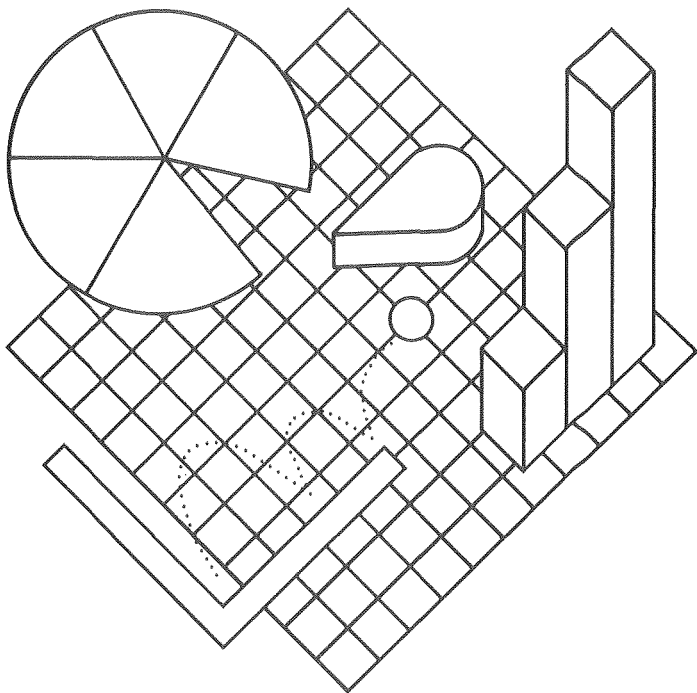# VISUALIZER™

BUSINESS GRAPHICS

For the Apple IIGS™

PBI SOFTWARE, INC.

Visualizer IIGS

Instruction Manual

PBI *Software, Inc.*

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Visualizer IIGS Introduction

Welcome to Visualizer, a color graphics program which creates business graphs with the Apple IIGS™. Why is there a need for Visualizer? Read on!

Business people are faced with stacks of numbers in many forms, including daily transactions, volume of sales, productive work days out of the year and a million other types of numbers which need to be understood so that they can be utilized. Unfortunately, this information is often in the form of columns of numbers on a spreadsheet, or on a piece of paper. Try to read all of these numbers and decide what they mean. Obviously a better way to display and read large quantities of numbers is needed.

Let's say that these numbers are on a piece of paper because they have just been printed from your AppleWorks spreadsheet. Wouldn't it be great if you could transform these numbers into a form where they could be understood and analyzed quickly? You can. Visualizer will take numbers which have been entered into the computer and saved on disk and create professional graphs in color. With the help of other special tools we have included in the package, you will be able to modify these graphs even further until they are exactly what you want.

How do you use this new tool? This question is as dependent on the user as it is on the program. The program and the manual are geared toward both the novice and the experienced computer user. To accomplish this, we have created a tool which is both easy to use and varied enough so that the professional who needs a powerful tool with many options is not limited. We have developed a balanced package which will not intimidate the beginner, but will grow with the user and be useful for years to come.

The manual begins with a few general instructions on getting started and follows with a quick tutorial which will allow all users to get a feel for how the program works. We will take you step by step through bringing up a spreadsheet, choosing your numbers, and drawing a chart. After going through the tutorial you will probably feel confident enough to try exploring the program on you own. However, if you run into snags, the rest of the manual is logically laid out to allow you to quickly reference any information by looking up the topic in the Table Of Contents.

Read This First - Back up Your Disk!

Now that you have returned from the store, having laid down your hard earned cash for our program, buy yourself some insurance. It's simple, takes only a few minutes of your time and a single diskette. What are we talking about? We are talking about sitting down with a utility program and making a copy of our program to put in a safe place (for more information on this refer to your IIGS manual). A place safe from coffee spills, pets, children, magnetic fields, and all other things that might harm your disk. It takes only a couple of minutes to protect yourself, so make a backup of our disk. You'll sleep better at night.

