



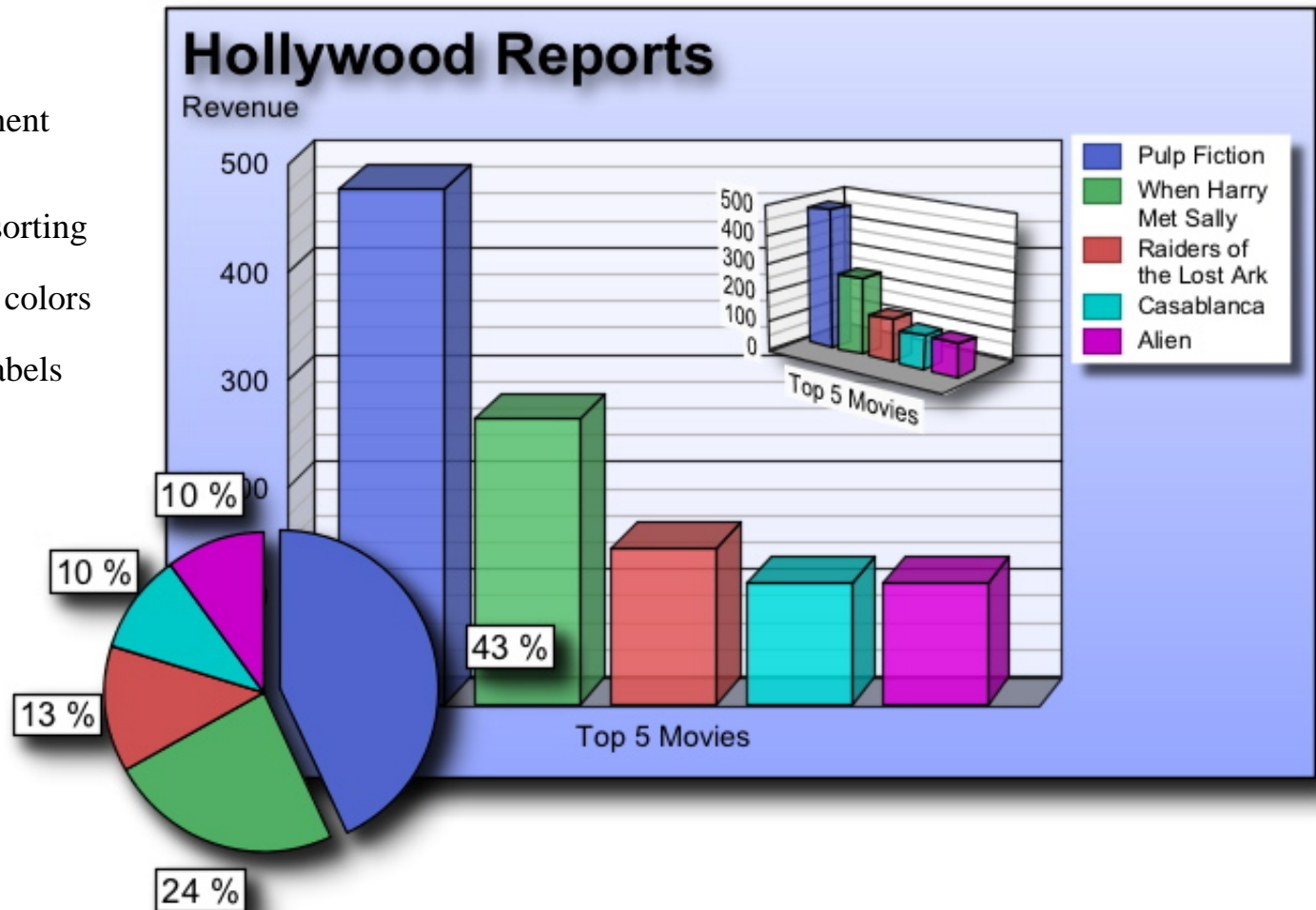
Graphing

ReportMill Graphing User Guide

This document describes ReportMill's graph component.
Graphs are the best way to present data visually.

