

Graphing Interface Overview

Note: This document is a reference for using JFree Charts. JFree Charts is m-Power's legacy graphing solution, and has been deprecated. JFree Charts have been replaced with Fusion Charts.

Graphs add visual detail and style to reports, as well as improving functionality. m-Power offers a graphing interface for ease of use during the graph design process. In this example we will be working over three fields in our order detail file: Product Number, Quantity Shipped, and Price. Detail rows have been removed, and we're subtotaling by product number so we see the total quantity and sales for each product. Our table looks like this:

Product Number	Quantity Shipped	Price
A1000	31498	\$325,745.00
A1010	21396	\$203,072.00
A1020	13514	\$233,420.00
A1030	23676	\$336,550.00
A1040	22664	\$105,780.00
A1050	47500	\$336,250.00
A1060	48546	\$389,482.50
B1000	53370	\$71,032.50
B1020	61476	\$148,072.00
B1030	88192	\$64,479.10
B1040	32586	\$31,836.00
B1050	27068	\$9,531.60
D1010	30212	\$44,125.00
D1030	32082	\$68,617.50
D1040	27498	\$33,412.00
D2000	32716	\$33,267.50
P0100	21854	\$22,140.80
P0200	24860	\$24,920.00
P0300	20086	\$24,316.00
P0400	20660	\$15,146.40
R0030	25210	\$88,737.50
R0040	21258	\$78,024.00
R0050	19910	\$38,701.00
R0060	7616	\$9,985.50
	755448	\$2,736,643.90

When you open up graph properties in m-Painter, you'll immediately see a change.

Graph Properties

Graph Type Fields Levels Descriptions Options Graph Preview

Which type of graph would you like to create?

Bar Line Pie Other

2D Bar

3D Bar

2D Clustered Bar

3D Clustered Bar

2D Stacked Bar

3D Stacked Bar

You are now working in a tabbed interface that will help walk you through making your graphs. m-Power's new interface has been designed to make designing graphs much more straightforward and less confusing.

In the "Graph Type" tab you select which graph you want to use. Graphs are grouped by category: Bar, Line, Pie, and Other. In this example, we will make a 3D Pie chart that will show total sales by product number, so we'll go to the "Pie" tab and select the "3D Pie" chart.

Graph Properties

Graph Type Fields Levels Descriptions Options Graph Preview

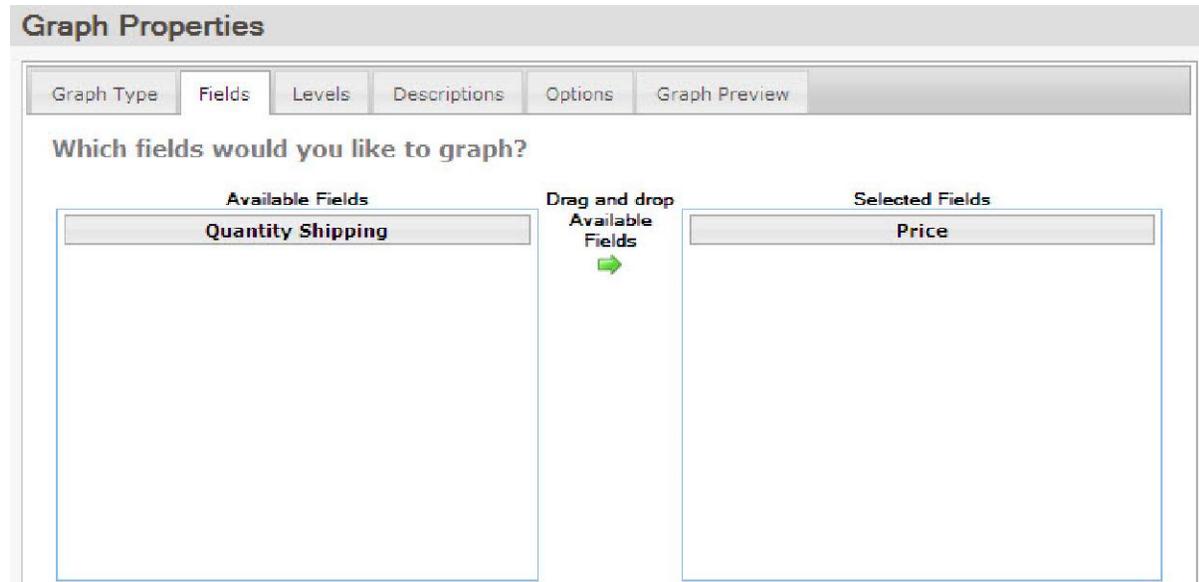
Which type of graph would you like to create?

Bar Line Pie Other

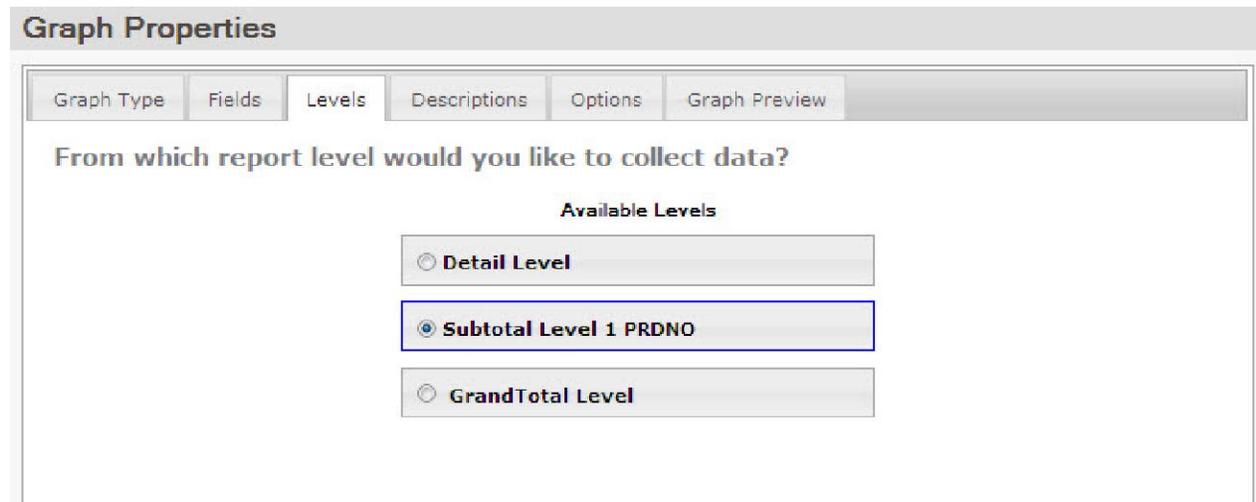
2D Pie

3D Pie

We can now move to the “Fields” tab. The default “Selected Field” is “Quantity Shipping” since it was the first numeric field in the order. We want to show price instead, so we’ll drag and drop “Quantity Shipping” back over to “Available Fields” so it doesn’t display on the chart and then drag “Price” over into the “Selected Fields” column.



If we click over to the “Levels” tab, we can select the level of detail we want your graph to show. In our case, we are looking for the total sales amount of each product number. These amounts appear on Subtotal Row 1, so we will select “Subtotal Level 1 PRDNO” as our report level.



Note: The Image Data Collection icon now automatically moves when you select your level. You no longer need to place it in the correct level of detail in m-Painter. This setting also changes the level of detail in your Graph Value and Description fields. These settings have been combined and automated to work seamlessly. For developers, this should be a welcome change that reduces confusion, saves time, and eliminates errors.

We can now move onto the “Descriptions” tab. Here, we can change the labels for our pie sections. You have the option to either type in a static label, select a field from the table to use, or you can do both, which is what we will

do here. We're going to use a field from the table ("Product Number") prefix it with the text, "Product Number", and suffix it with "Total". If we were just graphing a grand total row and wanted a completely static field, we would select the "Label" option, and type in our field description, such as "Total Sales".

Graph Properties

Graph Type | Fields | Levels | Descriptions | Options | Graph Preview

Description/Labels for each bar, line point, or pie section:

Field Label/Description

PRICE:

Label Get Description from field value

We'll now go to the "Options" tab.

Graph Properties

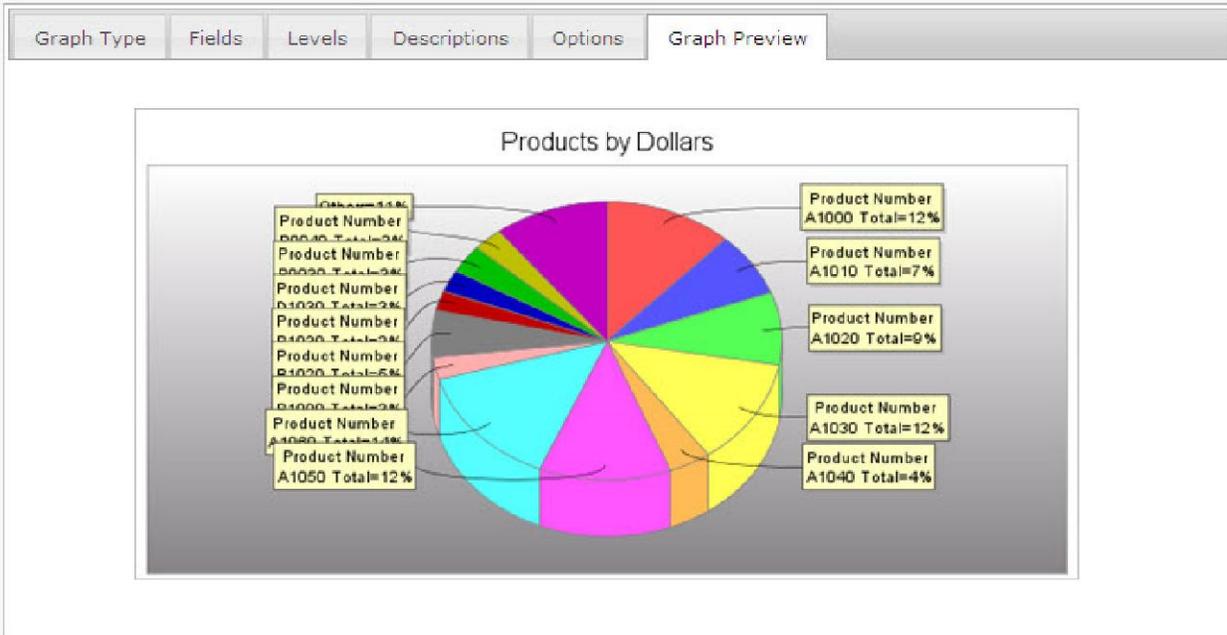
Graph Type | Fields | Levels | Descriptions | Options | Graph Preview

General	Image Width	<input type="text" value="600"/>
Title	Image Height	<input type="text" value="300"/>
Legend	Graph Orientation	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Tooltip	Border Visible?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Drill Down	Border Color	<input type="text" value="lightgrey"/> 
Chart and Plot		
3D Pie Options		

Here we can customize the look and feel of our graph. There are tabs all the way down the side with different categories of options to change. Lets leave these alone for a moment and see what our graph looks like.

A new feature in the graphing interface is the "Graph Preview" tab. We can do that now without having to save and run our report. The "Graph Preview" tab allows you to obtain instant feedback on what your changes will look like in real time without having to run your report. This will speed up development time significantly for developers who want to tweak the look and feel of their graph.

Graph Properties



In our preview, since our labels have two lines on them and because we have so many products, we'll need to make our pie chart bigger to be able to see our totals, so we'll go back to our "Options" tab and move to the "General" section. Here, we'll make our graph 800 pixels wide and 400 pixels long. That should compensate for our larger labels.

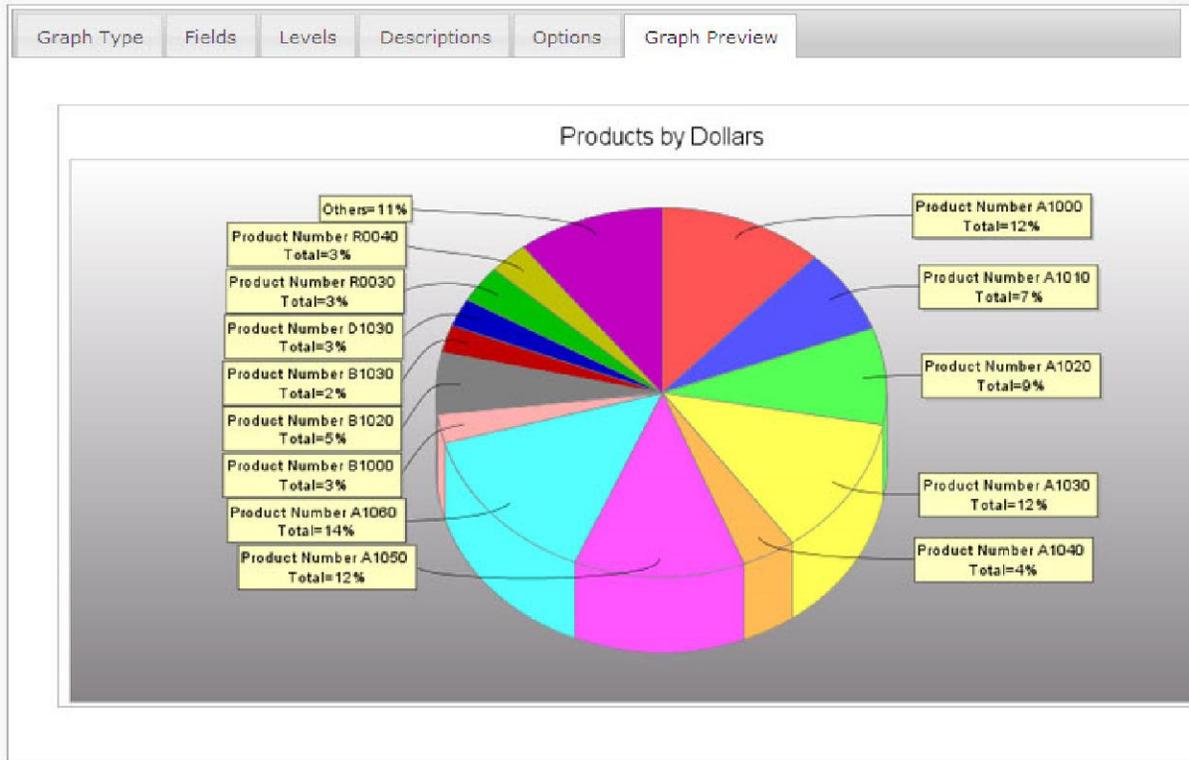
Graph Properties

Graph Type Fields Levels Descriptions Options **Graph Preview**

General	
Title	Image Width: 800
Legend	Image Height: 400
Tooltip	Graph Orientation: <input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Drill Down	Border Visible?: <input checked="" type="radio"/> Yes <input type="radio"/> No
Chart and Plot	Border Color: lightgrey
3D Pie Options	

And if we look at the "Graph Preview", sure enough, it does.

Graph Properties



On the other hand, such a big graph might be too big on some older monitors. We can bring the graph back down to its old size and change the threshold instead. The “Threshold” is a setting that filters smaller amounts into an “Others” category. If the threshold is raised, more fields will be placed into the “Others” category and won’t display on the screen.

Back in the “Options” tab, we’ll return our width to 600 and our height to 300, and then switch to the “Chart and Plot” section. In there, we’ll pick the “Threshold” tab. The default threshold is 2%, meaning that if an amount is less than 2% of the grand total, it gets placed into the “Others” category. Let’s raise that value from .02 to .03.