Enclosed are your Visualizer manual, one 3.5" disk, and a warranty card. Please fill out the warranty card and return it to us as soon as possible. We would like to ensure that you receive all update information as well as new product information from PBI Software.

Equipment Requirements:

This tutorial is designed for use with the following equipment:

Apple IIGS with 512K memory (Apple IIGS with a 256K memory expansion card)
RGB Monitor™
One 3.5 Drive™
ImageWriter II™

The minimum requirements for Visualizer are:

One Apple IIGS with a 256K memory expansion card installed
One Color Monitor (RGB for best graphics)
One 3.5" floppy disk drive

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Visualizer Tutorial:

Visualizer is a very easy tool to use and to prove this you will create and print a color graph on your ImageWriter // within the first fifteen minutes of using the program. We are assuming that you are familiar with using the mouse and performing rudimentary tasks such as clicking and dragging. If you are new to using a mouse, we recommend that you read the manual that came with your IIGS.

To begin with, we will need to start the program. Insert the Visualizer disk into the drive and turn on your computer. After a few moments (perhaps 30 seconds) you will be delivered to what we refer to as your work area. The computer screen is blank except for a line of options on the top of the screen. Also, there will be an arrow on the screen which you can move around by sliding the mouse on the desktop.

Now that we have the program running, we will need to get a spreadsheet onto the work area from which we will take our numbers to graph. To do this, go to the FILE menu and choose OPEN (move the arrow up to the FILE option, hold down the mouse button and drag down until OPEN is highlighted. Now release the mouse button). You will be presented with a selection box which offers a list of files which can be loaded and folders that can be opened. Along the right hand side of this menu are 4 options:
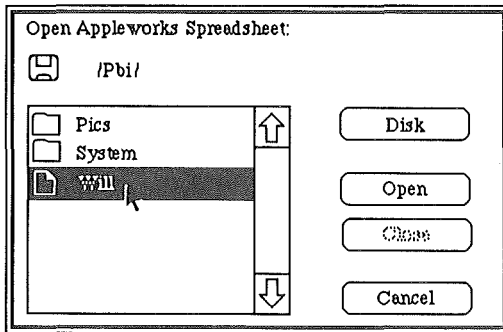

Figure 1

(DISK)

Clicking on this allows you to choose a different online volume. If you have two drives, then clicking on this will allow you to look at the files on a different disk. Also, if you eject the disk in drive 1 and insert a different one, you will have to click on DISK to tell the computer that you want to look at a different disk.

(OPEN)

When a spreadsheet file is selected (highlighted), choosing OPEN will open that spreadsheet. If you have selected a folder, then that folder will be opened and you will be able to look at its contents.

(CLOSE)

This option will be lighted only if you are inside a folder. This allows you to step out one level from the folder and back to the outer folder.

(CANCEL)

Use this option to tell Visualizer that you really didn't want to load a file after all and that you would like to return to where you were before you requested this option.

For the purposes of this tutorial, find the file called WILL and select it by placing the arrow cursor over the name and clicking the mouse button once. WILL should now be highlighted. Now choose the OPEN button on the screen and you will load the file you specified. A faster way to do this is to click twice on the file name when the arrow is on it ("Double-Clicking").

After loading a file you will see the work area with a spreadsheet loaded onto it. Examine the spreadsheet to find the numbers which you would like to graph.

For this tutorial, move the arrow over the top of the number '11' in column B, row 2, and then press and hold the mouse button down.

	A	B	C	D	E
1		1980	1981	1982	1983
2	Sales(m)	11	20	20	18
3	Expns.(m)	5	10	9	9
4	Profit(m)	6	10	11	9
5					

Figure 2

Now drag the arrow down to the number '9' in column E, row 4 (note that all of the area we have chosen to graph is now highlighted).

(B2..E4)

	A	B	C	D	E
1		1980	1981	1982	1983
2	Sales(m)	11	20	20	18
3	Expns.(m)	5	10	9	9
4	Profit(m)	6	10	11	9
5					

Figure 3

Release the mouse button now that you have selected the numbers to graph. Reselect the range by repeating this operation until you have chosen the correct block of numbers to graph. For this tutorial, please use the range we originally highlighted so that your graphs will match the ones we have in our manual.

