



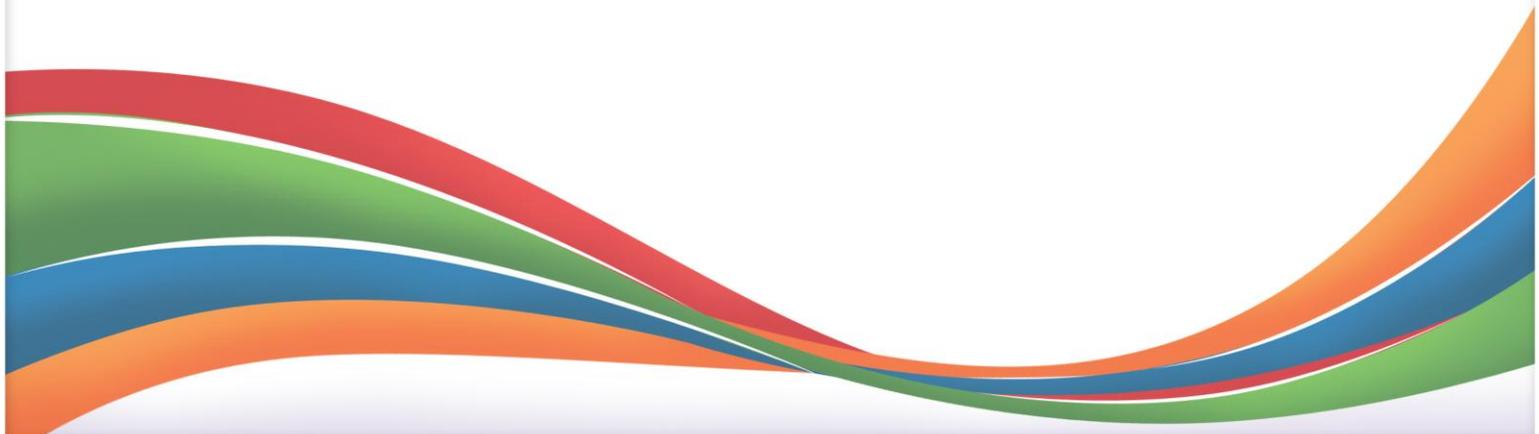
ARTIO FusionCharts for Joomla

Animated, Interactive & FREE Flash charts for Joomla

Documentation

<http://www.fusioncharts.com/joomla>

<http://www.artio.net/joomla-extensions/fusioncharts>



Preface

Joomla is the CMS of choice for websites owned by individuals and small businesses. Its appeal lies in its ease of use and high quality professional output. Since Joomla is an open source product, its functionality can easily be enhanced through custom developed extensions. ARTIO FusionCharts FREE for Joomla is a powerful Flash charting extension which can effectively take care of your basic data visualization needs.

Developed by ARTIO with the power of FusionCharts (industry leader in Adobe Flash Charting), ARTIO FusionCharts for Joomla lets you incorporate interactive and animated Flash charts in your Joomla pages. The extension provides a wide range of customizability options, which enable you to intricately configure the functional and cosmetic aspects of the chart. The built-in preview option helps you optimize your configuration prior to inserting the charts in a Joomla page.

This manual will help you explore all the features of ARTIO FusionCharts for Joomla. For ease of use – the manual has been divided into 7 chapters. If you are already familiar with Joomla then you shouldn't have any problem in implementing the product. Just skim through this manual and you'll be all set to work with ARTIO FusionCharts for Joomla. For any queries, you may contact us on support@fusioncharts.com.

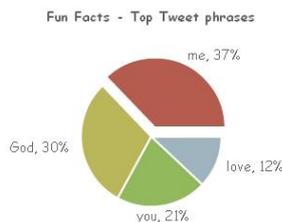
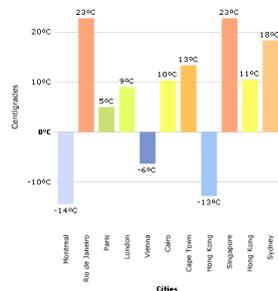


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1

Product Overview

The objective of this chapter is to help you get acquainted with the fundamental aspects of ARTIO FusionCharts for Joomla. In this chapter you will learn the process of installing the FusionCharts extension. Following which, you will be introduced to the main interface of ARTIO FusionCharts for Joomla. The information provided in this chapter is extremely crucial as it will help you effectively assimilate the topics which will be discussed in the subsequent chapters.

System Requirements and Installation

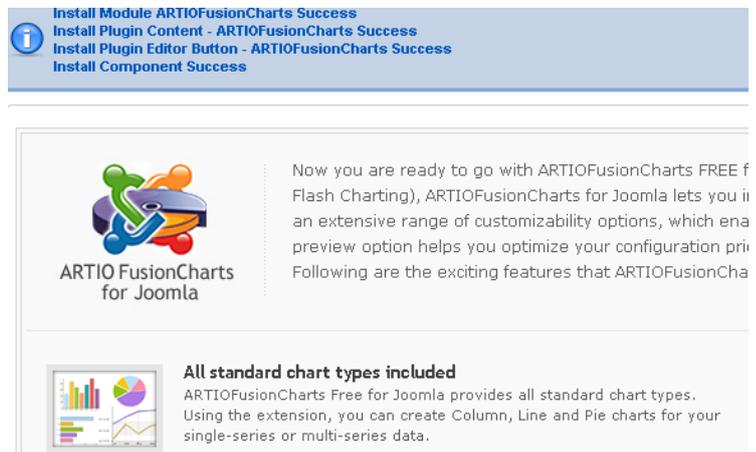
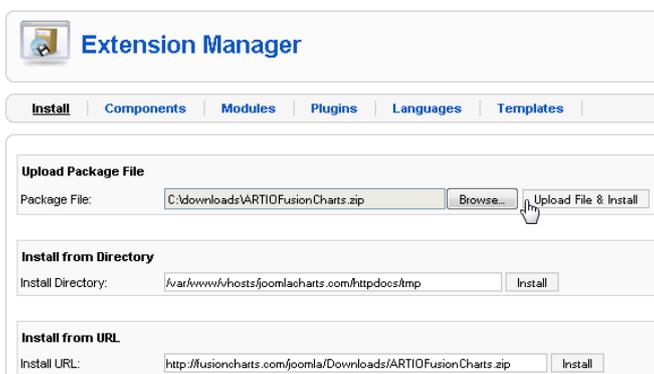
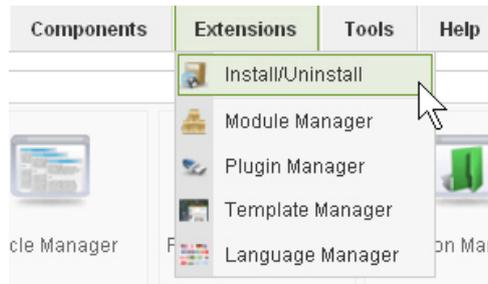
ARTIO FusionCharts for Joomla can be used with Joomla 1.5. The only prerequisite is that you must have the Multibyte Library extension installed on your PHP server. On the client-side, a JavaScript enable browser and Adobe Flash player 6 (or above) is required for viewing the chart.

Please also make sure to have write-access-permission set for the following directories:

```
/administrator/components,  
/administrator/languages,  
/administrator/modules,  
/administrator/images,  
/components,  
/languages,  
/modules,  
/plugins and  
/tmp
```

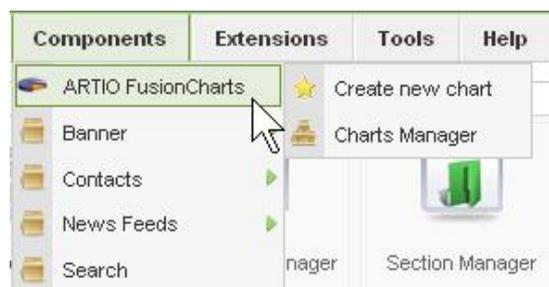
Installing the extension is extremely easy - a small step, but, giant leap:

1. Open the Extension Manager by selecting the **Install/Uninstall** option from the **Extensions** menu. The ARTIO FusionCharts for Joomla installation package contains a zipped archive 'ARTIOFusionChartsFREE.zip'. Just upload the zipped file using the **Upload Package Files** option.



This completes the installation – ARTIO FusionCharts for Joomla is now ready for use.

You'll find that the **Components** menu now displays a new **ARTIO FusionCharts** item. Using this option you can directly launch – either the FusionCharts Manager page or the Chart Configuration page.



In the next section we will discuss about the user interface that ARTIO FusionCharts for Joomla provides.

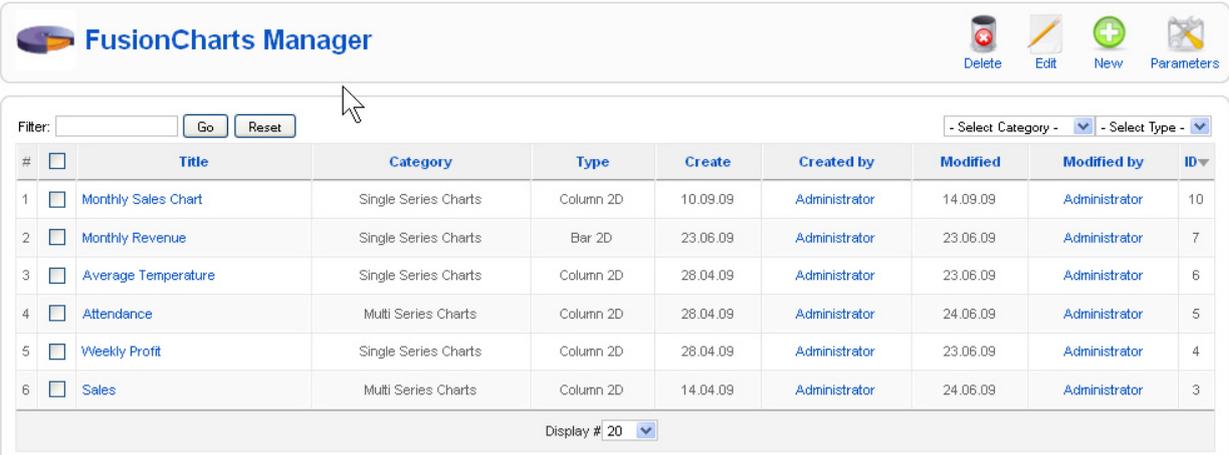
The Interface

While working with ARTIO FusionCharts for Joomla you'll primarily be dealing with the following interfaces:

1. **FusionCharts Manager page**
2. **Chart Configuration page**

FusionCharts Manager Page

FusionCharts Manager page is the place from where you can manage your chart library. All the charts that you create using ARTIO FusionCharts for Joomla, will be stored and listed in the FusionCharts Manager page.



