

### range selector, defined

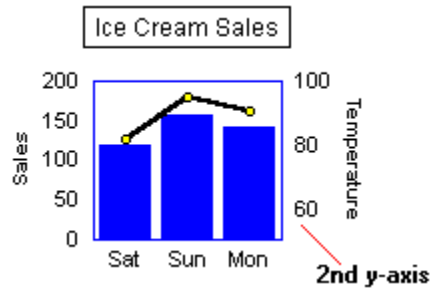


You can select a range from within a dialog box or the InfoBox by clicking the range selector button. When you click the button, 1-2-3 hides the dialog box or the InfoBox so that you can select the range. After you select the range, the dialog box or InfoBox reappears, with the range address entered.

## 2nd y-axis

An optional reference line marked at regular intervals with numeric values. In a vertical chart, the 2nd y-axis is on the right side of the chart. In a horizontal chart, the 2nd y-axis is at the top of the chart.

Use a second y-axis when you want to compare data series that require different scales.



**3D effects in charts**

Visual characteristics for a 3D chart, including platform, rotation, and elevation. For 3D pie charts, you can change the lighting, elevation, depth, and shadow.

## Details: Rotating 3D charts

### Options

- Rotation: Pivots around a point. You can specify a value from 5 to 85.
- Elevation. Controls the apparent view angle. Enter a value from 5 to 85. The lower numbers show the chart at eye level. As the number increases, the elevation shifts so that at 85 you see the chart as if you were looking down on top of it.
- Platform: Choose Low, Medium, or High if you want a platform. Choose None for no platform.
- Lighting: Choose the direction of the light: From left or From right.

---

{button ,AL('H\_LC\_3D\_CHANGE\_STEPS',1)} [Go to procedure](#)

## Rotating 3D charts

You can rotate and maneuver any 3D chart. With-depth charts cannot be rotated.

1. Select a 3D chart.
2. Choose Chart - Plot.
3. Click the 3D tab.
4. Under Rotation, enter a value between 5 and 85.
5. Under Elevation, enter a value between 5 and 85.
6. Under Platform, select a size, or choose None for no platform.
7. Under Lighting, select the lighting direction.

---

{button ,AL('H\_LC\_3D\_CHANGE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_3D\_PIES\_CHANGE\_STEPS;H\_LC\_CHANGING\_PLATFORM\_STEPS;',0)} [See related topics](#)

**Pie charts: 3D depth**

Changes the depth of the 3D effect in the pie chart.

## Designing three-dimensional charts

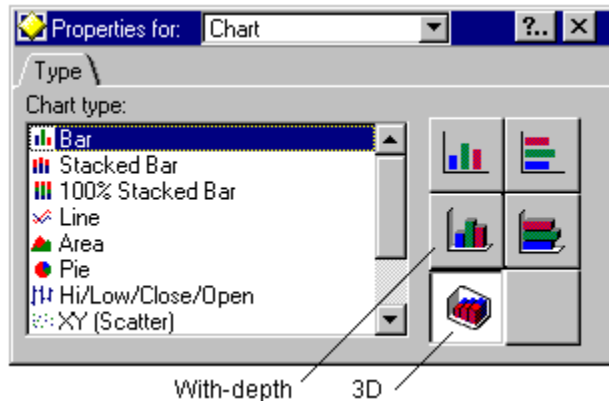
You can create dramatic three-dimensional (3D) and with-depth charts. Using 3D effects suggest mass and volume in your data. In a true three-dimensional chart, you can rotate the chart. In a with-depth chart, the 3D effects are static.

- Use 3D effects when you want to emphasize trends, not individual values, as the data is harder to read in a three-dimensional or with-depth chart.
- Change the size and color of the 3D platform to make the chart stand out. See [Changing the 3D platform](#).
- Change the platform or lighting to add depth to the chart. See [Changing 3D for pie and doughnut charts](#) or [Changing 3D for area, bar, line, and mixed charts](#).
- Rotate the chart or change the elevation to view the chart from a different perspective. See [Changing 3D for pie and and doughnut charts](#) or [Changing 3D for area, bar, line, and mixed charts](#).
- Add space between the rows of series to make the chart easier to read. See [Changing the spacing between series](#).

## Overview: Three-dimensional charts

You can create the illusion of a third dimension in a chart.

- A 3D chart allows for changes to rotation and elevation using [3D effects](#).
- A "with-depth" chart appears three-dimensional, but cannot be manipulated.



### Creating 3D and "with-depth" dimensional charts

Like other chart types, you can choose a 3D or "with-depth" chart at the time you create the chart, or modify an existing chart. Choose one of the types from the Type panel of the InfoBox. See [Adding 3D to a chart](#).

### Modifying 3D effects

Use the InfoBox (3D tab) to change the dimensional effect of the plot of a 3D chart. See [Rotating 3D charts](#) and [Changing 3D for pie charts](#).

For bar, line, area, and mixed charts, you can change:

- Rotation, to change the perspective from which you view the chart.
- Lighting, to shift the apparent direction of the light source and which side is shaded.
- Elevation, to modify the tilt of the chart.
- Platform, to change the height of the area beneath the chart. See [Changing the 3D platform](#).

For 3D pie charts, you can change lighting and elevation. In addition, you can change:

- Depth, to vary the percentage of space used by the 3D effect.
- Shadow, to alter the location of the shadow under the pie.

**Note** The data for a 3D chart is always two-dimensional. Using 3D changes only the appearance of the chart, not how the chart is generated.



## Details: Changing 3D for pie and doughnut charts

### Options

You can change one or more options for the 3D effect:

- 3D depth. Enter a value between 5 (flat) to 100 (cylindrical), or click the arrows to make incremental changes.
- Elevation. Enter a value between 5 (side view) and 85 (top-down view), or click the arrows to make incremental changes.
- Shadow depth. Choose from Shallow, Normal, Deep. To change the shadow depth, you must select a shadow style other than None.
- Shadow style. Choose None, Down, Left, Right.

---

{button ,AL(`H\_LC\_3D\_PIES\_CHANGE\_STEPS',1)} [Go to procedure](#)

### Changing 3D for pie and doughnut charts

You can change the three- dimensional effect for a 3D pie or doughnut chart.

1. Select a 3D pie chart or doughnut chart.
2. Choose Chart - Pie or Chart - Doughnut.
3. Click the 3D tab.
4. Under 3D depth, enter a value between 5 and 100.
5. Under Elevation, enter a value between 5 and 85.
6. Under Shadow depth, select the shadow depth.
7. Under Shadow style, select a shadow style, or None for no shadow.

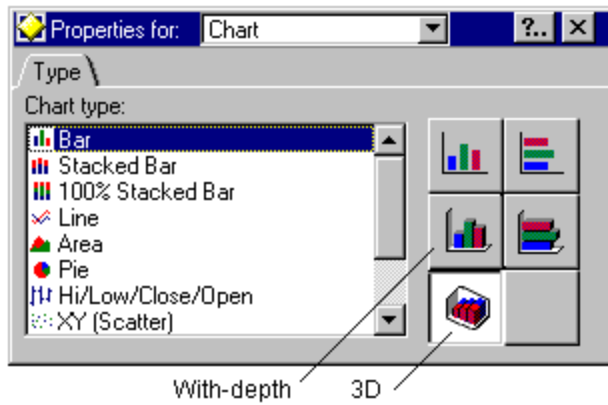
---

{button ,AL('H\_LC\_3D\_PIES\_CHANGE\_DETAILS';1)} [See details](#)

{button ,AL('H\_LC\_3D\_CHANGE\_STEPS;H\_LC\_ADDING\_3D\_STEPS;H\_LC\_CHANGING\_PLATFORM\_STEPS;';0)  
} [See related topics](#)

### Details: Adding 3D to a chart

After you select a chart type, such as Bar, Line, Area, or Pie, select a 3D or "with-depth" effect by clicking the appropriate icon.



To change the rotation or elevation, use the InfoBox. Under Properties for, choose Plot. Click the 3D tab and choose a different rotation and elevation.

---

{button ,AL('H\_LC\_ADDING\_3D\_STEPS',1)} [Go to procedure](#)

## Adding 3D to a chart

You can add a three-dimensional look to any bar chart, line chart, area chart, mixed chart, or pie chart.

1. Select the chart.
2. Choose Chart - Chart Type.
3. Under Chart type, select the type of chart.
4. Click an icon ([3D or with-depth](#)) at the right side of the panel.

**Tip** To create a three-dimensional look in an area chart with negative data, use the 3D icon.

---

{button ,AL('H\_LC\_ADDING\_3D\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_3D\_CHANGE\_STEPS;H\_LC\_3D\_PIES\_CHANGE\_STEPS;',0)} [See related topics](#)

## **Details: Adding axis titles and subtitles**

### **Options**

Show title. Enter one line of text for the title. For a legible chart, keep the title short.

Show subtitle. Do one of the following:

- Enter a line of text. Click the button to display the text on the chart.
- Select "Based on scale" to use the automatic scaling units (Thousands, Millions, etc.). See [Changing the axis scale](#).

Orientation. Select the vertical or horizontal text orientation that looks best for your chart.

Subtitle position. Select whether the subtitle text appears on the same line or below the axis title.

### **Changing the text font, size, and style**

You can change the appearance of text by using the InfoBox. Select the text, then click the Text Format tab and choose a different font, size, and style.

### **Using range data for titles and subtitles**

In Freelance Graphics and Word Pro, you can import data from a worksheet and use it as title text using the Import Data dialog box. See [Linking chart text to a range](#).

In 1-2-3, you can specify a cell containing the text you want to use. Select "Cell" and then specify a range using the range selector.

---

{button ,AL('H\_LC\_ADDING\_AXIS\_TITLE\_STEPS',1)} [Go to procedure](#)

## **Adding axis titles and subtitles**

Adding a title and subtitle to an axis helps to explain the values on the axis.

1. Select a chart.
2. Choose Chart - Axes & Grids.
3. Choose X-Axis & Grids or Y-Axis & Grids.
4. Click the Titles tab.
5. Select "Show title."
6. Enter a title.
7. Select "Show subtitle."
8. Enter a title or select "Based on scale."
9. Under Subtitle position, select where to display the subtitle.

---

{button ,AL('H\_LC\_ADDING\_AXIS\_TITLE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_EDITING\_TEXT\_STEPS;H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;H\_LC\_CHANGING\_AXIS\_SCALE\_STEPS;',0)} [See related topics](#)

**Details: Adding data to a chart from a spreadsheet**

Once you have created a link with a worksheet, you can edit the data or change the range assignment using the Edit Data window. The linked elements are outlined in color.

**To change linked data**

To change the data directly in the original worksheet, choose Chart - Edit Data. In the Edit Data window, double-click the outlined element you want to change. The application containing the worksheet opens. As you edit the data, the change appears in the Edit Data window.

**To change the range assignment**

Choose Chart - Edit Data to open the Edit Data window. Click Import Data to open the Edit Links dialog box. Click Individual, then edit the range for the part you want to change.

---

{button ,AL('H\_LC\_ADDING\_DATA\_FILE\_STEPS',1)} [Go to procedure](#)

## **Adding data to a chart from a spreadsheet**

In Word Pro and Freelance Graphics, you can add a chart series using data stored in a spreadsheet.

1. Edit the data in the file using the application that you used to create the file.
2. Choose Chart - Edit Data.
3. Click Import Data.
4. Under File Name, enter the name of the file you want to use.
5. Click Open to open the file in the Edit Links dialog box.
6. Select "Individual."
7. Select a series.
8. Select the data for the series from the spreadsheet.
9. Click Apply.
10. Click OK to close the Edit Links dialog box.

---

{button ,AL(`H\_LC\_ADDING\_DATA\_FILE\_DETAILS';1)} [See details](#)

{button ,AL(`H\_LC\_ADDING\_DATA\_123\_STEPS;H\_LC\_ADDING\_DATA\_TYPING\_STEPS';0)} [See related topics](#)



**Details: Adding data to a chart by typing****Using the Edit Data dialog box**

The worksheet in the Edit Data dialog box contains rows from 1 to 8192 and columns from A to AD. Use the scroll bars to move around the worksheet.

**Hiding the Preview window**

If you want to see more of the worksheet, you can hide the Preview window. Click the Options button and deselect Show chart preview. Then click OK.

**Adding descriptive text**

Annotations can help describe the chart data.

- Edit the legend, title, or label text. See [Editing chart text](#).
- Hide or show text. See [Hiding and showing parts of a chart](#).

---

{button ,AL(`H\_LC\_ADDING\_DATA\_TYPING\_STEPS',1)} [Go to procedure](#)

## Adding data to a chart by typing

In Freelance Graphics and Word Pro, you can add values to an existing series by editing the data in the Edit Data window.

1. Select the chart.
2. Choose Chart - Edit Data.
3. Enter or edit the values.
4. For labels and titles, do the following:
  - In the Label column, type the x-axis labels or pie titles.
  - In the Legend row, type the legend text or pie slice labels.
5. Click OK.

---

{button ,AL('H\_LC\_ADDING\_DATA\_TYPING\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_DATA\_FILE\_STEPS',0)} [See related topics](#)

## **Details: Adding grid lines and tick marks**

### **Using the Grid tab options**

The options on the Grid tab will vary depending on the chart type and axis you have selected.

- Bar, line, and area charts can have individual grid lines set for the y-axis. On the x-axis, you can only display the major interval grid lines.
- Scatter (X,Y) charts can have individual grid lines for both x-axis and y-axis.
- Pie charts do not have x-axis or y-axis options.

### **Making more changes to grid lines and tick marks**

If you want to scale manually, click the Scale tab. This panel also controls the display of tick marks.

You can change the colors and line widths of grid lines. See [Changing line styles in a chart](#).

You can hide grid lines, which can make some charts easier to interpret. See [Hiding and showing parts of a chart](#).

You can modify the appearance of grid lines and tick marks to customize a chart. See [Changing the look of grid lines and tick marks](#).

---

{button ,AL('H\_LC\_ADDING\_GRIDLINES\_STEPS',1)} [Go to procedure](#)

## Adding grid lines and tick marks

Grid lines and tick marks make it easier to read the values in a chart.

### Setting grid lines

1. Select a chart.
2. Choose Chart - Axes & Grids, then choose X-Axis & Grids or Y-Axis & Grids.
3. Add grid lines and tick marks.
  - To show grid lines, click the Grids tab. Under Show grid lines at, select an interval. (To add grid lines, see below).
  - To add tick marks, click the Ticks tab, then select the intervals and position.

### Setting extra grid lines

1. On the Grids tab, select "Show n extra grid lines" and enter the number of extra grid lines you want to define (up to 20).
2. Under Line number, enter 1. This is the first grid line.
3. Under Line value, enter a number for the location of the first extra grid line.
4. For each additional grid line, enter a new line number and line value.

**Tip** If you do not specify a line number or value, the major grid lines values are used.

---

{button ,AL(`H\_LC\_ADDING\_GRIDLINES\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_LC\_Changing\_line\_styles\_STEPS;H\_LC\_ADDING\_GRIDLINES\_STEPS`,`;0`)} [See related topics](#)

**Details: Adding a note to a chart****Changing text size, color, and style**

You can change the size and appearance of the text using the InfoBox. Open the InfoBox. Under Properties for, select Note, then click the Text Format tab. Select the Font name, Size, Style, and Text color. You can change the chart note title or a line of chart note text by selecting the note text directly in the chart.

**Deleting note text**

To delete a line of text, click the line of text in the chart note, then press DELETE. You can edit or delete characters using the InfoBox or by editing directly in the chart note.

**Hiding the note**

To hide the note, deselect "Show note" on the Options panel of the InfoBox.

---

{button ,AL('H\_LC\_ADDING\_NOTE\_STEPS',1)} [Go to procedure](#)

### **Adding a note to a chart**

1. Select a chart.
2. Choose Chart - Note.
3. Click the Options tab.
4. Select "Show note".
5. Under Line 1, Line 2, and Line 3, enter the note text.

**Tip** You can move the note anywhere on the chart. Click the note and drag it to another position. You can also use the Position buttons on the Options panel.

---

{button ,AL('H\_LC\_ADDING\_NOTE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;H\_LC\_EDITING\_TEXT\_STEPS;',0)} [See related topics](#)

### **Details: Showing pictures instead of bars in a bar chart**

#### **Options**

Under Picture size, you can specify how the picture is represented in the bar:

- Stretch to fill bar. Places one image in each bar, stretching the image as necessary so that it fills the bar.
- Preserve aspect ratio. Enlarges or shrinks the picture so that its width fits the bar. As many images as can fit are stacked in the bar. The last picture can be fractional.
- One picture equals  $nn$  <units>. Makes each picture equivalent to the specified number of y-axis units.

#### **File types supported**

You can use .bmp files.

---

{button ,AL('H\_LC\_ADDING\_PICTOGRAMS\_STEPS',1)} [Go to procedure](#)

## Showing pictures instead of bars in a bar chart

You can put a picture inside a bar, stacked bar, or 100% stacked bar.

1. Create or find the picture you want to use, and copy it to the Clipboard.
2. Select a chart.
3. Choose Chart - Series.
4. Click the Pictures tab.
5. Select a series.
6. Click Paste Picture.
7. Under Picture size, select an option.

---

{button ,AL('H\_LC\_ADDING\_PICTOGRAMS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_TYPES\_CHANGING\_STEPS;H\_LC\_CHANGING\_COLORS\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)



## **Details: Adding a trend line to a chart**

### **Selecting the trend type**

When you select the trend type, the values for the R-square, slope, and y-intercept for the trend line appear. These are the values that display in the note if you select "Show regression information in note." These values overwrite any existing chart notes.

### **Selecting a line style**

For a trend line, make sure to select a solid line style (rather than dashed line style). After creating the trend line, click the Lines & Colors tab in the InfoBox to select a line style.

---

{button ,AL('H\_LC\_ADDING\_REGRESSION\_STEPS',1)} [Go to procedure](#)

### Adding a trend line to a chart

You can add a trend line to a series in a scatter (XY) chart to show the correlation between the values.

1. Select an XY (scatter) chart.
2. Choose Chart - Series.
3. Click the Series trend tab.
4. Select the series from the list. The trend line will be added to the selected series.  
The series must have at least three data points.
5. Select the trend type.

**Tip** To display information about the trend line in the chart note, select "Show regression information in note."

---

{button ,AL(`H\_LC\_ADDING\_REGRESSION\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_LC\_SPECIFYING\_MIN\_MAX\_REGRESSION\_STEPS`,0)} [See related topics](#)

**Details: Adding a series to a chart****Editing a series**

You can also edit or delete series values using the Edit Data dialog box (Chart - Edit Data).

**Working with imported series**

Use the Edit Individual Links dialog box to make changes to a series that is linked to outside data sources. See [Linking chart data to a range](#).

---

{button ,AL(`H\_LC\_ADDING\_SERIES\_STEPS',1)} [Go to procedure](#)

### **Adding a series to a chart**

In Freelance Graphics and Word Pro, use the Edit Data window to add a series.

1. Select the chart to which you want to add a series.
2. Choose Chart - Edit Data.
3. Enter the values for the new series.
4. Click OK.

---

{button ,AL('H\_LC\_ADDING\_SERIES\_DETAILS',1)} [See details](#)

**Details: Adding a table below a chart****Changing line colors in a table**

You can change the line colors in a table. With the table selected, open the InfoBox and click the Lines & Colors tab. Under Line, click the icon that represents the lines you want to modify. Then select a color, width, and style for the selected line.

**Troubleshooting**

You cannot add a table under a number grid.

---

{button ,AL('H\_LC\_ADDING\_TABLE\_UNDER\_STEPS',1)} [Go to procedure](#)

### Adding a table below a chart

You can place a table containing the chart data directly below a chart.

1. Select a chart.
2. Choose Chart - Table.
3. Click the Options tab.
4. Select "Show data table."

**Tip** From the Options tab, you can control the display of the row and column headers, and specify whether the selected series appears in the table or chart.

---

{button ,AL('H\_LC\_ADDING\_TABLE\_UNDER\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_DISPLAYING\_VALUES\_STEPS;',0)} [See related topics](#)

**Details: Adding titles to a chart****Changing text size, color, and style**

You can change the size and appearance of the text using the InfoBox. Choose Chart - Title, click the Text Format tab, then select the Font name, Size, Style, and Text color. To change individual lines, click the text in the chart to select it, then use the InfoBox to make the changes.

**Deleting text**

To delete a line of text, double-click the line of text you want to delete and press DELETE. You can edit or delete characters using the InfoBox or by editing directly in the chart.

**Hiding the title**

To hide the title, deselect "Show title" on the Options panel of the InfoBox.

---

{button ,AL('H\_LC\_ADDING\_TITLE\_STEPS',1)} [Go to procedure](#)

## Adding titles to a chart

1. Select a chart.
2. Choose Chart - Title.
3. Click the Options tab.
4. Check the "Show title" box.
5. Under Line 1, enter the title text.
6. Under Line 2 and Line 3, enter the optional subtitle text.
7. Under Position, click the button that corresponds to the position on the chart where the titles should appear.

---

{button ,AL('H\_LC\_ADDING\_TITLE\_DETAILS',1)} [See details](#)

{button ,AL('H\_EDITING\_TEXT\_STEPS;H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;',0)} [See related topics](#)



## Designing effective charts

Charts help to make data more accessible and easier to recall.