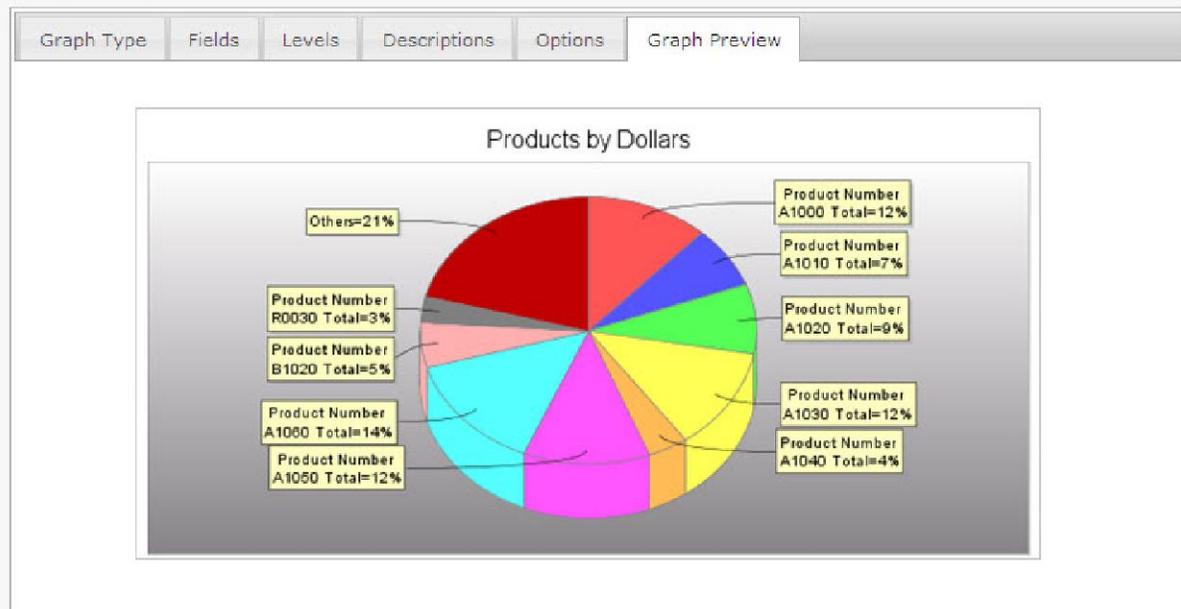
Graph Properties

Value Font **Threshold** Value Formats Colors

Threshold 0.03

That seems to have taken enough out to show everything in a readable format in the “Graph Preview”.

Graph Properties



For those developers who feel more comfortable with the old interface, you're still in luck; it hasn't gone away. Directly to the right of the "Graph Image Options" text, there is a link titled "Legacy Mode".

Graph Properties

Graph Image Options [Legacy mode](#)

General	Image Width	300
Title	Image Height	300
Legend	Graph Orientation	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal
Tooltip	Border Visible?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Drill Down	Border Color	lightgrey
Chart and Plot		
Dial Chart Options		

If you click on it, you'll be presented with a warning. **Note:** Flipping between legacy mode and wizard mode will lose any changes made to the graph properties if they haven't been saved by clicking OK on the lower right hand side of the "Graph Properties" screen. If you've made changes that you haven't saved and want to, click "Cancel" on the warning and save. Then open up graph properties and click on legacy mode again. This time, click "OK" when the warning comes up and you'll be brought to the previous interface.

Graph Properties

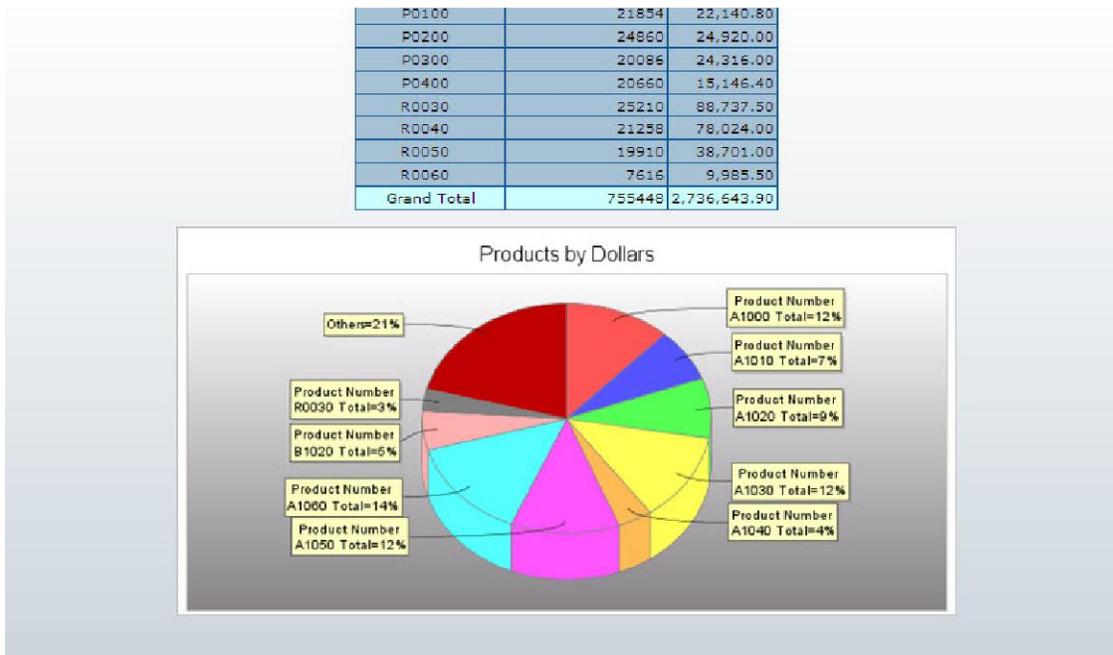
Image Properties | Image Data Collection | Image Info

Image Name: R01251_ Image Style: File Chart 3D Image Format: .png [Reset](#) [Switch to Wizard View](#)

Name	Value	Comments
delete_img	<input type="radio"/> Never <input type="radio"/> Immediately after image is sent to client <input checked="" type="radio"/> When application server ends	Delete image from server.
orientation	<input checked="" type="radio"/> Vertical <input type="radio"/> Horizontal	Graph orientation.
img_bordervisible	<input checked="" type="radio"/> Yes <input type="radio"/> No	Graph border.
img_bordercolor	lightgrey	Graph border color (either color name or #rrggbb.)
chartbackground	#fffff, #fffff, 0	Graph background colors. Specify three values separated by commas. For example, "color1,color2,0" means graph background color from color1 to color2 by direction 0 or 1 where 0 = top-to-bottom 1 = left-to-right
plotbackground	#fffff, #888488, 0	Plot background colors. Specify three values separated by commas. For example, "color1,color2,0" means plot background color from color1 to color2 by direction 0 or 1 where 0 = top-to-bottom 1 = left-to-right
plot_insets	4, 8, 4, 8	Plot margins: top,left,bottom,right margin of the plot. Specify four numbers separated by commas.
series_color		Item series colors separated by commas. Blank = mrc defaults
threshold	0.03	Put item values less than this percentage of the total into an "Other" group. Specify 0.00 to indicate that there should be no "Other" group.
graph_value_font	Helvetica, 0.10, #000000	Graph value font. Specify "font name, style, size, color" separated by commas.
graph_value_pattern	#, ##, 0	Graph value format.
graph_percent_pattern	#0%	Graph value percentage format.
title	Products by Dollars	Graph title.

OK Cancel

Now that we've finished customizing our graph, we can run it. Here it is in a browser window when we run the report:



Graph Type Tab

Welcome to mrc's graphing interface. The interface is divided into tabs that allow you to customize various parts of your graph. This tab, the graph type tab allows you to pick which kind of graph you want to use to visualize your data. You'll notice there are 4 types of graphs: Bar, Line, Pie, and Other.

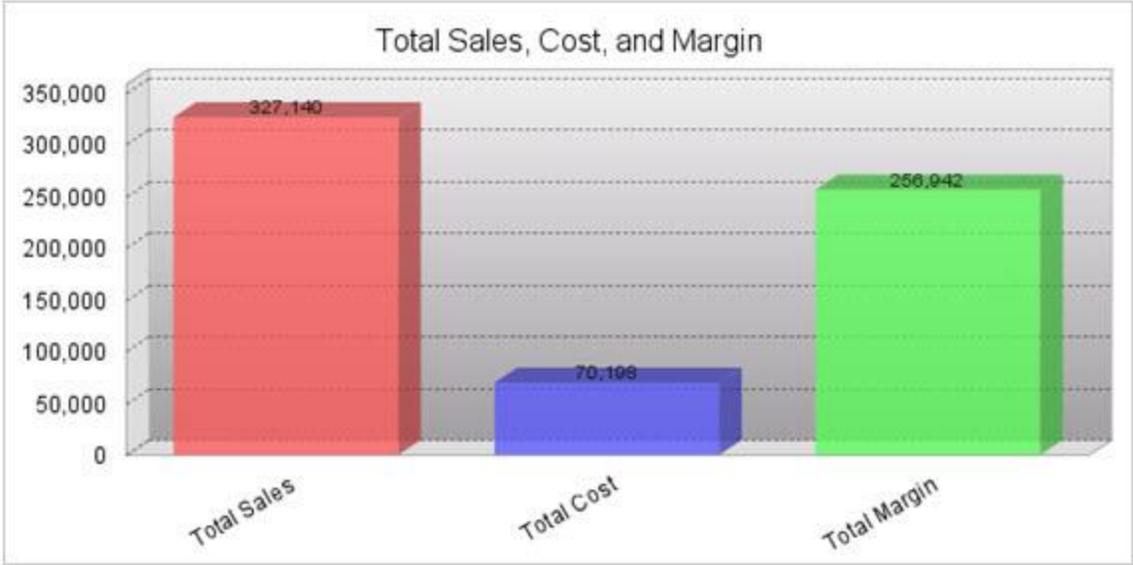
Bar Graphs

Bar Graphs have more flavors than any other graph type. You can categorize them a few different ways. First, there are 2D and 3D bar charts. The difference between these two graph types is purely visual, but each is useful in different ways. 2D bar graphs are easier to read when there are a large number of bars. Negative numbers also look better on 2D bar graphs. 3D bar graphs do well when numbers are positive and the number of bars is smaller. They are more aesthetically pleasing, but can start to look cluttered when the bars get smaller. The more pronounced differences come between Standard Bar charts, and Grouped (Clustered and Stacked) Bar Charts.

Standard Bar Charts

Standard bar charts are extremely versatile, and probably the most common charts used in m-Power. They can be used at the grand total, subtotal, or detail levels.

At Grand Total levels, one or more fields can be displayed on a chart. An example of when you might use it at the grand total level is to show the total sales, cost, and profit margin for a given year:



When used at subtotal or detail levels, only one field may be selected. This is useful for looking at things like total sales for each product number:



Grouped Bar Charts

Grouped graphs always use multiple fields at a subtotal or detail level. They are designed to show groups of fields for each row. There are two types of grouped bar charts: Clustered and Stacked.

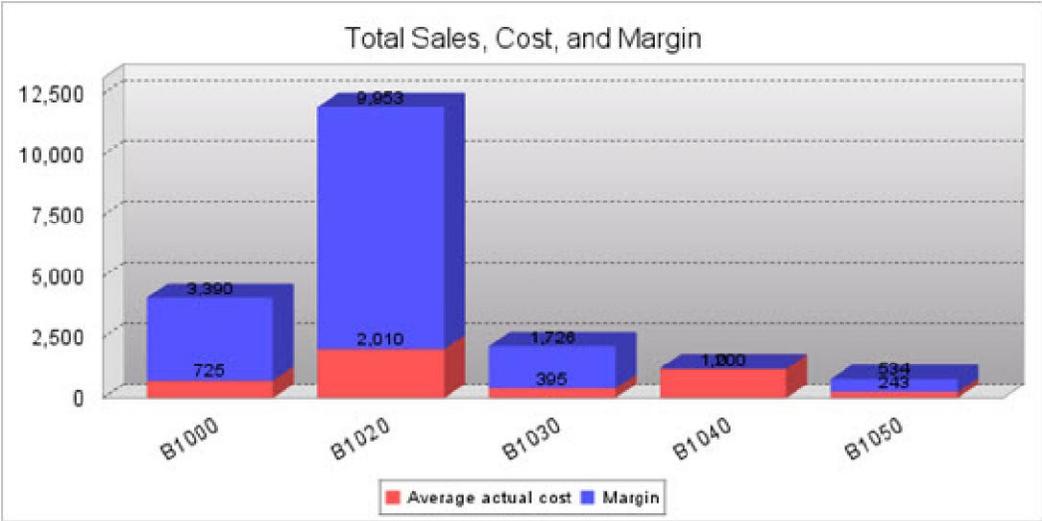
- *Clustered Bar Charts*

Clustered Bar Charts are useful for showing groups of data that are unrelated in the sense that they don't add up to a larger value that you want to show. Field values are grouped together but unlike stacked charts, they aren't combined vertically. An example might be graphing the total amount of items sold, total amount of items in inventory, and total sales in dollars for each product.



- *Stacked Bar Charts*

Stacked Bar Charts are best used when you want to show groups of data that add up to a larger number. For example, you could use them to show total cost and margin for each product number. They would stack up to show total sales:

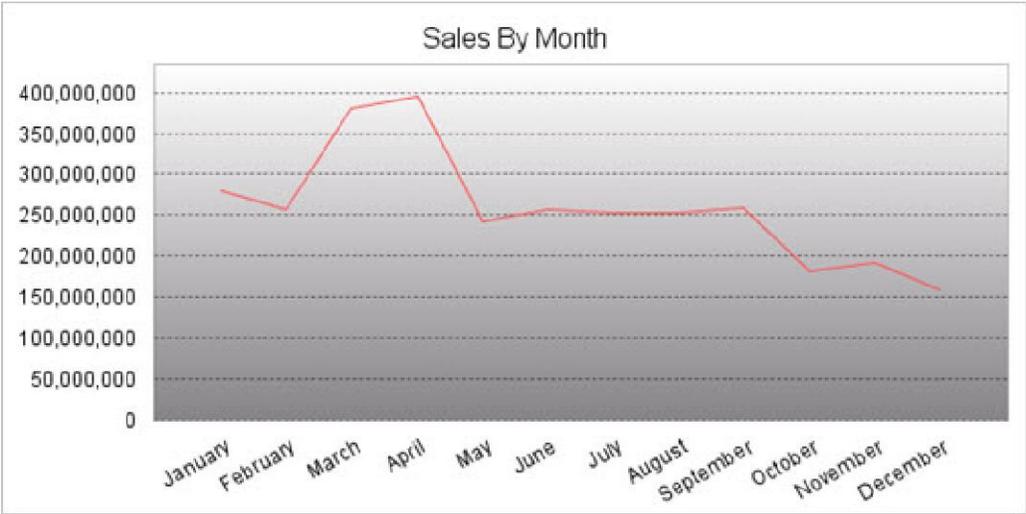


Line Graphs

Line Graphs are most commonly used to show trends. The two types of line charts are Single Line and Multiple Line.