You can also change numbers on the spreadsheet. If you would like to change some of the numbers, you can do so by putting the arrow over them, clicking the mouse button, typing in the new number, and pressing return. Wait! If you change any numbers during this tutorial, your graphs will not match our diagrams. We recommend that you complete the tutorial first and then return to the file "Will" and practice manipulating the numbers.

Drawing a graph of your numbers :

You have told Visualizer what numbers you want to graph, now you will have to specify the kind of graph you would like to see. Go to the GRAPH menu and pull the menu bar down to see the different graph types available. The graph types are 3-D Pie, Pie, Bar, Point/Line, Area, High-Low, Scatter and Regression. Refer to Chapter 3 for more information on each of these chart types.

Choose POINT/LINE for this tutorial. Visualizer should now draw a graph on your screen which looks like Figure 4.
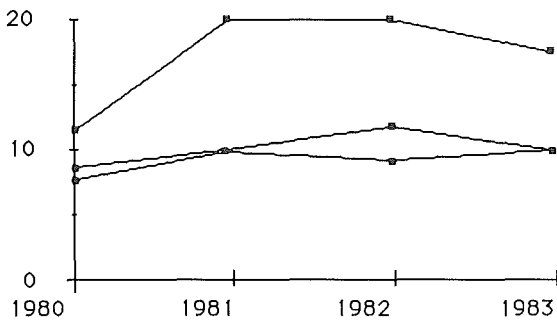

Figure 4

If the graph on your screen doesn't look like this, go to the WINDOWS option and select SPREADSHEET. Use this to go back to the spreadsheet and make sure that your ranges (numbers) are selected correctly.

Let's try to make a bar chart using the same data. Go to the GRAPH menu and choose BAR. The graph on your screen should now look like Figure 5.
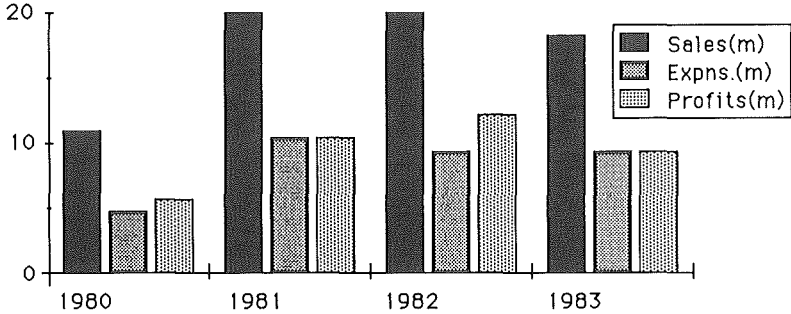

Figure 5

The legend option brings a legend box to the screen. The legend box displays a different color for each range on the graph. To get the legend box to appear, go to the OPTIONS menu and choose LEGENDS. A box should now appear on your screen containing small color boxes. If you want to move the legend box, hold the mouse button down anywhere within the legend box (except for the color boxes) and drag.

Change the color of any of these boxes and the corresponding data range by moving the arrow up to the box that you would like to change and click the mouse button. Do this now. A palette of 136 different colors will appear on your screen and you can change the color for the bar you specified to any available color. Pick a color and click on it. Click on OK when you are satisfied with your choice and Visualizer will redraw your graph to reflect the color that you have chosen. Repeat these steps until you have chosen all of the colors that you would like to use in your bar chart.

Now that you have a graph in the colors that you want, change the colors of the lines in the graph and the color of the text as well. Change the color on any of these items, by going to the OPTIONS menu and selecting DISPLAY. You will be presented with three boxes of color with titles reading BACKGROUND, TEXT and LINES. Change the color on any of these items by placing the arrow on top of the box and clicking. If you have clicked on TEXT then the box will change between four colors. If you have clicked on BACKGROUND or LINES, you will be presented with a color palette from which you can choose a color. When you have finished changing colors, click on OK.

