## **VP DATA-DRIVEN GRAPHICS**

**XEROX** 

**VP Series Reference Library Version 1.0** 

This publication could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of this publication.

This publication was printed in September 1985 and is based on the VP Series 1.0 software.

Address comments to:

Xerox Corporation
Attn: Product Education (N2-15)
701 S. Aviation Blvd.
El Segundo, California 90245

WARNING: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to subpart J of part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Printed in U.S.A. Publication number: 610E01050

XEROX ©, 6085, 8000, 8010, 860, 820-II, 8040, 5700, 8700, 9700, 495-1, ViewPoint, and VP are trademarks of Xerox Corporation.

VP are trademarks of Xerox Corporation.

IBM is a registered trademark of International Business Machines.

DEC and VAX are trademarks of Digital Equipment Corporation.

Wang Professional Computer is a trademark of Wang Laboratories, Inc.

Lotus 1-2-3 is a trademark of Lotus Development Corporation.

MS-DOS is a trademark of Microsoft Corporation.

The Source is a service mark of Source Telecomputing Corporation.

VisiCalc is a registered trademark of VisiCorp.

WordStar is a registered trademark of MicroPro International Corporation.

Teletype is a registered trademark of Teletype Corporation.

© 1985, Xerox Corporation. All rights reserved.

## **Table of contents**

1.	VP Data-Driven Graphics overview	1
	Related information	2
	VP Series reference library	2
	VP Series training guides	2
	Hardware/software requirements	2
	Hardware	2
	Software	2
	Using data-driven graphics	3
Bar charts Line charts Pie charts Chart creation	Bar charts	4
	Line charts	6
	Pie charts	7
	Chart creation	8
	Chart appearance	9
	Chart updates	9
	Statistics and facts	10
2.	Actions and procedures	11
	Placing a chart in a document	12
	Selecting a chart	13
	Entering chart data	14
	Entering data on the property sheet	14
	Using a table to drive the chart	16

	·	
	Selecting bar chart properties	17
	Selecting line chart properties	20
	Selecting pie chart properties	22
	Updating table-driven charts	23
	Work strategies	24
	Selecting a chart element	24
	Customizing chart elements	25
. Prope	erty/option sheets and windows	27
	Basic graphics transfer document	29
	Bar chart property sheet: spatial	33
	Bar chart property sheet: appearance	37
	Bar chart property sheet: all data	41
	Line chart property sheet: spatial	45
	Line chart property sheet: appearance	51
	Line chart property sheet: all data	55
	Pie chart property sheet: spatial	61
	Pie chart property sheet: appearance	65
	Pie chart property sheet: all data	69

## **List of figures**

1-1	Bar chart	5
1-2	Line chart	7
1-3	Pie chart	8
2-1	Placing a graphic frame in a document	12
2-2	Basic bar chart	13
2-3	Chart control points	14
3-1	Basic graphics transfer document	28
3-2	Bar chart property sheet: spatial	32
3-3	Bar chart property sheet: appearance	36
3-4	Bar chart property sheet: all data	40
3-5	Line chart property sheet: spatial	44
3-6	Line chart property sheet: appearance	50
3-7	Line chart property sheet: all data	54
3-8	Pie chart property sheet: spatial	60
3-9	Pie chart property sheet: appearance	64
3-10	Pie chart property sheet: all data	68

(This page intentionally blank)

# VP Data-Driven Graphics overview

VP Data-Driven Graphics software automatically transforms data into graphic forms. Using this software package, line, bar, and pie charts can be drawn to exacting specifications. Additionally, a variety of layout and shading properties can be selected to enhance each chart.

## **Related information**

The materials in the following paragraphs provide f information related to VP Data-Driven Graphics software.



## **VP Series reference library**

- Xerox ViewPoint
- **VP Document Editor**

## **VP Series training guides**

- Xerox ViewPoint
- VP Document Editor
- **VP Data-Driven Graphics**



## Hardware/software requirements

The following are the hardware, software, and network services requirements for VP Data-Driven **Graphics:** 

#### Hardware

A 6085 Professional Computer System, or an 8010 Information System

#### Software

- Xerox ViewPoint software
- VP Document Editor software

- VP Data-Driven Graphics software
- VP NetCom, VP RemoteCom, or VP StandAlone software

Xerox ViewPoint software, and either VP NetCom, VP RemoteCom, or VP StandAlone software, must be installed and enabled on the workstation.

VP Data-Driven Graphics software and all prerequisite software must be installed, enabled, and running on the workstation. Before using the software, open the application loader icon and verify that the appropriate software is loaded and running.

The sub-tab titled "Application Loader" in the VP Series reference library contains additional information on the application loader.

## **Using data-driven graphics**

Data-driven graphics transforms data automatically into bar charts, line charts, and pie charts. Data-driven graphics features include the following:

- Basic templates for bar charts, line charts, and pie charts are available in the basic graphics transfer sheet.
- Data for charts can be specified on the all-data page of the chart property sheet or in a table associated with the chart. Additionally, the chart can automatically be redrawn when the data is adjusted.
- Chart appearance can be selected as desired, using a variety of shadings and textures.
- An explanatory key can automatically be associated with each bar, line, and pie chart.

Data-driven graphics and basic graphics have many similarities:

- Bar charts, line charts, and pie charts exist within graphic frames. A graphic frame can contain any type of graphic object.
- Elements of data-driven graphics can be moved, copied, deleted, or stretched.
- Elements of data-driven graphics have associated properties that can be changed.
- Data-driven graphics can rest under or over other graphic objects, and their placement in a graphic frame can be facilitated through the use of an online grid.

#### **Bar charts**

A bar chart uses a series of bars with various heights, shadings, and textures to represent data. The heights of the bars correspond to the data specified for the chart. The chart can be tailored as desired using the spatial and appearance pages of the chart property sheet. Bar chart appearance and spatial pages include the following options:

- Bar chart orientation (vertical or horizontal)
- Bar stacking and grouping
- Tick marks and numbers on both the vertical and horizontal axes
- Labels and keys
- Shading and texture of the bars

Figure 1-1 is a sample bar chart.

