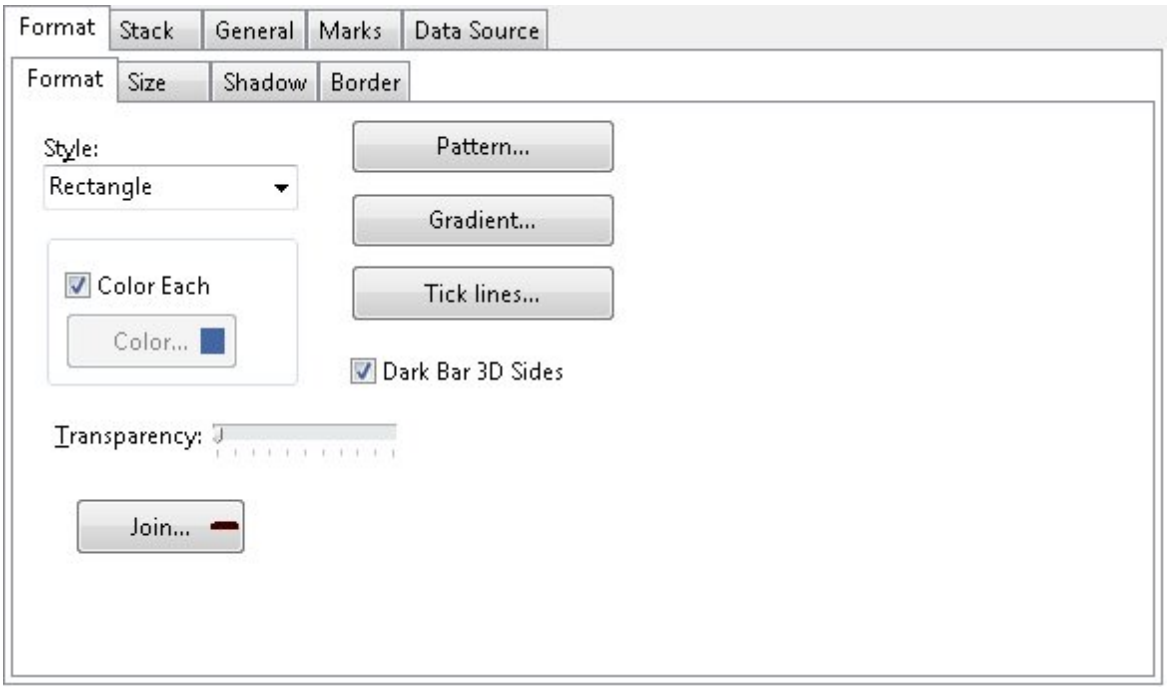
5.5.1.6.2 Bar Join

The Bar Join Series displays a Bar series with a Line joining the bars.

- Format
- Stack
- General
- Marks
- Data Source



5.5.1.6.2.1 Format



Format Tab
Style - defines the Bar shape used to draw Bars
Color Each - sets each chart Bar in a different color
Color - specifies the color used to display the bar, using a color palette
Pattern - specifies the Bar pattern, using the Pattern Editor

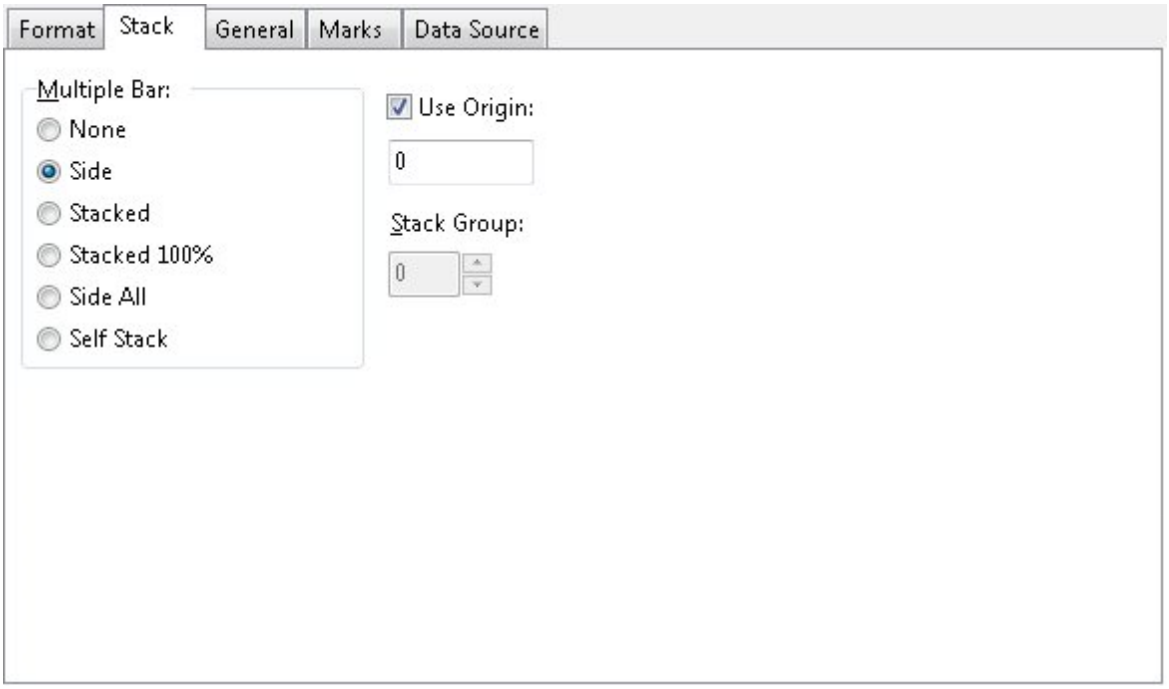
Gradient - specifies the gradient properties. The "Rectangle Gradient" style should be selected in order to be able to activate this property. By clicking on this button, the Gradient Editor will be displayed to define the gradient fill.
Tick lines - defines the tick lines properties upon the bars, using the Border Editor
Dark Bar 3D Sides - defines the 3D bar sides with darker colors
Transparency - specifies the degree of transparency
Join - defines the kind of pen used to draw the lines connecting the series bars, using the Border Editor

Size Tab
% Bar Depth - determines the 3D depth of the bars
% Bar Width - determines the width of vertical bars in pixels
% Bar Offset - determines the bars horizontal displacement
Bar Side Margins - controls whether the first and last Bar displayed will be separated from the chart rectangle by a margin. By default, margins are set to half the sum of all Bar Series bar widths.
Auto Mark Position - sets the Mark position automatically

Shadow Tab
Provides shadow properties for the bars. Refer to the Shadow Editor for property descriptions.

Border Tab
Border - defines the frame type and color, using the Border Editor
Dark Border - controls whether the bar sides will be filled with shadowed colors
Bevel size - defines the frame of the bar border

5.5.1.6.2.2 Stack

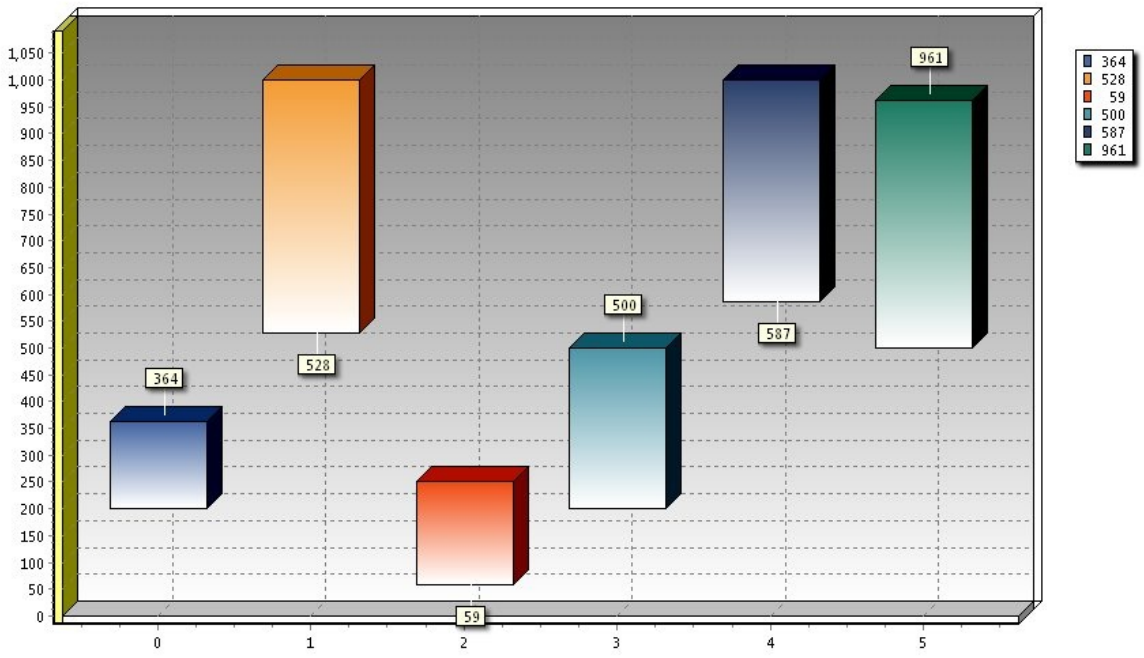


Multiple Bar - With more than one Bar Series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the Bar width will be divided by the number of Bar Series.
Use Origin - determines the axis value used as a common bottom for all Bars drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart

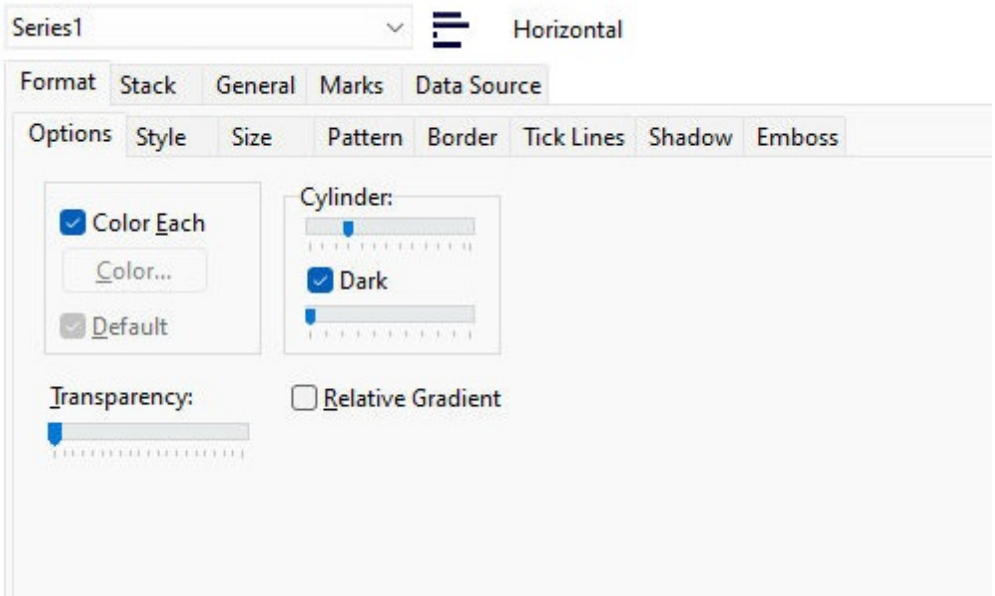
5.5.1.6.3 Bar 3D

The Bar 3D Series displays a Bar series with 3 dimensional features.

- Format
- Stack
- General
- Marks
- Data Source



5.5.1.6.3.1 Format



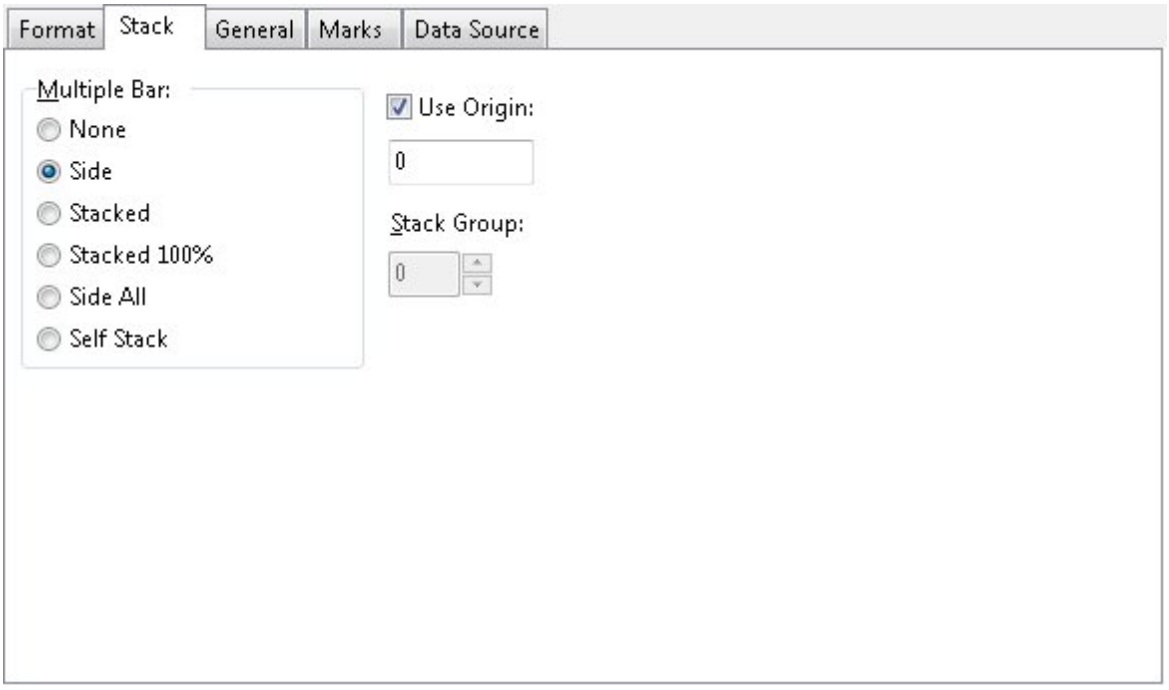
Format Tab
Style - defines the Bar shape used to draw Bars
Color Each - sets each chart Bar in a different color
Color - specifies the color used to display the bar, using a color palette
Pattern - specifies the Bar pattern, using the Pattern Editor
Gradient - specifies the gradient properties. The "Rectangle Gradient" style should be selected in order to be able to activate this property. By clicking on this button, the Gradient Editor will be displayed to define the gradient fill.
Tick lines - defines the tick lines properties upon the bars, using the Border Editor
Dark Bar 3D Sides - defines the 3D bar sides with darker colors
Transparency - specifies the degree of transparency

Size Tab
% Bar Depth - determines the 3D depth of the bars
% Bar Width - determines the width of vertical bars in pixels
% Bar Offset - determines the bars horizontal displacement
Bar Side Margins - controls whether the first and last Bar displayed will be separated from the chart rectangle by a margin. By default, margins are set to half the sum of all Bar Series bar widths.
Auto Mark Position - sets the Mark position automatically

Shadow Tab
Provides shadow properties for the bars. Refer to the Shadow Editor for property descriptions.

Border Tab
Border - defines the frame type and color, using the Border Editor
Dark Border - controls whether the bar sides will be filled with shadowed colors
Bevel size - defines the frame of the bar border

5.5.1.6.3.2 Stack



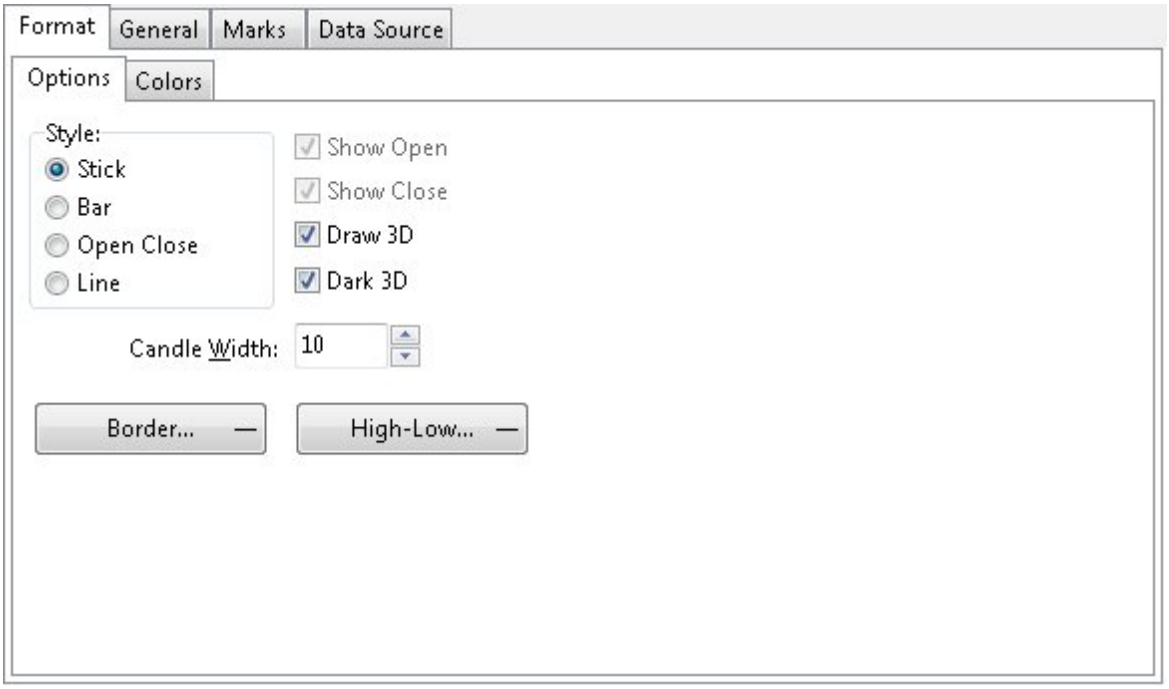
Multiple Bar - With more than one Bar Series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the Bar width will be divided by the number of Bar Series.
Use Origin - determines the axis value used as a common bottom for all Bars drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart

5.5.1.6.4 Big Candle

The Big Candle series is similar to the Candle Series.

- Format
- General
- Marks
- Data Source

5.5.1.6.4.1 Format



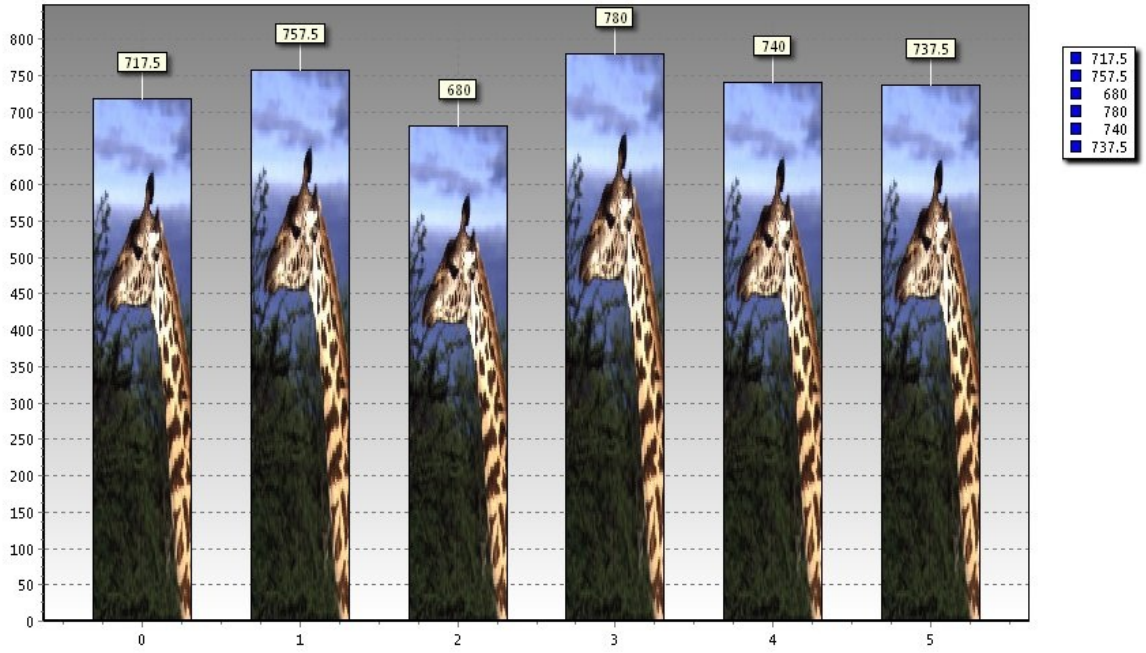
Options Tab
Style - defines the possible values of the Candle Series (how Candle points will be drawn)
Show Open - controls whether Open prices will be displayed
Show Close - controls whether Close prices will be displayed
Draw 3D - sets the Candle in 3 Dimensions
Dark 3D - shows the 3D portion of the Points as shaded
Candle Width - specifies the horizontal Candle Size. It is based on pixels for Screen charts.
Border - defines the Candle border, using the Border Editor
High-Low - defines the high low line properties, using the Border Editor

Colors Tab
Up Close - selects the Up color of the series
Gradient - specifies the gradient properties for the Up color, using the Gradient Editor
Down Close - selects the Down color of the series
Gradient - specifies the gradient properties for the Down color, using the Gradient Editor
Color Style - specifies the color style; "Relative to Open" or "Relative to previous Close"

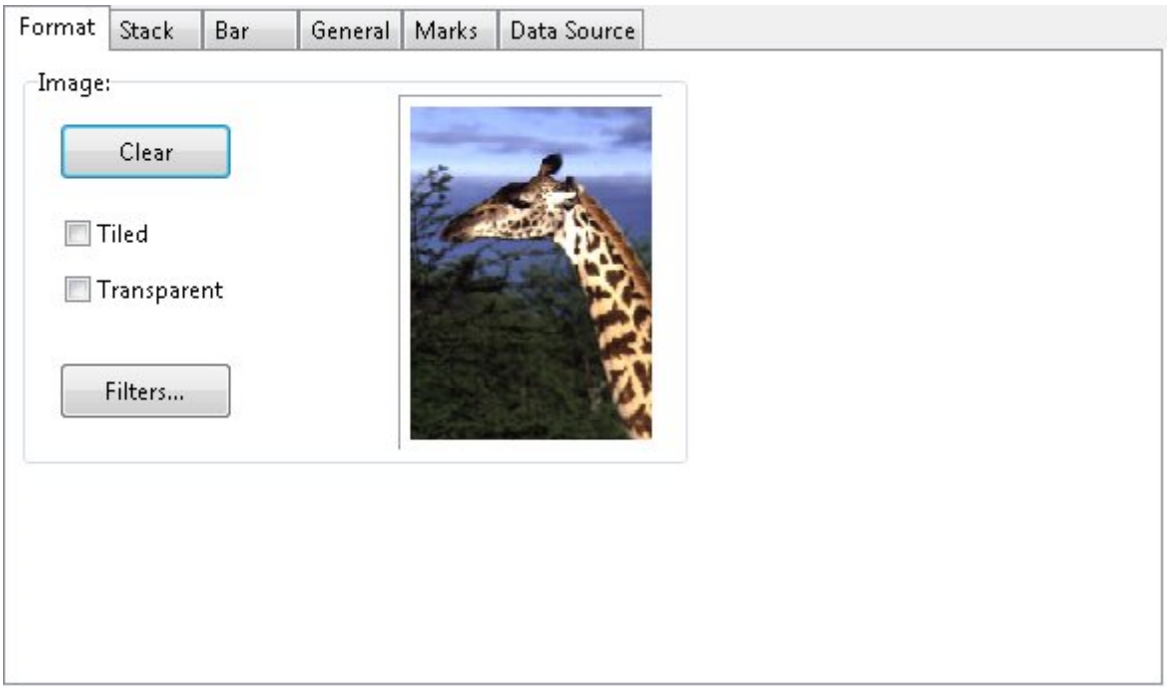
5.5.1.6.5 Image Bar

The Image Bar Series displays a Bar series with an image upon the bars.

- Format
- Stack
- Bar
- General
- Marks
- Data Source

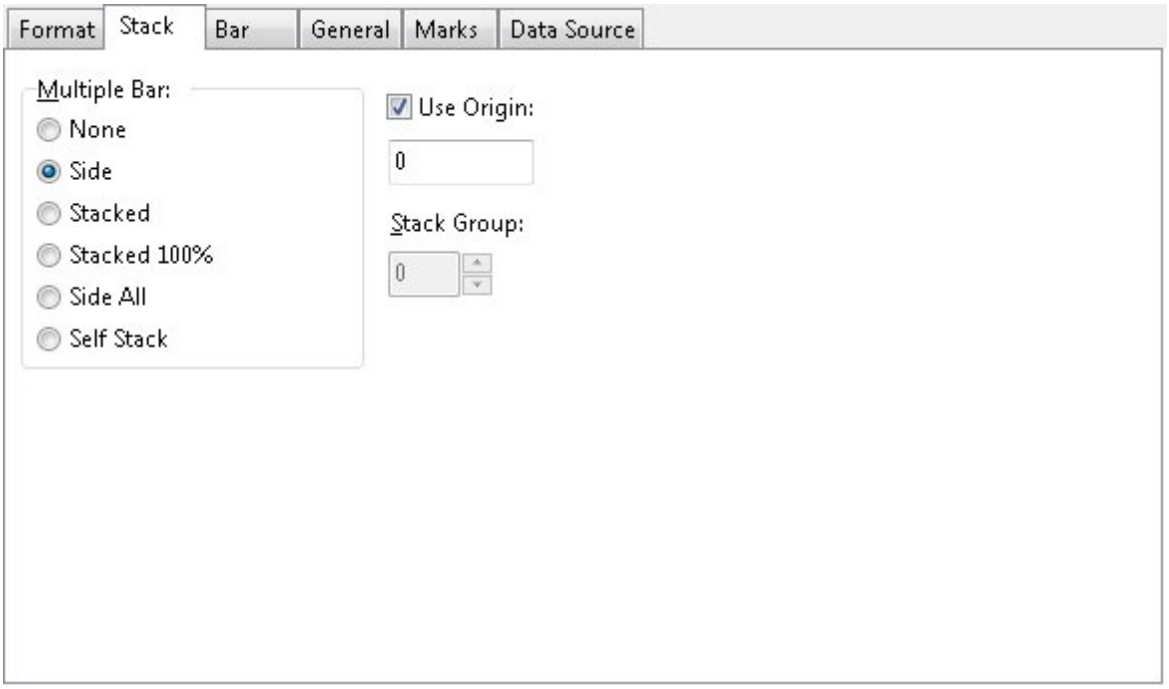


5.5.1.6.5.1 Format



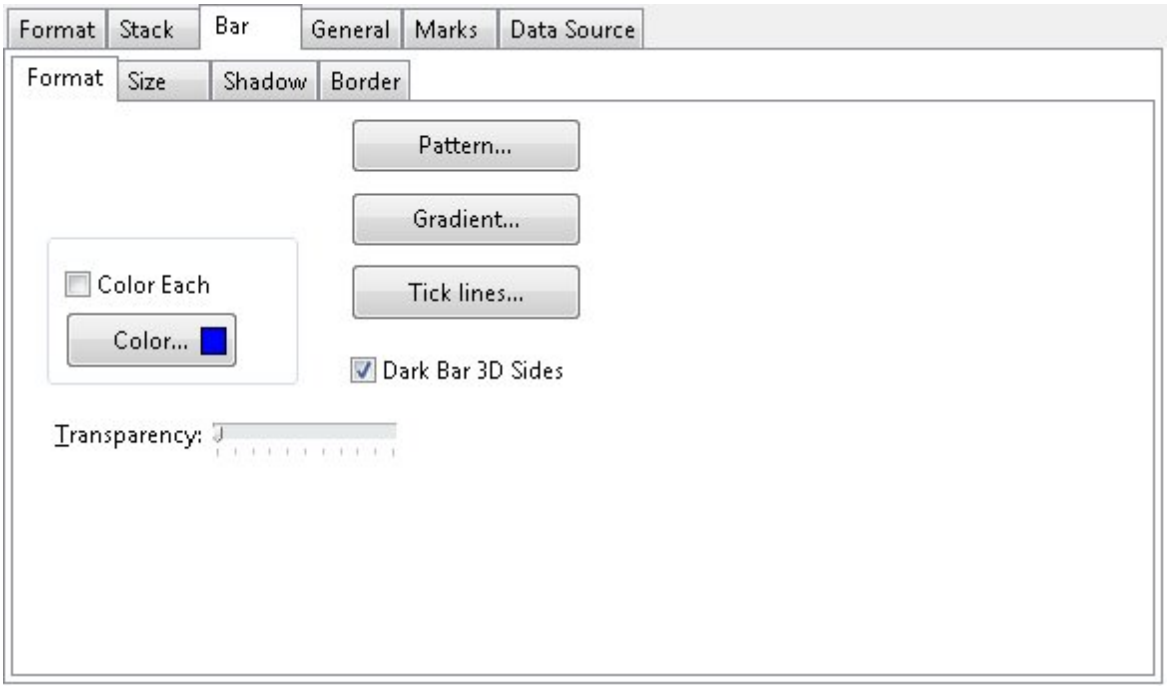
Clear / Browse - By clicking on this button, the image on the bars disappears and a "Browse" button is displayed to select a new image to be displayed on the bars.
Tiled - determines whether the Image Bar's image is equally tiled across the Bars. Default behavior is for the image to stretch.
Transparent - sets the image back color as transparent
Filters - applies filters to the added image

5.5.1.6.5.2 Stack



Multiple Bar - With more than one Bar Series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the Bar width will be divided by the number of Bar Series.
Use Origin - determines the axis value used as a common bottom for all Bars drawn
Stack Group - groups series to allow several stacks of independent series groups in the same chart

5.5.1.6.5.3 Bar



Format Tab
Color Each - sets each chart Bar in a different color
Color - specifies the color used to display the bar, using a color palette
Pattern - specifies the Bar pattern, using the Pattern Editor
Gradient - specifies the gradient properties. The "Rectangle Gradient" style should be selected in order to be able to activate this property. By clicking on this button, the Gradient Editor will be displayed to define the gradient fill.
Tick lines - defines the tick lines properties upon the bars, using the Border Editor
Dark Bar 3D Sides - defines the 3D bar sides with darker colors
Transparency - specifies the degree of transparency

Size Tab
% Bar Depth - determines the 3D depth of the bars
% Bar Width - determines the width of vertical bars in pixels
% Bar Offset - determines the bars horizontal displacement
Bar Side Margins - controls whether the first and last Bar displayed will be separated from the chart rectangle by a margin. By default, margins are set to half the sum of all Bar Series bar widths.
Auto Mark Position - sets the Mark position automatically

Shadow Tab
Provides shadow properties for the bars. Refer to the Shadow Editor for property descriptions.

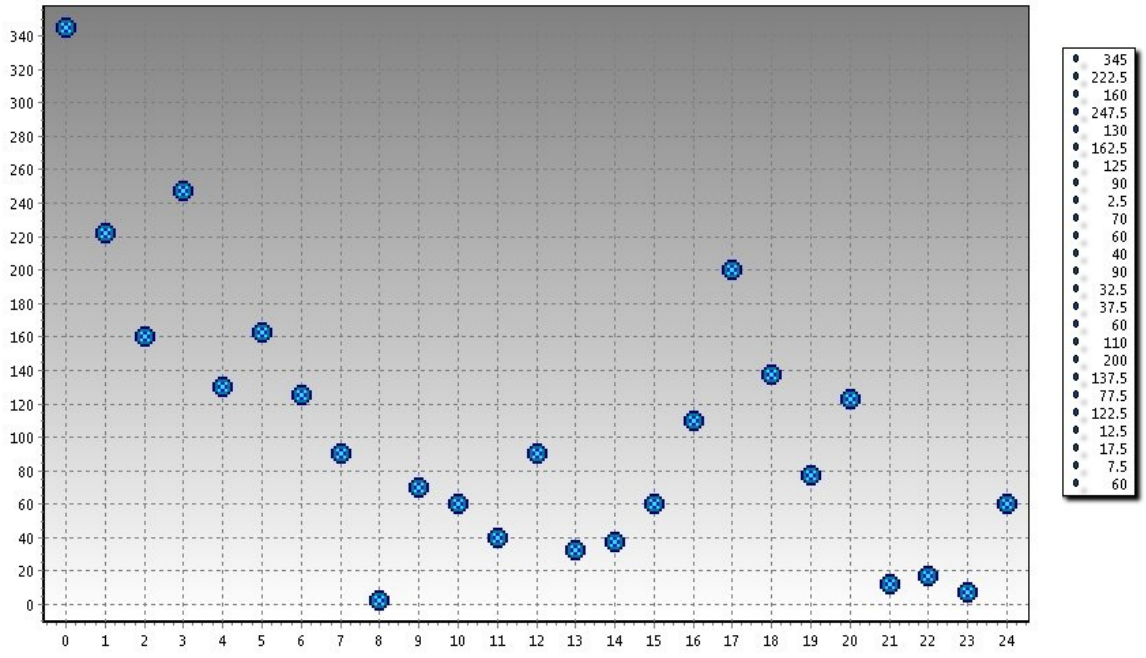
Border Tab
Border - defines the frame type and color, using the Border Editor
Dark Border - controls whether the bar sides will be filled with shadowed colors
Bevel size - defines the frame of the bar border

5.5.1.6.6 Image Point

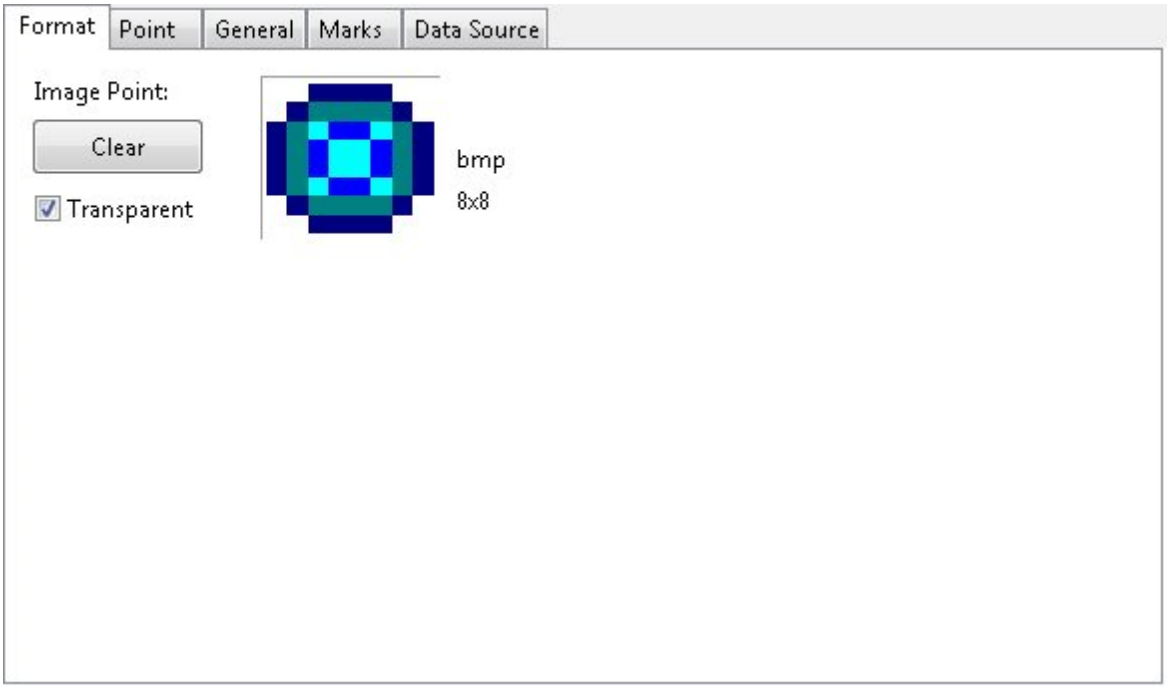
The Image Point Series is a point series descendant which can display images instead of pointers at the point values.

- Format
- Point

- General
- Marks
- Data Source



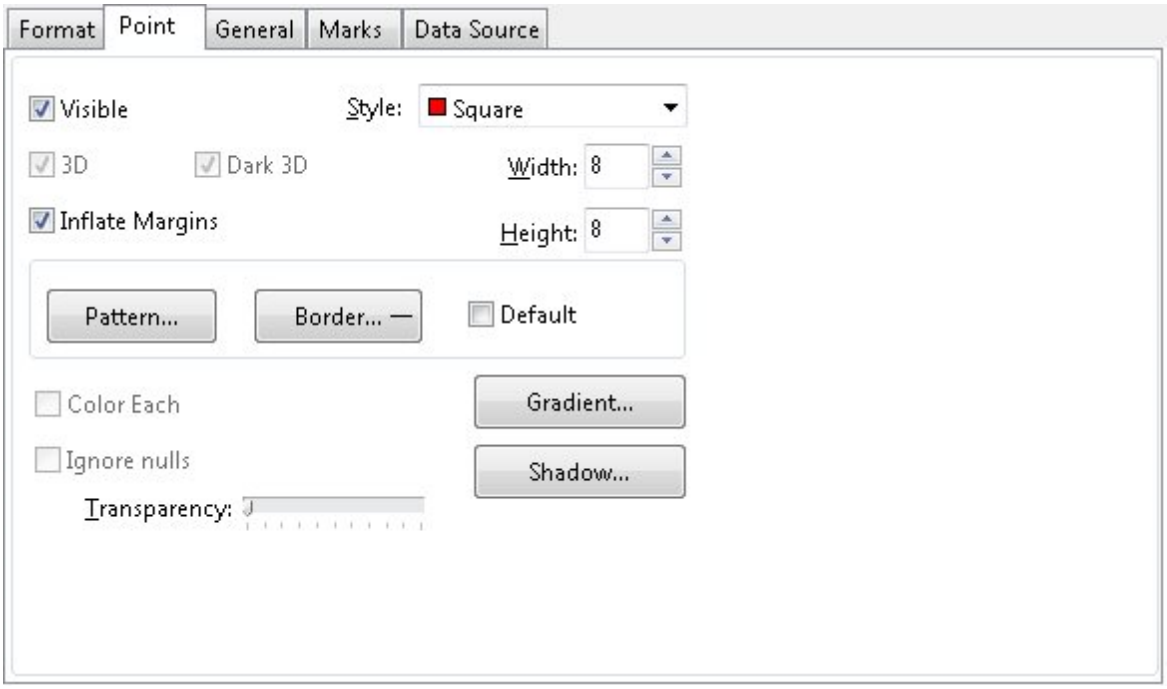
5.5.1.6.6.1 Format



Clear / Browse - By clicking on this button, the image disappears and a "Browse" button is displayed to select a new image.

Transparent - fills points using the image in transparent mode or opaque mode

5.5.1.6.6.2 Point

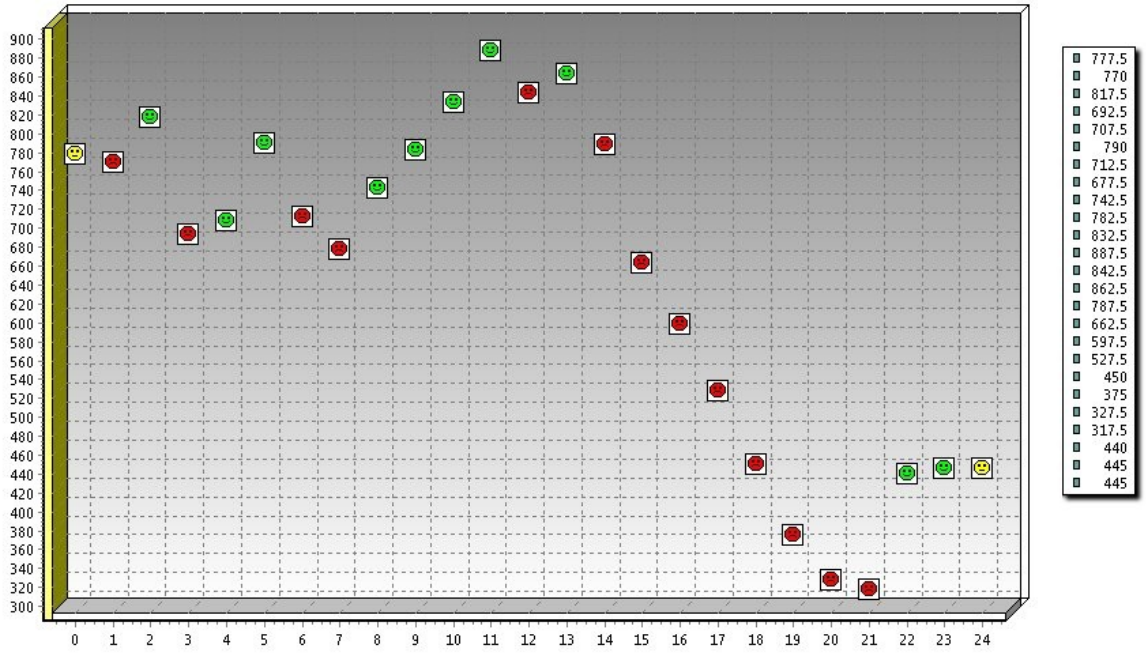


Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Color Each - enables/disables the coloring of each point
Ignore Nulls - ignore null values
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

5.5.1.6.7 Delta Point

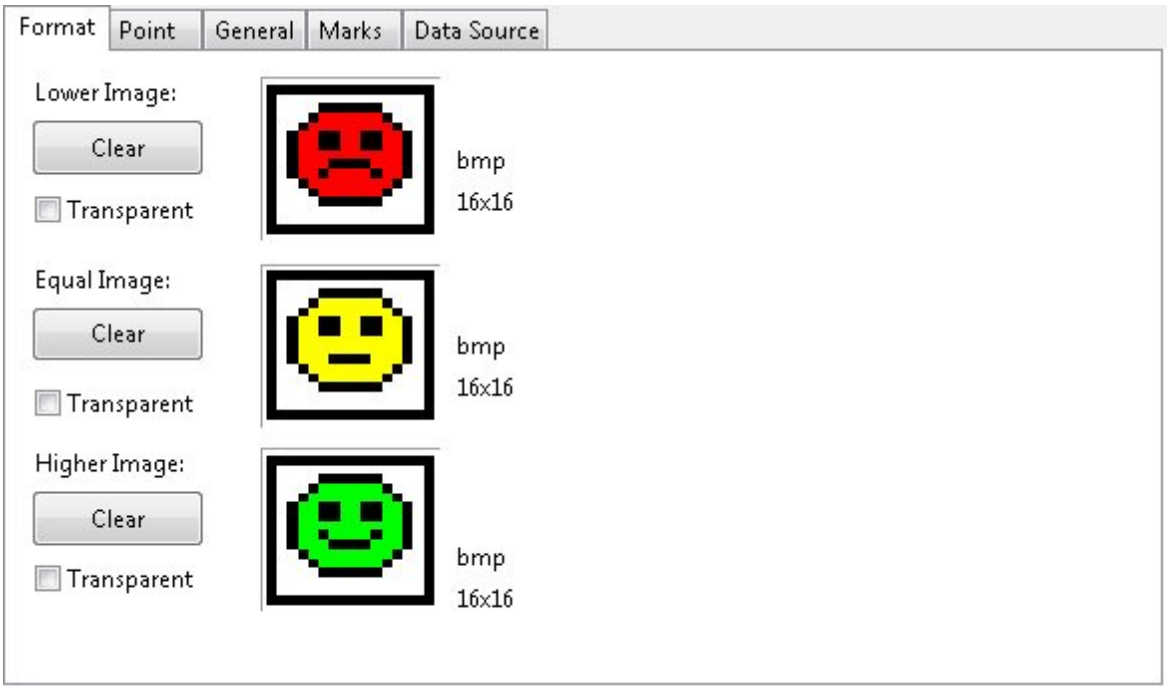
The Delta Point Series displays points with predefined images for up, down and equal trends. Each point shows an image that depends on this point value compared to previous point value.

- Format
- Point
- General
- Marks
- Data Source



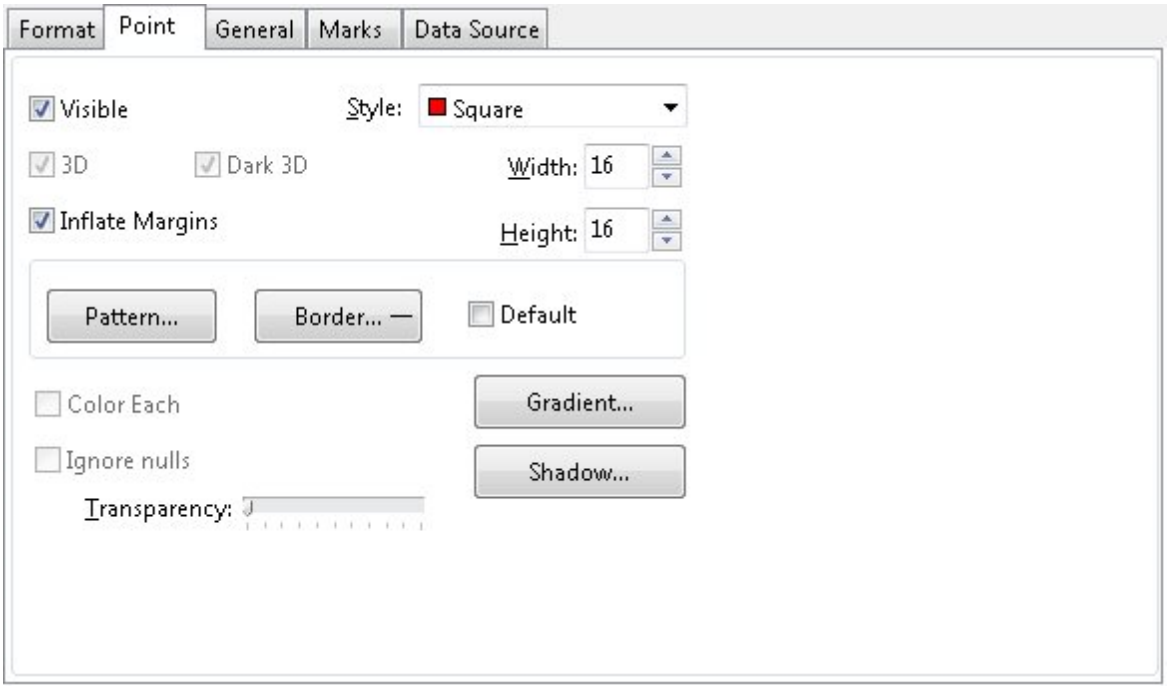
5.5.1.6.7.1 Format

Points with values lower than previous points, show the "Lower Image" image. Points with values equal to previous points, show the "Equal Image" image. Points with values greater than previous points, show the "Greater Image" image.