- Before you make a chart, determine your purpose, gather your data, and select a chart type that serves your purpose.
- Use emphatic headlines to clarify your message.
- Minimize extraneous words and chart parts. Use the chart to convey only the most important information.
- Choose a chart type that best illustrates the relationship between different data series.
- Add a note when more explanation is needed. See [Adding a note to a chart](#).
- Show a general trend by omitting the grid lines. Use grid lines to stress exact values.
- Change the axis scale to exaggerate differences between data series. See [Changing the axis scale](#).
- Use labels for charts with a few series. Use a legend for charts with more than three series.
- Legends are a good choice for charts with more than three series. Labels work well for charts with few series.

For more information about specific chart types, see:

- [Designing pie and doughnut charts](#).
- [Designing area charts](#).
- [Designing line charts](#).
- [Designing radar charts](#).
- [Designing horizontal bar charts](#).
- [Designing stacked bar charts](#).
- [Designing vertical bar charts](#).
- [Designing scatter \(XY\) charts](#).
- [Designing High-Low-Close-Open \(HLCO\) charts](#).

## Designing area charts

Area charts emphasize trends and totals in data over time by highlighting the area under the line created by each data series.

- To compare values as percentages of the whole, change the y-axis scale to 100%. See [Changing the axis scale](#).
- In a stacked area chart, the area at the bottom determines the look of the other areas; put the area you want to emphasize at the bottom, or put the smoothest area there.
- In a 3D area chart, increasing the gaps between the rows makes each series easier to distinguish. See [Changing the spacing between series](#).
- In an area chart with negative data, you can create a three-dimensional look by choosing the 3D effect (rather than the with-depth effect). See [Adding 3D to a chart](#).

**area chart**

Area charts show trends in data over time. Like line charts, area charts emphasize trends and totals rather than individual values. For example, use an area chart to see trends in costs for training and salaries over a five-year period.



**Details: Assigning series in an XY (scatter) chart**

By default, all y-series in scatter charts use the same x-values. The x-values are read from the first column in the data (for data assigned by column), or from the row (for data assigned by row). For example:

<u>X</u>	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>
42	53	55	54
44	57	56	61
49	56	52	59

This data would create a chart with three series, with the points of each series lined up along the x-values. For example, the first point in all three series would fall at 42 on the x-axis, the second point would fall at 44, and so on.

**Using separate X values**

When you select separate x-values, the columns or rows are paired in the data so that each column of y-values has a corresponding column of x-values. For example:

<u>X1</u>	<u>Y1</u>	<u>X2</u>	<u>Y2</u>
42	53	55	54
44	57	56	61
49	56	52	59

This data would now create a chart with two series, the first with points at (42, 53) (44, 57), and (49, 56), and the second with points at (55, 54), (56, 61), and (52, 59).

When using separate x-values, if you have an odd number of series, the last series is ignored.

---

{button ,AL('H\_LC\_ASSIGNING\_SERIES\_STEPS',1)} [Go to procedure](#)

### **Assigning series in an XY (scatter) chart**

In a scatter (XY) chart, you can use a separate x-series for each y-series.

1. Select a chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Select "Separate X values."

---

{button ,AL('H\_LC\_ASSIGNING\_SERIES\_DETAILS',1)} [See details](#)

**Data: Assign series**

You can assign series by column or by row.

Assignment	Type of chart	Description	Example
By column	All except pie charts	Plots each column of data in the selected range as a series	
By column	Pie charts	Plots each value in the selected column as a pie slice	
By row	All except pie charts	Plots each row of data in the selected range as a data series	
By row	Pie charts	Plots each value in the selected row as a pie slice	

**attributes**

Visual characteristics of an object. Attributes determine the appearance of text, lines, and fill patterns.

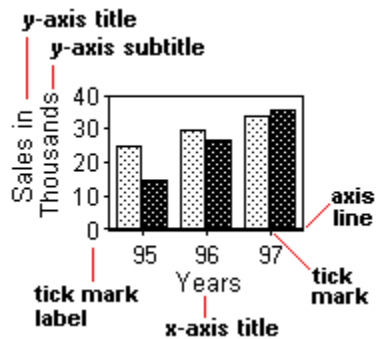
Text attributes include color, font, alignment, and numeric format.

Line attributes include color and line style.

Fill attributes include color and pattern.

## Overview: Axes and grid lines

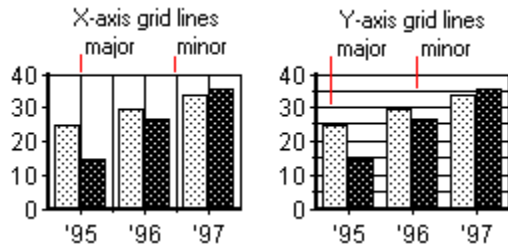
Chart axes are lines against which the data is plotted.



The axes vary:

- Vertical bar charts, line, and area charts have a horizontal x-axis and vertical y-axis. You can optionally specify a 2nd y-axis on the right.
- Horizontal bar charts have a vertical x-axis and horizontal y-axis and optional 2nd y-axis (top).
- 3D charts add a z-axis.
- Radar charts can have up to 40 axes.
- Pie charts have no axes.

Grid lines are the horizontal or vertical lines displayed through the plot of a chart. Grid lines are perpendicular to the axis to which they are associated.



## Modifying the axes

To increase the effectiveness of a chart, you can:

- Add tick marks and grid lines to show exactly where each data point falls. See [Adding grid lines and tick marks](#).
- Display titles to describe the axis. See [Adding axis titles and subtitles](#).
- Change where the axes intersect, to prevent large gaps on a chart. See [Changing the intersection of x- and y-axes](#).
- Change the scale of the axis so it best displays the data. See [Changing the axis scale](#) and [Scaling and arranging radar chart axes](#).
- Plot one or more series on a 2nd y-axis to show a different scale for that series. See [Plotting a series against a 2nd y-axis](#).



**axis labels**

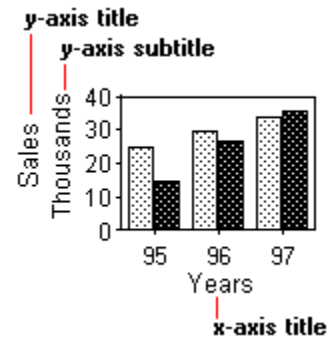
The labels used to identify the tick marks on an axis. Also called tick mark labels.

**axis lines**

Lines used to mark the location of axes. You can show or hide an axis line, as well as change its style.

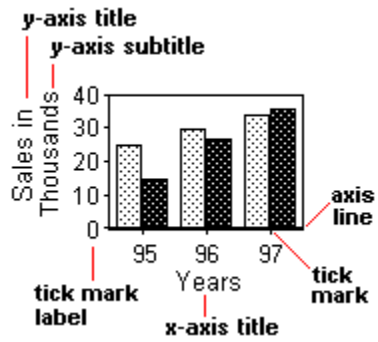
### axis titles

A line of text displayed below or beside an axis. The text of the axis title typically indicates the type of data plotted or describes the axis units.



### axes

Lines that form a frame of reference for the chart data. Most charts have an x-axis and a y-axis. You can also add a 2nd y-axis for charts that require two different scales.



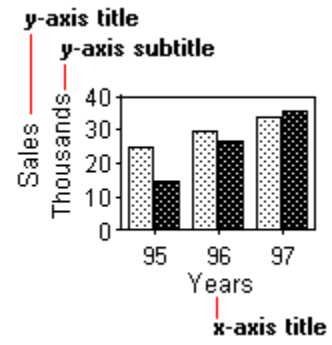
Pie charts do not have axes. Radar charts have a separate axis for each series.

**Axes: Axis intercept**

Sets the location on the y-axis where you want the x-axis to cross. In a scatter chart, sets the location on the x-axis where you want the y-axis or second y-axis to cross.

**axis subtitle**

A second line of text displayed below or beside an axis title.



**Axis subtitle text: Based on scale**

Displays a label that identifies the units for numbers greater than 1000 that are plotted on a numeric axis.

**Example**

When numbers are in the thousands, the axis subtitle is "Thousands." The axis tick mark labels are units representing thousands.

**Tick mark labels: Overlapping labels**

Changes the arrangement of the tick mark labels on a non-numeric axis.

- Automatic. Avoids overlapping the labels.
- Stagger. Displays the labels staggered on two lines.
- Slant. Displays the labels rotated at an angle.
- Vertical. Displays the labels rotated 90 degrees.



**Tick mark labels: Show labels every *nnn* ticks**

Determines how many tick mark labels are displayed. For example, to label every tick mark, enter 1. To label every other tick mark, enter 2.

**Tick mark labels: Character limit**

Determines how many characters are displayed for each tick mark label. For example, to display only the first five characters for each label, enter 5.

**bar chart**

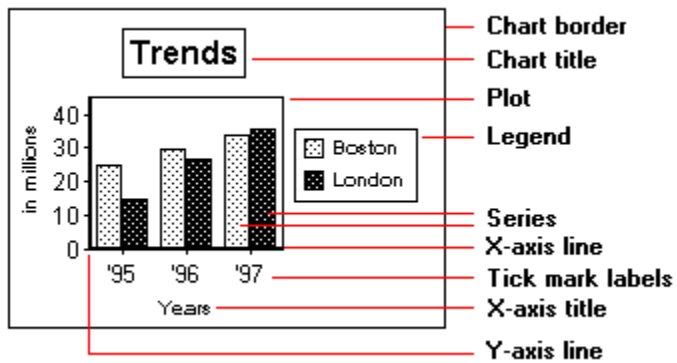
Each data series is plotted as a bar or portion of a bar.

There are three categories of bar charts. Each one suits a different purpose:

- Vertical bar charts
- Horizontal bar charts
- Stacked bar charts

## Overview: Parts of a chart

A chart illustrates numeric data. A chart contains one or more series, a plot, and axes (except pie charts). Some of these parts appear automatically with the chart style you choose. You can add or change parts of a chart using the InfoBox (Chart - Chart Properties).



See the following topics for a description of each chart part.

- [Title](#). See [Adding titles to a chart.](#)
- [Legend](#). See [Overview: Chart legend.](#)
- [Axis titles and axis subtitles](#). See [Adding axis titles and subtitles.](#)
- [Grid lines](#).
- [Tick mark labels](#).
- [Chart note](#).
- [Pie slice labels](#).
- [Series labels](#).
- [2nd y-axis](#). See [Plotting a series against a 2nd y-axis.](#)
- [Chart tables](#).
- [Stack totals](#).
- [Pie titles](#).
- [Pie totals](#).

## **Overview: Creating and using charts**

Charts are a great way to communicate numeric data graphically. A chart makes it easy to see trends and to make comparisons. Both a graphical chart and a table of numeric data can appear in a single document.

A chart can be simple, based on defaults, or customized, such as adding a corporate logo or standardizing on a text font for consistency in a presentation.

### **Choose a chart type and style**

You can choose a chart type (such as bar, pie, or area chart), and chart style. The chart style provides standard, compatible colors and text for the series, line styles, text, and other display characteristics. You can choose a different chart type or style as you work with a chart. See [Changing to a different chart type](#).

For detailed information about creating a chart in a Lotus application, see the Help for that application.

### **Use data**

Data for a chart can come from:

- Manual data entry. See [Adding data to a chart by typing](#).
- A worksheet, such as 1-2-3. See [Adding data to a chart from a spreadsheet](#).
- A database, such as Approach.
- Linking data from a worksheet to a chart. See [Linking chart data to a range](#).

### **Customize a chart**

The InfoBox makes it easy to add custom details to a chart. You can:

- Modify the text font, size, and style. See [Changing text fonts, size, and colors in a chart](#).
- Change the colors of chart parts. See [Changing colors and patterns in a chart](#).
- Include a table of data below the chart. See [Adding a table below a chart](#).

### **Save, print, or share your chart**

Once you have a chart you can:

- Save the chart as part of the document.
- Save the current chart as the default chart.
- Print the chart.
- Copy the chart to another document.

**Details: Calculating totals in a number grid****Hiding totals in a number grid**

You can temporarily hide selected totals in a number grid. On the Options panel, select a series from the list at the bottom of the panel. Uncheck "Show series in table." To redisplay the series, check the box.

**Creating a number grid chart**

A number grid chart contains only numbers. To create a number grid chart, choose Chart - Chart Type. In the InfoBox, click the Type tab. Under Chart Type, select Number Grid from the list.

You can also add a table below an existing bar, line, or area chart. A table displays the values used in the chart. Choose Chart - Table, then click the Options tab, and check Show data table.

---

{button ,AL('H\_LC\_CALCULATING\_TOTALS\_STEPS',1)} [Go to procedure](#)

### **Calculating totals in a number grid**

You can create an extra column or row in a number grid chart for calculating numeric value totals.

1. Select a number grid chart.
2. Choose Chart - Table.
3. Click the Options tab.
4. Check "Show row totals" or "Show column totals."
5. (Optional) Enter text for "Row totals label" or "Column totals label."

---

{button ,AL('H\_LC\_CALCULATING\_TOTALS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_TABLE\_UNDER\_STEPS;',0)} [See related topics](#)

**Details: Changing the intersection of x- and y-axes**

To reset the intercept to the default, deselect "Intercept."

**Making other changes to the scale**

You can select other options to change how the data is presented:

- Click the Labels tab to change the intervals for the scale labels.
- Click the Grids tab to specify whether the grid lines should appear.
- Click the Scale tab to change the direction and position of the scale.

**Changing the intersection of x- and y-axes in a scatter (XY) chart**

Rather than changing the intersection of the axes in a scatter (XY) chart, you can change the properties of a vertical and horizontal grid line to "look like" the axes.

For example, assume the x-axis values range from -5 to 5 and the y-axis values range from -20 to 100, and assume you want the x- and y-axes to intercept at (0,0). Select the vertical grid line that intercepts the x-axis at 0. Then click the Lines & Colors tab on the InfoBox and change that grid line's color and/or width. Similarly, select the horizontal grid line that intercepts the y-axis at 0, and change that grid line's color and/or width.

To select an individual grid line, hold the CTRL key and click the grid line. For information on changing the color and width, see [Changing the look of grid lines and tick marks](#).

---

{button ,AL(`H\_LC\_CHANGING\_AXES\_INTERSECT\_STEPS',1)} [Go to procedure](#)



## Changing the intersection of x- and y-axes

Changing the intersection of the chart axes can make the chart easier to read.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the axis.
4. Click the Scale tab.
5. Select "Intercept."
6. Enter a number for the intercept.

---

{button ,AL('H\_LC\_CHANGING\_AXES\_INTERSECT\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_AXIS\_SCALE\_STEPS',0)} [See related topics](#)

## Details: Changing the axis scale

### Options

- Scale manually: Instead of using the default values, you can create your own scale.
  - Maximum. Enter the highest value for the axis.
  - Minimum. Enter the lowest value for the axis.
  - Major ticks. Enter an interval value for the major tick marks.
  - Minor ticks. Enter a value. If the minor or major tick marks do not appear, click the Ticks tab in the InfoBox, and check the "Show tick marks at" box for the tick marks.
- Intercept. Enter a value.
- Direction: Choose an ascending or descending scale.
- Position: For the x-axis, choose Top, Bottom, or Both. For the y-axis, choose Left, Right, or Both.
- Type: Choose Linear, Log, 100%.
- Units: Choose Auto, or other incremental values such as Thousands and Millions.

In most charts, you can manually scale only the y-axis and 2nd y-axis. In scatter (XY) charts, you can also change the x-axis scale.

The Maximum, Minimum, Major ticks, and Minor ticks settings are interrelated, so that changing one of these settings may affect the other settings.

---

{button ,AL('H\_LC\_CHANGING\_AXIS\_SCALE\_STEPS',1)} [Go to procedure](#)

## Changing the axis scale

To create a better fit for the data, you can change the scale of a numeric axis.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select an axis.
4. Click the Scale tab.
5. Under Scale manually, change the axis options.

---

{button ,AL(`H\_LC\_CHANGING\_AXIS\_SCALE\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_SCALING\_RADAR\_AXES\_STEPS;H\_LC\_ADDING\_GRIDLINES\_STEPS;',0)} [See related topics](#)

## Details: Changing colors and patterns in a chart

### Selecting a series

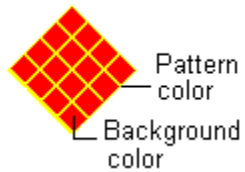
You can select a series from the InfoBox. Under "Properties for," select Series, then select the name of the series from the list on the Options panel. You can also select the series by clicking it. The InfoBox will update to reflect your selection.

### Selecting colors

To select a color on the Lines & Colors panel of the InfoBox, click the arrow beside any color box to display the color palette. When you click a different color, the color of the selected object changes.

### Changing pattern colors

A pattern has two parts: the color of the pattern (such as dots or stripes), and the background color that appears behind the pattern. For example:



In the pattern settings, the top left square represents a transparent pattern. If you change a series to Transparent, you will not be able to click the series to select it. To select a transparent series, open the InfoBox and under Properties for, select Series. On the Options panel, select the transparent series.

---

{button ,AL('H\_LC\_CHANGING\_COLORS\_STEPS',1)} [Go to procedure](#)

## Changing colors and patterns in a chart

Use the InfoBox to change colors and patterns.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the chart part you want to change.
4. Click the Lines & Colors tab.



5. Under Interior, select the Pattern, Pattern color, and Background.

**Tip** To select a single object in a group, such as one bar, hold the CTRL key and click the bar.

---

{button ,AL('H\_LC\_CHANGING\_COLORS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_COLORS\_DETAILS;H\_LC\_CHANGING\_STYLE\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;H\_LC\_ADDING\_3D\_STEPS;',0)} [See related topics](#)

**Details: Changing how chart data is assigned**

The way series are plotted will vary depending on the chart type:

- Bar, area, and line charts can display up to 30 series.
- A single pie chart plots only the first series. Each intersection of row and column represents the value for each slice.
- Multiple pie charts plot each series in a separate pie chart.

---

{button ,AL(^H\_LC\_CHANGING\_DATA\_ASSIGNED\_STEPS',1)} [Go to procedure](#)

## Changing how chart data is assigned

You can control whether data is plotted by columns or by rows.

1. Select a chart.
2. Choose one of these commands:
  - In Approach, Freelance Graphics, and Word Pro, choose Chart - Edit Data.
  - In 1-2-3, choose Chart - Ranges, then click Options.
3. Select whether the series is plotted by columns or by rows.
4. Click OK.

---

{button ,AL('H\_LC\_CHANGING\_DATA\_ASSIGNED\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_LINKING\_DATA\_STEPS;H\_LC\_MODIFYING\_CHART\_DATA\_STEPS;',0)} [See related topics](#)

### **Changing the spacing between series**

You can change the spacing between series for bar charts.

1. Select a bar chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under Gap%, type a number between 0 (no space) and 100 (the width of the bars in each group).

**Tip** If you want to overlap the bars in each cluster, enter a number for Overlap %.



## **Details: Changing the look of grid lines and tick marks**

### **Selecting individual grid lines**

To change an individual major grid line, hold the CTRL key and click the grid line. You can then change the line color, width, and style for the selected major grid line. The minor interval grid lines cannot be individually selected.

---

{button ,AL(`H\_LC\_CHANGING\_GRIDLINES\_STEPS',1)} [Go to procedure](#)

## Changing the look of grid lines and tick marks

1. Select a chart.
2. Double-click a grid line or tick mark.  
All the grid lines or tick marks for that axis are selected, and the InfoBox appears.
3. Click the Lines & Color tab.



4. Under Grid lines and ticks, select a line color, width, and style.

**Tip** Select the Show boxes on the Grids and Ticks panels to display the major and minor intervals of the grid lines and tick marks.

---

{button ,AL('H\_LC\_CHANGING\_GRIDLINES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_GRIDLINES\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)

**Details: Changing line styles in a chart**

You can change the line width, color, and style of these chart parts using the Lines & Colors panel of the InfoBox.

Select the name of the chart part from the "Properties for" list at the top of the InfoBox.

- Border surrounding a chart. Select "Chart."
- Line surrounding a title. Select "Title."
- Line surrounding a note. Select "Note."
- Line surrounding a legend. Select "Legend."
- Chart plot. Select "Plot."
- Lines surrounding chart areas, bars, and pie slices. Select "Series."
- Lines in a scatter chart, any line chart, radar chart, or mixed chart. Select "Series."
- Grid lines in a number grid or data table under a chart. Select "Table."

---

{button ,AL('H\_LC\_CHANGING\_LINE\_STYLES\_STEPS',1)} [Go to procedure](#)

## Changing line styles in a chart

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the chart part containing the line you want to change.
4. Click the Lines & Colors tab.



5. Under Line, select the Color, Width, and Style.

**Tip** To hide a line, set the Style to None.

---

{button ,AL(`H\_LC\_CHANGING\_LINE\_STYLES\_DETAILS',1)} [See details](#)

{button ,AL(`;H\_LC\_CHANGING\_COLORS\_STEPS;H\_LC\_CHANGING\_MARKERS\_STEPS',0)} [See related topics](#)

**Details: Changing markers in a chart**

The marker outline is the same color and width as the line itself. The markers cannot be resized separately.