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★ Graphing

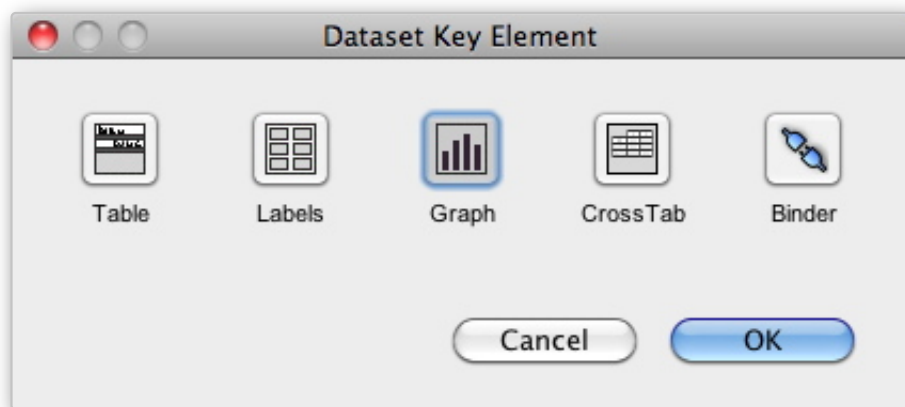
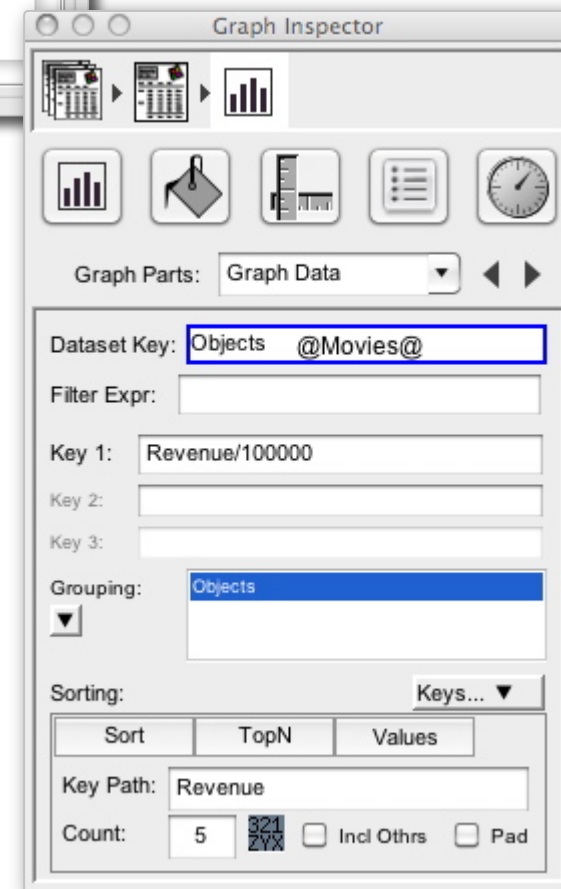
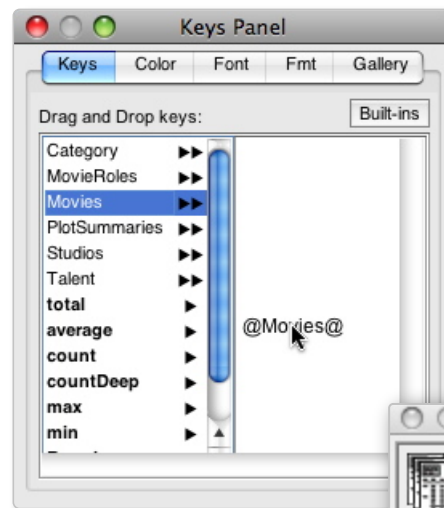
Creating a Graph Component

Method 1: Drag a Dataset Key from Keys Panel

Graphs are created the same way as tables and crosstabs - you simply drag and drop a "dataset key" into the document and select the Graph component. A dataset key is a key that represents a list of objects and is rendered in the keys browser with a double arrow.

Method 2: Click the "Add Graph" button in the tool bar

The second option works even if a data source hasn't been provided: simply click the add Graph button from the list of tools at the top of the open document. The first field in the graph inspector is for the dataset key. You can type one in, or drag one down from the Keys Panel (this would be equivalent to method one).



