

R:Charts 11

The Charting Solution for your R:BASE Database!



Help Manual



R:Charts 11

Help Manual

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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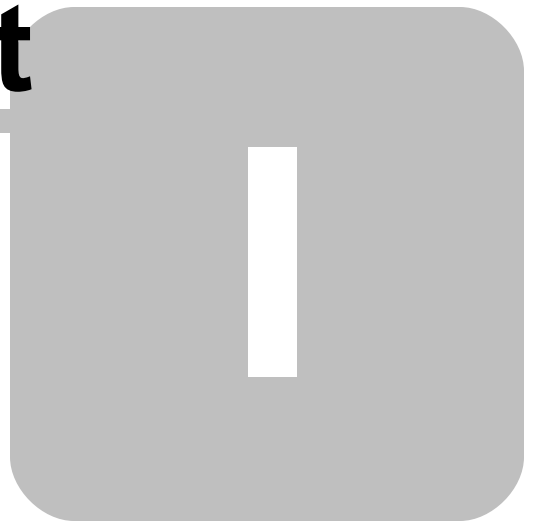
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Part



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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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.

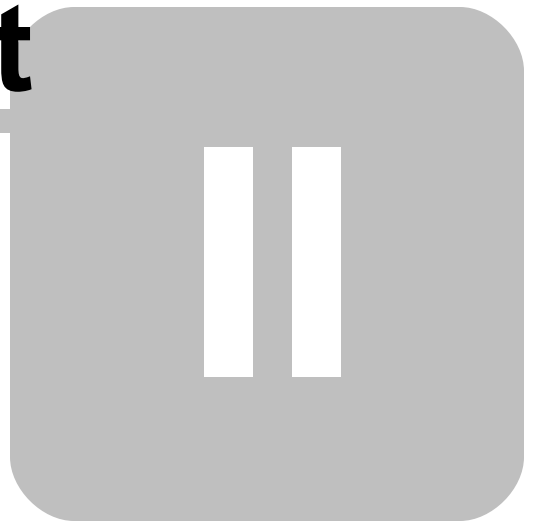
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2. To provide a reasonable solution for any solvable issue. Not all issues may be solved, and therefore we will acknowledge the existence of known issues, or bugs, which we are presently aware of, that have no reasonable work-around.

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



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 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012, 2012 R2

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
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.

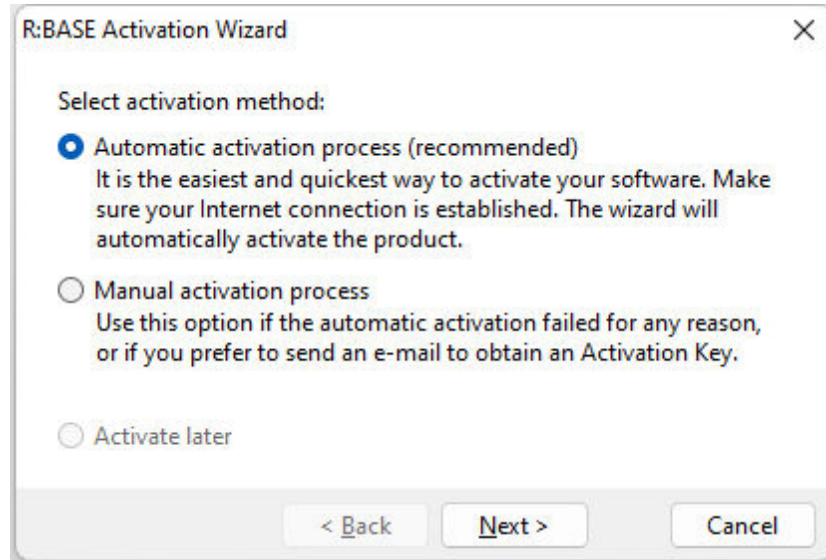
2.4.1 R:BASE

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.

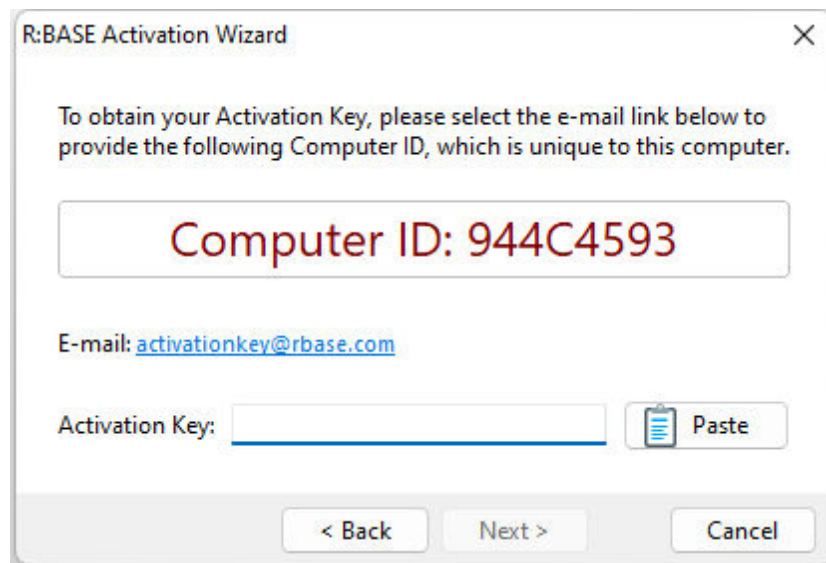
Only "Per Seat" License Keys are valid for this entry screen. All "Runtime" License Keys must be registered within R:Compiler for R:BASE or within Runtime for R:BASE separately.



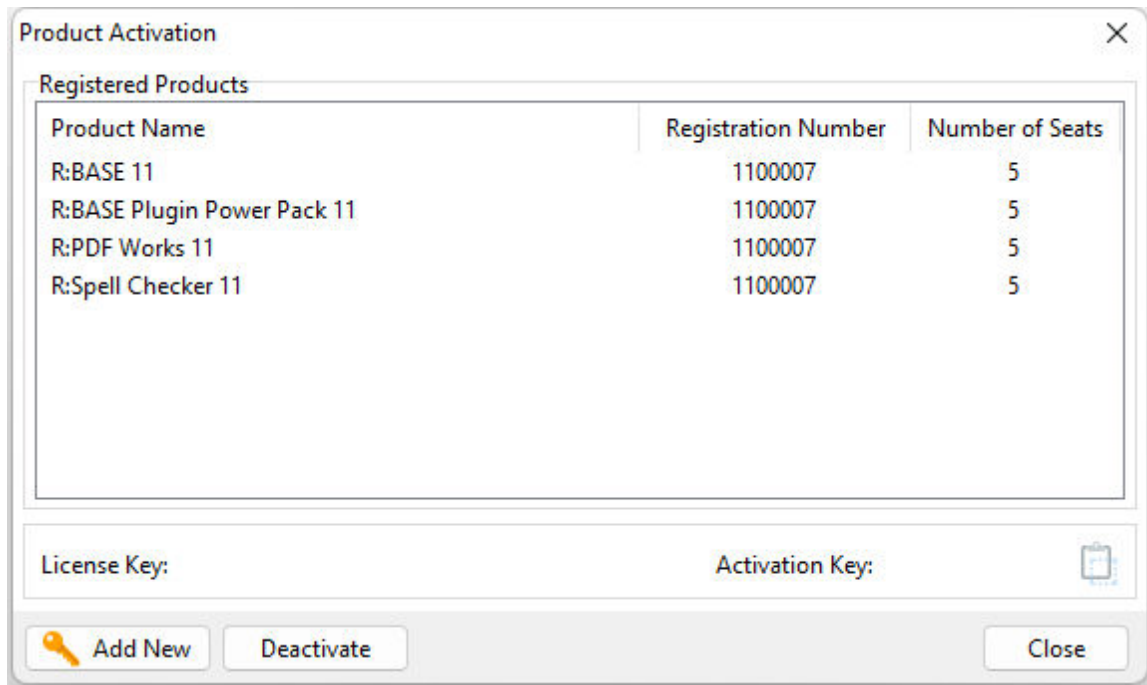
After entering the License Key, you will see a dialog to prompt for your activation method. The software can be activated automatically over the Internet, or manually by retrieving an Activation Key from R:BASE Technologies by email or over the phone. If you select "Later", you will be reminded each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



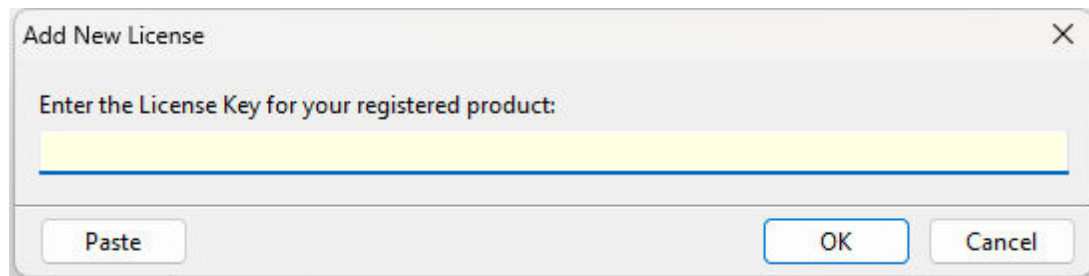
Please be advised that if you are activating multiple workstations, it is highly recommended that you keep records of the computer name, Computer ID and Activation Key for future reference. Access to this information will prove convenient in the event of a hardware failure or license transfer when uninstalling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