**Troubleshooting**

If the Marker information does not appear in the Lines & Colors panel, be sure you have a series selected. You can select a series by clicking it, or by selecting it from the "Properties for" list at the top of the InfoBox.

---

{button ,AL('H\_LC\_CHANGING\_MARKERS\_STEPS',1)} [Go to procedure](#)

## Changing markers in a chart

Markers can be used in line, mixed, scatter (XY), and radar charts.

1. Select a chart.
2. Choose Chart - Series.
3. Click the Options tab and select a series.
4. Click the Lines & Colors tab.



5. Check Show marker.
6. Select a Marker Symbol and Marker Color.

---

{button ,AL(`H\_LC\_CHANGING\_MARKERS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)

**Details: Changing the layout of multiple pie and doughnut charts**

The Layout panel controls the plot layout options for multiple pie and doughnut charts.

**Slice direction**

- Clockwise or counterclockwise. As you change the start angle, the slices will redraw in the direction you specify.
- Start angle. Click the arrows to incrementally change the start angle, or enter a value from 0 to 359.

**Chart layout**

- Automatic. The pies or doughnuts are displayed on the optimal number of lines.
- In n rows. You can specify the number of rows to use. This number may be automatically adjusted to ensure a sensible layout.

**Sort slices by size**

- Unsorted. Slices are not sorted.
- Separately for each chart. Each pie or doughnut is sorted using its slice values.
- Based on first chart. The order of the slices is determined by the first pie or doughnut.
- Based on last chart. The order of the slices is determined by the last pie or doughnut.

**Scale charts**

- Equally. All pies or doughnuts are the same size.
- By Area. The size of the pies or doughnuts will vary depending on the totals of their data values.
- By Height. On 3D charts, the height of the pies or doughnuts will vary depending on the values.

---

{button ,AL('H\_LC\_CHANGING\_MULTI\_PIE\_LAYOUT\_STEPS',1)} [Go to procedure](#)

### **Changing the layout of multiple pie and doughnut charts**

Multiple pie and doughnut charts can be laid out using more than one row.

1. Select a pie or doughnut chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under Chart layout, click "Automatic," or click "In n rows" and enter the number of rows to use.
5. (Optional) Under Sort slices by size, select an option.

---

{button ,AL('H\_LC\_CHANGING\_MULTI\_PIE\_LAYOUT\_DETAILS',1)} [See details](#)



## **Details: Changing the scaling of multiple pie and doughnut charts**

### **Using scaling options**

Scale charts

- Equally. All pies or doughnuts are the same size.
- By Area. The size of the pies or doughnuts will vary depending on the values.
- By Height. For 3D pies or doughnuts, the height will vary depending on the values.

---

{button ,AL('H\_LC\_CHANGING\_MULTI\_PIE\_SCALING\_STEPS',1)} [Go to procedure](#)

## Changing the scaling of multiple pie and doughnut charts

You can change the size of pies or doughnuts in a multiple chart. Pies and doughnuts with larger values will appear larger.

1. Select a pie or doughnut chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under "Scale charts," select an option.

---

{button ,AL(`H\_LC\_CHANGING\_MULTI\_PIE\_SCALING\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_CHANGING\_MULTI\_PIE\_LAYOUT\_STEPS;',0)} [See related topics](#)

## Details: Changing numeric formats in a chart

### Options

You can choose how you want the selected numbers in a chart to be displayed.

- Format type. Choose from General, Currency, ISO Currency, Comma, Fixed, Scientific, Percent, Date, Time.
- Current format. If there are other options for the Format type you select, they appear here. The options vary depending on the Format type.
- Parentheses. Check this box if you want parentheses displayed around the numbers.
- Decimal places. Use the arrows to set the number of decimal places, or enter a number between 0 and 15.

---

{button ,AL('H\_LC\_CHANGING\_NUMERIC\_FORMATS\_STEPS',1)} [Go to procedure](#)

## Changing numeric formats in a chart

You can change the format of labels on a numeric scaled axis or a pie chart.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the axis you want to format.
4. Click the Number Format tab.



5. Under Format type, select a format.
6. Under Current format, select from the list.
7. Under Decimal places, select a number.
8. Check the Parentheses box to add parentheses.

---

{button ,AL(`H\_LC\_CHANGING\_NUMERIC\_FORMATS\_DETAILS',1)} [See details](#)

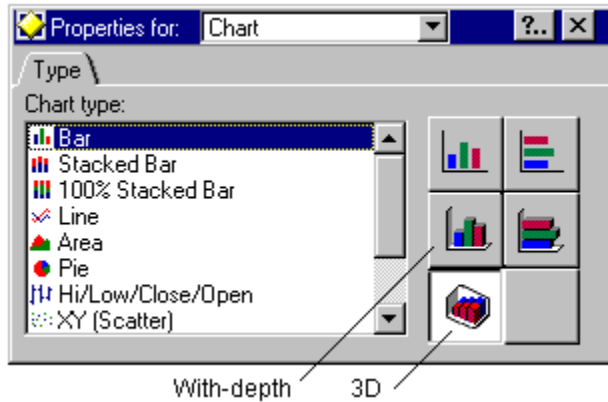
{button ,AL(`H\_LC\_TEXT\_OVER;',0)} [See related topics](#)

### Details: Changing the chart orientation

#### Using the orientation and dimension icons with a chart type

The icons on the Type panel will vary depending on the chart type. Use these icons to control:

- Chart orientation. Any bar chart can be positioned vertically or horizontally.
- Chart dimension. You can create 3D or with-depth charts for most chart types. Note that 3D charts can be rotated, and with-depth charts cannot be rotated.
- Multiple pie charts.



---

{button ,AL('H\_LC\_CHANGING\_ORIENTATION\_STEPS',1)} [Go to procedure](#)

## Changing the chart orientation

You can change the vertical and horizontal orientation of any bar chart.

1. Select a chart.
2. Choose Chart - Chart Type.
3. Click the Type tab.
4. Click the icon representing the horizontal or vertical orientation you want to use.

---

{button ,AL(`H\_LC\_CHANGING\_ORIENTATION\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_LC\_SIZING\_CHART\_STEPS`,0)} [See related topics](#)

## Details: Displaying pie and doughnut slice labels

### Using slice labels

You can select up to three labels for each pie slice or doughnut slice:

- Show value labels displays the actual data value.
- Show percent labels displays the percentage of each slice to the whole.
- Show slice labels displays the label text.

In 1-2-3, use the range selector to specify the range containing the slice labels.

In Freelance Graphics and WordPro, use the Edit Data window (Chart - Edit Data) to modify the Slices text.

Limiting the number of labels that you display on a chart can make it more legible. Instead of displaying percent, value, and slice labels on a chart, select only one or two for more impact.

---

{button ,AL('H\_LC\_CHANGING\_PIE\_LABELS\_STEPS',1)} [Go to procedure](#)

## Displaying pie and doughnut slice labels

You can display value, percent and slice labels for a pie chart or doughnut chart.

1. Select a pie chart or doughnut chart.
2. Choose Chart - Pie Labels or Chart - Doughnut Labels.
3. Click the Options tab.
4. Check one or more of the Show boxes.
5. (Optional) Under Position, select the position where the label is displayed.

---

{button ,AL(`H\_LC\_CHANGING\_PIE\_LABELS\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_LC\_EXPLODING\_PIE\_SLICES\_STEPS;H\_LC\_INDEPENDENT\_PIE\_DATA\_STEPS`;,0)} [See related topics](#)



### **Details: Changing slice color, line style, and fill**

#### **Combining small slices into a single slice**

Consider combining several small slices into one slice when the pie chart or doughnut chart has many slices. See [Combining pie or doughnut slices](#).

#### **Making good design choices**

By default, many design choices are already made for you, such as the colors, and the maximum number of individual slices that are displayed. You can also make your own design decisions:

- Use six or fewer slices.
- Limit the number of patterns in a chart.
- Try exploding a slice for emphasis.
- Consider how the chart will be distributed. A color chart will look different when printed on a black-and-white printer.
- Eliminate small or insignificant slices, or combine them into one slice.

---

{button ,AL('H\_LC\_CHANGING\_PIE\_SLICES\_STEPS',1)} [Go to procedure](#)

### Changing slice color, line style, and fill

1. Select a pie chart or doughnut chart.
2. Choose Chart - Slices.
3. Click a slice.  
To select a slice of a single pie or doughnut in a multiple chart, hold the CTRL key and click the slice.
4. Click the Lines & Color tab.



5. Under Interior, select a Pattern, Pattern color, and Background for the interior of the slice.
6. Under Line, select a Color, Width, and Style. This changes all the lines in the pies or doughnuts.

---

{button ,AL(`H\_LC\_CHANGING\_PIE\_SLICES\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_SELECTING\_PIES\_STEPS',0)} [See related topics](#)

## Details: Changing the start angle and direction for pie and doughnut charts

### Options

#### Slice direction

- Clockwise or counterclockwise. As you change the start angle, the slices will redraw in the direction you specify.
- Start angle. Click the arrows to incrementally change the start angle, or enter a value from 0 to 359.

---

{button ,AL(`H\_LC\_CHANGING\_PIE\_START\_ANGLE\_STEPS',1)} [Go to procedure](#)

## Changing the start angle and direction for pie and doughnut charts

1. Select a pie or doughnut chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under Slice direction, click the clockwise or counterclockwise icon.
5. Under Start angle, select a value.

---

{button ,AL('H\_LC\_CHANGING\_PIE\_START\_ANGLE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_LC\_INDEPENDENT\_PIE\_DATA\_STEPS;H\_LC\_CHANGING\_PIE\_LABELS\_STEPS;',0)} [See related topics](#)

## Changing the 3D chart platform

You can change the appearance of a wall, face, or floor of a 3D platform.

1. Select a 3D chart.
2. Choose Chart - Plot.
3. Click the Lines & Colors tab.



4. Under Plot section, click the icon that corresponds to the platform area you want to change.
5. Under Interior, select a Pattern, Pattern color, and Background.
6. Under Line, select a Color, Width, and Style.

**Tip** To select with the mouse, move the cursor to the platform part you want to select, hold the CTRL key, and click the part.

---

{button ,AL(`H\_LC\_3D\_CHANGE\_STEPS;',0)} [See related topics](#)

### Changing the look of a chart plot

You can change the color and pattern of the entire plot of a bar, line, or area chart.

1. Select a chart.
2. Choose Chart - Plot.
3. Click the Lines & Colors tab.



4. Under Interior, select a pattern, pattern color, and background.
5. Under Line, select a color, width, or style for the line around the plot.

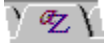
---

{button ,AL(`H\_LC\_CHANGING\_COLORS\_STEPS;';0)} [See related topics](#)

## Changing text in a table or number grid

You can modify the appearance of text in a chart table or number grid.

1. Select a chart table or number grid.
2. Choose Chart - Table.
3. Select the text you want to change.
4. Click the Text Format tab.



5. Under Font name, select a font.
6. Under Size, select the font size.
7. Under Style, select a style for emphasis.
8. Under Text color, select a text color.

**Note** Selecting one item in a series selects the entire series.

---

{button ,AL('H\_LC\_ADDING\_TABLE\_UNDER\_STEPS;H\_LC\_DISPLAYING\_SEPARATORS\_STEPS;',0)} [See related topics](#)

**Details: Changing to a mixed chart type**

Here are some guidelines to help you create an effective mixed chart.

- Lines and bars are an effective combination. For example, the line could track the sales of shoes over several years, while the bars could show the percentage share of the market. Lines are good for emphasizing continuity of data over time while bar charts emphasize values for individual time periods.
- Areas and lines are also useful. Use "area" for one of the series when you want to present a general trend rather than the individual bars.

---

{button ,AL(`H\_LC\_CHANGING\_SERIES\_TYPE\_STEPS',1)} [Go to procedure](#)



## Changing to a mixed chart type

A mixed chart can combine bar, area, and line series into one chart.

1. Select a chart.
2. Choose Chart - Series.
3. Click the Options tab.
4. Select a series from the series list.
5. Under Mixed type, select Area, Bar, or Line for the selected series.
6. Repeat for each series you want to change.

**Tip** On the Type panel, the chart type will now be "Mixed."

---

{button ,AL('H\_LC\_CHANGING\_SERIES\_TYPE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_COLORS\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)

**Details: Using an existing chart style****Chart styles you create**

You can create your own chart styles, name them, and use them when you create new charts. See [Creating a new chart style](#).

**Deleting chart styles**

You can remove a chart style by deleting it from the directory where it is saved.

**Changing a chart style**

You can make changes to a chart style and then save it using a new name or the same name. See [Creating and editing a chart style](#).

---

{button ,AL('H\_LC\_CHANGING\_STYLE\_STEPS',1)} [Go to procedure](#)

### Using an existing chart style

1. Select a chart.
2. Choose Chart - Chart Style - Apply.
3. Click the Styles tab.



4. Select a chart style.
5. Click Apply.

**Tip** If you have chart styles saved in another directory, choose Chart - Chart Style - Change Path, select the directory, then return to this panel to select a style.

---

{button ,AL('H\_LC\_CHANGING\_STYLE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CREATING\_STYLE\_STEPS;H\_LC\_EDITING\_STYLE\_STEPS;',0)} [See related topics](#)

## **Details: Changing text fonts, sizes, and colors in a chart**

### **Changing fill colors**

Title, legend, and note text appear in a box. You can change the fill pattern and colors of the box. From the InfoBox, click the Lines & Colors tab, and select the pattern and colors.

### **Hiding and showing text**

You can control whether or not text appears by using the InfoBox. Open the InfoBox, then select a chart part, such as Legend, Title or Series Labels from the Properties for list. Click the Options tab, and check the Show box if you want the selected chart part to appear on the chart.

### **Editing text**

You can edit existing text directly on the chart. See [Editing chart text](#).

---

{button ,AL('H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS',1)} [Go to procedure](#)

## Changing text fonts, sizes, and colors in a chart

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the part containing the text you want to change.
4. Click the Text Format tab.



5. Select the text you want to change.
  - To apply changes to one line of text, click it.
  - To apply changes to all text, click the frame around the text.
6. Under Font name, select a font.
7. Under Size, select a font size.
8. Under Style, select one of the emphasis options.
9. Under Text color, select a color.

---

{button ,AL('H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_COLORS\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)

## Details: Displaying axis labels

### Options

Overlapping is optional for some axes. The Overlapping options include:

- Automatic. Uses the best arrangement for the labels.
- Stagger. Alternates the labels between two lines.
- Slant. Displays the labels at an angle.
- Vertical. Displays the labels vertically.
- Down. Displays the labels vertically.

### Displaying long text labels

If you have labels with long names, you can make them fit better on the chart. You can:

- Change the text size. Open the InfoBox, then select the text in the chart. Click the Text Format tab, and select a smaller font size or different font.
- Use a different Overlapping option.
- Shorten the text. Under Character limit, enter a smaller number.
- Show fewer labels. Under Show labels every n ticks, enter a number other than 1.

---

{button ,AL('H\_LC\_CHANGING\_TICK\_LABELS\_STEPS',1)} [Go to procedure](#)

## Displaying axis labels

You can specify how axis labels are displayed. The options vary depending on which axis is selected.

1. Select a chart.
2. Choose Chart - Axes & Grids, then choose X-Axis & Grids or Y-Axis & Grids.
3. Click the Labels tab.
4. Select "Show labels every n ticks," and enter a number.
5. (Optional) Under Overlapping, select an option.
6. (Optional) Select "Character limit" and enter a number.

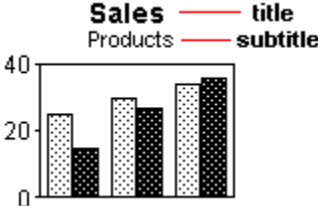
---

{button ,AL('H\_LC\_CHANGING\_TICK\_LABELS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_GRIDLINES\_STEPS;H\_LC\_CHANGING\_LINE\_STYLES\_STEPS;',0)} [See related topics](#)

**chart title**

Text in a chart that describes the main idea illustrated by the chart. The chart title typically appears at the top of the chart.





## Overview: Chart data

You can gather data for a chart by using any of the following methods:

- Manual data entry. See [Adding data to a chart by typing](#).
- Worksheet. Worksheet data can be linked to the chart. Changes to the source data will automatically update in the chart. If the link is broken, changes to the source data will not affect the chart data. See [Linking chart data to a range](#).

### Using a number grid or table

If you want to show the actual data values instead of a graphical representation, you can create a [number grid](#).

If you want to show the data values and graphic representation together, you can create a table that appears with the chart. See [Adding a table below a chart](#).

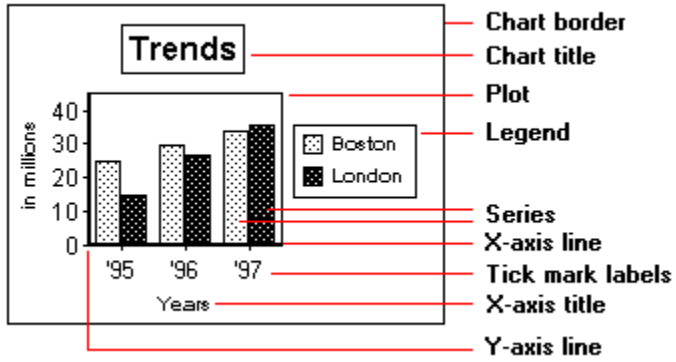
### How charts are generated from data

You can specify how you want rows and columns of data to appear in the chart.

- Bar, line, and area chart. The values in the first column are used for the x-axis. Each of the following columns is a series.
- Pie chart. A single pie chart uses one column of data. The labels for the slices are the values in the first column. Extra data is ignored.
- Multiple pie charts. A separate pie chart is created from each column, where each value is a slice. As with a single pie chart, the labels for the slices are the values in the first column. You can also use independent data for each of the pies.
- Scatter chart. The first column contains x-axis values. The remaining columns contain y-axis values.
- High-Low-Close-Open (HLCO) chart. Creates a different marker for each column. Column 1 contains the high values, column 2 contains the low values, column 3 contains the close values, column 4 contains the open values. If you have a fifth column, a volume bar chart appears at the bottom of the HLCO chart. Columns numbered 6 and higher are line series.
- Radar charts. Each row represents a different axis in the chart. Each series appears as lines connecting the points on the axes.
- 3D and with-depth charts. These chart types use the same data organization as 2D charts. While the display properties of a chart change when you add depth or 3D, the data remains two-dimensional.

**chart**

Graphic representation of data. A chart includes the parts illustrated below. Chart types include area, bar, high-low-close-open (HLCO), line, mixed, pie, radar, and scatter (XY).



**chart styles**

Named and saved sets of chart attribute settings that you can apply to any number of charts of any type. You can use chart styles to create a similar look for a set of charts. Chart styles specify all characteristics of a chart except its data and type.

**collection**

Two or more ranges, selected in a worksheet. The ranges in a collection can be contiguous or not and can span worksheets.

### **Using color and pattern in chart design**

You can give a chart a distinctive appearance by using colors and patterns.

- Instead of a blank chart background, choose a light fill color to highlight the chart on the page.
- Change the color for negative values. See [Emphasizing a data point](#).
- When using black and white, avoid clashing hatch patterns. Use gray-scale shading instead. See [Changing colors and patterns in charts](#).
- In Freelance Graphics, use SmartMaster colors for color compatibility between your chart and your presentation.

## **Overview: Chart colors, patterns, line and text styles**

A new chart uses a standard set of colors, patterns, and line and text styles. You can easily customize a chart by selecting individual parts, such as bars or titles, then using the InfoBox to change their appearance.

You can change:

- Colors and patterns of solid objects, such as the background of a plot or individual bars or pie slices. See [Changing colors and patterns in charts](#).
- Text, such as titles or axis names. See [Changing text fonts, sizes, and colors in charts](#).
- Lines, such as lines in a line chart, the outline of bars, or a chart border. See [Changing line styles in a chart](#).
- Numeric formats. See [Changing numeric formats in a chart](#).
- Change to a different chart style. See [Using an existing chart style](#).
- Save your customized changes as a new chart style. See [Creating and editing a chart style](#).

## **Details: Combining pie and doughnut slices**

### **Maximum slices**

Although the maximum possible number of slices in a pie or doughnut chart is forty, you should consider using a smaller number of slices for legibility.

### **Controlling how slices are displayed**

You can specify other slice options using the InfoBox. Choose Chart - Chart Properties to display the InfoBox. Under Properties for, select Chart, then click the Layout tab. On this panel, you can specify:

- Clockwise or counterclockwise direction for the slices.
- Angle (from 0 to 359) at which the slices start.
- Sort slices by size.

You can use these options to situate the most important slice at the upper right part of the chart.

---

{button ,AL('H\_LC\_COMBINING\_SLICES\_STEPS',1)} [Go to procedure](#)

### **Combining pie and doughnut slices**

You can combine the smallest slices into one slice to make a pie or doughnut chart more legible.

1. Select a pie chart or doughnut chart.
2. Choose Chart - Pie or Chart - Doughnut.
3. Click the Data tab.
4. Under "Combine additional slices into one, if there are more than...", enter a number.
5. (Optional) Under Label, enter a label name for the combined slice.