Clear / Browse - By clicking on this button, the image disappears and a "Browse" button is displayed to select a new image.
Transparent - fills points using the image in transparent mode or opaque mode

5.5.1.6.7.2 Point

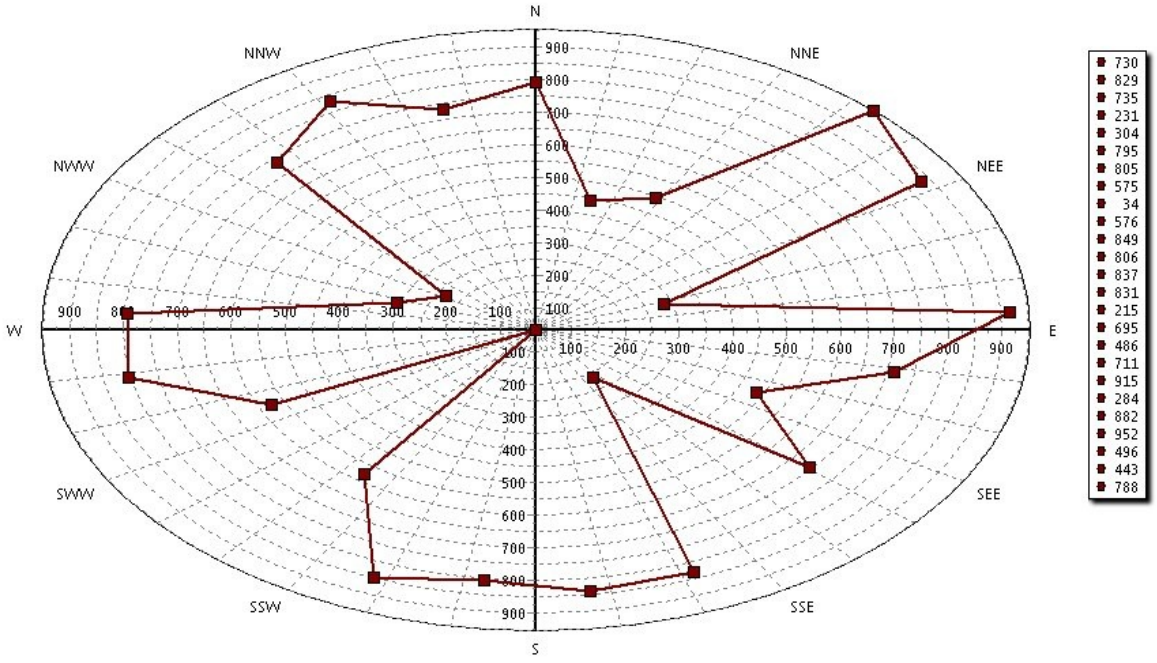


Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Color Each - enables/disables the coloring of each point
Ignore Nulls - ignore null values
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

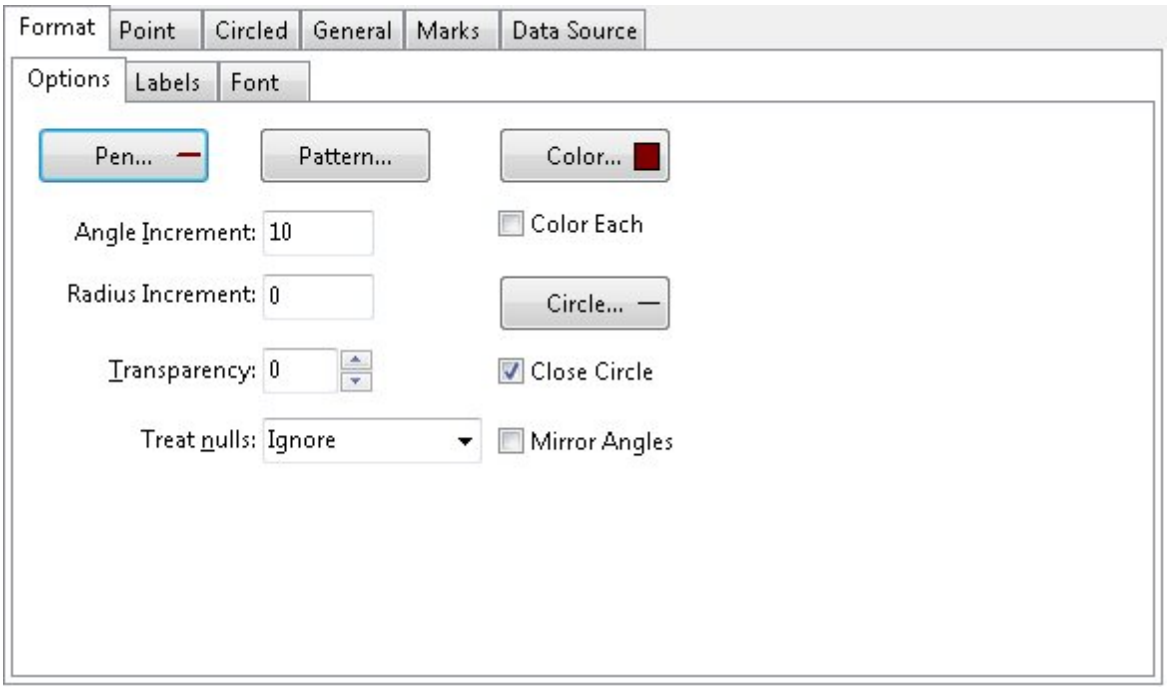
5.5.1.6.8 Wind Rose

The Wind Rose Series displays a graphic used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location.

- Format
- Point
- Circled
- General
- Marks
- Data Source



5.5.1.6.8.1 Format



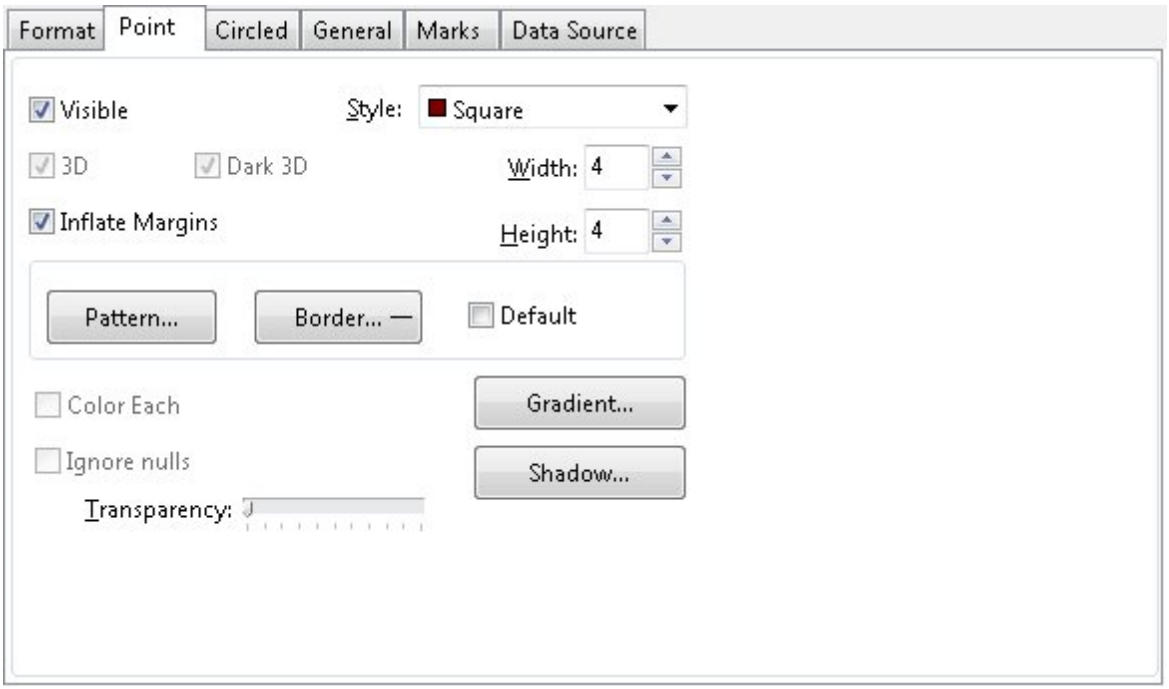
Options Tab
Pen - specifies the kind of pen used to draw the lines connecting points, using the Border Editor
Pattern - specifies the Series pattern, using the Pattern Editor
Angle Increment - defines the angle origin. By default it's zero, meaning angles start at the right most circle coordinate.
Radius Increment - determines the increment, in polar radius scales, used to draw the ring grid lines

Transparency - specifies the degree of transparency
Treat nulls - determines how null values are displayed
Color - specifies the series color
Color Each - defines each Series value with a different color.
Circle - sets the circle lines type, using the Border Editor
Close Circle - controls whether a line will be drawn between the first and last Series points
Mirror Angles - mirrors the angles from the left and right sides

Labels Tab
Visible - controls whether the bounding perimeter labels will be displayed or not
Rotated - rotates labels around circle
Inside - enables/disables the display of the axis labels inside the circle area
Margin % - sets the distance for the label location to the bounding perimeter
Mirrored - enables/disables the display of the labels as mirrored, to possible match the mirrored angles

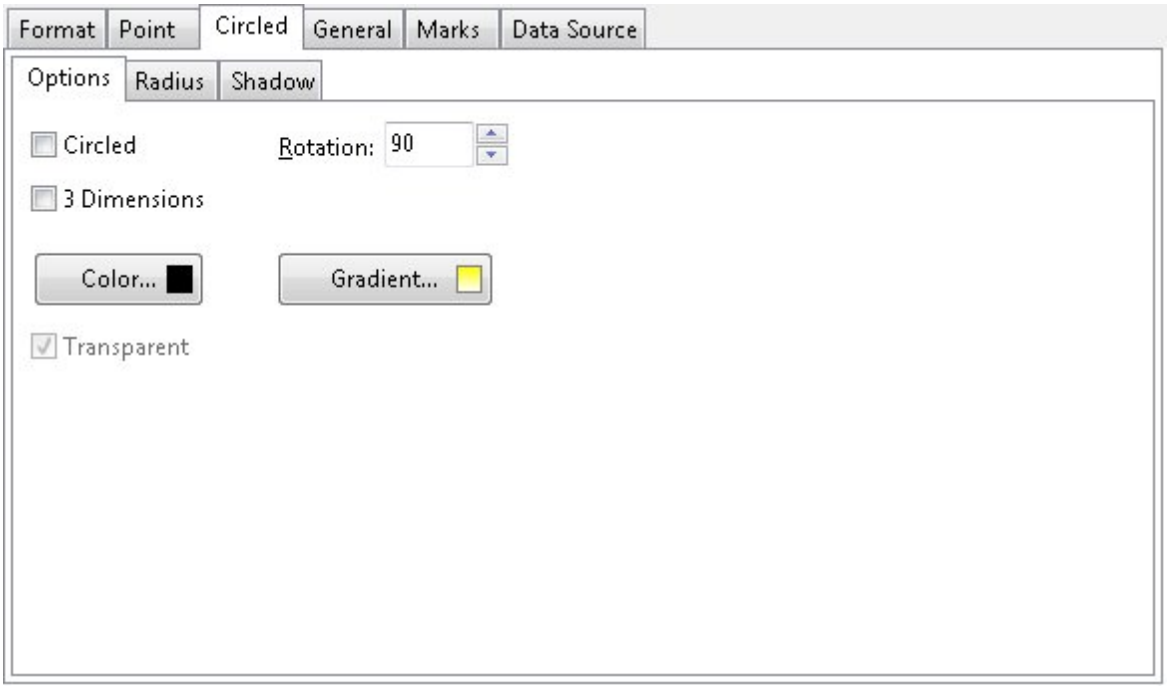
Font Tab
Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the Series text.

5.5.1.6.8.2 Point



Visible - shows or hides the Series Points
3D - sets the Series Points in "3D"
Dark 3D - sets the Series Points fill with darker colors than the rest of the Series
Inflate Margins - controls the rescaling of the chart dimensions to accommodate the Series
Style - determines the style of the Series points as Square, Circular, Triangular, etc.
Width - specifies the point width size
Height - specifies the point height size
Pattern - specifies the point pattern, using the Pattern Editor
Border - specifies the point border, using the Border Editor
Default - specifies the default values for pattern and border
Color Each - enables/disables the coloring of each point
Ignore Nulls - ignore null values
Transparency - specifies the degree of transparency
Gradient - specifies the gradient properties, using the Gradient Editor
Shadow - specifies a shadow, using the Shadow Editor

5.5.1.6.8.3 Circled



Options Tab
Circled - determines whether the Polar Grid Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the Polar Grid Series in 3D
Rotation - sets the Polar Grid Series rotation angle
Color - defines the circled color
Gradient - specifies the gradient properties for the Polar Grid Series background, using the Gradient Editor
Transparent - controls whether Polar Grid Series will be transparent

Radius Tab
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically

Shadow Tab
Defines the offset shadow of the Polar Grid Series. Refer to the Shadow Editor for property descriptions.

5.5.1.7 Gauges

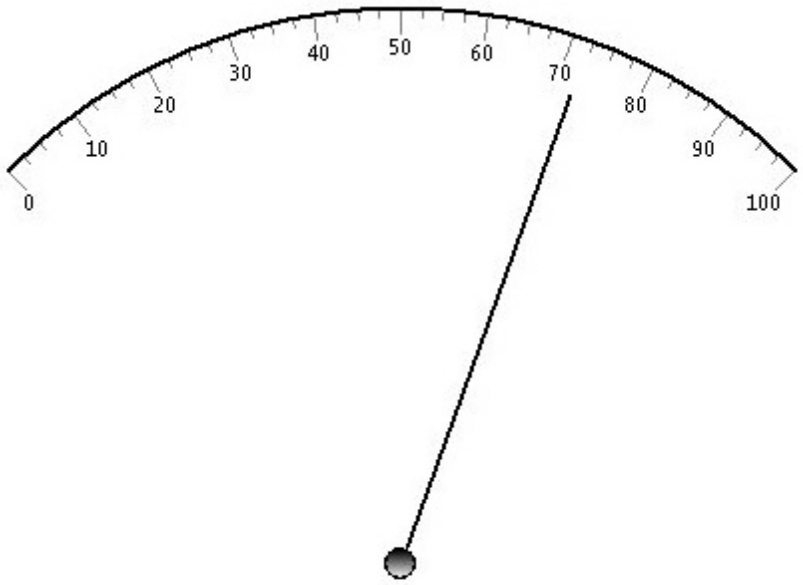
The Gauges tab offers a variety of gauges, such as Numerical, Linear, Circular, etc.

Icon	Series
	Gauge
	Numeric Gauge
	Linear Gauge
	Vertical
	Circular Gauge

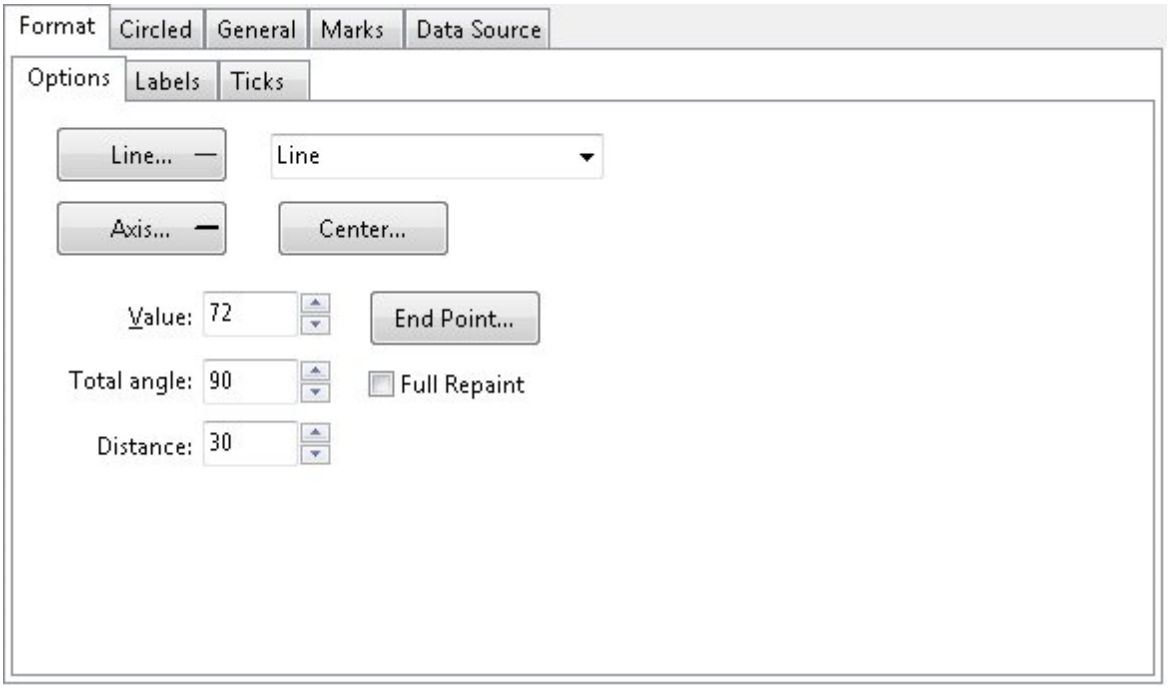
5.5.1.7.1 Gauge

The Gauge Series displays a simple instrumentation control.

- Format
- Circled
- General
- Marks
- Data Source



5.5.1.7.1.1 Format

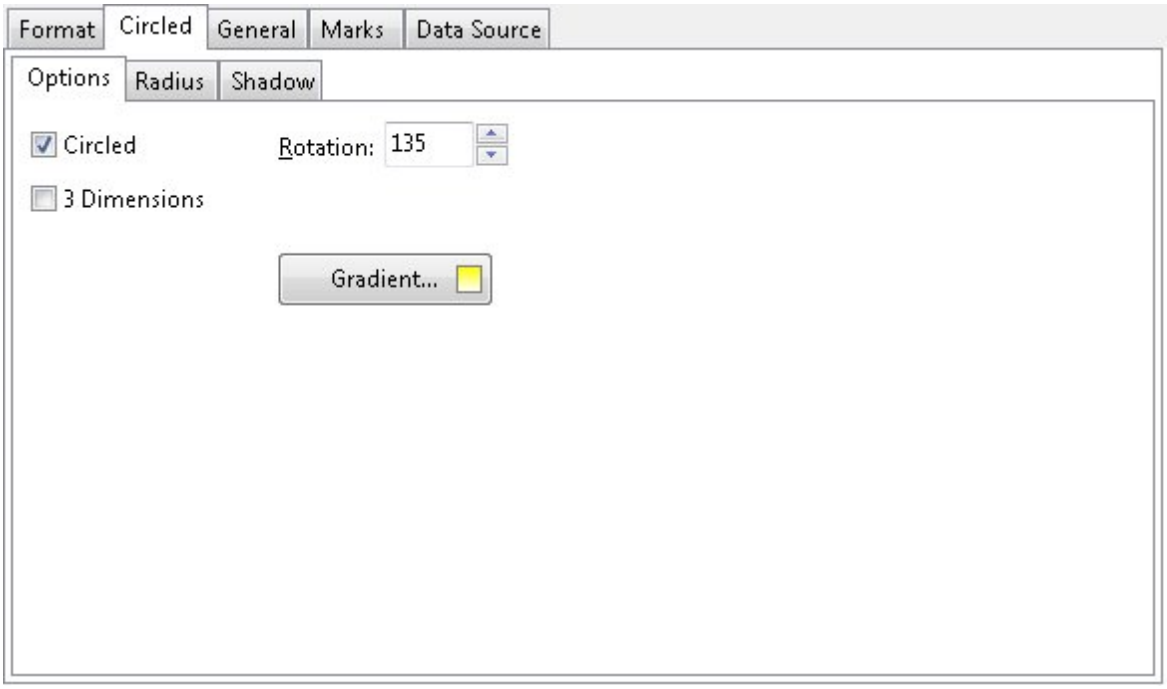


Options Tab
Line - specifies the kind of pen used to draw the gauge hand, using the Border Editor
Style - specifies the gauge hand style; line or triangle
Axis - specifies the kind of pen used to draw the gauge axis, using the Border Editor
Center - returns a sub-object with properties that control the appearance of a shape at the middle of gauge
Value - sets the position of gauge arrow line. The value must be a number between gauge Minimum and Maximum.
Total angle - controls the size in degrees for the gauge axis. Use with the Rotation property
Distance - specifies the distance between the tip of the gauge hand and the axis
End Point - specifies the properties for the pointer object at the end of the gauge hand, if visible
Full Repaint - controls if the whole chart will be repainted or just the gauge arrow line

Labels Tab
Show Labels - controls whether the axis labels will be displayed or not
Inside - enables/disables the display of the axis labels inside the circle area
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the axis labels
Format - specifies the display format for the axis labels
Increment - specifies the increment for the label to be displayed

Ticks Tab
Ticks - displays the Border Editor to define the tick properties
Height - specifies the height of the ticks
Minor - displays the Border Editor to define the minor tick properties
Height - specifies the height of the minor ticks
Count - specifies the number of minor ticks displayed between ticks
Distance - specifies the distance of the minor ticks upon the axis
Minimum - specifies the minimum displayed value on the axis
Maximum - specifies the maximum displayed value on the axis

5.5.1.7.1.2 Circled



Options Tab
Circled - determines whether the Series will be drawn elliptically or with the same X and Y radius (circle)
3 Dimensions - sets the Series in 3D
Rotation - sets the Series rotation angle
Gradient - specifies the gradient properties, using the Gradient Editor

Radius Tab
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically
Vertical - sets the vertical radius, otherwise Auto sets the value automatically

Shadow Tab
Defines the offset shadow of the Series. Refer to the Shadow Editor for property descriptions.

5.5.1.7.2 Numeric Gauge

The Numeric Gauge Series displays a instrumentation control represented by a container with a numerical scale in it. The numerical scale uses a numerical indicator to display the desired value.

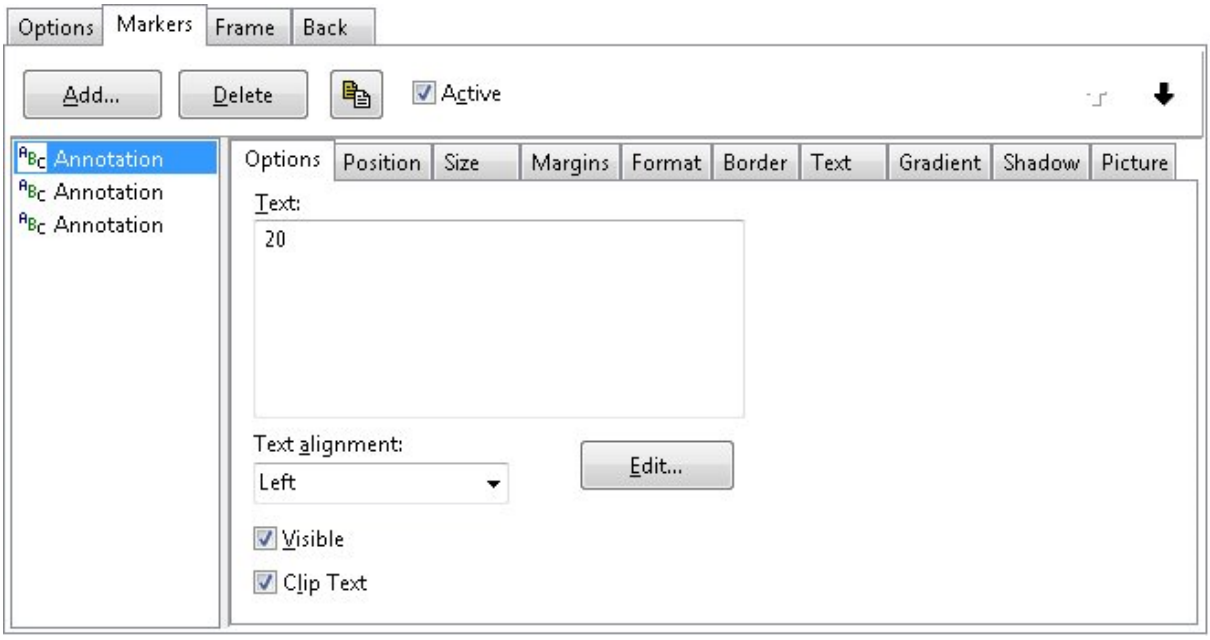
- Format
  - Options
  - Markers
  - Frame
  - Back
- General
- Marks
- Data Source

5.5.1.7.2.1 Format

Value - specifies the numeric gauge value
Palette - specifies the display palette, or theme, for the gauge
Digital font - specifies the font for the gauge number text

The "Markers" tab supports custom settings for marker, or annotation, text objects.

Add - adds an annotation to the gauge
Delete - deletes an annotation
Clone - clones or duplicates the selected annotation
Active - sets an annotation as active when checked



Options Tab
Text - the annotation text
Text alignment - determines the position of the annotation in the gauge: Left, Right or Center
Visible - controls whether the annotation will be shown, or not
Clip Text - specifies if the text is cut off
Edit - defines the annotation text

Position Tab
Auto - specifies automated annotation positions
Custom - specifies to use a custom annotation position
Left - specifies the left position value
Top - specifies the left position value
Units - specifies the units for directing the position location

Size Tab
Automatic - specifies an automatic annotation size, if checked
Width - specifies the annotation width
Height - specifies the annotation height

Margins Tab
Units - specifies the units for adjusting the annotation margins
Left - specifies the left margin value for the annotation
Top - specifies the top margin value for the annotation
Right - specifies the right margin value for the annotation
Bottom - specifies the bottom margin value for the annotation

Format Tab

Color - specifies the background color for the annotation
Pattern - specifies the background pattern for the annotation, using the Pattern Editor
Transparent - specifies if the annotation is transparent
Transparency - specifies the degree of transparency

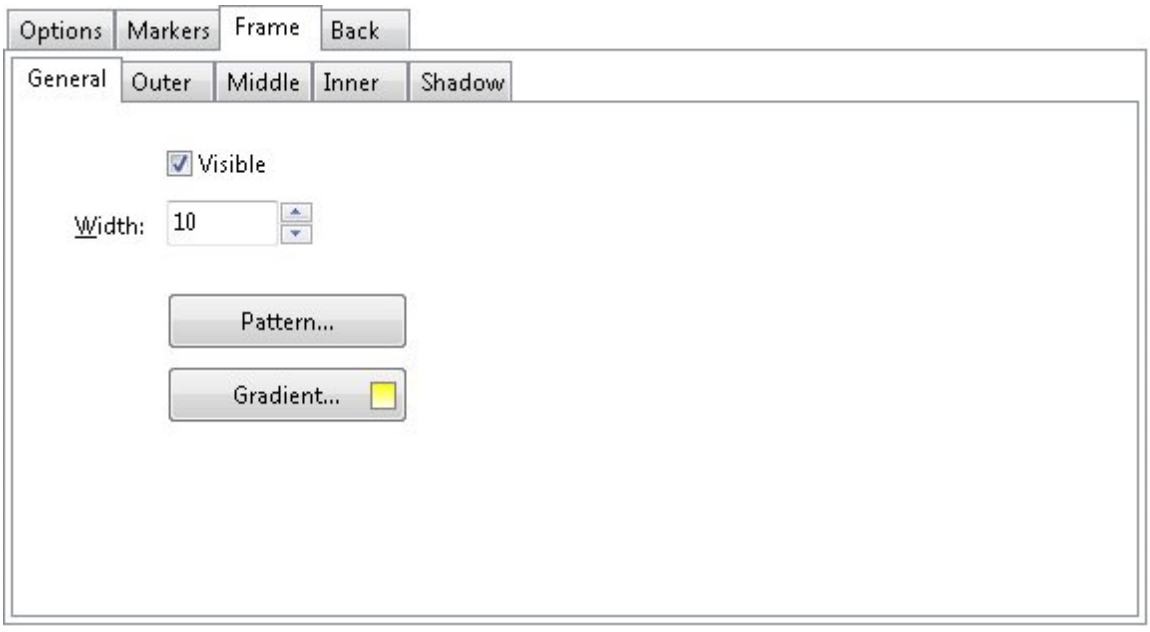
Border Tab
Bevel - specifies bevel option; None, Lowered, and Raised
Size - specifies the bevel size
Frame - specifies frame options for the annotation, using the Border Editor
Round Frame - rounds the frame edges
Size - specifies the rounded frame size

Text Tab
Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the annotation text.

Gradient Tab
Provides gradient properties for the annotation text. Refer to the Gradient Editor for property descriptions.

Shadow Tab
Provides shadow properties for the annotation text. Refer to the Shadow Editor for property descriptions.

Picture Tab
Browse - selects an image from computer files to be displayed on the annotation text
Filters - applies filters to the added image
Transparent - sets the image back color as transparent
Style - adjusts the image
Position - adjusts the image position



General Tab
Visible - determines whether the gauge frame will be displayed or not
Width - specifies the frame width
Pattern - specifies the frame pattern, using the Pattern Editor
Gradient - specifies the frame gradient properties, using the Gradient Editor

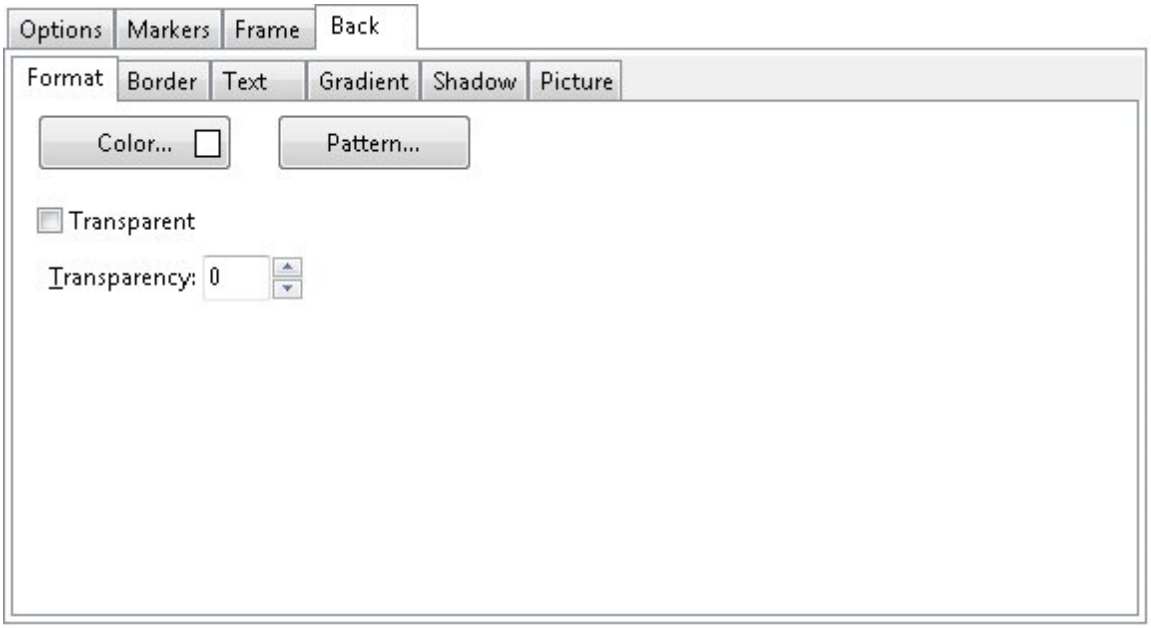
Outer Tab - Provides options for the Outer frame
Style - lists pattern styles for the outer frame
Color / Back - specifies the color and background color for the outer frame

Image - specifies an image for the outer frame, where the image can be loaded
Gradient - specifies the outer frame gradient properties, using the Gradient Editor

Middle Tab - Provides options for the Middle frame
Style - lists pattern styles for the middle frame
Color / Back - specifies the color and background color for the middle frame
Image - specifies an image for the middle frame, where the image can be loaded
Gradient - specifies the middle frame gradient properties, using the Gradient Editor

Inner Tab - Provides options for the Inner frame
Style - lists pattern styles for the inner frame
Color / Back - specifies the color and background color for the inner frame
Image - specifies an image for the inner frame, where the image can be loaded
Gradient - specifies the inner frame gradient properties, using the Gradient Editor

Shadow Tab
Visible - shows or hides the shadow
Color - specifies the shadow color, using a color palette. The slider can be dragged to slightly alter the selected color
Size - specifies the horizontal and vertical offset for the shadow
Transparency - specifies the degree of transparency for the shadow
Smooth - specifies if the shadow edge is defined or fades away
Blur - specifies the blur distance for the shadow edge
Clip - specifies if the shadow edge will be restricted to paint inside axes boundaries



Format Tab
Color - specifies the background color for the gauge
Pattern - specifies the background pattern, using the Pattern Editor
Transparent - specifies if the background is transparent
Transparency - specifies the degree of transparency

Border Tab
Bevel - specifies bevel option; None, Lowered, and Raised
Size - specifies the bevel size
Frame - specifies frame options for the annotation, using the Border Editor
Round Frame - rounds the frame edges
Size - specifies the rounded frame size

Text Tab

Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the annotation text.

Gradient Tab
Provides gradient properties for the annotation text. Refer to the Gradient Editor for property descriptions.

Shadow Tab
Provides shadow properties for the annotation text. Refer to the Shadow Editor for property descriptions.

Picture Tab
Browse - selects an image from computer files to be displayed on the annotation text
Filters - applies filters to the added image
Transparent - sets the image back color as transparent
Style - adjusts the image
Position - adjusts the image position

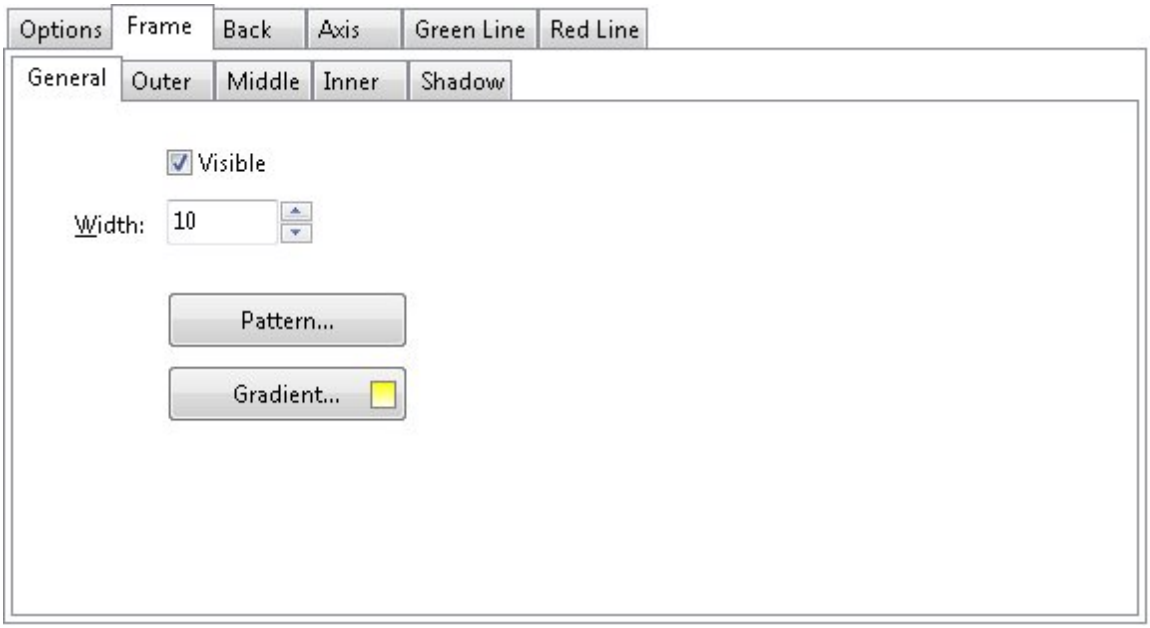
5.5.1.7.3 Linear Gauge / Vertical Gauge

The Linear Gauge and Vertical Gauge Series is used to display a specific data point over a horizontal or vertical scale using a slider component, or pointer, to indicate the data value.

- Format
  - Options
  - Frame
  - Back
  - Axis
  - Green Line
  - Red Line
- General
- Marks
- Data Source

5.5.1.7.3.1 Format

Value - specifies the gauge value
Palette - specifies the display palette, or theme, for the gauge
Value Area - specifies the properties for the background area behind the ticks
Max. Indicator - specifies the pointer properties for the maximum value indicator
Hand - specifies the pointer properties value indicator



General Tab
Visible - determines whether the gauge frame will be displayed or not
Width - specifies the frame width
Pattern - specifies the frame pattern, using the Pattern Editor
Gradient - specifies the frame gradient properties, using the Gradient Editor

Outer Tab - Provides options for the Outer frame
Style - lists pattern styles for the outer frame
Color / Back - specifies the color and background color for the outer frame
Image - specifies an image for the outer frame, where the image can be loaded
Gradient - specifies the outer frame gradient properties, using the Gradient Editor

Middle Tab - Provides options for the Middle frame
Style - lists pattern styles for the middle frame
Color / Back - specifies the color and background color for the middle frame
Image - specifies an image for the middle frame, where the image can be loaded
Gradient - specifies the middle frame gradient properties, using the Gradient Editor

Inner Tab - Provides options for the Inner frame
Style - lists pattern styles for the inner frame
Color / Back - specifies the color and background color for the inner frame
Image - specifies an image for the inner frame, where the image can be loaded
Gradient - specifies the inner frame gradient properties, using the Gradient Editor

Shadow Tab
Visible - shows or hides the shadow
Color - specifies the shadow color, using a color palette. The slider can be dragged to slightly alter the selected color
Size - specifies the horizontal and vertical offset for the shadow
Transparency - specifies the degree of transparency for the shadow
Smooth - specifies if the shadow edge is defined or fades away
Blur - specifies the blur distance for the shadow edge

Clip - specifies if the shadow edge will be restricted to paint inside axes boundaries

Format Tab
Color - specifies the background color for the gauge
Pattern - specifies the background pattern, using the Pattern Editor
Transparent - specifies if the background is transparent
Transparency - specifies the degree of transparency

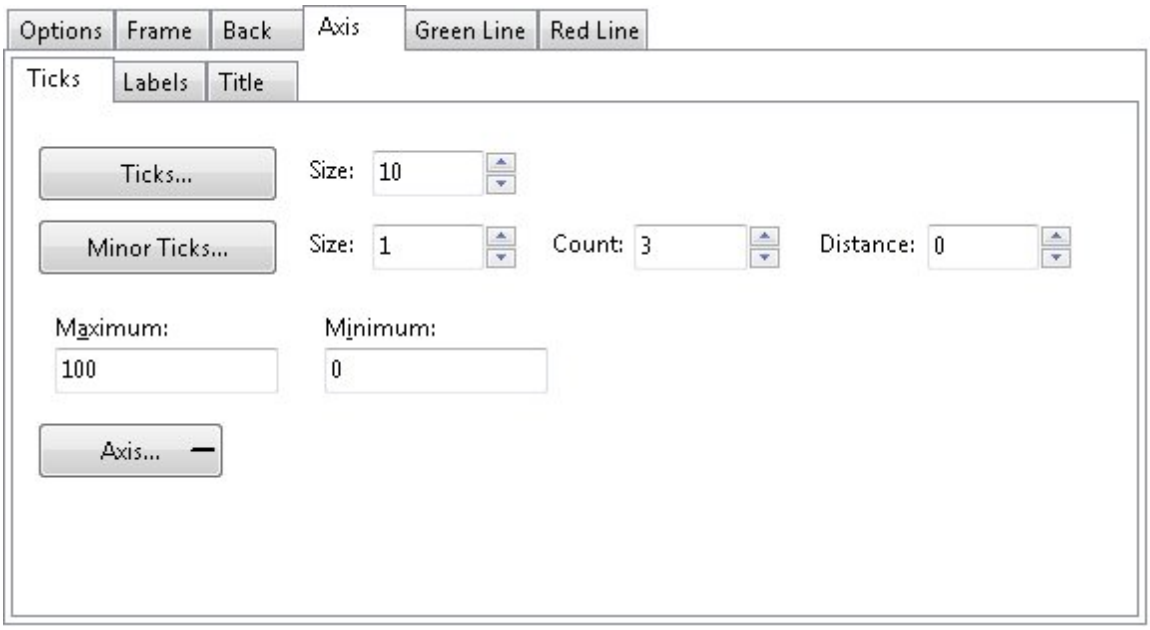
Border Tab
Bevel - specifies bevel option; None, Lowered, and Raised
Size - specifies the bevel size
Frame - specifies frame options for the annotation, using the Border Editor
Round Frame - rounds the frame edges
Size - specifies the rounded frame size

Text Tab
Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the annotation text.

Gradient Tab
Provides gradient properties for the annotation text. Refer to the Gradient Editor for property descriptions.

Shadow Tab
Provides shadow properties for the annotation text. Refer to the Shadow Editor for property descriptions.

Picture Tab
Browse - selects an image from computer files to be displayed on the annotation text
Filters - applies filters to the added image
Transparent - sets the image back color as transparent
Style - adjusts the image
Position - adjusts the image position



Ticks Tab
Ticks - displays the Border Editor to define the tick properties
Size - specifies the size of the ticks
Minor Ticks - displays the Border Editor to define the minor tick properties
Size - specifies the size of the minor ticks
Count - specifies the number of minor ticks displayed between ticks
Distance - specifies the distance of the minor ticks upon the axis
Maximum - specifies the maximum displayed value on the axis
Minimum - specifies the minimum displayed value on the axis
Axis - specifies the kind of pen used to draw the gauge axis, using the Border Editor

Labels Tab
Format - specifies the display format for the axis labels
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the axis labels
Visible - determines whether the axis labels will be displayed or not

Title Tab

Style Tab
Title - allows users to define a Title or text for the selected Axis
Angle - allows users to define the Title label angle
Size - allows users to define the Axis title label size
Visible - displays or hides the selected Axis title

Format Tab
The tab provides title properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the selected axis.

Style - specifies the properties for the green line object
Visible - determines whether the green line will be displayed or not
Start value - specifies the starting value displayed on the green line
End value - specifies the ending value displayed on the green line

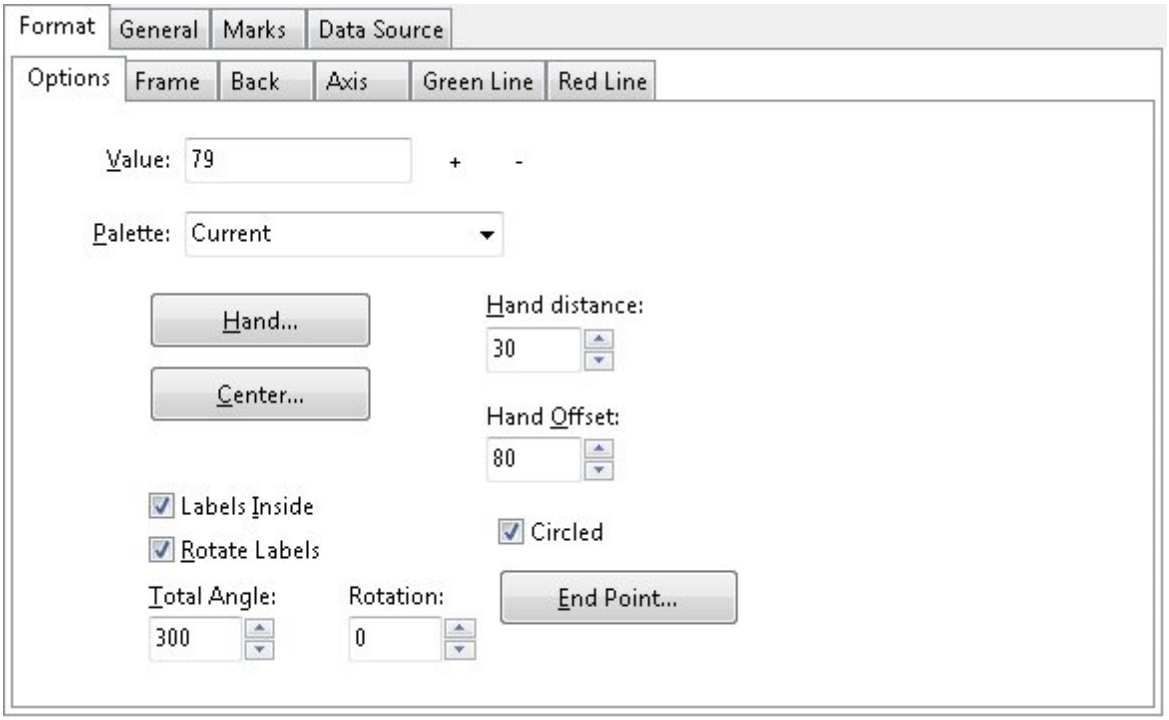
Style - specifies the properties for the red line object
Visible - determines whether the red line will be displayed or not
Start value - specifies the starting value displayed on the red line
End value - specifies the ending value displayed on the red line

5.5.1.7.4 Circular Gauge

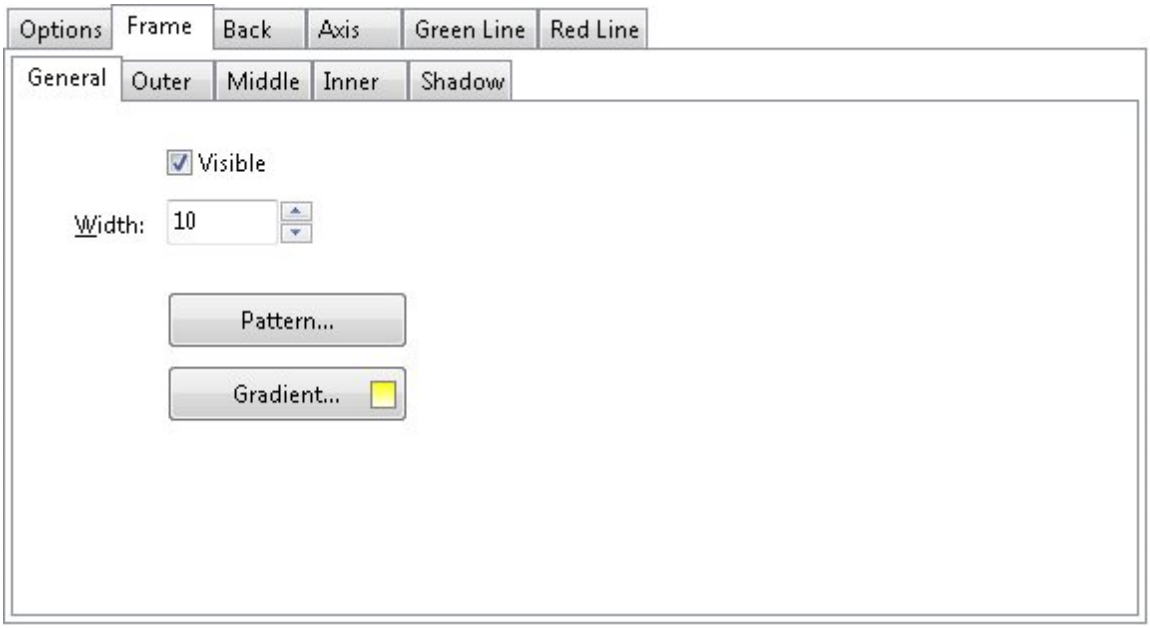
The Circular Gauge Series is used to display a specific data point over a circular scale with a spinning component, or pointer, to indicate the data value.