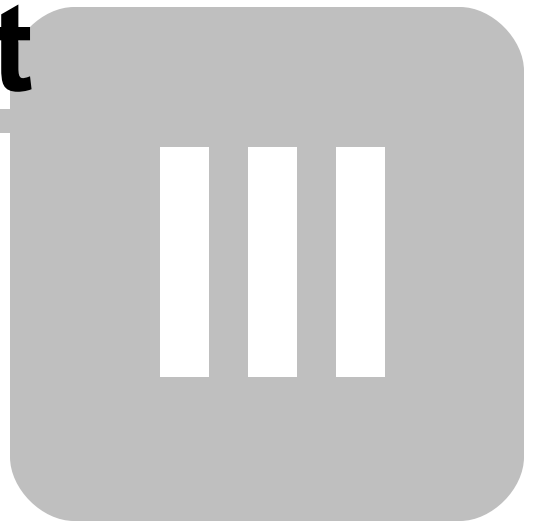
2.4.3 Runtime for R:BASE

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 #####-#####-#####-#####-#####-#####-#####-##### ' '
```

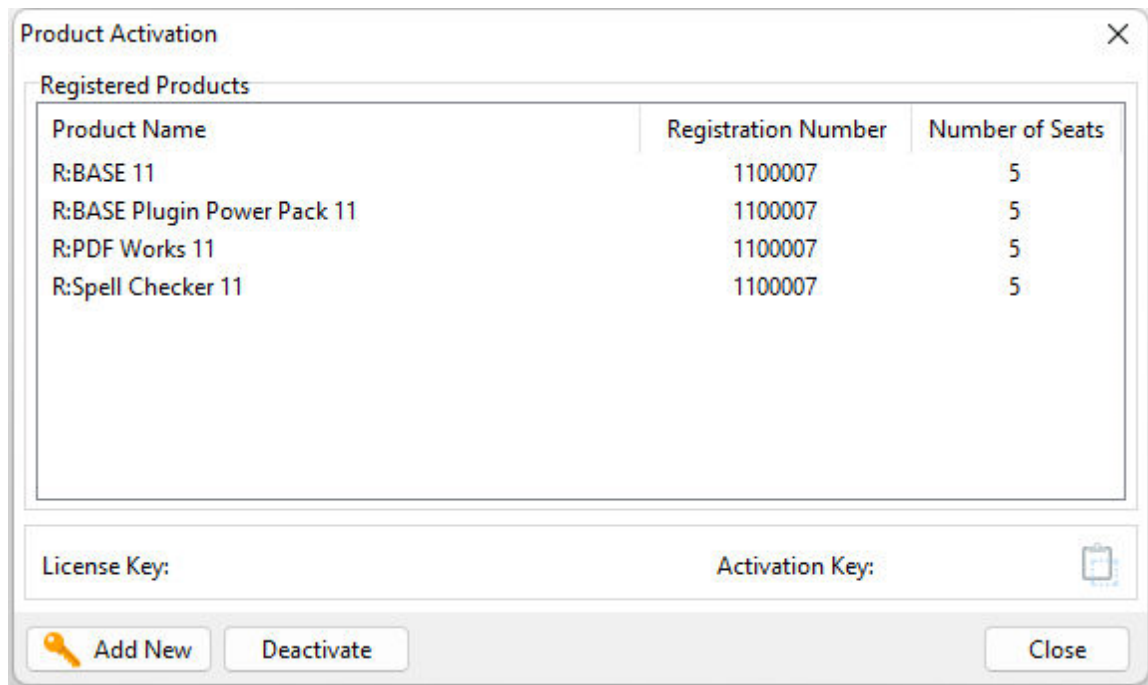
Part



3 Uninstall

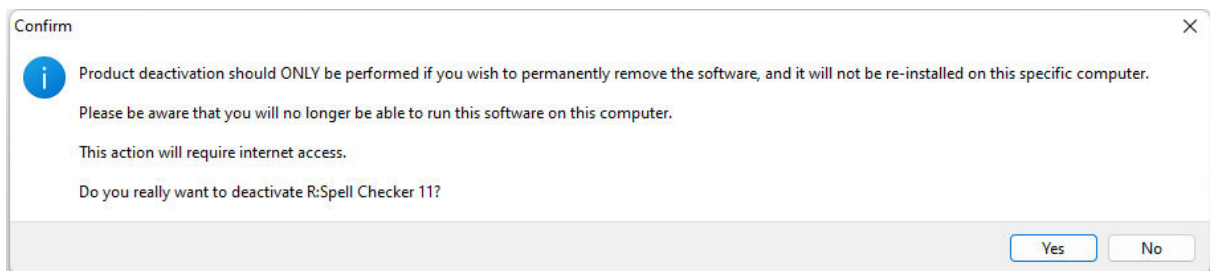
If a computer is no longer using R:Charts, through license transfer or hardware failure, the Activation Key that was used on that computer must be submitted to R:BASE Technologies so we can then remove the Activation Key from our log. We will disable the Key, which will then free up that used activation.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

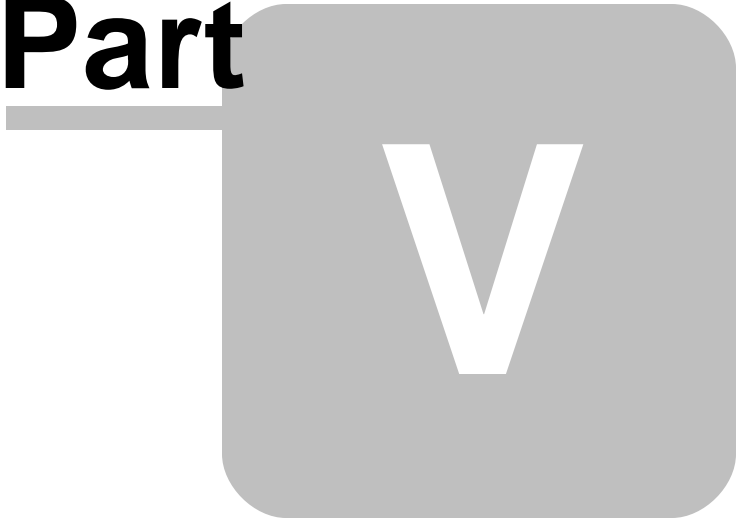


4 Using R:Charts

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



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 <i>Legend</i> - displays the legend in the chart <i>Axes</i> - displays axes <i>Titles</i> - displays the chart title <i>Series List</i> - displays the Series panel <i>Properties</i> - displays the Properties panel <i>Chart Gallery</i> - displays the chart gallery along the right side <i>Status Bar</i> - displays the status bar across the bottom <i>Data</i> - 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

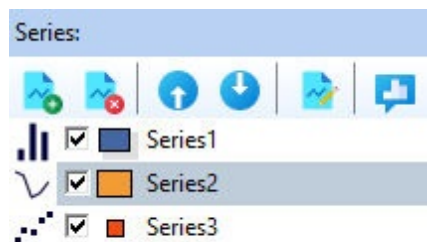
Button	Description
	Normal mode (deactivate navigation)
	Rotates the chart (up/down and left/right)*
	Moves the chart (up/down and left/right)*
	Zooms in and out of the chart*
	Increases or decreases 3D depth*
	Copies the displayed information to the clipboard. A copied chart will copy an image. Copied 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.

Properties:	
Series1	
Property	Value
Edit	
Color	 \$00A36644
Color each p	<input checked="" type="checkbox"/> Yes
Datasource	
Show at Leg	<input checked="" type="checkbox"/> Yes
Show Marks	<input checked="" type="checkbox"/> Yes
Title	
Visible	<input checked="" type="checkbox"/> Yes
Border	... —
Gradient	...
Pattern	
Side Margins	<input checked="" type="checkbox"/> Yes
Style	Rectangle
Use Origin	<input checked="" type="checkbox"/> Yes
Width	

5.5 Chart Gallery

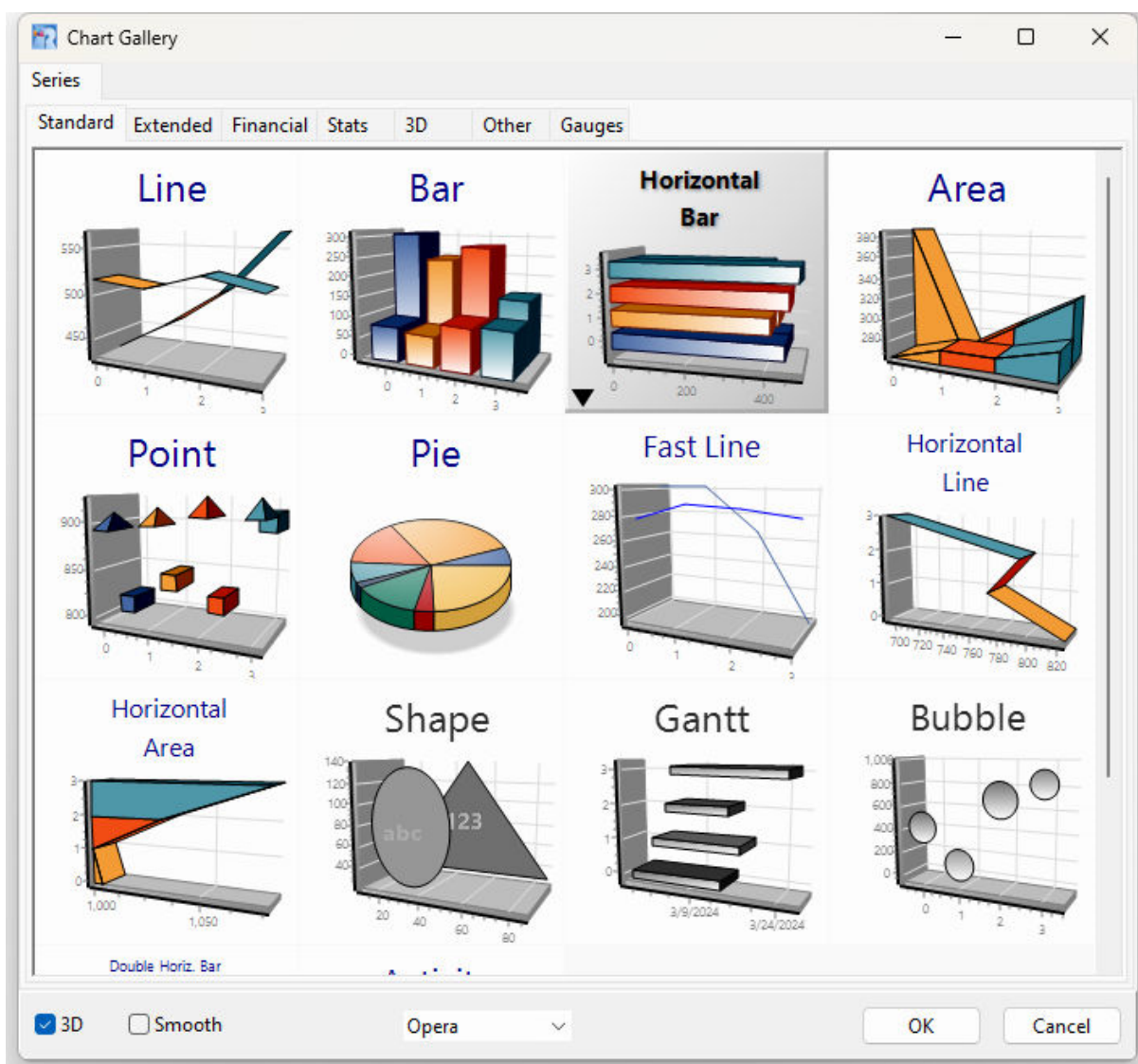
The Chart Gallery is displayed when first adding a series to a chart, and can also be displayed within the [Chart Editor](#), by selecting the tabs "Chart" > "Series", and then choosing the "Change" button. The Chart Gallery is also available as a toolbar along the right side of the R:Charts window. 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

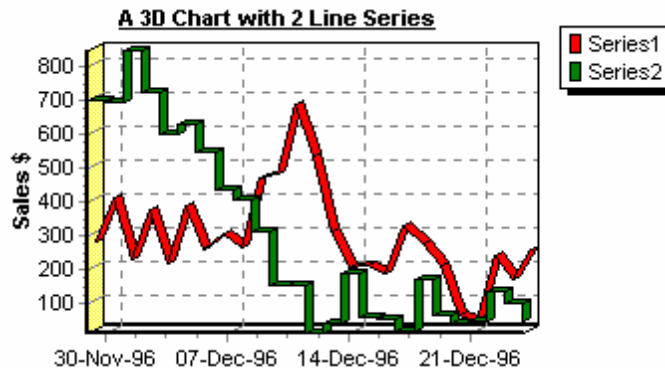
5.5.1.1.1 Line / Horizontal Line

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

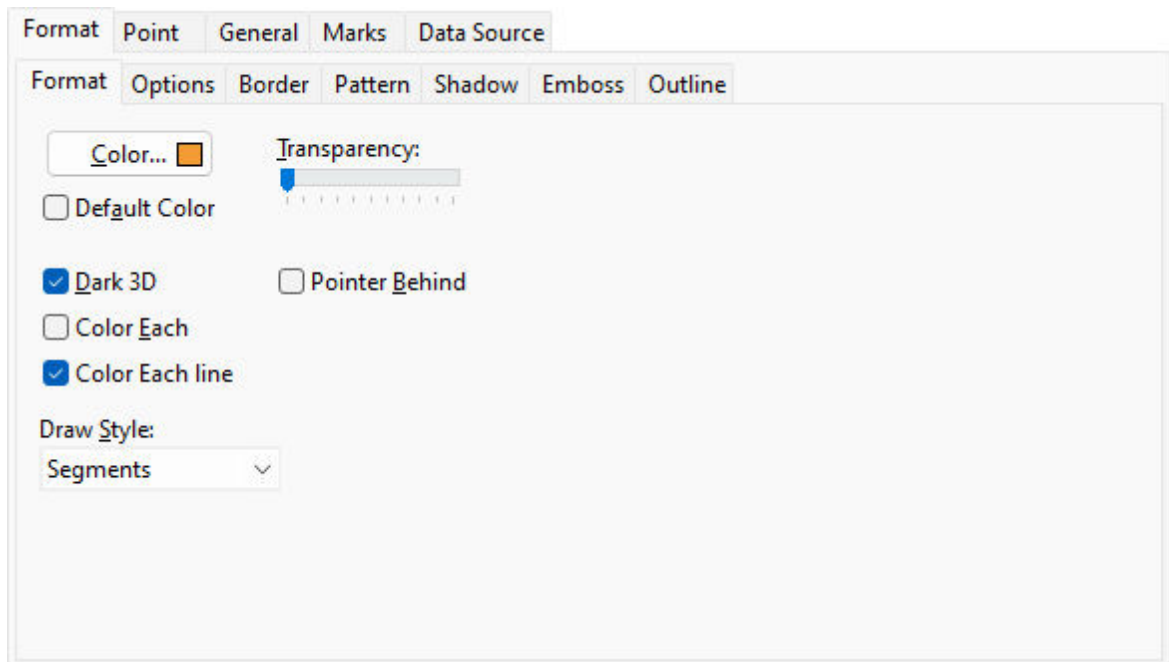
- [Format](#)
- [Point](#)
- [General](#)
- [Marks](#)
- [Data Source](#)

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



Border - specifies the Line series border, using the [Border Editor](#)

Color - specifies the color used to display the line, using a color palette

Pattern - specifies the lines pattern, using the [Pattern Editor](#)

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

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

Transparency - specifies the transparency

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.

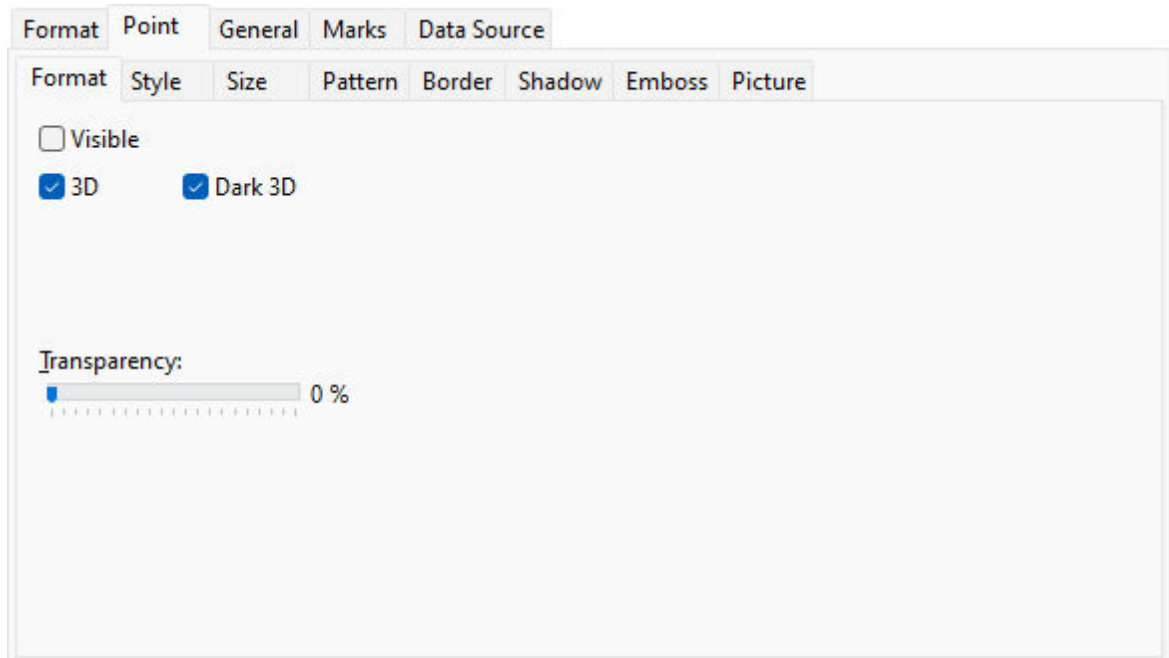
Outline - specifies an outline for the line, using the [Border Editor](#)

Color Each line - enables/disables the coloring of each outline line for the series

Shadow - specifies a shadow, using the [Shadow Editor](#)

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

5.5.1.1.1.2 Point



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

Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the Series

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

Width - specifies the Series point width size

Height - specifies the Series 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](#)

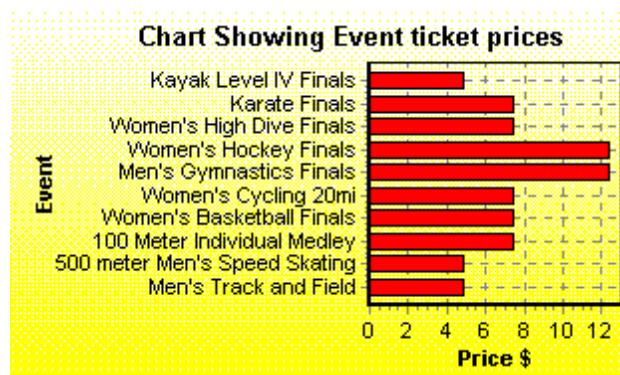
Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.1.2 Bar / Horizontal Bar

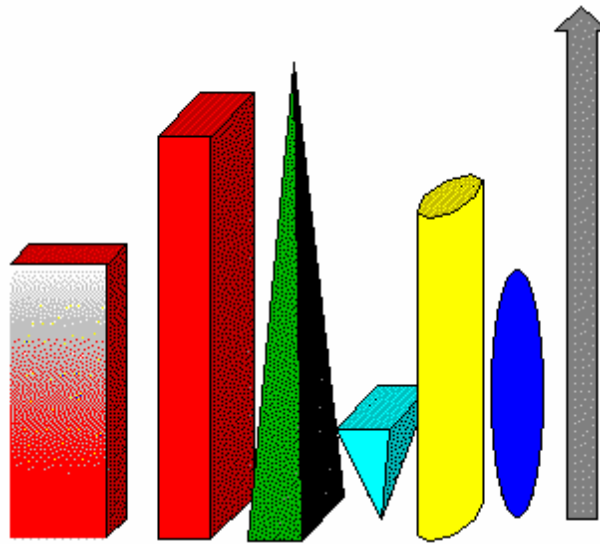
The Bar Series can include a Vertical Bar or Horizontal Bar.

- [Format](#)
- [Stack](#)
- [General](#)
- [Marks](#)
- [Data Source](#)

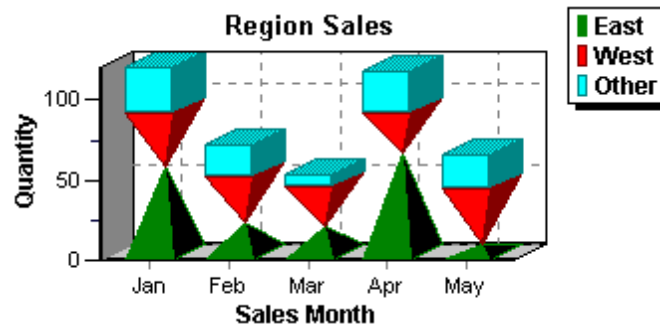
The Horizontal Bar Series shares the same properties as the Bar Series. Apart from any aesthetic requirement, one occurrence of the need to use a horizontal bar Series may be to adequately display long axis labels which are best read horizontally.



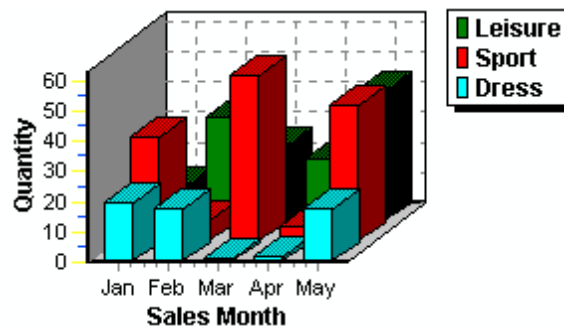
The Bar Series, in 2 or 3 dimensions, doesn't have to be represented by a rectangular bar. Choose a bar style for your Chart Series or 'mix and match' to suit your needs.

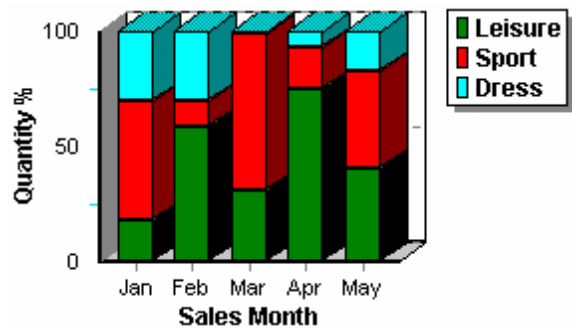
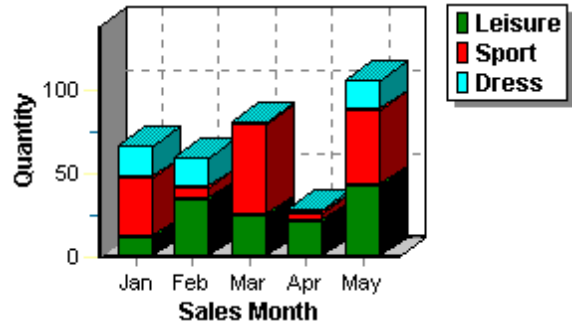
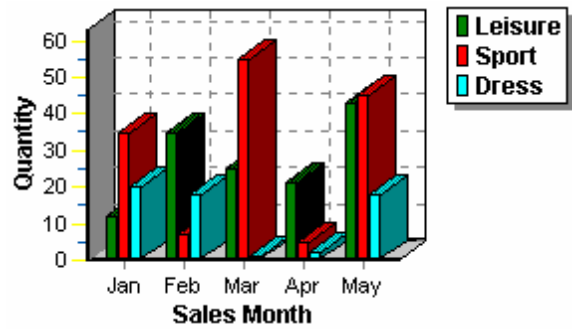


Mixing Bar Series styles may be useful for some applications. Below is a stacked bar example.

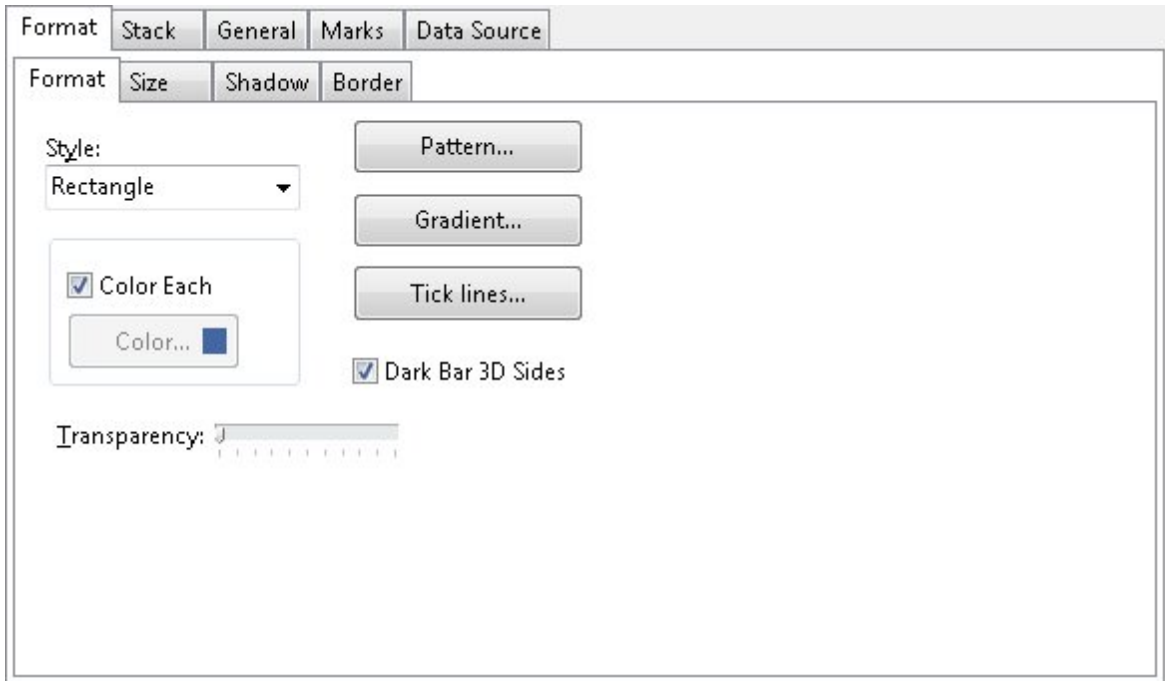


Below are samples displaying 3D Bar Series with four methods to display the same information.





5.5.1.1.2.1 Format

**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.

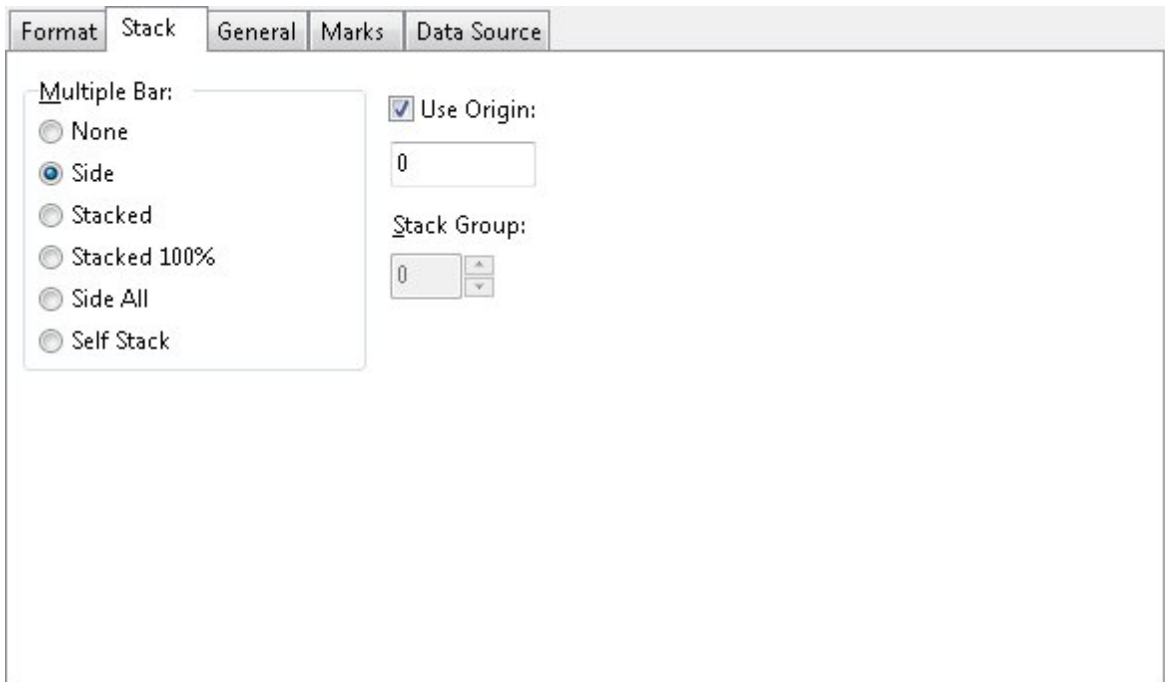
Border Tab

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

5.5.1.1.2.2 Stack



The screenshot shows a configuration window with five tabs: 'Format', 'Stack', 'General', 'Marks', and 'Data Source'. The 'Stack' tab is selected. It contains the following controls:

- Multiple Bar:** A group of radio buttons with options: None, Side (selected), Stacked, Stacked 100%, Side All, and Self Stack.
- Use Origin:** A checked checkbox and a text input field containing the value '0'.
- Stack Group:** A text input field containing '0' and a vertical spinner control.

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.

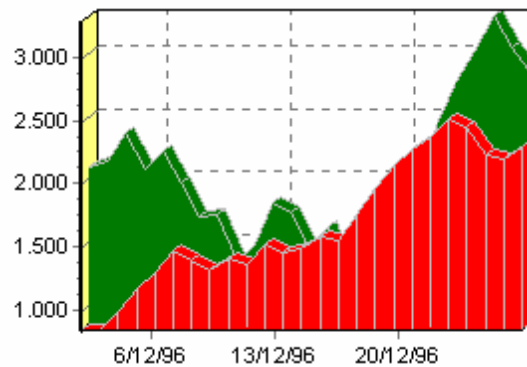
Use Origin - determines the axis value used as a common bottom for all Bars drawn

Stack Group - groups series to allow several stacks of independent series groups in the same chart

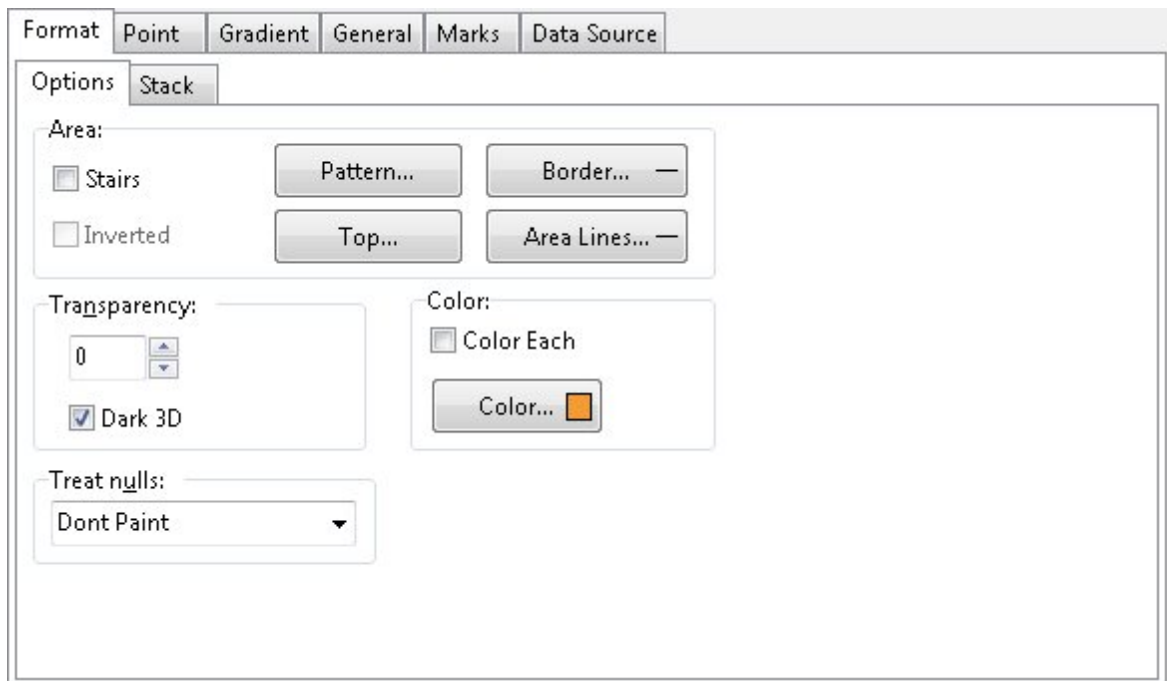
5.5.1.1.3 Area / Horizontal Area

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 Tab**

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.

Pattern - specifies the area pattern, using the [Pattern Editor](#)

Top - specifies the top surface area pattern, using the [Pattern Editor](#)

Border - specifies the area series border, using the [Border Editor](#)

Area Lines - alters the area lines, using the [Border Editor](#)

Transparency - specifies the transparency

Dark 3D - sets the series points filled with darker colors than the rest of the series

Color Each - enables/disables the coloring of multiple bars within the area

Color - specifies the color, using a color palette

Treat nulls - determines how null values are displayed

Stack Tab

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.

Overlap - Series displayed in same Z space (all Series take same Z-order position). This will result in overpainting of equal Series points.

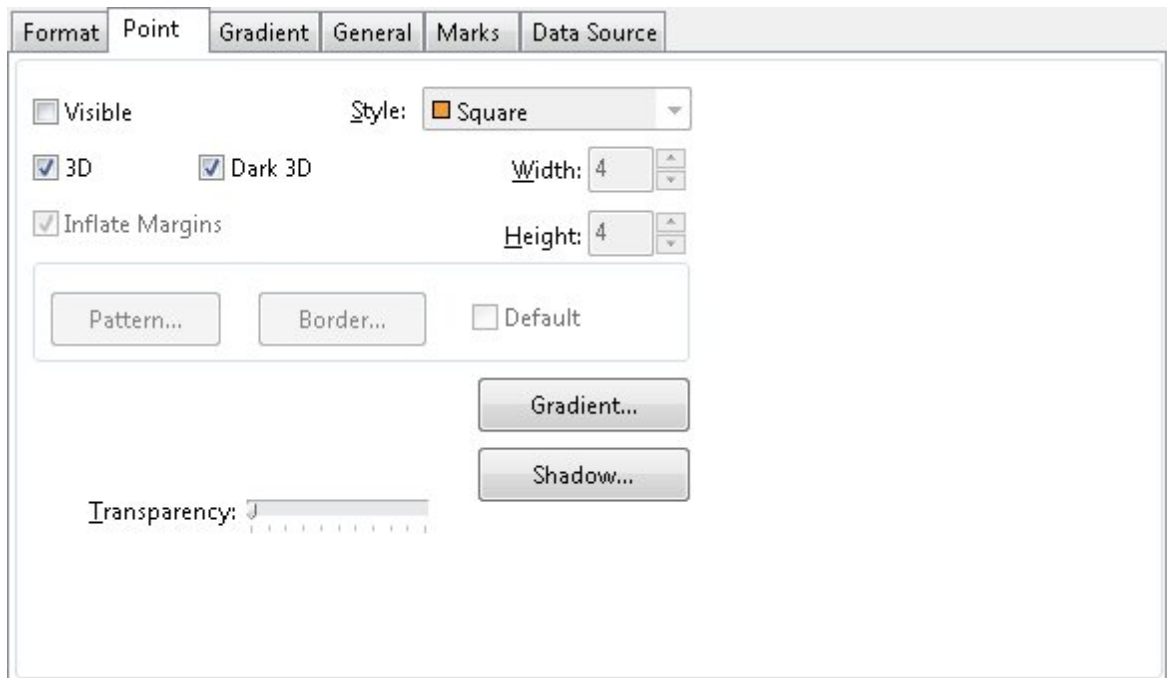
Stack - Stacks series one above the other. Series begin with lowest index order at bottom. Further Series are then plotted above in their respective indexed order with each point taking the cumulative value of lower points as their starting value.

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.

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

5.5.1.1.3.2 Point



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

Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the Series

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

Width - specifies the Series point width size

Height - specifies the Series 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. This property is for Horizontal Area.

Ignore Nulls - ignore null values. This property is for Horizontal Area.

Transparency - specifies the transparency

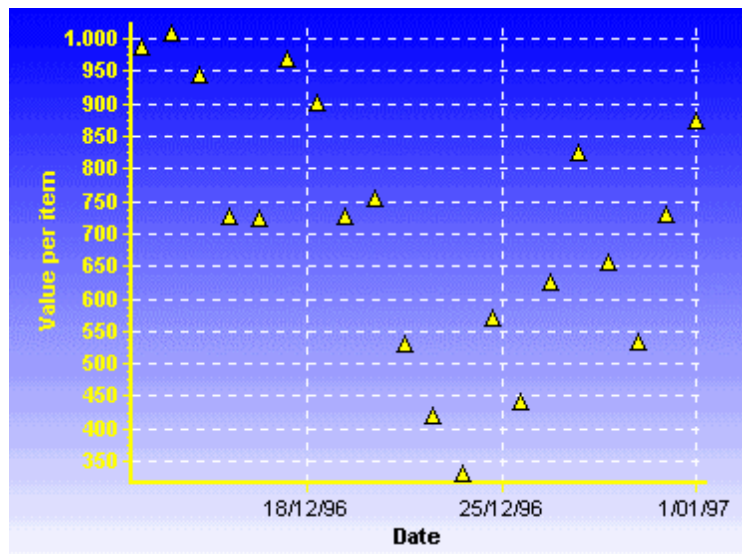
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

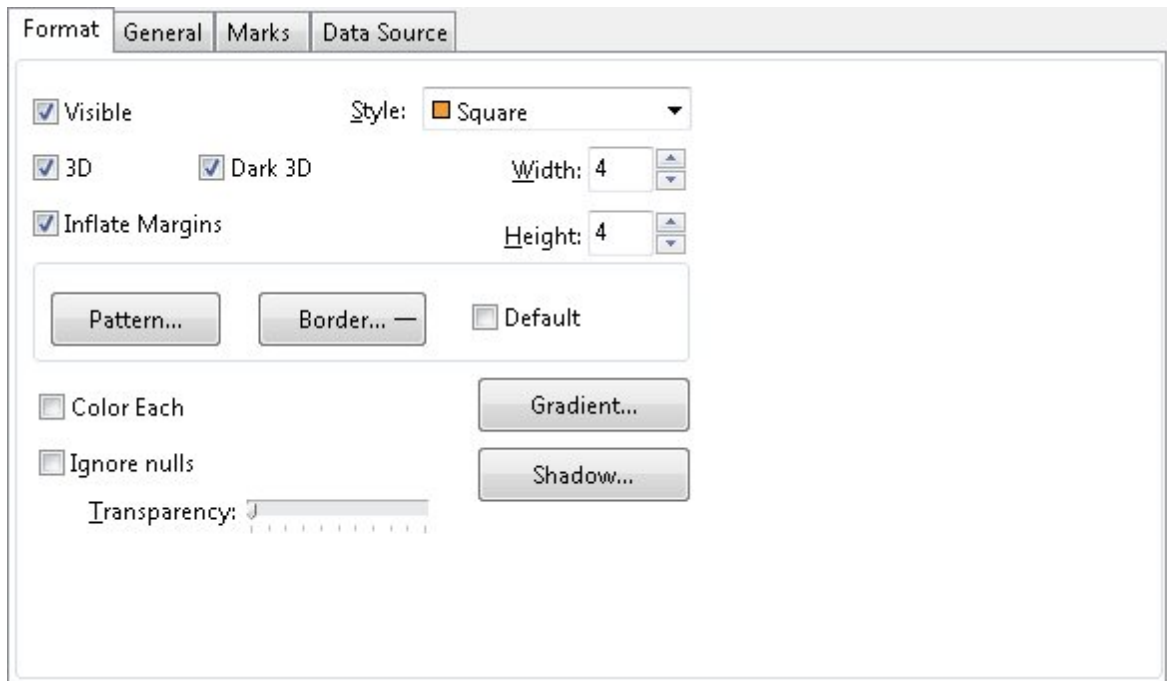
5.5.1.1.4 Point

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



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

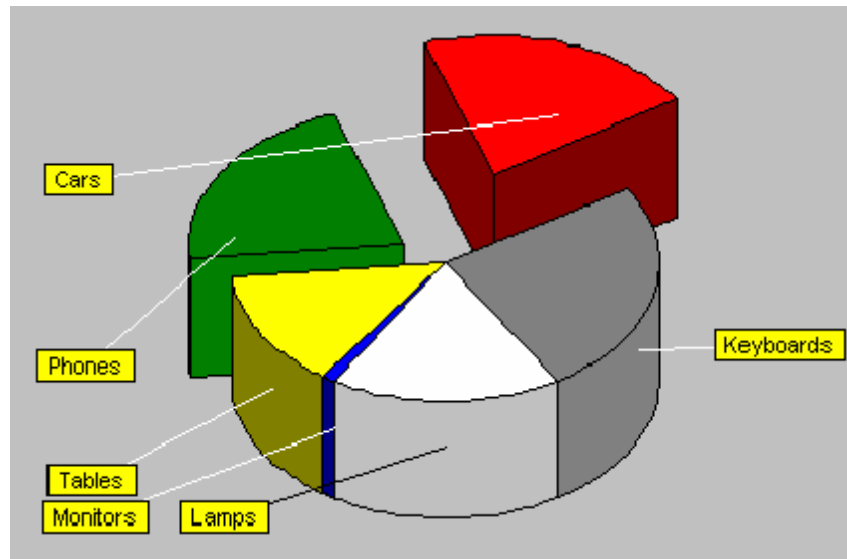
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.1.5 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

Format	Circled	General	Marks	Data Source
Options	Group Slices	Colors	Marks	
Explode biggest:	25	<input checked="" type="checkbox"/> Dark 3D		
Total angle:	360	<input type="checkbox"/> Patterns		
Dark Border:	120	<input type="button" value="Border..."/>		
Multiple Pies:	Automatic			
	<input type="button" value="3D Gradient..."/>			
Gradient Bright:	<input type="range" value="0"/>			

Options Tab

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

Total angle - determines the internal angle of the Pie slice displayed

Dark Border - shows shaded colors for the sides of the pie slices

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

Border - specifies the border for pie sections, using the [Border Editor](#)

Multiple Pies - specifies if multiple pies are supported

3D Gradient - provides gradient properties for the pie. Refer to the [Gradient Editor](#) for property descriptions.

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

Group Slices Tab

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 - opens a dialog to define a sub-Legend

Colors Tab

Color Each slice - enables/disables the coloring of each pie slice. When disabled, the Color button can be used to select a color

Color palette - defines a themed color scheme for the pie slices

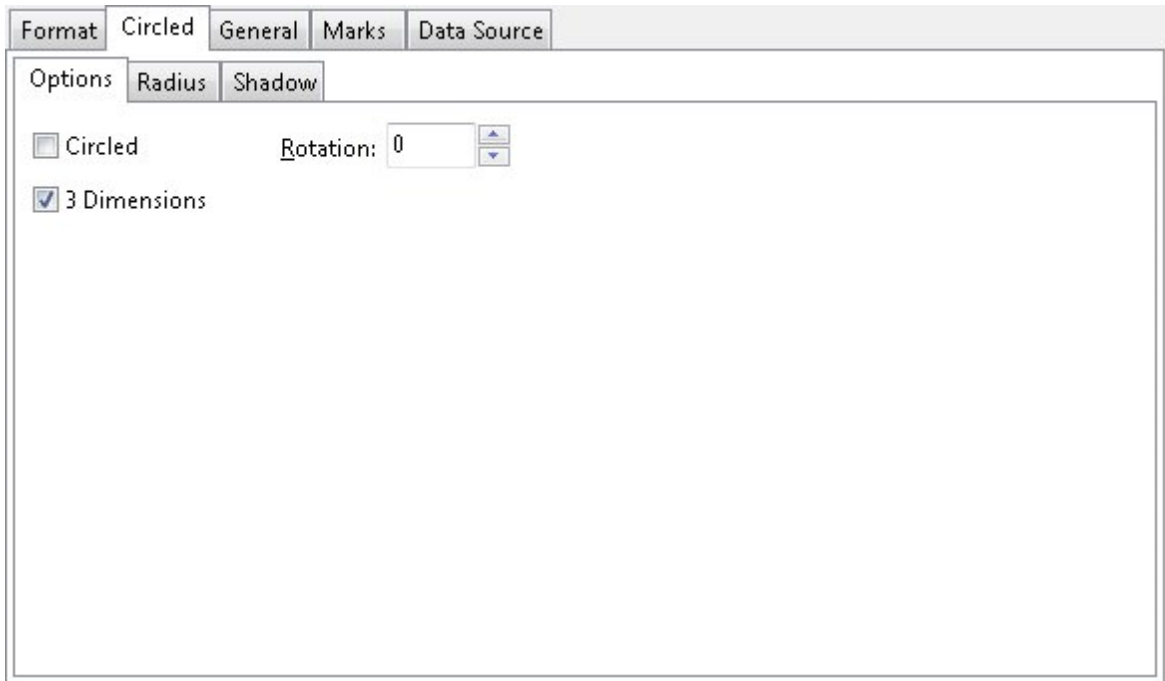
Marks Tab

Auto Mark Position - sets the slice marks automatically

Vertical center callout - vertically centers the line to the mark

Callout Leg size - increases the line width and expands the distance to the slice mark

5.5.1.1.5.2 Circled

**Options Tab**

Circled - determines whether the Pie Series will be drawn elliptically or with the same X and Y radius (circle)

Rotation - sets the Pie Series rotation angle

3 Dimensions - sets the Pie Series in 3D

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 Pie Series. Refer to the [Shadow Editor](#) for property descriptions.

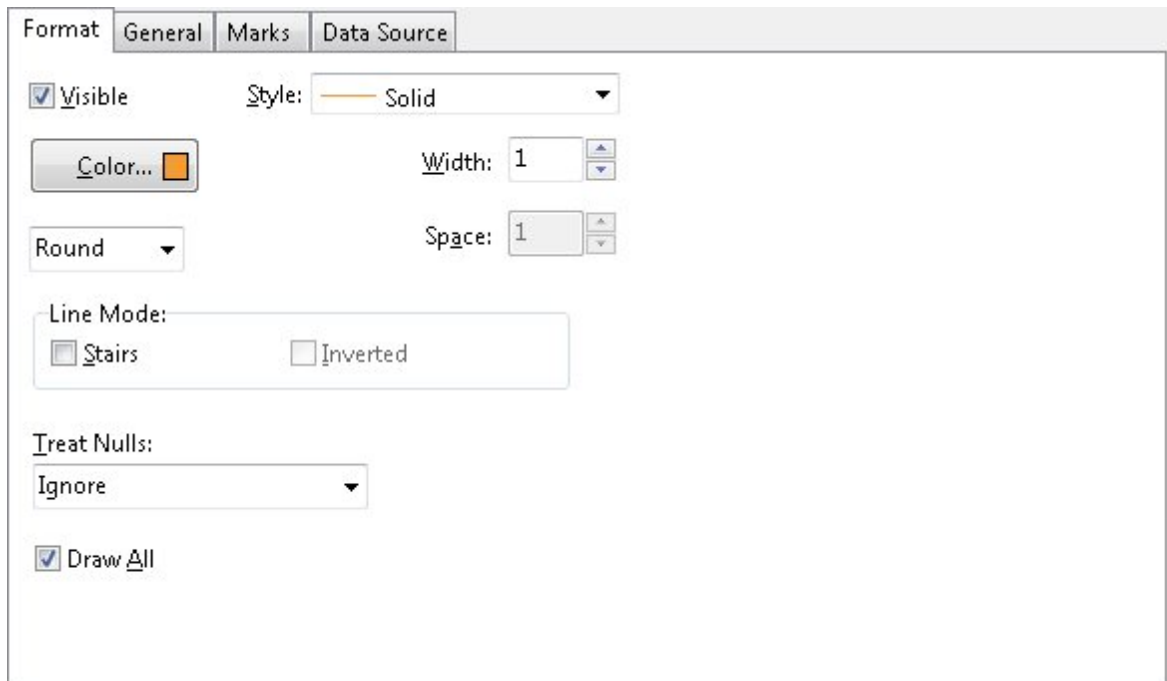
5.5.1.1.6 Fast Line

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



Visible - determines whether the line connecting points will be displayed or not

Color - specifies the color used to display the line, using a color palette

End style - specifies the style used to connect the lines; round, squared or flat. Joined lines must contain widths greater than one pixel.

Style - contains several pen styles with a solid line, dashes, dots, mixtures, and small dots

Width - specifies the pen width in pixels

Space - specifies the spacing between dots, when the small dots Style is selected

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.

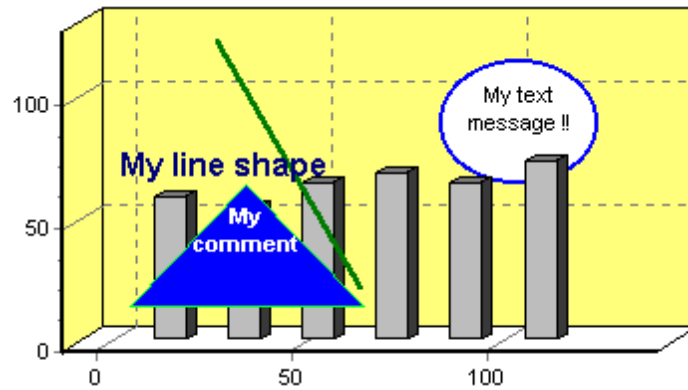
Treat nulls - determines how null values are displayed

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.

5.5.1.1.7 Shape

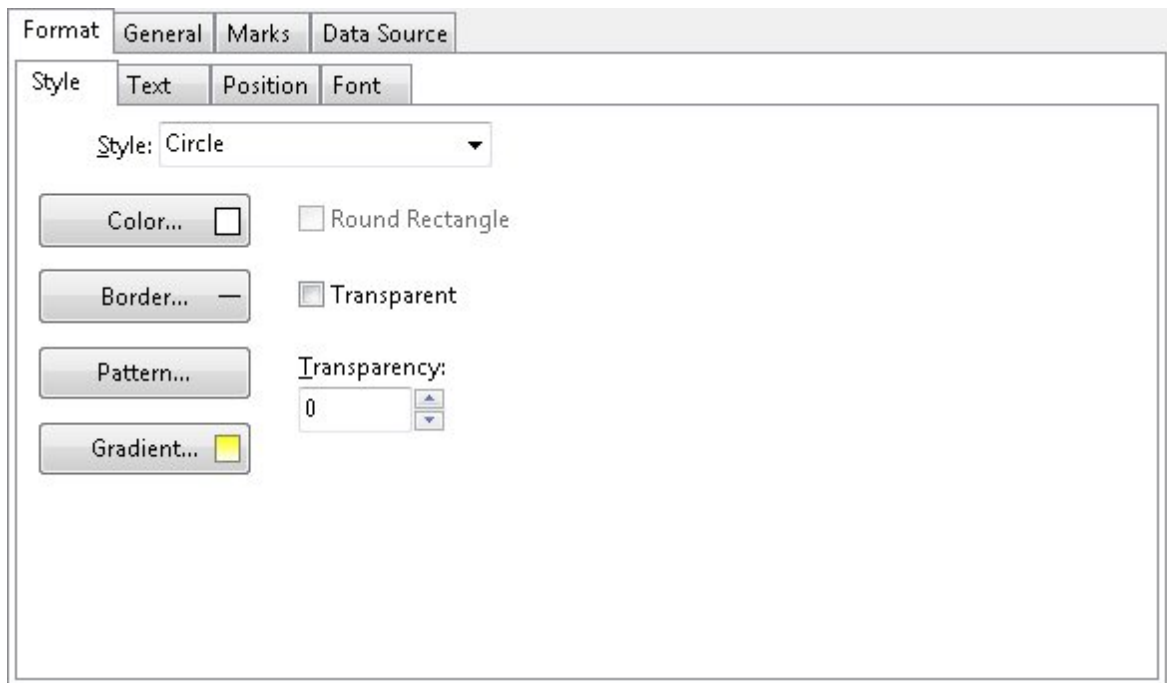
Shape Series are useful for defining or adding any additional information to your Chart, perhaps in runtime as a result of receipt of exceptional data. You may add text to any shape you add to your Chart and relate the shape to another Series.

- [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 Tab

Style - defines the list of possible values for the Shape Series

Color - specifies the color used to display the line, using a color palette

Border - specifies the Line series border, using the [Border Editor](#)

Pattern - specifies the lines pattern, using the [Pattern Editor](#)

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Round Rectangle - determines whether Shape Series draws rounded rectangle corners. It has effect only when shape Style is Rectangle.

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 Tab

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 Tab

Units - determines the unit used to define the Series position.

Top/Left/Right/Bottom Positions - define the coordinates of the enclosing Shape Series rectangle

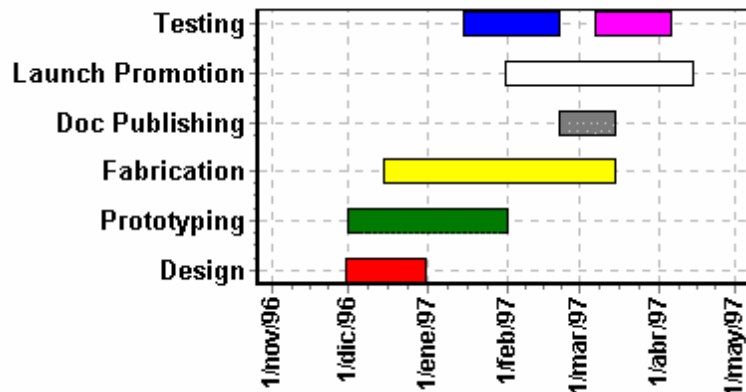
Font Tab

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

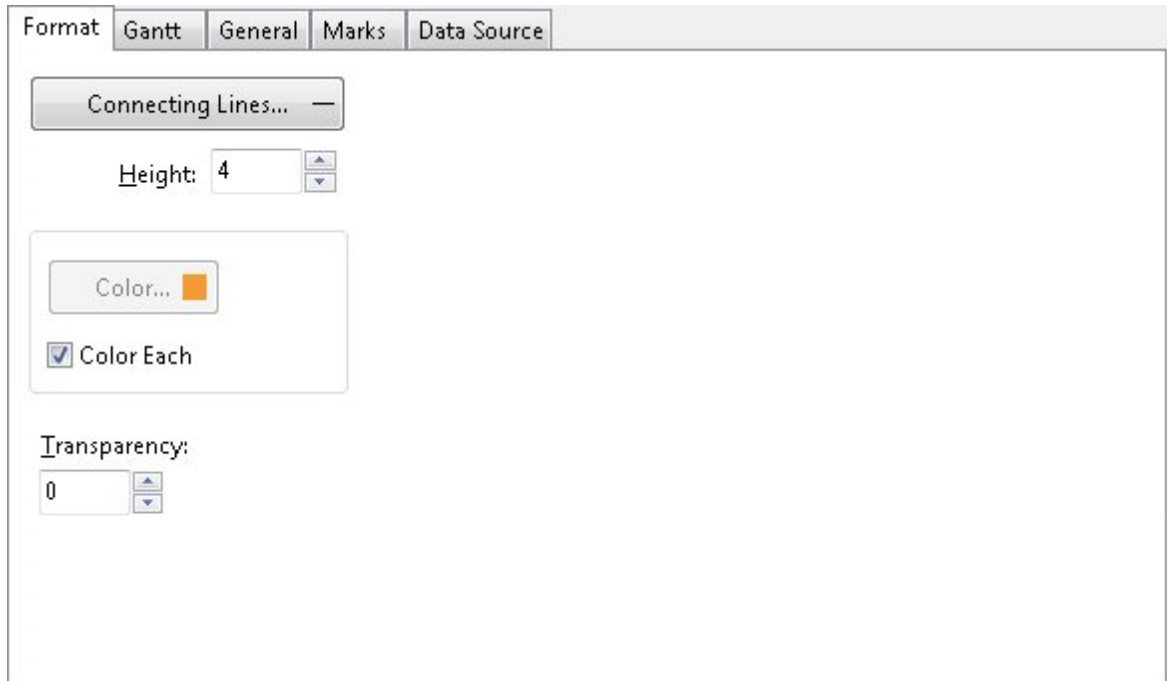
5.5.1.1.8 Gantt

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



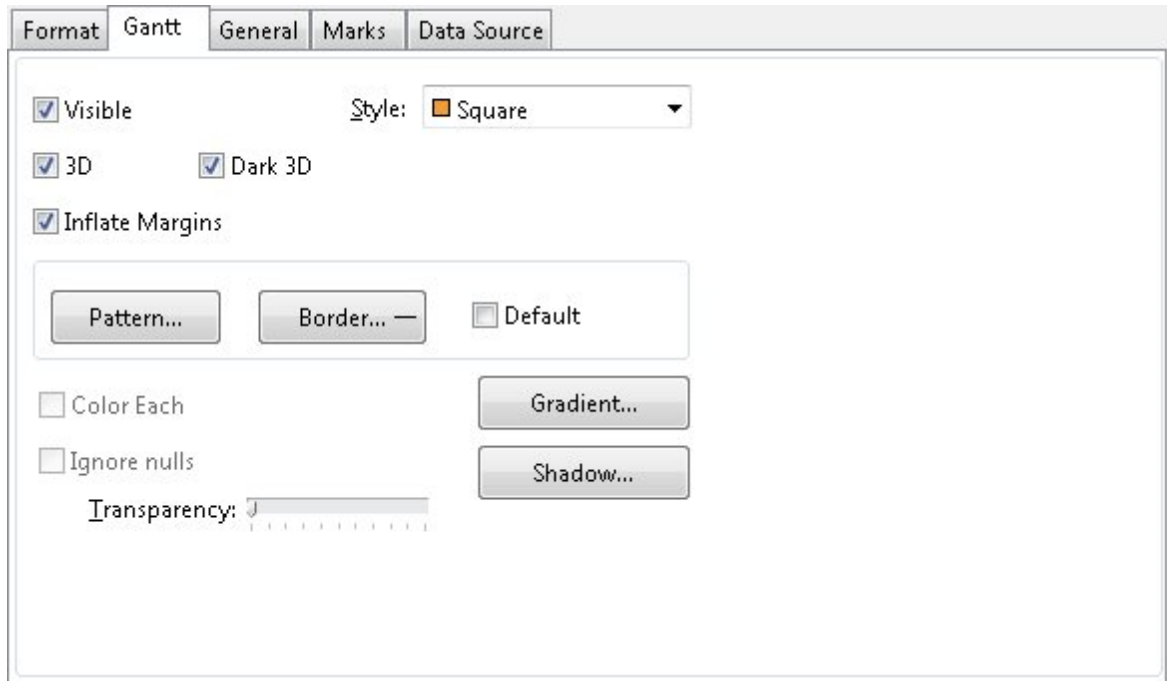
[Connecting Lines](#) - defines the pen properties used to draw the optional lines that connect Gantt Bars, using the [Border Editor](#)

[Height](#) - defines the Lines 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

5.5.1.1.8.2 Gantt



Visible - controls whether all the Series points will be displayed or not

3D - sets the Series points in 3 Dimensions

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.

Pattern - specifies the pattern of the Series points, using the [Pattern Editor](#). You may set your choice to "Default" or not.

Border - defines the Gantt border of the Series points, using the [Border Editor](#). You may set your choice to "Default" or not.

Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

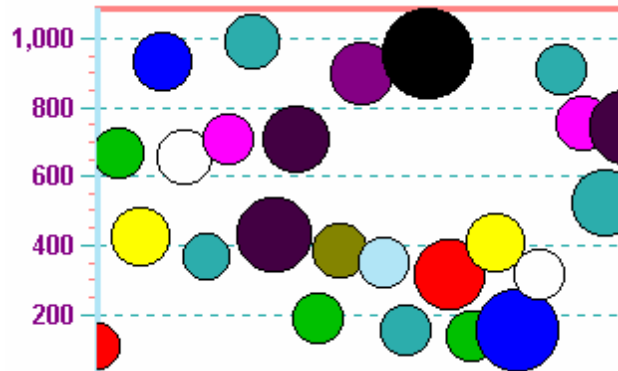
5.5.1.1.9 Bubble

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
General
Marks
Data Source

Visible

Style: Circle

3D

Dark 3D

Inflate Margins

Pattern...
Border... —
 Default

Color Each

Gradient...

Ignore nulls

Shadow...

Transparency:

Visible - determines whether the Series points will be displayed or not

3D - sets the Series point in 3 Dimensions

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.

Size - sets the size of the Series points by defining the Width and Height values.

Pattern - specifies the pattern of the Series points, using the [Pattern Editor](#). You may set your choice to "Default" or not.

Border - defines the border of the Series points, using the [Border Editor](#). You may set your choice to "Default" or not.

Color Each - sets a different color to each Series 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](#)

5.5.1.2 Extended

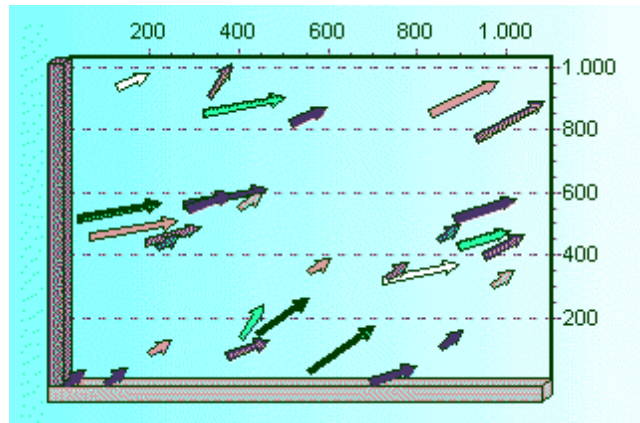
The Extended Series types include more specialized types for planning or mapping applications, e.g. Arrow, Polar, Org Charts, Bezier, etc.

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

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 **General** Marks Data Source

Border... — Pattern...

Color Each Width: 4

Color... Height: 4

Size:

Border - defines the Arrows border, using the [Border Editor](#)

Pattern - specifies the Arrows fill pattern, using the [Pattern Editor](#)

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

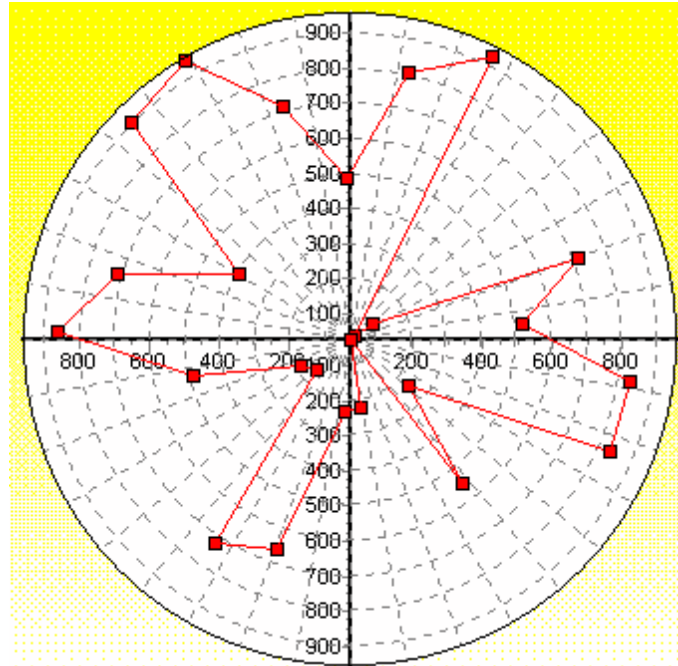
Height - determines the Arrow height size

Size - determines the Arrow size by defining the width and height values

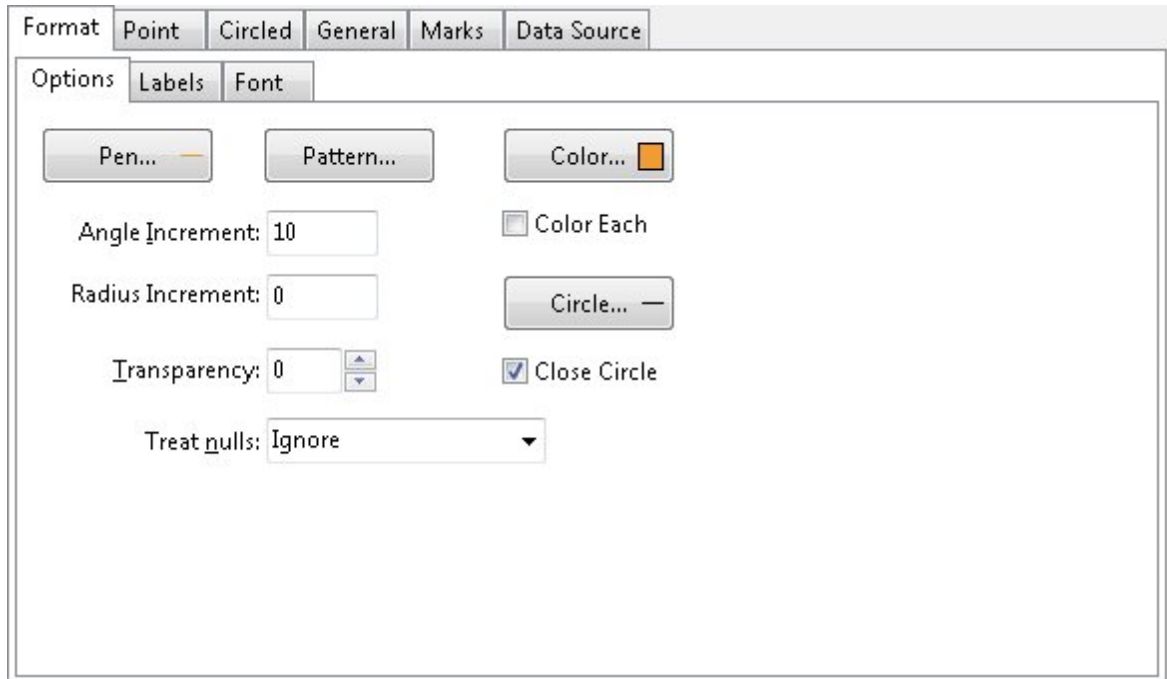
5.5.1.2.2 Polar / Polar Bar

The Polar series plots XValues as angular rotation from 0°. 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 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](#)

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

Color Each - defines each Series value with a different color. The "Color" button determines a unique color for all Series.

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

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

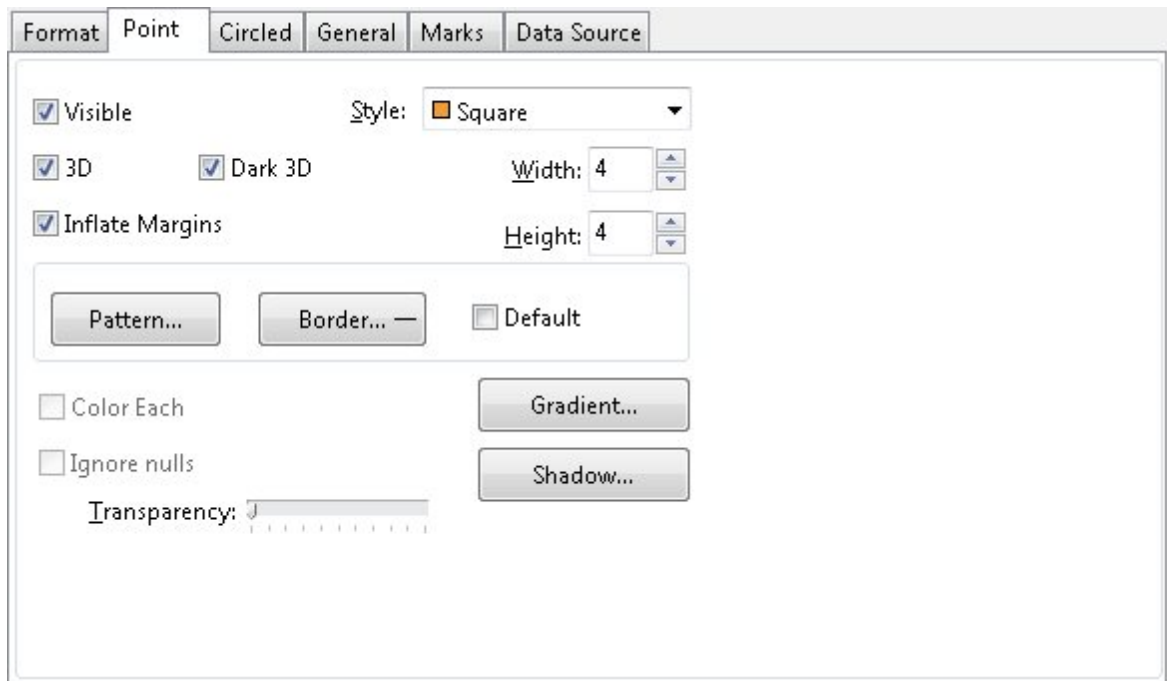
Inside - enables/disables the display of the axis labels inside the circle area

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.

5.5.1.2.2.2 Point



Visible - shows or hides the Points

3D - sets the Polar Series in "3D"

Dark 3D - sets the Series 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

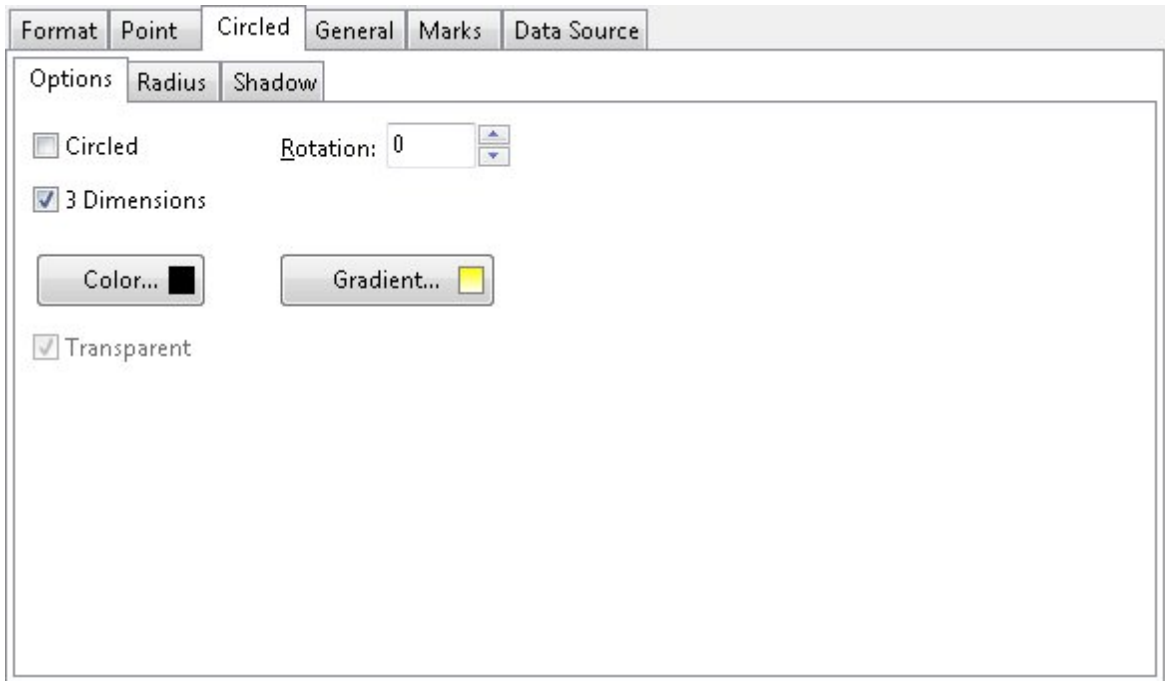
Ignore Nulls - ignore null values

Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.2.2.3 Circled

**Options Tab**

Circled - determines whether the Polar Series will be drawn elliptically or with the same X and Y radius (circle)

Rotation - sets the Polar Series rotation angle

3 Dimensions - sets the Polar Series in 3D

Color - defines the circled color

Gradient - specifies the gradient properties for the Polar Series background, using the [Gradient Editor](#)

Transparent - controls whether Polar Series will be transparent

Radius Tab

Horizontal - sets the horizontal radius size in pixels, otherwise Auto sets the value automatically

Vertical - sets the vertical radius size in pixels, otherwise Auto sets the value automatically

Shadow Tab

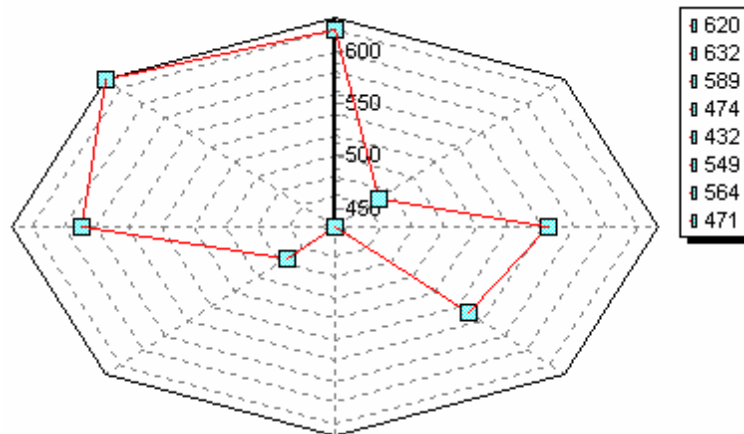
Defines the offset shadow of the Polar Series. Refer to the [Shadow Editor](#) for property descriptions.

5.5.1.2.2.3 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

Format	Point	Circled	General	Marks	Data Source
Options					
Labels					
Font					
Pen...		Pattern...		Color...	
Angle Increment: <input type="text" value="10"/>		<input type="checkbox"/> Color Each			
Radius Increment: <input type="text" value="0"/>		Circle...			
Transparency: <input type="text" value="0"/>		<input checked="" type="checkbox"/> Close Circle			
Treat nulls: <input type="text" value="Ignore"/>					

Options Tab

Pen - specifies the kind of pen used to draw the lines connecting Radar points, using the [Border Editor](#)

Pattern - specifies the Series pattern, using the [Pattern Editor](#)

Radius Increment - determines the increment, in radar radius scales, used to draw the ring grid lines

Transparency - specifies the degree of transparency

Color Each - defines each Series value with a different color. The "Color" button determines a unique color for all Series Arrows.

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

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

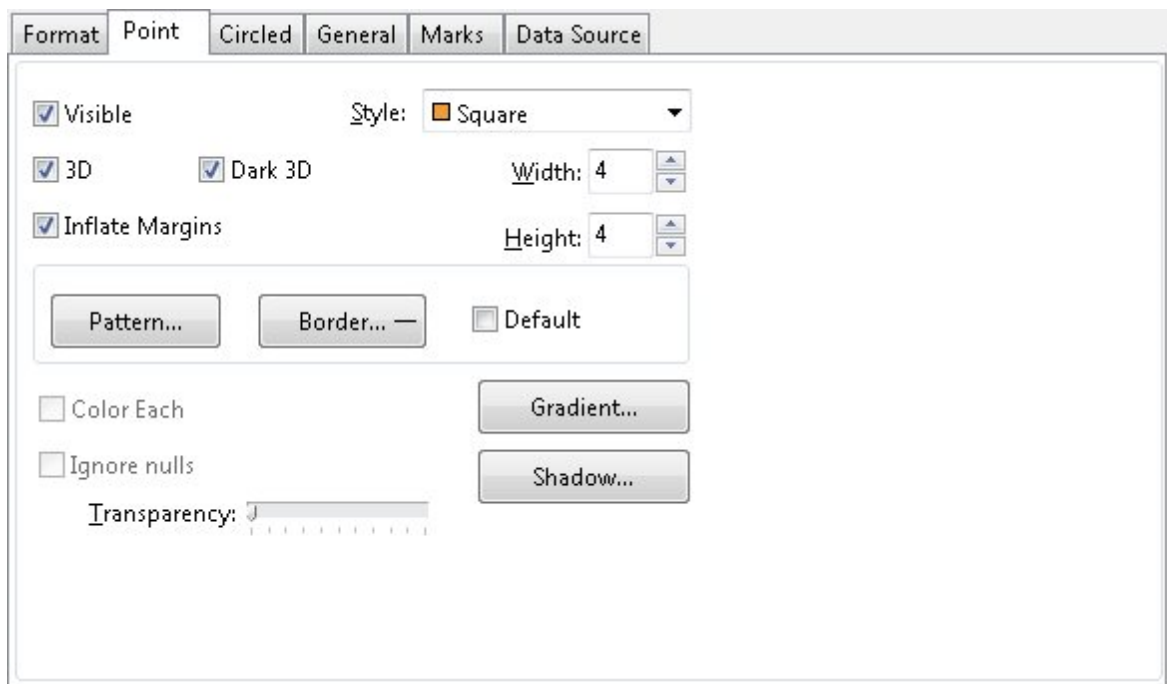
Inside - enables/disables the display of the axis labels inside the circle area

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 Radar Series text.

5.5.1.2.3.2 Point



Visible - shows or hides the Points

3D - sets the Radar Series in "3D"

Dark 3D - sets the Series 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

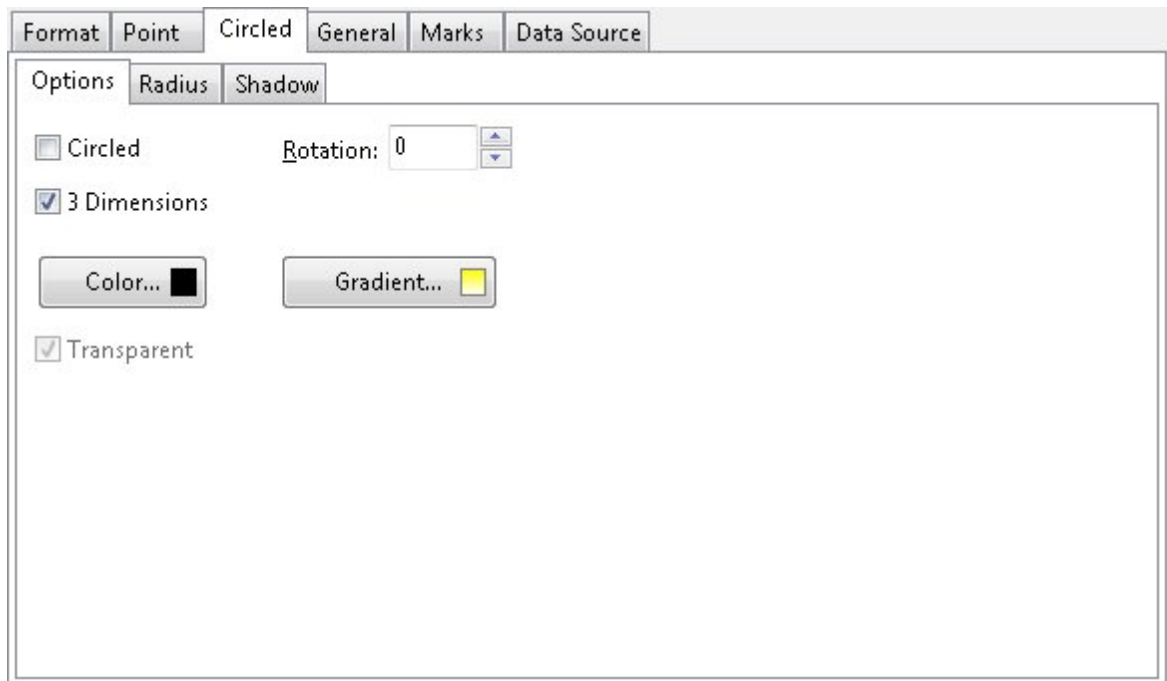
Ignore Nulls - ignore null values

Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.2.3.3 Circled



Options Tab

Circled - determines whether the Radar Series will be drawn elliptically or with the same X and Y radius (circle)

Rotation - sets the Radar Series rotation angle

3 Dimensions - sets the Radar Series in 3D

Color - defines the circled color

Gradient - specifies the gradient properties for the Radar Series background, using the [Gradient Editor](#)

Transparent - controls whether Radar Series will be transparent

Radius Tab

Horizontal - sets the horizontal radius size in pixels, otherwise Auto sets the value automatically

Vertical - sets the vertical radius size in pixels, otherwise Auto sets the value automatically

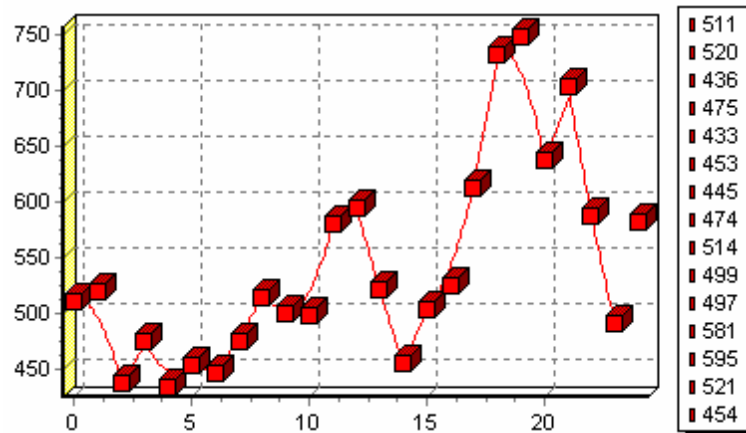
Shadow Tab

Defines the offset shadow of the Radar Series. Refer to the [Shadow Editor](#) for property descriptions.

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
Point
General
Marks
Data Source

Border... —

Color...
 Color Each

Clickable

Color Each line

Shadow...

Stack: None ▼

Treat nulls: Dont Paint ▼

Border - specifies the series border, using the [Border Editor](#)

Color - specifies the color used to display the line, using a color palette

Color Each - enables/disables the coloring of each connecting line of a series

Clickable - determines whether the Line 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 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.

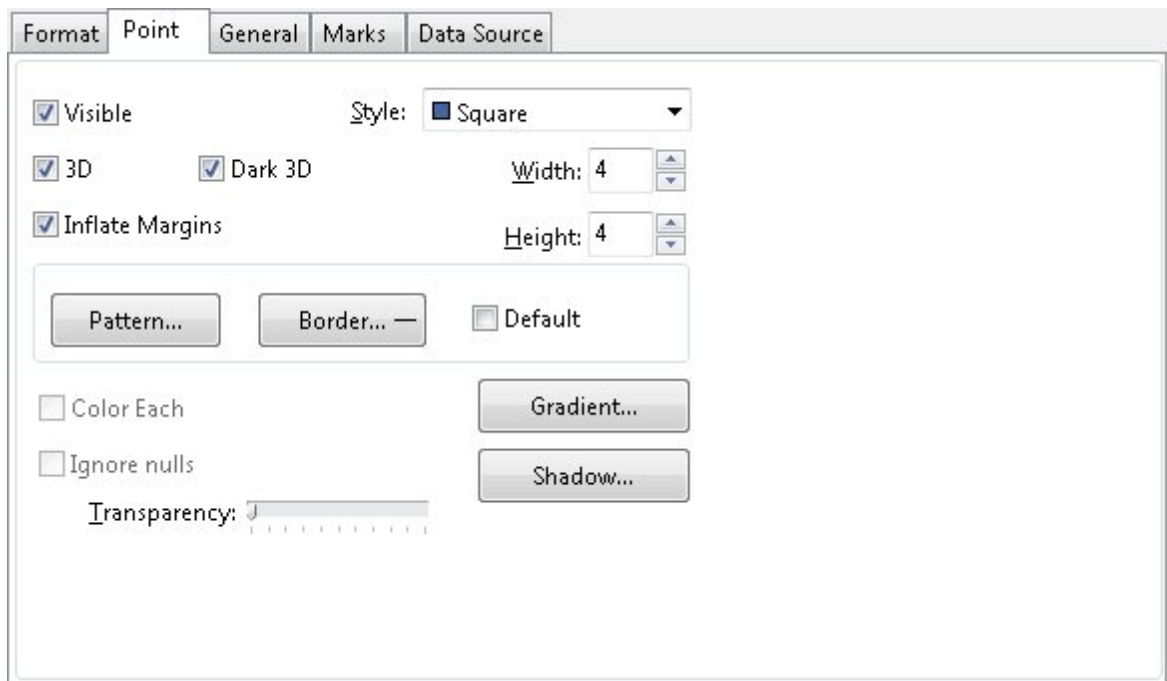
Stack 100% - Plots take up full Bottom to Top space of the Chart Area resulting in a percentage division by Area to reflect Series values.

Treat nulls - determines how null values are displayed

Color Each line - enables/disables the coloring of each outline line for the series

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.2.4.2 Point



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

Inflate Margins - specifies the rescaling of the chart dimensions to accommodate the Series

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

Width - specifies the Series point width size

Height - specifies the Series 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

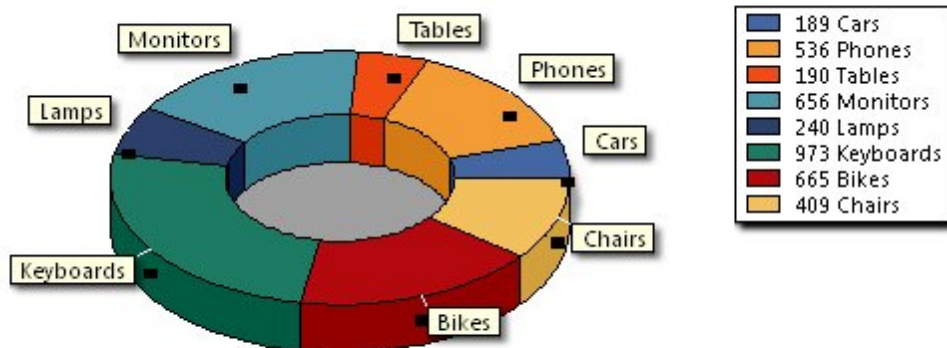
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.2.5 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 Donut Series

5.5.1.2.5.2 Circled



Options Tab

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 Tab

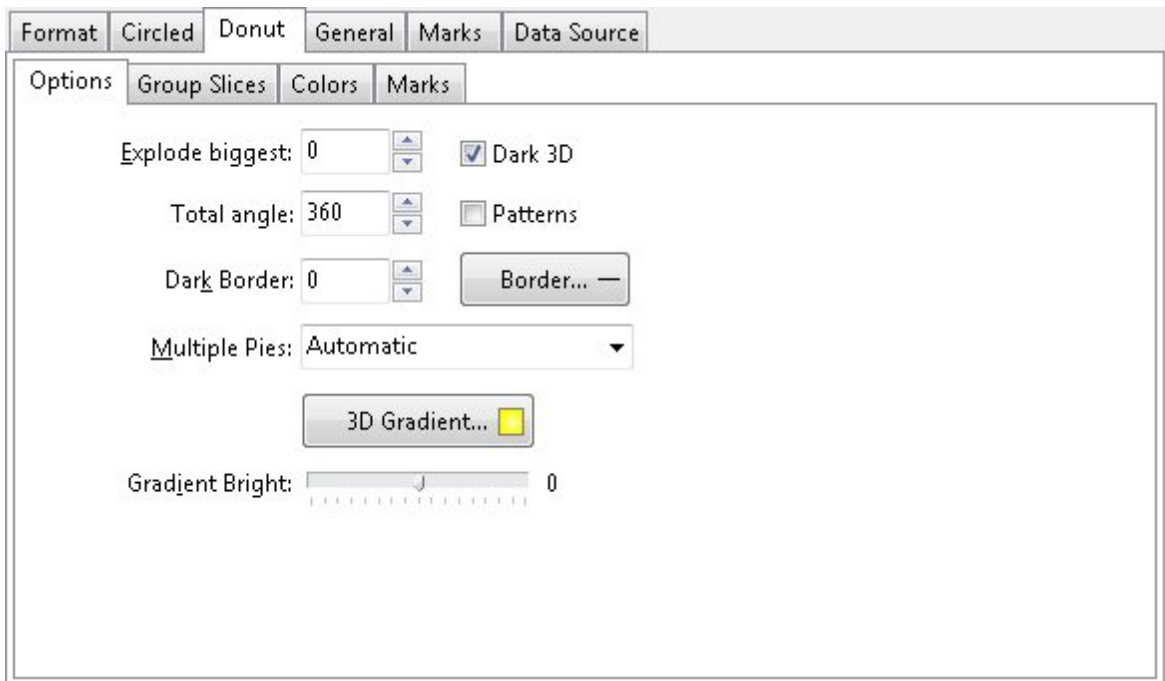
Horizontal - sets the horizontal radius, otherwise Auto sets the value automatically

Vertical - sets the vertical radius, otherwise Auto sets the value automatically

Shadow Tab

Defines the offset shadow of the Donut Series. Refer to the [Shadow Editor](#) for property descriptions.

5.5.1.2.5.3 Donut



Options Tab

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

Total angle - determines the internal angle of the slices displayed

Dark Border - shows shaded colors for the sides of the pie slices

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

Border - specifies the border for pie sections, using the [Border Editor](#)

Multiple Pies - specifies if multiple pies are supported

3D Gradient - provides gradient properties for the pie. Refer to the [Gradient Editor](#) for property descriptions.

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

Group Slices Tab

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 - opens a dialog to define a sub-Legend

Colors Tab

Color Each slice - enables/disables the coloring of each slice. When disabled, the Color button can be used to select a color

Color palette - defines a themed color scheme for the slices

Marks Tab

Auto Mark Position - sets the slice marks automatically

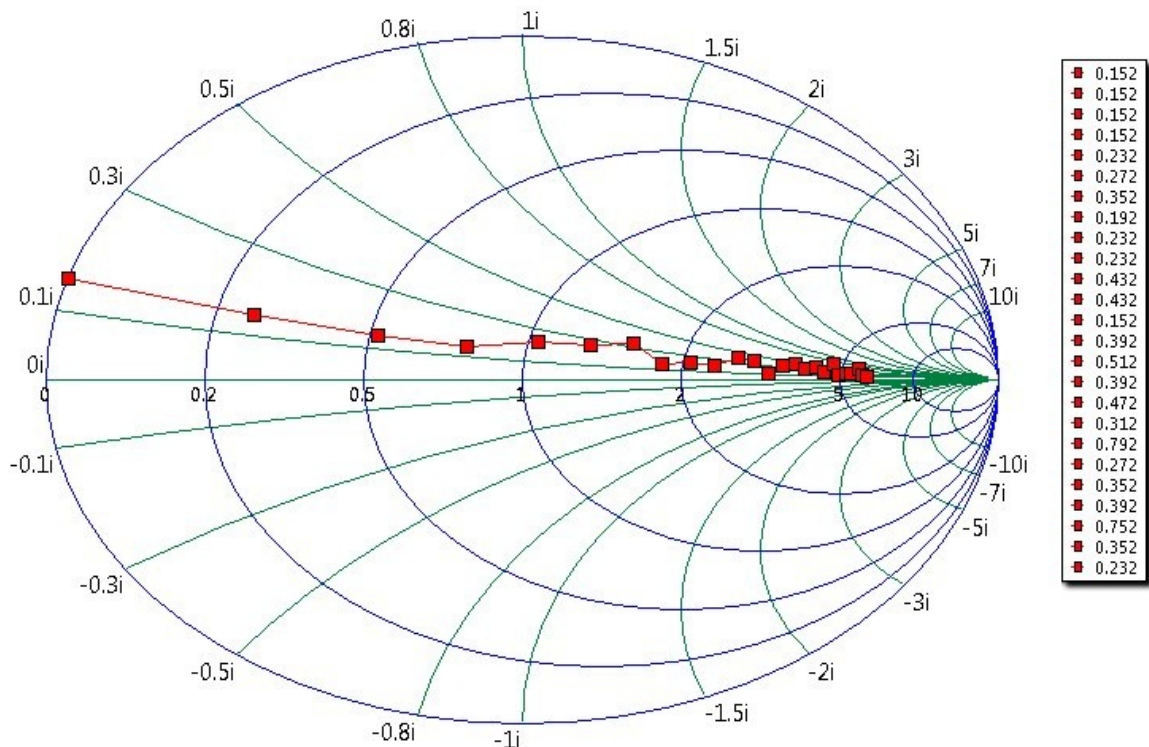
Vertical center callout - vertically centers the line to the mark

Callout Leg size - increases the line width and expands the distance to the slice mark

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

The screenshot shows a dialog box with the following elements:

- Tabs: Format (selected), Circled, General, Marks, Data Source
- Checkboxes:
 - C Labels
 - R Labels
 - Color Each
- Buttons:
 - C Pen... --
 - R Pen... --
 - Font... (next to C Labels)
 - Font... (next to R Labels)
 - Border... --
 - Circle... --
- Text field: Imag. Symbol: i

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, using the [Border Editor](#)

R Pen - defines the pen properties for the R lines, using the [Border Editor](#)

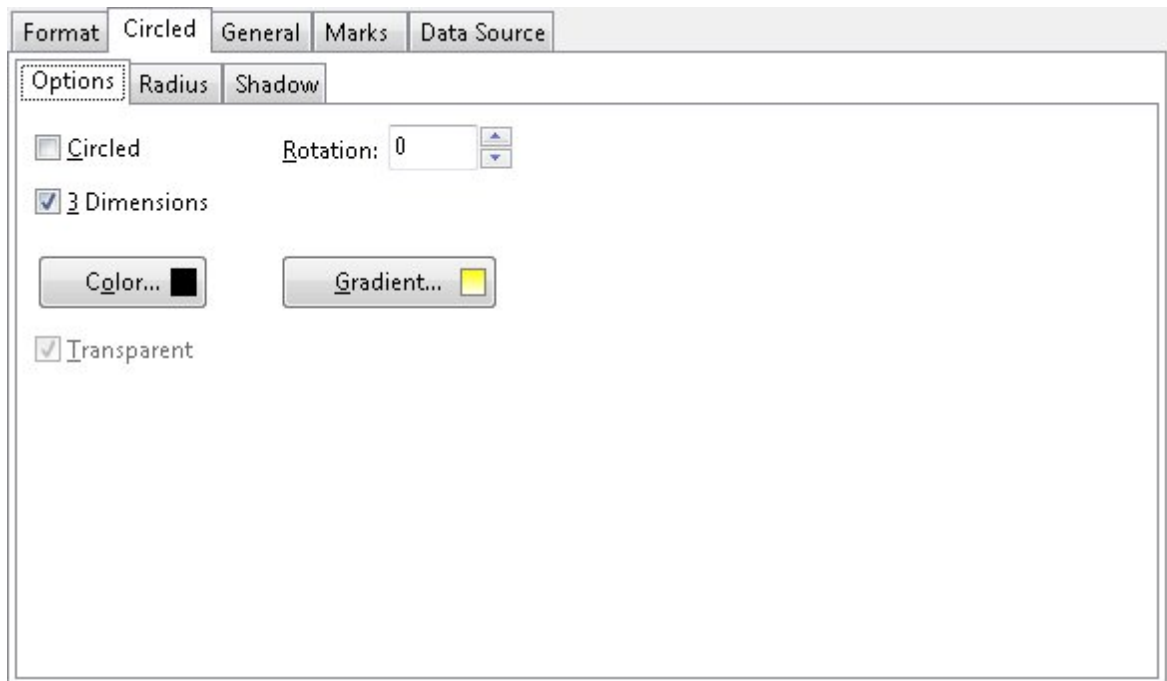
Color Each - enables/disables the coloring of each line section of the Smith series

Border - specifies the Smith series border, using the [Border Editor](#)

Imag. Symbol - defines the imaginary symbol displayed with reactance values.

Circle - sets the circle lines type, using the [Border Editor](#)

5.5.1.2.6.2 Circled

**Options Tab**

Circled - determines whether the Smith Series will be drawn elliptically or with the same X and Y radius (circle)

Rotation - sets the Smith Series rotation angle

3 Dimensions - sets the Smith Series in 3D

Color - defines the color of the encircled area

Gradient - specifies the gradient properties for the Smith Series background, using the [Gradient Editor](#)

Transparent - controls whether Smith Series will be transparent

Radius Tab

Horizontal - sets the horizontal radius size in pixels, otherwise Auto sets the value automatically

Vertical - sets the vertical radius size in pixels, otherwise Auto sets the value automatically

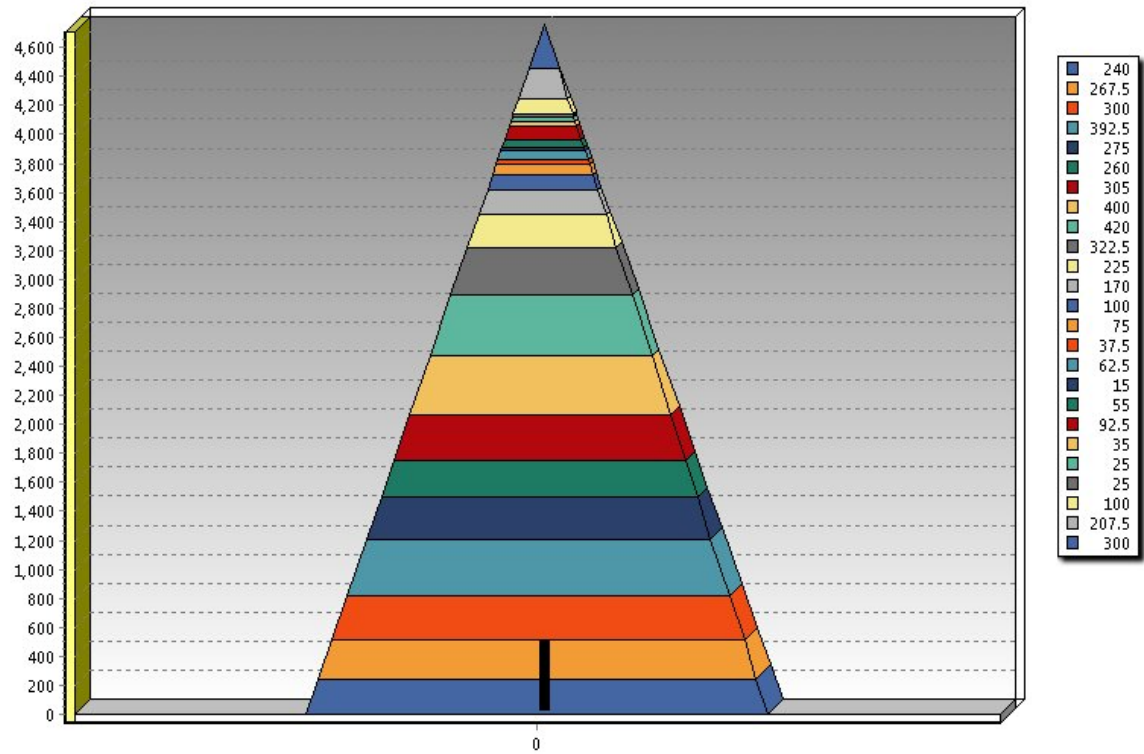
Shadow Tab

Defines the offset shadow of the Smith Series. Refer to the [Shadow Editor](#) for property descriptions.

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

Format **General** Marks Data Source

Border... — Color... ■

Pattern... Color Each

Size %: 50

Border - defines the Pyramid border, using the [Border Editor](#)

Pattern - specifies the Pyramid fill pattern, using the [Pattern Editor](#)

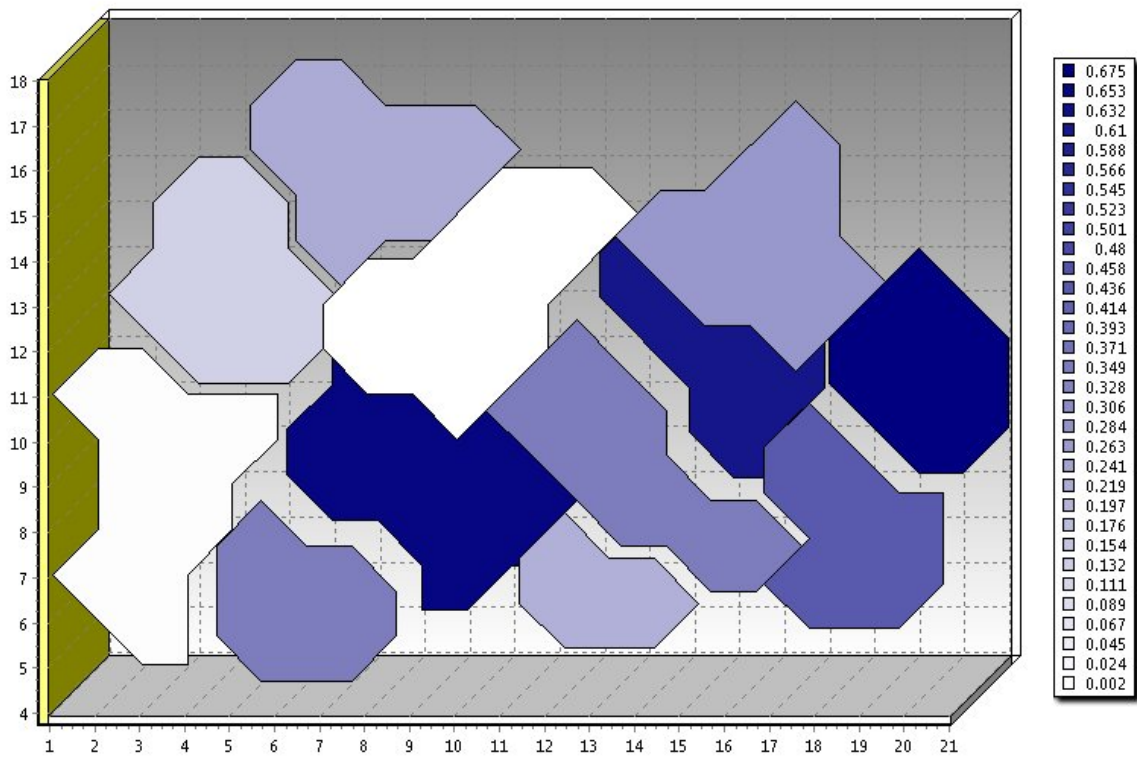
Color Each - defines each bar with a different color. If unchecked, the "Color" button determines a unique color for all.

Size - sets the size of Pyramid base relative to the Chart Axis delimiting width.

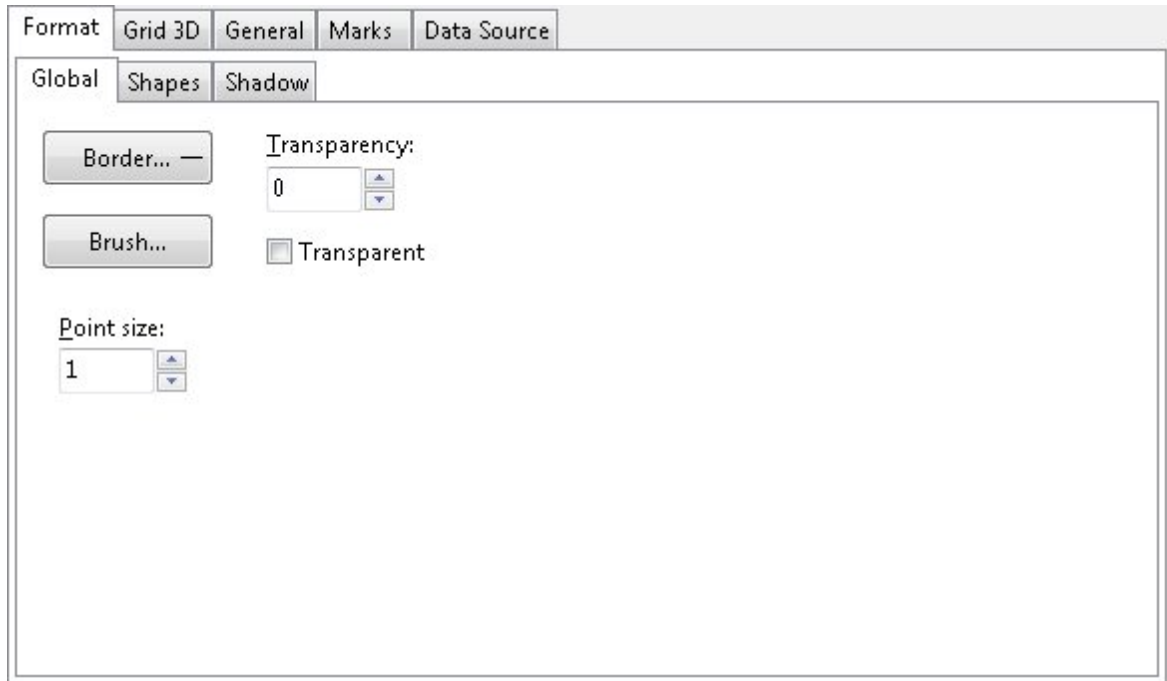
5.5.1.2.8 Map

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 Tab**

Border - specifies the Map border, using the [Border Editor](#)

Brush - specifies the pattern, using the [Pattern Editor](#)

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

Transparency - specifies the degree of transparency

Transparent - controls whether Shape Series will use the Shape Brush attributes to fill the interior of the Shape

Shapes Tab

"+" and "-" Buttons - adds or deletes points for the series

Values

Text - defines the text to be included in the Map portion/point

Z - specifies the position on the Z axis of the selected point.

Format

Border / Global - define the border for the Map point. By setting the "Global" option, the border will be applied to the chart globally.

Brush / Global - 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. The "Default" option

Gradient - defines a gradient fill for the selected Map point of the series, using the [Gradient Editor](#)

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

Points

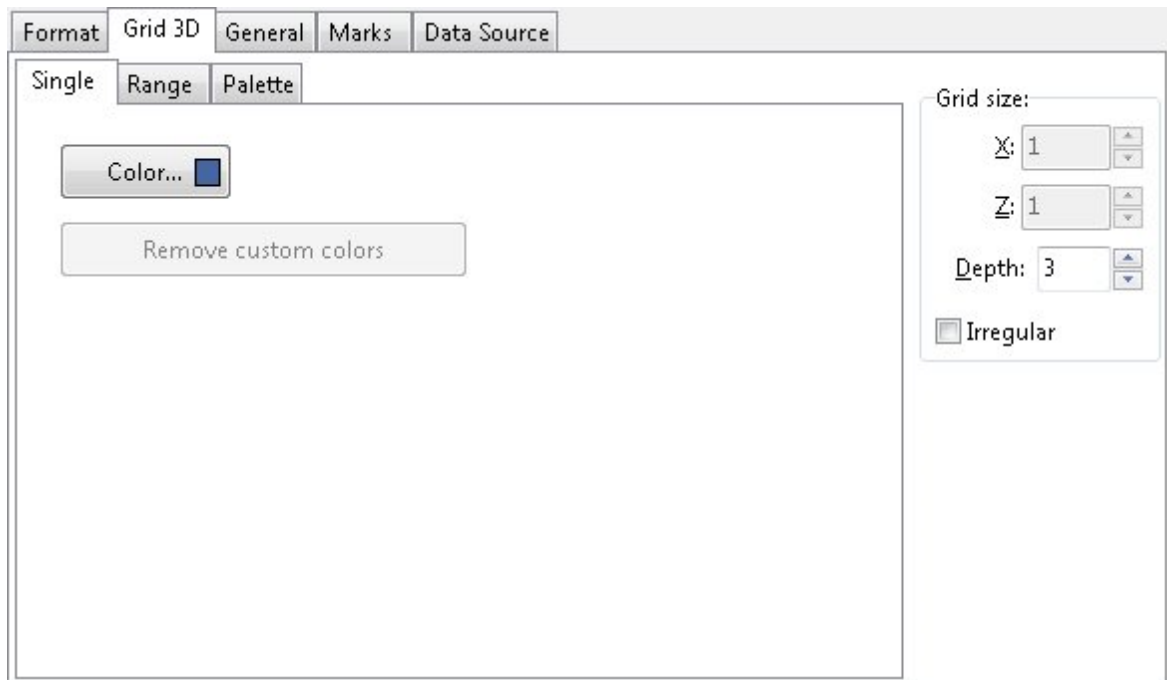
This option allows you to define the Series Map values manually by using the buttons on the bottom side.

The four first buttons are used to move over the added values. The "+" button is used to Add a new value. The "-" button is used to Delete a value. The Up Arrow is used to move up. The last buttons are used to Accept/Cancel respectively.

Shadow Tab

Defines the offset shadow of the Series. Refer to the [Shadow Editor](#) for property descriptions.

5.5.1.2.8.2 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

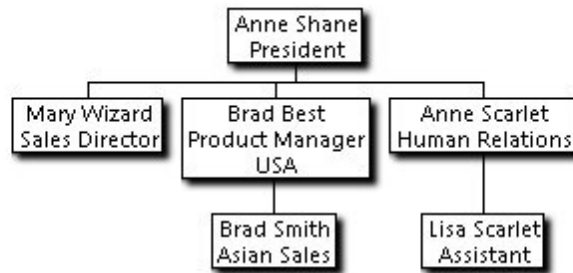
Depth - defines the Grid depth

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

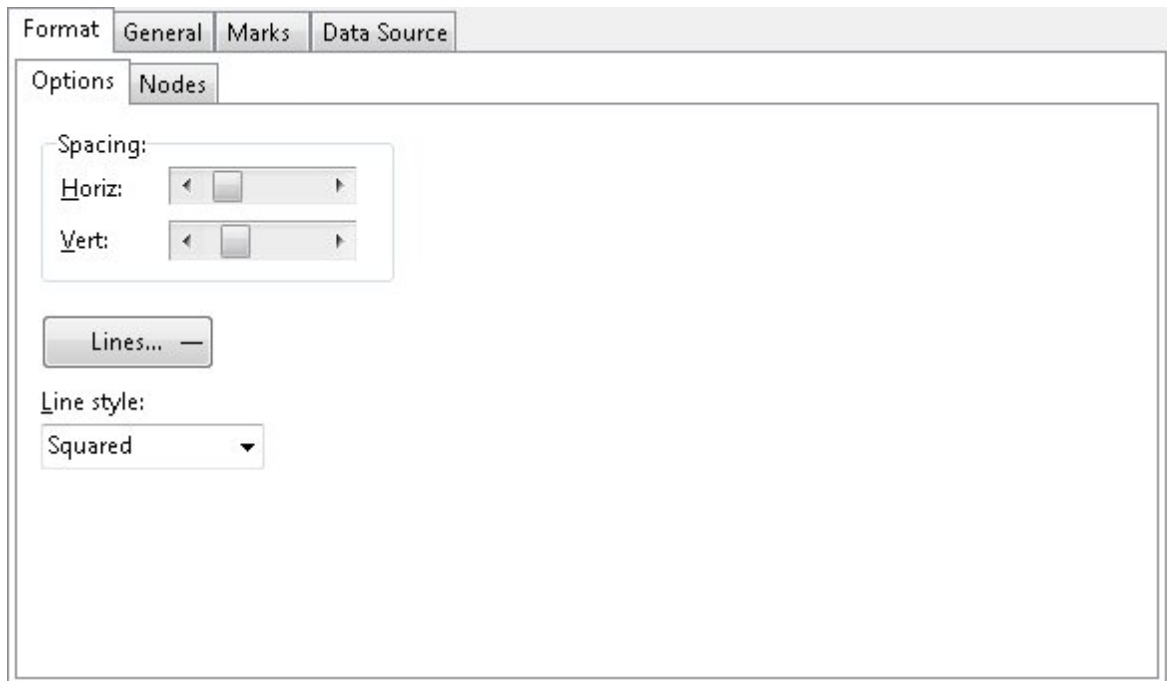
5.5.1.2.9 Org. Chart

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.

- [Format](#)
- [General](#)
- [Marks](#)
- [Data Source](#)









5.5.1.2.9.1 Format



5.5.1.3 Financial

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

Icon	Series
	Candle
	Volume
	Darvas
	Point & Figure
	Renko
	Kagi

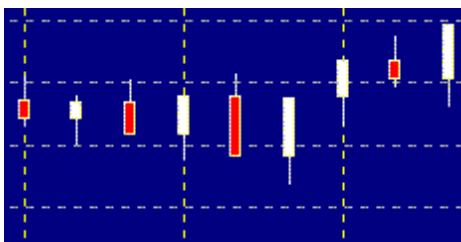
5.5.1.3.1 Candle

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.



5.5.1.3.1.1 Format

Format
General
Marks
Data Source

Options
Colors

Style:

Stick

Bar

Open Close

Line

Show Open

Show Close

Draw 3D

Dark 3D

Candle Width:

Border... —

High-Low... —

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

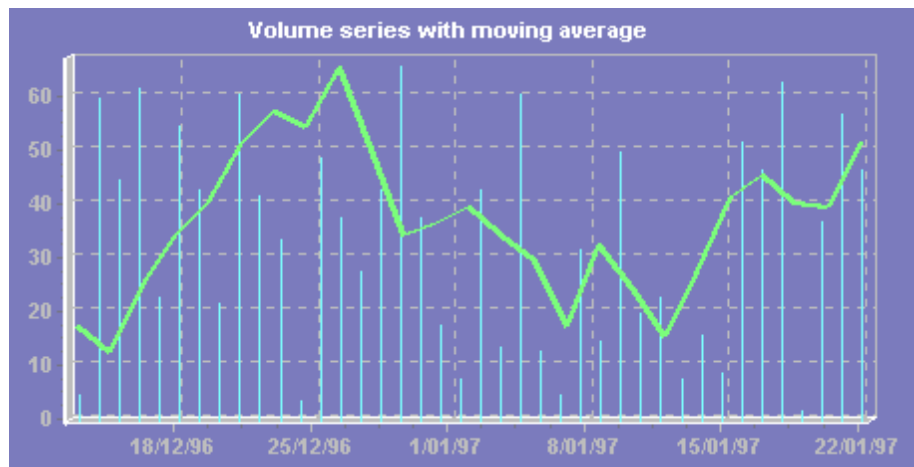
Gradient - specifies the gradient properties for the Down color, using the [Gradient Editor](#)

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

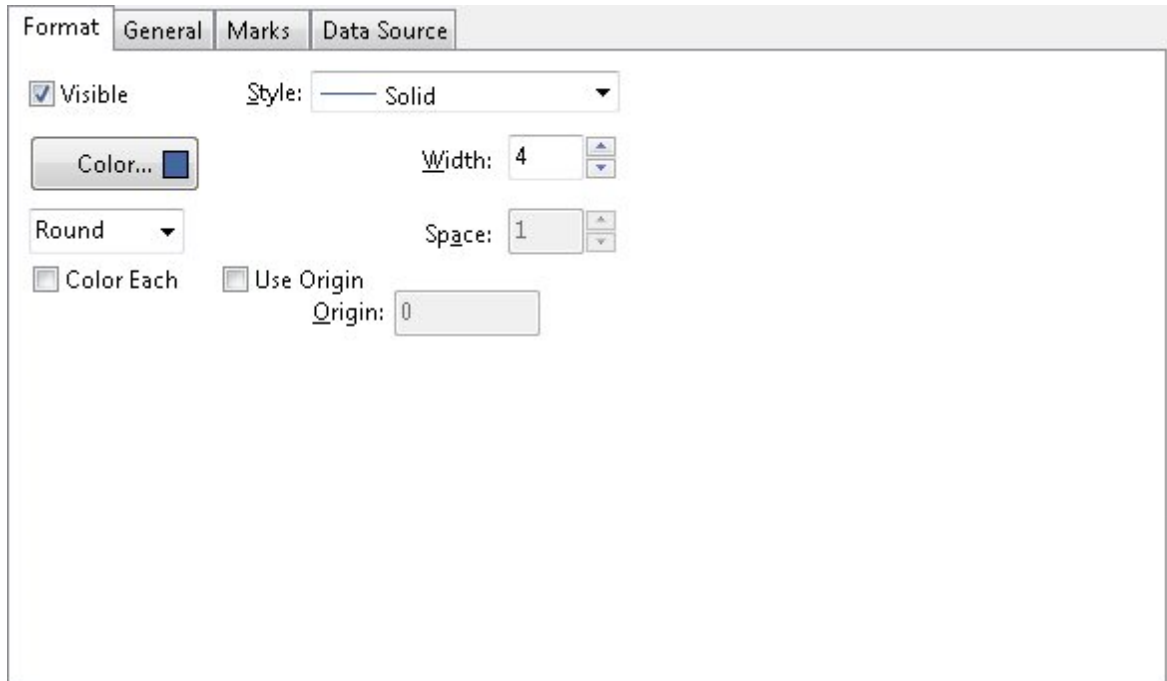
5.5.1.3.2 Volume

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](#)



5.5.1.3.2.1 Format



Visible - controls whether the Series points will be displayed or not.

Color - define the Volume Series color using a color palette

Round - alters the display of Volume Series Line

Color Each - plots each Volume point in a different color

Style - defines the Volume Line style

Width - determines the Volume Line width

Space - specifies spacing when the style is set to Small Dots

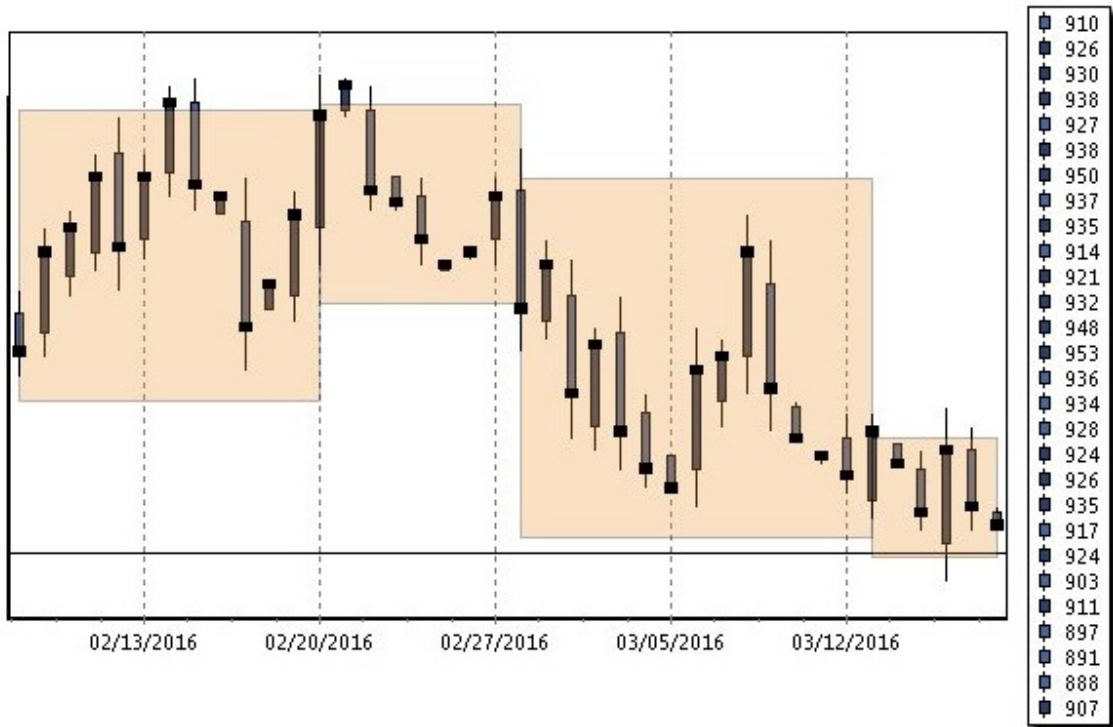
Use Origin - enables/disables the setting of the Y value that defines the bottom position for Volume points

Origin - sets the origin for the Y value

5.5.1.3.3 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](#)



5.5.1.3.3.1 Format

Format | General | Marks | Data Source

Options | Colors

Style:

- Stick
- Bar
- Open Close
- Line

- Show Open
- Show Close
- Draw 3D
- Dark 3D

Candle Width: 4

Border... — High-Low... —

Options Tab

Style - defines the possible values of the Darvas 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 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 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

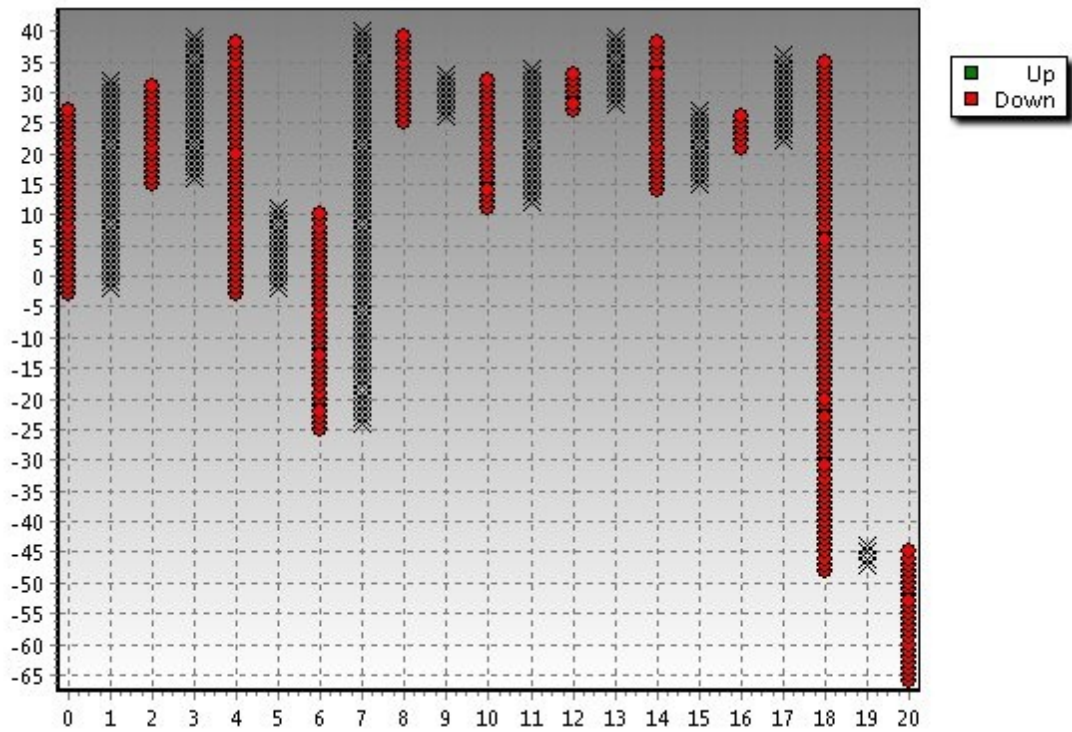
Gradient - specifies the gradient properties for the down color, using the [Gradient Editor](#)

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

5.5.1.3.4 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](#)



5.5.1.3.4.1 Format

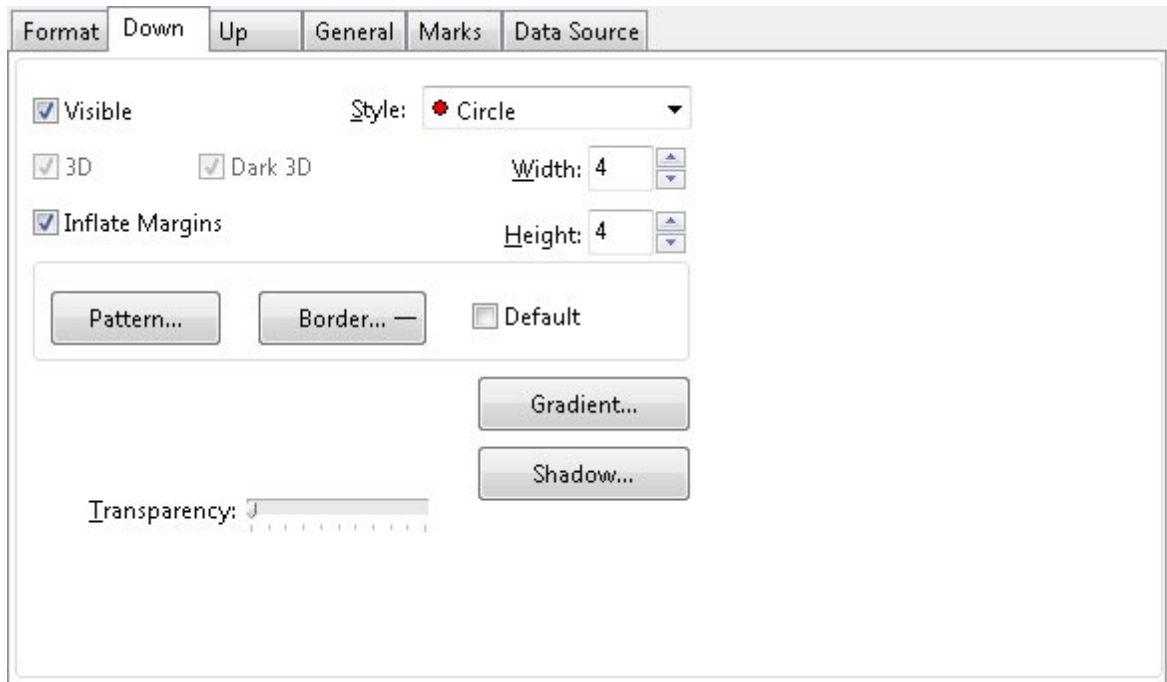
Format	Down	Up	General	Marks	Data Source
	<p>Box size: <input type="text" value="1"/></p> <p>Reversal amount: <input type="text" value="3"/></p>				

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.

5.5.1.3.4.2 Down



Visible - shows or hides the down movements

3D - sets the down movements in "3D"

Dark 3D - sets the down movements fill with darker colors than the rest of the series