You have nearly completed the graph, but let's add a title before you print it out. Move the arrow to the OPTIONS menu again and choose ADD TEXT. A box will appear for you to type in a title for the graph. After typing in the title for the graph, choose OK to accept the text. The title for the graph will show on the screen inside a box. The text can be moved by placing the arrow on it, holding down the mouse button, and then dragging the box to where you would like to place the text.

To print out our graph, you need to set up the printer options. Choose the FILE menu and select PRINT.... A selection box will appear as in Figure 6. Select the Color option to have Visualizer print to your ImageWriter in color and then choose OK to continue.

```
┌─────────────────────────────────────┐
│ ┌─────────────────────────────────┐ │
│ │            Print...             │ │
│ │                                 │ │
│ │   ⊠  Color                      │ │
│ │   ☐  Exchange black and white   │ │
│ │   ☐  Graphics Only              │ │
│ │                                 │ │
│ │          ( Cancel )  (( OK ))   │ │
│ └─────────────────────────────────┘ │
└─────────────────────────────────────┘
```
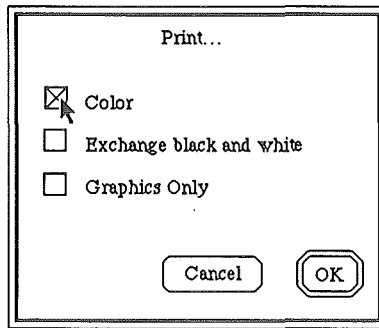
Figure 6

Let's print the graph now. Your printer should be on and set to where you want the graph to appear. Now go back to the FILE menu and choose PRINT. Your printer will begin to print out your graph. If it doesn't, check to make sure that your printer is turned on and selected. You can stop printing by pressing the OPEN APPLE and PERIOD keys simultaneously.

File Menu

```
File  Edit  Graph  Axis  Options
New
Open
Save
Close
Load Background
Set Background
Save Background
Print
Print...
Quit
```
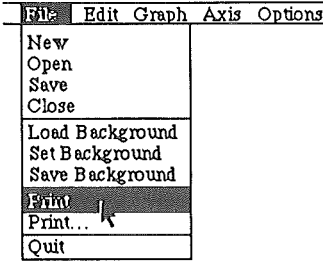
Figure 7

There are 10 commands under the FILE menu for the transferring of data to and from floppy or hard disk. See Figure 7 above.

New

This option opens a blank spreadsheet in the work area. Use this option if you do not have data already in a spreadsheet and you want to enter the numbers by hand.

Open

This allows you to open an existing spreadsheet created either in Visualizer or AppleWorks. You will be presented with a selection box which offers a list of files that can be loaded and folders which can be opened. Along the right hand side of this selection box are 4 options: DISK, OPEN, CLOSE, CANCEL.
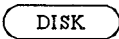
(DISK)

Clicking on this allows you to choose a different online volume. If you have two drives, then clicking on this will allow you to look at the files on a different disk. Also, if you eject the disk in drive 1 and insert a different one, you will have to click on DISK to tell the computer that you want to look at a different disk.

(OPEN)

When a spreadsheet file is selected (highlighted), choose OPEN to open that spreadsheet. If you have selected a folder, that folder will be opened and you can examine its contents.

(CLOSE)

This option will only be lighted if you are working inside a folder. It allows you to step out one level from the folder and back to the outer folder.

(CANCEL)

Tell Visualizer that you really didn't want to load a file after all and that you would just like to return to where you were before you requested this option.

Save

Save the cells chosen (highlighted) in Visualizer to the disk. Only the data highlighted will be saved. The data is saved under DIF format. DIF format is a simple way to write data to a disk which is recognized by most spreadsheet programs. Unfortunately most programs use different formula formats for saving, therefore formulas are lost when saved under DIF format and only numbers are saved.