---

{button ,AL(`H\_LC\_COMBINING\_SLICES\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_LC\_EXPLODING\_PIE\_SLICES\_STEPS;H\_LC\_CHANGING\_PIE\_SLICES\_STEPS;H\_LC\_CHANGING\_PIE\_LABELS\_STEPS`,0)} [See related topics](#)



### **Adding connecting lines to a stacked bar chart**

1. Select a stacked bar chart.
2. Choose Chart - Plot.
3. Select the Layout tab.
4. Select "Show connecting lines."

### **Connecting points in charts**

You can connect the points in a scatter chart.

1. Select a scatter chart.
2. Choose Chart - Series.
3. Click the Options tab, and select a series.
4. Click the Lines & Colors tab.
5. Select "Connect points."

---

{button ,AL(`H\_LC\_CHANGING\_MARKERS\_STEPS;`,0)} [See related topics](#)

### **Details: Copying a chart between applications**

#### **Editing a copied chart**

Any changes you make to a copied chart do not affect the original chart. If the data for the chart is linked to a worksheet, changes in the data will update both the original and the copy.

A chart copied into Approach cannot be edited. It is a picture of a chart and does not change even if the underlying data changes.

---

{button ,AL('H\_LC\_COPYING\_CHART\_STEPS',1)} [Go to procedure](#)

### **Copying a chart between applications**

You can copy a chart from one Lotus application to another.

1. Select a chart.
2. Choose Edit - Copy.
3. Open the document where you want to copy the chart.
4. Choose Edit - Paste.

---

{button ,AL(`H\_LC\_COPYING\_CHART\_DETAILS',1)} [See details](#)

### **Creating a chart by typing data**

In Freelance Graphics and Word Pro, you use the Edit Data window to enter chart data.

1. Choose Create - Chart.
2. Select a chart type and chart style.
3. Click OK to display the Edit Data window.
4. Enter the data.
5. (Optional) Enter label and legend text.
6. Click OK.

**Tip** You can add a chart title, chart note, and axis titles. Click the Titles tab and enter text. To add descriptive text for a series, click the Text Labels tab and enter text.

---

{button ,AL('H\_LC\_ADDING\_DATA\_TYPING\_STEPS;',0)} [See related topics](#)

## **Overview: Creating a chart in Word Pro**

In Word Pro, you can create charts in your document using the Create - Chart command.

Once you create a chart, you can customize it. You can:

- Add a title or subtitle. See [Adding titles to a chart](#) .
- Change colors and patterns. See [Changing colors and patterns in a chart](#).
- Change the appearance of the text. See [Changing text fonts, sizes, and colors in a chart](#).
- Change the chart type. See [Changing to a different chart type](#).

## **Learning more about Word Pro**

For more information about Word Pro, choose Help - Help Topics, click the Index tab, and choose a topic from the Help Index.

## **Overview: Creating a chart in Approach**

In Approach, you use the Chart Assistant to create a chart, using fields and crosstabs in the current database to provide data.

### **Using and modifying a chart**

Once you create a chart, you can customize it. You can:

- Add a title or subtitle. See [Adding titles to a chart](#) .
- Change colors and patterns. See [Changing colors and patterns in a chart](#) .
- Change the appearance of the text. See [Changing text fonts, sizes, and colors in a chart](#).
- Change the chart type. See [Changing to a different chart type](#) .

### **Learning more about Approach**

For more information about Approach, choose Help - Help Topics, click the Index tab, and choose a topic from the Help Index.

## **Overview: Creating a chart in Freelance Graphics**

You can create a chart as part of a Freelance Graphics presentation. There are three parts to creating a chart:

### **Open the Create Chart dialog box**

The Create Chart dialog box allows you to select a chart type, chart style, and SmartMaster colors. You can get to the Create Chart dialog box in one of two ways:

- Choose Create - Chart from the menu.
- Choose any SmartMaster page layout that includes a chart, then click the Click here block.

See [Create Chart dialog box](#).

### **Enter data in the chart**

You can enter data by:

- Manually typing data into the Edit Data window. See [Adding data to a chart by typing](#).
- Importing data from a worksheet or file. See [Adding data to a chart from a spreadsheet](#).

### **Use and modify a chart**

Once you create a chart, you can customize it. You can:

- Add a title or subtitle. See [Adding titles to a chart](#).
- Change colors and patterns. See [Changing colors and patterns in a chart](#).
- Change the appearance of the text. See [Changing text fonts, sizes, and colors in a chart](#).
- Change the chart type. See [Changing to a different chart type](#).

### **Learning more about Freelance Graphics**

For more information about Freelance Graphics, choose Help - Help Topics, click the Index tab, and choose a topic from the Help Index.



### **Details: Cutting and pasting data into a chart**

#### **Accepted file formats**

You can paste data from the following types of files:

- 1-2-3: WK3, WK4, WK5
- Symphony: WR1
- Excel: XLS
- dBASE: DBF
- ASCII numbers: PRN
- ASCII text: PRN

---

{button ,AL('H\_LC\_CREATING\_FROM\_CLIPBOARD\_STEPS',1)} [Go to procedure](#)

### **Cutting and pasting data into a chart**

In Freelance Graphics and Word Pro, you can copy data from a worksheet to a chart using the Edit Data window.

1. Select the data in the worksheet and copy it to the Clipboard.
2. Choose Chart - Edit Data.
3. Place the insertion point where you want to paste the data.
4. Press SHIFT + INSERT.
5. Click OK.

---

{button ,AL('H\_LC\_CREATING\_FROM\_CLIPBOARD\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CREATING\_BY\_TYPING\_STEPS',0)} [See related topics](#)

### **Creating a chart from worksheet data**

You can import data from a worksheet to create a chart in Freelance Graphics and Word Pro.

1. Choose Create - Chart.
2. Select a chart type and chart style.
3. Click OK to display the Edit Data window.
4. Click Import Data.
5. Type the name of the file containing the data you want to import.
6. In the Edit Links dialog box, follow the steps to select worksheet data and assign it to parts of a chart.
7. (Optional) Select "Keep file links" if you want to maintain a link between the worksheet data and the chart.
8. Click OK.
9. Click OK in the Edit Data dialog box.

**Details: Creating and editing a chart style**

The changes you make to a chart style take effect the next time you create a chart. The changes do not affect charts that you already created with the old style.

**Saving a chart style to the same directory**

To access all the styles easily, keep them in the same directory with the "basic.cl" style. All the styles will then appear in the Chart styles list. If you save the styles in different directories, you will have to use the Chart - Chart Style - Change Path command to access the other directory.

**Deleting a chart style**

You can delete a chart style from the directory where it is saved.

---

{button ,AL('H\_LC\_CREATING\_STYLE\_STEPS',1)} [Go to procedure](#)

## Creating and editing a chart style

### To create a new chart style

1. Select the chart you want to use as a template.
2. Choose Chart - Chart Style - Create.
3. Under Preview of New Style, check to see that this is the chart you want.
4. Click OK to accept the chart.
5. Enter a file name with the .CL extension for the style.
6. Click Save.

### To edit a chart style

If the preview chart is not what you want for the chart style, you can edit it.

1. Click Cancel.
2. Choose Chart - Chart Properties.
3. Edit the chart.
  - Under Properties for, select the chart part you want to change.
  - Click a tab (such as Lines & Colors) and change the options for the selected part.
4. Proceed from step 2 above.

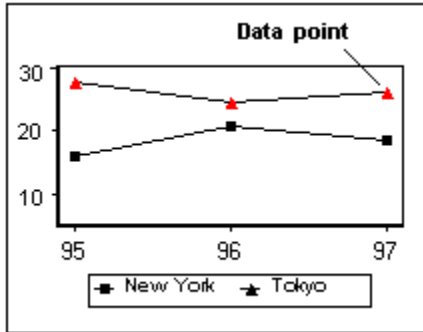
---

{button ,AL('H\_LC\_CREATING\_STYLE\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_STYLE\_STEPS;',0)} [See related topics](#)

**data points**

Values plotted in a chart. In a bar chart, data points appear as bars; in a pie chart, as slices; in a scatter (XY) chart, as markers.



**data range**

Range of values that represent the series of a chart, for example, the lines or bars.

**data table**

Table containing the data used to create a chart. The data table appears below a chart instead of a legend.

For a table of data without any graphical representation, use the number grid chart type.



**chart data**

Data used to create the individual data series or pie slices in a chart.

**Edit Data window**

Use the Edit Data window to enter values, legend, titles, and labels.

**Create Chart dialog box**

Use this dialog box to add a chart to your document. You can specify the chart type and optional chart style.

**Choose a task**

[Changing to a different chart type](#)

[Using an existing chart style](#)

**Set Default Chart dialog box**

Use this dialog box to change the default chart type and style. The new settings take effect the next time you create a chart.

**Choose a task**

[Setting the default chart type and style](#)

[Creating and editing a chart style](#)

**Edit Data dialog box**

Use the Edit Data dialog box to manually enter and edit data, chart titles, axis titles, series labels, and a chart note.  
To include imported data, click the Import Data button to display the Edit Links dialog box.

**Choose a task**

[Modifying typed or copied chart data](#)

[Adding a note to a chart](#)

[Adding titles to a chart using the Edit Data window](#)

[Adding text labels to a chart using the Edit Data window](#)

[Adding axis titles and subtitles](#)

**Choose an Edit Links task**

[Linking chart data to a range](#)

[Linking chart text to a range](#)

## **Create Chart Style dialog box**

Use this dialog box to save a new chart style. The chart style is based on the colors and fonts of the current chart. If you want this new style to become the default chart style, select "Make this your Default Chart."

Click OK to display the File Save dialog box.

### **Choose a task**

[Creating and editing a chart style](#)

[Using an existing chart style](#)

[Overview: Chart styles](#)

**Open and Save dialog box**

Use this dialog box to open a chart style file, to save a new chart style file, or to change the path to another directory for a chart style.

**Choose a task**

[Creating and editing a chart style](#)

[Setting the default chart type and style](#)

## **Setting styles in charts**

Use Styles to create a chart style or specify the default style to use when creating new charts.

### **Choose a task**

[Creating a new chart style](#)

[Setting the default style](#)

[Using the InfoBox with charts](#)



**default chart style**

Set of chart attributes that are automatically applied when you create a chart. You can create and save customized styles.

**Details: Deleting a chart****Other ways to delete**

Select the chart you want to delete, then do either of the following:

- Choose Edit - Clear.
- Click the Delete icon in the SmartIcons bar.

**Troubleshooting**

If you cannot delete the chart, be sure you have the entire chart selected, and not just the chart plot. Click outside the plot area to select the entire chart.

---

{button ,AL('H\_LC\_DELETING\_CHART\_STEPS',1)} [Go to procedure](#)

## Deleting a chart

You can permanently remove a chart from a document.

1. Select the chart you want to delete.
2. Press DELETE.

**Tip** If Undo is available, you can immediately choose Edit - Undo to retrieve the deleted chart.

---

{button ,AL(`H\_LC\_DELETING\_CHART\_DETAILS';1)} [See details](#)

{button ,AL(`H\_LC\_MOVING\_CHART\_STEPS;H\_LC\_SIZING\_CHART\_STEPS;H\_LC\_COPYING\_CHART\_STEPS';0)} [See related topics](#)

**Details: Deleting chart data****Troubleshooting**

If Undo is available, choose Undo to retrieve the deleted chart data.

**Deleting linked data**

If you delete data in the source application and the chart is linked, the data in the chart will be updated.

**Hiding chart data**

An alternative to deleting data is to hide it. Hidden data does not appear in the chart, but can be easily redisplayed later. To hide a series, use the InfoBox. Choose Chart - Series, then click the Options tab. Select a series from the list and deselect the Show box. See [Hiding and showing chart data](#).

---

{button ,AL(`H\_LC\_DELETING\_SERIES\_FILE\_STEPS`,1)} [Go to procedure](#)

## Deleting chart data

You can permanently delete a series, pie, doughnut, or slice from a chart.

1. Select the data you want to delete.
2. Press DELETE.

**Note** Deleting linked or imported data on the chart does not delete the data in the original source.

---

{button ,AL(`H\_LC\_DELETING\_SERIES\_FILE\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_HIDE\_SHOW\_DATA\_STEPS;H\_LC\_HIDING\_COMPONENTS\_STEPS;',0)} [See related topics](#)

### Displaying row and column headers in a table or number grid

1. Select a number grid chart or a chart with a table.
2. Choose Chart - Table.
3. Click the Options tab.
4. Check "Show row headers" or "Show column headers."

**Tip** You can hide a row or column header and its data. Select the series name from the list at the bottom of the Options panel, then deselect "Show series in table."

---

{button ,AL(`H\_LC\_DISPLAYING\_SEPARATORS\_STEPS;`,0)} [See related topics](#)

## **Details: Displaying grid lines in a table or number grid**

### **Options**

- Show line in header. Displays lines in the header.
- Show line in data. Displays grid lines in the data portion of the table or number grid.

### **Changing the color and line style of grid lines**

When you click a line icon, the selection in the table or number grid changes to show you what is selected. You can then select a line color, line width, and line style. If the lines do not appear, be sure that the "Show line in header" or "Show line in data" box is checked.

---

{button ,AL('H\_LC\_DISPLAYING\_SEPARATORS\_STEPS',1)} [Go to procedure](#)

## Displaying grid lines in a table or number grid

1. Select a table or number grid chart.
2. Choose Chart - Table.
3. Click the Lines & Colors tab.



4. Under Line, click the icon that represents the lines you want to change.
5. Select a Color, Width, and Style for the selected lines.
6. (Optional) Check "Show line in header" and "Show line in data."

**Tip** If you want to display row and column headers, click the Options tab, then check the appropriate box.

---

{button ,AL('H\_LC\_DISPLAYING\_SEPARATORS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_DISPLAYING\_TABLE\_FRAME\_STEPS;H\_LC\_DISPLAY\_ROW\_COLUMN\_STEPS;',0)} [See related topics](#)



### Changing the look of a table or number grid

1. Select a chart.
2. Choose Chart - Table.
3. Click the Lines & Colors tab.



4. Under Interior, select Pattern, Pattern color, and Background.

**Tip** You can also change the grid line color using the Lines & Colors panel. See [Displaying grid lines in a table or number grid](#).

---

{button ,AL(`H\_LC\_DISPLAYING\_SEPARATORS\_STEPS;',0)} [See related topics](#)

## **Details: Displaying chart series labels**

### **Label placement**

You can control where the labels in each series appear.

- Vertical bar chart series labels appear above or below the bars.
- Horizontal bar chart series labels appear to the right of, or just inside the bar.
- Stacked bar chart series labels display only below the bars.
- 3D charts do not display series labels.

### **Changing the appearance of label text**

You can select the label text, then change its font, size, style and color. See [Changing text fonts, sizes, and colors in a chart](#).

---

{button ,AL('H\_LC\_DISPLAYING\_VALUES\_STEPS',1)} [Go to procedure](#)

## Displaying chart series labels

You can display the value, percent, or text labels for any series you select.

1. Select a chart.
2. Choose Chart - Series labels.
3. Click the Options tab.
4. Select a series from the box.
5. Do one or more of the following:
  - Select "Show value labels."
  - Select "Show percent labels."
  - In Freelance and Word Pro, select "Show text labels."  
In 1-2-3, select "Show labels from range." Then click the range selector and select a range.
  - Under Position, select a location.
  - Under Orientation, select a rotation.

**Tip** A pie or doughnut chart can also display slice labels. See [Displaying pie or doughnut slice labels](#).

---

{button ,AL('H\_LC\_DISPLAYING\_VALUES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ROTATING\_LABELS\_STEPS;',0)} [See related topics](#)

## **Details: Editing chart text**

### **Editing chart text using the InfoBox**

The tabs in the InfoBox change depending on the selection. To display the appropriate panel, select the name of the chart part under "Properties for," then click the tab to get to the panel you want:

- Chart title. Select Title, then click the Options tab.
- Legend text. Select Series, then click the Options tab.
- Axis titles. Select the X-axis, Y-axis, or Z-axis, then click the "Titles" tab.
- Note. Select Note, then click the Options tab.

---

{button ,AL('H\_LC\_EDITING\_TEXT\_STEPS',1)} [Go to procedure](#)

## Editing chart text

### Editing in place on the chart

1. Double-click the chart text you want to edit.
2. Do one of the following:
  - To replace all the selected text, start typing. The selected text disappears and the new text replaces it.
  - To edit part of the text, move the cursor to the point where you want to edit and click, then edit the text.

### Editing using the InfoBox

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select a chart part (Title, X-axis, Y-axis, Series, Note).
4. Click the Options or Titles tab to edit the text.

**Tip** To cancel your edits, press ESC or choose Edit - Undo.

---

{button ,AL('H\_LC\_EDITING\_TEXT\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_NOTE\_STEPS;H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;',0)} [See related topics](#)

**3D: Elevation**

Changes the angle of the chart elevation. Select an angle from 5 (eye-level) to 85 (looking down on the top of the chart.)

## Emphasizing a data point

You can select and change one area, bar, or grid line to emphasize a single data point.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Press CTRL and click the part of the chart you want to change.
4. Click the Lines & Colors tab.



5. Under Interior, select a pattern, pattern color, and background.

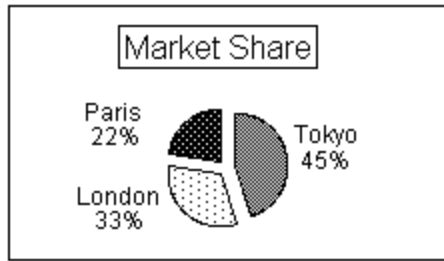
---

{button ,AL(`H\_LC\_SELECT\_OVER;'0)} [See related topics](#)

**Pie charts: Explode slices %**

Controls how far the pie slices are moved out from the center of a pie chart.

You can enter a value between 0 (slices are not exploded) and 100 (the pie slices are completely exploded.)





**Details: Exploding pie or doughnut slices****Exploding individual slices**

To move just one pie slice or doughnut slice, click the slice and drag it out from the center.

**Emphasizing slices**

Another way to make a slice of data stand out is to change the color or pattern of a slice. See [Changing slice color, fill, and line style](#).

---

{button ,AL('H\_LC\_EXPLODING\_PIE\_SLICES\_STEPS',1)} [Go to procedure](#)

## Exploding pie or doughnut slices

You can move out one slice or all slices from the center of a pie chart or doughnut chart.

### To explode one slice

1. Select a pie chart or doughnut chart.
2. Select a slice.
  - To select one slice in a single pie or doughnut chart, click the slice.
  - To select one slice in a multiple chart, press the CTRL key and click the slice.
3. Drag the slice away from the center of the chart.

### To explode or reassemble all the slices

1. Select a pie chart or doughnut chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under Explode slices %, enter a number from 100 (fully exploded) to 0 (slices not exploded).

---

{button ,AL('H\_LC\_EXPLODING\_PIE\_SLICES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_COMBINING\_SLICES\_STEPS;H\_LC\_3D\_PIES\_CHANGE\_STEPS;',0)} [See related topics](#)

## **Details: Entering data using Fill by Example**

### **Specifying a format**

You can use any of the following formats:

- January, February, March, etc.
- Jan, Feb, Mar, or JAN, FEB, MAR, etc.
- Sunday, Monday, Tuesday, or Sun, Mon, Tue, etc.
- Q1, Q2, Q3, Q4, or First Quarter, Second Quarter, Third Quarter, Fourth Quarter
- First, Second, Third, etc.
- 31-Dec-96
- 31-Dec
- Dec-96
- 31/12/96 or 12/31/96
- 31/12 or 12/31

### **Filling a selection using two cell values**

You can use the interval between two cell values to calculate the values for the selection. For example, if you enter 1 in the first cell, and 3 in the second cell, the remaining selected cells will be filled in as 5, 7, and 9. Negative numbers appear if the second number is smaller than the first.

---

{button ,AL('H\_LC\_FILL\_BY\_EX\_STEPS',1)} [Go to procedure](#)

## Entering data using Fill by Example

In Freelance Graphics and Word Pro, you can fill a selection based on one or two cell values.

1. Select a chart.
2. Choose Chart - Edit Data.
3. Click a cell to select it, then drag to select the other cells you want to fill.  
The values in the selection are based on the first or first two cell values. See [details](#).
4. Click Fill by Example.

---

{button ,AL(`H\_LC\_FILL\_BY\_EX\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_MODIFYING\_CHART\_DATA\_STEPS;H\_LC\_ADDING\_DATA\_TYPING\_STEPS;H\_LC\_LINKING\_DATA\_STEPS;H\_LC\_CREATING\_FROM\_CLIPBOARD\_STEPS;H\_LC\_EDITING\_TEXT\_STEPS;',0)} [See related topics](#)

**chart types**

Includes area, bar, high-low-close-open (HLCO), line, mixed, pie, radar, scatter (XY), and number grids.

**Bars: Gap %**

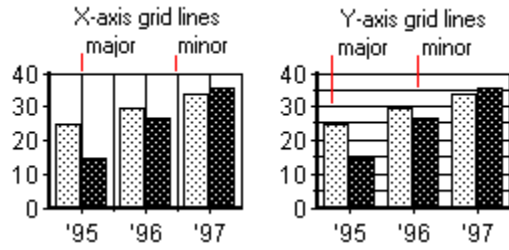
Controls the space between bars or clusters of bars in charts. Enter a value between 0% (no space between the series) and 100%, where the gap is equal to the width of the series.