- Format
  - Options
  - Frame
  - Back
  - Axis
  - Green Line
  - Red Line
- General
- Marks
- Data Source

5.5.1.7.4.1 Format



Value - specifies the gauge value
Palette - specifies the display palette, or theme, for the gauge
Hand - specifies the pointer properties value indicator
Center - returns a sub-object with properties that control the appearance of a shape at the middle of gauge
Hand Distance - specifies the distance between the tip of the gauge hand and the axis
Hand Offset - specifies the distance between the end of the gauge hand and the axis
Labels Inside - enables/disables the display of the axis labels inside the circle area
Rotate Labels - specifies if the labels values rotate with the circle of the gauge
Circled - determines whether the Series will be drawn elliptically or with the same X and Y radius (circle)
Total Angle - controls the size in degrees for the gauge axis. Use with the Rotation property
Rotation - sets the Series rotation angle
End Point - specifies the properties for the pointer object at the end of the gauge hand, if visible



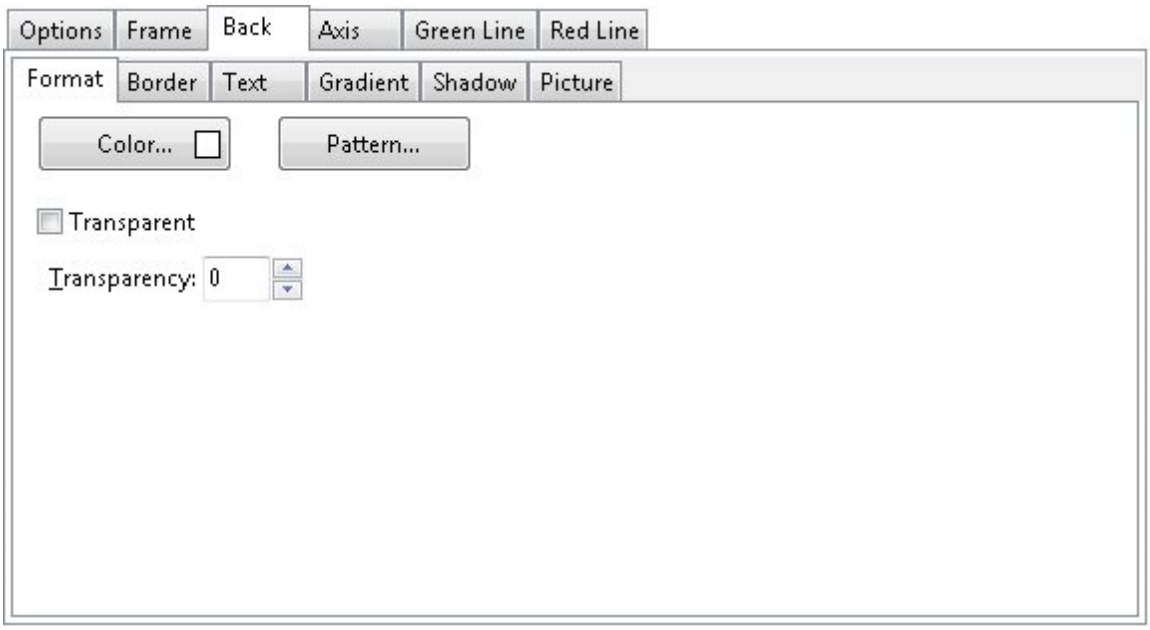
General Tab
Visible - determines whether the gauge frame will be displayed or not
Width - specifies the frame width
Pattern - specifies the frame pattern, using the Pattern Editor
Gradient - specifies the frame gradient properties, using the Gradient Editor

Outer Tab - Provides options for the Outer frame
Style - lists pattern styles for the outer frame
Color / Back - specifies the color and background color for the outer frame
Image - specifies an image for the outer frame, where the image can be loaded
Gradient - specifies the outer frame gradient properties, using the Gradient Editor

Middle Tab - Provides options for the Middle frame
Style - lists pattern styles for the middle frame
Color / Back - specifies the color and background color for the middle frame
Image - specifies an image for the middle frame, where the image can be loaded
Gradient - specifies the middle frame gradient properties, using the Gradient Editor

Inner Tab - Provides options for the Inner frame
Style - lists pattern styles for the inner frame
Color / Back - specifies the color and background color for the inner frame
Image - specifies an image for the inner frame, where the image can be loaded
Gradient - specifies the inner frame gradient properties, using the Gradient Editor

Shadow Tab
Visible - shows or hides the shadow
Color - specifies the shadow color, using a color palette. The slider can be dragged to slightly alter the selected color
Size - specifies the horizontal and vertical offset for the shadow
Transparency - specifies the degree of transparency for the shadow
Smooth - specifies if the shadow edge is defined or fades away
Blur - specifies the blur distance for the shadow edge
Clip - specifies if the shadow edge will be restricted to paint inside axes boundaries



Format Tab
Color - specifies the background color for the gauge
Pattern - specifies the background pattern, using the Pattern Editor
Transparent - specifies if the background is transparent
Transparency - specifies the degree of transparency

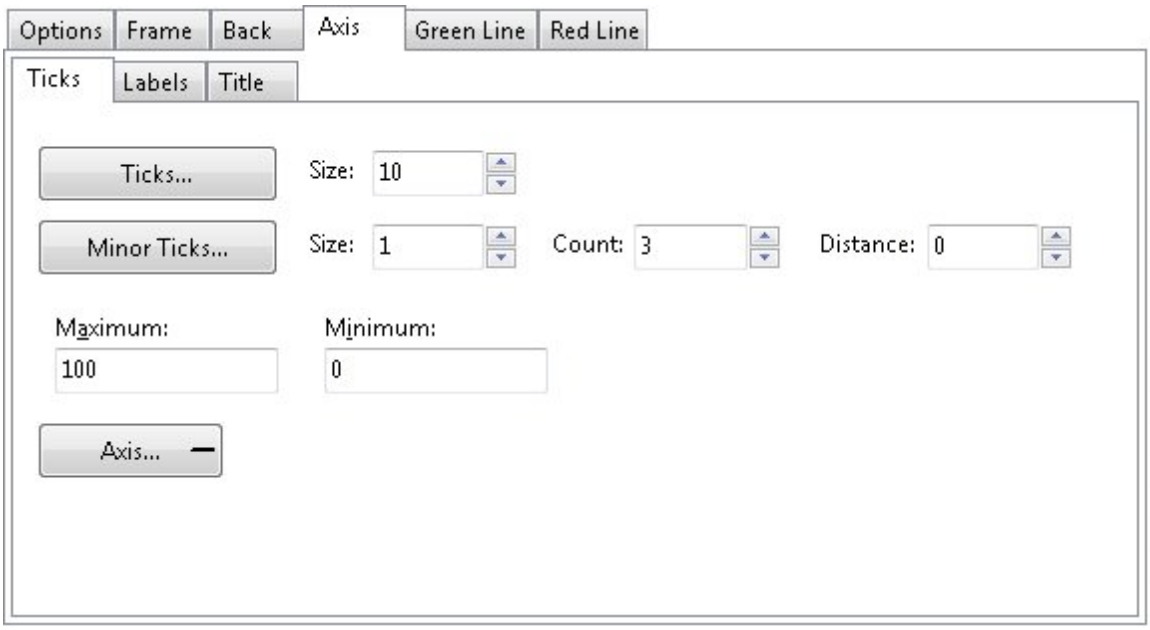
Border Tab
Bevel - specifies bevel option; None, Lowered, and Raised
Size - specifies the bevel size
Frame - specifies frame options for the annotation, using the Border Editor
Round Frame - rounds the frame edges
Size - specifies the rounded frame size

Text Tab
Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the annotation text.

Gradient Tab
Provides gradient properties for the annotation text. Refer to the Gradient Editor for property descriptions.

Shadow Tab
Provides shadow properties for the annotation text. Refer to the Shadow Editor for property descriptions.

Picture Tab
Browse - selects an image from computer files to be displayed on the annotation text
Filters - applies filters to the added image
Transparent - sets the image back color as transparent
Style - adjusts the image
Position - adjusts the image position



Ticks Tab
Ticks - displays the Border Editor to define the tick properties
Size - specifies the size of the ticks
Minor Ticks - displays the Border Editor to define the minor tick properties
Size - specifies the size of the minor ticks
Count - specifies the number of minor ticks displayed between ticks
Distance - specifies the distance of the minor ticks upon the axis
Maximum - specifies the maximum displayed value on the axis
Minimum - specifies the minimum displayed value on the axis
Axis - specifies the kind of pen used to draw the gauge axis, using the Border Editor

Labels Tab
Format - specifies the display format for the axis labels
Font - provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the axis labels
Visible - determines whether the axis labels will be displayed or not

Title Tab

Style Tab
Title - allows users to define a Title or text for the selected Axis
Angle - allows users to define the Title label angle
Size - allows users to define the Axis title label size
Visible - displays or hides the selected Axis title

Format Tab
The tab provides title properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for the selected axis.

Style - specifies the properties for the green line object
Visible - determines whether the green line will be displayed or not
Start value - specifies the starting value displayed on the green line
End value - specifies the ending value displayed on the green line

Style - specifies the properties for the red line object
Visible - determines whether the red line will be displayed or not
Start value - specifies the starting value displayed on the red line
End value - specifies the ending value displayed on the red line

5.5.2 Functions

The functions are mathematical calculations to create charts automatically using other Series points as a data source. To select a function you should open the Series Editor dialog you would like the calculation to display and then go to the Data Source tab.

Standard	Add Subtract Multiply Divide High Low	Average y = f(x) Median Mode Count Subset
Financial	ADX R.S.I. Moving Average Exponential Moving Average Momentum Momentum Division MACD Stochastic	Bollinger bands Compression Close Location Value On Balance Volume Commodity Channel Index Volume Oscillator SAR
Extended	Average Exponential Standard Deviation Root Mean Square Cross Points Performance Variance Perimeter Smoothing	Curve Fitting Trend Exponential Trend Correlation Cumulative Downsampling Histogram

5.5.2.1 Standard

The Standard Functions tab shows the standard functions Series type.

Add - The Add function calculates the sum of all points in the data source. It can also be used to calculate sums by every "n" number of points.

Subtract - The Subtract function uses more than one series as data source. It calculates for each point the difference between the last and first series.

Multiply - The Multiply function calculates the product of every point of several data source series.

Divide - The Divide function divides the points of a data source series by other data source series points.

High - Calculates the highest point of all the series points.

Low - Calculates the lowest point of all the series points.

Average - Calculates the average value for the data source points.

y = f(x) - In this equation X represents the input of the process and Y the output of the process and f the function of the variable X.

Median - Returns the median of the given numbers. The median is the number in the middle of a set of numbers.

Mode - Returns the most frequently occurring, or repetitive, value in an array or range of data.

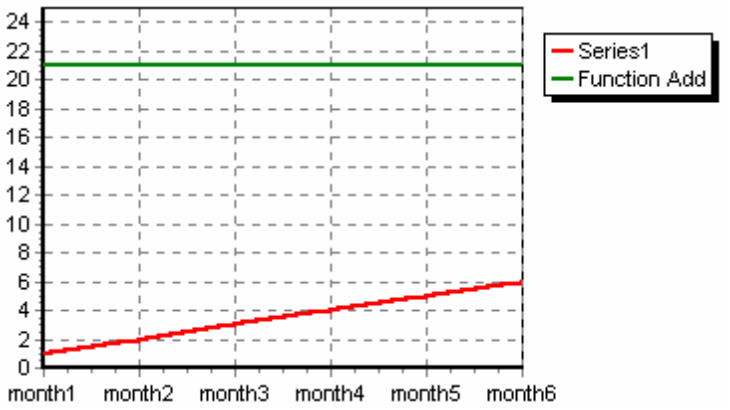
Count - Calculates the number of points of the data source series.

Subset - Return subsets of vectors, matrices or data frames which meet conditions.

Copy - Displays a copy of the points of the data source series. Copy is available within the Data Source function list, but is not an option when adding a new Series.

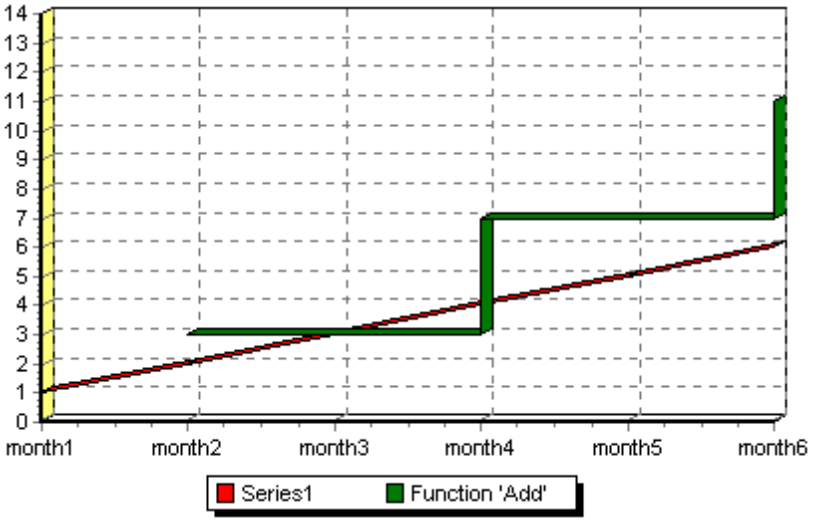
5.5.2.2 Standard Function Examples

Add
The Add function adds data from one or more Series. If we create a line Series 'Series1', create a line Series 'Function Add' and define Series 'Function Add' as Add of Series1 and do nothing more we will obtain a Chart with Series1 displayed and 'Function Add' as one flat line which is the sum of all values of Series1. In the figure the total of 1 + 2 + 3 + 4 + 5 + 6 = 21.

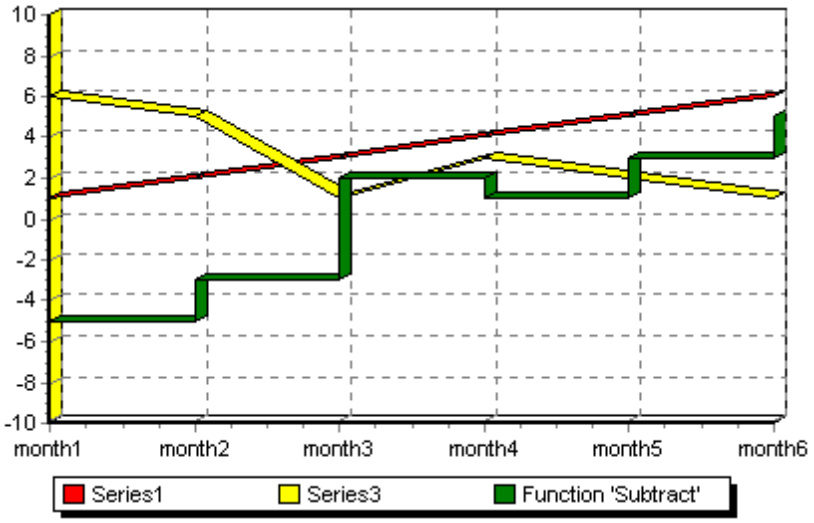


You can modify the Series 'Function Add' to represent Add of Series1 by 2 point groupings (1+2), (3+4), (5+6). Defining the period as 2, sets the Add function to add every 2 points. The period property adds enormous value to function Series.

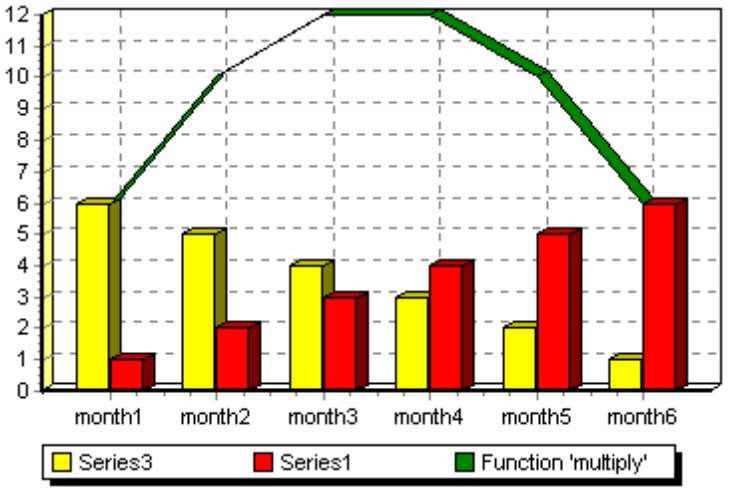
Add function with period = 2



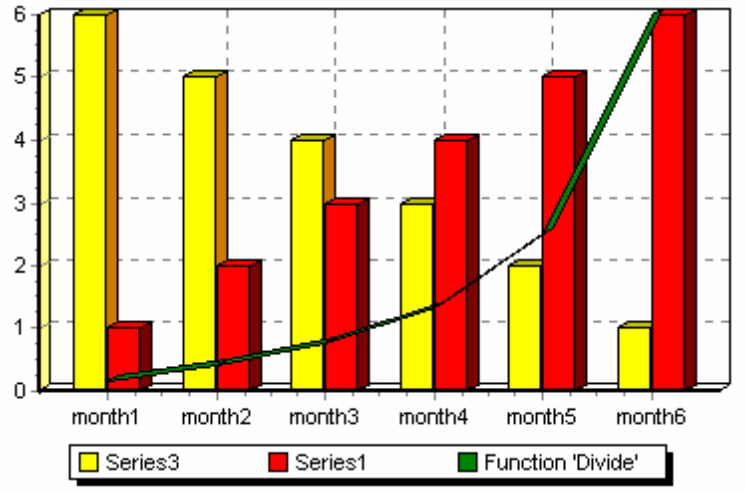
Subtract
Subtract requires 2 input Series. With more than one Series in the function the default period sets to 1 axis point. the 2nd Series will be subtracted from the 1st Series in the list. The following Chart forces all Series to draw in the same 3-Dimensional plane - The resulting Series overlay (a sort of optical illusion) in the Chart depends on the Series paint order.



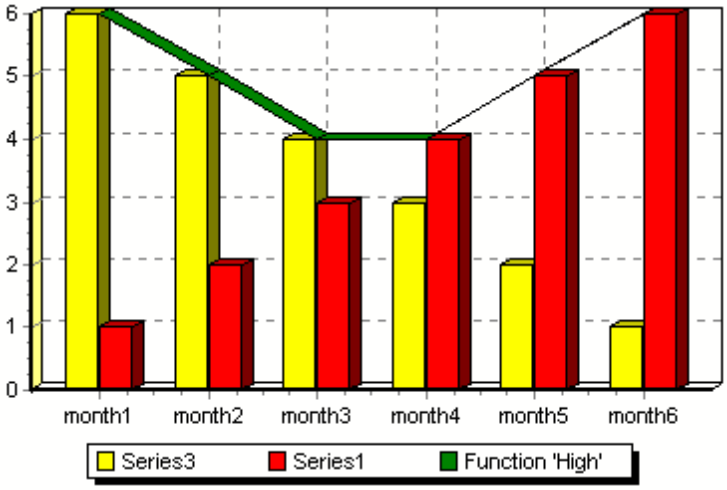
Multiply
The default period for the function 'multiply' is 1. You may add as many Series as you wish to the multiply function.



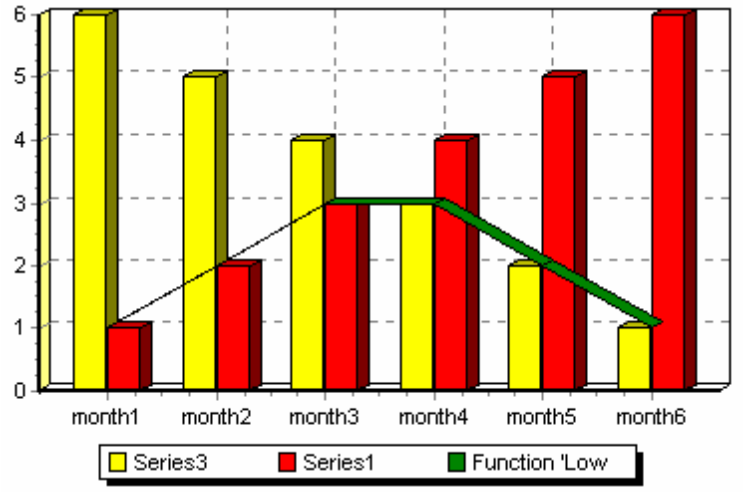
Divide
As divide requires at least 2 input Series the default period for the divide function is 1. The 2nd Series in the list is the denominator. If you add more than 2 Series then the 1st will be divided by the 2nd then that is divided by the third, etc.…



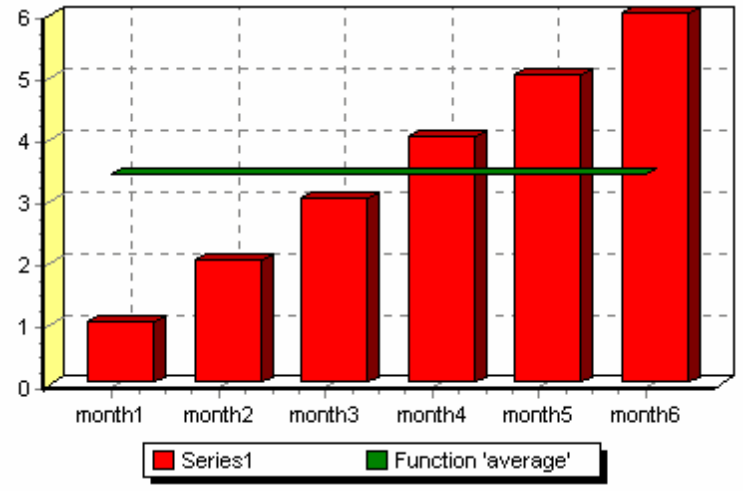
High
High accepts multiple input Series and will always display the highest point between those Series at each period point. (1 Series default period 0, 2 or more Series default period 1).



Low
Low accepts multiple input Series. It will always display the lowest point between those Series at each period point. (1 Series default period 0, 2 or more Series default period 1).Fig. 7.



Average
The default period for average with one Series is 0 (all) which will give you the average for that Series across the whole Chart. If you have more than one Series the period will be 1 axis point. You may change the period to alter the frequency of the average curve.



5.5.2.3 Financial

The Financial tab shows financial functions Series types.

ADX - Financial function of technical analysis.

R.S.I. - The financial R.S.I function (Relative Strength Index) uses a Candle series (OHLC) as data source.

Moving Average - Calculates the moving average for the data source points.

Exponential Moving Average - The Exponential Moving Average function calculates values using the following formula:

FP = 2 / (Period + 1)
Value = Source* FP + (Value - 1) * (1-FP)

Momentum - The Momentum function calculates the difference between each point in the data source and the "n" previous point value.

Momentum Division - The Momentum Division function calculates the ratio of a point value compared to the previous N point value. The formula is:

Momentum = 100 * Value / PreviousValue

MACD - Calculates the Moving Average Convergence/Divergence (MACD) line, from a data matrix, data, and a nine-period exponential moving average from the MACD line

Stochastic - Calculates randomly determined values; having a random probability distribution or pattern that may be analyzed statistically but may not be predicted precisely

Bollinger bands - Calculates two lines (Bollinger bands) around the source series points. Warning: The data source series should be of Vela type (financial Candle)

Compression - Mixes two fixed length inputs and produces a single fixed length output of the same size as one of the inputs

Close Location Value - A measure used in technical analysis to determine where the price of the asset closes relative to the day's high and low.

On Balance Volume - Calculates a cumulative volume that depends on stock price. When the closing stock price for the day is greater than the previous day's close, the volume for the day is added to the cumulative result. If the stock price decreases, volume is subtracted from the result. Applications of On Balance Volume include confirmation of price movements.

Commodity Channel Index - Measures the current price level relative to an average price level over a given period of time

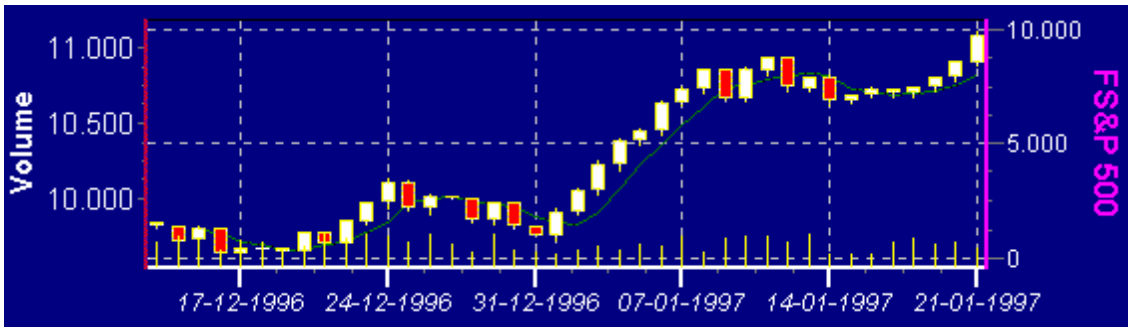
Volume Oscillator - Computes the relationship between a short-term moving average and a long-term moving average of the stock volume

SAR - Calculates trends in OHLC data source series (Open High Low Close financial data)

5.5.2.4 Financial Function Examples

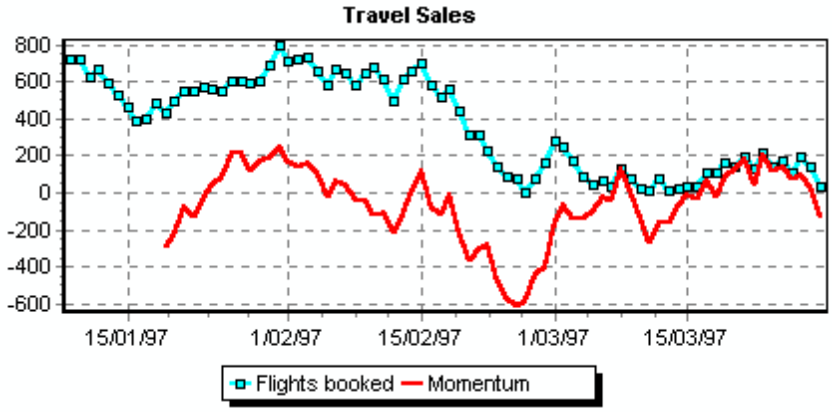
Moving Average
The moving average function permits you to track the current average as your data charts. You may define the period over which the moving average steps.

Moving average applied to track data in a candle series:



Relative Strength Index (RSI) is often used in financial applications. 2D RSI curve calculating over the last 20 data points of a candle series:

Momentum
A momentum series is defined usng period. The curve takes the last value of the period and subtracts the first value.



5.5.2.5 Extended

The Extended tab types includes more specialized function types.

Average Exponential - The Exponential Average function calculates the average of all the source points using the exponential algorithm.

Standard Deviation - Calculates the Standard Deviation results for input data

Root Mean Square - The Root Mean Square (RMS) function does the following calculation:

Result = Sqrt(Sum(Square(Value))) / NumValues)

Cross Points - Calculates the points where the two source series do cross. This function requires two source series.

Performance - Calculates the percentage of difference between each point and the first point of the source series

Variance - Measures how far a set of numbers are spread out

Perimeter - Calculates which points from the source series points form the "perimeter" or "boundaries". The result is a set of points that display a closed polygon passing over the source points that are at the edges of the total source points.

Smoothing - Attempts to capture important patterns in the data, while leaving out noise or other fine-scale structures/rapid phenomena. In smoothing, the data points of a signal are modified so individual points (presumably because of noise) are reduced, and points that are lower than the adjacent points are increased leading to a smoother result.

Curve Fitting - Constructs a polynomial line based on its Data Source Series values.

Trend - The Trend function calculates the "best fit" line using all the data source points.

Exponential Trend - The Exponential Trend function is similar to Trend, except the calculation fits values using their exponential (e) weights.

Correlation - Correlation between random variables at two different points in space or time

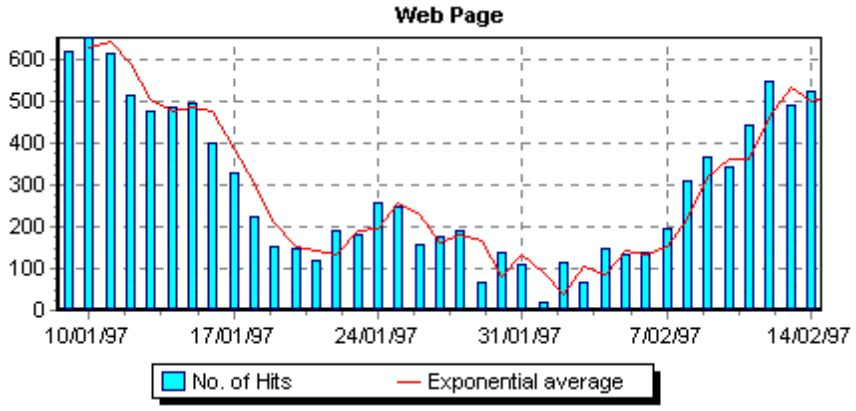
Cumulative - Sums the source series points one by one

Downsampling - Reduces the number of points of series using several different techniques. It uses an algorithm with which polylines consisting of many points can be reduced to a simplified form. This can be useful in situations where your graphical application must draw many polylines and time becomes an issue, like cartographic applications.

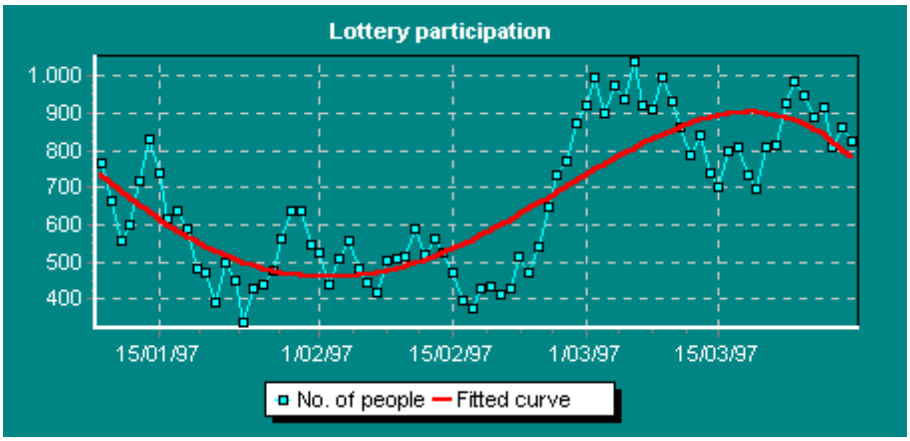
Histogram - Calculates the number of points of the Series, grouped by intervals defined by the NumBins property.

5.5.2.6 Extended Function Examples

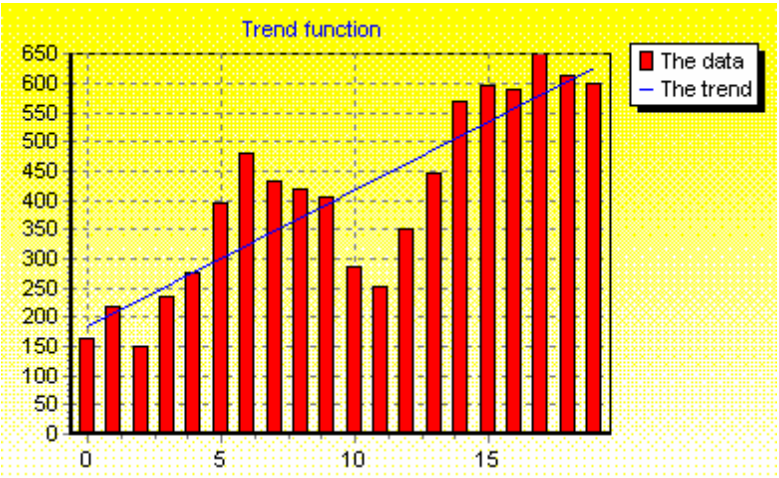
Exponential Average
The exponential average is similar to a moving average. It has a weight factor to add importance to more recent data. The diagram shows an exponential average with weighting 0.2.



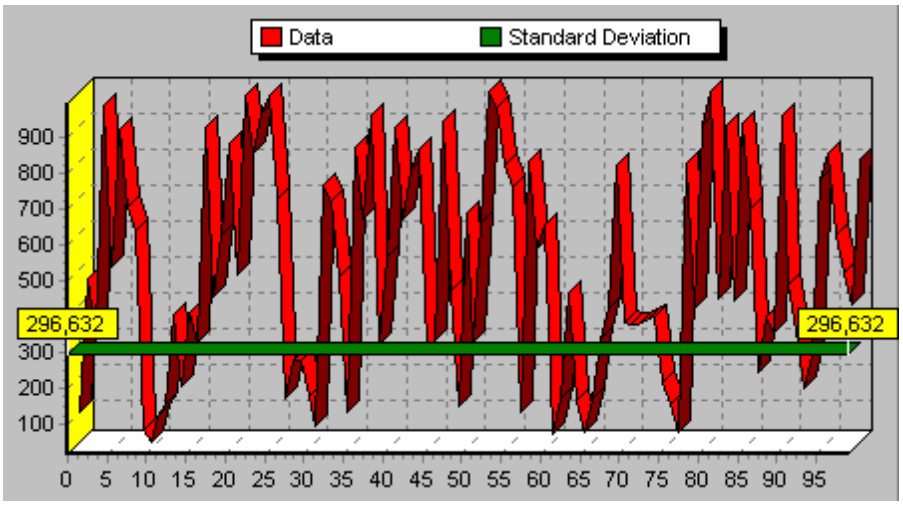
Fitted Curve
The Fitted Curve performs a polynomical gaussian calculation on the underlying Series data to draw a smooth curve over the original points:



Trend
The Trend does a similar task to Curve Fitting but draws the best straight line trend through the data. Period can be applied to the trend.

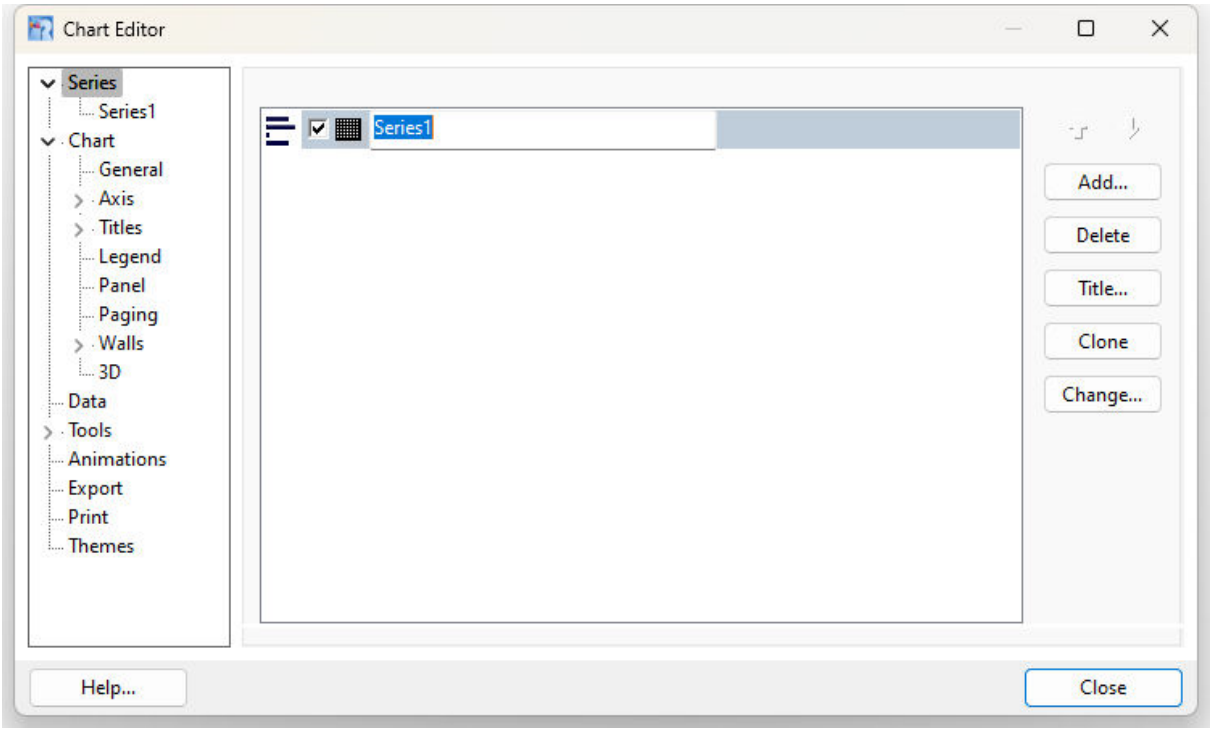


Standard Deviation
The Standard Deviation shows the standard deviation from the mean of data from the input Series. Period can be applied.



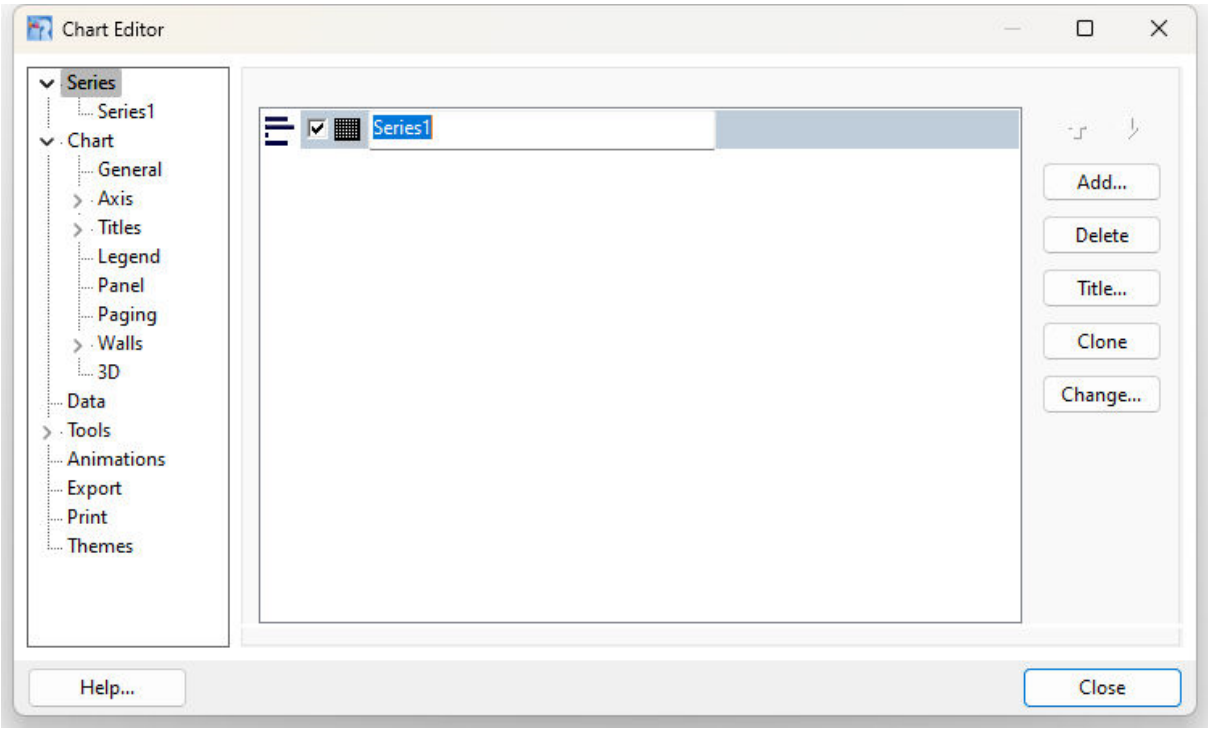
5.6 Chart Editor

The Chart Editor is the tabbed dialog window that allows complete control over a defined chart.



5.6.1 Series

The "Series" supports the ability to edit the series defined for a chart.



Using the buttons provided, users can add, remove, or modify series.

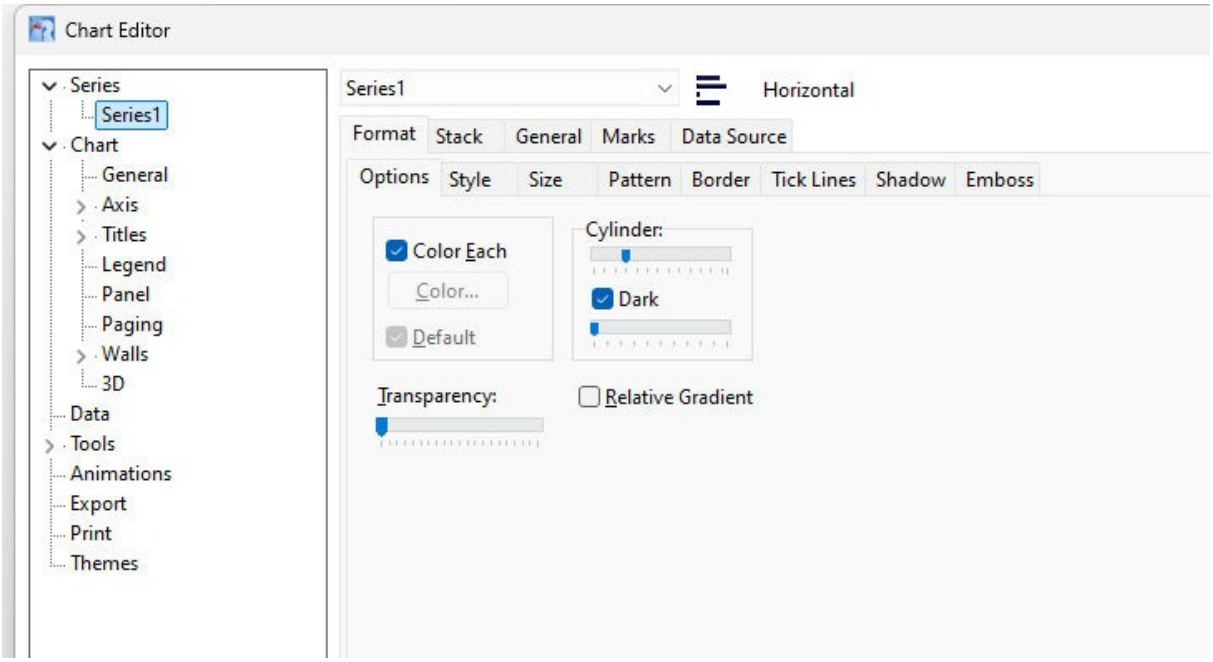
- *Up Arrow* - moves the selected series up, to draw it before other series in the chart
- *Down Arrow* - moves the selected series down, to draw it after the other series in the chart
- *Add* - shows the Chart Gallery dialog to add a new series
- *Delete* - removes the selected series
- *Title*... - changes the selected series title
- *Clone* - creates a duplicate of the selected series
- *Change...* - changes the chart type, displaying the Chart Gallery

It is also possible to double-click a series to show the editor dialog, and also drag a series to change its position in the list. The right mouse button shows a floating menu with several options to configure the selected series.

5.6.1.1 Format

The Format tab provides custom format settings for the series.

Note: The properties available on this tab, and subsequent tabs before the "General" tab, will differ for the specified series type.



5.6.1.2 General

The "General" tab provides settings to modify the properties related to the general data of the Series. The displayed fields may vary for the selected series.

