



# CHARTS

*Charts are good at illustrating the relationships in your spreadsheet data by telling the story of your data in a single colorful picture.*

## **Chart Anatomy...**

The **y axis**...is usually the vertical arm. It is also the *values axis*. Each line along the scale displayed on the y axis is a *tick mark* that indicates a value on the scale.

The **x axis** is the horizontal arm, and is marked off by tick marks. It is also the *categories axis*.

The x and y axes can be flipped, making the y horizontal and the x vertical.

A **data point**, corresponds to a cell on the worksheet. A **data marker** is a graphic representing a data point. All the data markers in a data series are the same size and shape. The **legend** is a description of the data marker.

A **data series** is the information that is represented on the chart by means of bars, columns, pie slices, lines and data points, and so on. A chart can contain one or more data series.

## **Chart Placement...**

Two choices:

- **Embedded.** Within the data worksheet. Embedded charts work well in reports, when you might want the data and the chart to sit side by side. Select the range, click the *Chart Wizard*, then place the chart logo anywhere on your worksheet.

- **Chart Sheet.** Take a separate worksheet and stick the chart in it. The chart will refer to the data on the other

worksheet. Having a separate chart sheet is a good idea if you are going to turn your chart into an overhead projection or a slide.

## **First things first...**

The first step in creating a chart is to select the data on the worksheet. Although you can select data to be charted before, during, or after the Chart Wizard runs, it is typical to select the data first. Use these guidelines when selecting data for a chart:

- \* On the worksheet, the data for the chart must be placed in columns and rows, but need not be in adjacent columns and rows.

- \* Position labels to be used on a chart in the top row and leftmost column of the data range.

- \* Select the labels along with the chart data.

- \* Select nonadjacent cells by holding down the Ctrl key.

- \* Do not include totals when selecting.

## **Chart Toolbar...**

The Chart toolbar appears automatically when you activate a chart, if it is checked in the submenu that appears when you choose **View, Toolbars**. You also can right-click any toolbar and then choose Chart in the shortcut menu to display the Chart toolbar.

## **Choosing a Chart Type...**

Some chart types work better for particular types of data. For example a pie chart might be the best choice to view the

percentage of total revenue produced by each department in a company. It's often best to base your choice on the nature of the data, because that affects the appearance of the chart axes.

### **Making Changes...**

A chart is made up of objects with labels, and most can be changed. The axes, data markers, tick marks, titles, and legends are all objects, and their size, color, scale, and font can be altered any way you like.

**Change the axes** to make zero values stand out and exaggerate small changes.

### **Adding and Deleting Data Series...**

When you use the Chart Wizard to create charts, Excel plots the data according to the selected worksheet range. You can use several commands to edit an existing chart. For example, you can delete a data series from a chart, add a new data series to a chart, and change the order in which the data series appear.

To delete a data series from a chart, select the data series you want to remove, and then press the Delete key. Excel removes the data series and redraws the chart to reflect the deletion.

To add a data series, follow these steps:

1. Select the chart to which you want to add new data.
2. Choose **Chart, Add Data**. The Add Data dialog box appears.
3. Enter or select the range in the worksheet that contains the data you want to add.
4. Choose OK. Excel adds the data series to the chart.

To change the order of the data series:

1. Select the chart, then double-click on any data series.
2. Choose **Format, Selected Data Series**, then the **Series Order Tab**.

3. Select the series you want to change, then choose the **Move Up** or **Move Down** button.

4. Choose OK.

### **In 3-D charts, you get a few more choices...**

There are plot and chart areas, and also **walls and floors** inside the plot area. All can be enhanced with patterns and colors. The only types that have no 3-D format are XY, Doughnut, Radar, and Stock charts.

Elevation controls the relative level at which the chart is viewed. Enter a value or use the arrow buttons to adjust the value.

Rotation controls the view angle of the chart around the vertical axis. Enter a rotation value in degrees, or click the rotation arrows to change the view angle.

Use the perspective controls to set the amount of depth in the chart view. Select the **Right Angle Axes** option to remove all perspective from the chart view.

To return to the standard 3-D view, click the **Default** button.

**Change the orientation of a 3-D chart** when the foreground columns obscure background columns by pointing at any outer corner of the walls or floor of the plot area, and click. Point at the square black handles at the corners. Now drag.

**Take a slice of your pie chart** by clicking anywhere on the pie making the data series handles appear. Click the handle on the slice you want to slip out. Drag the slice as far as you want it to go.

**Explode your pie chart entirely.** Click once to the get data series handles, then drag each of them until the whole pie is in pieces.

**Reassemble your pie.** Just shove the slice back in and press **Esc** to get rid of the handles.

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