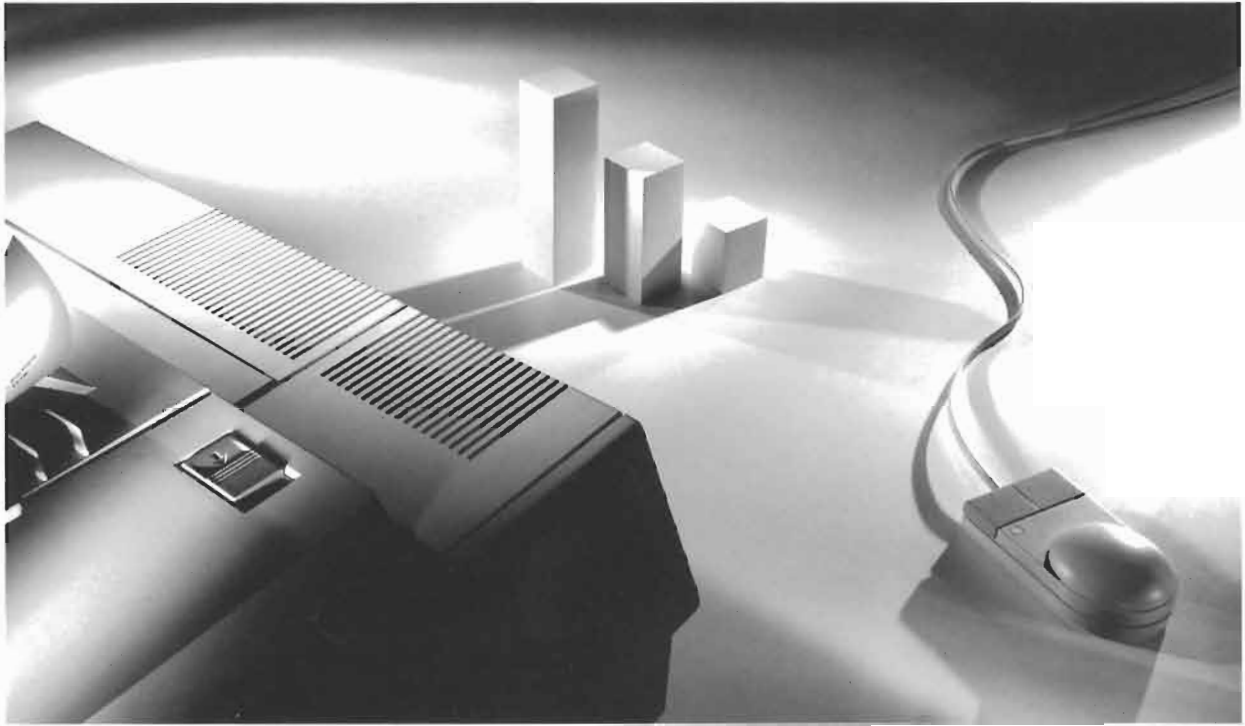


THE GRAPHICS GALLERY



Charting Gallery User's Guide



Charting Gallery



**Manual Part No.
5958-9663**

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**Personal Software Division
3410 Central Expressway
Santa Clara, CA 95051, U.S.A.**

Printing History

First Edition—November, 1988

Printed in U.S.A.

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Introduction to Charting Gallery

Learning the Basics

Charting Gallery is a business graphics software package that helps you create a variety of professional charts. Charting Gallery comes with a setup booklet, this manual, and a quick reference card, so you can learn what you need to know quickly.

- **Setting Up Drawing Gallery and Charting Gallery** is your setup guide. Read it first. This booklet shows you how to prepare a working copy of the Charting Gallery software and how to install your printer or plotter.
- This manual, **Charting Gallery**, is a complete guide to all Charting Gallery features.
- **The Quick Reference Guide to Charting Gallery** is a separate booklet. It is a handy source of condensed information that tells you how to use the Charting Gallery functions and screens to perform some basic tasks.

What's in this Manual

Chapter 1, *Learning to Use Charting Gallery*, tells you how to read the Charting Gallery screens, use the functions and find your way around Charting Gallery.

Chapter 2, *Making a Chart*, is a tutorial that guides you through the entire chart-making process. It helps you learn to choose a chart type and chart options, enter data into the chart, save the chart, and print the chart.

Chapter 3, *What Charts Can You Create?*, tells you how to select the chart type that best presents your information.

Chapter 4, *Using the Chart Options*, tells you how to select an appropriate chart option for your chart type.

Chapter 5, *Working with Chart Data*, shows you how to use the Data screen to enter or edit various data values and chart labels.

Chapter 6, *Enhancing a Chart*, shows you how to use the Edit and Draw functions to add various elements to your chart.

Chapter 7, *Annotating a Chart*, tells you about using annotations to emphasize important parts of your chart.

Chapter 8, *Getting and Saving a Chart*, tells you how to use the Get and Save functions to retrieve and save charts.

Chapter 9, *Using Layout*, shows you how to work with multiple charts on a single page.

Chapter 10, *Printing and Plotting a Chart*, describes how to use the Device Control screen to print or plot your chart.

Chapter 11, *Using Charting Gallery with Other Applications*, tells you how to use Charting Gallery with other popular software.

Chapter 12, *Production Charting*, shows you how to create a command file that automates the chart-making process.

Appendix A, *Error Messages*, lists all the error messages that Charting Gallery displays and tells you what to do when you see them.

Appendix B, *Converting Gallery Files to CGM and CGM Files to Gallery* explains the use of the two file-conversion utilities.

Appendix C, *Charting Gallery Version Information*, gives you a chronology of previous Charting Gallery versions, outlines the new features in this version, and tells you about file compatibility between different versions of Charting Gallery.

Appendix D, *Using Your Keyboard*, explains how to use your keyboard to perform Charting Gallery tasks.

Glossary for Charting Gallery, explains some frequently used charting terminology.

Before You Begin

Before you begin using Charting Gallery, read the *Setting Up Drawing Gallery and Charting Gallery* booklet for complete information about:

- Installing your software.
- Identifying the devices that you intend to use with the software. Your printer, plotter, video board, and monitor must be identified using the Identify Devices (DEVICEID) program.

Also be sure that:

- You've made a working copy of the Charting Gallery Setup, Application, Gold and Utility discs.
- Your printer or plotter is turned on and has paper in it.

Charting Gallery runs on all IBM and compatible machines as specified in the setting up booklet. The HP Vectra is an IBM-compatible personal computer. PAM is not included with Charting Gallery, but it is not required to run Charting Gallery. If you're using DOS on your computer, you can ignore all references to PAM and Vectra.

This book contains many examples of Charting Gallery screens. Your screen may look slightly different from the screens in this book if you have a color monitor.

Tips for Flexible Disc Users

If your working copy of Charting Gallery is on one or more high-capacity flexible discs (1.2KB on 5-1/4" discs or 1.44KB on 3-1/2" discs), these tips will help you protect your working copy from accidental damage.

- Never take your working copy of Charting Gallery out of a drive while the application is running. The only safe time to remove the working disc is *after* you leave Charting Gallery.
- Never take any flexible disc out of a drive while the drive light is on. If you do, you may lose all the information on the disc.
- Because of space limitations, avoid saving charts on your working copy of Charting Gallery. Instead, set aside a data disc – a blank formatted disc – for saving charts.

Starting Charting Gallery

You can start Charting Gallery from the DOS prompt. If you are using an HP Vectra with the Personal Applications Manager (PAM), you can also start from the PAM Main screen.

If you don't know how to get to the DOS prompt or PAM Main screen, refer to the manuals that came with your computer.

Check to see where your working copy of Charting Gallery is located. It will be on one of the following:


- A hard disc.
- A high-capacity flexible disc medium.

Starting from PAM

1. Display the PAM screen.
2. Choose **Charting Gallery**.
3. Choose **Start Applic.**

The disc drive light flashes, indicating that Charting Gallery is starting. After a moment, a chart screen appears.

Starting from DOS

1. Check to see that the DOS prompt for your hard disc or high-capacity disc is displayed on the screen. If you've installed Charting Gallery in a subdirectory, make sure the DOS prompt indicates the current subdirectory.
2. Type `CHARTGAL` and press .

The disc drive light flashes, indicating that Charting Gallery is starting. After a moment, a Charting Gallery screen appears.

Charting Gallery is easy to learn and use. In this chapter, you learn about:

- The Charting Gallery screens.
- The function keys and function labels.
- Finding your way around Charting Gallery.
- Using the mouse and keyboard.

If this is the first time you've used Charting Gallery, this chapter will help you learn the basics. Here you'll find an overview of functions and terms that are used throughout Charting Gallery.

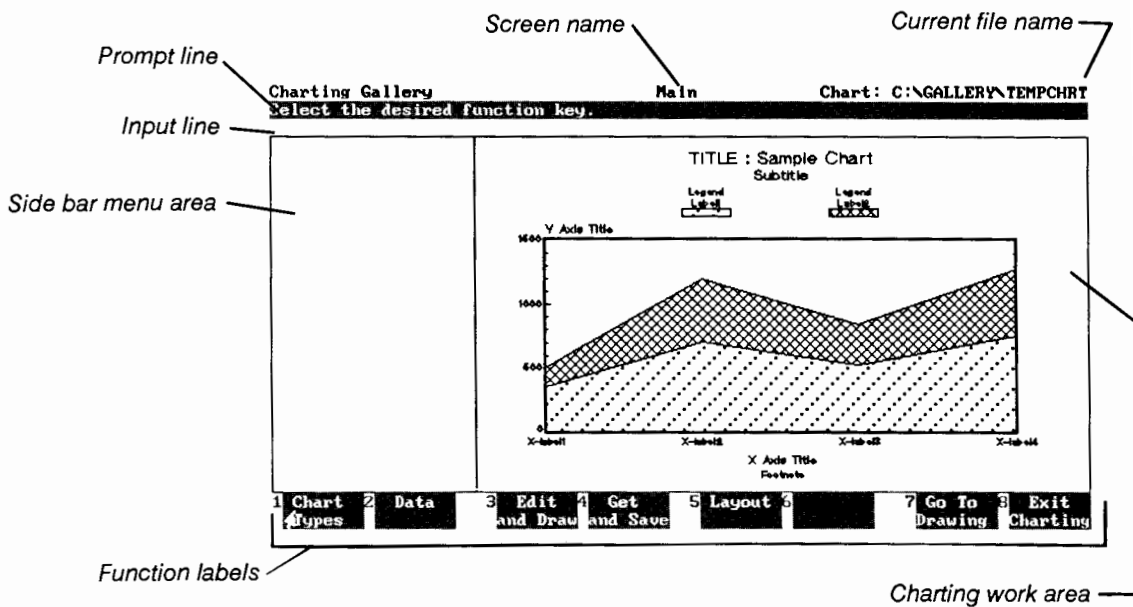
Charting Gallery Screens

When you use Charting Gallery, you most often use the charting work area in the Charting Main screen. The Charting Gallery screens include:

- Charting Main screen.
- Data screen.
- Layout screen.
- File Manager screen.
- Device Control screen.

Screen Features

The screens have several basic features in common that you should be familiar with before you create a chart. The following illustration points out some of the basic screen features, as they appear on the Charting Main screen.



The Charting Main screen includes:

- The **charting work area**, where you develop your chart's appearance.
- The **side bar** menu area, which, depending on the functions you've chosen, displays a list of menu items you can choose by clicking on the desired option.
- The **function labels** where you can choose the screens or side bars you want to display and the tasks you want to perform.
- The **input line**, where you enter information that Charting Gallery requests.
- The **prompt line**, which displays messages and instructions from Charting Gallery. If you are uncertain about what to do next, look at the prompt line for help.
- The current **file name**, which includes the disc drive and the directory.

The Data screen, Device Control screen, and File Manager screens also have specially designated areas, called **fields**, where you enter information.

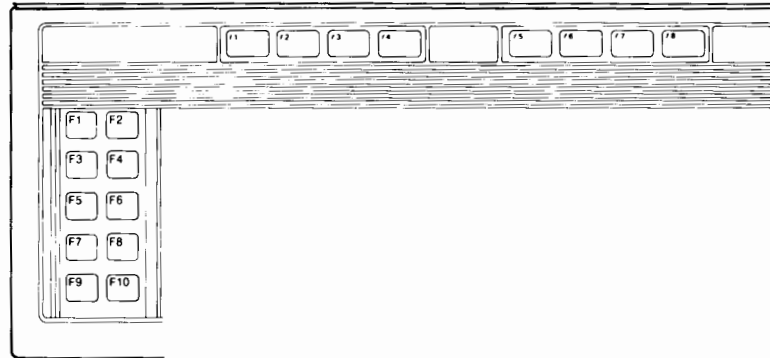
Function Labels

Several main Charting Gallery functions help you determine what you can do in the charting work area, and what you can do with the chart once you've designed it. These functions include:

- Chart Types functions.
- Edit and Draw functions.
- Get and Save functions.

The function labels correspond to the keys labeled **F1** through **F8** or **F1** through **F10** on your keyboard. (The location of these function keys depends upon which keyboard you have.) The illustration below shows the labels Charting Gallery displays at the bottom of the Charting Main screen.

1 Chart Types 2 Data 3 Edit and Draw 4 Get and Save 5 Layout 6 7 Go To Drawing 8 Exit Charting



When you want to display another screen or side bar, or perform a task, use the mouse to click the function label you want, or press the appropriate function key. When using a keyboard that has two rows of functions keys, you can choose the function label from the group of function keys at the top of your keyboard or at the side.

Throughout this manual, you'll see instructions telling you to choose function labels. *Choose* means either press the function key associated with the label or click the function label with the mouse. Some screens in Charting Gallery require that you use the mouse to select items on the screen. See "Using a Mouse" later in this chapter for instructions on selecting items with the mouse.

Moving Around in Charting Gallery

The Charting Main screen is the starting point for all tasks in Charting Gallery. From this screen, you can:

- Go to one of the five principal Charting Gallery screens.
- Go directly into Drawing Gallery if Drawing Gallery is available.
- Leave Charting Gallery and return to DOS or PAM.

1 Chart Types 2 Data 3 Edit and Draw 4 Get and Save 5 Layout 6 7 Go To Drawing 8 Exit Charting

If you've finished a task and want to return to the Charting Main screen, choose the **FB** function label until the Charting Main functions reappear on your screen. In some cases, you'll have to choose **FB** several times to get back to the Charting Main screen again.

Using a Mouse

You need to have a mouse to use Charting Gallery. A mouse is required to perform the following tasks:

- Select chart types from the side bar menu.
- Select chart options from the side bar menu.
- Select draw options from the side bar menu.
- Select file names in Get and Save.
- Select a layout format when using the Layout screen.
- Select the files you want to include in the layout when using the Layout screen.
- Perform the layout editing functions.

A mouse also makes doing the following fast and easy:

- Move the cursor around on the screen.
- Choose function labels.
- Select specific items on the screen.

Moving the Cursor

- 1. Place the palm of your hand over the mouse with your forefinger and middle finger resting lightly on the mouse buttons.
- 2. Move the mouse to your right. The cursor moves similarly to the right on the screen.
- 3. Move the mouse in an upward direction across your desk. The cursor also moves toward the top of your screen.
- 4. Continue moving the mouse around until you can easily locate the pointer anywhere on the screen.

If you run out of room on your desk, lift the mouse up, place it back down where you have more room and continue moving it in the desired direction.

Table 1-1 defines some commonly used mouse terms.

Screens and Cursors

The cursor may change depending on which screen you're using. Most of the time the cursor is an arrow-shaped pointer, as on the Charting Main screen.

On the Data, Device Control, and File Manager screens, the cursor appears as a small rectangle.

When you use the keyboard to type information on the input line, the cursor appears as a blinking line. It indicates where the next character that you type will appear.

On the layout work area, when you've initiated an edit operation, the cursor becomes a crosshair.

Table 1-1. MOUSE TERMINOLOGY

To...	Means...
Point	Move the mouse until the pointer is where you want it.
Click	Quickly press and release the left mouse button.
Select	Point to the item you want and click the mouse button once.
Drag	Press and hold down any mouse button while dragging the mouse to move the crosshair.
Release	Let go of the mouse button you're pressing.

About the Keyboard

With Charting Gallery you'll use the following keys on your keyboard:

- The **function keys** let you do different tasks with Charting Gallery.
- The **typewriter keys** let you type text, letters, characters, symbols, and numbers.

The keys on your keyboard are grouped according to their functions. If you need more general information about your keyboard, see the manual that came with your computer.

For information on how to use the keys on specific Charting Gallery screens, see Appendix C, *Using Your Keyboard*.

In most cases you need to use the keyboard only to type the information Charting Gallery requests.

Editing What You Type

You can use the keys shown in Table 1-2 to edit the text you type in Charting Gallery.

Table 1-1. EDITING KEYS

Press	Action
<p>Ins</p>	<p>When pressed, the characters you type are inserted at the cursor position. When not pressed, the characters you type replace any existing characters.</p>
<p>DEL</p>	<p>Deletes one or more characters at the cursor position.</p>
<p>Alt + L</p>	<p>Deletes all characters from the cursor to the end of the line.</p>
<p>Alt + D</p>	<p>Deletes the current line of data.</p>
<p>Alt + I</p>	<p>Inserts a blank row above the current line of data.</p>
<p>Alt + S</p>	<p>Erases all data from the cursor position to the end of the last row of data.</p>

2

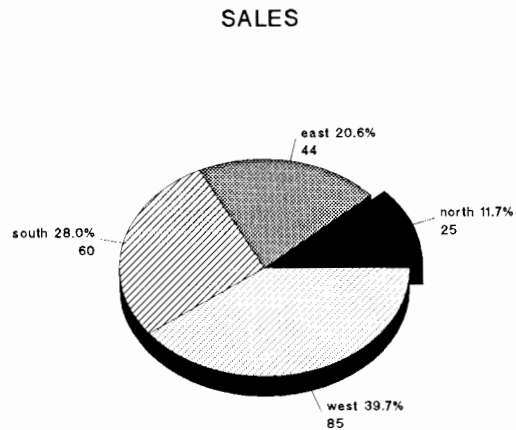
Making a Chart

This chapter contains step-by-step instructions for creating a chart. Using a three-dimensional pie chart as an example you will learn how to perform the following tasks:

- Choose a chart type.
- Choose the chart's options.
- Enter data into the chart and edit the data.
- Explode a pie chart segment.
- Save the chart.
- Draw the chart to a printer or plotter.
- Leave Charting Gallery.

Overview

Here's the chart you will create:



A pie chart shows the relationship of parts to a whole. This particular chart shows a company's orders by sales region. This pie chart uses textured segments, the pie chart you create will use solid fill segments.

Choosing a Chart Type and Options

You will use the Chart Types menu to choose the type of chart you want and to define the chart's options. For this example, you'll choose a pie chart type and make it a three-dimensional chart presented at a 75-degree angle. These options create a chart that is more aesthetically pleasing than a flat pie chart.

To Choose the Chart Type

1. Display the Chart Types menu. You can do this by choosing **Chart Types** from the main Charting Gallery functions.

The side bar displays a list of eight major chart types.

2. Use the mouse to position the cursor on the desired chart type. In this case, that is **Pie**. To choose the chart type, click the mouse button once.

The selection box moves to **Pie** and the icon above the list of chart types displays a small pie chart.

To Choose the Chart Options

1. Choose **Chart Options**.

The side bar lists the options available for a pie chart.

2. Use the mouse to position the cursor on the **3D - 75 degree** option, then click the mouse button once.

The icon above the list of pie chart options changes angles to reflect your choice.

3. Choose **Enter**.

The charting work area displays sample data in a three-dimensional pie chart at the 75-degree angle you selected. The main Charting Gallery function labels are displayed and the side bar is cleared.

Entering the Data

You'll use the Data screen to enter your data values. As you follow these steps, don't worry about making mistakes. You can correct them by moving the cursor back and retyping. If you need information on moving the cursor, read "Moving the Cursor" in Chapter 1, *Learning to Use Charting Gallery*.

Before You Start

1. Choose **Data** from the main Charting Gallery functions to display the Data screen.


Since you're creating a new pie chart, you need to clear the Data screen of all the information associated with the existing sample chart.


2. Choose **Edit Data**.
3. Choose **Erase Chart**.
4. If you are asked for a confirmation, choose **Yes, Save**. (If you decided not to save the data at this point, you could choose **No, Discard**.)


The Data screen is now empty and ready to receive new data.


Type in the Data

1. When you first display the Data screen, the cursor should be located at the beginning of the first row in the Range 1 column. If the cursor is not already there, press **Tab** until it is. You could also use the mouse to position the rectangle-shaped cursor in the desired column, then click the mouse button once.
2. Type 25 and press **↵**.
Type 44 and press **↵**.
Type 60 and press **↵**.
Type 85 and press **↵**.
3. Now check what you have typed.
4. Move the cursor to the beginning of the first row of the Segment Labels column. To do this, you could press **Shift** + **Tab**, then press **▲** four times; or you could use the mouse.

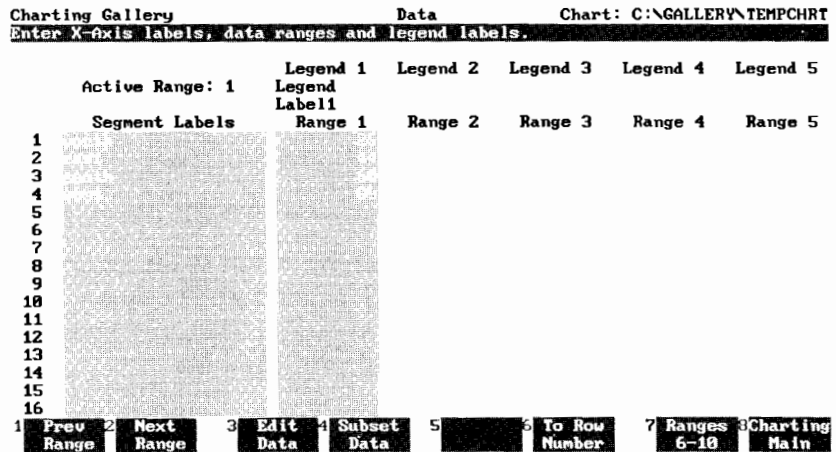
5. Type north and press .

Type east and press .

Type south and press .

Type west and press .

Your data is complete. It should look like this:



To View Your Chart

After you enter data, use the Edit and Draw functions to see how your data looks as a chart.

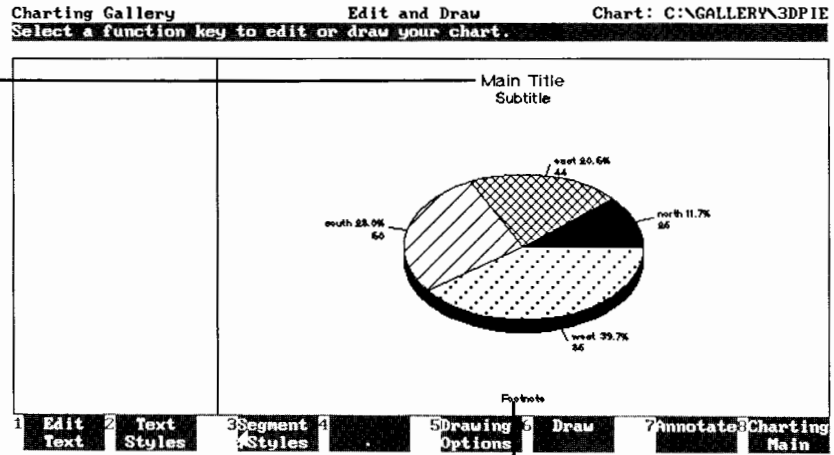
1. Select **Charting Main**.
2. Select **Edit and Draw**.

Notice that each number you've entered is represented by a pie segment. The names of the sales regions have become labels for the pie segments. The percentages and data values are also shown.

Editing Chart Text

To alter the chart's appearance, select **Edit Text**. You are now ready to make any of the changes shown.

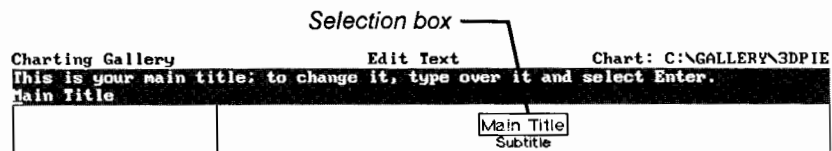
Replace sample titles with titles of your own.



Replace the sample footnote.

Changing the Main Title

Suppose you want to change the Main Title so that it reads SALES. If you look near the top of the charting work area, you'll see that Main Title has a box drawn around it. This box is the **selection box**.