Options

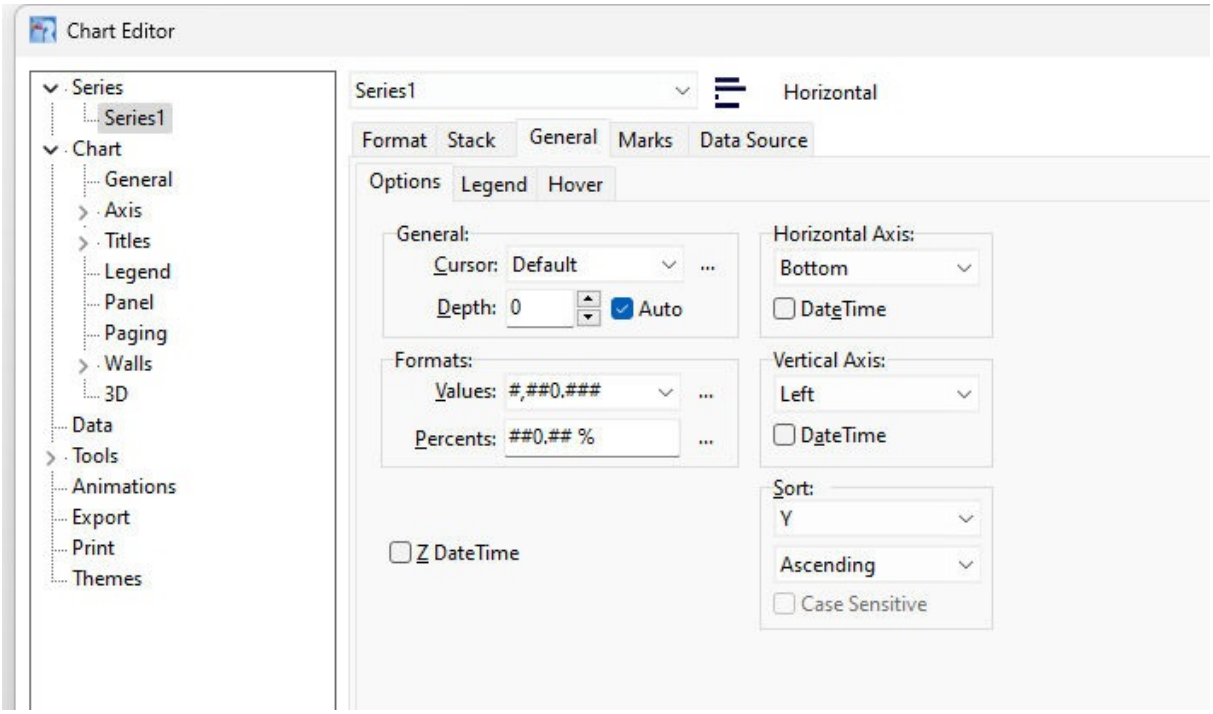
General
Cursor - defines a cursor type (image) when the mouse passes into the region covered by a series point
Depth/Auto - specifies the line depth, if the "Auto" check-box is activated the chart defaults to a determined value

Formats
Values - specifies a format to be applied to the axis labels
Percents - specifies the series format for percent style figures

Z DateTime - specifies to change the normal values of the series to date/time values

Horizontal Axis - specifies where the horizontal axis values are displayed: Top, Bottom or Top and Bottom
Date-Time - specifies to change the normal axis values of the series to date/time values

Vertical Axis - specifies where the vertical axis values are displayed: Left, Right or Left and Right
Date-Time - specifies to change the normal axis values of the Series to date/time values
Sort - specifies what chart area to sort the series values, and order; as ascending, or descending

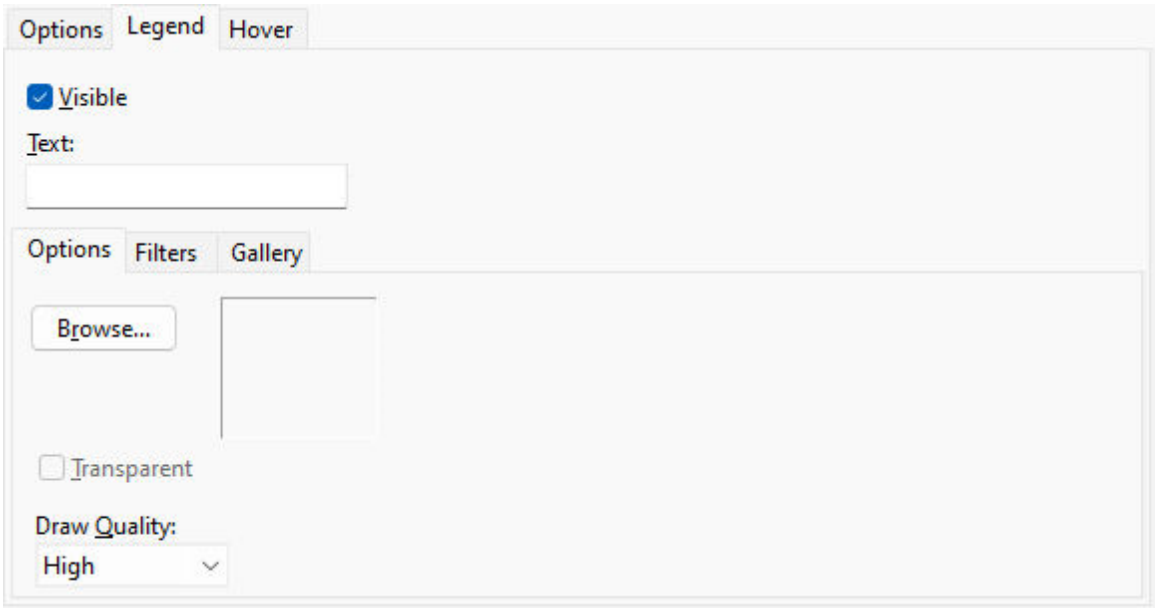


Legend
Visible - specifies to show/hide the chart legend

Options
Browse - selects an image from computer files to be displayed
Transparent - sets the image back color as transparent
Draw Quality - specifies the picture draw quality; High or Low

Filters - applies filters to the added image

Gallery - provides several default picture options to choose from

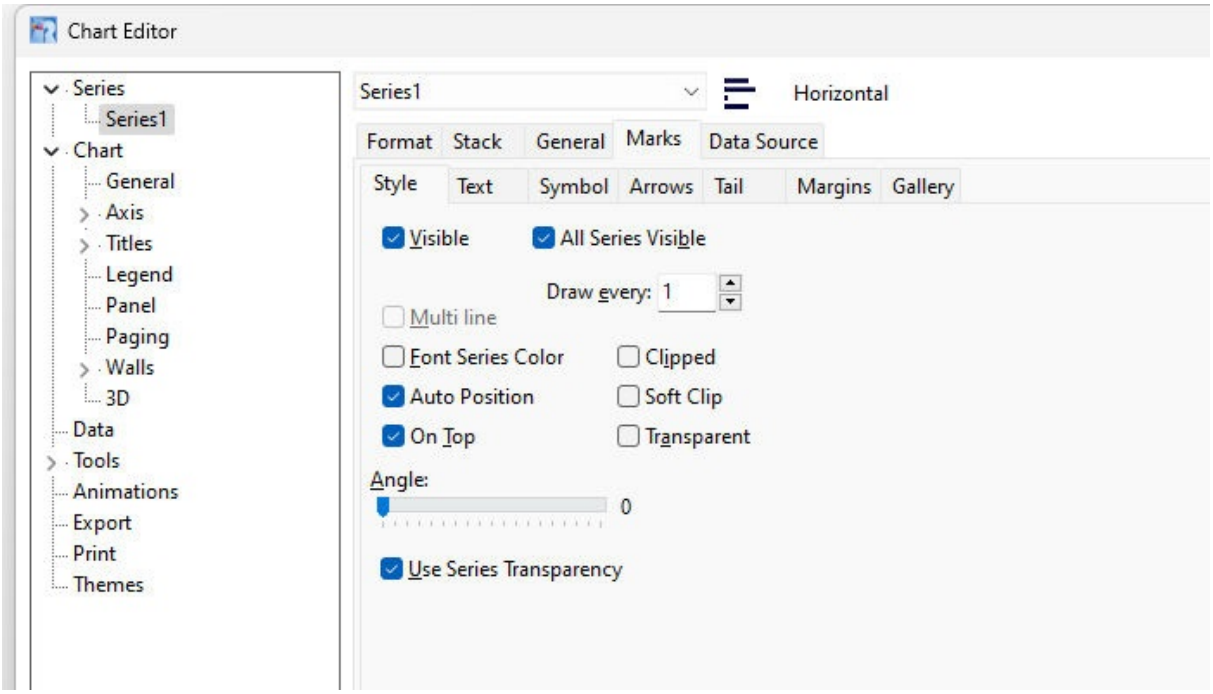


Hover - specifies settings for visual interactions/hints when the mouse cursor hovers over an element in the chart

Format - See **Format**
Border - See **Border**
Font - See **Font**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels for the chart Title, SubTitle, etc.

5.6.1.3 Marks

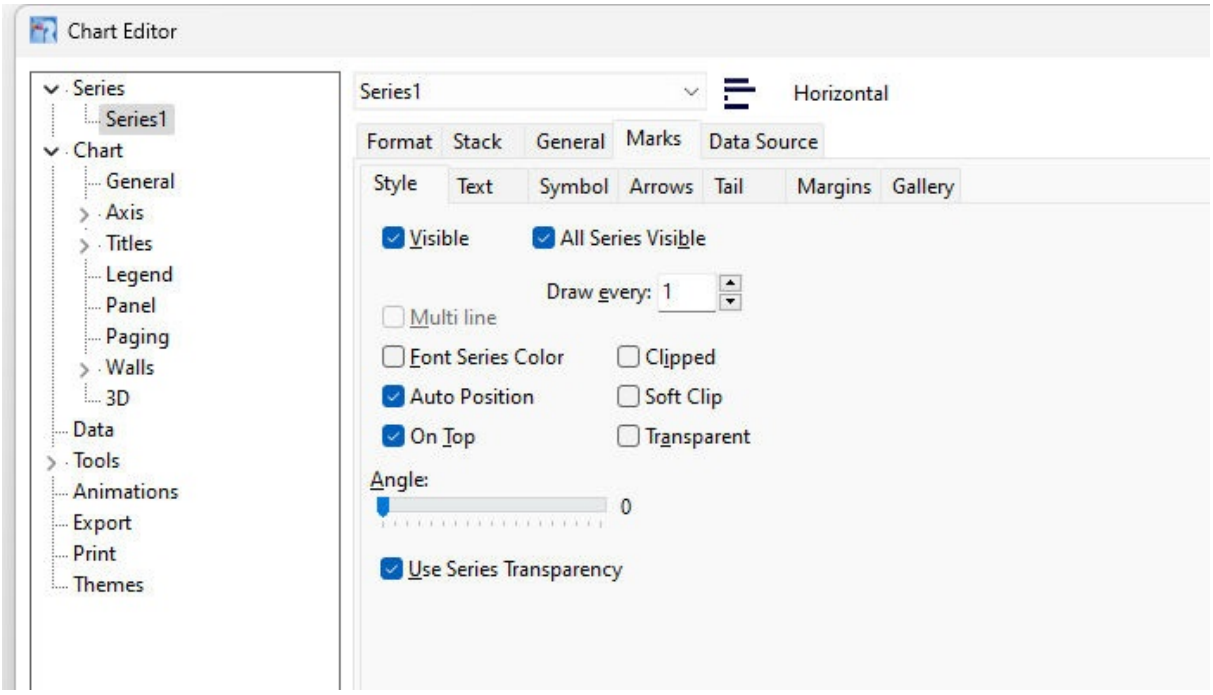
The "Marks" tab includes the necessary properties to define a mark next to each Series point. The marks are the values that represent the data which appear within the chart.



5.6.1.3.1 Style

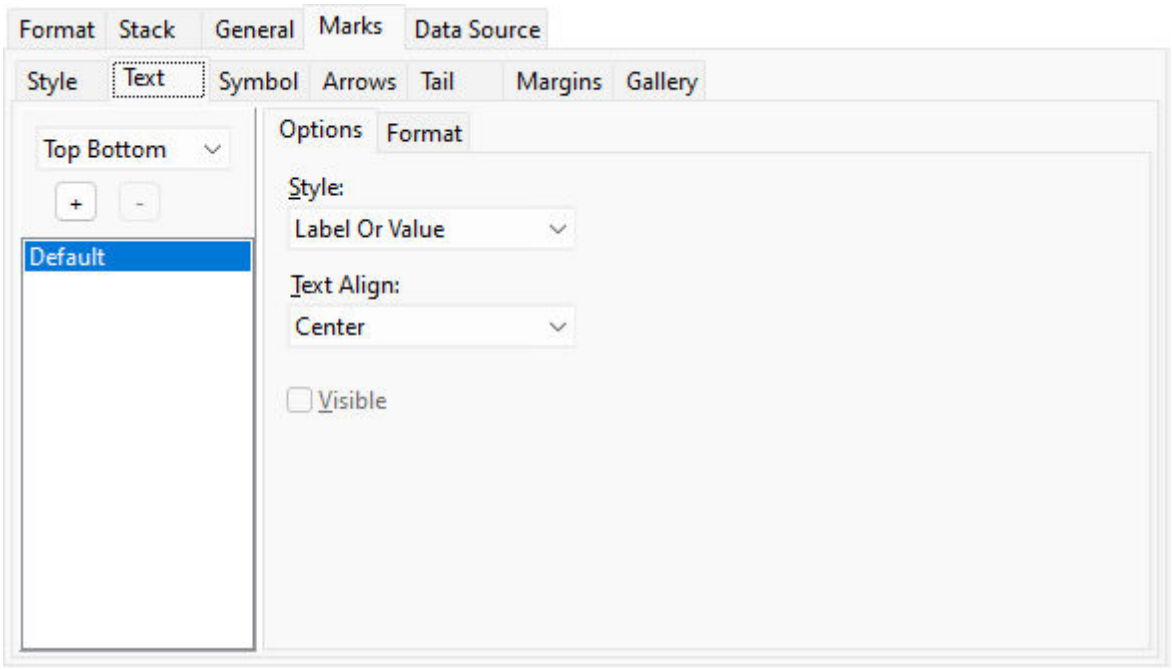
The Style tab provides style properties for marks.

Visible - controls whether the series marks will be displayed or not
All Series Visible - determines whether all the series labels are visible or not
Draw every - sets the number of consecutive marks to be drawn. Setting this property to two will draw every other mark, to three every third, etc.
Multi line - enables/disables multiple-line labels. Depending on the style selected in the "Style" combo-box this property will be activated or not
Font Series Color - specifies to display each marks series item using the Series color
Auto Position - specifies a default position for the mark
On Top - specifies the mark are always drawn on top of all other Series in the chart
Angle - defines the rotation degree of each mark
Use Series Transparency - specifies to follow the transparency defined for the entire series
Clipped - specifies to hide the marks or labels which are totally or partially out of the chart
Soft Clip - specifies to use an enhanced/smooth clipped display for the marks
Transparent - specifies whether the mark box is transparent



5.6.1.3.2 Text

Provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for marks.



+/- - allows for multiple marks to be assigned. The drop down specifies the multiple marks to be listed top to bottom, or right to left, if defined.

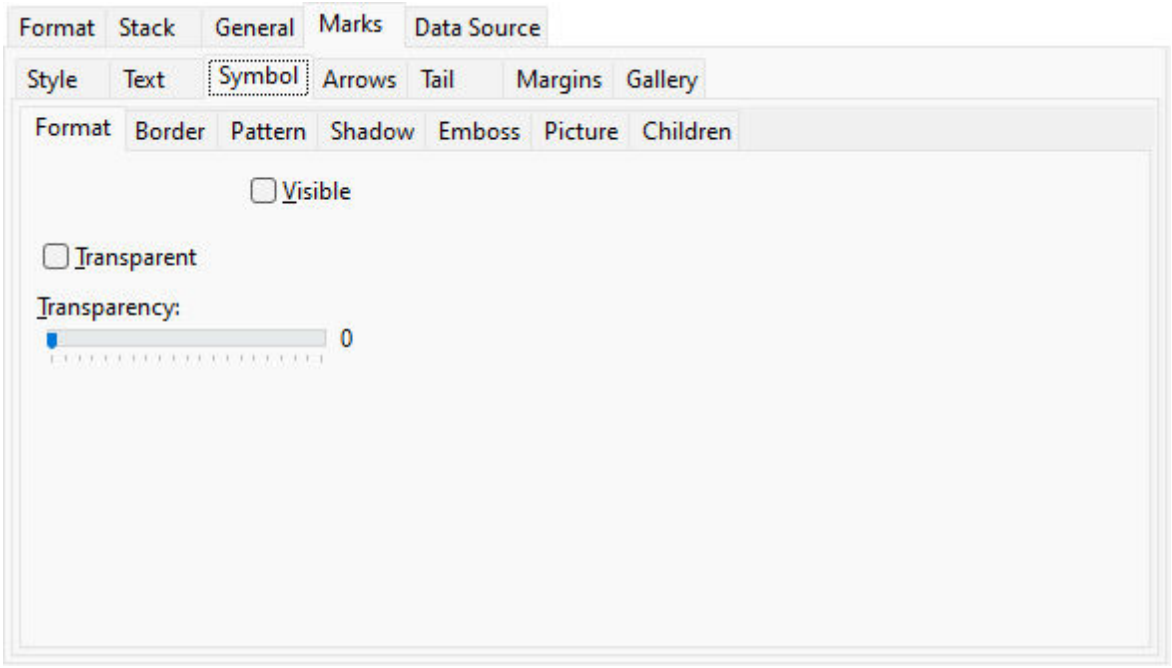
Options
Style - defines the possible label text values: Value, Percent, etc.
Text Align - specifies the text alignment
Visible - specifies whether the added mark text (+/- buttons) within the list are displayed

Format - See **Format**

5.6.1.3.3 Symbol

The Symbol tab provides properties for the display of a symbol for the series marks. Series Marks can display a small "symbol", similar to the chart legend symbol, inside each series mark rectangle. The Symbol property includes several formatting properties used to display the symbol inside the mark.

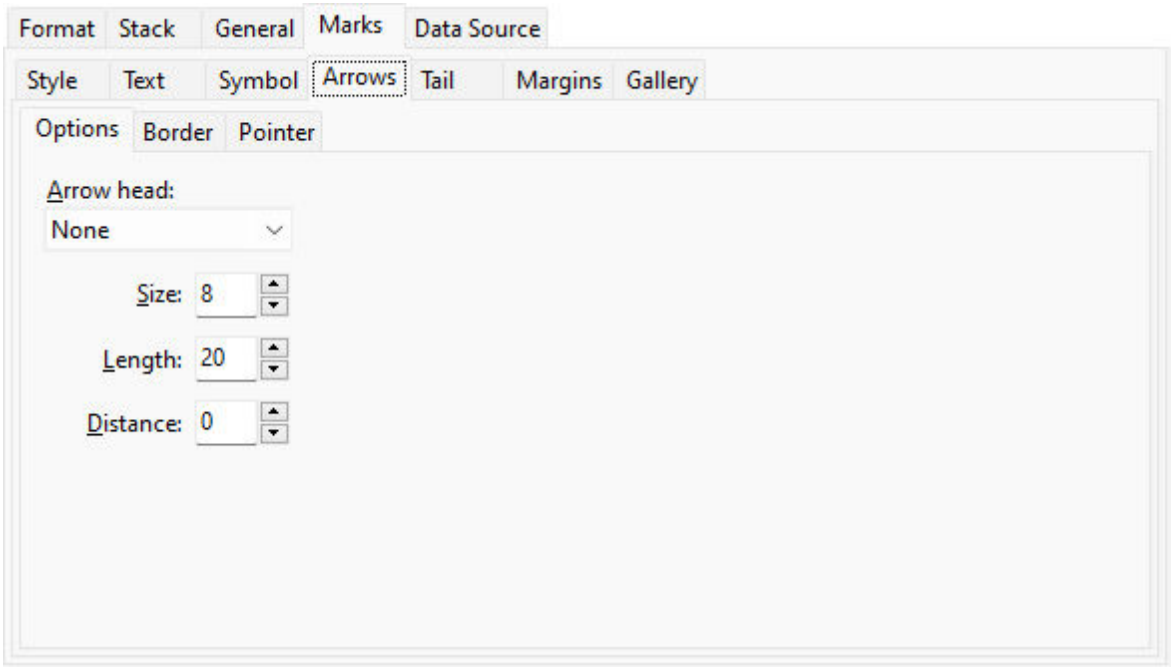
Format - See **Format**
Border - See **Border**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels for the chart Title, SubTitle, etc.



5.6.1.3.4 Arrows

The Arrows tab provides arrow properties for marks. The arrow property determines the kind of pen used to draw a line connecting the Point Mark to the corresponding series point. Each Series component handles marks in a different manner, thus the arrow coordinates are specific to each series type.

Options
Arrow head - specifies the mark arrow head display type; None, Line, Solid
Size - specifies the mark arrow size
Length - specifies the number of pixels used to display a line connecting the Series Marks to their corresponding points
Distance - specifies the distance from mark arrow to their corresponding points



Border - See **Border**

Pointer - specifies the pointer settings when the arrow head display is set to "None"

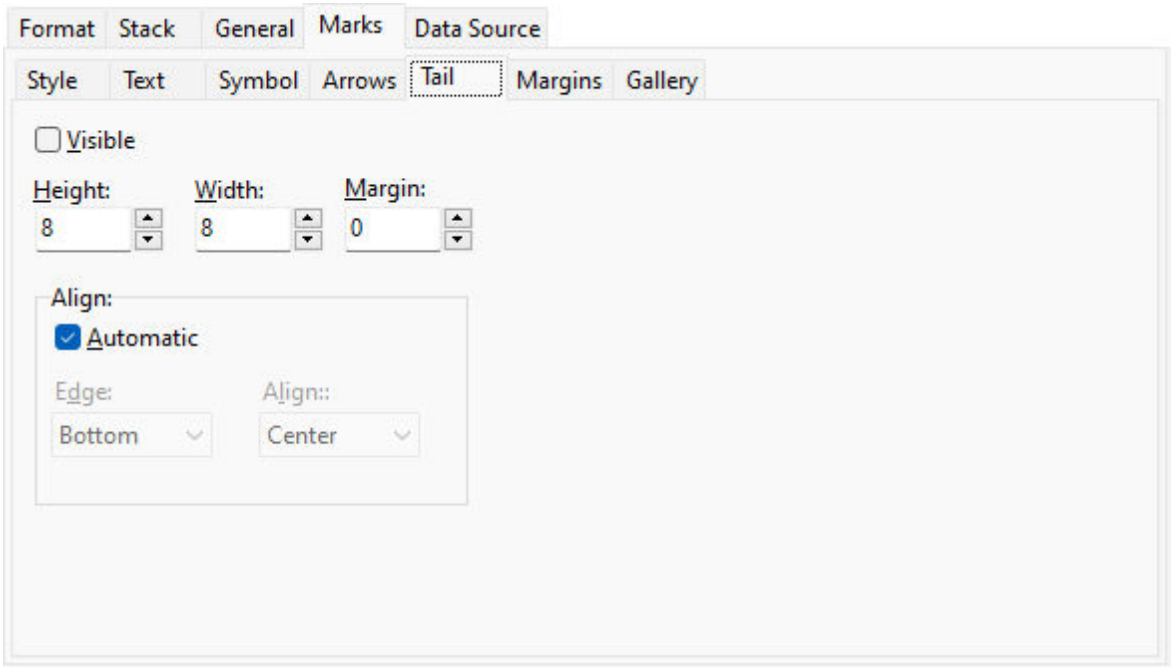
Pointer

Format - See **Format**
Style - specifies the pointer style
Size - specifies the pointer size (in units), width, height, and depth
Pattern - See **Pattern**
Border - See **Border**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

5.6.1.3.5 Tail

The Tail tab provides tail properties for marks.

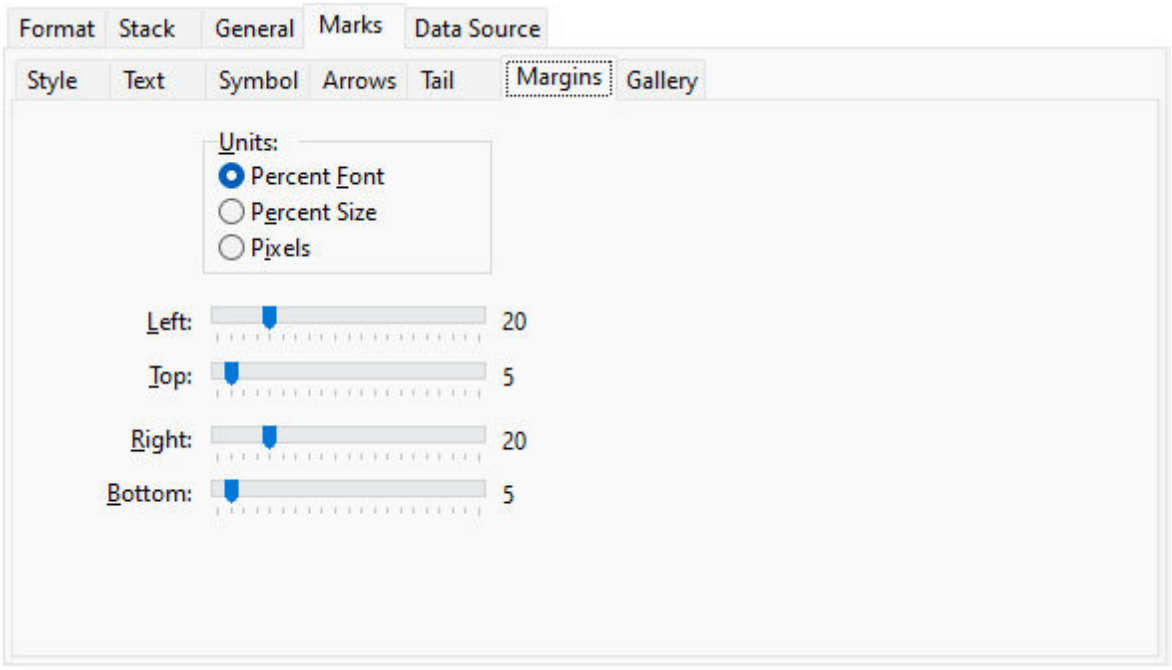
Visible - specifies to show/hide the mark "tail" pointer
Height - specifies the pointer tail height
Width - specifies the pointer tail width
Margin - specifies the pointer tail margin
Align - specifies the pointer tail automatic alignment, or otherwise, the edge location, and alignment



5.6.1.3.6 Margins

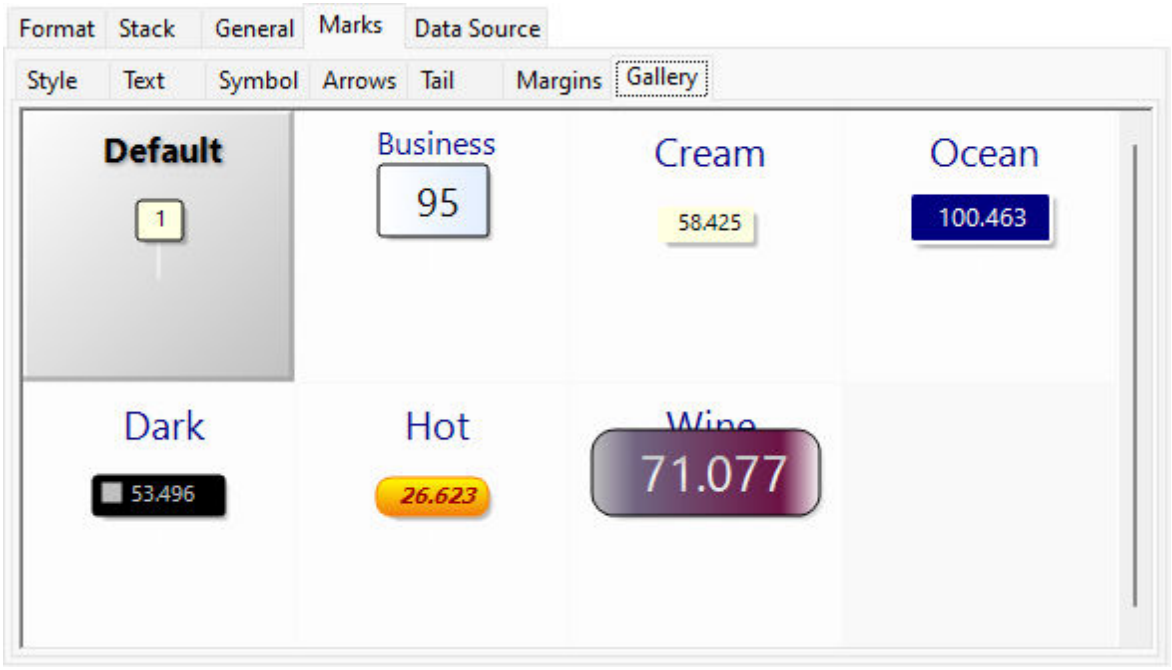
The Margins tab provides margin properties for marks.

Units - specifies the units for adjusting the mark margins
Left - specifies the left margin value for the marks
Top - specifies the top margin value for the marks
Right - specifies the right margin value for the marks
Bottom - specifies the bottom margin value for the marks



5.6.1.3.7 Gallery

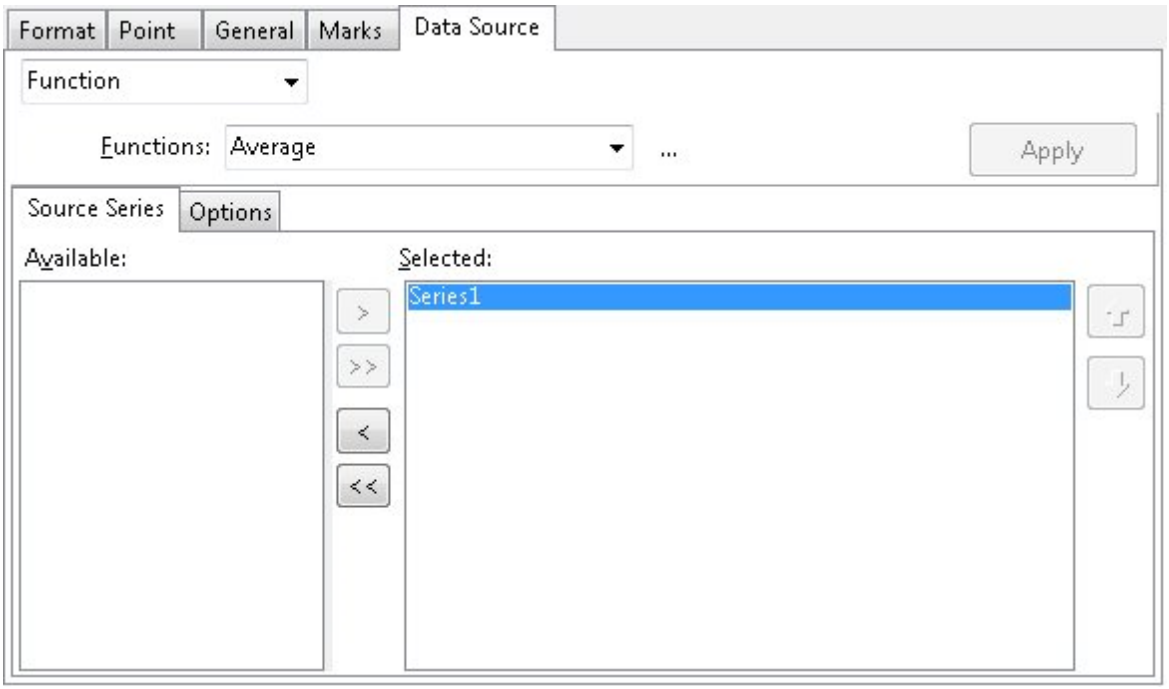
The Gallery tab provides pre-defined properties for marks.



5.6.1.4 Data Source

The "Data Source" tab contains all options used to import data into a chart series.

Manual - the Series data will be entered manually with the keyboard using the Data menu. The series are empty (with no data) until values are entered.
Random - series can be filled using random data. R:Charts will load and display random values into the Series.
Series - provides standard and extended functions to apply to already defined series
Function - independent components that use Series. Series data can be calculated using a mathematical/statistical function, using another series as the underlying values for the function.
Excel files - accepts data from Excel files. After an Excel file is selected, select the the Worksheet in the Excel book which contains the cells. A value range can be defined for the cells to import.
XML file - accepts data from an XML file
Table/View - accepts data from an R:BASE table/view
Text File - accepts data from an ASCII text file. A text file may contain multiple data fields. In general, the fields are separated (delimited) by comma, blank space, tab.



Functions
The Functions are independent components that use Series. Series data can be calculated using a mathematical and statistical functions, using another series as the underlying values for the function.

Functions - shows the available functions. Normally the functions work upon one or more other Series to give a dynamic result. Some functions (for example RSI) are only allowed on financial series like Candle.

Apply - defines a new function. Clicking the "Apply" button will cause the function to be recalculated.

Source Series Tab
The Source tab shows the Series list available. You may choose which Series to add to the function by double-clicking on it and moving it into the "Selected" list. The "Selected" list box contains the series used in the function calculation. The up and down arrows determine the Series order for the function calculation.

Options Tab
The Options tab is visible only for some functions. It contains additional parameters that determine the function style:

Calculate function every - users choose between two options: the function calculation every Number of Points chosen or using a Range of Values, which is 0 by default meaning all the points are used.
All Points - may be activated if you had previously selected by Number of Points to make the calculation. It uses all the points for the calculation.
Change - may be activated if you had selected the option "Range of Values" and would like to change the range. You may add the increment range value at the dialog box display.
Alignment - defines the position of the points. You can choose between: First, Center or Last depending on your preference
Include Null Values - include Null values in calculations

5.6.2 Chart

The "Chart" option contains definition information for the chart. It includes sections to define general and other more specific parameters. Some parameters will not be applied until after a data Series is defined in the chart.

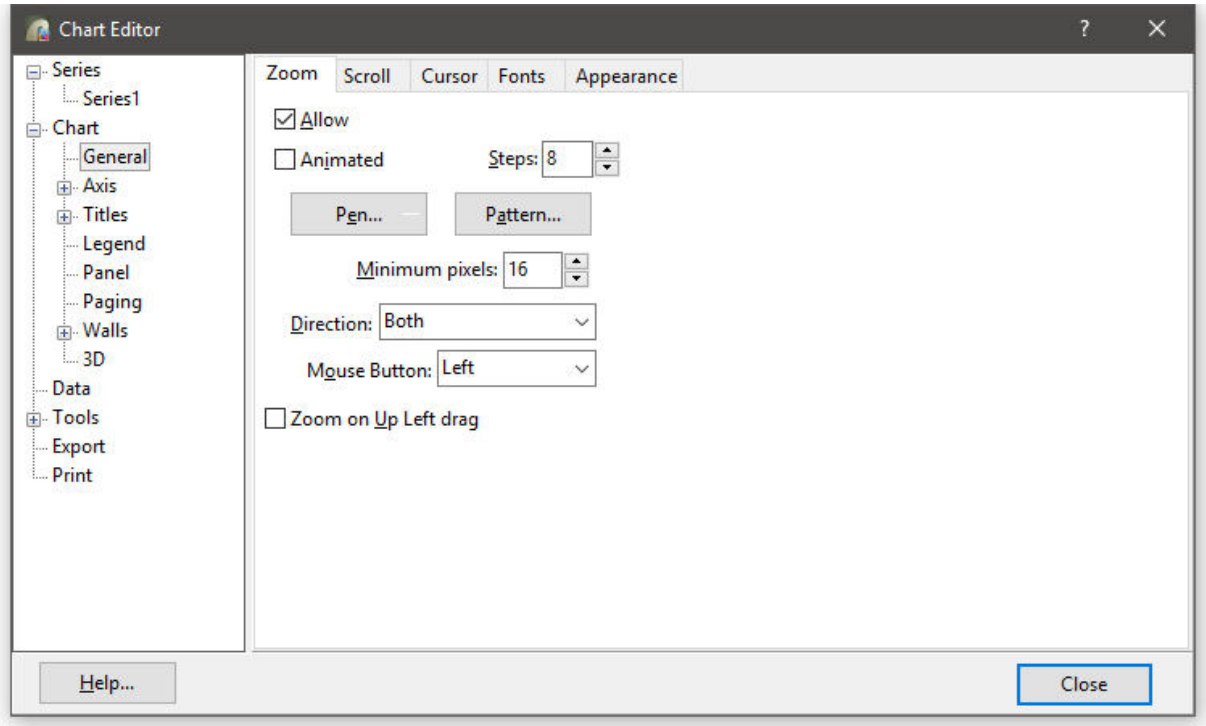


Chart Properties
Chart properties are those which affect the overall appearance of the chart. They include those properties and methods that define the color of the chart background, titles and their position, margins, borders and bevels, background images, frame and axis visible, pen colors and widths, 3D, walls, etc. Nearly all these properties are available via the Chart Editor at design or the Properties toolbar.

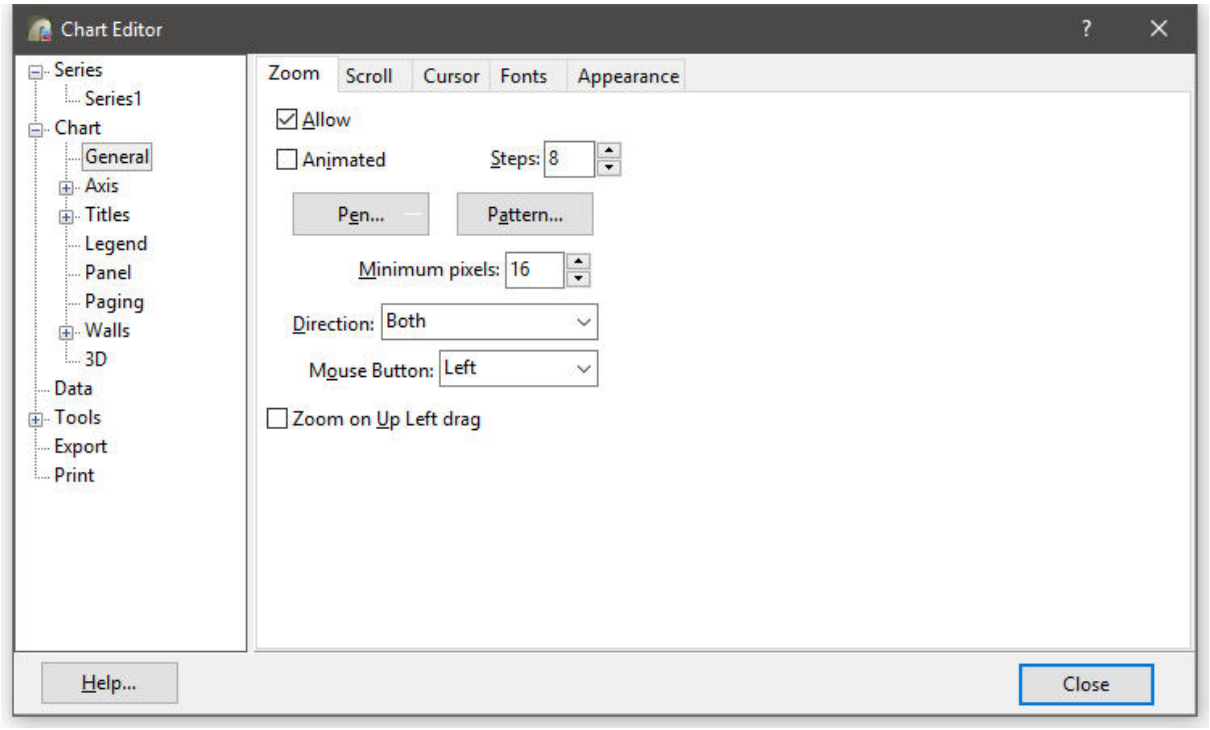
The overall chart appearance characteristics are a grouped into the following categories:

- General
- Axis
- Titles
- Legend
- Panel
- Paging
- Walls
- 3D

These are the groupings you will find if you open the Chart Editor and browse the chart. Other properties affect the 'look' of your chart. These include series colors and mark characteristics, individual axis and grid display properties and labeling.

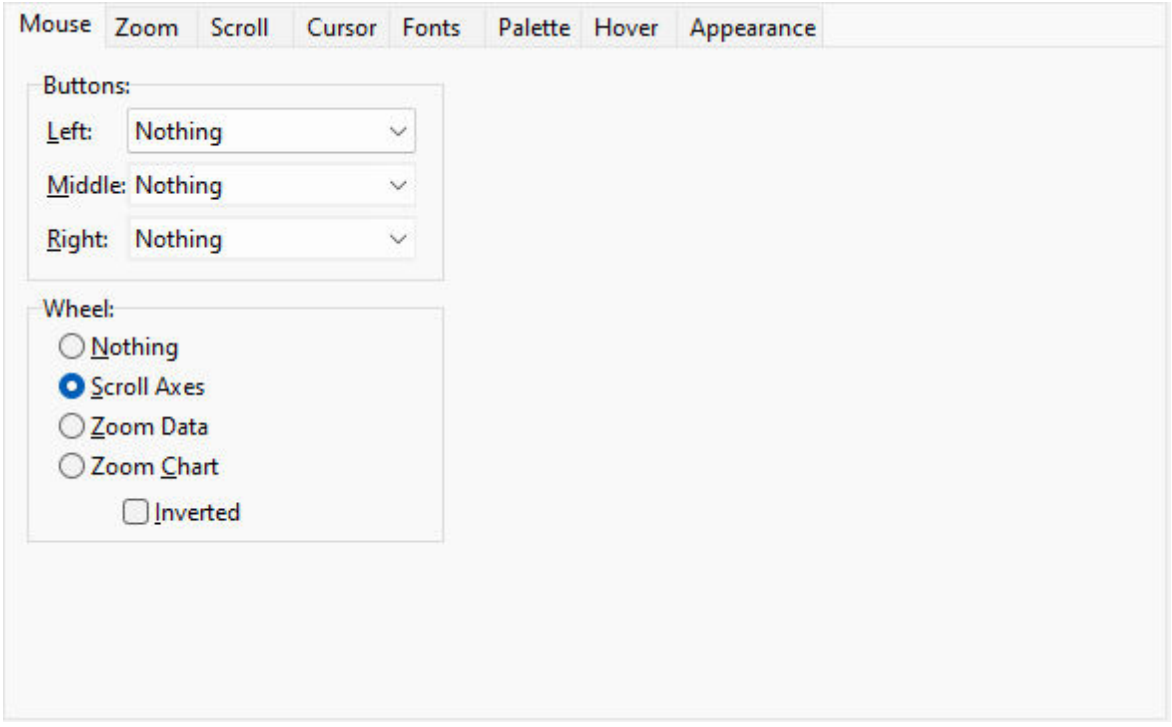
5.6.2.1 General

The General option allows users to modify the general chart properties.



5.6.2.1.1 Mouse

The mouse options offer actions to take for the mouse buttons and scroll wheel.



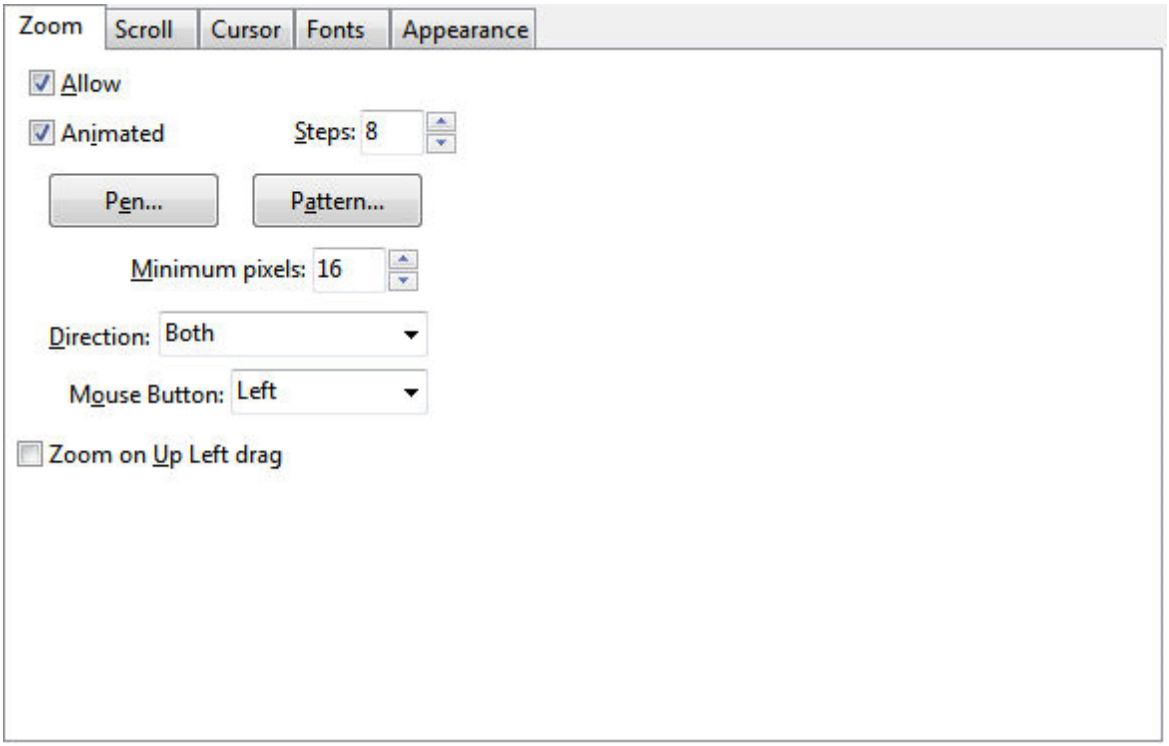
5.6.2.1.2 Zoom

The Zoom tab specifies zoom properties for the chart.

Options
Allow - enables/disables the zoom function in the chart
Animated - determines if zoom will be performed directly or it will be displayed as an animated sequence of zooms
Steps - controls the number of zoom steps
Minimum pixels - sets the minimum number of onscreen pixels traversed by the mouse drag for the zoom action to actuate
Direction - sets the direction of the zoom (Horizontal, Vertical or Both) on a selected area
Mouse Button - sets the mouse button used to enable the zoom action
Zoom on Up Left drag - specifies if the zoom object will apply "un-zoom" when the end user drags the mouse from bottom-right to up-left direction
Historical unzoom - creates an historical recording of chart zoom-ins, so that zoom-out is in their reverse sequence
Keep aspect ratio - the chart is scaled as large as possible inside the given area, preserving the aspect ratio
Full Repaint - controls if the chart is repainted when zooming

Border - used to draw a surrounding rectangle of the zoom area as mouse is dragged. See **Border**

Pattern - See **Pattern**

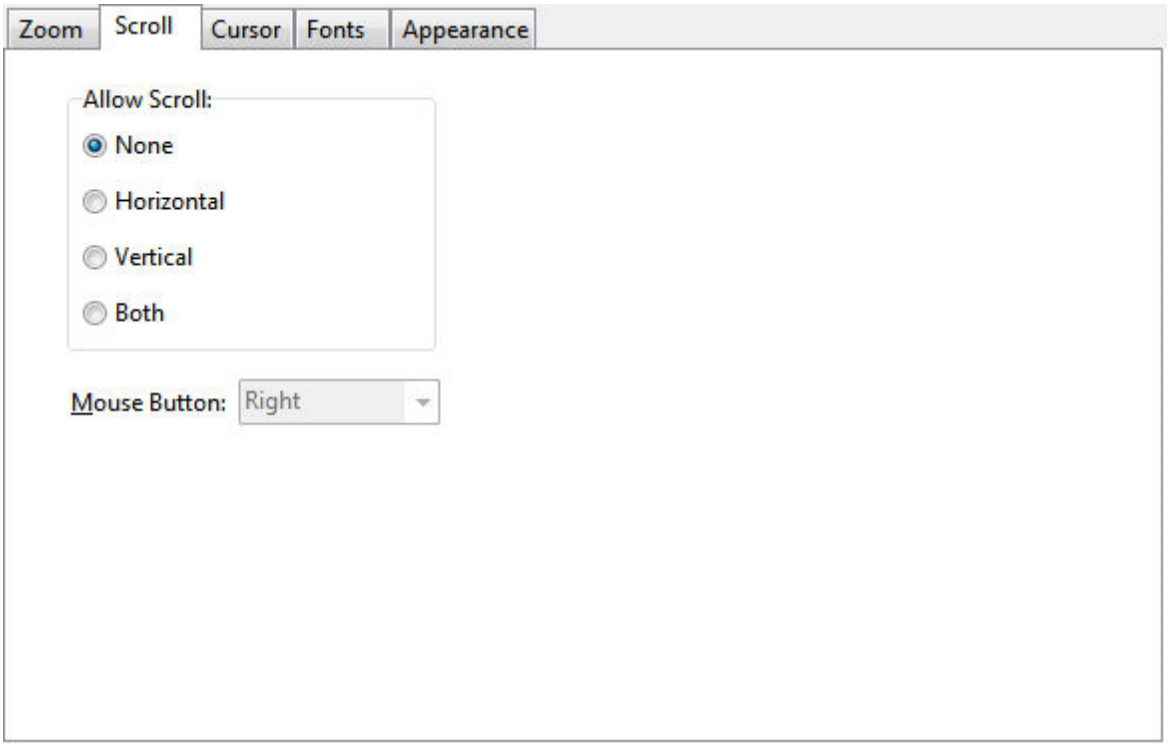


5.6.2.1.3 Scroll

The Scroll tab specifies scroll properties for the chart.