### grid lines

Horizontal and vertical lines that span the plot area from any axis beginning at the tick marks.

- Major grid lines extend from the major tick marks.
- Minor grid lines appear between the major grid lines and extend from the minor tick marks.

You can display grid lines with or without the corresponding tick marks.



## Designing horizontal bar charts

Horizontal bar charts are best for comparing values at a single point in time. For effective horizontal bar charts:

- Emphasize a single bar by using a different fill pattern or color. See [Changing colors and patterns in a chart](#).
- Show a clearer relationship between data series by changing the space between bars or clusters of bars. See [Changing the spacing between series](#).
- Display data values beside the bars. See [Displaying chart series labels](#)
- Substitute symbols or pictures for your bars to create a visual link between a bar chart and your topic. See [Showing pictures instead of bars in a bar chart](#).
- Display values along the right edge of, or inside, bars to eliminate your viewer's visual trip to the scale. See [Displaying chart series labels](#).



### horizontal bar charts

Used to compare values at a single point in time. For example, use a horizontal bar chart to show:

- The return on investment for ten mutual funds in 1994
- The number of cars sold by color in 1990



## **Details: Hiding and showing chart data**

### **Showing hidden lines, grids, or borders**

To hide lines, such as grid lines or borders, change the line style to "None" on the Lines & Colors tab of the InfoBox. To redisplay a line, open the InfoBox, select the line part from the "Properties for" list, and select a line style and color on the Lines & Colors tab.

### **Troubleshooting**

If you do not see the "Show" box you expected, check to be sure that you have the correct chart data selected. To change the chart selection, click the part in the chart, or select it from the "Properties for" list in the InfoBox.

Undo. If the Edit - Undo command is available, you can use it to reverse the effect of the last action.

### **Using the chart data table to hide a series**

You can hide a series using the chart data table. To display the data table, choose Chart - Table and click the Options tab. Check the "Show data table" box. Select the series you want to hide from the drop-down list.

- To hide the series in the chart, deselect "Show series in chart."
- To hide the series in the table, deselect "Show series in table."

---

{button ,AL('H\_LC\_HIDE\_SHOW\_DATA\_STEPS',1)} [Go to procedure](#)

## Hiding and showing chart data

You can hide or show a series, a pie, a doughnut, or a slice. The data remains in the chart but does not display or print.

1. Select a chart.
2. Choose Chart - Series. (For a pie or doughnut chart, choose Chart - Slices.)
3. Click the Options tab.
4. From the drop-down list, select the series you want to hide or show.
5. Do one of the following:
  - To hide, deselect the "Show" box.
  - To show, select the "Show" box.

**Tip** The "Show" text varies depending on what is selected. For example, if you select a pie slice, the check box will read "Show slice."

---

{button ,AL(`H\_LC\_HIDE\_SHOW\_DATA\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_DELETING\_SERIES\_FILE\_STEPS;H\_LC\_ADDING\_DATA\_123\_STEPS;H\_LC\_ADDING\_DATA\_TYPING\_STEPS;',0)} [See related topics](#)

**Details: Hiding and showing parts of a chart****Selecting chart parts from the Properties for list**

To select a part, open the InfoBox (Chart - Chart Properties). Click the "Properties for" list that appears at the top of the InfoBox. Click the name of the chart part to select it.

**Repositioning parts of a chart**

You can easily reposition a chart title, legend, or note.

- To move using the mouse, click the title, legend, or note, and drag it to a new position.
- To move using the InfoBox, choose the chart part under Properties for (Title, Legend, or Note). Click the Options tab. Click one of the Position settings.

---

{button ,AL('H\_LC\_HIDING\_COMPONENTS\_STEPS',1)} [Go to procedure](#)

## Hiding and showing parts of a chart

Use the InfoBox to control which parts are hidden and which parts are displayed. Hidden chart parts do not display or print.

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select the chart part you want to hide or show.
4. Click the Options tab.
5. Do one of the following:
  - To hide, deselect the "Show" box.
  - To show, select the "Show" box.

**Tip** The "Show" text varies depending on what chart part is selected. For example, if you select the legend, the check box will read "Show legend."

---

{button ,AL(`H\_LC\_HIDING\_COMPONENTS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_DELETING\_CHART\_STEPS',0)} [See related topics](#)

## **Overview: Hiding, showing, and deleting in a chart**

### **Comparing hide and delete**

You can control which parts of a chart are displayed by hiding or deleting. Both methods alter the chart. Hiding is temporary. The hidden parts still exist, but they do not appear when the chart is printed or displayed. Deleting is permanent, though it can be immediately reversed if Undo is available.

### **Hiding and showing information in a chart**

Use the InfoBox to specify what parts appear on a chart. You can:

- Hide part of a chart. For example, you may choose not to show a title if you want more room for your data. You can also easily redisplay a hidden part, such as series labels or the legend. See [Hiding and showing parts of a chart](#).
- Hide data, such as a series, pie, or pie slice. You can emphasize more important data by hiding extraneous data. The original chart is not affected. By hiding rather than deleting, a single chart can be used for different purposes. See [Hiding and showing chart data](#).

### **Deleting information in a chart**

Deleting parts of a chart or chart data is a permanent method of altering a chart. Although deleted data no longer appears in the chart, the data is not deleted from the original source. See [Deleting chart data](#).

### **Designing High-Low-Close-Open (HLCO) charts**

Use High-Low-Close-Open (HLCO) charts, or "stock market charts," to track data that fluctuates over time.

- Use HLCO charts whenever you need to show three or four values per point.
- Use candlestick markers in an HLCO chart to make it easier to read.
- Use a fifth data series to show a volume bar chart underneath the HLCO chart.

**high-low-close-open (HLCO) charts**

Used to track data that fluctuates over time. Also called "stock market charts," HLCO charts are good for monitoring stock prices, commodities, air temperature, and currency rates. Examples include:

- The changes in a stock price over a 30-day period
- The daily temperature range in August for Juneau, Alaska





**horizontal chart**

Charts with a horizontal y-axis. In a horizontal chart, the usual orientation of the axes is rotated clockwise 90 degrees.

## **Working with charts**

You can get Help about working with charts. Do one of the following:

- Choose Help - Help Topics to open the Help Topics box.
- Click the Help button in a dialog box to get help for the dialog box.
- Click the question mark (?) in the upper-right corner of the InfoBox.
- Press F1.

To locate a topic in the Help Topics box, do one of the following:

- Click the Contents tab. Double-click the "How Do I?" book. Choose "Work with Charts."
- Click the Index tab. Type a topic or scroll through the list of topics. Click a topic, then click the Display button.

## Details: Using independent data for multiple pies and doughnuts

### Using independent data

With pies or doughnuts that have independent data, the slice labels are stored in every other column:

	<u>Sales</u>		<u>Expense</u> <u>s</u>
Phone sales	50	Magazine ads	10
Mailings	47	Seminars	15
Retail	20	Radio ads	12
		Mailings	14

This data would create two independent charts:

- The pie or doughnut "Sales" has three slices: Phone sales, Mailings, and Retail.
- The pie or doughnut "Expenses" has four slices: Magazine ads, Seminars, Radio ads, and Mailings.

Pies or doughnuts with independent data cannot be sorted based on the first or last chart. The only sorting options are Unsorted or Separately for each chart.

When you specify "Use independent data," the legend does not display.

### Adding labels and titles for multiple pies or doughnuts

In Freelance Graphics and WordPro, use the Edit Data window to add labels and titles. Choose Chart - Edit Data. Click the Data Labels tab, and enter the label text. Under Titles, enter title text. To display the labels, choose Chart - Pie Labels, click the Options tab, and check Show slice labels.

### Changing an individual slice

You can select one slice and then make changes to it. In a pie or doughnut chart using independent data, you can simply click the slice. (In a chart that does not use independent data, you must hold the CTRL key when you click the slice.) Use the Lines & Colors panel of the InfoBox to change colors and patterns of the selected slice.

Pies or doughnuts with independent data cannot be sorted based on the first or last chart. The only sorting options are Unsorted or Separately for each chart.

---

{button ,AL('H\_LC\_INDEPENDENT\_PIE\_DATA\_STEPS',1)} [Go to procedure](#)

## Using independent data for multiple pies and doughnuts

In a chart with multiple pies or doughnuts, you can use independent data for each pie or doughnut.

1. Select a chart with multiple pies or doughnuts.
2. Choose Chart - Pie.
3. Click the Data tab.
4. Check "Use independent data."

---

{button ,AL('H\_LC\_INDEPENDENT\_PIE\_DATA\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_PIE\_LABELS\_STEPS;',0)} [See related topics](#)

**InfoBox**

A modeless dialog box used to specify attributes and settings.

- You can leave the InfoBox open when working with a chart.
- When you make a chart selection, the InfoBox displays the appropriate settings for that part.
- When you change a setting, the chart updates immediately.
- For help on a panel, click the question mark in the upper corner of the InfoBox.

### **Setting lines within a plot frame**

In a two-dimensional line chart, you can specify whether the lines touch the axis or are inset from it.

1. Select a 2D line chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Do one of the following:
  - Select "Inset lines from plot frame" to set the lines in from the axis.
  - Deselect "Inset lines from plot frame" to have the lines touch the axis.

**Details: Labeling radar chart axes**

When you want to change the display of the radar axes, choose Chart - Axes & Grids to open the InfoBox to the appropriate tabs. Click the tab that corresponds to the part of the axes that you want to modify.

**Using independent axes**

You can specify independent axes for radar charts using the InfoBox. Choose Chart - Axes & Grids to open the InfoBox. Click the Ticks, Labels, or Scale tab, then select "Make axes independent." A drop-down list of the axes appears. Once you select an axis, you can:

- Display tick marks (Ticks tab)
- Show labels at a specified interval (Labels tab)
- Manually set the scale (Scale tab)

---

{button ,AL('H\_LC\_LABEL\_RADAR\_AXES\_STEPS',1)} [Go to procedure](#)

## Labeling radar chart axes

### To display axes titles

1. Select a radar chart.
2. Choose Chart - Axes & Grids.
3. Under Properties for, choose Axes Titles.
4. Click the Labels tab.
5. Select "Show labels every n ticks," and enter a number.
6. (Optional) Under Character limit, enter a number.

### To edit axes titles

- In 1-2-3, edit the text in the range. To change the range associated with the axes titles, use the range selector.
- In Freelance Graphics and Word Pro, double-click the text and edit it, or open the Edit Data dialog box (Chart - Edit Data) and edit the Axis Titles text.

---

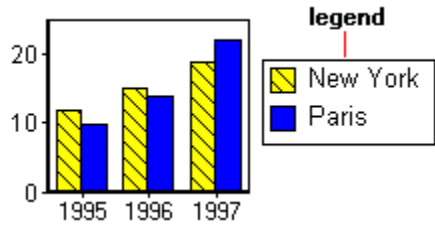
{button ,AL('H\_LC\_LABEL\_RADAR\_AXES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_SCALING\_RADAR\_AXES\_STEPS',0)} [See related topics](#)



**legend**

A box containing symbols and text explaining what each data series represents. Each symbol is a color, pattern, or marker that corresponds to one data series in the chart.

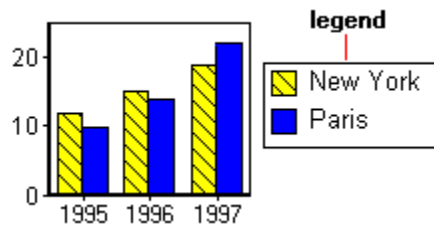


**legend label**

Text that describes one item (a slice of a pie chart or a series of any other chart type) of a legend.

## Overview: Chart legend

The legend identifies each series.



You can:

- Hide or display the legend. See [Hiding and showing parts of a chart](#).
- Edit the text. See [Editing chart text](#).
- Change the line around the legend. See [Changing line styles in a chart](#).
- [Modify the appearance of legend text](#). See [Changing text font, sizes, and colors](#).
- Change the color and pattern within the border. See [Changing colors and patterns in a chart](#).
- Reposition the legend. See [Moving a chart part](#).

**3D: Lighting**

Changes the apparent direction of the light source in 3D area, line, bar, and mixed charts.

## Designing line charts

Line charts trace the changes in sets of data over time. Line charts are the best choice when there are a lot of data points. For effective line charts:

- Use three or fewer lines in a chart, especially if the lines cross. For more data sets, break the data into two charts on the same page.
- Make lines thicker than axes, and axes thicker than grid lines. See [Changing line styles in a chart](#).
- Vary line styles and widths to differentiate lines, especially if you are using black-and-white, or want a single line to stand out.
- Use dashed or dotted lines to denote projected data or estimates.
- Use markers if you want to stress individual points, but be aware that markers can look cluttered.
- In a 3D line chart, increasing the gaps between the rows will make each series easier to distinguish. See [Changing the spacing between series](#) .

**line chart**

Traces the changes in sets of data over time. Each data point represents a value at a particular time period or moment in time. Each line represents a category of data. Line charts are often the best choice for time-series data, especially when you have a lot of data points.

For example, use a line chart to show:

- Daily sales over two months
- Average salaries for engineers compared to average salaries for other professionals, charted by age



## Details: Linking chart data to a range

### Linking chart parts

You can link the following chart parts to a range in a worksheet:

- [Chart title](#)
- [Axis titles and subtitles](#)
- [Series labels](#)
- [Pie slice labels](#)
- [Legend](#)
- [Pie title](#)

### Turning off links

To turn off the link, deselect the Link box for the chart part. The data is then copied to the Edit Data window. You can view and modify the data using the Edit Data window or in the chart. You cannot type a value for a chart part when the Link box is selected for that part.

---

{button ,AL('H\_LC\_LINKING\_DATA\_STEPS',1)} [Go to procedure](#)

## Linking chart data to a range

In Freelance Graphics and Word Pro, you can link parts of a chart to data in an external file. When the file changes, the linked part updates automatically.

1. Select a chart.
2. Choose Chart - Import Data.
3. In the Open dialog box, enter the name of the file containing the data, then click OK.
4. Do one of the following:
  - To assign ranges for chart parts or individual series, click the Individual button (at the bottom) to display the Edit Individual Links dialog box.
  - To assign ranges for a group, use the Edit Links dialog box.
5. Do one of the following:
  - In the Edit Individual Links dialog box, choose the chart part, select the cells, then click Apply.
  - In the Edit Links dialog box, select the cells then apply the selection by clicking the Title, Legend, X-axis Labels, or Data button.

**Note** When you're importing series for an XY (scatter) chart in the Edit Links dialog box, select all the x- and y-axes data, then click the Data button.
6. (Optional) Select "Keep file links."
7. Click OK.

---

{button ,AL('H\_LC\_LINKING\_DATA\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_LINKING\_TEXT\_STEPS;',0)} [See related topics](#)



### **Details: Linking chart text to a range**

#### **Breaking links**

In a linked chart, editing the linked text breaks the link. To break a link, double-click the linked text directly in the chart and type a new value. You can then choose whether you want to abandon changes, delete only the affected links, or delete all links.

---

{button ,AL('H\_LC\_LINKING\_TEXT\_STEPS',1)} [Go to procedure](#)

## Linking chart text to a range

In Freelance Graphics and Word Pro, you can link chart text to a range in a worksheet or file.

1. Select a chart.
2. Choose Chart - Import Data.
3. Click "Individual" to display the Edit Individual Links dialog box.
4. Select the chart part you want to link.
5. Select the range of cells in the worksheet.
6. Click Apply.
7. Click OK to return to the Edit Data dialog box.
8. Click OK.

**Tip** Select "Keep file links" if you want to create a link.

---

{button ,AL('H\_LC\_LINKING\_TEXT\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_EDITING\_TEXT\_STEPS;H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;',0)} [See related topics](#)

**chart link**

A reference to data stored in a worksheet or file. You use a link to read data from a worksheet or file directly into your chart, without re-entering values when they change. Links will update the chart when the data changes.

**chart markers**

Symbol representing each value in the data series for a line, mixed, and scatter (XY) chart.

To change the symbol or color for a marker, select the series and go to the Lines & Colors panel of the InfoBox.

To display the marker, be sure the Marker box is checked.

## **Designing mixed charts**

Mixed charts combine parts from a line chart, a bar chart, or an area chart to show a comparison between two different types of data. For effective mixed charts:

- Show the different series on different y-axes. See [Plotting a series against a 2nd y-axis](#).
- Make the series with the largest values into an area, as that series will appear behind the other series. See [Changing the type of a series](#).
- When using areas and bars, make the bars narrow by increasing the gap between the bars, so that you can see the area displayed behind the bars. See [Changing the space between bars](#).

**mixed charts**

Chart created by combining parts from a line chart, bar chart, or area chart. You can plot data in two or three forms on the same chart. In a mixed chart, each series can be shown by using lines, areas, or bars.

For example, use a mixed chart to show the relationship between revenues, expenses, and profits over a five-year period. You can plot profits and expenses as bars, and revenues as a line.

## **Details: Modifying typed or copied chart data**

### **Using the Edit Data window**

You can use the Edit Data window (Chart - Edit Data) to modify the data, the legend, and the axis labels.

### **Editing titles**

There are two ways of entering and editing text for the chart title, axis titles, and chart note.

- InfoBox. Choose Chart - Chart Properties to open the InfoBox. Under "Properties for," select the part you want to edit. Click the Options tab. Enter the text in the Options panel.
- Edit Data dialog box. Choose Chart - Edit Data, then click the Titles tab. Enter the chart title, note, or axis title.

The title and note can each contain up to three lines of text. Axis titles are one line. Enter a title for the 2nd y-axis if you expect to plot one or more series on that axis. See [Plotting a series against a 2nd y-axis](#).

---

{button ,AL('H\_LC\_MODIFYING\_CHART\_DATA\_STEPS',1)} [Go to procedure](#)

### **Modifying typed or copied chart data**

In Freelance Graphics and Word Pro, you can change manually entered data using the Edit Data window.

1. Select the chart.
2. Choose Chart - Edit data.
3. Edit the values in the Edit Data window.
4. (Optional) Click Titles, and change the titles and note.
5. Click OK.

**Tip** If you imported the data for your chart, you can modify the ranges used to create the chart.



### Changing the shape of a radar chart plot

By default, radar charts use a circular boundary for the plot. You can change the boundary to a polygonal shape, with one corner of the polygon at each axis.

1. Select a radar chart.
2. Choose Chart - Plot.
3. Click the Options tab.
4. Select "Use polygonal plot boundary."

---

{button ,AL(`H\_LC\_CHANGING\_PLOT\_LOOK\_STEPS;H\_LC\_SCALING\_RADAR\_AXES\_STEPS;`,`0`)} [See related topics](#)

## Moving a chart part

You can move a chart legend, title, note, slice, or plot.

1. Select a chart.
2. Select the chart part you want to move.
3. Drag the selected part to the new location, then release the mouse button.

**Tip** You can also move a legend, title, or note using the Position buttons in the InfoBox. Open the InfoBox, select the part you want to move, and click the Options tab. Under Position, click the button that corresponds to the new position. For a legend, you can specify whether it should be inside or outside the plot area.

---

{button ,AL('H\_LC\_SIZING\_CHART\_STEPS;H\_LC\_SELECTING\_INFOBOX\_STEPS;H\_LC\_SELECTING\_MOUSE\_STEPS;',0)} [See related topics](#)

## **Details: Adding text labels to a chart using the Edit Data window**

### **Displaying text labels**

Use the InfoBox to control whether the text labels appear on the chart. Select a chart and choose Chart - Series Labels. On the Options tab, select a series, then select "Show text labels." To hide the text labels, deselect "Show text labels."

### **Getting a better fit**

You can make text labels fit better by changing the orientation. Double-click a series label to select it, then select the angle from "Orientation" on the InfoBox.

Changing the font size can also improve legibility. See [Changing text fonts, size, and colors in a chart.](#)

---

{button ,AL(`H\_LC\_NEWTEXTLABELS\_STEPS',1)} [Go to procedure](#)

### **Adding text labels to a chart using the Edit Data window**

In Freelance Graphics and Word Pro, you can create text labels for series using the Edit Data window.

1. Select a chart.
2. Choose Chart - Edit Data.
3. Click the Text Labels tab.
4. Enter the label text for each series.

---

{button ,AL('H\_LC\_NEWTEXTLABELS\_DETAILS',1)} [See details](#)

## **Adding titles to a chart using the Edit Data window**

In Freelance Graphics and Word Pro, you can add a chart title, note, and axis titles using the Edit Data window.

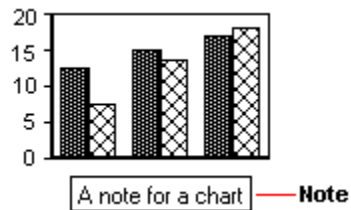
1. Select a chart.
2. Choose Chart - Edit Data.
3. Click the Titles tab.
4. Under Chart Title, enter up to three lines of text.
5. Under Note, enter up to three lines of text.
6. Under Axis Titles, enter text.
7. Click OK.

---

{button ,AL('H\_LC\_ADDING\_TITLE\_STEPS;H\_LC\_CHANGING\_TEXT\_COLORS\_FONT\_STEPS;','0)} [See related topics](#)

## Overview: A note in a chart

When you want to provide extra information in a chart, add a note. The note appears in a separate, moveable box within the chart.