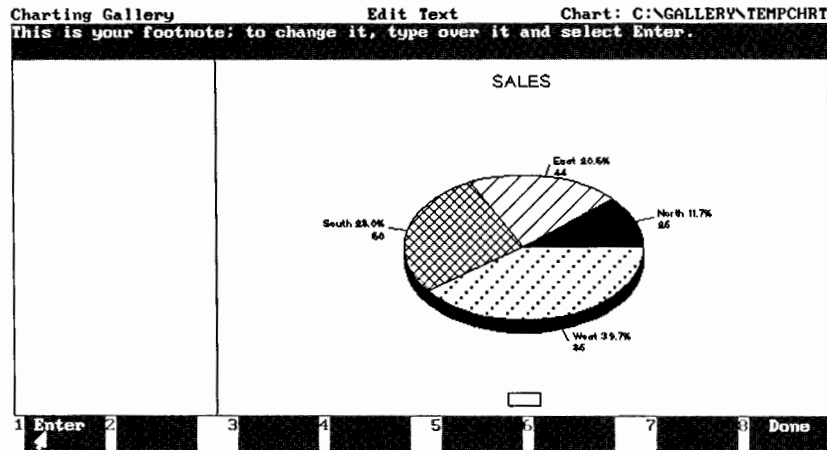
When the selection box is at the item you want to change, you can make the changes. You move the selection box by using the mouse to point to and select an item on the screen, or by pressing the **Tab** key.

1. Make sure that the selection box is at Main Title. If it's not, press the **Tab** key as many times as necessary to move the box to Main Title.
2. Look at the input line where you'll type in the new title.
3. Type SALES.
4. To delete the remainder of the sample title, press **Alt** + **L**.
5. Press **Tab**.

SALES appears on your chart, and the selection box moves to SUBTITLE.

Delete the Subtitle and Footnote

1. Press **Alt** + **L**.
Subtitle is removed from the input line.
2. Press **Tab**.
Subtitle is removed from the chart.
3. Position the pointer on Footnote. Click the mouse button once. The selection box appears at Footnote.
4. Press **Alt** + **L** to remove the footnote text.
Your chart should now look like this.



5. Press **Enter**.
6. Choose **Done**.

What Enter and Tab Do

Each time you edit text, pressing **Enter** activates your changes and updates the chart. Pressing **Tab** moves the selection box to the next item in the charting work area. You can also use **Tab** to activate your changes. Pressing **Shift** + **Tab** moves the selection box backward.

Exploding a Pie Chart Segment

Sometimes you want to emphasize a portion of the pie chart. By exploding a pie chart segment, you draw attention to it.

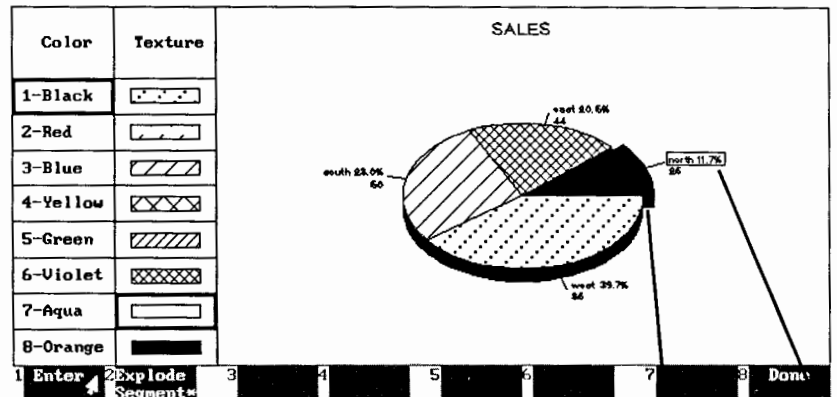
1. Choose **Segment Styles** from the Edit and Draw functions.

A new set of function labels appears at the bottom on the screen.

2. Press **Tab** to move the selection box to the segment label of the pie segment you want to explode.
3. Choose the **Explode Segment** function by moving the cursor to it and clicking the mouse button once.

An asterisk (*) appears in the **Explode Segment*** function label. It indicates that the selected segment will be separated from the rest of the pie.

Charting Gallery Chart Styles Chart: C:\GALLERY\3DPIE
You may change the legend specifications, then select Enter.



Asterisk indicates the selected segment will be exploded.

This is the exploded pie segment.

The selection box indicates the segment to be exploded.

4. Choose **Done**.

Saving Your Chart

Now that you have created a pie chart, follow these steps to save it.

1. Choose **Charting Main** to display the Charting Main functions.
2. Choose **Get and Save** to display the Get and Save functions.
3. Choose **Save** to display the Save functions.
4. Choose **Chart**.

The input line displays

```
C:\GALLERY\TEMPCHART
```

which is the fully qualified path name and the chart's temporary file name.

5. See "Saving a Chart to a Different Drive and Directory" if you want to change the chart's name, drive, or directory; otherwise, choose **Enter**.

If you already have a file named TEMPCHART, you may need to choose **Save** again.



Saving a Chart to a Different Drive and Directory

In this exercise, you change the drive letter and directory path, in addition to typing the file name.

1. Press the **←** key until the cursor is at the beginning of the file name, or at the place in the file name or path name where you want to begin making changes.
2. Type the letter of the drive that contains the data disc.
3. Type the name of the directory you want, if any.
4. Type the name you want for the file.

For example, if the data disc is in drive B, type:

B:SALES

5. If extra characters remain after you type the drive letter, directory, and file name use **DEL**, or **Alt** + **L** to delete them.
6. Press **Enter**.

Charting Gallery saves your chart, unless the name you typed already exists.

If the message displayed informs you that the file name you entered already exists, type in a new file name, or choose **Save** again. to overwrite the existing chart with your new chart.

7. Choose **Done** then **Charting Main** to redisplay the main Charting Gallery functions.

Printing or Plotting a Chart

You can use a printer or plotter to draw your chart on paper. When you are ready to use a printer or plotter, display the Device Control screen and check the various settings. Then, print or plot the chart. (If your computer does not have a printer or plotter attached, go on to the next chapter.)

Before You Begin

Make sure that your printer or plotter is turned on and has paper in it. If you haven't yet installed the configuration information for your printer or plotter on your working copy of Charting Gallery, do that now. Refer to the *Setting Up Drawing Gallery and Charting Gallery* booklet for specific instructions.

Displaying the Device Control Screen

The Device Control screen lets you check the settings that control the size and orientation of your chart when it is printed or plotted. Follow these steps to see this screen.

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Draw**.
A new group of function labels – the Draw function labels – appears.
3. Choose **Device Control**.

This screen sample shows the options you have for printing and plotting your chart. These are the standard settings for the Device Control screen. See "Device Control Options" in Chapter 10, *Printing and Plotting a Chart* for a detailed description of what these settings do.

Your chart will print horizontally across the page.

The name that appears here should match the name of your printer or plotter.

The printer or plotter will leave a 3/4 inch blank margin around the edges of your chart.

These options let you draw to a file.

The resolution will depend on the type of printer you have. If you are using a plotter, this setting doesn't apply.

Device Control

Select a device and choose output options.

Device Name/Port **LaserJet+/COM1**

<p>Orientation Horizontal</p> <p>Location Full Page</p> <p>Margins (inches) 3/4 3/4 3/4</p>	<p>Copies 1</p> <p>Auto Feed Yes</p> <p>Medium Paper</p> <p>Picture Scaling Best Fit</p> <p>Paper Size A (8-1/2 x 11 in.)</p> <p>Resolution 300 X 300 DPI</p> <p>Units Inches</p>
--	--

Draw to File No

File Name Not Applicable

1 Draw to LaserJet 2 Previous Choice 3 Next Choice 4 Default Choices 5 Save Choices 6 7 8 Back to Charting

Checking the Settings

You will use the standard settings for your printer or plotter as shown in the previous figure.

1. Check the Device Name/Port field near the top of the screen. It should display the type of printer you plan to use.
2. To change the device name:
 - a. Click on the Device Name/Port field to make sure it is the currently selected item on the screen.
 - b. Click on the Device Name/Port field again, or choose **Next Choice**. A different device name appears in the field.
 - c. Continue clicking on the field or choosing **Next Choice** until the name of your printer or plotter appears on the screen. If the printer or plotter you want does not appear, you need to install its configuration file on your working copy of Charting Gallery. See the *Setting Up Drawing Gallery and Charting Gallery* booklet.
3. Choose **Default Choices**.

You now have the settings you need to print or plot the chart.

Printing or Plotting the Chart

1. Choose **Back to Charting**.
Your chart reappears.
2. Choose **Draw To <device>**. The name of your printer or plotter appears in place of <device>, and Charting Gallery prints or plots the chart.
3. After your chart has been drawn, choose **Done** to redisplay the Edit and Draw functions.

4. Redisplay the main Charting Gallery functions by pressing **F8** or by choosing the **Charting Main** function label.

You are now ready to create another chart, or exit Charting Gallery. The next exercise provides instructions on leaving Charting Gallery.

Exiting Charting Gallery

If you have Drawing Gallery installed on your computer, the main Charting Gallery function labels provide the **Go to Drawing** and **Exit Charting** functions.

If you do not have Drawing Gallery installed, the main Charting Gallery function labels provide the **Exit** function label as your way leave Charting Gallery.

- You can use the **Go to Drawing** function to go directly to Drawing Gallery from Charting Gallery.
- You can use the **Exit** function to leave Charting Gallery and return to DOS or PAM.

Go To Drawing Gallery

1. From the Charting Main screen, choose **Go to Drawing**. If you have not saved your current chart, Charting Gallery asks you whether you want to save or discard the chart.
 - If you want to save it under the name displayed, choose **Yes, Save**. Charting Gallery saves the chart.
 - To save your chart under a different name, choose **Cancel Exit** and use the Get and Save functions. Follow the naming and saving procedure described in "Saving a Chart" in Chapter 8, *Getting and Saving a Chart*.
 - If you don't want to save your chart, choose **No, Discard**.

Return to DOS or PAM

1. From the main Charting Gallery functions, choose **Exit**. If you have not saved your current chart, Charting Gallery asks you whether you want to save or discard the chart. Do one of the following:
 - If you want to save it under the name displayed, choose **Yes, Save**. Charting Gallery saves the chart and returns you to DOS or PAM.
 - To save your chart under a different name, choose **Cancel Exit** and use the Get and Save functions. Follow the naming and saving procedure described in "Saving a Chart" in Chapter 8, *Getting and Saving a Chart*.
 - If you don't want to save your chart, choose **No, Discard**. Charting Gallery discards the chart and returns you to DOS or PAM.

Now, you can:

3. Remove your discs if the Charting Gallery working copy is on a flexible disc.
4. Use a different application or turn off the computer.

What's Next

Congratulations! You have completed the steps to create a three-dimensional pie chart with an exploded segment. Now you are ready to explore the other features of Charting Gallery.

What Charts Can You Create?

In this chapter, you learn how to select the best chart types and chart options for your data. You must use the mouse to select the chart types and options you want.

There are eight basic chart types:

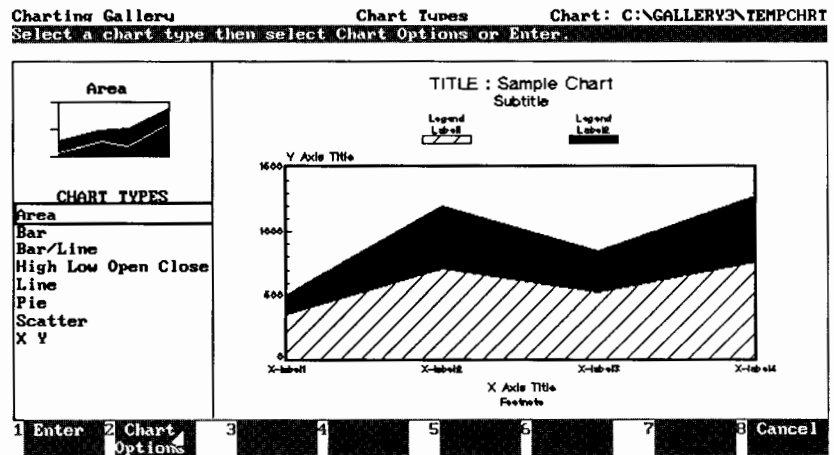
- Area
- Bar
- Bar/Line
- High Low Open Close
- Line
- Pie
- Scatter
- XY

Each type is explained in the sections that follow.

To begin creating a new chart, choose **Chart Types** from the main Charting Gallery functions.

Selecting Area Charts

Area charts show total volume or quantity, or depict running totals. Area charts are "additive," which means that the total volume of the chart is the sum of the parts. The top line of the chart shows the total volume.



1. Select the Area chart type.

2. To view the chart options available for use with the Area chart type, choose **Chart Options**.

The chart options appear in the side bar menu area.

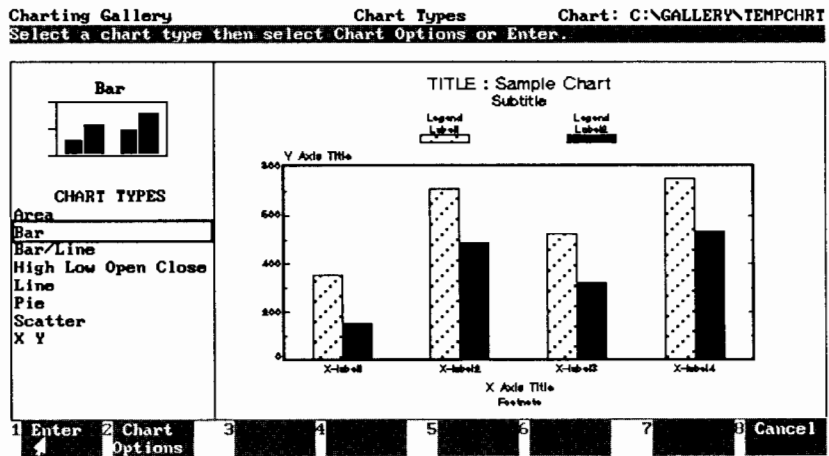
For information on how these options affect your chart, refer to "Scaling Options" and "Line Thickness Options" in Chapter 4, *Using the Chart Options*.

3. To change a chart option, point to the scaling or line thickness option you want. Click the mouse button once. The selection box moves to the option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The charting work area displays a sample area chart using sample data.

Selecting Bar Charts

Use a bar chart to compare information.



1. Select the **Bar** chart type. The kind of comparison you want to make determines the chart options you select.

2. To view the chart options available for use with the Bar chart type, select **Chart Options**.

The side bar displays a list of several chart options. These options fall into two categories, clustering options and stacking options.

3. Decide what you want your bar chart to show.

If you want to compare how different sets of data change over a period of time, select a clustered bar chart option.

If, however, you wish to show how the components within sets of data change over a period of time, select a stacked bar chart option.

For more information on how these options affect your chart, refer to "Clustering Options" and "Stacking Options" in Chapter 4, *Using the Chart Options*.

4. Select the chart option you want.
5. Go to the next section to determine bar chart presentation.

Determine Bar Chart Presentation

Once you have selected the kind of bar chart you want to create, you can change any chart options that affect the appearance of your chart.

1. To view the options that control your chart's appearance, select **MORE**.

You need to check the dimension, outline color, line thickness, and numbering options.

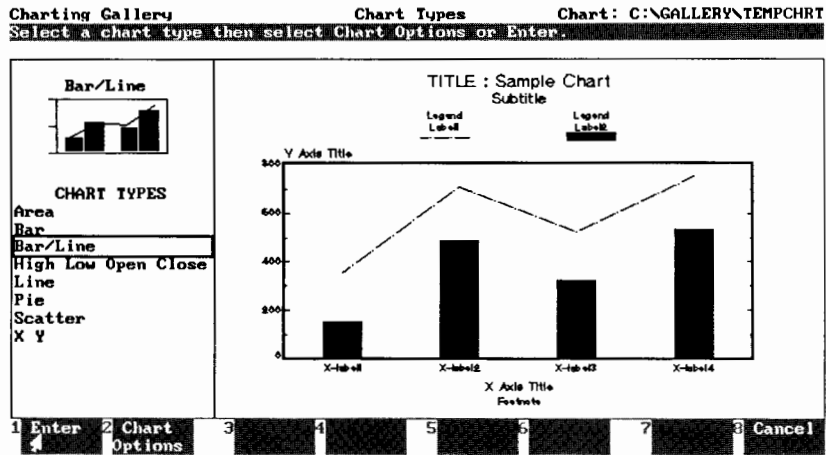
For information on how these options affect your chart, refer to "Dimension Options," "Outline Color Options," "Line Thickness Options," and "Numbering Options" in Chapter 4, *Using the Chart Options*.

2. To change a presentation option, point to the bar, outline color, line thickness, or number you want. Click the mouse button once. The selection box moves to that option.
3. Repeat step 2 until you have selected all the options you want.
4. Choose **Enter**.

The chart area of the screen displays sample data in the bar chart you selected.

Selecting Bar/Line Charts

Use a bar/line chart to show progress towards a goal and changes over time, while emphasizing a single factor. The way you want to show the progress, determines the chart options you select.



1. Select the **Bar/Line** chart type.

Creating a Chart

2. To view the chart options available for use with the Bar/Line chart type, choose **Chart Options**.

The side bar displays a list of several chart options. These options fall into two categories, clustering options and stacking options.

3. Decide what you want your Bar/Line chart to show.

If you want to compare how different sets of data change over a period of time, and relate the comparison to progress towards a goal, select a clustered bar/line chart option.

If, however, you wish to show how the components within sets of data change over a period of time, select a stacked bar chart option.

For more information on how these options affect your chart, refer to "Clustering Options" and "Stacking Options" in Chapter 4, *Using the Chart Options*.

4. Select the chart option you want.
5. Go to the next section to determine Bar/Line chart presentation.

Determine Bar/Line Chart Presentation

Once you have selected the kind of Bar/Line chart type you want, you can change any chart options that affect the appearance of your chart.

1. To view the options that control your bar/line chart's appearance, select **MORE**.

You need to check the dimension, outline color, line thickness, and numbering options.

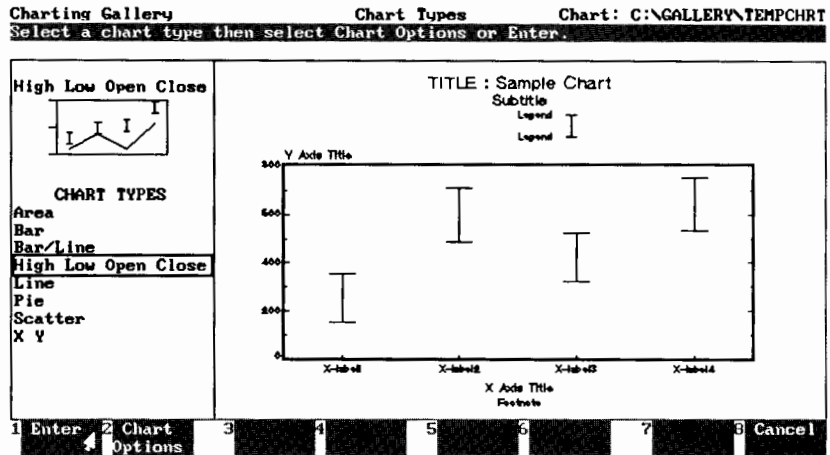
For information on how these options affect your chart, refer to "Dimension Options," "Outline Color," "Line Thickness," and "Numbering Options" in Chapter 4, *Using the Chart Options*.

2. To change any of the presentation options, point to the bar, outline color, line thickness, or number option you want. Click the mouse button once. The selection box moves to that option.
3. Repeat step 2 until you have selected all the options you want.
4. Select **Enter**.

The charting work area displays a sample bar/line chart using sample data.

Selecting High Low Open Close Charts

Use a high low open close chart (HLOC) to show how information fluctuates within a given period of time. A HLOC chart is especially useful when you want to depict stock market volume. You can also use an HLOC chart make a control chart that shows temperature variations or chemical saturation points as they occurred within a specific time period.



1. Select the **High Low Open Close (HLOC)** chart type.

2. To view the chart options available for use with the HLOC chart type, choose **Chart Options**.

The chart options appear in the side bar menu.

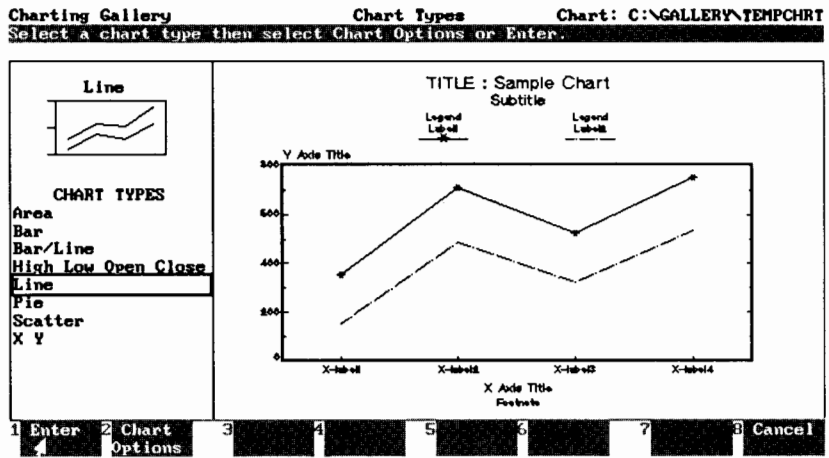
For information on how these options affect your chart, refer to "Scaling Options" and "Line Thickness Options" in Chapter 4, *Using the Chart Options*.

3. To change a chart option, point to the scaling or line thickness option you want. Click the mouse button once. The selection box moves to that option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The screen displays a sample HLOC chart using sample data.

Selecting Line Charts

Use a line chart to emphasize a trend.



1. Select the **Line** chart type.

2. To view the chart options available for use with the Line chart type, choose **Chart Options**.

The chart options appear in the side bar menu.

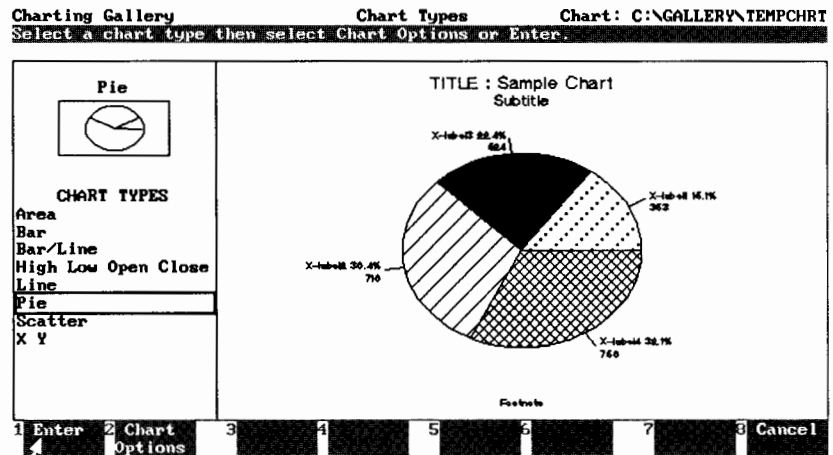
For information on how these options affect your chart, refer to "Scaling Options" and "Line Thickness Options" in Chapter 4, *Using the Chart Options*.

3. To change a chart option, point to the scaling or line thickness option you want. Click the mouse button once. The selection box moves to that option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The screen displays a sample line chart using sample data.

Selecting Pie Charts

Use a pie chart to show the relationship of parts to a whole.



1. Select the **Pie** chart type.

2. To view the options available for use with the Pie chart type, choose **Chart Options**.

The chart options appear in the side bar menu.

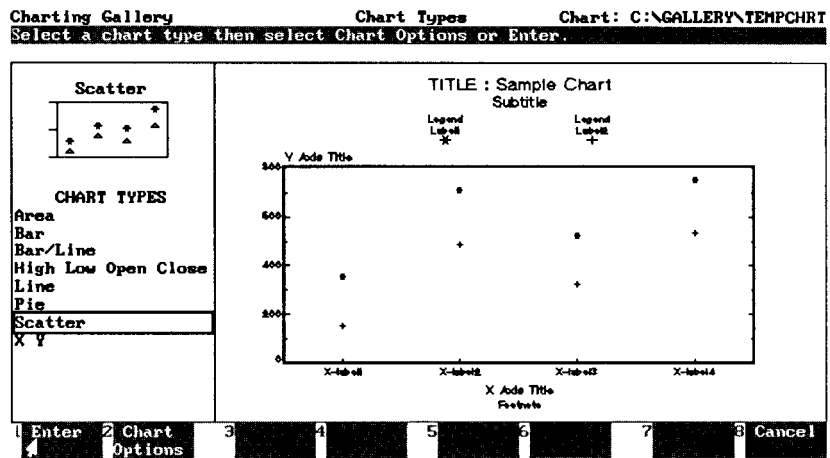
For information on how these options affect your chart, refer to "Dimension Options," "Outline Color Options," and "Segment Options" in Chapter 4, *Using the Chart Options*.