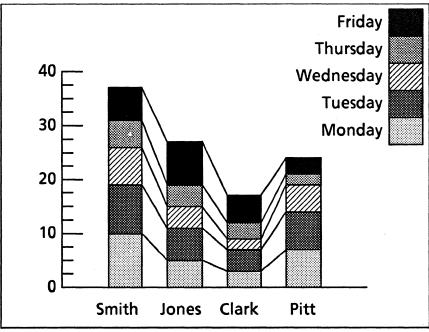


Figure 1-1 Bar chart

#### Line charts

Line charts display a series of lines or points to represent trends indicated by data. Line chart elements include scale, point sets, and line(s). Point sets or lines are automatically drawn to reflect chart data.

Line chart data can be displayed in the following ways:

- A data point graph shows each point specified by the chart data and is most useful when the data samplings are closely grouped.
- A line graph draws a line connecting the dots and is most useful for indicating trends while retaining data point locations. The chart shown in Figure 1-2, Line chart, is an example of a line graph.

The chart can be tailored as desired. Chart appearance can be selected using the spatial and appearance pages of the line chart property sheet. The spatial and appearance pages include the following options:

- Line chart orientation (vertical, horizontal, left, or right)
- Tick marks and numbers on both the vertical and horizontal axes
- Labels and keys
- Point and line structure

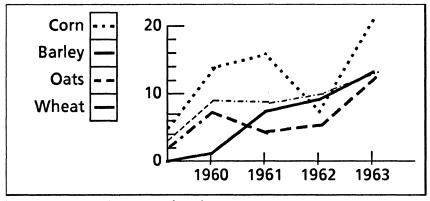


Figure 1-2 Line chart

#### Pie charts

A pie chart is a graphic representation of a set of values as percentages of a whole. Each value is represented as a wedge-shaped portion of a circle called a pie slice. The size of a slice corresponds to the percentage that the slice's value contributes to the whole pie.

Each pie slice has a name and a numerical value. The name is used to label the slice. Slice labels are placed around the pie, and each label is connected to the slice's arc by a line. The numerical value determines the size of the pie slice. Pie slices are generated clockwise from vertical in the order that the values are specified in the all-data page of the chart property sheet or in the associated table.

A variety of textures and shadings can be selected for the pie slices. A pie chart can have either an adjoining or separated layout. In the adjoining layout, slices are placed immediately adjacent to one another to form a circle. In the separated layout, each slice is displaced outward from the center to emphasize slice differences.

Figure 1-3 is an example of a pie chart in adjoining and separated layouts.

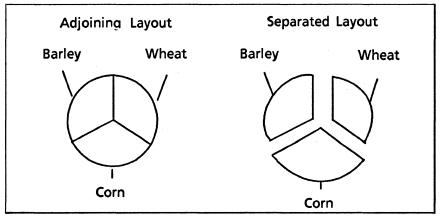


Figure 1-3 Pie chart

#### Chart creation

To create a data-driven chart, a basic chart template is copied from the basic graphics transfer document into a graphic frame.

The data to drive a chart can be contained in the alldata page of the chart property sheet or a table in the document. When a table is used to drive a chart, the table and chart must be contained in the same document and the table cannot have divided columns.

VP Data-Driven Graphics automatically shades each line, bar, or slice when the chart is created. These shadings and textures can be modified as desired.

The chart is selected as a whole for entering data for A the bars, lines, or pie slices; styling the chart; and moving or stretching the chart. An individual part of the chart is selected only for customizing an element of the chart (for example, changing the location of the key).



#### **Chart appearance**

Chart appearance can be specified on the spatial and appearance pages of the chart property sheet. Chart lines, bars, slices, and text labels are joined as a single graphic element for moving, copying, and deleting charts as one object.

To customize individual parts of a chart, the chart can be split using [JOIN]. Individual chart elements can be selected and modified by selecting options on the element's property sheets or by using <MOVE>, <STRETCH>, or <DELETE>. After the chart is customized, the chart elements can be rejoined into a single construction.

Modifications to chart elements include:

- Moving the key to a location that does not overlap the chart
- Moving the chart labels
- Adjusting the spacing between bars on a bar chart
- Changing the properties of bars, lines, or pie slices
- Deleting bars, lines, or slices

#### Chart updates

Charts driven by data on the all-data page of the chart property sheet are updated by entering the new information in the property sheet and selecting [APPLY] or [DONE].

Charts driven by data in a document table are updated by selecting [UPDATE CHARTS] in the document auxiliary menu.

## **Statistics and facts**

- When data in a table driving a chart is changed, the chart must be updated to reflect the change using the [UPDATE CHARTS] command.
- Only a subdivided column can contain repeating subrows.
- If a chart is driven by a table, the table must be contained in the same document.

## 2. Actions and procedures

The actions and procedures contained in this section enable you to:

- Place bar, line, and pie charts in documents
- Select all or part of a chart to define chart properties
- Enter data for a chart in a property sheet or table
- Select chart appearance and style properties
- Update table-driven charts

## Placing a chart in a document

To place a chart in a document, place a graphic frame in the document and copy a basic bar, pie, or line chart from the basic graphics transfer document into the graphic frame.

Charts can also be copied from another location in the document or from another document and then modified as desired. To copy a chart from another graphic frame, select the chart, press <COPY>, and select inside the graphic frame in your document. To copy a graphics frame containing a chart, select the graphics frame or graphic frame anchor containing the chart, press <COPY>, and select the character the chart is to follow.

If you do not have the basic graphics transfer document on your desktop, open the the workstation divider in the directory. Then open the basic icons divider and copy the basic graphics transfer document to your desktop.

Once you have the basic graphics transfer document on your desktop:

1. Open the document, place a graphics frame in the document, and stretch the graphic frame to the approximate size desired.

To place a graphics frame in the document (Figure 2-1), hold down <KEYBOARD>, press <SPE-CIAL>, and press <A>.

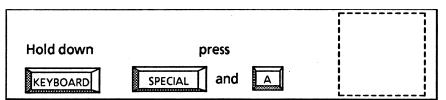


Figure 2-1 Placing a graphics frame in a document

2. Open the basic graphics transfer document, select the chart, press <COPY>, and select inside the graphic frame as the destination. If the document is under the window, adjust the window size. Figure 2-2 illustrates the basic bar chart.

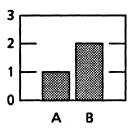


Figure 2-2 Basic bar chart

3. Select the bar, line, or pie chart nearest the desired control point and stretch or magnify the copied chart to the desired size.

## Selecting a chart

The chart is selected for entering data, selecting appearance properties, and moving or stretching the chart. Selecting charts differs from selecting other graphic objects because the control points for the chart are located on an invisible rectangle surrounding the chart. Since this rectangle is not visible on the screen, the guiding point is chosen by positioning the pointer near a section of the chart closest to the desired control point.