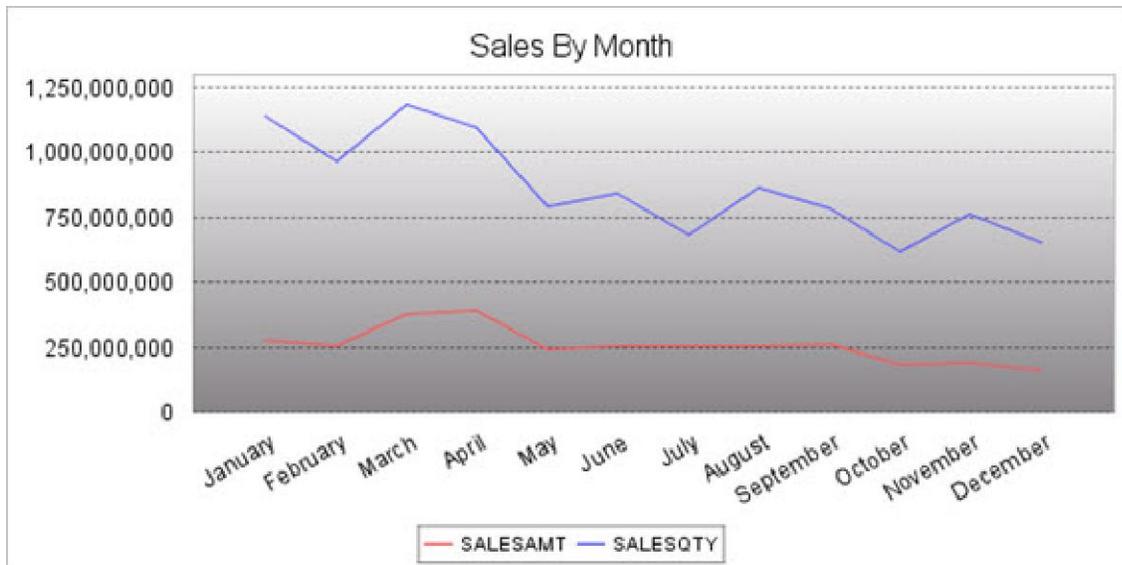
Single Line Graph

Single line graphs mostly work at subtotal and detail rows with one value, however they may also work at grand total rows with multiple values. A very common use for a line graph would be to show total sales by month or year:



Multiple Line Graph

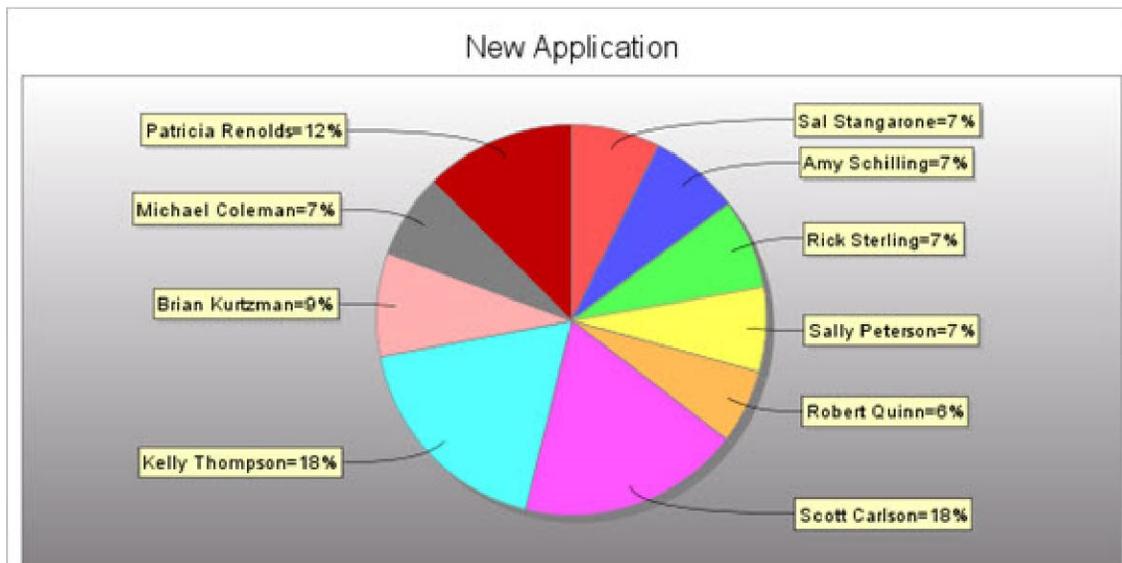
Multiple Line Graphs are always used at either subtotal or detail levels and contain multiple fields. They are used to show trends of multiple values. An example would be to show total sales in dollars and total sales quantity:



Pie Graphs

Pie Charts are great for showing data as a percentage of a total. The difference between 2D and 3D is only stylistic. 2D charts are simpler and data is more visually accurate because it isn't tilted, while 3D charts are more aesthetically pleasing.

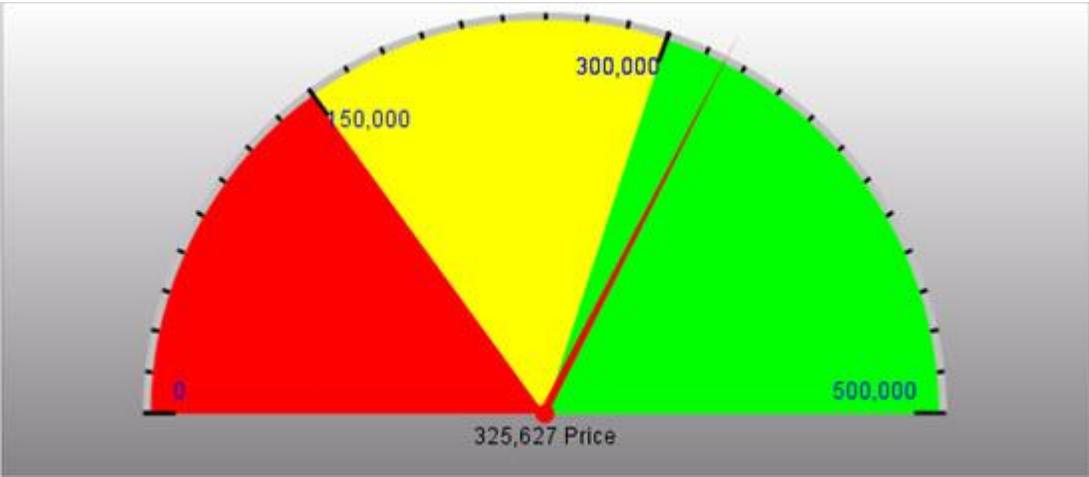
One example of a pie chart would be to show total profit per salesperson:



Other Graphs

There are two other graphs: Speedometer and Dial Graphs, which can be discussed together.

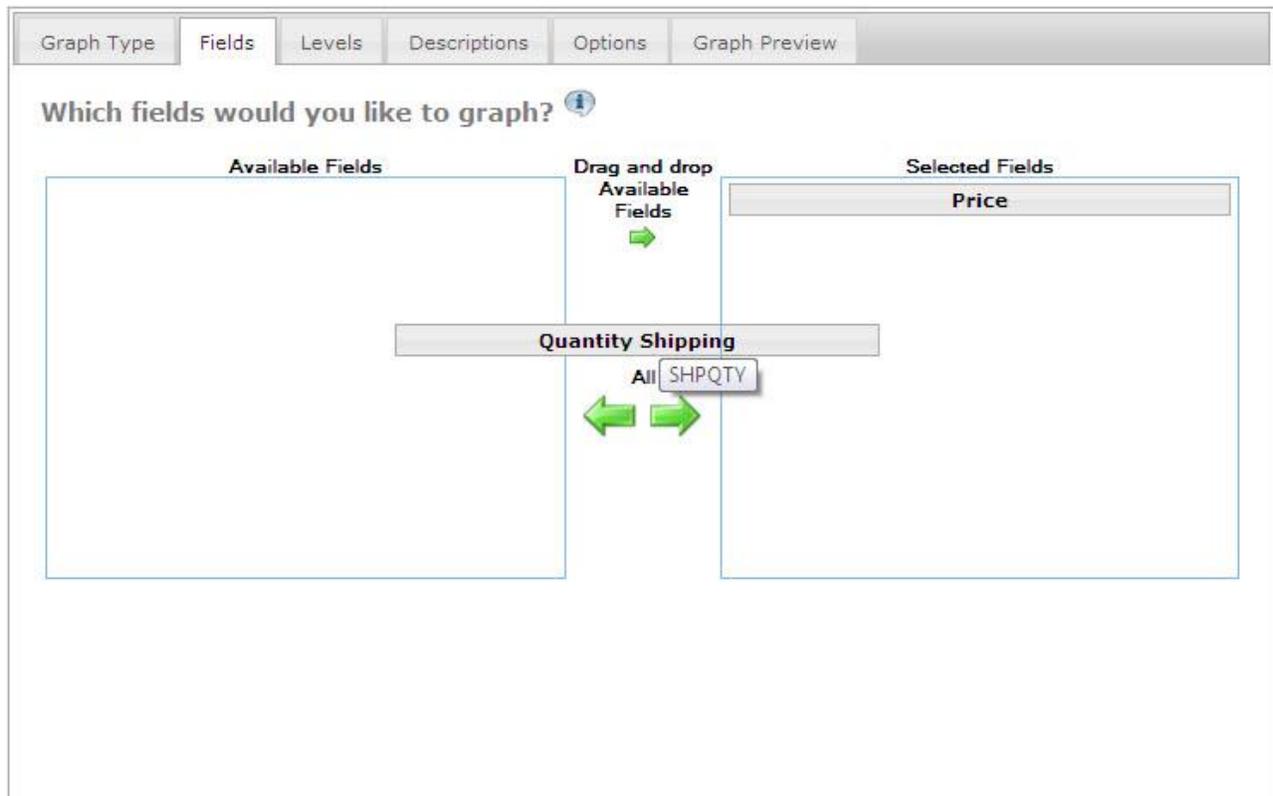
Both Speedometer and Dial graphs are used to display a single value up against a range, so they work only on the grand total level using one field. They are great for showing snapshots of progress towards a goal. A potential use would be to show sales goals:



Fields Tab

This tab allows you to select the field (or fields) you want your graph to display. You will see two columns in this tab: **Available Fields** and **Selected Fields**. All of the fields in your application — whether or not they are visible in m-

Painter — will be in one of these two columns. To add a field to your graph, click and drag it from the **Available Fields** column and drop it into the **Selected Fields** column.



To remove a field from your graph, do the opposite. Click and drag the field name from the **Selected Fields** column and drop it in the **Available Fields** column.

You can also reorder your selected fields so that the third field shows up second (for example) by clicking and dragging the fields around within the **Selected Fields** column.

Note: You can select or deselect all fields by clicking on the appropriate large green arrow.

Levels Tab

In this tab, you will select from what rows in the report the graph will pull its data.

Graph Properties

Graph Type Fields Levels Descriptions Options Graph Preview

From which report level would you like to collect data?

Available Levels

- Detail Level
- Subtotal Level 1 PRDNO
- GrandTotal Level

The level of detail depends on what you want to show and where that information is located on your report. Selecting the grand total row will display the final totals in each of the selected numeric fields. This is typically used when making a single line, bar, speedometer or dial chart. Selecting a subtotal row will have the chart display the values from each subtotal row. Single and grouped charts are commonly used with subtotal rows.

Note: Users of the legacy interface should note that this tab combines two settings from m-Power's previous interface: the Image Data Collection icon, and the detail level setting in your Image Data Collection tab. Instead of moving the data collector icon and modifying each field to match the correct subtotal row, this is all done automatically in this screen with a single click. When you select your level of detail, the icon moves to the correct row in the data table, and the corresponding graph values and descriptions are updated without any extra input.

Descriptions Tab

This tab allows you to change the labels of various parts of your graph. This screen will look very different depending on your graph type, the number of field selections you have, and the level of detail from which you are pulling.



Description/Labels for each bar, line point, or pie section: 

Field	Label/Description
CALCULA001:	Margin <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value
PRICE:	Price <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value
ACTCS:	Cost <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value

For each of the fields that will show up on the graph, you will be able to specify a label. By default, m-Painter will use the Field Description given in **Field Settings**.

However, there are times that you may not be interested in a “static” value. Instead, you can specify to “Get Description from field value.” This option is often used when you have specified a “Subtotal” level for data collection.

Description/Labels for each bar, line point, or pie section: 

Field	Label/Description
CALCULA002:	<input type="text"/> Product Number <input type="text"/>
	<input type="radio"/> Label <input checked="" type="radio"/> Get Description from field value

The dropdown box in the middle allows you to select a database field to use as a label. That value can have a prefix and a suffix added to it with the text boxes on the left and right of the dropdown box. No additional spaces are inserted in between prefixes/suffixes and the field value, so if the prefix is “Product Number” and the value in your table is “A1000”, the label will be “Product NumberA1000”. To make the label, “Product Number A1000”, make sure to add in the space in your prefix so it is “Product Number”.

Clustered and stacked bar charts, along with multiple line graphs have this screen:

Description/Labels for each bar, line point, or pie section: 

Field	Label/Description
PRICE:	Margin <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value
ACTCS:	Price <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value
CALCULA001:	Cost <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value

Group Description for each bar cluster, bar stack, or line point:

Description: Product Number

Label Series Get Group Description from field value

The top half of the screen is for the label on the individual fields. These labels will be on the legend and on the tooltip if the label is set to "Item Value".

The bottom half of the screen is the label for each group, and can again be either a field value with optional prefixes or it can be completely free typed, in which case the notes above apply. When a Speedometer or Dial Chart is selected, the following screen is shown:

Description/Labels for each bar, line point, or pie section: 

Field	Label/Description
CALCULA001:	Margin <input type="text"/>
	<input checked="" type="radio"/> Label <input type="radio"/> Get Description from field value

Speedometer/Dial Chart Ranges, Groups, and Colors

From	To	Color	Range Description
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



[Add Additional Range](#)

The label in the top section describes the field value you are using. It is circled in red below.

The bottom section is where you mark the colored ranges of your graph. The **From** and **To** fields are numeric ranges, and define the length of the current range. The next field is the color, which can be free typed as a 6-digit hexadecimal value or one of the 17 [HTML color names](#). You can also click on the color wheel next to the field and select a color from a palette. The last field is the range description. It will display on the legend of the graph, and is circled in blue below.

Note: All of the above fields must be filled in on the speedometer and dial charts in order for it to display properly.

Description/Labels for each bar, line point, or pie section:

Field **Label/Description**

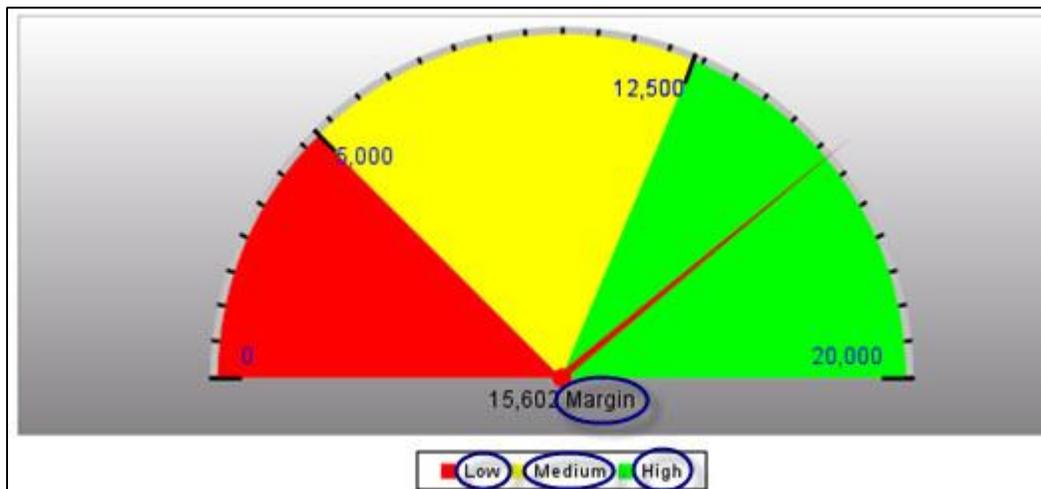
CALCULA001:

Label Get Description from field value

Speedometer/Dial Chart Ranges, Groups, and Colors

From	To	Color	Range Description
<input checked="" type="checkbox"/> 0	<input type="text" value="5000"/>	<input type="text" value="red"/>	<input type="text" value="Low"/>
<input checked="" type="checkbox"/> 5000	<input type="text" value="12500"/>	<input type="text" value="yellow"/>	<input type="text" value="Medium"/>
<input checked="" type="checkbox"/> 12500	<input type="text" value="20000"/>	<input type="text" value="green"/>	<input type="text" value="High"/>

[Add Additional Range](#)



General Options Tab

Image Height/Width

This option determines the total height and width of the graph image in pixels. The default is 600 width and 300 height.

Note: Pie Charts are best kept at a 2:1 ratio of width to height in order to maintain a perfect circle. Dial Charts should be at 1:1 width to height. Deviating from those aspect ratios will make the circles look more like ovals.

Graph Orientation

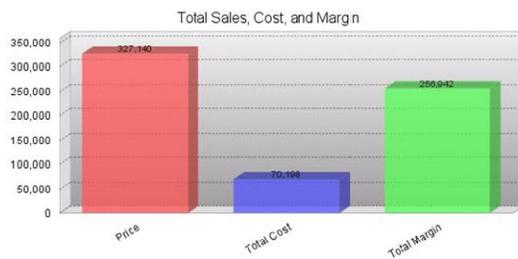
Border Visible

This option toggles the border around the image on and off.

On



Off



Border Color

Changes the color of the same border noted above. Color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

Title Options Tab

All settings in this options section affect the title at the top of the graph:



Graph Title

This field is the actual title. By default, this is set to the title of the application.

Title Font, Style, Size, and Color

The font settings for the text of the title can be modified using these fields:

- **Title Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser's default Sans-Serif font is.