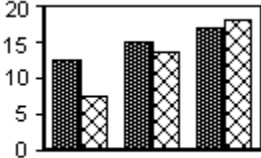


A note can be useful to explain unusual data results or to provide more information about how data was collected. To use a note in a chart:

- Create a note. There is a limit of one note in a chart. The note can contain up to three lines of text. See [Adding a note to a chart](#).
- Edit the text. See [Editing chart text](#).
- Change the appearance of the text. See [Changing text font, sizes, and colors](#).
- Hide the note. This allows you to provide a comment about the chart, but not display it. See [Hiding and showing parts of a chart](#).

**chart note**

One to three lines of descriptive text you can add to a chart. You can use a note to describe or emphasize data in a chart.



A note for a chart — **Note**

**Data: Format type**

Changes how numbers are displayed. You can set up to 15 decimal places. Format types include:

- General. Uses standard number formats. Decimal places cannot be set.
- Currency. Provides several currency options.
- ISO currency.
- Comma. Adds commas as separators.
- Fixed. Lets you set fixed-width values.
- Scientific. Lets you set scientific notation.
- Percent. Lets you set the percent label.
- Date. Provides several date options.
- Time. Provides several time options.



## **Designing chart tables**

A chart table contains the data values. To display a table of numeric data, use a number grid chart. To display a table of values below another chart, use a data table.

- Use a data table when you want to present the actual values for the chart. See [Adding a table below a chart](#).
- Use a font size that is large enough to be legible. See [Changing text fonts, sizes, and colors in a chart](#).
- Grid lines can add clarity to a chart containing many rows or columns of data. For charts with less dense data, consider omitting the grid lines. See [Displaying grid lines in a table or number grid](#).
- Show the total values of each row or column when you want to summarize the data. See [Calculating totals in a number grid](#).

**number grids**

A table of actual data values rather than a graphical representation. Number grids can show text values as well as numeric values.

**Bars: Overlap %**

Controls the amount of overlap of bars within the same cluster. Overlap is a percentage of the bar width. You can set the overlap for any value from 0 (no overlap) to 100 (overlap bars completely).

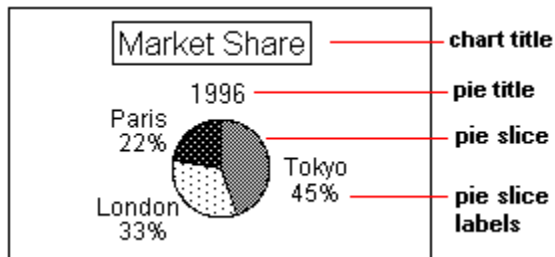
The overlap % is available only for bars that are clustered or not stacked.

**percent chart**

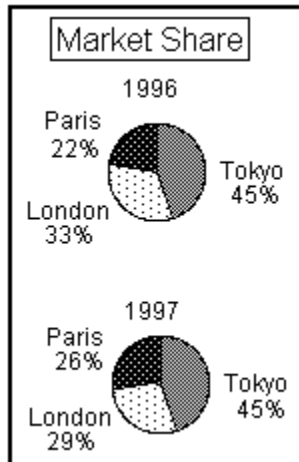
Displays values in each data range as a percentage of the sum (100%) of all the values. Percent charts include pie charts and 100% stacked bar charts.

## Overview: Pie and doughnut charts

Pie charts and doughnut charts show data for each series in a separate pie or doughnut. Each slice represents a data value.



Each pie or doughnut represents 100% of the values for the series. A single chart has one pie or doughnut, and shows the data for one series. A multiple pie or doughnut chart shows a separate pie or doughnut for each series.



The data in multiple pie and doughnut charts can be synchronized or independent:

- For synchronized data, the slices in each pie or doughnut represent the same types of values. For example, if you are tracking sales figures for products over three years, the same color slice in each pie would show the sales for each product sold.
- For independent data, each series produces a separate pie or doughnut. For example, you could use one chart to show profits and one to show expenses. See [Using independent data for multiple pie and doughnut charts](#).

### Changes you can make to pie and doughnut charts

In pie and doughnut charts, you can:

- Change the direction of the slices. See [Changing the start angle and direction for pie and doughnut charts](#).
- Change the layout and scaling of multiple pies. See [Changing the layout of multiple pie and doughnut charts](#).
- Change the look of 3D effects. See [Changing 3D for pie and doughnut charts](#).

For individual pie and doughnut slices, you can:

- Combine and sort the slices. See [Combining slices](#) and [Sorting slices by size](#).
- Change the color or line style of a slice. See [Changing slice color, line style, and fill](#).
- Move a slice away from the center of the pie or doughnut. See [Exploding slices](#).

## Designing pie and doughnut charts

Pie charts and doughnut charts show the relationship of parts to the whole.

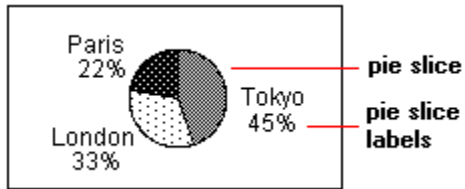
- Use six or fewer slices. Eliminate or combine remaining small slices. See [Combining pie and doughnut slices](#).
- Put the most important slice in the upper-right quadrant, or arrange slices in order from largest to smallest. See [Sorting pie or doughnut slices by size](#).
- Emphasize a slice by exploding it, or explode all the slices for a dramatic visual effect. See [Exploding pie or doughnut slices](#).
- Display percent values next to slices when specific data is important. See [Displaying pie and doughnut slices labels](#).
- Change the color or pattern of a specific slice to call attention to it. See [Changing colors and patterns in a chart](#).
- Show pie titles and totals to help explain the contents of your chart. See [Showing pie and doughnut titles and totals](#).

Multiple pie and doughnut charts compare separate charts to each other. For multiple pie and doughnut charts:

- Scale the charts by height or area to emphasize charts representing larger amounts of data. See [Changing the scaling of multiple pie and doughnut charts](#).
- If you have more than two pie or doughnut charts, arrange the charts so that they fall in different rows. See [Changing the layout of multiple pie and doughnut charts](#).
- If the slices in the different pies or doughnuts represent different types of data, use different slice labels for each. See [Using independent data for multiple pies and doughnuts](#).

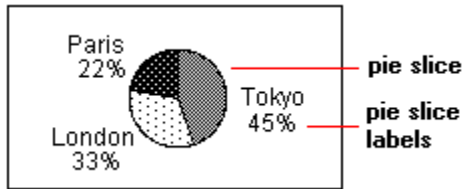
### pie slices

Wedges in a pie chart that represent each data value in the series shown by the pie chart. A pie chart can display up to 40 slices. A single slice can be used to represent a collection of all the small values.



### pie slice labels

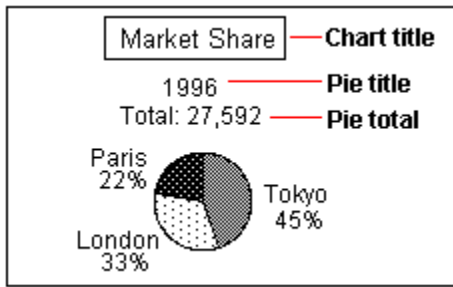
Labels that identify each slice in a pie chart. You can assign labels that are the actual values in the data series, the percentage of the whole that each slice represents, or descriptive text from the legend.





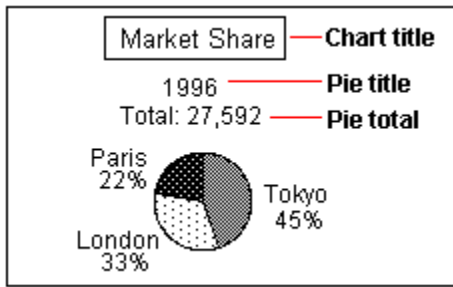
**pie title**

Descriptive text that explains the contents of a pie chart.



**pie totals**

The total value represented by the pie.



**Details: Showing pie and doughnut titles and totals**

You can create a title for each pie or doughnut. If you are using the Edit Data window, click the Titles tab and enter the title. See [Adding titles to a chart](#).

**Changing the appearance of text**

You can change the font, color, and style of the title and total using the Text format panel of the InfoBox. Select the title or total, click the Text format tab, and change the options.

---

{button ,AL('H\_LC\_PIE\_TOTALS\_STEPS',1)} [Go to procedure](#)

### Showing pie and doughnut titles and totals

1. Select a pie or doughnut chart.
2. Choose Chart - Pie Titles or Chart - Doughnut Titles.
3. Click the Options tab.
4. Check Show title and Show total.
5. Under "Position," select Above chart or Below chart.

**Tip** You can edit the title by double-clicking the text and entering new text.

---

{button ,AL('H\_LC\_PIE\_TOTALS\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_PIE\_LABELS\_STEPS',0)} [See related topics](#)

**pie chart**

Chart showing the relationship of parts to the whole. Each slice of the pie represents a data value. The size of the slice corresponds to the percentage of the total that it represents.

A pie chart displays each series in a separate pie, with each value in the series representing a different slice. Pie charts can display up to 40 slices per pie.

Use a pie chart when you want to compare five or six values in a single data series to the total.

For example, use a pie chart to show:

- Sales of five different car models made in a given year



**3D: Platform**

Changes the height of the platform area beneath a 3D chart.

**Details: Plotting a series against a 2nd y-axis****Plotting the series against the first y-axis**

You can change which axis the series is plotted against. Choose Chart - Series, and click the Options tab. Select the series from the pull down list, and uncheck "Plot against 2nd Y-axis." If this is the only series plotted on that axis, deselecting "Plot against 2nd Y-axis" removes the 2nd y-axis from the chart.

**Using a 2nd y-axis with an HLCO chart**

You cannot add a 2nd y-axis to a high-low-close-open chart because the 2nd y-axis is reserved for the fifth data values (the volume data).

---

{button ,AL('H\_LC\_PLOTTING\_SERIES\_ON\_2Y\_STEPS',1)} [Go to procedure](#)

## Plotting a series against a 2nd y-axis

A 2nd y-axis uses a separate scale to plot the selected series.

1. Select a chart.
2. Choose Chart - Series.
3. Click the Options tab.
4. Select a series from the box.

This series will be plotted against the 2nd y-axis.

5. Select "Plot against 2nd Y-axis."

**Tip** To change the scaling on the 2nd y-axis, click the axis to select it, then click the Scale tab in the InfoBox. Under Scale manually, enter new scaling values.

---

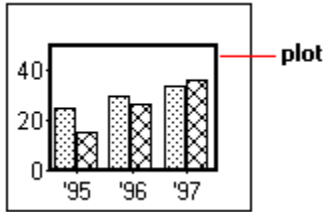
{button ,AL('H\_LC\_PLOTTING\_SERIES\_ON\_2Y\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_AXIS\_SCALE\_STEPS;',0)} [See related topics](#)



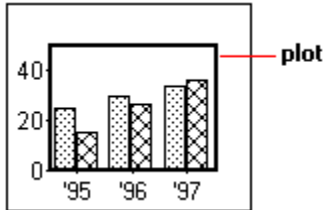
### chart plot

Area bounded by the axes, where data is plotted on a chart. By default, the plot contains the bars, lines, or areas in a chart. You can change the color, fill pattern, and frame of a plot.



## Overview: Chart plot

The plot is the area in the chart that surrounds the data. The plot does not include other text, such as the title, axis labels, or a note. All chart types have a plot, except pie charts and doughnut charts.



There are several ways to select the plot:

- Click the plot border.
- Click within the plot border (without clicking any other chart part).
- Select it from the "Properties of" list in the InfoBox (Chart - Chart Properties).

### Once the plot is selected, you can:

- Change the color and pattern of the plot. See [Changing the look of the plot.](#)
- Move the plot. See [Moving a chart part.](#)
- Resize the plot. See [Resizing a chart or chart part.](#)

### **Adding a picture to a chart plot**

You can fill the background area of a chart plot with a single picture.

1. Create or find the picture you want to use, and copy it to the Clipboard.
2. Select a chart.
3. Choose Chart - Plot.
4. Click the Options tab.
5. Select "Paste Picture."

### **Positioning the chart title, note, and legend**

1. Select a chart.
2. Choose Chart - Chart Properties.
3. Click the Layout tab.
4. Check the Show box for each part you want to display.
5. Under Position, select a location for the title, note, or legend.
6. (Optional) Select "Place legend inside plot."

## **Setting axis titles and ticks in charts**

Use the Titles, Ticks and Labels panels with the selected x-axis, y-axis, or z-axis.

### **Choose a task**

[Adding axis titles and subtitles](#)

[Changing the axis scale](#)

[Displaying axis labels](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

## **Setting axes scale properties for charts**

Use the Scale panel to change the scale of the selected axis.

### **Choose a task**

[Changing the axis scale](#)

[Changing the intersection of the axes](#)

[Using the InfoBox with charts](#)

## **Setting 3D properties for charts**

Use the 3D panel to change the look of 3D settings in a chart.

### **Choose a task**

[Rotating 3D charts](#)

[Changing 3D for pie and doughnut charts](#)

[Using the InfoBox with charts](#)

## **Setting data properties for charts**

Use this panel to change how data is parsed.

### **Choose a task**

[Changing how chart data is assigned](#)

[Using the InfoBox with charts](#)



## **Setting grid properties in charts**

Use the Grids panel to set the grid lines for x-axis, y-axis, and z-axis of a chart.

### **Choose a task**

[Adding grid lines and tick marks](#)

[Using the InfoBox with charts](#)

## Setting layout properties for chart series

Use the Layout panel to modify how series appear in the plot. The Layout panel changes to reflect the current selection.

### Choose a task

[Changing the spacing between series](#)

[Adding connecting lines to a stacked bar chart](#)

[Assigning series in an XY \(scatter\) chart](#)

[Stacking and overlapping chart series](#)

[Setting lines within a plot frame](#)

[Using the InfoBox with charts](#)

### **Setting range properties for charts**

Use the Ranges panel to assign ranges to the parts of a chart.

Click the Options button to assign series by row or by column.

### **Choose a task**

[Assigning chart parts to ranges in 1-2-3](#)

[Changing how chart data is assigned](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

## **Setting chart types**

Use the Type panel to change the chart type, and to specify whether it is a 2D, 3D, or "with depth" chart.

### **Choose a task**

[Changing to a different chart type](#)

[Using the InfoBox with charts](#)

## **Setting text properties for charts**

Use the Text panel to change the Font name, size, and style for any selected chart text.

### **Choose a task**

[Changing text fonts, sizes, and colors](#)

[Using the InfoBox with charts](#)

**Setting title, note, and legend layout properties**

Use the Layout panel to control the display and position of the chart title, note, legend.

To return the plot to its original size and location, select "Restore plot size."

**Choose a task**

[Positioning the chart title, note, and legend](#)

[Using the InfoBox with charts](#)

## **Setting legend properties in charts**

Use the Options panel to hide, show, or reposition the chart legend.

### **Choose a task**

[Hiding and showing parts of a chart](#)

[Selecting chart parts using the InfoBox](#)

[Using the InfoBox with charts](#)

## **Setting lines and colors properties in charts**

Use the Lines & Fill panel to change the line, color, and fill of the chart part you select, such as a series, title, and legend.

### **Choose a task**

[Changing line styles in a chart](#)

[Changing colors and patterns in a chart](#)

[Using the InfoBox with charts](#)



### **Setting options for a note in charts**

Use the Options panel to create, display, or reposition a note of explanatory text for the chart. In an XY (scatter) chart, you can display regression line information as a note.

#### **Choose a task**

[Adding a note to a chart](#)

[Editing chart text](#)

[Using the range selector in 1-2-3](#)

[Adding a trend line to a chart](#)

## **Setting number properties for charts**

Use the Number Format panel to change the style of numbers in series, slice labels, and pie totals that you select.

### **Choose a task**

[Changing numeric formats](#)

[Using the InfoBox with charts](#)

## **Setting slice properties for pie and doughnut charts**

Use the Layout panel to explode pie or doughnut slices, change the slice direction and start angle, and sort the slices by size.

### **Choose a task**

[Exploding pie slices](#)

[Changing the start angle and direction for pie charts](#)

[Sorting pie slices by size](#)

[Combining pie slices](#)

[Using the InfoBox with charts](#)

### **Setting layout properties for pie and doughnut charts**

Use the Options panel to hide or show, or to reposition the value labels, percent labels, or slice labels when you have Pie Slices or Doughnut Slices selected.

#### **Choose a task**

[Displaying pie and doughnut slice labels](#)

[Using the InfoBox with charts](#)

### **Setting properties for pie or doughnut chart data**

Use the Data panel to combine small pie slices or doughnut slices into one labeled slice. For multiple pies or doughnuts, you can specify whether each uses independent data.

#### **Choose a task**

[Combining pie and doughnut slices](#)

[Using independent data for multiple pies and doughnuts](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

## **Setting layout properties for pie and doughnut chart slices**

Use the Layout panel to explode pie or doughnut slices, change the slice direction and start angle, and sort the slices by size.

### **Choose a task**

[Exploding pie and doughnut slices](#)

[Changing the start angle and direction for pie and doughnut charts](#)

[Sorting pie or doughnut slices by size](#)

[Combining pie and doughnut slices](#)

[Using the InfoBox with charts](#)

### **Setting platform settings for charts**

Use the Plot Section of the Lines & Colors tab to select and modify the platform area for a 3D chart.

#### **Choose a task**

[Changing the 3D platform](#)

[Using the InfoBox with charts](#)

## **Setting options properties for chart plot**

Use the Options panel to restore the chart to its original layout, and to add a picture to the plot background.

### **Choose a task**

[Restoring the default plot layout](#)

[Adding a picture to a chart plot](#)

[Changing the look of a chart plot](#)

[Using the InfoBox with charts](#)



## **Setting properties for chart series**

Use the Options panel to change the settings for the selected series. The options vary depending on the chart type you have selected.

### **Choose a task**

[Hiding and showing parts of a chart](#)

[Plotting a series against a 2nd y-axis](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

### **Setting picture properties for charts**

Use the Pictures panel to add pictures, remove pictures, and change the picture size when you have a bar series selected.

#### **Choose a task**

[Showing pictures instead of bars in a bar chart](#)

[Using the InfoBox with charts](#)

## **Setting series trend properties in charts**

Use the Series trend panel to add or change a trend line for the selected scatter (X,Y) plot series.

### **Choose a task**

[Adding a trend line to a chart](#)

[Using the InfoBox with charts](#)

## **Setting properties for series labels in charts**

Use the Options panel to display or reposition the value, percent, or text labels for the selected series.

### **Choose a task**

[Displaying chart series labels](#)

[Rotating chart series labels](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

## **Setting table properties for charts**

Use the Options panel to display the data table under the chart, and to change the table settings.

### **Choose a task**

[Adding a table below a chart](#)

[Displaying row and column headers in a table or number grid](#)

[Using the InfoBox with charts](#)

## **Setting title properties for charts**

Use the Options panel to enter title text, hide or show a title, or reposition the title when it is selected.

### **Choose a task**

[Adding titles to a chart](#)

[Editing chart text](#)

[Moving a chart part](#)

[Using the range selector in 1-2-3](#)

[Using the InfoBox with charts](#)

## Designing radar charts

Radar charts compare data series consisting of several different variables.

- Use 3 or fewer lines per chart, especially if the lines cross. If you have more data sets, break your data into two charts on the same page.
- Make lines thicker than axes and axes thicker than grid lines. See [Changing line styles in a chart](#).
- Vary line styles and widths to differentiate lines, especially if you are using black and white or want to emphasize a single line among several. See [Changing line styles in a chart](#).
- Use dashed or dotted lines to denote projected data or estimates. See [Changing line styles in a chart](#).
- Use markers if you want to stress individual points, but be aware that they add clutter. See [Changing markers in a chart](#).
- Change the axis scales to exaggerate differences between data series. See [Scaling and arranging radar chart axes](#).
- Change the style of one or more series from line to area, to differentiate the series in your radar chart. See [Changing to a mixed chart type](#).

### **Assigning chart parts to ranges in 1-2-3**

You can assign or modify the range that is associated with a chart part.

1. Select a chart.
2. Choose Chart - Ranges.
3. Under Parts, select a chart part.
4. Under Subparts, select a subpart, such as an individual series or "All series."
5. To assign or modify the range, click the range selector.  
The InfoBox closes and the cursor changes shape.
6. Select a new range.  
The InfoBox reappears and the chart is redrawn using the new range assignments.



**Details: Sorting pie or doughnut slices by size****Other sorting changes**

You can change the direction in which the pie or doughnut slices are sorted. Under Slice direction, choose clockwise or counterclockwise. You can also choose the angle at which the sorting starts. Under Start angle, enter a value between 0 and 360.