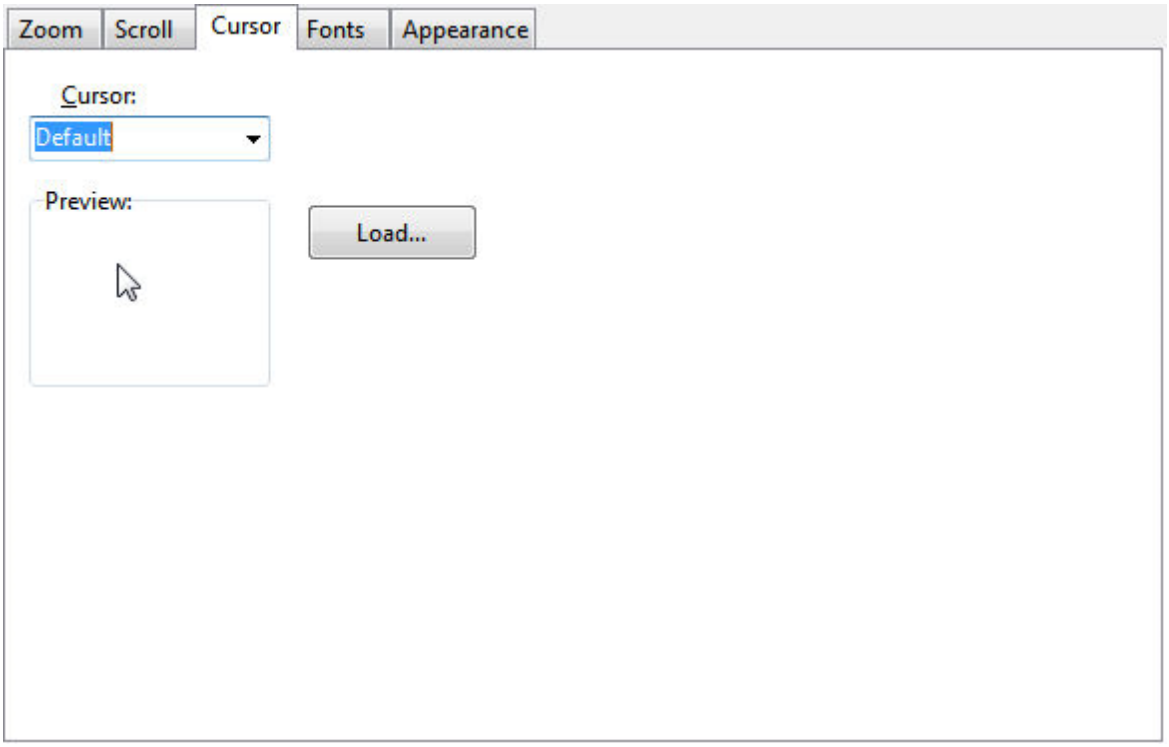
Allow Scroll - enables/ disables the scroll function in the chart series
Mouse Button - sets the mouse button used to enable the scroll action

Inside bounds - When true, the chart is only panned when the mouse cursor moves within the bounds of the chart. When false the chart will continue panning even when the cursor moves outside the charts bounds.



5.6.2.1.4 Cursor

The Cursor tab define a cursor type (image) when the mouse passes into the region.



5.6.2.1.5 Fonts

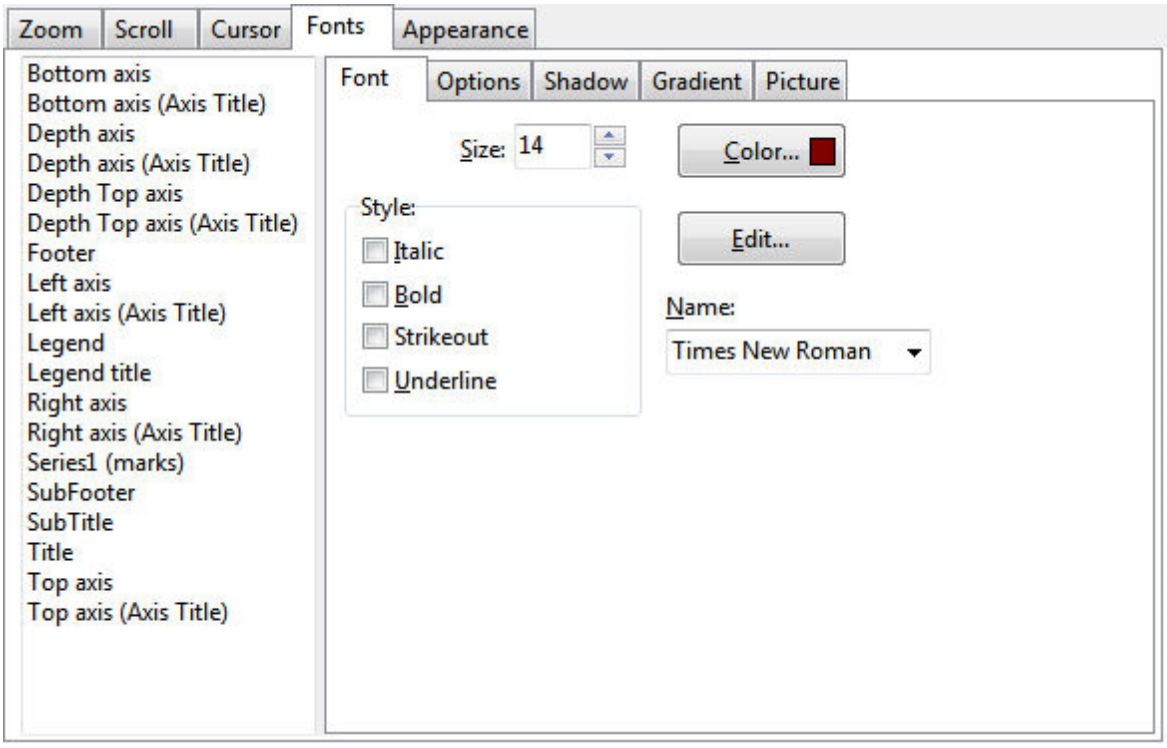
The Fonts tab provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for all portions of the chart.

All Fonts - specifies font settings applies to all fonts
Zoom Text - enables/disables the zooming of text, and allows specifying zoom with more precision

Font - See **Font**

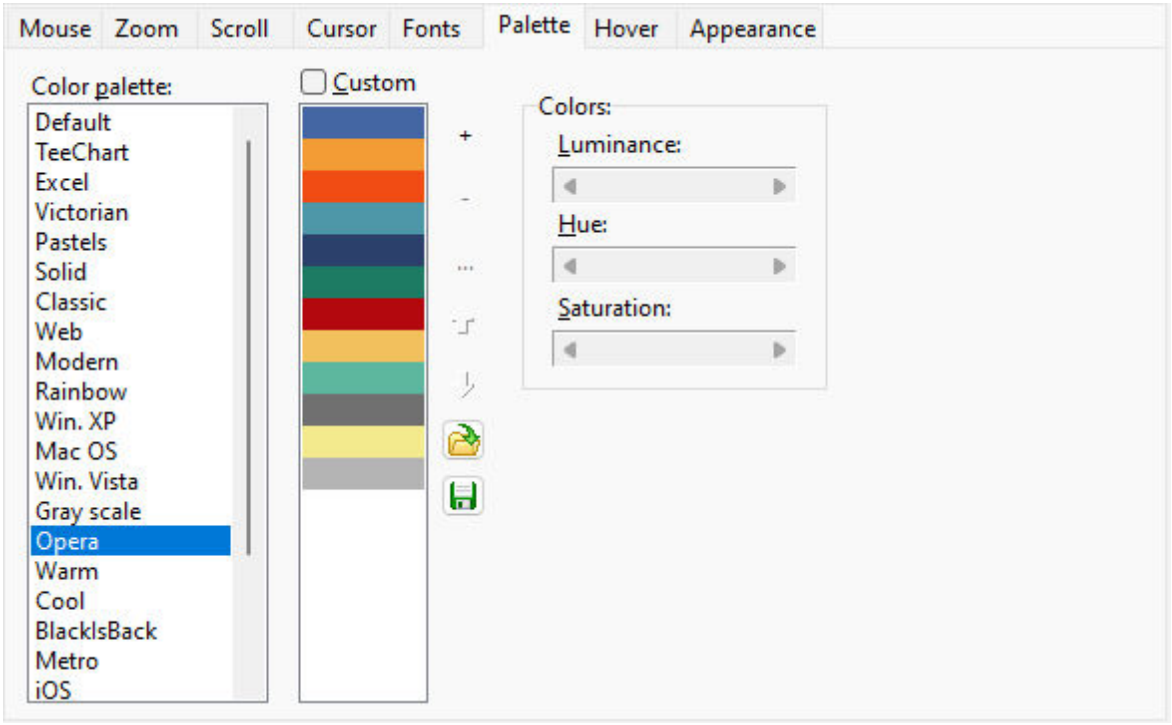
Options
Quality - specifies the quality of the text font
Inter-char spacing - specifies the size of the space between characters
Depth - specifies the font depth

Shadow - See **Shadow**
Emboss - See **Emboss**
Gradient - See **Gradient**
Picture - See **Picture**
Outline - specifies font outline properties. See **Border**



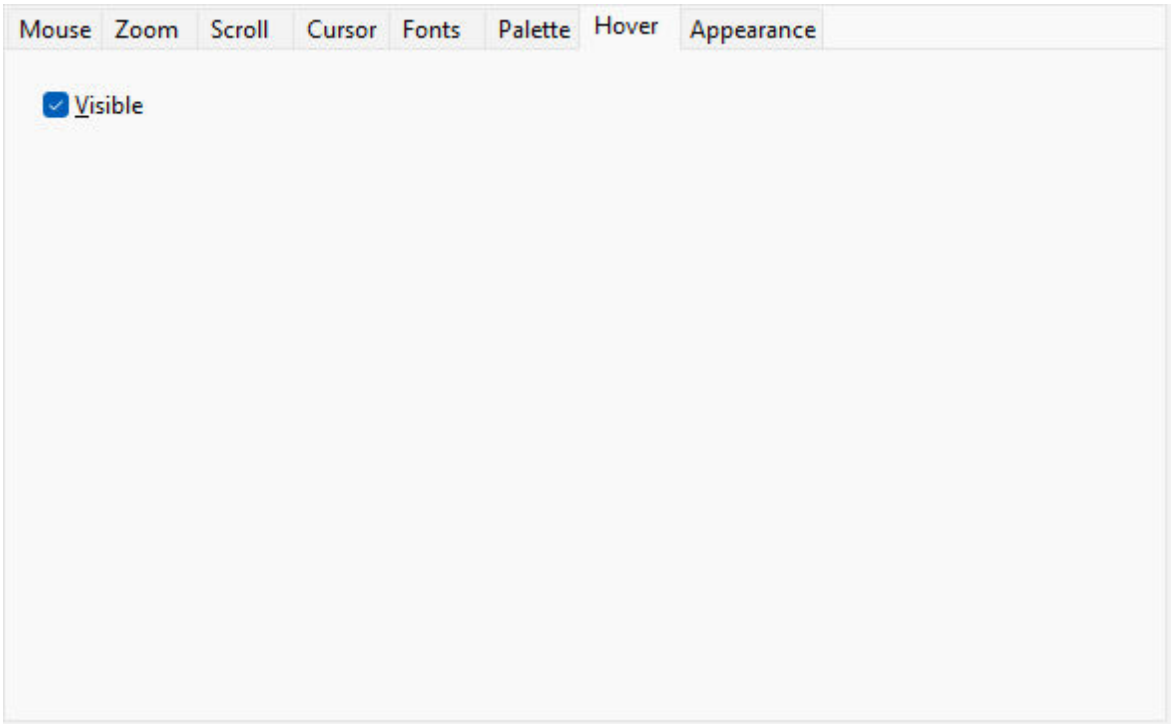
5.6.2.1.6 Palette

The Palette tab provides color palettes to review a set of available colors.



5.6.2.1.7 Hover

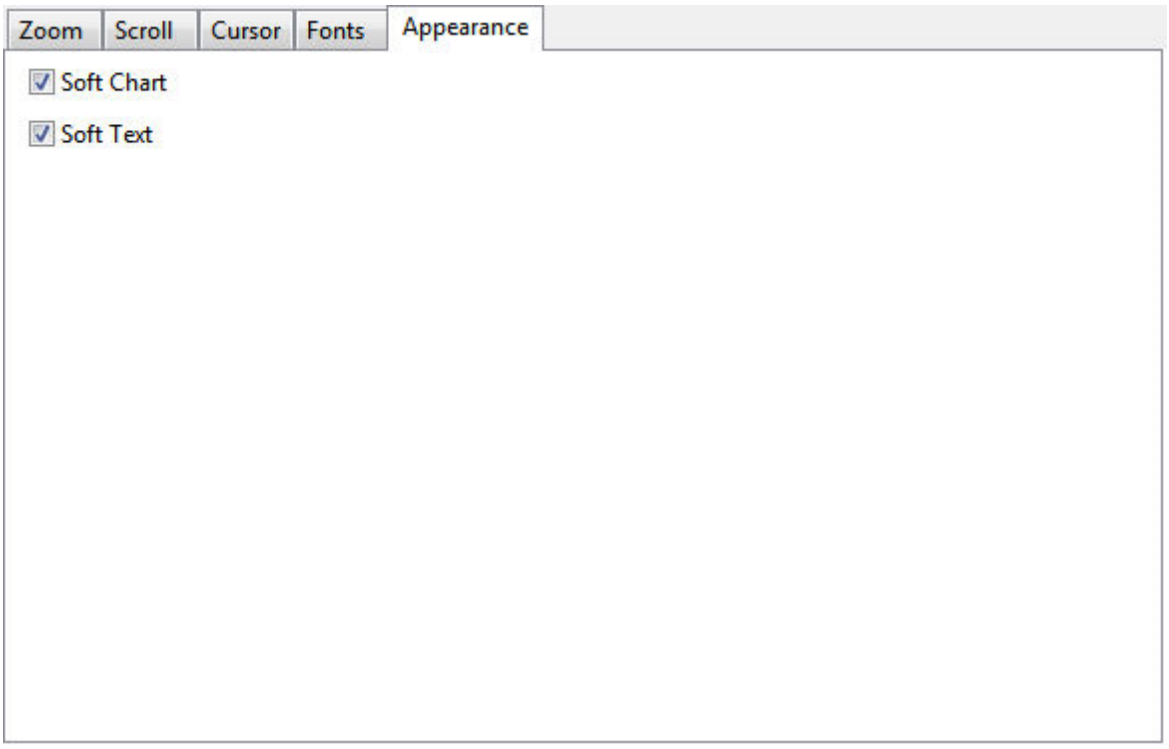
The Hover tab enables/disables all visual interactions/hints when the mouse cursor hovers over an element in the chart.



5.6.2.1.8 Appearance

The appearance options provide an enhanced display for the chart objects and text.

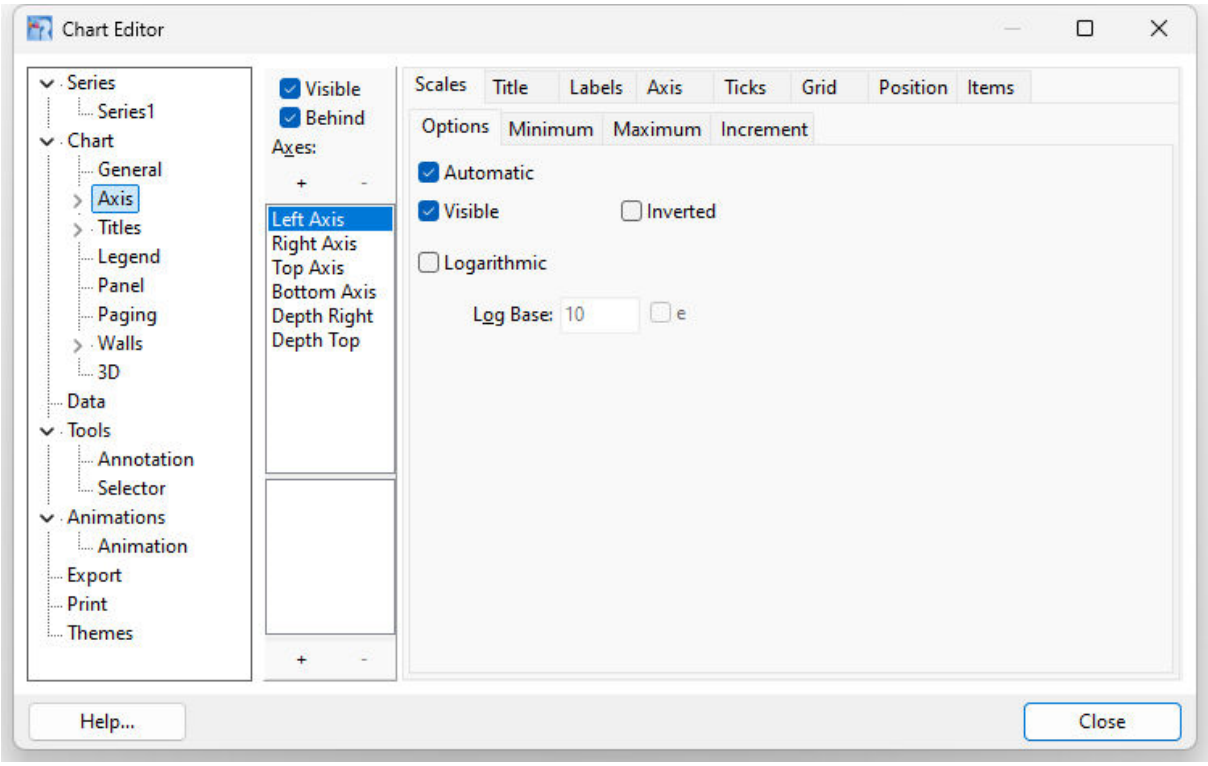
Soft Chart - specifies the chart is displayed using a smooth resizing algorithm to soften diagonal pixels
Soft Text - specifies the text is displayed using a smooth resizing algorithm to soften diagonal pixels



5.6.2.2 Axis

The Axis option supports custom settings for all available chart axes. In order to alter an axis setting, it must first be selected within the Axis tree nodes or the "Axes:" panel. There are six available axes in a chart: Left, Right, Top, Bottom, Depth Right, and Depth Top.

Visible - shows or hides the chart axis
Behind - shows the chart axis behind the series, or not
Axes - provides the available axes: Right, Left, Top, Bottom, Depth Right, and Depth Top
Signs (+) and (-) - enables to add or delete chart Axes

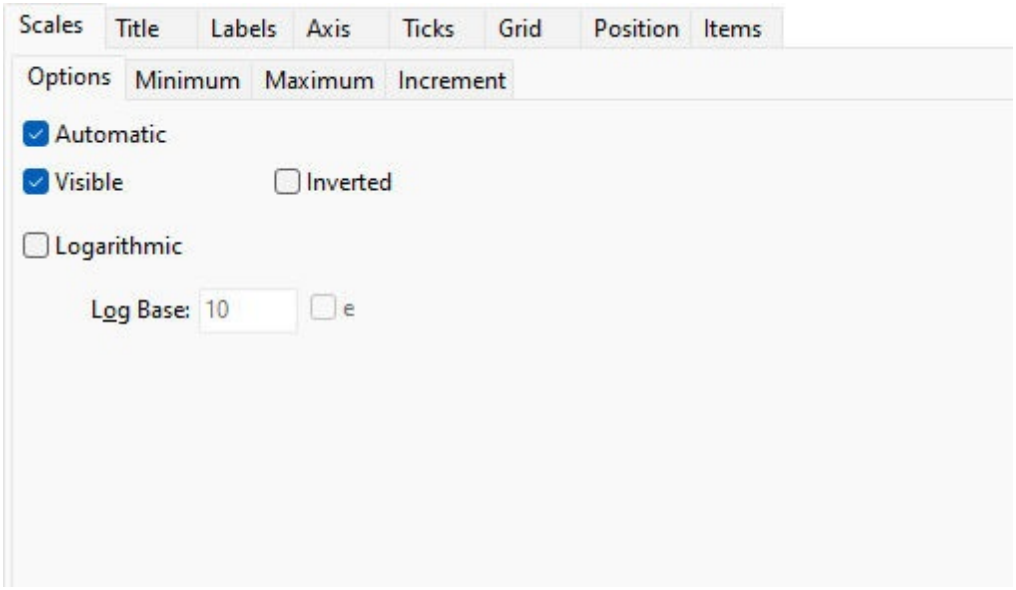


5.6.2.2.1 Scales

Options
Automatic - sets the selected axis properties for the chart to be proportional
Visible - shows or hides the selected axis lines
Inverted - specifies if the selected axis values can be inverted resulting in an inverted chart
Logarithmic - specifies if the axis scales logarithmically (boolean)
Log Base - sets the base for the logarithmic scale

Minimum/Maximum
Auto - sets the axis values automatically
Change - allows users to define a maximum and minimum axis value
Offset - specifies to offset the values
Round - specifies to round the values

Increment
Change - defines the axis increment, which is the minimum step between axis labels
Show all labels - displays all increment labels

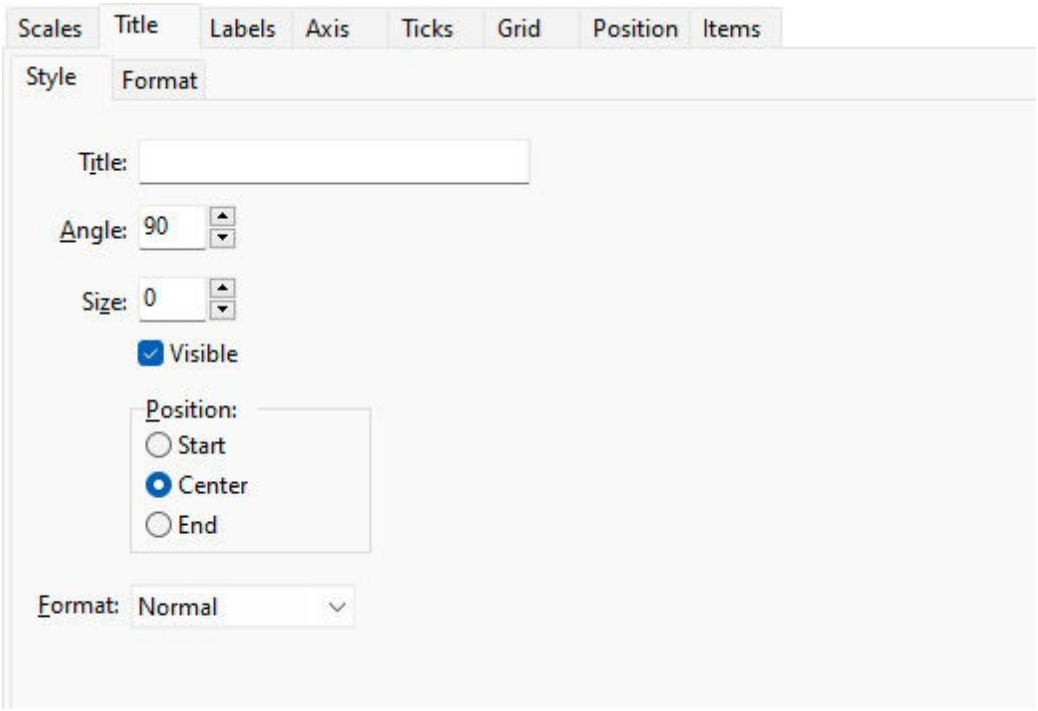


5.6.2.2.2 Title

Style
Title - specifies a title or text for the selected axis
Angle - specifies the title label angle
Size - specifies the axis title label size
Visible - displays or hides the selected axis title
Position - sets the chart axis position
Format - specifies to output normal plain text or text that might contain HTML formatting tags

Format

Format - See **Format**
Border - See **Border**
Font - See **Font**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels for the axis title



5.6.2.2.3 Labels

Style
Visible - displays or hides the selected axis label
Multi-line - automatically breaks the label line on occurrence of the space
Round First - controls whether labels of the axis selected will be automatically "rounded" to the nearest magnitude
Label on Axis - controls whether labels will be shown at axis minimum and maximum positions, or not
Alternate - displays alternate values for the label
Behind Grid - specifies if the axis labels are drawn behind the grid
Size - allows users to define the label size of the selected axis
Angle - allows users to define the label angle of the selected axis
Minimum Separation - specifies the minimum distance between axis labels as a percentage
Style - defines the text style of the selected axis; Auto, Value, Marks, Text and None
Margin to axis % - specifies the percent margin of the labels from the axis

Options
Exponential - defines the axis values exponentially
Values Format - defines the axis labels text format/mask
Default Alignment - controls whether the axis labels will be shown in the default position, or not
Use Images - specifies to use images for the axis labels
Position - specifies the axis label position relative to the axis ticks

Format

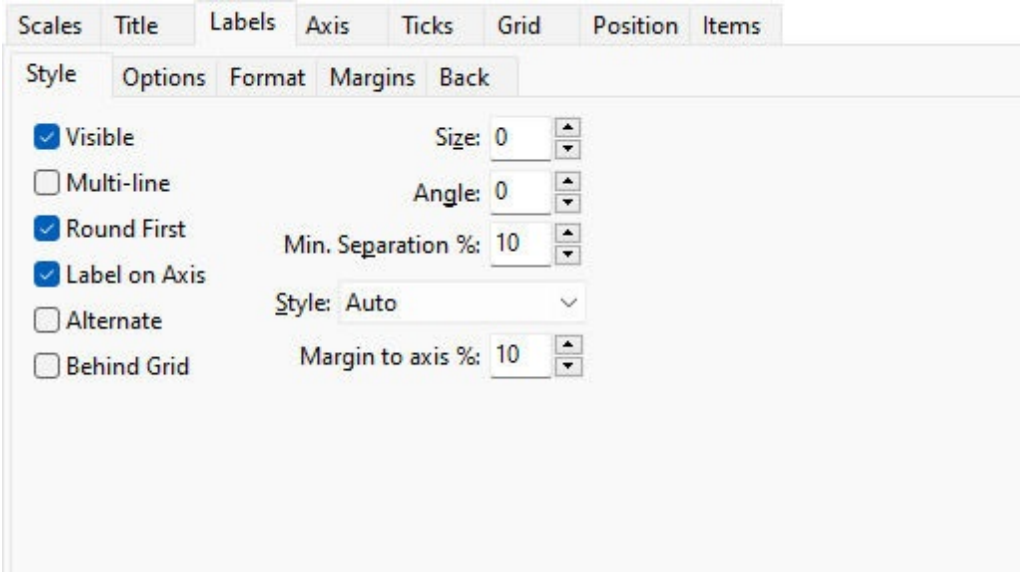
Format - See **Format**
Border - See **Border**
Font - See **Font**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the text for child labels

Margins

Units - specifies the units for adjusting the axis label
Left - specifies the left margin value for the axis label
Top - specifies the top margin value for the axis label
Right - specifies the right margin value for the axis label
Bottom - specifies the bottom margin value for the axis label

Back - specifies a background for the selected axis labels

Format - See **Format**
Border - See **Border**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines child text labels for the selected axis labels



5.6.2.2.4 Axis

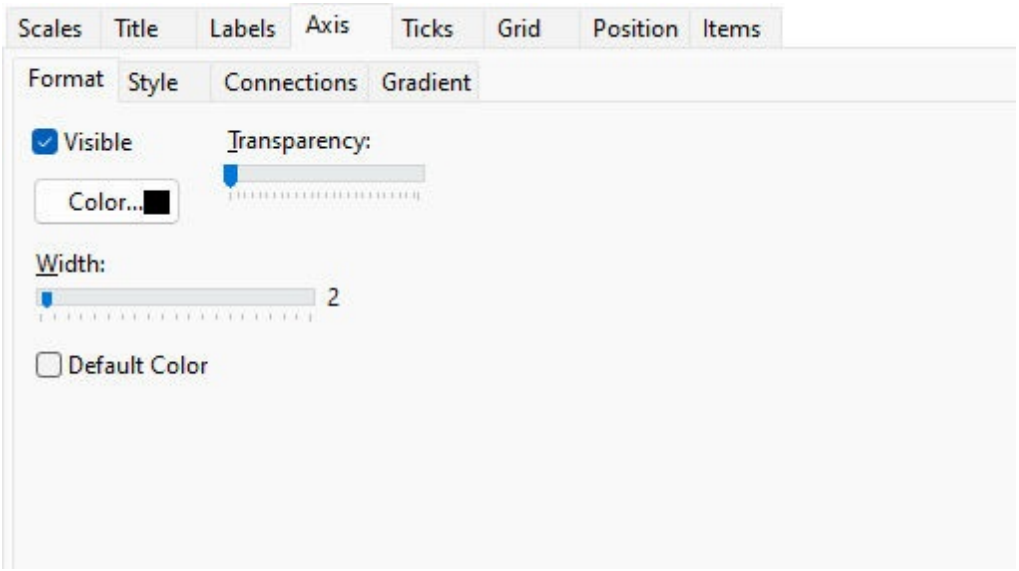
Format - See **Format**

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**



5.6.2.2.5 Ticks

Outer
Length - defines the border and length in pixels of the axis ticks
At Labels Only - sets the axis ticks and axis grid to be drawn only at labels

Inner
Length - defines the border and length in pixels of axis ticks drawn inside chart boundaries

Minor
Length - defines the border and length in pixels of axis minor ticks
Count - defines the number of Grid lines

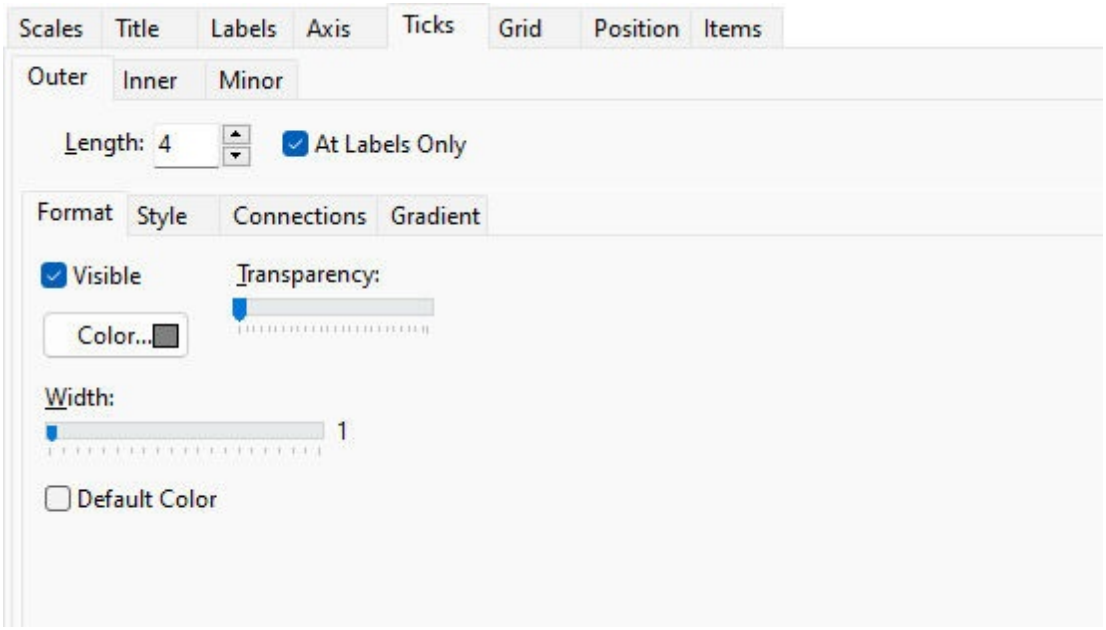
Format - See **Format**

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**



5.6.2.2.6 Grid

Border - displays the axis background grid
Centered - controls if grid will be centered or not onscreen
Z - controls the z axis size
Draw every - controls the spacing for grid lines

Minor - displays the minor background grid
Count - defines the and the number of lines for the minor background grid

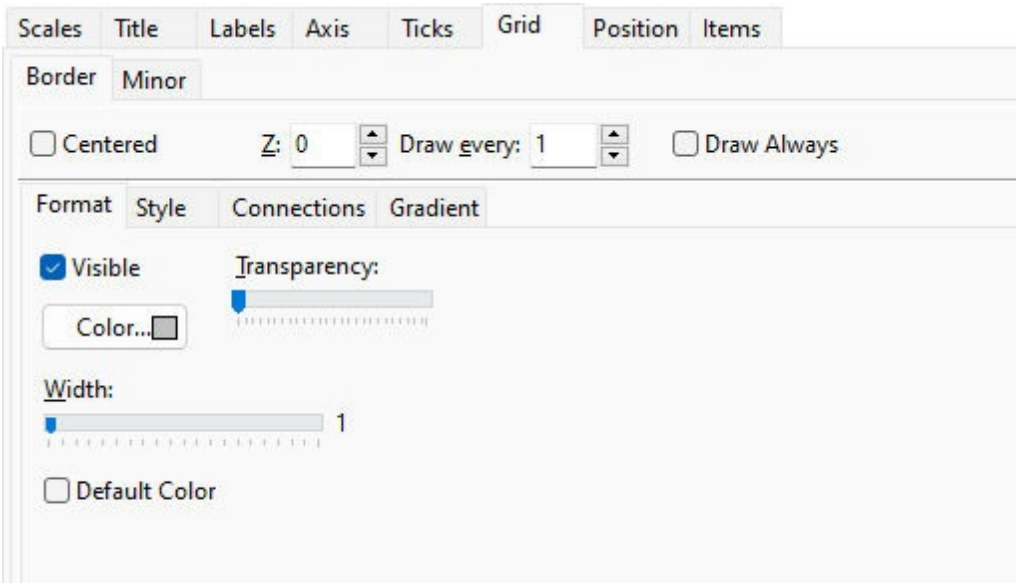
Format - See **Format**

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

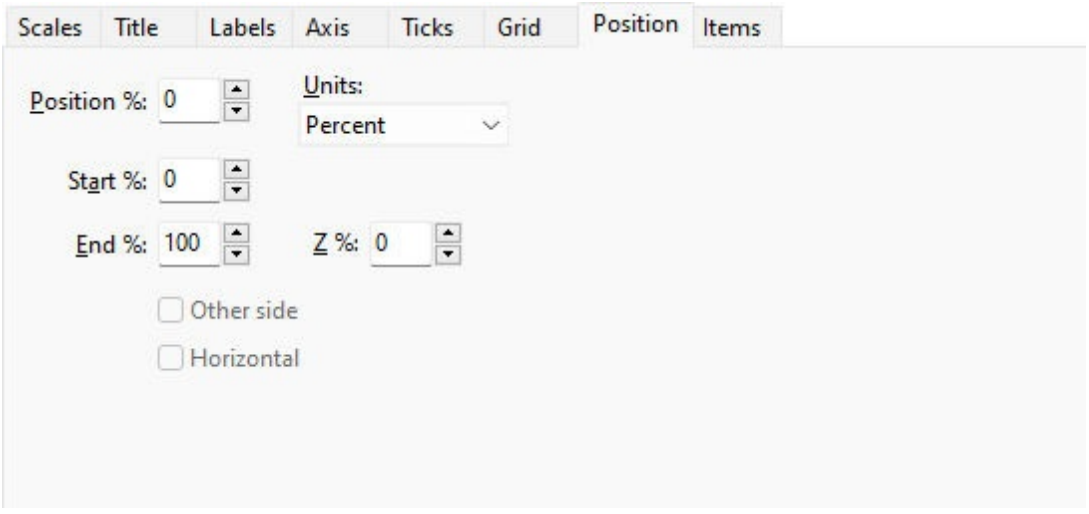
Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**



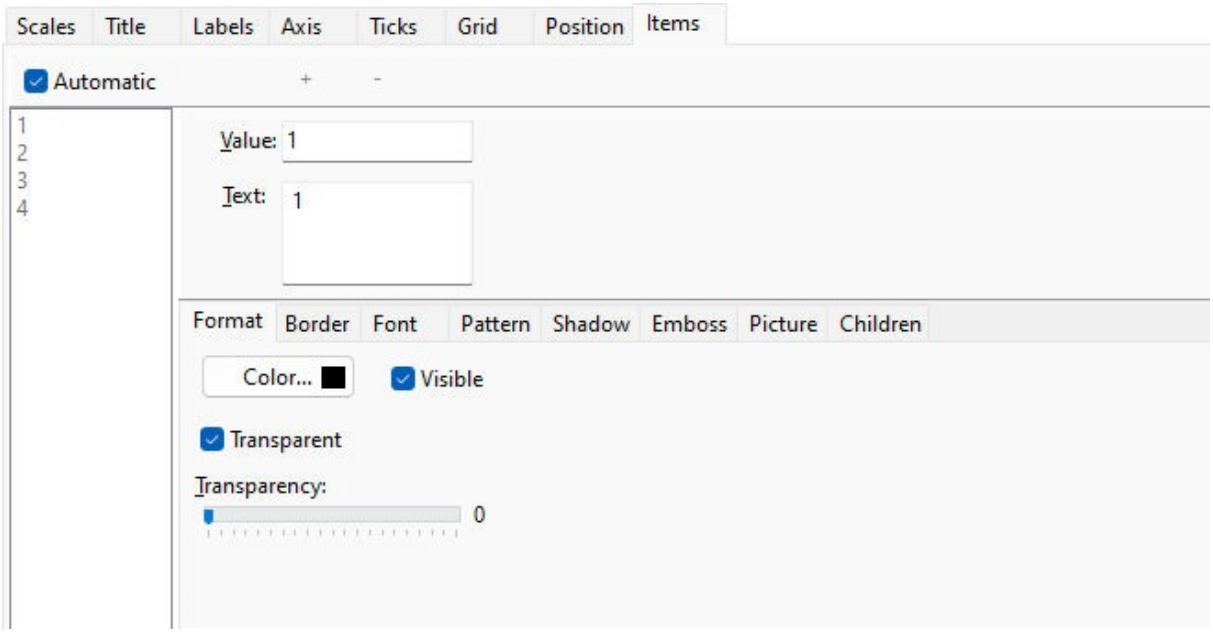
5.6.2.2.7 Position

Position % - axis position as a percentage (0-100%). 0% being top for a horizontal axis and left for a vertical axis.
Start - axis starting position on its own axis expressed as percentage (0-100%). For a vertical axis a start position of 75% would place the top of the axis 75% down the chart.
End - axis ending position as a percentage. For the vertical axis a value of 75% would place the beginning of the scale 75% down from top.
Units - controls the value for the axis units
Z - controls the z axis size
Other side - controls the opposite axis position
Horizontal - determines the axis position horizontally



5.6.2.2.8 Items

The Items tab allows for custom adjustments to the selected axis values.



5.6.2.3 Titles

The Titles option adjusts the properties for the chart Title, SubTitle, SubFooter and Footer, with options providing custom positioning, transparency, gradient, and shadowing.

Position
Custom - controls a customized position for the chart Title, SubTitle, etc.
Vert. margins - adjusts the vertical margin for the Title, SubTitle, etc.
Adjust Frame - controls the text label frame

Options
Visible - controls whether the Title, SubTitle, etc. will be shown, or not
Alignment - determines the position of the Title label in the chart panel: Left, Right or Center
Format - specifies to output normal plain text or text that might contain HTML formatting tags

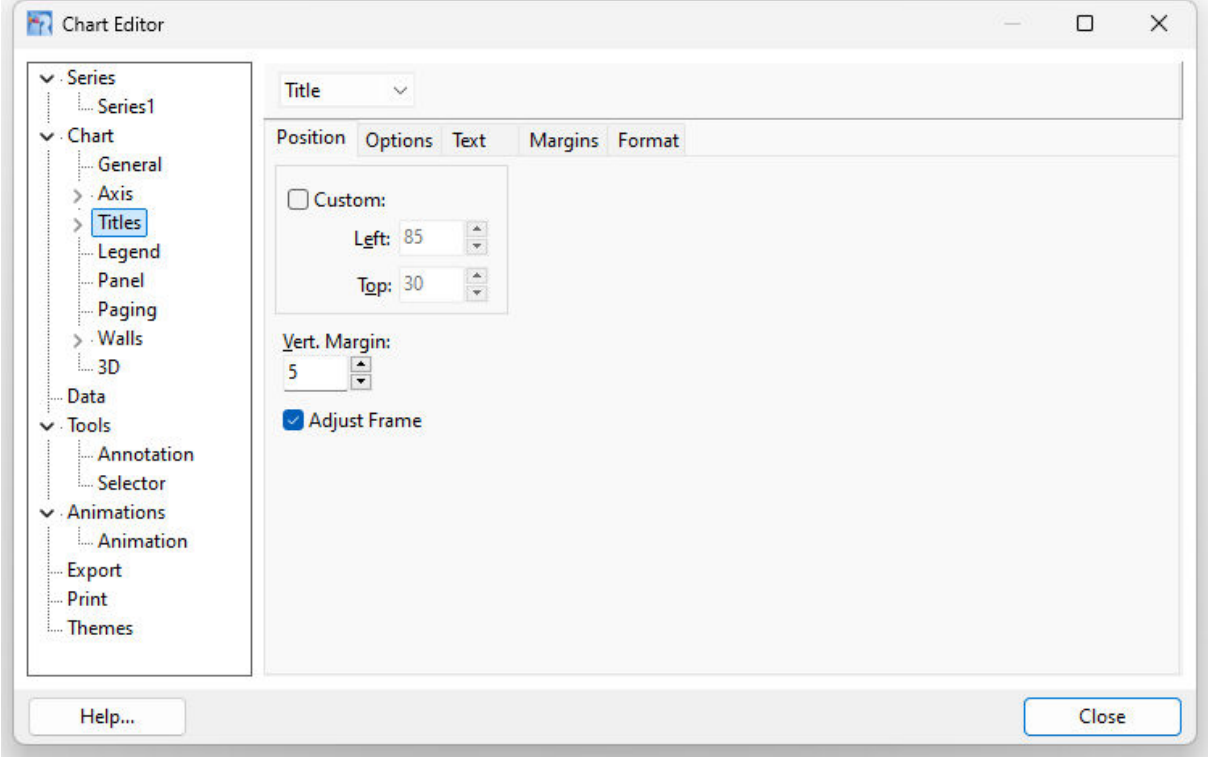
Text - defines the text label for the chart Title, SubTitle, etc.
Text alignment - determines the position of the title: Left, Right or Center
Clip Text - specifies if the text is cut off
Rotation - specifies the angle for the text
Cursor - defines a cursor type (image) when the mouse passes into the text area
Edit - alters the legend text

Margins
Units - specifies the units for adjusting the title
Left - specifies the left margin value for the title
Top - specifies the top margin value for the title
Right - specifies the right margin value for the title
Bottom - specifies the bottom margin value for the title

Format

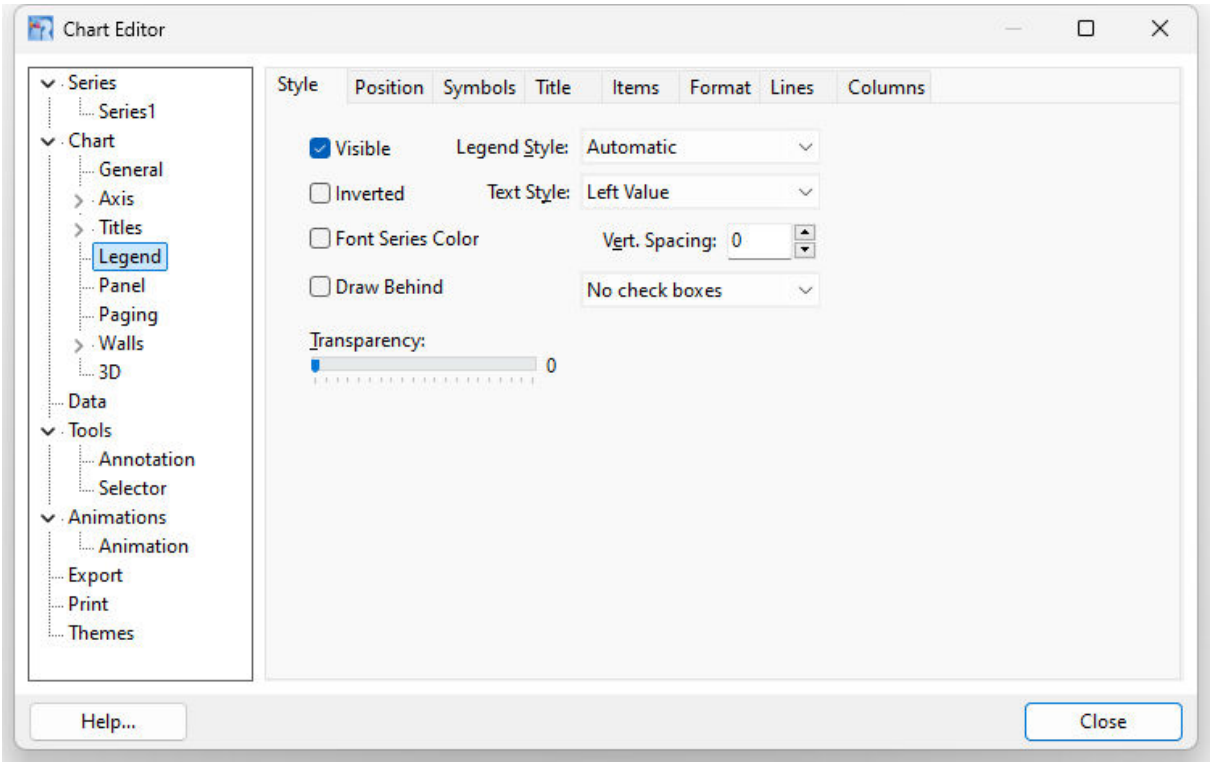
Format - See **Format**
Border - See **Border**
Font - See **Font**
Pattern - See **Pattern**

Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**
Children - defines the child text labels for the chart Title, SubTitle, etc.



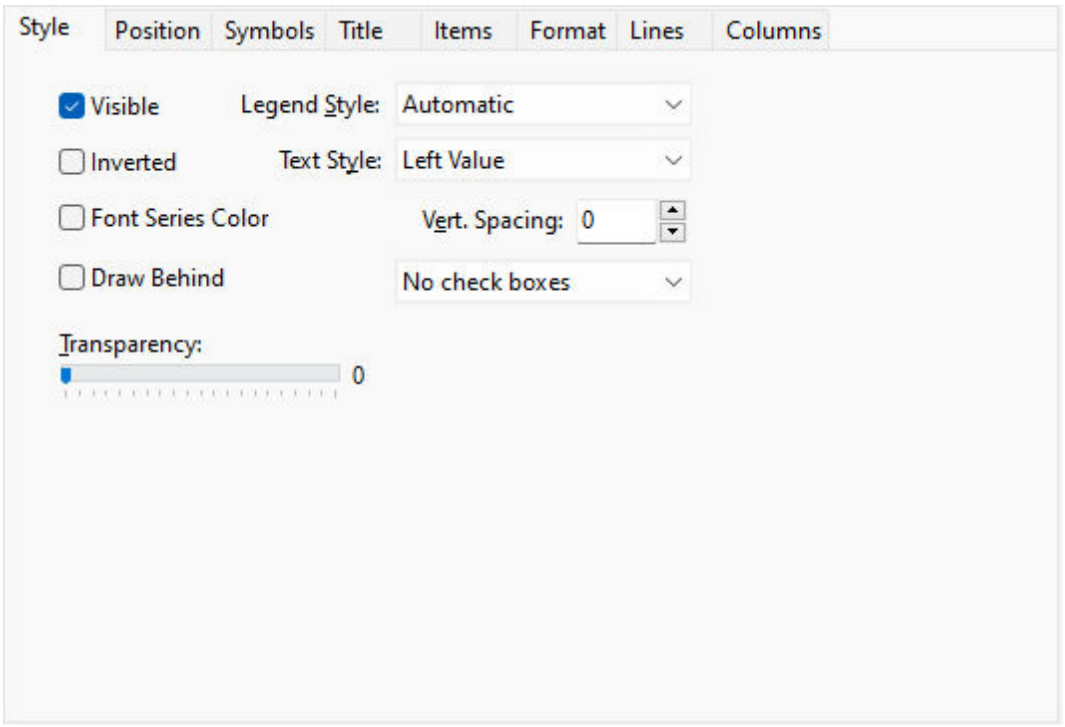
5.6.2.4 Legend

The Legend option adjusts the chart legend with options including various styles, spacing, custom positioning, specific symbols, transparency, gradient, and shadowing.