- **Title Font Style**

This setting will make the font Bold, Italic, both, or normal. The default "Normal" will leave the text without bold or italics.

- **Title Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

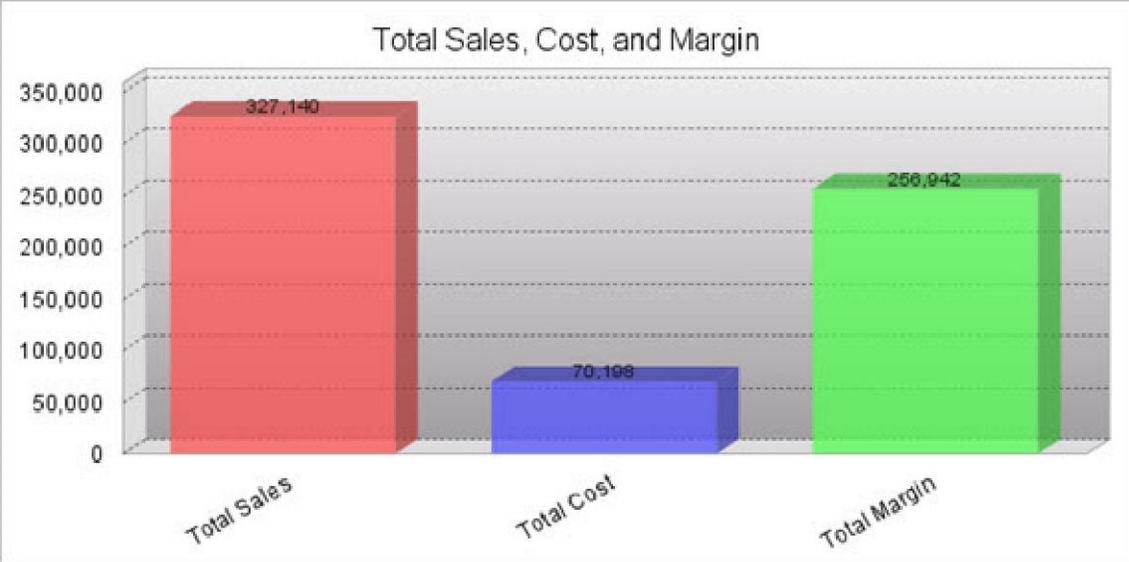
- **Title Font Color**

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

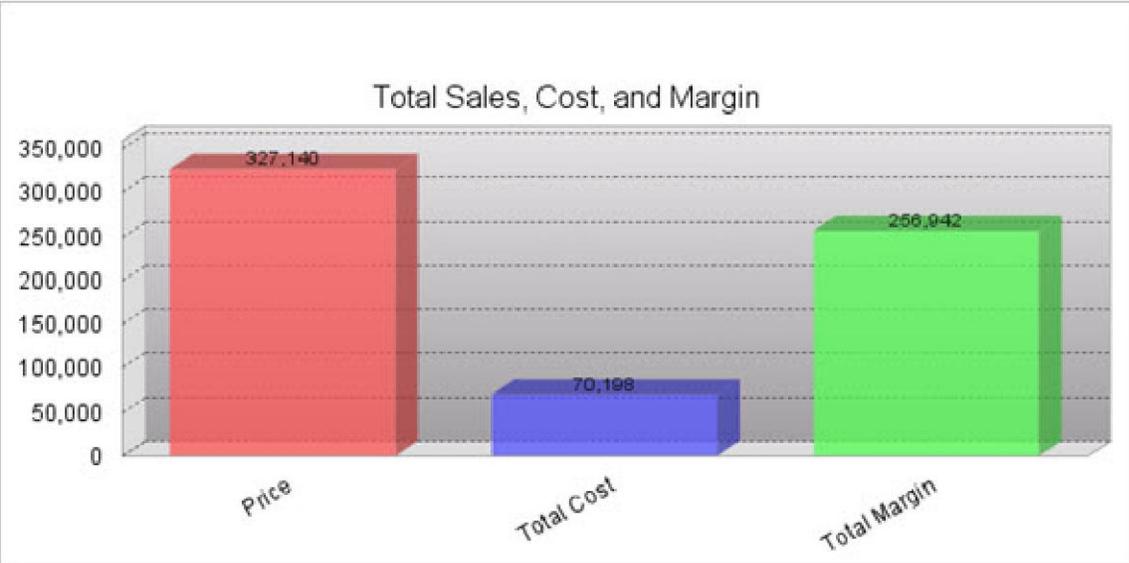
Title Margin Top

This setting defines the amount of white space in between the border (or the top of the image if there is no border) and the top of the title. The default is 10.

10 pixels



20 pixels



Legend Tab

This tab deals with the legend on the graph:



By default, the legend is turned off. To turn it on, click “Yes” on **Make Graph Visible?**

Legend Location

This setting moves the legend to the bottom, left, right or top of the image location. By default, it displays at the bottom.

Legend Font, Style, Size, and Color

The font settings for the text of the legend can be modified using these fields:

- **Legend Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- **Legend Font Style**

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- **Legend Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

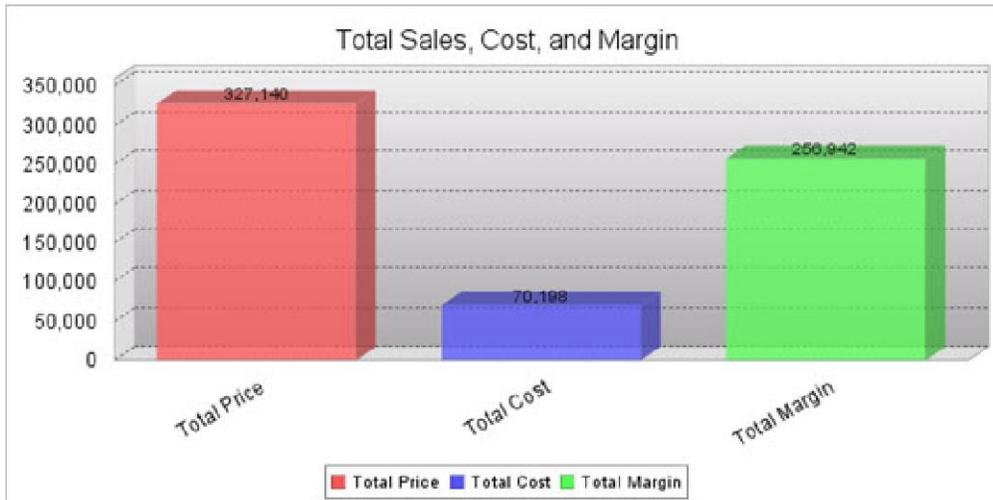
- **Legend Font Color**

The font color may be a 6-digit hexadecimal value or any of the 147 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

Legend Margins

This setting controls the amount of space between the legend and either the graph or the border (or edge of the image if there is none). Units are in pixels, and the order is top, left, bottom, right.

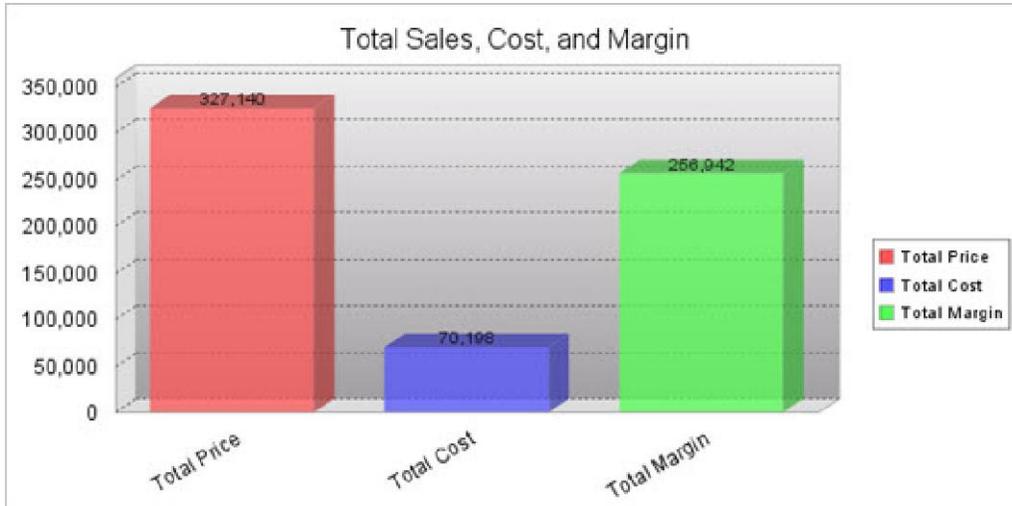
Legend Location = Bottom, Legend Margins = 4.8,4,8



Legend Location = Bottom, Legend Margins = 20.8,20,8



Legend Location = Right, Legend Margins = 4.8,4,8



Legend Location = Bottom, Legend Margins = 4.20,4,20



Tooltip Options Tab

This tab governs the tooltip you see when you hover your mouse over a value on the graph.

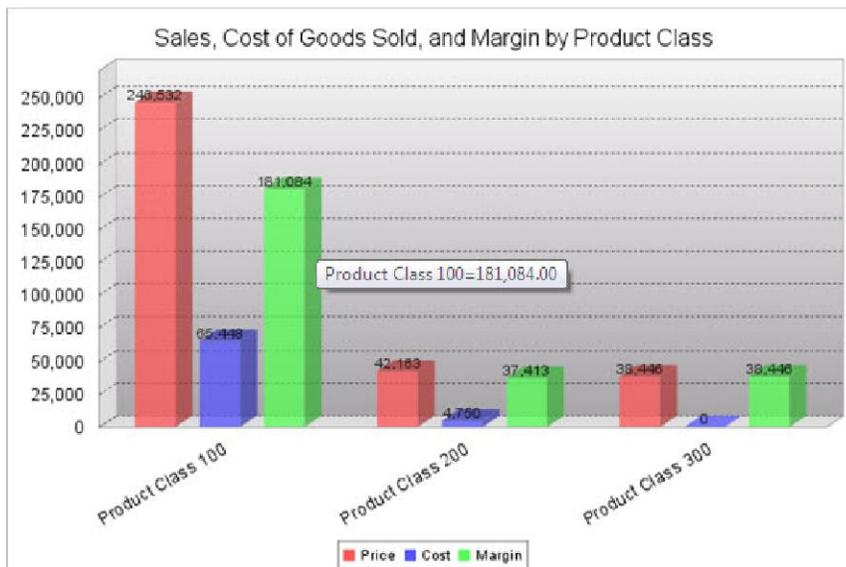


By Default, the tooltip is turned on. To turn it off, change **Enable Tooltip** to “No”.

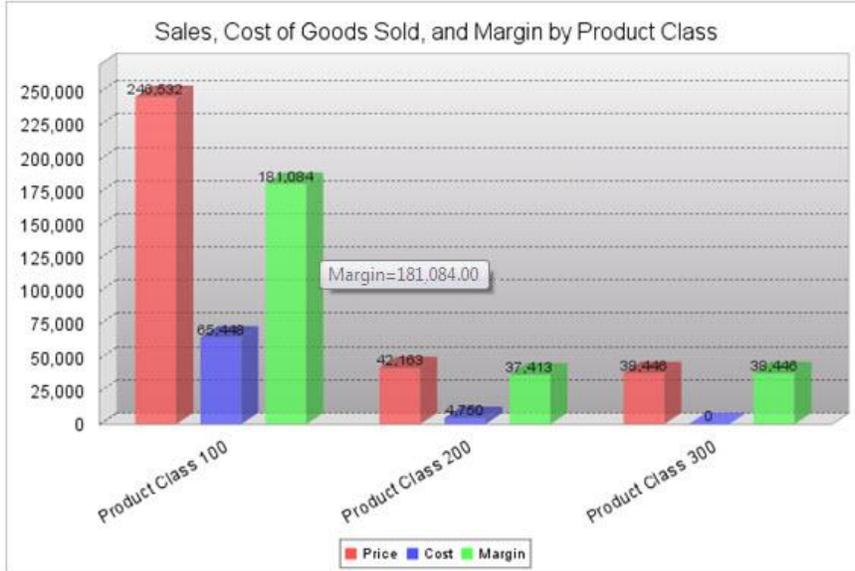
Tooltip Label

This setting controls what description shows on the tooltip. It is used in stacked, clustered, and multi-line graphs to toggle between displaying label of the overall group or the label of each individual field.

Tooltip Label = Group Name



Tooltip Label = Item Name



Tooltip Value and Percent Pattern

This allows you to change the format in which the tooltip displays your database field. It will allow you to insert commas, dollar signs, zero fields, etc. into your number. It operates similarly to the Format option in Field Settings. It is most different in that it uses # signs instead of nines to delineate fields that remain the same. Here are a few examples to show how different patterns behave.

Database Value Value Pattern Display

12345.678 #,##0.00# 12340.008

12345 #,##0.00# 12340.00

12345.678 \$#,### 12345

12345 ###.000% 12345.000%

The Percent Pattern is used with pie charts, and operates the same way as the Value Pattern, but deals with the percentage of the pie instead of the data value. The locations of the Percentage and Value Patterns in pie charts are governed by the [2D Pie](#) and [3D Pie](#) Chart Options tabs.

Drilldown Options Tab

This tab gives you the ability to link to another application by clicking on a section of your graph.

To enable this feature, click, “Yes” on the **Activate Graph Smartlinking** option.

Next, select the type of application you want to link to in **Target Application Type**.

Then select your application from the **Application List**.

Lastly, add in any of your parameters. You may type them in manually or use the **Add Field Parameter** option to assist you.

Chart and Plot Options Tab

This tab is divided into 4 sections: Value Font, Thresholds, Value Formats, and Colors.

Value Font Tab

This tab handles the font settings of the value displayed for each item on the graph.



The font settings for the text of the value can be modified using these fields:

- *Value Font*

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- *Value Font Style*

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- *Value Font Size*

The font size can be raised or lowered here. By default it is set to 10 pt.

- *Value Font Color*

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

- *Show X Axis Item values?*

Yes On Top of Bar — Value appears at the top of a bar (Shown in example).

Yes, inside the bar — Values appears centered directly in the center of the bar.

No — Item value is not shown at all on the graph.

Threshold Tab

This tab deals with items placed into the “Others” category:



The **Threshold** value is a decimal percentage. If a field in the table has a value of less than the threshold’s percentage (the default is .02, or 2%) of the grand total, then it is placed into the “Others” category.

Value Formats Tab

This allows you to change the format in which the graph displays your value; it will allow you to insert commas, dollar signs, zero fields, etc. into your number. It operates similarly to the Format option in Field Settings. It is most different in that it uses # signs instead of nines to delineate fields that remain the same. Here are a few examples to show how different patterns behave.

Database Value Value Pattern Display

12345.678 ##,##0.00# 12340.008

12345 ##,##0.00# 12340.00

12345.678 \$#,### 12345

12345 ###.000% 12345.000%

The Percent Pattern is used with pie charts, and operates the same way as the Value Pattern, but deals with the percentage of the pie instead of the data value. The locations of the Percentage and Value Patterns in pie charts are governed by the [2D Pie](#) and [3D Pie](#) Chart Options tabs.

Colors Tab

This tab is where you set the colors for your graph and its series.

Series Colors

This section allows you to override the default colors for your series. To override these settings, change **Use Defaults?** to “No.” To add a color, type in either the 6-digit hexadecimal value of the color or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette. Then click and drag the color preview to the selected colors list.

The colors also can be rearranged by dragging them into the desired order in the selected colors list.

The image shows the 'Series Colors' control panel and two 3D bar charts. The control panel has a 'Use Defaults?' section with 'Yes' and 'No' radio buttons. The 'No' button is selected. To the right, there is an 'Add New Color' section with a text field containing '#e9007', a color wheel icon, and a 'Color Preview' box. Below this is a 'Drag New Color Into Series' button with a green arrow. On the far right is a 'Selected Colors' list showing three color swatches: yellow, black, and magenta.