Inflate Margins - controls the rescaling of the chart dimensions to accommodate the down movements

Style - refers to symbol that is painted for price down periods

Width - specifies the down movements width size

Height - specifies the down movements height size

Pattern - specifies the down movements pattern, using the [Pattern Editor](#)

Border - specifies the down movements border, using the [Border Editor](#)

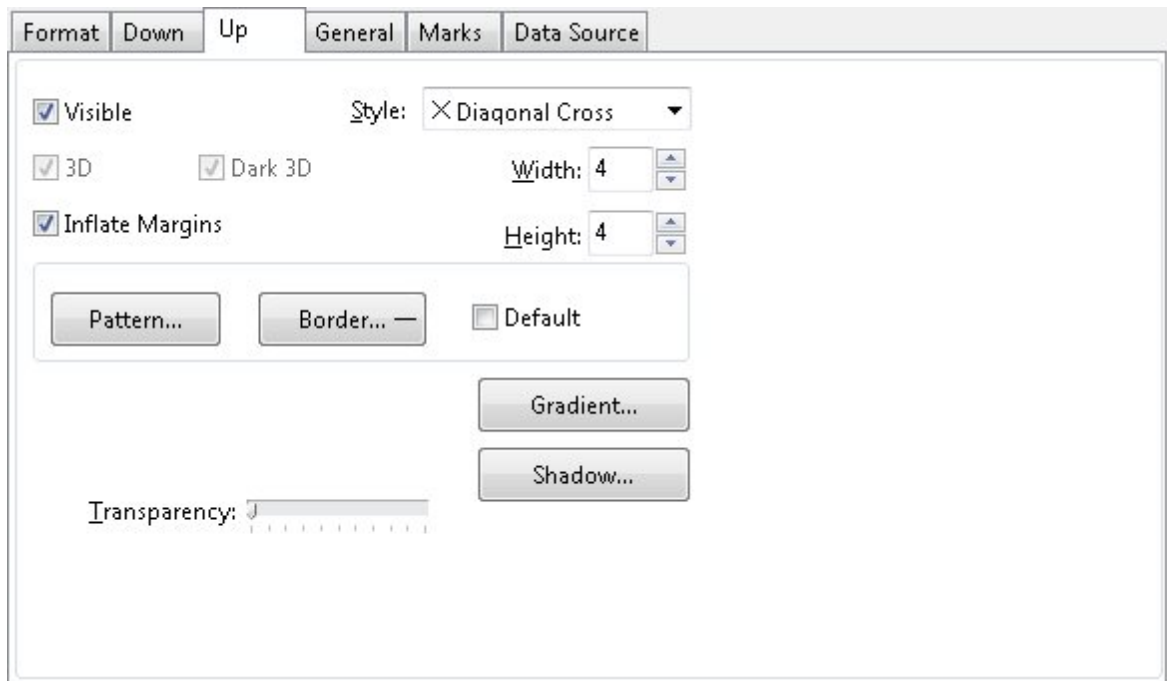
Default - specifies the default values for pattern and border

Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.3.4.3 Up



Visible - shows or hides the up movements

3D - sets the up movements in "3D"

Dark 3D - sets the up movements fill with darker colors than the rest of the series

Inflate Margins - controls the rescaling of the chart dimensions to accommodate the up movements

Style - refers to symbol that is painted for price up periods

Width - specifies the up movements width size

Height - specifies the up movements height size

Pattern - specifies the up movements pattern, using the [Pattern Editor](#)

Border - specifies the up movements 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](#)

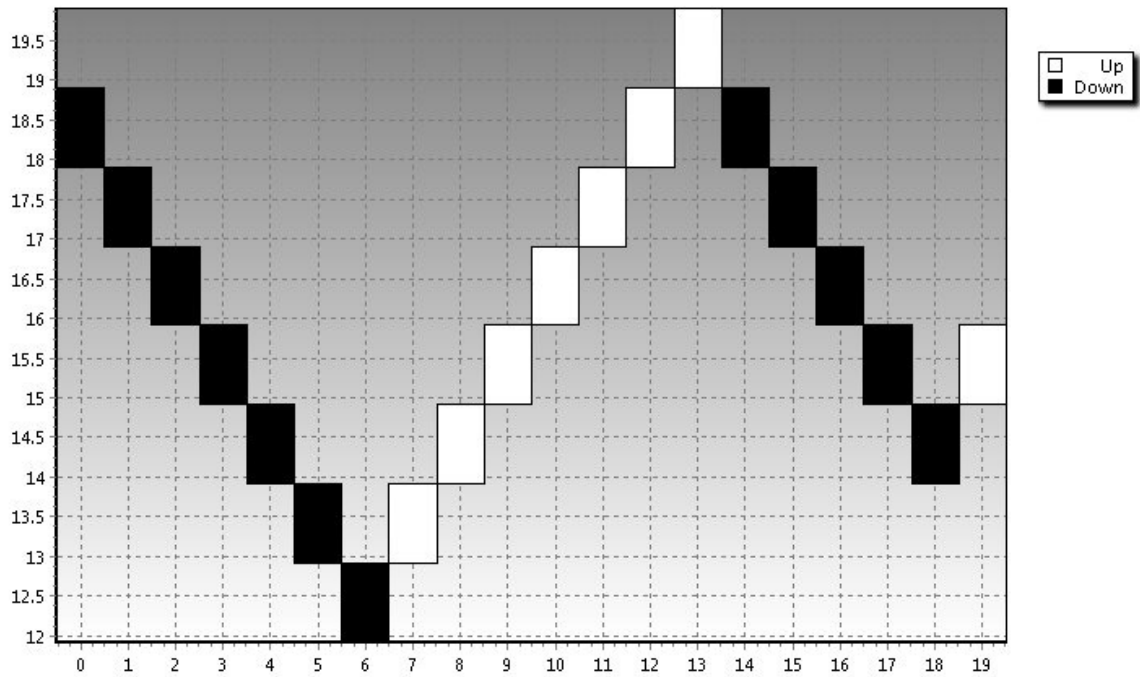
5.5.1.3.5 Renko

The Renko charts is a financial indicator used as a trend following technique.

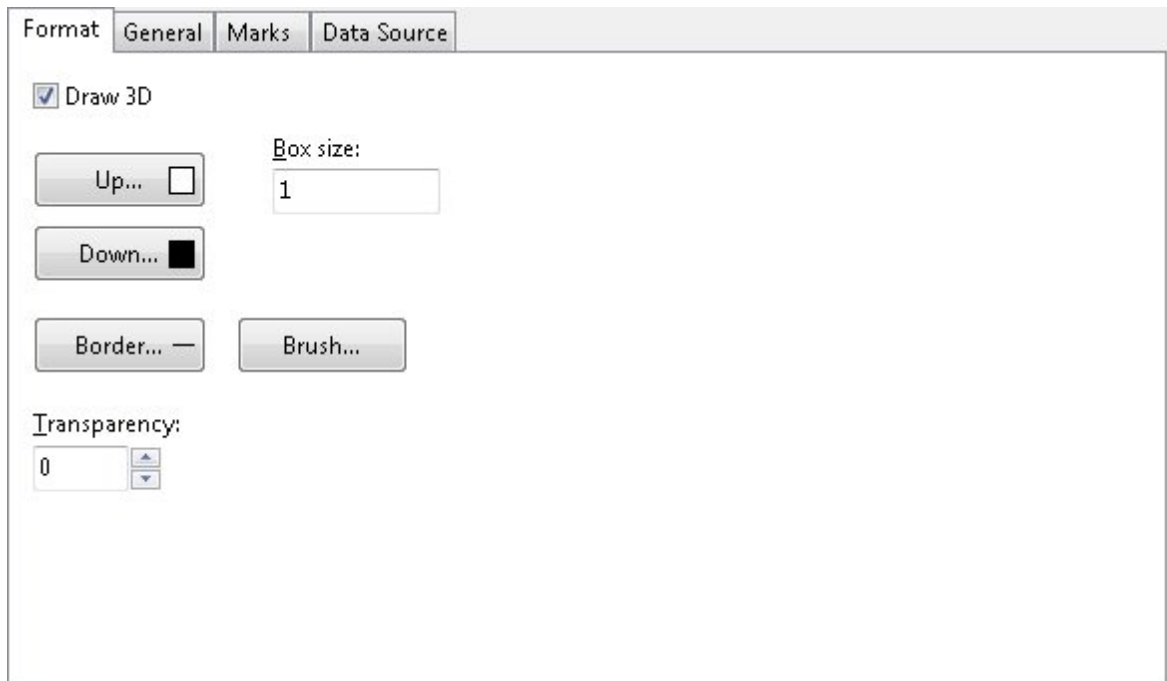
The Renko chart line bricks are drawn in the direction of the prior move only if prices move by a minimum "Box Size" amount, which is equivalent to the box size that are always equal in size.

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



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

Border - defines the border, using the [Border Editor](#)

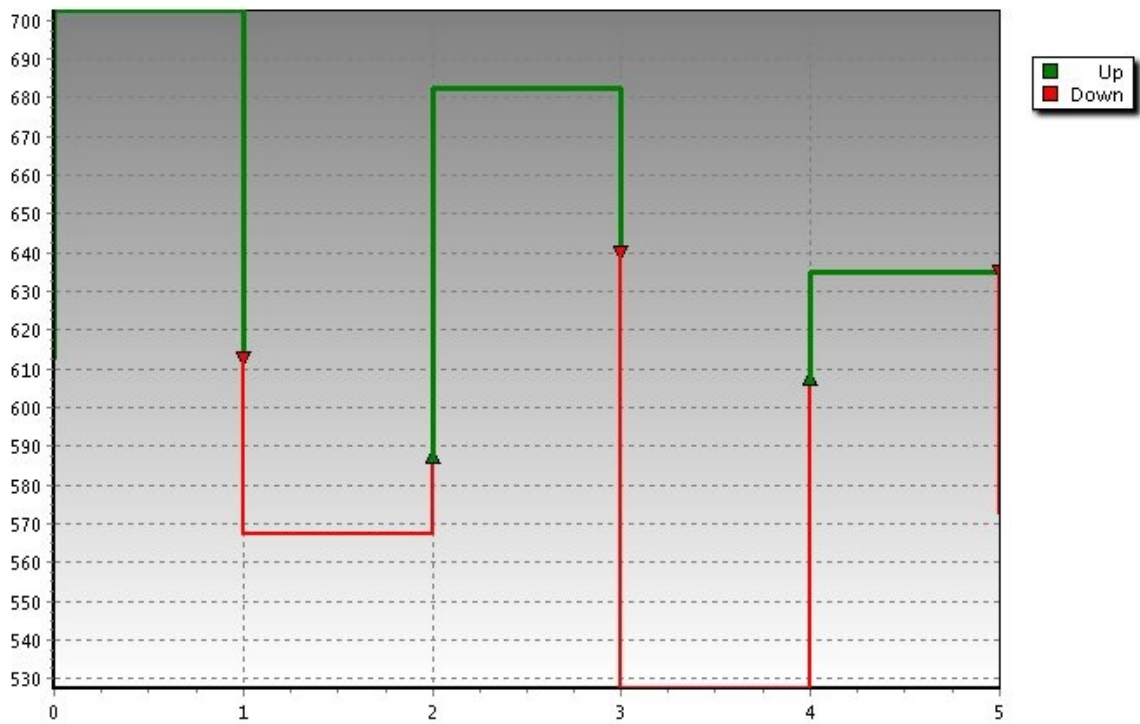
Brush - specifies the pattern, using the [Pattern Editor](#)

Transparency - specifies the degree of transparency

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

**Lines Tab**

Up - pen properties used to draw lines when trend is up

Down - pen properties used to draw lines when trend is down

Buy Tab

Visible - shows or hides the buy signals

3D - sets the buy signals in "3D"

Dark 3D - sets the buy signals fill with darker colors than the rest of the series

Inflate Margins - controls the rescaling of the chart dimensions to accommodate when trend is up

Style - symbol to draw at buy signals

Width - specifies the width size of buy signals

Height - specifies the height size of buy signals

Pattern - specifies the buy signals pattern, using the [Pattern Editor](#)

Border - specifies the buy signals 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](#)

Sell Tab

Visible - shows or hides the sell signals

3D - sets the sell signals in "3D"

Dark 3D - sets the sell signals fill with darker colors than the rest of the series

Inflate Margins - controls the rescaling of the chart dimensions to accommodate when trend is down

Style - symbol to draw at sell signals

Width - specifies the width size of sell signals

Height - specifies the height size of sell signals

Pattern - specifies the sell signals pattern, using the [Pattern Editor](#)

Border - specifies the sell signals 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](#)

5.5.1.4 Stats

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

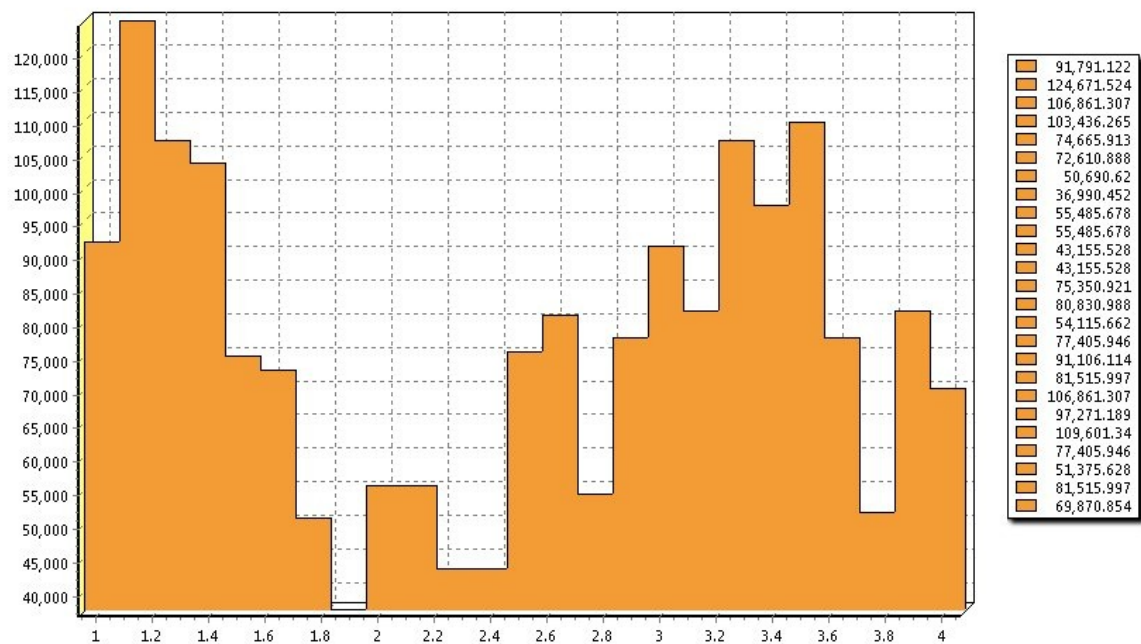
Icon	Series
	Histogram
	Horizontal Histogram

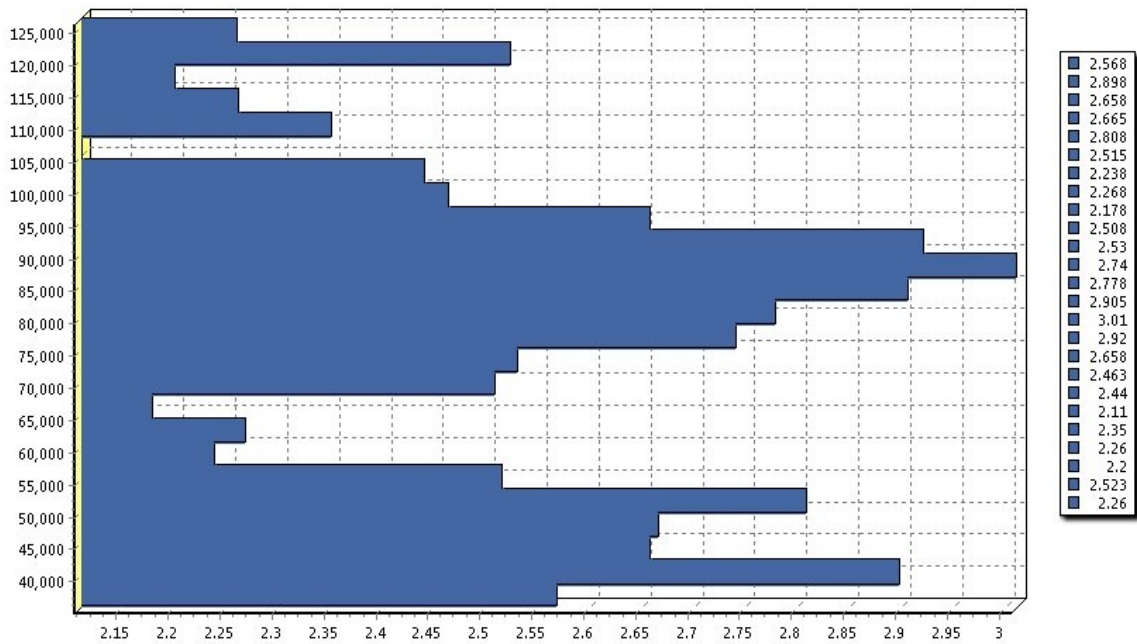
	Error Bar
	Error
	High-Low
	BoxPlot
	Horizontal BoxPlot
	VolumePipe
	Funnel
	HighLow Line

5.5.1.4.1 Histogram / Horizontal Histogram

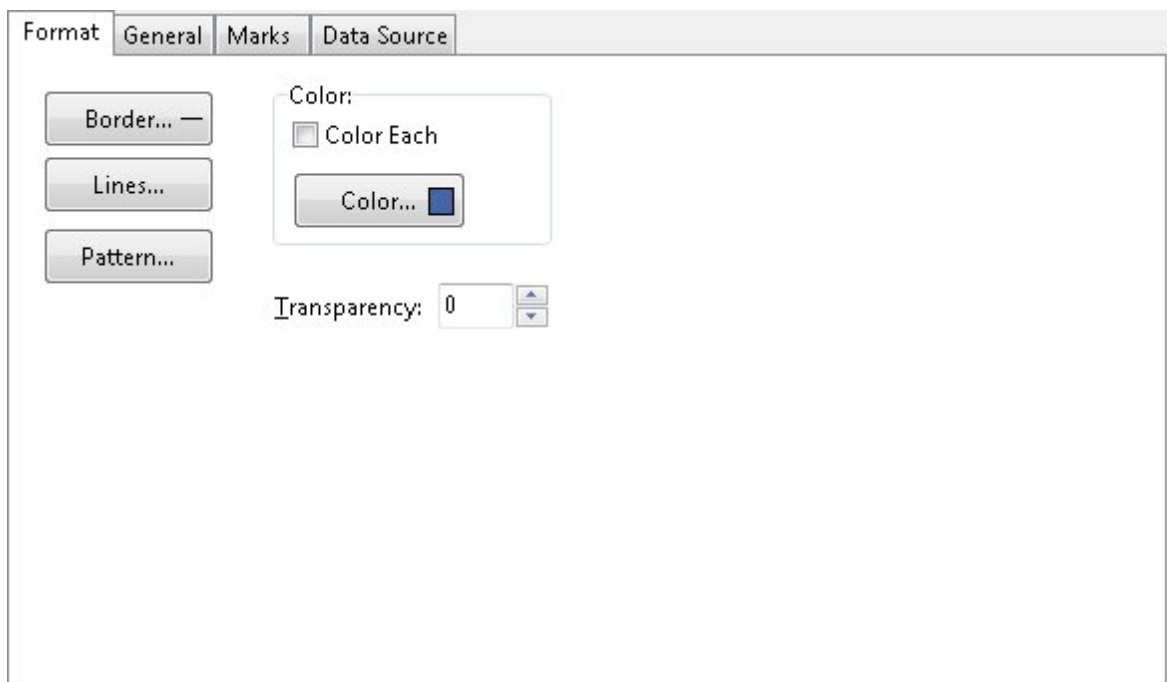
The Histogram and Horizontal Histogram Series display a graphical representation of the distribution of numerical data.

- [Format](#)
- [General](#)
- [Marks](#)
- [Data Source](#)





5.5.1.4.1.1 Format



Border - specifies the Histogram border, using the [Border Editor](#)

Lines - alters the Histogram lines, using the [Border Editor](#)

Pattern - specifies the Histogram pattern, using the [Pattern Editor](#)

Color Each - enables/disables the coloring of multiple bars within the area

Color - specifies a single color, using a color palette

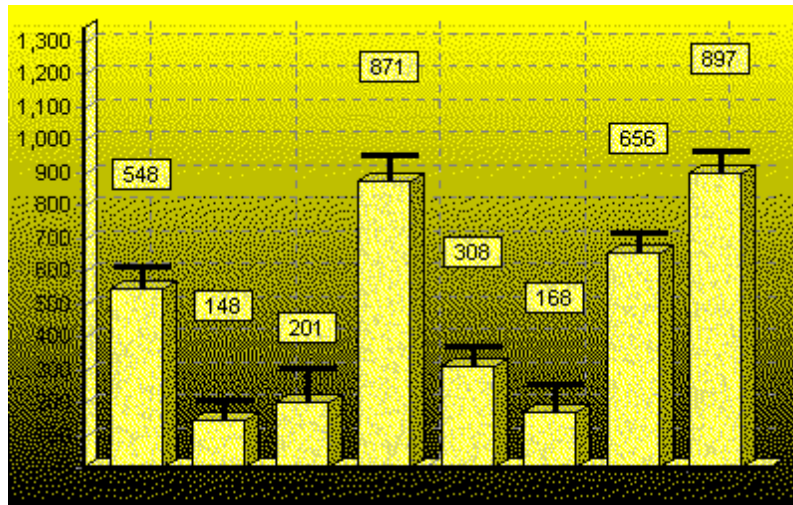
Transparency - sets the transparency level from 0 to 100%

5.5.1.4.2 Error Bar

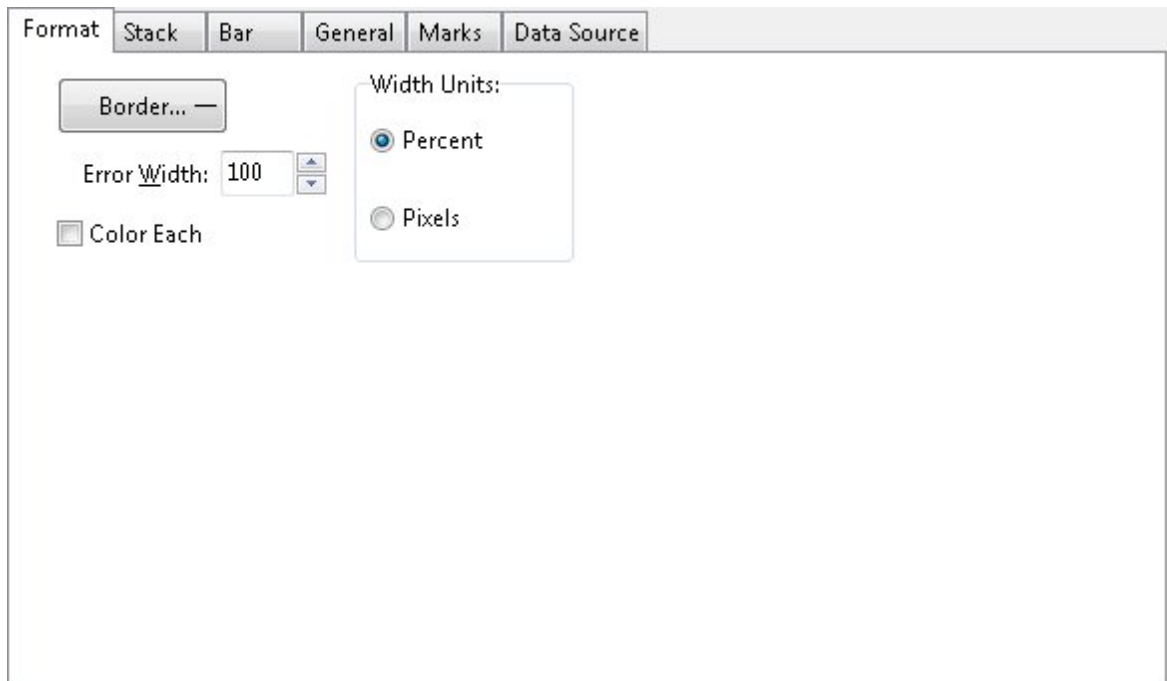
The Error Bar Series displays a graphical representation of the variability of data and are used on graphs to indicate the error, or uncertainty in a reported measurement.

- [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



Border - specifies the Error Bar border, using the [Border Editor](#)

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.

Color Each - plots each error Bar in a different color

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.

5.5.1.4.2.2 Stack

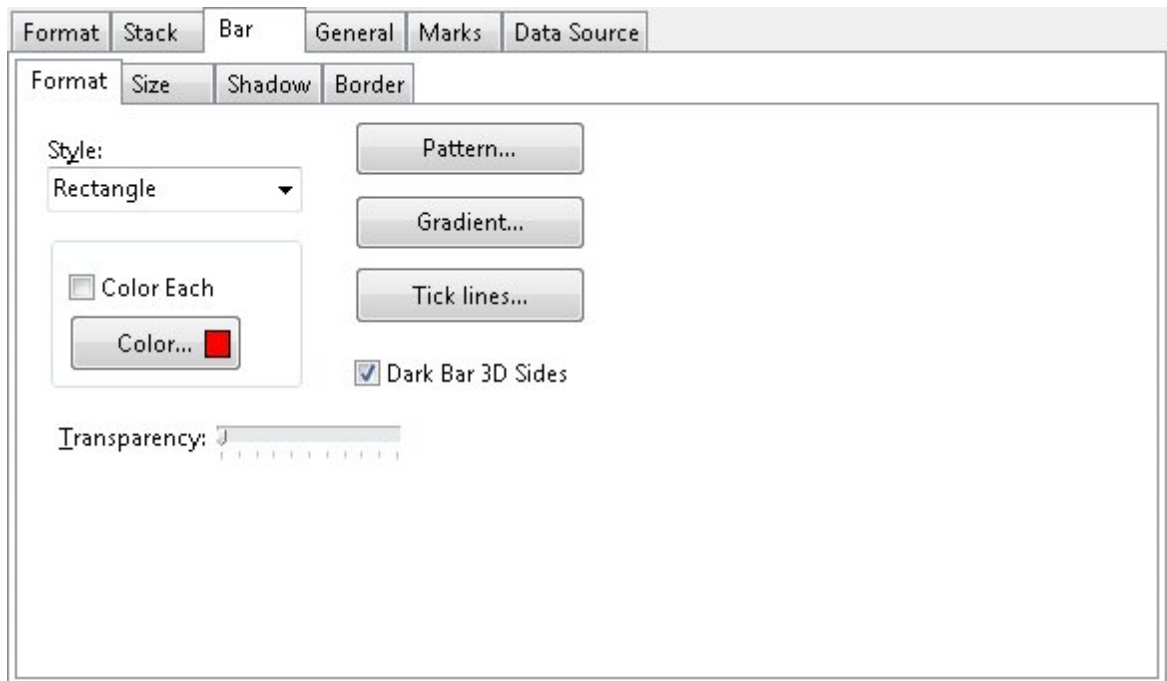
The screenshot shows a software interface with a tabbed menu at the top containing 'Format', 'Stack', 'Bar', 'General', 'Marks', and 'Data Source'. The 'Stack' tab is selected. Below the tabs, there is a section titled 'Multiple Bar:' with a list of radio button options: 'None', 'Side' (which is selected), 'Stacked', 'Stacked 100%', 'Side All', and 'Self Stack'. To the right of these options, there is a checked checkbox labeled 'Use Origin:' followed by a text input field containing the number '0'. Below that, there is a label 'Stack Group:' followed by a spinner control showing the number '0' and up/down arrow buttons.

Multiple Bar - With more than one Error 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

5.5.1.4.2.3 Bar

**Format Tab**

Style - defines the Bar shape used to draw Bars

Color Each - enables/disables the coloring of multiple bars within the area

Color - specifies a single color, using a color palette

Pattern - specifies a pattern to fill the bar, 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 - controls whether the bar sides will be filled with shadowed colors

Transparency - sets the transparency level of the bars

Size Tab

% Bar Depth - determines the depth of the 3D Bars, in pixels

% Bar Width - determines the width of the 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](#)

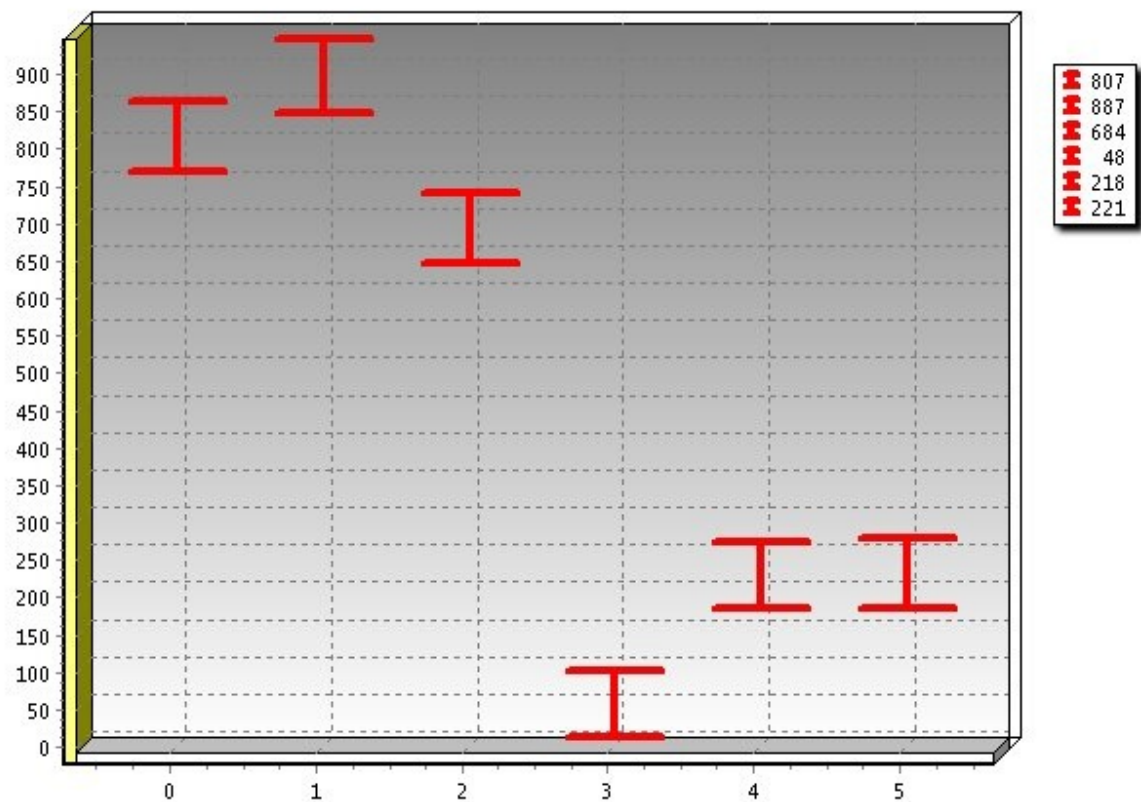
Dark Border - controls whether the bar sides will be filled with shadowed colors

Bevel size - defines the frame of the bar border

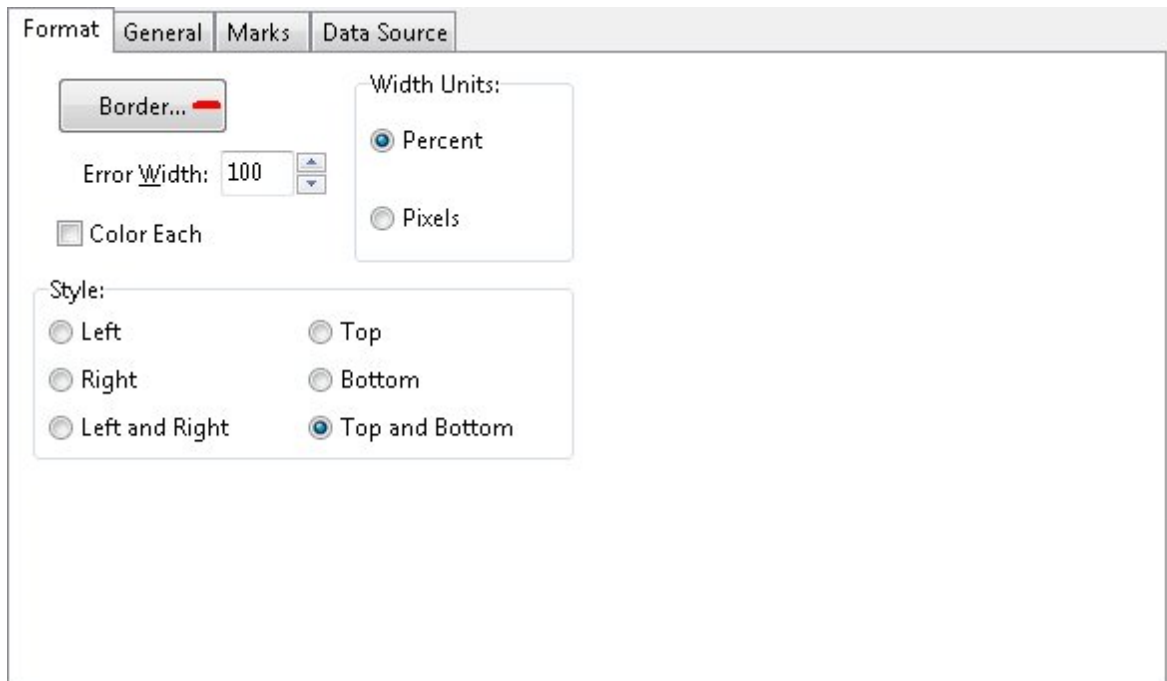
5.5.1.4.3 Error

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



Border - specifies the border of the Series points, using the [Border Editor](#)

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 Bars width.

Color Each - plots each Series point in a different color

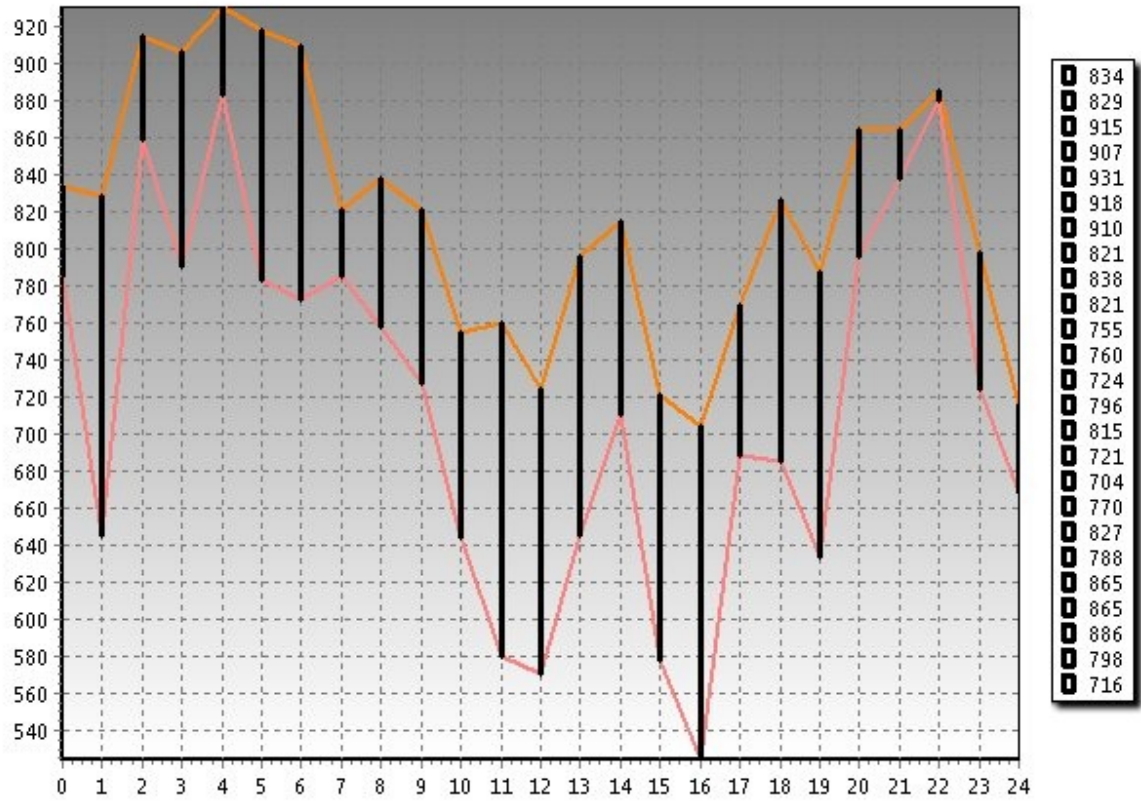
Width Units - determines whether Error Width property is expressed either in pixels or as a percentage of the Bar width. By default, the Error "T" width is 100% of the Bar width.

Style - defines the Error Series Style

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

Format **Low** High General Marks Data Source

Border... —

Color... ■

Color Each

Lines - specifies the pen used to draw the High-Low Series lines, using the [Border Editor](#)

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

High and Pattern - defines the properties for the High values of the Series. The "Pattern" button defines the pattern style, using the [Pattern Editor](#)

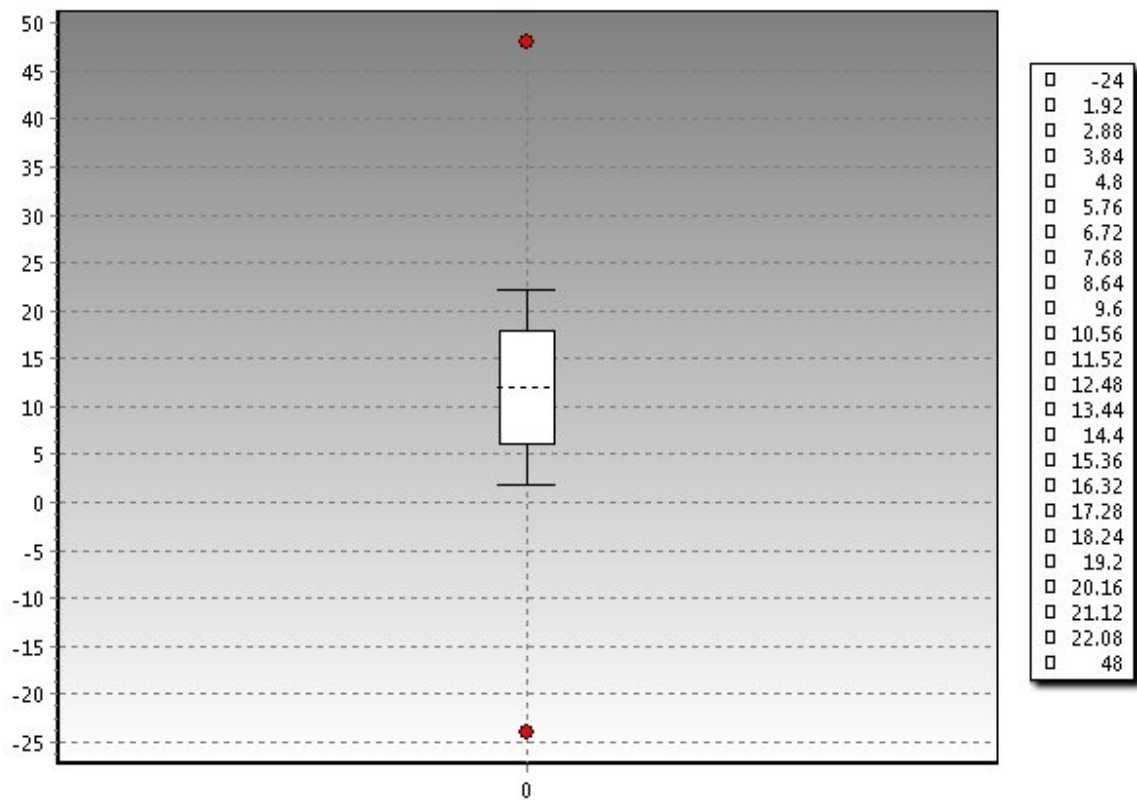
Low and Pattern - defines the properties for the Low values of the Series. The "Pattern" button defines the pattern style, using the [Pattern Editor](#)

Transparency - sets the transparency level from 0 to 100%

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

The screenshot shows a dialog box with several tabs: Format, MildOut, ExtrOut, Box, General, Marks, and Data Source. The 'Box' tab is selected. Inside the dialog, there are two rows of controls. The first row has a button labeled 'Median...--' followed by a text input field labeled 'Position:' containing the number '0'. The second row has a button labeled 'Whisker...--' followed by a text input field labeled 'Length:' containing the number '1.5'.

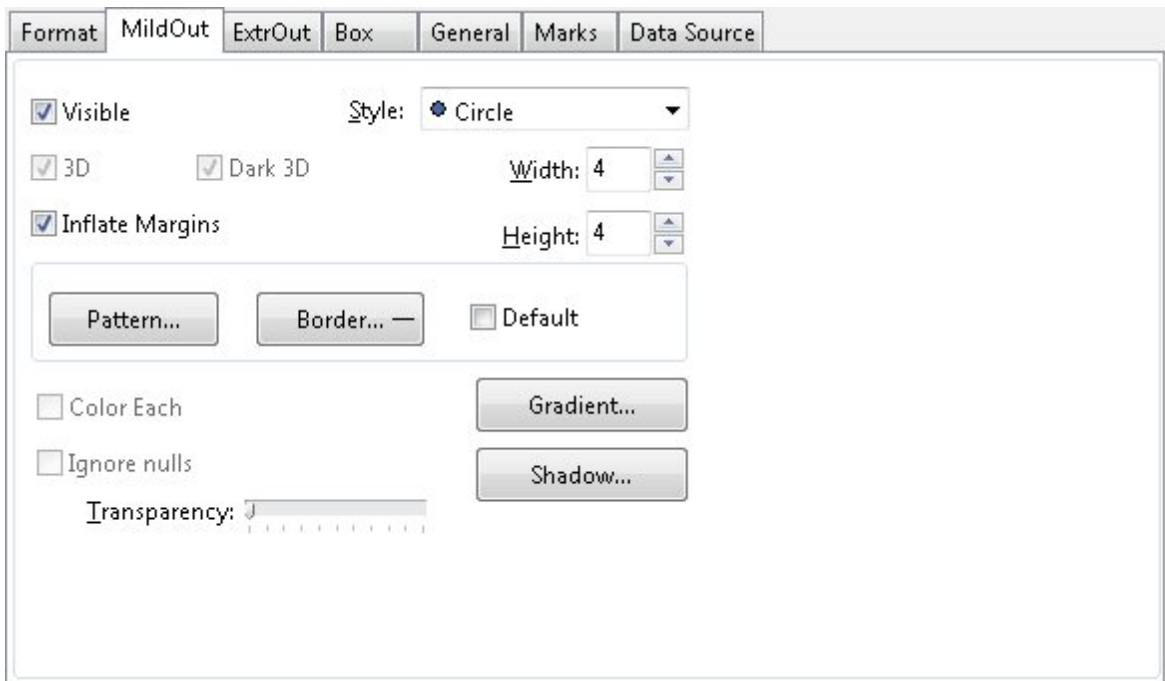
Median - determines the pen used to represent the color and style of the median line, using the [Border Editor](#)

Position - specifies the position of box Series: horizontal axis position or vertical axis position

Whisker - determines the pen to represent the color and style of the whisker lines, using the [Border Editor](#)

Length - defines the length of the whiskers as a function of the inter-quartile range (IQR). Default value for Whisker Length is 1.50.

5.5.1.4.5.2 MildOut



Visible - determines whether all the Series points will be displayed or not

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

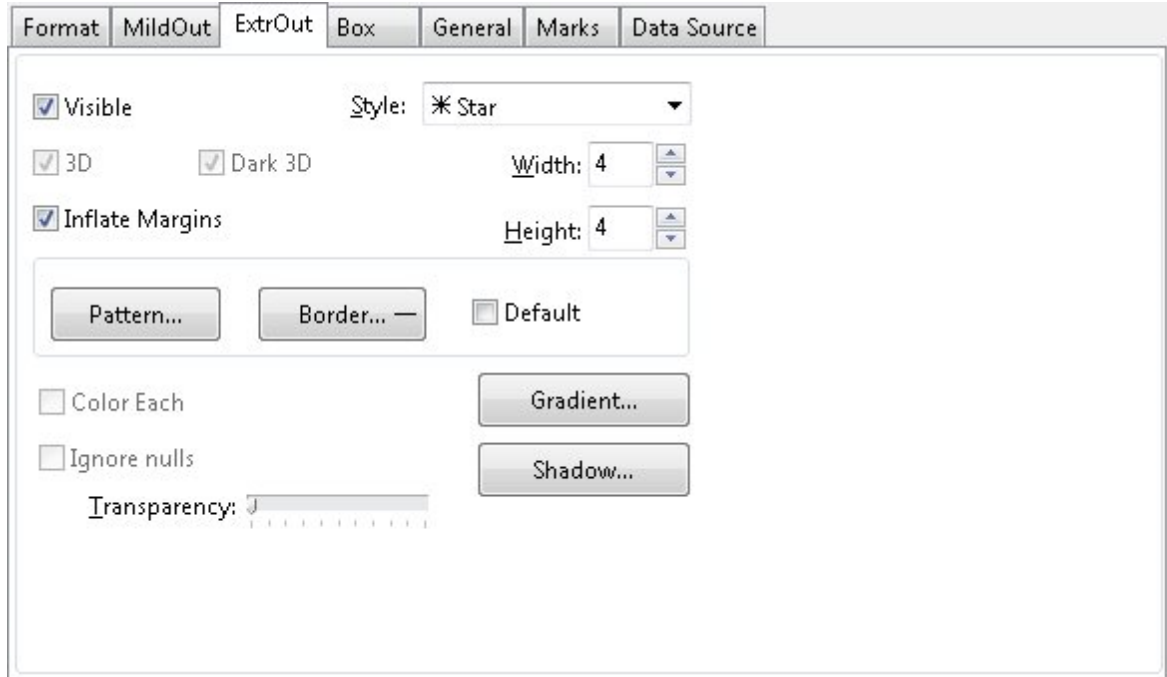
Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.4.5.3 ExtrOut

This property controls the appearance of the extreme range of outer points. ExtrOut contains several properties to control the formatting attributes of the extreme range of outer points like Pen, Brush, Draw3D, Visible, etc.



Visible - determines whether all the Series points will be displayed or not

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

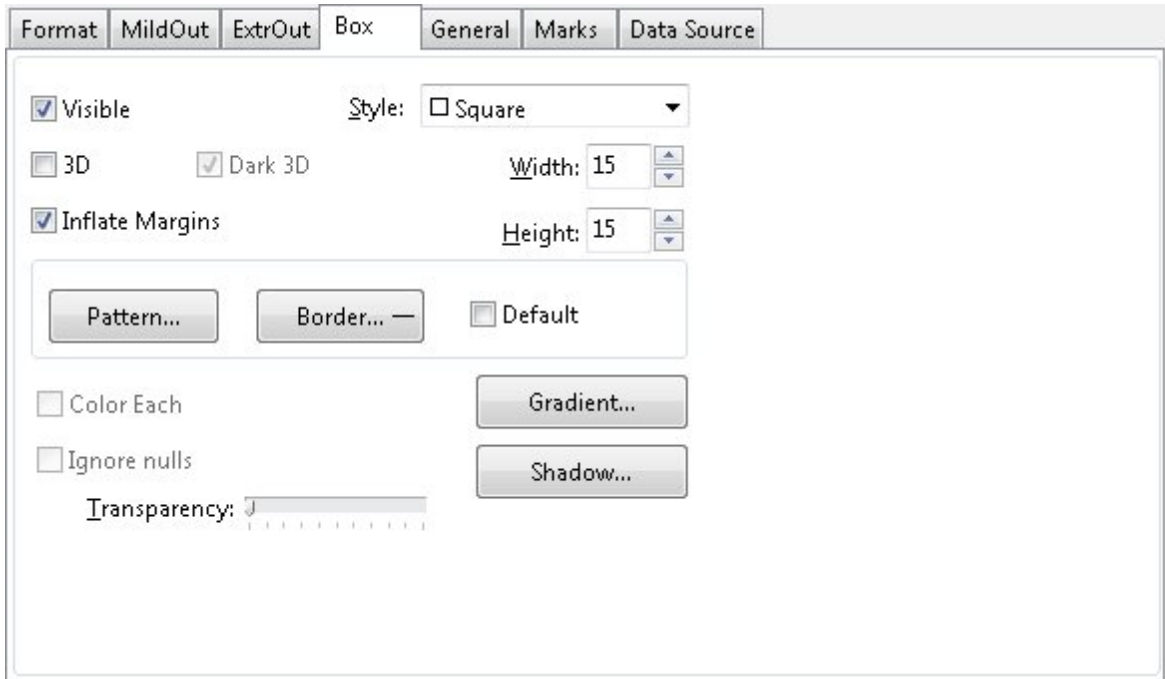
Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.4.5.4 Box

This property controls the appearance of Series box. Box contains several properties to control the formatting attributes of box like Pen, Brush, Draw3D, Visible, etc.



Visible - determines whether all the Series points will be displayed or not

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

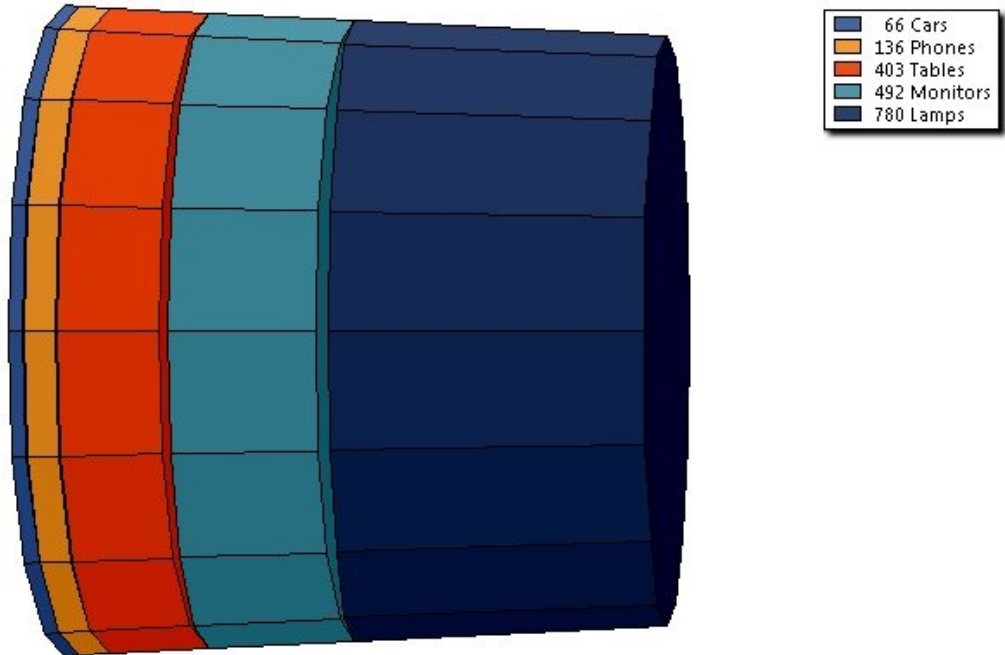
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

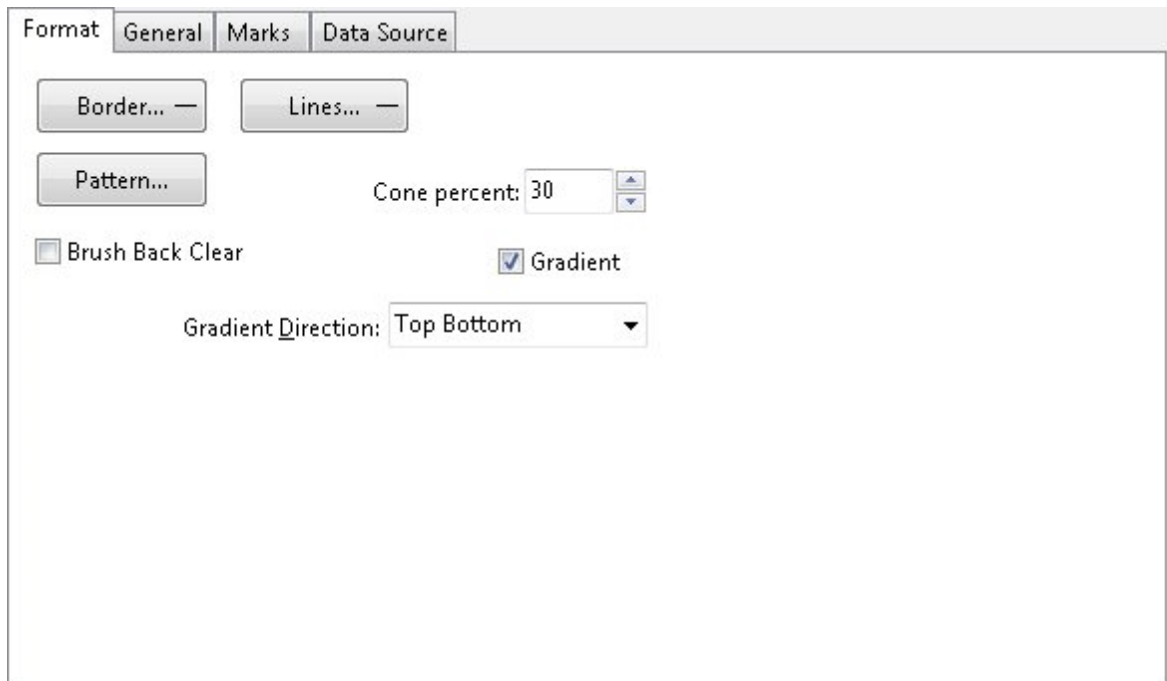
5.5.1.4.6 VolumePipe

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

- [Format](#)
- [General](#)
- [Marks](#)
- [Data Source](#)



5.5.1.4.6.1 Format



Border - determines the border properties, using the [Border Editor](#)

Lines - determines the pen properties, using the [Border Editor](#)

Pattern - defines the pattern style, using the [Pattern Editor](#)

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

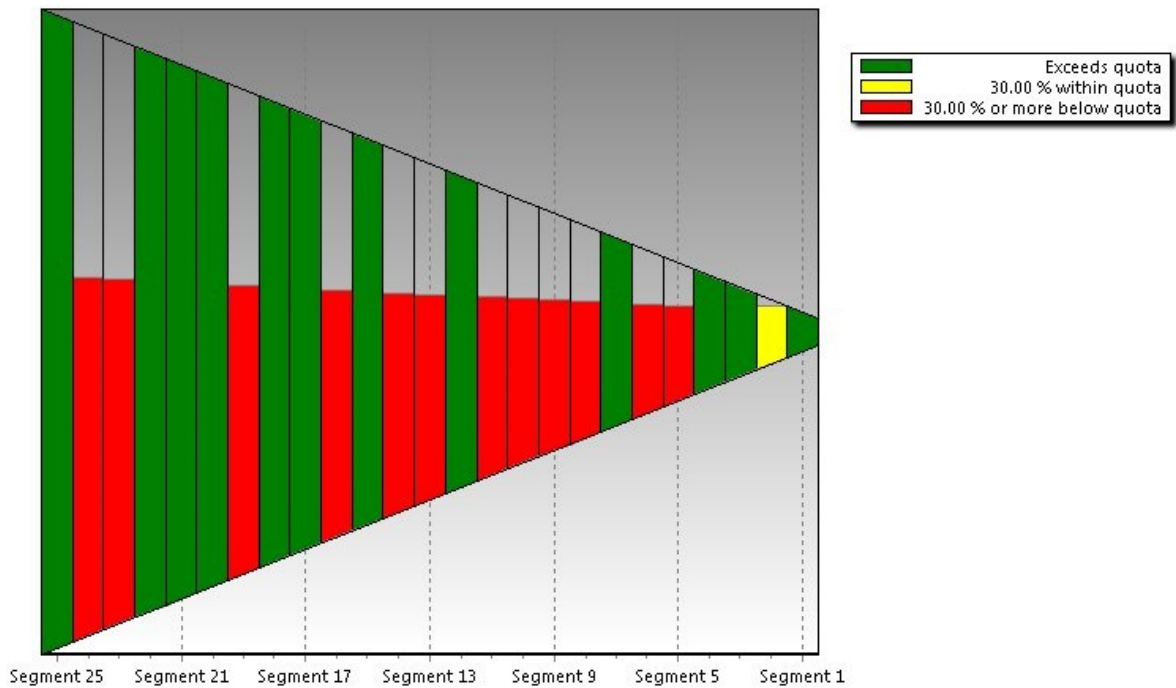
Gradient - sets a gradient for the defined color formatting

Gradient Direction - applies gradient directions

5.5.1.4.7 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](#)



5.5.1.4.7.1 Format

Format General Marks Data Source

Above... ■ Dif. Limit: 30

Within... ■ Lines... — Pattern...

Below... ■ Border... —

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, using the [Border Editor](#)

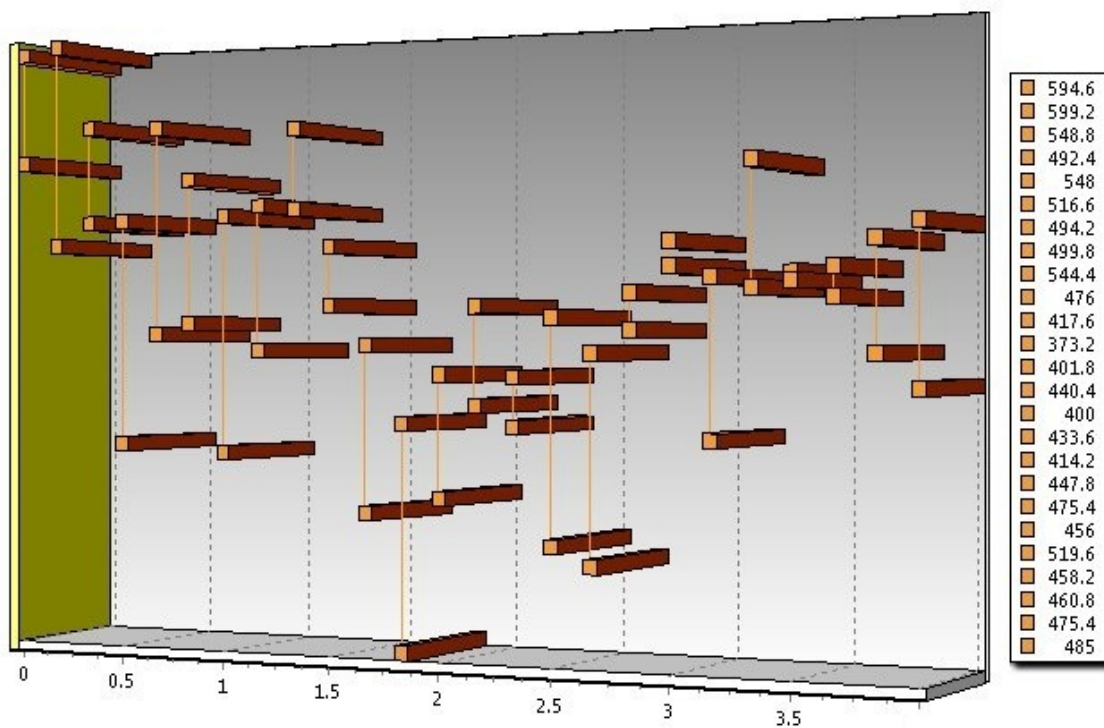
Pattern - defines the pattern used to fill in the Series, using the [Pattern Editor](#)

Border - defines the Funnel Series border, using the [Border Editor](#)

5.5.1.4.8 HighLow Line

The HighLow Line Series point out how close actual values came to the goal points.

- [Format](#)
- [Low](#)
- [High](#)
- [General](#)
- [Marks](#)
- [Data Source](#)



5.5.1.4.8.1 Format

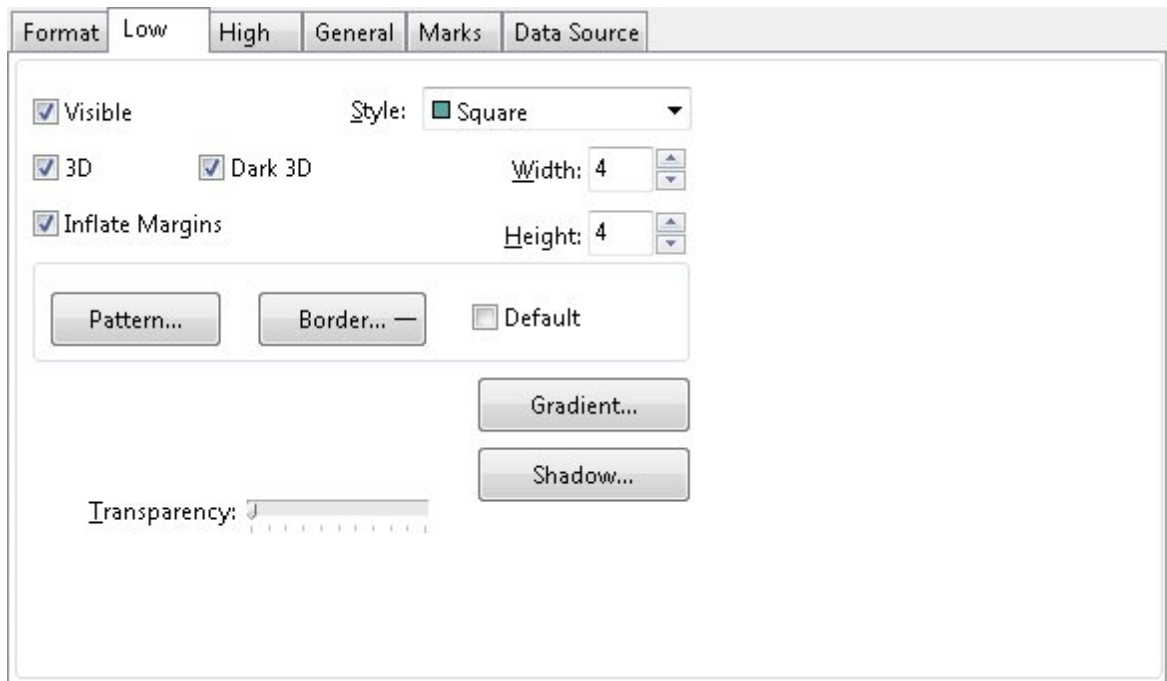


Border - specifies the Series border, using the [Border Editor](#)

Color - define 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

5.5.1.4.8.2 Low



Visible - determines whether all the Series points will be displayed or not

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](#)

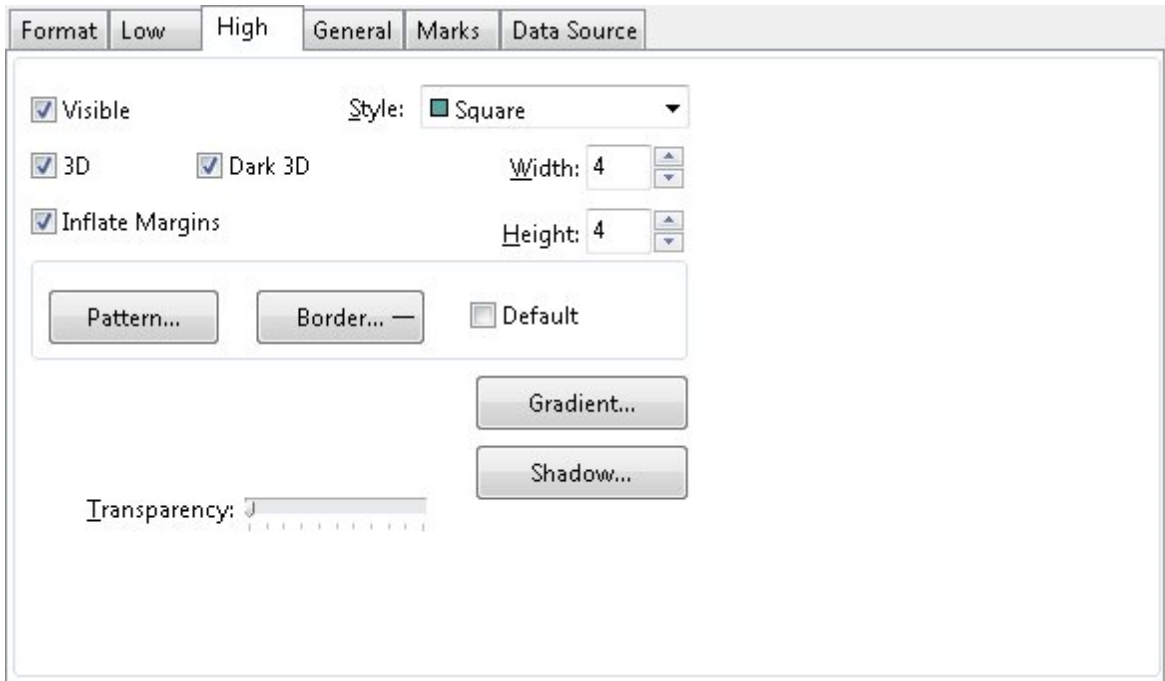
Default - specifies the default values for pattern and border

Transparency - specifies the degree of transparency

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

5.5.1.4.8.3 High



Visible - determines whether all the Series points will be displayed or not

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 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.

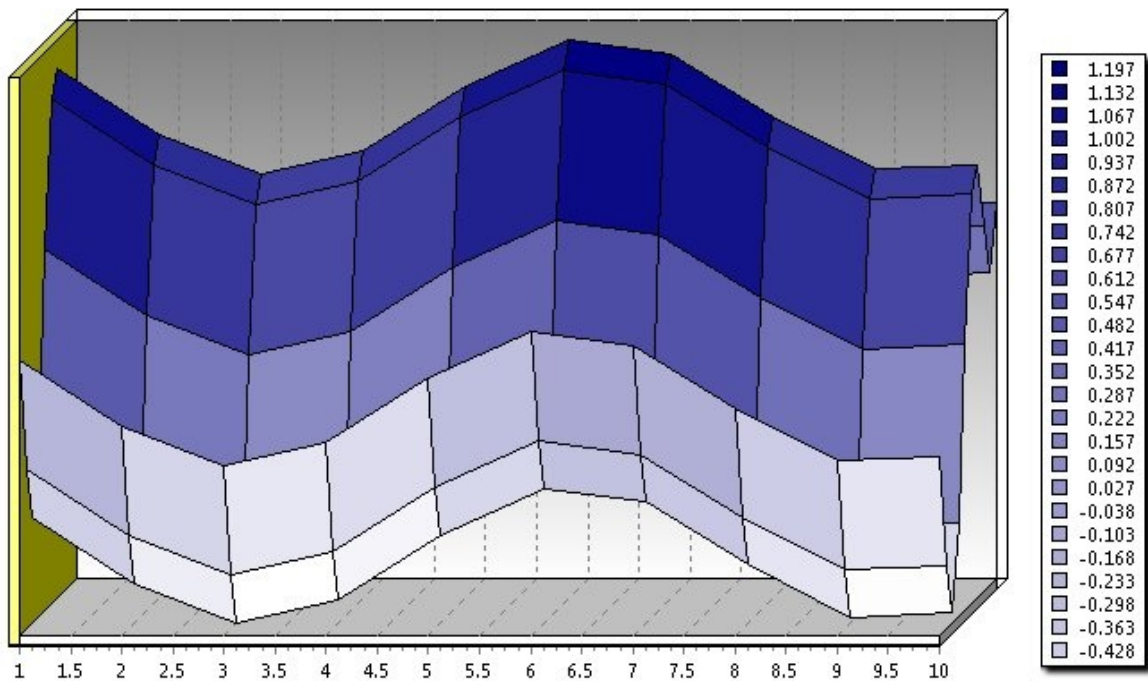
Icon	Series
	Surface

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

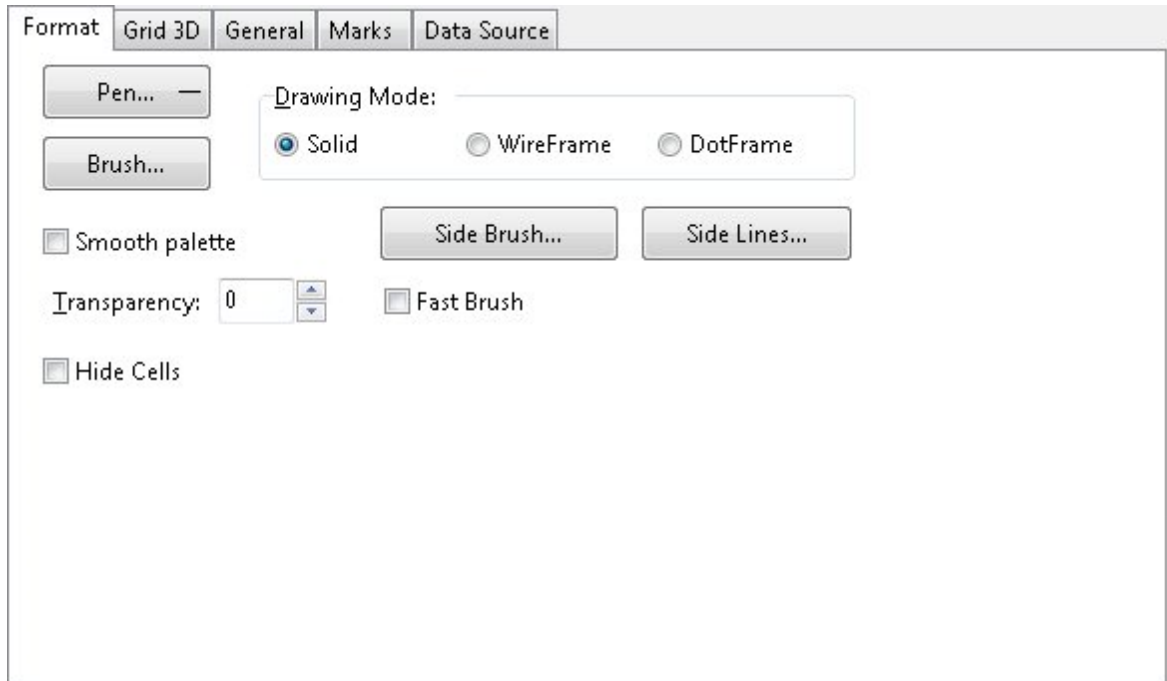
5.5.1.5.1 Surface

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](#)

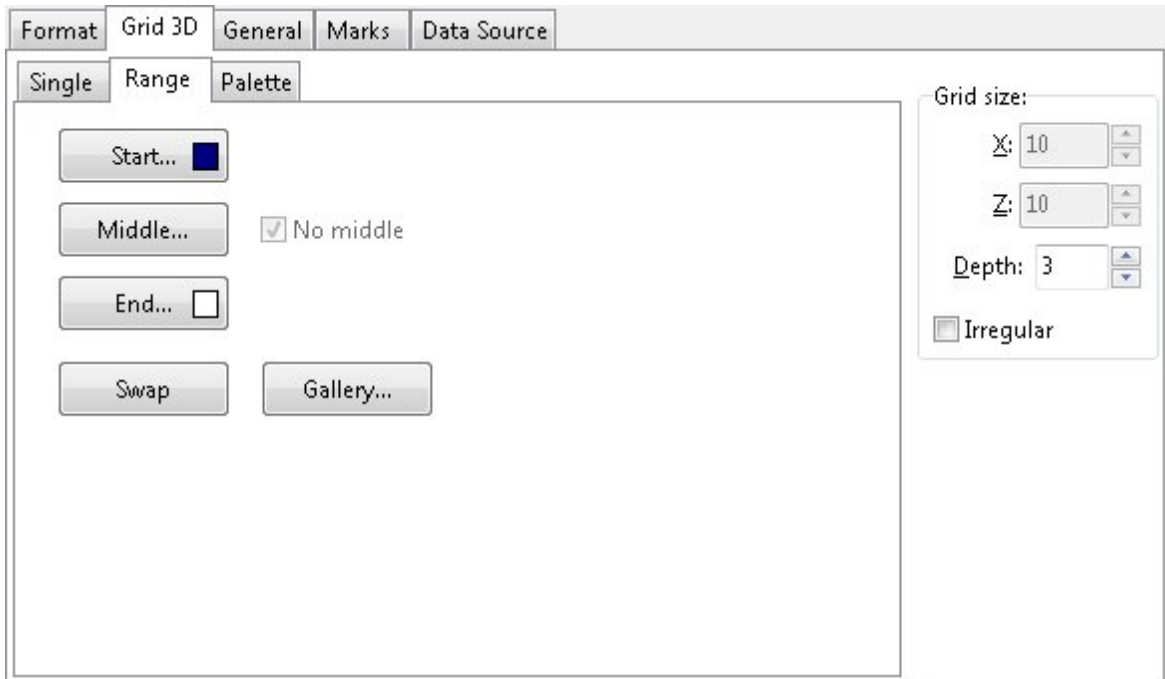
Side Lines - determines the kind of lines displayed for sides of the Series, using the [Border Editor](#)

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

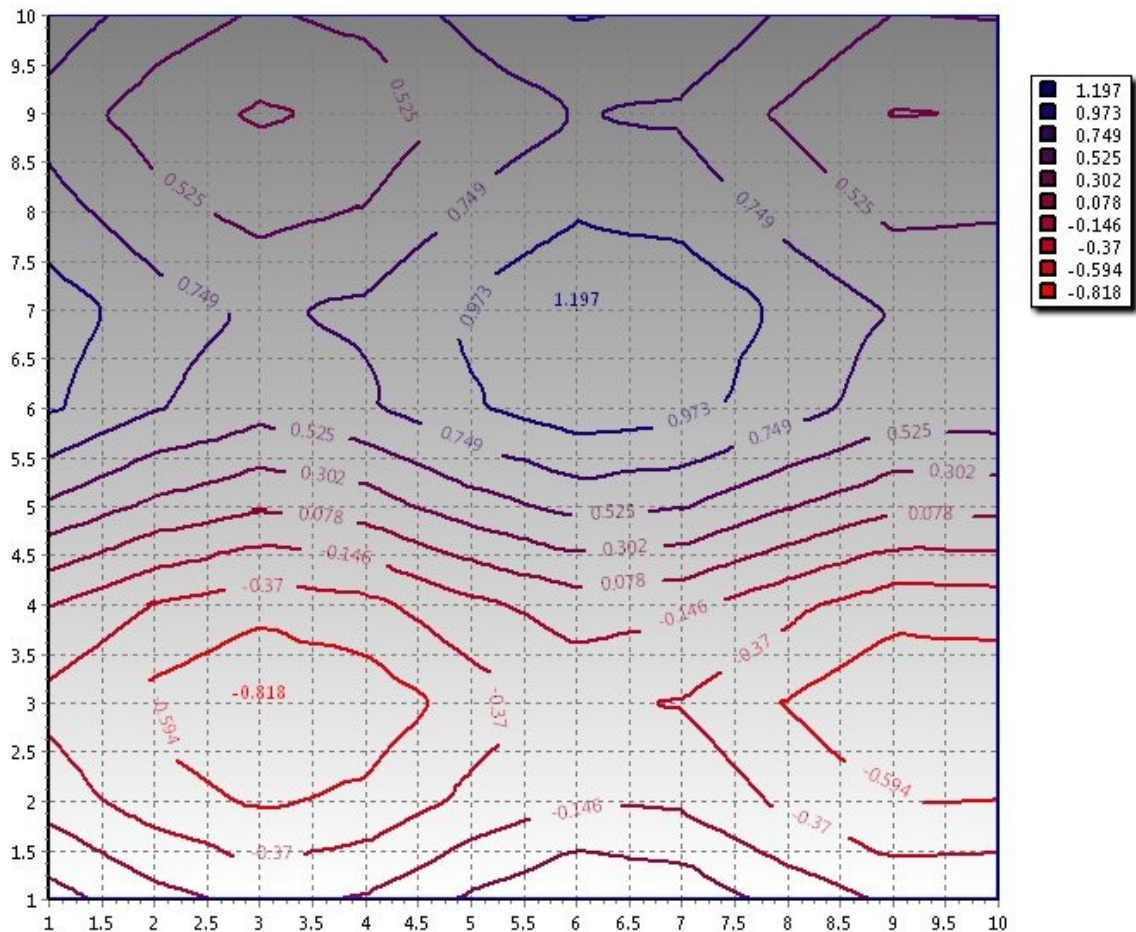
Depth - defines the Grid depth

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

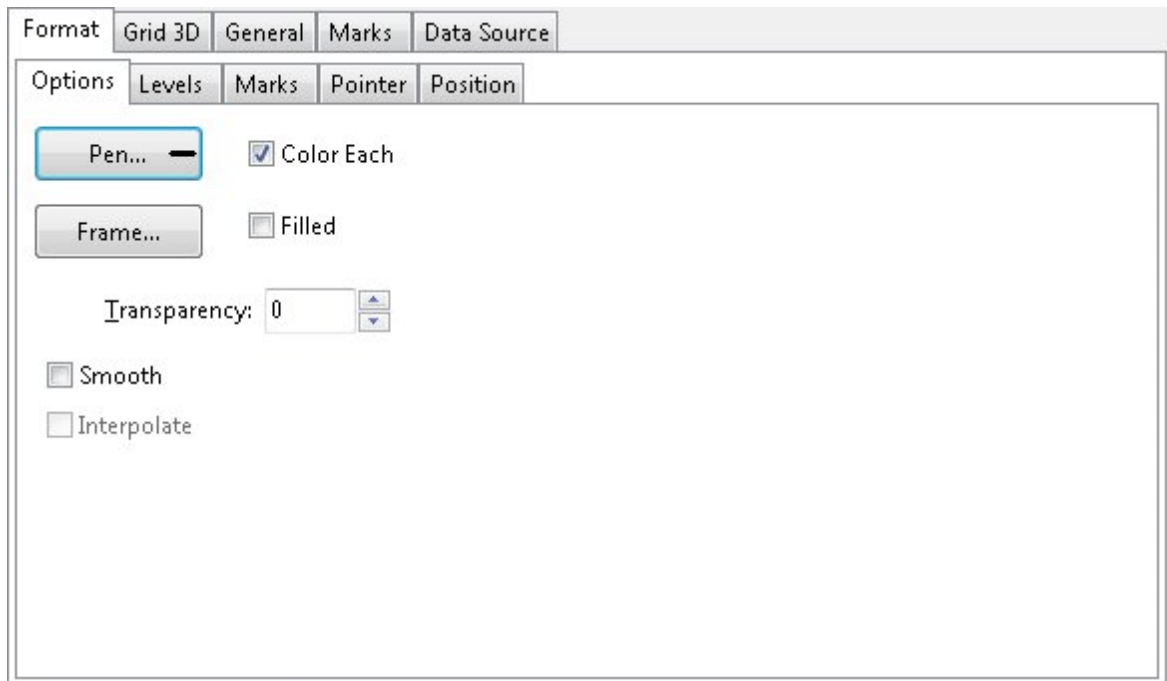
5.5.1.5.2 Contour

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](#)

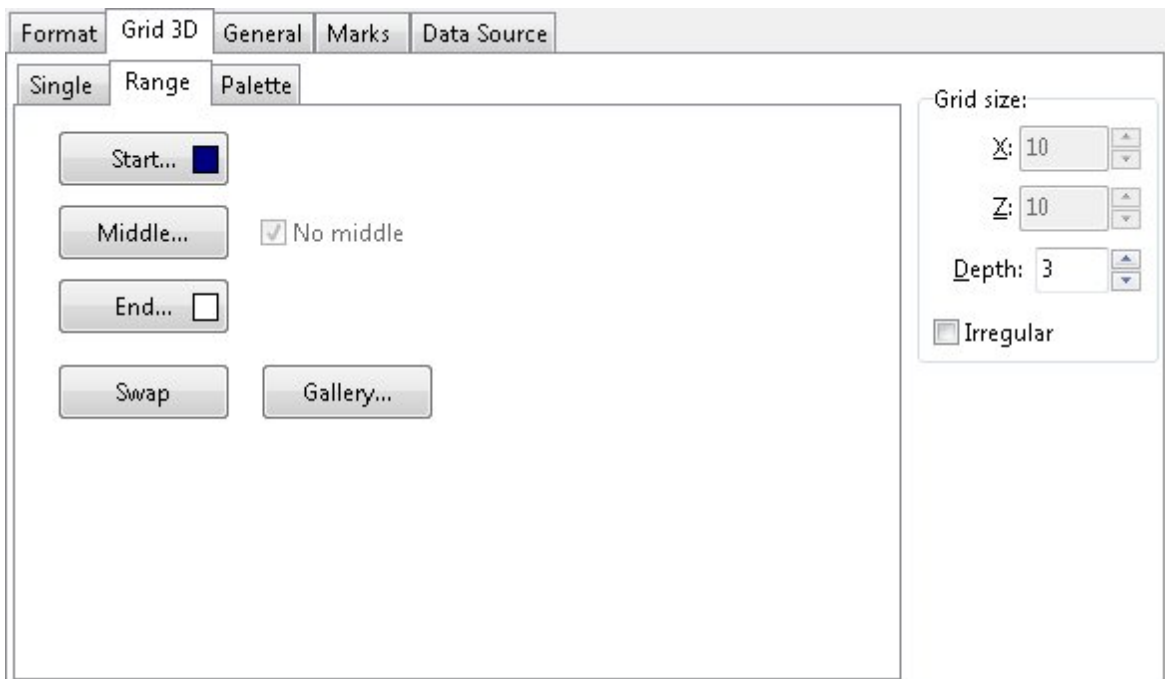
Shadow - specifies a shadow, using the [Shadow Editor](#)

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

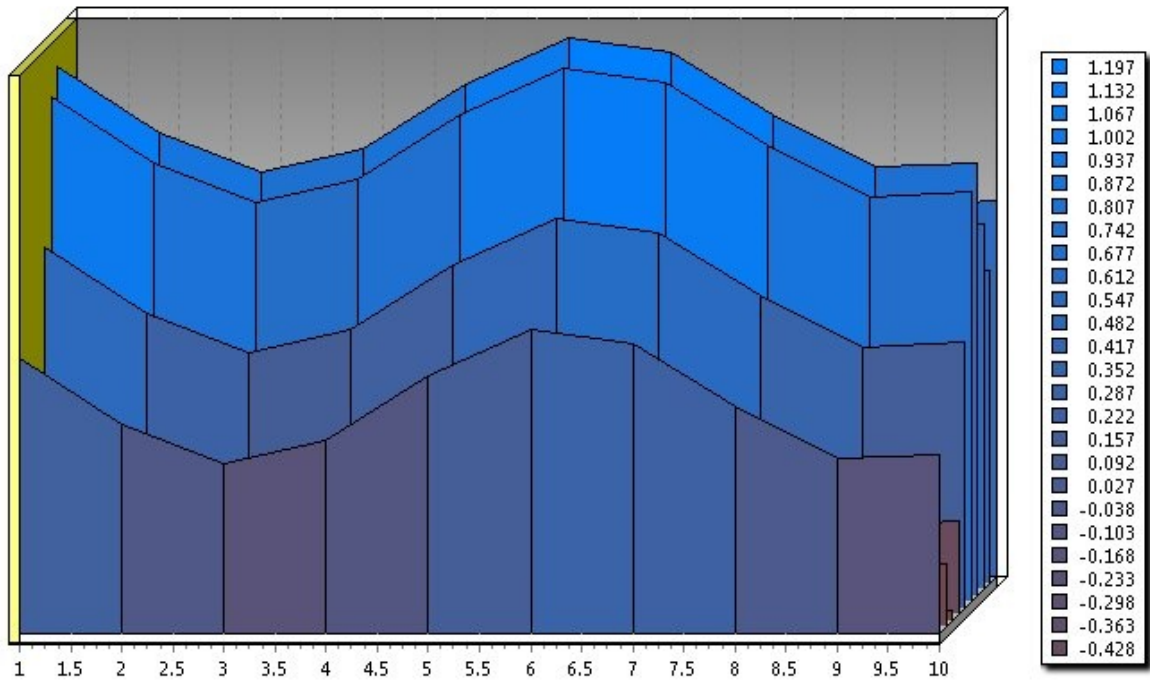
Depth - defines the Grid depth

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

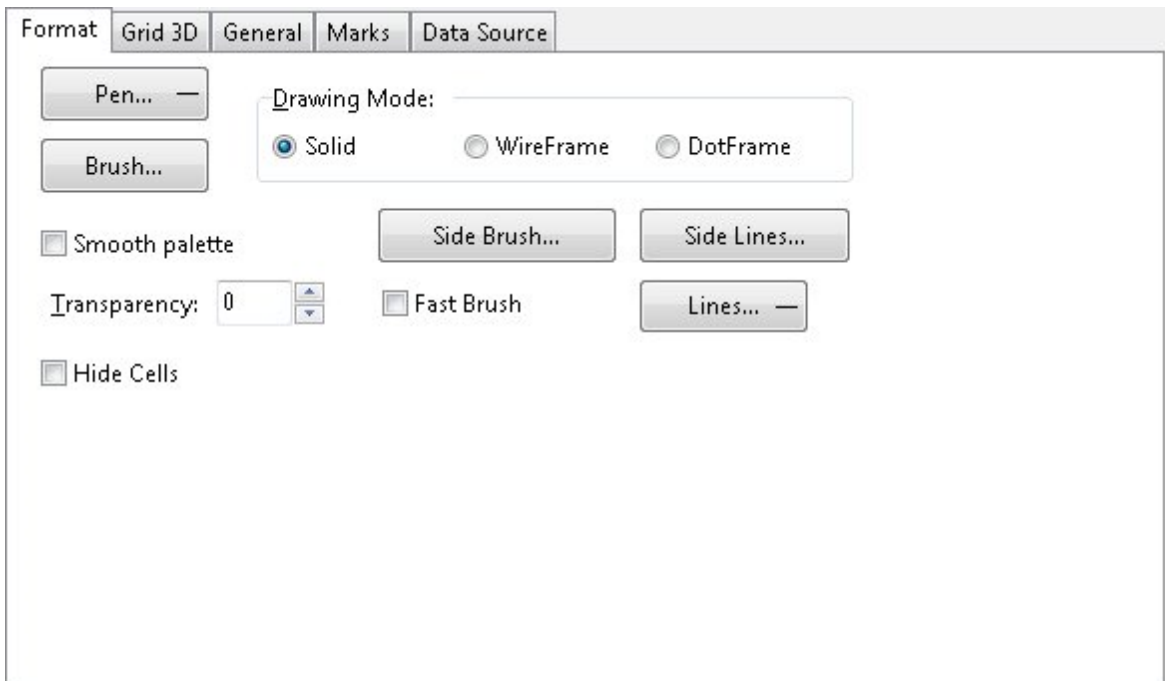
5.5.1.5.3 Water Fall

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](#)

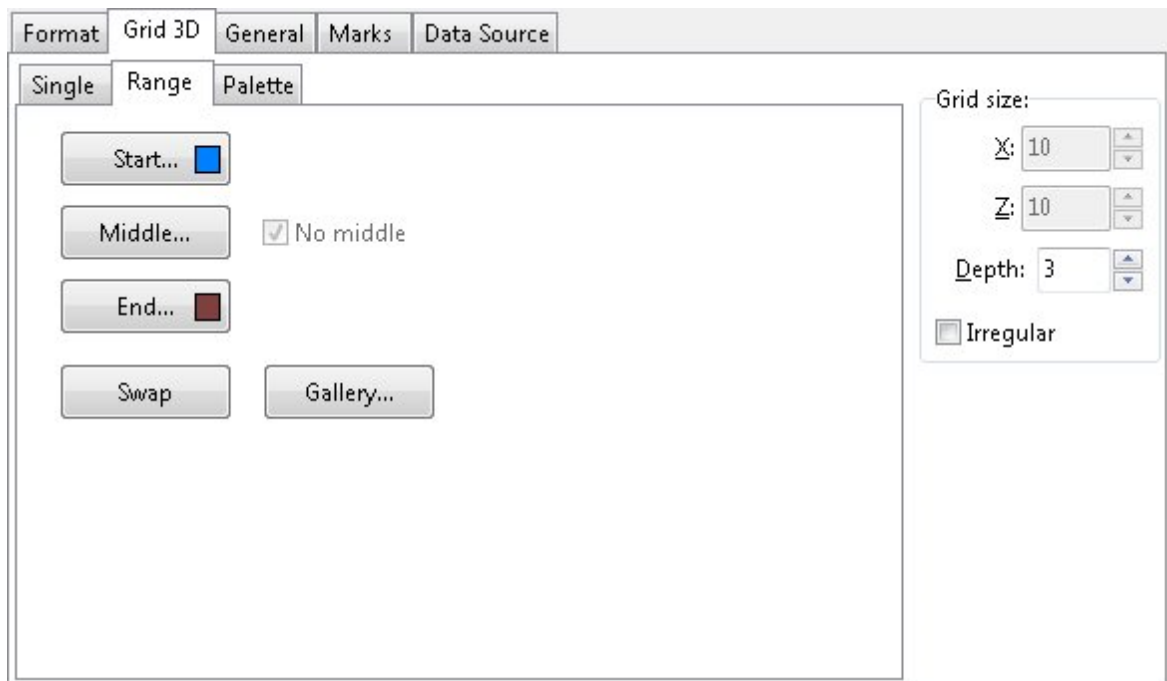
Transparency - sets the transparency level from 0 to 100%

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

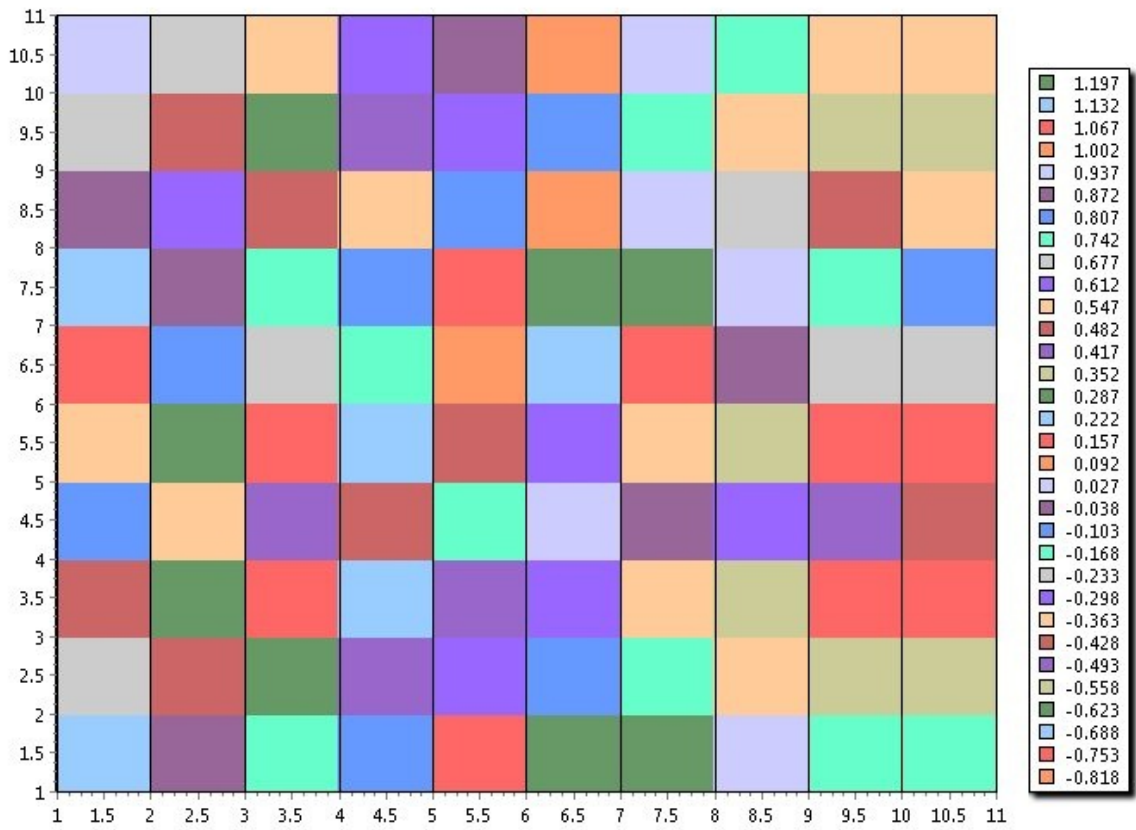
Depth - defines the Grid depth

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 Grid 3D General Marks Data Source

Format Grid Position

Frame... Smooth

Transparency:
0

Load...

Format Tab

Frame - specifies the properties of the series frame, using the [Border Editor](#)

Smooth - the colorgrid 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

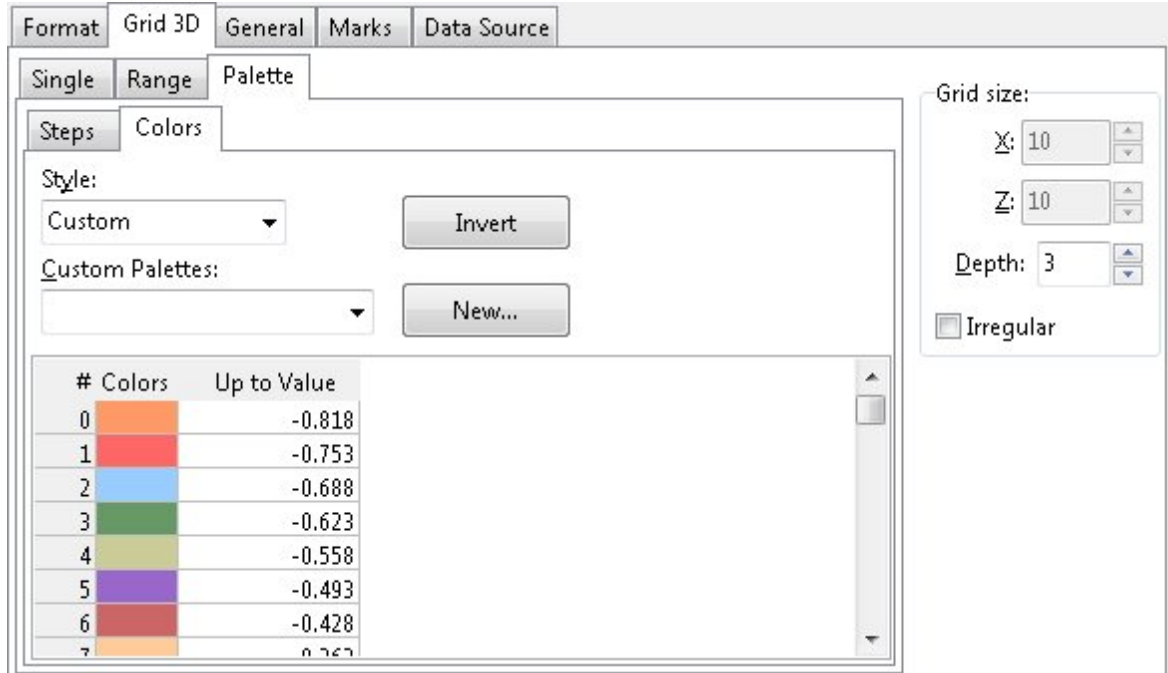
Position Tab

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

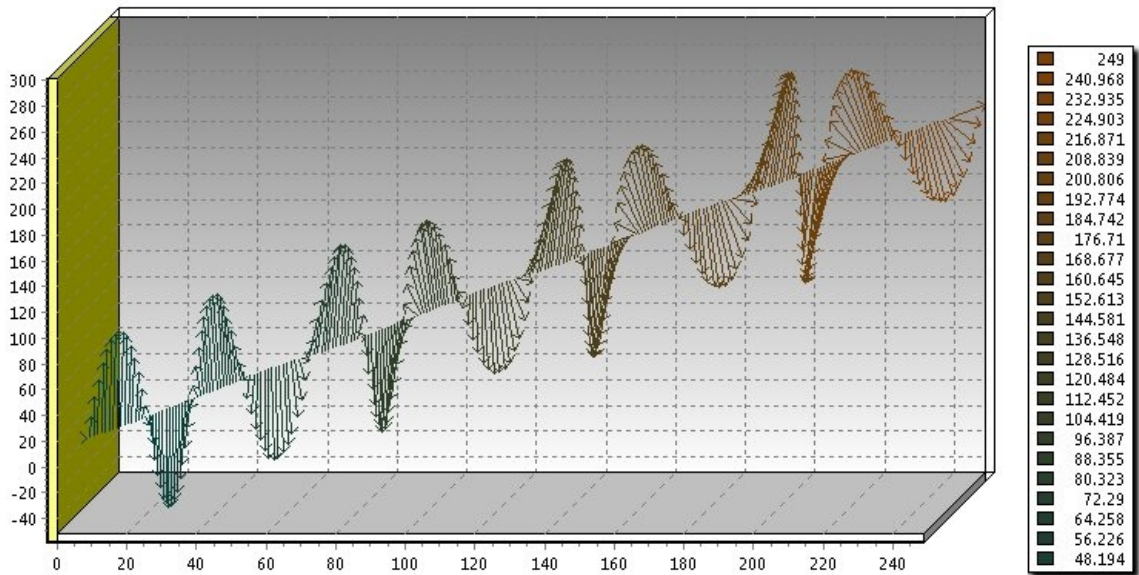
Depth - defines the Grid depth

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

Format	Grid 3D	General	Marks	Data Source
Arrow <u>W</u> idth:	4			
Arrow <u>H</u> eight:	4			
Start...	<input checked="" type="checkbox"/>	Default color		
End... —	<input checked="" type="checkbox"/>	Default color		

Arrow Width - specifies the amount in pixels of arrow width

Arrow Height - specifies the amount in pixels of arrow height

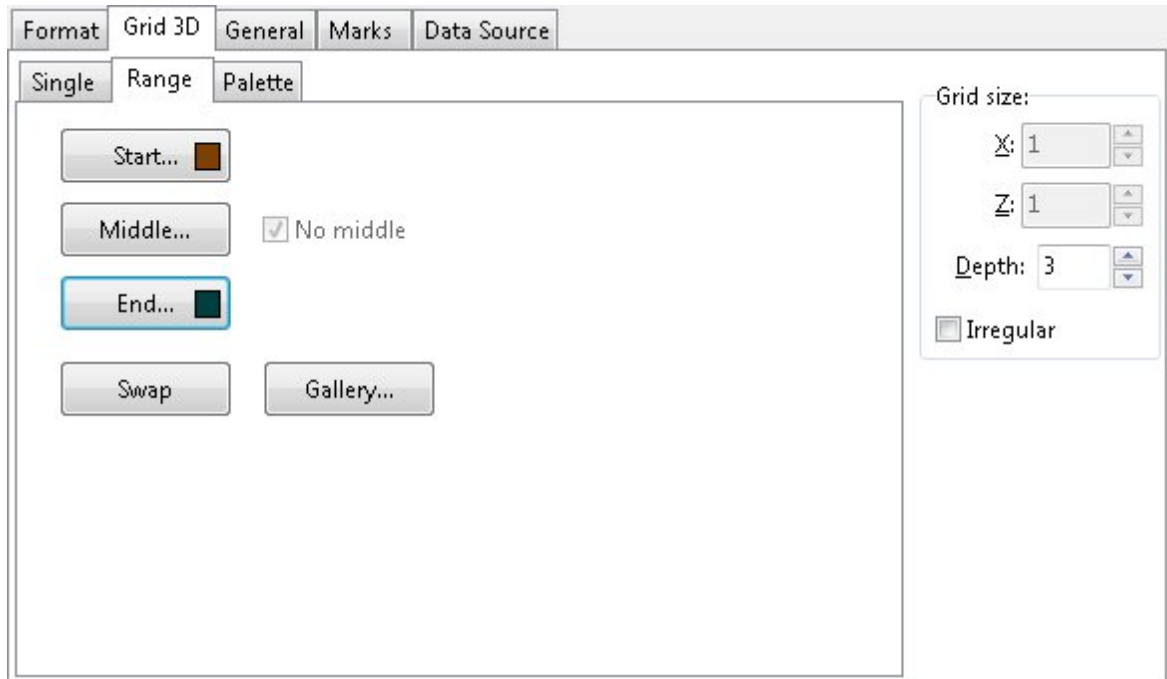
Start - specifies the pen setting used to display arrows at the starting coordinate of vector lines, using the [Border Editor](#)

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

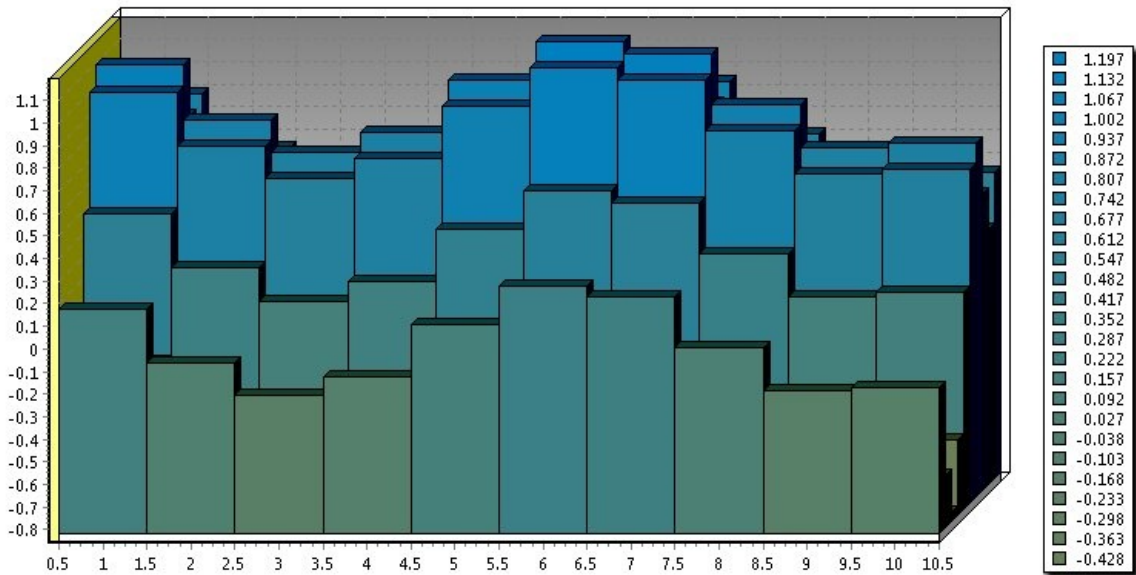
Depth - defines the Grid depth

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