The screenshot shows the FusionCharts Manager interface. At the top left is the logo and title 'FusionCharts Manager'. On the top right is a toolbar with four icons: Delete (trash), Edit (pencil), New (plus), and Parameters (gear). Below the toolbar is a search filter with a text input, 'Go' and 'Reset' buttons, and two dropdown menus for 'Select Category' and 'Select Type'. The main area contains a table with the following data:

#	<input type="checkbox"/>	Title	Category	Type	Create	Created by	Modified	Modified by	ID
1	<input type="checkbox"/>	Monthly Sales Chart	Single Series Charts	Column 2D	10.09.09	Administrator	14.09.09	Administrator	10
2	<input type="checkbox"/>	Monthly Revenue	Single Series Charts	Bar 2D	23.06.09	Administrator	23.06.09	Administrator	7
3	<input type="checkbox"/>	Average Temperature	Single Series Charts	Column 2D	28.04.09	Administrator	23.06.09	Administrator	6
4	<input type="checkbox"/>	Attendance	Multi Series Charts	Column 2D	28.04.09	Administrator	24.06.09	Administrator	5
5	<input type="checkbox"/>	Weekly Profit	Single Series Charts	Column 2D	28.04.09	Administrator	23.06.09	Administrator	4
6	<input type="checkbox"/>	Sales	Multi Series Charts	Column 2D	14.04.09	Administrator	24.06.09	Administrator	3

At the bottom of the table is a 'Display #' dropdown menu set to 20.

The FusionCharts Manager page comprises of the following elements:

- **Toolbar:** The toolbar is located on the top right corner of the FusionCharts Manager page. It provides options for creating, editing and deleting charts. The **Parameters** button, which is located at the extreme right end of the toolbar, allows you to set the default configurations of the Chart Configuration page.
- **Chart List Table:** The chart list table displays a list of all existing charts. You can use the filter options provided at the top of the chart list table to view charts of particular category or type. You can also search for a particular chart by entering its title in the provided search field.

Note - Since FusionCharts for Joomla comes with a library of sample charts, you'll see a populated Chart List table even if you are working with a fresh installation of ARTIO FusionCharts for Joomla.

Chart Configuration Page

In the chart Configuration page you can configure each and every aspect of the chart. Here, you can provide data, set the chart title and make all functional and aesthetic configurations and nevertheless get a live preview of the addition and alterations that you make.

The Chart Configuration page is divided into following sections:

- **Toolbar** – The toolbar contains three buttons namely; **Save**, **Apply** and **Cancel**. The **Save** and **Apply** buttons serve an identical purposes, i.e. they save the current configuration – the only distinction is that in addition to saving, the **Save** button also closes the Chart Configuration page.
- **Main Data** - This section contains some crucial set of configuration options. Here, you need to give a name to the chart for proper identification in the chart manager list. The other options allow you to change the chart’s type.
- **Chart Data** – Using this section you furnish a chart with data. Moreover, you can customize the properties of individual data items.
- **Trend Lines** – At times you might have an need to create trendlines for your chart. All the trendlines that you create for a chart will get listed here and you can easily remove or re-configure them.

- Chart Parameters section** – This section is located at the bottom right corner. Here, you'll find a categorical list of configurations for the selected chart. Clicking on a listed item brings up an expandable panel – containing configuration options pertaining to the selected item. For instance, if you click on **Canvas Properties** - a panel will expand to display all configuration parameters associated with the chart canvas.



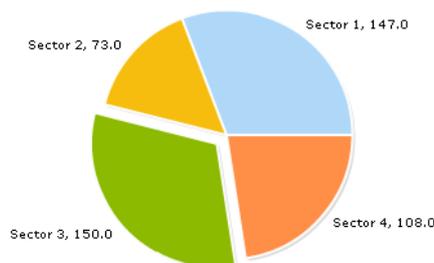
- Chart Preview** – Here, you'll find a **Render Chart** button, which renders the chart based on the current configurations. You don't have to save the settings in order to get the current preview. This feature is extremely helpful as it allows you to check out various configurations without having to save or apply them first.

<input type="checkbox"/>	Sector 2	73	F6BD0F	
<input type="checkbox"/>	Sector 3	150	8BB400	
<input type="checkbox"/>	Sector 4	108	FF8E46	

The chart was rendered by sample data

Chart Preview

Render Chart



2

Creating Charts

This chapter will get you take-off with ARTIO FusionCharts for Joomla. You'll learn how to create charts and embed them into a Joomla article. The chapter also discusses the process of modifying an existing chart.

Creating Your First Chart

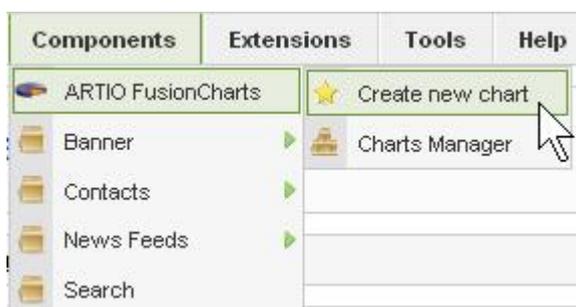
Let's create a simple monthly sales chart.

You might be having some sales data for the month like the following:

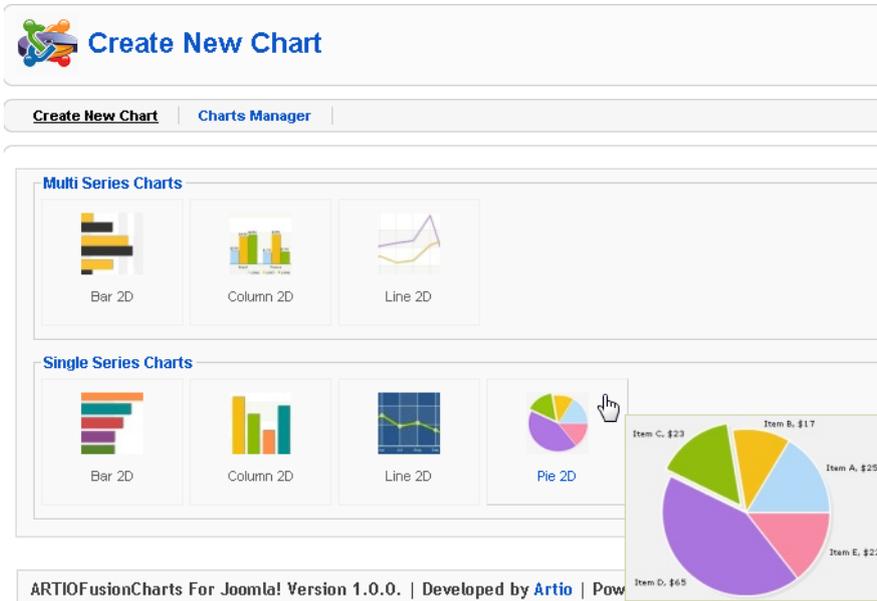
Week	Sales (Amount in \$)
Week 1	15000
Week 2	17000
Week 3	14000
Week 4	18500

Here are the steps for configuring the chart:

1. Click on the **Components** menu and select **Create new chart** from the **ARTIO FusionCharts** sub-menu.



- You'll be asked to choose a chart type from either the single-series or the multi-series chart category. Since, we are dealing with single set of data in this example – you'll pick a chart from the **Single Series Chart** category, say, the **Column 2D**.



- the display will now change, as you'll be moved to the New Chart creation/ configuration page.

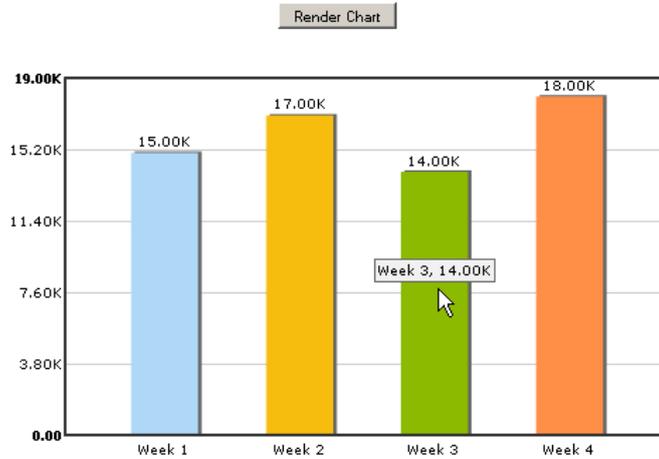
- In the Chart Configuration page, we set title for the chart as "Monthly Sales Chart".



- Some sample data is displayed in the Chart Data section of the Chart Configuration page. Replace the contents of the **Name** and **Value** columns by referring to the sample data table (above).

<input type="checkbox"/>	Name	Value
<input type="checkbox"/>	Week 1	15000
<input type="checkbox"/>	Week 2	17000
<input type="checkbox"/>	Week 3	14000
<input type="checkbox"/>	Week 4	18000

- Next, scroll down to locate the Chart Preview section. Click on the **Render Chart** button to preview the chart and then click the **Save** button on the toolbar to finalize the configuration.



The chart is ready, but to add it to your Joomla website, you'll have to make it a part of an article.

Adding the Chart to an Article

Here are the steps for adding the chart to an article:

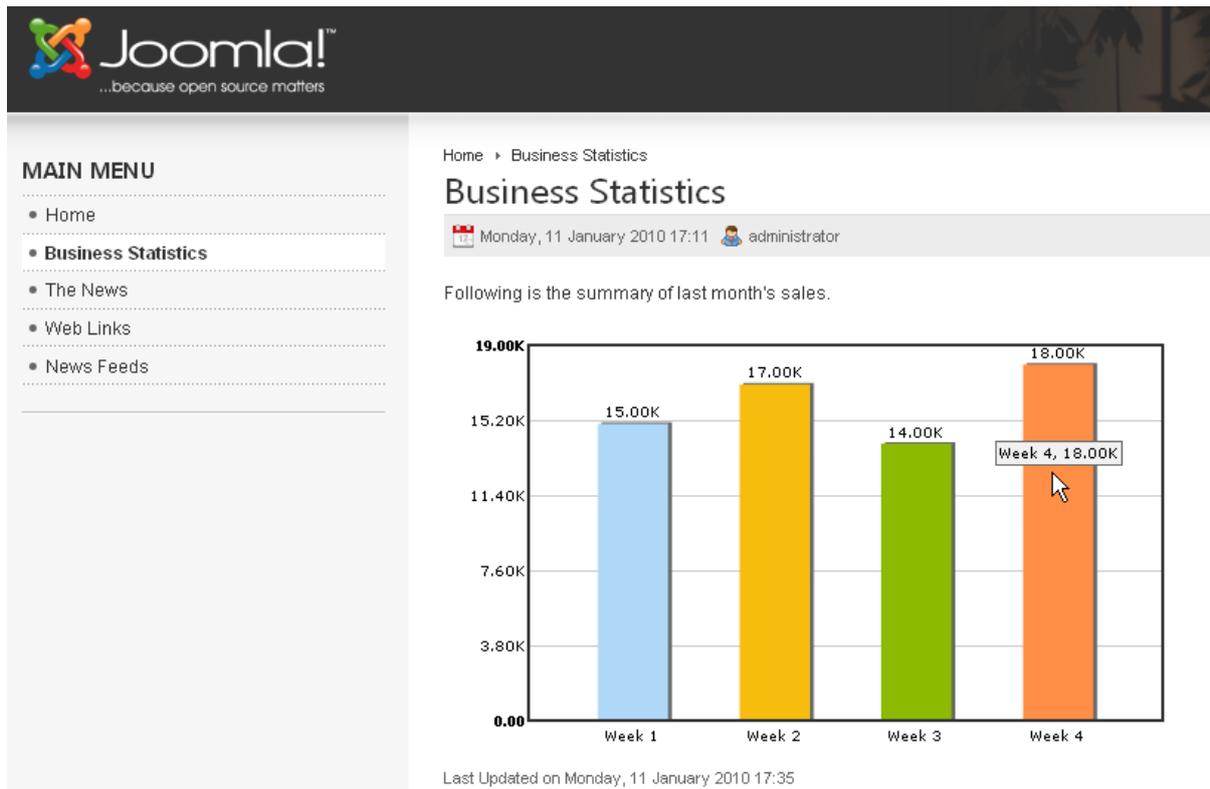
- Create a new article or open an existing article in edit mode.
- Position the cursor at the point where you want to insert the chart.
- Click on the **Chart** button which is located below the article editing area. This brings up a list of all available charts. Click on the desired chart and it will automatically be embedded into the article.