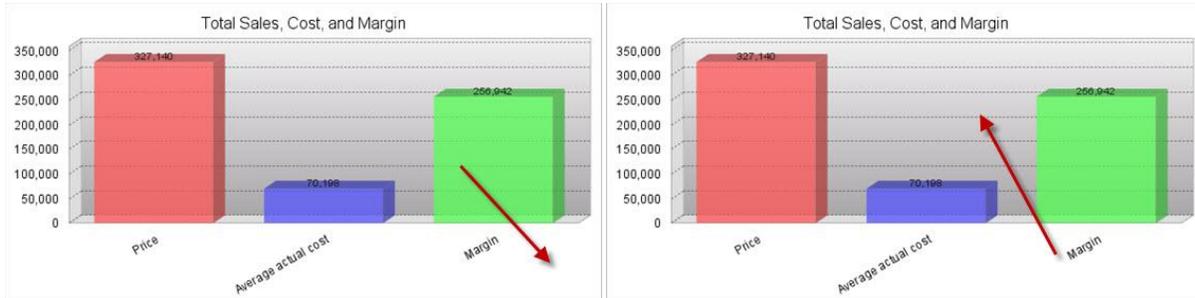
The left chart, titled 'Total Sales, Cost, and Margin', shows three bars: 'Total Sales' (red, 327,140), 'Total Cost' (blue, 70,100), and 'Total Margin' (green, 256,942). The right chart, also titled 'Total Sales, Cost, and Margin', shows the same data with different colors: 'Price' (yellow, 327,140), 'Average actual cost' (black, 70,100), and 'Margin' (magenta, 256,942).

Chart and Plot Background Colors

These options will allow you to change the background of the chart and the plot:

Chart

Plot



You can again type in a 6-digit hexadecimal value, the 17 [HTML color names](#), or use the color wheel to select a color from a palette.

The background is designed to work with a color gradient, so you can blend up to two colors in your background. To use only one color, simply make both colors the same.

Chart Background Colors			
Fade from color:	<input type="color" value="blue"/>	to color	<input type="color" value="red"/>
			Fade: <input type="text" value="Left-to-Right"/>
Plot Background			
Fade from color:	<input type="text" value="white"/>	to color	<input type="text" value="grey"/>
			Fade: <input type="text" value="Top-to-Bottom"/>



Chart Background Colors				
Fade from color:	white	to color	white	Fade: Left-to-Right
Plot Background				
Fade from color:	blue	to color	red	Fade: Top-to-Bottom



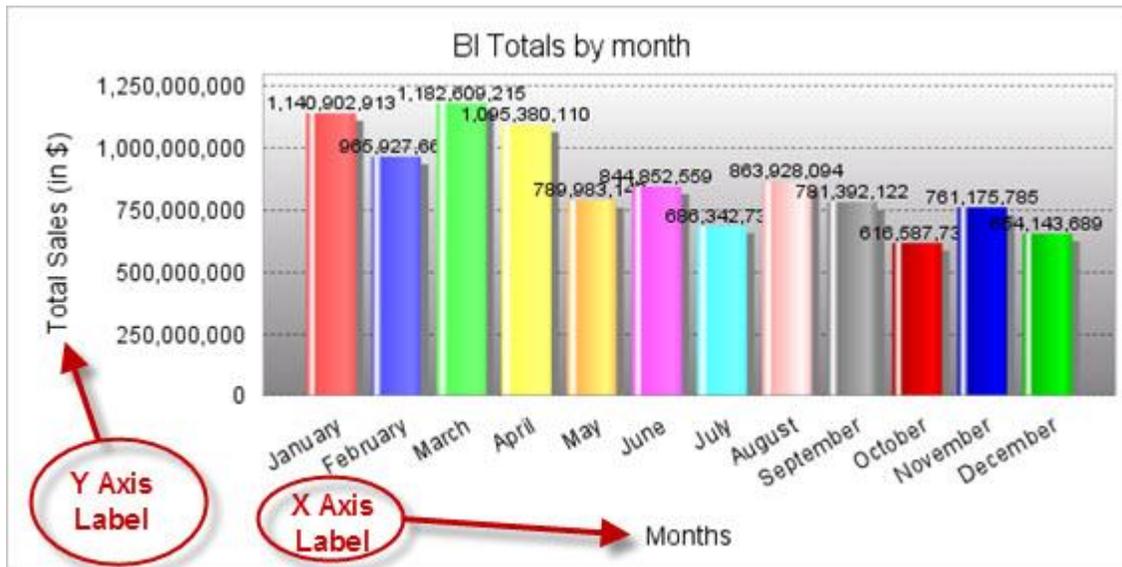
2D Bar Options Tab

- Learn more about each tab:

This tab provides options specific to the 2D Bar Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months, and the Y label is “Total Sales (in \$).”

The font settings for the text of the label can be modified using these fields:

- **X/Y Axis Label Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- **X/Y Axis Label Font Style**

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- **X/Y Axis Label Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

- **X/Y Axis Label Font Color**

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

- **X/Y Axis Label Margins**

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

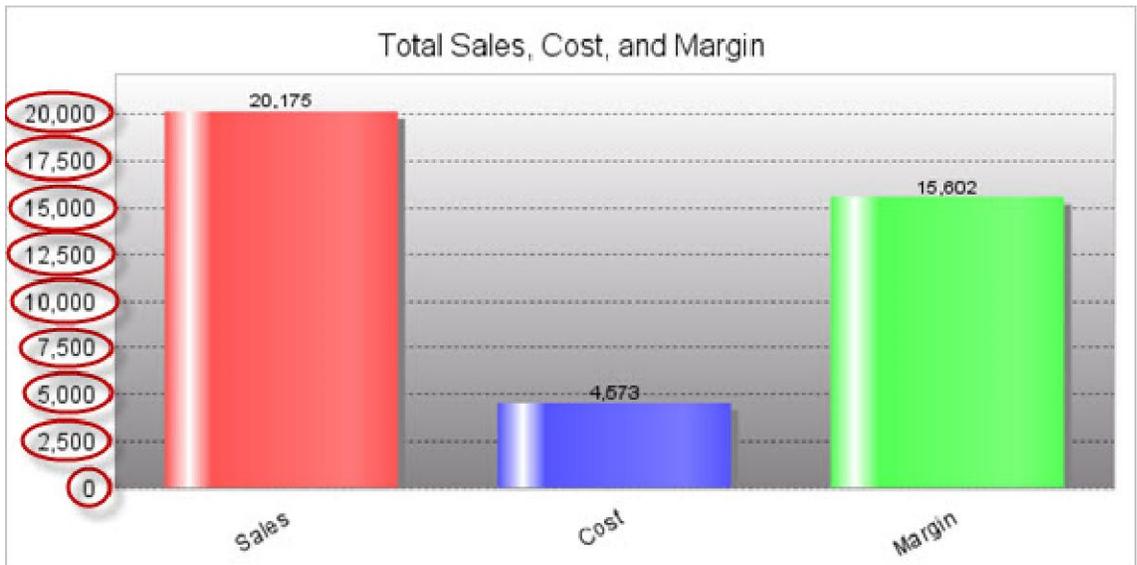
The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Label.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.

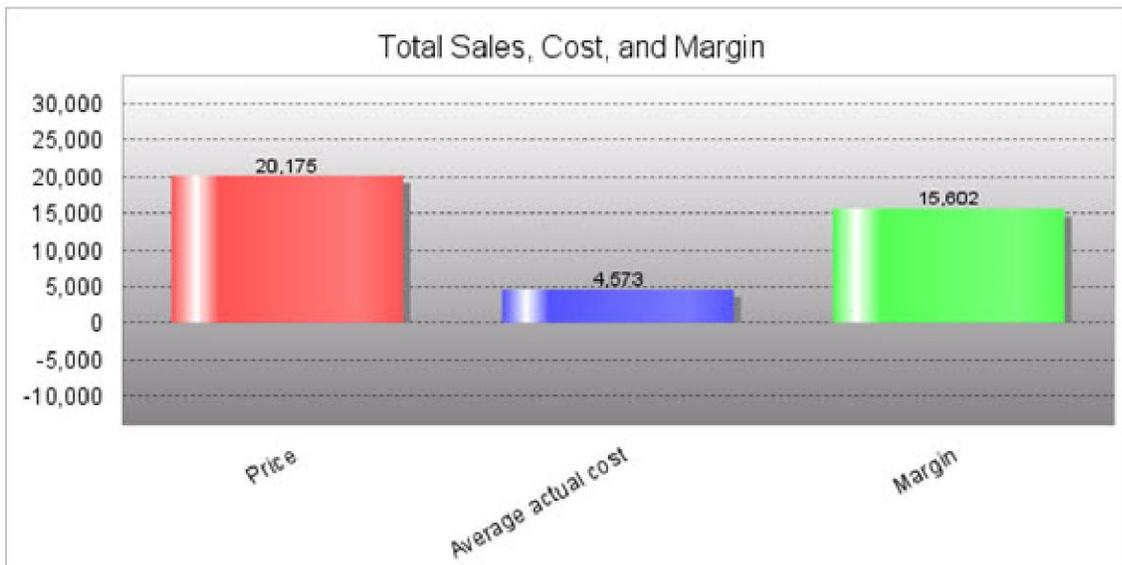


The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No".



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 30,000 and the lower boundary set at -10,000.



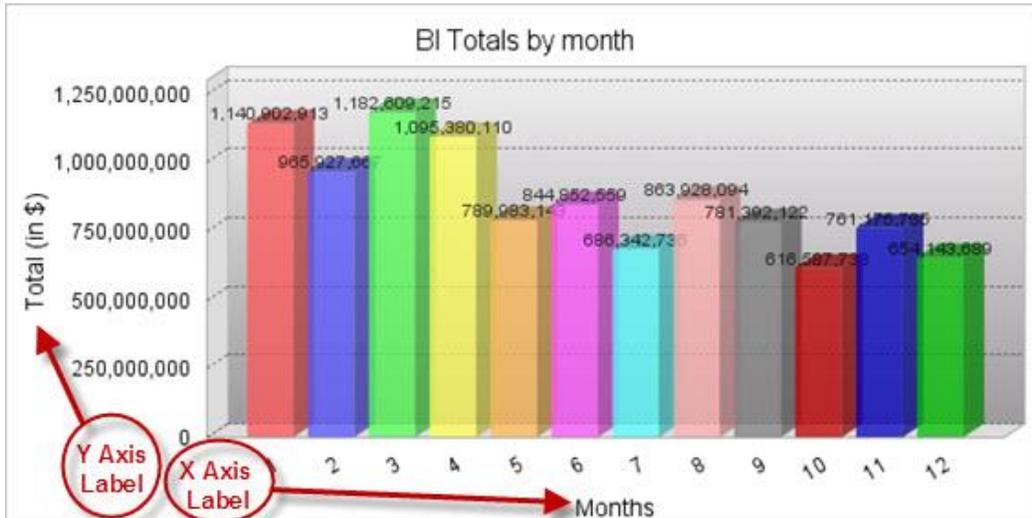
The final value sets the distance between the scale markings on the graph. The example above has been set to 5000 units of distance.

3D Bar Options Tab

This tab provides options specific to the 3D Bar Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months, and the Y label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- **X/Y Axis Label Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- **X/Y Axis Label Font Style**

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- **X/Y Axis Label Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

- **X/Y Axis Label Font Color**

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

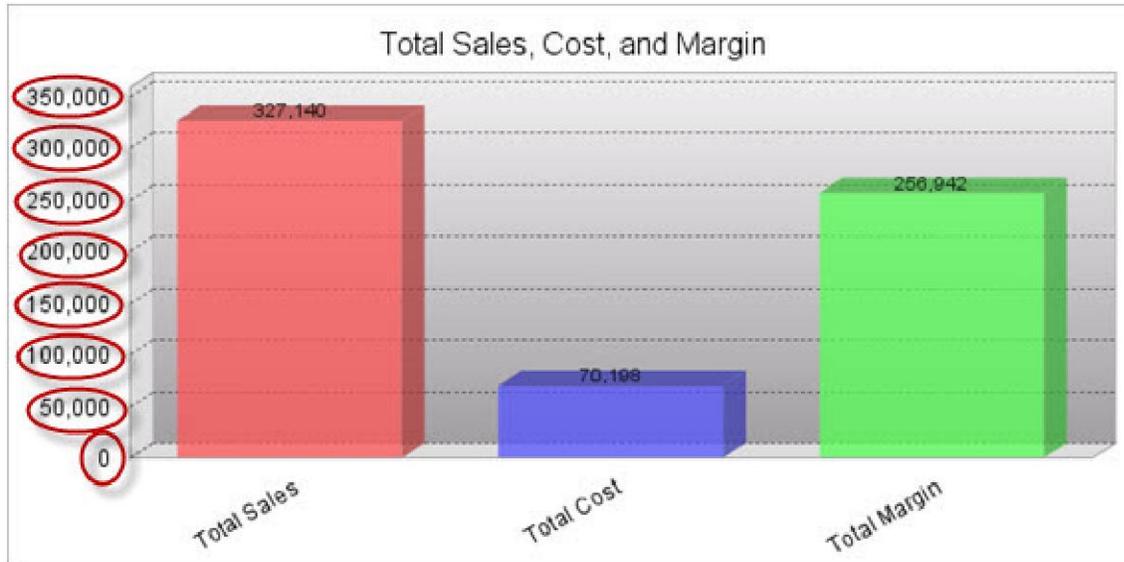
The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Label.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.



The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No."



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 30,000 and the lower boundary set at -10,000.



The final value sets the distance between the scale markings on the graph. The example above has been set to 5000 units of distance..

2D Clustered Bar Options Tab

This tab provides options specific to the 2D Clustered Bar Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months”, and the Y label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- **X/Y Axis Label Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- **X/Y Axis Label Font Style**

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- **X/Y Axis Label Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

- X/Y Axis Label Font Color

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Labels.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.



The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No."



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 30,000 and the lower boundary set at -10,000.



The final value sets the distance between the scale markings on the graph. The example above has been set to 5000 units of distance.

3D Clustered Bar Options Tab

This tab provides options specific to the 3D Clustered Bar Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months”, and the Y label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- **X/Y Axis Label Font**

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- **X/Y Axis Label Font Style**

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- **X/Y Axis Label Font Size**

The font size can be raised or lowered here. By default it is set to 10 pt.

- X/Y Axis Label Font Color

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Labels.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.



The font settings may be modified as noted above in the X/Y Axis Label Tabs.

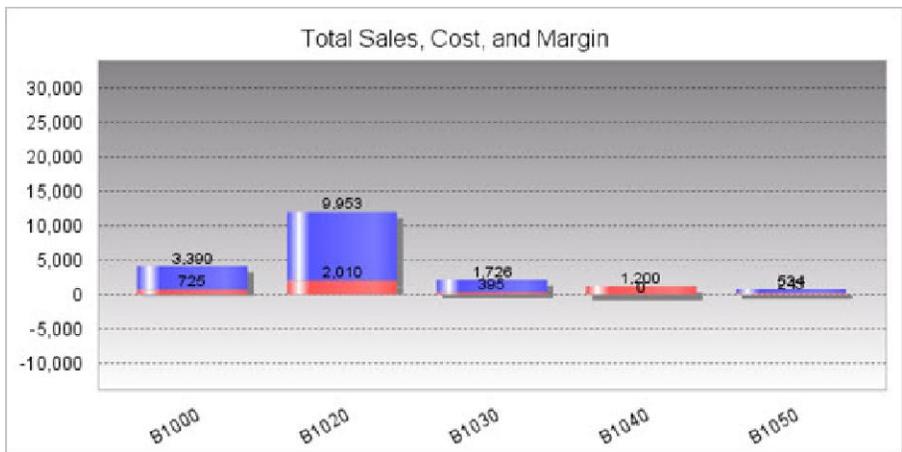
By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No."



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 30,000 and the lower boundary set at -10,000.



The final value sets the distance between the scale markings on the graph. The example above has been set to 5000 units of distance.



3D Stacked Bar Options Tab

This tab provides options specific to the 3D Stacked Bar Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months”, and the Y axis label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- *X/Y Axis Label Font*

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- *X/Y Axis Label Font Style*

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- *X/Y Axis Label Font Size*

The font size can be raised or lowered here. By default it is set to 10 pt.

