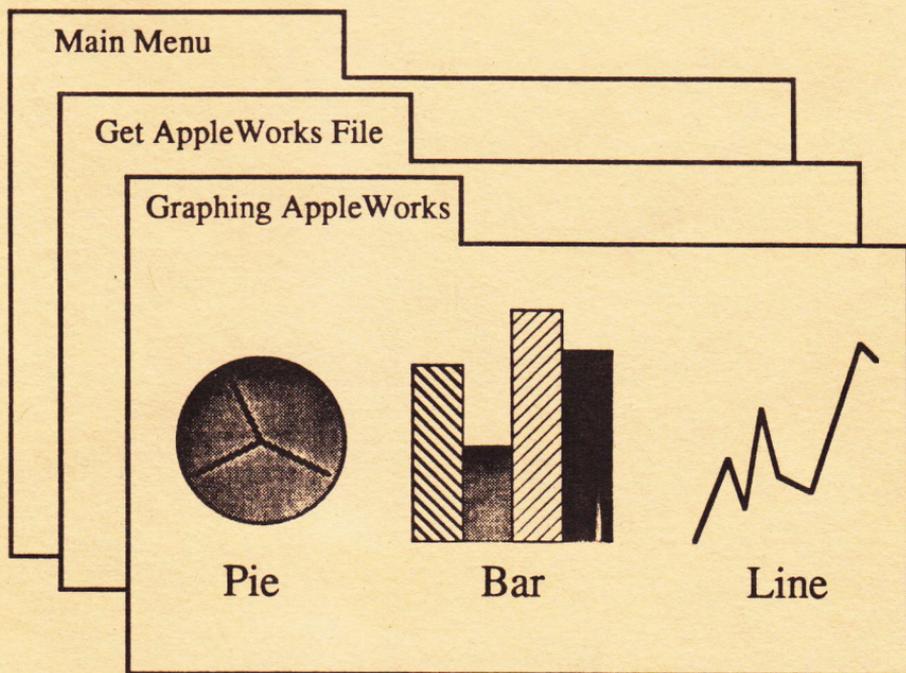


# GraphWorks™

## User's Manual version 1.0



**PBI Software**

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# *GraphWorks*<sup>TM</sup> - An Overview

GraphWorks by PBI Software has been developed to offer graphic capabilities for AppleWorks<sup>TM</sup>. GraphWorks, a stand-alone ProDOS Apple //e-//c program, utilizes the spreadsheet data files from AppleWorks<sup>TM</sup> and plots them as four graph types; line, bar, stack-bar, and pie. This program is menu-driven folder-oriented therefore if one knows how to use AppleWorks<sup>TM</sup>, GraphWorks should be a breeze.

## SYSTEM REQUIREMENTS

APPLE //e or //c . DISPLAY MONITOR . 80 COLUMN CARD  
ONE FLOPPY DISK DRIVE . APPLEWORKS<sup>TM</sup> PROGRAM .  
PRINTER (OPTIONAL)

## PRESENTING GRAPHIC DATA

Graphics have a way of presenting quantitative as well as qualitative information in an efficient and effective visual form. Graphics offer an understandable and simpler format in comparison to data presented in a narrative or tabular format.

GraphWorks is easiest to use with consecutive data and legends so if you plan to graph future spreadsheet information, remember the formats of the spreadsheet required by GraphWorks.

The phrase "one picture is worth a thousand words" can justify the need for GraphWorks.

## SUGGESTED GRAPHING TYPES

A line graph should be used to plot trends of changes over periods of time, relationships between the occurrence of two variables, or comparisons of trends and relationships (e.g. comparison of last year monthly sales <one range, 12 data points> and current year monthly sales <second range, 12 data points>).

The bar graph is similar to the line graph except comparisons are commonly within one certain time or unit (e.g. monthly sales of one year, 12 bars <months>).

The stack-bar is used for comparison of totals with multi-variables or quantities (e.g. two stack-bars, each representing a different year's total within the bars, internal variables representing the sales of each month).

A pie chart is the easiest to read and should be used only for the simplest of data visualization. Percentage of whole is the primary use for pie charts (e.g. age groups of Apple//buyers).

## GETTING STARTED

GraphWorks has a user interface similar to AppleWorks; menu folders, appropriate prompts, and function selection (highlight it with arrow keys or by pressing the number and then return).

The GraphWorks Disk is a start-up disk. Put GraphWorks disk in drive 1 and turn on computer system. Press space bar to continue. The Main Menu folder will appear shortly.

. The "Esc" will always bring you back into the Main Menu.

. When selecting from folders, either press the number of the desired function or use the up/down arrow until the function is highlighted and press "return".

To configure GraphWorks for your computer system there are two steps to follow: (1) configure your AppleWorks spreadsheet data disk location, and (2) configure your printer, printer interface card and location of that card. Select #4, "Other Activities". Press "Return".

If your computer has an external second disk drive, go to the next step. If you have a single drive or you have your AppleWorks spreadsheet data files on a hard disk, select #2, "Change current disk drive or ProDOS prefix". Press "return". Now under the "Change

Current Disk" folder, select your data drive and if selecting hard disk, type the COMPLETE pathname of volume (you are limited to a 35 character pathname). Press "Return".

. Remember to press "RETURN" after each folder selection. THE MANUAL ASSUMES YOU WILL PRESS RETURN AFTER EACH FOLDER SELECTION AND WILL STOP REPEATING "PRESS RETURN".

Now from the "Other Activities" folder, Select #3; "Specify information about your printer".