To select the chart, position the pointer on the chart nearest the desired control point and click the left mouse button. The eight control points around the invisible rectangle should become visible, with the guiding point somewhat larger. Figure 2-3 illustrates the points displayed when a chart is selected.

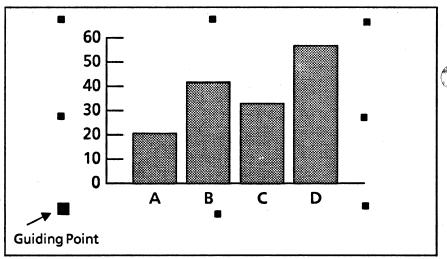


Figure 2-3 Chart control points

After being selected, the chart can be moved, stretched, magnified, or have properties changed.

## **Entering chart data**

To describe the bars, lines, or slices on the chart, you enter the data in the [ALL DATA] chart property sheet or specify a table in the same document as the source of the data. Lines, bars, and slices can be driven by column or row.

## Entering data on the property sheet

To enter chart data on the all-data page of the chart property sheet:

- Select the chart, press <PROP'S>, and select [ALL DATA] in the chart property sheet.
- 2. Select [ROW] or [COLUMN] as the Data Set option to specify whether the chart labels are from the first row or the first column of the data table.

- 3. Select [PROPERTY SHEET] in the Data Table option to enter the data on the property sheet, and select [ROW] or [COLUMN] as the Fill in by option. At the bottom of the property sheet is a table in which you enter the data for the chart. If [ROW] is selected, the cursor moves across each row of the table. If [COLUMN] is selected, the cursor moves down each column of the table.
- 4. Add the desired number of rows and columns to the table.

To add rows to a table, select a row (select a field in the row and adjust the selection to a second field in the row), press <COPY>, and select the lower line of the last row in the table. Rows can also be added by selecting [ROW] in the Fill-in by option, positioning the caret in the lower right hand field, and pressing <NEXT>.

To expand the number of columns in the table, select a column (select a field in the column and adjust the selection to a second field in the column), press <COPY>, and select the right line of the last column in the table. Columns can also be added by selecting [COLUMN] in the Fill-in by option, positioning the caret in the lower right hand cell, and pressing <NEXT>.

5. Select within the header area of the second column and enter the labels for the chart's key as column headers, using <NEXT> to move from one column header to the next. The header area is the first empty field to the right of the field containing the word "Labels." You can use any combination of characters or numbers of any length. These labels appear on the chart to identify the chart elements (bars, lines, or slices) and in the chart's key, if that option is selected.

If you prefer no labels, leave the top row blank.

6. Enter the labels for the chart elements in the first column or row of the table. The labels can be any combination of numbers and letters.

 Enter the data to drive the chart elements in the remaining columns of the table. The data can only be numerical. The numbers, however, can be either positive or negative and can contain exponents and decimals (for example, 9<sup>3</sup> or 2.5).

Note: If a bar chart contains both negative and positive integers, the side-by-side layout must be used to display the net value of the bar chart correctly. Stacked bar charts should be used only when the values in the bar chart are either all positive or all negative.

8. Select [APPLY] or [DONE]. If you have not completed the remaining property sheets, select [APPLY].

## Using a table to drive the chart

To use a table in the same document to drive the chart:

- 1. Select the chart and press < PROP'S>.
- Select [ALL DATA] in the chart property sheet and select [DOCUMENT] in the Data Table in option. The data table in the property sheet disappears.
- Select [ROW] or [COLUMN] in the Data Set is option to specify whether the chart labels are from the first row or the first column of the document table.
- Enter the name of the document table in the property sheet and select [APPLY] or [DONE]. The table and chart must be contained in the same document.

If the table named cannot be found, a message is displayed. Close the chart property sheet and verify the table name by selecting the table and pressing <PROP'S>.



## **Selecting bar chart properties**

The spatial property sheet contains options for the positioning and layout of the chart. You can design the chart as desired. The following appearance properties can be selected on the spatial page of the chart property sheet:

- Numbering units and divisions on axis
- Scale style (four options)
- Orientation (vertical/horizontal)
- Layout (stacked/vertical)
- Spacing (six options)
- Float (bars above axis)
- Mirror (bars crossing axis)
- Key (legend for bar shading/textures)

To select spatial properties:

1. Select the chart, press <PROP'S>, and select [SPATIAL PROPERTIES] in the chart property sheet.

When the data to drive the chart is entered on the all-data property sheet, the numbering sequence and number of tick marks on the vertical axis are automatically selected. The numbering sequence and tick marks can be changed by entering the desired data in the Units and Divisions options.

- 2. Enter the desired number in the Units option. The number entered determines the numbering sequence for the major tick marks on the chart (for example, the number 10 would result in the major tick marks being numbered 0, 10, 20, 30, and so on). If you choose too small a numbering sequence (which would place too many numbers on the vertical axis), the system automatically chooses a larger sequence.
- Enter the desired number in the Divisions option.
  The number entered determines the number of
  divisions separating each major tick mark. For
  example, if you specify five divisions, there are
  four unnumbered tick marks between the
  numbered ones, dividing each numbered section
  into five pieces.
- Select one of the four style options for the axis. To display an option, select [APPLY] after selecting an option.
- Select an orientation for the bars: horizontal or vertical.
- 6. Select a layout for bars: stacked or side-by-side. Stacked bars are much wider than side-by-side. If a bar chart contains both negative and positive integers, the side-by-side layout must be used to display the net value of the bar chart correctly.

**Note:** The following are cases in which the stacked option is preferable or necessary:

- a. If the bar sets contain labels and the key option is not used (if the bars are side by side, the labels overlap)
- If the last spacing option, which connects the bars together, is chosen
- c. If the values in the bar chart are either all positive or all negative



7. Select the spacing between the bars. A variety of bar widths and spacings between bar sets can be selected. The last option, separated bars with line ramps, can be selected only if the stacked option for bars is chosen. (If chosen, line ramps are drawn between the bars in each group).

Note: The first option is not available.

- Optionally, select the bar to display as floating or mirrored.
- Select the [KEY], if desired. If [KEY] is selected, a legend appears in the upper right hand corner of the chart listing the names of the bars. An appearance rectangle shows the shading and texture of each bar.