3. To change a chart option, point to the dimension, outline, or segment option you want. Click the mouse button once. The selection box moves to that option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The screen displays a sample pie chart using sample data.

Selecting Scatter Charts

Use a scatter chart to emphasize your data points and show general trends.



1. Select the Scatter chart type.

2. To view the options available for use with the Scatter chart type, choose **Chart Options**.

The chart options appear in the side bar menu.

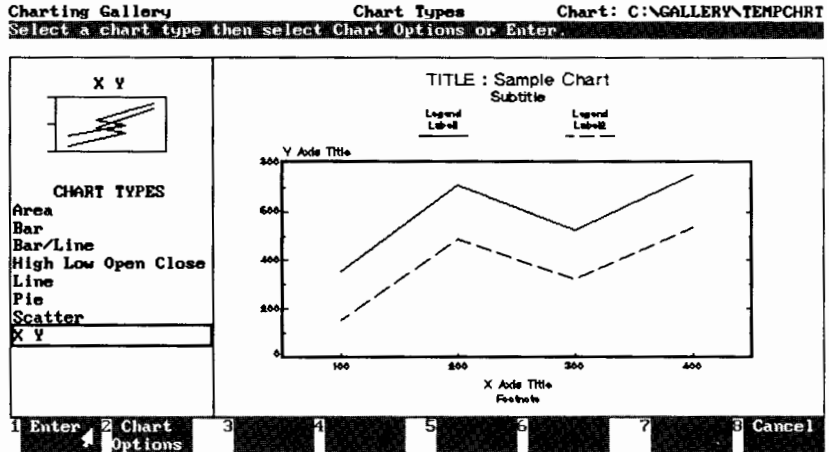
For information on how these options affect your chart, refer to "Scaling Options" and "Line Thickness Options" in Chapter 4, *Using the Chart Options*.

3. To change a chart option, point to the the scaling or line thickness option you want. Click the mouse button once. The selection box moves to that option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The screen displays a sample scatter chart using sample data.

Selecting XY Charts

Use an XY chart to show a trend, or show how two variables relate to each other when the order of the data is important.



1. Select the XY chart type.

2. To view the options available for use with the XY chart type, choose **Chart Options**.

The chart options appear in the side bar menu.

For information on how these options affect your chart, refer to "Scaling Options" and "Line Thickness Options" in Chapter 4, *Using the Chart Options*.

3. To change any of the chart's options, point to the scaling or line thickness options you want. Click the mouse button once. The selection box moves to that option.
4. Repeat step 3 until you have selected all the options you want.
5. Choose **Enter**.

The screen displays a sample XY chart using sample data.

Using the Chart Options

After you select a chart type, as described in the preceding chapter, you choose options that affect the appearance of your chart. Not all chart types use all chart options. This chapter describes the effects of the chart options on each chart type.

For convenience, the chart options are grouped into these eight categories:

- Clustering options
- Dimension options
- Line Thickness options
- Numbering options
- Scaling options
- Segment options
- Stacking options
- Outline Color options

When you select **Chart Options** for a specific chart type, the side bar displays a list of the chart options available for that chart type.

Use the mouse to choose the chart option you want, then select **Enter**. The Charting Main screen displays the chart type/option combination you selected. If you want to redisplay the main Charting Gallery functions, choose **Cancel**.

Using a chart option does not alter the data in any way. However, occasionally a three-dimensional or log scale option may make some information difficult to read.

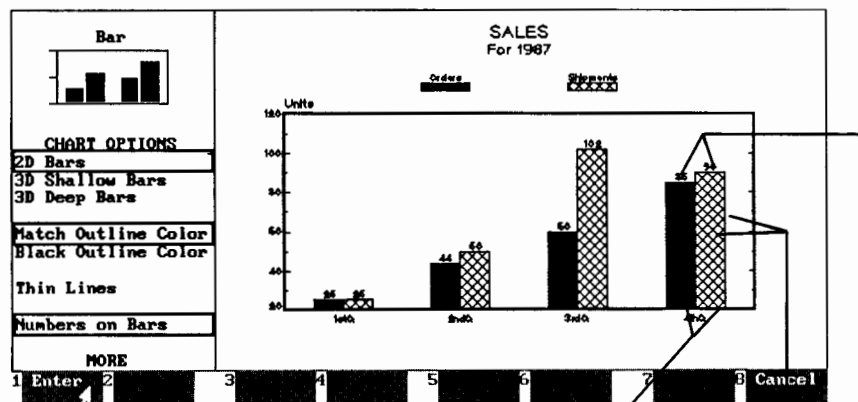
Sample Charts

Here are a few examples of charts you can make by combining chart types with various chart options. In these samples, the side bar shows some of the chart options that have been selected, and the charting work area shows how the chart would appear after choosing **Enter** from the Chart Types function labels.

Vertical Clustered Bar Chart

This is a **Bar** chart type, combined with the **Vertical Clustered** chart option. The additional options shown in the side bar were displayed by selecting **MORE**. The chart uses two-dimensional bars, matching outline color, and numbers on bars.

Charting Gallery Chart Types Chart: C:\GALLERY\VERTCBAR
Select a chart option then select Enter.



Two dimensional bars are displayed.

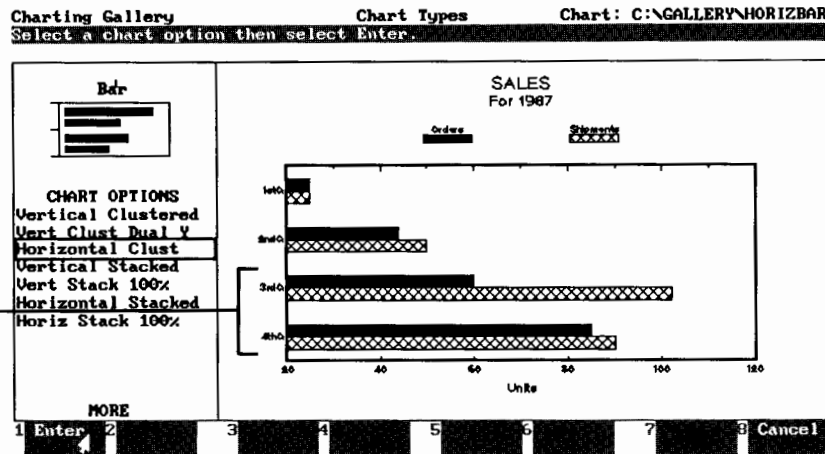
Outline color displayed is the same as the bar color.

Numeric value of bars is displayed.

Horizontal Clustered Bar Chart

This is a **Bar** chart type, combined with the **Horizontal Clust** chart option. The chart uses two-dimensional bars, and matching outline color.

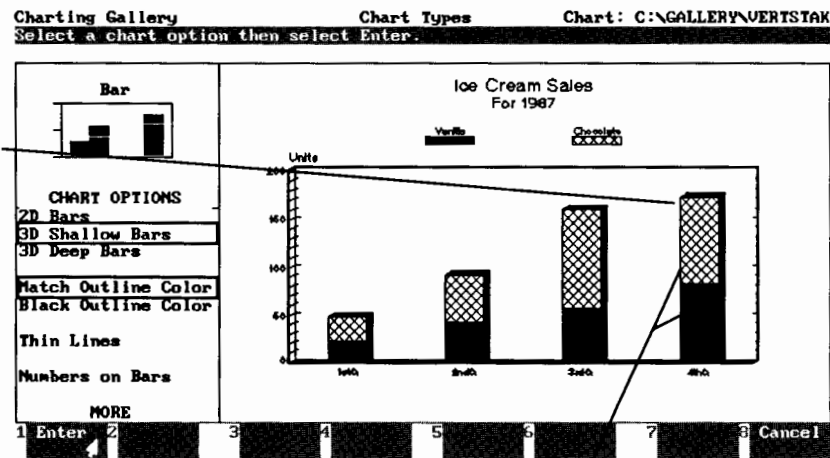
Horizontal clustered bars are displayed.



Vertical Stacked Bar Chart

This is a **Bar** chart type, combined with the **Vertical Stacked** option. The additional options shown in the side bar were displayed by selecting **MORE**. The chart uses three-dimensional shallow bars, and matching outline color.

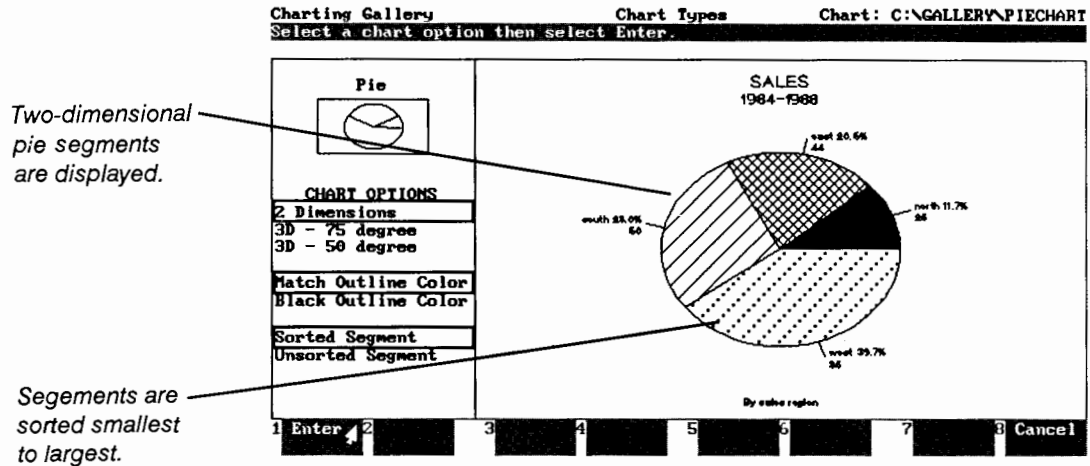
Three-dimensional shallow bars are displayed.



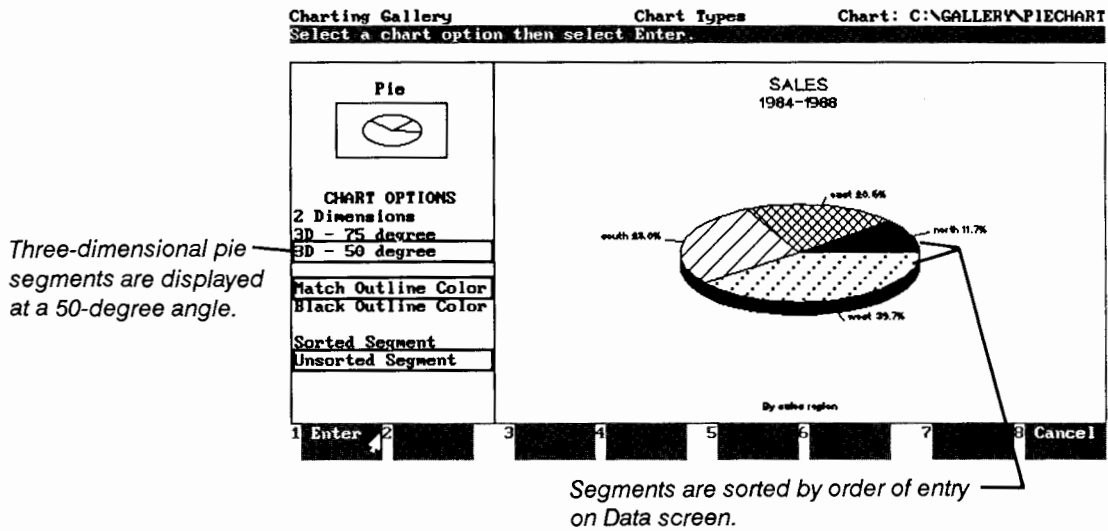
Bar chart uses stacked bars.

Chart Options

Sorted 2D Pie Chart This is a Pie chart type. The chart uses two-dimensional, sorted segments with matching outline color.

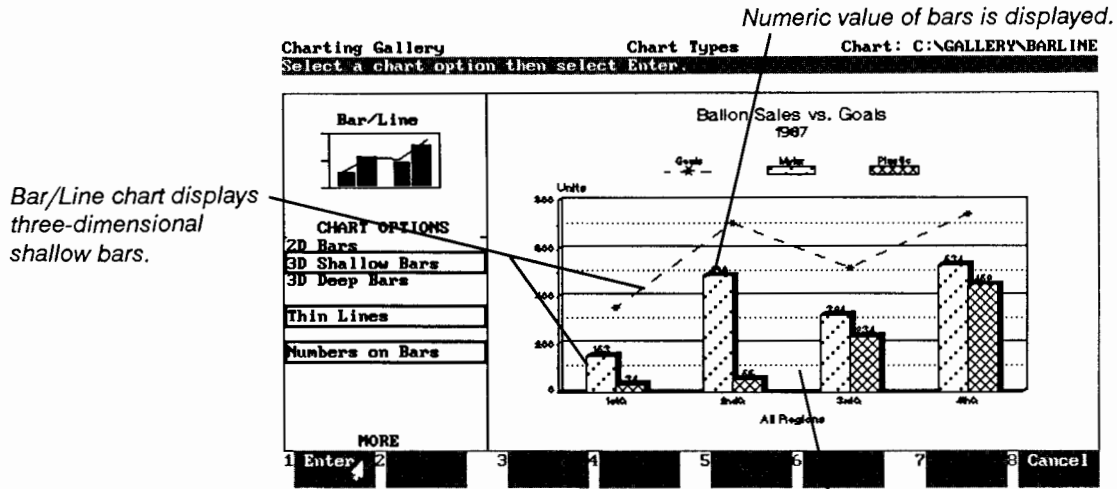


Unsorted 2D Pie Chart This is a Pie chart type. The chart uses three-dimensional unsorted segments drawn at a 50-degree angle, with a matching outline color.



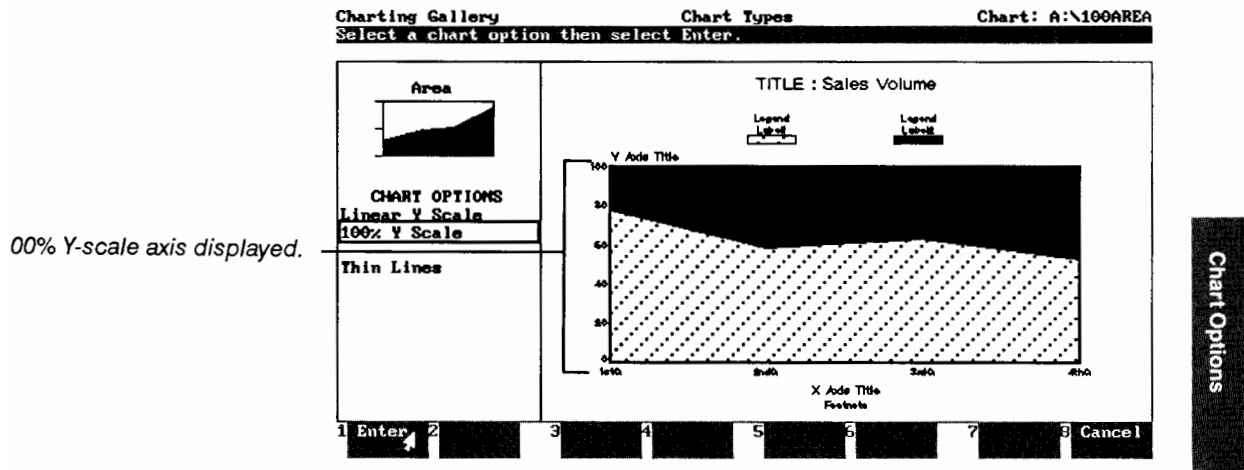
3D Bar/Line Chart

This a Bar/Line chart type, combined with the Vertical Clust Dual Y option. The additional options shown in the side bar were displayed by selecting MORE. The chart uses three-dimensional shallow bars, thin Y-axis lines, and numbers on bars.



100% Y-Scale Area Chart

This is an Area chart type, combined with the 100% Y Scale chart option.



Clustering Options

When you select **Chart Options** for a bar or bar/line chart, the side bar on the screen includes these clustering options among its list of selections:

- Vertical Clustered
- Vertical Clustered Dual Y
- Horizontal Clustered

Vertical Clustered

If you want to compare independent sets of data to show how each set has changed over a period of time, select the **Vertical Clustered** option to make this comparison easy to see. It is best to limit the clustering to three sets.

Vertical Clustered Dual Y

If you want to compare independent sets of data to show how each set has changed, and wish to compare the trends or relative changes to two different Y-axis scales, select the **Vert Clust Dual Y** option.

For example, you might want to create a vertical clustered dual-Y bar chart showing a particular company's stock value, with the price on the left Y-axis and percent of change on the right Y-axis.

Horizontal Clustered

If you want to compare various aspects of several items at the same time, select the **Horizontal Clust** option for your bar or bar/line chart.

It is best to limit the clustering of information to three groups.

Dimension Options

When you select **Chart Options** for a bar, or bar/line chart and click **MORE**, the side bar on the screen includes these dimension options among its list of selections:

- 2D Bars
- 3D Shallow
- 3D Deep

When you select **Chart Options** for a pie chart, the side bar on the screen includes these dimension options among its list of selections:

- 2 Dimensions
- 3D - 75 degree
- 3D - 50 degree

2D Bars

If you want to create a two-dimensional bar chart, select the **2D Bars** option. With the two-dimensional bars option, the bars in a chart are flat and do not have three-dimensional sides.

3D Shallow

If you want to create a three-dimensional bar chart with shallow sides, select the **3D Shallow** option.

You can change the color of the tops and sides of the bars, as described in "Outline Color Options," later in this chapter. You cannot change the pattern, which is always solid. Color choices affect all the bars in your chart.

3D Deep Bar

If you want to create a three-dimensional bar chart with deep sides, select the **3D Deep** chart option.

You can change the color of the tops and sides of the bars, as described in "Outline Color Options" later in this chapter. You cannot change the pattern, which is always solid. Color choices affect all the bars in your chart.

2 Dimensions

If you want to create a flat pie chart, select the **2 Dimensions** option.

3D - 75 Degree Pie

If you want to create a three-dimensional pie chart that is presented at a slight incline, select the **3D - 75 degree** option.

3D - 50 Degree Pie

If you want to create a three-dimensional pie chart that is presented at a sharp incline, select the **3D - 50 degree** option.

Line Thickness Option

When you select **Chart Options** for an area, bar, bar/line, high low open close, line, scatter, or XY chart, the side bar on the screen includes the **Thin Lines** option among its list of selections. (Depending on the chart type, you may have to click **MORE** to see this option.)

Thin Lines

If you want to use ultra thin lines in your chart, including the axes, the grid lines, and the data lines, select the **Thin Lines** option.

The thin lines option differentiates between major and minor grid lines by making minor grid lines dotted.

You may not notice the difference between regular (thick) and thin lines on the charting work area. The difference is most obvious when you print or plot your chart.

Numbering Option

When you select **Chart Options** for a bar or bar/line chart and click **MORE**, the side bar on the screen includes the **Numbers on Bars** option among its list of selections.

Numbers on Bars

If you want to show the numeric value of all the bars in your bar chart, select the **Numbers on Bars** option. Charting Gallery displays a number that is sum of the bar value at the top of the bar.

Turning the numbers for any set of stacked bars on or off, affects the entire chart.

You cannot use the **Numbers on Bars** option with 100% bar charts.

Charting Gallery attempts to fit all the numbers on the bars, but those that do not fit in the chart area will not be drawn. Overlapping numbers will appear.

You can also specify that numbers appear only above specific bars. To add numbers to certain data sets, follow the instructions provided in "Adding Numbers to Bars" in Chapter 6, *Enhancing a Chart*.

Scaling Options

When you select **Chart Options** for an area chart, the side bar on the screen includes these scaling options among its list of selections:

- Linear Y Scale
- 100% Y Scale

When you select **Chart Options** for a high low open close chart, the side bar on the screen includes these scaling options among its list of selections:

- Linear Y Scale
- Dual Linear Y Scale

When you select **Chart Options** for a line, scatter, or XY chart, the side bar on the screen includes these scaling options among its list of selections:

- Linear X Scale
- Log X Scale
- Linear Y Scale
- Log Y Scale
- Dual Linear Y Scale
- Log Lin Y Scale
- Lin Log Y Scale
- Dual Log Y Scale

Linear X Scale

If you want your chart's X-axis to display an equal distance between each tick mark, select the **Linear X Scale** option.

Log X Scale

If you want to show relative change on the X-axis when there is a large difference between baseline quantities, select the **Log X Scale** option. This chart option is also useful when you want to show the relative change of variables that are expressed in different units of measure, for example, the increase of crime incidents as compared to population growth.

Linear Y Scale

If you want your chart's Y-axis to display an equal distance between each tick mark along a single Y-axis, select the **Linear Y Scale** option.

100% Y Scaling

If you want to compare the trend of the components to a whole, select the **100% Y Scaling** option.

When you select this option, Charting Gallery automatically labels the Y-axis from 0 to 100. You cannot control the increments for Y-axis labeling with the Edit and Draw functions when you use the 100% option.

Log Y Scale

If you want to show relative change along the Y-axis when there is a large difference between baseline quantities, select the **Log Y Scale** option. This chart option is also useful when you want to show the relative change of variables that are expressed in different units of measure, for example, the increase of crime incidents as compared to population growth.

The scaling options listed below are for charts with a dual Y-axis scale. Use these options to compare trends or relative changes. Charting Gallery draws your chart with a labeled Y-axis on the left and right sides of the chart. This is useful when you want to show how one variable impacts another. If you use a dual Y-axis scaling option, refer to "How Chart Type Affects the Data Screen" in Chapter 5, *Working with Chart Data*.

Dual Linear Y Scale	If you want linear scaling on both the left and right Y-axis, select the Dual Linear Y Scale option.
Log Lin Y Scale	If you want log scaling on the left Y-axis and linear scaling on the right, select the Log Lin Y Scale option.
Lin Log Y Scale	If you want linear scaling on the left Y-axis and log scaling on the right, select the Lin Log Y Scale option.
Dual Log Y Scale	If you want log scaling on both the left and right Y-axis, select the Dual Log Y Scale option.

Segment Options

When you select **Chart Options** for a pie chart, the side bar on the screen includes these segment options among its list of selections:

- Sorted Segments
- Unsorted Segments

Sorted Segments

If you want the segments in your pie chart sorted from smallest to largest, with the smallest segment appearing just above the 3 o'clock position and the larger segments appearing in order of size as you move counter-clockwise around the pie, select the **Sorted Segments** option.

Unsorted Segments

If you want the segments in your pie chart to follow the order in which you entered them on the Data screen, beginning at the 3 o'clock position and moving counter-clockwise around the pie, select the **Unsorted Segments** option.

Stacking Options

When you select **Chart Options** for a bar chart, the side bar on the screen includes these stacking options among its list of selections:

- Vertical Stacked
- Vertical Stacked 100%
- Horizontal Stacked
- Horizontal Stacked 100%

When you select **Chart Options** for a bar/line chart, the side bar on the screen includes these stacking options among its list of selections:

- Vertical Stacked
- Horizontal Stacked

Vertical Stacked

If you want to show how the components within sets of data change over time, select the **Vertical Stacked** option.

Vertical Stacked 100%

If you want to compare components of a whole in a vertical format, select the **Vert Stack 100%** option.

The Y-axis labeling runs from 0 to 100%.

If you select this option, Charting Gallery prevents you from using the **Numbers on Bars** option.

Horizontal Stacked

If you want to compare totals and sums of totals at one time, select the **Horizontal Stacked** option.

Horizontal Stacked 100%

If you want to compare components of a whole in a horizontal format, select the **Horiz Stack 100%** option.

The Y-axis labeling runs from 0 to 100%.

If you select this option, Charting Gallery prevents you from using the **Numbers on Bars** option.

Outline Color Options

When you select **Chart Options** for a pie, bar, or bar/line chart, the side bar on the screen includes the following outline options among its list of selections. (For a bar chart, you must click **MORE** before you can view these options.)

- Match Outline Color
- Black Outline Color

Match Outline Color

If you want the outline of the bar or pie segment to be the same color as the bar or pie segment, select the **Match Outline Color** option.

For three-dimensional bars and pie segments, the three-dimensional sides are the same color as the outline.