---

{button ,AL('H\_LC\_REARRANGING\_SLICES\_STEPS',1)} [Go to procedure](#)

### **Sorting pie or doughnut slices by size**

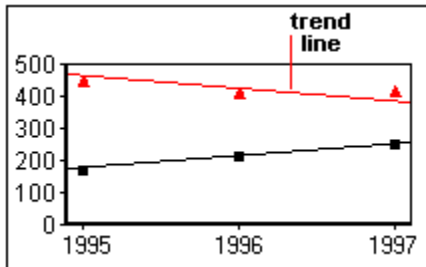
1. Select a pie chart or doughnut chart.
  2. Choose Chart - Pie or Chart - Doughnut.
  3. Click the Data tab.
  4. Do one of the following:
    - For a single pie or doughnut, check "Sort slices by size."
    - For multiple pie charts or doughnut charts, under "Sort slices by size" select a sorting option.
- 

{button ,AL('H\_LC\_REARRANGING\_SLICES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_MULTI\_PIE\_LAYOUT\_STEPS;H\_LC\_CHANGING\_PIE\_START\_ANGLE\_STEPS;',0)} [See related topics](#)

## Overview: Series trend lines

A trend line, also called a regression line, is a line associated with a data series that shows the general trend of the series.



In a chart, you can:

- Add a trend line to any series in a scatter (XY) chart that contain markers. See [Adding a trend line to a chart](#).
- Control which values will be included in the trend line, thereby excluding outlying data from the analysis. See [Specifying the values to calculate in a trend line](#).
- Specify where you want to display the line. See [Specifying where to display a trend line](#).
- Optionally display information about the analysis, such as y-intercept, slope, and R-square in the chart note. See [Adding a note to a chart](#).

Once the line is part of the chart, you can modify it by changing its color or line style. The line and series color are always the same. See [Changing line styles in a chart](#).

## **Overview: Resizing, moving, and copying a chart**

You can resize, move, and copy a chart.

### **Resizing**

Some resizing happens automatically, for instance, when you add a table below a chart or add pies to a multiple pie chart. But you can also make the chart the size you want. See [Resizing a chart or chart part](#).

### **Moving**

In a chart, you can:

- Move the entire chart by clicking it and then dragging it to a new location.
- Move the title, legend, note, or plot within the chart. See [Moving a chart part](#).

### **Copying**

You can copy a chart from one application and paste it in another. You can also copy a chart from one page to another within the same application. See [Copying a chart between applications](#).

### **Restoring the default plot layout**

You can return the plot to its original position and size.

1. Select a chart.
2. Choose Chart - Plot.
3. Click the Options tab.
4. Under Plot position and size, select "Default settings."

## Rotating chart series labels

Rotating series labels make labels more legible when the labels contain a lot of text or are close together.

1. Select a chart.
2. Choose Chart - Series labels.
3. Click the Options tab.
4. Select a series from the list.
5. Select the "Show" box for the labels you want to display.
6. Under Orientation, select a rotation.

---

{button ,AL(^H\_LC\_CHANGING\_PIE\_LABELS\_STEPS;H\_LC\_CHANGING\_ORIENTATION\_STEPS;H\_LC\_EDITING\_TEXT\_STEPS;!,0)} [See related topics](#)

**3D: Rotation**

Rotates a 3D chart clockwise by degrees, changing the perspective from which you view the chart. Enter a value between 5 and 85.

**Bars: Row gap%**

Controls the space between rows of series in a 3D bar chart or a bar chart with depth.

You can specify a row gap between 0 (no gap between the series) and 100 (gap is equal to the width of the series).



**Trend lines: R-squared**

A measure of the amount of variability in the data that is captured by the trend line. High values of R-squared indicate that the trend line tracks the data closely.

**Scale: Type**

Sets the scale for the axis.

- Linear. Numbers increase or decrease by a fixed number of units for a fixed interval.
- Log. Numbers increase or decrease logarithmically. Numbers must be greater than zero (only positive numbers are displayed).
- 100%. Numbers range from 0 to 100% (a percent scale).

**Scale: Direction**

The direction settings for the axis scale are:

- Ascending. Displays values on the axis from lowest to highest.
- Descending. Displays values on the axis from highest to lowest.

**Scale manually: Major ticks**

Sets the interval between major tick marks on an axis. To use the default setting, deselect the box.

**Example**

To display the major tick marks at intervals of 100, type 100 in the Major ticks box on the Scale panel of the InfoBox.

**Note** If major tick intervals do not divide evenly into the maximum value, the axis will rescale to the maximum value.

**Scale manually: Maximum**

Sets the highest value for the axis scale. "Maximum" is set on the Scale panel of the InfoBox.

**Note** If major or minor intervals do not divide evenly into the maximum value, the axis will rescale to the maximum value.

**Scale manually: Minor ticks**

Sets the interval between minor tick marks on an axis. Deselect the box to use the default setting.

**Example**

To display the minor tick marks at intervals of 50, type 50 in the Minor ticks box on the Scale panel of the InfoBox.

**Note** If minor intervals do not divide evenly into the maximum value, the axis will rescale to the maximum value.

**Scale manually: Minimum**

Sets the lowest value for the axis scale. Deselect the box to use the default setting.

**Scale: Units**

Changes the unit scale for a numeric axis. The units are the measurements for tick mark labels on a numeric axis.

- Auto. Automatically sets the tick mark labels on a numeric axis based on the numbers plotted in the chart.
- None. Displays the actual values as the tick mark labels.
- Thousands, Ten Thousands, Millions, ..., Thousandths, Millionths, .... Sets the scale according to the unit you select from the list.
- Other. Sets the scale to a power of 10 not listed. Enter a number for Units.

The Units box displays a number representing the power of 10 used for the unit scale you chose. For example, if you choose Thousands, the number 3 appears in the box.

**Note** If the axis Subtitle is set to Automatic, the subtitle text automatically displays the units you select.



**Pie charts: Scaling options**

You can change the scale of pies in a multiple pie chart.

- Equally. Each pie appears the same size, regardless of the total of each pie.
- Scale by area. Pies with larger totals appear larger.
- Scale by height. Pies with larger totals have taller platforms (3D multiple pies only).

## **Details: Scaling and arranging radar chart axes**

### **Redisplaying grid lines**

When you scale each axis independently, all the grid lines are turned off. To redisplay the grid lines, click the Scale tab and deselect Make axes independent.

---

{button ,AL('H\_LC\_SCALING\_RADAR\_AXES\_STEPS',1)} [Go to procedure](#)

## Scaling and arranging radar chart axes

1. Select a radar chart.
2. Choose Chart - Axes & Grids.
3. Click the Scale tab.
4. (Optional) Under Scale manually, enter values.
5. (Optional) Check Make axes independent if you want each axis to use a different scale.

---

{button ,AL('H\_LC\_SCALING\_RADAR\_AXES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_LABEL\_RADAR\_AXES\_STEPS',0)} [See related topics](#)

## **Details: Selecting chart parts using the InfoBox**

### **Determining what is selected**

When an object is selected, selection handles (small boxes) appear around the object.

### **Selecting hidden chart parts**

Use the InfoBox to display a hidden chart part, such as a legend or a series. Select a chart, open the InfoBox (Chart - Chart Properties), and select the chart part from the "Properties for" list at the top of the InfoBox. Click the Options tab, then select "Show."

You cannot select hidden parts using the mouse.

---

{button ,AL(^H\_LC\_SELECTING\_INFOBOX\_STEPS',1)} [Go to procedure](#)

## Selecting chart parts using the InfoBox

Use the InfoBox to select the part of the chart you want to work with.

1. Click a chart to select it.
2. Choose Chart - Chart Properties.
3. Under Properties for, select a part.

**Tip** To modify the selected part, choose from the options on the InfoBox panels. Click a tab to display a panel, such as Lines & Colors.

---

{button ,AL(`H\_LC\_SELECTING\_INFOBOX\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_SELECTING\_MOUSE\_STEPS;H\_LC\_SELECTING\_PIES\_STEPS;H\_LC\_SELECTING\_TABLES\_STEPS;',0)} [See related topics](#)

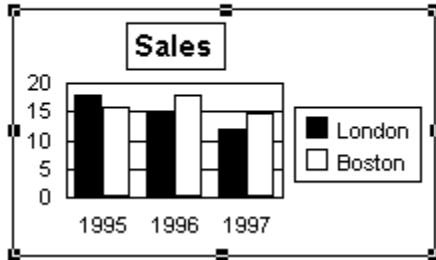
## Details: Selecting chart parts with the mouse

### Determining what is selected

Handles (small boxes) appear around the selected object.

Click any chart part to select it.

Click next to a part to select the entire chart.



### Selecting one in a set

To select a single item from a set, hold down CTRL when you click the mouse.

On line, bar, area, or mixed charts, you can select:

- Individual bar, area, or line segment
- Individual cell in a table
- Individual major grid line (x-axis, y-axis, 2nd y-axis)

On a pie chart, you can select:

- Individual pie slices
- Individual pie slice labels

### Selecting in a 3D chart

You can select the same way that you select parts of a 2D chart. In addition, you can select:

- Platform left face or right face
- Left back wall or right back wall
- Floor

See [Changing the 3D chart platform](#).

### Selecting hidden chart parts

Use the InfoBox to display a hidden chart part, such as a legend, series, or data table. Open the InfoBox (Chart - Chart Properties). Under "Properties for," select the part you want to show. Click the Options tab, then check the Show box. You cannot select hidden chart parts using the mouse.

---

{button ,AL('H\_LC\_SELECTING\_MOUSE\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_LC\_SELECTING\_INFOBOX\_STEPS;H\_LC\_SELECTING\_TABLES\_STEPS;H\_LC\_SELECTING\_PIE\_S\_STEPS;',0)} [See related topics](#)

## Selecting chart parts with the mouse

You can select:

- Entire chart. Click the chart border or just outside the plot.
- Pie or doughnut. Click the center of the pie or doughnut.
- Part of a chart, such as a series. Click the part you want to select.
- Chart parts with text, such as the legend. Click the border around the part to select the part itself, or click the text to select the text.
- One of a series of parts, such as one bar, one line segment, or a pie slice. Point to the part, hold the CTRL key, and then click the mouse.

---

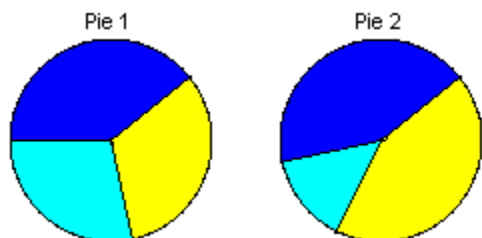
{button ,AL(`H\_LC\_SELECTING\_MOUSE\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_SELECTING\_INFOBOX\_STEPS',0)} [See related topics](#)

### Details: Selecting in a pie chart

#### Working with pie charts with multiple pies

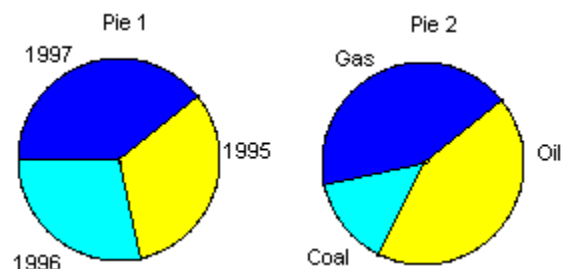
A pie chart displays each series in a separate pie. If you have multiple series, you can create multiple pies.



You can also create pie charts with independent data.

#### Working with independent data

If you have multiple series, you can make each of the series independent of the other series. In this example, the data slices in each pie represent different information, unlike those in the multiple pie chart shown above.



Another way to produce separate pies is to create each pie from individual data series but display them all on the same page. You can create additional pie charts on the same page or move or copy a pie chart from another page or application.

#### Selecting a pie using the InfoBox

You can use the InfoBox to select one pie from multiple pies in the same chart. Choose Chart - Chart Properties to open the InfoBox. Under "Properties for," select Pie, then click the Data tab. In the drop-down list, select the pie.

---

{button ,AL('H\_LC\_SELECTING\_PIES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_LC\_SELECTING\_INFOBOX\_STEPS;H\_LC\_PIE\_TOTALS\_STEPS;',0)} [See related topics](#)



## Selecting in a pie or doughnut chart

You can use the mouse or InfoBox to select parts of a pie or doughnut chart.

### To select with the InfoBox

1. Select a pie or doughnut chart.
2. Choose Chart - Chart Properties.
3. Under Properties for, select a chart part.

### To select with the mouse

- For one pie or doughnut chart in a multiple chart, click the center of the pie or doughnut.
- For a chart with one pie or doughnut, click outside the pie or doughnut (useful when you want to resize or move the pie).
- For one slice in a single pie or doughnut, click the slice. (In a chart with multiple pies or doughnuts, clicking one slice selects the corresponding slice in each of the others.)
- For one slice in a pie or doughnut chart with multiple pies or doughnuts, hold the CTRL key and click the slice.
- For one slice in a chart with multiple pies or doughnuts that uses independent data, click the slice.

---

{button ,AL(^H\_LC\_SELECTING\_PIES\_DETAILS',1)} [See details](#)

{button ,AL(^H\_LC\_SELECTING\_INFOBOX\_STEPS;H\_LC\_SELECTING\_MOUSE\_STEPS;',0)} [See related topics](#)

**Details: Selecting options in a chart table or number grid**

You can use the mouse to resize a number grid, but not a data table. The frame of a data table is always aligned with the plot frame of the chart.

For vertical 2D charts (bar, stacked bar, area, line, XY, HLCO, mixed), the columns of data in the data table are aligned with the x-axis tick marks.

---

{button ,AL(`H\_LC\_SELECTING\_TABLES\_STEPS`,1)} [Go to procedure](#)

### Selecting options in a chart table or number grid

1. Select a chart.
2. Choose Chart - Table.
3. Click the Options tab.
4. Select "Show data table."
5. Select the options you want:
  - Show row headers
  - Show column headers
  - Show row totals (Number grid only)
  - Show column totals
  - Under Column totals label, enter text.
  - Under Row totals label, enter text (Number grid only)

### To hide or display a series

1. Select a chart.
2. Select the series from the drop-down list.
3. Select the option you want.
  - Show series in table
  - Show series in chart (Table only)

---

{button ,AL('H\_LC\_SELECTING\_TABLES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_SELECTING\_INFOBOX\_STEPS;H\_LC\_ADDING\_TABLE\_UNDER\_STEPS;',0)} [See related topics](#)

## Overview: Selecting in a chart

The first step in changing a chart is to select what you want to work with, such as a legend or axis. You can make a selection using the InfoBox or the mouse. Selection handles (small squares) appear around the selected chart or chart part.

### Selecting with the InfoBox

The InfoBox (Chart - Chart Properties) provides easy access to any part of a chart.

- To open the InfoBox, select a chart and choose Chart - Chart Properties.
- To select a chart part, click the "Properties for" list at the top of the InfoBox and make a selection.
- To open the InfoBox from the chart, double-click a chart or part of a chart. The InfoBox opens to the correct panel of options for the selected part.

**Tip** You can keep the InfoBox open while you are working on a chart. The InfoBox is context-sensitive; as you click different parts of a chart, the InfoBox updates.

### Selecting with the mouse

To use the mouse to make a chart selection, click the part of the chart you want. Selection handles (small squares) appear around the part. Notice that the mouse pointer changes as you move it from text to an axis line. See [Selecting chart parts with the mouse](#).

For more information about chart tables, pie charts, and doughnut charts, see [Selecting options in a chart table](#) and [Selecting in a pie or doughnut chart](#).

### Clicking in the right place

The mouse pointer changes shape as you move it around the chart, providing a visual cue about what it points to. For instance, if you move the mouse pointer to text on the title, a small "A" appears.

### Working with a selection

Once you have selected a chart or part of a chart, you can:

- Change colors, patterns, and styles. See [Changing colors and patterns in a chart](#).
- Modify text. See [Changing text fonts, sizes, and colors in a chart](#) and [Editing chart text](#).
- Resize, move, or copy a chart. See [Overview: Resizing, moving, and copying a chart](#).

**Data labels: Position**

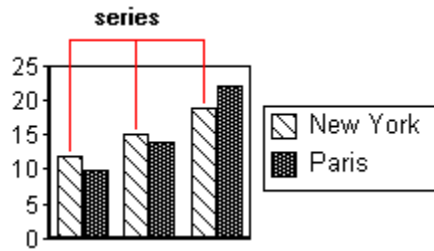
You can specify where the value and percent labels are displayed in a chart. 3D charts and with-depth chart do not display labels.

- Above series and Below series are available for vertical series.
- Left of series and Right of series are available for horizontal series.

**chart series**

A set of values plotted on a chart. If you assign series by column, each column of data represents a series. If you assign series by rows, each row of data represents a series.

All chart types except pie charts can display up to 30 data series. Pie charts show one series in each pie.



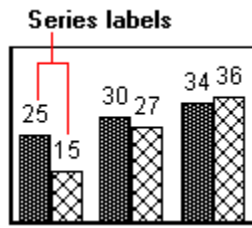
**Series labels options**

Series labels provide additional information about the values in a chart.

- Value labels. The numeric value of each series.
- Percent labels. The percentage each series represents of the whole.
- Slice labels. Available only for pie charts.

### chart series labels

Labels that identify each value plotted in a series. You can assign labels that are the actual values in the data series, or the percentage of the whole that each value in a series represents. You can also enter text labels manually or retrieve them from a range in an external worksheet.



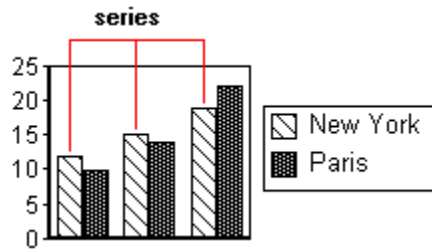


**Chart: Mixed type**

Combines different chart types into one chart. Mixed charts can include area, bar, or lines. To create a mixed chart, select "Mixed" on the Type panel of the InfoBox.

## Overview: Chart series

A series is a set of values plotted on a chart. In this example, the New York values are a series, and the Paris values are a series.



If you assign series by column, each column of data represents a series. If you assign series by rows, each row of data represents a series.

In pie charts, each pie represents a single series, with each slice in the pie showing a data value for that series.

A series can be modified. You can:

- Delete data series from a chart. See [Deleting chart data](#).
- Hide a series. See [Hiding and showing parts of a chart](#).
- Stack the series. See [Changing to a different chart type](#).
- Change the spacing between series by overlapping or increasing the space. See [Changing the spacing between series](#).
- Show the numeric value for the series. See [Displaying chart series labels](#).
- Connect bars and markers. See [Connecting points and bars in charts](#).
- Choose a different marker used for a series. See [Changing markers in a chart](#).
- Use different colors in a series. See [Changing colors and patterns in a chart](#).
- Add pictures to bars in a chart. See [Using pictures instead of bars in a bar chart](#).
- Plot a series on a second y-axis. See [Plotting a series against a 2nd y-axis](#).
- Change a series from one type to another, such as bars to areas. See [Changing to a different chart type](#).

**3D: Shadow**

Controls the shadow below a 3D pie chart.

## **Details: Resizing a chart or chart part**

### **Resizing guidelines**

You can resize in one direction, or both directions at once:

- To resize in one direction, click the selection handle in the middle of the box (top, bottom, left, or right) and drag to the dimensions you want.
- To resize both the height and width at one time, click any one of the corner selection handles, and drag to the dimensions you want.

### **Resizing text**

Use the InfoBox to change the font size. See [Changing text fonts, sizes, and colors in a chart](#).

### **Changing line thickness**

Use the InfoBox to change the line width. See [Changing line styles in a chart](#).

---

{button ,AL('H\_LC\_SIZING\_CHART\_STEPS',1)} [Go to procedure](#)

## Resizing a chart or chart part

To change the size of a chart, plot, legend, title, or note, use the mouse.

1. Click the part you want to resize. Selection handles appear around the selected part.
2. Move the mouse pointer to point at a selection handle. (The mouse pointer shape changes when you point at a selection handle.)
3. Drag the selection handle to resize the part.

**Tip** To resize other parts, such as text or line thickness, use the InfoBox.

---

{button ,AL(`H\_LC\_SIZING\_CHART\_DETAILS',1)} [See details](#)

{button ,AL(`H\_LC\_MOVING\_CHART\_STEPS;H\_LC\_SELECTING\_INFOBOX\_STEPS;',0)} [See related topics](#)

**Slice labels options**

Pie labels include:

- Value labels. The value of each pie slice.
- Percent labels. The percentage each slice represents of the whole.
- Slice labels. Text associated with each slice.

**Trend lines: Slope**

A measure of the amount of slant in the trend line.

**Pie charts: Sorting options**

For multiple pies, you can specify how to sort the slices:

- Unsorted. Does not sort the slices. Slices are plotted in the order in which they appear in the data.
- Separately for each pie. Sorts the slices in each pie in ascending order in each pie.
- Based on first pie. Sorts the slices in each pie in the order they appear in the first pie.
- Based on last pie. Sorts the slices in each pie in the order they appear in the last pie.

**Note** Pies with independent data can use only Unsorted and "Separately for each pie."



**Details: Specifying where to display a trend line**

The minimum and maximum y-axis values do not exclude data points from the trend calculation. The actual values used in the trend analysis are controlled by the start and end points.

---

{button ,AL('H\_LC\_SPECIFYING\_MIN\_MAX\_REGRESSION\_STEPS',1)} [Go to procedure](#)

### **Specifying where to display a trend line**

You can specify the minimum and maximum x-values for the trend line. If you do not specify these values, the trend line is drawn across the entire width of the x-axis.

1. Select an XY (scatter) chart.
2. Choose Chart - Series.
3. Click the Series Trend tab.
4. Select a series.
5. Enter the minimum and maximum x-axis values.