- *X/Y Axis Label Font Color*

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

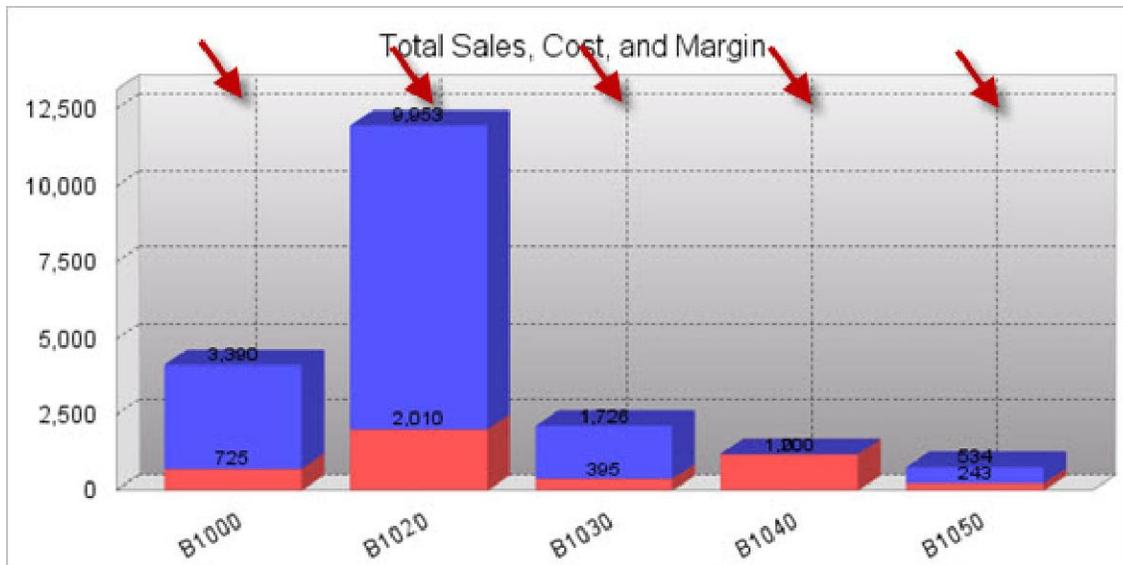
This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

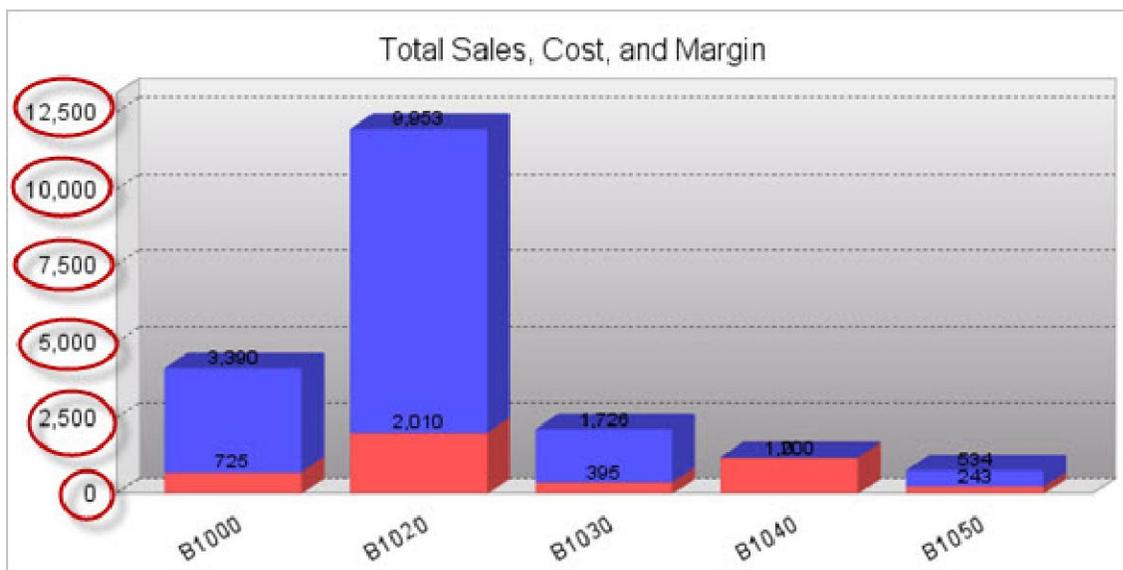
The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Label.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



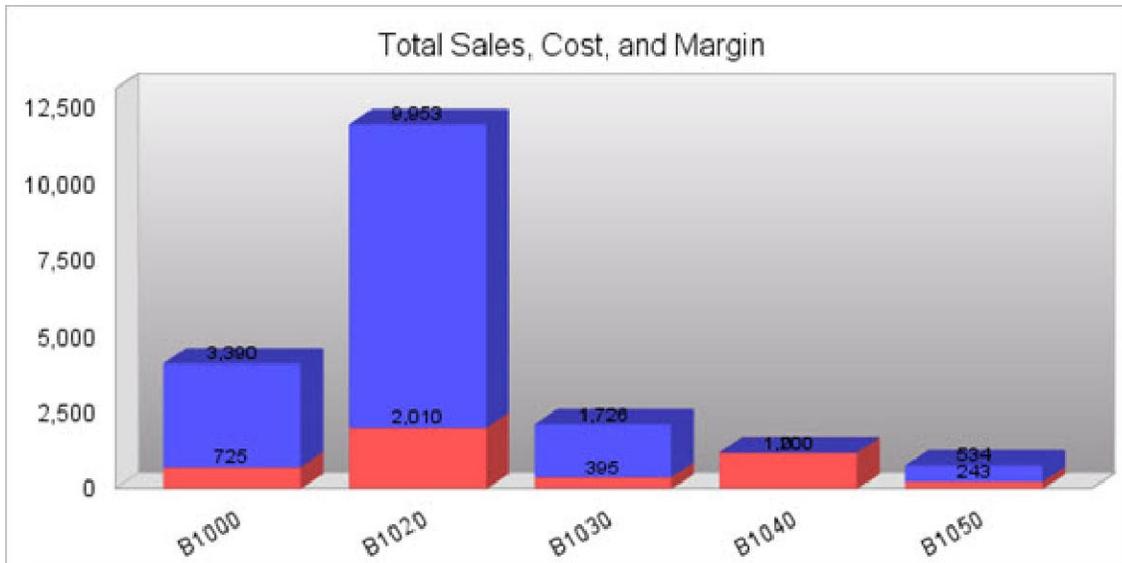
Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.

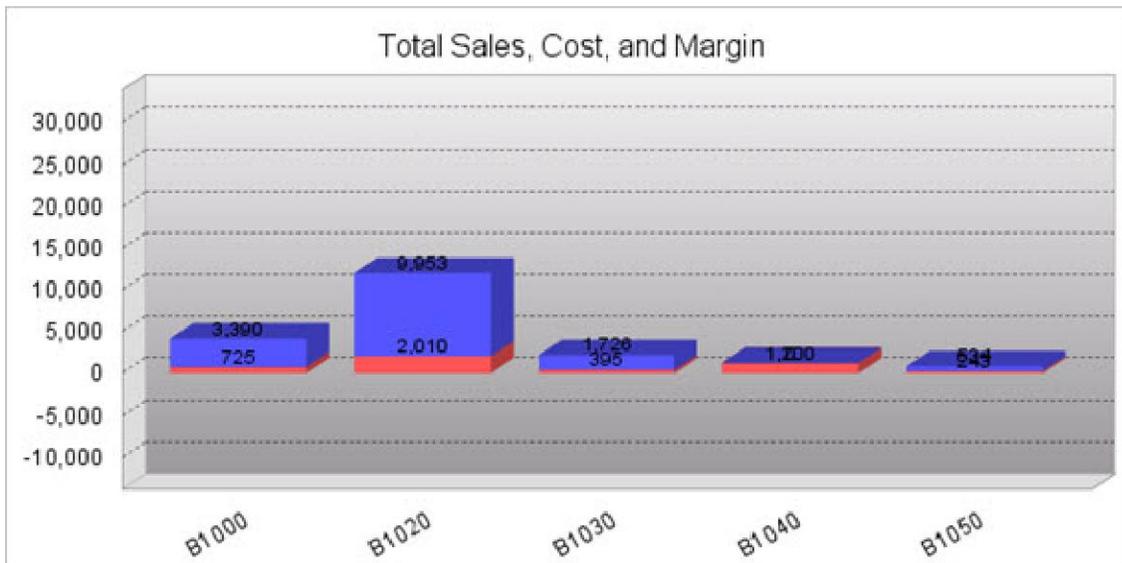


The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No".



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 30,000 and the lower boundary set at -10,000.



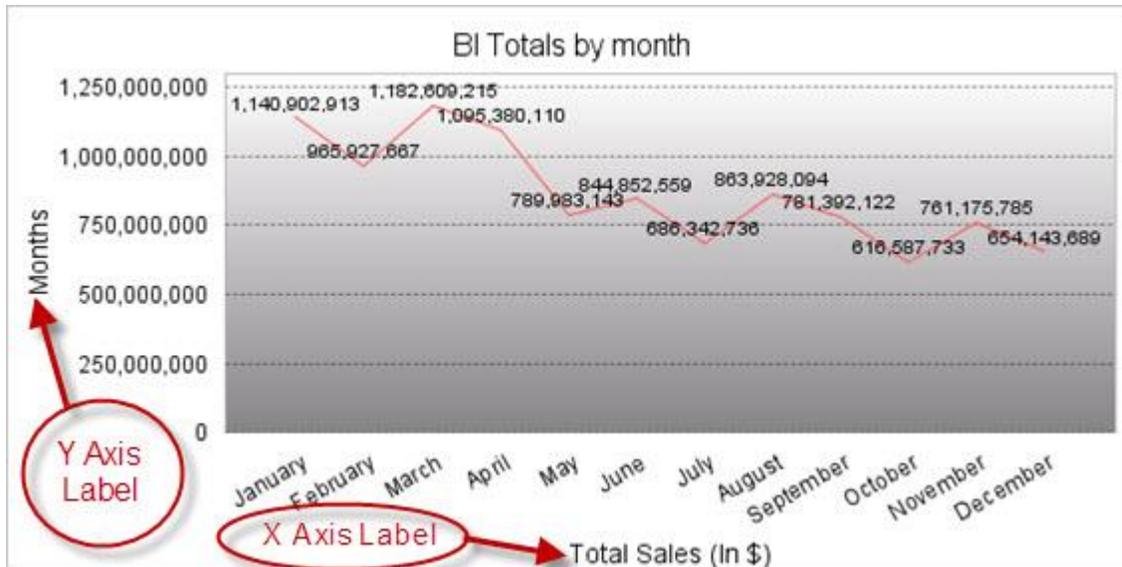
The final value sets the distance between the scale markings on the graph. The example above has been set to 5000 units of distance.

Single-line Chart Options Tab

This tab provides options specific to the Single-Line Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months”, and the Y label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- *X/Y Axis Label Font*

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- *X/Y Axis Label Font Style*

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- *X/Y Axis Label Font Size*

The font size can be raised or lowered here. By default it is set to 10 pt.

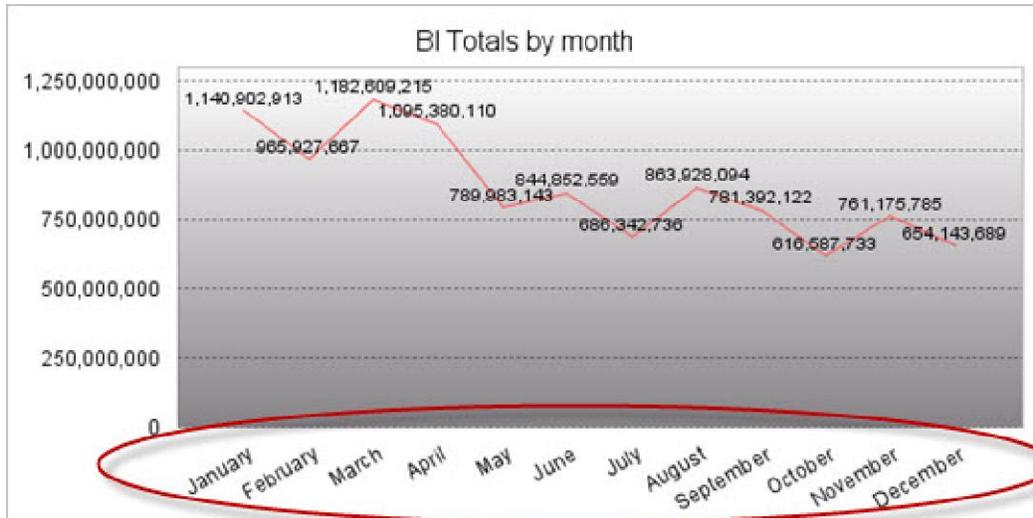
- *X/Y Axis Label Font Color*

The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

X Axis Item Label Tab

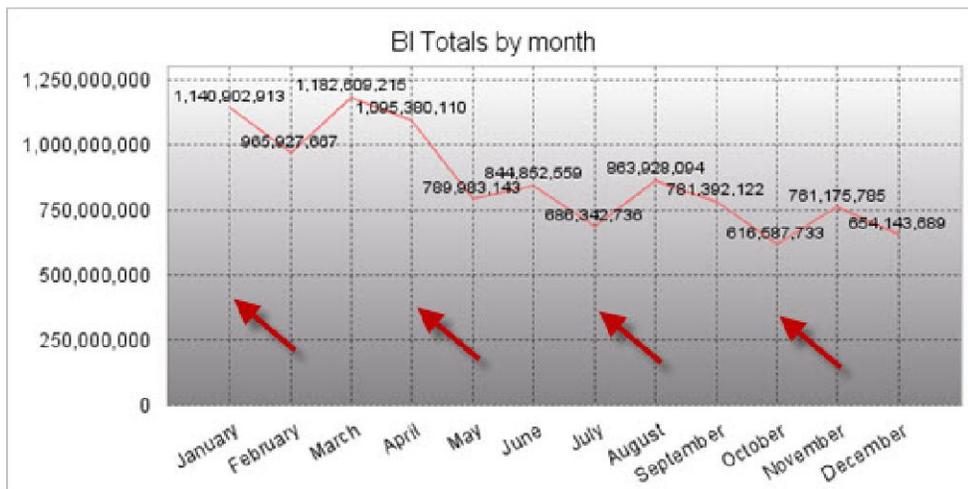
This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

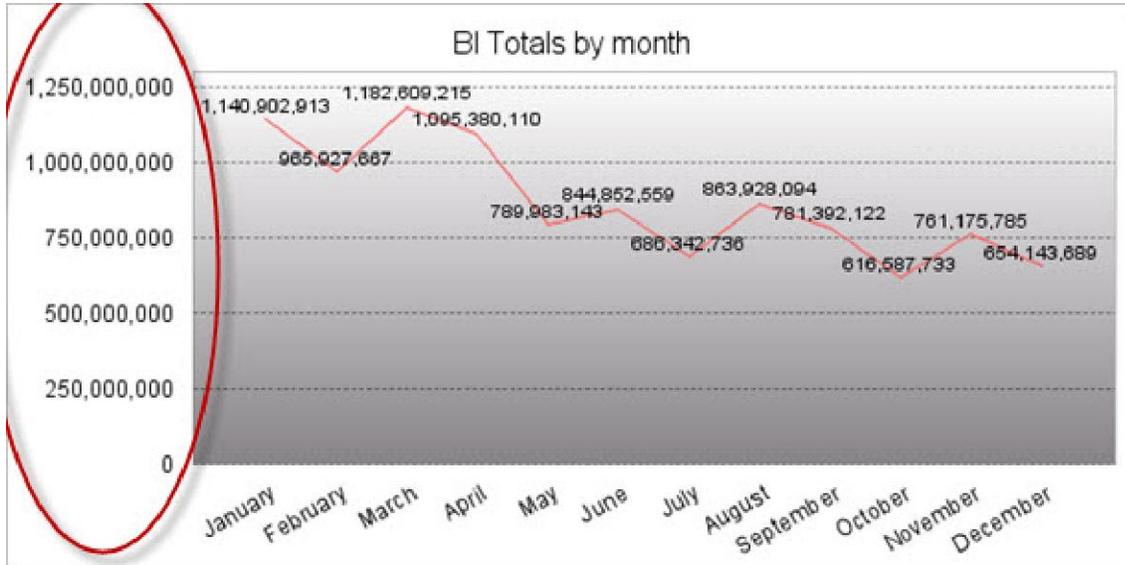
The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Label.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



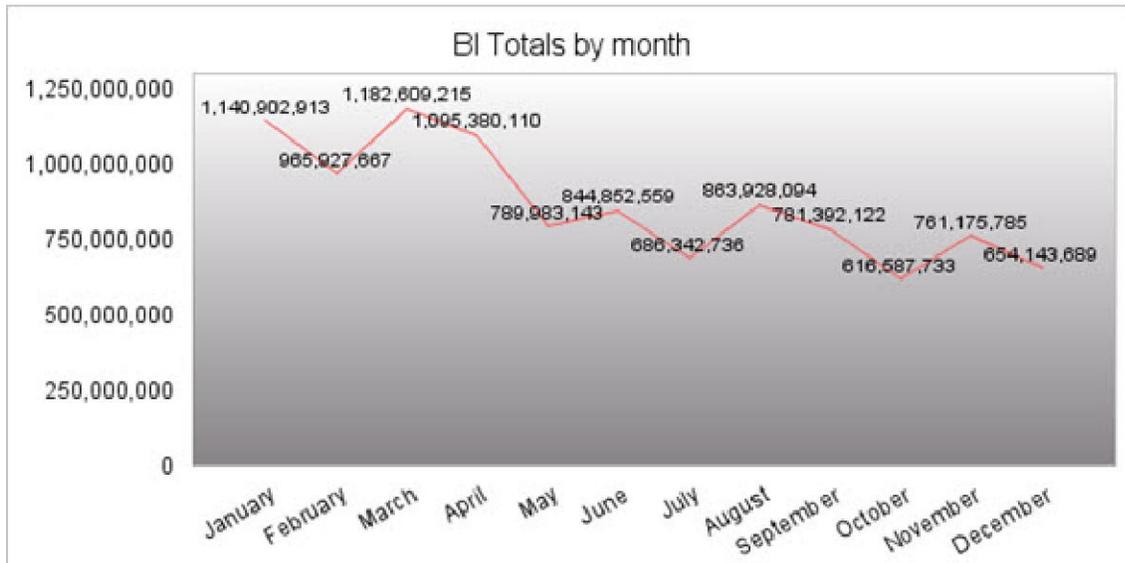
Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.