The screenshot shows a dialog box titled "Format" with several tabs: "Format", "Grid 3D", "General", "Marks", and "Data Source". The "Format" tab is active. It contains the following controls:

- A "Border..." button with a minus sign.
- A "Pattern..." button.
- A checked checkbox labeled "Dark 3D".
- A "Style:" dropdown menu currently set to "Cube".
- An "Origin:" section containing a checkbox labeled "Use Origin" (which is unchecked) and a text input field containing the value "0".
- A "Percent:" section containing two spinners: "Depth:" set to "100" and "Width:" set to "100".
- A "Transparency:" spinner set to "0".

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.

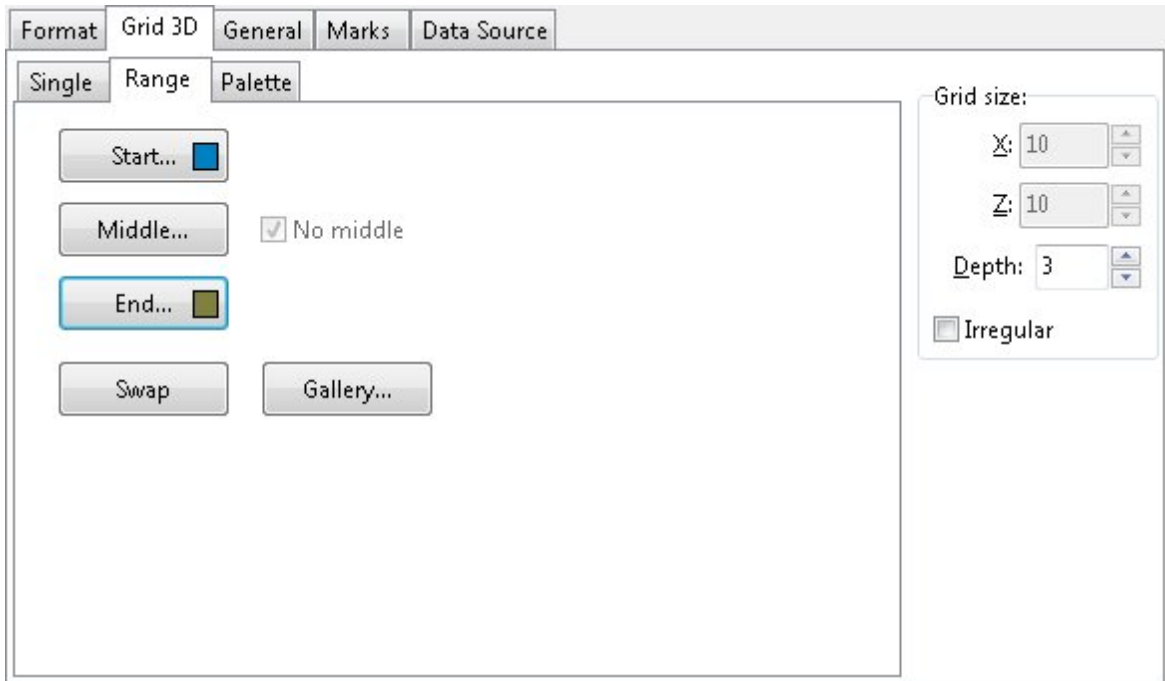
Percent Depth - determines the depth percent of the bars, in pixels

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.

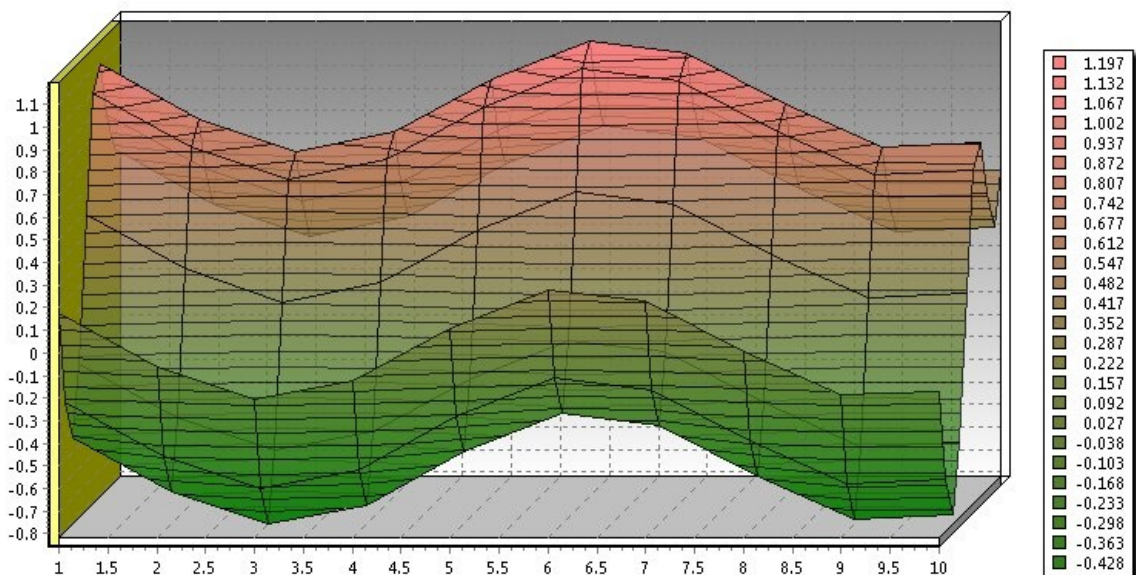
5.5.1.5.7 Iso-Surface

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.

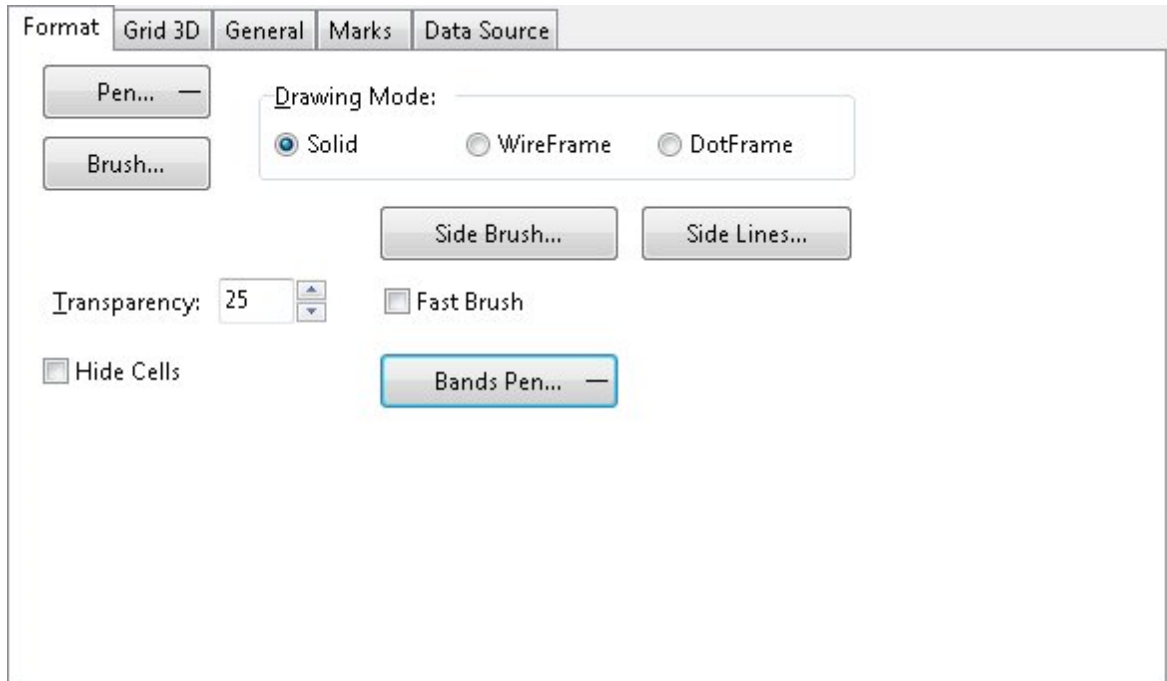
The difference between a Surface and Iso-Surface series is that Iso-Surface fill each "cell" in a different way than Surface. Surface series simply paints the interior of a cell using a calculated color based on each cell Y value.

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](#)

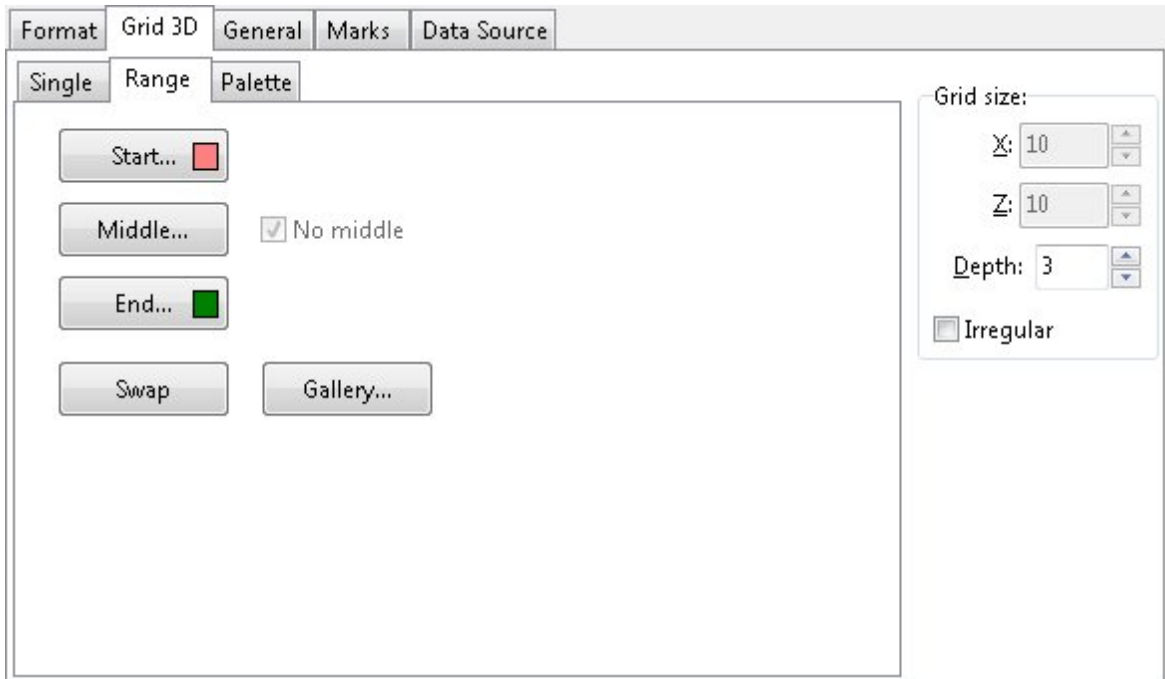
Transparency - sets the transparency level from 0 to 100%

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

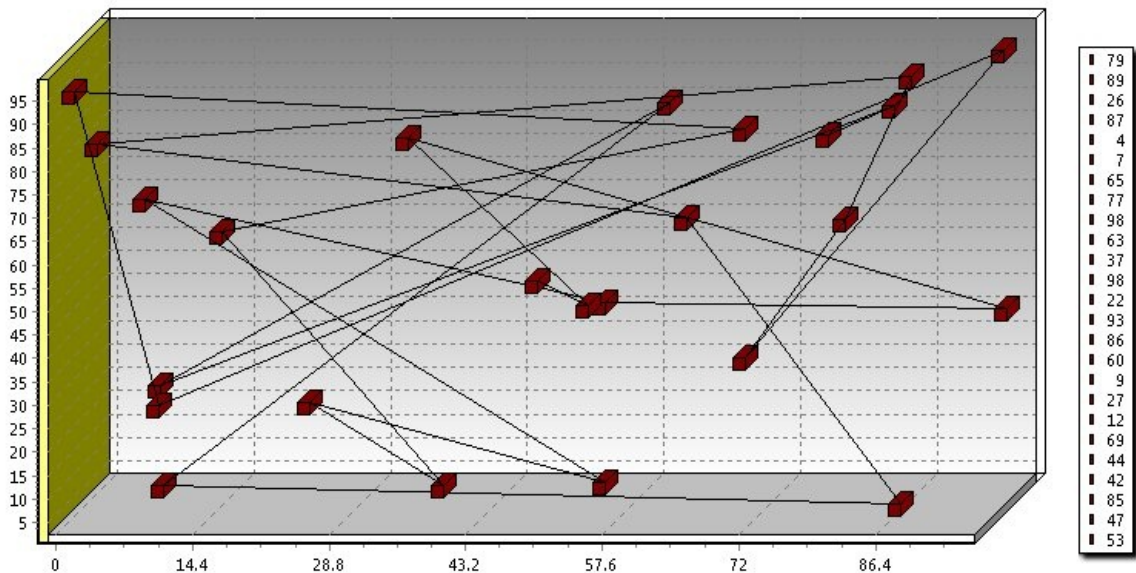
Depth - defines the Grid depth

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

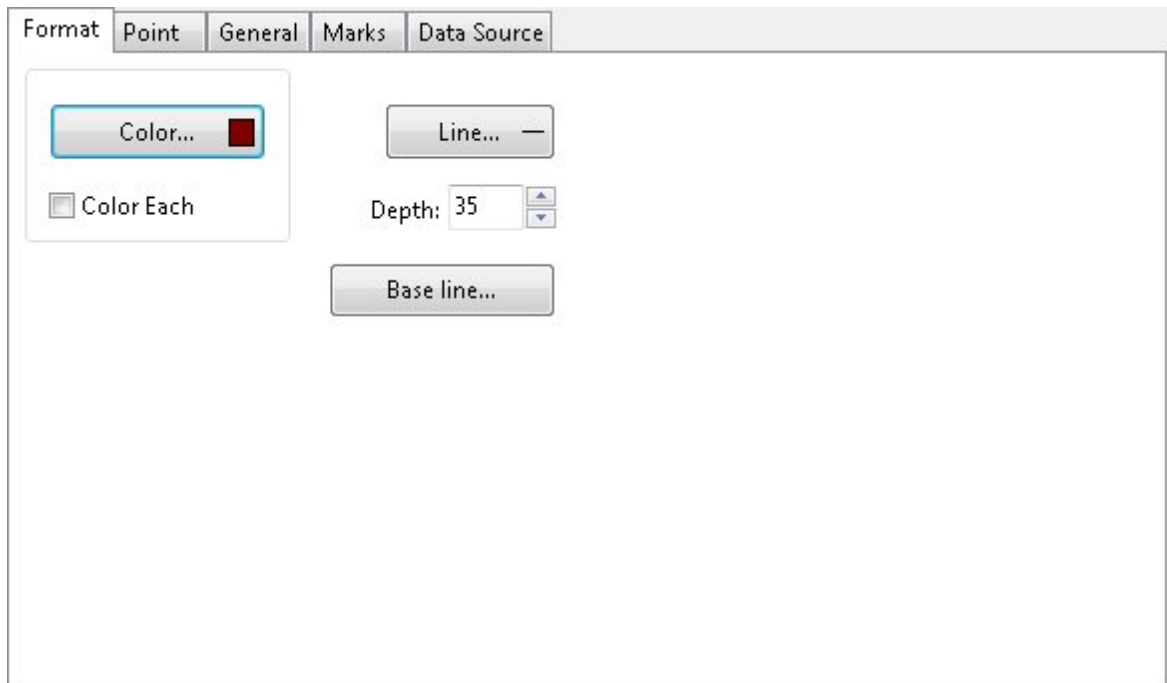
5.5.1.5.8 Point3D

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

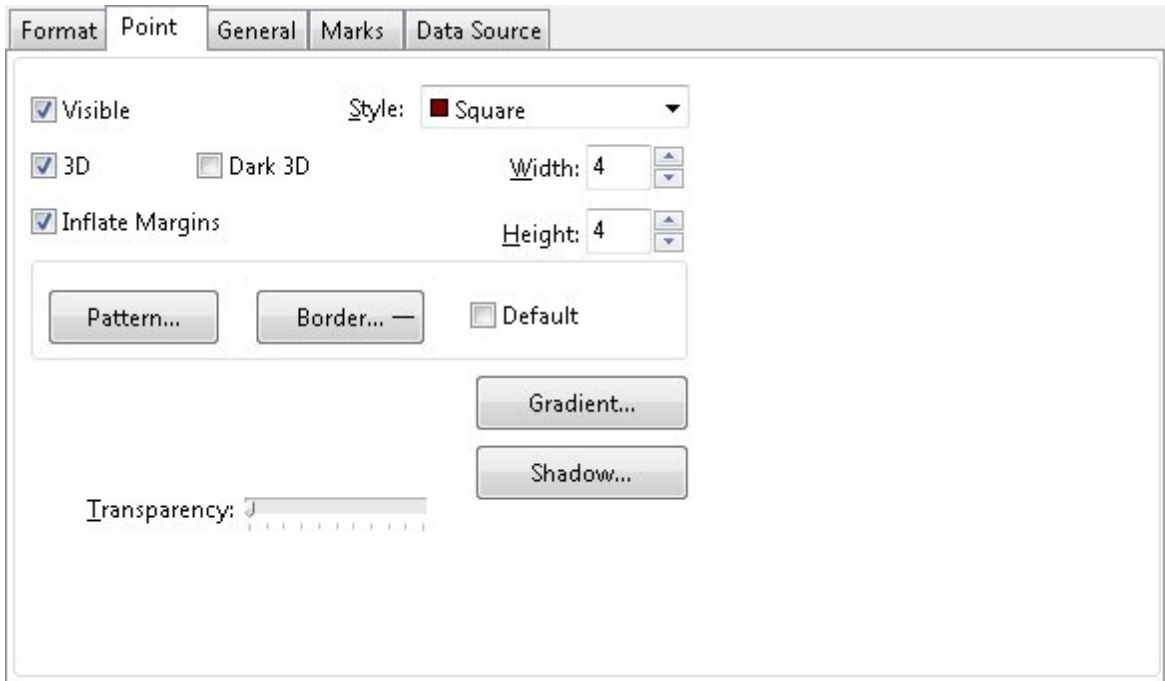
Color Each - enables/disables the coloring of each point

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

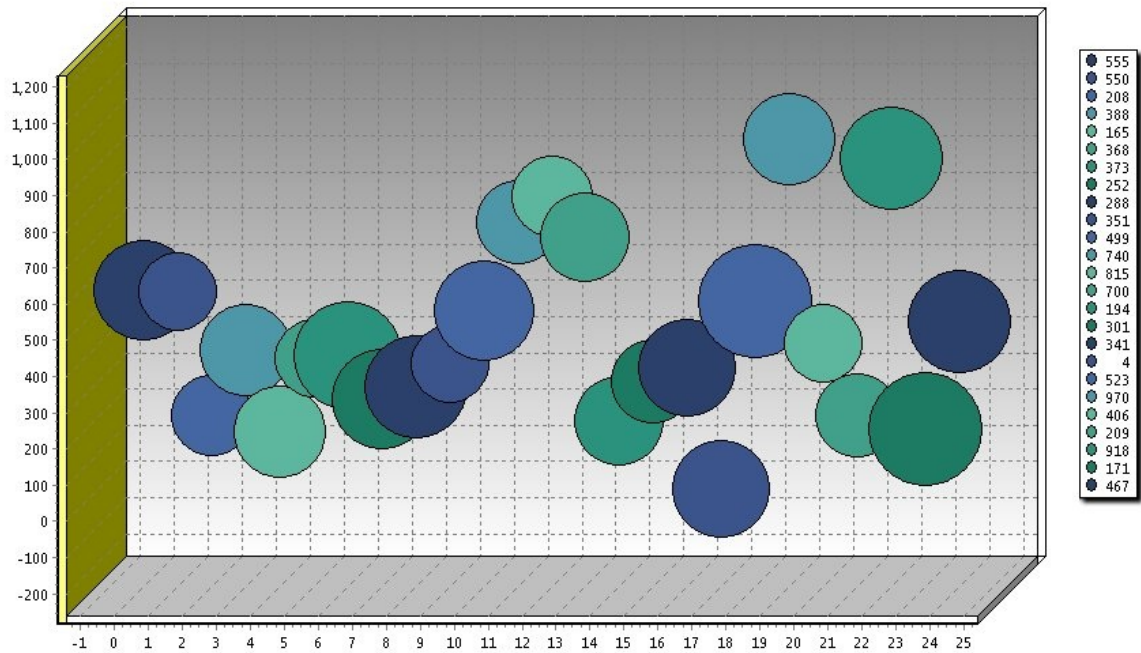
The Bubble 3D Series is useful for showing importance weighting. For example, comparing high volume selling product that, by income, doesn't bring in a revenue of the scale of another low volume seller. When viewing the chart at a glance, literally, big bubbles are seen as important. Bubble Series can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

- [Format](#)

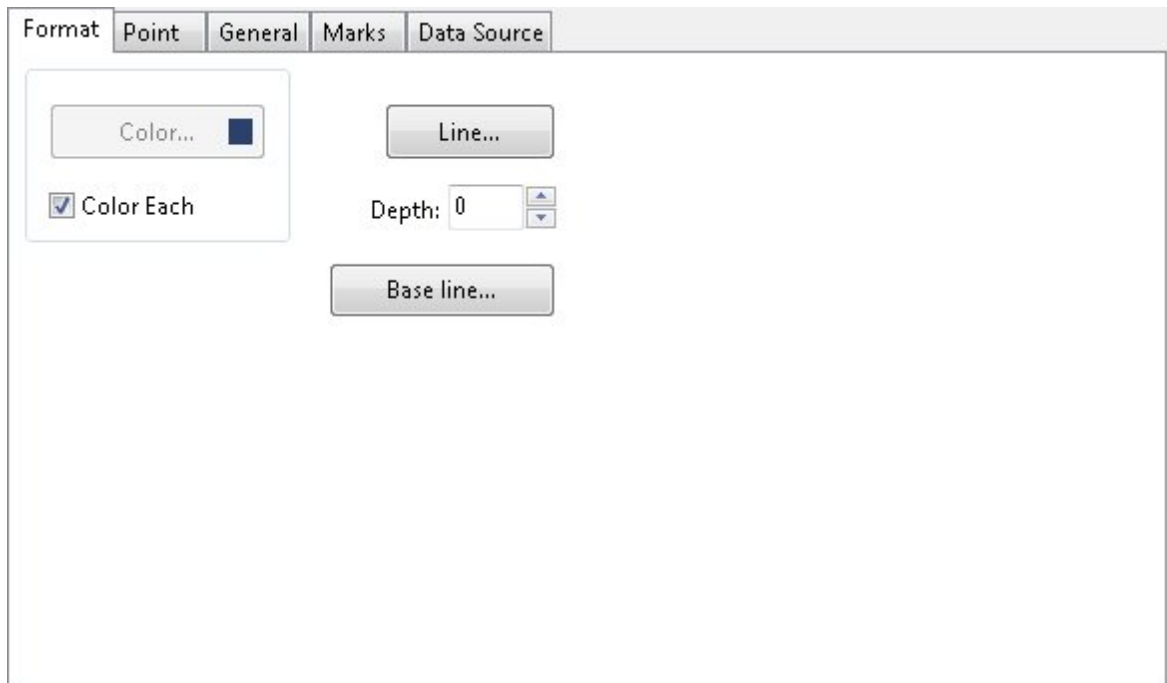
- [Point](#)
- [General](#)
- [Marks](#)
- [Data Source](#)

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

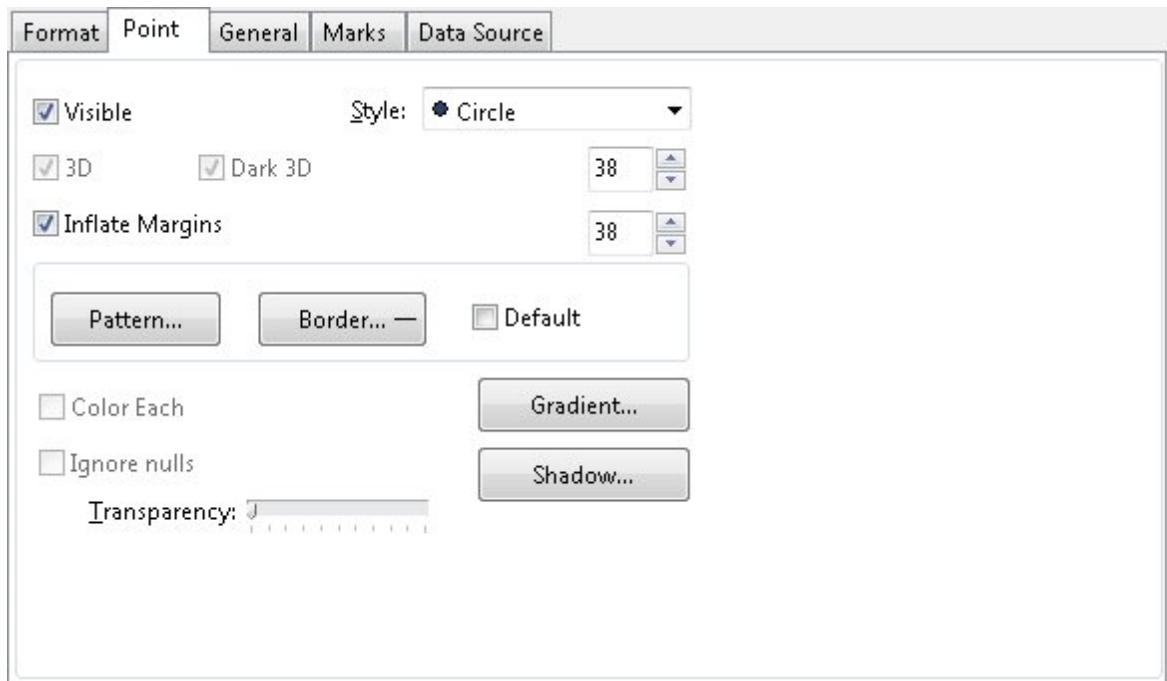
Color Each - enables/disables the coloring of each point

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

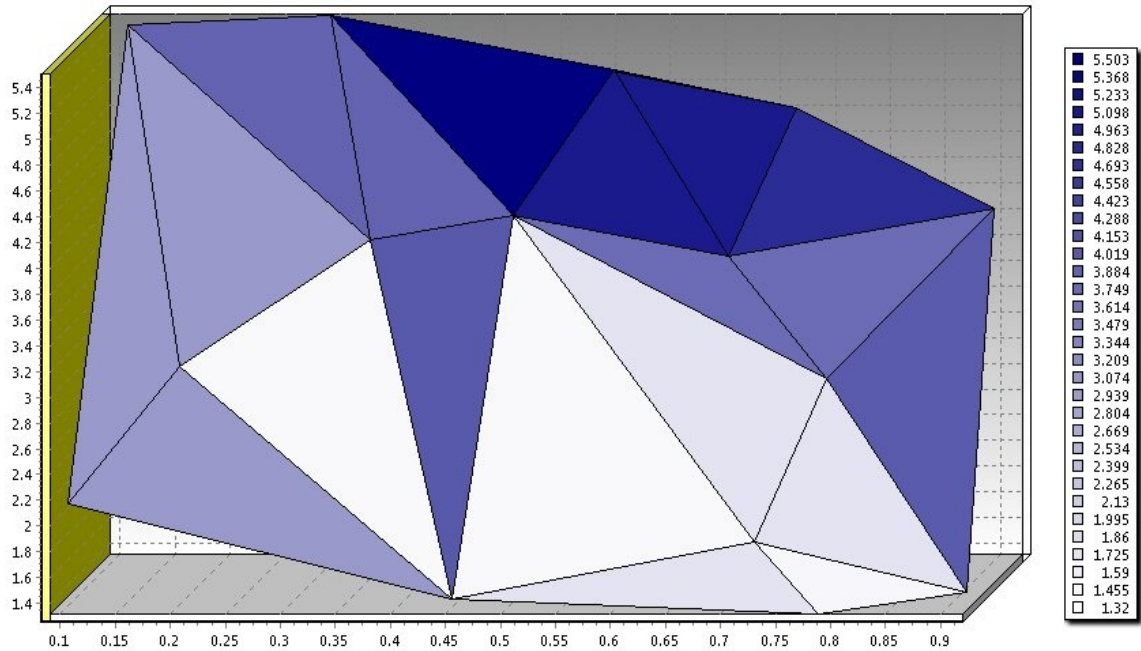
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

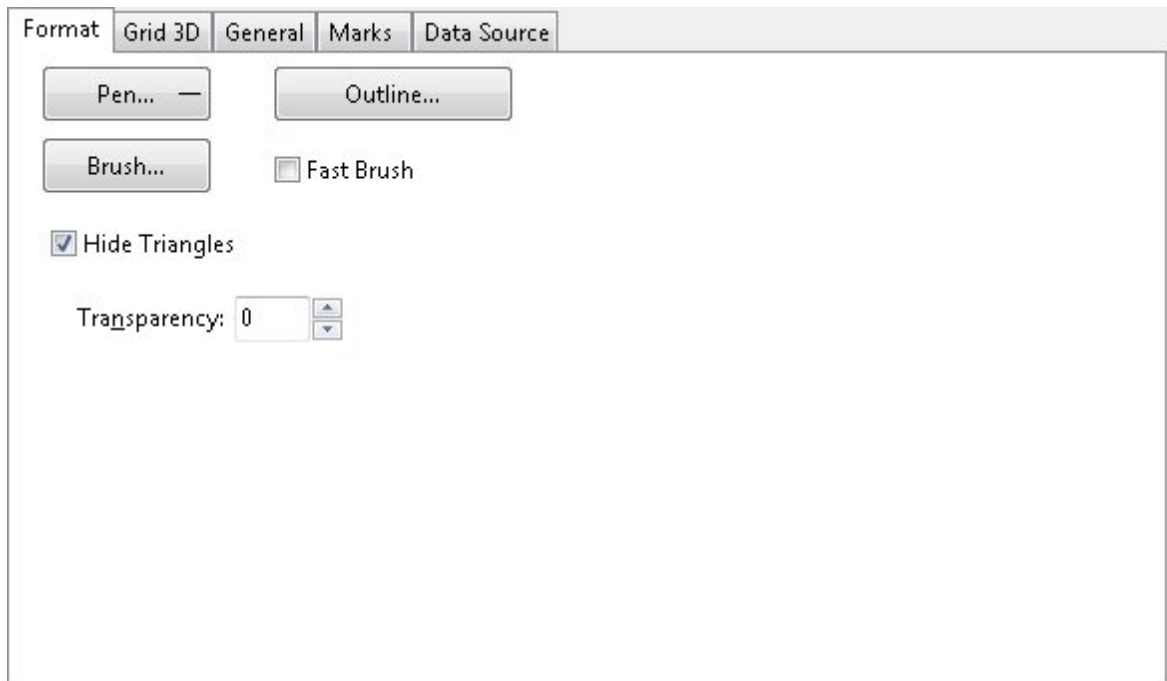
5.5.1.5.10 Triangle Surface

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](#)

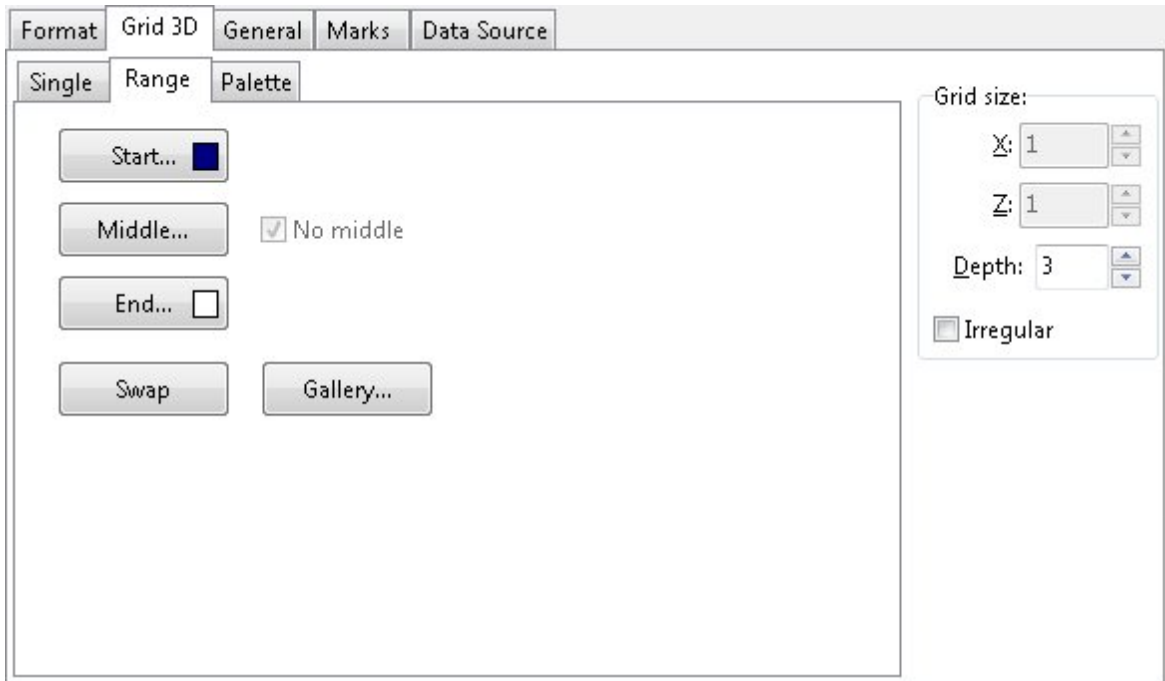
Outline - determine the Series border, using the [Border Editor](#)

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

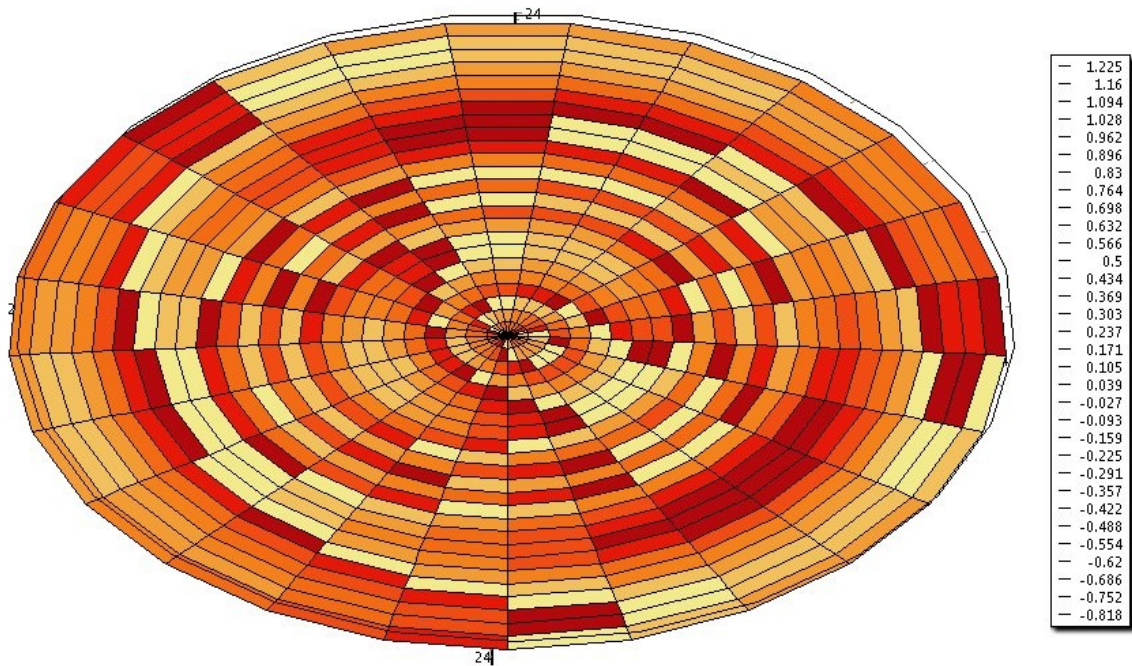
Depth - defines the Grid depth

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

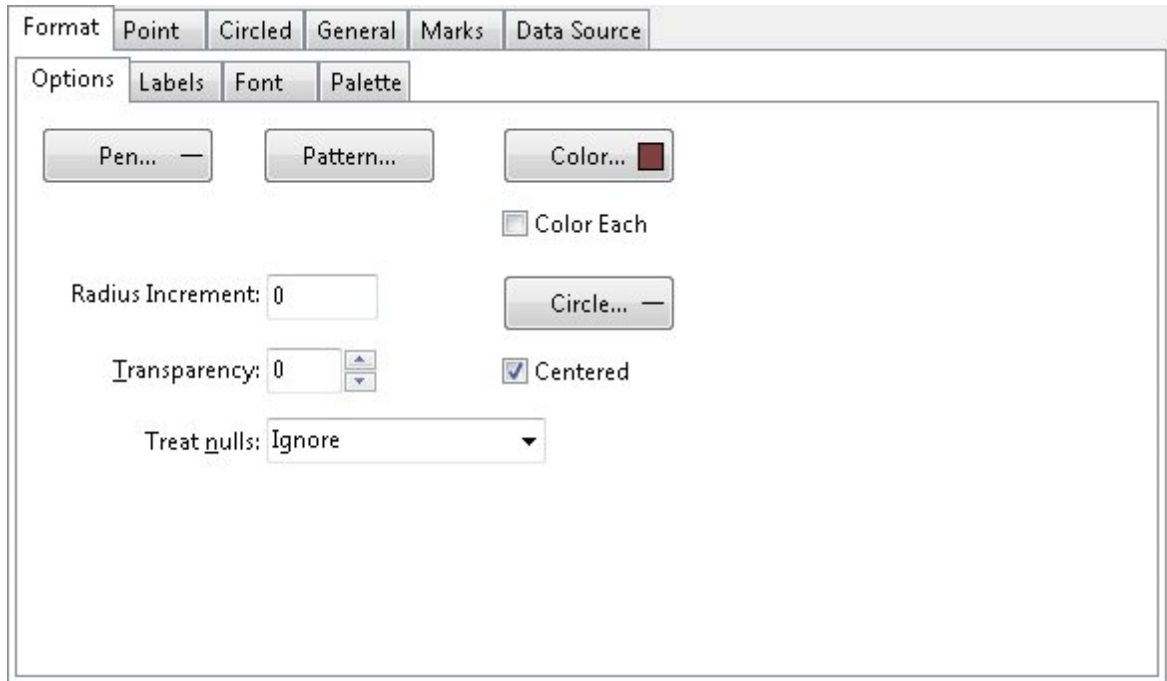
5.5.1.5.11 Polar Grid

The Polar Grid Series plots XValues as angular rotation from 0° 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

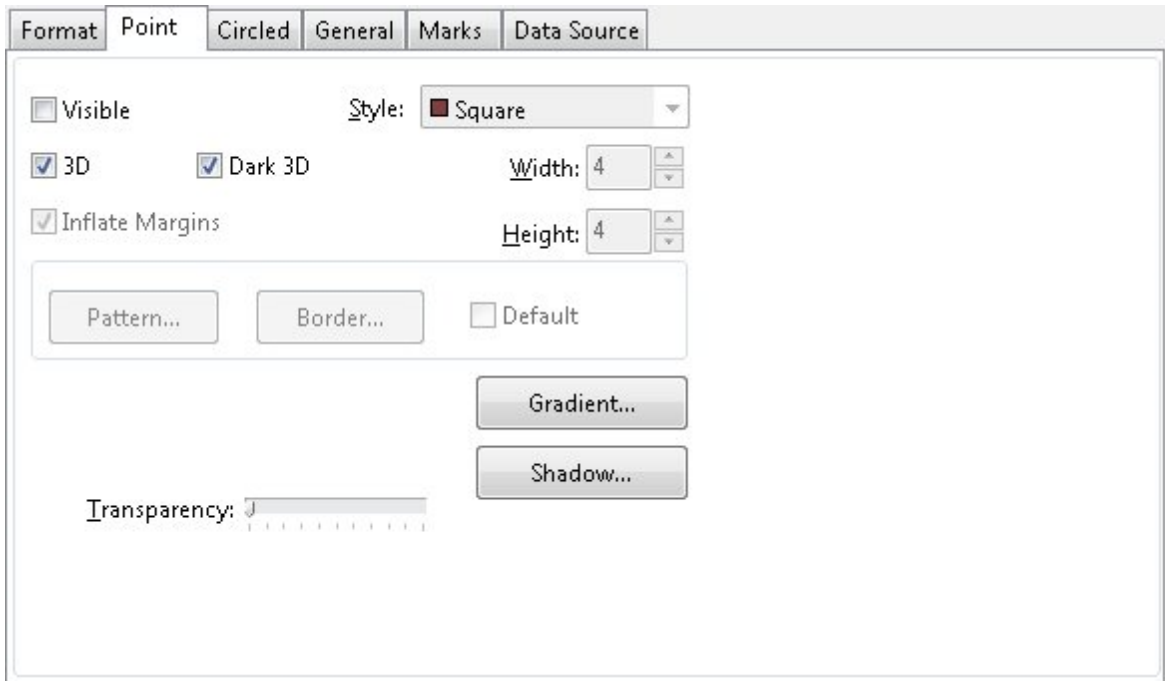
Style - specifies the color style for the points

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](#)

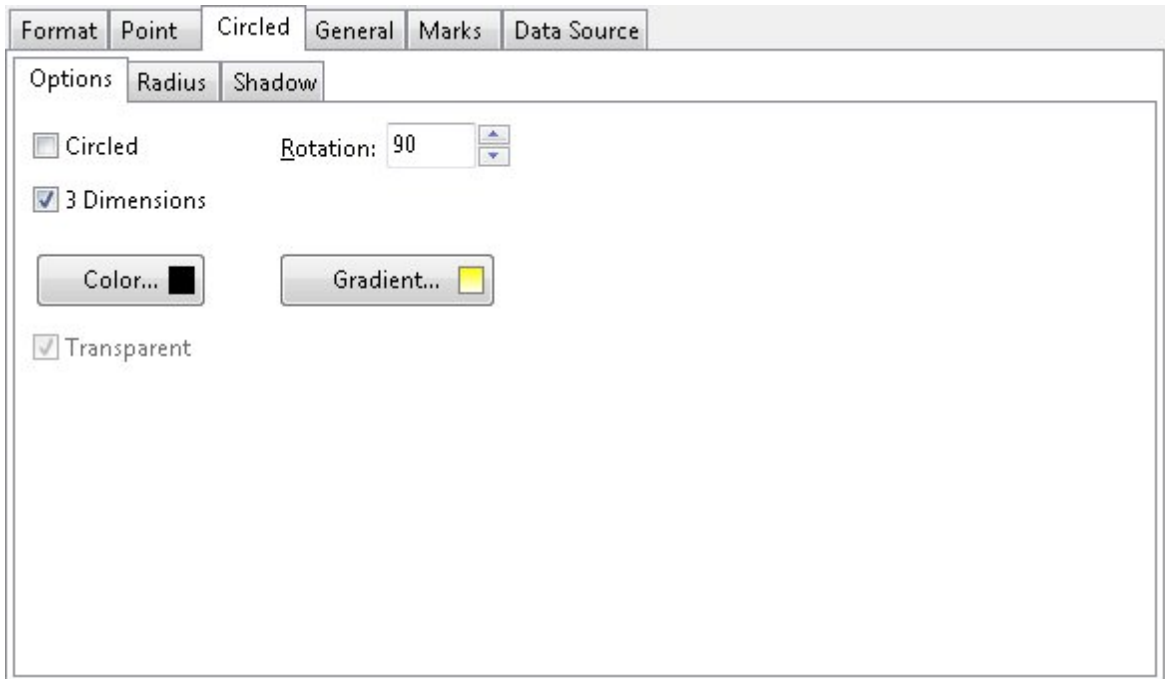
Default - specifies the default values for pattern and border

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.

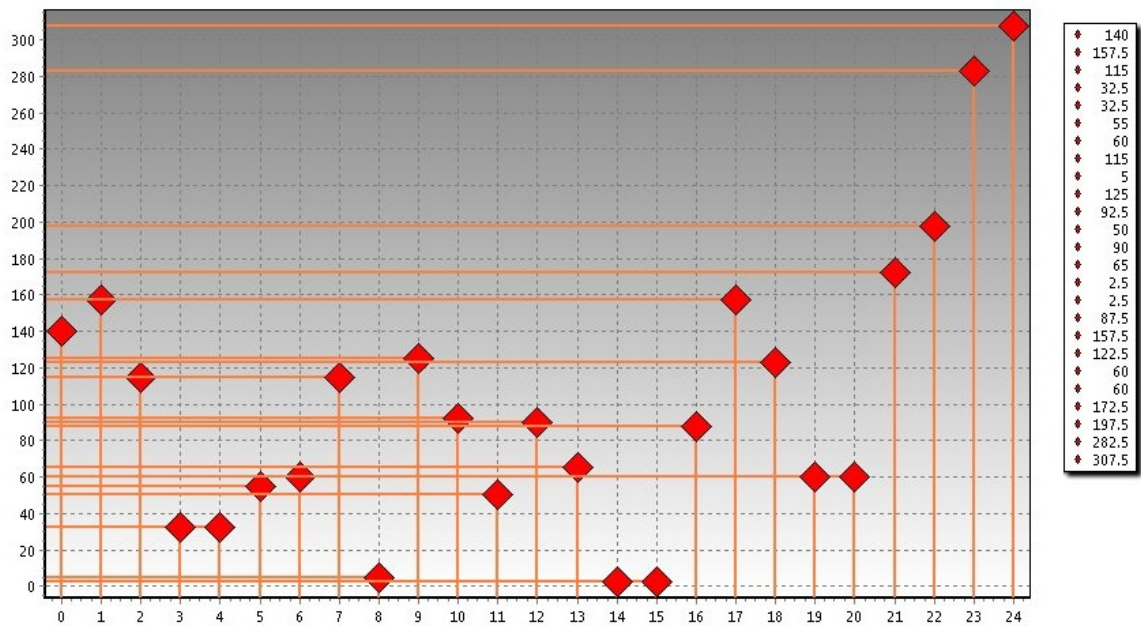
Icon	Series
	Line Point
	Bar Join
	Bar 3D

	Big Candle
	Image Bar
	Image Point
	Delta Point
	Wind Rose

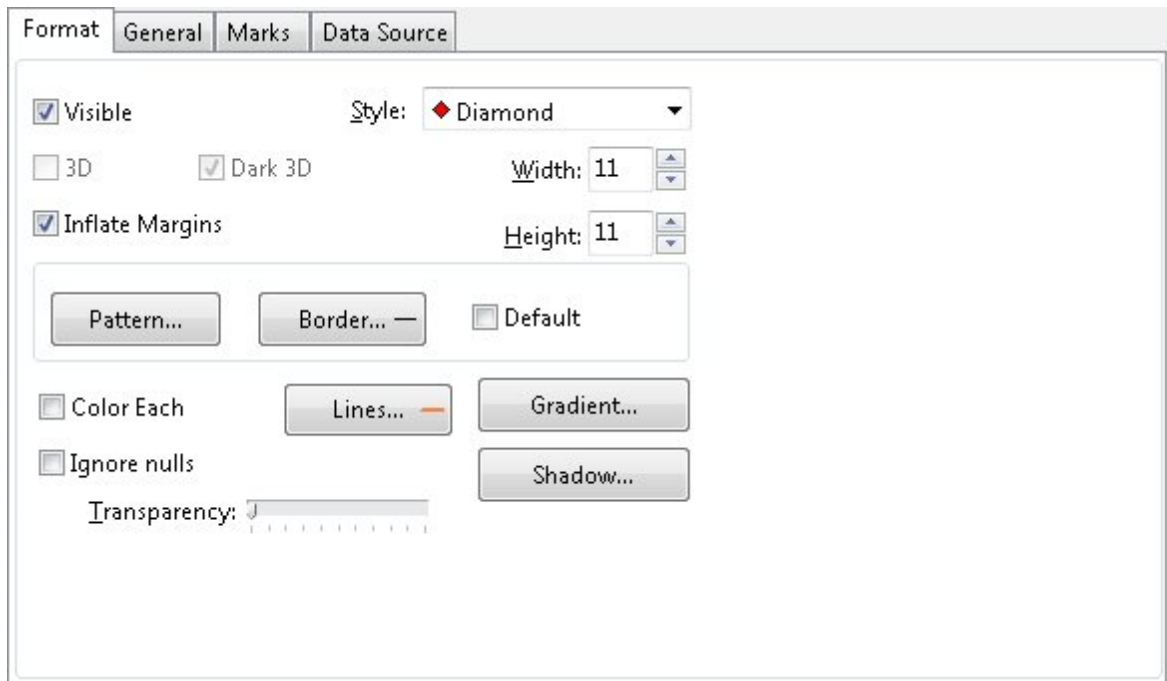
5.5.1.6.1 Line Point

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

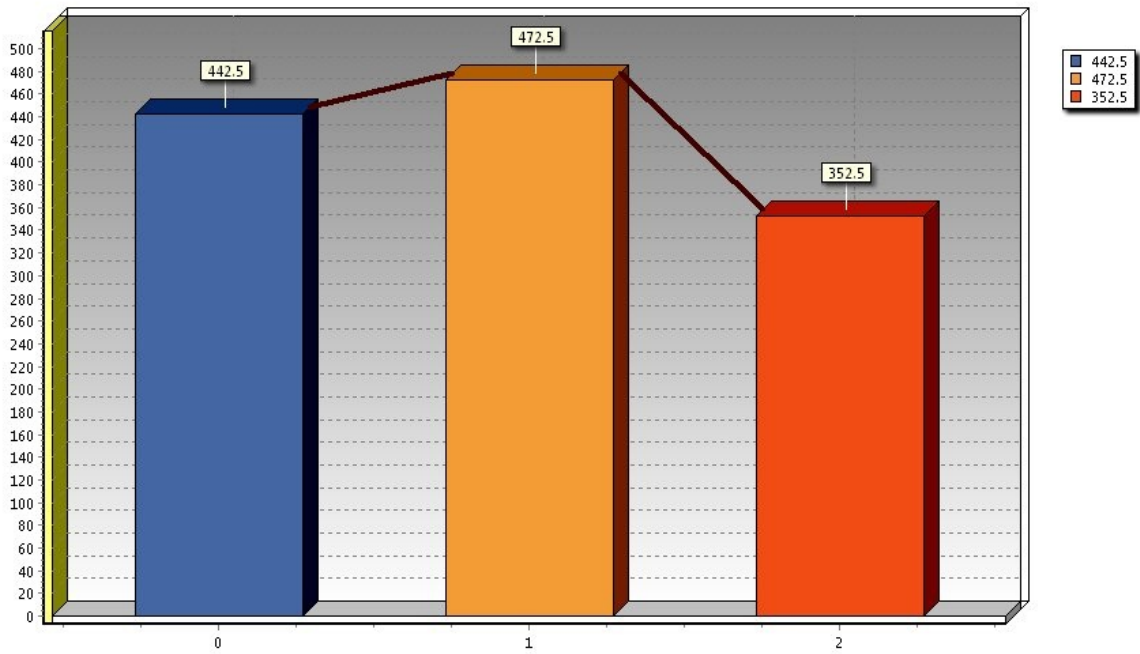
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

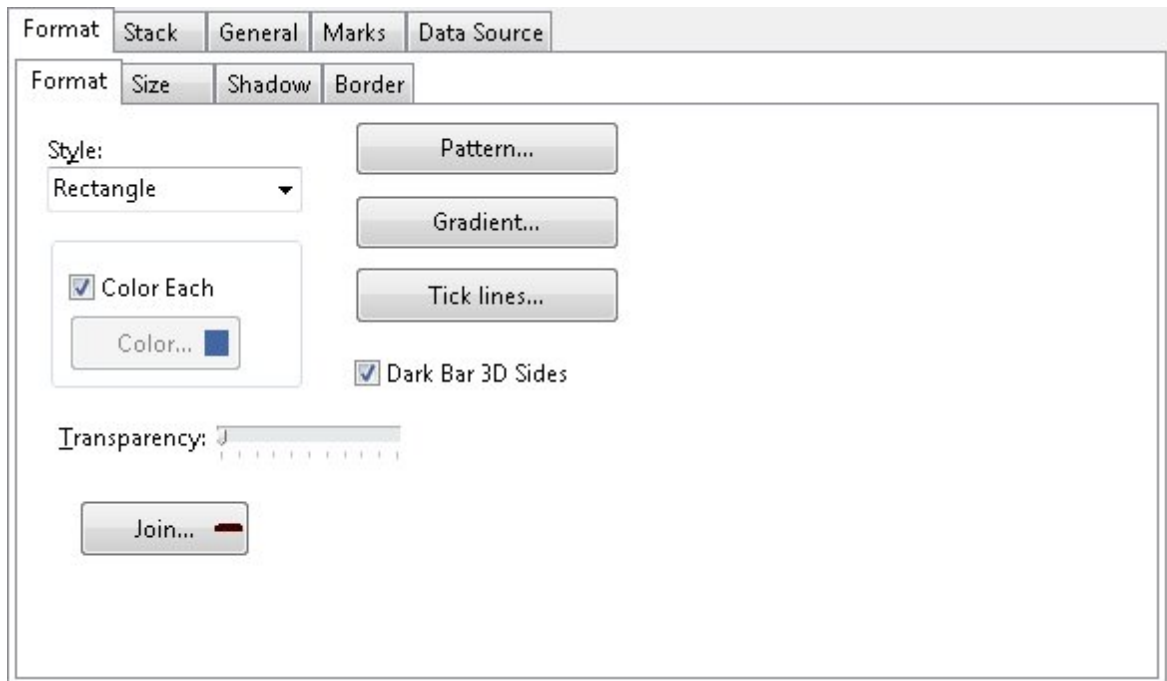
5.5.1.6.2 Bar Join

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.

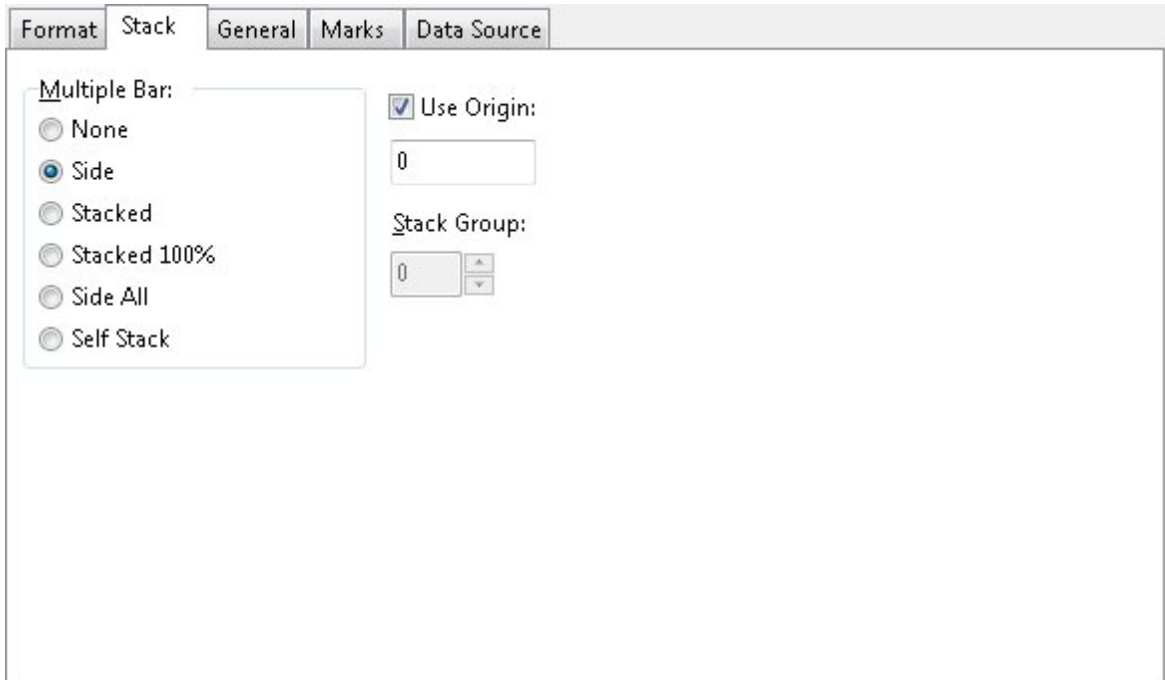
Border Tab

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.

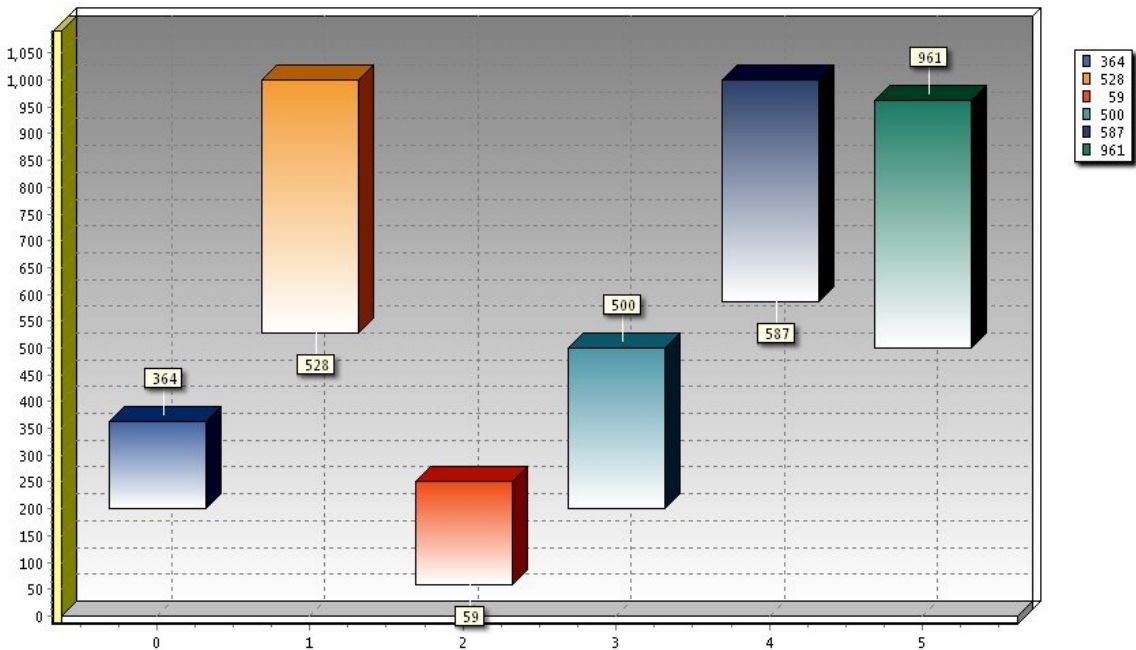
Use Origin - determines the axis value used as a common bottom for all Bars drawn

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 Stack General Marks Data Source

Format Size Shadow Border

Style: Rect. Gradient

Color Each

Color...

Pattern...

Gradient...

Tick lines...

Dark Bar 3D Sides

Transparency: [Slider]

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

The screenshot shows a software interface with a 'Stack' tab selected. The 'Multiple Bar' section has radio buttons for 'None', 'Side' (selected), 'Stacked', 'Stacked 100%', 'Side All', and 'Self Stack'. To the right, there is a checked 'Use Origin' checkbox and a text input field containing '0'. Below that is a 'Stack Group' section with a text input field containing '0' and up/down arrow buttons.

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

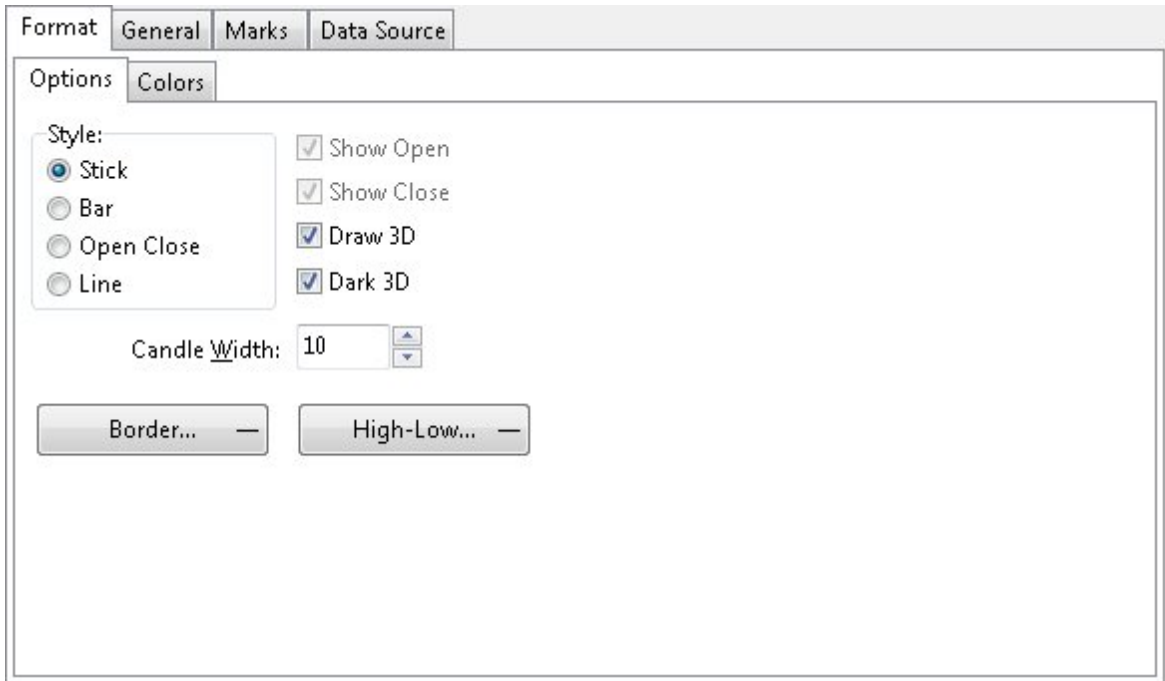
5.5.1.6.4 Big Candle

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](#)

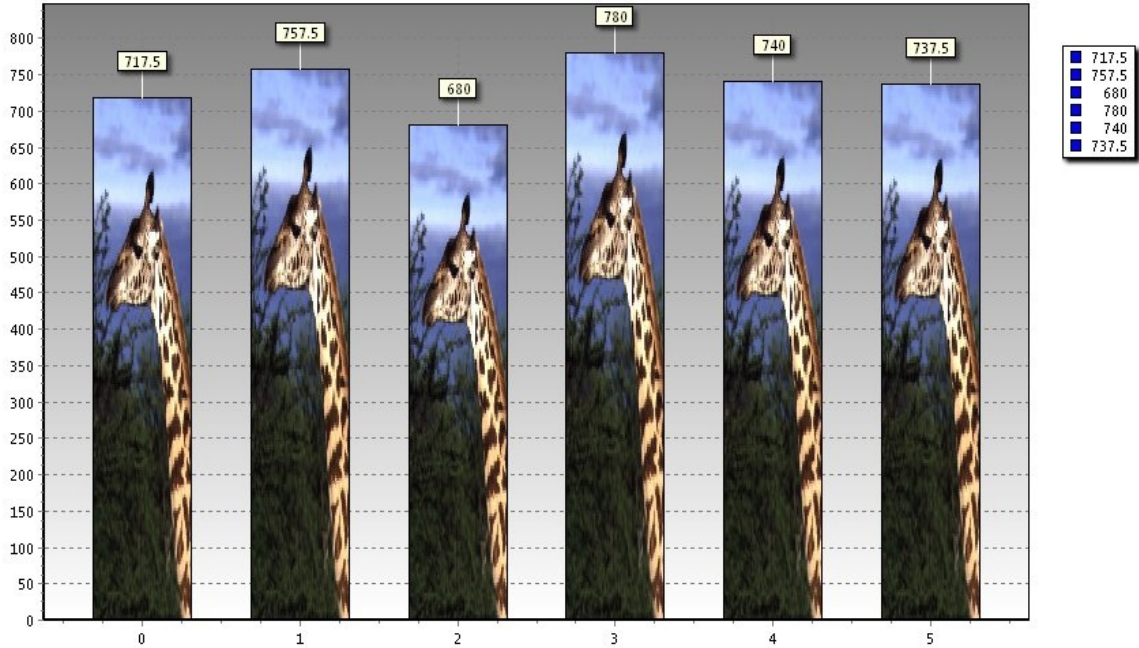
Color Style - specifies the color style; "Relative to Open" or "Relative to previous Close"

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

Format | Stack | Bar | General | Marks | Data Source


Image:

Clear

Tiled

Transparent

Filters...



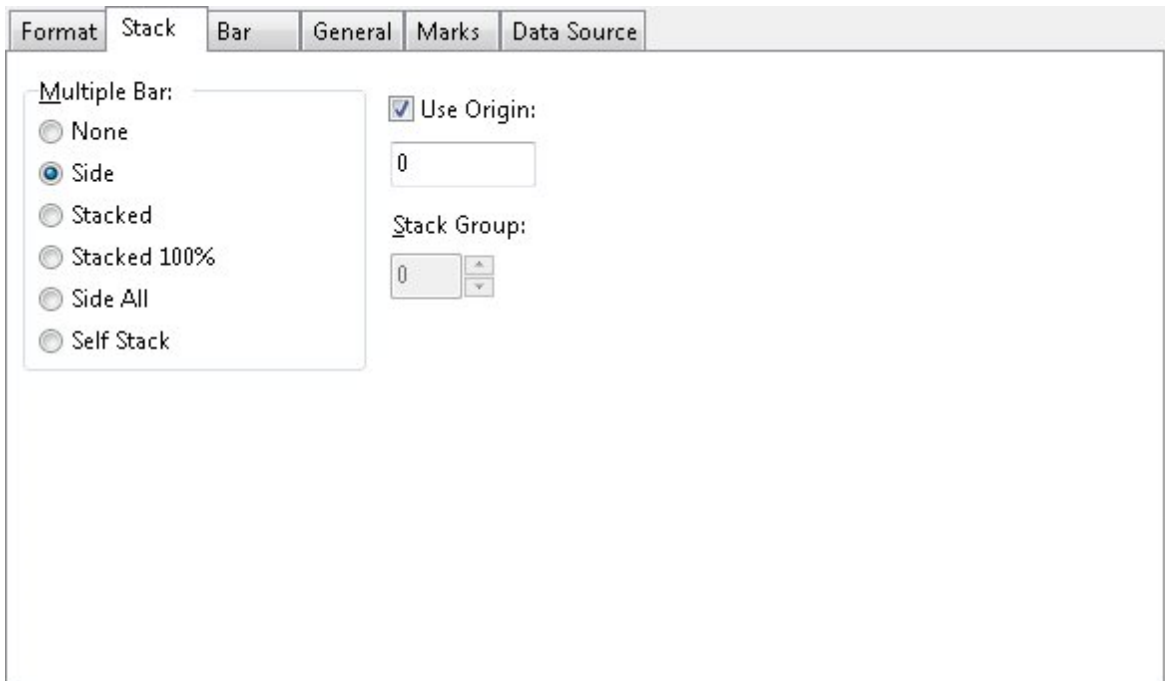
Clear / Browse - By clicking on this button, the image on the bars disappears and a "Browse" button is displayed to select a new image to be displayed on the bars.

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

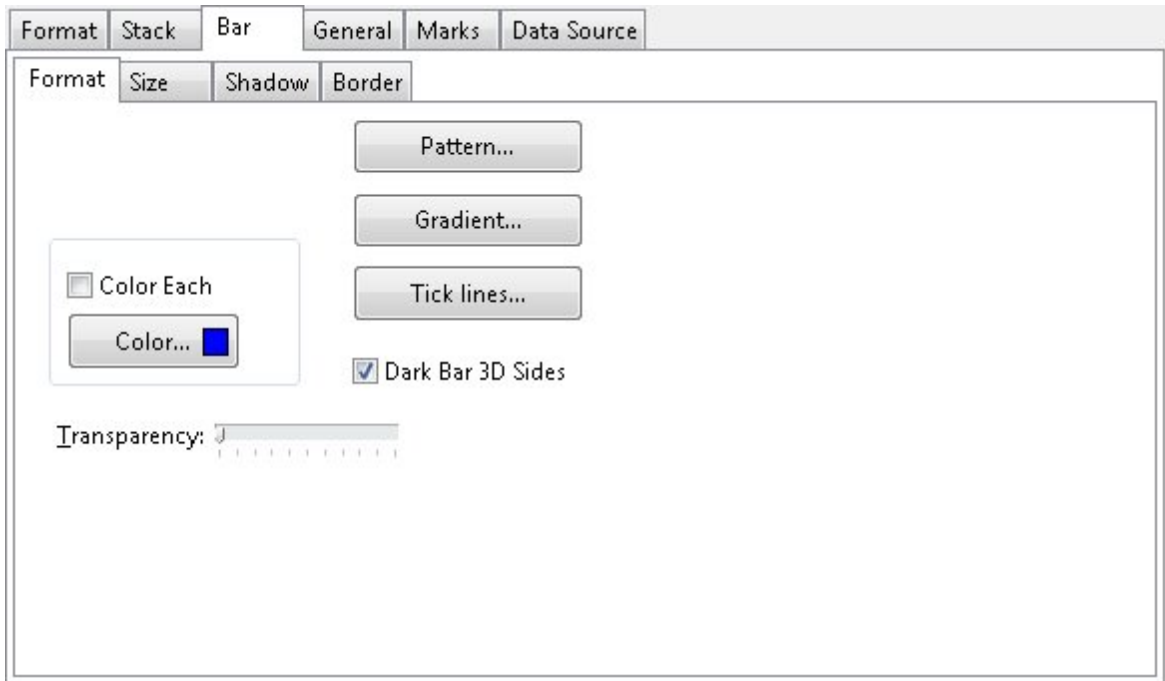


Multiple Bar - With more than one Bar Series in the same chart, then you can choose if they will be drawn side by side, one behind the other, or stacked. Side by side means the Bar width will be divided by the number of Bar Series.

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](#)

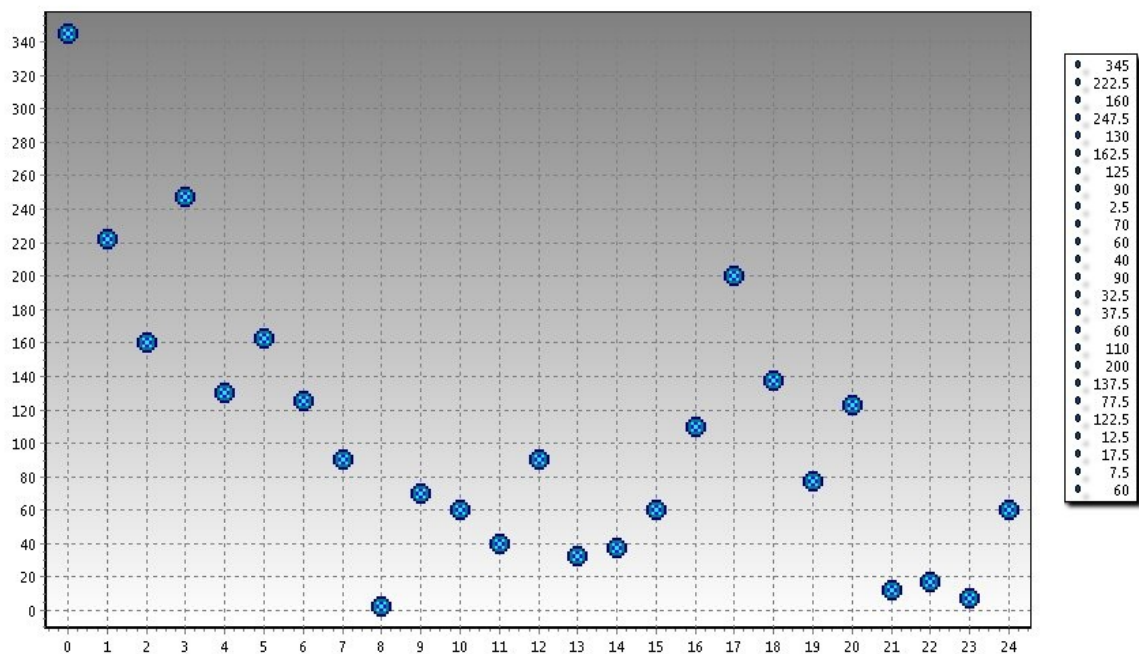
Dark Border - controls whether the bar sides will be filled with shadowed colors

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](#)



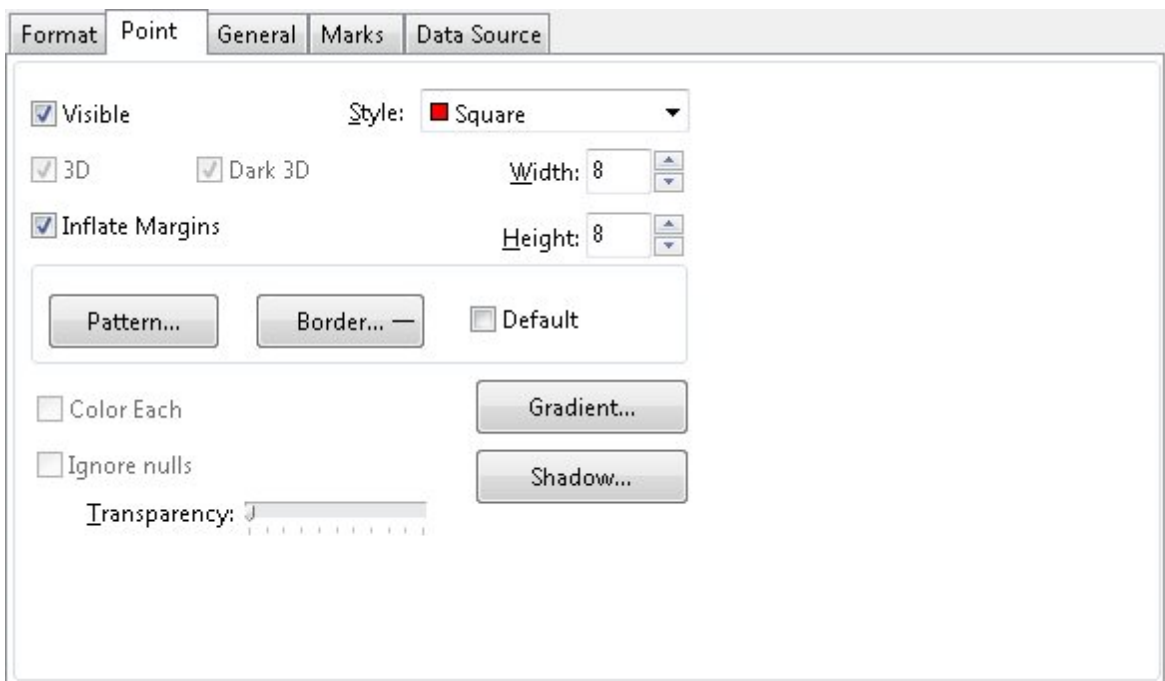
5.5.1.6.6.1 Format



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

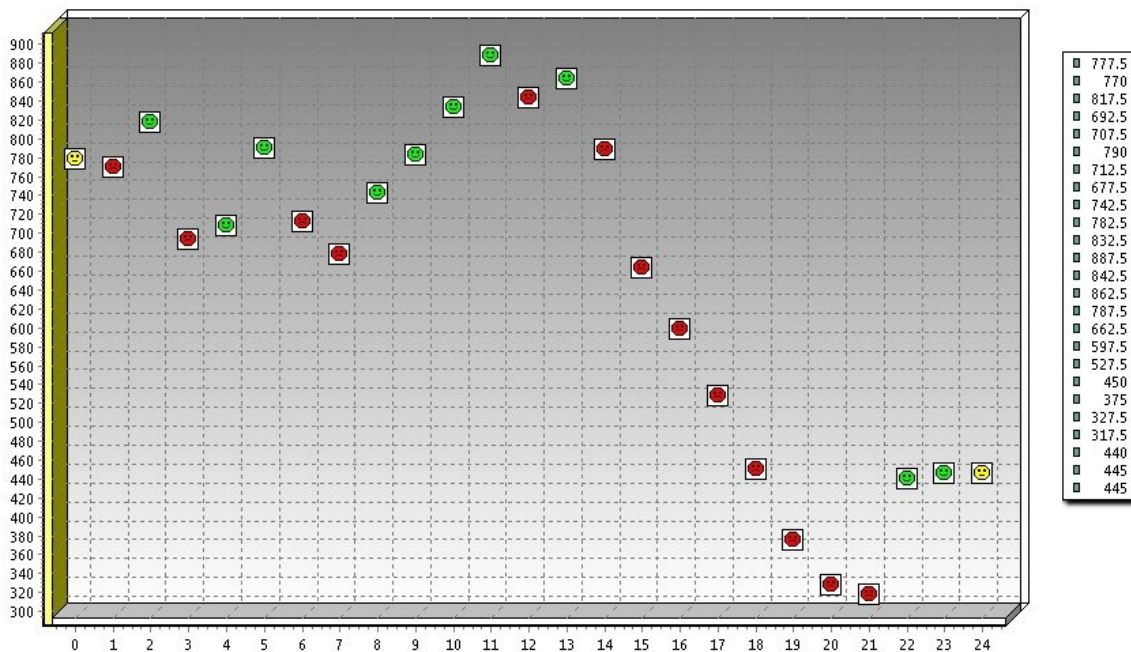
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

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.

Format
Point
General
Marks
Data Source

Lower Image:

bmp
16x16

Transparent

Equal Image:

bmp
16x16

Transparent

Higher Image:

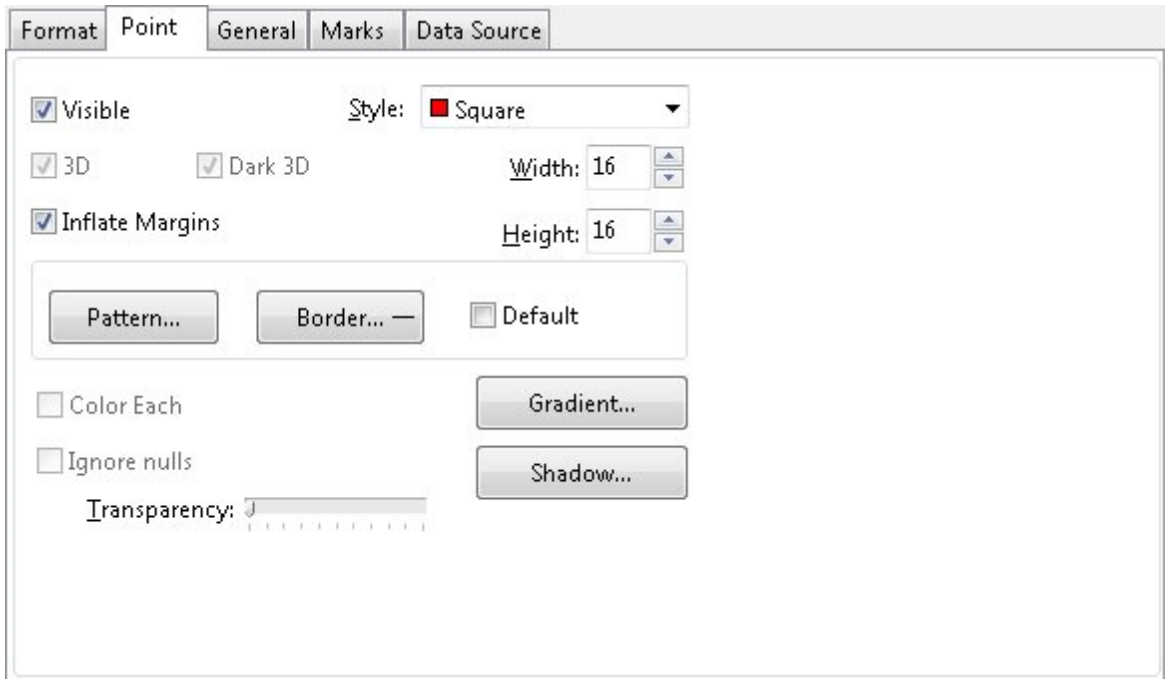
bmp
16x16

Transparent

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

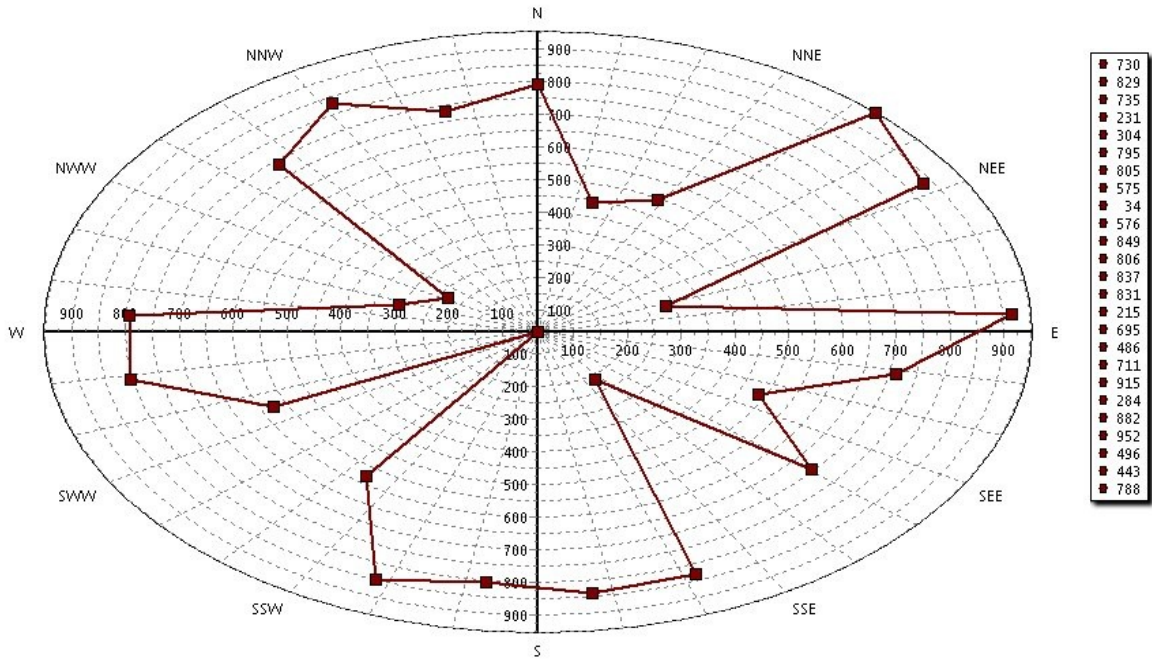
Gradient - specifies the gradient properties, using the [Gradient Editor](#)

Shadow - specifies a shadow, using the [Shadow Editor](#)

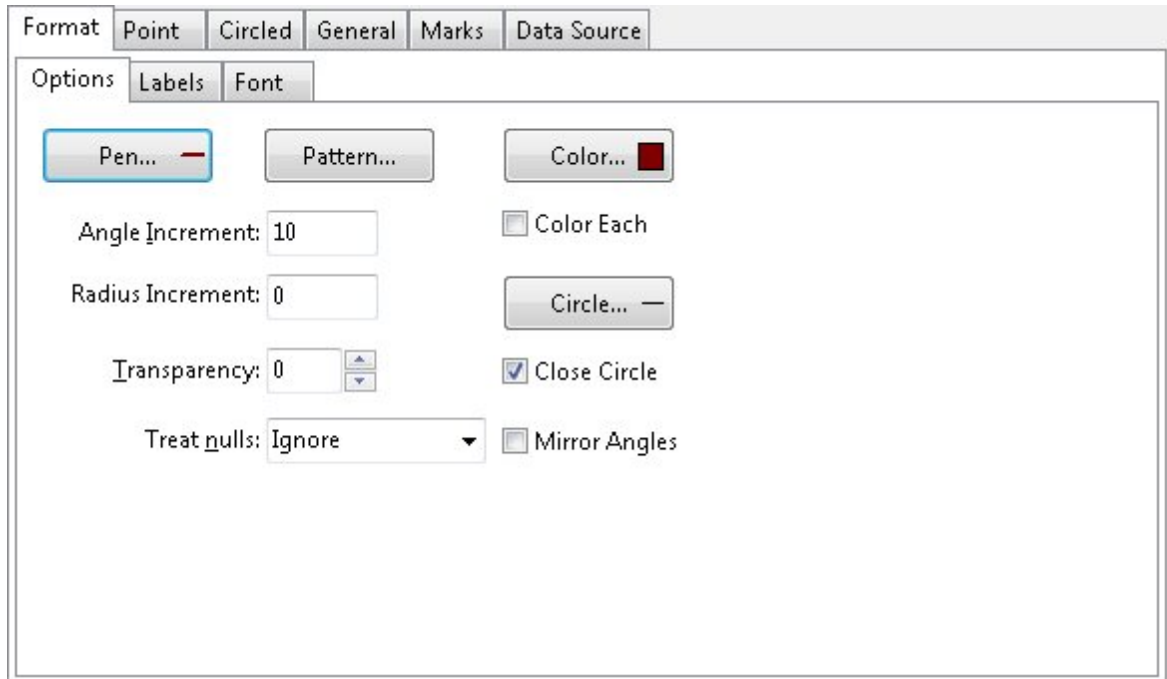
5.5.1.6.8 Wind Rose

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

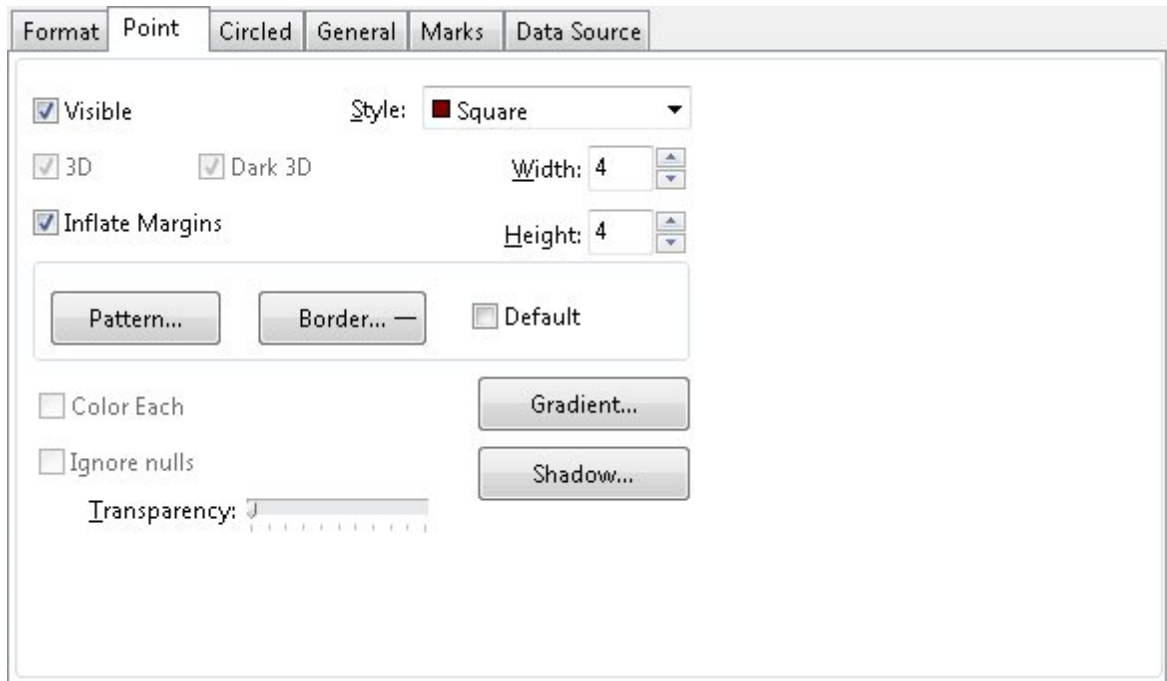
Margin % - sets the distance for the label location to the bounding perimeter

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

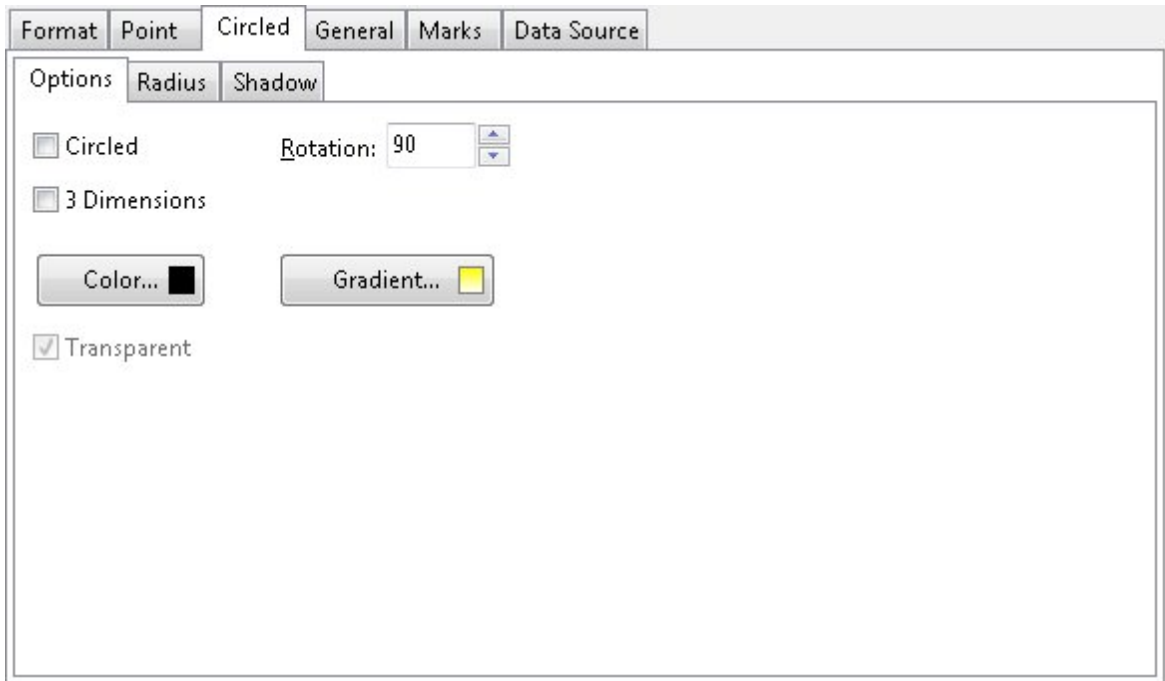
Ignore Nulls - ignore null values

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

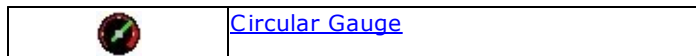
Shadow Tab

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.

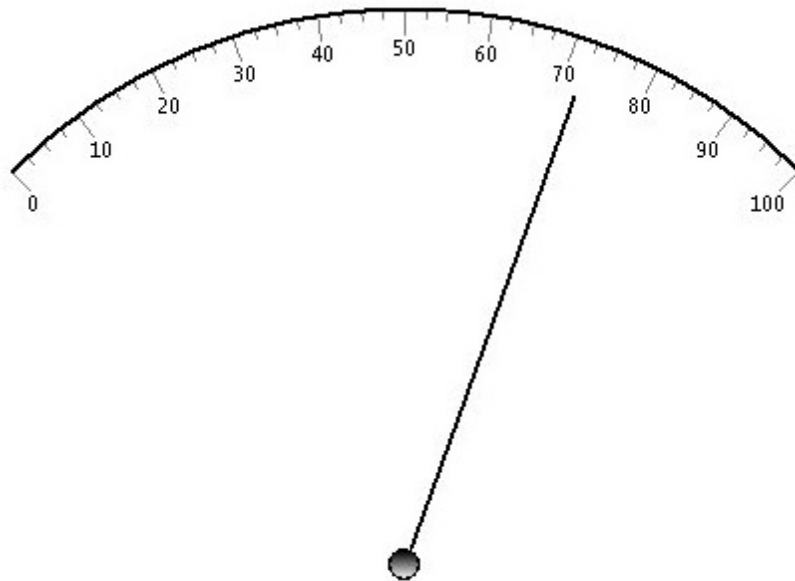
Icon	Series
	Gauge
	Numeric Gauge
	Linear Gauge
	Vertical



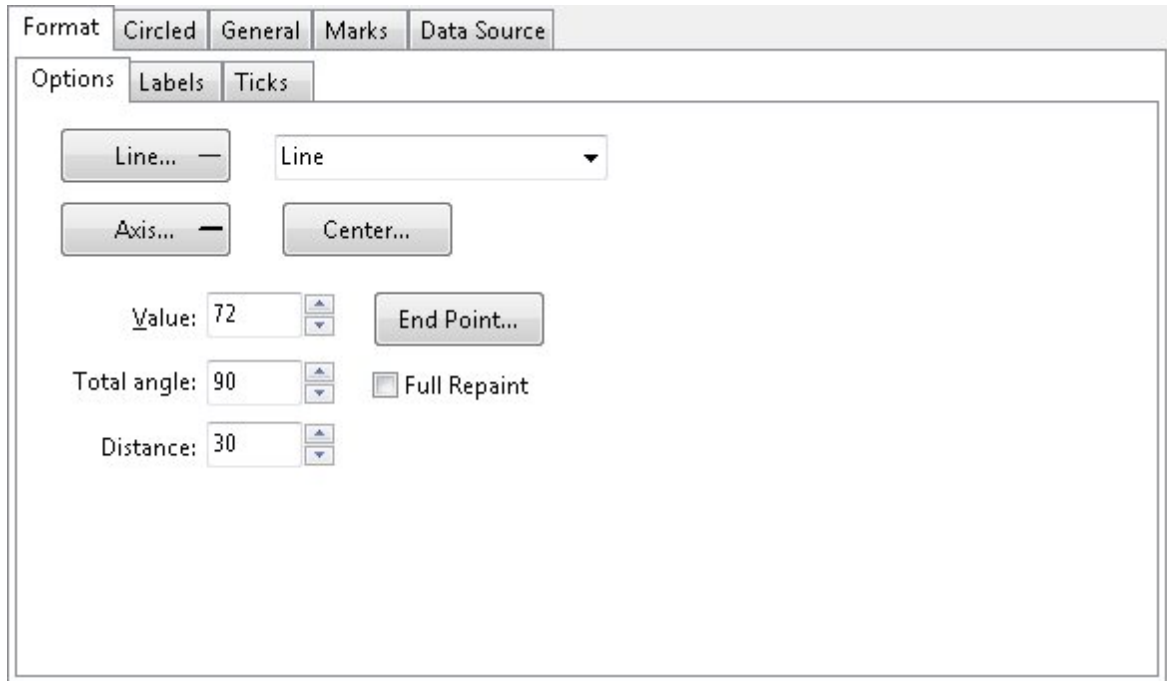
5.5.1.7.1 Gauge

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

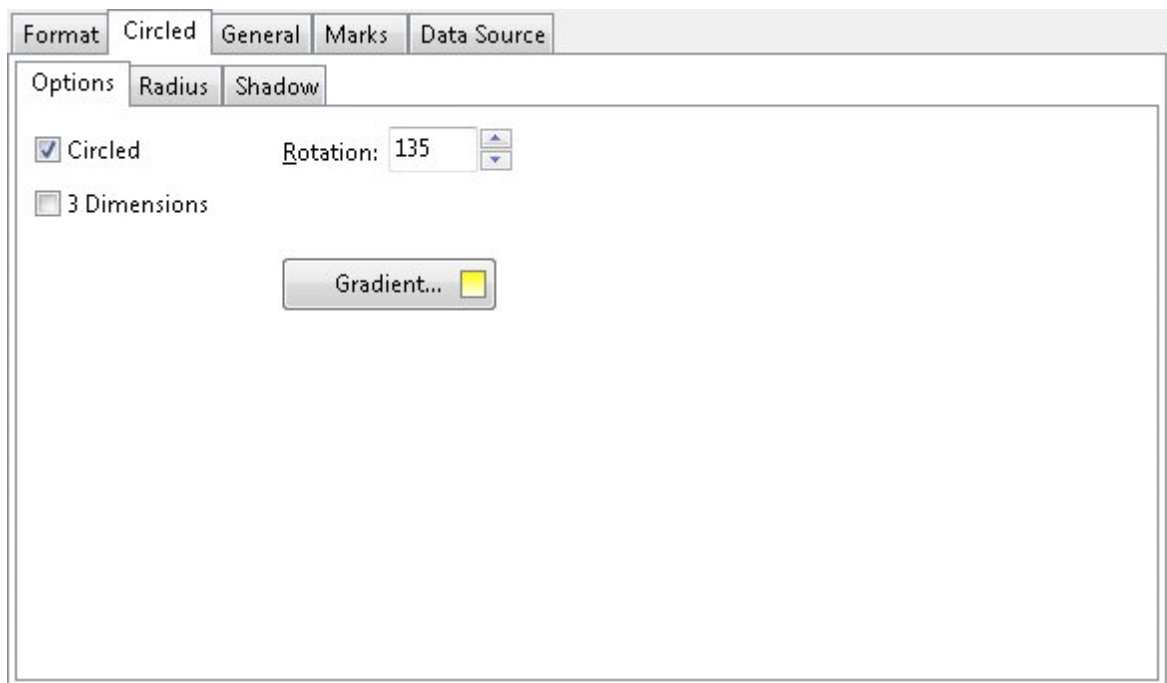
Count - specifies the number of minor ticks displayed between ticks

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

The screenshot shows a software interface with a tabbed menu at the top containing 'Options', 'Markers', 'Frame', and 'Back'. The 'Options' tab is active. Below the tabs, there are three main settings:

- Value:** A text input field containing '50.75', followed by '+' and '-' buttons.
- Palette:** A dropdown menu currently showing 'Current'.
- Digital font:** A section with three radio button options: 'Bar' (which is selected), 'Dot', and 'Custom'.

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

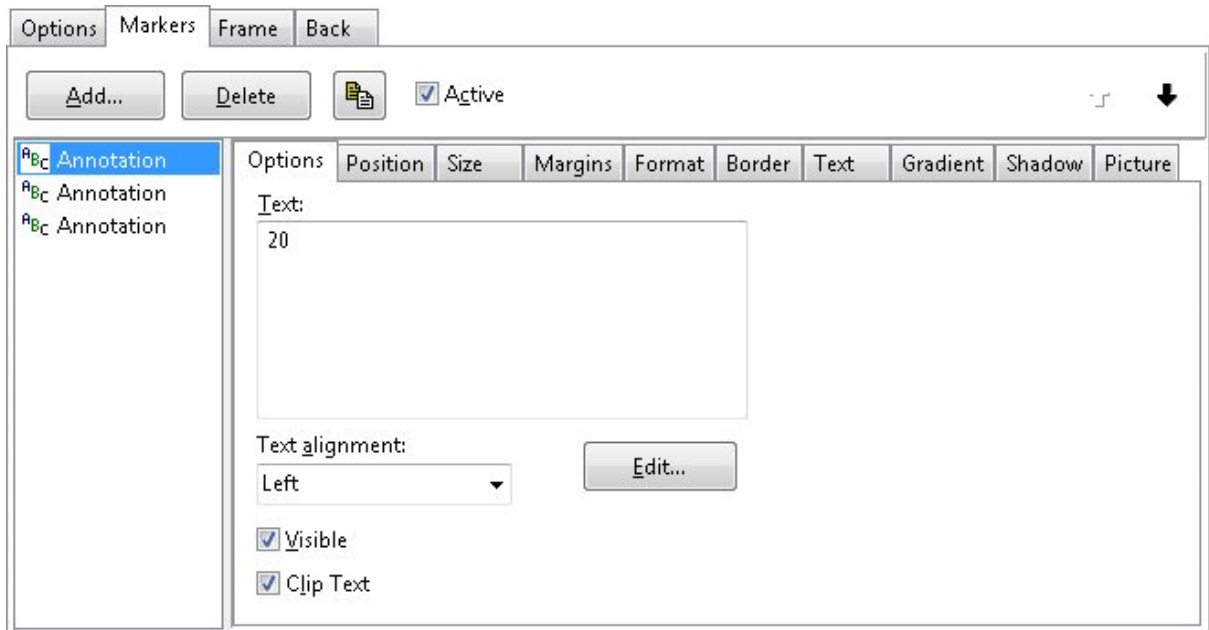
The "Markers" tab supports custom settings for marker, or annotation, text objects.

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 left margin value for the annotation

Right - specifies the left margin value for the annotation

Bottom - specifies the left 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

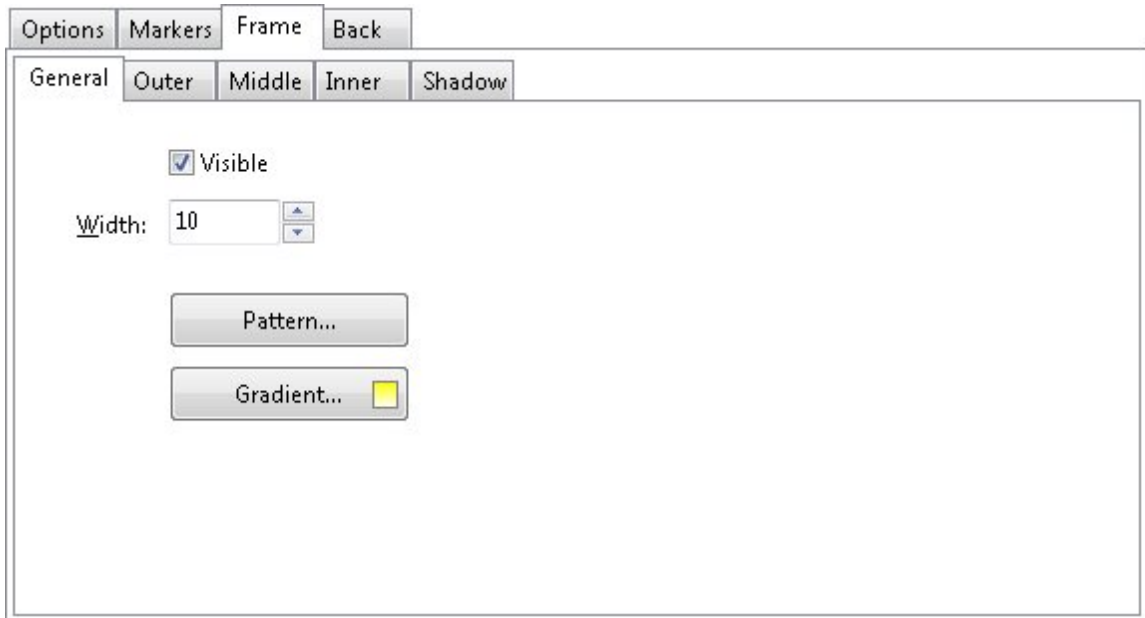
Browse - selects an image from computer files to be displayed on the annotation text

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

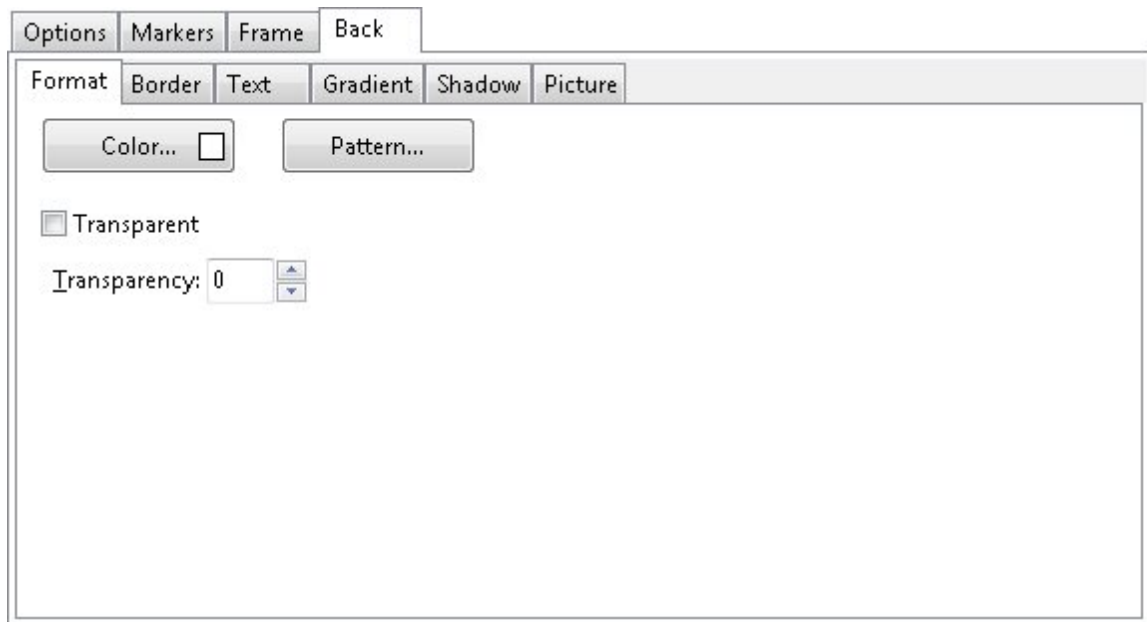
Size - specifies the horizontal and vertical offset for the shadow

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

Options | Frame | Back | Axis | Green Line | Red Line

Value: + -

Palette: ▼

Value area...

Max. Indicator...

Hand...

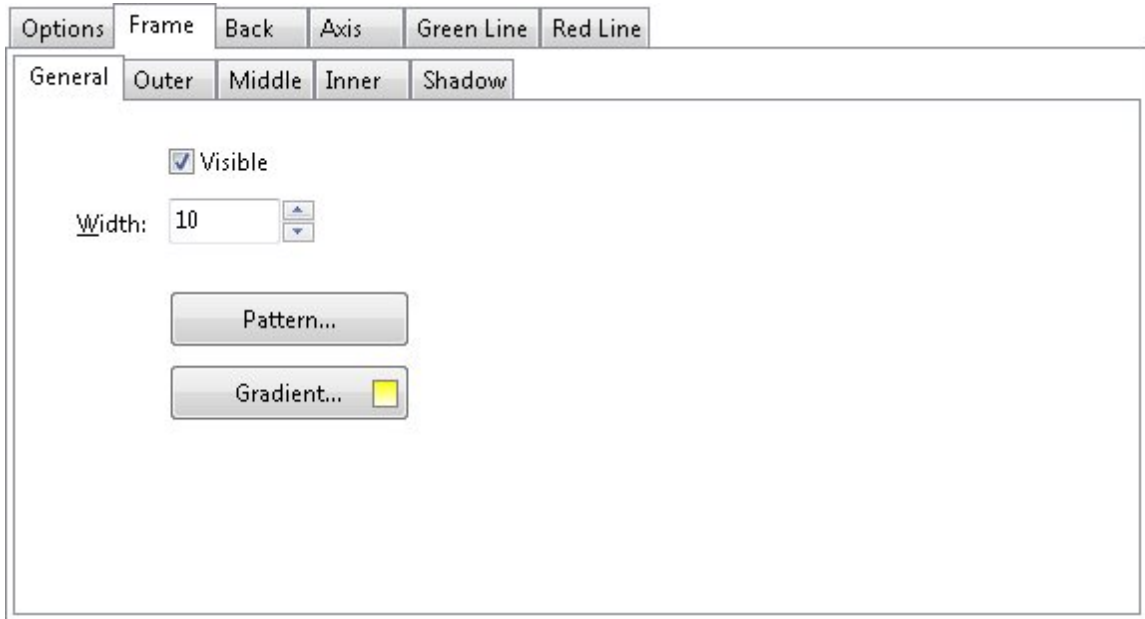
Value - specifies the gauge value

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

The screenshot shows a software interface with several tabs: Options, Frame, Back, Axis (selected), Green Line, and Red Line. Under the 'Axis' tab, there are sub-tabs for Ticks, Labels, and Title. The 'Ticks' sub-tab is active, displaying the following controls:

- A 'Ticks...' button.
- A 'Size' input field with a value of 10 and up/down arrows.
- A 'Minor Ticks...' button.
- A 'Size' input field with a value of 1 and up/down arrows.
- A 'Count' input field with a value of 3 and up/down arrows.
- A 'Distance' input field with a value of 0 and up/down arrows.
- A 'Maximum' input field with a value of 100.
- A 'Minimum' input field with a value of 0.
- An 'Axis...' button with a minus sign.

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.

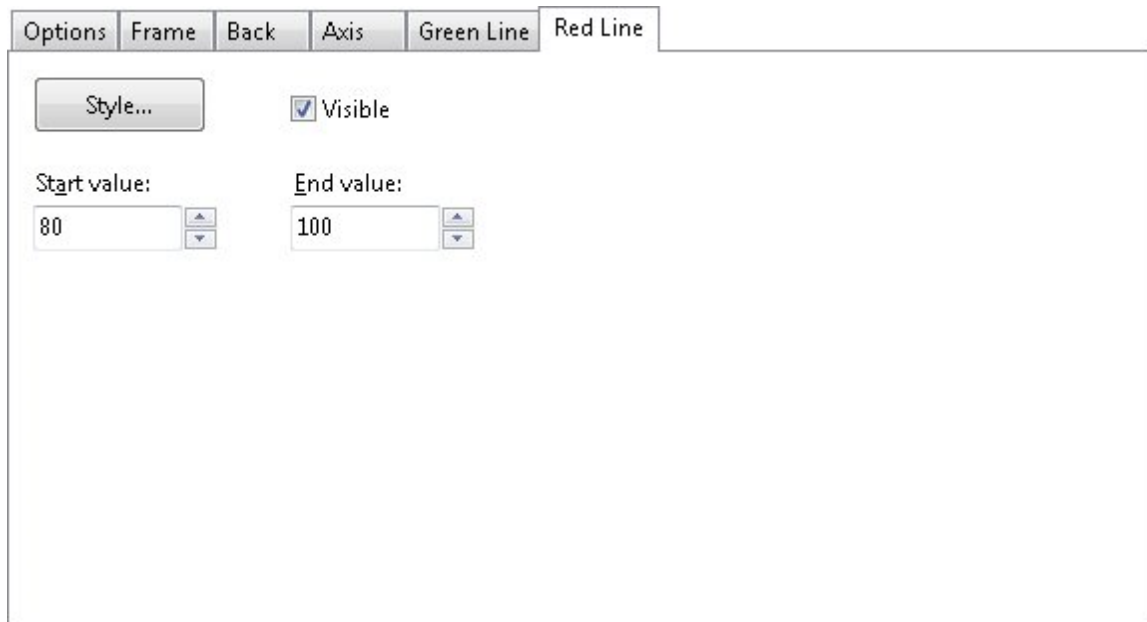
The screenshot shows a software interface with several tabs: 'Options', 'Frame', 'Back', 'Axis', 'Green Line', and 'Red Line'. The 'Axis' tab is currently selected. Inside the 'Axis' tab, there is a 'Style...' button. To its right is a checked checkbox labeled 'Visible'. Below these are two spinners: 'Start value' with a value of 0, and 'End value' with a value of 40. The 'Green Line' sub-tab is also visible, indicating the current configuration is for the green line.

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

Format | General | Marks | Data Source

Options | Frame | Back | Axis | Green Line | Red Line

Value: 79 + -

Palette: Current

Hand... Hand distance: 30

Center... Hand Offset: 80

Labels Inside Circled

Rotate Labels

Total Angle: 300 Rotation: 0 End Point...

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

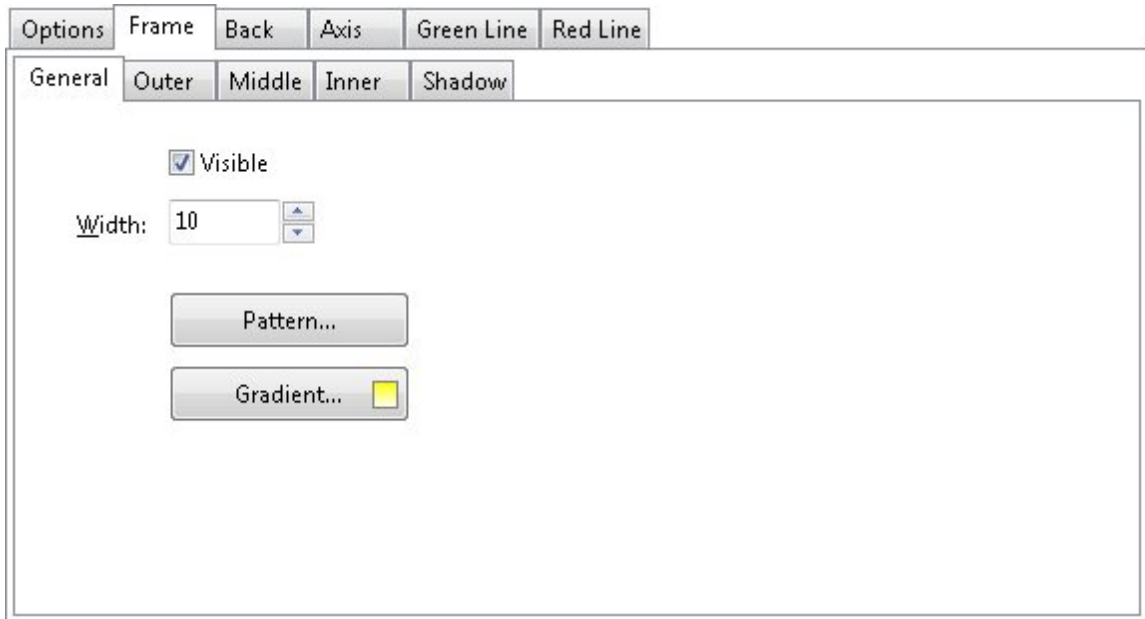
Rotate Labels - specifies if the labels values rotate with the circle of the gauge

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

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

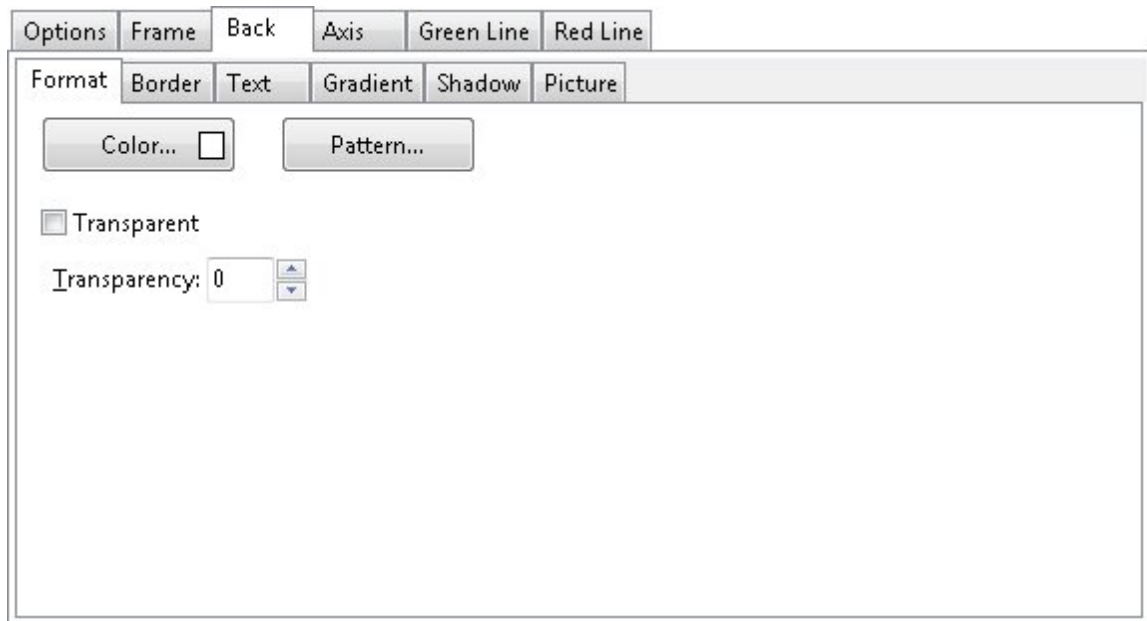
Size - specifies the horizontal and vertical offset for the shadow

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

The screenshot shows a software interface with several tabs: Options, Frame, Back, Axis (selected), Green Line, and Red Line. Under the 'Axis' tab, there are sub-tabs for Ticks, Labels, and Title. The 'Ticks' sub-tab is active, displaying the following controls:

- A 'Ticks...' button.
- A 'Size' field set to 10 with up and down arrows.
- A 'Minor Ticks...' button.
- A 'Size' field set to 1 with up and down arrows.
- A 'Count' field set to 3 with up and down arrows.
- A 'Distance' field set to 0 with up and down arrows.
- A 'Maximum' field set to 100.
- A 'Minimum' field set to 0.
- An 'Axis...' button with a minus sign.

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.

Options | Frame | Back | Axis | **Green Line** | Red Line

Style... Visible

Start value: 0 End value: 40

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

Options | Frame | Back | Axis | Green Line | **Red Line**

Style... Visible

Start value: 80 End value: 100

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.

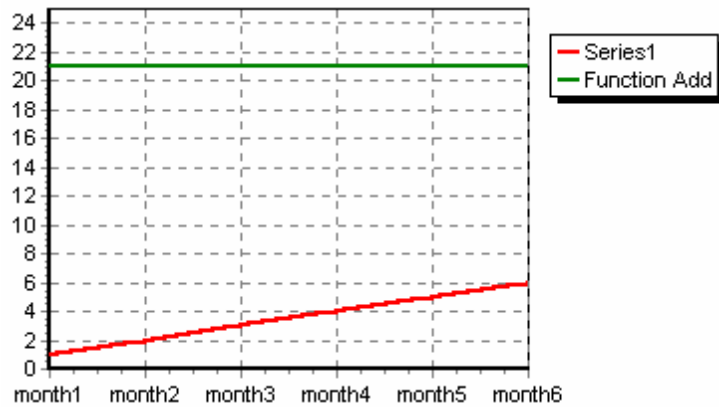
Subset - Return subsets of vectors, matrices or data frames which meet conditions.

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

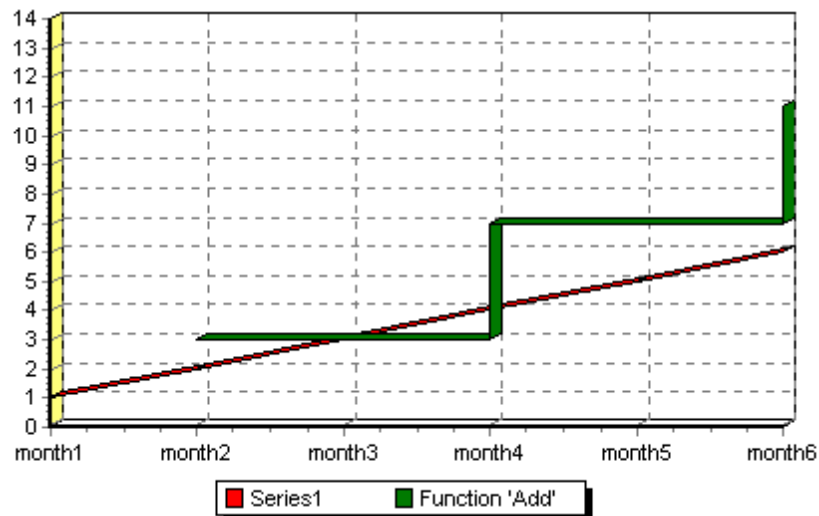
Add

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 $1 + 2 + 3 + 4 + 5 + 6 = 21$.



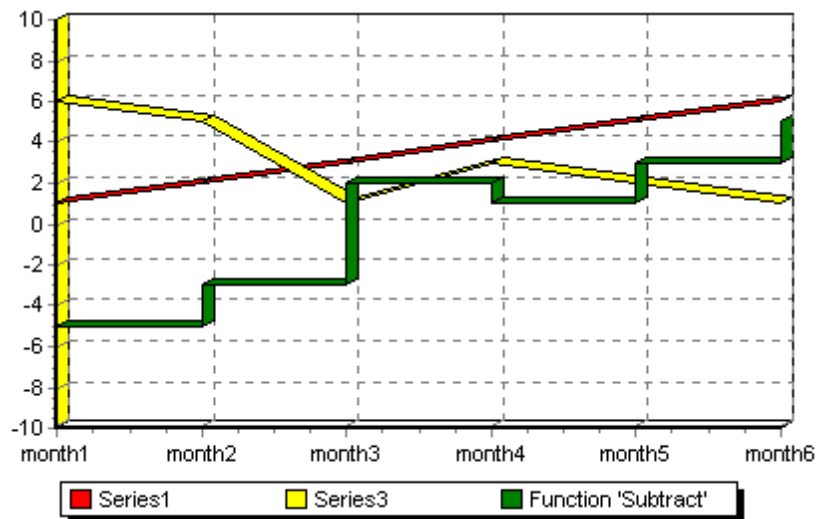
You can modify the Series 'Function Add' to represent Add of Series1 by 2 point groupings (1+2), (3+4), (5+6). Defining the period as 2, sets the Add function to add every 2 points. The period property adds enormous value to function Series.

Add function with period = 2



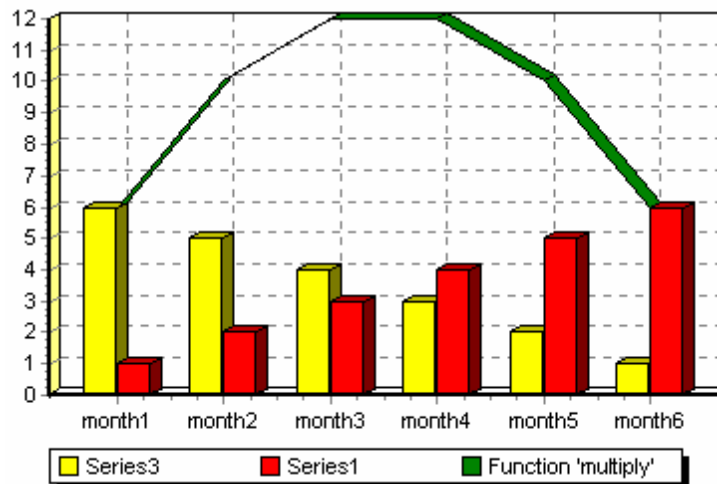
Subtract

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.



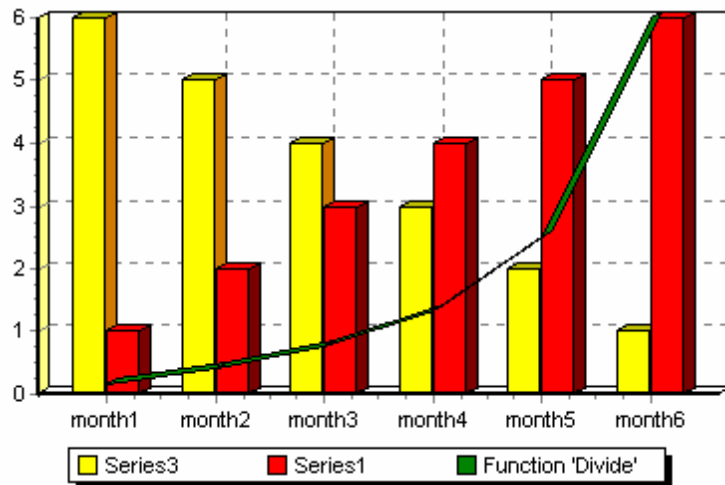
Multiply

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



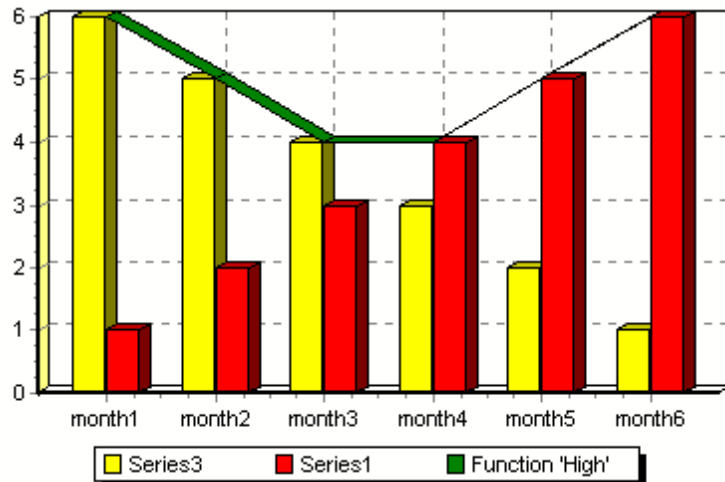
Divide

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....



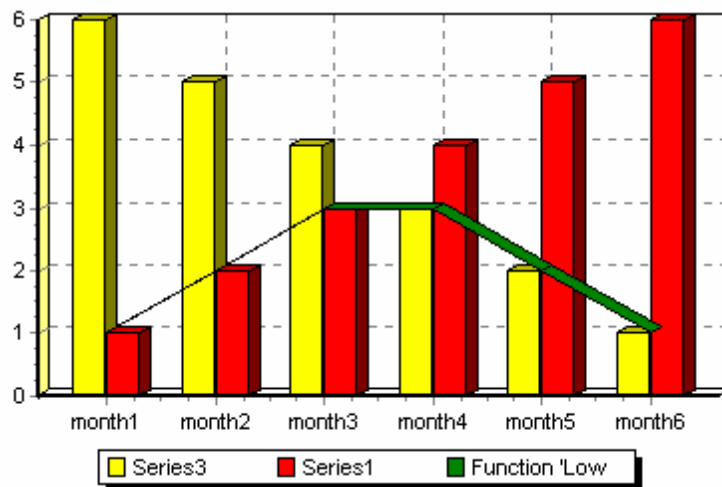
High

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).



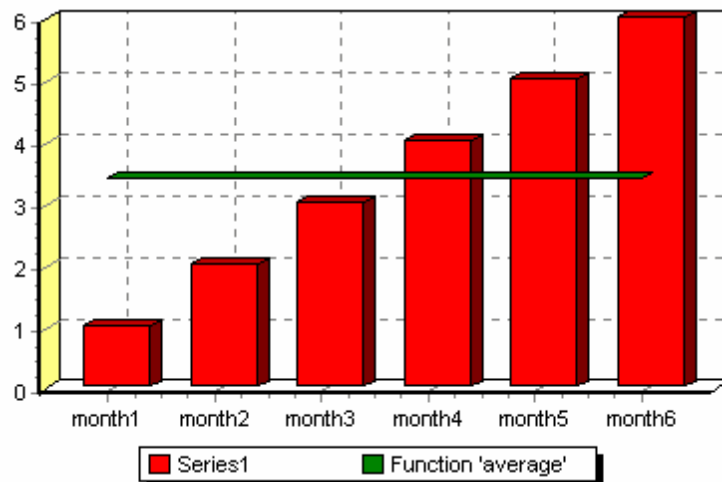
Low

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:

$$FP = 2 / (\text{Period} + 1)$$

$$\text{Value} = \text{Source} * FP + (\text{Value} - 1) * (1 - FP)$$

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:

$$\text{Momentum} = 100 * \text{Value} / \text{PreviousValue}$$

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:

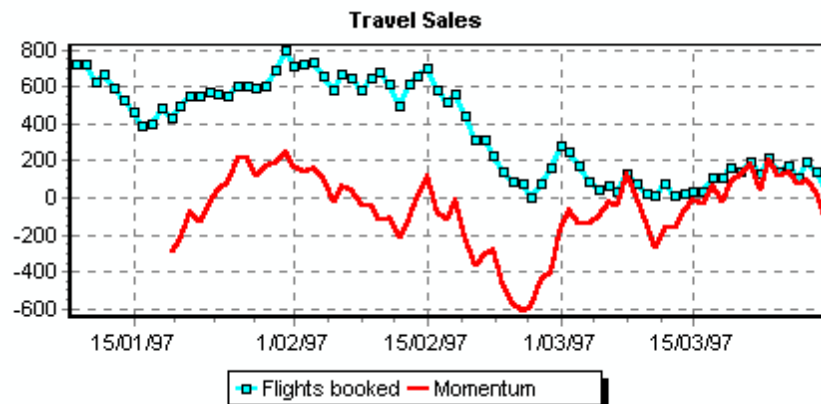


Relative Strength Index (RSI) is often used in financial applications. 2D RSI curve calculating over the last 20 data points of a candle series:



Momentum

A momentum series is defined using a 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:

$$\text{Result} = \text{Sqrt}(\text{Sum}(\text{Square}(\text{Value})) / \text{NumValues})$$

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

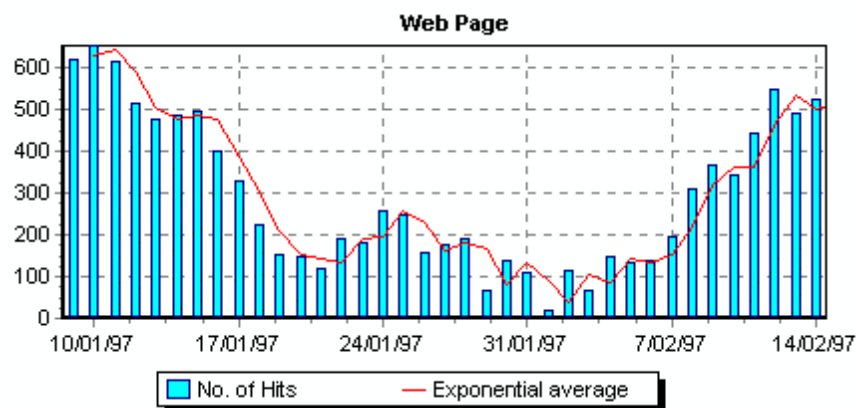
Downsampling - Reduces the number of points of series using several different techniques. It uses an algorithm with which polylines consisting of many points can be reduced to a simplified form. This can be useful in situations where your graphical application must draw many polylines and time becomes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