If the labels in the top row of the data table on the all-data property sheet are blank, the key does not contain data.

10. Select [APPLY] or [DONE]. To continue with the remaining property sheets, select [APPLY].

To select shading and texture for the bars:

- 1. Select the bar chart, press <PROP'S>, and select [APPEARANCE] in the bar chart property sheet Display option.
- 2. Select the name of the bar you want to change next to the Components option. Bars not named on the all-data property sheet are given the default names Bar Set 1, Bar Set 2, and so forth.
- Select the desired shading and texture. Only one shading option can be selected at a time. Multiple textures can be selected. The Appearance option immediately reflects shading and texture changes.
- 4. Repeat steps 2 and 3 as desired and select [APPLY] or [DONE]. To continue with the remaining property sheets, select [APPLY].

## Selecting line chart properties

The spatial property sheet contains options for the 🥟 layout and positioning of the chart. You can design the chart as desired.



#### To select spatial properties:

1. Select the chart, press <PROP'S>, and select [SPATIAL] for the Display option.

When the data to drive the chart is entered on the all-data property sheet, the numbering sequence and number of tick marks on the vertical axis are automatically selected. The numbering sequence and tick marks can be changed by entering the desired data in the Units and Divisions options.

Enter the desired minimum and maximum axis values, the unit of measurement, and the divisions within the unit for each axis. For the v axis, select y-minimum, y-maximum, y-units, and y-divisions. For the x axis, select x-minimum, x-maximum, xunits, and x-divisions.

The number in the Units option determines the numbering sequence for the major tick marks on the chart (for example, the number 10 would result in the major tick marks being numbered 0, 10, 20, 30, and so on). If you select too small a numbering sequence (which would display too many numbers on the vertical axis), the system automatically chooses a larger sequence.

The number in the Divisions option determines the number of divisions separating each major tick mark. For example, if you specify five divisions, there are four unnumbered tick marks between the numbered ones, dividing each numbered section into five sections.

3. Select one of the four orientations for the chart.

- 4. Select one of the seven style options for each axis. To display an option, select [APPLY] after selecting an option.
- 5. Select [KEY], if desired. If [KEY] is selected, a legend appears in the upper right hand corner of the chart listing the names of the bars.
  - If the labels in the top row of the data table on the all-data page of the property sheet are blank, the key does not contain data.
- 6. Select [APPLY] or [DONE]. To continue with the remaining property sheets, select [APPLY].

The labels of the lines are displayed in the Components option of the appearance page of the property sheet. For lines not named on the all-data page of the property sheet, the default names A, B, and so on, are displayed.

Line width and structure, or point size, structure, and form, are automatically selected when the data to drive the chart is entered on the all-data page of the property sheet. Line width and structure, or point size, structure, and form, can be modified on the appearance property sheet.

The interior appearance of a slice is the combination of shading and texture. A pie slice can be any of five shades from white to black. The default shade of a slice is white. Additionally, a slice can have any combination of five textures, including vertical hatching, horizontal hatching, two types of diagonal hatching (upper left to lower right or lower left to upper right), and polka dot. The default texture of a slice is no texture. The shading and texture of each slice are selected on the appearance property sheet.

To select line width and structure, or point size, structure, and form for line charts:

1. Select the chart, press <PROP'S>, and select [APPEARANCE] as the Display option.

- Select the line to be changed in the Components option.
- Select the desired line width and structure, or point size, structure, and form.
- Repeat steps 2 and 3 as desired and select [APPLY] or [DONE]. To continue with the remaining property sheets, select [APPLY].

## Selecting pie chart properties

The spatial page of the pie chart property sheet contains options for the layout of the chart. You can redesign the chart as desired.

It is usually easier to style the chart after inserting the numerical data to drive the chart on the all-data page of the property sheet.

#### To select spatial properties:

 Select the chart, press <PROP'S>, and select [SPATIAL] in the chart property sheet.

When the data to drive the chart is entered on the all-data page of the property sheet, the chart line width and layout are automatically selected. The line width and layout can be changed by entering the desired data in the Line Width and Layout options.

- 2. Enter the desired line width in the Line Width option.
- 3. Enter the desired layout, joined or separated, in the Layout option.
- Select [APPLY] or [DONE]. To continue with the remaining property sheets, select [APPLY].

The labels of the slices in the pie chart are displayed in the Components option of the appearance page of the property sheet. For slices not named on the all data property sheet, the default names A, B, and so forth, are displayed.

Shadings for each pie slice are automatically selected when the data to drive the chart is entered on the all-data page of the property sheet. A variety of shadings and textures can be selected on the appearance page of the property sheet. The appearance of a slice is the combination of shading and texture. A single shading and multiple textures can be selected.

To select shading and textures for pie slices:

- 1. Select the chart, press <PROP'S>, and select [APPEARANCE] in the chart property sheet.
- 2. Select the slice to be changed in the Components option.
- Select the desired shading and texture. Only one shading can be selected at a time. Multiple textures can be selected. The Appearance option immediately reflects shading and texture changes.
- Repeat steps 2 and 3 as desired and select [APPLY]
  or [DONE]. To continue with the remaining
  property sheets, select [APPLY].

## **Updating table-driven charts**

If data in a table is changed after a chart has been created using that table, the chart does not reflect the table changes unless the chart is updated.

To update a chart created from a table, open the document containing the table and chart, update the appropriate table, and select [UPDATE CHARTS] in the window auxiliary menu.

The chart reflects the changes made in the table. If you add additional columns of information, you may want to select appearance properties for the new chart elements.

## **Work strategies**

## Selecting a chart element

An individual part (line, shape, or label) of a chart can be selected to customize the chart (for example, changing the location of the key). To select an individual part:

- Position the pointer on the chart and click the left mouse button. The chart control points should now be displayed.
- Press <JOIN> to split the chart into individual components. Each line, shape, and text frame in the chart is now a graphic object that can be selected individually.
- 3. Select the desired part (line, shape, text frame, or key). Once an individual part has been selected, its location, size, or properties can be changed.

Adjustments, such as moving the key so it does not overlap the chart or adjusting the distance between bars, can only be done when the chart is split.

To rejoin the chart, select any part of the chart and press <JOIN>.

## **Customizing chart elements**

To customize individual components of a chart, the chart can be split by selecting the whole chart and pressing <JOIN>. When the chart is split, individual chart elements can be selected. Chart elements can be modified by selecting options on each element's property sheet or by using <MOVE>, <STRETCH>, or <DELETE>. After the chart is customized, the chart elements can be rejoined into a single construction by selecting any element of the chart and pressing <JOIN>.