#	<input type="checkbox"/>	Title	Category	Type	Create	Created by	Modified	Modified by	ID
1	<input type="checkbox"/>	Monthly Sales Chart	Single Series Charts	Column 2D	11.01.10	Administrator	11.01.10	Administrator	10
2	<input type="checkbox"/>	Monthly Revenue	Single Series Charts	Bar 2D	23.06.09	Administrator	23.06.09	Administrator	7
3	<input type="checkbox"/>	Average Temperature	Single Series Charts	Column 2D	28.04.09	Administrator	23.06.09	Administrator	6
4	<input type="checkbox"/>	Attendance	Multi Series Charts	Column 2D	28.04.09	Administrator	24.06.09	Administrator	5
5	<input type="checkbox"/>	Weekly Profit	Single Series Charts	Column 2D	28.04.09	Administrator	23.06.09	Administrator	4
6	<input type="checkbox"/>	Sales	Multi Series Charts	Column 2D	14.04.09	Administrator	24.06.09	Administrator	3

Display # 20

Publish your article and this is how the chart will appear in it:



But, this is not all, rather just the first landmark of your exploration. We will pass more advanced features in next sections as well as in subsequent chapters.

Changing the Chart Type

Now, what if you want to see the share of each week contributing to the month's total sales? Well, you might wish to change the chart type to a pie in that case. It's easy!

Here are the steps:

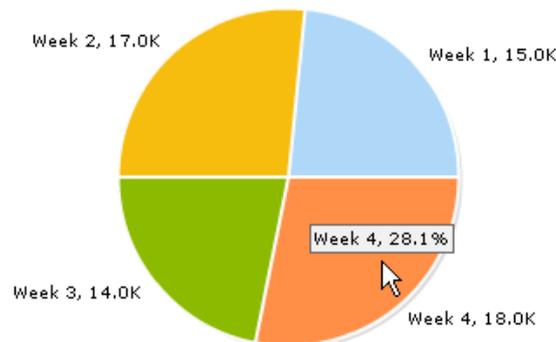
1. Open the FusionCharts Manager page and then open the "Monthly Sales Chart" in edit mode (by clicking on the title of the chart).
2. In the *Main Data* section of the Chart Configuration page, change the chart type to 'Pie 2D' and then click the **Change Category & Type** button. A dialogue box will be displayed informing you that current data and configurations will be saved. Press **OK** and proceed to the next step.

Main Data

Title	Monthly Sales Chart
Category - Type	Single Series Charts - Pie 2D

Change Category & Type

3. Next, scroll down to the Chart Preview section and click the **Render Preview** button to preview the change.



4. Finally, click the **Save** button on the toolbar to finalize the changes.

As you can see, the chart type has changed, and the modification will automatically be reflected in the article - where the chart has been embedded.

Home > Business Statistics

Business Statistics

Monday, 11 January 2010 17:11 administrator

Following is the summary of last month's sales.

Week	Sales (K)	Percentage
Week 1	15.0K	
Week 2	17.0K	
Week 3	14.0K	
Week 4	18.0K	28.1%

Last Updated on Monday, 11 January 2010 17:35

Creating a Multi-Series Chart

Till now, we've been dealing solely with charts showing a single set of data i.e. single-series charts. But, you might have multiple sets of data, may be sales data of a few months. You might need to compare sales data of two months. A multi-series chart would help you out in that. It can display two or more sets of data simultaneously. It helps in comparing and contrasting data

Let's build upon the previous example. We'll add another set of data, sales amount for another month, to the data used for creating the "Monthly Sales Chart" in the previous section.

Week	December Sales (\$)	January sales (\$)
Week 1	15000	17000
Week 2	17000	16000
Week 3	14000	17200
Week 4	18000	17000

Following are the steps for creating the chart:

1. Open the FusionCharts Manager page and click the **New** button on the toolbar.
2. In the chart selection page, select the 'Column 2D' option from the **Multi-series Charts** category.
3. Enter 'Sales Comparison Chart' as the **Title**.
4. Observe, that the topmost row in the **Chart Data** section comprises of fields with default text such as 'Category 1', 'Category 2' etc. Similarly the column on the extreme left comprises of fields with default text such as 'Dataset 1', 'Dataset 2' etc.

In charting terminology *categories* refer to the set of labels which are displayed along the X-axis of the chart and *datasets* refer to those sets of values which are actually plotted on the chart. The chart which we intend to plot comprises of 4 categories and 2 datasets (see data table above). So, you'll have to get rid of the extra datasets.

Following are the steps for deleting extra datasets:

- Select 'Dataset 3' and 'Dataset 4' by clicking on the check boxes displayed alongside respective text fields.
- Next, click the **Remove Datasets** button to delete the selected datasets.

Chart Data

Add Category
 Remove Categories
 Add Dataset
 Remove Datasets

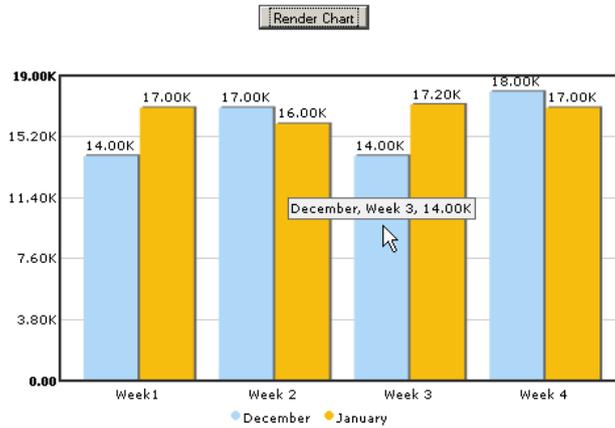
Categories

	Category 1	Category 2	Category 3	Category 4
<input type="checkbox"/> Dataset 1	82	116	129	143
<input type="checkbox"/> Dataset 2	150	114	71	54
<input checked="" type="checkbox"/> Dataset 3	106	84	126	93
<input checked="" type="checkbox"/> Dataset 4	137	122	53	131

5. Next, fill in the data by referring to the data table (above).

<input type="checkbox"/> Week 1	<input type="checkbox"/> Week 2	<input type="checkbox"/> Week 3	<input type="checkbox"/> Week 4	
<input type="checkbox"/> December	15000	17000	14000	18000
<input type="checkbox"/> January	17000	16000	17200	17000

6. Preview the newly formed chart using the **Render Chart** button.



7. Finally, click the **Save** button on the toolbar to finalize the configurations.

The "Sales Comparison Chart" chart is now ready for embedding in an article.

MAIN MENU

- Home
- **Business Statistics**
- The News
- Web Links
- News Feeds

Business Statistics

Monday, 11 January 2010 17:11 administrator

Following is the summary of last month's sales.

Let me compare it with the the present month's sales

Last Updated on Monday, 11 January 2010 19:37

3

Customizing the Basic Properties of a Chart

In this chapter you'll learn how to set the basic properties of a chart - such as; size, margins, scale limits, captions and axis titles etc. In addition to setting the overall appearance of the chart, these properties allow you to customize certain aspects of the chart which are directly associated with data (e.g. scale limits).

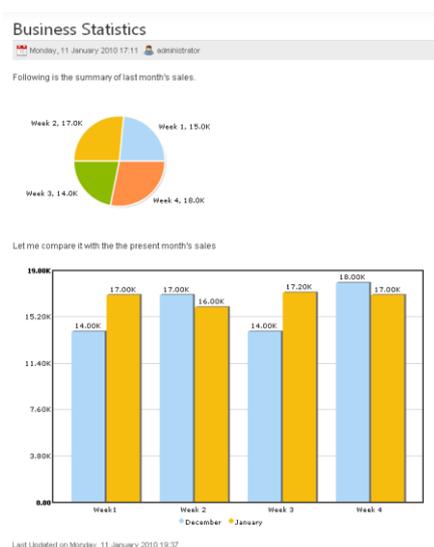
Setting the Chart Size

You can change the size of the chart from the **Sizes** panel in the **Chart Parameters** section. To set the size, you need to specify the intended width and height of the chart in terms of pixels. The default width and height of the chart is 500 pixels and 300 pixels respectively.



Sizes	
Width	500
Height	300

Let us now try once changing the pie chart's width-height to 300-200 and the comparison chart's width to 600 & height to 400. Save and re-load the article and see how it is applied so seamlessly!



Adding Caption and Axis Titles

FusionCharts for Joomla allows you to add caption, sub caption and titles for X and Y axis of the chart. These parameters can be configured from the **Chart and Axis Titles** panel in the **Chart Parameters** section.



Setting the Scale Limits

Normally, the minimum and maximum limits of the chart scale are determined automatically. However, you have the option of customizing the chart scale by specifying its minimum and maximum limits. Customization of the chart scale is essential in case the chart is plotted with values having marginal differences - as this helps in accentuating the differences between the plotted values.

You can set the minimum and maximum limits of the scale from the **Chart Numerical Limits** panel in the Chart Parameters menu. Let us edit our existing 'Monthly sales chart' and try setting 10000 as min value and 25000 as the max limit.

▼ Chart Numerical Limits	
Y-Axis Min. Value (Number)	10000
Y-Axis Max. Value (Number)	25000

The chart on the left does not have the number limits set, hence, shows the limits that the chart itself has auto-calculated. The chart on the right sets 10000 and 25000 as the min and max value respectively.



