# Using DeltaGraph on the Macintosh

To Run DeltaGraph: Using the Finder: Select **Find...** from the **File** menu at the top of the screen. Type in DeltaGraph, press the Return key. Locate the DeltaGraph application in the resulting file list, and double click on it to launc the program. **Using the Launcher:** Click on the App bar of the Launcher. If the Launcher is not visible, it should be the first item under the apple menu locate the top left of the mac screen. Click on the Deltagraph icon to launch the program.

The arrow cursor will turn into a watch during the loading process, which will several seconds. When the program is loaded, a spreadsheet grid will be prese in which to enter data. Data is entered in a series of vertical columns and horizontal rows. A portion of this grid is displayed below.

IMPORTANT: The first vertical column is reserved for Labels, so data entry should begin in the second column, (Column A).
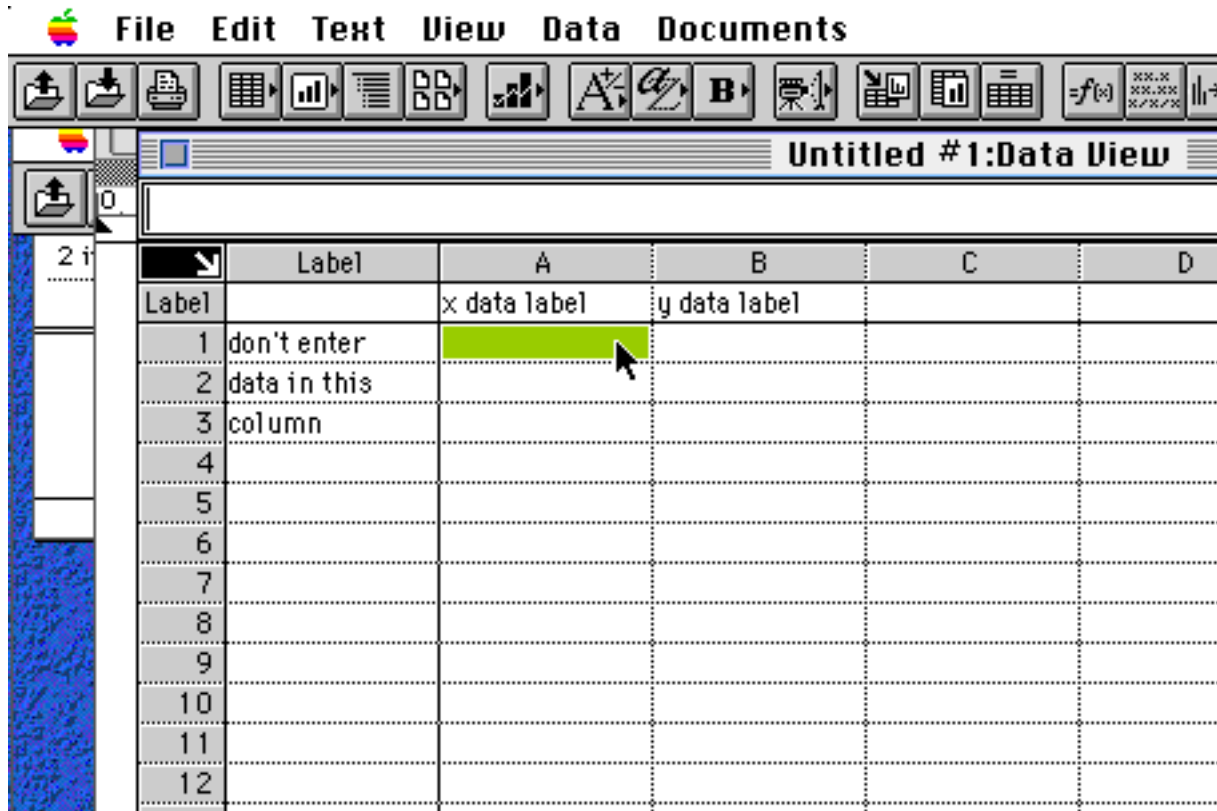
To begin data entry: Click the mouse pointer in the white cell below the letter and type in your x data label (time, mass, or whatever)

Press the Return key, the title will be entered, and the cursor will advance to r of column A, where you may enter your first x data value. (shown above) Pres return to enter each data point into a cell.