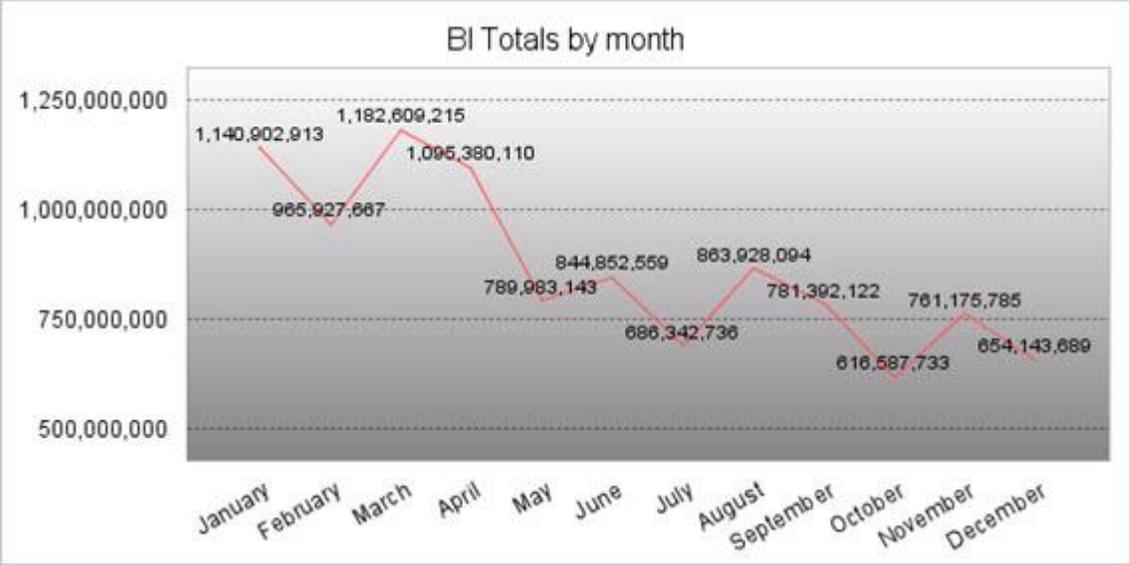


The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No".



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 1,250,000,000 and the lower boundary set at 500,000,000.



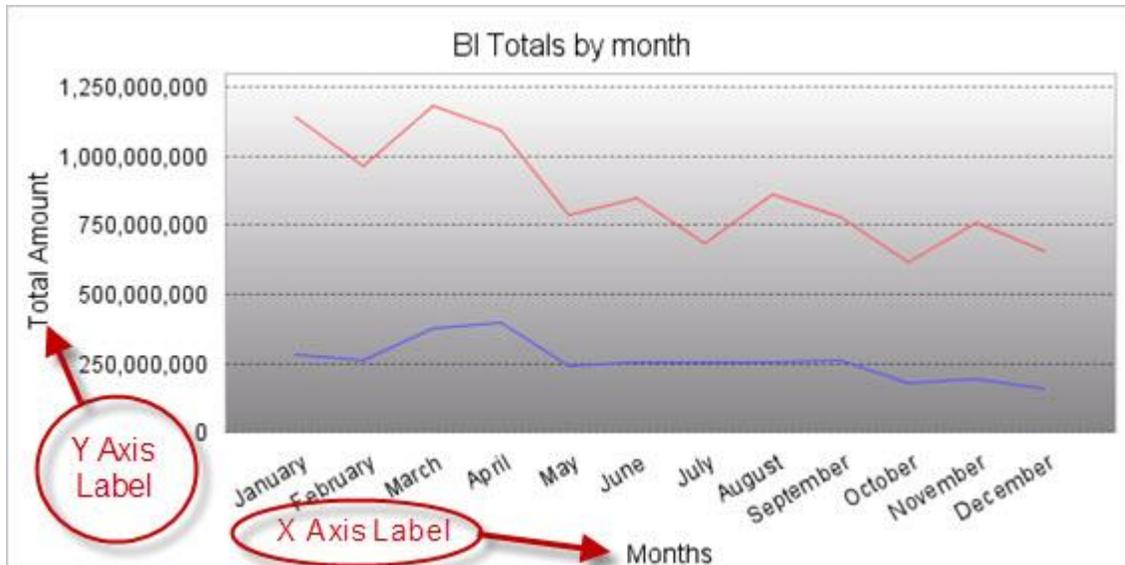
The final value sets the distance between the scale markings on the graph. The example above has been set to 250,000,000 units of distance.

Multi-line Chart Options Tab

This tab provides options specific to the Multi-line Chart.

X/Y Axis Label Tab

This tab governs the text label on the X and Y Axes:



Add a label by typing a name in the **X/Y Axis Label** field. This will be the title for that label. In the above example, the X axis label is “Months”, and the Y label is “Total Sales (in \$)”.

The font settings for the text of the label can be modified using these fields:

- *X/Y Axis Label Font*

Available Fonts are Helvetica, Arial, Times New Roman, Tahoma, and Sans-Serif. Sans-Serif will make the font be whatever the browser’s default Sans-Serif font is.

- *X/Y Axis Label Font Style*

This setting will make the font Bold, Italic, both, or normal. The default “Normal” will leave the text without bold or italics.

- *X/Y Axis Label Font Size*

The font size can be raised or lowered here. By default it is set to 10 pt.

- *X/Y Axis Label Font Color*

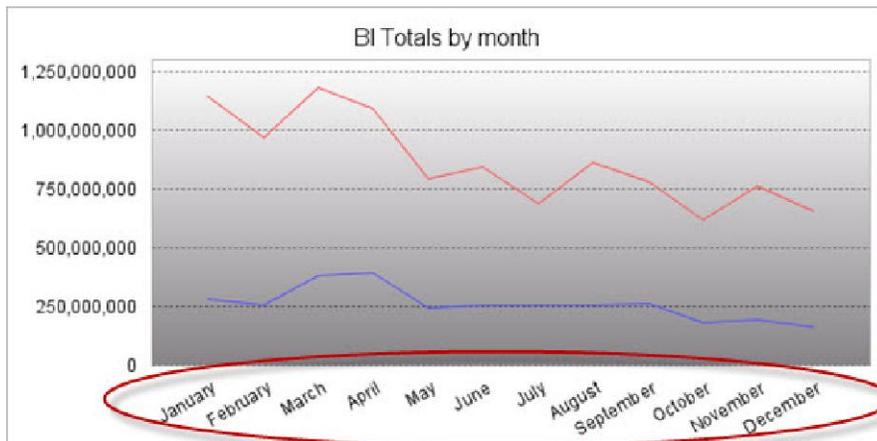
The font color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.

X/Y Axis Label Margins

This setting controls the amount of space around the axis label. Units are in pixels, and the order is top, left, bottom, right.

X Axis Item Label Tab

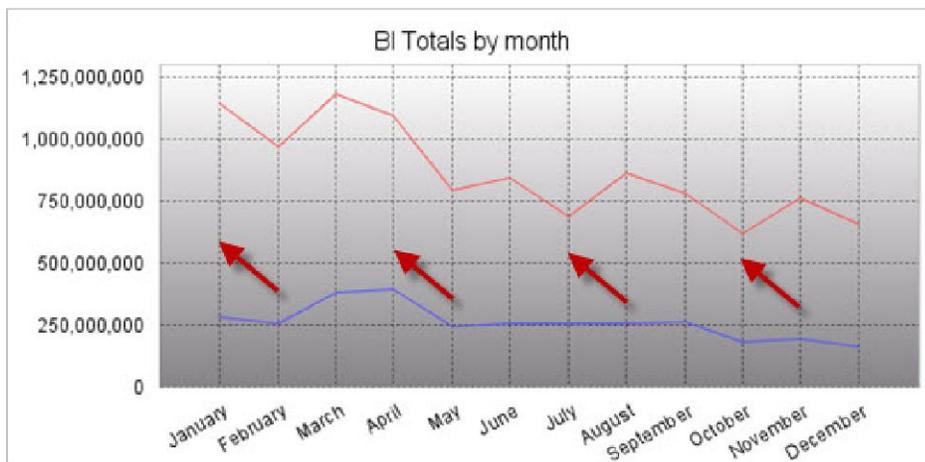
This tab gives options for the labels of each bar on the x axis of the chart:



The angle of the labels can be modified by changing the **X Axis Item Label Rotation**. Units are in degrees. Perfectly horizontal is 0 degrees, perfectly vertical is 90 or 270 degrees.

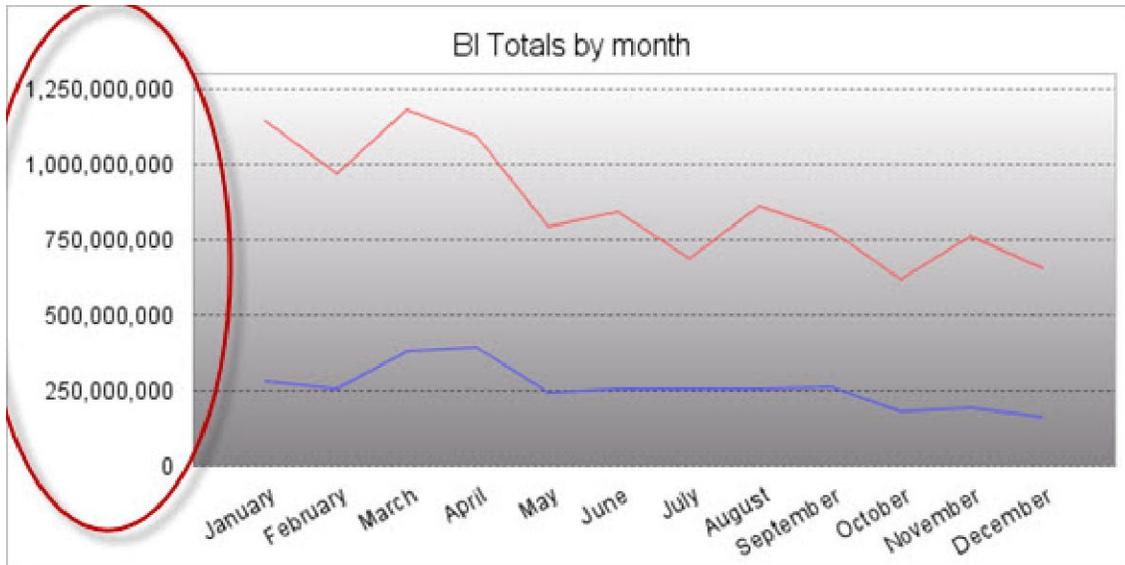
The font of the labels may be edited with the **Font, Style, Size, and Color** settings. Explanations for each setting are noted above in reference to the X/Y Axis Label.

To display vertical grid lines on your chart, turn on the **Display X Axis Grid Lines?** option.



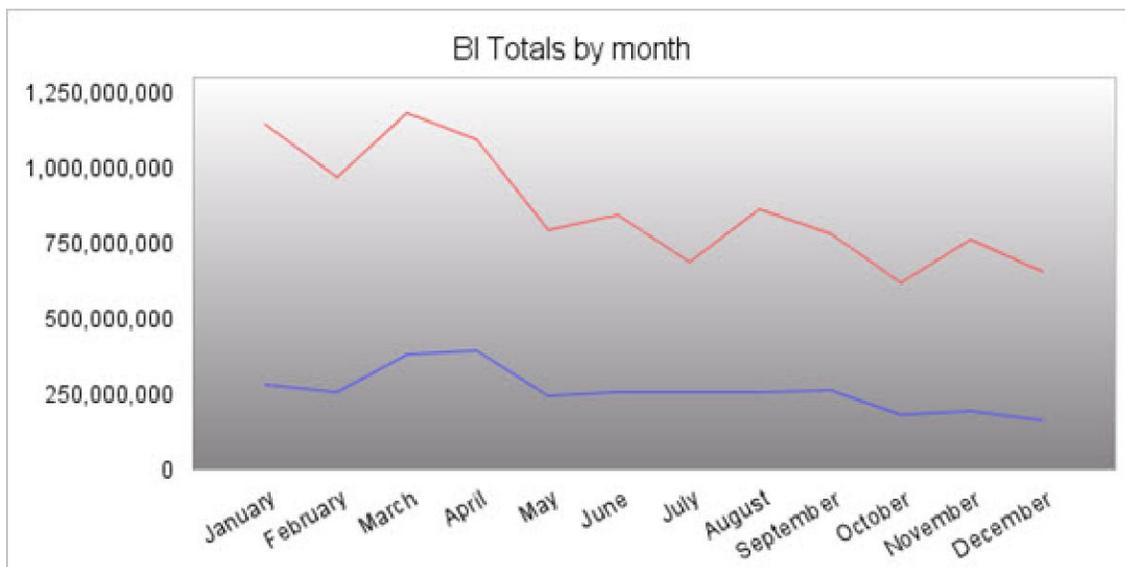
Y Axis Scale Tab

This tab deals with the numeric labels along the Y axis.

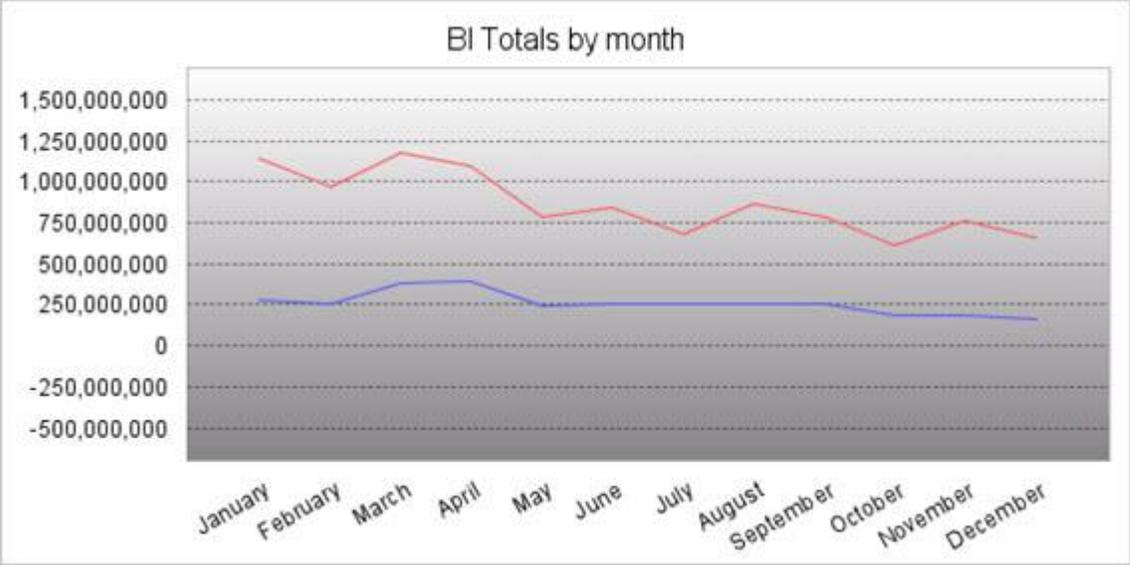


The font settings may be modified as noted above in the X/Y Axis Label Tabs.