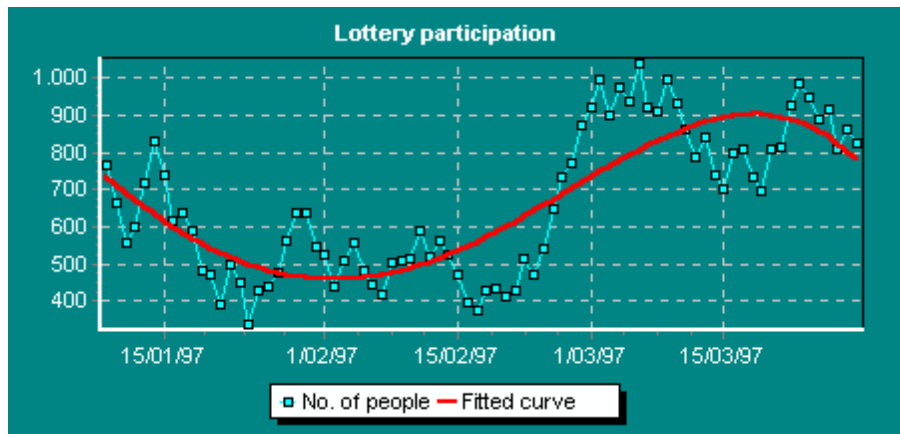
Exponential Average

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.



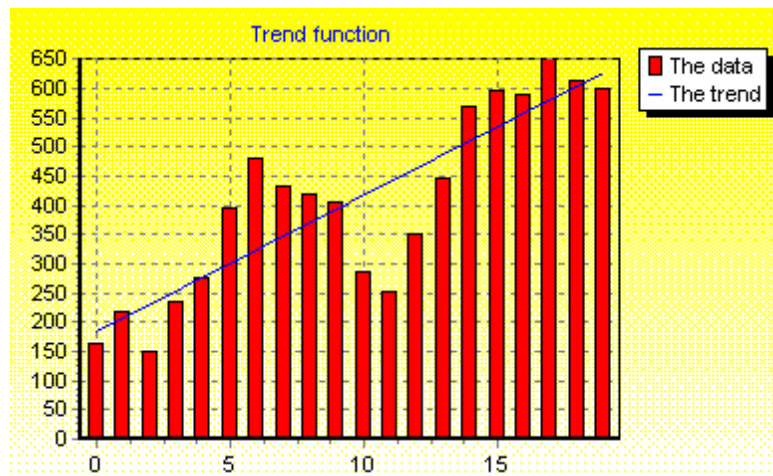
Fitted Curve

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



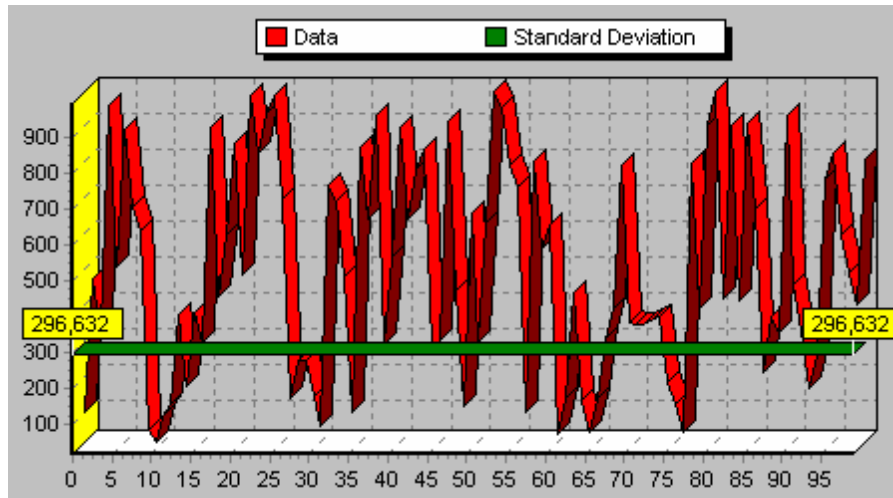
Trend

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.



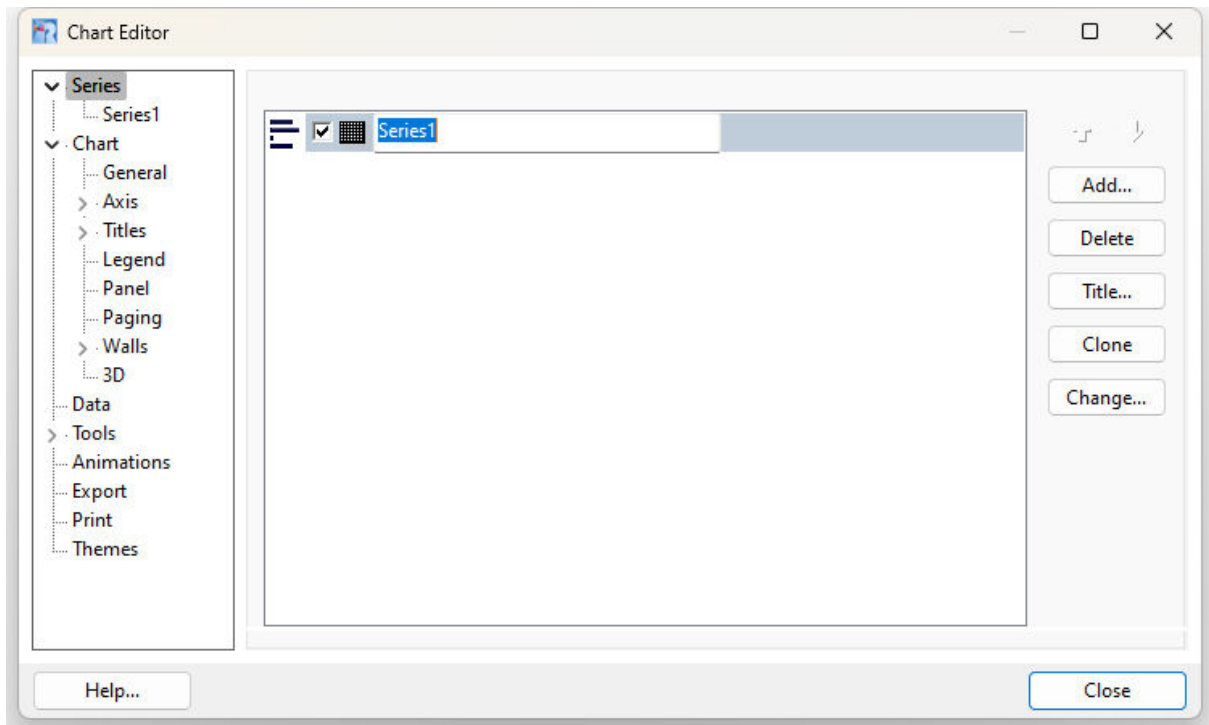
Standard Deviation

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



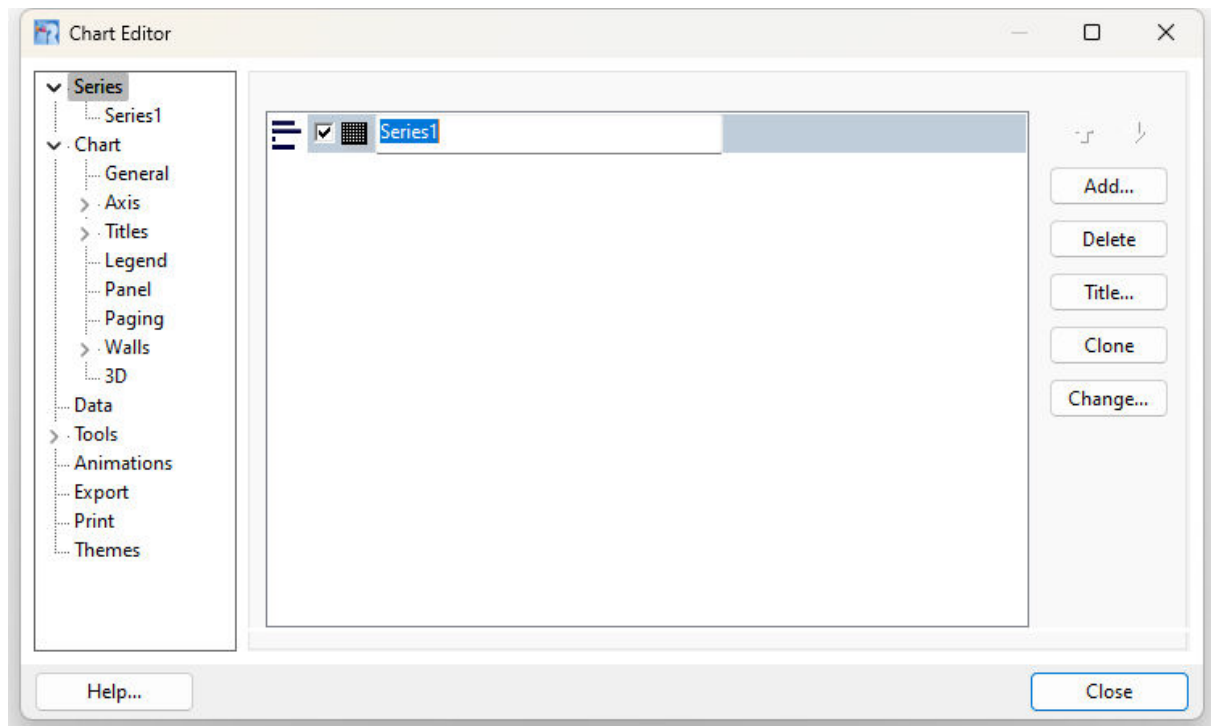
5.6 Chart Editor

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.

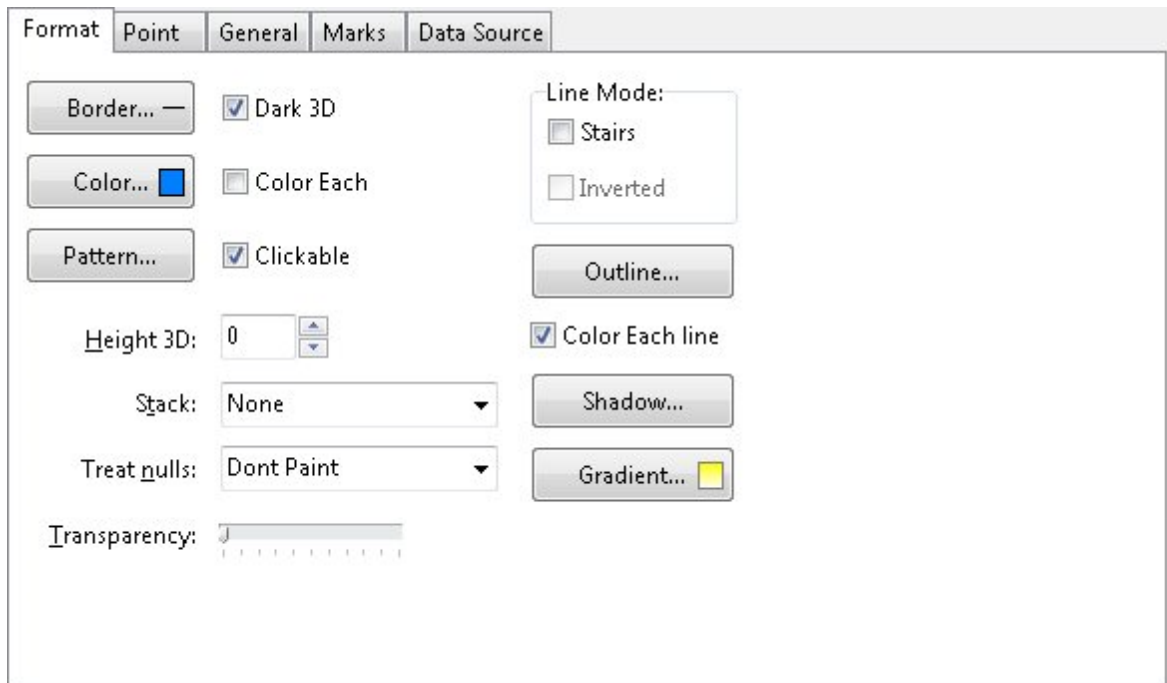
- **Up Arrow** - moves the selected series up, to draw it before other series in the chart
- **Down Arrow** - moves the selected series down, to draw it after the other series in the chart
- **Add** - shows the Chart Gallery dialog to add a new series
- **Delete** - removes the selected series
- **Title...** - 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 possible subsequent tabs before the "General" tab, will differ for the specified [series type](#).



Border - specifies the Line series border, using the [Border Editor](#)

Color - specifies the color used to display the line, using a color palette

Pattern - specifies the lines pattern, using the [Pattern Editor](#)

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

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.

Transparency - specifies the transparency

Shadow - specifies a shadow, using the [Shadow Editor](#)

Gradient - specifies the gradient properties, using the [Gradient Editor](#)

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

Horizontal Axis - specifies where the Horizontal Axis values are displayed: Top, Bottom or both

Date-Time - specifies to change the normal values of the Series to date/time values

Vertical Axis - specifies where the Vertical Axis values are displayed: Left, Right or both

Sort - specifies to order the Series values as ascending, or descending

Z Date-Time - specifies to change the normal values of the Series to date/time values

Legend

Show in Legend - show/hide the legend in a chart

Options Legend Hover

Visible

Text:

Options Filters Gallery

Browse...

Transparent

Draw Quality:
High ▾

Hover

Options Legend Hover

Format Border Font Pattern Shadow Emboss Picture Children

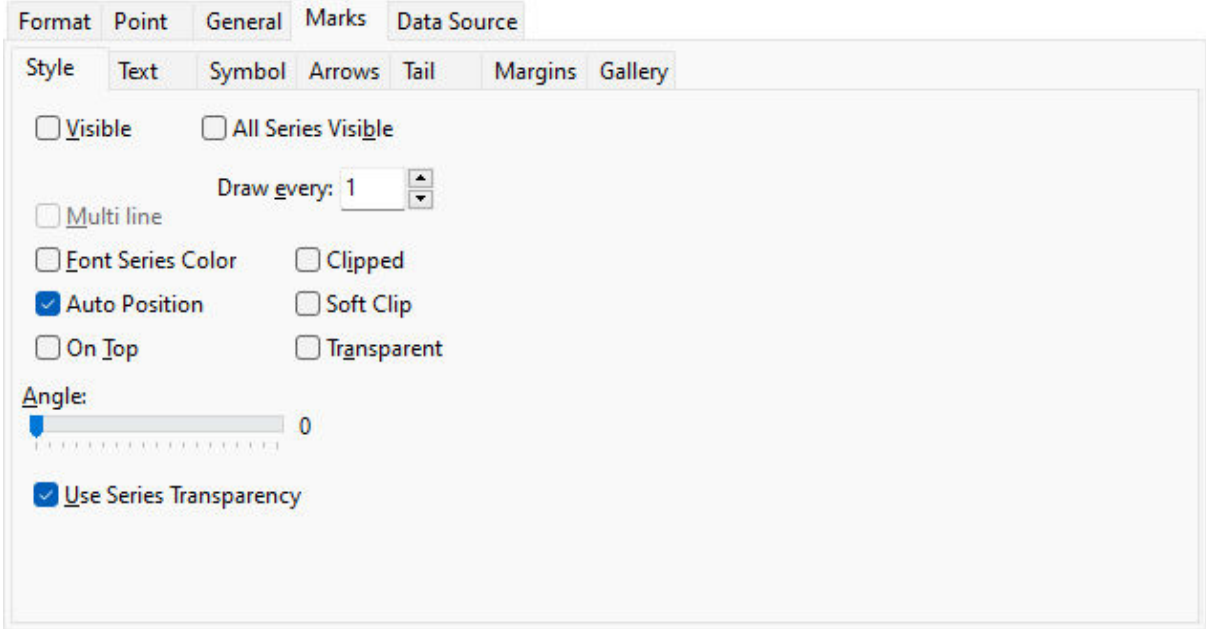
Color... Visible

Transparent

Transparency:
 0

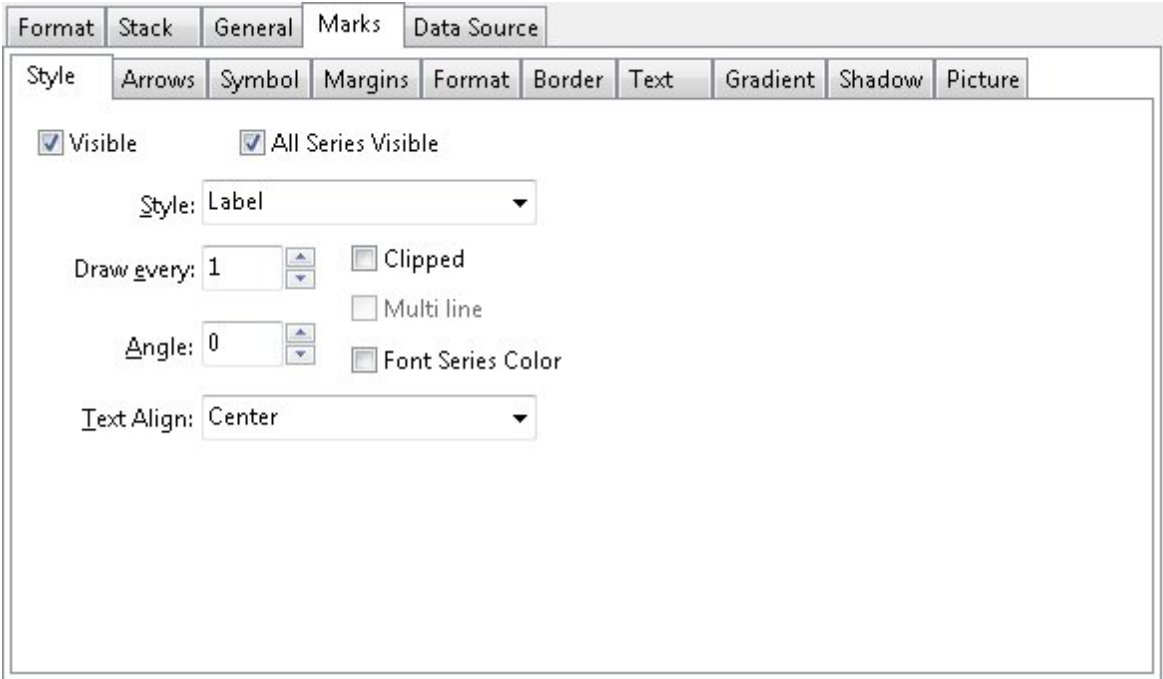
5.6.1.3 Marks

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

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

Style - defines the possible label text values: Value, Percent, etc.

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.

Angle - defines the rotation degree of each Mark.

Clipped - specifies to hide the Marks or labels which are totally or partially out of the chart

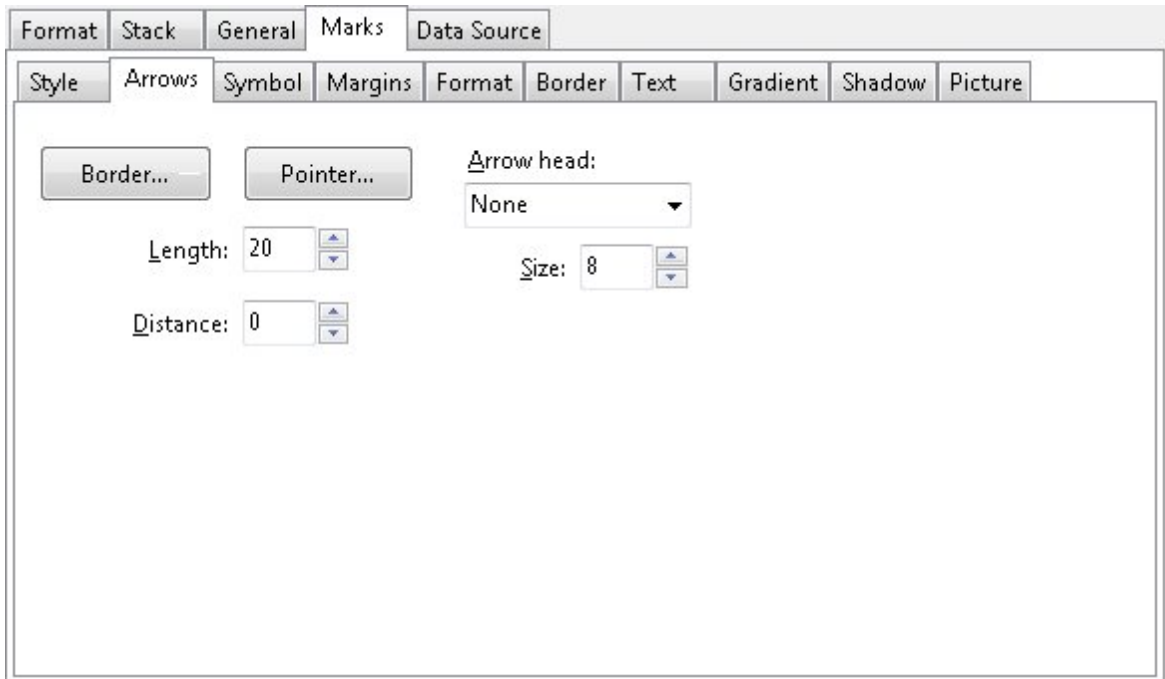
Multi line - enables/disables multiple-line labels. Depending on the style selected in the "Style" combo-box this property will be activated or not

Font Series Color - specifies to set the color and length of the Mark arrows

Text Align - specifies the text alignment

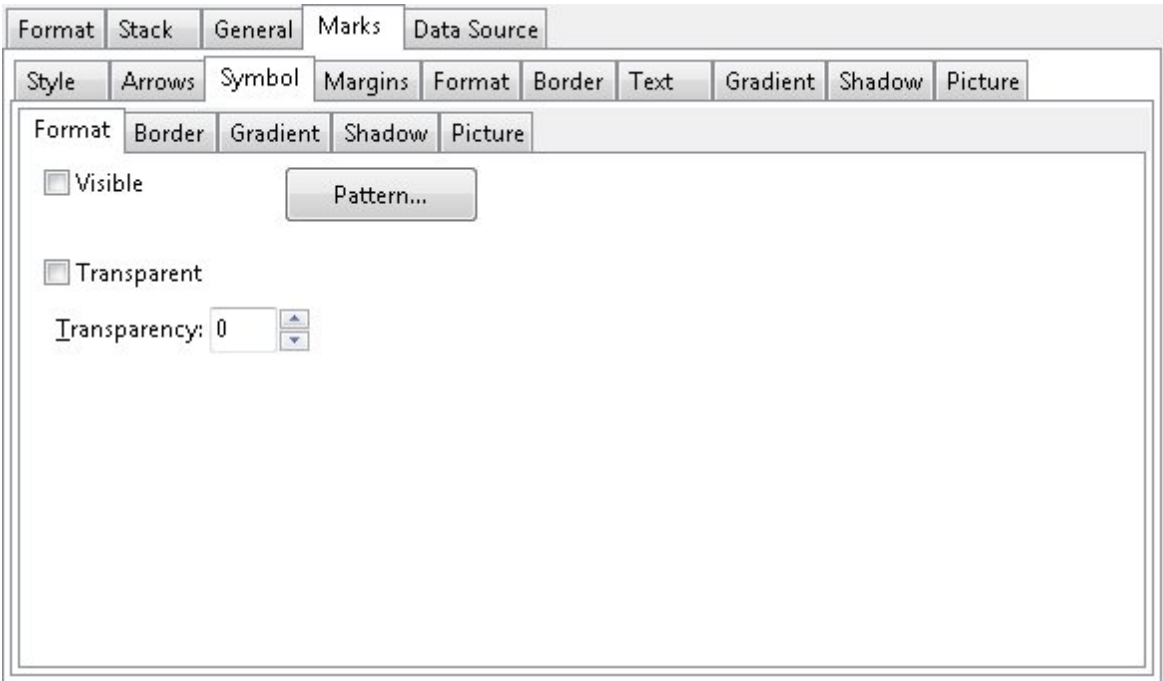
5.6.1.3.2 Arrows

Provides arrow properties for Marks.



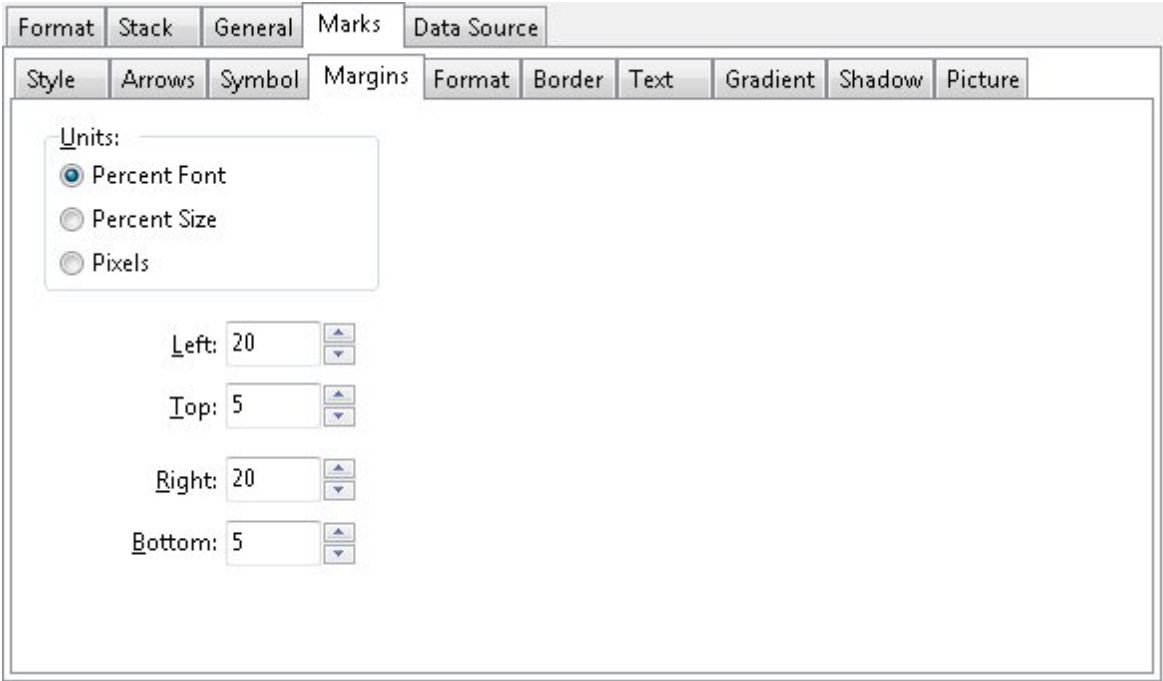
5.6.1.3.3 Symbol

Provides properties for the display of a symbol for Series Marks.



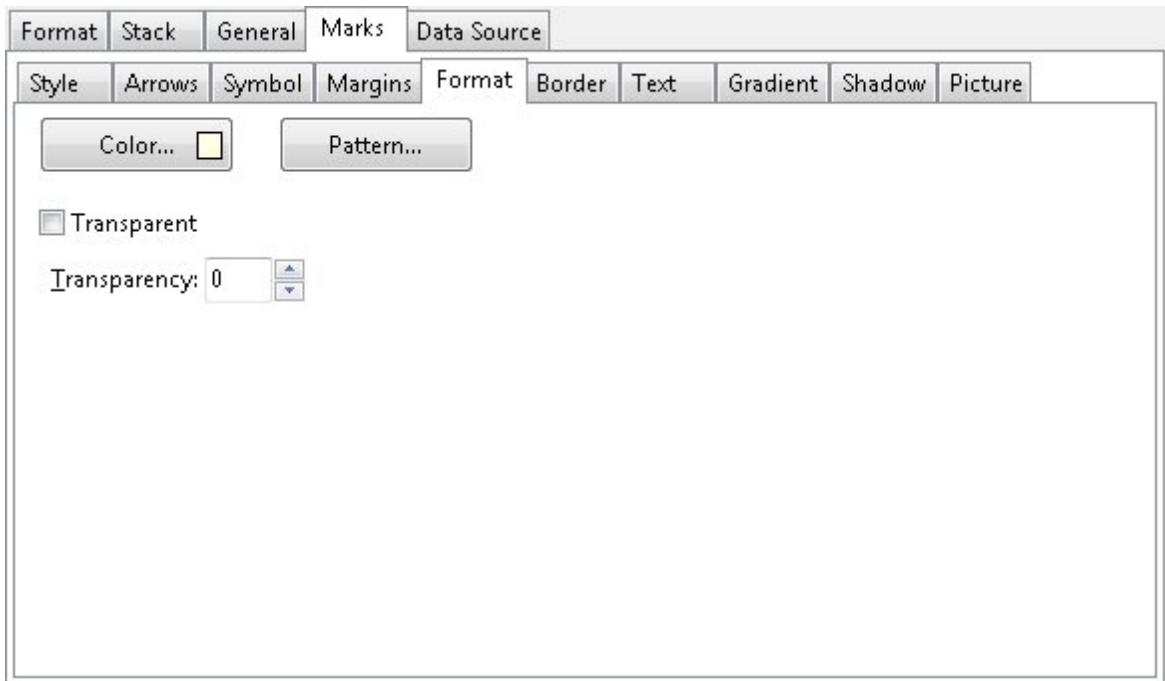
5.6.1.3.4 Margins

Provides margin properties for Marks.



5.6.1.3.5 Format

Provides format properties for Marks.



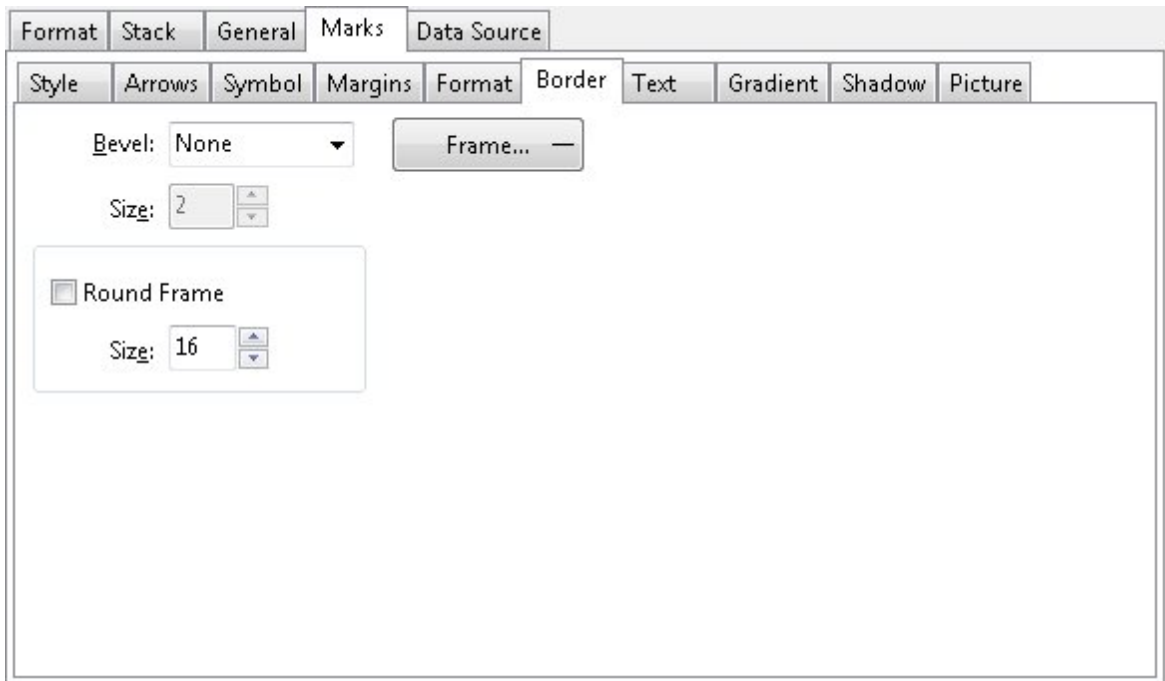
Color - defines the Mark color, using a color palette

Pattern - defines a pattern style and color for the Marks, using the [Pattern Editor](#)

Transparent - specifies to make the back color of the Marks transparent

5.6.1.3.6 Border

Provides border properties for Marks.



Bevel - defines the frame of the Marks; Lowered or Raised

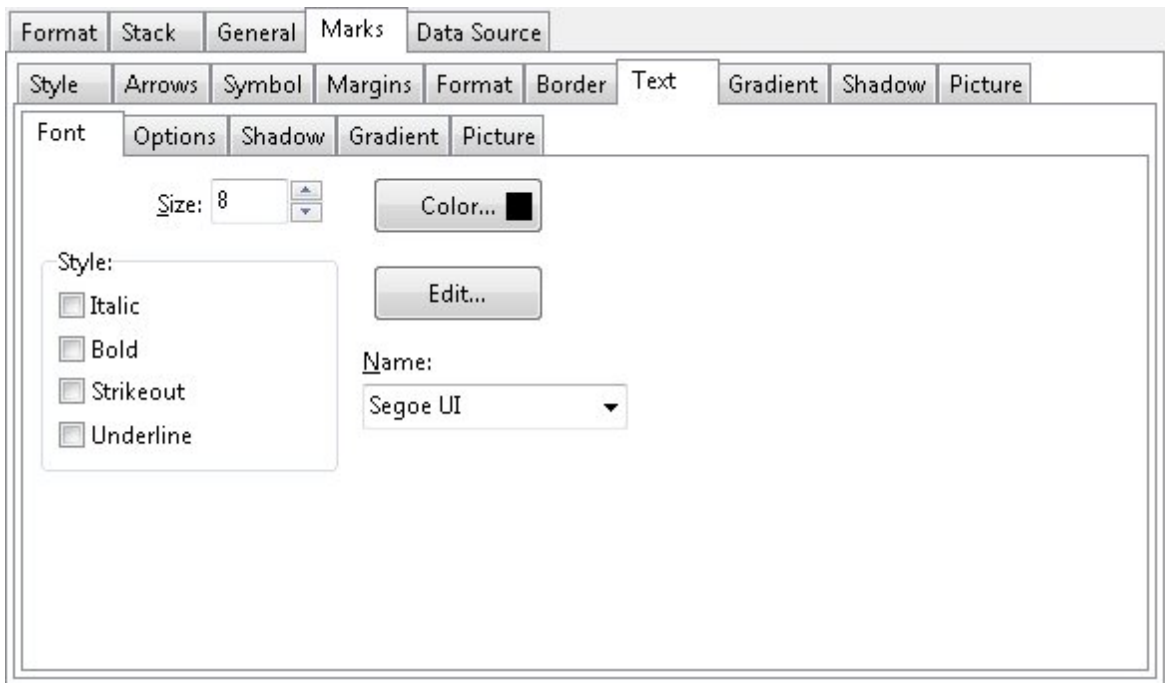
Frame - defines the frame type and color, using the [Border Editor](#)

Size - defines the size of the Marks

Round Frame - displays a rounded Mark frame

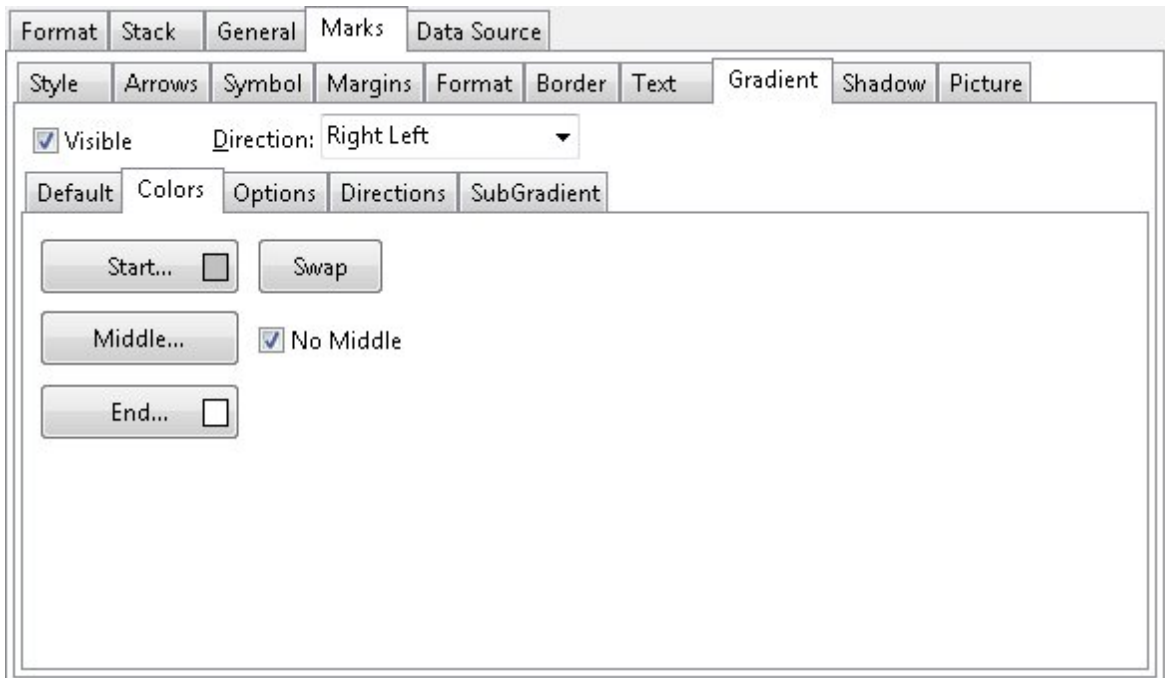
5.6.1.3.7 Text

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



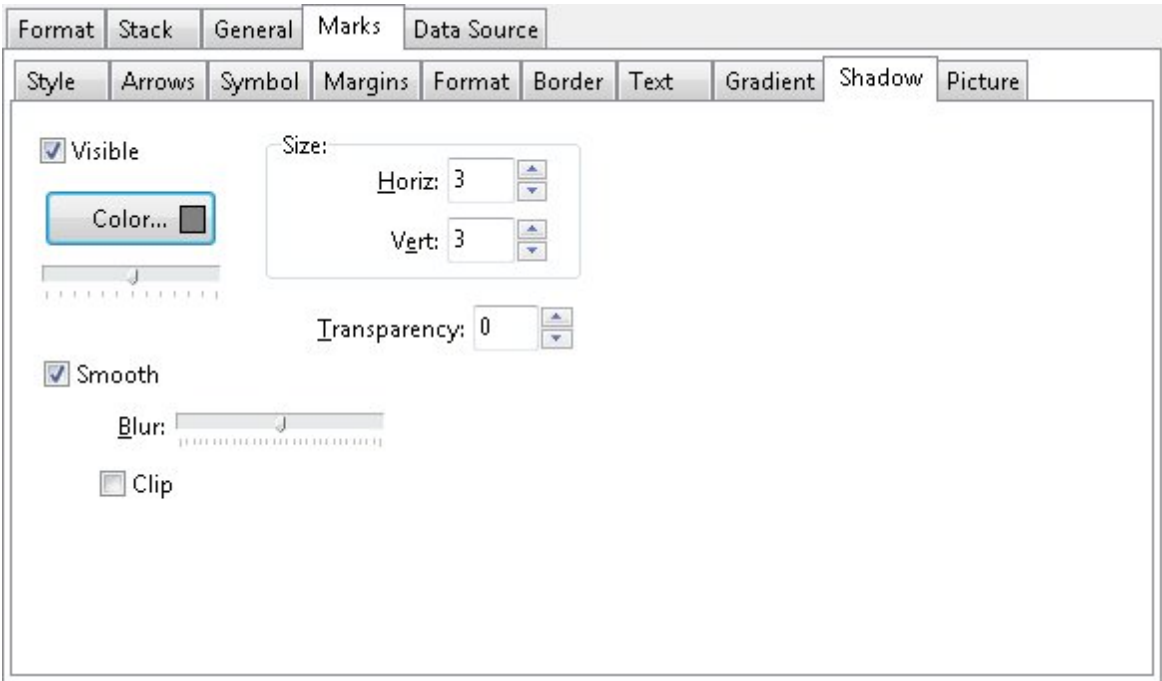
5.6.1.3.8 Gradient

Provides gradient properties for Marks. Refer to the [Gradient Editor](#) for property descriptions.



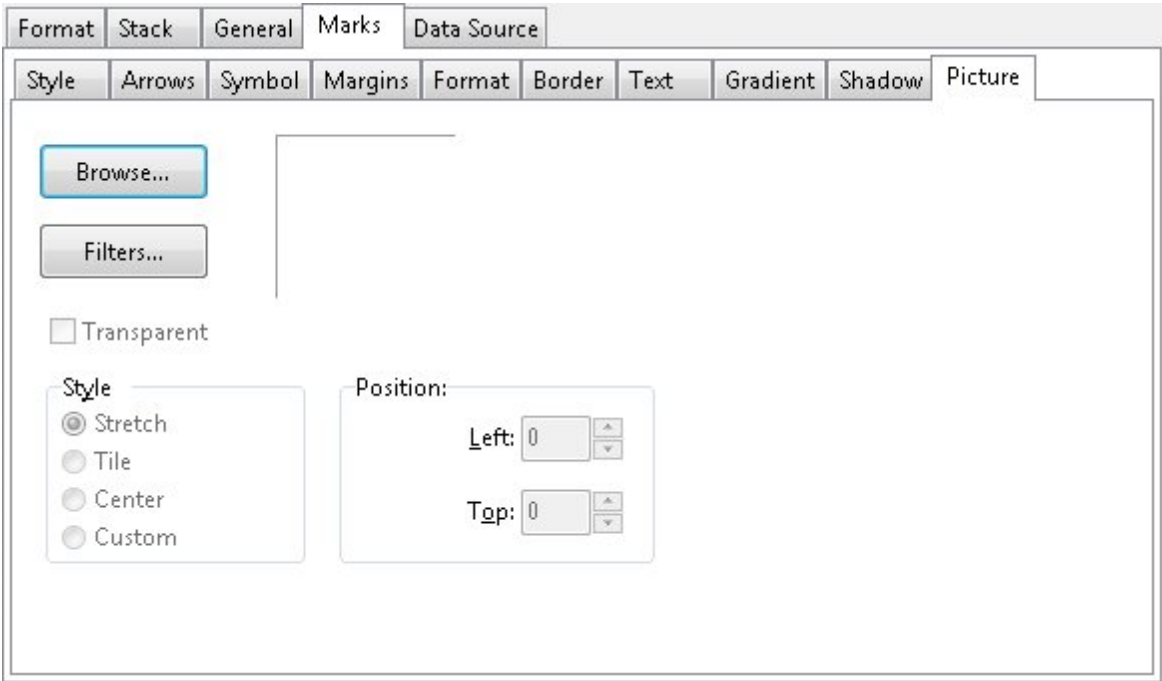
5.6.1.3.9 Shadow

Provides shadow properties for Marks. Refer to the [Shadow Editor](#) for property descriptions.



5.6.1.3.10 Picture

Provides picture properties for Marks.



Browse - selects an image from computer files to be displayed on the Chart Panel.

Transparent - sets the image back color as transparent

Style - adjusts the image to the Chart size

Position - Adjusts the image position on the panel

5.6.1.4 Data Source

The "Data Source" tab contains all options used to import data into a chart series.

The screenshot displays the 'Data Source' tab in the R:Charts software. At the top, there are several tabs: 'Format', 'Stack', 'General', 'Marks', and 'Data Source'. The 'Data Source' tab is active. Below the tabs, there is a 'Table/View' dropdown menu. Underneath, there is a section for 'Table/View' with a dropdown menu showing 'QuarterlySummary' and an 'Apply' button. Below this, there are three rows of configuration: 'Labels' set to 'Quarter', 'X' set to 'Quarter', and 'Bar' set to 'TotalSale'. Each row has a 'DateTime' checkbox which is currently unchecked.

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

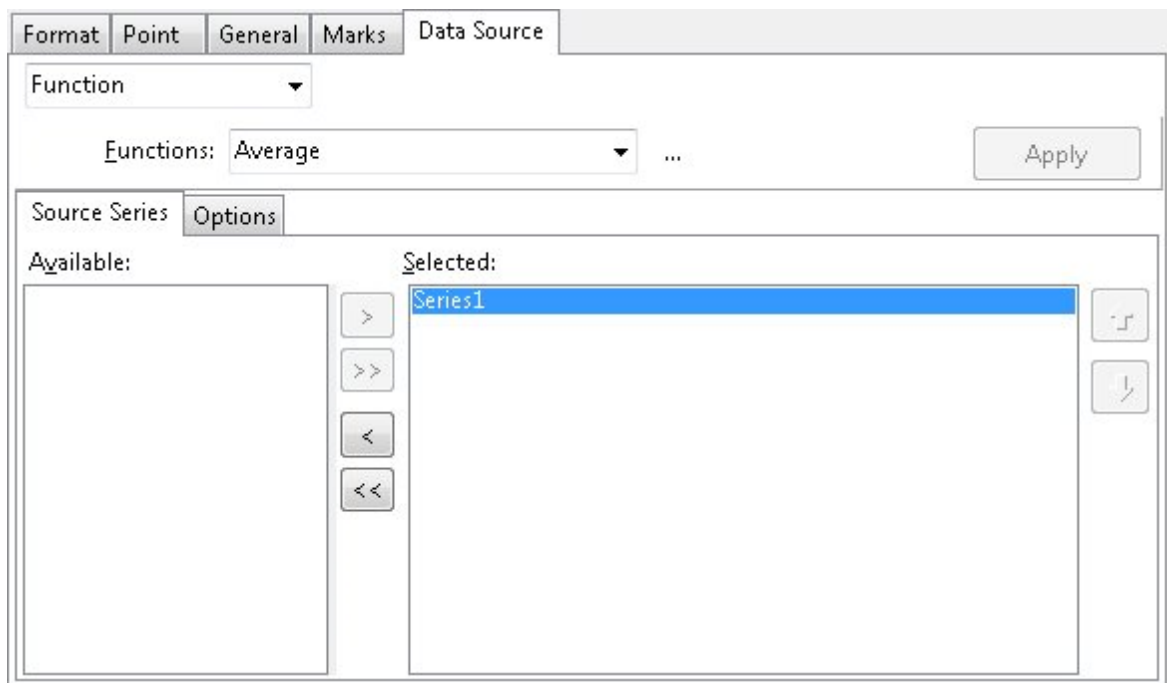
Function - independent components that use Series. Series data can be calculated using a mathematical/statistical function, using another series as the underlying values for the function.

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

This 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

This 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" tab 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.

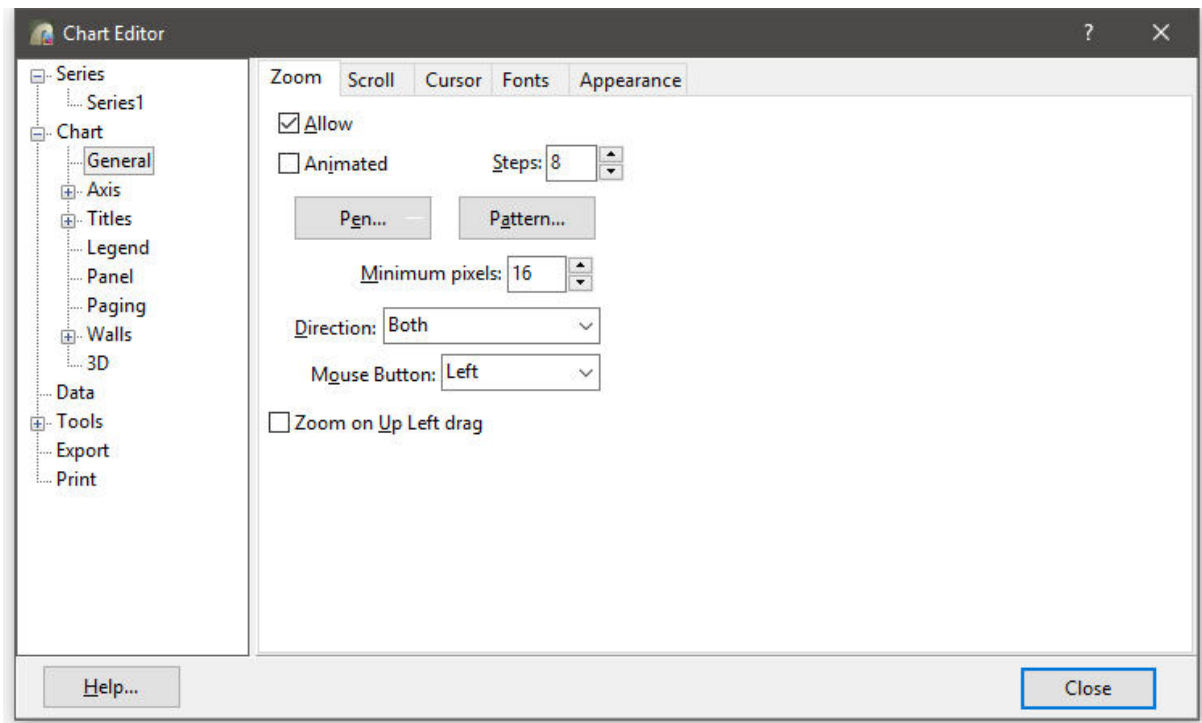


Chart Properties

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.

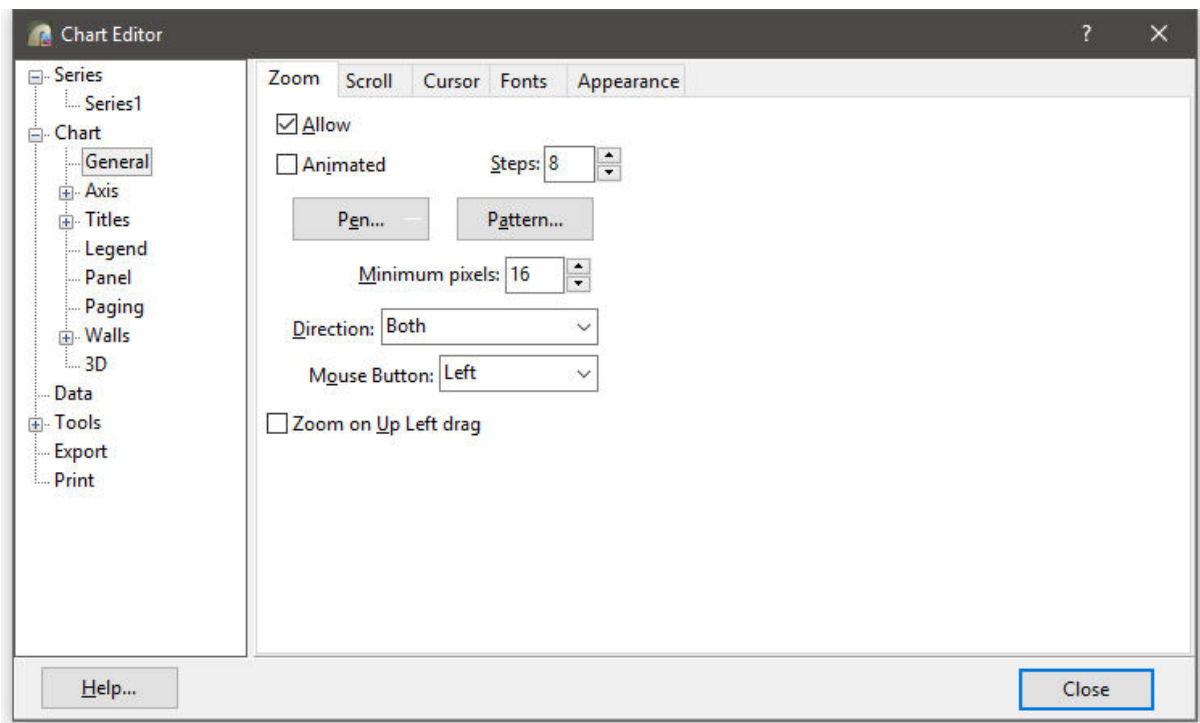
The overall chart appearance characteristics are a grouped into the following categories:

- [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" settings allows users to modify the chart properties in general. Zoom and scroll behaviors can also be enhanced.



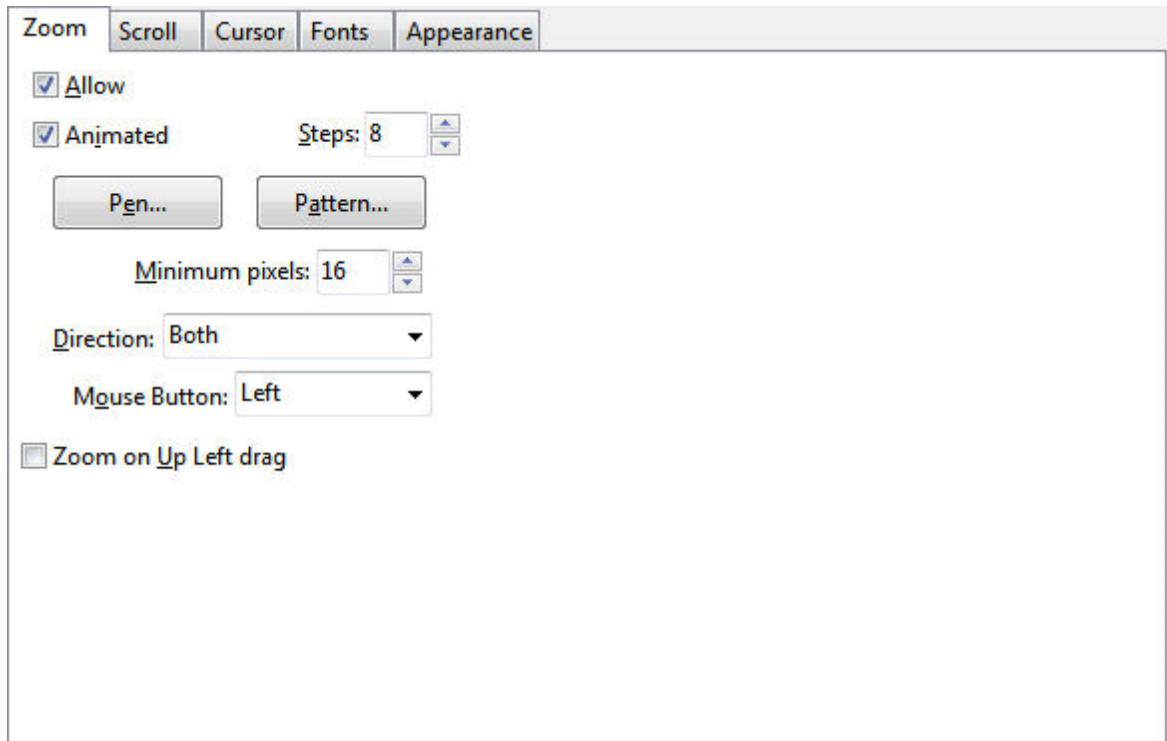
5.6.2.1.1 Mouse

The mouse options offer actions to take for the mouse buttons and scroll wheel.



5.6.2.1.2 Zoom

The tab specifies zoom properties for the chart.



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

Pen - used to draw a surrounding rectangle of the zoom area as mouse is dragged. By clicking on this button the [Border Editor](#) will be displayed where to define the Pen type.

Pattern - displays the the [Pattern Editor](#) to define the pattern type for the zoom area

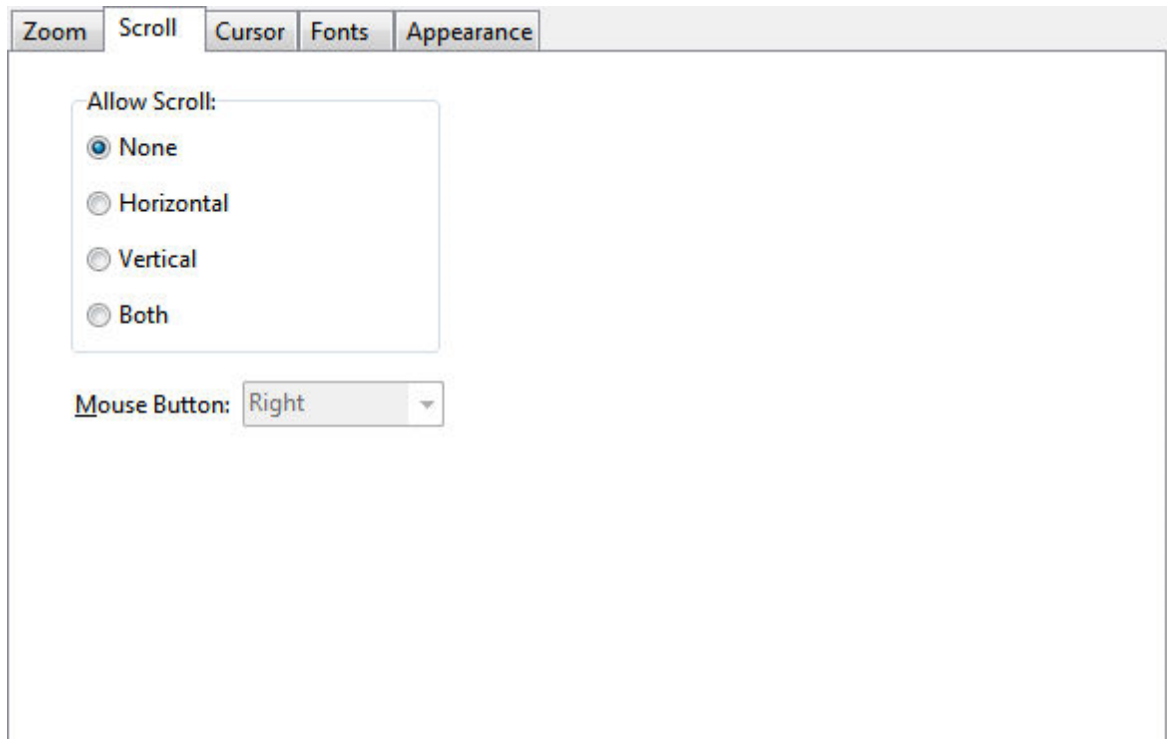
Minimum pixels - sets the minimum number of onscreen pixels traversed by the mouse drag for the zoom action to actuate.

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

5.6.2.1.3 Scroll

The tab specifies scroll properties for the chart.

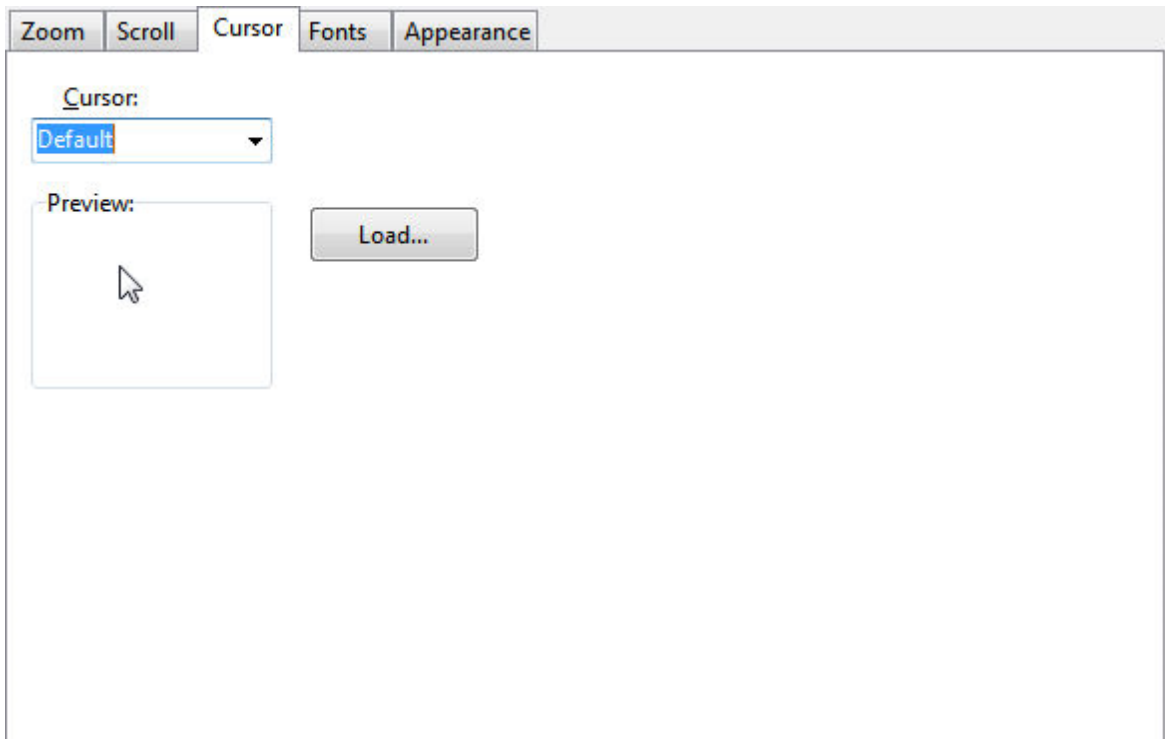


The image shows a screenshot of a configuration window with five tabs: Zoom, Scroll, Cursor, Fonts, and Appearance. The 'Scroll' tab is selected and active. Inside the 'Scroll' tab, there is a section labeled 'Allow Scroll:' with four radio button options: 'None' (selected), 'Horizontal', 'Vertical', and 'Both'. Below this section is a 'Mouse Button:' label followed by a dropdown menu currently showing 'Right'.

Allow Scroll - enables/ disables the scroll function in the Chart Series
Mouse Button - sets the Mouse button used to enable the scroll action.

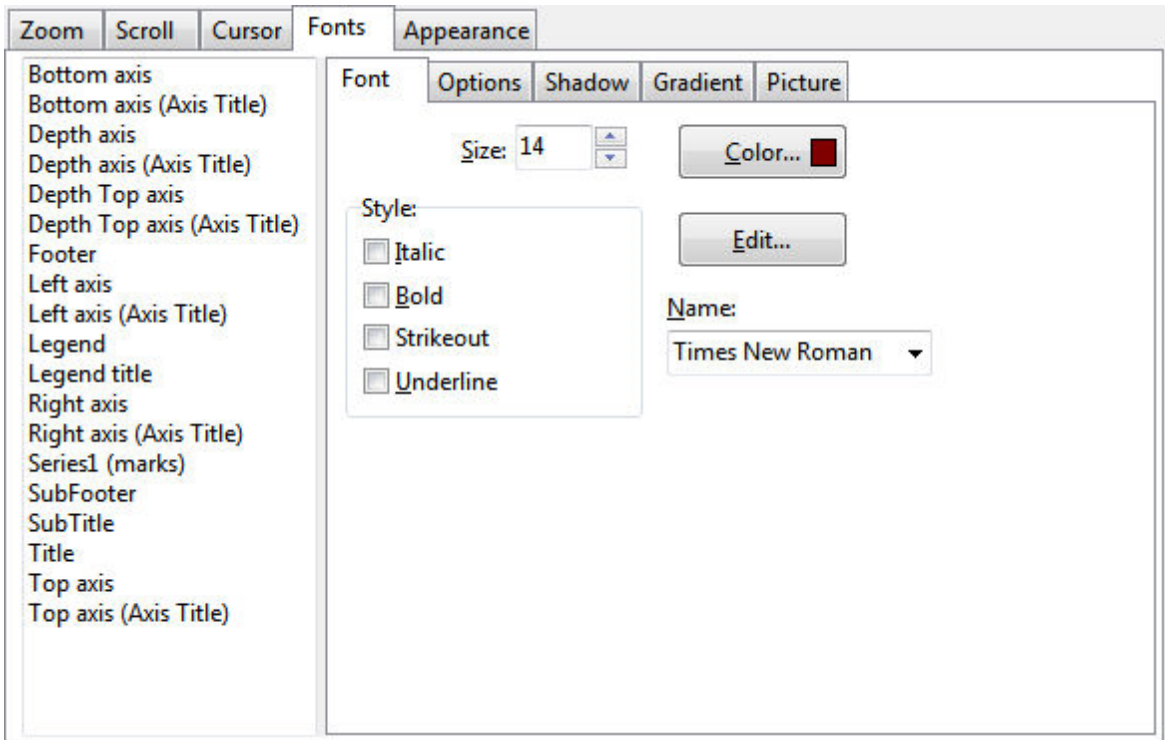
5.6.2.1.4 Cursor

The properties define a cursor type (image) when the mouse passes into the region.



5.6.2.1.5 Fonts

The tab provides text properties to edit the font size, color, style, name, outline, shadow, gradient, picture, and more for all portions of the chart.



5.6.2.1.6 Palette

The hover options provide an enhanced display for the chart objects and text.



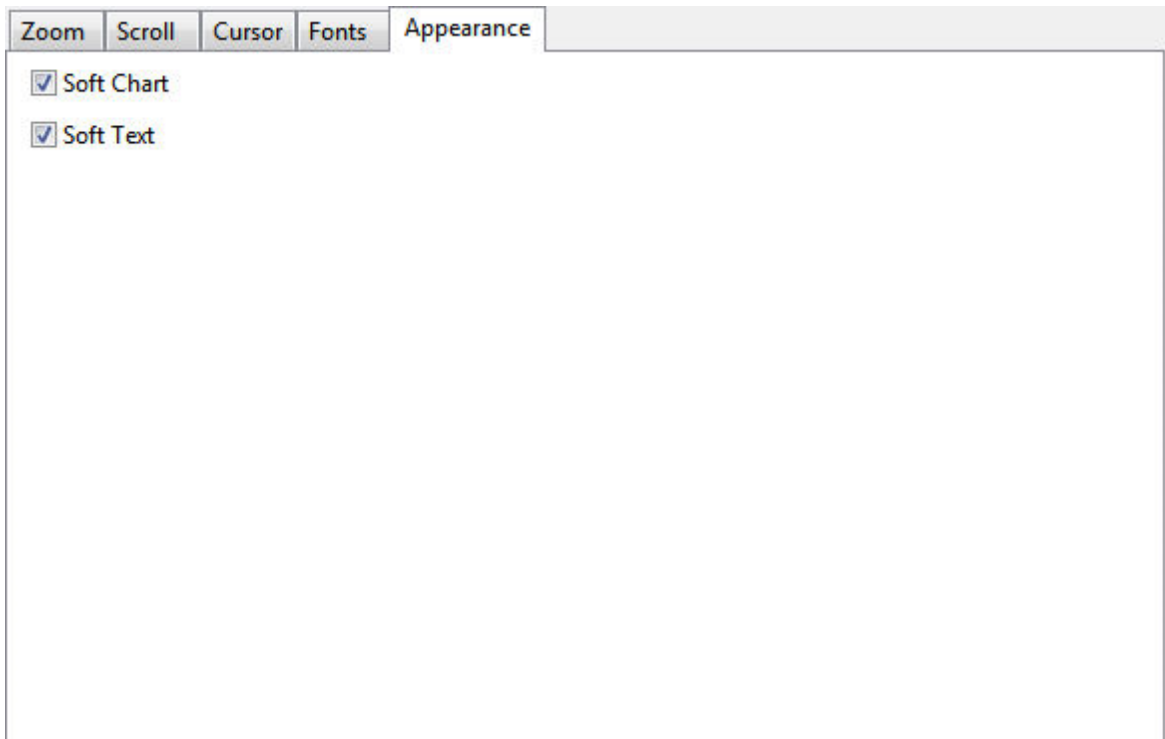
5.6.2.1.7 Hover

The hover options provide an enhanced display for the chart objects and text.



5.6.2.1.8 Appearance

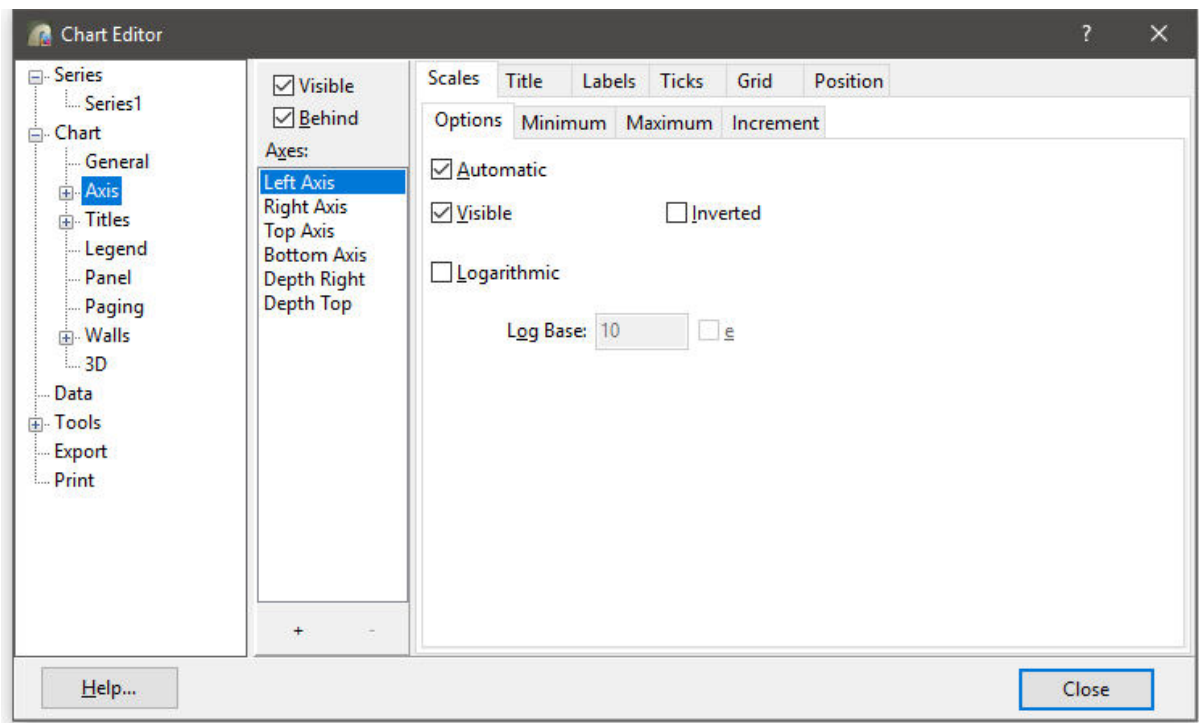
The appearance options provide an enhanced display for the chart objects and text.



5.6.2.2 Axis

The "Axis" tab supports custom settings for all available chart axes. In order to alter an axis setting, it must first be selected with the "Axes:" panel.

There are five axes in a chart: Left, Top, Right, Bottom and Depth. The "Depth Axis" is not visible by default. All other axes are visible when a series is added to a chart.



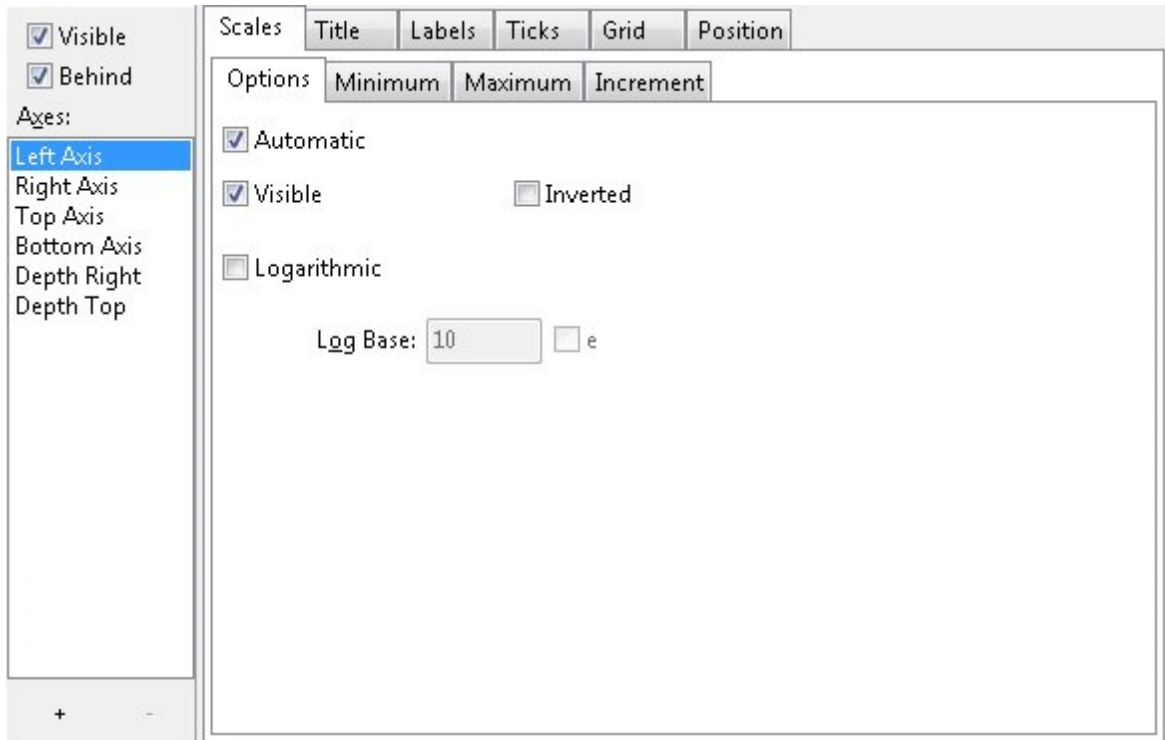
Visible - shows or hides the Chart Axis

Behind - shows the Chart Axis behind the Series, or not

Axes - The Chart has five Axes: Right, Left, Top, Bottom and Depth

Signs (+) and (-) - enables to add or delete Chart Axes

5.6.2.2.1 Scales

**Options Tab**

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 Tabs

Auto - sets the Axis values automatically

Change - allows users to define a maximum and minimum axis value

Offset - specifies to offset the values

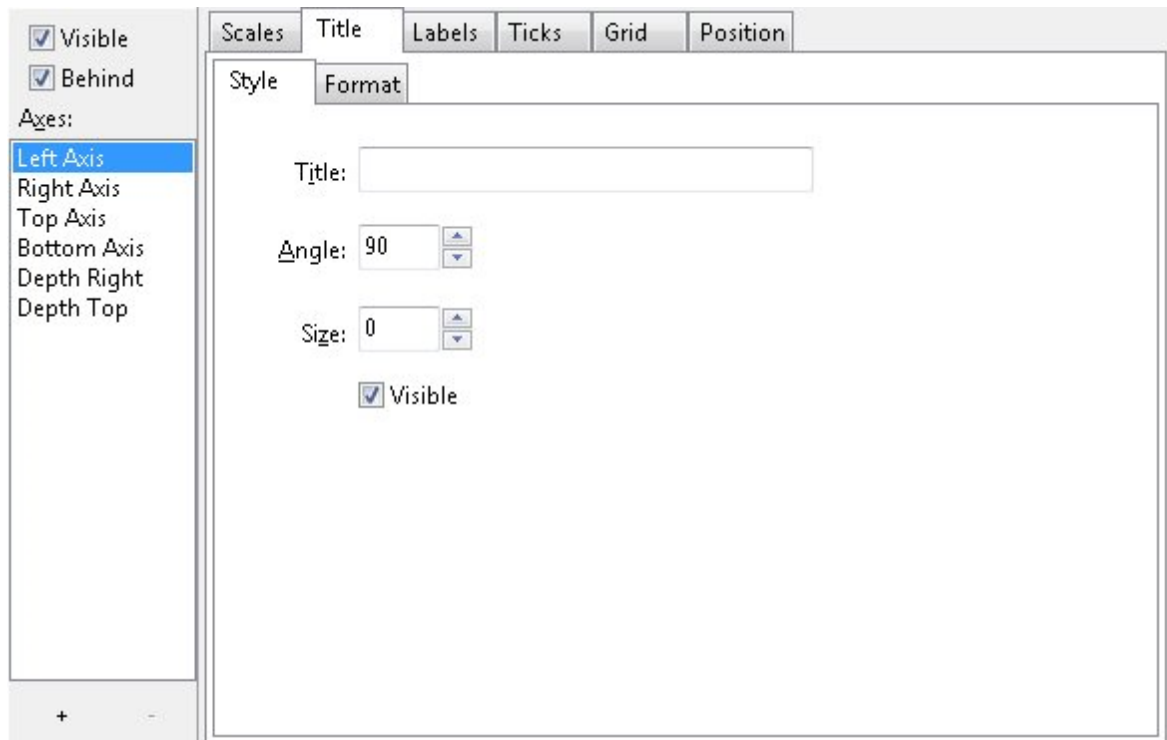
Round - specifies to round the values

Increment Tab

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 Tab**

Title - allows users to define a Title or text for the selected Axis

Angle - allows users to define the Title label angle

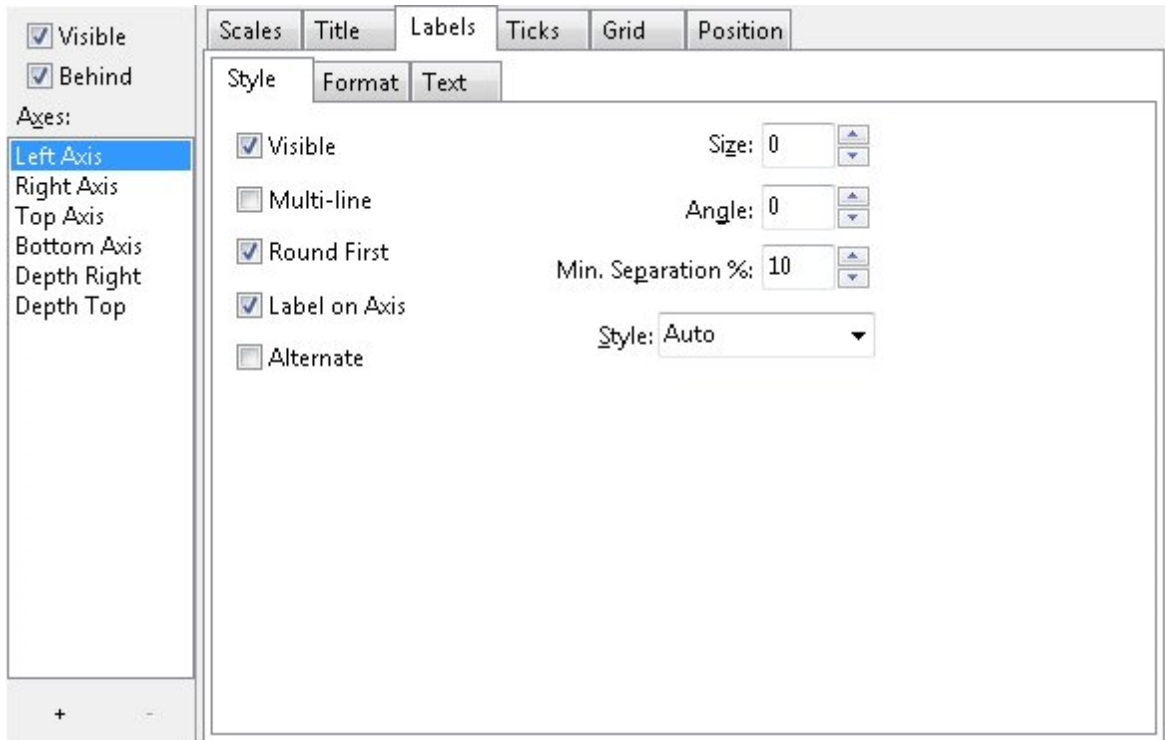
Size - allows users to define the Axis title label size

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.

5.6.2.2.3 Labels

**Style Tab**

Visible - displays or hides the selected axis texts

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 labels

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

Format Tab

Exponential - defines the Axis values Exponentially

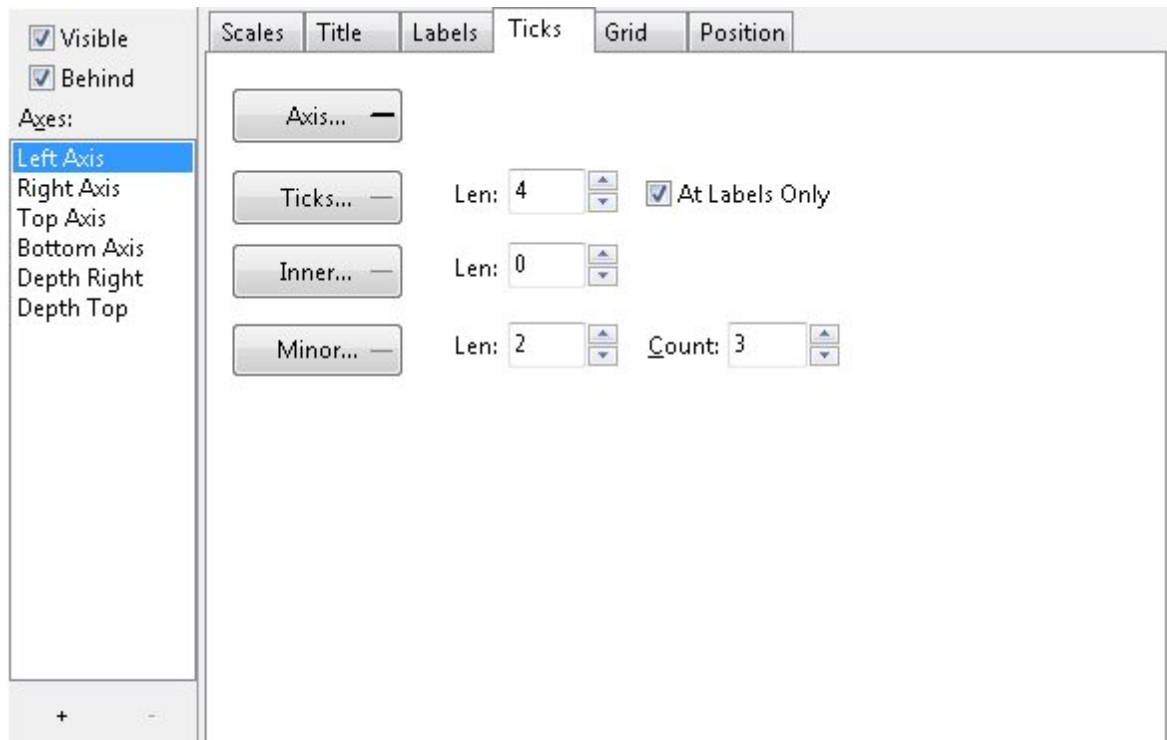
Values Format - defines the Axis Labels text Format/Mask

Default Alignment - controls whether the Axis Labels will be shown in the default position, or not

Text Tab

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

5.6.2.2.4 Ticks



Axis - displays the [Border Editor](#) to define the Axis Ticks border

Ticks / Len - defines the Border and Length in pixels of the Axis ticks

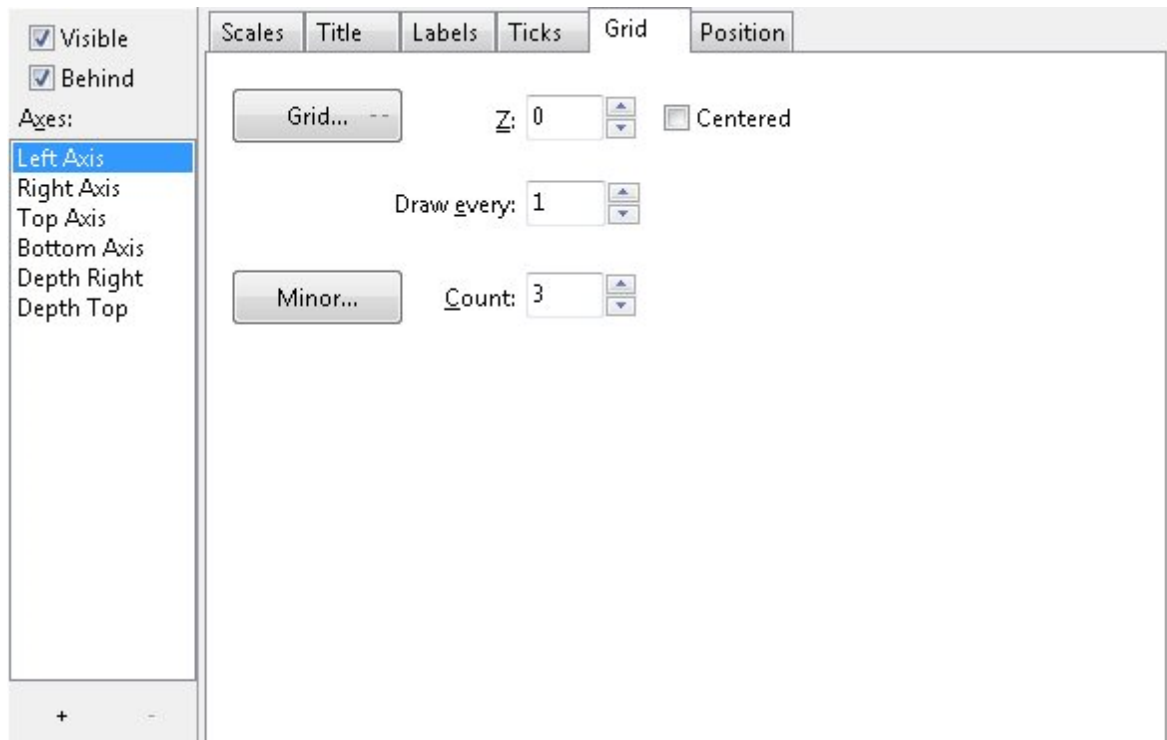
At Labels Only - sets the Axis Ticks and Axis Grid to be drawn only at Labels

Inner / Len - defines the Border and Length in pixels of Axis ticks drawn inside Chart boundaries

Minor / Len - defines the Border and the Length in pixels of Axis Minor ticks

Count - defines the number of Grid lines

5.6.2.2.5 Grid



Grid - displays the [Border Editor](#) to define the Axis background grid

Z - controls the z axis size

Centered - controls if grid will be centered or not onscreen

Draw every - controls the spacing for grid lines

Minor - displays the [Border Editor](#) to define a minor background grid

Count - defines the and the number of lines for the minor background grid

5.6.2.2.6 Position

The screenshot displays the 'Position' configuration tab for a chart axis. On the left, a sidebar contains checkboxes for 'Visible' and 'Behind', and a list of axes: 'Left Axis' (highlighted), 'Right Axis', 'Top Axis', 'Bottom Axis', 'Depth Right', and 'Depth Top'. The main panel features tabs for 'Scales', 'Title', 'Labels', 'Ticks', 'Grid', and 'Position'. The 'Position' tab is active, showing the following settings:

- Position %:** 0
- Start %:** 0
- End %:** 100
- Z %:** 0
- Units:** Percent
- Other side
- Horizontal

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

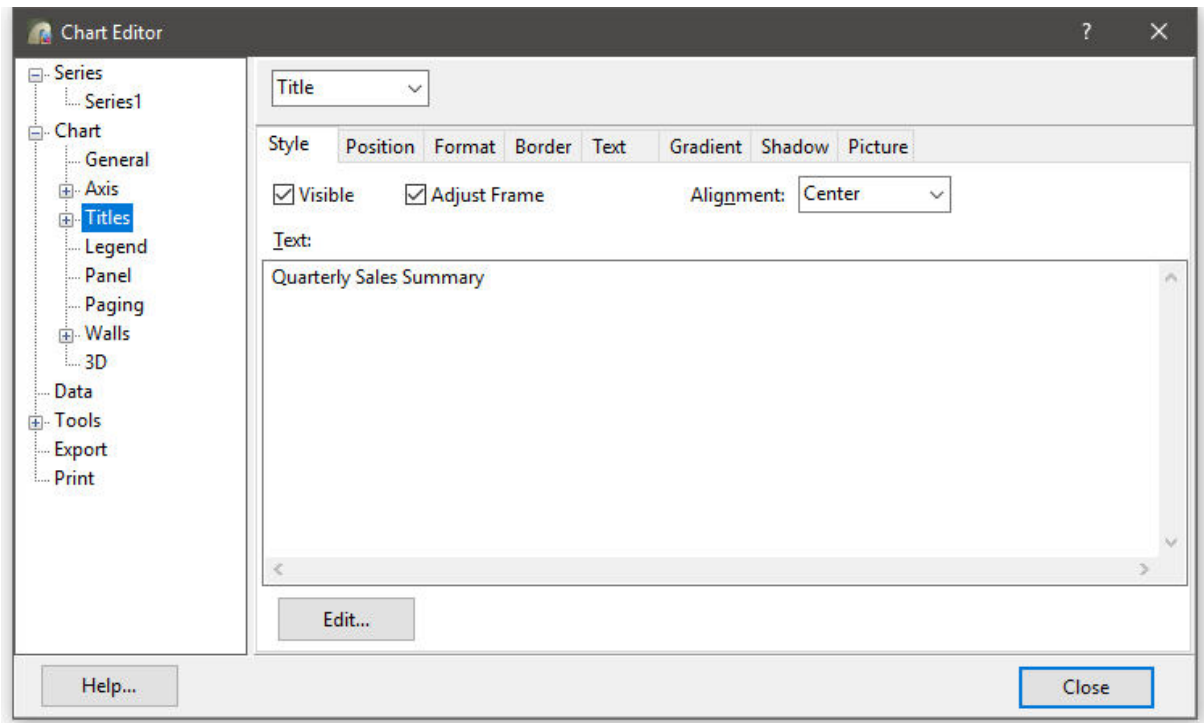
Z - controls the z axis size

Other side - controls the opposite Axis Position

Horizontal - determines the Axis Position Horizontally

5.6.2.3 Titles

The "Titles" tab adjusts the properties for the Title, SubTitle, SubFoot and Footer for the Chart, with options like custom positioning, transparency, gradient, and shadowing.



Style Tab

Visible - controls whether the Title, SubTitle, etc. will be shown, or not

Adjust Frame - controls the Text Label Frame

Alignment - determines the position of the Title Label in the Chart panel: Left, Right or Center

Text - defines the Label Text

Position Tab

Custom - controls a Customized position for the Chart Title, SubTitle, etc.

Vert. margins - adjusts the vertical margin for the Title, SubTitle, etc.

Format Tab

Color - defines the Chart Title, SubTitle, etc. color, using a color palette

Pattern - defines a pattern style and color for the Chart Title, SubTitle, etc., using the [Pattern Editor](#)

Transparent - specifies to make the back color of the Chart Title, SubTitle, etc. transparent

Border Tab

Bevel - defines the frame of the Chart Title, SubTitle, etc.; Lowered or Raised

Frame - defines the frame type and color, using the [Border Editor](#)

Size - defines the size of the Chart Title, SubTitle, etc.

Round Frame - displays a rounded Chart Title, SubTitle, etc. frame

Text Tab

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

Gradient Tab

Provides gradient properties for the Chart Title, SubTitle, etc. Refer to the [Gradient Editor](#) for property descriptions.

Shadow Tab

Provides shadow properties for the Chart Title, SubTitle, etc. Refer to the [Shadow Editor](#) for property descriptions.

Picture Tab

Provides picture properties for the Chart Title, SubTitle, etc.

Browse - selects an image from computer files to be displayed on the Chart Panel.

Filters - applies filters to the added image

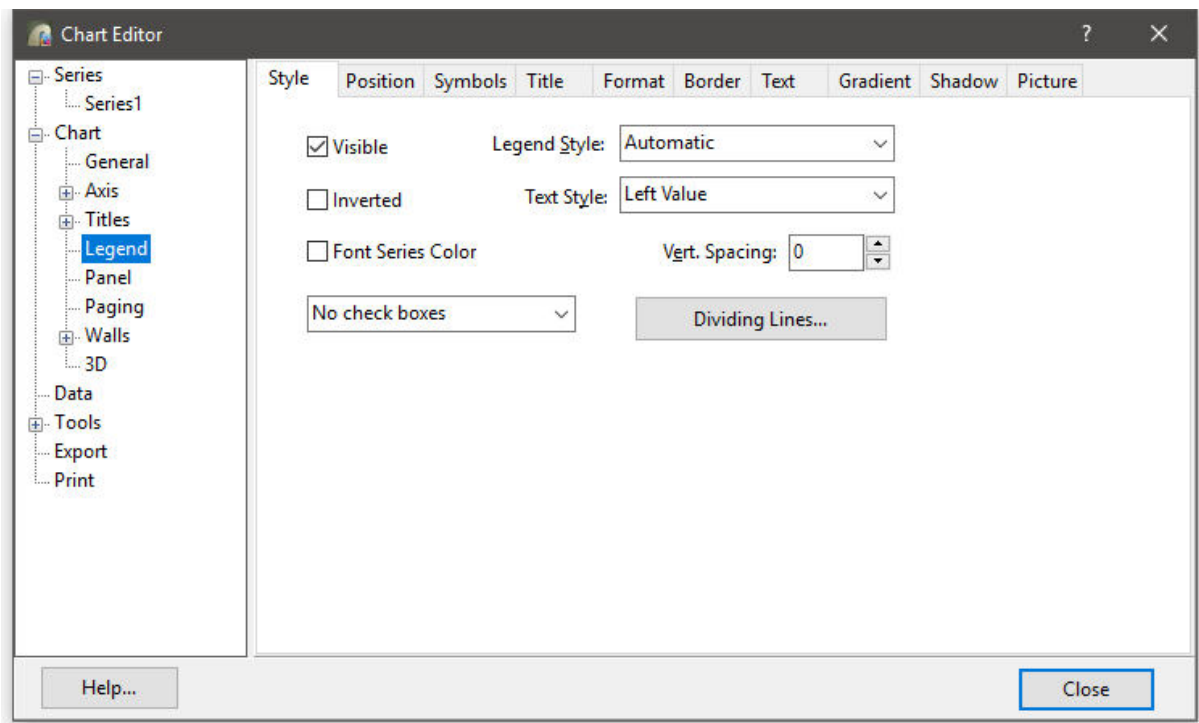
Transparent - sets the image back color as transparent

Style - adjusts the image to the Chart size

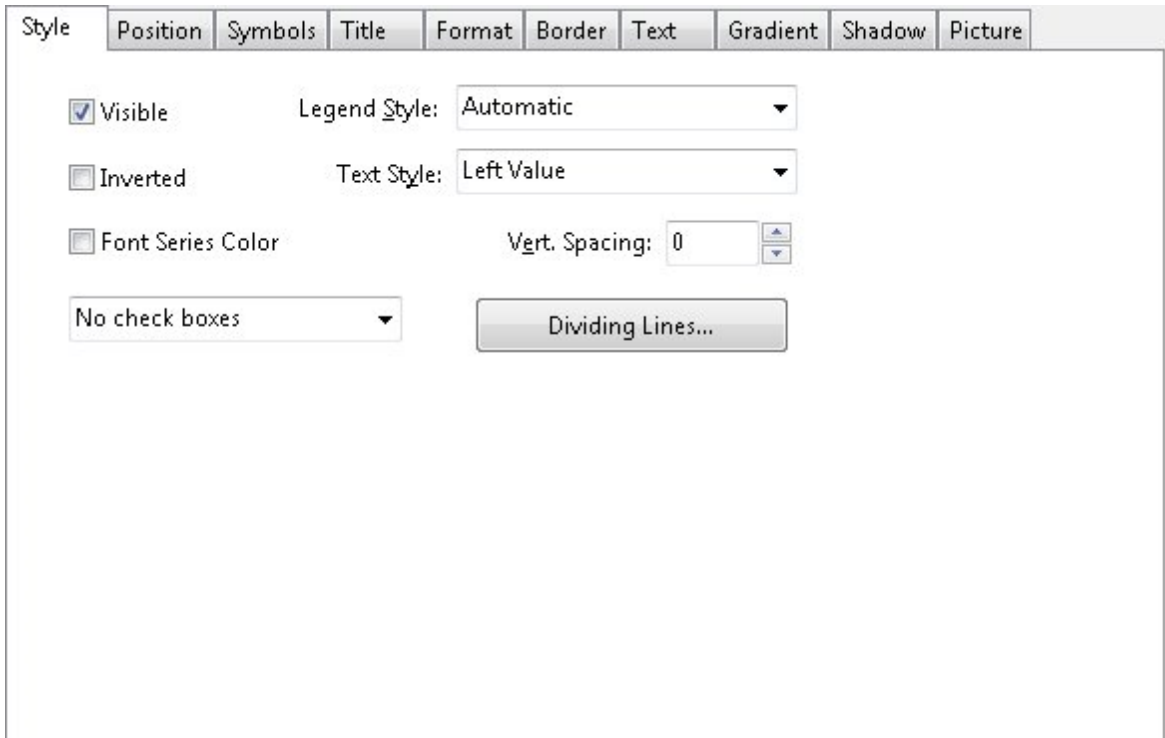
Position - Adjusts the image position

5.6.2.4 Legend

The "Legend" tab 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 - shows or hides 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

Check Boxes - enables/disables the display of Legend check boxes for each Series

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)

