Creating Charts in Excel 2007

Using the Microsoft Excel 2007 chart creation system you can quickly produce professional looking charts. This help sheet describes how to create and modify a simple 3-D Column bar chart and Pie chart. It is good practice to create the charts described in this document and try modifying them before applying the techniques you learn to your own data.

A simple three dimensional Column bar chart can be produced from the following example spreadsheet. Note that cell A1 is left blank.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Dogs</td>
<td>Cats</td>
<td>Mice</td>
</tr>
<tr>
<td>2</td>
<td>Jan</td>
<td>10</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Feb</td>
<td>20</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Mar</td>
<td>30</td>
<td>35</td>
<td>60</td>
</tr>
</tbody>
</table>

First drag over the titles and data so that they are all highlighted.

Click on the Insert tab, at the Charts group select Column, a drop down window displaying various types of Column chart appears (picture below left).

Select the extreme left 3-D Column format, a 3-D Column chart is displayed embedded within the spreadsheet (picture below).

*The new 3-D Column Chart embedded in the spreadsheet*
Switching the Axis

To switch the Row and Column axis select your chart by clicking anywhere within it, then click on the Design tab, at the Excel ribbon Data Group select the Switch Row/Column button (picture left).

Adding Axis Titles

To add axis titles first click on the chart to select it, then click on the Layout tab, at the Labels group click on Axis Titles, a drop down window displays Primary Horizontal and Primary Vertical Title options, select the Primary Horizontal Axis Title option then select Title Below Axis (picture below).

A text box containing the words Axis Title appears below the chart, enter your own title text in this box. To create a vertical title for the Y axis use the same procedure but select the Primary Vertical Axis Title option. Then select the Vertical Title option.

To modify the Y axis title after it has been created click on the Y axis title to select it then click the Format tab, at the Current Selection group on the Excel ribbon select Format Selection. The Format Axis Title window appears. It is worth experimenting with the various options, particularly the Alignment option as this allows you to rotate the text and change its direction.

Adding a Chart Title

A chart title can be added by clicking on the chart to select it, selecting the Layout tab and using the Excel ribbons Labels group Chart Title option. Select a position for your title from the available options in the drop down window.

Legend Options

The legend indicates the colours or patterns that are assigned to the data series in a chart. To modify the legend click on the chart then click on the Layout tab, at the Labels group on the Excel ribbon select Legend a drop down window appears displaying various Legend position options.

Adding Data Labels to a Series

Right click on one of the series bars that you want to add data labels to, a window appears with various options, select Add Data Labels. A data label is added to the top of each bar for that data series. The default setting is Value (picture below).

A chart with Data Value Labels added for the Mar data series
Category names can be added as data labels by right clicking on one of the series bars that you want to add category names to, select Format Data Labels, the Format Data Labels option appears, click on the Category Name box (Values can be turned off by clicking the Values box). Click on Close. The category name now appears at the top of each bar for the selected data series.

**Listing and Modifying the Elements of a Chart**

A quick method for listing and changing the various elements for a chart such as the Titles and Back Wall is as follows:

Select the chart by clicking on it, select the **Layout** tab, then from the Excel ribbons **Current Selection** group at the extreme left of the ribbon click the downward arrow alongside the top option. The various Chart Elements that you can change are listed (picture below).

The **Chart Elements list**

Click on any chart element you want to modify e.g. if Back Wall is selected you can add a colour or picture to the area behind a chart's bars. The picture below points out the element names used for the various areas of a chart.
Layouts and Styles

Using the Design tabs Chart Layouts section you can easily apply various preformatted layouts to your chart (picture below). Preformatted colour combinations for the charts bars are easily selected from the Design tabs Chart Styles section. If the chart is to be printed on a black and white printer you will achieve better definition by selecting a chart style that uses varying shades of grey.

Changing the Scale of the Y Axis

Note… the Y axis is the vertical axis at the left of the chart, this is also known as the Value axis. In the bar chart used for this help sheet the axis has the range of values 0 10 20 30 40 50 60.

Select the Y axis by clicking on it, select the Layout tab, then at the Current Selection section of the Excel ribbon click on Format Selection, the Format Axis window appears (picture below left). At the moment the Y axis counts up in increments of 10. This can be changed to increments of 5 by clicking the Fixed radio button for the Major Unit entry and entering 5.0 as the new Major Unit value. This will change the interval of Tick marks and Grid lines to 5 and so change the look of the chart (picture below right). Click on the Close button.

The Format Axis Window

The numbers at which the Y axis starts and finishes can be changed by entering new Fixed values for the Minimum and Maximum settings.

Changing the Number Category for the Y Axis to Currency or Percentage

The default setting for Number Category is General, so the numbers on the Y axis are displayed as they appear on the example chart in this help sheet. You may need to display numbers as another category such as Currency or Percentages, to achieve this, at the Axis Options list select Number and select the number category you require from the list.
Changing the X Axis

The X axis is the horizontal axis running along the bottom of the chart, it is also known as the **Category** axis. Rather than displaying numerical intervals, this axis displays text labels, therefore fewer modification options are available than you find for the Y axis. To view the available options use the same technique as described for changing the Y axis.

Creating a Simple 3-D Pie Chart

A pie chart can be produced from the following example spreadsheet.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dogs</td>
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<td>2</td>
<td>Cats</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Mice</td>
<td>50</td>
</tr>
</tbody>
</table>

First drag over the titles and data so that they are all highlighted.

Click on the **Insert** tab, at the **Charts** group select **Pie**, a drop down window displaying various types of pie chart appears (picture below left).

Select the 3-D Pie chart option at the bottom left, a 3-D Pie chart appears embedded within the spreadsheet (picture below).

Exploding a Section

You can emphasise a section of a pie chart by exploding it away from other sections. First, click on the pie chart to select it then click once on the section that is to be exploded. With the left mouse button depressed, drag the slice out to explode it.
Adding a Title, Legend and Data Labels

Click on the chart to select it and then click the Layout tab. At the Excel ribbons Labels section select the item you want to add or change (picture left). The Data Labels option adds the numerical values to the pie segments.

Example Pie Chart

The example chart (picture left) has been given the chart title Animals Pie Chart. The Dogs segment has been exploded away from the other sections and Data labels have been added and positioned using the Display Data Labels and position centred on the data points option. Show Legend at Left has been selected from the Legend options.

Layouts and Styles

Using the Design tabs Chart Layouts section you can easily apply various preformatted layouts to your pie chart (picture below). Preformatted colour combinations for the pie chart segments are easily selected from the Design tabs Chart Styles section. If the chart is to be printed on a black and white printer you will achieve better definition by selecting a chart style that uses varying shades of grey.