

## FORMATTING A PLOT

Formatting a Plot Using Commands The formatting commands are entered after the plot or the fplot commands. The various formatting commands are:

**The xlabel and ylabel commands:** Labels can be placed next to the axes with the xlabel and ylabel commands which have the form:

```
xlabel(' Enter the String1')
```

```
ylabel('Enter the String2')
```

**The title command:** A title can be added to the plot with the command

```
Title('text as string')
```

**The text command:** A text label can be placed in the plot with the text or gtext commands:

```
text(x,y,'text as string')
```

```
gtext('text as string')
```

The text command places the text in the figure such that the first character is positioned at the point with the coordinates x, y (according to the axes of the figure). The gtext command places the text at a position specified by the user. When the command is executed, the Figure Window opens and the user specifies the position with the mouse.

**The legend command:** The legend command places a legend on the plot. The legend shows a sample of the line type of each graph that is plotted, and places a label, specified by the user, beside the line sample. The form of the command is: legend('string1','string2', ..... ,pos) The strings are the labels that are placed next to the line sample. Their order corresponds to the order that the graphs were created. The pos is an optional number that specifies where in the figure the legend is placed. The options are:

pos = -1 Places the legend outside the axes boundaries on the right side.

pos = 0 Places the legend inside the axes boundaries in a location that interferes the least with the graphs.

pos = 1 Places the legend at the upper-right corner of the plot (default). pos = 2 Places the legend at the upper-left corner of the plot.

pos = 3 Places the legend at the lower-left corner of the plot.

pos = 4 Places the legend at the lower-right corner of the plot.

### The axis command:

When the `plot(x,y)` command is executed, MATLAB creates axes with limits that are based on the minimum and maximum values of the elements of `x` and `y`. The axis command can be used to change the range and the appearance of the axes. In many situations a graph looks better if the range of the axes extend beyond the range of the data. The following are some of the possible forms of the axis command:

**The grid command:** `grid on` Adds grid lines to the plot. `grid off` Removes grid lines from the plot.

### Formatting a Plot Using the Plot Editor

A plot can be formatted interactively in the Figure Window by clicking on the plot and/or using the menus. Figure below shows the Figure Window with the plot. The Plot Editor can be used to introduce new formatting items, or to modify formatting that was initially introduced with the formatting commands.