Black Outline Color

If you want the outline of the bar or pie segment to be drawn in pen 1 (black), select the **Black Outline Color** option.

For three-dimensional bars and pie segments, the three-dimensional sides are the same color as the outline.

Working with Chart Data

This chapter tells you when and how to use the Data screen to enter and edit the information that you want your chart to represent.

You can use the Data screen to do the following tasks:

- Work with data values.
- Enter and edit X-axis unit labels.
- Enter and edit pie chart segment labels.
- Enter and edit legend labels.
- Make a chart that includes or excludes specific data.
- Enter and edit dual Y-scale chart data.

To begin working with chart data, display the Data screen by choosing **Data** from the main Charting Gallery functions.

Using the Data Screen

Charting Gallery displays a Data screen that is specific to the chart type you select.

You use the Data screen to enter or edit data, segment labels, X-axis labels, and legend labels. You can also use the Edit and Draw functions to work with segment labels and X-axis labels.

The following illustration shows the Data screen as it appears for Bar chart types. See "How Chart Type Affects the Data Screen," later in this chapter, for information specific to other chart types.

This screen sample shows the columns labeled Range 1 through Range 5 where you enter the data values that your chart represents. It also shows the function label to select if you want to enter up to ten ranges of data values.

You may find that using more than five ranges of data can make your chart look cluttered.

Sample data is shown. Use Edit Data to clear values.
Enter X-Axis labels, data ranges and legend labels.

Textual X-Axis Labels		Legend 1	Legend 2	Legend 3	Legend 4	Legend 5
		Legend Label 1	Legend Label 2			
		Range 1	Range 2	Range 3	Range 4	Range 5
1	X-label1	353	153			
2	X-label2	710	490			
3	X-label3	524	324			
4	X-label4	750	534			
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

Legend labels go here.

This column is reserved for X-axis labels, except in pie charts. Pie charts use segment labels.

Data values go here.

Choose this function to display ranges 6 through 10.

1 X-Axis Labels 2 Select Labels 3 Edit Data 4 Subset Data 5 To Row Number 6 Ranges 6-10 7 Charting Main

Entering Data from Scratch

When you create a chart from scratch by selecting the appropriate chart type and chart options, Charting Gallery draws that chart on the screen with sample data.

You can modify the CHARTGAL.INI file to prevent any sample data from being displayed on your screen when you start Charting Gallery. If you want to do this, refer to the INITIALIZE_CHART and NO_CHART commands described in Chapter 12, *Production Charting*.

If you have not modified the CHARTGAL.INI file to suppress sample data, you must use the Data screen to remove the sample data and enter data that is meaningful to the chart you wish to make. If the data columns are *not* blank when you begin, you will need to erase all of the chart data so you can enter your information. See "Editing Data Values," later in this chapter.

The process of combining chart types and chart options to create a chart from scratch is described in Chapter 2, *What Charts Can You Create?* and Chapter 3, *Using the Chart Options*.

Modifying Existing or Transferred Data

When you create a new chart by updating an existing chart, you need to use the Data screen to edit the chart's data to reflect the new information you wish to convey.

You may want to erase part of the information displayed on the Data screen. In this case, you can erase the data from an entire column, from a row, or from a single field. See "Editing Data Values," later in this chapter.

If you do not want to erase information which you do not want to use in your current chart, see "Partial Charts," later in this chapter.

The method of retrieving an existing chart is explained in "Getting an Existing Chart" in Chapter 8, *Getting and Saving a Chart*.

For information on creating a chart from a spreadsheet or database, see "Transferring Data from a Spreadsheet" and "Transferring Data from a Database" in Chapter 11, *Charting Gallery and Other Programs*.

For information on transferring graphs, see "Transferring Graphs from Lotus or Symphony" in Chapter 11.

Editing Data Values

You can always edit data values on the Data screen. You can correct typing mistakes using the editing procedures described in "Editing What You Type" in Chapter 1 *Learning to Use Charting Gallery*. Table 5-1 shows you how to edit characters and blocks of text on the Data screen. Begin by choosing **Edit Data**.

To do this:	Move the cursor to:	Then choose:
Erase a data value	the data value you want to erase	Erase Field
Erase an entire column of data	row 1 of the column	Erase Column
Erase part of a column	the first data value to be erased	Erase Column
Delete a row	the row to be deleted	Delete Row
Insert a blank row	the row where you want the blank row to appear	Insert Row
Erase the entire chart	anywhere on the screen	Erase Chart

Entering Data Values

This section explains how to enter data values on a blank Data screen for a bar chart.

In general, this data-entry information applies to the other chart types. However, the use of the Data screen varies from chart to chart. For specific data-entry information on the other chart types, refer to "How Chart Type Affects the Data Screen," later in this chapter.

While you can use the mouse to move the rectangle-shaped cursor around on the Data screen, it might be easier to use the keyboard at this time, since you are using it to enter data. See Table D-1 in Appendix D, *Using Your Keyboard*.

Typing in the Data

1. Move the cursor to row 1 of the column labeled Range 1.
2. Type in the first data value. Don't worry about positioning the data values within each field, Charting Gallery does that for you when you are finished.

Each number you enter becomes a bar in your chart. An entire column of numbers becomes a series of bars, with each number represented by a single bar.

All charts can have up to ten columns of numbers with up to 640 data values.

Each number you enter in this column becomes a bar in a data set.

Each number you enter in this column becomes a bar in a second data set.

	Textual X-Axis Labels	Legend 1 Label 1	Legend 2 Label 2
1		353	
2		718	
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

3. Move the cursor to row 2 in Range 1 and type in the next data value.
4. Continue moving the cursor from one row to the next, until you have entered all the data values you want in Range 1. If you run out of rows on the current Data screen, refer to "Displaying Other Rows," later in this chapter.
5. Move the cursor to row 1 in Range 2 and type the rows of data values you want for that range.

Continue moving the cursor from one range to the next, until you have entered all the data values you want for the Data screen ranges. If you run out of ranges on the current Data screen, refer to "Displaying Ranges 6 through 10," later in this chapter.

Displaying Ranges 6 through 10

1. Choose **Ranges 6-10**.
Ranges 6 through 10 appear on the screen.
2. To get back to Ranges 1 through 5, choose **Ranges 1-5**.

Displaying Other Rows

1. Choose **To Row Number**.
Charting Gallery asks you to type in a row number.
2. Type in the row number you want to go to and press **↵**, or choose **Last Data Row**.

Charting Gallery advances the screen to the row number you entered.

Even though the Data screen can accommodate up to 640 rows of data, you can only use **To Row Number** to advance as far as the first *empty* row of data. For example, if row 59 is your last row of data, you can only advance as far as row 60.

If you want to view empty rows on the Data screen, you can use the **Pg Dn** and **Pg Up** keys to display other data rows.

Pg Dn displays the next 16 rows; **Pg Up** displays the previous 16 rows.

Entering Negative Numbers and Fractions

When entering data values for your chart, you can enter either positive or negative numbers. Express a negative number by placing a minus sign in front of it. For example:

-348

Express fractions as a decimal value. For example:

-348.5

Using Scientific Notation

You can also use scientific notation to express very large or very small numbers. The format to use is:

{plusminus} <number> E{plusminus} n

Where:

- <number> is a real number
- E means "multiply by"
- n is a power of 10.

If you are unfamiliar with scientific notation, the following examples show you how it works:

Example	Translation
3E+3	3000
3.42E+3	3420
3E-3	.003
3.42E-3	.00342
6.257E+8	625700000
-4.33E-5	-.0000433

You can use scientific notation to express numbers as large as 1E+30 (that's 1 followed by 30 zeros) or as small as 1E-30 (1 preceded by a decimal point and 30 zeros). Charting Gallery keeps track of up to six digits of precision.

Working with X-Axis Unit Labels

X-axis labels are the measurement units that appear along the X-axis of all charts, except pie charts.

To work with X-axis labels, choose **Data** from the main Charting Gallery function labels. You can enter these labels directly into the leftmost column of the Data screen. The types of X-axis labels are described in the next section.

The following screen sample shows you where to type the X-axis unit labels, the function label to choose for selecting the X-axis label type, and the heading on the Data screen that displays the type of X-axis label that is currently selected.

Charting Gallery X-Axis Labels Chart: A:\NBARCHART
Select the desired X-axis label type.

The X-axis label type appears here.

You type X-axis labels into this column.

	Legend 1 Legend Label1	Legend 2 Legend Label2	Legend 3	Legend 4	Legend 5
	Range 1	Range 2	Range 3	Range 4	Range 5
1					
2	353	153			
3	710	490			
4	524	324			
5	750	534			
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

1 Textual 2 Numeric 3 Dates 4 Day 5 Month 6 Quarter 7 Year 8 Done

Choose this function for textual X-axis labels.

Choose this function for numeric X-axis labels.

Choose one of these functions for unit-of-time X-axis labels.

Types of X-Axis Labels

To define the type of X-axis labels you want, choose **X-Axis Labels** from the Data function labels. Then choose the type of X-axis labels you want. Each label may be up to 20 characters long. If you select a large text size, Charting Gallery may omit the labels if they won't fit in the space available.

There are three types of X-axis labels:

- textual
- numeric
- units of time

Textual labels are labels that use text only or a combination of text and numbers.

Numeric labels are labels that use numbers only. Numeric labels may be positive or negative, or decimal amounts. You can use scientific notation to express very large or very small numbers.

Units of Time labels are labels that use one of the following:

- Specific dates.
- Days of the week.
- Months of the year.
- Quarters of the year.
- Specific years.

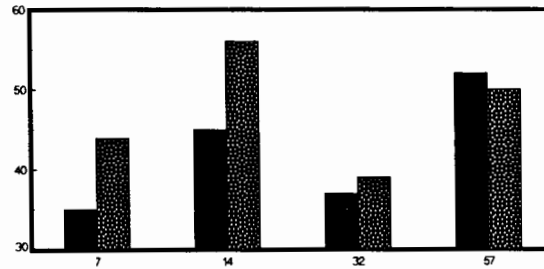
The top of the X-Axis Labels column on the screen always shows the type of X-axis label that is currently in effect.

Textual vs. Numeric X-Axis Labels

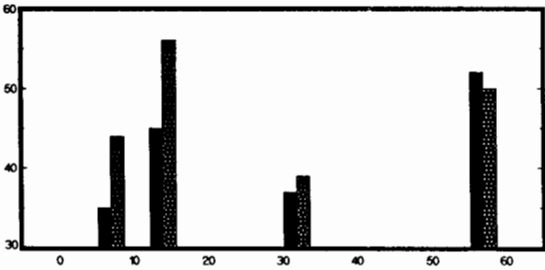
These two pictures help illustrate the difference between textual and numeric X-axis labels. In each case, these X-axis labels are used to create the chart:

7, 14, 32, 57


In the first chart, the X-Axis Labels column is set to Textual. Charting Gallery makes no attempt to *scale* the X-axis of the chart. Charting Gallery also does not scale the X-axis when the X-axis labels are days, months, or quarters.



In the second chart, the X-Axis Labels column is set to Numeric. This time, Charting Gallery scales the X-axis of the chart, adjusting for the uneven numerical spacing between the labels. Also, if you use dates or years for the X-axis labels and X-axis label types, Charting Gallery scales the chart's X-axis.



Entering a Textual or Numeric Label

1. Display the Data screen.
2. Look at the top of the X-Axis Labels column to check the label type.
3. If the label type is correct, go to step 4. If you need to change the label type to either Numeric or Textual follow these steps:
 - a. Choose **X-Axis Labels**.
 - b. Choose **Textual** or **Numeric**.
 - c. Choose **Done**.
4. Position the cursor on the first field in the X-Axis Labels column.
5. Type the text or numbers of the label.
6. If you want to enter another X-axis label, press  to move the cursor to the next field in the X-Axis Labels column. Repeat step 5.




If you leave an X-axis textual label field blank for a row of data values, your chart will show no X-axis label for that row. With numeric labels, you will need to type in a number or remove the line.

When you see your chart in the Charting work area, notice that Charting Gallery adjusts the numeric labels into even intervals that include the lowest and highest number that you entered.

Entering Units of Time Automatically



1. Choose **Data** from the main Charting Gallery functions.
2. Choose **X-Axis Labels**.
3. Depending on the kind of unit of time label you want, choose one of the following functions:
 - **Dates**.
 - **Day**.
 - **Month**.
 - **Quarter**.
 - **Year**.

For Date labels:

1. Enter all dates in standard date format. (For example, MM-DD-YY or MM/DD/YY.) Type the beginning date you want to use as the first X-axis label, and then press .
2. Type the ending date you want to use as the last X-axis label, and then press .
3. Type the number of days that you want between each date on the X-axis, then press .




When you use date labels and all of the years are within the same century, Charting Gallery displays the last two digits of the years on your chart's X-axis.

For Day, Month, and Quarter labels:

1. Type a number for the first day, month, or quarter that you want to use as an X-axis label, and then press .
2. Type a number for the total number of days, months, or quarters you want to use, then press . For example, to get labels for the next 15 months, type 15.

Labels are created starting in row 1 of the X-axis label column.

For Year labels:


1. Type the first year that you want to use as an X-axis label, and then press .
2. Type the last year that you want to appear on the X-axis, and then press .
3. Type the number of years that you want to be the interval between labels. Press  again.

For example, to create labels for each year between the first and last years, enter 1 as the interval. To create a label for every other year, enter 2. To create a label for every third year, enter 3.

Segment Labels in Pie Charts

You type the text of the label directly into one of the fields in the Segment Labels column on the Data screen. You can enter as many labels as you have pie segments, up to a limit of 16. Each label may have up to 20 characters. You can enter letters, numbers, or a combination of both. Charting Gallery may shorten your labels if they are too long.

Entering a Segment Label

1. Display the Data screen.
2. Move the cursor to the first field in the Segment Labels column.
3. Type the text of the segment label.
4. If you want to enter another segment label, press  to move the cursor to the beginning of the next segment label field. Repeat step 3.

Follow these steps to enter up to 16 segment labels in 16 rows.

If you leave segment label fields blank, those pie segments will be unlabeled.

Legend Labels

You can use legends on all charts except pie charts to indicate what a particular texture, line style, or marker style on your chart represents. When you are creating a chart, you can use the Data screen to name the legends that appear on your chart. These legend names are called legend labels.


You type the text of the legend label directly into one of the legend fields. A legend can have up to two lines of text, with up to ten characters on each line. You can enter letters, numbers, or a combination of both.

If you choose a large text size, Charting Gallery may need to shorten your text and reduce it to one line if it won't all fit in the space available. If this happens, choose a smaller text size.

Entering a Legend Label

1. Display the Data screen.

Position the cursor at the beginning of the first legend field.

2. Type the text of the legend label. To type a second line, press  after you have typed the first line.

Your chart displays both lines of a legend label only when you have less than six active ranges of data and you are using either medium or small text. If you have more than five active ranges, or if you are using large text, you'll see only the first line of each legend label on the charting work area.

3. To enter another legend label, move the cursor to the next legend field. Repeat step 2.

Follow these steps to enter as many legend labels as you want. If you need to use legends 6 through 10, choose **Ranges 6-10** to access those legend fields.

Partial Charts

To make a chart out of only a portion of the data that appears on the Data screen, use **Subset Data**. This function is useful when you have transferred data from another program and you do not want to use all the information you have retrieved.

Charting Gallery allows you to exclude both rows and columns of data from a chart. On the Data screen, only the columns and rows that will be represented are highlighted, as you can see in this screen sample.

Charting Gallery Subset Data Chart: A:\BARCHART
 Using cursor to mark location, select data to be displayed.

	Textual X-Axis Labels	Legend 1 Label1 Range 1	Legend 2 Label2 Range 2	Legend 3 Range 3	Legend 4 Range 4	Legend 5 Range 5
1	1stQ	353	153			
2	2ndQ	710	490			
3	3rdQ	524	324			
4	4thQ	750	534			
5	1stQ	300	100			
6	2ndQ	600	500			
7	3rdQ	400	700			
8	4thQ	700	600			
9						
10						
11						
12						
13						
14						
15						
16						

1 Starting Row 2 Ending Row 3 Include Range 4 Exclude Range 5 6 To Row Number 7 Ranges 6-10 8 Done

data is shown in the chart. (points to rows 1-4)

This data is not shown. (points to rows 5-8)

Excluding Rows of Data

1. Display the Data screen.
2. Choose **Subset Data**.
3. Click the first row of data you want to *include* in the chart. If the row you want is not on the screen, use **To Row Number** to move to that row.
4. Choose **Starting Row**.

The rows above the row you selected change to reverse video display to indicate that they will not be represented in the chart.

5. Click the last row of data you want to *include* in the chart. If the row you want is not on the screen, use **To Row Number** to move to that row.
6. Choose **Ending Row**.

The rows below the row you selected change to reverse video display to indicate that they will not be represented in the chart.

Only the highlighted rows will be included in your chart.

7. Choose **Done**.

If you are working with pie charts, keep in mind that a pie chart cannot represent more than 16 rows of data at a time.

Excluding Columns

This procedure does not apply to Pie charts. Pie charts use only one column of data at a time.

1. Display the Data screen.
2. Choose **Subset Data**.
3. Click the column of data that you want to *exclude* from your chart. If the column you want to exclude does not appear on the screen, choose **Ranges 6-10** before you move the cursor.
4. Choose **Exclude Range**. The entire data column changes to reverse video display to indicate that it won't be represented in the chart.
5. Repeat steps 3 and 4 for any other columns of data you want to exclude.

Only columns of data that remain highlighted are represented in your chart. To reactivate a column of data that you've excluded, click that column and choose **Include Range**.

6. When you are finished, choose **Done**.

Excluding X-Axis Labels

Charting Gallery includes in the chart all the X-axis labels entered on the Data screen and automatically abbreviates them when necessary. You can select specific X-axis labels to include or exclude from your chart.

1. Choose **Select Labels** from the Data functions.
2. Choose **Best Fit*** from the Select Labels functions.
3. Click the X-Axis label you want.
4. Choose the Include or Exclude function label you want.

To reselect the automatic abbreviation of the Best Fit function, choose **Best Fit** again.

How Chart Type Affects the Data Screen

Special considerations such as column heading differences, function label differences, and data-entry limitations, apply when you are using the Data screen to create the following kinds of charts:

- Pie charts.
- High low open close charts.
- X Y charts.
- Dual Y-axis scaled charts.

For example, if you are creating a pie chart, the Data screen displays a column headed `segment Labels` where you enter the labels you want for the pie chart segments. Likewise, if you are creating a bar chart, that same column area on the Data screen displays the heading `X-Axis Labels` and is reserved for entry of the bar chart X-axis labels.

The Label column is not the only area on the Data screen that reflects the chart type you select. To find out more about how to use the Data screen, read the information in the following sections that pertain to the chart type you want.

Pie Charts

Every row that contains a number in a currently active Range column becomes a segment in your chart. In Charting Gallery, a pie chart can have up to 16 segments.

If you enter more than 16 numbers into a column, the additional numbers will not be represented in the chart.

A pie chart can use only one active range at a time. If you are creating a pie chart and your Data screen contains more than one range of information, Charting Gallery automatically highlights Range 1 as the active range.

If you need to choose another range to use in your chart, choose **Next Range** until the active range number matches the number of the Range column that you want your pie chart to represent.

Choosing **Next Range** increases the active range number by 1. Pressing **Prev Range** decreases the active range number by 1. If the active range is 10, choosing **Next Range** changes the active range number back to 1.

High Low Open Close Charts

To enter data values for a high low open close (HLOC) chart, type the information into columns labeled High, Low, Open, Close, Line-Left, or Line-Right. These HLOC column headings take the place of the Range column headings that usually appear on the Data screen for most other chart types.

Both the high and low columns must be active on the Data screen before Charting Gallery can create a HLOC chart.

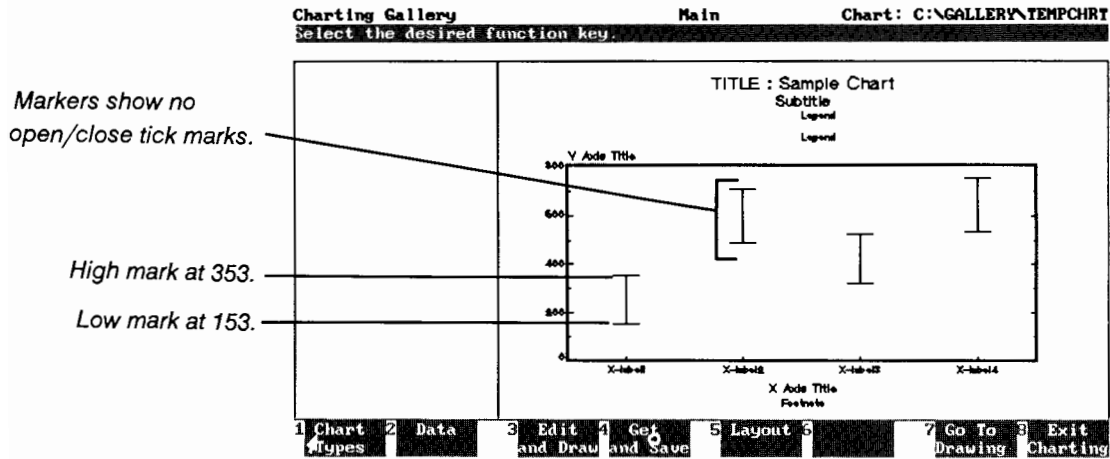
When you have data in the High and Low columns, you can create an HLOC chart.

Charting Gallery Data Chart: C:\GALLERY\TEMPCHRT
Enter X-axis labels, data ranges and legend labels.

	Textual	Legend 1	Legend 2	Legend 3	Legend 4	Legend 5
	X-axis Labels	Label1	Label2	Open	Close	Line-Left
1	X-label1	High	Low			
2	X-label2	353	153			
3	X-label3	710	490			
4	X-label4	524	324			
5		750	534			
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

1 X-axis Labels 2 Select Labels 3 Edit Data 4 Subset Data 5 HLOC Options 6 To Row Number 7 Ranges 6-10 8 Charting Main

A high/low chart has no open and close tick marks and depending on the marker style you are using, looks like the example shown below.



Charting Gallery checks the data values you type to ensure that the low value entered on a row is less than the high value on the same row. Charting Gallery prevents you from exiting the Data screen if there's a discrepancy on any row. If you entered an open or close value on a row that is not within the high and low range, Charting Gallery alerts you to this, but allows you to exit the screen.

HLOC Column Headings

If you are making a dual Y-axis HLOC chart from transferred or imported data, and that data does not use the High, Low, Open, Close, Line-Left column sequence that Charting Gallery uses, you can change the order of the column headings on the Data screen. It is easier to change a column heading than to change the entries in the column.

For example, if your imported data is arranged in columns ordered High, Low, Open, Close and Line-Right, then you could change the Line-Right column heading to be Line-Left. The Data screen would then look like the screen sample shown below.

The Data screen displays the **Set Line-Right** function label *only* when the Dual Linear Y Scale chart option is selected. See Dual Y-Axis Charts, later in this chapter.

Charting Gallery HLOC Options Chart: C:\GALLERY\TEMPCHRT
Select a disk/directory followed by a file, then select Enter.

	Textual X-Axis Labels	Legend 1 Label1 High	Legend 2 Label2 Low	Legend 3 Open	Legend 4 Close	Legend 5 Line- Left
1	X-label1	353	153			
2	X-label2	710	490			
3	X-label3	524	324			
4	X-label4	750	534			
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
1	Set To	2 Set To	3 Set To	4 Set To	5 Set Line	6 Set Line
	High	Low	Open	Close	Left	Right
						7 Ranges
						8 6-10
						9 Done

This is the function used to change the column heading to Line-Left.

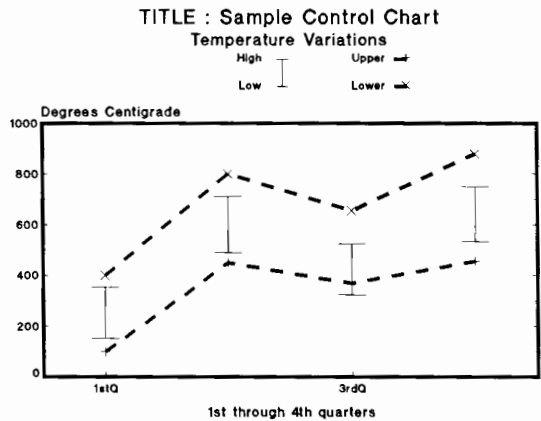
This is the new Line-Left column heading.