Auto-generated scale limits



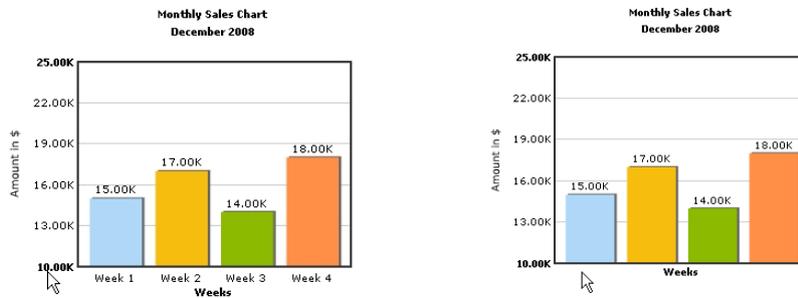
Customized scale limits

Generic Properties

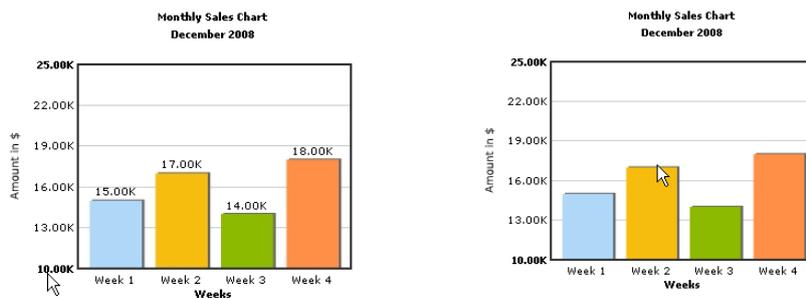
General properties of the chart can be set from the **Generic Properties** panel in the Chart Parameters menu. The **Generic Properties** panel provides the following configuration parameters:

Generic Properties	
Show Names	<input type="radio"/> No <input checked="" type="radio"/> Yes
Show Values	<input type="radio"/> No <input type="radio"/> Yes
Show Limits	<input type="radio"/> No <input type="radio"/> Yes
Rotate Names	<input type="radio"/> No <input type="radio"/> Yes
Animation	<input type="radio"/> No <input type="radio"/> Yes
Show Column Shadow	<input type="radio"/> No <input type="radio"/> Yes

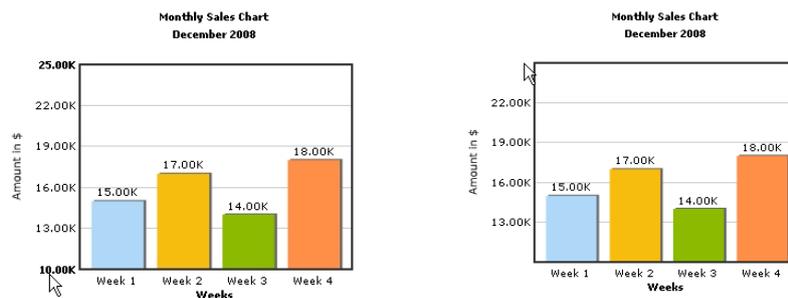
Show Names: This parameter allows you to enable or disable the display of data labels.



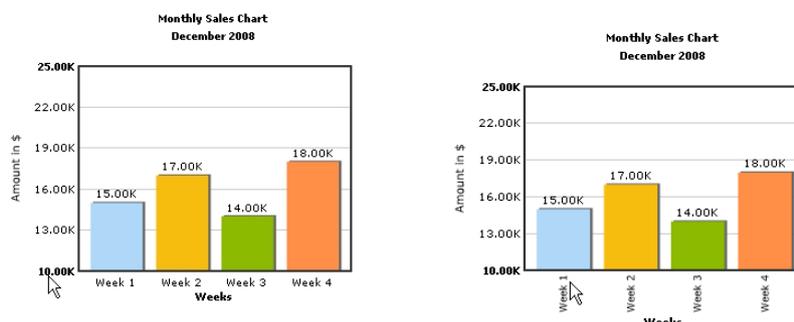
Show Values: Using this parameter you can enable or disable the display of data values.



Show Limits: Using this parameter you can enable or disable the display of scale limits.

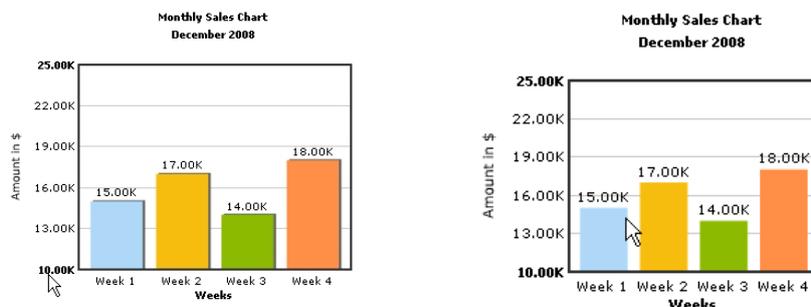


Rotate Names: This parameter allows you to display the data labels in rotated mode.



Animation: Using this parameter you can enable or disable the default animation of the chart.

Show Column Shadow: This parameter allows you to enable or disable the shadow effect on the data plots.



Setting the Chart Margins

FusionCharts for Joomla allows you to configure all the four margins of the chart. Margins can be configured from the **Chart Margins** panel located in the **Chart Parameters** section. To configure the margins you need to specify the intended width of the margin in the appropriate text field. For instance, to set a margin of 20 pixels on the left hand side of the chart canvas, you'll have to enter 20 in the **Left Margin** field. By specifying different values for each of the margins you can effectively set the orientation of the chart canvas.

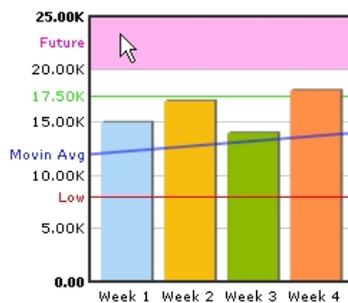
Chart Margins

Chart Margins refers to the empty space left on the top, bottom, left and right of the chart. That means, FusionCharts would leave that much amount of empty space on the chart, before it starts plotting.

Left Margin (Pixels)	<input type="text"/>
Right Margin (Pixels)	<input type="text"/>
Top Margin (Pixels)	<input type="text"/>
Bottom Margin (Pixels)	<input type="text"/>

4

Trend-Lines and Trend-Zones



Trend-lines and trend-zones are special horizontal lines or zones on the chart canvas, which help in highlighting the significant values on a chart. These pre-determined values convey special messages to the audience. For instance, in a sales chart, a trend-line can be used to indicate the target sales-revenue, low-revenue line, future revenue zone etc.

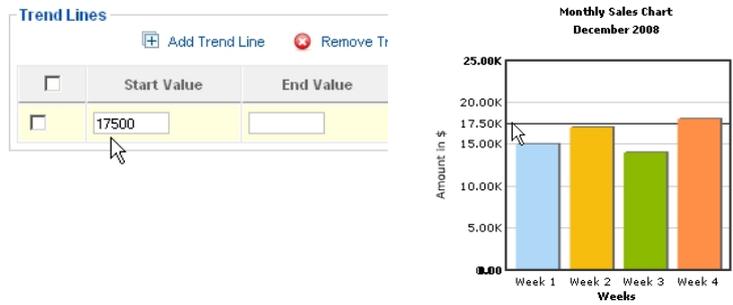
Trend lines and trend zones can be created and configured from the **Trend Lines** section of the Chart Configuration Page. There is no limit to the number of trend lines or trend zones that can be added to a chart, so, you can add as many of them as you want.

Trend Lines

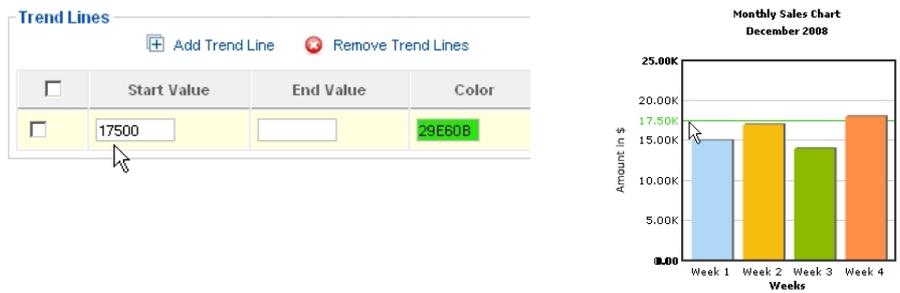
<input type="checkbox"/>	Start Value	End Value	Color	Display Value	Thickness Value	Is Trend Zone	Show On Top	Alpha
<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	100				

Creating a simple Trend Line

The **Add Trend Line** button lets you create a new trend line for the chart. A row will be added to the Trend Lines section each time you click the **Add Trend Line** button. You can configure a simple trend line, simply by specifying a value in the **Start Value** field.



As you can see a trend has been created at the 17,500 mark. You can set a color to the trend-line.



It can be made more illustrious by means of a text label. You can specify the text for the label in the **Display Value** field. Let us add another trend-line with label "Low". Moreover, you can opt to show the trend-line over the chart plots just by clicking on the check-box for **Show On Top** column.

<input type="checkbox"/>	Start Value	End Value	Color	Display Value	Thickness Value	Is Trend Zone	Show On Top	AI
<input type="checkbox"/>	17500		29E60B			<input type="checkbox"/>	<input type="checkbox"/>	100
<input type="checkbox"/>	8000		E80000	Low		<input type="checkbox"/>	<input checked="" type="checkbox"/>	100



You can also set thickness by providing a thickness value. Zero would make the thickness hairline sized. You can set transparency of the line where 100 mean fully opaque and 0 means fully transparent. We will see how this gets implemented in the next sample.

Creating a Slanted Trend Line

Additionally you can define an **End Value** in addition a different **Start Value** to create a slanting line.

Start Value	End Value	Color	Display Value	Thickness Value	Is Trend Zone	Show On Top	Alpha
12000	14000	1726FF	Movin Avg	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	60

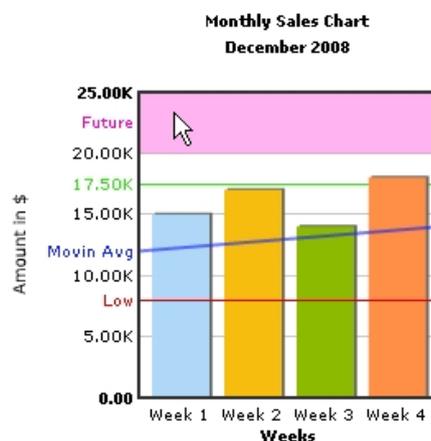


Creating a Trend Zone

Like the slanted trend line, a trend zone helps in depicting the significance of a range of values. Trend zones are more impactful than a slanted trend line. You can convert a slanted trend line into a trend zone, simply by enabling the **Is Trend Zone** option.

<input type="checkbox"/>	20000	25000	FF00CC	Future	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The above setting would add up a trend-zone at the top of the chart.



5

Configuring Chart Elements

ARTIO FusionCharts for Joomla allows intricate customization of individual chart elements. By modifying the cosmetics of each chart element, you can make the chart blend in with the look and feel of your Joomla site. This chapter describes how to go about customizing various elements of the chart.

Data Plot

Data plot refers to the bars, columns, lines or sectors of a pie chart. You can customize a data plot to set custom color and even specify a distinct tooltip text for each of them. Additionally, each data plot can be converted into a hot-spot/hyperlink. Data plots are to be configured from the Chart Data section. The layout of the chart Data section varies depending on the category of the chart (i.e. single-series or multi-series).

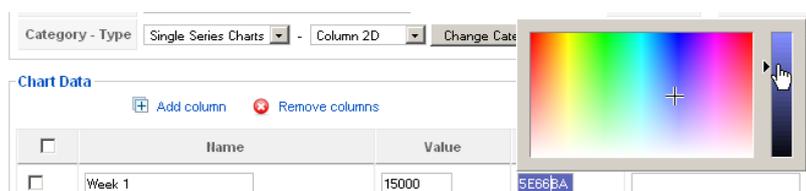
Configuring Data Plots in a Single-Series Charts

In case of a single-series chart, you will have to configure each data plot individually.