Select your printer, then your interface card, and then location of the slot/port. APPLE //c USERS: Select 2 for the interface card (and the 1 for the slot/port number.

Press ESC twice to go back to the "Main Menu" folder.

Select #1; "Add AppleWorks files to the Desktop". (15 files maximum)

You should now be in the "Spreadsheet Files" folder. All AppleWorks spreadsheet files will be displayed for you to place into the Desktop. This is the first step before you can graph the data. To place into the Desktop, select your file(s). Press ESC to go back to the "Main Menu".

Select #2; "Work with one of the files on the Desktop". The selections should be displayed. Highlight file to work with (use cursor keys) and by pressing RETURN; file should now appear in spreadsheet form.

. You cannot edit a spreadsheet file while you are in GraphWorks. All editing must be done in AppleWorks.

. If spreadsheet is larger than 12K, you will be unable to access data over that limit. If you wish to graph any data beyond the 12K range, you must quit GraphWorks and edit spreadsheet under AppleWorks. However, if the data is within the beginning 12K, just press "Return" when the menu prompts you.

## GRAPHING THE SPREADSHEET

Having the spreadsheet data displayed, select graph type by pressing S. Then either press P for Pie, B for Bar, S for Stacked Bar, L for Line. Press "Return".

. If you need help, just press ?

### To do a Pie Chart

Place cursor on the first data cell/point. Select "A" range by pressing A. Use arrows to highlight the selection of up to 24 numbers/data points. Press RETURN after selection of the data points. These points will then correspond to a percentage of the whole Pie.

To move quickly through the spreadsheet, "Open Apple" key and arrows will move the cursor one page in the direction of the arrow.

. All data points must be followed consecutively; all spaces and non-numerical data points will plot as a 0 (zero).

. If the screen does not display all data points, highlight what you can and press Return. Scroll through the spreadsheet data until the other desired datapoints are shown with at least the last data point last selected shown on screen and Press the desired range again and you will see where the range left off. Continue highlighting and the "paste" routine will complete. These steps are also required when working with a long legend.

To select a legend (some people refer to legends as labels) for the Pie; that is, to name each data point or "slice" of the Pie, first set cursor on the first cell where the legends begin. Press L. You will be given choices of legend ranges: a, b, c, d, e, f, and L. Select L. The legend must be equal to the number of data points in the A-range.

To view all options (legends & ranges), press O. To clear all, press X.

Press G for graph; now the graph will be displayed.

If you wish to insert any text into the graph, press ESC after graphing and then press T for title. You will immediately return to the last graph display but

with a cursor block on the left upper corner. You can move the cursor block with the arrows anywhere on the graph and make additions or change data information.

To re-enter the spreadsheet data display, press ESC. To review the plot with the title changes, press R for review. If you press G, the program will re-plot your graph without the title changes, if any. To clear a range or legend, select the range or legend and press ESC.

### **To Print**

To print, first check to see if display is satisfactory (do this by graphing - "G" or "R"). Press P for print. You have two choices, Regular or Expanded size. The regular size is usually a quarter of a page while the expanded size is almost a full page.

. The expanded graph may not fit the width of a sheet of paper. Epson, Okidata and Gemini print-outs will extend about 1/2" past a standard 8-1/2" width. You should place the sheet of paper lengthwise if possible.

Select the size and align the paper and press RETURN. To halt printing, press ESC.

### **To do a Bar Graph**

Place cursor in the beginning of each range. You can select up to 6 ranges with a TOTAL of 24 datapoints. Select the A-range thru F-range by pressing keys A thru F. Highlight the range and when completed, press RETURN. Press S to select type of graph, choose B for bar. To select a legend for each bar set, place cursor at the legend desired, press L for legend and then the letter to correspond with the range; A, B, C, E, or F. When the graph is plotted, a legend (box) will appear with the same pattern fill as the bars. The title and print command structure is the same as the Pie Chart.

. If you need help, press the ? key.

### **To do a Stacked-Bar Graph**

Select up to six ranges - A thru F range. For every data point within the range, the point will be "stacked" upon each other. Each range must contain an equal amount of data points, up to 24 in each range.

## To do a Line Graph

The procedure is the same as the bar graph. The only exception is that each range can have up to 52 data points. There can be up to six ranges.

## POINTS TO REMEMBER

Configure printer selection and data file/drive location only once.

"ESC" key should always brings you back to the last function.

You can plot:

- a total of 24 data points in a Pie graph.
- a total of 24 data points in a Bar graph.
- a total of 24 data points per range (up to 6 ranges) in a Stacked-bar.
- a total of 52 data points/six ranges in a Line graph.

If ranges/legends exceed the screen, highlight what you see. Press RETURN. Then scroll until more of data is shown. Press the range/legend key again and then continue to highlight from there. You must be sure that at least one of the data points is displayed after scrolling or you may erase the initial range setting.

Once your Options (legends and ranges) are selected, you can select different graph types by pressing S, then the type, and then G - to graph. It is not necessary to input the same ranges and legends. However, if the graph selected has data points in excess of the limitations of the selected graph, you will have to clear the ranges.

You must graph before you print.

The graph and options cannot be saved to disk.

If you intend to graph future AppleWorks spreadsheet data, keep in mind the structures of GraphWorks to minimize re-editing a spreadsheet.

If you have any questions, call PBI Software at (415) 349-8765 9 AM TO 5 PM PST. Any suggestions, send them to PBI Software, 1155B-H Chess Drive, Foster City, CA 94404 U.S.A.

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