A chart element can be deleted by splitting the chart and deleting the element as a graphic object; however, if the data for the element is not also deleted from the data table, the chart element reappears when the chart is updated.

**Note:** If you change data on the property sheets, customized changes may be lost.

#### To customize a chart:

- Select the chart and press <JOIN> to split the chart. The message "The chart is now split" appears in the message area. The chart now consists of individual lines, shapes, and text frames, each individually selectable.
- 2. Select the part or group of parts you want to move or change, and make the desired changes, such as moving, copying, deleting, stretching, magnifying, or changing properties. Each part of the chart is now considered a graphic object.
- 3. Select any part of the chart and press <JOIN> to join the chart elements back into a single component.

A chart element can be deleted by splitting the chart and deleting the element as a graphic object; however, if the data driving the element is not also deleted from the data table, the element reappears when the chart is updated. To alter chart data by column or row:

- Select the chart, press <PROP'S>, and select [ALL DATA] in the chart property sheet.
- 2. Select a field in the column or row you want to manipulate and adjust the selection (using the right mouse button) to a second field in the same column or row to select the entire column or row. When a row or column is selected, the entire row or column is highlighted and can be moved, copied, or deleted.

Changes made on the all-data page of the property sheet do not take effect until [APPLY] or [DONE] is selected on the property sheet. Changes made to a table within a document do not take effect until [UPDATE CHARTS] is selected in the window auxiliary menu.

To copy or move a column, select the column (select a cell in the column and adjust the selection to a second element in the same column), press <COPY> or <MOVE>, and select the right bounding line of the column as the destination.

To copy or move a row (select a cell in the row and adjust the selection to a second element in the same row), select the row, press <COPY> or <MOVE>, and select the right bounding line of the lower bounding line of the row as the destination.

To delete the column or row, select the column or row and press < DELETE >.

# 3. Property/option sheets and windows

This section describes the property sheets, option sheets, and windows for data-driven graphics.

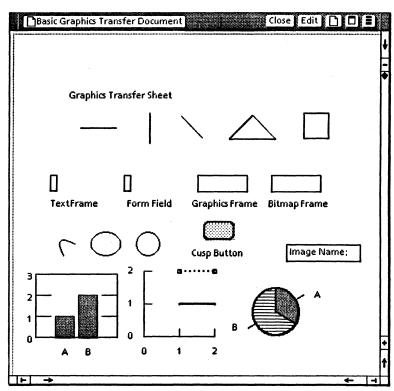


Figure 3-1 Basic graphics transfer document

## **Basic graphics transfer document**

The basic graphics transfer document (Figure 3-1) contains each basic type of graphic object and a basic version of a bar chart, line chart, and pie chart.

The basic graphics transfer document is displayed by opening the workstation divider in the directory and then opening the basic icons divider. The basic graphics transfer document can now be copied to the desktop. Pressing < OPEN > displays the window.

Once the objects are copied from the transfer sheet, their sizes and properties can be adjusted.

The sub-tab titled "Basic graphics" in the VP Series reference library contains information on points, lines, shapes, and embedded frames.

#### Window commands

The following is a description of the commands located at the top of the document window in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

#### [APPLY]

Applies the properties currently selected on the property sheet without closing it.

#### [CLOSE]

Closes the window.

#### [DEFAULTS]

Resets the properties to the preassigned settings.

#### [EDIT]

Places the document in edit mode so objects can be modified. When [EDIT] is selected, the following additional window commands are displayed: [PAGINATE], [RESET], [SAVE], and [SAVE AND EDIT].

#### [PAGINATE]

Displayed when [EDIT] is selected. Places all the data entered in the document in the designated order. Automatically starts new pages when they are needed or required. Adjusts frames, text, columns margins, and the general layout of a document.

#### [RESET]

Displayed when [EDIT] is selected. Returns the document to the state it was in when [SAVE] or [SAVE and EDIT] was last selected.

#### [SAVE]

Displayed when [EDIT] is selected. Saves changes made to the document and returns the window to the read-only state.

#### [SAVE AND EDIT]

Displayed when [EDIT] is selected. Saves changes made to the document and keeps the document in edit mode.

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.



Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

#### **Basic charts**

The following is a list of the basic charts contained in the basic graphics transfer document.

- Bar chart
- Line chart
- Pie chart

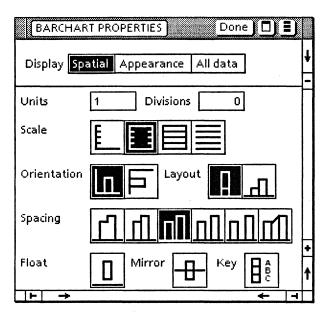


Figure 3-2 Bar chart property sheet: spatial

# Bar chart property sheet: spatial

The spatial bar chart property sheet (Figure 3-2) is used to style the bar chart. There are properties to determine the style of axes, the orientation of the bars, and the spacing between bar groups.

The spatial bar chart property sheet is displayed by selecting the bar chart, pressing <PROP'S>, and selecting [SPATIAL] as the Display option.

### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

# [APPLY]

Applies the properties currently set on the property sheet without closing it.

### [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

# **Display**

Links the spatial, appearance, and all data properties of the chart property sheet.

#### Units

Refers to the difference between successive labels on the vertical axis. (For example, if the labels on the vertical axis read 5, 10, 15, ..., the number would be 5.) The Units option can be changed as desired. The default value is 1.

#### **Divisions**

Specifies tick marks between the labeled divisions on the vertical axis. For example, 0 or 1 indicates no tick marks. To display one tick mark between each division, 2 is entered. To display two tick marks between each division, 3 is entered, and so forth. The default division is 0.

#### Scale

Determines the style of axis used for the bar chart. The default scale is the first option.

#### Orientation

Determines if the bars are vertical or horizontal. The default orientation is the verticle option.

#### Layout

Appears on the property sheet when there is more than one bar set. Determines if the bar sets are stacked on top of each other or placed side by side. The default layout is the first option.

### **Spacing**

Determines the spacing between bars. The first option is flush against the previous one. The remaining options specify increasing amounts of space between bar sets and affect the widths of the bars. The last option should be only used if there is a single bar set in the chart or the stacked Layout option is selected. If this option is selected, the bar groups are spaced apart, and line "ramps" connect the tops and each corresponding section of the bars. The default spacing is the fourth option.