<input type="checkbox"/>	Name	Value	Color	Hover Text	Link	Alpha	Show Name
<input type="checkbox"/>	Week 1	15000	5E66BA	First week sales	http://www.fusioncharts.com	100	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Week 2	17000	7693A7	Second week sales	www.fusioncharts.com/maps	100	<input type="checkbox"/>
<input type="checkbox"/>	Week 3	14000	BC203C	Third week sales	www.fusioncharts.com/widgets	100	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Week 4	18500	878593	Fourth week Sales	fusioncharts.com/PowerCharts	100	<input type="checkbox"/>

Following configuration options are available for customization of data plots:

- **Color:** In the color field you can set the color of the data plot. To set color, you can either use the color picker or directly enter the hex code (without # prefix) in the **Color** field.



- Hover Text:** A tooltip is displayed each time the mouse cursor is made to hover over a data plot. By default, the name and value of the data plot is displayed in the tooltip. You can customize the tooltip text simply by entering the desired text in the **Hover Text** field. The text entered in the **Hover Text** field will be displayed in the tooltip along with value of the plot.

Name	Value	Color	Hover Text
Week 1	15000	5E66BA	First week sales



- Link:** By providing a URL in the **Link** field you can turn the data plot into a hyperlink.

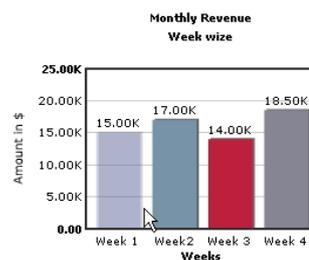
Name	Value	Color	Hover Text	Link
Week 1	15000	5E66BA	First week sales	http://www.google.com

This sets the first column to open Google.com when clicked.

- Alpha:** This field sets the transparency of the data plot. The default value is 100 which means that the data plot is 100% opaque. However, you can lower the transparency level of the data plot by providing value less than 100 where Zero means fully transparent data plot.

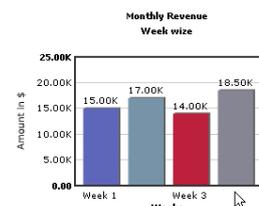
In this setting shown below, we set alpha for the first column to 30. This makes that column 30% opaque.

Link	Alpha
http://www.google.com	30



- Show Name:** This option allows you to selectively display the data labels for certain data plots. See example below.

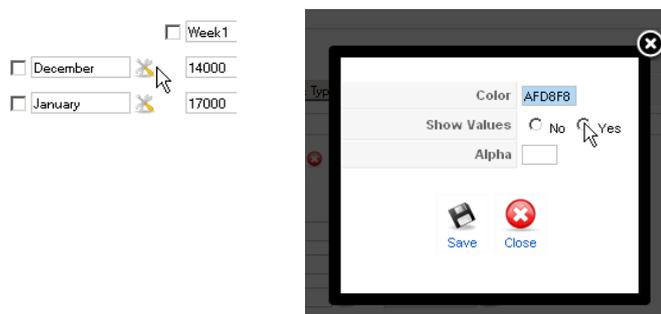
Show Name



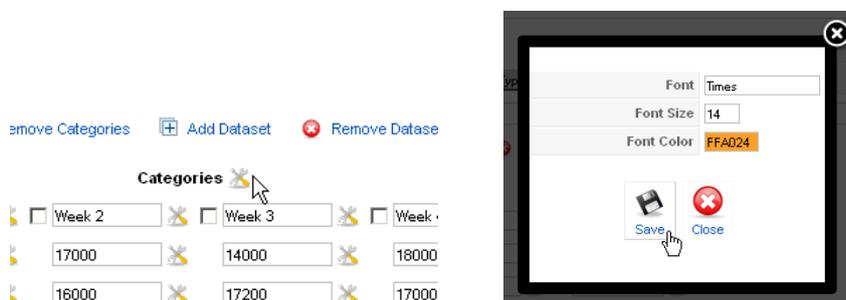
Configuring Data Plots in Multi-Series Chart

In case of a multi-series chart you have the option of globally specifying the properties of the data - for each dataset or each category as well as each data plot and all categories.

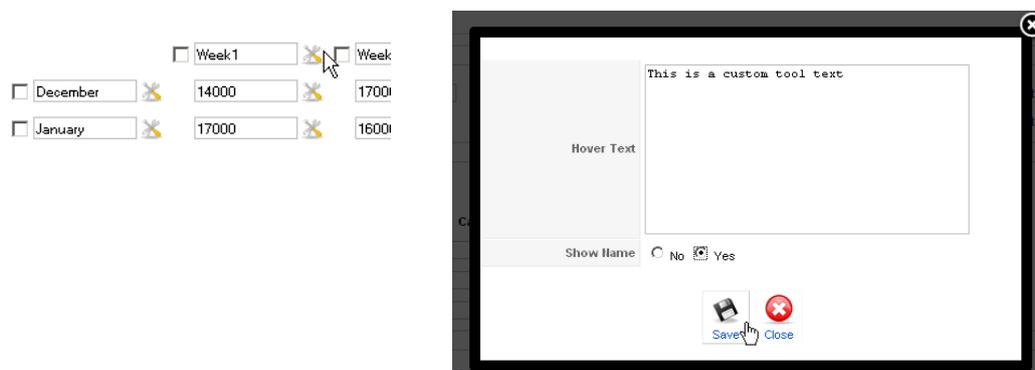
Each Dataset : To set the color and alpha of data plots belonging to a particular dataset – you’ll have to bring up the configuration window by clicking on the button  adjoining the dataset field. From the configuration window you can also enable or disable the display of data values.



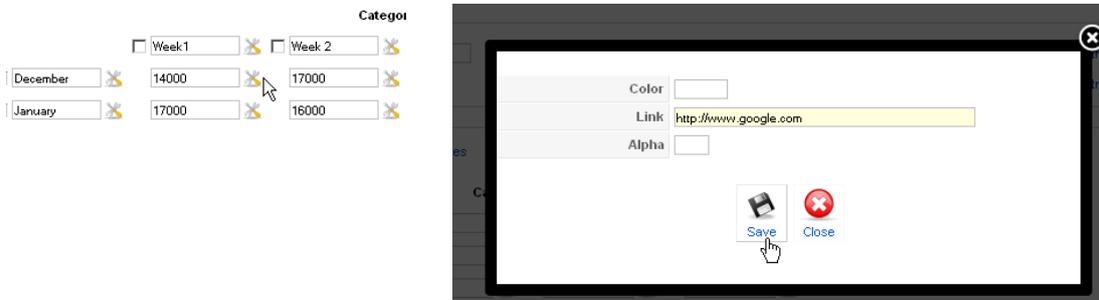
All Categories/labels : The font of data labels can be configured clicking the configure button next to "Categories" heading.



Each Label : You can specify a custom tooltip text for each category and enable or disable the display of data labels by clicking on the button next to the label field.



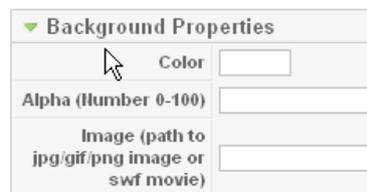
Each Data plot : Even in multi-series charts, it is possible to customize the color and alpha of each individual data plot clicking the configure button next to the specific data plot. Additionally, you can make individual data plot function as a hyperlink to a specified URL.



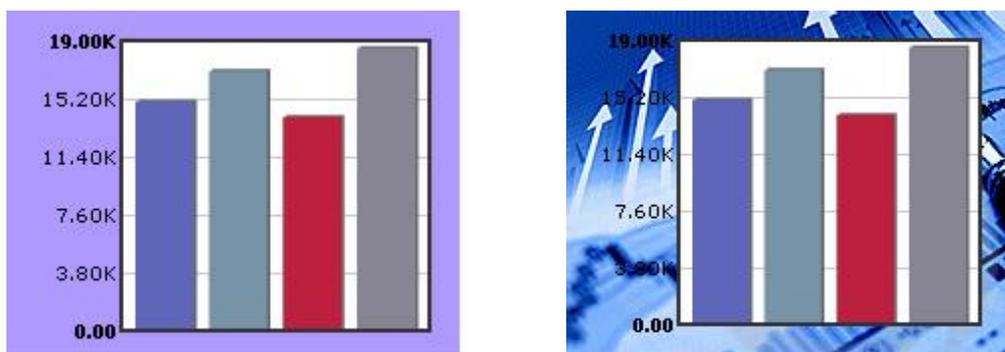
Background

Background refers to the area on which all the chart elements, such as; canvas, labels, caption; axis names, etc. are drawn.

You can customize the background from the **Background Properties** panel in the **Chart Parameters** menu.



In the **Background Properties** panel, you can customize the color and alpha of the chart's background. You also have the option of using an image or an SWF file as the background of the chart. To set an image or an SWF file as the background of the chart, you have to specify the URL of the desired media file in the **SWF** field. You can use any JPEG, PNG or an SWF file as the chart's background.



Canvas

Canvas is the area of the chart, in which the data is plotted.

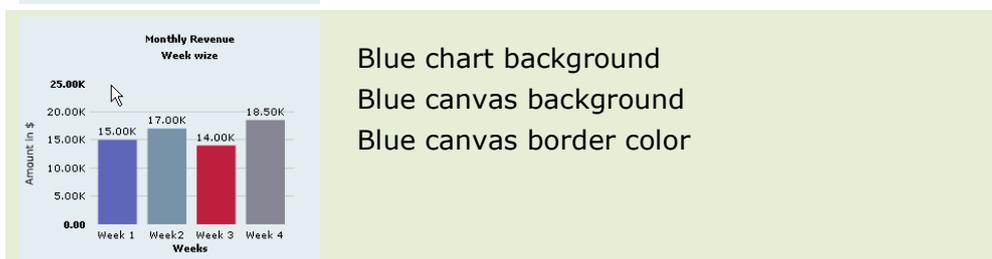
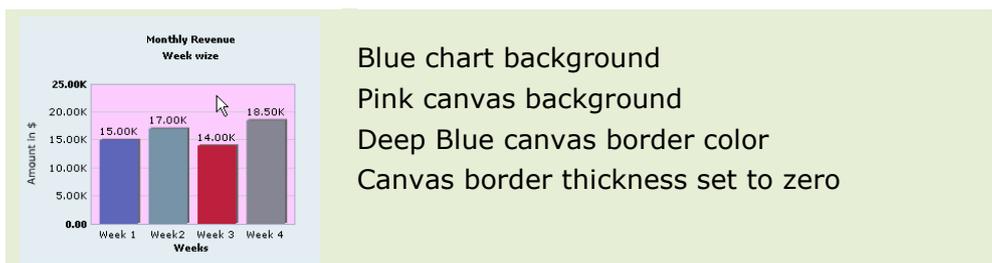
The properties of the chart's canvas can be customized from the **Canvas Properties** panel in the **Chart Parameters** menu:

Canvas Properties	
Background Color	<input type="text"/>
Background Alpha (Number 0-100)	<input type="text"/>
Border Color	<input type="text"/>
Border Thickness (Number 0-100)	<input type="text"/>

ARTIO FusionCharts for Joomla allows you to customize the background color and alpha of the chart's canvas. Additionally you also get to customize the color and thickness of the canvas border.