Close

When you are finished with a spreadsheet, or if you want to load another one, you will have to close the file that is currently on your work area. Choose CLOSE from your FILE menu and the spreadsheet that is currently in use will be put away. If you have made changes to the spreadsheet, you will be asked if you want to save the file before the spreadsheet is closed.

Load Background

Professional graphics often have charts with pictures in the background. These pictures can be used to add emphasis to the message of the graph. Visualizer can do this for you. Create a picture in a paint program then bring it into Visualizer. Go to the FILE option and choose LOAD BACKGROUND. You will be presented with a list of available files and folders on your disk much the same as you were when you chose OPEN earlier. You will only be able to load potential picture files (these are binary files typically non-text information, approximately 32K in size). Select an available picture and chose OPEN. If you decide you don't want a picture, choose CANCEL. To remove a background picture from the graph, go to the LOAD BACKGROUND option and choose it again.

Set Background

Before you can save the current screen image as a background picture, you must choose SET BACKGROUND. This option locks the image without scale handles. If you set the background, the graph which is currently on the screen will be saved as part of the background. Any subsequent graphs you draw will have the current image in the background. This feature can be used effectively to create images with multiple graphs overlaid onto each other.

Save Background

There are many times when it would be nice to save your charts to disk so that you can re-display or even load them into a paint program and further manipulate them. Fortunately, Visualizer also provides a way to save your files to disk. Choosing SAVE BACKGROUND from the OPEN menu will present you with a list of the files currently on the disk, an option to change disks which you would like to save to (DISK), a save button (SAVE), and a cancel button (CANCEL). At the bottom of the window there is a rectangle with a flashing cursor in it. In that rectangle, enter the name under which you would like to save the file, and click SAVE.

Note: By setting and saving your graph as a background picture, you can repeat this process and fill your display with multiple graphs. This overlay feature allows representation of different ranges and different graph types on one screen.

Print

The Print option will output your graph to the printer that you have specified under the PRINT... menu (detailed below). Make sure that your printer is turned on and that the select light is on. In addition make sure that the cables leading to the printer are plugged in correctly.

Print...

The Print... option allows you to change the options under which printing will occur. If you want to print your graph in color on your ImageWriter II, click on the COLOR box. To create inverted black and white pictures, click on EXCHANGE BLACK AND WHITE (Note: this does not invert colors). The GRAPHICS ONLY option increases the sharpness of color pictures, but can cause some distortion of text.
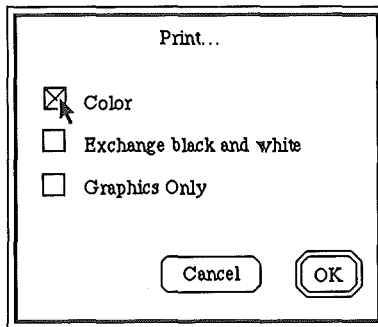
Print...

☒ Color

☐ Exchange black and white

☐ Graphics Only

Cancel   OK

Figure 8

Quit

To quit Visualizer, choose the QUIT option under FILE and the screen will return to the Finder. If you have a changed spreadsheet which has not been saved, Visualizer will ask you if you want to go back and save the file.

Edit Menu

Figure 9

The edit menu allows you to cut, copy, and paste numbers to and from the information box in the spreadsheet. The Delete option allows text, lines, and legend boxes to be deleted from the graph and, in addition, the selected range in the spreadsheet itself can be deleted with the Clear Range command.

Figure 10

Cut

The Cut command cuts the number or label in the information box and saves it to the clipboard.

Copy

The Copy command is the same as the Cut command in that it will take text and put it on the clipboard. Copy does not remove the information from the information box.

Paste

The Paste command will take the text or number that is on the clipboard and copy it into the information box.

Note : The clipboard can only hold one number or label at a time.

Delete

This command will delete whatever is currently selected in the graph mode (except for the graph itself). This provides a quick way to get rid of text, legends, and lines. An even quicker way to perform this function is to hit the DELETE key.