Changing HLOC Column Headings

1. Choose **HLOC Options**.
2. Click the column with the heading you want to change.
3. Depending on the heading you want to use, click one of the following functions:
 - **Set To High.**
 - **Set To Low.**
 - **Set To Open.**
 - **Set To Close.**
 - **Set Line Left.**
 - **Set Line Right.**

Lines and the HLOC Chart

Sometimes you may want to draw lines on your HLOC chart. This is useful if you want to connect the closing marks for a stock market chart, or if you want to draw two lines to represent the maximum and minimum acceptable levels in a control chart, as shown in the screen sample below.

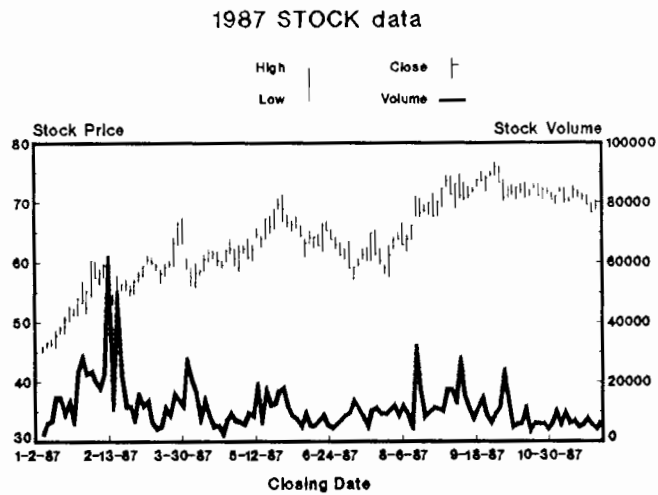


Adding Lines to a HLOC Chart

1. Click the column that contains the data you want to represent as a line, or if no data exists yet, type it in an available column.
2. If your chart uses a dual Y-axis, you can associate the lines with either the left or right axis, otherwise you can use only the left Y-axis. Determine which Y-axis you want the line to use as its scale, then click one of the following functions:
 - **Set Line-Left.**
 - **Set Line-Right.**

Both of the lines on the sample control chart shown on the previous page used the Line-Left setting.

The following sample shows a stock market chart with volume set to Line-Right.



XY Charts

When creating an XY chart, enter X-axis labels that are numeric, dates or years. Also, set the X-axis label type to Numeric, Dates, or Year.

Use the Data screen to set the X-axis label type and to enter the X-axis labels *before* selecting XY as the chart type.

See "Working with X-Axis Unit Labels," earlier in this chapter.

Dual Y-Axis Charts

All charts except area and pie charts provide you with the option of using dual Y-axis scaling. If you have selected any of the following dual Y-axis chart options, you must use the Data screen to associate the data sets with the appropriate axis:

- Vertical Clustered Dual Y.
- Dual Linear Y Scale.
- Log Lin Y Scale.
- Lin Log Y Scale.
- Dual Log Y Scale.

Entering Dual Y-Axis Chart Data

1. After choosing a dual Y-axis option, display the Data screen.

For charts that use a dual Y-axis, the column headings are **Left Axis** or **Right Axis** instead of **Range**. The column heading **Right Axis** and function label **Set Line Right** appear only when one of the above dual Y-axis chart options are selected.

Charting Gallery Data Chart: C:\GALLERY\DUALAXIS
Enter X-Axis labels, data ranges and legend labels.

You can change this column heading to Right Axis.

	Legend 1	Legend 2	Legend 3	Legend 4	Legend 5
Textual	Legend Label1	Legend Label2			
X-Axis Labels	Left Axis	Left Axis	Left Axis	Left Axis	Left Axis
1 X-label1	353	153			
2 X-label2	710	490			
3 X-label3	524	324			
4 X-label4	750	534			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

1 X-Axis Labels 2 Select Labels 3 Edit Data 4 Subset Data 5 Set L/R Axes 6 To Row Number 7 Ranges 6-10 8 Charting Main

Use this function to change the column heading to Left Axis or Right Axis.

2. Enter data for the second data set.
3. Choose **Set L/R Axes**.
4. Position the cursor on the column that contains the first Y data set, then click the mouse button.
5. Choose **Set to Left** or **Set to Right** depending on which Y-axis you want to associate with the data set.

Charting Gallery Set Axes Chart: C:\GALLERY\DUALAXIS

Move cursor to desired range; select axis to plot to.

This is the column heading that was changed to Right Axis.

	Textual	Legend 1	Legend 2	Legend 3	Legend 4	Legend 5
	X-Axis Labels	Legend Label1	Legend Label2			
		Left Axis	Right Axis	Left Axis	Left Axis	Left Axis
1	X-label1	353	153			
2	X-label2	710	490			
3	X-label3	524	324			
4	X-label4	750	534			
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

1 Set To Left 2 Set To Right 3 4 5 6 To Row Number 7 Ranges 6-10 8 Done

This is the function used to change the column heading to Right Axis.

6. Repeat steps 4 and 5 for each data set.
7. Choose **Done**.

Your chart is drawn with two Y-axis scales. To view the results, display the Main Charting screen by choosing **Done** then choosing **Charting Main**.

If you want to change the scales of the Y-axes, see "Changing the Scale" in Chapter 6, *Enhancing a Chart*.

Enhancing a Chart

This chapter tells you how to use the Edit and Draw functions to enhance your charts. You will learn how to:

- Work with chart titles and change the style and size of text.
- Edit legend and segment labels.
- Change line and HLOC marker styles.
- Change chart textures, patterns, and colors.
- Change the scale of a chart.
- Display the right Y-axis scale of any chart except a pie chart.
- Add numbers to bars on bar charts.
- Explode a pie segment.
- Add a regression line to a scatter chart.
- Add markers to lines in line, bar/line, HLOC, and XY charts.
- Switch between a bar chart and line chart, or switch between a clustered or stacked bar chart and a bar/line chart.

To begin enhancing your chart's appearance, choose **Edit and Draw** from the main Charting Gallery functions.

Using the Edit and Draw Functions

Charting Gallery displays different **F3** and **F4** Edit and Draw function labels depending on which chart type you're working with. The **F3** function label provides a unique styles option for each chart type. The **F4** function label provides axes options for all chart types, except for pie charts. For pie charts, the **F4** label is blank.

The following illustration shows the charting work area and the Edit and Draw function labels as they appear for bar charts.

Charting Gallery Edit and Draw Chart: C:\GALLERY\BARCHART
Select a function key to edit or draw your chart.

1 Edit Text 2 Text Styles 3 Bar Styles 4 Axes Options 5 Drawing Options 6 Draw 7 Annotate 8 Charting Main

Allows you to change chart text.

Allows you to change text color, font and size.

Allows you to control bar textures. Label differs from chart type to chart type.

Allows you to control general chart appearance.

Lets you use auto scaling or manual scaling, and control the grid color.

The Side Bar Menu Area

When you first choose the Edit and Draw function, Charting Gallery displays a new set of function labels.

Depending on what you want to do, you can choose from any of the Edit and Draw functions displayed at the bottom of the screen.

Depending on which Edit and Draw function label you select, the side bar menu area to the left of the charting work area may also display a list of several options. You can then make more choices.

After using one of the Edit and Draw functions to enhance your chart's appearance, choose **Enter**, to see your changes in the charting work area. To redisplay the Edit and Draw functions, choose **Done**.

For example, when you're working with a bar chart and you choose **Text Styles** from the Edit and Draw functions, Charting Gallery displays your bar chart in the charting work area and displays a list of color, font, and text size choices in the side bar.

Charting Gallery Text Styles Chart: C:\GALLERY\BARCHART
 Set text characteristics; select Enter to view changes.

These are your text font options. The selection box indicates light is the current setting.

This is your text styles and color menu. The color menu selection box indicates black is the current setting.

These are your text size options. The fill shows medium is the current setting.

Color	Font
1-Black	Light
2-Red	Bold
3-Blue	Size
4-Yellow	
5-Green	
6-Violet	
7-Aqua	
8-Orange	

1 Enter 2 3 4 5 6 7 8 Done

Working with Chart Titles

To use the Edit and Draw functions to add, change, or delete any of the items shown in the screen sample, choose **Edit Text**.

What you type goes here.

This is the selection box. You move it to the text item on our chart that you want to change.

You can change the Y-axis title.

You can change the X-axis title and chart footnote.

You can change the subtitle.

Charting Gallery **Edit Text** **Chart: C:\GALLERY\BARCHART**
This is your main title; to change it, type over it and select Enter.
TITLE : Sample Bar Chart

Category	Legend Label (Dotted)	Legend Label (Solid)
1st Q	~350	~150
2nd Q	~700	~450
3rd Q	~500	~300
4th Q	~750	~500

TITLE : Sample Bar Chart
Subtitle

Y Axis Title

X Axis Title

Footnote

1 Enter 2 3 4 5 6 7 8 Done

Enhancing a Chart

Editing Titles

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Edit Text**.
3. Move the selection box to the text you want to add, change, or delete.
4. Type your new text over the existing text.
To delete text, use **Alt** + **L**, or **DEL**.
5. Check the input line to make sure the text is correct.

Different items have different text editing requirements. Check the following information before continuing.

- For legend labels, use a backslash (\) to indicate the end of the first line.
- Each line of a legend label can have up to ten characters.
- A pie chart segment label can be up to 20 characters long.
- A footnote can be up to 60 characters long.
- An X- or Y-axis title can be up to 40 characters long.
- If you are adding X- or Y-axis titles to a *horizontal clustered* or *horizontal stacked* chart, the position of the X- and Y-axis is reversed. In these charts, the X-axis identifies the vertical axis of your chart.

6. Choose **Enter**.

Charting Gallery displays the title you entered.

- If the subtitle, footnote, or segment label does not display, it may be because the text size is set to large. If this is true, check the following:

To restore the subtitle, footnote, or segment label, use **Text Styles** to change the text size to medium. Refer to "Changing Text Styles" later in this chapter.

- If the segment label is not more than 20 characters, and the text size is not large, the drawing option may have been set to show percentages on your pie chart.

To restore the Segment label, use **Draw Options**, and click **Draw Percent** to remove the side bar selection box from that menu item.

7. Repeat steps 3-6 to edit other titles.

Changing Text Styles

You control the appearance of text in a chart with the **Text Styles** function.

- *Font* refers to the typeface used to display individual text characters.

Charting Gallery provides two text fonts:

LIGHT

BOLD

- *Color* is the color of the text when you plot the chart or print it using a color printer. Whatever color you choose is used for all text on a chart. You have a choice of eight colors. If you want to change the text color, refer to "Changing Text Color on Any Chart," later in this chapter.
- *Size* refers to how large the text is. Charting Gallery has three text sizes, as shown in this figure.

SMALL
MEDIUM
LARGE

You can use either font in any of the three sizes. If you don't choose a font or size, Charting Gallery displays all text in the *light* font and *medium* size. Whatever font you choose applies to all text on a chart.

Changing the Text Font

1. If you haven't already done so, choose **Edit and Draw** from the main Charting Gallery functions, then choose **Text Styles**.

The Font menu appears in the side bar.

2. Move the Font menu selection box to either Light or Bold.
3. Choose **Enter**.

Changing the Text Size

1. If you haven't already done so, choose **Edit and Draw** from the main Charting Gallery functions, then choose **Text Styles**.

The Size menu appears in the side bar. The filled box indicates the current size selection.

2. Move the solid fill to the text size you want.
 - Use small text when your chart contains a lot of text. If you use medium or large text, you won't be able to put as much text on your chart. Also, when you use large text, no room is available for a subtitle or footnote.
 - Use large text when you want to print more than one copy of your chart on a page. If you use medium or small text, the text may be too small to read.
3. Choose **Enter**.

If you change the text size to large, Charting Gallery warns you that the subtitle and footnote won't fit on your chart.



- To redraw your chart in the large text size, choose **Yes, Continue**. If you want to keep the subtitle and footnote, choose **No, Cancel**.

When you change text font or size, all text on your chart is changed.

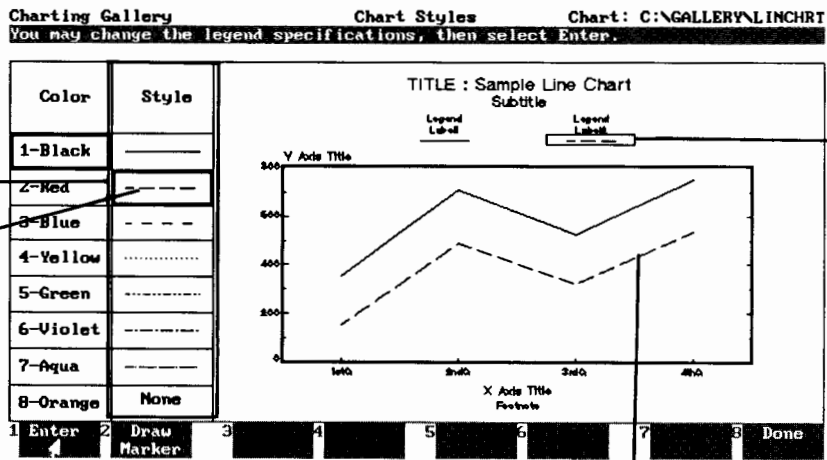
Working with Line Styles

Line styles identify ranges of data in line, bar/line, high low open close, and XY charts.

Charting Gallery automatically assigns a default line style to each range of data that you enter into the Data screen. If necessary, you can change any of the default line styles to another style by choosing **F3** from the Edit and Draw functions.

When you change a line style, you can choose from the styles shown in the style menu of the side bar.

This is your line Styles menu.
This is the currently selected line style.



This is the line the change will affect.
The legend selection box indicates the line to be changed.



Initially, Charting Gallery selects as many line styles as necessary to represent the data you've entered on the Data screen. Charting Gallery selects style 1 for Range 1, style 2 for Range 2, and so on. If your chart represents more than seven ranges of data, Charting Gallery selects style 1 for Range 8, style 2 for Range 9, and style 3 for Range 10.

The following instructions tell you how to change a line style. If you want to change a line color, refer to "Changing Line Marker, or Texture Color," later in this chapter.

Changing a Line Style

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Line Styles** or **Bar/Line Styles**, depending on the type of chart you're using.

The Line Style menu appears in the side bar.

If you're working with a bar/line chart and the side bar doesn't display the Line Style menu, don't worry – it will appear once you complete step 3.

You can also display the Line Style menu by choosing **Bar Line**. This places an asterisk (*) in the bottom of the function label beside **Line** and also changes the bar to a line in the charting work area.

3. Move the Legend selection box to the legend associated with the line you want to change.
4. Move the Line Style menu selection box to the line style you want.
5. Choose **Enter**.

Working with Markers

Markers are symbols that show the location of each data point on a line. When you select a line style, you can also tell Charting Gallery to place a marker at each data point on the line.

You can add markers to a line, bar/line, high low open close, or XY chart.

Adding Markers to a Chart

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Line Styles**, **Bar/Line Styles**, or **HLOC Styles** depending on the type of chart you're using.
3. Move the Legend selection box to the legend associated with the line that you want to display markers.
4. Choose the **Draw Marker** function label.

This places an asterisk (*) in the **Draw Marker*** function label. The asterisk indicates that the line will be drawn with a marker at each data point.

5. Choose **Enter**.

Your chart is redrawn to show a marker at each data point on the line.

6. Repeat this process for each line on which you want to display markers.

Working with Marker Styles on Scatter Charts

Markers show the location of data points on a scatter chart. Charting Gallery automatically assigns a default marker style to each range of data that you enter on the Data screen. You can change any of the default styles to another style by choosing **F3** from the Edit and Draw function labels.

You can choose from the markers shown in the side bar.

Charting Gallery Chart Styles Chart: C:\GALLERY\SC1CHRT

You may change the legend specifications, then select Enter.

Color	Marker
1-Black	*
2-Red	+
3-Blue	x
4-Yellow	=
5-Green	△
6-Violet	□
7-Aqua	◇
8-Orange	○

TITLE : Sample Scatter Chart
Subtitle

Legend Label Legend Label
○ +

Y Axis Title

X Axis Title

Footnote

1 Enter 2 Draw 3 4 5 6 7 8 Done

Regresn

This is your Marker menu.

This is the selected marker style.

This is the marker set the change will affect.

The legend selection box indicates the marker to be changed.

Initially, Charting Gallery selects as many marker styles as necessary to represent the data you have entered on the Data screen. Charting Gallery selects marker style 1 for Range 1, style 2 for Range 2, and so on up to Range 8. If your chart represents more than eight ranges of data, Charting Gallery selects style 1 for Range 9, and style 2 for Range 10.

Changing a Marker Style

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Marker Styles**.
The Marker menu appears in the side bar.
3. Move the Legend selection box to the legend associated with the marker whose style you want to change.
4. Move the Marker menu selection box to the marker style you want.
5. Choose **Enter**.

Adding a Regression Line to a Scatter Chart

You can add a regression line to a scatter chart. Linear regression scatter charts are useful for analyzing data if your data follows a fairly consistent curve. A linear regression line can be used to show the relationship between two variables, the X and Y axes.

A linear regression line is a straight line drawn so that the sum of the squares of the distances from each point to the regression line is as small as possible (least squares).

There can be one regression line for each data set on a scatter chart.

Creating a Linear Regression Scatter Chart

1. Create a scatter chart.
2. Choose **Edit and Draw** from the main Charting Gallery functions.
3. Choose **Marker Styles**.

Charting Gallery Chart Styles Chart: C:\GALLERY\SC1CHRT
 You may change the legend specifications, then select Enter.

Color	Marker
1-Black	*
2-Red	+
3-Blue	x
4-Yellow	=
5-Green	△
6-Violet	□
7-Aqua	◇
8-Orange	○

TITLE : Sample Scatter Chart
 Subtitle

Y Axis Title

X Axis Title

Legend Label

Legend Label

1 Enter 2 Draw Regress 3 4 5 6 7 8 Done

The legend selection box indicates the marker set to have the linear regression line drawn.

Linear regression between the markers of the indicated marker set.

Choose to draw or undo linear regression.

4. If you have more than one data set, move the Legend selection box to the legend of the data set for which you want to draw a regression line.
5. Choose **Draw Regress***.

Changing Textures on Area, Bar, and Pie Charts

Textures identify areas in area charts, bars in bar and bar/line charts, and segments in pie charts. When you create an area, bar, or pie chart, Charting Gallery automatically assigns a default texture to the chart. You can replace the default patterns with other patterns by choosing **F3** from the Edit and Draw functions.

You can then choose from the textures shown in the side bar.

Charting Gallery Chart Styles Chart: C:\GALLERY\AREACHRT
 You may change the legend specifications, then select Enter.

Color	Texture
1-Black	
2-Red	
3-Blue	
4-Yellow	
5-Green	
6-Violet	
7-Aqua	
8-Orange	

1 Enter 2 3 4 5 6 7 8 Done

TITLE: Sample Area Chart

Y Axis Title Legend XXXXX

X Axis Title

This is your Texture menu.

This is the selected texture.

The legend selection box indicates the current area to be changed.

This is the area the change will affect.

Changing Chart Textures

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Depending on the type of chart you're using, choose one of the following:
 - **Area Styles**.
 - **Bar Styles**.
 - **Bar/Line Styles**.
 - **Segment Styles**.

The Texture menu appears in the side bar.

If you're working with a bar/line chart, and the Texture menu doesn't appear in the side bar, don't worry – it will appear upon completion of step 3. You can also display the Texture menu by choosing **Bar Line**. This places an asterisk (*) in the top of the function label beside **Bar**.

3. Move the Legend selection box to the legend whose texture you want to change.
4. Move the Texture menu selection box to the texture you want.
5. Choose **Enter**.

Changing Colors

Charting Gallery allows you to assign colors when you use a color printer or plotter. If your computer has a high-resolution color monitor, Charting Gallery displays your chart on the charting work area in the colors you have chosen.

If you have a low-resolution color monitor or a monochrome (black-and-white) monitor, Charting Gallery represents your color selections with *gray scale* values. For more information, see "Gray Scale" later in this chapter.









You can assign colors to the following parts of your chart:

- Text.
- Textures on bar, bar/line, area, and pie charts.
- Lines on line charts.
- Markers on scatter charts.
- Grids, X-axes, and Y-axes on bar, bar/line, and line charts.

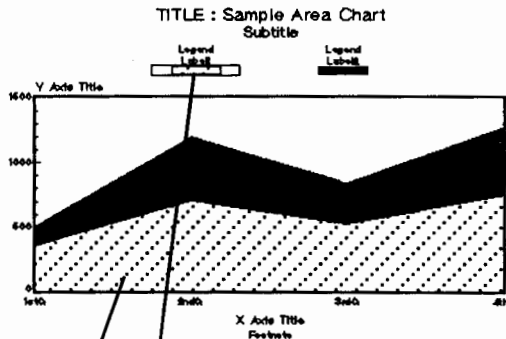
For example, if you have assigned green to a particular legend on a bar chart, all the bars in that data set will be green when you print the chart with a color printer. If you plot the chart, the bars will be plotted in green *if you have loaded the pens in your plotter using the same numbering sequence as shown in the menu.*

The Color menu appears in the side bar when you choose **F3** from the Edit and Draw functions.

Charting Gallery Chart Styles Chart: C:\GALLERY\AREA.CHRT
 You may change the legend specifications, then select Enter.

Color	Texture
1-Black	
2-Red	
3-Blue	
4-Yellow	
5-Green	
6-Violet	
7-Aqua	
8-Orange	

TITLE : Sample Area Chart
 Subtitle



1 Enter 2 3 4 5 6 7 8 Done

This is your Color menu.

This is the currently selected color.

The legend selection box indicates the current area to be changed.

This is the area the change will affect.

Changing Bar Chart Colors

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Depending on the kind of chart you are using, choose one of the following:
 - **Bar Styles.**
 - **Bar/Line Styles.**

The Color menu appears in the side bar.

3. Move the Legend selection box to the legend associated with the set of bars you want to change.
4. Move the Color menu selection box to the color you want.
5. Choose **Enter**.
6. Repeat steps 3-5 for any other sets of bars with colors you want to change.

Changing Line, Marker, or Texture Color

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Depending on the type of chart you're using and the item whose color you want to change, choose one of the following:
 - **Line Styles.**
 - **Marker Styles.**
 - **Area Styles.**
 - **Segment Styles.**
 - **HLOC Styles.**

The Color menu appears in the side bar.

3. Move the Legend selection box to the legend of the line, marker, or texture whose color you want to change.
4. Move the Color menu selection box to the color you want.
5. Choose **Enter**.
6. Repeat steps 3-5 to change any other line, marker, or texture color.

Changing Text Color on Any Chart

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Text Styles**.
The Color menu appears in the side bar.
3. Move the Color menu selection box to the color you want.
4. Choose **Enter**.

Changing the color for text affects *all* text, including text annotations. The default color for text items is Black which corresponds to pen #1 on your plotter.

Changing Axis or Grid Color

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Axes Options**.
3. Press **(Tab)** to move the selection box to the axis or grid whose color you want to change.
4. Move the Color menu selection box to the color you want.
5. Choose **Enter**.

Charting Gallery changes all axes.


Pens and Pen Numbers

In the table below, the pen numbers identify the correct slot for each pen on the pen holder of your plotter. Charting Gallery matches pen colors to pen numbers as shown.

Pen:	Color:	Pen:	Color:
1	Black	5	Green
2	Red	6	Violet
3	Blue	7	Aqua
4	Yellow	8	Orange

When you select a color on the Color menu, Charting Gallery uses the pen number associated with that color when it chooses pens for plotting. Before you plot a chart, check to see that the colors of the pens in the pen holder match the pen numbers shown on the Color menu.

For example, if you select Red from the Color menu for all text items on your chart, Charting Gallery uses pen #2 on your plotter to draw the text items. This means that a red pen must be in the #2 position in your pen holder.

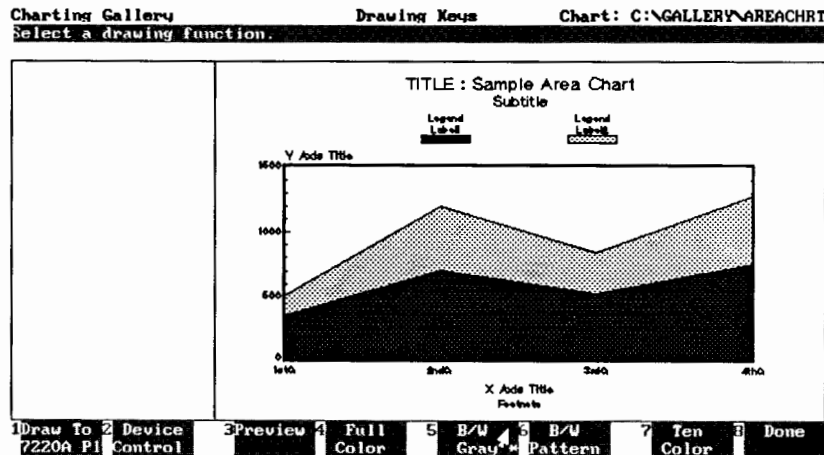
Some plotters hold fewer than eight pens. If you have such a plotter, you can still use all eight colors on the Color menu to plot a chart. When you have chosen a color whose number is higher than the number of pens available on your plotter, the plotter pauses when it is ready to plot that color. You can then change one of the pens in the pen holder to a different color. After you have loaded the pen, press  to start the plotter again.