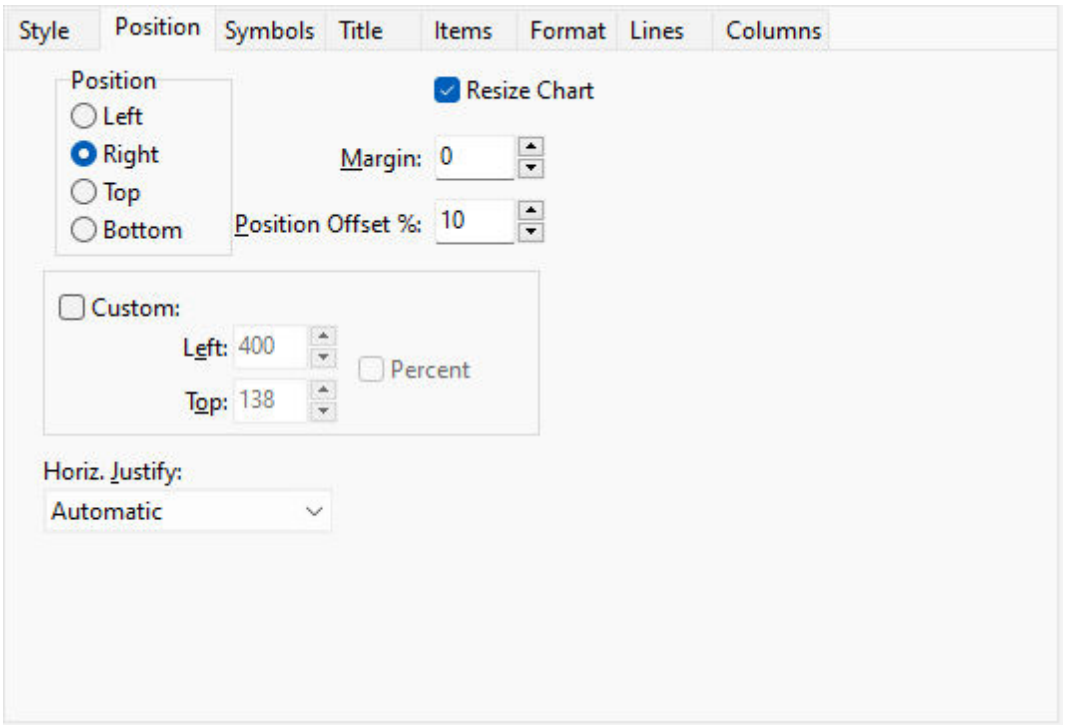
5.6.2.4.1 Style

Visible - shows or hides the chart legend
Inverted - displays the legend items in the opposite direction
Font Series Color - determines whether or not the color of the font of the legend text is the same as the Series color
Draw Behind - specifies if the legend is drawn behind the series
Transparency - specifies the transparency for the legend
Legend Style - defines the legend style
Text Style - defines the legend text style: Plain, Left value, Right value, etc.
Vertical Spacing - determines the vertical spacing between legend items (pixels)
Check Boxes - enables/disables the display of legend check boxes, or radio buttons



5.6.2.4.2 Position

Position - sets the chart legend position
Resize Chart - indicates whether legend will automatically reduce the chart to prevent overlapping of legend and chart
Margin - determines the number of screen pixels between legend and chart
Position Offset - indicates the displacement as a percentage depending on the legend position
Custom - controls a customized position for the legend position in the chart panel
Horiz. Justify - specifies if the legend is horizontally justified; Automatic, Yes, No



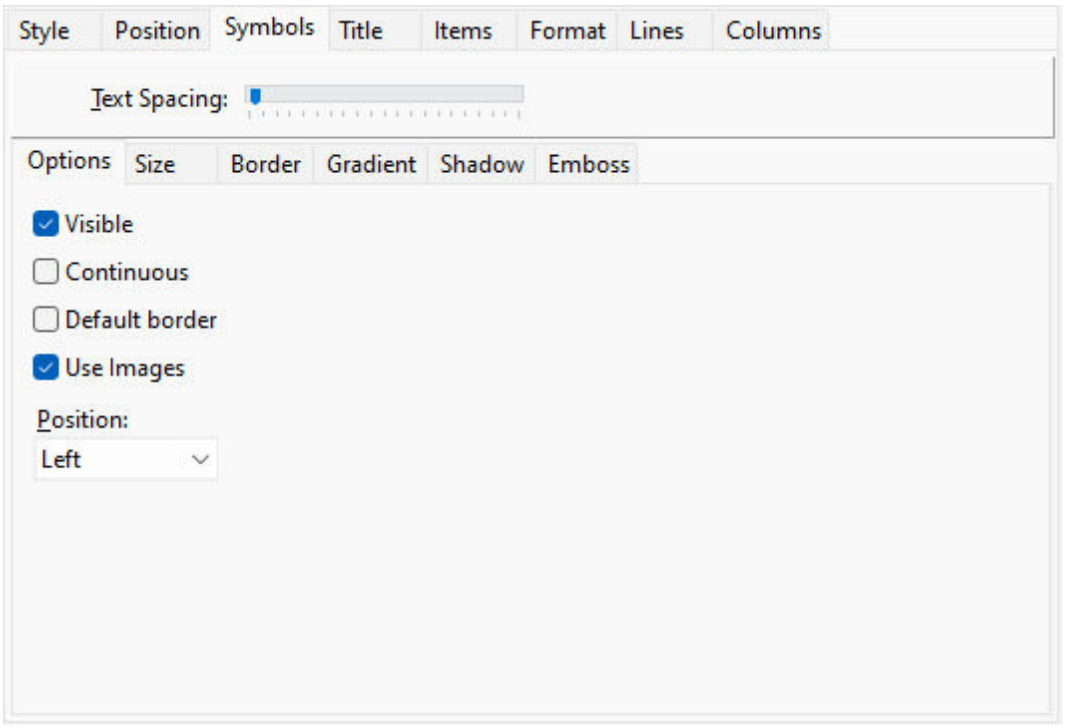
5.6.2.4.3 Symbols

Text Spacing - specifies the spacing between the legend symbols and series values

Options
Visible - shows or hides the symbols within the legend
Continuous - lets the different legend color rectangles flow into each other. The color rectangles of the different items are drawn attached to each other (no vertical spacing).
Default Border - displays the default border for legend symbols
Use Images - specifies to use images for the legend symbols
Position - sets the symbols and units position respectively in the legend

Size
Height - determines the legend symbols height, as a percentage or in pixels
Width - determines the legend symbols width, as a percentage or in pixels
Squared - displays a square symbol, rather than a rectangle

Border - See **Border**
Gradient - See **Gradient**
Shadow - See **Shadow**
Emboss - See **Emboss**



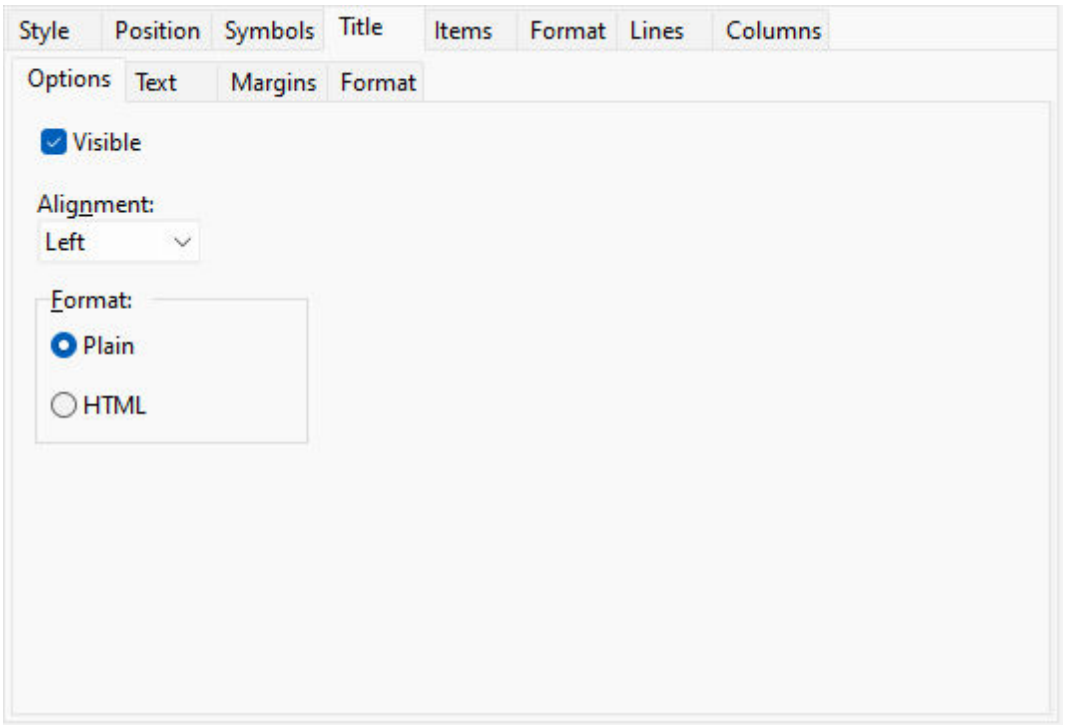
5.6.2.4.4 Title

Options
Visible - specifies if the legend title is displayed
Alignment - determines the position of the title legend in the chart panel: Left, Right or Center
Format - specifies to output normal plain text or text that might contain HTML formatting tags

Text - specifies the legend text
Text alignment - determines the position of the title: Left, Right or Center
Clip Text - specifies if the text is cut off
Rotation - specifies the angle for the text
Cursor - defines a cursor type (image) when the mouse passes into the text area
Edit - alters the legend text

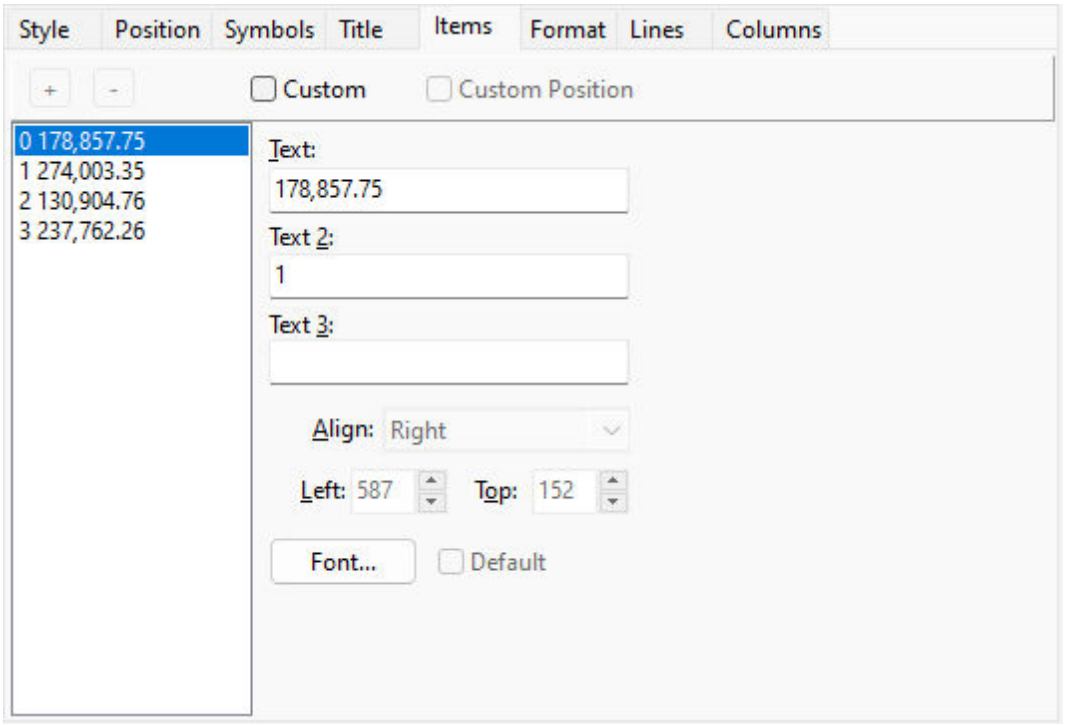
Margins
Units - specifies the units for adjusting the title
Left - specifies the left margin value for the title
Top - specifies the top margin value for the title
Right - specifies the right margin value for the title
Bottom - specifies the bottom margin value for the title

Format - See **Format**



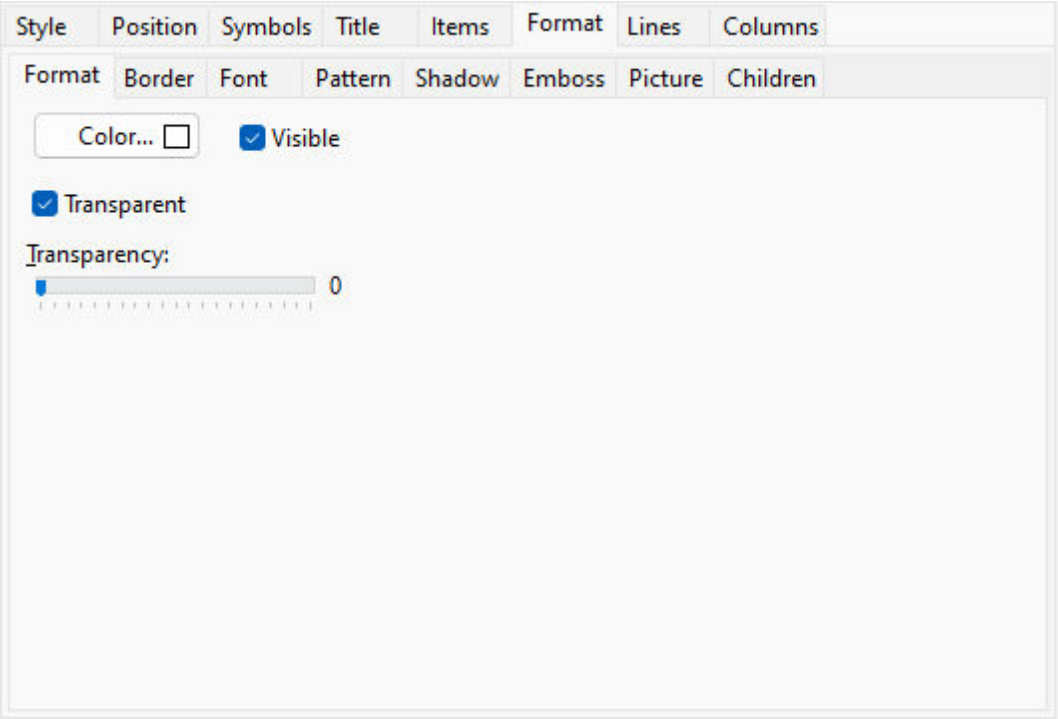
5.6.2.4.5 Items

The Items tab allows for custom adjustments to the legend item values, alignment, position, and font.



5.6.2.4.6 Format

Format - See **Format**



5.6.2.4.7 Lines

The Lines tab allows for the display and custom adjustments to lines that may be placed between the legend item values.

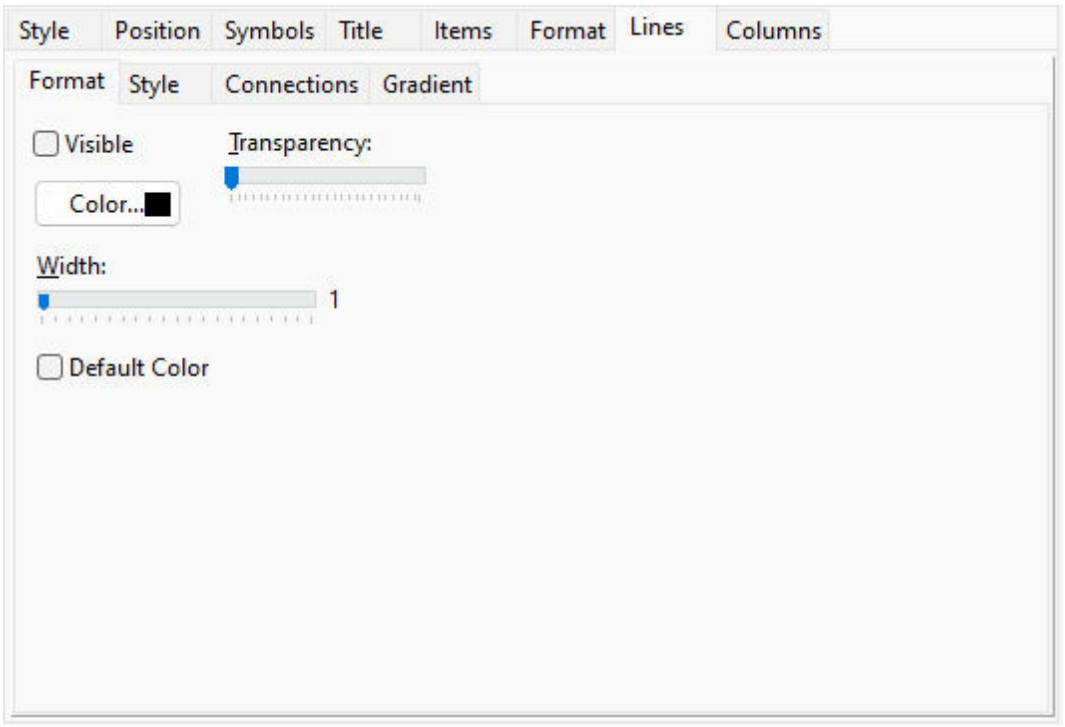
Format
Visible - specifies whether the legend lines are visible
Color - specifies the color used to display the lines, using a color palette
Transparency - specifies the transparency for the lines
Width - determines the width of the legend lines
Default Color - specifies if the default color is used for the lines

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

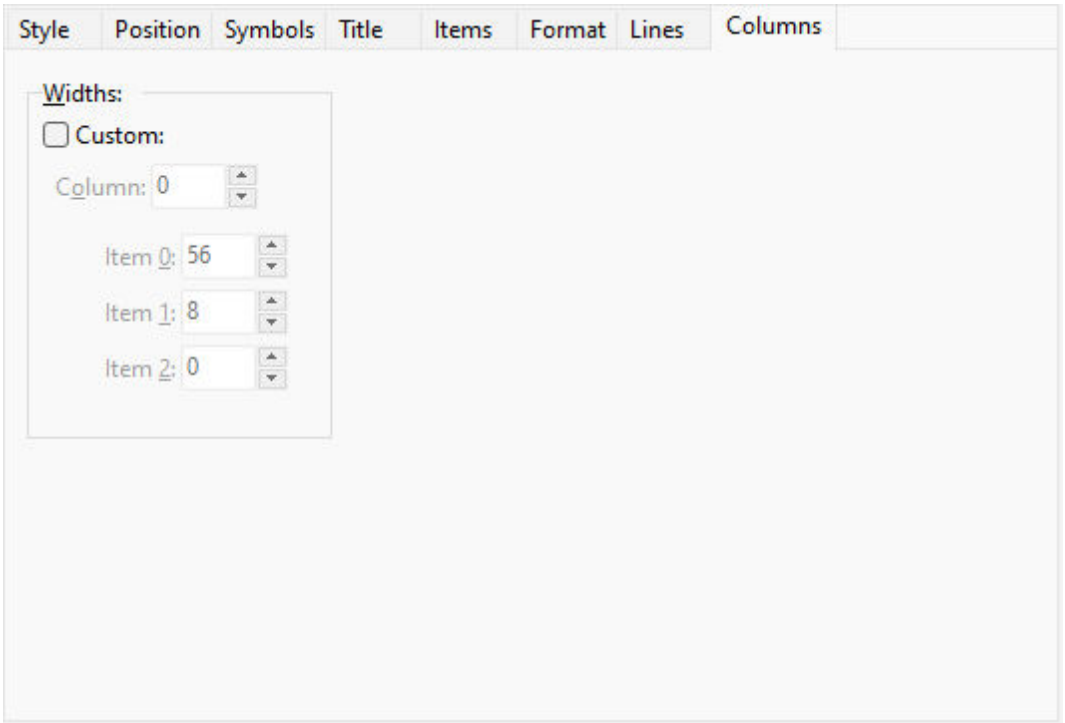
Note: Joined lines must contain widths greater than one pixel.

Gradient - See **Gradient**



5.6.2.4.8 Columns

The Columns tab allows for custom width to the legend columns.



5.6.2.5 Panel

The Panel option alters the panel that the chart, legend, title, and axes values are placed on. The background color can be altered, or an image can be added. Editing of the panel borders, along with gradient and shadowing are supported.

Color
Color - displays a color palette to select the chart panel color
Default - displays the default background color
Filters - displays the Filters dialog
Back Image Inside - displays the image inside the Chart. Select the Image tab for image file properties.

Borders

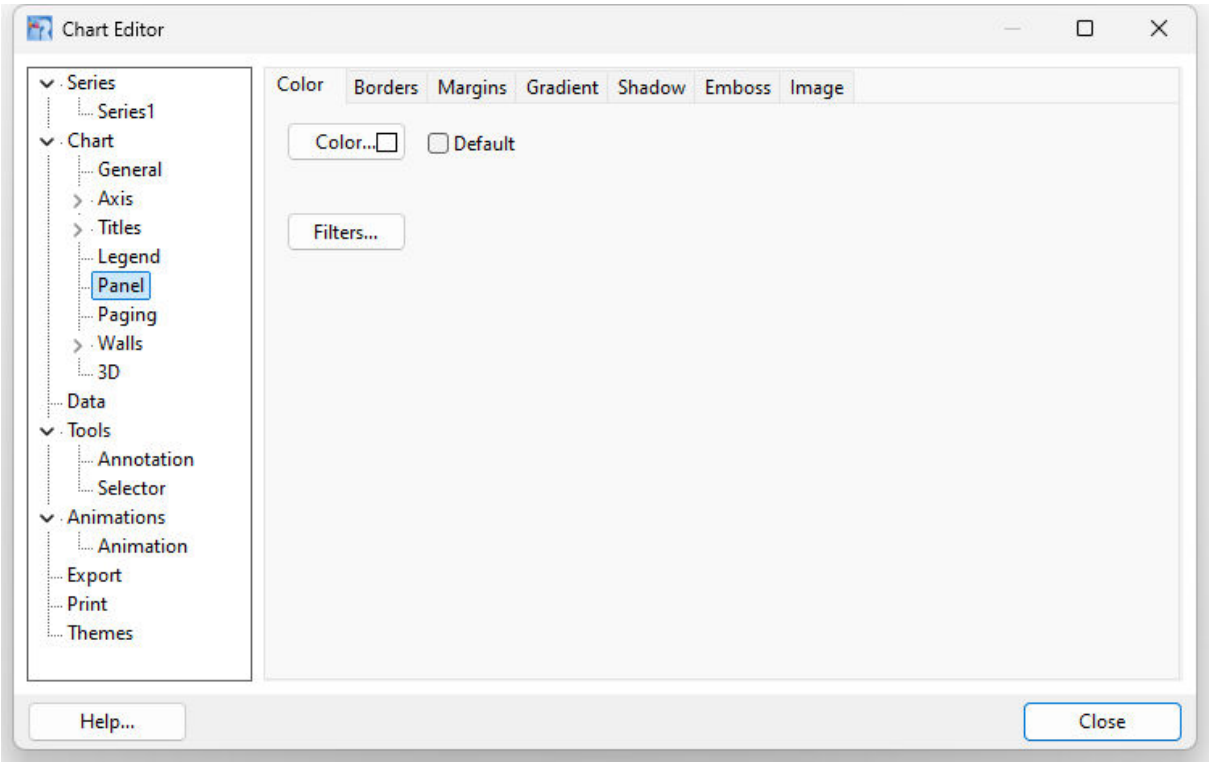
Border - See **Border**

Bevels
Bevel Inner - sets the Inner Chart Panel Bevel: Lowered, Raised or None
Bevel Outer - sets the Outer Chart Panel Bevel: Lowered, Raised or None
Width - sets the border width
Separation - sets the area of separation between chart and panel edge

Margins
Units - specifies the units for adjusting the panel margins
Left - specifies the left margin value for the panel
Top - specifies the top margin value for the panel
Right - specifies the right margin value for the panel
Bottom - specifies the bottom margin value for the panel

Gradient - See **Gradient**
Shadow - See **Shadow**
Emboss - See **Emboss**

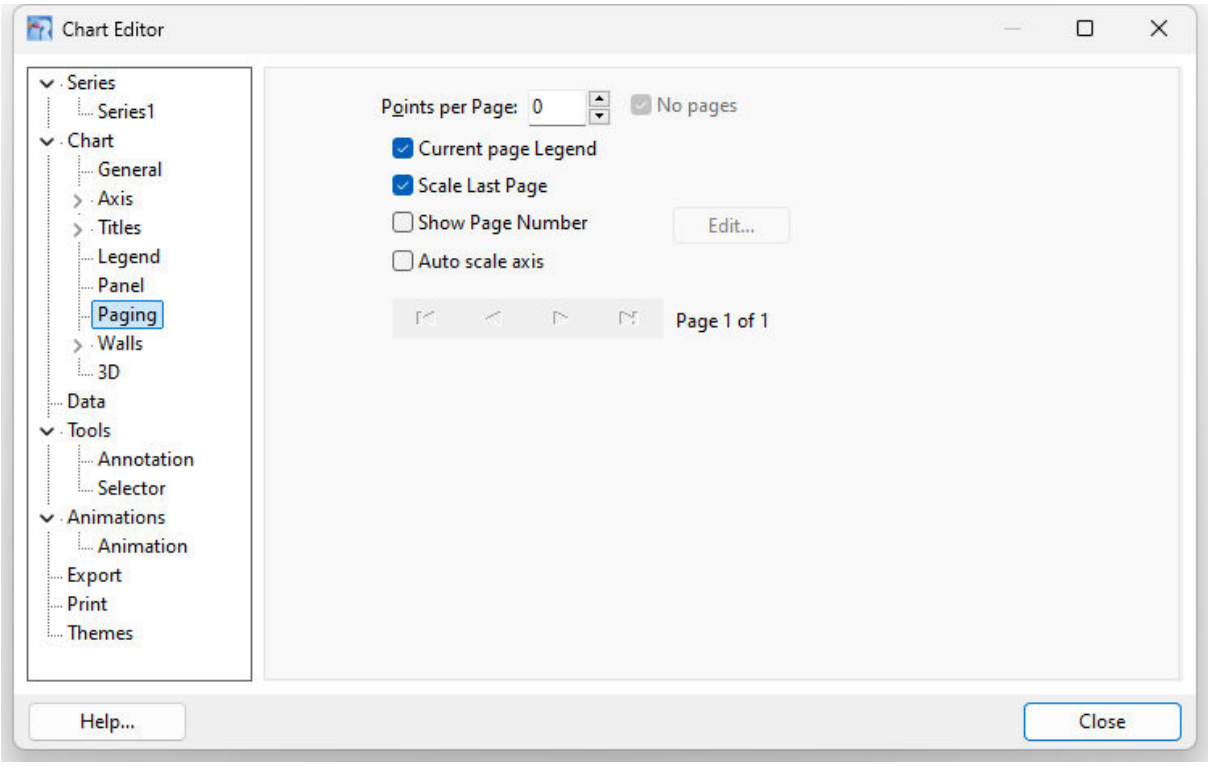
Image
Back Image Inside - specifies to place the image inside the panel background
Image - See **Picture**



5.6.2.6 Paging

The Paging option is used to customize the chart paging if the data source for the chart contains more data than can be legibly displayed on one chart screen. This method allows the chart to be divided into pages that can be leafed through.

Points per page - sets the number of points per chart page
Current page Legend - determines whether or not the Legend only shows the current page items when the Chart is divided into pages
Scale Last Page - controls how the last Chart page will be displayed. When it is activated, the last Chart page will have the same horizontal scaling as the other pages. When not, the last Chart page scaling will be adjusted based on the number of visible points on that last page.
Show Page Number - determines whether or not the page number is displayed on the Panel
Edit - alters the page number display
Auto scale axis - automatically scales axis for defined page points



5.6.2.7 Walls

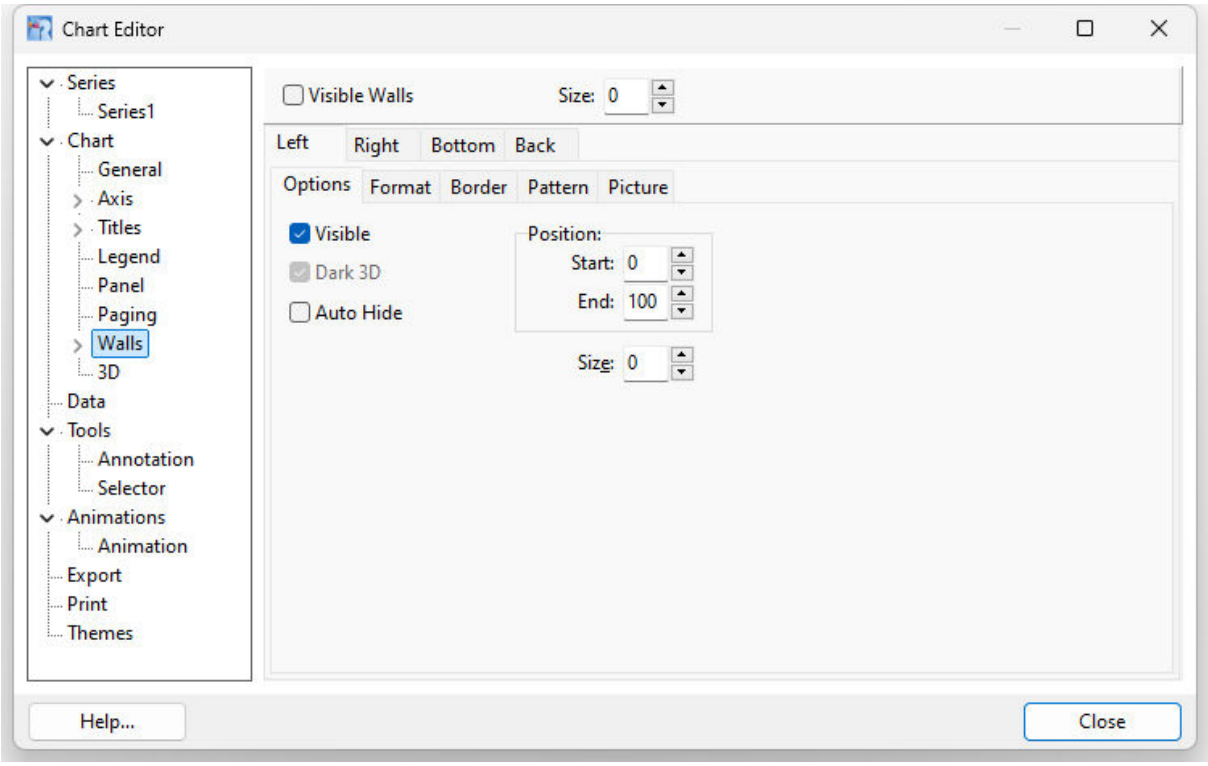
The Walls option alters the charts walls that are displayed when the chart is 2-dimensionally or 3-dimensionally displayed. There are 4 Walls: Left, Right, Bottom and Back, that may be represented in 2D or 3D.

Visible Walls - shows or hides the Chart Walls
Size - defines the thickness/size for all walls

Left, Right, Bottom, and Back Tabs
Each tab contains the following properties (some of which are are specific to the selected wall).

Options
Visible - controls whether the selected wall will be displayed
Dark 3D - colors the 3D Depth area of a wall a darker shade
Auto Hide - specifies if the wall is automatically hidden
Position - sets the start and end position for the wall
Size - defines the wall thickness/size

Format - See **Format**
Border - See **Border**
Pattern - See **Pattern**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**



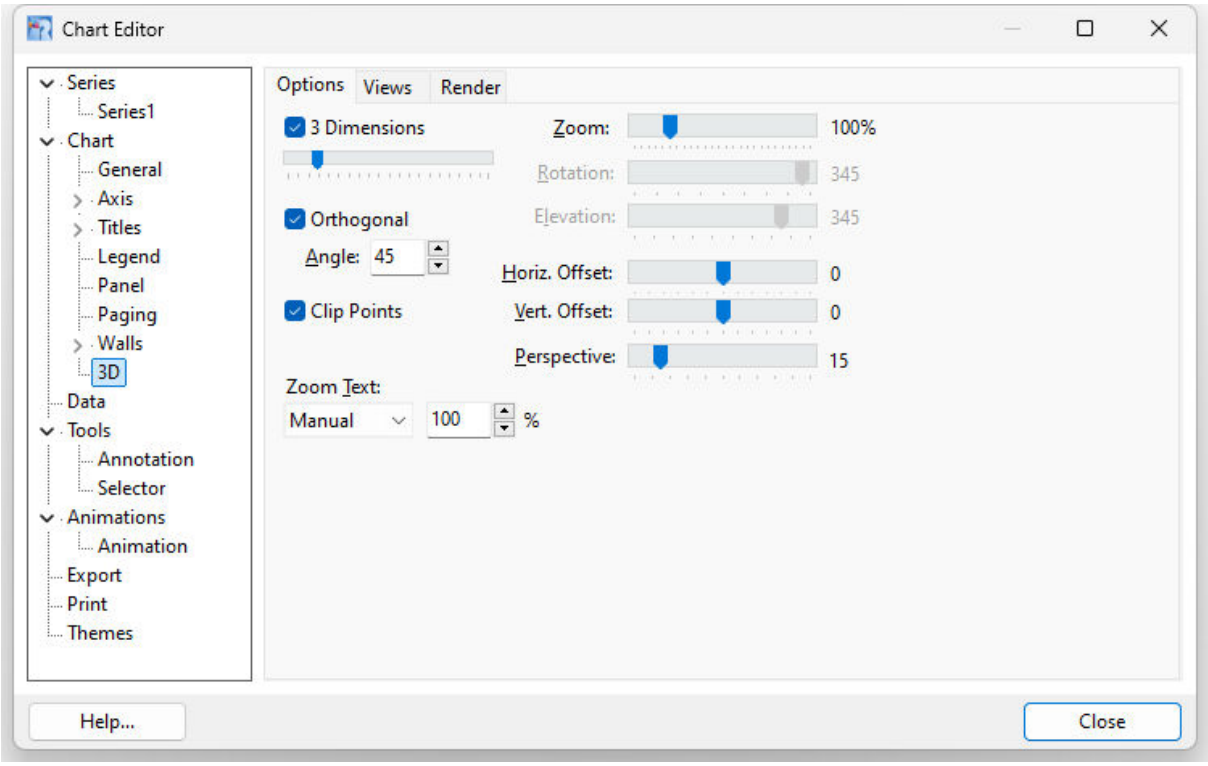
5.6.2.8 3D

The 3D option alters the various 3-dimensional settings when using 3D charts.

Options
3 Dimensions - controls whether the Chart will be displayed in 3D or not.
    3D % - defines the 3D percentage
Orthogonal - sets the Chart orthogonally
    Angle - defines the angle it will be displayed at
Clip Points - applies clip points to the 3D plane
Zoom Text - controls the Text size when 3D
Zoom - controls the Chart size.
Rotation - The Rotation property is supported when a Chart is in 3D, but not for Orthogonal Charts. It enables the Chart to be rotated through a full 360º.
Elevation - The Elevation property is supported when a Chart is in 3D, but not for Orthogonal Charts. It enables the Chart to be rotated vertically through a full 360º.
Horizontal Offset - moves the Chart on a Horizontal plane
Vertical Offset - moves the Chart on a Vertical plane
Perspective - The Perspective property is supported when a Chart is in 3D, but not for Orthogonal Charts. It offers a distance adjustment for the Chart displayed, giving the appearance of perspective between the nearest and furthest parts of the Chart.

Views
Offers different 3-dimensional views for the chart

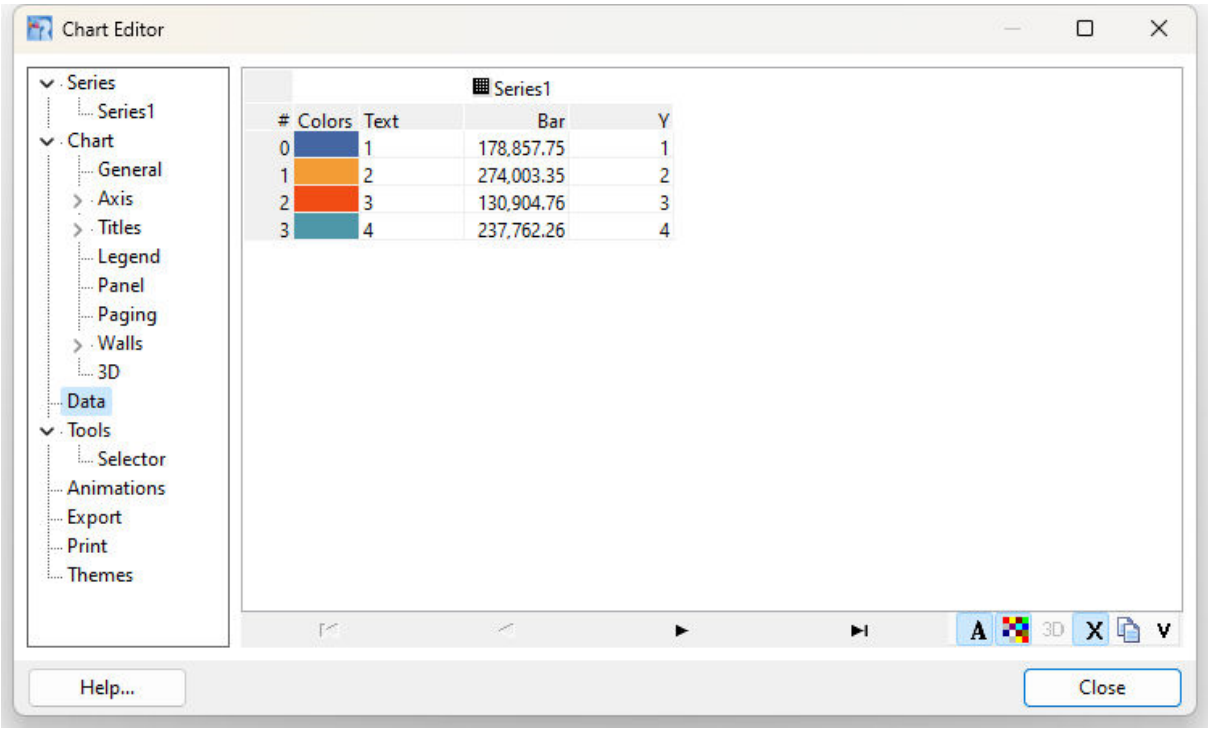
Render - specifies the 3D rendering engine



5.6.3 Data

The "Data" option displays the data values that the chart is based upon. Each series is displayed. Each Series offers one or more values depending on the series style. The columns can be resized by clicking and dragging the line dividing the grid titles. The buttons with arrows enable changing the selected cell.

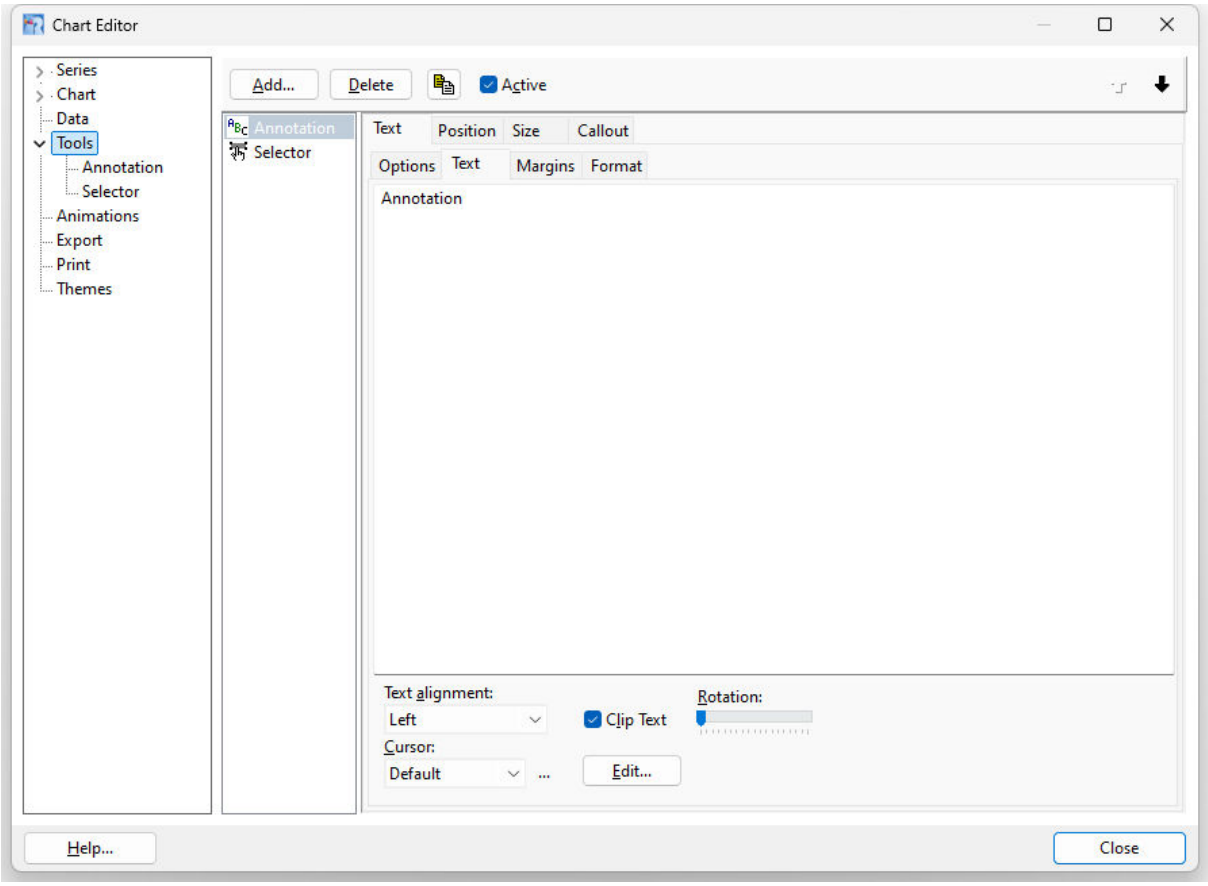
From this area users can change the specific color for each point. Select the multi-color button in the bottom right to display the color column. Double-click over the color to change in order to open the Color Palette.



5.6.4 Tools

The "Tools" add additional functionality to a chart. Users will be able to modify properties specific to that Tool type.

Add - adds a new tool to the chart
Delete - deletes the selected chart tool
Close - makes an exact copy of the selected tool
Active - enables/disables the selected tool



5.6.4.1 Annotation

Annotations can be added to charts to display an explanation or comment. The Annotation tool is used to display customizable text and text boxes on the chart. The text box position, size, shape, colors, gradient and shadow as well as the text's font, outline, size and shadow can be adjusted.