To enter y values, click in the cell below the letter B, type in the y data label,

return, and enter data as before.

To graph the data: Place the mouse pointer over the column A label (grey) and press the mouse button. While continuing to hold the mouse button, drag across to the grey B column label. These columns should now be highlighted, so the program will know which data is to be plotted.

To select non adjacent data columns: Click the grey column label of the x data, then hold the command key down and click on the y data column label. program will interpret the first highlighted column as x and the second as y, regardless of how they appear in the grid. The command key has the open app and cloverleaf like symbol, and is located next to the spacebar.

Next, select Chart Gallery... from the Data menu at the top of the screen. The following dialog box should appear.
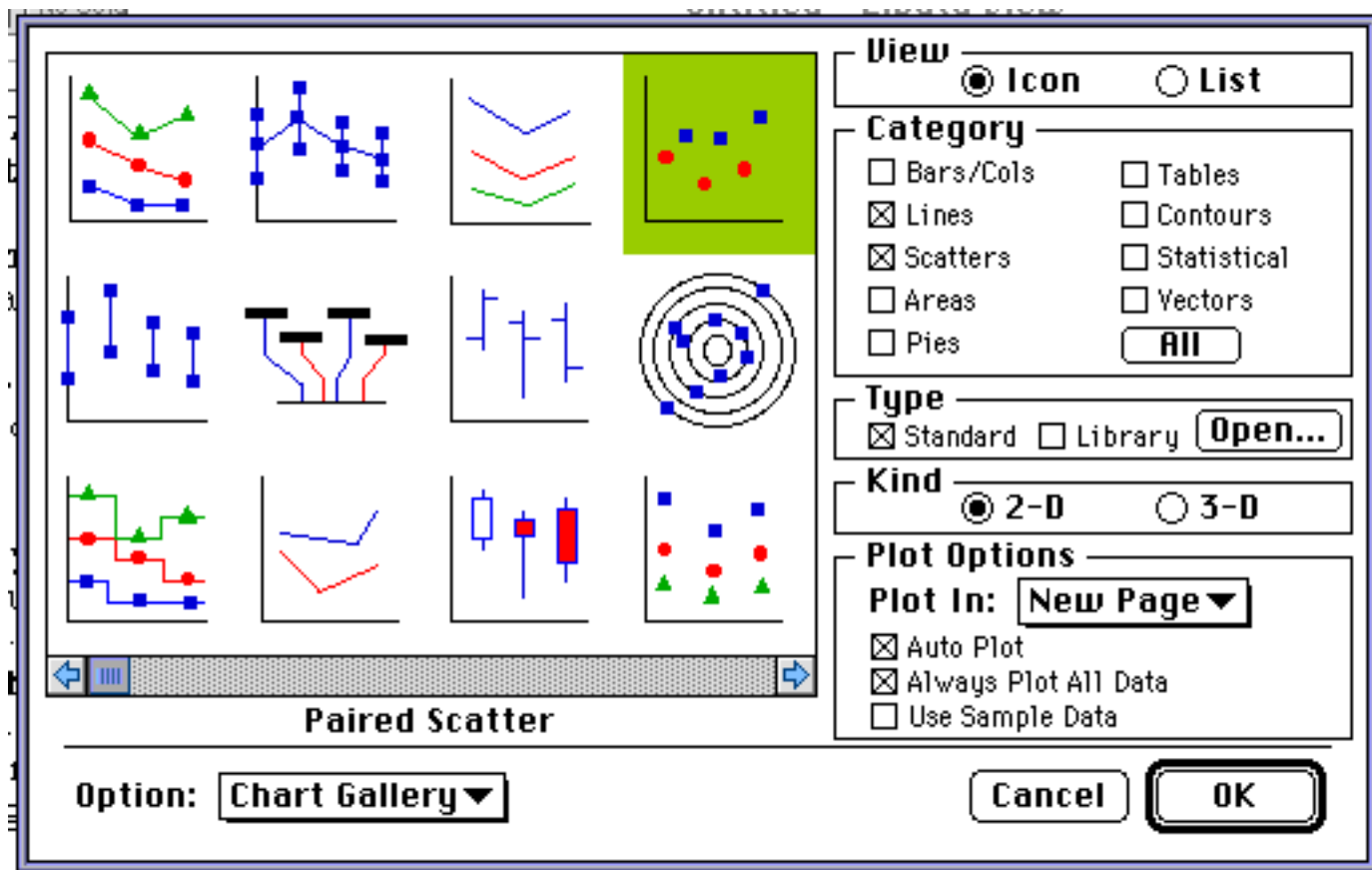
Make sure Lines or Scatters boxes are checked under Category, and 2-D is checked under Kind. Click on Paired Scatter (not Scatter), then click OK to graph the data.