Gray Scale and Dithering

Gray scale and **Dithering** are two alternative methods of representing colors on monochrome monitors, low-resolution color monitors, and printed charts.

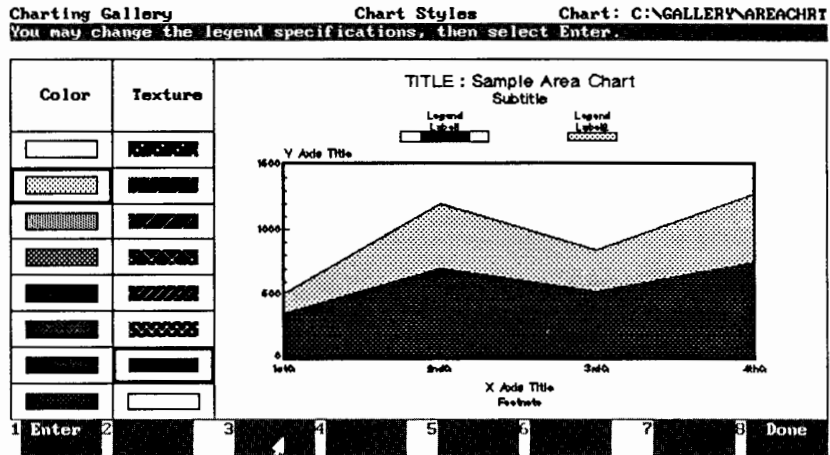
Gray scale represents the chart colors as smooth continuous tones, and dithering is a high-contrast black-and-white representation of color that is good for photo copying.

To use the gray scale palette, choose **Draw** from the Edit and Draw functions, then choose **B/W Gray**. Charting Gallery uses a gray scale to replace the color in the chart, as shown below.

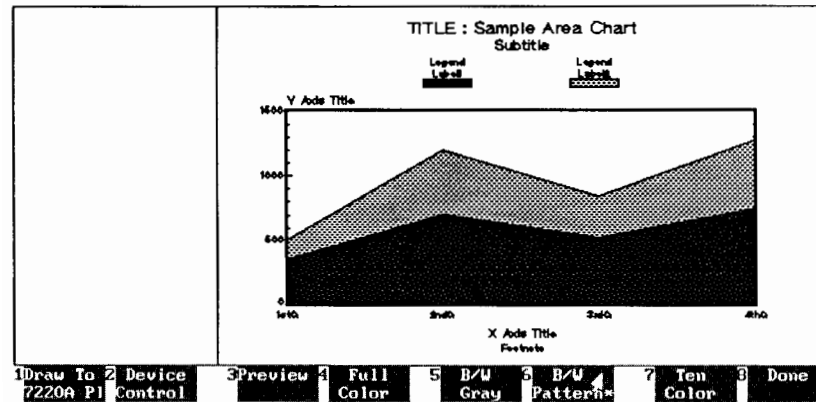


Enhancing a Chart

To change the gray scale, choose **Edit and Draw** from the main Charting Gallery functions, then choose a Styles or Axes option. Charting Gallery displays the gray scale in the Color menu, as shown here. You can select the gray scale you want.



To use the black-and-white pattern palette, choose **Draw** from the Edit and Draw functions, then choose **B/W Pattern**. Charting Gallery uses a black-and-white pattern (dithering) to replace the color in the chart, as shown in the following sample.



Enhancing a Chart

To change the black-and-white pattern, choose **Edit and Draw** from the main Charting Gallery functions, then choose a Styles or Axes option. Charting Gallery displays the black-and-white patterns in the Color menu, as shown below. You can select the black-and-white pattern you want.

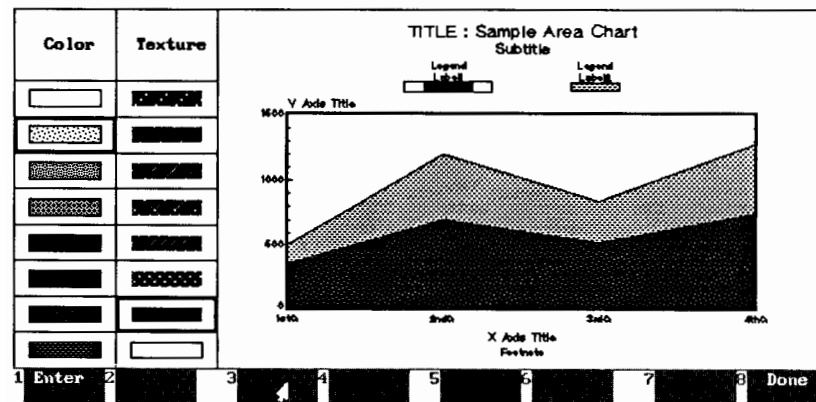
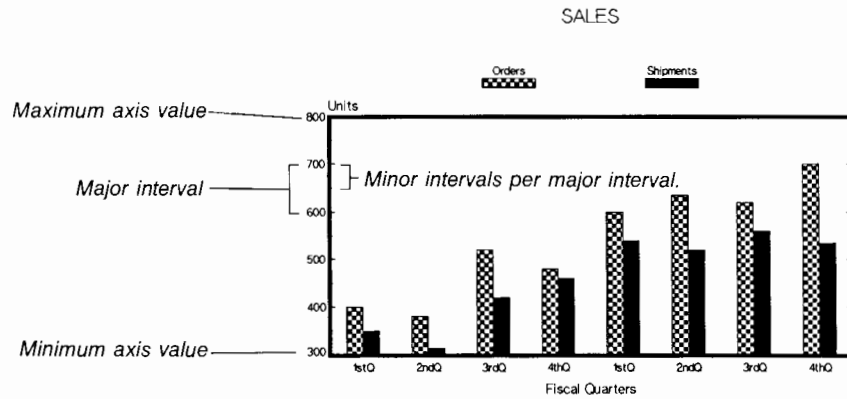


Chart Scale

The **scale** of a chart is the range of values shown along the X- and Y-axes. Normally, Charting Gallery calculates this range for you by using the information you enter on the Data screen. However, if you are not using a 100% scale option with a bar chart, you can change the scale of your chart to whatever you like.

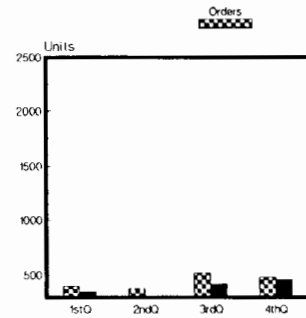
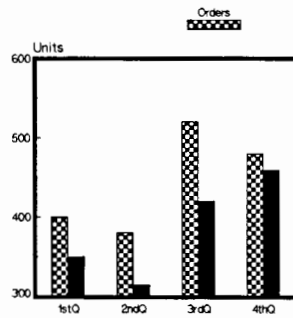
When you change the scale of a chart, you can change one or all of the chart features shown below.



X-axis scaling only occurs when the X-axis labels are numeric, dates, or years.

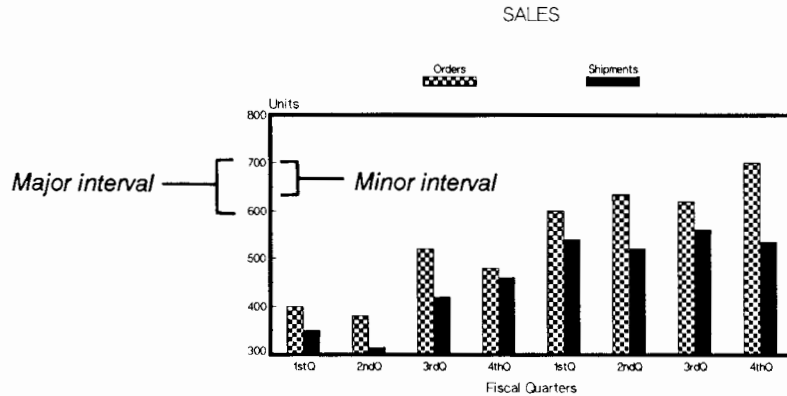
How Scaling Affects Your Chart

The minimum and maximum axis values are the smallest and largest numbers used on the scale. The range between these two numbers determines how much detail your chart shows. The smaller the range, the more detail you see, as the figure shows.



Enhancing a Chart

The **major interval** value and the number of **minor intervals** affect the amount of detail that is shown along the axes. The major interval is the numeric distance between the numbers on the axes. The minor interval determines how many tick marks appear within each major interval.



Automatic Scaling

Automatic scaling refers to Charting Gallery's ability to adjust the scale of your chart when the X- or Y-axis uses numeric units of measure. Charting Gallery uses automatic scaling to ensure that the chart always represents your data in sufficient detail. Normally, automatic scaling is on.

Each time you modify the data on the Data screen, Charting Gallery adjusts the scale of the chart to reflect the changes. When automatic scaling is off, the scale remains fixed no matter how often you modify your data.

Changing the Scale

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Axes Options**.
3. Press **Tab** to move the charting area selection box to either the X- or the Y-axis. (You won't be able to move the selection box to the X-axis unless the X-axis labels are numeric. You can use the mouse to move the charting area selection box.)
4. Check the **Auto Scale** function label to see if automatic scaling is on. If there is an asterisk (*) in the function label, automatic scaling is on.
5. If automatic scaling is on, choose **Auto Scale***.
The asterisk disappears, indicating that automatic scaling has been turned off.
6. Check the input line. Charting Gallery displays the current *minimum axis* value for your chart.


```
Charting Gallery           Axes Options           Chart: C:\GALLERY\BARChart
Select grid color; change minimum axis value and select Enter.
0
```

7. Type the new minimum axis value.


```
Charting Gallery           Axes Options           Chart: C:\GALLERY\BARChart
Select grid color; change minimum axis value and select Enter.
300
```


8. Choose **Enter**.

```
Charting Gallery           Axes Options           Chart: C:\GALLERY\BARChart
You may change the maximum axis value. > 302.5 Press Enter.
300
```

9. Type the new *maximum axis* value and press .

This value must be less than the value shown in the message on the prompt line.

10. Type the new major interval value and press .

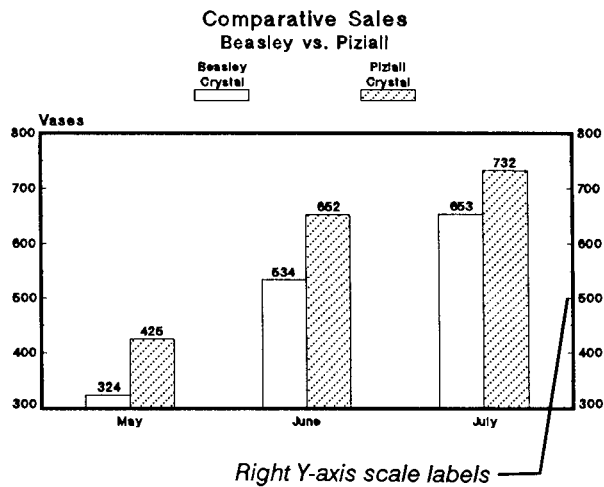
11. Type the number of minor intervals for the new major interval and press .

Charting Gallery redraws your chart to show the new axis scaling.

Right Y-Axis Scale Labels

You can display right Y-axis scale labels on any bar, line, or scatter chart with a single Y-axis.

When you work with a dual Y-axis chart, the right Y-axis labels are displayed automatically. Refer to "Scaling Options" in Chapter 4, *Using the Chart Options*, for information on creating a dual Y-axis chart.



Displaying the Right Y-Axis Scale

Complete the following steps to display the right Y-axis scale labels on any chart except a pie chart.

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Drawing Options**.

Charting Gallery displays a menu of Drawing Options in the side bar.

3. Select **More** from the bottom of the side bar menu.
4. Select the **Draw Right Y Labels** option.

Charting Gallery draws a selection box around the option.

- To remove the selection box, and prevent printing of right Y-axis labels, select the **Draw Right Y Labels** again.
5. Choose **Enter**.

Use the Data screen to select which ranges are scaled to each axis. See "Entering Dual Y-Scale Chart Data" in Chapter 5, *Working with Chart Data*.

Numbers on Bars

You can add numbers to the bars in bar charts and bar/line charts to show the numeric value of a specific data set. You cannot add numbers to bars in stacked or 100% bar charts.

Adding Numbers to Bars

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Depending on the chart type you're using, choose one of the following:
 - **Bar Styles**.
 - **Bar/Line Styles**.
3. Move the Legend selection box to the legend of the data set you want numbered. For bar/line charts, the **Draw Number** function label is only displayed when the Legend selection box is on a data set represented by bars.
4. Choose **Draw Number**. An asterisk appears in the function label to show that it is active.

Charting Gallery immediately numbers the bars of that indicated data set.

5. Repeat steps 1-5 for any other data sets that you want to number.

Using Drawing Options

Drawing options provide several ways to change the appearance of your chart.

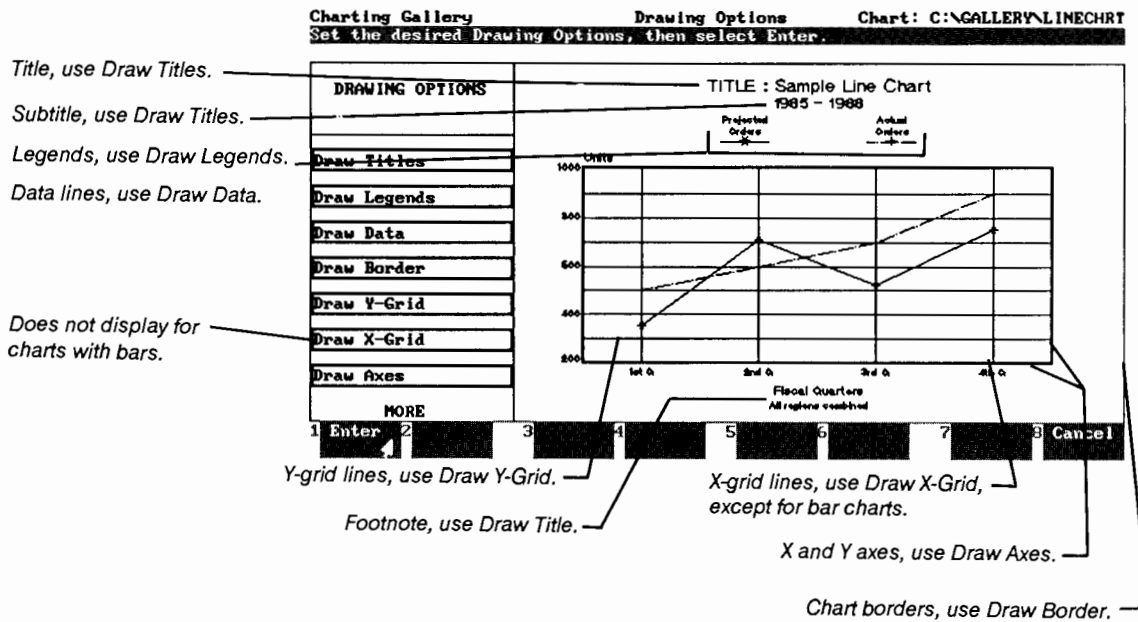
When you choose **Drawing Options** from the Edit and Draw functions, Charting Gallery displays a side bar menu of Drawing option choices available for your chart.

Each Drawing Option menu item represents an item in your chart. A selection box around a menu item indicates that the item is currently selected for the chart; if there is no selection box, that item is not on the chart.

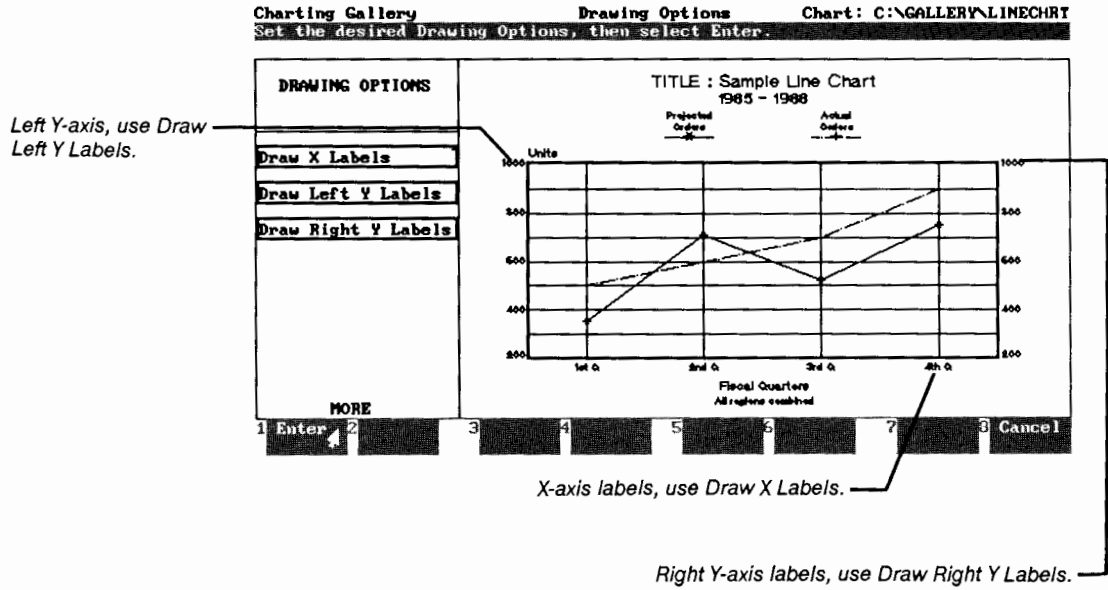
The Drawing Option Choices

The drawing options listed in the side bar apply to all charts except pie charts.

The figure below shows a sample line chart with the chart areas that are controlled by these drawing options.



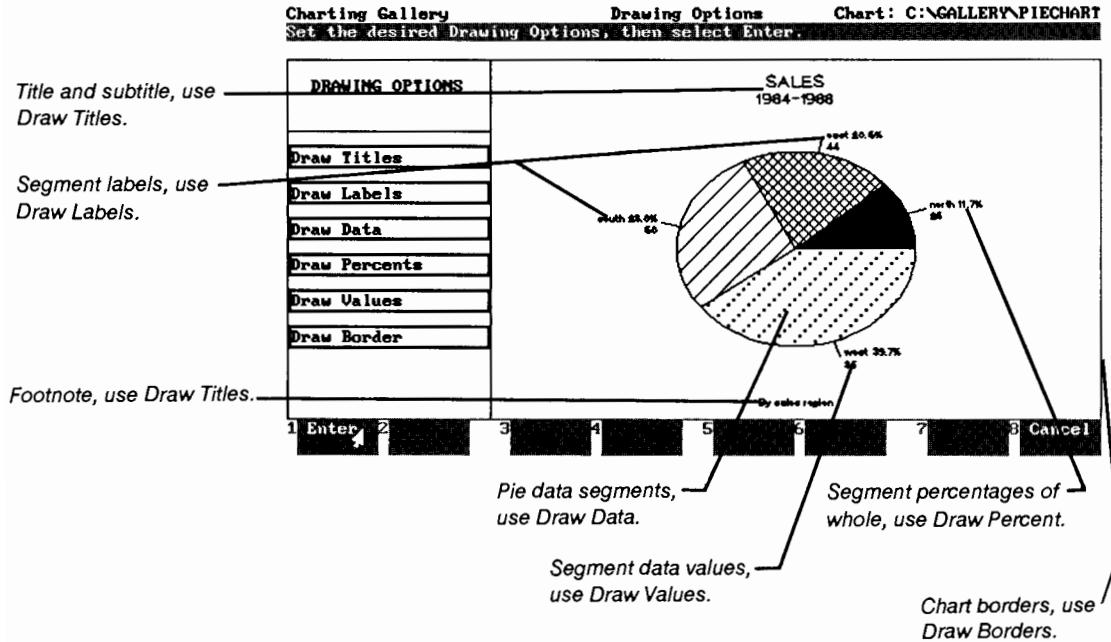
The figure below shows a sample line chart with the chart areas that are controlled by the drawing options you can see by clicking **MORE**.



For Pie Charts

The drawing options listed in the side bar apply to pie charts.

The figure below shows a sample pie chart with the chart areas that are controlled by these drawing options.



Enhancing a Chart

Changing Drawing Options

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Drawing Options**.
3. Select the drawing option in the side bar menu that you want to change.

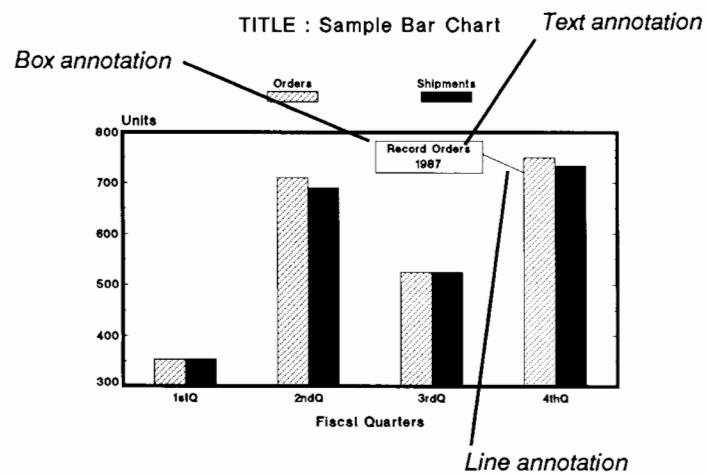
Items you want to include in the chart should have a selection box around their corresponding menu items.
4. For any chart except a pie chart, select **MORE** from the bottom of the side bar menu.
5. Choose **Enter** to redraw your chart with only the items you want displayed. Or choose **Cancel** to redisplay the Edit and Draw functions.

Annotating a Chart

An **annotation** is a line, box, or text label that you add to a chart to draw attention to important information. You can add annotations to any type of chart. This chapter explains how to add annotations to a chart. You use the Annotate function to:

- Add text, lines and boxes.
- Edit and move text.
- Erase text, lines and boxes.

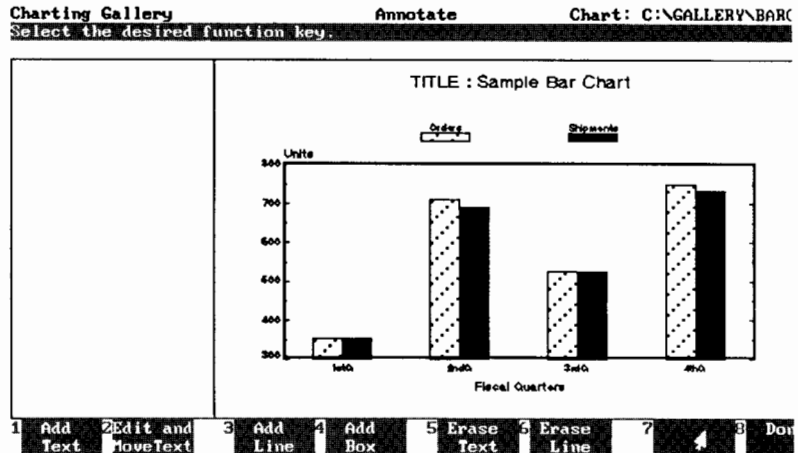
The following chart has a box, a text, and a line annotation.



If you also have Drawing Gallery installed on your personal computer, you can use it to add more extensive annotations than Charting Gallery can provide.

Displaying the Annotation Functions

To place annotations in a chart, choose **Annotate** from the Edit and Draw function labels.



Moving the Pointer

An arrow pointer appears in the lower-left corner of the charting work area when you choose one of the Annotation functions. The pointer tells Charting Gallery where you want to add, edit, move, or erase annotations on a chart. Each time you choose an Annotation function, Charting Gallery asks you to move the pointer.

It is faster and easier to use the mouse to move the pointer, rather than using the keyboard.

If you prefer to move the pointer by pressing the direction keys on the cursor pad to the right of the keyboard, you'll probably want to set the pointer speed to fast by pressing (+). When you want to position the pointer precisely, you will have to set the pointer to slow (-). See Appendix D.