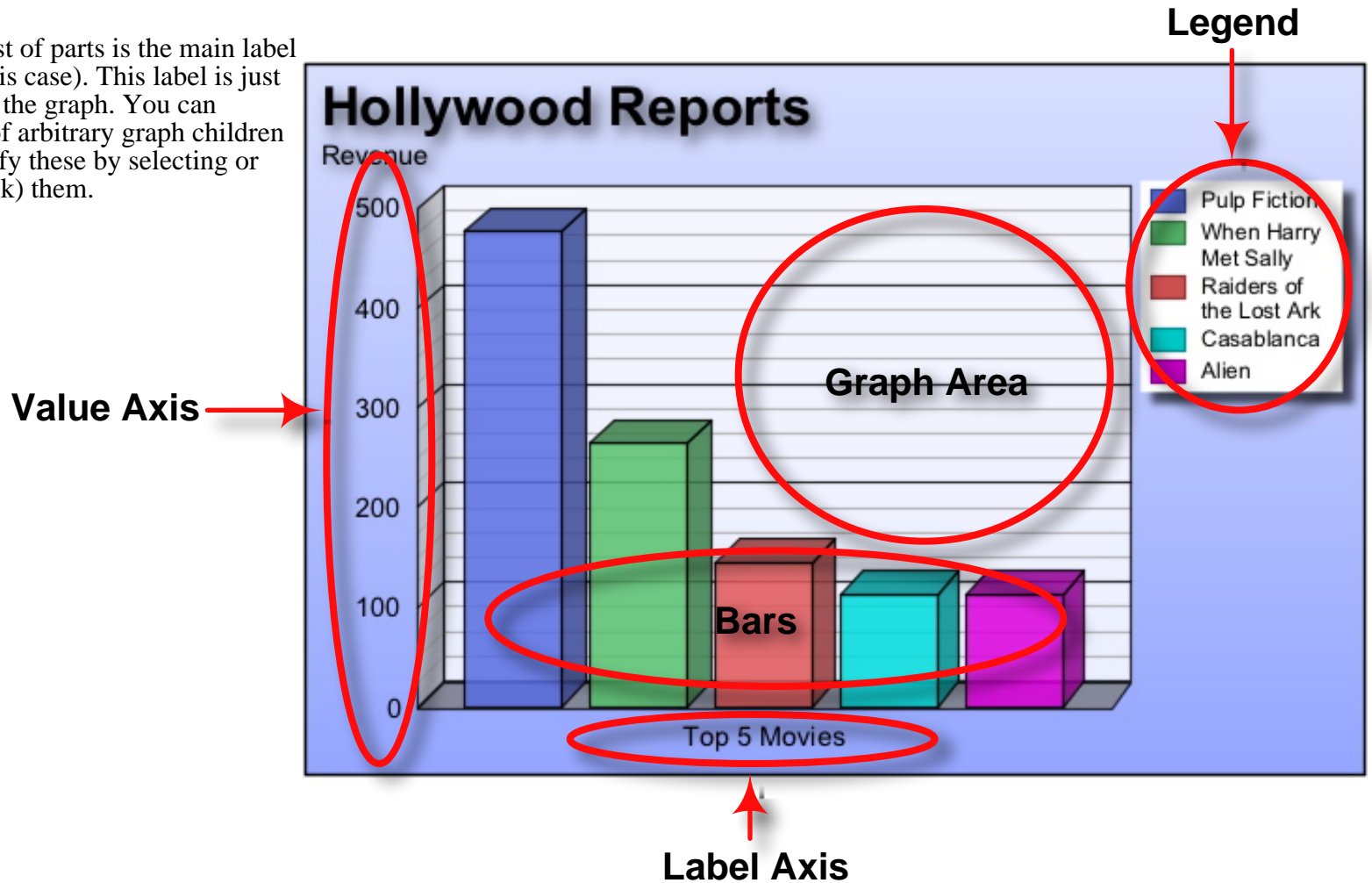


Graphing

Graph Parts

A graph is made up of a number of parts: Graph Area, Value Axis, Label Axis, Bars, Legend. Attributes for each part can be configured in their respective inspectors.

The one exception to this list of parts is the main label ("Hollywood Reports" in this case). This label is just a text field that is a child of the graph. You can manually add any number of arbitrary graph children like this one. You can modify these by selecting or super-selecting (double-click) them.





Graphing

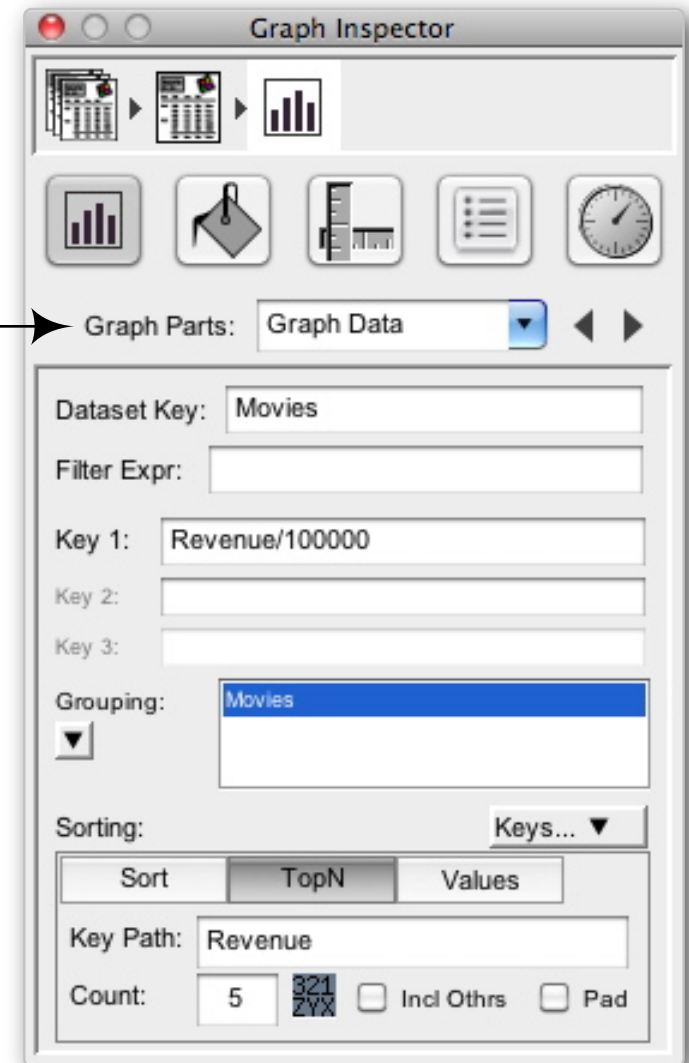
Master Graph Inspector

The graph inspector is really a collection of embedded inspectors, each allowing you to configure attributes of the different graph parts. These inspectors are all available from the pick list at the top of the inspector. You can also cycle through them using the navigation buttons to the right of the pick list.

The separate inspectors are:

- Graph Data: For setting keys, sorting and grouping
- Graph Area: For setting graph type, layout, colors, 3D rendering
- Value Axis: For setting attributes of the axis that shows key values
- Labels: For setting attributes of the axis that shows sections and items
- Bar/Wedge: For setting attributes of individual bars (or Pie wedges)
- Legend: For setting attributes of the legend
- Series 1,2,...: For setting attributes of each series (key)
- 3D: For setting attributes of 3D

Graph Parts
Pick List





Graphing

Graph Data Inspector

This inspector is used to define the dataset, set graph keys and configure grouping and sorting.

Dataset Key

This field sets the key used to retrieve the dataset, which should typically be in the form of a List of objects. In the figure shown here, the dataset has a List of Movie objects. You might also try a simple key defining static data, like: "list(1,2,3)" (with a graph key of "this").