Copy Range

This command allows you to copy an entire range over to another area on the datasheet. This is very much like the Copy command except you can copy the entire range. Use the mouse and highlight a range of cells to copy, then go up to the Edit Menu and select Copy Range. You will be prompted for the first cell to which you want to copy the data. Enter in the cell number (i.e. B25) and the range will be copied to the area you specified.

Clear Range

Quickly zero an entire range of the spreadsheet by selecting the range (highlight the range by clicking and dragging) and then select Clear Range. The range will be set to zero.
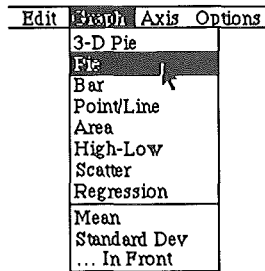
Graph Menu

Figure 11

Change the chart type at any time by going to the GRAPH menu and choosing a graph type. The graph will be drawn or redrawn if you already had a chart on the screen. Once the chart is drawn, you can click on any part of it and scale handles will appear around the graph. Move the graph by grabbing the scale handles and dragging. Resize the graph, either vertically or horizontally, by grabbing the handles and pulling the graph larger or smaller. When selecting the pie chart, notice the addition of scale handles on the individual pie slices. These handles allow you to grab and pull out individual slices of the pie.

Visualizer will allow up to 52 data points in a range and up to 24 ranges. Data is graphed in the following format :

- If the column length is greater than or equal to the row length of the block selected, then the data is separated into columns of data and the legend titles come from the tops of each column.

- If the row length is greater than the column length then the data is separated into rows of data and the legend titles come from the left hand sides of each row.

An exception to the above rule is pie charts. They use only the first range chosen. Each data point will have its own label in the legend box.

Note : Draw your charts and graphs more quickly by turning off all 3-D options under Format and draw your text, lines, and color changes first. This technique speeds up the design process by saving the program from redrawing a very complex diagram after every change is made.

Graph Types

PIE: The pie chart is used primarily to compare numbers (i.e. to show percentages). Visualizer will take the entire set of data to graph and determine the percentage of the pie that each number represents. Note: If a selected number is negative, Visualizer will take the <u>absolute value</u> of it for pie chart graphing.

3-D PIE: The 3-D Pie chart is similar to a normal pie chart except that it presents the chart in three dimensions.

BAR: The bar chart is a series of bars drawn on the screen. The size of each bar is determined by the size of the number which it represents. Refer to the Options chapter (pages 24-27) and the Format section (page 26) for more information on bar graphs.

POINT/LINE: This option draws a graph which consists of points, lines, or points connected by lines. Refer to the OPTIONS Menu section for information on how to create different chart types.

AREA: The area chart is similar to a line chart except that the area underneath the lines is shaded using the same color in which the lines are drawn. The first range selected is the first range shaded in.

HIGH-LOW: This option connects the Minimum and Maximum value for each category with a line for easy comparison of tolerances. This feature is useful for scientific applications where deviations must be compared.

SCATTER: The scatter plot is essentially the same as a line/point graph without lines. It is presented as a separate option for users who are comfortable referring to a scatter plot or a scattergram.

REGRESSION: This graph type incorporates a regression line into the scatter diagram. This shows the relationship between the different variables (ranges) you have selected. Visualizer mathematically calculates the best fitting linear line that represents the points on the graph.

MEAN: This option plots the average or mean between the various data ranges. Visualizer will plot a line representing the mean in all graphs except the pie. Visualizer will automatically calculate the average between all data points.

STANDARD DEV.: Visualizer will plot lines representing the standard deviation of the data you have selected. Visualizer will plot three lines to measure the standard deviation. One will be the center line which is thicker than the other two. This line represents the mean or average of all the numbers. The other two lines represent the value one standard deviation from the mean. 66% of all values are within these lines.

... IN FRONT: This option instructs Visualizer to display the mean or standard deviation lines in front of the graph. Otherwise, they would be in the background of the graph.
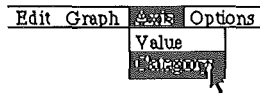
Axis Menu

Figure 12

The axis menu allows the user to change the values appearing on the Value and Category axes (in a Cartesian plane, the Value axis is the Y-axis and the Category axis is the X-axis).