NOTE: Do not use the Scatter option, as this will treat x and y as separate sets data and give you two plots, one for x and one for y.

A plain graph similar to the one on the following page should appear.
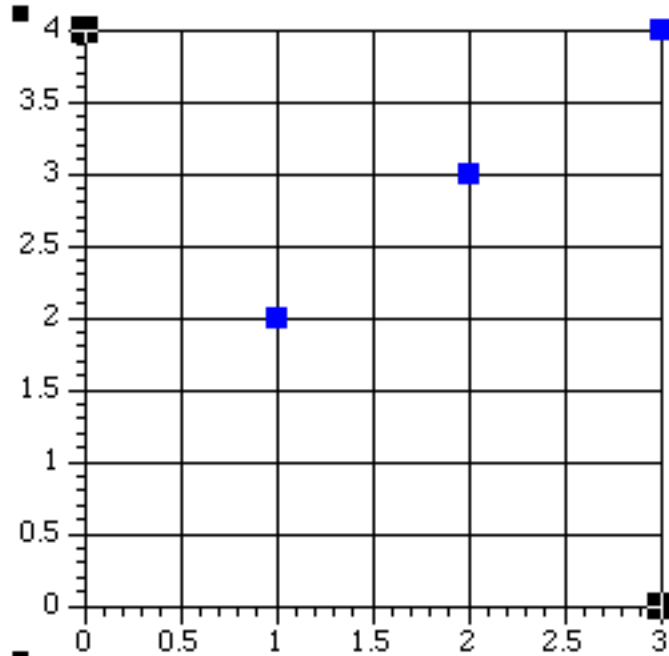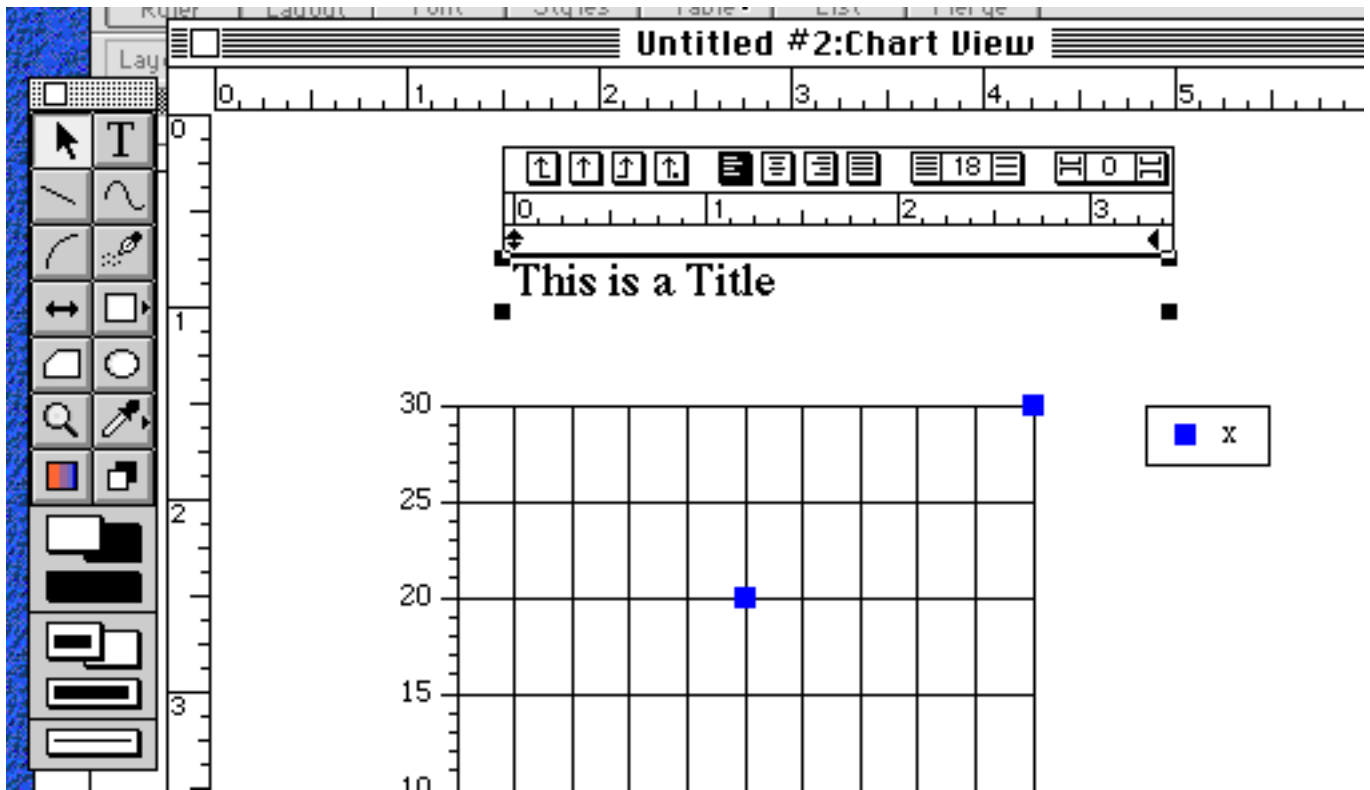(Untitled #1:Chart View)