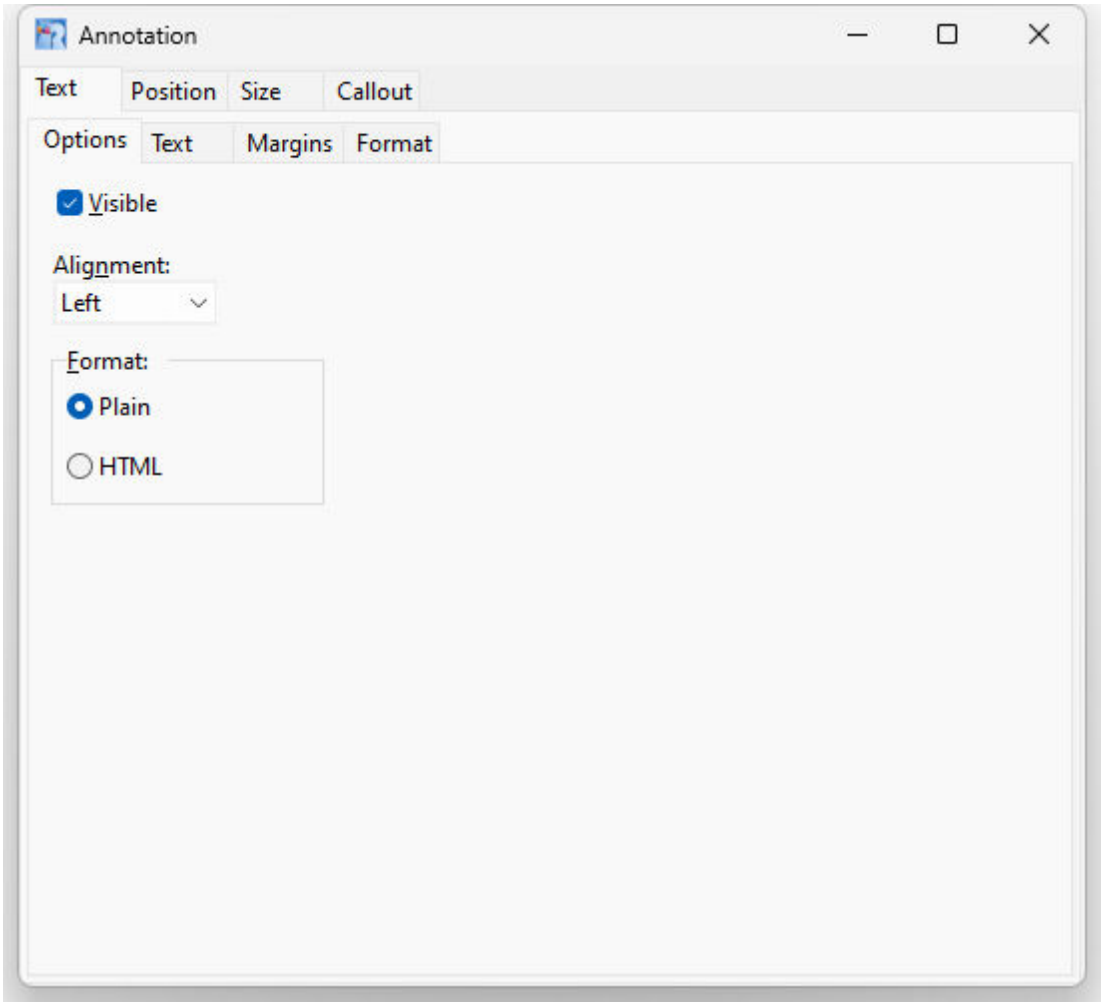
Text

Options
Visible - specifies whether or not the annotation will be displayed
Alignment - determines the position of the annotation in the chart panel: Left, Right or Center
Format - specifies to output normal plain text or text that might contain HTML formatting tags

Text - specifies the annotation text
Text alignment - determines the position of the annotation in the gauge: Left, Right or Center
Clip Text - specifies if the text is cut off
Rotation - specifies the angle for the annotation text
Cursor - defines a cursor type (image) when the mouse passes into the annotation text area
Edit - alters the annotation text

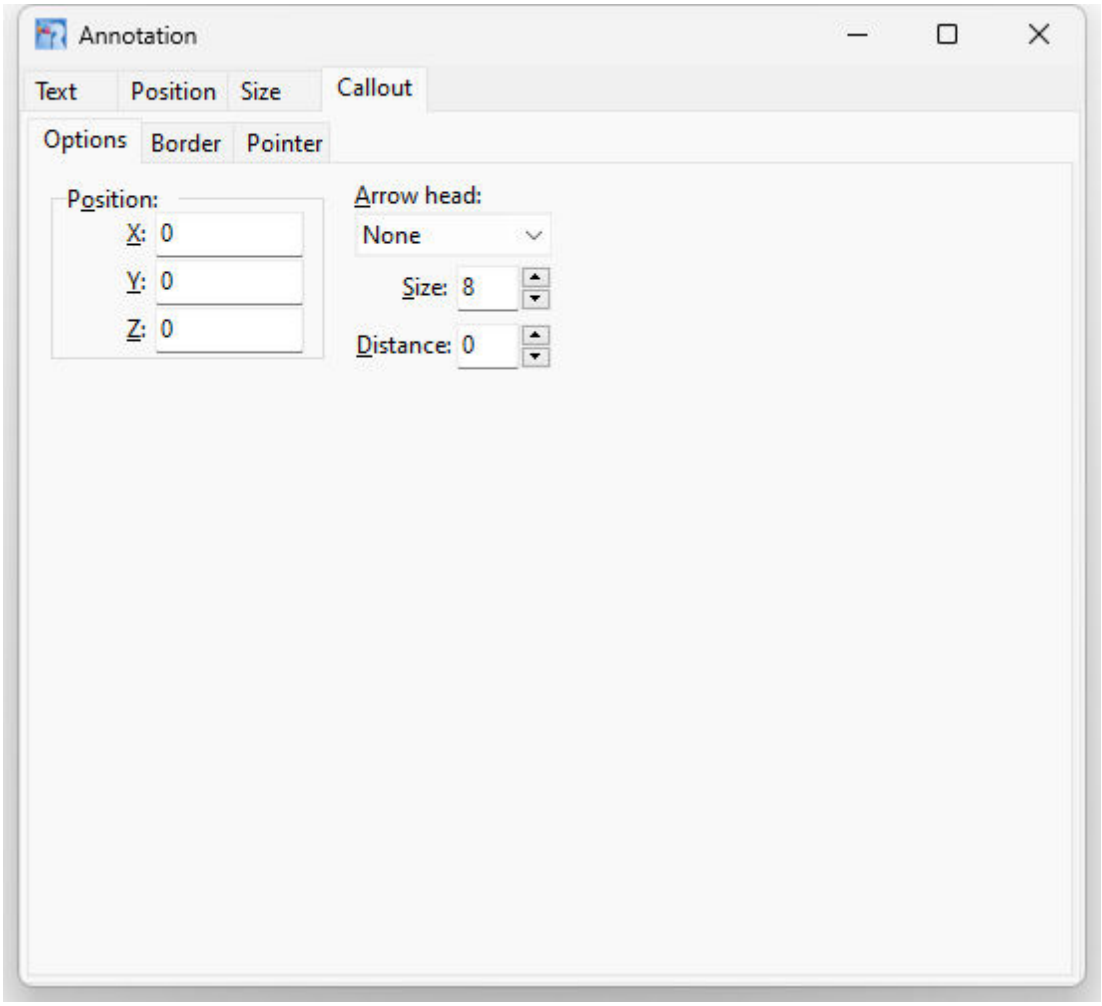
Margins
Units - specifies the units for adjusting the annotation margins
Left - specifies the left margin value for the annotation
Top - specifies the top margin value for the annotation
Right - specifies the right margin value for the annotation
Bottom - specifies the bottom margin value for the annotation

See **Format**



Position
Auto - specifies automated annotation positions
Custom - specifies to use a custom annotation position
Left - specifies the left position value
Top - specifies the left position value
Units - specifies the units for directing the position location
Draw 3D - sets the annotation box in 3 Dimensions
Z - specifies the annotation position on the Z axis

Size
Automatic - specifies an automatic annotation size, if checked
Width - specifies the annotation width
Height - specifies the annotation height



Callout - specifies to display a pointer shape (arrow, small rectangle, ellipse, etc.) at the annotation position

Options
Position - specifies position in relation to the item the callout object is drawing attention to (X, Y, and Z coordinates)
Arrow Head - specifies arrow head type; None, Line, Solid
Size - specifies the size/height of the callout object
Distance - specifies the length in pixels between a series point and the line connecting the annotation

Border

Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - specifies the pen width in pixels
Default color - specifies to use the default color
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

Note: Joined lines must contain widths greater than one pixel.

See **Gradient**

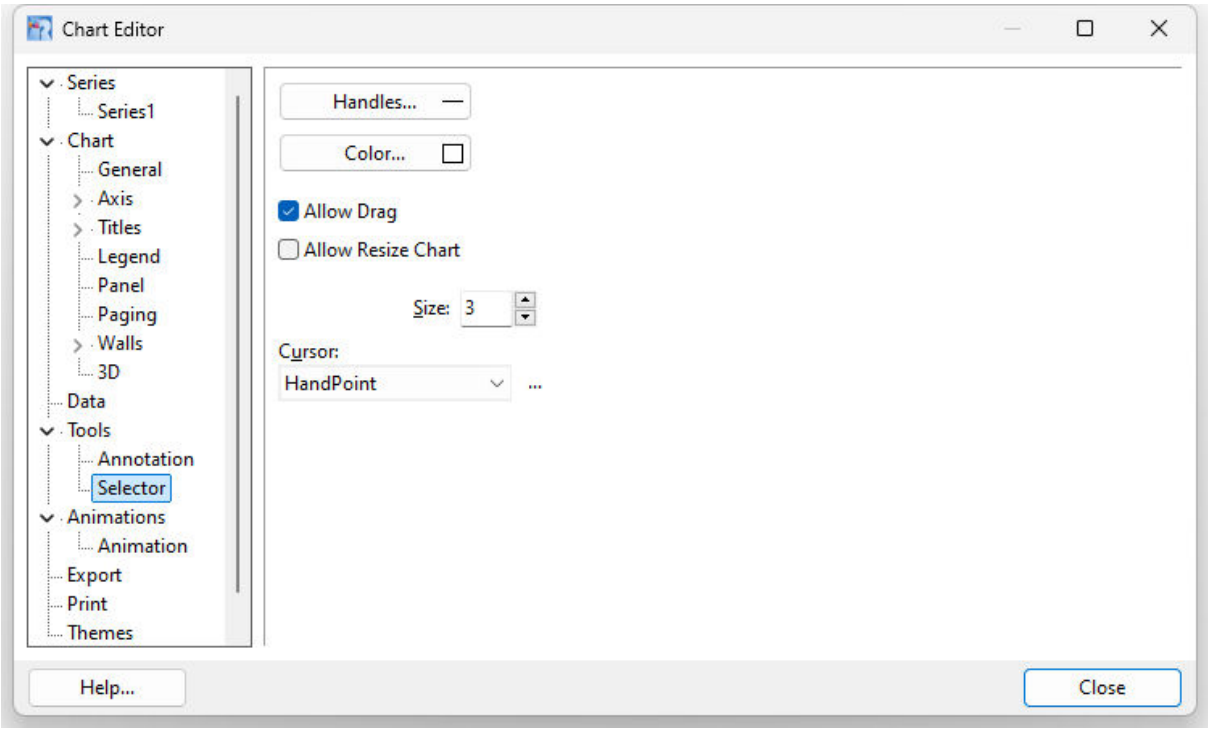
Pointer

Format - See **Format**
Style - specifies the pointer style
Size - specifies the pointer size (in units), width, height, and depth
Pattern - See **Pattern**
Border - See **Border**
Shadow - See **Shadow**
Emboss - See **Emboss**
Picture - See **Picture**

5.6.4.2 Selector

The Selector option enables the user to click and drag chart elements.

Handles - See **Border**
Color - a Color Editor dialog will be displayed to define the color for the cursor
Allow drag - allows mouse-dragging of any objects
Allow Resize Chart - allows the chart to be resized
Size - determines the size of the cursor, to identify the selected object
Cursor - specifies the the cursor type



5.6.5 Export

The "Export" option saves the chart as several supported formats. The buttons at the bottom are used to copy, save, or email the chart in the desired format.

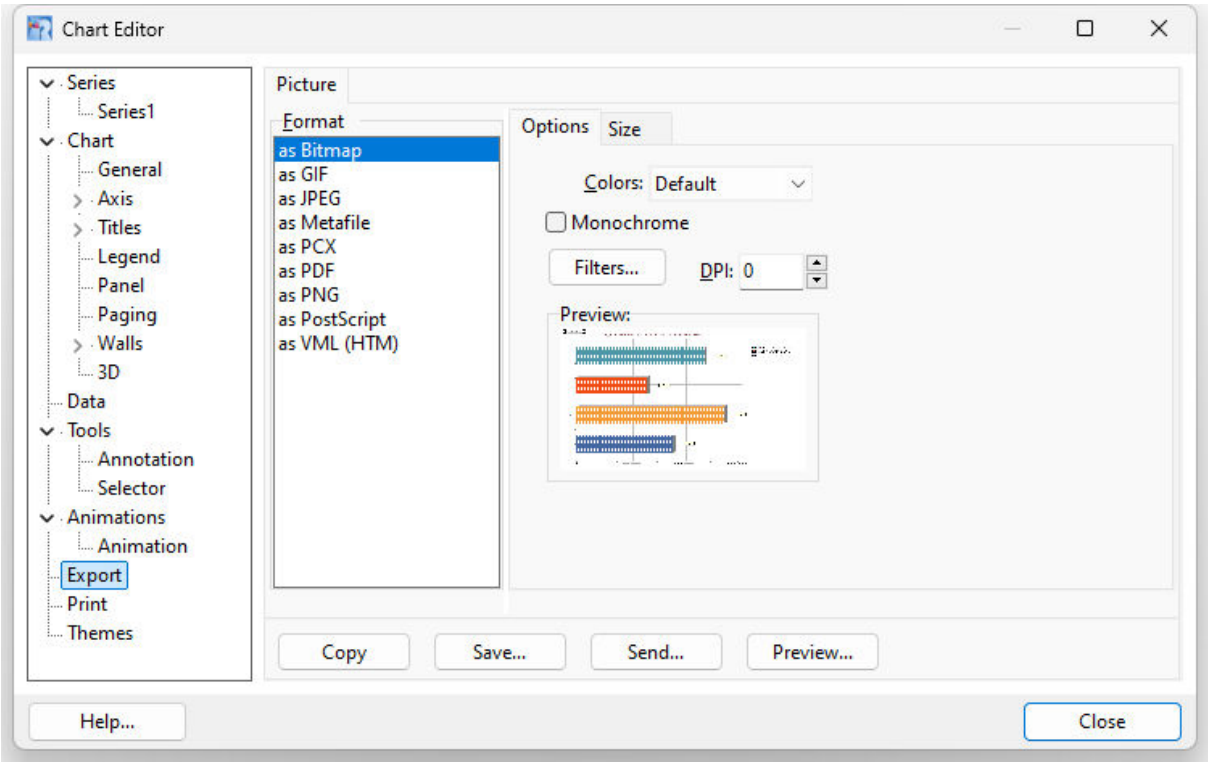
Format - specifies the format to export the chart

Options - based upon the Format, the "Options" and "Size" options will differ.

Colors - specifies the color depth
Monochrome - specifies the chart output as monochrome
Filters - adds image filters to the chart output
DPI - specifies the printed image resolution. A higher DPI means more detail and clarity in printed images.

Size
Width - determines the desired picture width in pixels.
Height - determines the desired picture height in pixels.
Keep Aspect Ratio - when checked, changing the width or height of the picture will calculate the other to maintain the same width to height aspect ratio that appears on the screen. When this option is unchecked, users can set any width and height sizes.
File Size - determines the export file size
Scale - specifies the

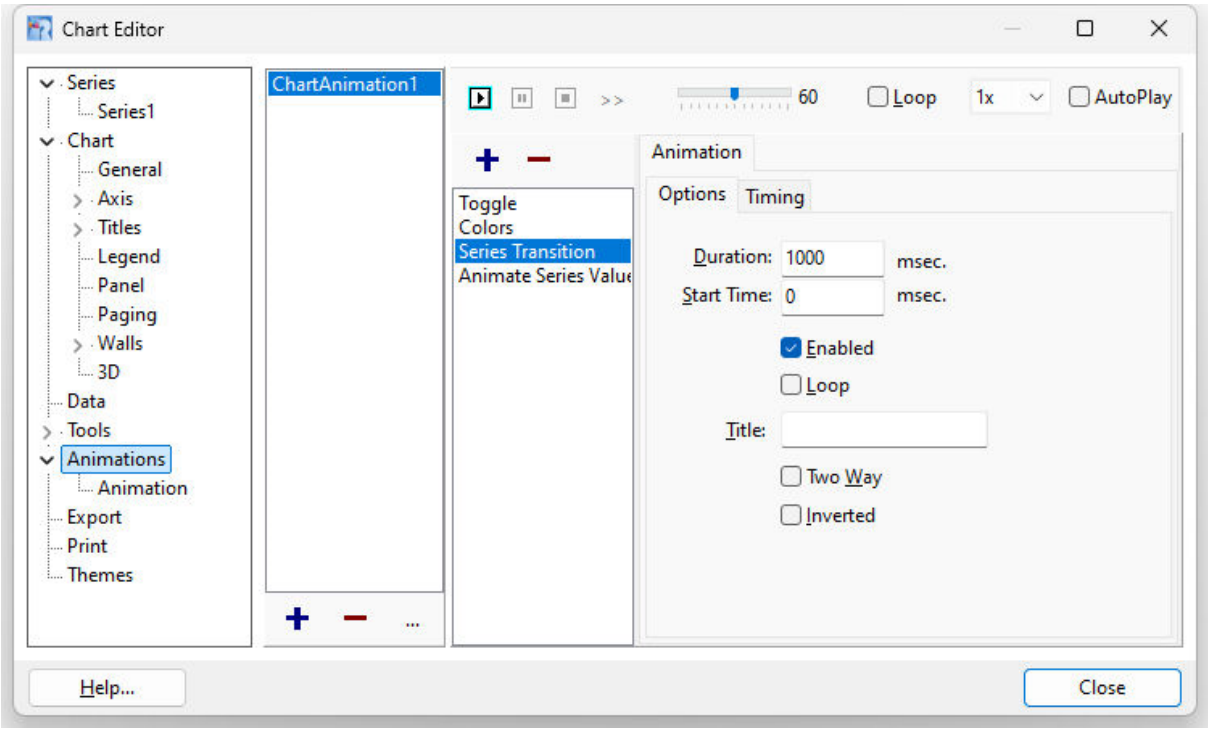
Copy - stores the chart picture or series data in the Windows clipboard
Save... - opens the "Save to file" dialog to choose the file name to save
Send... - shows the dialog to send a file by email using your client email program. The chart picture or series data will be an attached file of the email.
Preview... - launches the chart, based upon the selected Format



5.6.6 Animations

The Animations option is available to create and apply the necessary properties and methods to use several animations on the chart and series.

Animation > Options
Duration - specifies the number of frames for duration
Start Time - specifies the start time for the animation
Enabled - enables/disables the animation
Loop - specifies if the animation stops when finished or starts again at the beginning
Title - specifies the animation title
Two Way - specifies the animation is subsequently reversed or undone
Inverted - specifies if the animation is inversely drawn



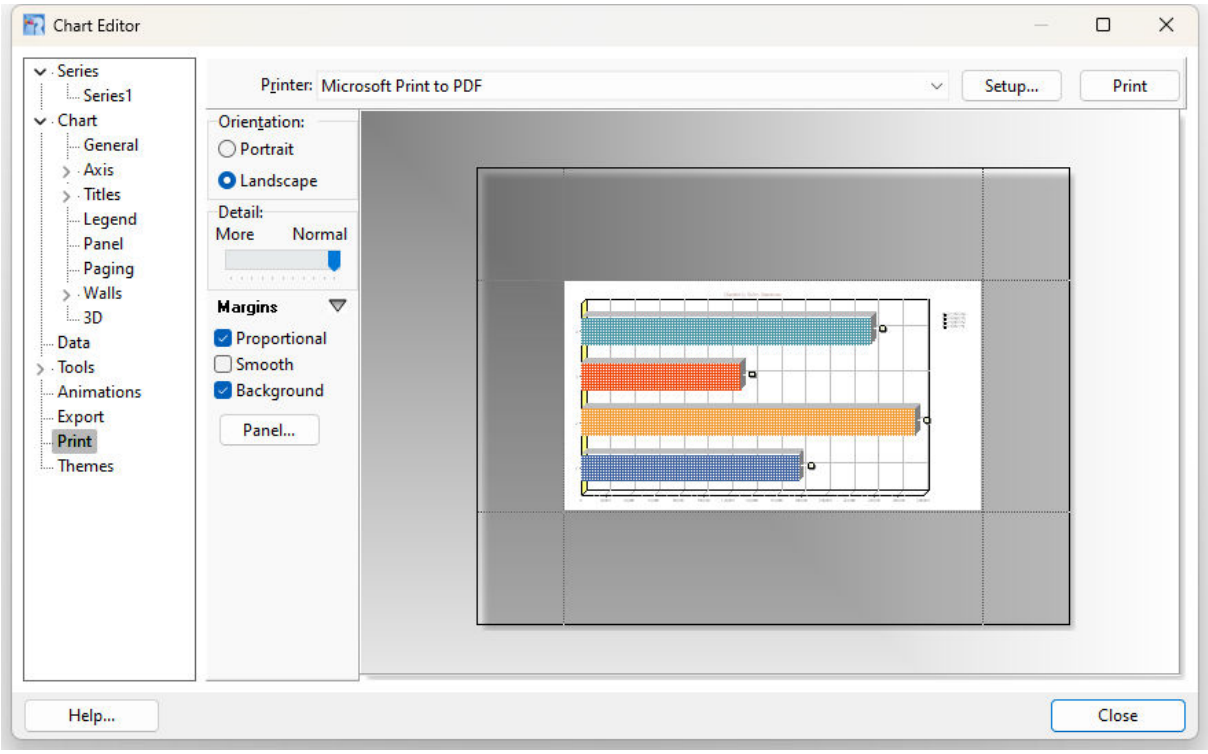
5.6.7 Print

The "Print" option prints the chart, with several extended options. Users can set the printer from the list of printers available, preview the page, position, size, etc. Any modification to the editor properties will be reflected on the Chart Page Panel.

Printer - specifies the printer to print the chart page. If there is no printer available, it will show a blank display.
Setup... - defines the selected printer properties
Print - the page is sent to the printer

Orientation - specifies the printed page orientation: portrait or landscape
Detail - controls how many screen pixels will be mapped to printer pixels. The value is in a range from 0 to 100%. The lower the value, the higher the resolution of screen pixels passed to the printer. Depending on the printing controls installed, it may happen that fine lines are omitted when printed or are not well-defined when a higher detail value is selected.
Margins - specifies the page margins by changing the default values. Every box refers to the four sides of the page: top, bottom, right and left. The page margins are expressed as a percentage of total page dimensions.
Reset Margins - specifies to reset to the default margins
View Margins - specifies if the position margins will be visible in the panel. Dragging the lines with the mouse you will change the margins.

Proportional - sets the print dimensions of the chart to be proportional to the onscreen dimensions. The proportion depends on the screen proportion, i.e. the relation between the portrait size and landscape size of the chart.
Smooth - specifies if the chart edges are defined
Background - specifies if the chart background is printed



5.6.8 Themes

The Themes option displays the available chart themes and a preview of the chart. The "View" drop-down button provides options to alter the 3-dimensional aspect and scale. Scale adjusts the display for the Preview tab.

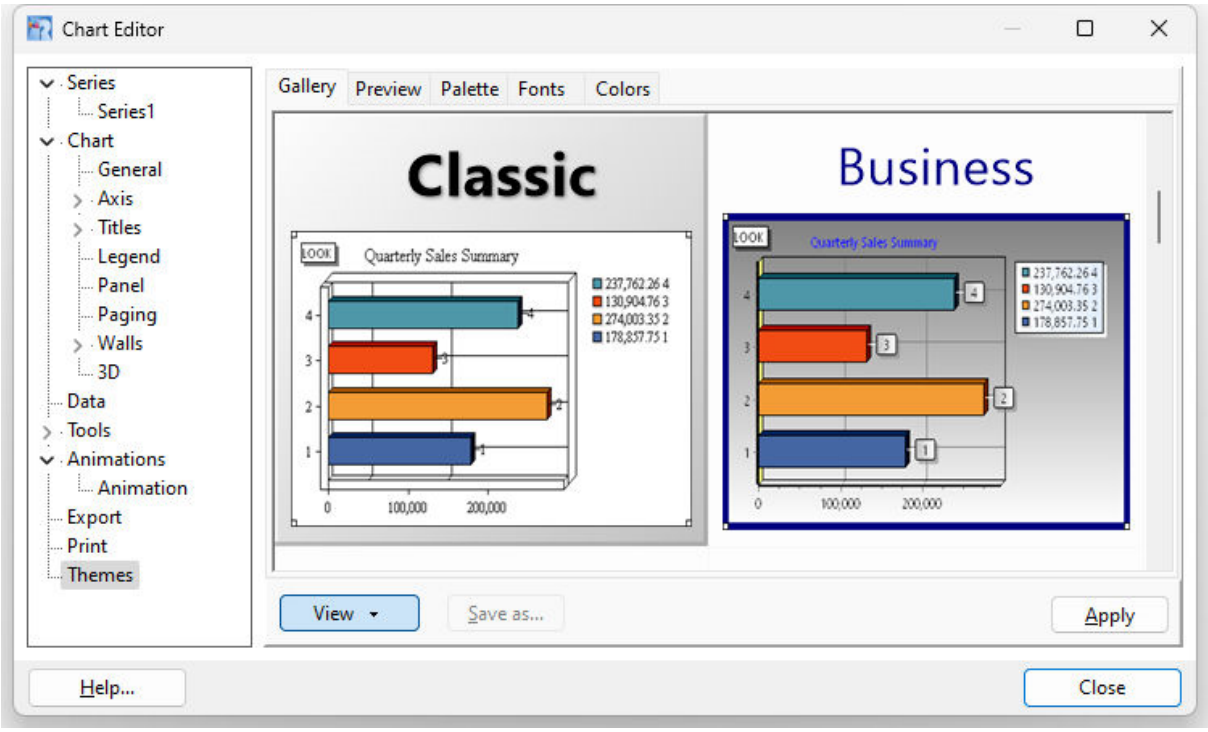
The Gallery tab displays the chart in the available themes.

The Preview tab displays the list of available themes to preview the output individually.

The Palette tab provides color palettes to review a set of available colors.

The Fonts tab provides a list of available fonts installed on the computer.

The Colors tab provides a set of colors schemes to apply a set of colors to a chart and background. The color palette takes effect if no explicit color is applied to each value. Consider the color palette as the default colors of newly added values that get overwritten by any preferred color.

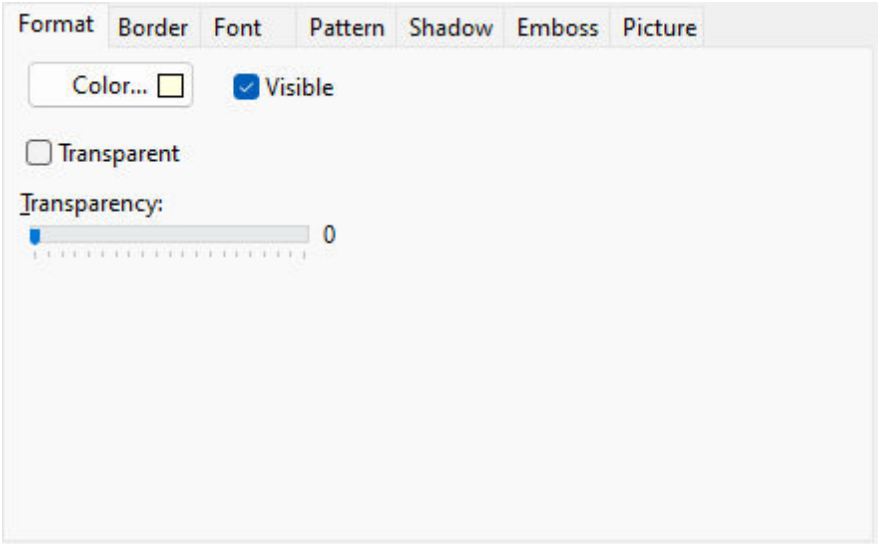


5.7 Common Tabs

5.7.1 Format

The Format tab specifies color, border, font, and many other formatting objects for chart objects.

Color - specifies the color used to display the item, using a color palette
Visible - specifies whether the item is visible
Transparent - specifies whether the item is transparent
Transparency - specifies the transparency for the item



5.7.2 Border

The Border tab is used to customize the pen used to draw borders around text, series marks, chart titles, etc. There are several different pen styles available.

Frame

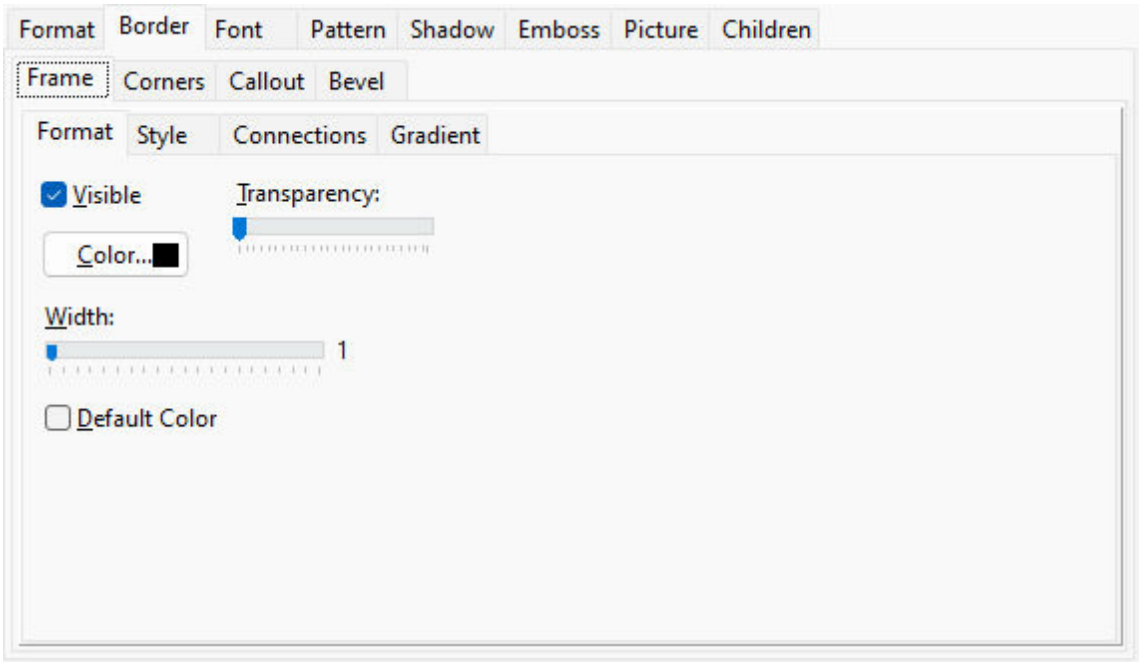
Format
Visible - shows or hides the border
Color - specifies the color used to display the border using a color palette
Width - specifies the pen width in pixels
Default Color - specifies to use the default color
Transparency - specifies the transparency

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots
Space - specifies the spacing between dots, when the Dash Dot Dot style is selected

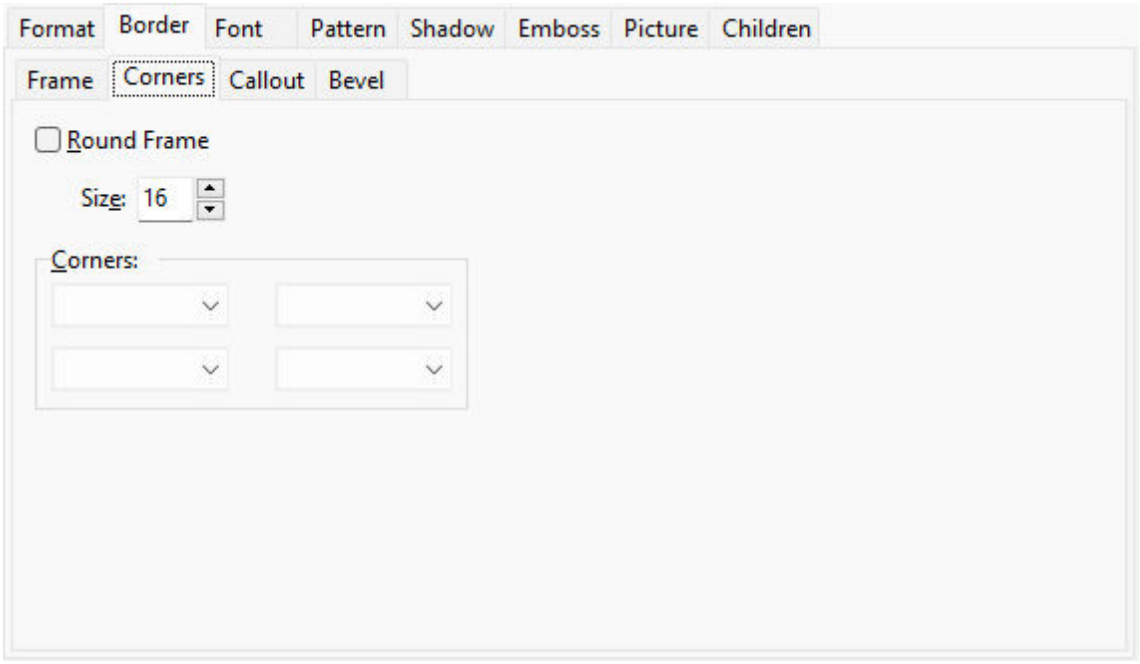
Connections
End Style - specifies the style used to connect the lines; round, squared or flat.
Join Style - specifies the style used to connect the join lines; round, bevel or miter.

Note: Joined lines must contain widths greater than one pixel.

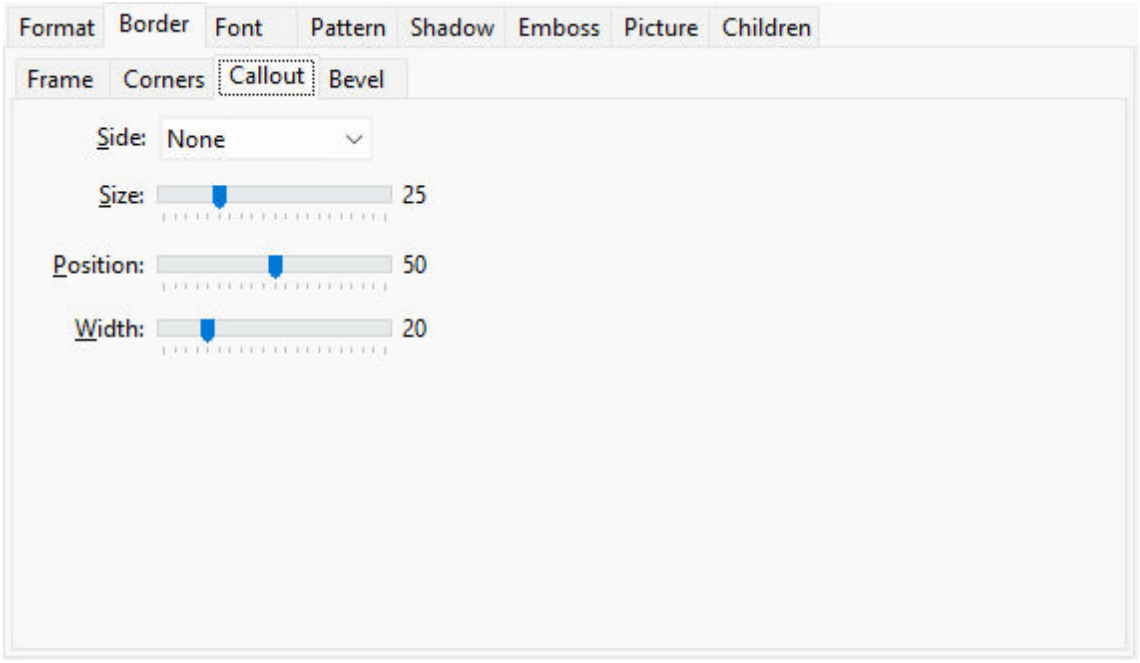
Gradient - See **Gradient**



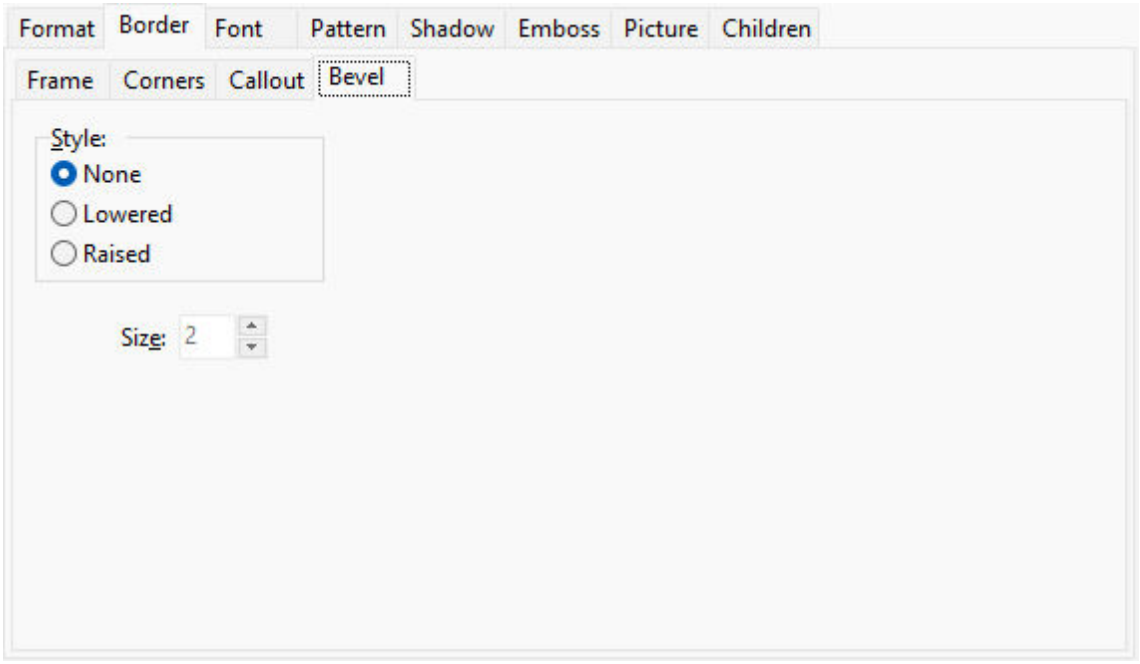
Corners
Round Frame - rounds the border edges
Size - specifies the rounded frame size
Corners - specifies the style for each corner



Callout - specifies to display a pointer shape (small rectangle, ellipse, etc.)
Side - specifies the location for the callout object
Size - specifies the size/height of the callout object
Position - specifies the position in relation to the item the callout object is drawing attention to
Width - specifies the width of the callout object

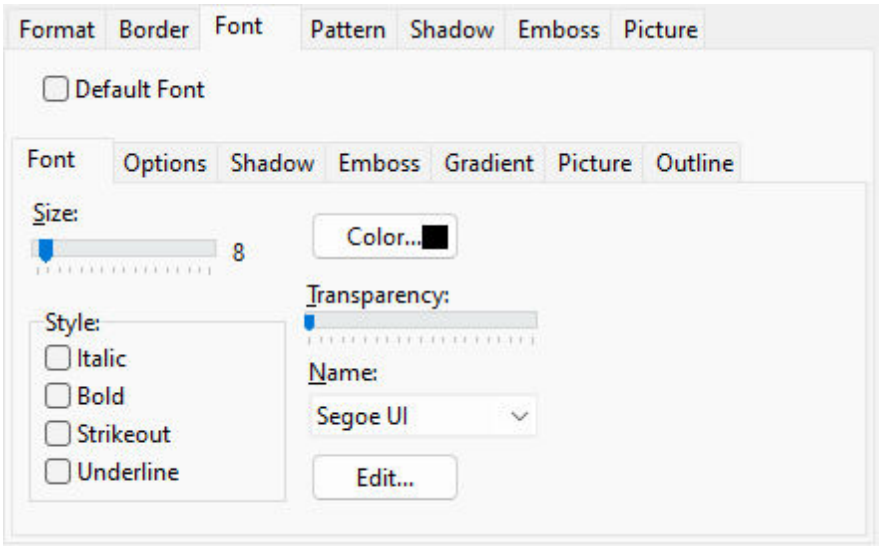


Bevel
Style - specifies the bevel option; None, Lowered, and Raised
Size - specifies the bevel size



5.7.3 Font

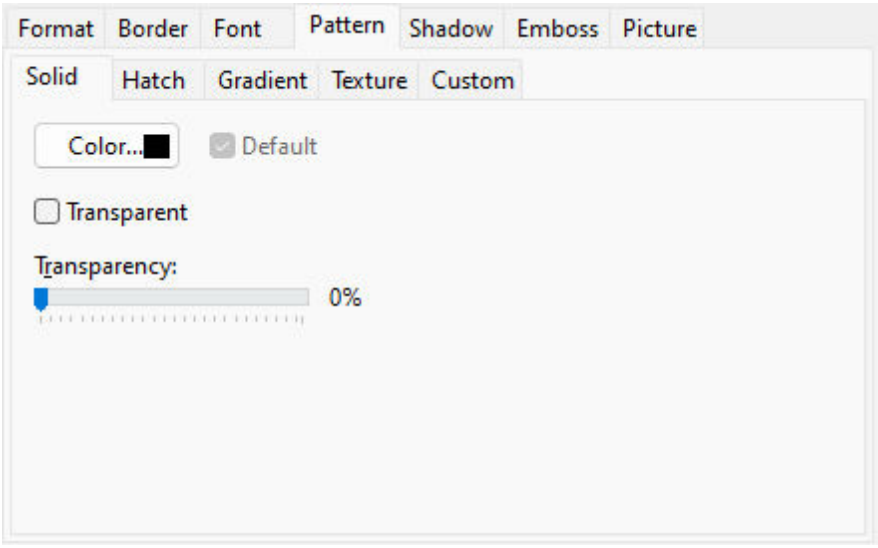
The Font tab provides properties to edit the font size, color, style, name, outline, shadow, gradient, picture, etc.



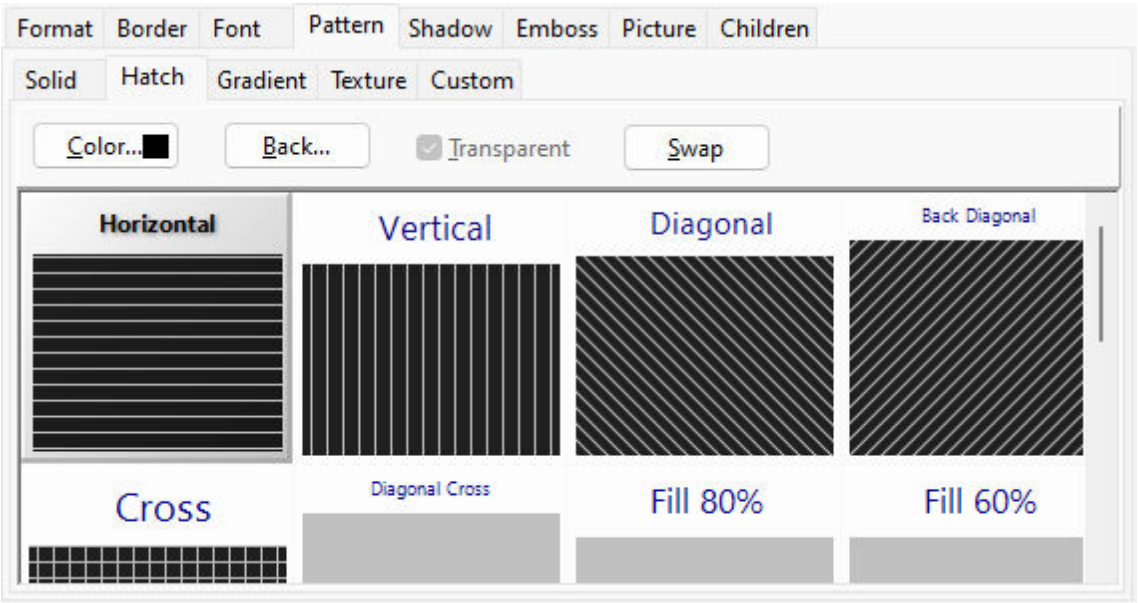
5.7.4 Pattern

The Pattern tab is used to apply alters the pattern style. Patterns fill the selected zones.

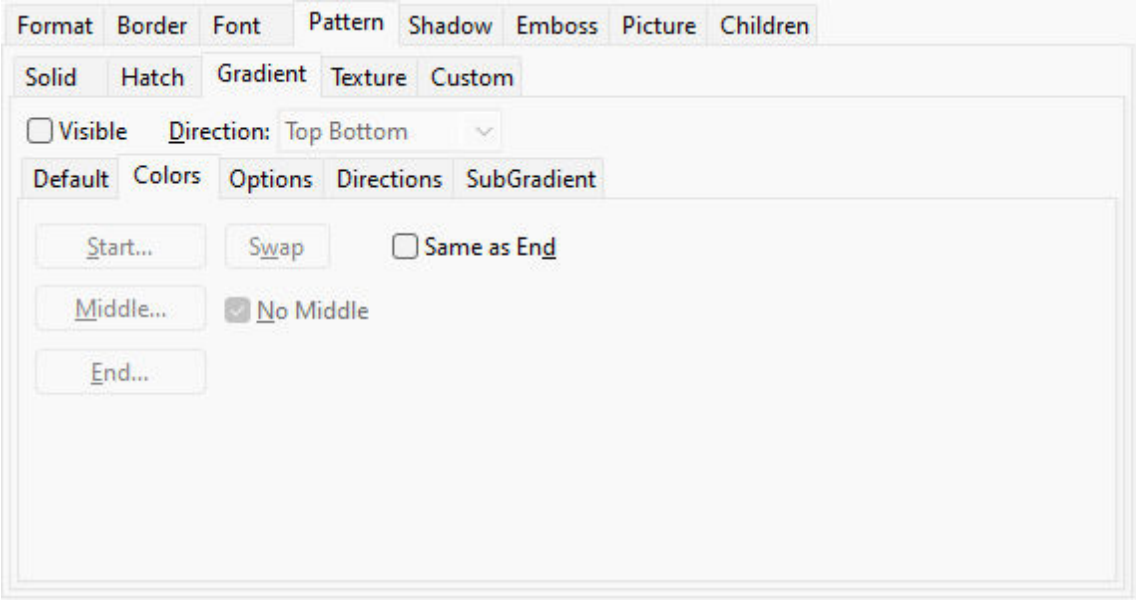
Solid
Color - specifies the pattern color
Transparent - specifies whether the pattern is transparent
Transparency - specifies the transparency for the pattern



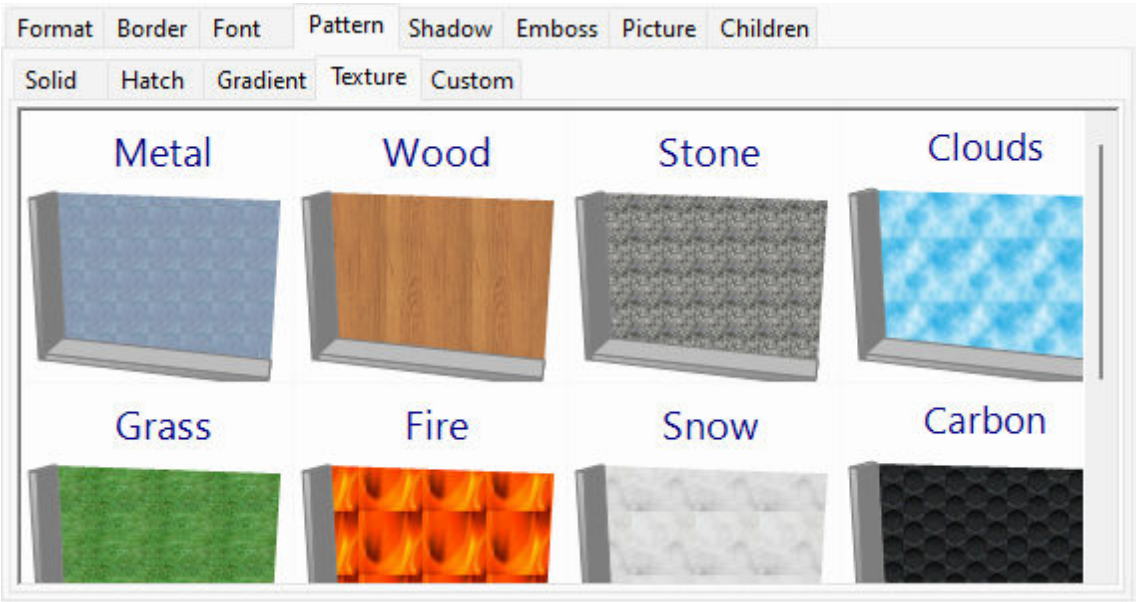
Hatch - provides pattern styles
Color - specifies the foreground color
Background - specifies the background color
Transparent - specifies whether the pattern is transparent
Swap - specifies the foreground and background colors will be exchanged



See **Gradient**

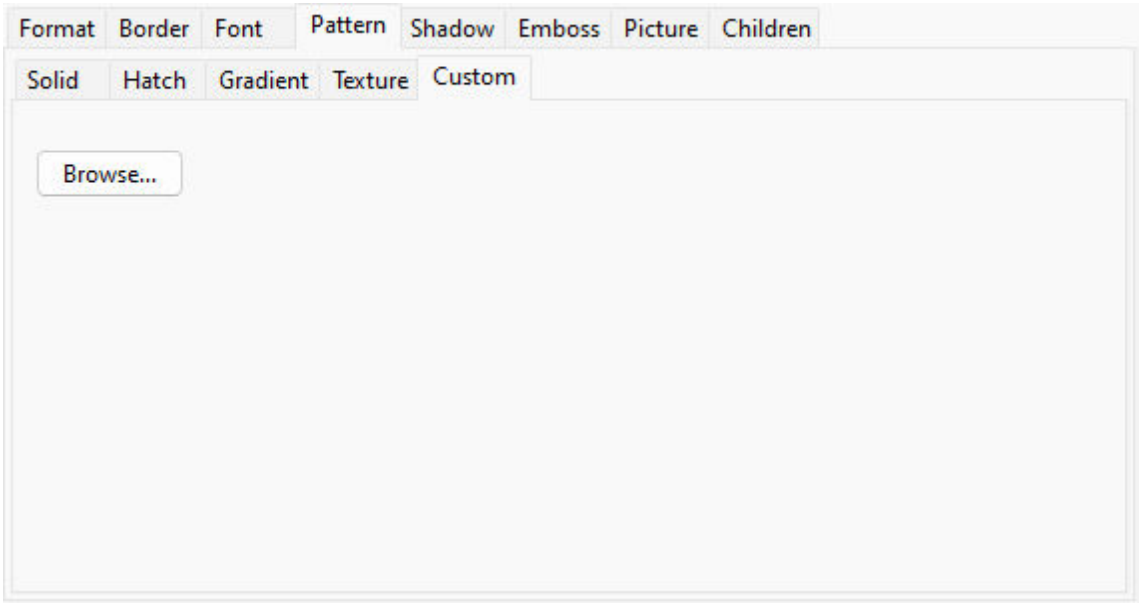


Texture - specifies various surfaces metal, wood, stone, etc.