#### Float

Not currently available.

#### Mirror

Not currently available.

### [KEY]

Provides a key showing the names and shadings of each of the bar sets in the upper right hand corner of the bar chart. The default is no key.

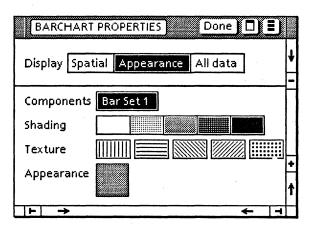


Figure 3-3 Bar chart property sheet: appearance

# Bar chart property sheets: appearance

The appearance bar chart property sheet (Figure 3-3) sets the shading and texture for a specific bar set.

The appearance bar chart property sheet is displayed by selecting the bar chart, pressing <PROP'S>, and selecting [APPEARANCE] as the Display option.

### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

#### [APPLY]

Applies the properties currently selected on the property sheet without closing it.

# [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

# **Display**

Links the spatial, appearance, and all data properties of the chart property sheet.

### **Components**

Lists the names of the bar sets for the bar chart. (If the bar sets do not have labels, it contains Bar Set 1, Bar Set 2, and so forth). The default bar set is Bar Set 1.

# **Shading**

Specifies the desired shading for each bar set. The default shading is the second option.

#### **Texture**

Provides a variety of textures for the interior pattern of each bar. The default texture is none.

# **Appearance**

Changes instantly to reflect the selections of shading and texture for the bar set. The default appearance matches the shading.

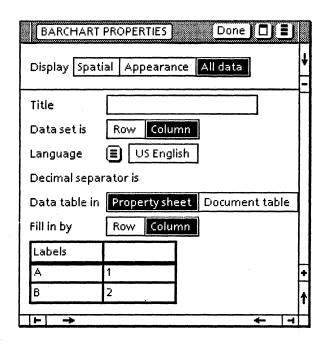


Figure 3-4 Bar chart property sheet: all data

# Bar chart property sheet: all data

The all-data bar chart property sheet contains a table for inserting the data to drive a bar chart. Each entry in the table determines the height of one of the bars.

The data table can be expanded or contracted to accommodate the number of bars to be included on the chart. <NEXT> or <SKIP> can be used to type in or edit the numbers in the table.

The all-data bar chart property sheet is displayed by selecting the bar chart, pressing <PROP'S>, and selecting [ALL DATA] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

# [APPLY]

Applies the properties currently selected on the property sheet without closing it.

# [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management

commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to display the commands.

# **Properties**

The following is a list of the properties.

### Display

Links the spatial, appearance, and all-data properties of the property sheet.

#### Title

Specifies the title to appear above the chart. The default is no title.

#### Data set is

Specifies whether the data sets are determined by rows or columns. The default choice is [COLUMN]; the X-axis labels are based on the text in the first column of the table and each data set gets its name from the text in the header. When [ROW] is selected, the X-axis labels are based on the text in the header of the table and each data set gets its name from the text in the first column. This feature enables a chart to be constructed using a data table in which the data sets are in rows rather than columns. The default is [COLUMN].

Language

Provides a multinational data format for displaying the proper decimal separator (period or comma) for numerical data in the selected language. The default language is U.S. English.

#### **Decimal separator is**

This read-only item displays the type of decimal separator used in the language specified in the Language option.

#### Data table in

Determines the origin of the bar chart. If [DOCUMENT TABLE] is highlighted, the information comes from a table within the document. If [PROPERTY SHEET] is highlighted, the information is entered through the data table in the property sheet. The default is [PROPERTY SHEET].

#### Table name

Specifies the name of a table in the document as the source of data to drive the chart if [DOCUMENT TABLE] is selected for the Data table in option.

### Fill in by

Appears when [PROPERTY SHEET] is selected. Selecting [ROW] or [COLUMN] determines the operation of <NEXT>. If <NEXT> is pressed when the caret is in the bottom right hand corner of the table, a new empty row or column is added to the table, depending on the setting. The default fill-in option is by [COLUMN].

#### Labels

Specifies labels for the bars. The default values for labels are A and B for the y axis and none for the x axis.

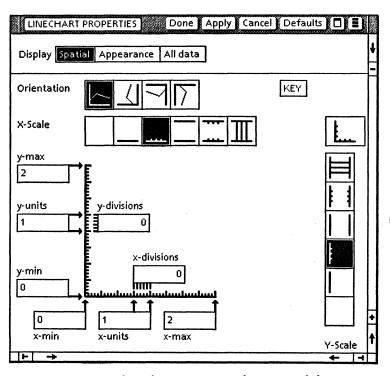


Figure 3-5 Line chart property sheet: spatial

# Line chart property sheet: spatial

The spatial properties of the line chart property sheet (Figure 3-5) are used to design the line chart. The type of scale, the size of the scale, whether or not there is a key showing the label, and the line type of each line can be specified.

The spatial properties of the line chart property sheet are displayed by selecting the line chart, pressing <PROP'S>, and selecting [SPATIAL] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

# [APPLY]

Applies the properties currently set on the property sheet without closing it.

# [CANCEL]

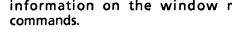
Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management



Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

### **Display**

Links the spatial, appearance, and all-data properties of the property sheet.

#### Orientation

Determines which of the four possible rotations (normal, 90, 180, 270) to use in displaying the graph. Every part of the graph except the key is displayed using the specified orientation. The default orientation is normal.

Note: If the first column in the data table contains textual data, then the text is used as x-scale labels, and the x-max, x-min, x-units, and x-divisions properties are ignored. Refer to the description of all-data property sheet for additional information.

#### X-Scale, Y-Scale

Provides a variety of appearances for each axis:

- 1. None
- 2. Single-sided with no tick marks
- 3. Single-sided with tick marks
- 4. Double-sided with no tick marks
- 5. Double-sided with tick marks
- 6. Double-sided with full grid lines

The default is the third option

#### Appearance

This read-only item shows a small view of how the chart's layout will appear, given the current settings of the two scales and the orientation.

#### [KEY]

Used to display a legend to represent the names and appearance of the line sets. The key is inserted automatically in the upper left hand corner of the line chart. The key can be moved as desired. The default is no key.