Filter Expression

The filter expression field lets you set an optional key to be evaluated against the retrieved dataset objects, where only the objects that satisfy that expression are included. So if this is set to "Revenue>1000000", we'll only get the movies that made more than a million in revenue.

Key 1, 2, ...:

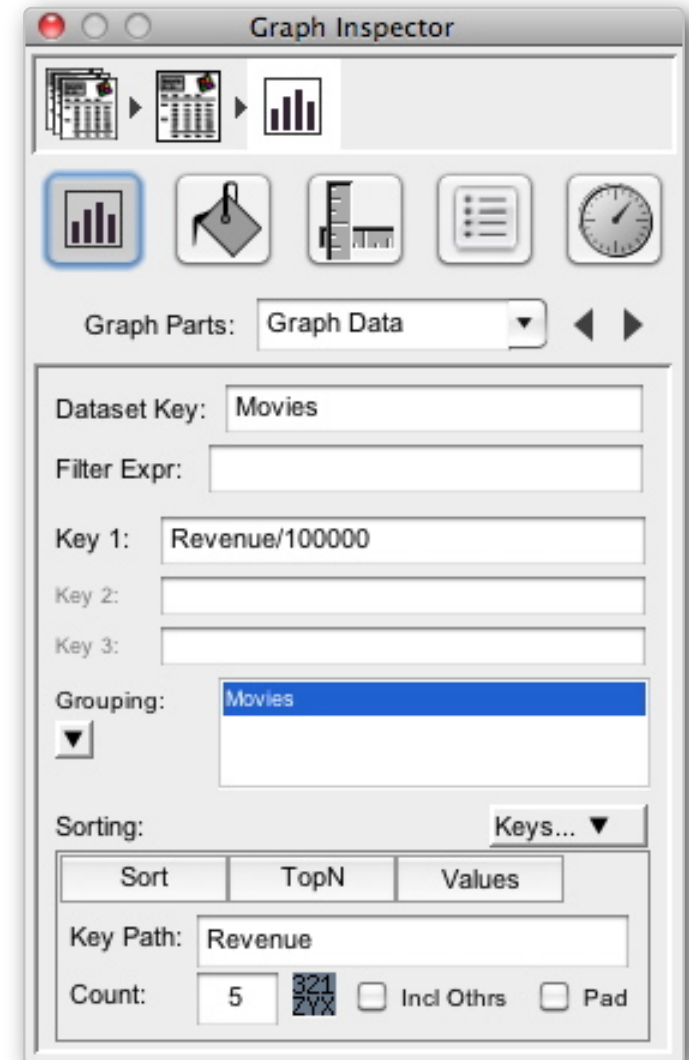
The key fields let you set key(s) to be evaluated against the dataset objects. The resulting values are what form the graph. Each defined key results in a new "Series". You'll notice a new "Series X" Inspector is added for each key that is set.

Grouping List

Dataset objects can be grouped by keys added using the grouping list. This is a rare need, but an example would be to group our Movies by "Rating" or "Revenue". Once the dataset is configured to group, probably the only useful keys will be aggregate keys, like "count". For our Movies example grouped by "Rating" with key "count", we would see a graph with a bar for each Rating showing the number of movies for that rating.

Sorting Controls

The sorting controls either let you set a simple sort, based on a list of keys dragged in, or a Top N sort based on a given key, or a values sort, based on actual entries.





Graphing

Graph Area Inspector

This inspector is used to set the graph type, layout, colors and 3D.

Graph Type

The first row of icons in this inspector lets you select the graph type. From left-to-right: Bar, Horizontal Bar, Area, Line, Scatter and Pie.

Layout

Layout determines how graph key values are presented and arranged into graph sections.

Series: A graph series is a list of dataset values for a given key. If series are "Separated", then each series gets its own section. If series are "Merged", then there is a section for each dataset object, made up of items for each graph key.

Section: A graph section is a part of the graph with a group of values. If "Merged", then there is a section for each dataset object, containing a value for each graph key. If "Separated", then there is a section for each series. Section values are rendered in the same color.

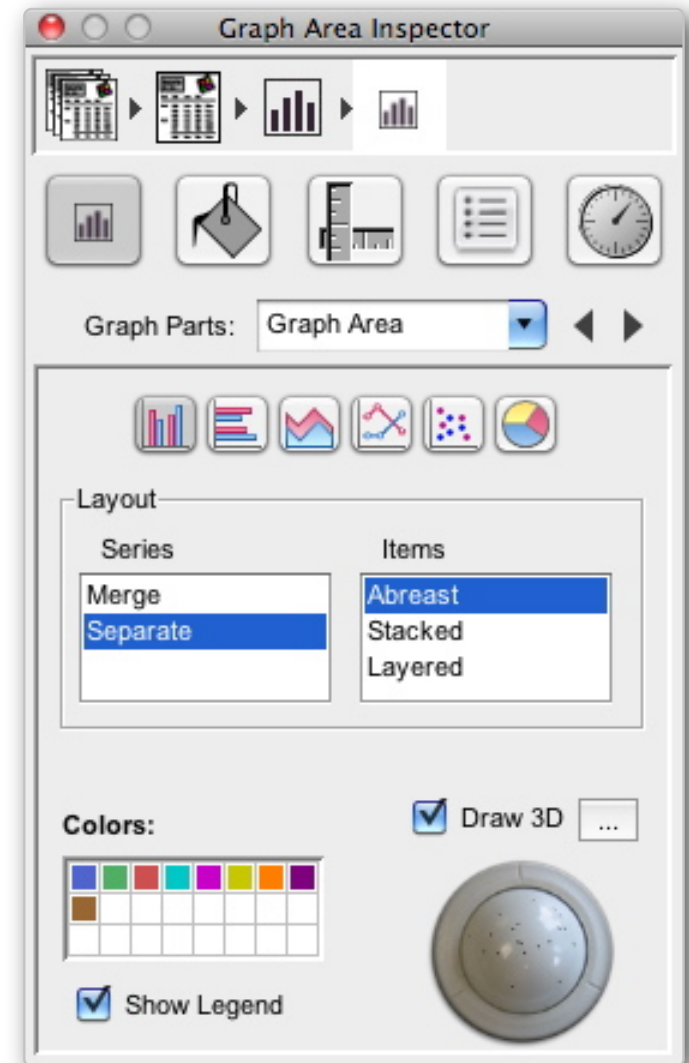
Items: In a given section, items can be arranged side-by-side (abreast), stacked or layered (mostly useful for 3D graphs).