Value & Category Axes

When Visualizer draws your bar and line charts, it chooses the increments and highest value which will be used on the axes. Usually the choices that Visualizer makes will be fine, however you may find that you don't want to keep these values. To modify them, select which axis you wish to modify under the AXIS menu. A selection box will appear with various numbers. See Figure 13. Turn off the automatic value selection box to the left of each value you wish to change. Then place the arrow over each value you wish to modify and double click to select it. Now type in the new value. The AXIS value is where the Category axis and the Value axis intersect. This can be set to any value within the maximum axis range.

Figure 13

You can also set the axes scale to Logarithmic. This option will transform the scales from a linear orientation to a logarithmic orientation. This is useful for plotting scientific data related to each other by powers of ten (logarithmic relationships).

A standard graph has the vertical axis on the left hand side of the graph. Switch the vertical axis to the right hand side of the axis, by clicking on the REVERSE ORDER box under the Value axis menu. To flip the graph upside down, select Reverse Order from the Category axis menu.

Select the OK button to enter in your changes and the graph will be redrawn to the values you specified. Selecting CANCEL will return the graph to its original form.

Options Menu

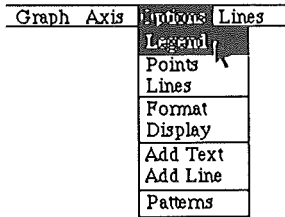| Graph	Axis	Options	Lines
		Legend	
		Points	
		Lines	
		Format	
		Display	
		Add Text	
		Add Line	
		Patterns	

Figure 14

After you have drawn a chart, there are a number of options that you might want to employ including changing the color of your text and drawing your bar chart in 3-D.

Legend

The legend option brings a legend box to the screen. This legend box represents the name of the range and its corresponding color. If you want to move the legend box, hold the mouse button down anywhere within the legend box (except for the color boxes) and drag.

Another feature of the legend box is that it allows you to change the colors in your graph. To change the color, place the arrow on top of a color in the legend box and click on it. A palette of 136 colors will appear on the screen. Choose a new color by placing the arrow on top of the selected color and click on it. After selecting your new color, click on OK. The chart will change to the color you have selected.

Note: You cannot change patterns when in the black and white mode.

Points

When drawing point/line charts, there are several options that you can employ. For a simple Scattergram, choose POINTS (so that the check mark shows up on the menu) and unchoose LINES (so that the check mark is not showing). Note that to DESELECT either POINTS or LINES, you need to rechoose them from the OPTIONS menu.

Lines

The LINES option is the opposite of the POINTS option in that it turns on and off lines in POINT/LINE. If you have a scattergram on your screen and you want to have a graph with lines connecting to dots, choose LINES and the program will generate lines.

Format

Format can be used to change the way that different chart types are drawn on the screen.

Order

Figure 15

ORDER: Order changes the way bar charts are displayed. This command allows you to graph the data by row or by column. Switching this mode allows you to exchange the Category axis and the Value axis data.
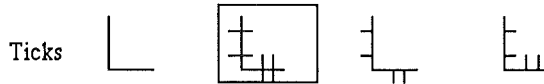
Ticks

Figure 16

TICKS: Ticks allows you to change the way tick marks are displayed on the axes. The ticks can be turned off, run through the lines, run on the outside of the lines, and run on the inside of the lines.

Bars

Figure 17

BARS: This option allows you to change how the bars are drawn. The bars can be drawn in the standard format; in 3 dimensions (with shadowing); in standard format but overlapping each other; in 3 dimensional format overlapping each other; and in stacked format.

Display

Visualizer allows you to customize just about everything on your graphic images. This includes the background color, color of lines, and the color in which text is displayed. To change the color on any of these items, go to the OPTIONS menu and select DISPLAY. You will be presented with three boxes of color with titles reading BACKGROUND, TEXT, and LINES. Change the color on any of these items by placing the arrow over them and clicking. When clicking on the TEXT box, you will toggle through a series of four colors: Black, Magenta, Light Green, and White. Both BACKGROUND and LINES give you a color palette with which you can change the colors of your current graph. To change the color, place the arrow over the color desired and click the mouse. When you have finished changing colors, click on OK to accept the changes.