Note - The thickness of the canvas border cannot exceed 100 pixels. Thickness value Zero denotes hair-line thickness. Canvas settings are not applicable in Pie chart.

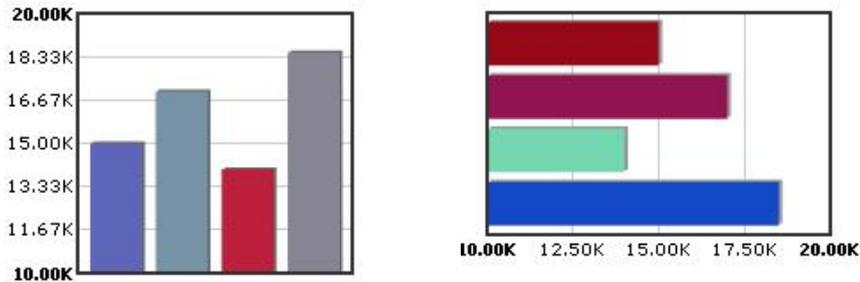
Below find same charts shown in various background and canvas settings.



Divisional Lines

You can drastically enhance the visual appeal of the chart by adding horizontal and vertical divisional lines (div lines) to the chart canvas.

Horizontal divisional lines run across the width of the chart canvas, while vertical divisional lines traverse the length of the chart canvas. Div lines aid in data interpretation as they provide a visual backdrop, which helps the audience - match the position of the data plot to its corresponding value on the numeric axis of the chart.



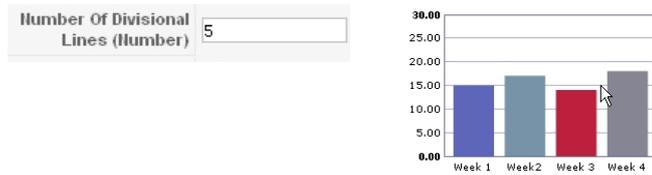
Divisional lines aid in data interpretation

Divisional lines can be configured from **Divisional Lines** panel in the **Chart Parameters** menu. Since a chart can have two types of divisional lines (i.e. horizontal and vertical), distinct panels have been provided in the **Chart Parameters** menu for separately configuring horizontal and vertical divisional lines.

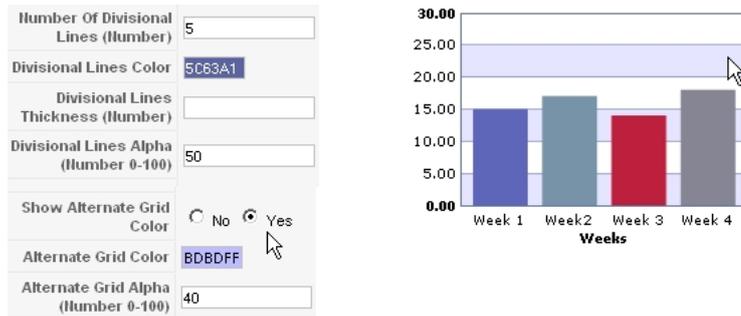
▼ Divisional Lines (Horizontal)	▼ Divisional Lines (Vertical)
Divisional Lines are horizontal or vertical lines running through the canvas. Each divisional line signifies a smaller unit of the entire axis thus aiding the users in interpreting the chart.	
Number Of Divisional Lines (Number) <input type="text"/>	Number Of Divisional Lines (Number) <input type="text"/>
Divisional Lines Color <input type="text"/>	Divisional Lines Color <input type="text"/>
Divisional Lines Thickness (Number) <input type="text"/>	Divisional Lines Thickness (Number) <input type="text"/>
Divisional Lines Alpha (Number 0-100) <input type="text"/>	Divisional Lines Alpha (Number 0-100) <input type="text"/>
Show Divisional Lines Value <input type="radio"/> No <input type="radio"/> Yes	Show Alternate Grid Color <input type="radio"/> No <input type="radio"/> Yes
Show Alternate Grid Color <input type="radio"/> No <input type="radio"/> Yes	Alternate Grid Color <input type="text"/>
Alternate Grid Color <input type="text"/>	Alternate Grid Alpha (Number 0-100) <input type="text"/>
Alternate Grid Alpha (Number 0-100) <input type="text"/>	

If you intend to show divisional lines on your chart, then the first thing that you need to do is - decide on the number of divisional lines that you want to have on the chart. You can have unlimited number of div lines on your chart. However, it is essential to ensure, that you use the right number of divisional lines, as too few or too many of them won't

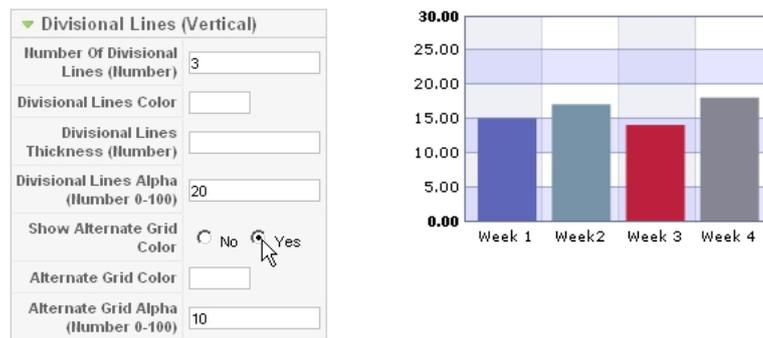
help in enhancing the readability of the chart scale. You can specify the desired number of divisional lines in the field labeled **Number of Divisional Lines**.



You can go on setting various things like divisional line color, alpha, alternate grid etc.



You can enhance the visual appeal of the chart by enabling the vertical div lines and grids as shown below.



In column and line charts, you can hide the values associate with horizontal divisional lines. Similarly, in bar charts you can hide the values associated with vertical divisional lines. Values are displayed along the numeric axis of the chart and can be hidden by disabling the **Show Divisional Line Values** option.

Example chart shown below.

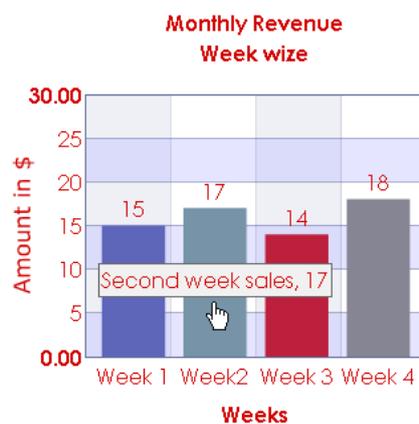


Font

ARTIO FusionCharts for Joomla allows you to customize the font of the text which is displayed on the chart. Fonts can be configured from the **Font Properties** panel in the **Chart Parameters** Menu.

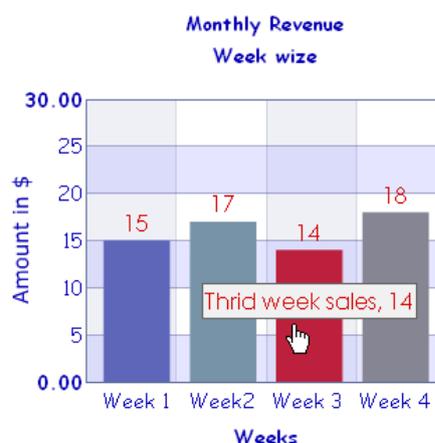
▼ Font Properties	
Font Name (String)	Century Gothic
Font Size (Number)	16
Color	D40404
Outside Canvas Font Name (String)	Comic Sans MS
Outside Canvas Font Size	14
Outside Canvas Color	0A04B5

In the **Font Name**, **Font Size** and **Color** fields you can specify the font family, the font size and the color of the font which you want you use throughout the chart. This setting will affect all the text elements of the chart, including; data labels, scale values, axis names, caption, data values and tooltip text.



It is possible to separately define the font for the text which appears outside the chart canvas. Fonts for the text elements which are external to the chart canvas can be defined using **Outside Canvas Font Name**, **Outside Canvas Font Size** and **Outside Canvas Color** fields.

▼ Font Properties	
Font Name (String)	Century Gothic
Font Size (Number)	16
Color	D40404
Outside Canvas Font Name (String)	Comic Sans MS
Outside Canvas Font Size	14
Outside Canvas Color	0A04B5



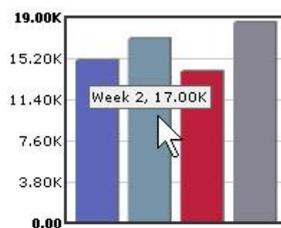
Note – Outside Canvas Font settings are not applicable in Pie chart.

Tooltips

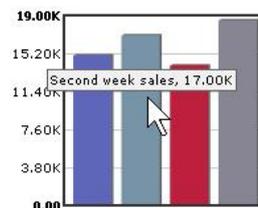
The name and value of a data plot is displayed via a tooltip each time the mouse cursor hovers over it. You can customize the appearance and the text of a tooltip and also turn off the tooltip feature if required. Tooltips can be configured from the **Tooltips** panel in the **Chart Parameters** menu.

▼ Tooltip properties	
This is the tooltip which shows up when the user moves his mouse over a particular data item (column, line, pie, bar etc.).	
Enable Tooltip	<input type="radio"/> No <input checked="" type="radio"/> Yes
Background Color	<input type="text"/>
Border Color	<input type="text"/>
Tooltip Separator Character (Char)	<input type="text"/>

The tooltip text can be customized in the Chart Data section, where you can provide custom text for each data plot by entering the desired text in the respective **Hover Text** fields.

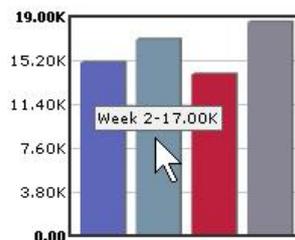


Default tooltip text

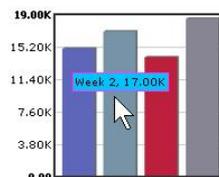


Custom tooltip text

Comma (,) is used as the default separator in tooltips. You can customize the separator by entering a character of your choice in the **Tooltip Separator Character** field.



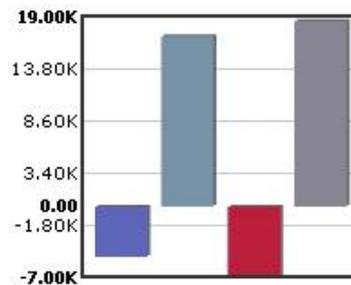
The color of the tooltip's background and the color of the tooltip border can be specified in the **Background Color** and **Border Color** fields.



In case, you want to do away with the tooltip feature all together, all you have to do - is disable the **Enable Tooltip** option.

Zero Plane

Zero Plane appears on charts that are plotted using both positive and negative values. It separates the positive and the negative sections of the chart canvas.



It is possible to customize the cosmetic properties of the zero plane. This can be done from the **Zero Plane** panel in the **Chart Parameters** menu.