By default, the Y-Axis scale lines are turned on. To turn them off, set **Display Y Axis Grid Lines** to "No".



The next two values set the scale of the graph. When these are set to zero, the scale varies to match the values of the graph. To fix the upper and lower limit, enter the values into the Y Axis Upper/Lower Boundary. The example below is with the upper boundary set to 1,500,000,000 and the lower boundary set at -500,000,000.



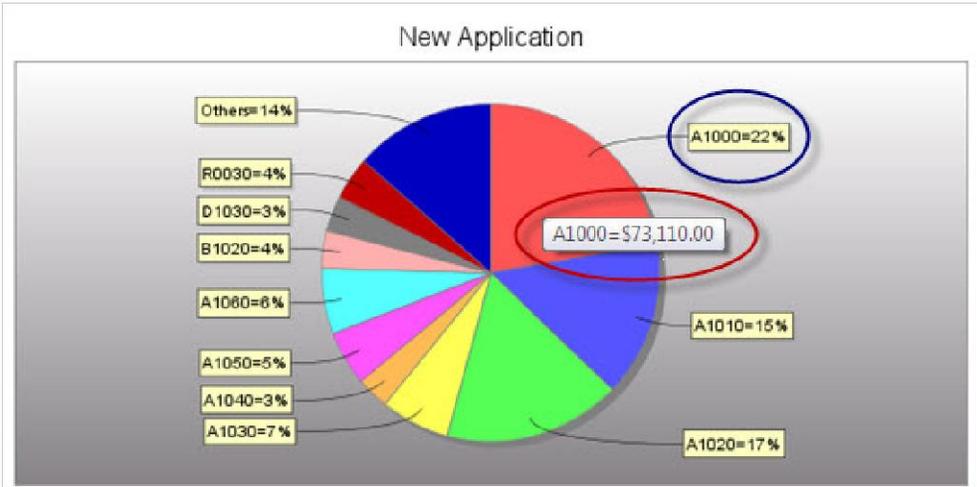
The final value sets the distance between the scale markings on the graph. The example above has been set to 250,000,000 units of distance.

2D Pie Options Tab

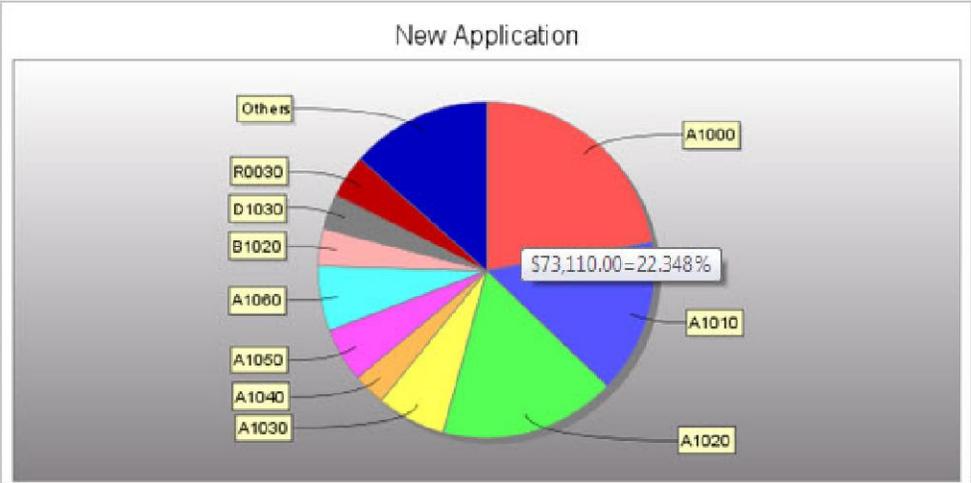
This tab provides options specific to the 2D Pie Chart.

Pie Label/Tooltip Value Format

The Pie Label/Tooltip Value Formats define what values are displayed on the label (circled in blue) and the tooltip (circled in red).



There are three values that may be used in the format, the description from the description tab (displayed by entering “{0}”), the numeric value of the pie piece (displayed by entering “{1}”), and that piece’s percentage of the pie (displayed by entering “{2}”). In the example below, the **Pie Label Value Format** is “{0}” and the **Pie Tooltip Label Format** is “{1}={2}”.



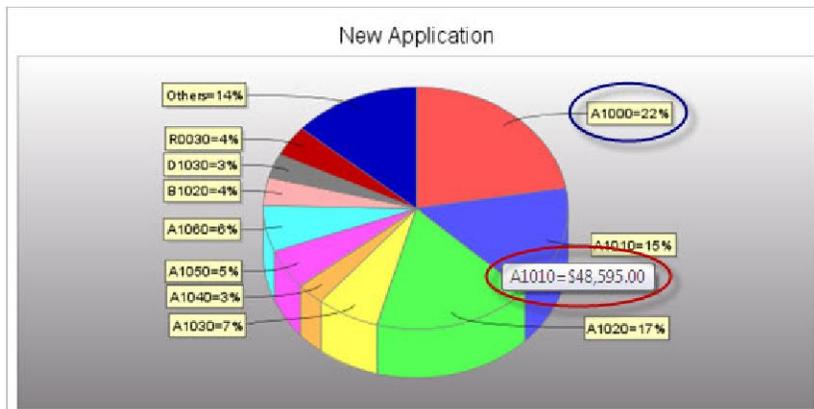
3D Pie Options Tab

- Learn more about each tab:

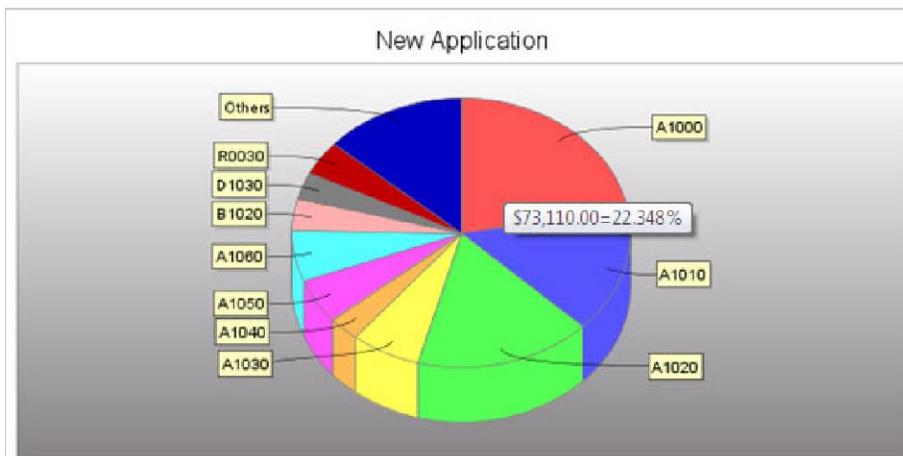
This tab provides options specific to the 3D Pie Chart.

Pie Label/Tooltip Value Format

The Pie Label/Tooltip Value Formats define what values are displayed on the label (circled in blue) and the tooltip (circled in red).



There are three values that may be used in the format, the description from the description tab (displayed by entering "{0}"), the numeric value of the pie piece (displayed by entering "{1}"), and that piece's percentage of the pie (displayed by entering "{2}"). In the example below, the **Pie Label Value Format** is "{0}" and the **Pie Tooltip Label Format** is "{1}={2}".

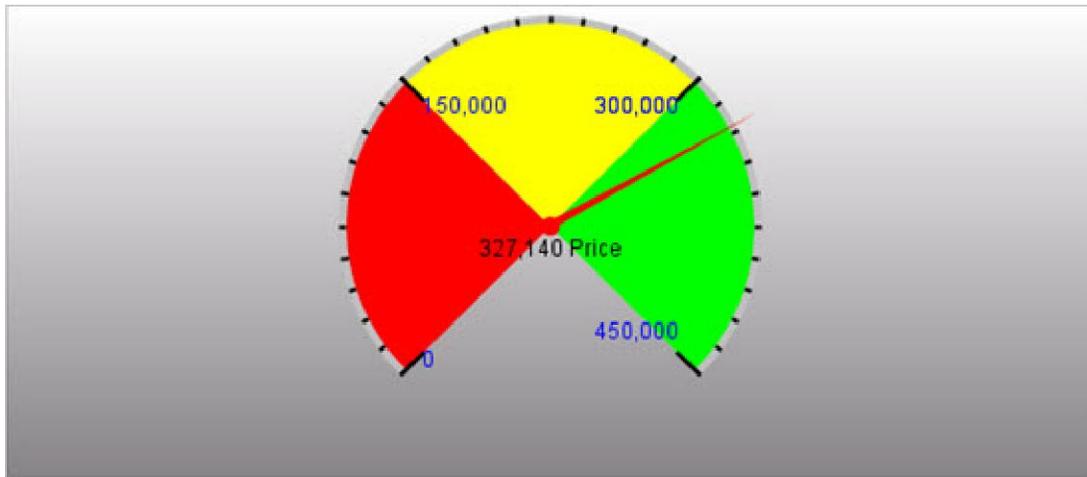


Speedometer Options Tab

This tab provides options specific to the Speedometer Chart.

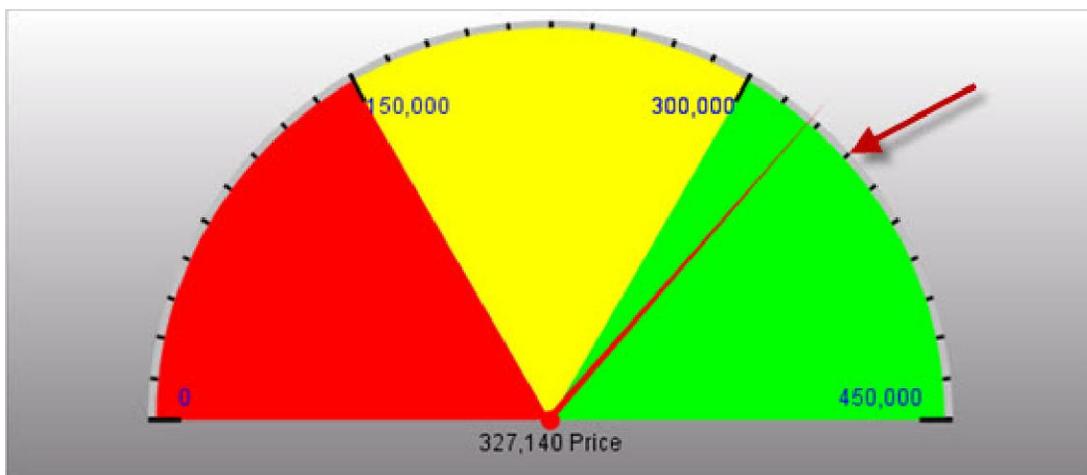
Meter Angle

This value sets the angle (out of 360) that the chart uses out of the circle. The default is 180, meaning the chart will only occupy half of the circle. This example shows a 270 degree angle:



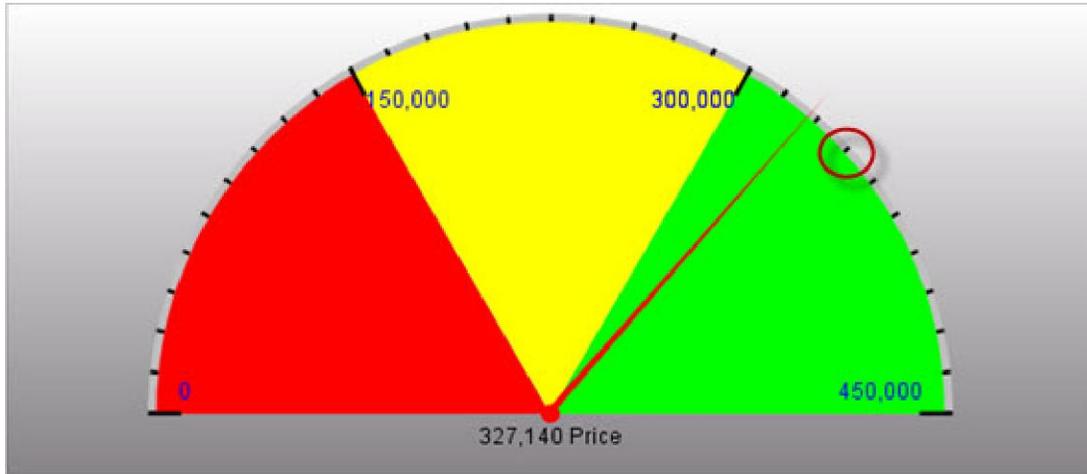
Meter Outline Color

This option allows you to change the color of the area at the edge of the meter. The color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.



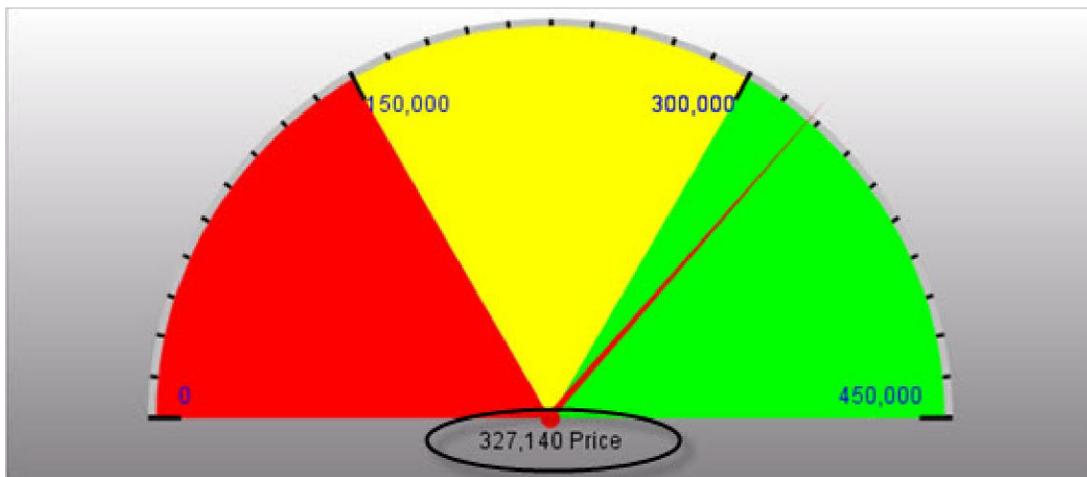
Number/Color of Scale Marks

These values deal with the tick marks on the chart. You can determine how many of them to have and what their color is.



Show Needle Value? and Needle Color

The **Show Needle Value?** option determines whether or not the value the needle is pointing at is displayed at the bottom of the chart. The color of the needle may also be adjusted using the **Needle Color** option.



Dial Chart Options Tab

This tab provides options specific to the Dial Chart.

Meter Angle

This value sets the angle (out of 360) that the chart uses out of the circle. The default is 180, meaning the chart will only occupy half of the circle. This example shows a 270 degree angle:



Meter Outline Color

This option allows you to change the color of the area at the edge of the meter. The color may be a 6-digit hexadecimal value or any of the 17 [HTML color names](#). You can also click on the color wheel next to the text field to pick a color from a palette.



Number/Color of Scale Marks

These values deal with the tick marks on the chart. You can determine how many of them to have and what their color is.



Show Needle Value? and Needle Color

The **Show Needle Value?** option determines whether or not the value the needle is pointing at is displayed at the bottom of the chart. The color of the needle may also be adjusted using the **Needle Color** option.