Colors

The color dock lets you set the colors used for each section. Trailing white colors are ignored, so if you want a set of colors to repeat, drag white color swatches on top of trailing color values that are unwanted. Click on a color swatch to select it (and show the color panel).

3D

Basic 3D settings are also found in the Graph Area Inspector. Turn 3D on/off or drag the trackball to change camera angle. Click the "..." button to get advanced 3D control.





Graphing

Graph Value Axis Inspector

This inspector is used to set attributes of the graph Value Axis - the axis that measures the graph values. When this inspector is visible and selected, any shape attributes that are shown or changed correspond to the Value Axis labels. So if you choose a new color, stroke, font or text color, the resulting axis labels are shown with these attributes.

Show Axis Labels

This switch configures whether the graph has the labels that appear at intervals along the Value Axis (and are used to measure the axis).

Show Major Grid Lines

This switch determines whether the graph draws lines across the graph at major intervals along the Value Axis (and perpendicular to it). There are usually 5 of these, unless it has been manually set with the Count spinner described below.

Show Minor Grid Lines

This switch determines whether the graph draws lines across the graph at intervals between the major grid lines. There are usually 1, 2 or 3 of these, depending on the space available.

Rotation

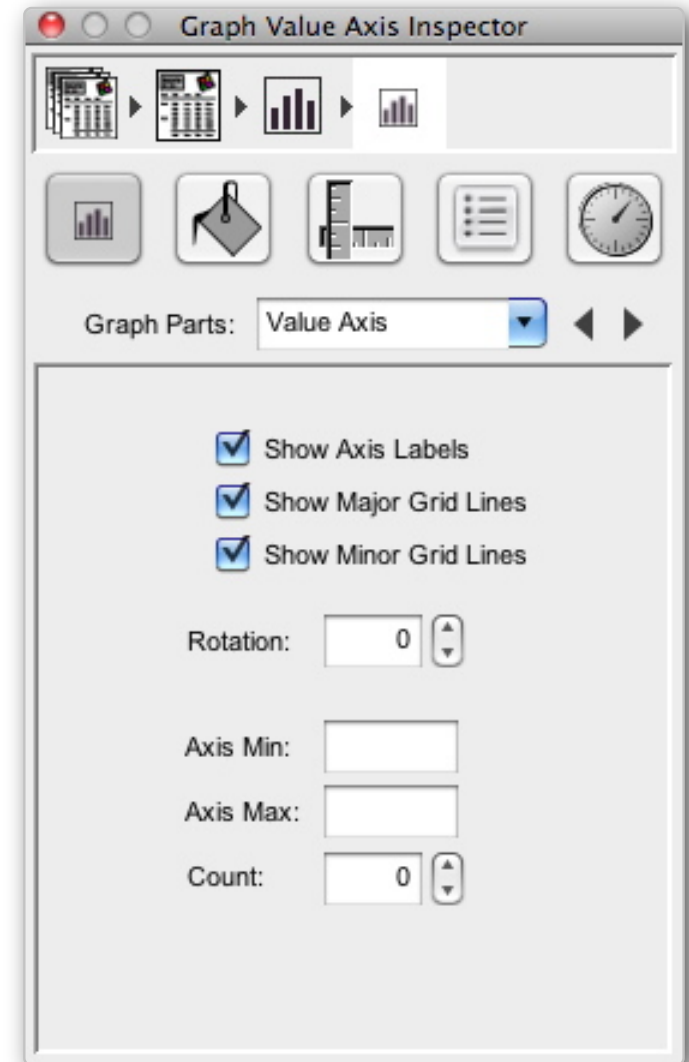
Determines at what angle the Value Axis labels are displayed.

Axis Min/Max

These values are generally calculated to best fit the extents of the given graph values. They can be set to ensure a specified axis range if it is known ahead of time. Simply clear these fields to go back to the auto-calculated values.

Count

This spinner control configures how many intervals should be represented by the Value Axis. Reset to zero to have this be auto-calculated.





Graphing

Graph Label Axis Inspector

This inspector is used to set attributes of the graph Label Axis - the axis that shows the items (as opposed to their values). When this inspector is visible and selected, any shape attributes shown or changed correspond to the Label Axis labels. So if you choose a new color, stroke, font or text color, the resulting axis labels are shown with these attributes.