▼ Zero Plane

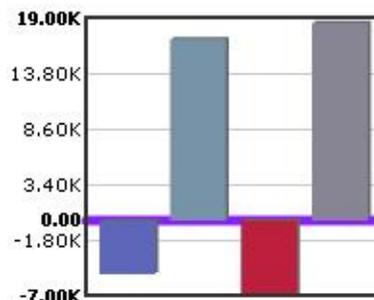
The zero plane is a simple plane (line) that signifies the 0 position on the chart. If there are no negative numbers on the chart, you won't see a visible zero plane.

Zero Plane Thickness (Number)

Zero Plane Color

Zero Plane Alpha (Number 0-100)

In the Zero Plane panel, you can set the thickness color and alpha of the zero plane.



6

Number Formatting

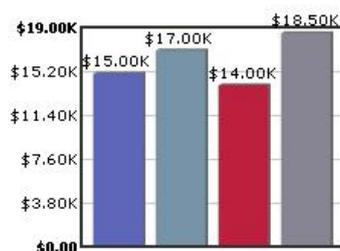
ARTIO FusionCharts for Joomla provides many options for customizing the way numbers are displayed on charts. You can control the formatting of numbers and even set a common prefix and suffix for all numbers displayed on a chart.

Number formatting is managed from the **Number Formatting Options** panel in the **Chart Parameters** menu.

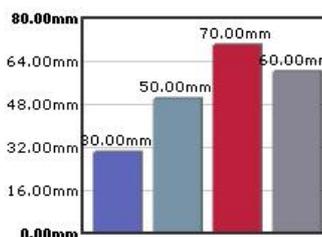
Number Formatting Options	
Number Prefix (String)	<input type="text"/>
Number Suffix (String)	<input type="text"/>
Format Number	<input type="radio"/> No <input type="radio"/> Yes
Format Number Scale	<input type="radio"/> No <input type="radio"/> Yes
Decimal Separator (Char Like . or ,)	<input type="text"/>
Thousand Separator (Char Like . or ,)	<input type="text"/>
Decimal Precision (Number)	<input type="text" value="0"/>
Divisional Line Decimal Precision (Number)	<input type="text"/>
Limits Decimal Precision (Number)	<input type="text" value="2"/>

Adding Prefix and Suffix to Numbers

You might need to format the chart values to contain some currency characters or some other units like °C or mm etc. These come either as prefix or as suffix of the chart values. To get this, you just have to enter the characters that are to be prefixed or suffixed in **Number Prefix** or **Number Suffix** fields.



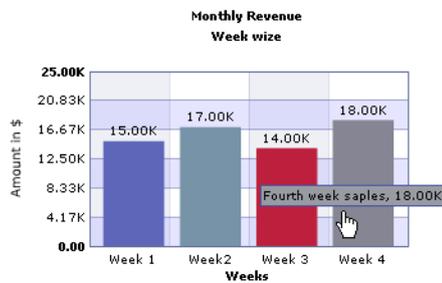
Dollar \$ as prefix



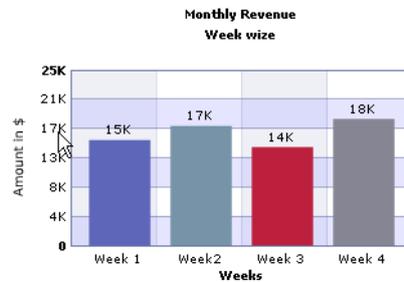
mm as suffix

Setting the Decimal Precision

You can globally set the decimal precision for all numeric values of the chart by specifying the desired number of decimal places in the **Decimal Precision** field. If you set the decimal precision to '2', then values that have more than 2 decimal places will be rounded automatically.



Default Decimal Precision set to 2



Decimal Precision set to 0

It is possible to distinctly set the decimal precision of the scale limits and the rest of the chart scale. The decimal precision of the scale limits can be defined in the **Limits Decimal Precision** field, the decimal precision of the chart scale can be defined in the **Divisional Line Decimal Precision** field.

The chart below shows chart data decimal precision set to 1. Div lines' decimal precision to 2 and chart limit decimal precision to 4.



Number Scaling

Numbers plotted on the chart are automatically scaled on a K-M (thousand, million) scale. This means, that 55,500 will be represented as 55.50K and 1,100,000 will be represented as 1.10M. You can disable this feature by turning off the **Format Number Scale** parameter. The following table shows how various options work:

	Format Number <input type="radio"/> No <input checked="" type="radio"/> Yes Format Number Scale <input type="radio"/> No <input checked="" type="radio"/> Yes Decimal Separator (Char Like . or ,) <input type="text"/>
	Format Number <input checked="" type="radio"/> No <input type="radio"/> Yes Format Number Scale <input type="radio"/> No <input checked="" type="radio"/> Yes
	Format Number <input type="radio"/> No <input checked="" type="radio"/> Yes Format Number Scale <input checked="" type="radio"/> No <input type="radio"/> Yes Decimal Separator <input type="text"/>
	Format Number <input checked="" type="radio"/> No <input type="radio"/> Yes Format Number Scale <input checked="" type="radio"/> No <input type="radio"/> Yes Decimal Separator <input type="text"/>

Custom decimal and thousand separators

There are various standards for decimal and thousand separators. In general . (dot) is taken as the decimal point and , (comma) as thousand separator. By default ARTIO FusionCharts applies this. But, if you want to apply other standards like , (comma) as decimal point and . (dot) as thousand separator or any other symbol in these places you can do this by setting **Decimal Separator** and **Thousand Separator** settings. Examples below:

	Default: Decimal Separator is . Thousand separator is ,
	Decimal Separator is , Thousand separator is .
	Decimal Separator is : Thousand separator is ,

NOTE: In case you do not wish to display formatted numbers on charts, you can always disable the number formatting feature by turning off the **Format Number** option.

7

Customizing Line and Pie Charts

ARTIO FusionCharts for Joomla offers special customizability options for Line and Pie charts. Both Line and Pie charts can have configurable shadow effects and it is possible to adjust the radius of anchors and pies. Additionally, Pie charts support selective slicing of individual pies while the Line chart allows intricate customization of anchors and lines.

Customizing the Line Chart

Line charts allow customization of lines and anchors (data points). The properties of the lines can be configured from the **Line properties** panel in the Chart Parameters menu. You can customize the color, thickness and the alpha setting of the lines.

Line properties samples:

The image displays three examples of the 'Line properties' configuration panel and the resulting line chart visualizations. Each example shows a panel with three settings: Color, Thickness (Pixels), and Alpha (Number 0-100). The first example has Color 1774FF, Thickness 5, and Alpha 100, resulting in a blue line with a thickness of 5 pixels. The second example has Color 1774FF, Thickness 8, and Alpha 100, resulting in a blue line with a thickness of 8 pixels. The third example has Color 3D873D, Thickness 4, and Alpha 0, resulting in a green line with a thickness of 4 pixels and zero opacity.

Anchors

Use **Anchor properties** panel to customize anchors. You can set number of sides the anchor should have. '3' in the **Sides** field will result in triangular anchors, while a value of '6' will form hexagonal anchors. The intended size of anchors can be specified in the **Radius** field. Furthermore, there are settings for anchor border, anchor background and anchor transparency (alpha). Examples illustrated below:

Anchor properties

Anchors (or the marker points) are the polygons which appear at the joint of two consecutive lines. On a line chart, the anchors are the elements which react to the hover caption and link for that particular data point. You can customize all the facets of the anchors using the properties below:

Show anchors No Yes

Sides (Number > 3)

Radius (Number)

Border color

Border thickness (Pixels)

Background color

Background alpha (Number 0-100)

Alpha (Number 0-100)

Show anchors No Yes

Sides (Number > 3)

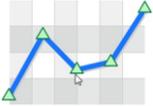
Radius (Number)

Border color

Border thickness (Pixels)

Background color

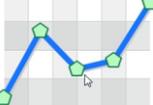
Anchor sides set to 3



Anchor sides set to 4



Anchor sides set to 5



Anchor Alpha set to 40



Imparting Shadow Effect

A thin shadow can be seen below a line. You can customize it through **Line Shadow Properties** tab. You can turn-off the shadow, you can grow it big with translucent effects and set its color too. A sample shown below:

Line Shadow Properties

Show shadow No Yes

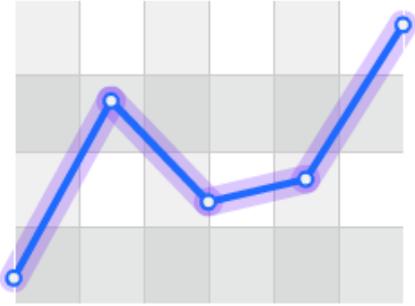
Color

Thickness (Pixels)

Alpha (Number 0-100)

X-shift (Number)

Y-shift (Number)



Customizing the Pie Chart

ARTIO FusionCharts for Joomla, provides numerous options for customizing the Pie chart. You can drastically enhance the appearance of a pie chart by customizing its radius, and the alpha of each pie's fill-color. These properties can be configured from the **Pie Properties** panel.

▼ Pie Properties	
Radius (Pixels)	<input type="text"/>
Border Thickness (Pixels)	<input type="text"/>
Border Alpha (Number 0-100)	<input type="text"/>
Fill Alpha (Number 0-100)	<input type="text"/>

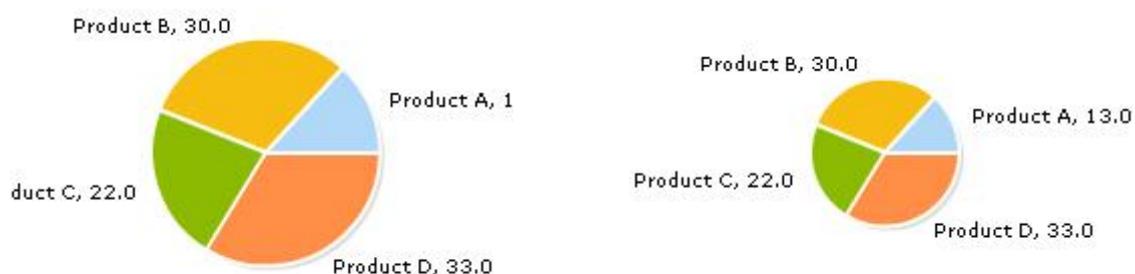
▼ Name/Value display distance control	
Slicing distance (Pixels)	<input type="text"/>
Names distance (Pixels)	<input type="text"/>

▼ Pie Shadow Properties	
Show shadow	<input type="radio"/> No <input type="radio"/> Yes
Color	<input type="text"/>
Alpha (Number 0-100)	<input type="text"/>
X-shift (Number)	<input type="text"/>
Y-shift (Number)	<input type="text"/>

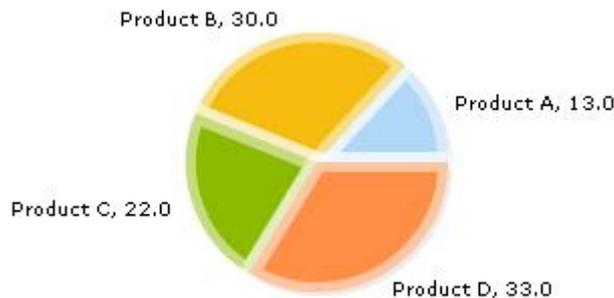
▼ Generic Properties	
Show Names	<input type="radio"/> No <input checked="" type="radio"/> Yes
Show Values	<input type="radio"/> No <input type="radio"/> Yes
Show percentage values	<input type="radio"/> No <input type="radio"/> Yes
Show percentage in label	<input type="radio"/> No <input type="radio"/> Yes
Animation	<input type="radio"/> No <input type="radio"/> Yes

Customizing the Appearance of a Pie Chart

The radius of the pie chart can be specified in the **Radius** field and the alpha of the chart's fill colors can be specified in the **Fill Alpha** field. Customization of the chart's radius helps in ensuring the visibility of the labels.