Untitled #1:Chart View

Lay

0 , , , , 1 , , , , 2 , , , , 3 , , , , 4 , , , , 5 , , , ,

0 , , , , 1 , , , , 2 , , , , 3 , , ,

This is a Title

30

25

20

15

10

x

To add a graph title: Click on the "T" at the top right of the toolbar located along the left of the screen. to select the text tool.   (shown in Untitled #1:Chart View, top of previous page) Next, click above the graph where you would like y title to be. A box will appear over your graph into which you may type. (shown in Untitled #2:Chart View, bottom of previous page)

To resize the text: Drag across it while holding the mouse down to select it, then use the Text menu at the top of the screen to change its characteristics. Click anywhere outside the selection rectangle when finished.

To move the text on the page: Click once on it to select, then drag while holding down the mouse button.

To label the x and y axes : Double click on the numbers along either the x or y axis to produce a dialog box for typing an axis label.

To change the x and y axes range: Double click on the axis between tick marks to produce a dialog box where the axis min, max and number of intermediate tick marks may be edited.

To change grids and tick marks: Click directly on the tick marks, and a dialog box will appear allowing you to change their length and to enable major and m grid lines to be shown. The default is to only show major grid lines.

To change the size of the axis labels: Click once to select the text. Change using the Text menu at the top of the screen.

To resize the graph on the page: Click once anywhere within the graph to select it. Hold down the shift key to avoid changing the relative x,y proportion the graph. Position the cursor on the lower right selection dot. Drag while ho the mouse button down.
If you drag without holding the shift key, you can change the relative x,y proportions of the graph.

To obtain a mathematical curve fit: Click once anywhere within the graph to select it. Select **Curve Fitting...** from the **Chart** menu at the top of the screen. Select the desired curve fit type in the resulting dialog box. Click on the OK b or hit the return key to complete.

To print the curve fit formula on the graph: Click on the **Copy Formula** button at the bottom of the **Curve Fitting...** dialog box. Click on the text tool as described in **To add a graph title** at the top of this page. Paste the formula in using the **Paste command** under the **Edit** menu, or press the command and V keys simultaneously. Drag the text box to wherever you would like it to be shown.

To change the symbols used for the data points: Click once within the graph to select it. Select **Symbols...** From the **Chart** menu. You may change Color, Size and Key (the symbol used) by holding down the mouse button while pointing to the down arrow symbol to the right of these words in the resulting dialog box.

