

FreqPlot Documentation

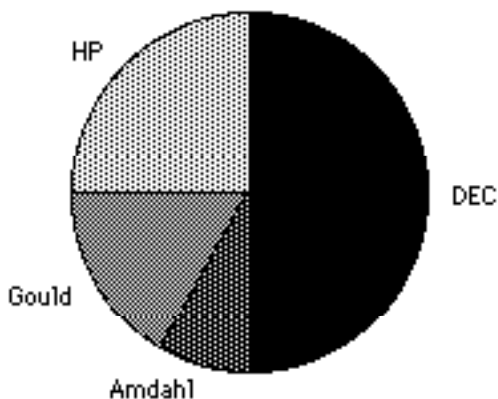
by

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FreqPlot is an Excel macro that reduces a set of data to a form suitable for plotting simple frequencies. The problem solved by *FreqPlot* is illustrated with the following set of fictitious data.

Institution	Manf	Qty
A	DEC	1
A	Amdahl	1
A	Gould	1
B	DEC	5
B	HP	1
C	HP	2
C	Gould	1

The objective is to produce a chart showing what proportion each computer manufacturer has of the total computers installed in all institutions. The following figure shows the desired result as a pie chart.



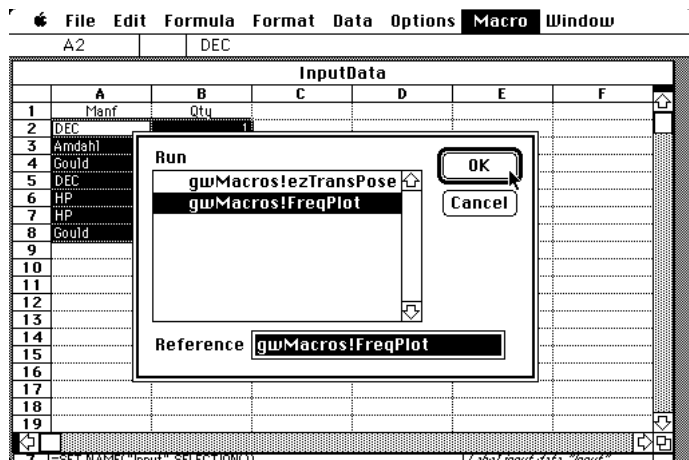
Before the chart can be drawn the raw data must be reduced to a set of frequencies as shown below.

Manf	Qty
Amdahl	1
DEC	6
Gould	2
HP	3

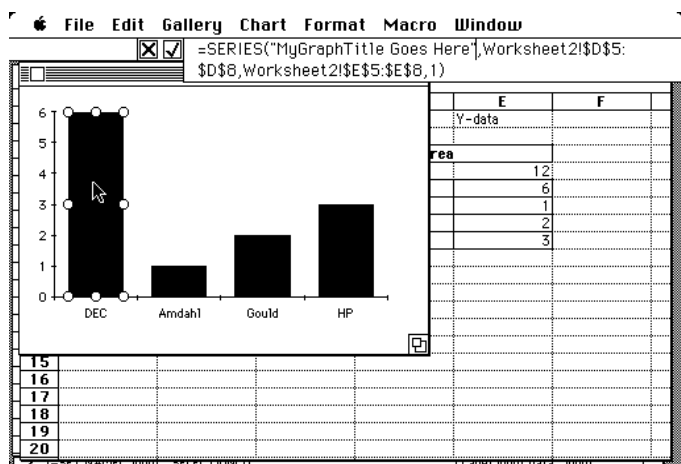
FreqPlot accepts single column or dual column data as input and produces a graph of the reduced data in the form of the default graph type (initially format one from the set of column charts). The first column of the input data is assumed to be text or numeric identifiers, and the second column numeric quantities. The quantities are summed for each unique identifier. If the input data consists of one column only, then it is assumed to contain identifiers and the reduction process counts the occurrences of each unique identifier.

FreqPlot leaves the original data intact. Each time the macro is invoked a new worksheet is created to perform the reduction process on and the resulting graph is placed on a new chart. The worksheets have names starting “**Worksheet...**” and the graphs have names starting with “**Chart...**”. If *FreqPlot* is invoked repeatedly then it will be necessary to delete the unwanted worksheets and graphs.

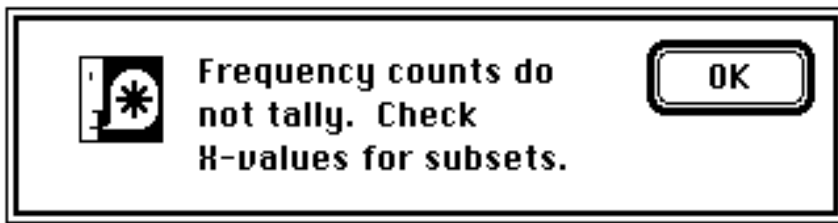
To run *FreqPlot*, select the input data, choose “**Run ...**” from the **Macro** menu, click on the **FreqPlot** macro name and press the **OK** button.



Different graph types can be selected by choosing a type from the **Gallery** menu. The default graph type is set by first selecting the the desired type from the **Gallery** menu and then choosing **Set Preferred Format** from the **Chart** menu. To label the X- and Y- axes, choose “**Attach Text ...**” from the **Chart** menu. “**Attach Text ...**” can also be used to add a title to the graph although a simpler method is to edit the title straight into the **SERIES** function. Select the graph by clicking anywhere on the graphic representation and the **SERIES** function will be displayed in the formula bar. Enter the graph title, enclosed in quotes, between the left parenthesis and the first comma, and click the check box.



FreqPlot has one known problem which is due to the way in which the Excel database and criteria function works. Where the identifiers to be plotted are text and some of the identifiers are supersets of other identifiers, the supersets are counted in the tally of the subsets. That is, if we have the identifiers "DEC" and "DE", then the occurrences of "DEC" are counted in with the occurrences of "DE". *FreqPlot* detects when double counting has occurred and displays the following alert.



The avoidance procedure, should this problem occur, is to append a character such as "#" or space to every identifier. While a space character is preferable because it will not appear on the chart, it must be used with caution if the identifiers would normally contain space characters. For example, in the case where we have identifiers "DE Cent" and "DE", adding a space character to every identifier would not solve the problem because "DE_Cent" would be a superset of "DE_".

FreqPlot is stored in the macro library file **gwMacros**. **gwMacros** also contains *ezTransPose*, a macro to simplify transposing a selection (no need to remember to type **Command-Enter** instead of **Return** because **TRANSPOSE** is an array function). To use *ezTransPose*, select the row, column or array to be transposed, invoke *ezTransPose* by choosing **Run** from the **Macro** menu and double clicking on **ezTransPose**. The transposed row, column or array will be created in a new worksheet leaving the original intact.

FreqPlot was first described in the June'88 issue of *Wings for the Mind* (the newsletter of the Apple University Consortium) in the article entitled, Plotting Frequencies in Excel. The article was based on experiences with Microsoft Excel, version 1.0. Comments and enquiries should be directed to the author at Computing Services Division, University of Technology, Sydney, PO Box 123, Broadway NSW 2007 by snail mail or to gregw@csd.uts.oz by electronic mail.

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