Show Axis Labels

This switch configures whether the graph has labels that appear at the base of the bars.

Show Grid Lines

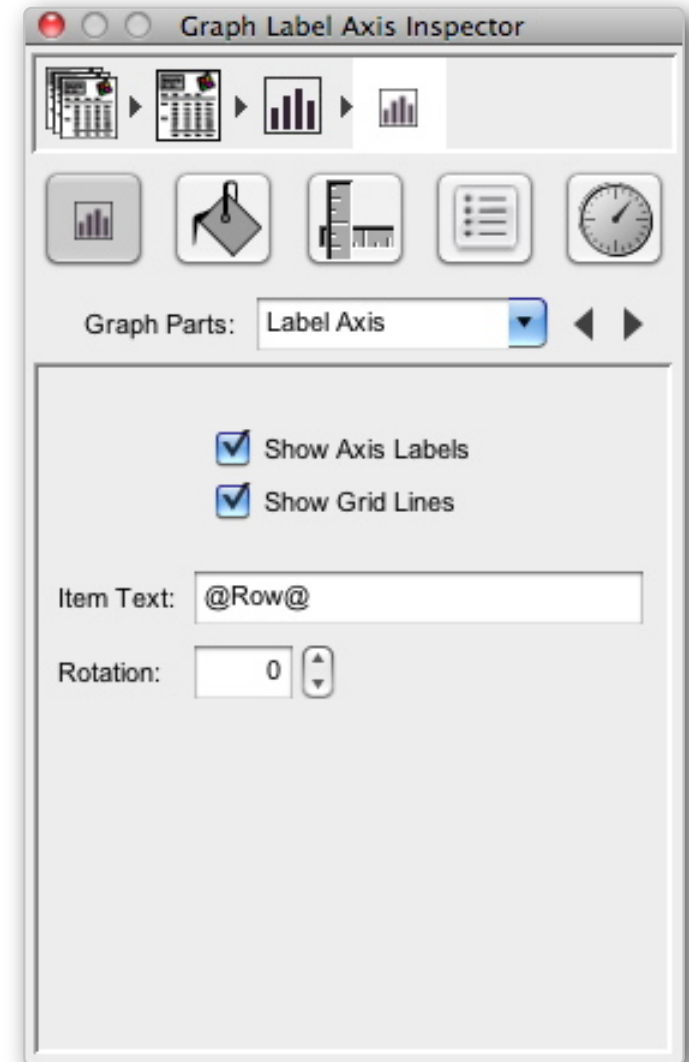
This switch determines whether the graph draws lines between graph sections (assuming there are multiple keys or graph layout has series "Merged").

Item Text

This text is displayed at the base of the graph, one for each section. This text can either be static (like "Series Values") or a key that is evaluated for each section.

Rotation

Determines at what angle the axis labels are displayed. It can be useful to rotate labels if they are expected to be wider than the section (and would overlap each other).



Graphing

Graph Bars Inspector

This inspector is used to set attributes for the bars in a bar graph.

Bar Gap

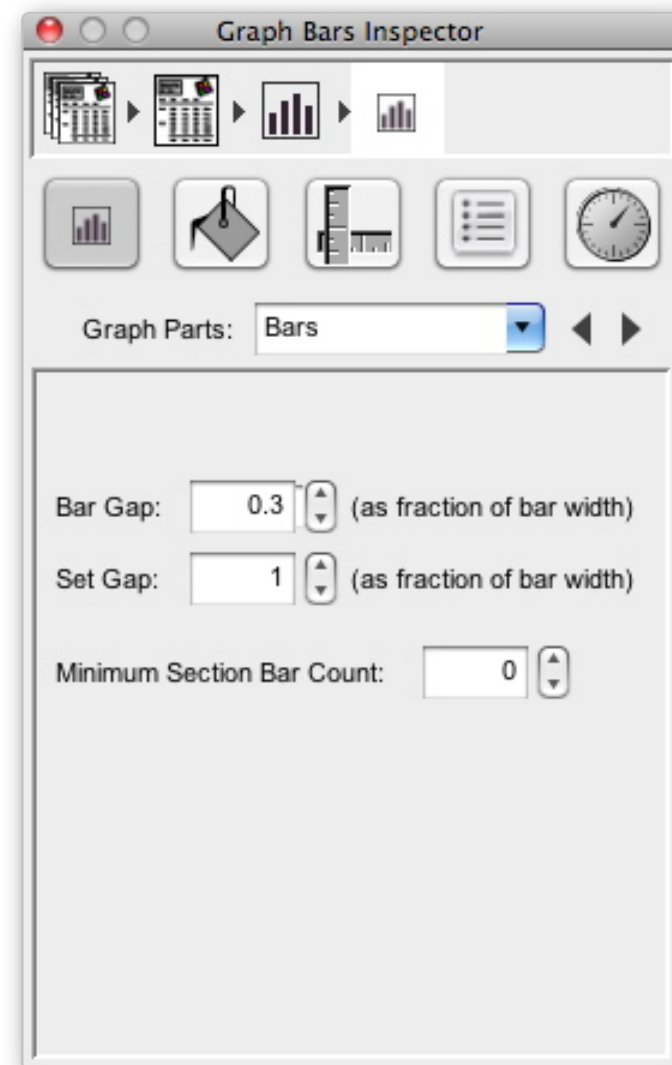
The space between bars, as a fraction of the bar width.