#### x-max, y-max

Specifies the maximum values on the measurement lines, or axes. For example, if 20 is entered, the scale extends up to 20. A maximum value, which is smaller than the largest data point, can be entered; however, when the chart is updated, the system displays a message and ignores the maximum value entered. The default is 2.

### x-min, y-min

Specifies the minimum value to be drawn on the measurement lines, or axes. For example, if 0 is entered, the scale begins at 0. A minimum value which is larger than the smallest data point can be entered; however, when the chart is updated, the system displays a message and ignores the minimum value entered. The default is 0.

#### x-units, y-units

Specifies the numerical labels placed along the measurement lines. For example, if 4 is entered, the units appear as 0, 4, 8, and so forth. The default is 1.

#### x-divisions, y-divisions

Specifies the number of smaller tick marks per unit. For example, if 2 is entered, there are two subsections for each unit with a tick mark. If 0 or 1 is entered, there is one subsection with no tick mark. The default division is 0.

(This page intentionally blank)

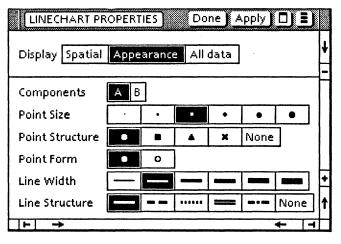


Figure 3-6 Line chart property sheet: appearance

# Line chart property sheet: appearance

The appearance line chart property sheet (Figure 3-6) is used to set the shape of the data points and style of connecting lines.

The appearance line chart property sheet is displayed by selecting the line chart, pressing <PROP'S>, and selecting [APPEARANCE] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

### [APPLY]

Applies the properties currently set on the property sheet without closing it.

# [CANCEL]

Closes the property sheet without applying any changes to the properties.

### [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

# Display

Links the spatial, appearance, and all-data properties of the property sheet.

# Components

Displays the components of the selected line set. The default component is A.

#### **Point Size**

Used to select one of six point sizes. The default is the third option.

#### **Point Structure**

Used to select one of four shapes: round, square, triangular, or cross. No point can also be selected. The default is round.

#### **Point Form**

Used to select either a hollow or solid point. The default is solid.

#### **Line Width**

Provides a choice of six line thicknesses. The default is the second option.

#### **Line Structure**

Provides five line types including solid, dotted, dashed, and no line. The default is solid.

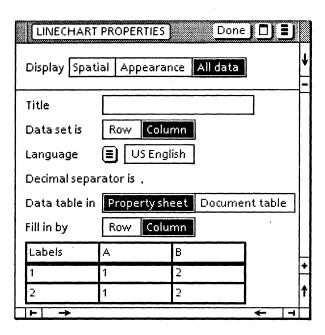


Figure 3-7 Line chart property sheet: all data

# Line chart property sheet: all data

The all-data line chart property sheet (Figure 3-7) contains a table for inserting the data to drive a line chart. Each entry in the table determines a data point on the line.

The data table can be expanded or contracted to accommodate the number of lines to be included on the chart. <NEXT> or <SKIP> can be used to type in or edit the numbers in the table.

The all-data line chart property sheet is displayed by selecting the line chart, pressing <PROP'S>, and selecting [ALL DATA] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

# [APPLY]

Applies the properties currently set on the property sheet without closing it.

### [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

### [RESET]

Resets the properties to the options set the last time [DONE] or [APPLY] was selected.

Causes the window management commands to

appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

### **Display**

Links the spatial, appearance, and all-data properties of the property sheet.

#### Title

Specifies the title to appear above the chart. The default is no title.

#### Data set is

Specifies whether the data sets are determined by rows or columns. The default choice is [COLUMN]; the X-axis labels are based on the text in the first column of the table and each data set gets its name from the text in the header. When [ROW] is selected, the X-axis labels are based on the text in the header of the table and each data set gets its name from the text in the first column. This feature allows the user to construct a chart using a data table in which the data sets are in rows rather than columns. The default is [COLUMN].

Language

Provides a multinational data format for displaying the proper decimal separator (period or comma) for numerical data in the selected language. The default language is U.S. English.

**Decimal separator is** 

This read-only item displays the type of decimal separator used in the language specified in the Language option.

#### Data table in

Specifies the source of information to drive the line chart. If [DOCUMENT TABLE] is selected, then the data comes from a table within the document. If [PROPERTY SHEET] is highlighted, a data table appears in the all-data property sheet. The default is [PROPERTY SHEET].

If [DOCUMENT TABLE] is selected, the following property appears:

#### Table name

Specifies the name of a table containing information to be displayed in the line chart. If the table cannot be found in the document, then the property sheet displays the data table. The table and the line chart must be in the same document.

If [PROPERTY SHEET] is selected, the following properties appear:

### Fill in by

Appears when the Data table in option on the all-data page of the chart property sheet is selected or the table name entered cannot be found in the document. Selecting [ROW] or [COLUMN] determines the operation of <NEXT>. If <NEXT> is pressed when the caret is in the bottom right hand corner of the table, a new empty row or column is added, depending on which option was selected. The default is [COLUMN].

#### Data table

Contains the table for entering the data to be displayed. The first column of data is used for the labels of the X-axis. The chart is constructed from the type of labels in the first column when [COLUMN] is selected as the Data set in option:

- All of the labels are valid numbers
- At least one of the labels is empty or not a valid number

When all the labels in the first column are valid numbers, the largest and smallest values are used for x-max and x-min. Each number becomes its row's X-position on the chart. If the x-min value from the spatial page is greater than the smallest value on the data page, then the x-min value is ignored. If the x-max value requested is less than the largest value in the data table, then the x-max value is ignored and a message is displayed when [DONE] or [APPLY] is selected.

When at least one of the labels in the first column is empty or not a valid number, all of the labels are treated as text, and the x-units and x-divisions parameters on the spatial page are ignored. There is one division per row, and the row in which an element appears determines its position on the X-axis. The x-max, x-min, and x-units values from the spatial page are ignored, but the x-divisions value is used.

Any text found in the top row, referred to as the table header, is used to label the line segments of the key, specified in the spatial page of the chart property sheet. Every element of the table may specify a point to be drawn on the line chart. If an element contains a number, that number determines the point's position on the Y-axis. If an element is empty, no point is drawn (every X-value does not need a corresponding Y-value).

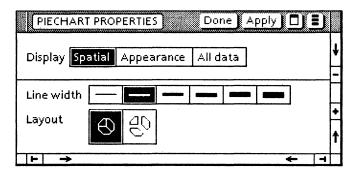


Figure 3-8 Pie chart property sheet: spatial

# Pie chart property sheet: spatial

The spatial pie chart property sheet (Figure 3-8) control the layout of the pie chart.