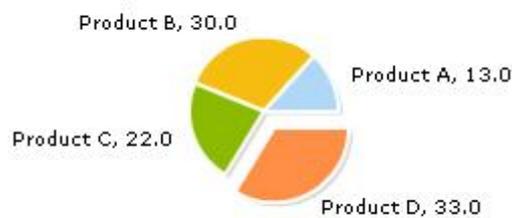
The thickness and alpha level of the sector border (or pie border) can be specified in the **Border Thickness** and **Border Alpha** fields. Customization of the pie border enhances the visual appeal of the pie chart.



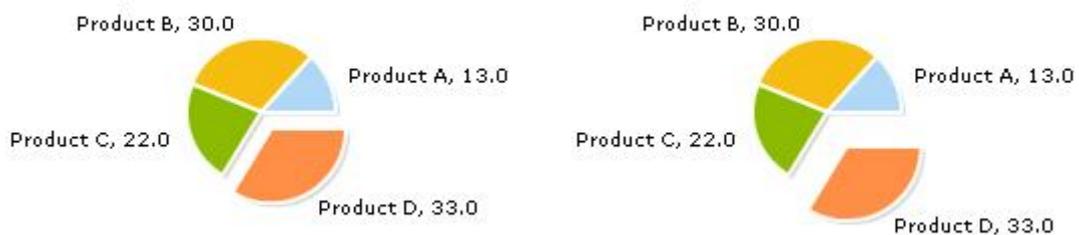
Slicing

It is possible to selectively slice individual sectors of a pie chart. You can slice a particular sector of the chart simply by enabling the **Is Sliced** parameter from the Chart Data section.

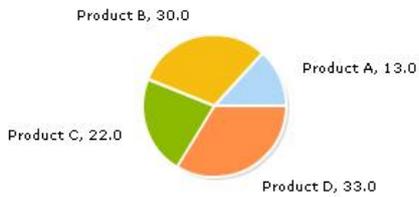
Is Sliced
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>



Slicing is an effective way of highlighting crucial data. So, you can use this feature to draw your audience's attention to a particular sector of a pie chart. The slicing effect can be further enhanced by customizing the slicing distance, this can be specified in the **Slicing Distance** field - in the **Name value display distance control** panel.



Labels



It is possible to adjust the distance of separation between the labels and the sectors of the pie chart, this helps in improving readability - especially when too many values have been plotted on the chart.

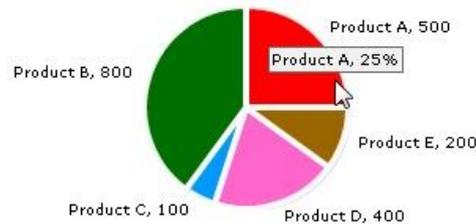
The distance of separation between the labels and their respective pies can be specified in the **Names Distance** field – in **the Name value display distance** control.

Auto-percentage calculation

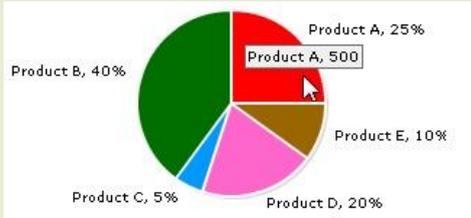
A pie chart can be configured to auto-calculate percentage share of each pie in a chart and show the percentage value both as a part of chart label and tool-tip.

To customize this option you need to go to Generic Properties section and toggle with 'Show percentage values' and 'Show percentage in label' settings.

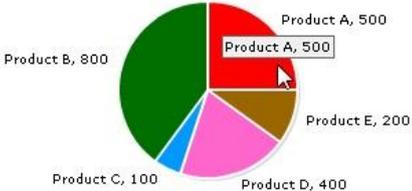
Generic Properties	
Show Names	<input type="radio"/> No <input checked="" type="radio"/> Yes
Show Values	<input type="radio"/> No <input type="radio"/> Yes
Show percentage values	<input type="radio"/> No <input type="radio"/> Yes
Show percentage in label	<input type="radio"/> No <input type="radio"/> Yes
Animation	<input type="radio"/> No <input type="radio"/> Yes



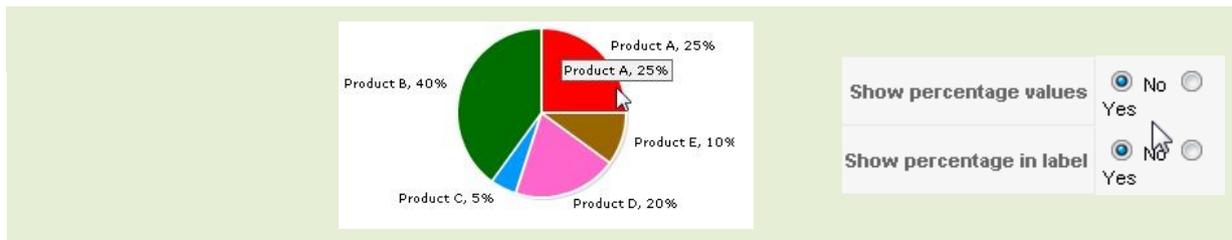
Default settings



Show percentage values	<input checked="" type="radio"/> No <input type="radio"/> Yes
Show percentage in label	<input type="radio"/> No <input checked="" type="radio"/> Yes

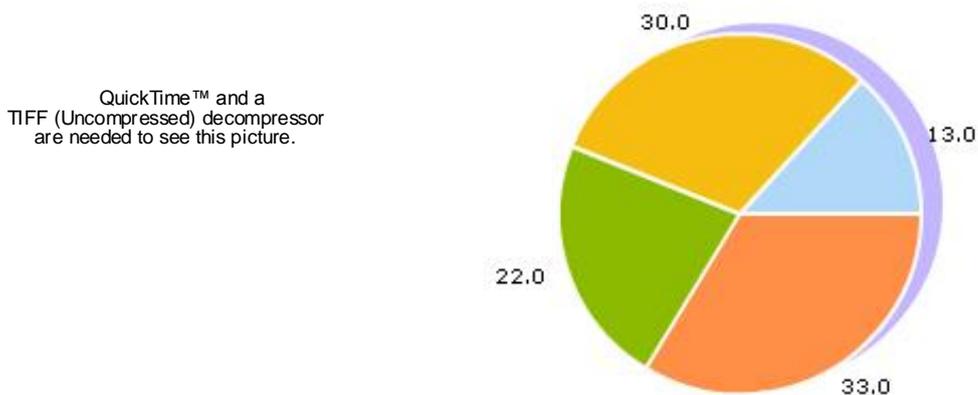


Show percentage values	<input type="radio"/> No <input checked="" type="radio"/> Yes
Show percentage in label	<input type="radio"/> No <input checked="" type="radio"/> Yes



Imparting Shadow Effect

ARTIO FusionCharts for Joomla allows you to impart custom-defined shadow effect to pie charts.

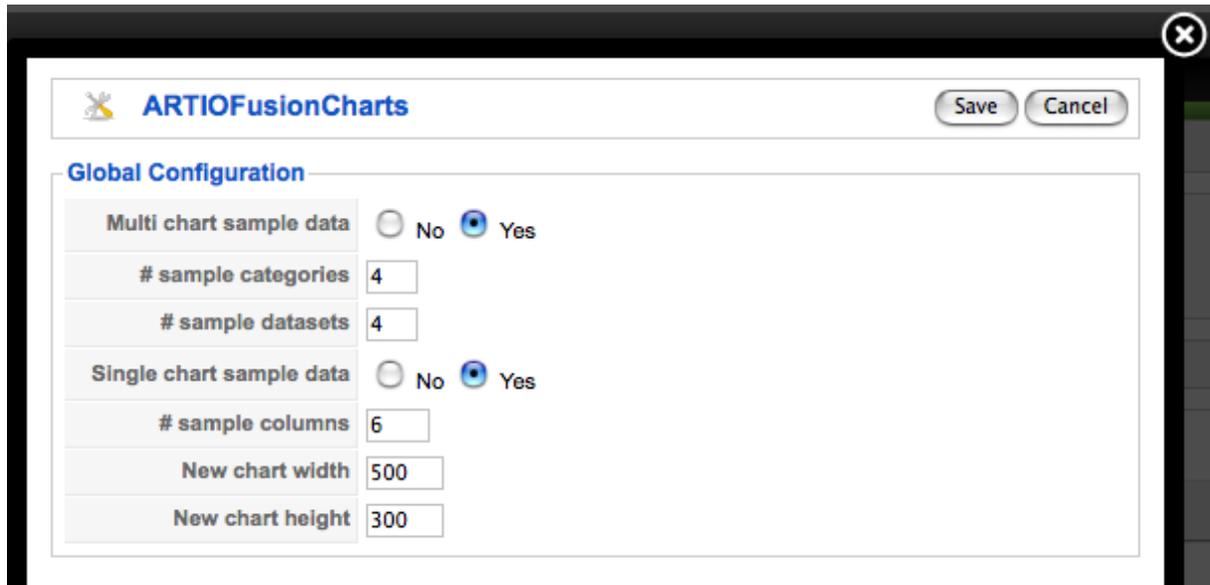


In Pie charts it can be configured from the **Pie Shadow Properties** panel.

You can customize the color of the shadow behind the pie but in order to make it apparent, you might also need to configure the direction of the shadow by setting its X and Y co-ordinates. The X and Y co-ordinates can be specified in the **X-shift** and **Y-shift** fields respectively.

Appendix A

You can set global configurations of ARTIO FusionCharts FREE for Joomla clicking "Parameters" button in "Charts Manager" page. This opens up a setting box from where you can set up whether to use sample data when a new chart is created. In case you set "Yes", you can also set the number of categories and datasets for a new Multi series chart or columns/lines/bars or pies for a new single series chart. Moreover, you can set the default chart's width and height which is used when a new chart is created.



The image shows a dialog box titled "ARTIO FusionCharts" with a close button in the top right corner. The dialog contains a "Global Configuration" section with the following settings:

Multi chart sample data	<input type="radio"/> No <input checked="" type="radio"/> Yes
# sample categories	<input type="text" value="4"/>
# sample datasets	<input type="text" value="4"/>
Single chart sample data	<input type="radio"/> No <input checked="" type="radio"/> Yes
# sample columns	<input type="text" value="6"/>
New chart width	<input type="text" value="500"/>
New chart height	<input type="text" value="300"/>

At the top right of the dialog, there are "Save" and "Cancel" buttons.

Appendix B

Screenshots of some sample implementation of ARTIO FusionCharts for Joomla.