---

{button ,AL('H\_LC\_SPECIFYING\_MIN\_MAX\_REGRESSION\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_ADDING\_REGRESSION\_STEPS',0)} [See related topics](#)

### **Specifying the values to calculate in a trend line**

You can control the first and last points for which the trend line is calculated. Enter these values when your data fits the trend line well except for the points at the beginning and end of the series.

1. Select an XY (scatter) chart.
2. Choose Chart - Series.
3. Click the Series trend tab.
4. Select the series.
5. Enter values for "Start at point" and "End at point."

If you do not specify a start point or end point, all of the values in the series are used in the calculation.

The start and end points do not specify the values where the trend line displays. To specify where to display the trend line, use the Minimum and Maximum attributes.

---

{button ,AL(`H\_LC\_SPECIFYING\_MIN\_MAX\_REGRESSION\_STEPS`;,0)} [See related topics](#)

## Details: Stacking and overlapping chart series

### Using stacking options

You can stack, overlap, and cluster the series in a chart to make the chart easier to read or the data easier to compare.

- Stacking the series emphasizes the total volume of the series. Positive numbers are stacked above the axis line and negative numbers are stacked below the line.
- Clustering the bars into a group compares related sets of items over time. Clustering emphasizes the value of each item in the set, rather than the sum of the items. See [Changing the spacing between series](#).

---

{button ,AL('H\_LC\_STACKING\_SERIES\_STEPS',1)} [Go to procedure](#)

## Stacking and overlapping chart series

### To stack bars or areas

1. Select a chart.
2. Choose Chart - Chart Type.
3. Click the Type tab.
4. Under Chart type, select "Stacked Bar," "100% Stacked Bar," or "Area."

### To overlap bars or areas

1. Select a chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Do one of the following:
  - For an area chart, under Areas, select "Overlapped."
  - For a bar chart, enter a value for "Overlap %."

**Tip** Overlap % is not available for 3D bar charts.

### To stack lines

1. Select a line chart.
2. Choose Chart - Plot.
3. Click the Layout tab.
4. Under Lines, select "Stacked."

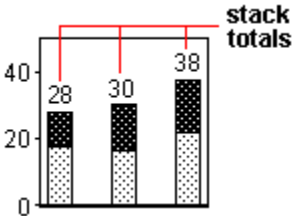
---

{button ,AL('H\_LC\_STACKING\_SERIES\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_TYPES\_CHANGING\_STEPS;',0)} [See related topics](#)

**stack totals**

The total value represented by the bars in a stacked bar chart.



**Pie charts: Start angle**

Controls the angle in a pie chart at which the first pie slice is displayed. By default, the first pie slice is displayed at 0 degrees (12:00 on a 12-hour clock). Counterclockwise display begins at the 3:00 position. You can change where the first pie slice is displayed by entering a value under Start angle.

## Designing stacked bar charts

Use a stacked bar chart when you want to compare totals as well as individual values for different time periods or categories of data.

- Make sure the segments of the bar add up to a meaningful total.
- Use five or fewer segments per bar (data sets).
- Use the darkest or densest fills for segments at the baseline or left. Use lighter fills as segments rise up or move right in the bar.
- To compare values as percentages of the whole, change the y-axis scale to 100%. See [Changing the axis scale](#).
- If you want to draw attention to the changes in a specific data set, put that data set first so it appears on the bottom or left of the stacked bars.
- Substitute symbols or pictures for your bars to eliminate abstraction and create a strong visual message between your bar chart and your topic. See [Using pictures instead of bars in a bar chart](#).
- Add connecting lines between bar segments to make it easier to compare values. See [Adding connecting lines to a stacked bar chart](#).
- Change the space between the bars to more effectively show the relationship between data series. See [Changing the space between areas, bars, and lines](#).



**stacked bar chart**

Compares totals as well as individual values for different time periods or categories of data. Each bar in a stacked bar chart represents a total. The segments in each bar represent the values that add up to the total.

For example, use a stacked bar chart to compare:

- The costs of salaries and benefits over five years
- Sales of three different products during four quarters



**Details: Setting the default chart type and style****Choosing a different chart style**

When you create a chart, four chart styles are provided for you. You can also create your own chart styles, name them, and use them when you create new charts. Using a chart style provides a uniform look to your charts. See [Creating and editing a chart style](#).

**Changing chart types**

You can easily change from one chart type to another without having to reset the default chart type. Choose Chart - Chart Type to open the InfoBox. Then click the Type tab, and select a different chart type from the Chart type list.

---

{button ,AL('H\_LC\_STYLES\_DEFAULT\_STEPS',1)} [Go to procedure](#)

## Setting the default chart type and style

You can specify a default chart type and style. The settings take effect the next time you create a chart.

1. Select a chart.
2. Choose Chart - Chart Styles - Set Default Chart.
3. Under Select a chart type, select the chart type and the appropriate icon (for example, 2D or 3D).
4. Under Select a chart style, select the style file.
5. Click OK.

---

{button ,AL('H\_LC\_STYLES\_DEFAULT\_DETAILS',1)} [See details](#)

{button ,AL('H\_LC\_CHANGING\_STYLE\_STEPS;',0)} [See related topics](#)

## **Overview: Chart styles**

A chart style is a named set of chart attribute settings, such as colors, fonts, and line styles. Using a chart style means that many design decisions are already made for you. A chart style makes it easier to create charts with a consistent look.

### **Using a chart style**

When you change from one chart style to another, the appearance of the current chart changes. The colors, patterns, text styles, and line styles will probably change, depending on the style. The placement of titles, size of the chart, and the parts that appear may also change.

You can specify a chart style in one of two ways:

- Use a chart style that is provided (BASIC.CL, STRIPES.CL, EFFECTS.CL, or CLASSIC.CL). Look for the style names when you are using the Style panel of the InfoBox. See [Using an existing chart style](#).
- Create your own style based on an existing style. See [Creating and editing a chart style](#).

**Types of trend lines**

You can create the following types of trend lines:

- Linear:  $y = a + bx$
- Exponential:  $y = ae^{(bx)}$
- Logarithmic:  $y = a + b (\ln x)$
- Power:  $y = ax^b$ , where  $a > 0$

You can remove the trend line. Open the InfoBox and click the Series trend tab. Under Type, select None.

**Chart tables: Grid lines**

There are four types of grid lines in chart tables:

- Horizontal grid lines that separate data cells (Horizontals).
- Vertical grid lines that separate data cells (Verticals).
- The vertical grid line that separates the data from the column headers (First vertical).
- The horizontal grid line that separates the data from the row headers (First horizontal).

## Overview: Chart tables

A chart table can be either a number grid or a data table.

- Number grids are charts themselves. A number grid shows the actual numeric and text values. There is no graphical representation.
- Data tables appear under charts. A data table displays the data values that correspond to the chart.

		Column header			
		Q1	Q2	Q3	Q4
Row header	■ 1995	24	32	35	38
	□ 1996	26	35	33	37
	■ 1997	27	30	35	34

Data cell

For number grids and data tables, you can:

- Show grid lines between the rows and columns. See [Displaying grid lines in a chart table](#).
- Change lines and colors. See [Changing the look of a table or number grid](#).
- Display row and column headers. See [Displaying row and column headers in a chart](#).
- Choose different colors and line styles used in a row or column. See [Changing the look of a table or number grid](#).
- Calculate row or column totals. See [Calculating totals in a number grid](#).

**chart tables**

A tabular display of chart values, in one of two formats:

- Number grids show values instead of a graphical representation of those values
- Data tables appear under a graphical chart to show the values represented on the chart



### **Sizing columns in a chart table**

In a chart table, the first column contains the legend text. The other columns line up beneath each series on the chart. Resizing the plot changes the column widths.

1. Select a 2D vertical chart containing a table.
2. Choose Chart - Plot. Selection handles appear around the plot.
3. At the left line of the plot, drag a selection handle to resize the plot and table columns.

**Tip** You can change the font size for a better fit. See [Changing text fonts, sizes, and colors in a chart](#).

## **Overview: Chart text and numbers**

Adding text to a chart, such as titles and axis labels, can help clarify the meaning of the data. Including numbers on a chart adds precision.

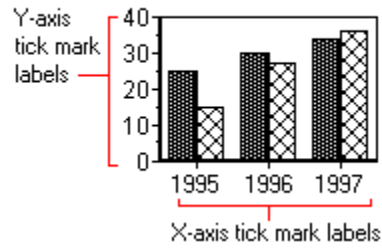
On a chart, you can:

- Add, delete, or modify text. See [Editing chart text](#).
- Change the appearance of text by changing its attributes, such as font, size, and color. See [Changing text fonts, sizes, and colors in a chart](#).
- Enter the text manually. See [Creating a chart from worksheet data](#).
- Read in the values through a link to worksheet data. See [Linking chart text to a range](#).
- Modify the format of numbers in your chart. See [Changing numeric formats in a chart](#).

**tick mark labels**

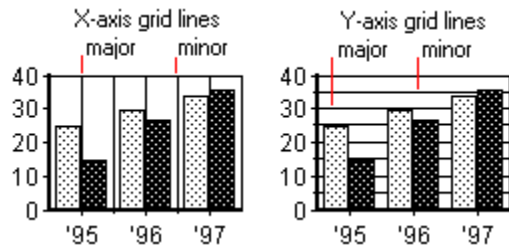
Text that identifies values associated with an axis. The tick mark labels appear under or next to the major tick marks on an axis.

When creating a chart, you can specify the tick mark labels to appear on the x-axis (also called x-axis labels). The y-axis labels are typically generated automatically from the data.



## Overview: Titles in charts

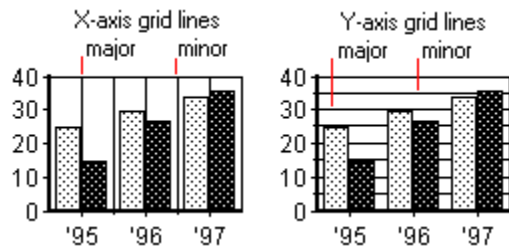
The chart title provides important documentation about your chart. It annotates the chart, labels its contents, and distinguishes one chart from another.



When working with a chart title, you can:

- Edit the text by adding or deleting characters. See [Editing chart text](#).
- Create a title or subtitle. See [Adding titles to a chart](#).
- Change the line width or color around the title. See [Changing line styles in a chart](#).
- Move the title to another location around the plot. See [Moving a chart part](#).
- Resize the title box. See [Resizing a chart or chart part](#).
- Change the appearance of the title text. See [Changing text fonts, sizes, and colors](#).
- Hide the title or show a previously hidden chart title. See [Hiding and showing parts of a chart](#).

Charts can also have axis titles, which are labels for an axis. See [Adding axis titles and subtitles](#).



## Glossary for charts

Click a word for a description:

[2nd y-axis](#)

[3D effects](#)

### A

[Area charts](#)

[Attributes](#)

[Axes](#)

[Axis labels](#)

[Axis lines](#)

[Axis subtitles](#)

[Axis titles](#)

### B

[Bar charts](#)

### C

[Chart data](#)

[Chart note](#)

[Chart styles](#)

[Chart tables](#)

[Chart title](#)

[Chart types](#)

[Charts](#)

[Collection](#)

### D

[Data](#)

[Data points](#)

[Data range](#)

[Data table](#)

[Default chart style](#)

[Grid lines](#)

### H

[HLCO charts](#)

[Horizontal charts](#)

### L

[Legend](#)

[Legend labels](#)

[Line charts](#)

[Link](#)

### M

[Mixed charts](#)

### N

[Number grids](#)

### P

[Percent charts](#)

[Pie charts](#)

[Pie slices](#)

[Pie slice labels](#)

[Pie titles](#)

[Pie totals](#)

[Plot](#)

### R

### S

Scatter (XY) charts

Series

Series labels

Stack totals

Subtitles (axis)

Tables

Three-dimensional effects

Tick mark labels

Titles (axis)

Titles (chart)

Trend lines

**V**

Vertical charts

**W**

With-depth effects

**X**

X-axis

XY charts

**Y**

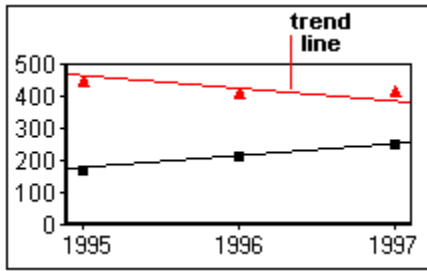
Y-axis

**Z**

Z-axis

**trend line**

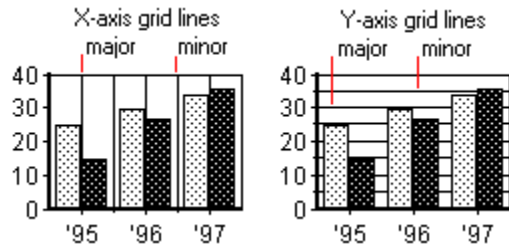
A line associated with a series in a scatter (XY) chart that shows the general trend of the series. Also called a regression line.



## Details: Changing to a different chart type

### Using the Type panel icons

Once you select a chart type, the icons at the right side of the panel will change to the appropriate icons for that type. Click an icon to select it. These icons control the orientation (horizontal, vertical) and the dimension (3D or with-depth) for the chart type. Not all options are available for all chart types.



### Changing to pie charts

If you have multiple series in a bar, line, or area chart, and you want to chart all the series as pies, be sure to click the multiple pies icon on the righthand side of the Type panel. If you click the single-pie icon, only the first series will be charted.

### Matching the chart type to the data

Different chart types convey different messages. To emphasize your message, select the best chart type for the purpose. See [Overview: Chart types](#).

---

{button ,AL('H\_LC\_TYPES\_CHANGING\_STEPS',1)} [Go to procedure](#)



### Changing to a different chart type

You can change to another chart type, dimension (2D, 3D, and with-depth), and orientation.

1. Select a chart.
2. Choose Chart - Chart Type.
3. Click the Type tab.
4. Under Chart type, select a chart type.
5. Click an icon at the right side of the Type panel.

**Tip** The orientation icons will vary depending on the chart type you select.

---

{button ,AL('H\_LC\_TYPES\_CHANGING\_DETAILS',1)} [See details](#)

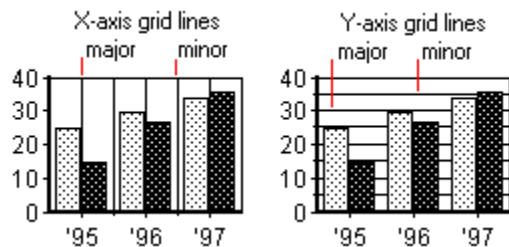
{button ,AL('H\_LC\_CHANGING\_PLOT\_LOOK\_STEPS;',0)} [See related topics](#)

## Overview: Chart types

Different chart types convey different messages. To emphasize your message, choose the best chart type for the purpose. See [Designing effective charts](#).

### Working with chart types

You can easily change from one chart type to another using the InfoBox. Choose Chart - Chart Type from the Chart menu to display the InfoBox, and click the Type tab. Under Type, select a chart type. From the icons at the right side of the panel, select the display characteristics you want for the chart. These options may include horizontal and vertical, or 3D and with-depth display.



### Area charts

Area charts track data over time, and present the data as broad trends, rather than focusing on individual data points. See [Designing area charts](#).

In addition to a two-dimensional area chart, you can also create:

- 3D area. You can rotate a 3D chart. Click the 3D tab on the InfoBox to change the elevation and rotation.
- Area with-depth. A with-depth chart gives the appearance of depth, but cannot be rotated.

### Bar charts

Bar charts also present data over a period of time, with an emphasis on individual data points.

Some of the bar charts you can create include:

- Stacked bar charts. See [Designing stacked bar charts](#).
- Vertical bar charts. See [Designing vertical bar charts](#).

### High-Low-Close-Open (HLCO) charts

HLCO chart is often used for stock market reports. See [Designing High-Low-Close-Open \(HLCO\) charts](#).

### Line charts

Line charts are a good choice when you have a lot of data points, where the slope of the line indicates a general trend. See [Designing line charts](#).

### Mixed charts

In one chart, you can specify a combination of bar, line, or area for the series. See [Designing mixed charts](#).

### Pie charts

Pie charts show the relationship of a part to the whole. See [Designing pie charts](#).

### Scatter charts

A scatter chart is helpful when you want to show if there is a correlation between two variables. Scatter charts have two numeric axes, which can be linear or logarithmic. See [Designing scatter \(XY\) charts](#).

### Radar charts

See [Designing radar charts](#).

## Using the InfoBox with charts

Use the InfoBox to change properties and settings for the chart part you select.

### To open the InfoBox

1. Do one of the following:
  - Choose Chart - Chart Properties. The InfoBox opens to the panels that apply to the entire chart.
  - Choose Chart, then a chart part from the menu (such as Legend, Plot, or Series.) The InfoBox opens to the panels that apply to the selected chart part.
  - Double-click a chart part. The InfoBox opens to the panels that apply to the selected chart part.
2. Click the tab for the panel you want to use.

### To display the appropriate panel

The tabs and panels will change depending on the current selection in the chart.

1. Under Properties for, select the name of a chart part.
2. Click the tab for the panel you want to use.

**Tip** To change the chart selection, select a different chart part from the "Properties for " list at the top of the InfoBox.

### Using the range selector in 1-2-3

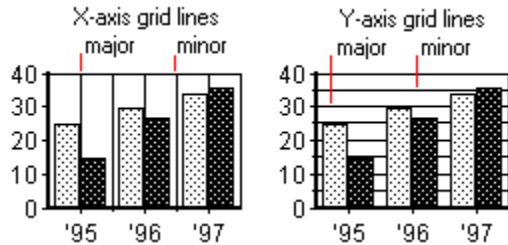
In 1-2-3, you use the range selector to specify a range for a chart part, such as series data or titles.

1. Select a chart.

2. Double-click a chart part to select it.

The InfoBox appears.

3. Click the range selector, or select "Cell" to display the range selector.



The pointer changes to the range selector pointer.



4. Select the range.

When you release the mouse button, the InfoBox reappears with the range address entered.

**Tip** For a summary showing the range assigned to each chart part, use the Ranges panel (Chart - Ranges).

## Designing vertical bar charts

Charts with vertical bars are good for comparing individual values over time.

- You can display values along the tops of, or inside bars, to make the chart easier to read. See [Displaying chart series labels](#).
- Use a different fill pattern or color to highlight a single bar to make a point. See [Changing colors and patterns in a chart](#).
- Substitute symbols or pictures for your bars to eliminate abstraction and create a strong visual message between your bar chart and your topic. See [Using pictures instead of bars in a bar chart](#).
- Change the space between the bars or clusters of bars to more effectively show the relationship between data series. See [Changing the spacing between series](#).

**vertical bar chart**

Compares individual values. The height of each bar indicates the value at one point in time, and the left-to-right orientation of the chart provides a sense of movement over time. Vertical bar charts can also illustrate a frequency distribution.

For example, use a vertical bar chart to show:

- House sales from January to June (values at different points in time)
- Number of employees who fall within different age ranges (frequency distribution)



**vertical chart**

Y-axis and the 2nd y-axis (if any) are plotted vertically. Vertical display is the default for most charts.

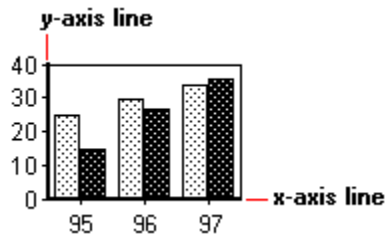
**with-depth effect**

Creates the illusion of a third dimension in a chart. A "with-depth" chart looks three-dimensional, but cannot be manipulated. A 3D chart allows for changes to rotation and elevation.



**x-axis**

A reference line marked in regular intervals with descriptive labels. In a scatter (XY) chart, the intervals on the x-axis represent numeric (scaled) values, not labels. Typically, the x-axis shows the categories of the data plotted, and the y-axis shows the data values.



### **Designing scatter (XY) charts**

Use scatter charts, also called XY charts, to look for correlation between large sets of data.

- Use scatter charts only if your audience has the statistical knowledge to interpret them.
- Add a trend line to show the general direction of the data points. See [Adding a trend line to a chart](#).
- Use the line connecting the points to show the direction of the data. See [Connecting points in charts](#).

**scatter (XY) chart**

Shows whether there is a correlation between large sets of data. If the data points cluster around an imaginary line, a correlation exists. The more points that approach the line, the stronger the correlation.

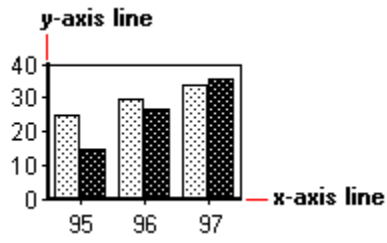
For example, use a scatter chart to determine the correlation between:

- Daily sales of frozen yogurt and the average daily temperature during July
- Personal income and years of education



**y-axis**

A reference line marked in regular intervals with numeric values. Typically, the y-axis shows the data values being plotted, and the x-axis shows the categories of the data.



**Trend lines: Y-intercept**

The location on the y-axis at which the trend line intersects the axis.

**z-axis**

A reference line in a 3D chart that shows the values plotted for the third dimension.