Set Gap

The space between sections, as a fraction of the bar width.

Minimum Section Bar Count

The minimum number of bars the graph is expected to usually hold. By setting this you can get more consistent bar widths, even for graphs with small number of values.





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Graph Pie Wedge Inspector

This inspector is used to set attributes of a pie graph.

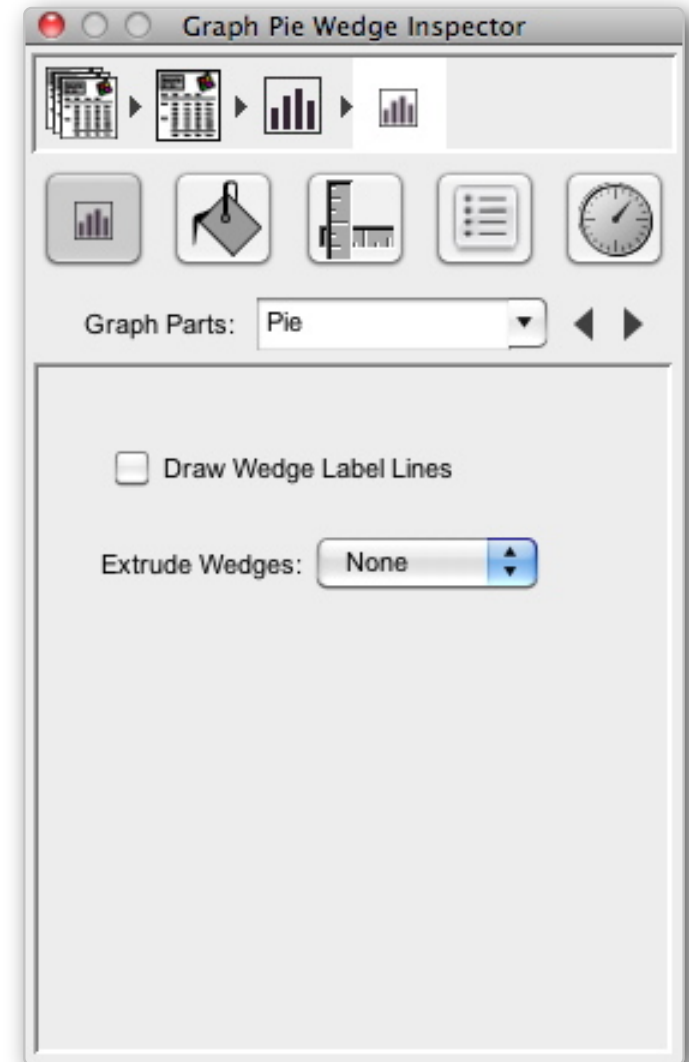
Draw Wedge Label Lines

Sets whether the Pie graph displays lines from the center of a pie wedge to its label.

Extrude Wedges

This combo box lets you configure whether the pie graph has extruded wedges and which wedges are extruded:

- None: No wedges are extruded
- First: First wedge is extruded
- Last: Last wedge is extruded
- All: All wedges are extruded
- Custom...: Lets you configure a key chain - wedge is extruded if key chain evaluates to true for wedge data



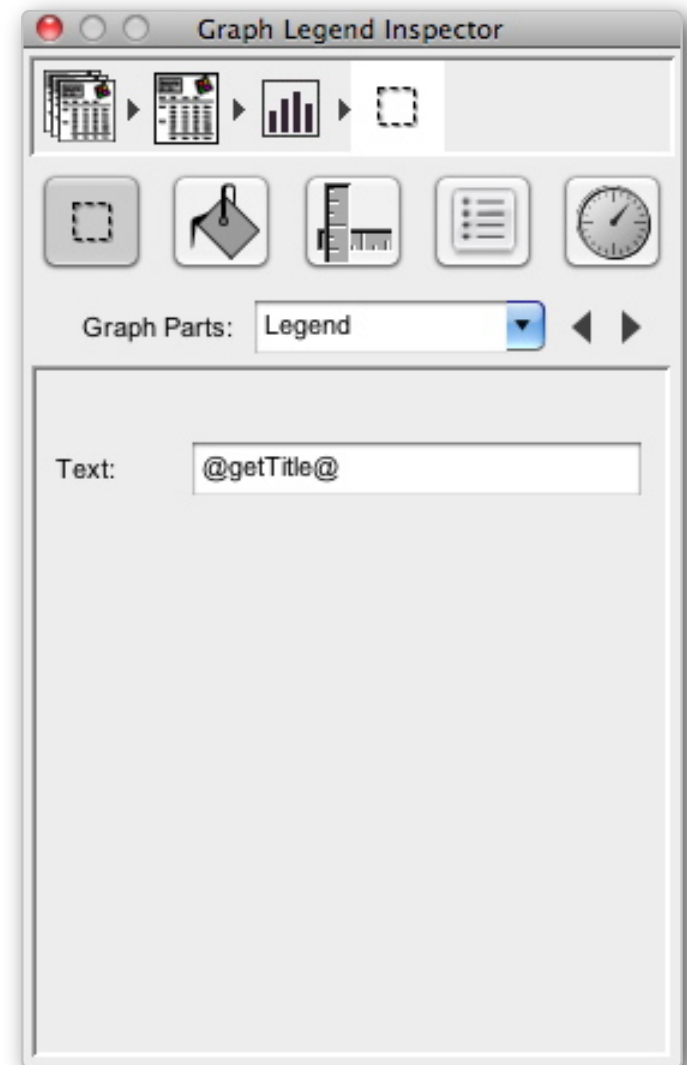
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Legend Inspector

This inspector is used to set attributes of the Legend.