To perform a calculation on a data column: Double click on the grey alphabetic column heading, (A, B, C, etc.). The **Formula Builder** dialog box will appear, as shown below. At the bottom of the box select the column that the results are to be put in by using the **Prev. Col** and **Next Col** buttons. Col C is selected in the example.
Next, select the desired **Function** or **Operator** from the **Typing Shortcuts** at the top of the page. The Ln function has been selected in the example. Finally, select the **Source Column** that is to be input into the formula. The B column has been selected in the example. Click the OK button at the bottom r of the dialog box and the formula will be applied to all the data in column B, w the results placed in column C, in the example.
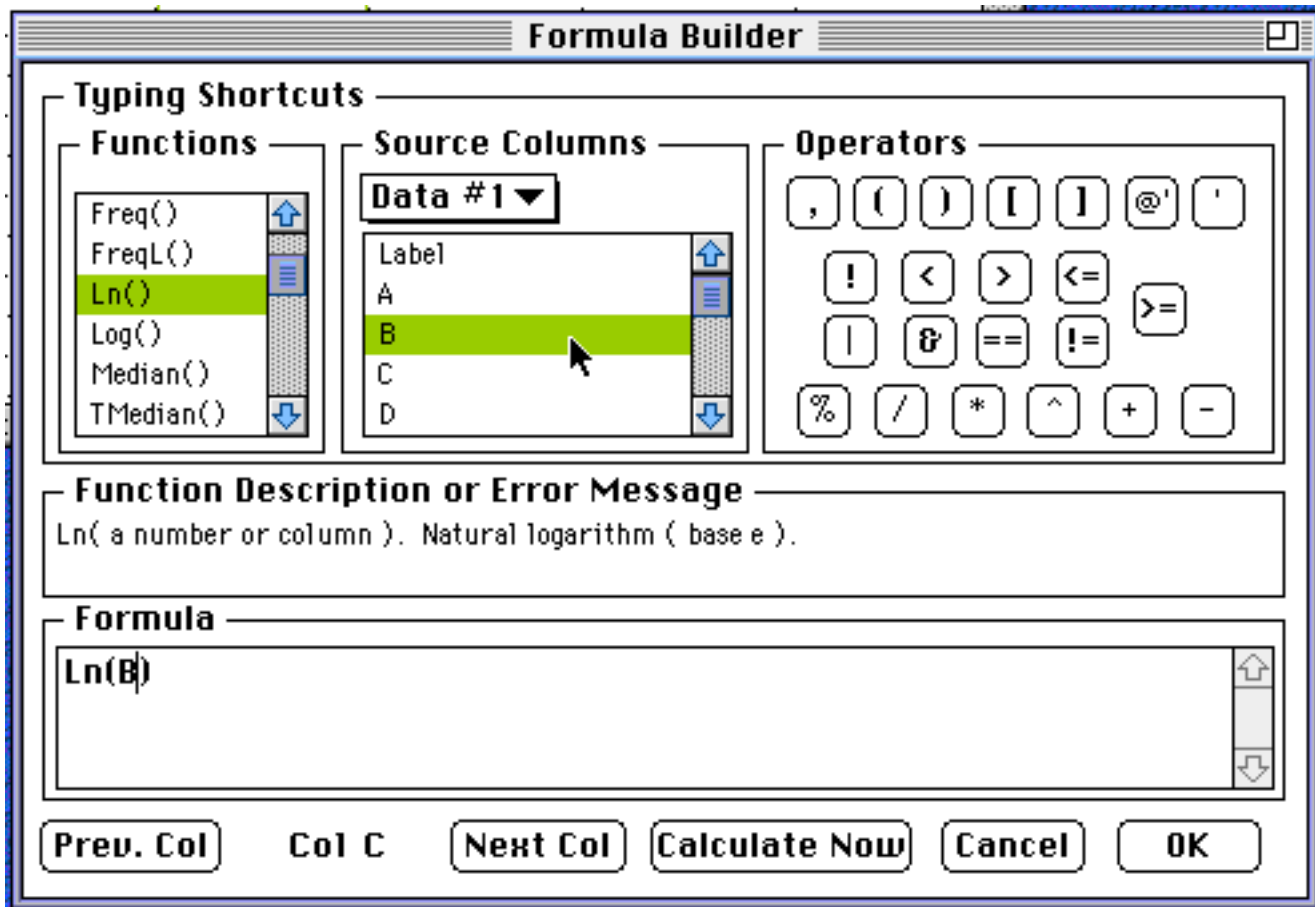
To print: Select Print from the File menu at the top of the page, or press the Command and P keys simultaneously.

Additional online help is available under the Apple menu at the top of the screen.