Dividing Lines - specifies lines separating Legend items

5.6.2.4.2 Position

The screenshot shows the 'Position' tab of the R:Charts Interface. The 'Position' section is active, displaying radio buttons for 'Left', 'Right', 'Top', and 'Bottom', with 'Right' selected. A 'Resize Chart' checkbox is checked. There are input fields for 'Margin' (0) and 'Position Offset %' (10). A 'Custom' section is also visible, with 'Left' (500) and 'Top' (73) input fields, and a 'Percent' checkbox.

Position - sets the Chart Legend position

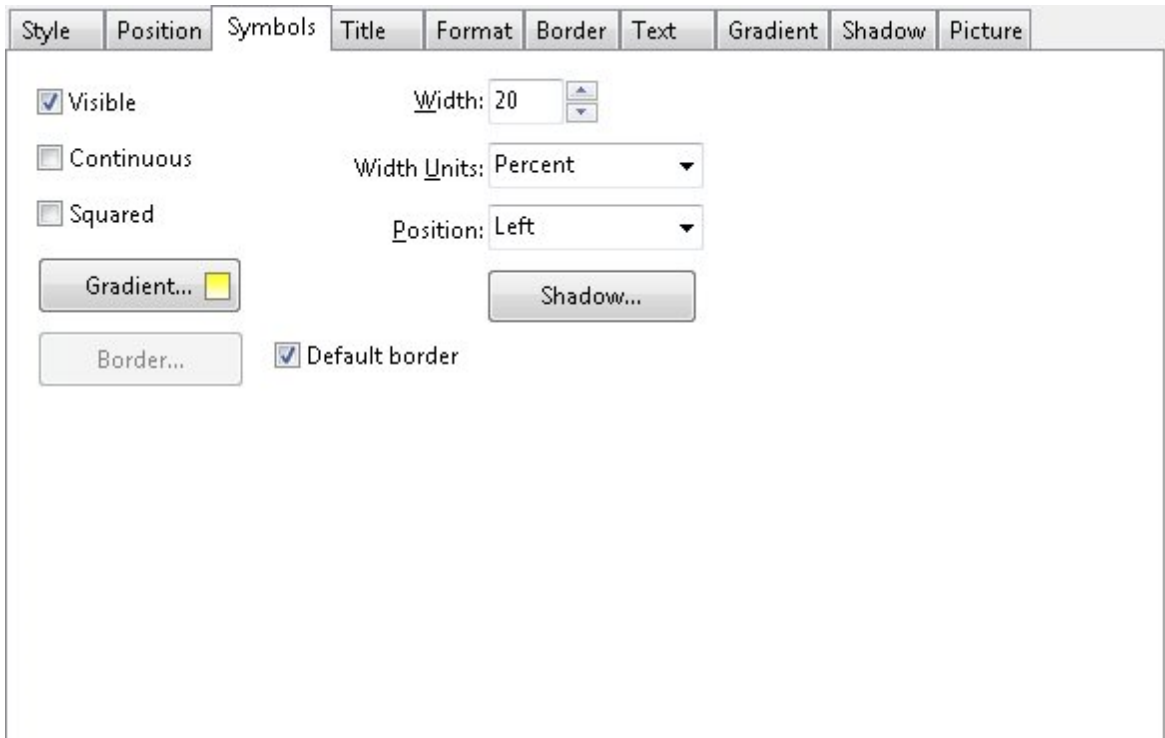
Resize Chart - indicates whether Legend will automatically reduce the Chart rectangle to prevent overlapping of Legend and Chart rectangles

Margin - determines the number of screen pixels between Legend and Chart rectangles.

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

5.6.2.4.3 Symbols



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).

Squared - displays a square symbol, rather than a rectangle

Gradient - displays the [Gradient Editor](#) to modify the gradient properties for the Legend Symbols

Border - displays the [Border Editor](#) to modify the border properties for the Legend Symbols

Default Border - displays the default border for Legend Symbols

Width - determines the Legend Symbols width

Width Units - defines the width of Symbols as a percentage or in pixels

Position - sets the symbols and units position respectively in the Legend

Shadow - displays the [Shadow Editor](#) to modify the shadow properties for Legend Symbols

5.6.2.4.4 Title

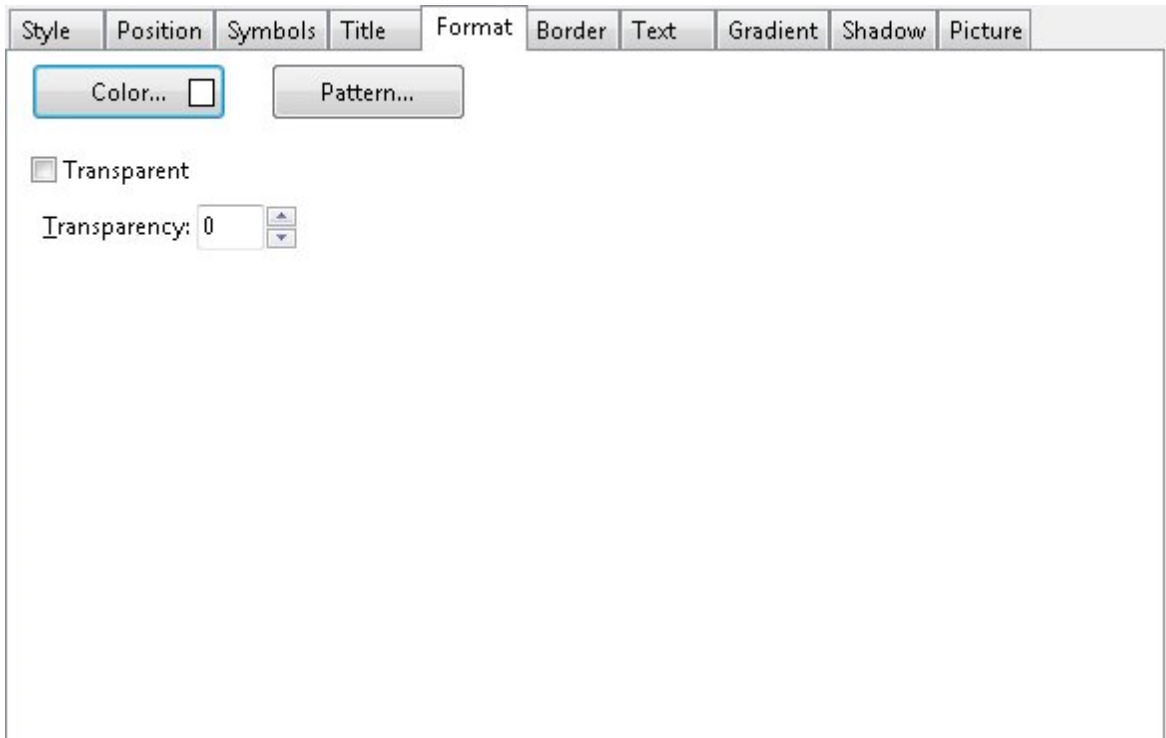
The image shows a software interface for configuring a chart's title. At the top, there is a horizontal menu with tabs: Style, Position, Symbols, Title (selected), Format, Border, Text, Gradient, Shadow, and Picture. Below this, a sub-menu for the 'Title' tab includes: Options (selected), Format, Border, Text, Gradient, Shadow, and Picture. The main area contains a 'Text:' label above a large empty text input box. To the right of the input box is an 'Edit...' button. Below the input box is a 'Text alignment:' label, followed by a dropdown menu currently set to 'Left' and a checked checkbox labeled 'Visible'.

Text - defines the Legend Text

Alignment - determines the position of the Title Legend in the Chart panel: Left, Right or Center

Visible - controls whether the Legend Title will be shown, or not

5.6.2.4.5 Format

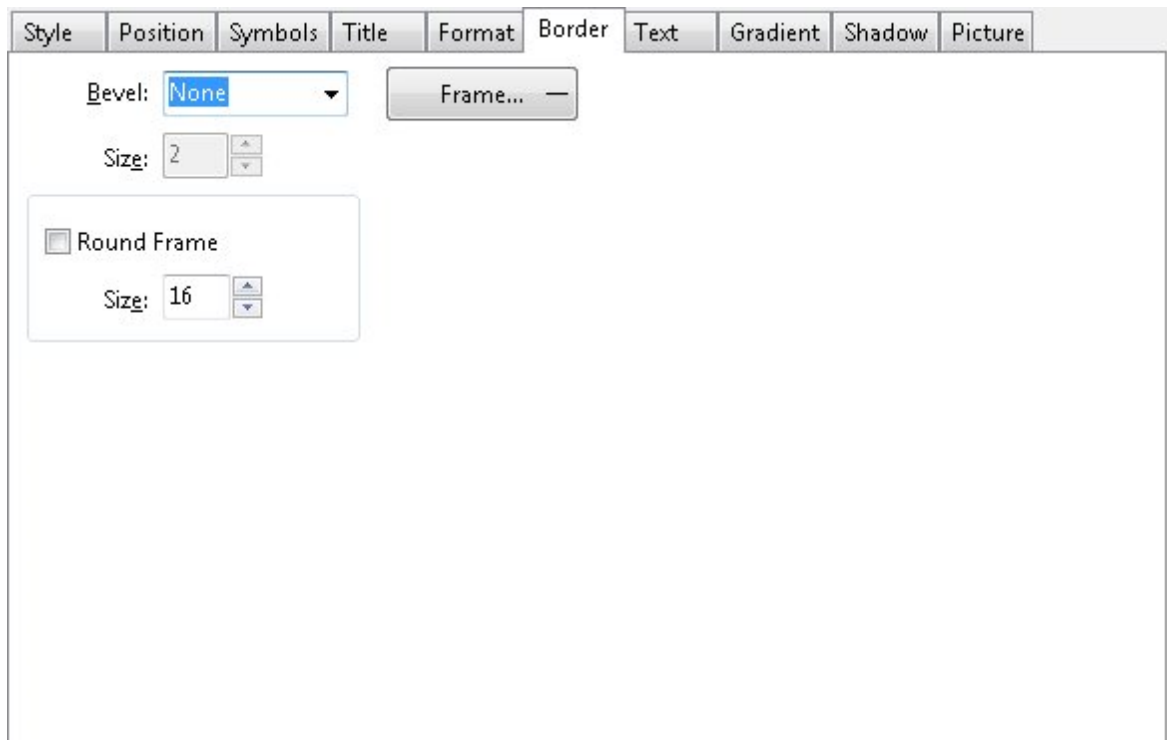


Color - defines the Legend Title color, using a color palette

Pattern - defines a pattern style and color for the Legend Title using the [Pattern Editor](#)

Transparent - specifies to make the back color of the Legend Title transparent

5.6.2.4.6 Border



Bevel - defines the frame of the Legend Title; Lowered or Raised

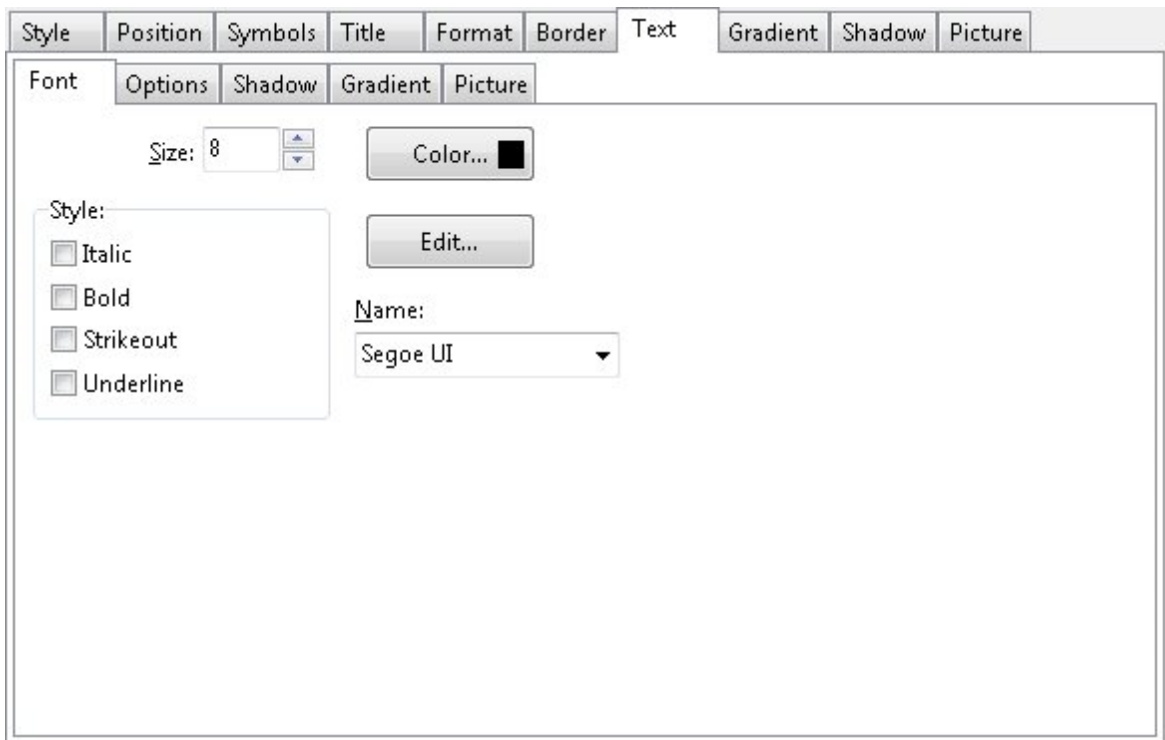
Frame - defines the frame type and color, using the [Border Editor](#)

Size - defines the size of the Legend Title

Round Frame - displays a rounded Legend Title frame

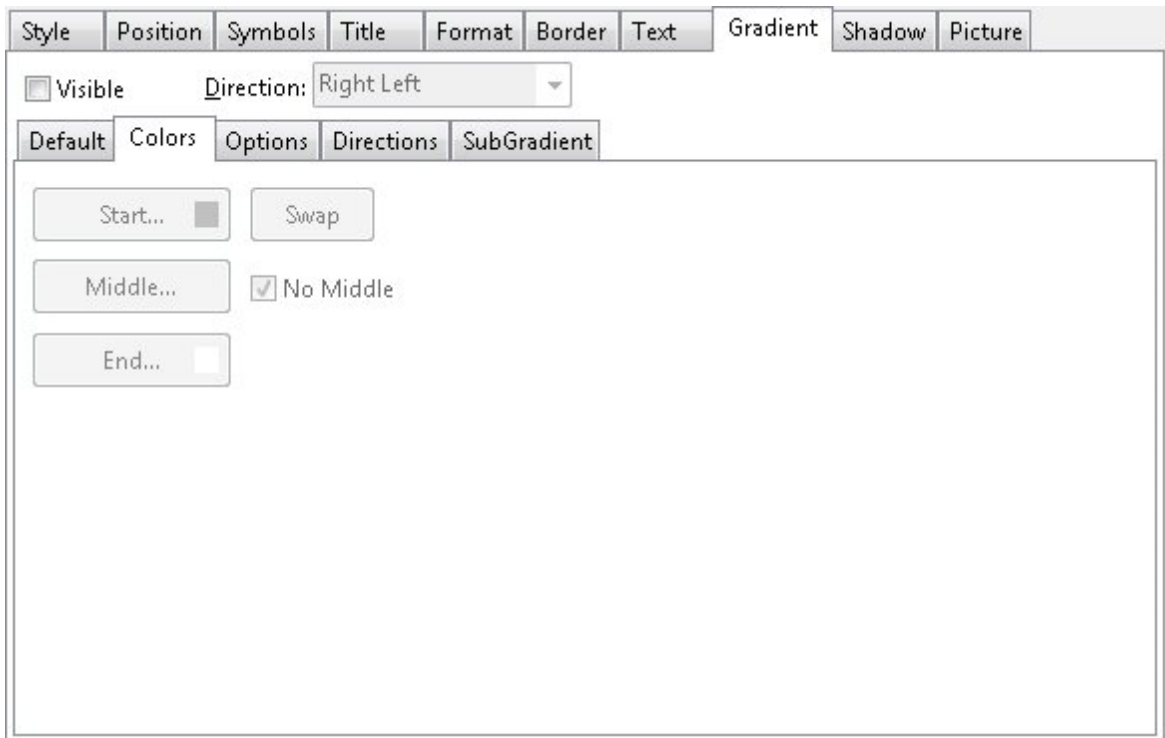
5.6.2.4.7 Text

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



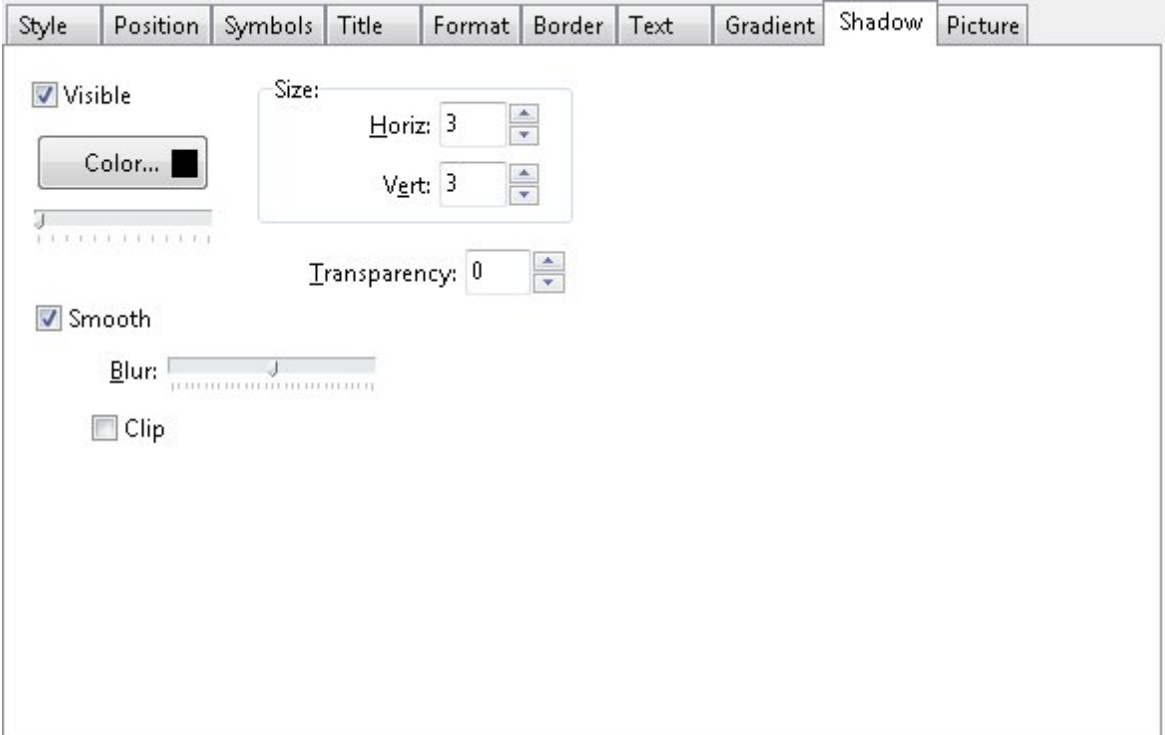
5.6.2.4.8 Gradient

Provides gradient properties for the Legend Title. Refer to the [Gradient Editor](#) for property descriptions.



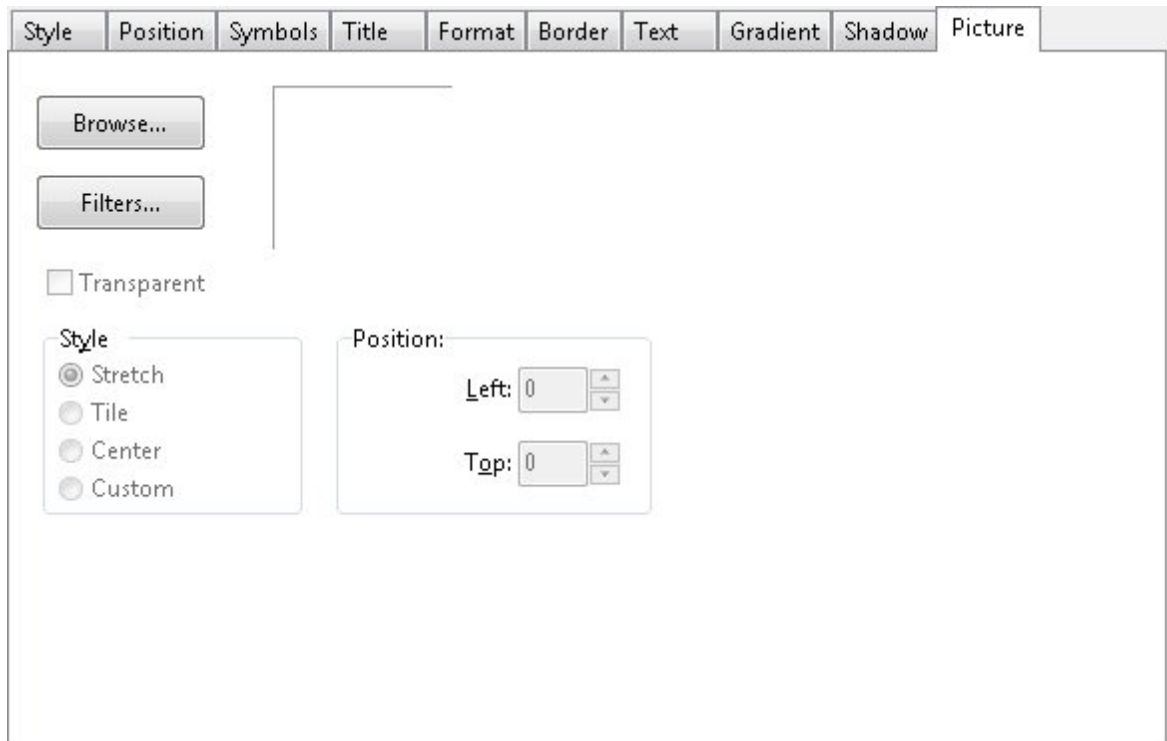
5.6.2.4.9 Shadow

Provides shadow properties for the Legend Title. Refer to the [Shadow Editor](#) for property descriptions.



5.6.2.4.10 Picture

Provides picture properties for the Legend Title.



Browse - selects an image from computer files to be displayed on the Chart Panel

Filters - applies filters to the added image

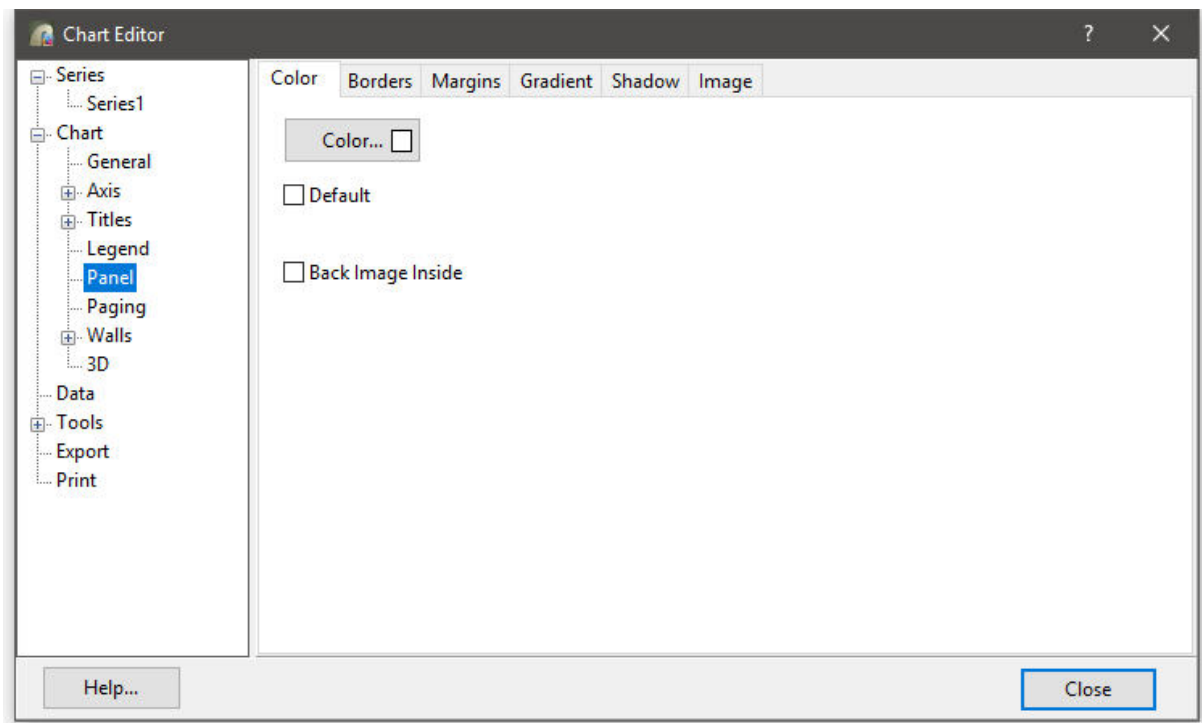
Transparent - sets the image back color as transparent

Style - adjusts the image to the Chart size

Position - adjusts the image position

5.6.2.5 Panel

The "Panel" tab alters the panel that the chart, legend, title, and axes values are placed on. The background color can be altered, or an image can even be added. Editing of the panel borders, along with gradient and shadowing are supported.



Color Tab

Color - displays a color palette to select the Chart Panel color

Default - displays the default background color

Back Image Inside - displays the image inside the Chart. Select the Image tab for image file properties.

Borders Tab

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

Border - defines the frame type and color, using the [Border Editor](#)

Round Border - sets the rounded edge of the border corners

Margins Tab

Provides margin properties for the panel.

Gradient Tab

Provides gradient properties for the panel. Refer to the [Gradient Editor](#) for property descriptions.

Shadow Tab

Provides shadow properties for the panel. Refer to the [Shadow Editor](#) for property descriptions.

Image Tab

Browse - selects an image from computer files to be displayed on the Chart Panel.

Filters - applies filters to the added image

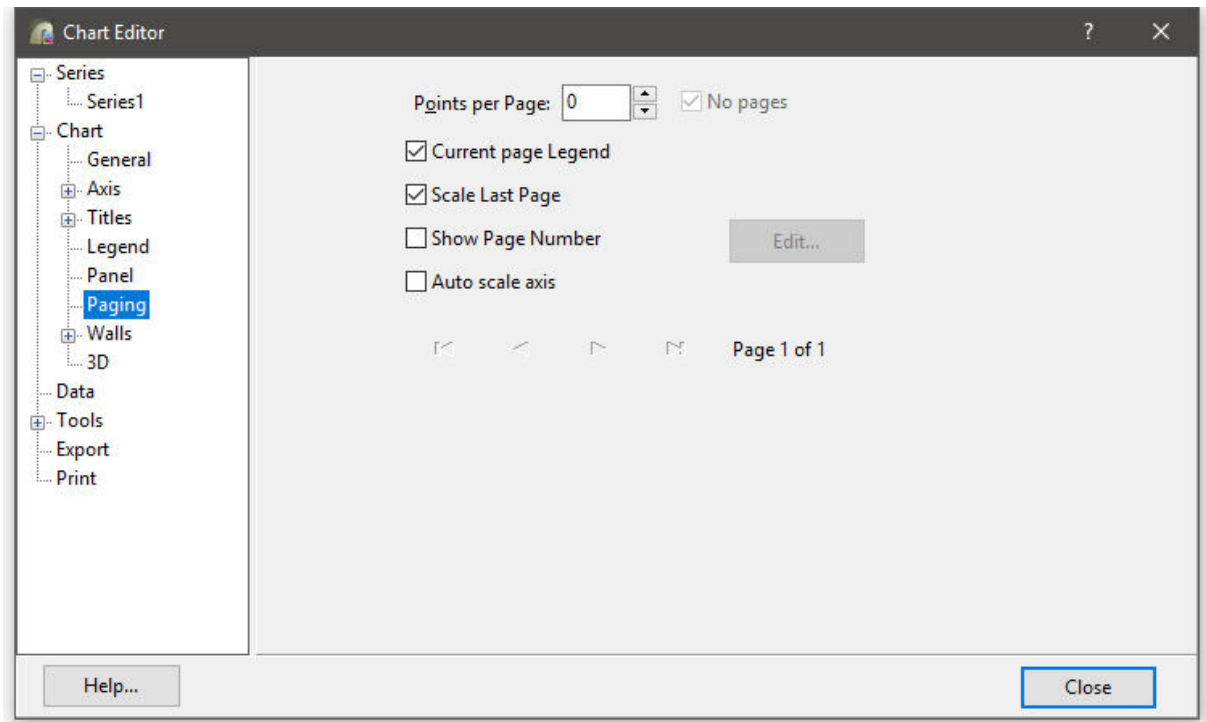
Transparent - sets the image back color as transparent

Style - adjusts the image to the Chart size

Position - Adjusts the image position

5.6.2.6 Paging

The "Paging" tab 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.

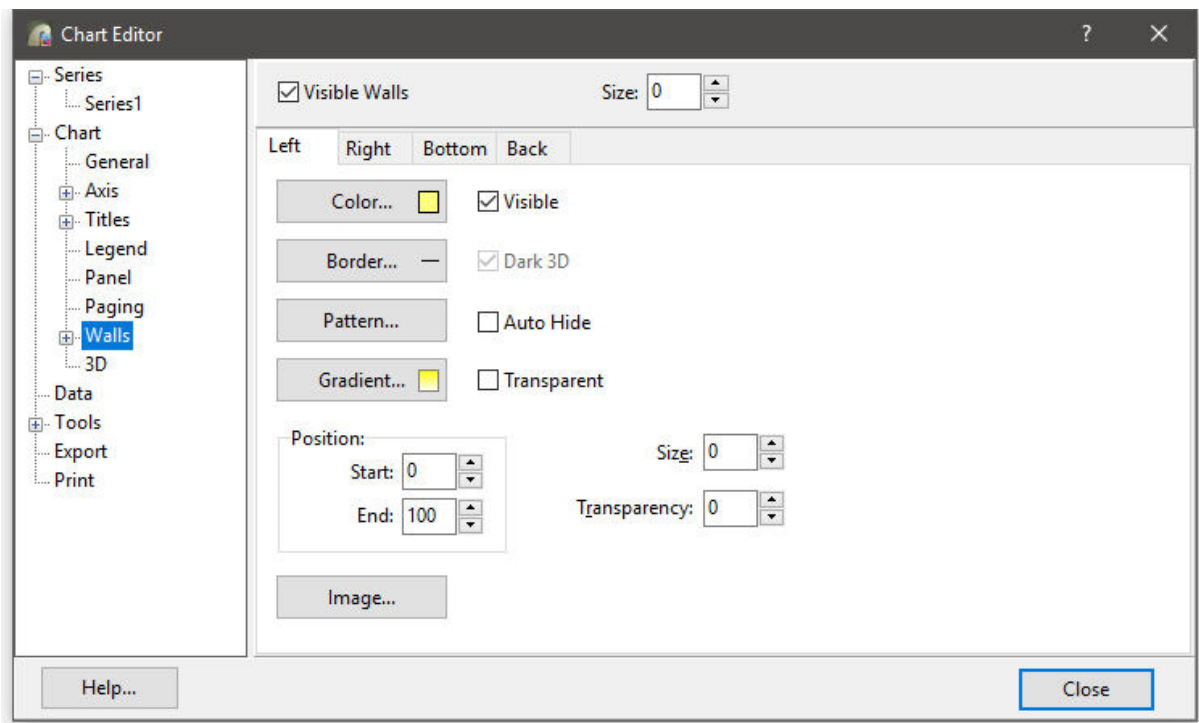
Show Page Number - determines whether or not the page number is displayed on the Panel

Edit - alters the page number display

Auto scale axis - automatically scales axis for defined page points

5.6.2.7 Walls

The "Walls" tab 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 of these tabs contains the following properties (some are specific to the selected wall).

Color - displays a color palette to define the Wall color

Border - defines the wall border using the [Border Editor](#)

Pattern - displays the the [Pattern Editor](#) to define the pattern type for the wall

Gradient - Provides gradient properties for the Wall. Refer to the [Gradient Editor](#) for property descriptions.

Visible - controls whether the Wall selected will be displayed or not

Dark 3D - colors the 3D Depth area of a wall a darker shade than the rest of it

Auto Hide - specifies if the wall is automatically hidden

Transparent - controls whether the Wall color or gradient will be displayed or not

Position - sets the start and end position for the wall

Size - defines the Wall thickness/size

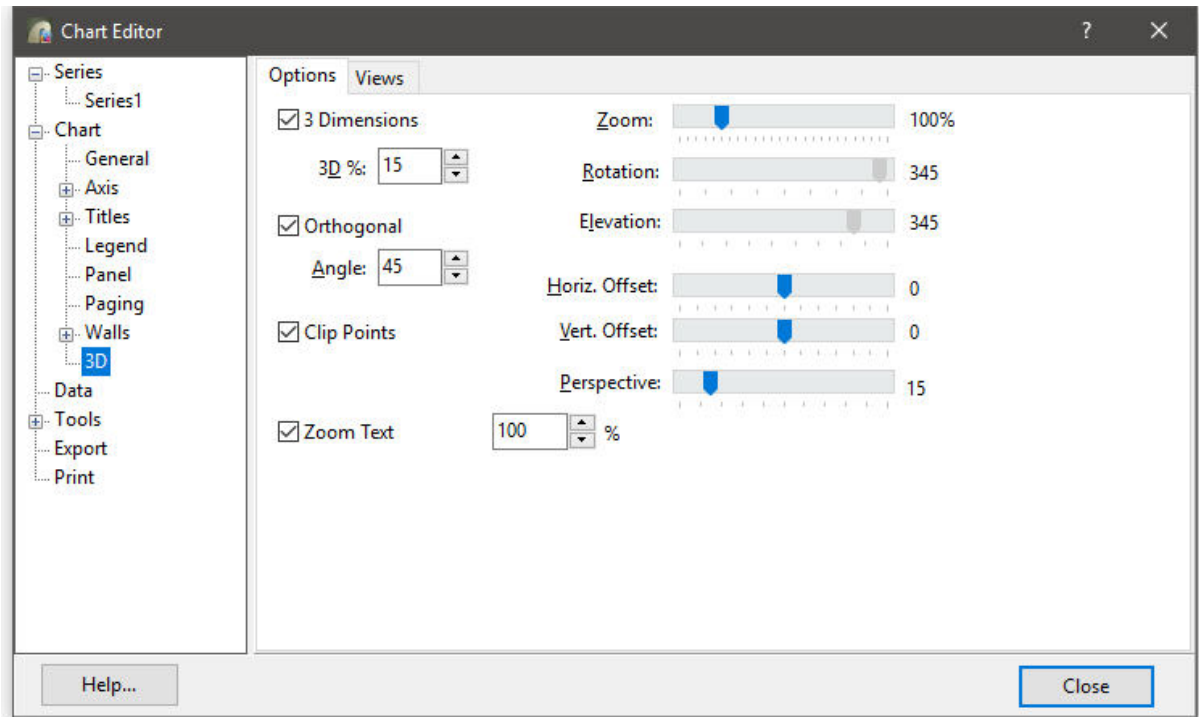
Transparency - specifies the transparency

Image - allows an image from computer files to be displayed, with optional filters, and transparency

Shadow - Provides shadow properties for the "Back" wall. Refer to the [Shadow Editor](#) for property descriptions.

5.6.2.8 3D

The "3D" tab alters the various 3-dimensional settings when using 3D charts.



Options Tab

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 360°.

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 360°.

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 Tab

Offers different 3-dimensional views for the chart

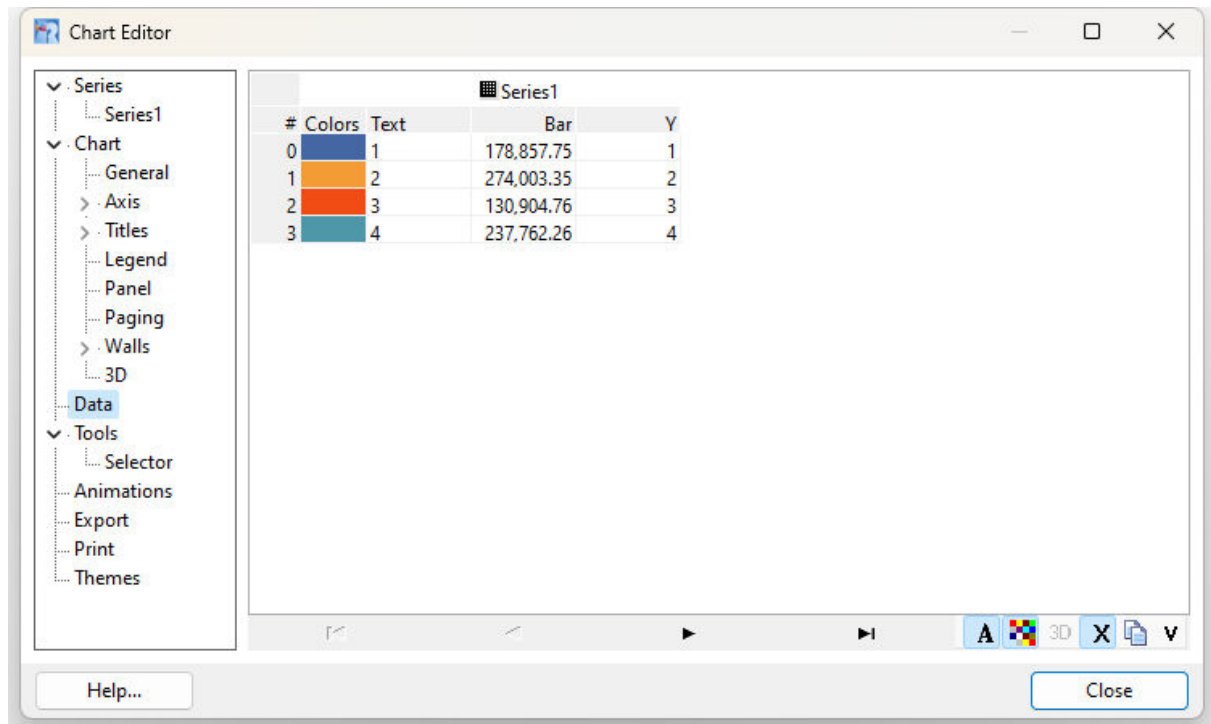
5.6.3 Data

The "Data" option displays the data values the chart is based upon. Each series is displayed. Each Series offers one or more values depending on the series style.

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.

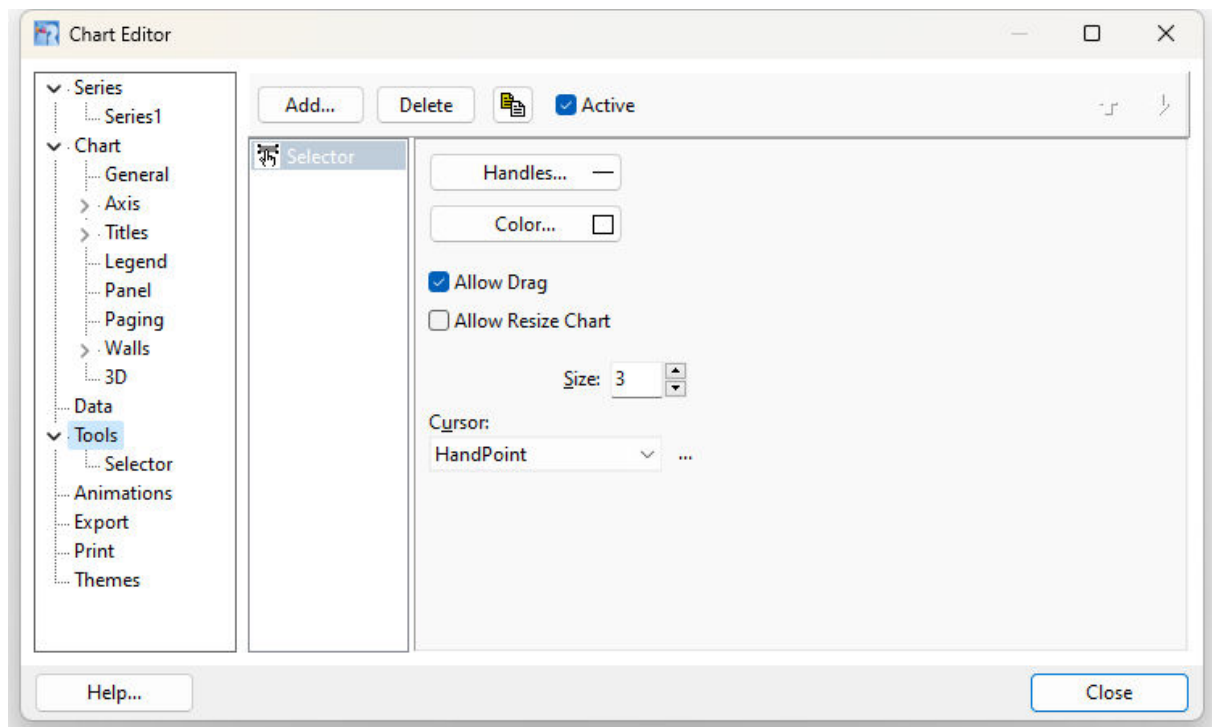
The buttons with arrows enable changing the selected cell.

The columns can be resized by clicking and dragging the line dividing the grid titles.



5.6.4 Tools

The Tools add additional functionality to a chart. Users will be able to modify properties specific to that Tool type from the Tools property list.



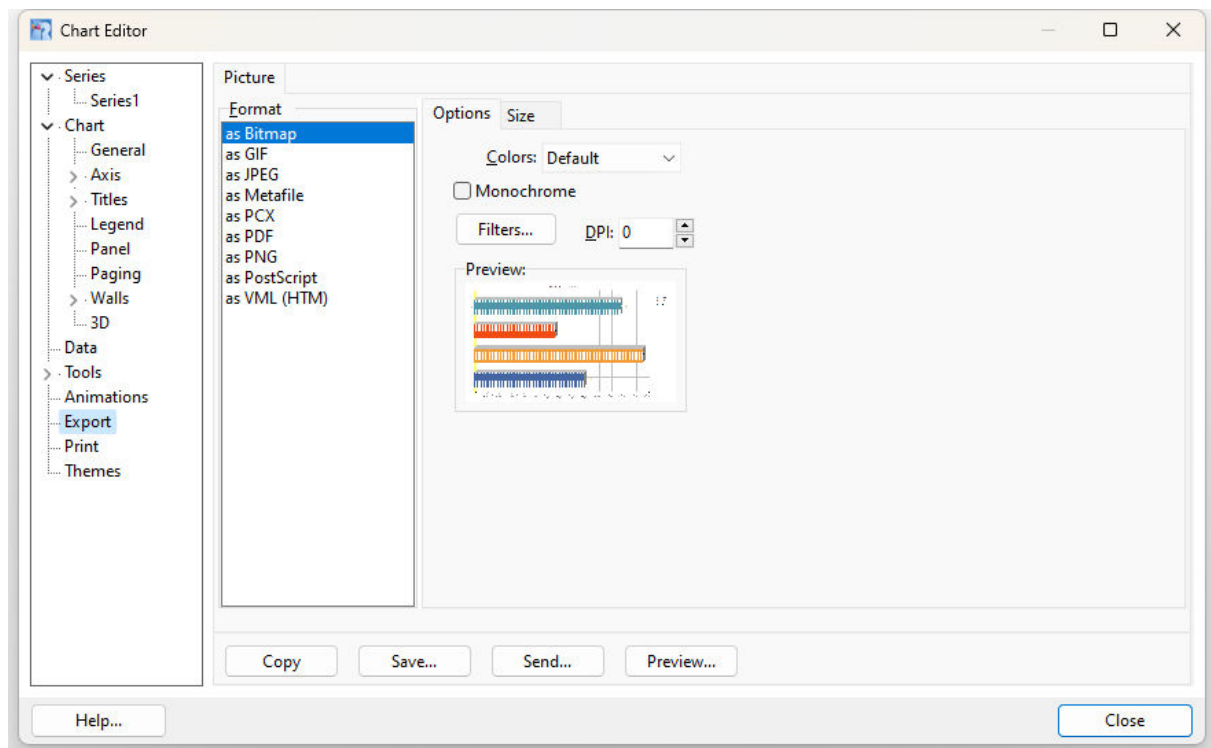
Add - adds a new tool to the chart

Delete - deletes the selected chart tool

Active - enables/disables the selected tool

5.6.5 Export

The "Export" tab 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, different "options" for each are available

Colors - specifies the color depth

Monochrome - specifies the chart output as monochrome

Filters - adds image filters to the chart output

Enhanced - converts the chart to an Enhanced metafile (EMF) instead of a normal metafile (WMF)

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

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

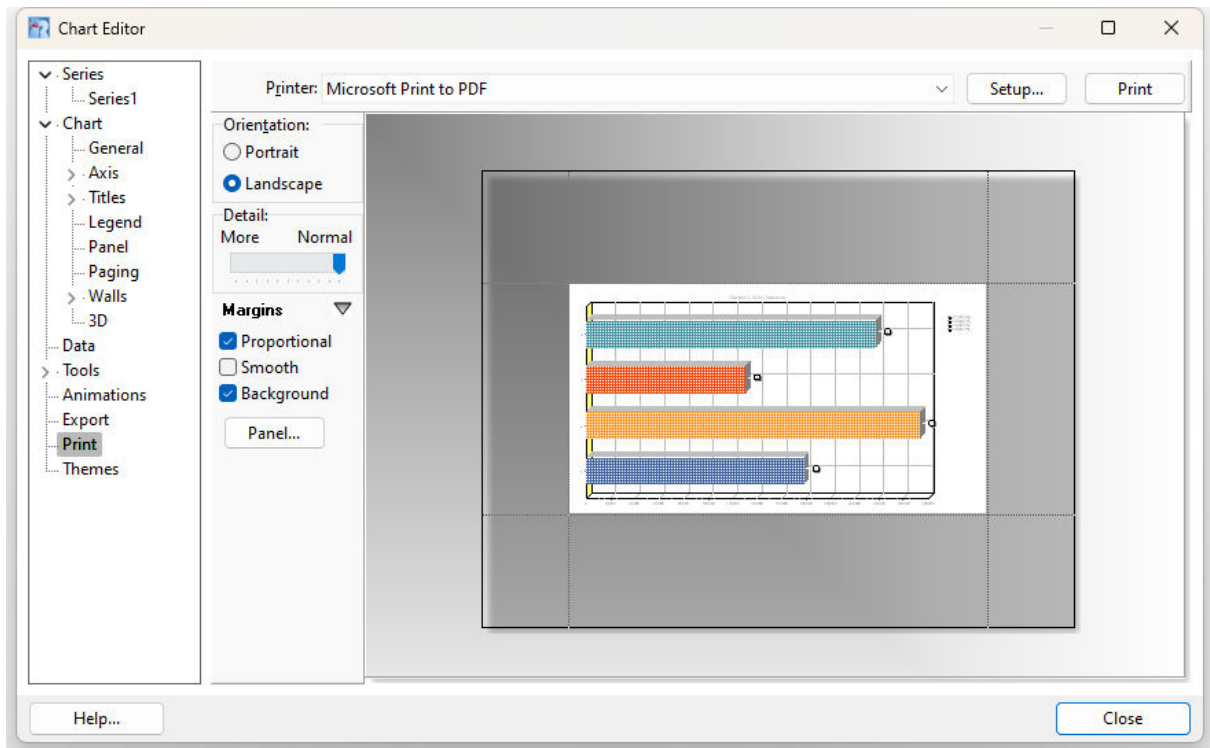
Send... - shows the dialog to send a file by email using your client email program. The chart picture or series data will be an attached file of the email.

5.6.6 Animations

Enter topic text here.

5.6.7 Print

The "Print" tab 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.

Orientation - specifies the printed page orientation: portrait or landscape

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.

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.

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

Setup... - defines the selected printer properties

Print - the page is sent to the printer

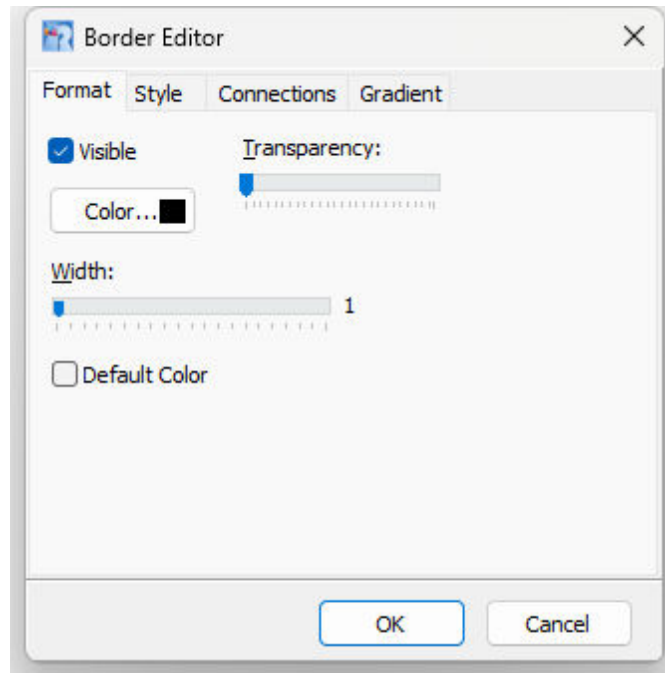
5.6.8 Themes

Enter topic text here.

5.7 Editors

5.7.1 Border Editor

The Border Editor is used to customize the pen used to draw borders around text, series marks, chart titles, etc. There are several different pen styles available.



Format

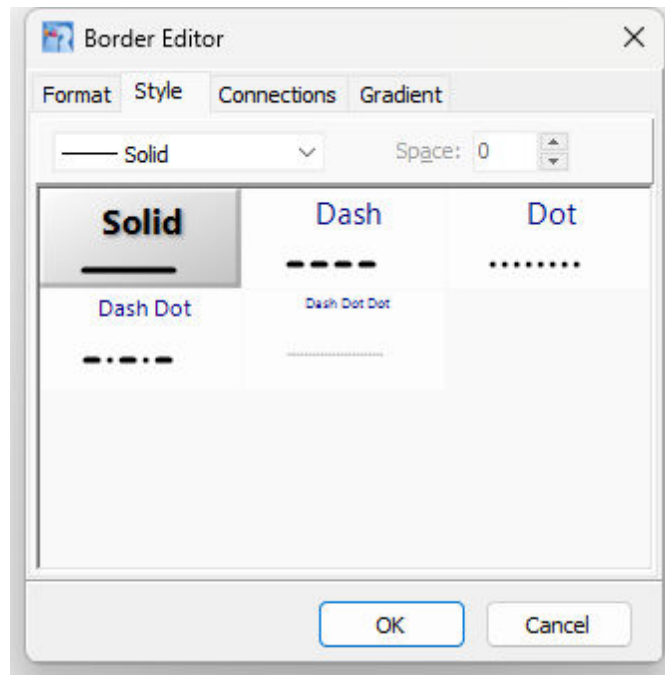
Visible - shows or hides the border

Color - specifies the color used to display the border using a color palette

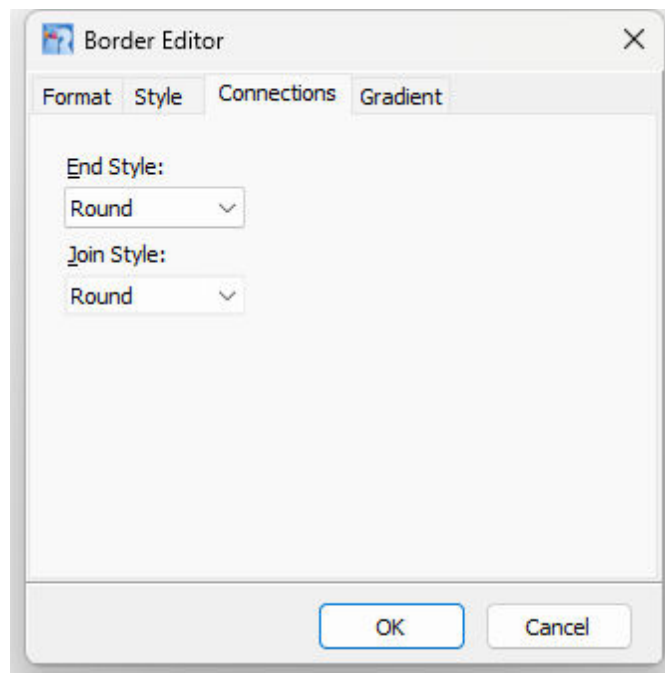
Width - specifies the pen width in pixels

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

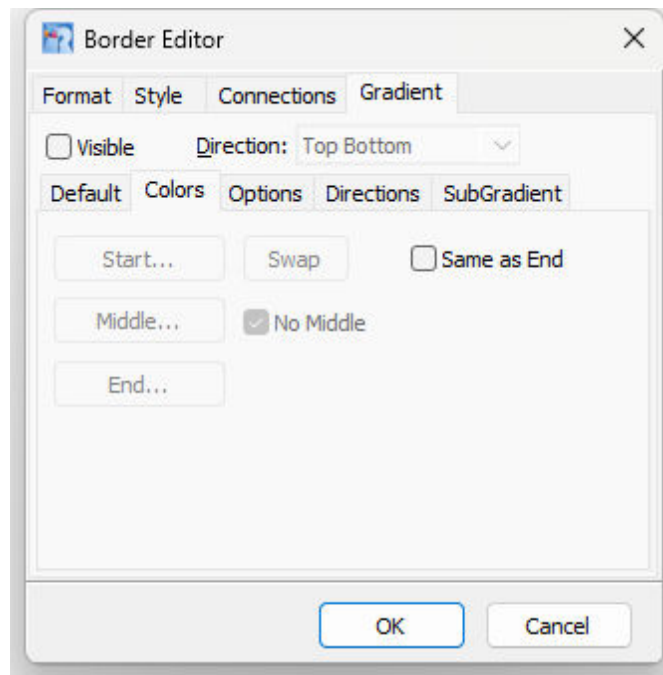


Connections

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

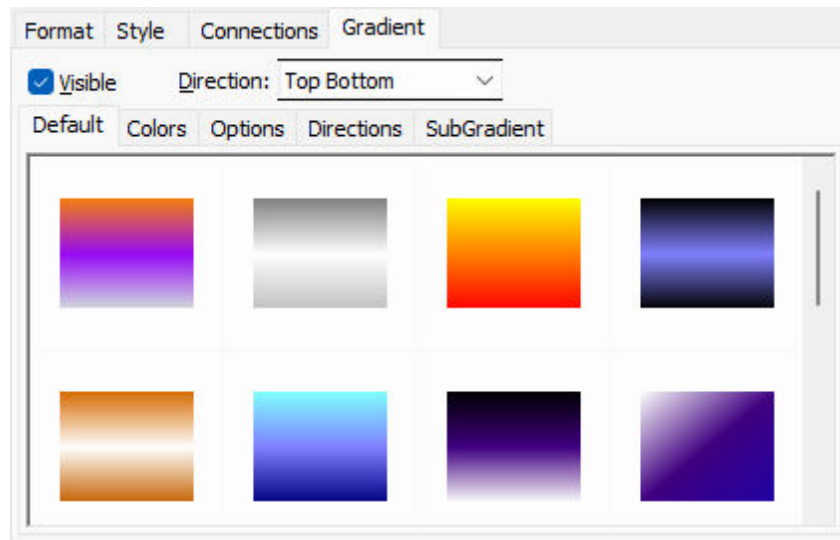
5.7.2 Gradient

The Gradient tab defines a gradient style (filled with multiple gradient colors). 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

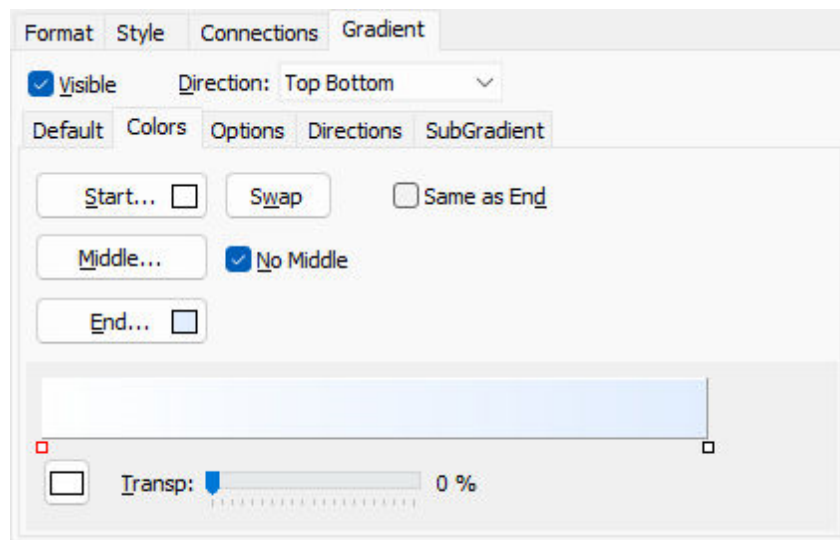
Start - specifies the start gradient color using a color palette

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

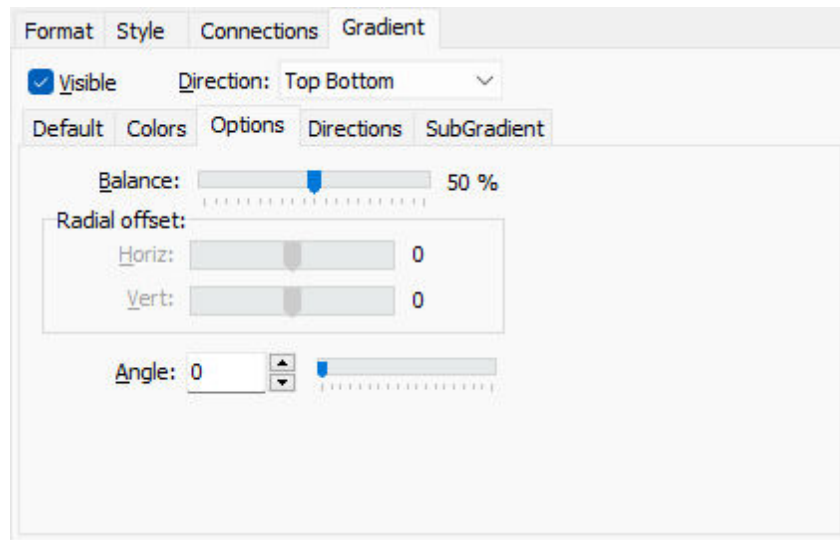


Options

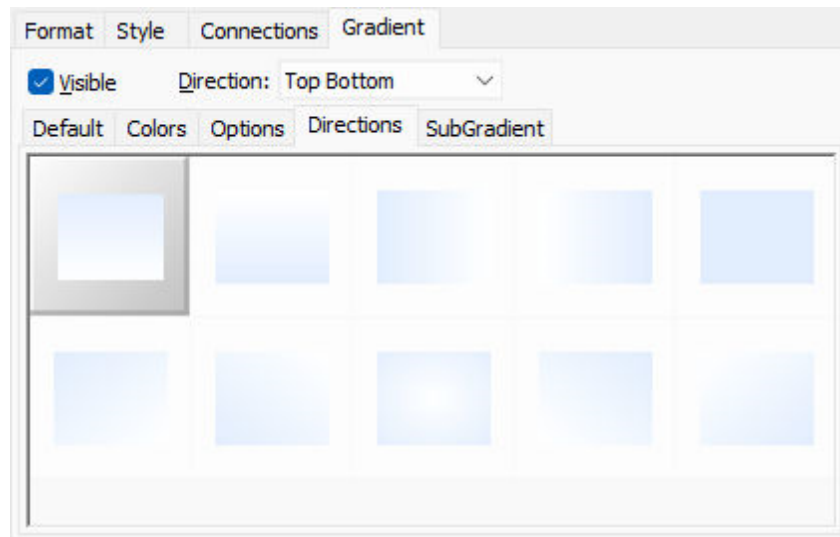
Balance - specifies the balance between the start and end gradients

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

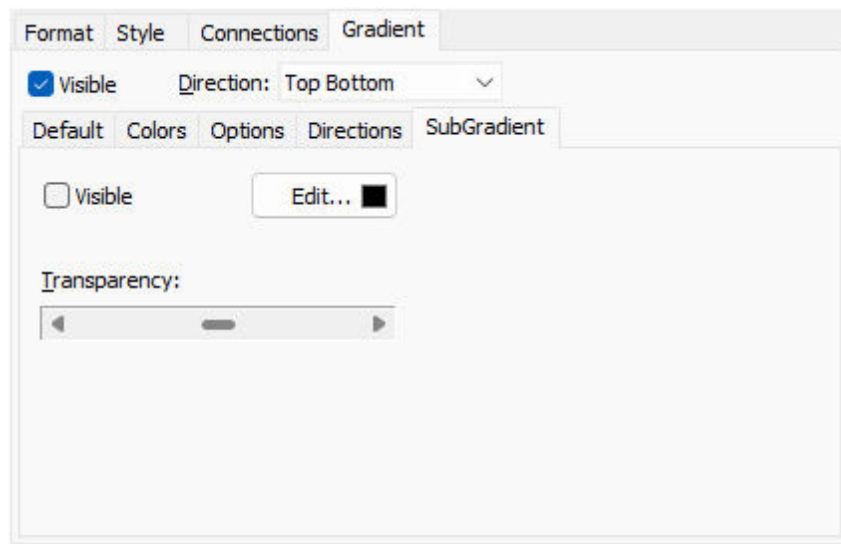


SubGradient

Visible - specifies if a SubGradient is displayed

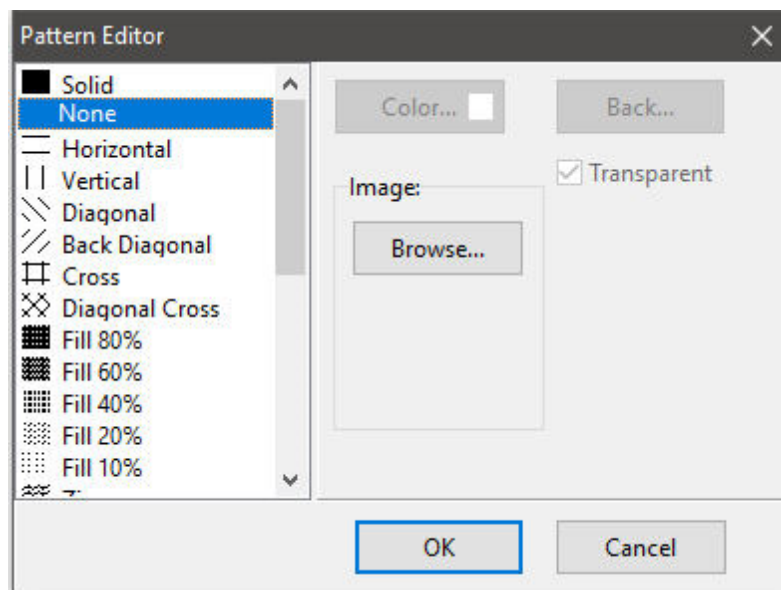
Edit - specifies the SubGradient color using a color palette

Transparency - specifies the SubGradient transparency



5.7.3 Pattern Editor

The Pattern Editor choose the pattern style for the selected chart part. Patterns fill the selected zones.



Style - lists pattern styles

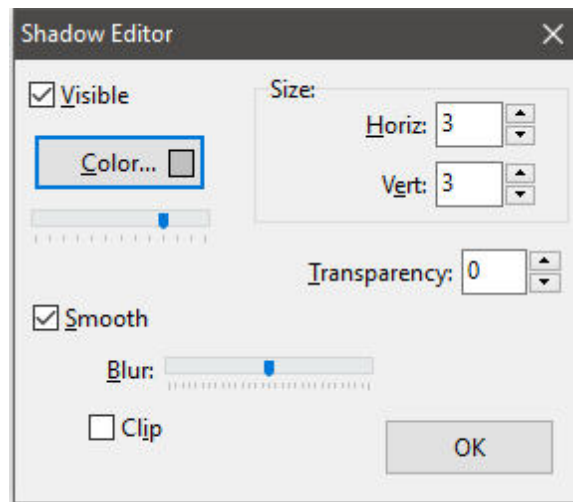
Color - specifies the pattern color

Image - 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 BMP (Windows Bitmap) format.

5.7.4 Shadow Editor

The Shadow Editor is used to customize the show properties when added to a series.



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

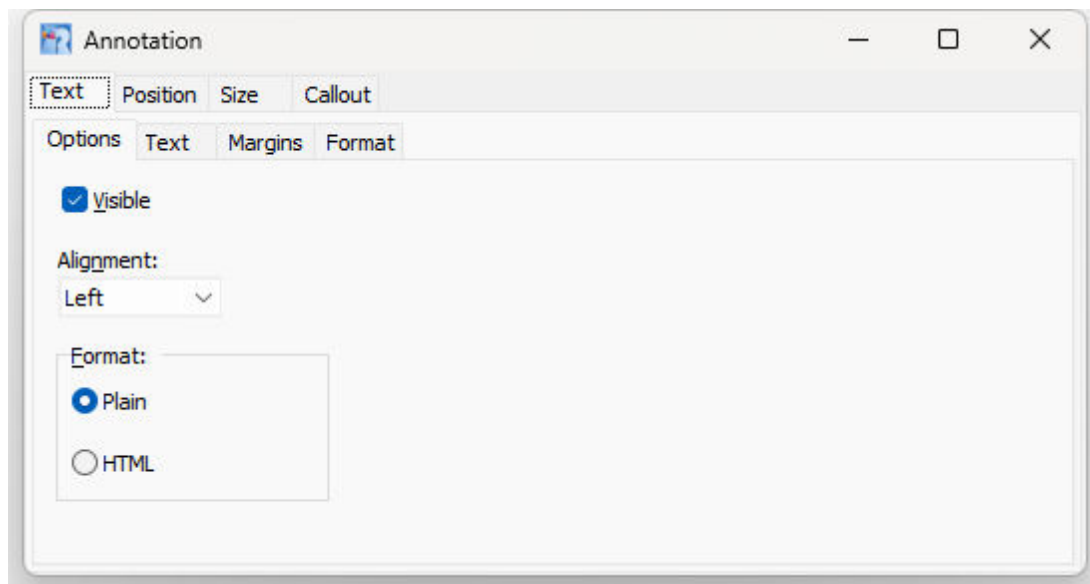
Smooth - specifies if the shadow edge is defined or fades away

Blur - specifies the blur distance for the shadow edge

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

5.8 Annotation

Annotations can be added to charts to display an explanation or comment.

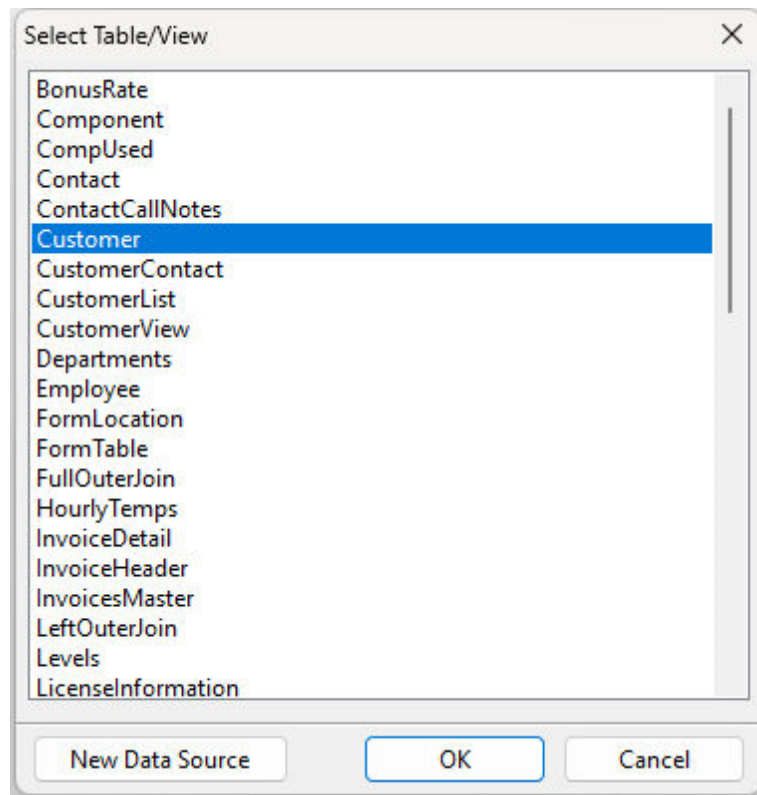


5.9 Dynamic Data Source

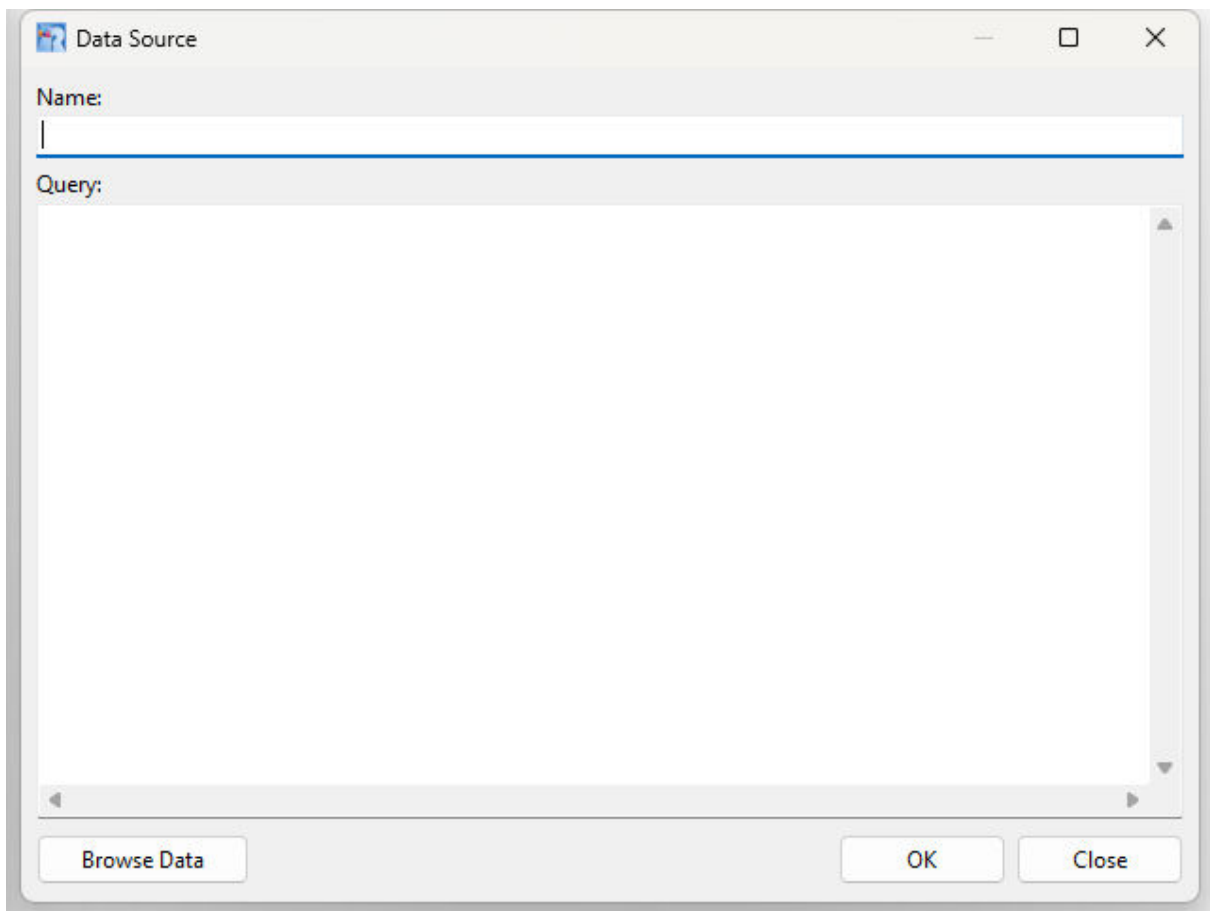
Data Sources in R:Charts can now be treated dynamically to work like the regular table and view sources. A data source contains a Name and Query component.

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 be edited in an internal Data Browser. Changes within the R:Charts Data Browser are live, and reflected upon the actual R:BASE database.

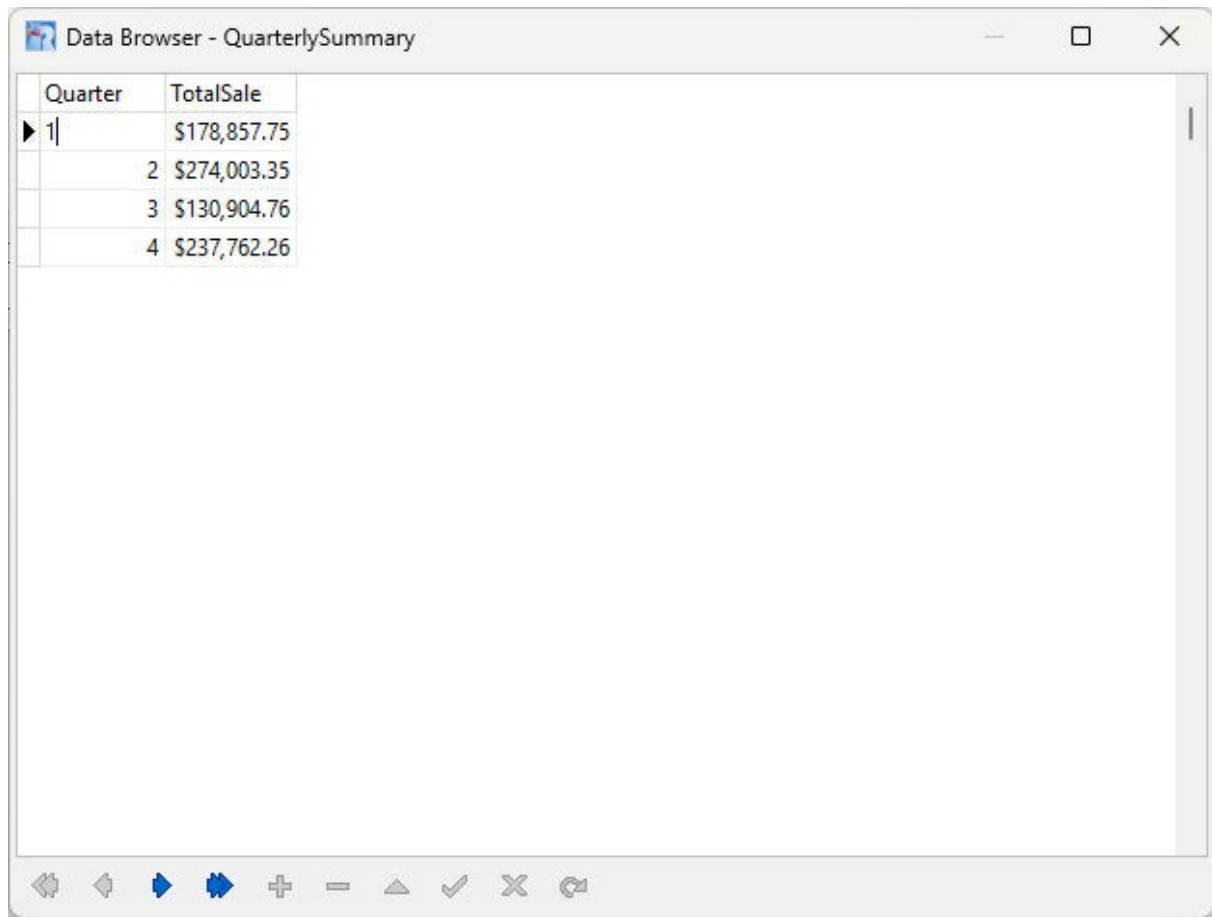
To add a dynamic data source click the "Add Data Source" button on the [Chart toolbar](#) and select the "New Data Source" button at the bottom of the dialog.



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.

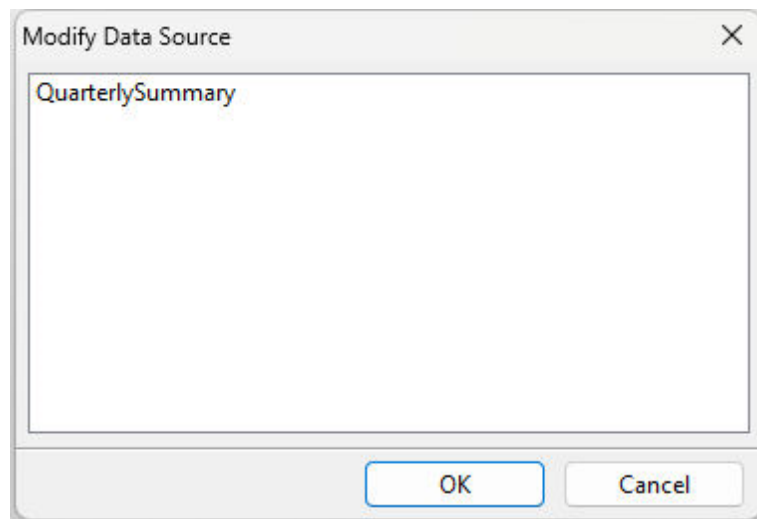


The screenshot shows a window titled "Data Browser - QuarterlySummary". Inside the window is a table with two columns: "Quarter" and "TotalSale". The first row is selected, indicated by a mouse cursor and a blue highlight. The data in the table is as follows:

Quarter	TotalSale
1	\$178,857.75
2	\$274,003.35
3	\$130,904.76
4	\$237,762.26

At the bottom of the window is a toolbar with several icons: a left arrow, a right arrow, a double left arrow, a double right arrow, a plus sign, a minus sign, a triangle pointing up, a checkmark, an 'X', and a refresh icon.

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.

5.10 On Before Design EEP

An "On Before Design EEP" is 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.

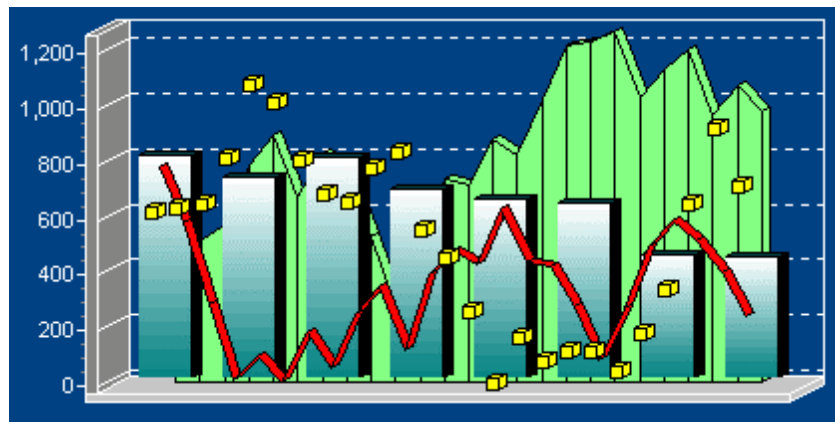
An additional EEP button is also available to edits the "On Before Design EEP", without opening the chart file (rbc) in cases where creating global variables are required in order to open the chart file correctly.

Both EEPs are available on the [Chart Toolbar](#).

5.11 Combining Series

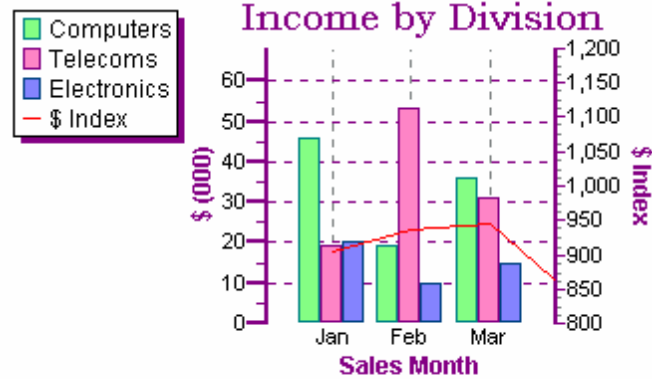
There is no practical limit to the number of [Series](#) that you can add concurrently to your Chart. You may mix different Series types, almost any Series type with any other Series type. [Functions](#) may also be added to a Series. For certain combinations it is not practical as axis definition between 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.

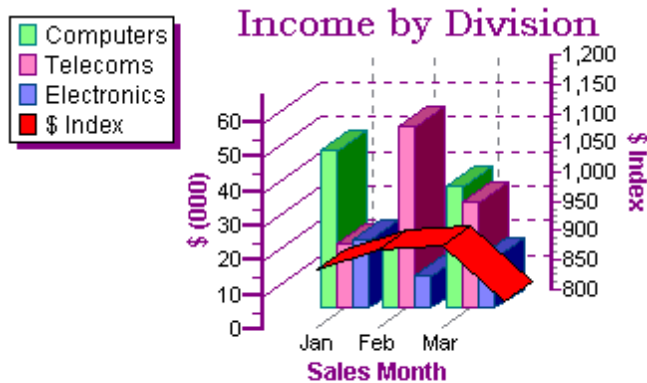


Example Series combination

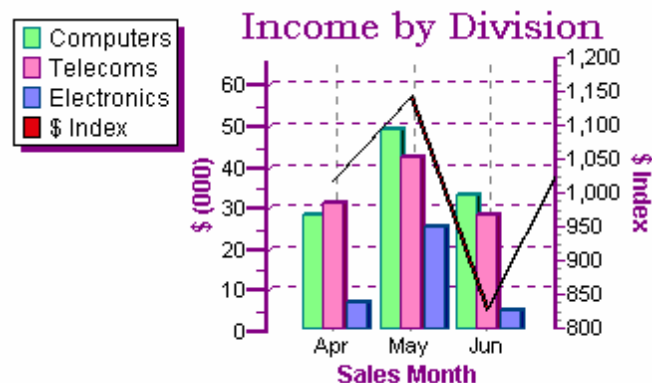
Combining Series types in one Chart can add a great deal of information value. The following example shows the incomes by Division and puts the \$ index in the same Chart to measure the effect of that external influence on incomes.



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.

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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
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. <i>Tahoma,12,Bold+Italics</i>	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. <i>Tahoma,12,Bold+Italics</i>	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. <i>Tahoma,12,Bold+Italics</i>	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 FactsTheme RandomTheme OperaTheme	Specifies the chart theme
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.

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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