The spatial pie chart property sheet is displayed by selecting the pie chart, pressing [PROPS], and selecting [SPATIAL] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

### [APPLY]

Applies the properties currently set on the property sheet without closing it.

### [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

### [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

# **Display**

Links between the spatial, appearance, and alldata properties of the chart property sheet.

#### Line width

Specifies one of six line widths for the border of the pie slice symbols. The default line width is the second option.

#### Layout

Specifies whether the pie chart slices are adjoining or separated. In an adjoining layout, the pie slices are placed immediately adjacent to each other to form a continuous circle. In the separated layout, slices are spaced apart from the center of the circle. The default layout is adjoining.

(This page intentionally blank)

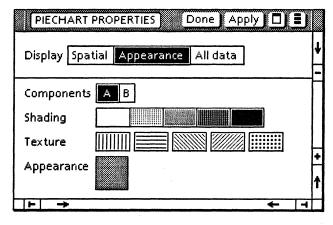


Figure 3-9 Pie chart property sheet: appearance

# Pie chart property sheet: appearance

The appearance pie chart property sheet (Figure 3-9) controls the shading and texture of each pie slice.

The appearance pie chart property sheet is displayed by selecting the pie chart, pressing <PROP'S>, and selecting [APPEARANCE] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

#### [APPLY]

Applies the properties currently set on the property sheet without closing it.

# [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

目

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.



Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

Display

Links the spatial, appearance, and all-data properties of the chart property sheet by selecting the name of the desired page.

Components

Displays the labels of the slices. The slice label is selected to display and select appearance properties for the slice.

Shading

Specifies the shading of a pie slice as one of five possible gray tones. The shades are white, light gray (25 percent gray), medium gray (50 percent gray), dark gray (75 percent gray), and black. The default shade of slice A is white and slice B is the second option.





#### **Texture**

Specifies any combination of five textures. The textures are vertical hatching, horizontal hatching, two types of diagonal hatching (upper left to lower right or lower left to upper right), and polka-dot. The default is no texture.

#### **Appearance**

This read-only item displays the current settings of the shading and texture parameters.

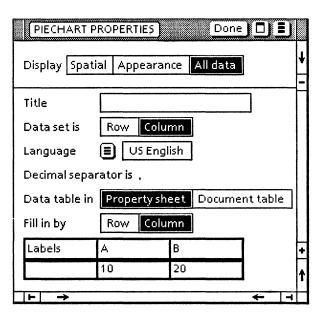


Figure 3-10 Pie chart property sheet: all data

# Pie chart property sheet: all data

The all-data pie chart property sheet (Figure 3-10) defines the data to generate the pie chart.

The all-data pie chart property sheet is displayed by selecting the pie chart, pressing <PROP'S>, and selecting [ALL DATA] as the Display option.

#### Window commands

The following is a description of the commands located at the top of the property sheet in the gray area.

#### [DONE]

Closes the property sheet and applies the properties currently set on it. If any information is incorrect, the property sheet remains open and displays an error message.

### [APPLY]

Applies the properties currently set on the property sheet without closing it.

# [CANCEL]

Closes the property sheet without applying any changes to the properties.

# [DEFAULTS]

Resets the properties to the preassigned settings.

# [RESET]

Causes the window management commands to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. The sub-tab titled "Windows" in the VP Series reference library contains detailed information on the window management commands.

Causes the window commands that have been placed in the floating item auxiliary menu to appear when the pointer is placed over the auxiliary menu and the left mouse button is held down. Window commands are placed in the floating item auxiliary menu when the window is not wide enough to accommodate the commands.

# **Properties**

The following is a list of the properties.

Display

Links the spatial, appearance, and all-data properties of the chart property sheet.

Title

Specifies the title to appear above the chart. The default is no title.

#### Data set is

Specifies whether the data sets are determined by rows or columns. The default choice is [COLUMN]; the X-axis labels are based on the text in the first column of the table and each data set gets its name from the text in the header. When [ROW] is selected, the X-axis labels are based on the text in the header of the table and each data set gets its name from the text in the first column. This feature enables a chart to be constructed using a data table in which the data sets are in rows rather than columns. The default is [COLUMN].

#### Language

Provides a multinational data format for displaying the proper decimal separator (period or comma) for numerical data in the selected language. The default language is U.S. English.

#### **Decimal separator is**

This read-only item displays the type of decimal separator used in the language specified in the Language option.

#### Data table in

Specifies the data source for the pie chart: the table in the property sheet or a table in the same document as the pie chart. The default data source is [PROPERTY SHEET].

If the current data source choice is a table in the document, the following property appears:

#### Table name

Contains the name of the table in the document that contains the data for the pie chart.

If the current data source choice is a table in the property sheet, the following parameter is visible in addition to the data table:

Fill in by

Determines the effect of <NEXT> when the caret is in positioned in a table cell. [ROW] causes the caret to move right to the next cell in the current row, with wraparound to the leftmost cell of the next row from the rightmost cell of a row, and causes a new row to be added to the table when <NEXT> is pressed in the last cell of the table. [COLUMN] causes the caret to move down to the next cell in the current column, with wraparound to the top cell of the next column from the bottom cell of a column, and causes a new column to be added to the table when <NEXT> is pressed in the last cell of the table.

A pie chart is generated from the first value in each data set of the source data and the data set labels. When the data set choice is [COLUMN], the chart is generated from the column header labels and the first value in each column of the source data. When the data set choice is [ROW], the chart is generated from the row labels (the leftmost column) and the first value in each row of the table (the second column). The first element of each data set must be a positive numerical value. If the data set label is blank, no label or link line is drawn for the slice in the pie chart diagram and a default name is used to identify the slice in the appearance properties Components option.

A pie slice is added or deleted by adding or deleting a data set in the source table for the pie chart diagram. A new slice has the default appearance properties (white shading with no texture). Pie slices in the diagram are generated clockwise from the twelve-o'clock position in the order of the data sets in the source table (left-to-right for column data sets, top-to-bottom for row data sets).

A pie chart driven by the property sheet data table is updated whenever [APPLY] or [DONE] is selected. A pie chart driven by a table in the document is updated when [UPDATE CHARTS] is selected in the document auxiliary menu.

(This page intentionally blank)