Add Text

This option enables you to add text to the graph. You will be presented with a box in which you can type your text. The text will be displayed on your graph. To change the location of your text, place the arrow over the text and hold the button down. You will then be able to drag the text box anywhere on the screen (just as you can with the Legend box).

Add Line

The add line feature allows you to add a line between text and a point on your graph. This is a very useful feature as it allows you to connect the text on the graph to the information it is describing. Move the lines around by placing the cursor on top of

the line and dragging. To change the size and direction of the line, click on the grabber bars on the ends of the line and drag. The following example illustrates taking a line and bringing one end around to point the labelled "Sales".
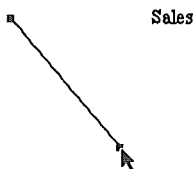
Sales

Figure 18

In Figure 17 we see the arrow being used to grab one end of the line.

Sales

Figure 19

In Figure 18, the line has been dragged around and now connects to Sales.

Lines can also be used in other ways such as underlining text, boxing in text (to give it a frame) and creating a box within a box.

Patterns

There are times when it will be preferable to have black and white patterns instead of color graphics on your charts. Examples of this are if you have a monochrome monitor, or if you will be printing to the Laserwriter. When in pattern mode, all of your Point/Line charts will be connected with different symbols so that lines can be distinguished from each other.
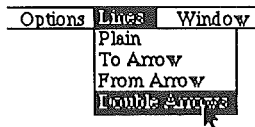
Lines Menu

Figure 20

Visualizer enables you to place arrows or lines onto the graph to assist in showing the relationships between text and graphics. Lines can be placed at different angles and lengths anywhere on the graph.

First, we must add a line to the graph. Go to the Options menu and choose Add Line. A line will be placed vertically near the right side of the graph. Click on the line and the handles will appear. Now the line can be manipulated. Grab one of the handles on either end of the line and move the mouse around. You will see the angle and length of the line change with the movement of the mouse.

If a line has been selected (handles appear on the screen) all of the options in the Lines menu will be highlighted. The four options in the lines menu enable you to use the line arrows or pointers.

Plain

This is the default setting. There will be no arrows on the line if this option is chosen.

To Arrow

This places an arrow at the right end of the just drawn line. If the line has been rotated then an arrow will appear at the left end of the line.

From Arrow

This places an arrow at the left end of the line.

Double Arrow

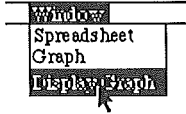This places arrows at both ends of the line.

Window Menu

Figure 21

With Visualizer you will use two different work areas, the spreadsheet and the graph page. The window menu allows you to change the window that is shown.

Spreadsheet

Choosing Spreadsheet will bring the spreadsheet to the foreground on your computer screen and will allow you to review and edit it.

Chart

Chart brings the graph you have drawn to the foreground on your computer screen so that it can be manipulated and viewed.

Display Graph

This option will drop away the menu and scroll bars and display the full graph. This allows you to see how the finished image will look on paper.

Keyboard Short Cuts

```
⌘- C Copy
⌘- D Display
⌘- F Format
⌘- G Graph
⌘- L Line
⌘- O Open
⌘- Q Quit
⌘- S Spreadsheet
⌘- T Text
⌘- V Paste
⌘- X Cut
```

Figure 22

Command keys provide a quick way to skip going to a menu and selecting a certain item. Use these short cuts by holding down the command key (the key at the bottom left hand corner of the keyboard with the clover leaf and apple on it) and the specified key. For example, to cut something out hold down the command key and the X.

To move around the spreadsheet with the keyboard, use the up and down arrow keys to move up and down. To move right, use the TAB key. To move left, hold the OPEN-APPLE key and use the TAB key.

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