```

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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/>

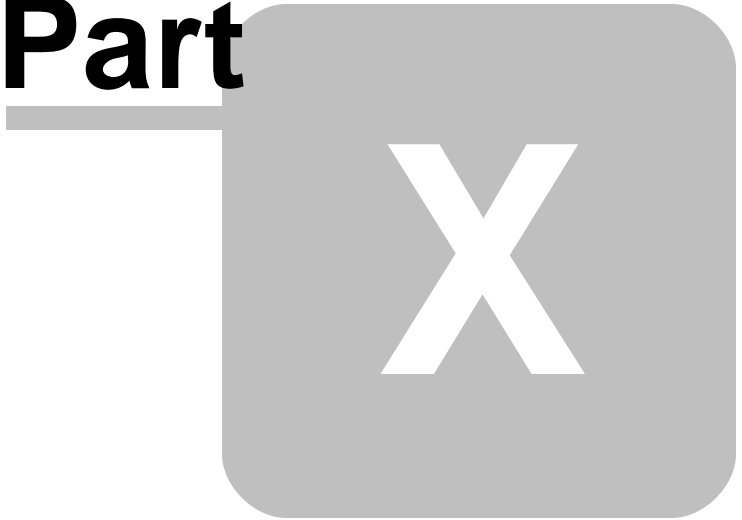
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9 Useful Resources

- . 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>

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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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