Using the Annotation Functions


The function labels at the bottom of the Annotation screen let you add new annotations to a chart, and modify or delete existing annotations. The functions Table 7-1 are described more fully in the rest of this chapter.

Table 7-1. Annotation Screen Function Labels

Function:	Purpose:
Add Text	Adds text to a chart. A chart can have up to ten text annotations.
Edit and MoveText	Lets you edit and move text annotations.
Add Line	Draws lines on a chart. A chart can have up to 30 line annotations.
Add Box	Draws boxes on a chart. A chart can have up to seven box annotations. A box counts as 4 lines in the 30 lines allowed.
Erase Text	Removes text annotations from a chart.
Erase Line	Removes line and box annotations from a chart.
Done	Takes you back to the Edit and Draw screen.

Adding Text


You can add up to ten text annotations to a chart. Each text annotation may contain up to 60 characters. If you type in more than 60 characters, the additional characters will not appear on your chart. The font, size, and color of all text annotations are determined by the selections you make when you choose **Text Styles** from the Edit and Draw labels.

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Annotate**.
3. Choose **Add Text**.
4. Position the pointer where you want the first text character to appear.
5. Click the mouse button or press .

A small diamond appears where you positioned the pointer. This is the **text diamond**. It marks the location where the first text character will appear. If the location isn't quite right, choose **Cancel** and try again.

6. Type the text.

What you type appears on the input line.

7. Press .

The text you have typed is transferred from the input line to the text diamond. At the same time, the text diamond goes away.

8. If you want to add more text annotations, repeat steps 4-7.
9. When you are finished adding text, choose **Done**.

When you add text to a chart observe these cautions:



- Don't place text too close to the right-hand edge of the chart. Charting Gallery will not display text characters that run beyond the edge of the chart. If your text goes over the edge, use **Edit and MoveText** to move the text annotation to a different location.
- Do not place text too close to other text or other items on the chart. If the text appears on top of other text or on top of another item in the chart, use **Edit and MoveText** to move the text annotation to a different location.

Editing and Moving Text

You can edit and move text annotations on a chart with the function label **Edit and MoveText**.


1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Annotate**.
3. Choose **Edit and MoveText**.

A box appears around the last text annotation you have worked with. If this is the text annotation that you want to modify, skip step 4.

4. Move the charting work area selection box to the text annotation you want to modify. You can move the box in two ways:
 - Move the pointer to the annotation you want to modify. Press and release the mouse button, or press .
 - Press the **(Tab)** key.
5. Choose **Edit and Move**.
6. If you are not going to move the text, choose **Same Position**. Now go to step 8.
7. If you are going to move the text, position the pointer where you want the first character to appear, and click the mouse button or press .

8. Enter any editing changes you want to make. The text you type replaces existing text.
9. If you change your mind about modifying a text annotation, choose **Cancel**.

Choosing **Cancel** redisplay the main annotation functions without changing the text annotation.

10. Press and release the mouse button, or press . Charting Gallery modifies the text annotation.


Edit and MoveText changes only the text that you have added through **Add Text**. **Edit and MoveText** won't change titles, X-axis labels, legend labels, and segment labels.

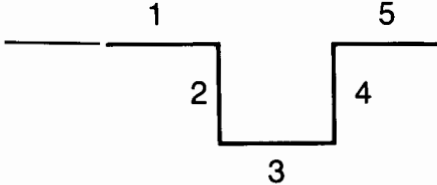
Working with Lines and Boxes

You can add lines and boxes to draw attention to parts of your chart. In this picture, the first line has one line segment; the second line has five.

Adding Lines

With Charting Gallery, you can draw either single or multiple-segment lines.

Single segment line 

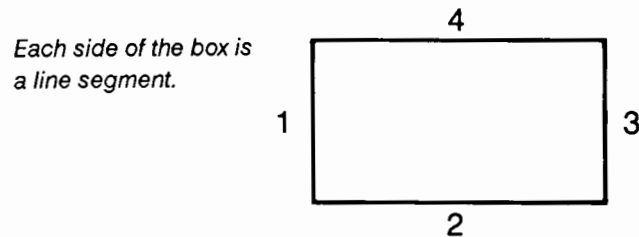
Multiple-segment line 

You can have up to 30 line *segments* in a chart. Charting Gallery keeps track of the number of segments you have used and warns you when you reach the 30-segment limit.

Adding Boxes

You can add up to seven boxes to a chart. If you have already added lines to a chart, the number of boxes you can add will be less than seven. A chart can have no more than 30 line segments, whether the line segments appear as parts of lines or parts of boxes.

This figure shows that each side of the box is a line segment.



Drawing a Single Line or Box

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Annotate**.
3. To draw a line, choose **Add Line**.
To draw a box, choose **Add Box**.
4. Move the pointer to where you want the line to start.
5. Press the mouse button. This anchors the starting point of the line or the first corner of the box.
6. Position the pointer where you want the line segment to end, or the diagonal corner of the box to appear.
7. Release the mouse button. This anchors the line segment or box into place.

8. If you want to add more segments to the line you are drawing, repeat step 5 or step 6 for each additional segment.
9. When you are ready to stop, choose **Done**. The Annotation function labels reappear.

Adding Other Lines or Boxes

To add two or more separate lines or boxes to a chart without having to return to **Add Line** or **Add Box**:

1. Follow the basic procedure described in "Drawing a Single Line or Box" until you are ready to anchor the last line segment of the line or the diagonal corner of the box.
2. To begin a new line, position the pointer where you want the last segment of the line you are drawing to end. Anchor the end point of the last line segment by clicking the mouse button twice.

To begin a new box, move the pointer to the spot where you want the diagonal corner to appear. Anchor the diagonal corner of the box by clicking the mouse button twice.

When you use the mouse, do not move it between each click. Moving the mouse between clicks, frees the pointer so that you can draw a new line or a new box without extending the line or adding an unwanted adjacent box.

3. If you change your mind about drawing a line or box before you have anchored it into place, press **Cancel**. The line or box is erased and the Annotation function labels reappear.

Erasing Lines, Boxes, and Text

You can erase lines, boxes, and text that you've added to a chart. Erasing is a permanent operation—once you erase a line or a box, there is no way to get it back except to draw it again.

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Annotate**.
3. To erase a line or a box, choose **Erase Line**. To erase a text annotation, choose **Erase Text**.

A box appears around the *last* line or *last* text annotation you created.

4. Move the box to the line or text you want to erase. When the pointer touches the line you want to erase, click the mouse button
5. Choose **Erase**.

If you change your mind about erasing, press **Cancel**. This redisplay the main annotation functions without erasing anything.

6. If you are erasing a box, repeat steps 3-5 four times—once for each side of the box.

The Annotation function labels reappear on the screen.

Erase Line erases only those lines that you have drawn by using **Add Line** or **Add Box**. Examples of lines that **Erase Line** won't erase are legend boxes, grid lines, and lines that represent data values.

Getting and Saving a Chart

This chapter tells you how to use the Get and Save functions to manage the storage and retrieval of your chart information.

Of course you can use the Get and Save functions to do more than get a chart or save a chart. Here, you learn to:

- Get a chart.
- Save a chart.
- Browse through the charts, worksheets, chart descriptions, and chart data on file.
- Search for a specific chart file, description file, data file, or worksheet file.
- Save chart data and chart descriptions separately and then combine them.
- Save a chart as a Gallery picture file for use in Drawing Gallery.
- Change the current drive, directory path, and file name.
- Create new directories.
- Name, rename or delete chart files.

To begin any of these tasks, choose **Get and Save** from the main Charting Gallery function labels.

How Chart Information is Stored

When you save charts, Charting Gallery creates two DOS files to hold the two parts of your chart. These files have special file extensions that Charting Gallery adds to the name of your chart.

Chart information consists of the following components:

- The chart data file (.GPD)
- The chart description file (.GPH)

The **chart data file** contains the information you enter on the Data screen.

The **chart description file** contains the design of your chart. It includes the chart type, chart options, drawing options, titles, fonts, colors, textures, and annotations you see when you view your chart.

The **Gallery picture file** is an optional file you can use to transfer your chart to Drawing Gallery for custom editing.

- The Gallery picture file (.GAL)

Charting Gallery allows you to save the chart data separately from the chart description. Because the data is separate from the description, you can create a chart description once and update it with new data as often as necessary.

The Save function labels correspond to the file types as shown below. The Get function labels use the same principle.

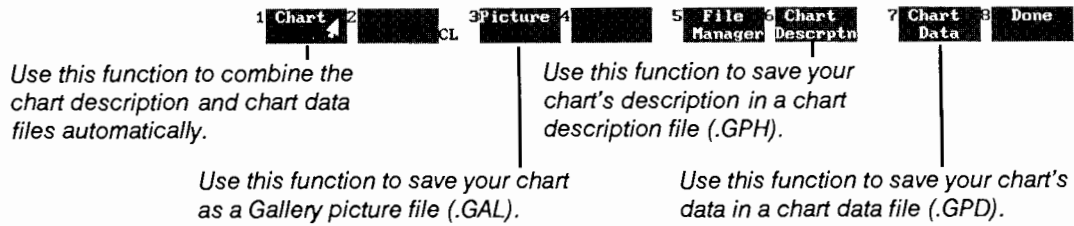


Chart Names

To get or save a chart, you must tell Charting Gallery the type of file you want as well as the name of the file and its location. All files are saved as DOS files. This means that the names you assign to your charts must follow DOS naming conventions.

Working with the Drive, Directory Path, and File Name

Charting Gallery uses the drive letter and the directory path to locate the chart files that you get and save.

When you start a Charting Gallery session, the File field in the upper right hand corner of the screen shows the drive and directory location of Charting Gallery itself. This is called the **default directory**. As long as the charts you work with reside under this directory, you do not change the drive letter or the directory path. All you do is type the name of the chart after the directory path.

If you want to save a chart that *does not* reside under the default directory shown in the File field, you must change the directory path in addition to typing in the chart name. Type in the drive letter, directory path, and chart name.

This is the current drive, path, and file name.

```
Charting Gallery          Save Chart          Chart: C:\GALLERY\BARCHRT
Use the cursor keys to edit the filename, then select Enter.
C:\GALLERY\BARCHRT
```

You type the drive, path, and file name you want here.

Once you change the default directory, your changes remain in effect until you return to the Get and Save screen and change the directory path again.

When Should You Save a Chart?

Every time you create a new chart, or modify an existing chart, you need to save that chart information. You can save the chart under a new name, or you can use an existing chart name to overwrite an old chart with new chart information.

You must save the chart if you want to keep a permanent copy of it. If you don't save the chart on a disc, it will be erased when either you get another chart from disc storage or you leave Charting Gallery.

Charting Gallery *will not* automatically save your chart when you leave Charting Gallery. However, it does ask you whether you want to save or discard the current chart.

If you are in the middle of a long session, it is also a good idea to save your chart every 20 minutes or so. If a power loss occurs, you'll still have a recent version of your chart on disc.

Storing Chart Information

You can save chart information either by saving an entire chart or by saving the chart data, pictures, and descriptions separately. To learn how to store a chart, read the general information in this section, then follow the instructions in "Saving a Chart" or "Saving Chart Data, Pictures, and Descriptions Separately."

Entering Chart Names

The name you assign to the chart information, can be up to eight characters long. Do not type the file name extension. Charting Gallery automatically assigns the correct extension depending on the information you're saving. For information on the file extensions used, refer to "Chart Names" earlier in this chapter.

Exiting the Save Function

Charting Gallery displays a message at the top of the screen to tell you when the save procedure is completed.

When you have completed saving the entire chart, or one of the chart components, choose **Done** to redisplay the Get and Save function labels.

Saving a Chart

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Choose **Save**.
3. Choose **Chart**.
4. In the input line, type the name you want to give the chart. Include the disc drive and directory path if they are different from those shown on the screen.

```
Charting Gallery          Save Chart          Chart: C:\GALLERY\BARCHRT
Use the cursor keys to edit the filename, then select Enter.
A:\BARCHRT
```

*You type the drive, path,
and file name you want here.*

5. Choose **Enter**.

If the file name already exists as the name of another chart file, you can save the current chart under that file name by choosing **Save** again.

Otherwise, you can type in another, unique, file name, or choose **Cancel Save**.

Saving Chart Data, Pictures, and Descriptions Separately

You can save the data, and description parts of your chart separately by using the Save functions. Saving the parts separately is useful when you want to combine your new data with a different description. You can also save the chart in the form of a Gallery picture file if you want to use the chart in Drawing Gallery.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Choose **Save**.
3. Depending on the chart component you want to save, choose one of the following function labels:
 - **Picture**.
 - **Chart Descriptn**.
 - **Chart Data**.

4. In the input line, type the name you want to give the picture, description, or data. Include the disc drive and directory path if they are different from those shown on the screen.

When naming a file of chart data, be sure to use a name that is different from the name you use for the chart description – otherwise, Charting Gallery treats the two files as a single unit.

5. Choose **Enter**.

If the file name already exists as the name of another file, you can save the current file under that file name by choosing **Save** again.

Otherwise, you can type in another, unique, file name, or choose **Cancel Save**.

When Should You Get a Chart?

You can use the Get functions to retrieve an entire existing chart, and to retrieve chart data, or a chart description separately. For information on how to retrieve a Gallery picture file while in Charting Gallery, refer to "Adding a Chart, Picture, or Graph" in chapter 9, *Using Layout*.

Also, use the Get function if you want to retrieve saved graph information from another system. For more information, refer to "Transferring Graphs from Lotus 1-2-3 or Symphony" in chapter 11, *Using Charting Gallery with Other Applications*.

The Get function uses a menu list in the side bar to display a list of directories and file names available for you to choose from.

Retrieving Chart Information

You can retrieve chart information either by retrieving an entire chart, or by retrieving the chart data or description separately. To learn how to retrieve a chart, read the general information in this section, then follow the instructions in "Getting a Chart," "Getting a Chart Data File," or "Combining Chart Data and Chart Descriptions."

If there is a chart already displayed on your screen, Charting Gallery prompts you to save it or discard it before continuing with the Get function. If you save your chart, you won't lose any work when the screen is cleared to make room for the new chart information you want to retrieve.

Displaying the Get Functions

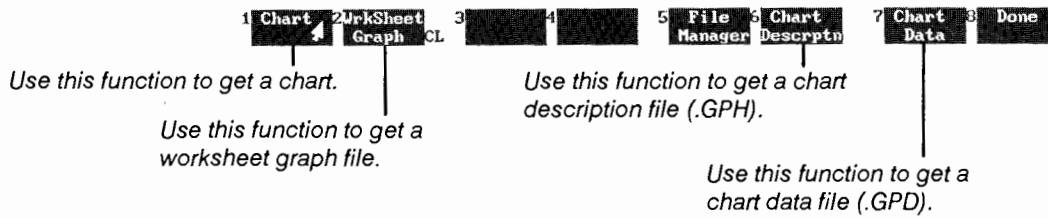
When you choose **Get** from the Get and Save function labels, Charting Gallery displays a new set of function labels.

These Get function labels offer you a choice of retrieving a specific type of file.

The file types offered are:

- Chart files.
- Worksheet graph files.
- Chart description files.
- Chart data files.

The types of files you can retrieve correspond to the Get function labels as shown below.



When you choose the type of file you want, Charting Gallery displays a side bar menu that lists all the possible choices of disc drives, and files. The current disc\directory\file is also displayed on the input line.

For example, if you choose **Chart**, the side bar displays a list of files available in the current drive and directory, and the input line displays the current disc\directory\file as shown in this screen sample.

Getting and Saving

Choosing a Menu Item

To make a file selection click the menu item of your choice. You can alter the list of file names from which you make your selection by first using the Set File Search function. Refer to "Searching for a File," later in this chapter for more information.

When Charting Gallery moves the menu selection box to the indicated item, click the menu item. Charting Gallery displays your selection in the charting work area. You also could choose **Enter** to cause Charting Gallery to display your selection.

Browsing Through Menu Items

Browsing can help speed up the chart selection process.

After you choose the file type you want, choosing **Browse Files** allows you to display one chart after another quickly. You don't have to choose the file type because Charting Gallery continues displaying the side bar menu.

When you choose **Browse Files**, an asterisk (*) appears in the **Browse Files*** function label to indicate that the side bar menu will remain in place when Charting Gallery displays the selected item.

If you want Charting Gallery to clear the side bar when you choose a menu item, choose **Done**.

Searching for a File

Like browsing, file search helps speed up the selection process. You can search for a specific file, or for a group of related files.

File search causes Charting Gallery to start the side bar menu list with the first instance of your search, and to display that file name in the input line.

To use file search, follow the steps outlined below:

1. Choose the file type you want.
2. Choose **Set Search File**.



Type the file search criteria here. Charting Gallery uses the same file search conventions as DOS.

Charting Gallery Set File Search File Search: *.GPH

Type a search expression to be appended to the current path; select Enter.
*.GPH

Disk/Dir	Files
A:	BARCHRT
B:	TEMPCHRT
C:	
<parent>	
BASIC1	
BASIC2	
BASIC3	

MORE MORE

1 Enter 2 CL 3 4 5 6 Restore Default 7 8 Cancel Search

TITLE : Sample Bar Chart

3. Depending on the file type you chose, Charting Gallery displays one of the following search criteria on the input line and displays all the associated menu items in the side bar.
 - For chart description files, Charting Gallery displays ***.GPH**.
 - For worksheet graph files, Charting Gallery displays ***.WK1**.
 - For data files, Charting Gallery displays ***.GPD**.

Charting Gallery uses the standard DOS method of designating a wildcard with an asterisk (*) or question mark (?).

4. Perform one of these steps to make the search criteria specific:
 - On the input line, type in the full name of the file you want. Be sure to type the file extension. Choose **Enter**.
 - Identify the group of related files you want. Charting Gallery uses the same file search criteria that DOS uses. Type this expression on the input line then choose **Enter**. Move the selection box to the menu item of your choice.
5. If you want to retrieve and display a selection, click that menu item, or choose **Enter**.
6. If you have not made a selection, but want instead to see the list of available files for the file type, choose Set File Search and select Restore Default.

Getting a Chart

When you get a chart, you retrieve all the components of a chart – the description file and the data file.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Choose **Get**.
3. Choose **Chart**.
4. Choose the side bar menu item you want.
5. To display the indicated chart file, click the item enclosed by the selection box, or choose **Enter**.

Getting a Chart Data File

You can get a chart data file without getting the corresponding chart description file. So you can use the same data to create charts that have different appearances. You can also bring data from another program into Charting Gallery. See chapter 11, *Using Charting Gallery with Other Applications*, for more information.

When you get a chart data file, all annotations, titles, fonts, text size, color, and texture remain unchanged. They are not reset to the default.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Choose **Get**.
3. Choose **Chart Data**.
4. Choose the chart data file you want.
5. To display the indicated chart data file, click the item enclosed by the selection box, or choose **Enter**.

After you have gotten a chart data file, you can go to the Data screen to view and/or edit the data.

Combining Chart Data and Chart Descriptions

You can combine data from one chart with the description of a second chart to make a third chart. Combining the data of one chart with the description of another can save you time when you want to update a chart with new data on a regular basis.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Choose **Get**.
3. Choose **Chart Data**.
4. Choose the data file you want. Click it or choose **Enter**.
5. Choose **Get** again.
6. Choose **Chart Description**.
7. Choose the chart description file you want.
8. To display the combined data and description, click the data description file item enclosed by the selection box, or choose **Enter**.

After you have gotten the two files, you can go to the Data screen to view and/or edit the data.


Using File Manager

As its name implies, File Manager helps you manage the chart files that you create when you use Charting Gallery. You can also use DOS commands to do the tasks that File Manager does. However, when you use File Manager, you don't have to leave Charting Gallery to perform the task, as you would if you used DOS commands.. For example, if want to delete a chart file, but you've forgotten the name of a chart, you can use File Manager as another way to browse through the file names in the directory where the chart resides. Once you've located the chart name, you can delete it and return directly to Charting Gallery.

Viewing the File Manager Screen


1. Choose **Get and Save** from the Charting Main screen.
2. Choose **File Manager**.
3. To select a file name in the File Manager, move the selection arrow until it is above the file name. To move the selection arrow, use the mouse to click the item you want.

Changing the Default Drive or Directory

1. Choose **Charting Dir.**
2. Type the name of the directory, including both the drive letter and the directory path, and then press . If the directory is a subdirectory of the displayed directory, do not type the drive letter and directory path.
3. Choose **Return Dir.**

Creating a New Directory

1. Choose **File Funct'ns.**
2. Choose **Make Dir.**

Type the directory name including the drive letter and the directory path, and then press .

3. Choose **Start Make Dir.**

Renaming Chart Files

1. Choose **File Funct'ns.**
2. Choose **Rename File.**

You must rename both the chart description file and the chart data file for the chart you want to rename.

Deleting Chart Files

1. Choose **File Funct'ns.**
2. Locate both the chart description file name and the chart data file name for the chart you want to delete.
3. Choose **Delete File/Dir.**

Using Layout

This chapter describes how to use the Layout screen and functions to create a single page that contains multiple charts, worksheet graphs, and pictures.

Here you learn to do the following:

- Define a layout format.
- Position or realign the charts and pictures you want on a page.
- Replace the charts or pictures in an existing layout with new charts and pictures.
- Reshape and resize the charts and pictures in a layout.
- Get and Save a layout.
- Draw a layout.
- Update the charts in an existing layout with new chart information.

If you want to perform any of these tasks, choose **Layout** from the main Charting Gallery functions.

Working with Layout

To use the Layout functions you need to know how to select the object with which to work. In Charting Gallery, an object is synonymous with the image of a chart, worksheet graph, or picture. You can select an object in the following ways:

- Click within the bounds of the work area.
- Click the object's name in the side bar menu area.
- Use tab/shift-tab to move the selection box.

You can identify which object is currently selected in the following ways:

- The selected object's name is outlined by the selection box in the side bar menu area.
- The selected object has handles drawn along its perimeter in the layout work area.

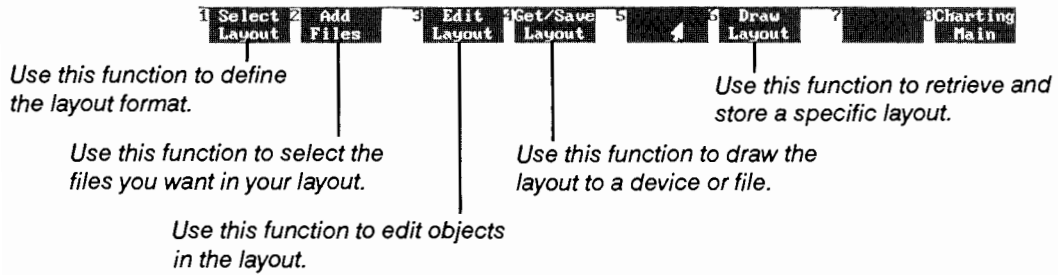
Creating a Page Layout

To create a page layout that contains multiple charts, pictures, and worksheet graphs, you need to know how to define a layout format and how to position and realign the objects you want on the page.

Before you start defining your layout format, determine the number of charts and pictures you want on the page. Know the names of the charts, pictures, and graphs you're going to use, and decide approximately where you want to locate them.

The Charting Gallery Layout functions help you position the charts and pictures precisely with format options, work area place holders, and editing functions.

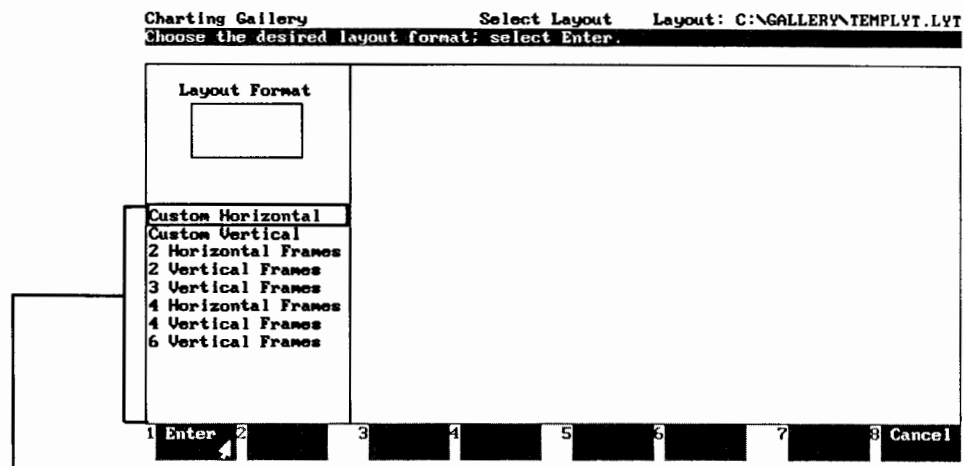
When you choose **Layout**, Charting Gallery displays the following function labels:



Defining the Layout Format

1. Choose **Select Layout** from the Layout function labels.

The screen displays a side bar menu area that lists eight Layout format options.