Text

The text or key used to evaluate legend strings if data layout is "Separated". If data is merged, then legend uses Series text.





Graphing

Series Inspector

This inspector is used to set attributes of individual series. Each graph key creates a graph series, and the Graph Parts list contains a Series Inspector for each of these series.

Title

The title of the Series. This is used by the Graph Legend if the Section Layout is set to "Merge".

Bar/Wedge Labels

This inspector lets you configure a label for each of the following bar/wedge positions: Top, Middle, Bottom, Above, Below. When this inspector is visible and a label position is selected, any shape attributes shown or changed correspond to the label for the selected position. So if you choose a new color, stroke, font or text color, the resulting label in the specified position is shown with these attributes.

Text

The text or key to be shown for each bar/wedge.

Rotation

Determines at what angle the axis labels are displayed. It can be useful to rotate labels if they are expected to be wider than the space available for the bar (and would overlap each other).



Graphing

3D Inspector

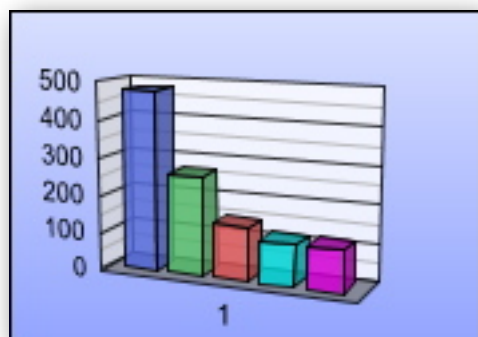
This inspector is available by clicking the "..." button in the Graph Area Inspector.

Rendering

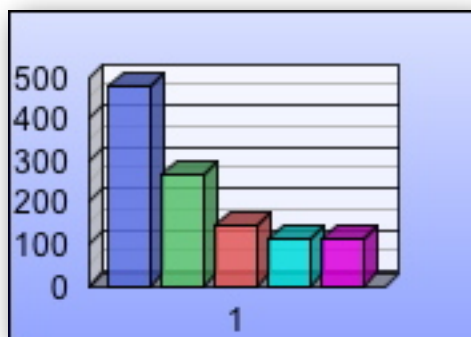
There are two types of 3D rendering for graphs: Real 3D and Pseudo 3D.

Real 3D lets you view and interact with the graph in true 3D.

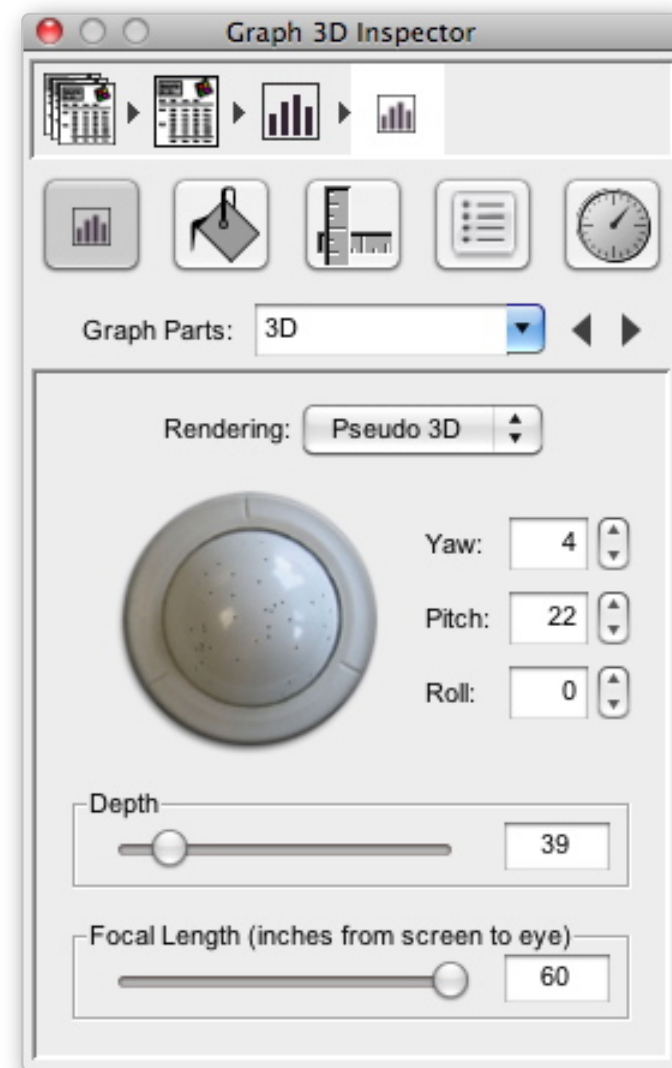
Pseudo 3D renders the graph straight on with no perspective viewpoint, but with the back-plane shifted up and to the side (a common rendering method for graphs).



Real 3D



Pseudo 3D





Graphing

DrillDown, Hover, Transparency, Stroke

It is possible to set certain additional attributes for generated bars and wedges. If you add a simple rectangle shape to a graph and set its name to "Prototype", you can set its URL, Hover, transparency or stroke, and resulting bars/wedges will have these attributes.