Custom
Browse - specifies an image for the pattern, where the image can be loaded

Warning: Allowed pattern images should be small (for example 16 x 16 pixels) due to Windows restrictions. If an image is not displayed, it might be a Windows limitation. Try to load a smaller image in the BMP (Windows Bitmap) format.

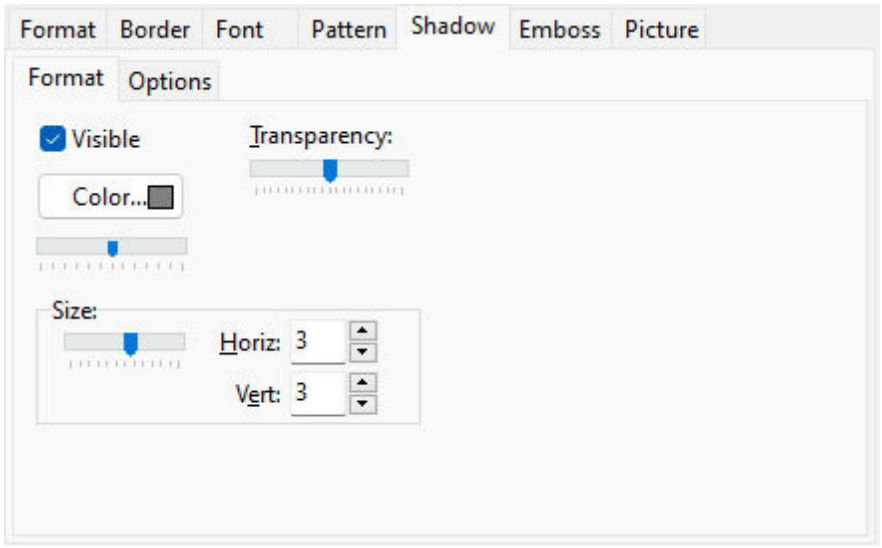


5.7.5 Shadow

The Shadow tab is used to customize the shadow properties when added to a series.

Format
Visible - shows or hides the shadow
Color - specifies the shadow color, using a color palette. The slider can be dragged to slightly alter the selected color
Size - specifies the horizontal and vertical offset for the shadow
Transparency - specifies the degree of transparency for the shadow

Options
Smooth - specifies if the shadow edge is defined or fades away
Blur - specifies the blur distance for the shadow edge
Clip - specifies if the shadow edge will be restricted to paint inside axes boundaries
Direction - specifies the direction of the shadow

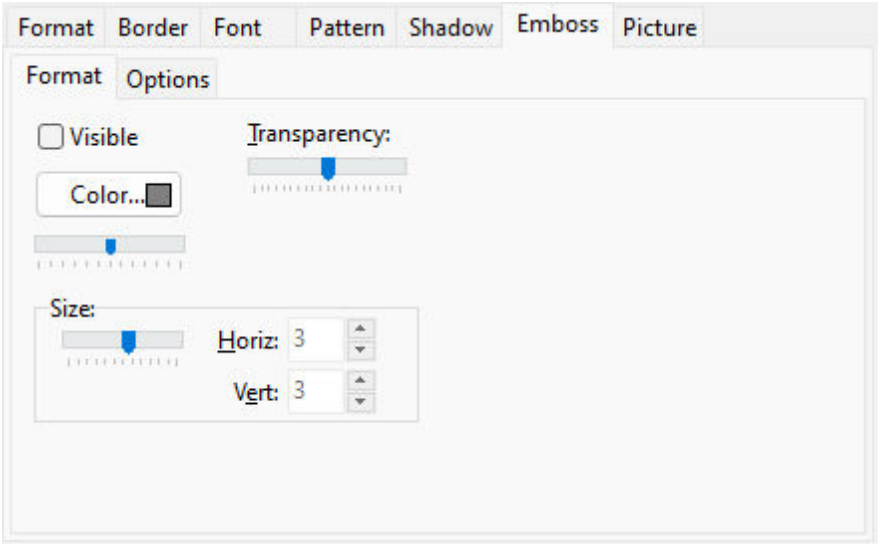


5.7.6 Emboss

The Emboss tab is used to produce a "shadow-like" effect in the opposite direction of a shadow.

Format
Visible - shows or hides the emboss effect
Color - specifies the color used to display the emboss using a color palette
Transparency - specifies the emboss transparency
Size - specifies the size of the emboss in pixels. When adjusting the Size using the slider, it will set both Horizontal and Vertical Size to the same value.

Options
Smooth - specifies if the emboss will be displayed as a uniform color (unchecked), or with smooth edges (checked)
Blur - specifies the number of "blur" steps to apply. A blurred shadow might decrease brightness, where a darker may be needed.eed.
Clip - specifies if smooth shadows are clipped using the current canvas clipping region (checked)
Direction - specifies the direction in which the emboss will be applied



5.7.7 Picture

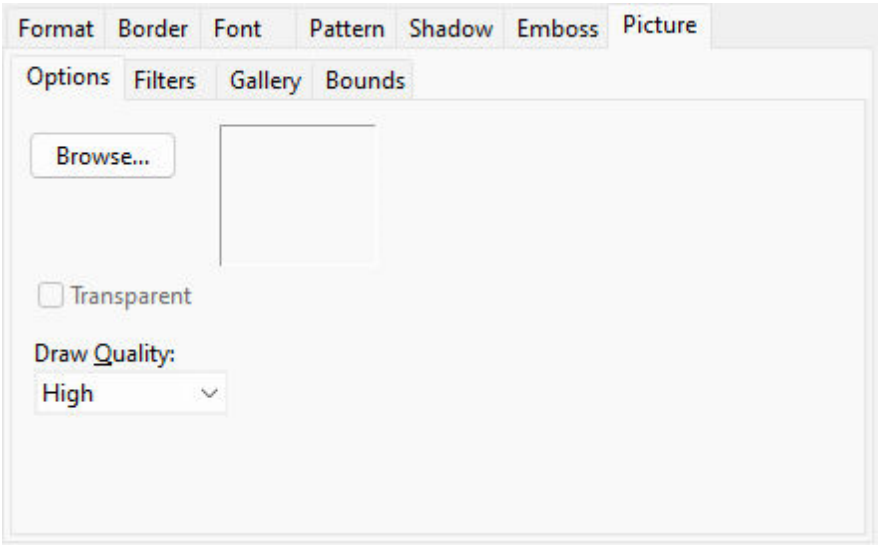
The Picture tab is used to display an image on the background. The picture can be drawn stretched, tiled, or centered, and it can be customized applying visual filters to manipulate the image pixels.

Options
Browse - selects an image from computer files to be displayed
Transparent - sets the image back color as transparent
Draw Quality - specifies the picture draw quality; High or Low

Filters - applies filters to the added image

Gallery - provides several default picture options to choose from

Bounds
Position - adjusts the image position
Style - adjusts the image placement style

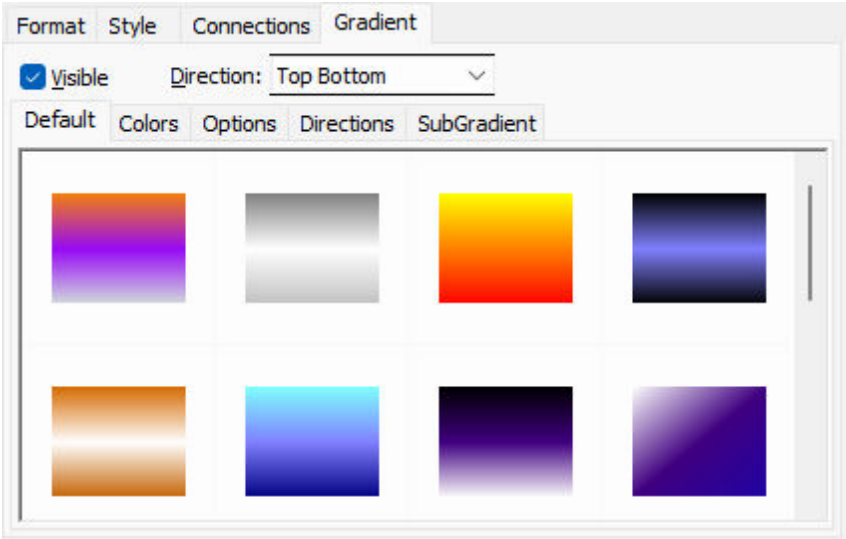


5.7.8 Gradient

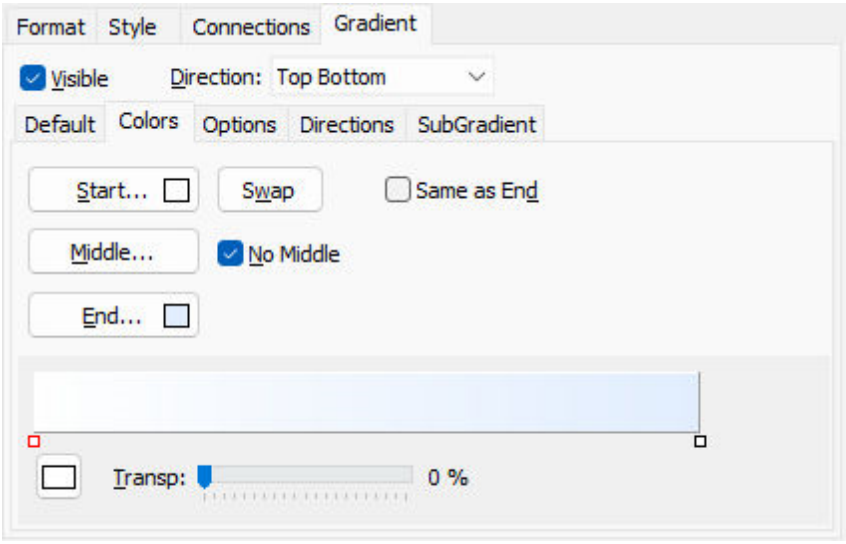
The Gradient tab specifies the colors used to fill a chart background/area. The background/area is filled using the Start Color and End Color. The drawing output may be controlled with the Direction property. Use the Visible property to show/hide the color filling. By selecting and combining the direction and colors, a more visually-pleasing chart can be drawn.

Visible - specifies if a color gradient is displayed
Direction - specifies the direction in which the gradient fill will be applied

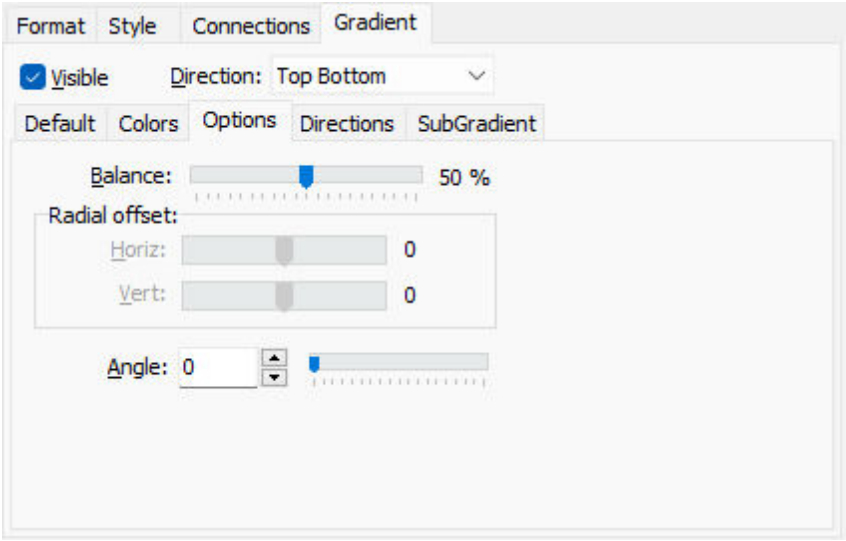
Default - provides several default gradients to choose from, with previews



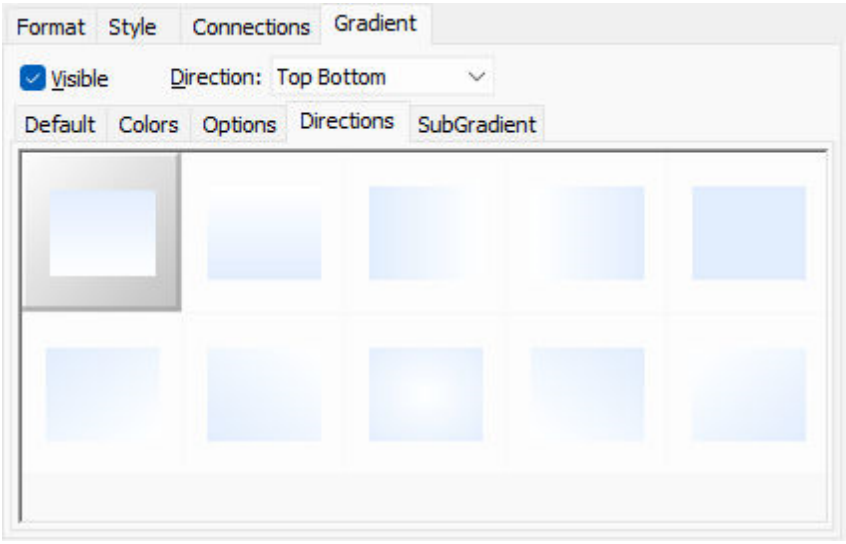
Colors
Start - specifies the start gradient color using a color palette
Middle - specifies the middle gradient color using a color palette. No middle color is used by default.
End - specifies the end gradient color using a color palette
Swap - specifies the start and end gradient colors will be exchanged
No Middle - specifies if the middle gradient color will be applied



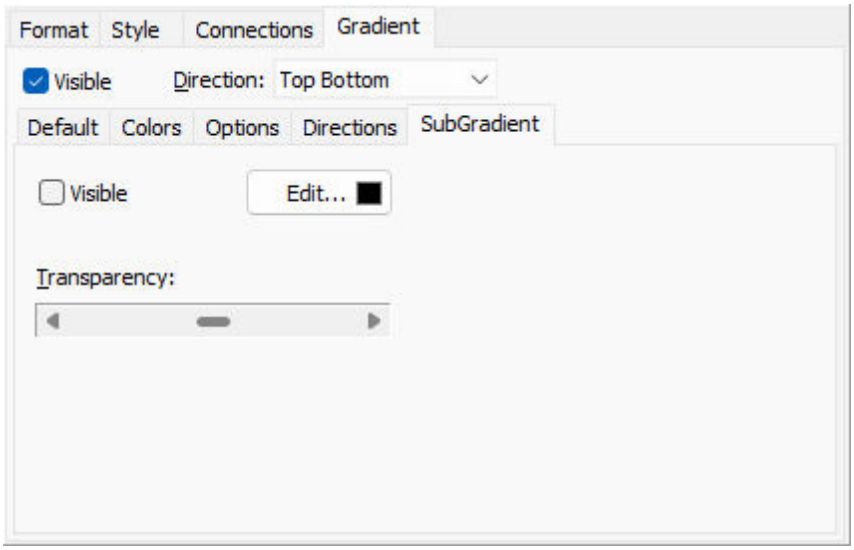
Options
Balance - specifies the balance between the start and end gradients
Radial Offset - specifies horizontal and vertical offset, when the gradient direction is radial
Angle - specifies the angle, when the gradient direction starts at a corner



Directions - provides previews for the selected gradient direction



SubGradient
Visible - specifies if a SubGradient is displayed
Edit - specifies the SubGradient color using a color palette
Transparency - specifies the SubGradient transparency



5.7.9 Frame

The Frame tab specifies to draw a frame around the chart, with several styles available.

General
Visible - determines whether the gauge frame will be displayed or not
Width - specifies the frame width
Style - specifies the chart frame style; Circle or Rectangle

Outer - provides options for the outer frame

Solid
Color - specifies the color for the outer frame, using a color palette
Default - displays the default color
Transparent - controls whether a transparency is applied to the outer frame

Transparency - specifies the degree of transparency

Hatch - provides pattern styles for the outer frame
Color / Back - specifies the color and background color for the outer frame
Transparent - controls whether a transparency is applied pattern
Swap - changes the background to the color value

Gradient - See **Gradient**
Texture - specifies various surfaces metal, wood, stone, etc.
Custom - specifies an image for the outer frame, where the image can be loaded

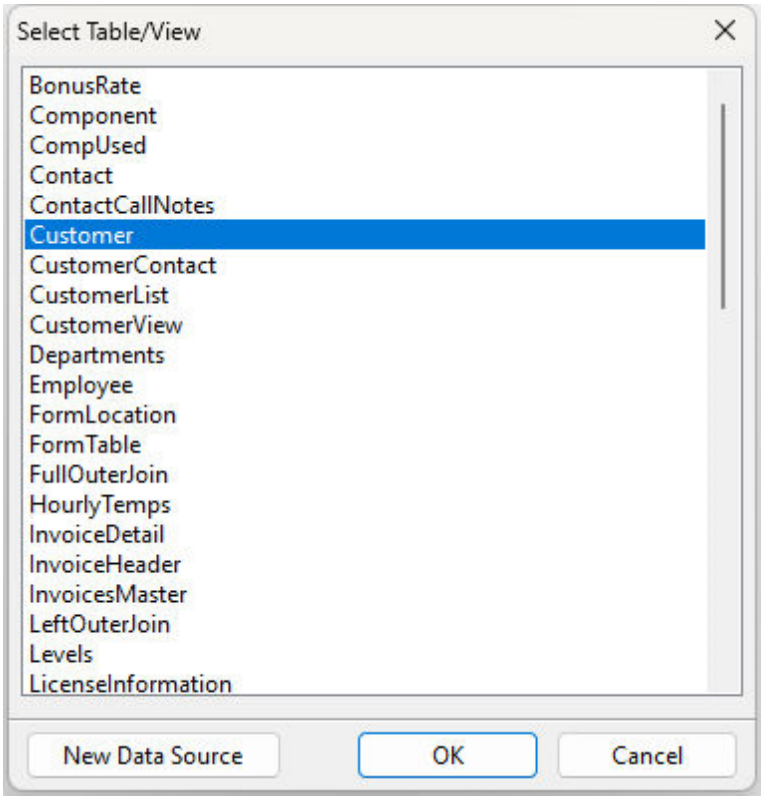
Middle - provides options for the middle frame. See the above **Outer** frame settings.
Inner - provides options for the inner frame. See the above **Outer** frame settings.
Shadow - See **Shadow**
Emboss - See **Emboss**

5.8 Dynamic Data Source

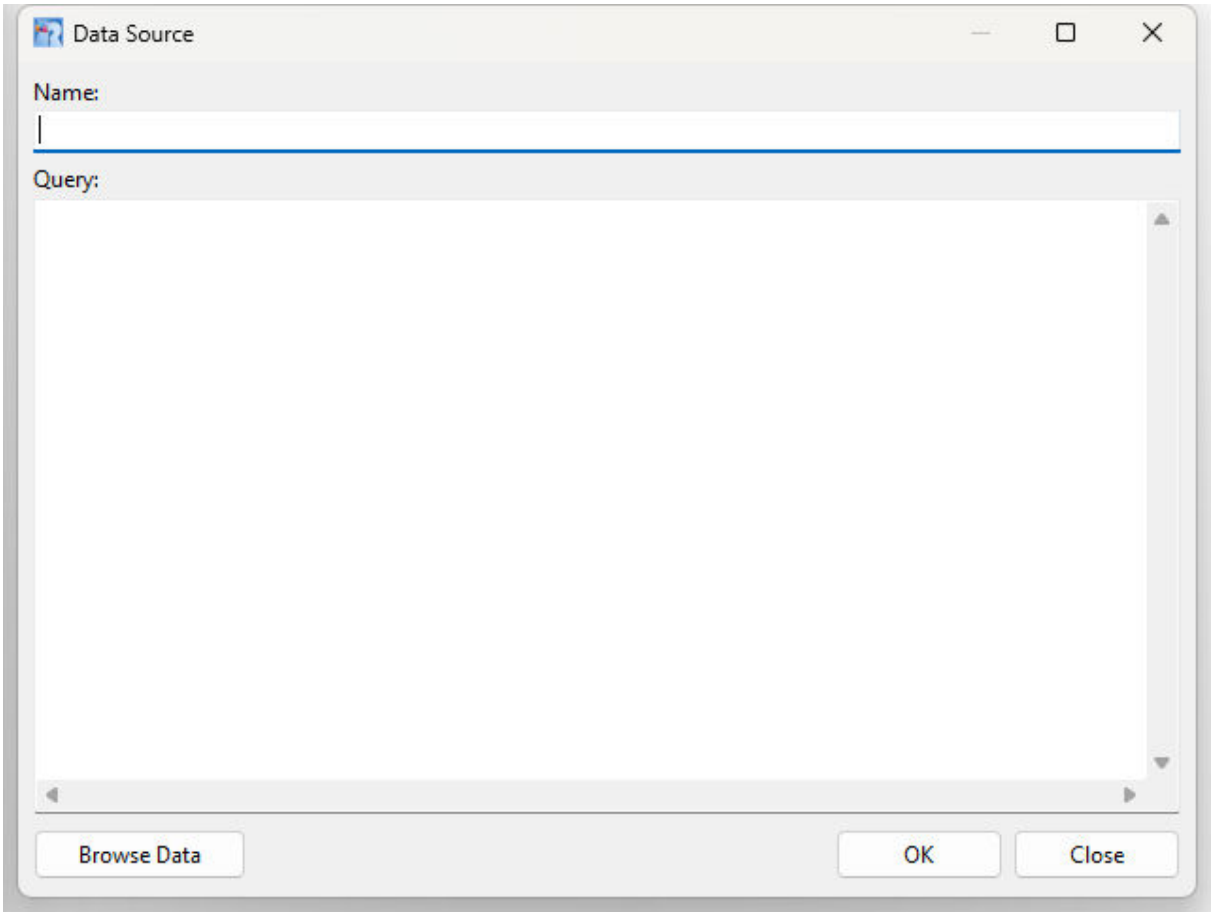
Data Sources in R:Charts can now be treated dynamically to work like the regular table and view sources. A data source contains a Name and Query component.

For regular tables/views the Name is the table/view name and the Query is "SELECT ALL FROM TableName", where the Name is read-only and the Query is editable. However, with dynamic data sources, both the Name and Query are editable. The data source Name should follow existing R:BASE table name rules, meaning no spaces, must start with a letter or underscore, alphanumeric only, etc. Note that these sources are "not" created in the database as views. The data sources are stored as a collection in the R:Charts project, where even the data can edited in an internal Data Browser. Changes within the R:Charts Data Browser are live, and reflected upon the actual R:BASE database.

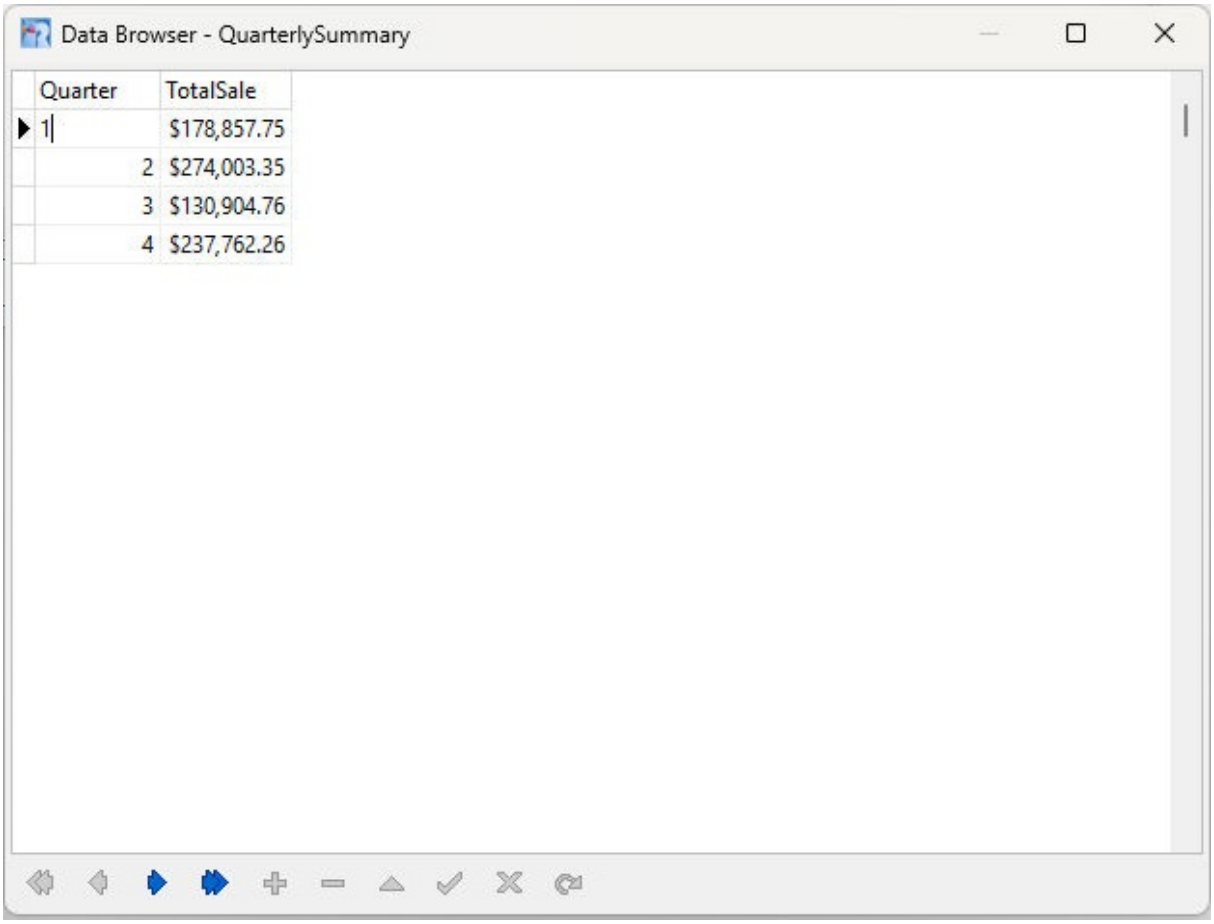
To add a dynamic data sources click the "Add Data Source" button on the Chart toolbar and select the "New Data Source" button at the bottom of the dialog.



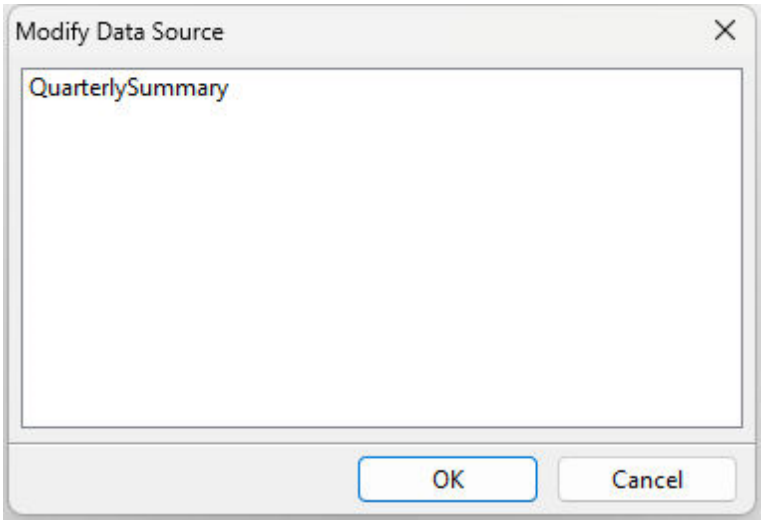
Enter a Name and Query for the data source. The Name will identify the data source. Press the [F3] to insert objects like table, view, or column at the current cursor location. The "Browse Data" button displays the dataset and validates the query.



The Data Browser allows changes to data, but only for fields within tables and views that can be updated. R:Charts follows the same behavior as in R:BASE. Changes within the R:Charts Data Browser are live, and reflected upon the actual R:BASE database.



A Data Source can be removed or deleted by selecting the "Remove Data Source" button on the Chart toolbar. Dynamic Data Sources are enclosed with less than and greater than characters (e.g. <HistoryOfCatalog>, <QtrSum_QuotaMax>).



Existing Data Sources can be modified by selecting the "Modify Data Source" button on the Chart toolbar. Dynamic Data Source are enclosed with less than and greater than characters. Another way to update

the underlying query is to right click the series in the "Series" section, then click "Update Data Source...". The internal query of regular tables and views can also be edited. But the "Name" is read-only.

5.9 On Before Design EEPs

EEP editing options are supported within R:Charts, allowing users to open existing chart (.rbc) files based upon views, which are dependent upon global variables.

When running a form or report with a chart, all global variables are defined and there should be no issues running the chart in a form or report. However, if a chart needs to be updated, the R:Charts designer now allows for the global variables to be defined.

With R:Charts open, after connecting to database, and before creating/updating an existing chart file, that is when to take advantage of the EEP options.

. On Before Design EEP...
. On Before Design EEP without Opening RBC File...

The EEP options allow for changes to be made to source tables on the fly within R:Charts, without having to use R:BASE.

An example would be when opening an existing chart (.RBC) file that depends on a view which is dependent on variable definitions.

The "On Before Design EEP without Opening RBC File" option would be used to create the desired environment of defined variables and temporary tables that are required to create/edit the chart file.

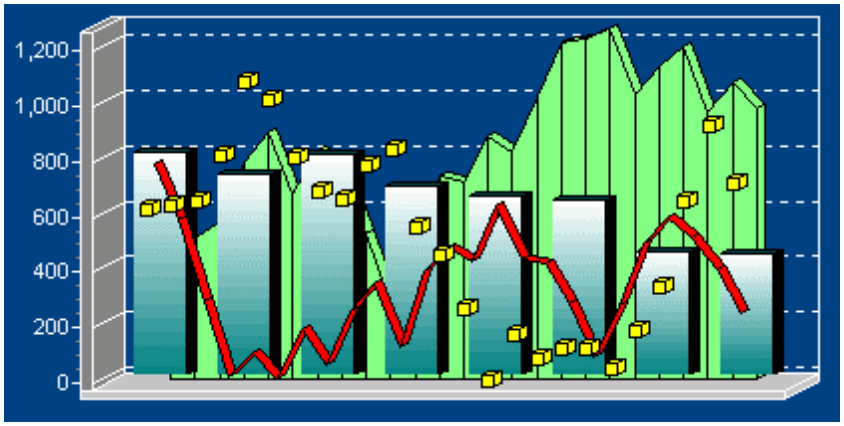
The "On Before Design EEP" may be used to define temporary table to select them as a Series source.

Both EEPs are available on the Chart Toolbar.

5.10 Combining Series

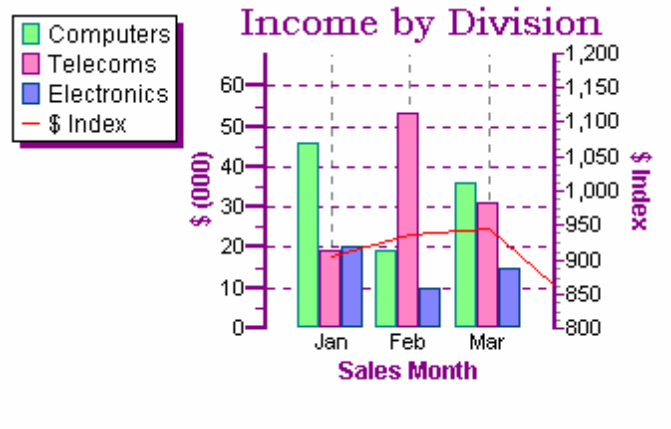
There is no practical limit to the number of Series that you can add concurrently to your Chart. You may mix different Series types, almost any Series type with any other Series type. Functions may also be added to a Series. For certain combinations it is not practical as axis definition between Series may directly conflict. For those cases the Series not available are grayed out in the Series gallery so that you cannot mistakenly select them.

See the section on functions for more about combining Series types. Functions work with other Series to create and display algorithmic relationships.

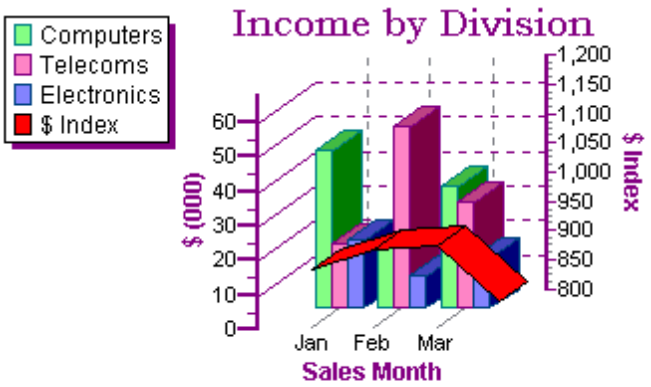


Example Series combination

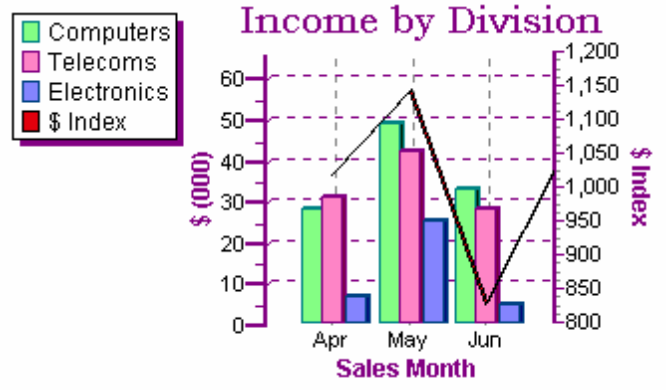
Combining Series types in one Chart can add a great deal of information value. The following example shows the incomes by Division and puts the $ index in the same Chart to measure the effect of that external influence on incomes.



You may combine Series in 3D Charts. The previous example is represented in 3D below. The Chart looks attractive although a high degree of 3D perspective makes it more difficult to visualize the monthly $ index with Division incomes.



You could minimize the effect by reducing the extent of 'side' view (percentage 3D).



It is possible to put all Series on the same plane although we advise caution as the effect may be confusing depending on which Series types you are combining.

Part VI

6 R:Charts Plugin Syntax

The following PLUGIN syntax is available to create an image of a chart, based upon an existing chart file:

Syntax:

```
PLUGIN RCharts vResult|<parameters>
```

Where:

vResult is the text variable to return the status, such as 'OK' or the exact -ERROR- message.

Parameters:

Parameter	Value	Description
FILENAME	chart file name	Specifies the name of R:Charts file name, chartfile.rbc
SAVE_TO_JPG SAVE_TO_BMP SAVE_TO_PNG SAVE_TO_PDF SAVE_TO_VML SAVE_TO_EMF SAVE_TO_WMF	image file name	Specifies the name of the output image file and format. The recommended format is JPG.
IMAGE_WIDTH	value	Specifies the image width, in pixels
IMAGE_HEIGHT	value	Specifies the image height, in pixels
SOFT_CHART	ON/OFF	Specifies to use an enhanced/smooth display for the chart objects
SOFT_TEXT	ON/OFF	Specifies to use an enhanced/smooth display for the chart text
TRANSPARENT	ON/OFF	Specifies to use a transparent background for the image file. Transparency is only available for the SAVE_TO_PNG parameter.
CHART_TITLE	value	Specifies the chart title
CHART_TITLE_ALIGNMENT	LEFT CENTER RIGHT	Specifies the alignment of the chart title
TITLE_FONT	type,size,style+style e.g. Tahoma,12,Bold+Italics	Specifies the font of the chart title
LEGEND_VISIBLE	ON/OFF	Specifies if the chart legend is displayed
LEGEND_TITLE	value	Specifies the legend title
LEGEND_TITLE_FONT	type,size,style+style e.g. Tahoma,12,Bold+Italics	Specifies the font of the chart legend title
LEGEND_POSITION	xxx yyy	Specifies the coordinates for the displayed legend
LEGEND_FONT	type,size,style+style e.g. Tahoma,12,Bold+Italics	Specifies the font of the chart legend
LEGEND_ALIGNMENT	LEFT RIGHT TOP BOTTOM	Specifies the alignment of the chart legend
3D	ON/OFF	Specifies if the chart is displayed 3-dimensionally
COLOR	Value	Specifies the chart background color
THEME	DefaultTheme ExcelTheme ClassicTheme BusinessTheme WebTheme WindowsXPTheme BlueSkyTheme	Specifies the chart theme

	FactsTheme RandomTheme OperaTheme	
PRINT		Displays the print preview for the chart
SERIES_TABLE[x]	table name	Specifies the table for the chart series (x is a zero based index pointing to the series number)
SERIES_XLABELS[x]	column name	Specifies the column for the X axis labels
SERIES_XVALUES[x]	column name	Specifies the column for the X axis values
SERIES_YVALUES[x]	column name	Specifies the column for the Y axis values
SERIES_COLORS[x]	column name	Column in the table to set the color for the point
SERIES_TITLE[x]	value	Specifies the title for the chart series (x is a zero based index pointing to the series number)

Notes:

- Returned variable name and the parameters must be separated by a "|" pipe character.
- The below parameters are not to be mixed in one command. If some combination of these parameters are used in one command, the last parameter in the list is the one that is performed.
  - SAVE_TO_BMP
  - SAVE_TO_JPG
  - SAVE_TO_VML
  - SAVE_TO_PDF
  - SAVE_TO_PNG
  - SAVE_TO_EMF
  - SAVE_TO_WMF
  - PRINT

Part VII

7 Samples

7.1 Create a Chart Based on R:BASE Data

The following includes step-by-step instructions to create an R:Charts chart based upon an R:BASE database table/view:

1. Launch R:Charts from the desktop icon.
2. Connect to the database that you are using for your chart. From the toolbar, select the "Connect" button.
3. In the "Connect Database" dialog, select a database to connect. You may have to browse for a database, for example: C:\RBTI\RBG11\Samples\RRBYW20\RRBYW20.RX1
4. Next, add your table or view that the chart data will display. By now, you should know what table or view you wish to use to display data in a chart. From the toolbar, select the "Add Data Source" button.
5. From the dialog with the list of tables and views in the database, select the table/view and press OK.

The next step is to choose the type of chart you wish to display. The different types of charts available to you are added from the "Series:" panel. The Series will represent the columns within the table or view. Now, we will add the Series.

6. From the Series panel, add a Series by pressing the "Add…" button. The Chart Gallery will open. Choose the type of chart you want to create. The chart will become highlighted and a small black arrow will appear at the bottom left of the highlighted box. You can click on the black arrow to see variations of the chart style. Double click on the variation (or the regular chart style) to select the style. If you want a 2D versus a 3D chart, uncheck the 3D box at the bottom before selecting the chart type.

A chart appears as a preview. This chart displayed is not based on your actual data. The table or view, previously added, will be assigned to the chart style you picked.

7. To associate the chart to your table or view, click the "Edit..." button from within the "Series:" panel (looks like a blue triangle , or protractor, with a pencil). In the window that appears, select on the "Series" tab. Within the "Series:" tab, select the "Data Source" tab.
8. From the "Table/View:" drop down box, choose the appropriate table you wish to assign.
9. If you wish to display column data at the series labels, choose a column from the drop down box. Otherwise, you can leave the field empty.
10. Based on the type of chart you are using, the properties will be displayed differently here. If you have a pie chart, you will assign a column to a field "Pie". If you have a bar chart, you will assign a column to a field "Bar". Each type of chart may have additional options for the X and Y axis.

You can click the "Apply" button at any time to see how the chart will be affected by your choices. When done, click OK. Your chart will now be based on real data.

Additional formatting for your chart can be applied from editing the Series from the "Series:" panel, or by choosing any of the available options in the "Properties:" panel. When a different option is selected from the drop down box in the "Properties:" panel, the panel's options will change specifically for that portion of your chart. After making the changes you desire, save your chart.

11. Choose the blue diskette button to save the chart. Name the chart file and be sure to use the .rbc file extension.

7.2 Displaying a Chart in an R:BASE Report

Use the following example to use dynamically created R:Charts image files in Reports:

Assume that you have already created a bar chart and saved the chart file as Quarterly_BarChart.RBC. Now, to use that format with live data in your report, follow these steps:

1. Launch R:BASE, connect to your database, and open the Report Designer for the report which will display the chart image.

2. Define a Global TEXT Variable in your report designer or at the R> prompt, such as vImage.
3. Place a "Variable Image" object on your report and adjust the size (width and height) and make sure to note the screen width and height in pixels. To view the screen width and height in pixels in report designer, right-click on the report ruler and select "Screen Pixels". The default is set to Inches. Assume that the "Variable Image" object is set to 324 x 244.
4. Assign the "Variable Image" object with the variable vImage.
5. Save the report and close the Report Designer.

At the R> prompt or in a command file, use the following syntax to print the report the screen:

```
PLUGIN RCharts vResult +
|FILENAME Quarterly_BarChart.RBC +
|SAVE_TO_JPG Quarterly_BarChart.jpg +
|IMAGE_WIDTH 324 +
|IMAGE_HEIGHT 244
SET VAR vImage = 'Quarterly_BarChart.jpg'
PRINT reportname OPTION SCREEN|Window_State MAXIMIZED
DELETE Quarterly_BarChart.jpg
RETURN
```

For more sample charts, reports, and command files, please follow the sample applications bundled with RRBYW20:

Sample R:Charts File	Sample Report
Quarterly_BarChart.RBC	Quarterly_BarChart
Quarterly_BarHorizontal.RBC	Quarterly_Horizont
Quarterly_PieChart.RBC	Quarterly_PieChart

7.3 Altering the Chart X and Y Values

The following example alters the chart X and Y values using different column names.

```
-- the BonusRate table includes an added ItemColor column to store the series color
PLUGIN RCharts vResult+
|FILENAME Quarterly_BarHorizontal.rbc +
|SAVE_TO_JPG Quaterly_Bar.jpg +
|CHART_TITLE Quarterly Summary +
|LEGEND_TITLE Bonus Totals +
|SERIES_TABLE[0] BonusRate +
|SERIES_XLABELS[0] BonusPct +
|SERIES_XVALUES[0] BonusPct +
|SERIES_YVALUES[0] MaxAmount +
|SERIES_COLORS[0] ItemColor +
|SOFT_CHART ON +
|SOFT_TEXT ON
```

Part VIII

8 Technical Support

Please read over the help documentation at least once before seeking support. We have worked very hard to make the help documentation clear and useful, but concise. It is suggested that you reread these instructions once you have become accustomed to using the software, as new uses will become apparent.

If you have further questions, and cannot find the answers in the documentation, you can obtain information from the below sources:

- Email our Technical Support Staff at: support@rbase.com
- Access the R:BASE Technologies Support home page online at https://www.rbase.com/support

You may be required to purchase a technical support plan. Several support plans are available to suit the needs of all users. Available Technical Support Plans

Please be prepared to provide the following:

- The product registration number, which is located on the invoice/order slip for the purchased product
- The type of operating system and hardware in use
- Details regarding your operating environment; such as available memory, disk space, your version of R:BASE, local area network, special drivers, related database structures, application files, and other files that are used or accessed by your application

All provide information will be used to better assist you.

R:BASE Technologies has a number of different services available for R:BASE products. As a registered user, you will receive information about new features for R:BASE and other R:BASE Technologies products. Please remember to register your software. https://www.rbase.com/register/

Part

9 Useful Resources

. R:BASE Home Page:	https://www.rbase.com
. Up-to-Date R:BASE Updates:	https://www.rbaseupdates.com
. Current Product Details and Documentation:	https://www.rbase.com/rbg11
. Support Home Page:	https://www.rbase.com/support
. Product Registration:	https://www.rbase.com/register
. Official R:BASE Facebook Page:	https://www.facebook.com/rbase
. Sample Applications:	https://www.razzak.com/sampleapplications
. Technical Documents (From the Edge):	https://www.razzak.com/fte
. Education and Training:	https://www.rbase.com/training
. Product News:	https://www.rbase.com/news
. Upcoming Events:	https://www.rbase.com/events
. R:BASE Online Help Manual:	https://www.rbase.com/support/rsyntax
. Form Properties Documentation:	https://www.rbase.com/support/FormProperties.pdf
. R:BASE Beginners Tutorial:	https://www.rbase.com/support/rtutorial
. R:BASE Solutions (Vertical Market Applications):	https://www.rbase.com/products/rbasesolutions

Part X

10 Feedback

Suggestions and Enhancement Requests:

From time to time, everyone comes up with an idea for something they'd like a software product to do differently.

If you come across an idea that you think might make a nice enhancement, your input is always welcome.

Please submit your suggestion and/or enhancement request to the R:BASE Developers' Corner Crew (R:DCC) and describe what you think might make an ideal enhancement. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main menu bar, choose "Help" > "R:DCC Client". If you do not have a login profile, select "New User" to create one.

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the request. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted enhancement request.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to rdcc@rbase.com.

Reporting Bugs:

If you experience something you think might be a bug, please report it to the R:BASE Developers' Corner Crew. In R:BASE, the R:DCC Client is fully integrated to communicate with the R:BASE development team. From the main menu bar, choose "Help" > "R:DCC Client". If you do not have a login profile, select "New User" to create one.

You will need to describe:

- What you did, what happened, and what you expected to happen
- The product version and build
- Any error message displayed
- The operating system in use
- Anything else you think might be relevant

If you have a sample you wish to provide, have the files prepared within a zip archive prior to initiating the bug report. You will be prompted to upload any attachments during the submission process.

Unless additional information is needed, you will not receive a direct response. You can periodically check the status of your submitted bug.

If you are experiencing any difficulties with the R:DCC Client, please send an e-mail to rdcc@rbase.com.

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