The side bar lists the layout formats when you choose the Select Layout function from the Layout function labels.

2. Click the layout format option that is best suited to the number and orientation of the objects you want to show. You can use the following guidelines to help you decide which format is best for you.
 - If you want to control where you add objects to the page, as opposed to following the other predefined-formats, use the **Custom Horizontal** or **Custom Vertical** option.
 - If you want to align two or four objects in a horizontal format, use the **2 Horizontal Frames** or **4 Horizontal Frames** option.
 - If you want to align two, three, four, or six objects in a vertical format, use the **2 Vertical Frames**, **3 Vertical Frames**, **4 Vertical Frames**, or **6 Vertical Frames** option.

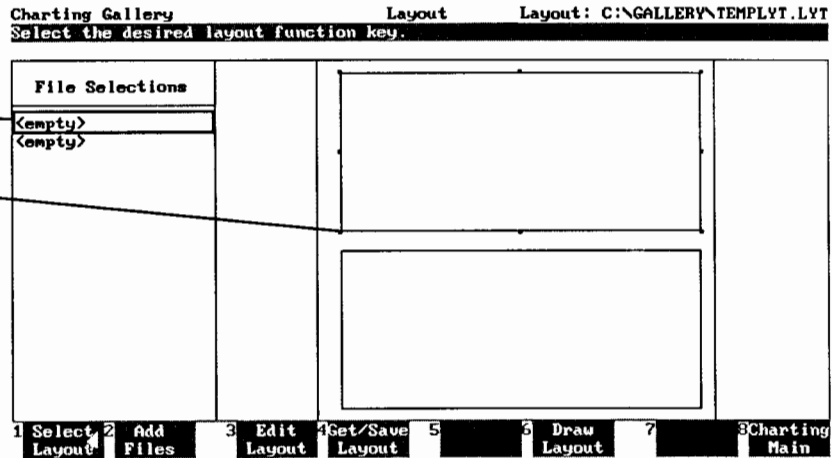
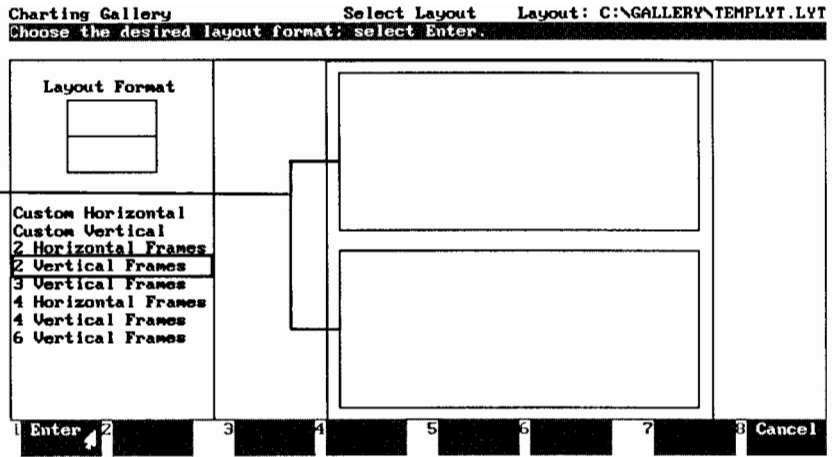
3. Choose **Enter**.

Depending on the layout format you chose, Charting Gallery does one of the following:

- If you chose a custom layout format, the side bar menu area remains blank, as does the layout work area.
- If you chose a specific number of frames for your layout format, Charting Gallery divides the layout work area into the number of frames you requested. These frames are place holders that show you where your charts, pictures, and graphs will be located on the screen, and eventually drawn on the page.

The side bar menu area also lists an <empty> file name for each place holder.

The following examples show how the screen looks when you select the **2 Vertical Frames** option and click **Enter**.



Adding a Chart, Picture, or Graph

You're now ready to identify the files that contain the charts, pictures, and graphs you want in your layout.

1. Choose **Add Files** from the Layout function labels.

Charting Gallery displays the Get functions. The full operation of these functions is described in "Retrieving Chart Information" in chapter 8, *Getting and Saving a Chart*.

In Layout, the Get functions provide an additional file type – the Gallery picture file. You can get a Gallery picture file (.GAL file) by choosing the **Picture** function label.

2. Choose the type of file you want to add to the layout. For example, if you want to add a chart, choose the **Chart** function label, or if you want to add a worksheet, choose the **Worksheet Graph** function label.

If you want to add a chart to your layout that is a combination of a data file and a description file, see "Combining Chart Data and Chart Descriptions," in chapter 8, *Getting and Saving a Chart*.

If you have activated one of the objects in the layout, Charting Gallery displays the **Replace Active** function label.

3. Depending on the layout format option you chose, or on the size you want your object to be, do one of the following:

- Choose the **Replace Active** function.
- If don't want to use the **Replace Active** function, you can override it by drawing your own frame. Position the cursor in the layout work area where you want to locate the object. Hold the mouse button down and drag the crosshairs across the screen to make a box the size you want. Release the mouse button.

The side bar menu area lists all of the possible choices for disc drives and file names that you can add as an object to the box you've drawn.

The following screen sample shows the list of chart files available on the A: drive.

The screenshot shows the 'Charting Gallery' window with the title 'Add Chart' and 'File Search: *.GPH'. Below the title bar, it says 'Select a disk/directory followed by a file, then select Enter.' and 'A:\AREACHRT'. The main window is divided into a table on the left and a drawing area on the right.

Disk/Dir	Files
A:	100AREA
B:	3DPIC
C:	AREA
	AREACHRT
	BAR
	BARCHART
	BARCHRT
	BARLIN3D
	BARTIME
	BARYELLO
	CONTROL
	CUS0203
	CUS0204
	CUS0303
	CUS0306
	CUS0307
	MORE

Annotations on the left side of the screenshot:

- 'This is the current disc.' points to the 'A:' row in the table.
- 'This is the selected chart.' points to the 'AREACHRT' file in the table.
- 'This is the frame where the area chart stored on drive A will be drawn.' points to the drawing area on the right.

At the bottom of the window, there is a menu bar with the following items: 1 Enter, 2 Browse Files, 3, 4, 5 File Manager, 6, 7 Set File Search, 8 Cancel Add.

4. Move the menu selection box to the menu item that names the file you want to add to the layout.
5. Click the selected item or choose **Enter** and Charting Gallery places the object in the layout work area.

Charting Gallery sizes and repropotions the object to best fit the frame and centers the object within the frame.

Charting Gallery Add Chart File Search: *.GPH
 Select a disk/directory followed by a file, then select Enter.
 A:\AREACHRT

Disk/Dir	Files
A:	100AREA
B:	3DPIE
C:	AREA
	AREACHRT
	BAR
	BARCHART
	BARCHRT
	BARLINE3D
	BARLINE
	BARVELLO
	CONTROL
	CUS0203
	CUS0204
	CUS0303
	CUS0306
	CUS0307
	MORE

is the area chart from drive A:\AREACHRT drawn in the selected frame.

Use Enter or click the selected file to draw that file in the layout frame.

1 Enter 2 Browse Files 3 4 5 File Manager 6 Set File Search 7 Cancel Add

6. Click the next open frame to activate it.

You need to activate the next open frame, otherwise you will add the next chart, picture, or graph to the same active frame.

7. Repeat steps 2-6 to add additional objects.

Changing the Format

If you don't like the positioning of the charts, pictures, or graphs, you can realign the objects by repeating steps 1-3 described in the "Defining the Layout Format" earlier in this chapter.

You may need to delete some of the objects if you want to choose a format option with fewer frames than you're currently using. See "Deleting Objects" later in this chapter for more information.

Editing the Layout

This section describes how to edit objects in the layout work area. You can edit objects by choosing the **Edit Layout** function. However, if you want to move, stretch, or shrink an object, you don't have to use the Edit Layout functions. You can move, stretch, and shrink objects automatically any time during a layout session, by activating that object then following the instructions in "Moving Objects," or "Stretching and Shrinking Objects," provided later in this chapter.

Here is a list of how you can change an object during layout:

- Move
- Stretch/Shrink
- Enlarge/Reduce
- Copy
- Delete
- Match Size
- Undo

To perform any of these editing tasks, choose **Edit Layout** from the Layout function labels.

Moving Objects

There are two ways of moving objects. One way is choosing the **Move** key, then following the instructions in the message line. The following instructions show you the second way:

1. Activate the object you want to move.
2. Position the pointer inside the object to be moved.
3. Press the mouse button to display the crosshair and drag the object to the new location.
4. Release the mouse button. The object freezes at the new location and the handles reappear.

Stretching and Shrinking Objects

You can stretch or shrink an object horizontally, vertically, or both. There are two ways of stretching and shrinking an object. One way is choosing the **Stretch Shrink** key, then following the instructions in the message line. The following instructions show you the second way:

1. Activate the object you want.
2. Move the pointer to any *handle* on the object, a corner, side, top, or bottom handle.
3. Press the mouse button to display the crosshair and drag the *handle* to a new location.
4. Release the mouse button. The object freezes in the new shape and the handles reappear.

Enlarging and Reducing Objects

Follow these instructions to change an object's size but not its shape.

1. Activate the object you want.
2. Choose **Enlarge Reduce** from the Edit Layout function labels.
3. Move the pointer to any *handle* on the object, a corner, side, top, or bottom handle.
4. Press the mouse button to display the crosshair and drag the *handle* to a new location. Moving away from the center of the object increases its size. Moving toward the center decreases its size.
5. Release the mouse button when the object is the way you want it to be. The object or groups of objects freezes in position.

Copying Objects

Copy lets you duplicate one or more objects in the layout work area in another place on the layout work area. This saves you the time and trouble of adding an object twice.

1. Activate the object you want to copy by selecting it.
2. Choose **Copy** from the Edit Layout function labels.
3. Move the pointer to the location where you want the object to appear.
4. Press either button on the mouse. A copy of the object appears at that location.

If you need to adjust the position of the copy, move the object to a new location.

5. Release the mouse button. The copy freezes into place and handles appear around it, indicating that it is active and can be edited.

Deleting Objects

Delete removes one or more objects from the drawing board.

1. Activate the object you want to delete.
2. Choose **Delete** from the Edit Layout function labels. The object disappears from the layout work area.

Caution



When you choose **Delete**, any active object on the layout work area is deleted immediately! If you delete an object accidentally, use the **Undo** function key before you do anything else to restore the object.

Match Size

By matching the size of one object or frame to another, you can line objects up to create an orderly presentation.

1. Activate the object or frame you want to change.
2. Choose **Match Size**.
3. Click the object or frame you want.

Undoing a Step

You can choose **Undo** to undo whatever you *just* did to the layout. You can choose it a second time to "undo the undo" – that is – to restore the layout to the way it was before you chose **Undo** the first time.

Getting and Saving a Layout

In general, the Get and Save functions used for retrieving and storing a layout follow the same procedures as those described in chapter 8, *Getting and Saving a Chart*. However, a layout file is identified by the .LYT file extension.

Getting a Layout

The layout retrieval functions allow you to do the following:

- Choose a previously saved layout from a menu of existing layout files.
- Browse through the menu of layout files to speed up the layout selection process.
- Search for a specific layout file or a group of related layout files.

If you want to perform any of these layout retrieval tasks, choose **Get Layout** from the Layout function labels. Then refer to the related information in the "Retrieving Chart Information" section in chapter 8, *Getting and Saving a Chart*.

Saving a Layout

The Save Layout functions allow you to store a newly created or edited layout file for future use. You can save a layout two ways:

- As a layout file that uses the .LYT file extension.
- As a Gallery picture file that uses the .GAL file extension. Gallery picture files can be edited and enhanced in Drawing Gallery.

1. Depending on how you want to save the page layout, do one of the following:
 - If you want to save the page layout as a layout file, choose the **Save Layout** function.
 - If you want to save the page layout as a Gallery picture file, choose **Save As Picture**.
2. In the input line, type the name you want to give the file. Include the disc drive and directory path if they are different from those shown on the screen.
3. Choose **Enter**.

If the file name already exists as the name of another file, you can save the current layout under that file name by choosing **Enter** again.

Otherwise, you can type in another, unique, file name, or choose **Cancel Save**.

For information on the File Manager, refer to "Using File Manager" in chapter 8, *Getting and Saving a Chart*.

Drawing a Layout

To print or plot the page layout, choose the **Draw Layout** function from the Layout function labels.

The printing or plotting of a page layout is identical to the printing of a chart as described in chapter 10, *Printing and Plotting a Chart*.

Updating Existing Charts in Layout

To update charts in an existing layout, do the following:

1. Click the chart object you want to change. The chart object is activated.
2. Choose **Charting Main**.
3. Use the Chart Types, Data, or Edit and Draw menus to make changes to the chart.
4. When you finish making your changes, choose **Layout**.
5. Select **Yes, Save** to save the changes.

You return to Layout and the changes are reflected in the active Layout object.

If you chose **No, discard**, you return to Layout without saving any changes.

Printing and Plotting a Chart

Once you've created a chart, you can draw it to a plotter or printer, or to a file. In this chapter, you'll learn how to:

- Preview the chart on the screen before you print or plot it.
- Change the current device setting to select a different printer, plotter, or file type.
- Change the Device Control options to specify such variables as number of copies, paper size, color, and resolution.
- Change the current palette.
- Print or plot the chart.

This chapter also provides information on using HP LaserJet Printers with Charting Gallery. Refer to the *Setting Up Drawing Gallery and Charting Gallery* booklet for information about installing the printers, plotters, and other devices that can be used with Charting Gallery.

Checking Your Equipment

Before you can print or plot a chart, your equipment needs to be set up properly. Here's a checklist.

- Is your printer or plotter connected to your computer?
- Is it turned on?
- Make sure the paper or transparency film is loaded. If you have a plotter, check to see that the pens are in the right order. Starting from pen #1, the order is usually black, red, blue, yellow, green, violet, aqua, orange.
- Have you identified your printer, plotter, or 35mm camera using the Identify Devices (DEVICEID) program?

If not, refer to the *Setting Up Drawing Gallery and Charting Gallery* booklet.

Using the Preview Function

Before you print or plot, you can preview a chart on the screen to see how it will look when it is printed or plotted. You use the **Preview** function label. When you preview a chart, Charting Gallery enlarges the chart to fill the screen.

When you preview a picture, it is displayed using the palette you have currently selected. *Before* you preview your picture, select the palette that most closely represents the capabilities of your printer, plotter, or film recorder.

For example, the full-color palette shows how your picture will look if printed on a color printer. The B/W Pattern palette shows how it will look if printed on a black-and-white printer.

Previewing Your Chart



See "Changing the Palette" later in this chapter for more information about the use of palettes.

1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Draw** from the Edit and Draw functions.
3. Choose **Preview**.
A beep tells you when the drawing is completed.
4. Click a mouse button or press any key to redisplay the Draw function labels and charting work area.
5. You can now plot or print the chart. See "Drawing Directly to a Printer or Plotter," later in this chapter.

Working with Color Palettes

You may use a printer, plotter, or 35mm camera to "draw" the charts you create in Charting Gallery. These devices have very different color capabilities.

To help you create charts that use the full range of colors available on your charting device, Charting Gallery includes four *palettes*. A palette is a set of colors, black-and-white-patterns, or gray scales you can apply to your charts. These are the palettes:

- A ten-color palette – for a standard pen plotter.
- A full 125-color palette – for color printers and 35mm cameras. Use this palette when you have a Gallery picture file brought in from Drawing Gallery that is used in a Charting Gallery layout.
- A black-and-white gray-scale palette – for HP LaserJets and other black-and-white printers.
- A black-and-white pattern (dithered) palette.

Choose the palette that most closely resembles the colors used in your chart, and used by your printer, plotter, or camera. If you choose the **B/W Gray** or **B/W Pattern** functions, see "Gray Scale and Dithering" in Chapter 6, *Enhancing a Chart*.

The four palettes are identified by the Draw function labels as shown below.

Charting Gallery Drawing Keys Chart: C:\GALLERY3\TEMPCHRT

Select a drawing function.

The screenshot shows a software window titled "Charting Gallery" with a sub-window "Drawing Keys". The main area displays a chart titled "Sample Chart" with a subtitle. The chart has a Y-axis labeled "Y Axis Title" with values 0, 500, 1000, and 1500. The X-axis is labeled "X Axis Title" with four tick marks labeled "X-label1", "X-label2", "X-label3", and "X-label4". The chart area is filled with a black-and-white pattern. A legend is visible at the top of the chart area with two entries labeled "Legend Label".

At the bottom of the window, there is a "Footnote" section with eight drawing function labels: 1 Draw To 7220A Pl, 2 Device Control, 3 Preview, 4 Full Color, 5 B/W Gray, 6 B/W Pattern, 7 Ten Color, and 8 Done. A bracket underlines labels 4 through 7. A line points from the text "The black-and-white pattern was selected." to the chart area.

These are the four palette function labels.

Using Device Control

The Device Control screen lets you specify the **current device** – the one Charting Gallery will use to print or plot your chart. The current device can be any device you've installed. The Device Control screen also lets you choose options that determine how your drawing is printed or plotted on the page, or in what format it is sent to a file.

When you use Charting Gallery for the first time, the device control options are set so that Charting Gallery will:

- Print or plot your chart horizontally on the page.
- Leave a blank 3/4 inch margin between the border of your chart and the edges of the page.
- Assume that your printer or plotter is loaded with 8 1/2 x 11 inch paper.
- Print or plot one copy of your chart.

Only one device at a time can be the current device. The current device appears on the **F1** label at the bottom of the screen after you choose **Draw** from the Edit and Draw functions. If the current device is not the one you want, you can change it.

Changing the Current Device and Other Options

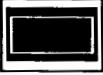
1. Choose **Edit and Draw** from the main Charting Gallery functions.
2. Choose **Draw**.
3. Choose **Device Control** to display the the Device Control screen.

This is the current Device Name/Port field.

Device Control

Select a device and choose output options.

Device Name/Port **LaserJet*/COM1**

	Orientation Horizontal	Copies 1
	Location Full Page	Auto Feed Yes
Margins (Inches)	3/4	Medium Paper
	3/4	Picture Scaling Best Fit
	3/4	Paper Size A (8-1/2 x 11 in.)
	3/4	Resolution 300 X 300 DPI
Draw to File No	Units Inches	
File Name Not Applicable		

1 Draw to LaserJet 2 Previous Choice 3 Next Choice 4 Default Choices 5 Save Choices 6 7 Back to Charting

This function matches the current device. A device can be a printer, plotter, or other application such as PC Paintbrush.

4. Move the pointer to the printer or plotter name in the **Device Name/Port** field at the top of your screen.
5. Click a mouse button, or choose **Next Choice** or **Previous Choice** until the printer, plotter, or file type you want appears. If the device you want is not available, you must install it. See the *Setting Up Drawing Gallery and Charting Gallery* booklet for installation information.

If you are changing from Device Name to File Type, see "Drawing to Files," later in this chapter, and Chapter 11, *Using Charting Gallery with Other Applications*.

6. Click a mouse button or press **Tab** to move to the first option you want to change. Click again or choose **Next Choice** or **Previous Choice** to display other options. If you are changing the File Name field, type in the name. For specific information about each option, see "Device Control Options," later in this chapter,
7. Repeat steps 5-6 for any other options you want to change.

8. Choose **Save Choices**.

Once you save the options for a device, you don't have to set them again unless you want to change them.

Your choices for the Draw to File and File Name options are not saved. Every time you start Charting Gallery the default appears in these fields.

9. Choose **Back to Charting** to redisplay the Edit and Draw functions.

Restoring the Defaults

You may want to restore the default choices for a printer or plotter after you have changed them.

1. Follow steps 1-4 of the previous procedure, "Changing the Current Device and Other Options."

2. Choose **Default Choices**.

The default choices are restored.

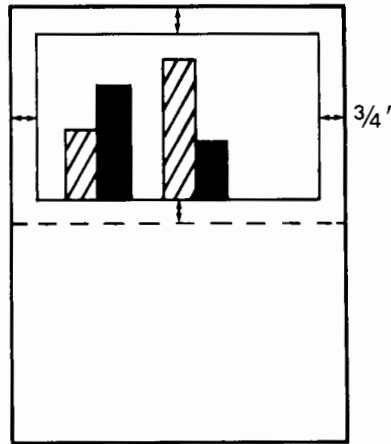
3. Choose **Save Choices**.

The default choices are saved.

Device Control Options

This section describes the options that appear on the Device Control screen. When you change a setting, remember that:

- The choices shown apply only to the current device.
Other printers and plotters may have different choices. To see the choices in effect for another printer or plotter, you must change the current device.
- The Orientation, Location, and Margins settings work together. All three settings affect the positioning of your chart on the page or transparency.

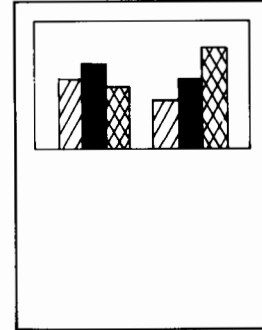
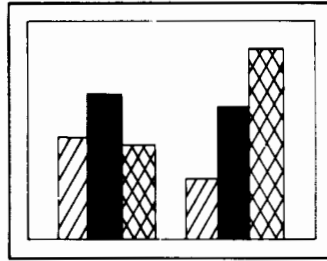


*In this example:
Orientation = Vertical
Location = Top Half
Margins = 3/4 inches on all
four sides*

All of the options are described below. Use the mouse to click the options you want.

Orientation

This option controls the horizontal or vertical placement of the chart on a page as shown below.



The orientation you choose affects the choices available for the Location option. For example, if you set Orientation to Horizontal, you can draw your chart on the left or right half of the page, but not the top or bottom half. To draw on the top or bottom half, change Orientation to Vertical.

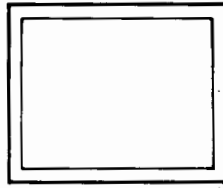
The default choice is Horizontal.

Location Location controls the area on the page or transparency in which your chart is drawn. You can draw a chart on a full page, or on any part of a page.

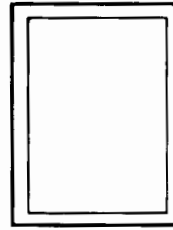
Specifying a location lets you add charts to a page that already has something else drawn on it. If you use Location for this purpose, be sure to turn autofeed off.

The following illustration shows the choices available for this option. Notice that the choices for the Location option are determined by the Orientation setting.

Full Page Choices:



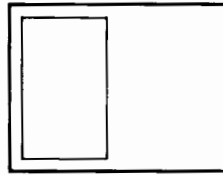
HORIZONTAL



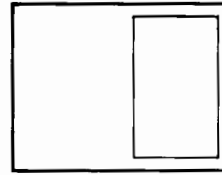
VERTICAL

Half Page Choices:

Horizontal only:

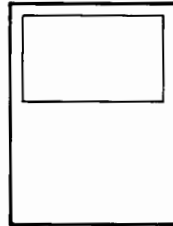


LEFT
HALF

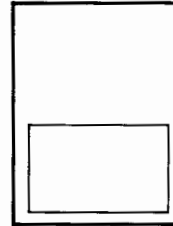


RIGHT
HALF

Vertical only:



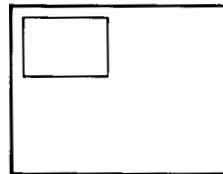
TOP
HALF



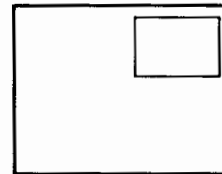
BOTTOM
HALF

Quarter Page Choices:

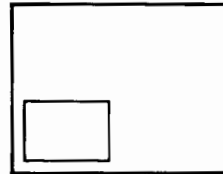
(These are available for both orientations. Only Horizontal is shown here).



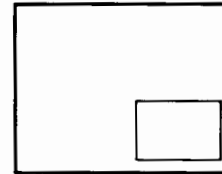
UPPER LEFT



UPPER RIGHT



LOWER LEFT



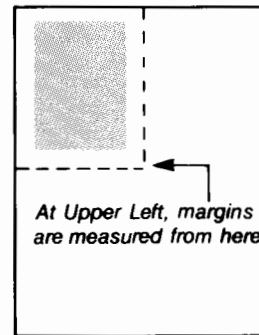
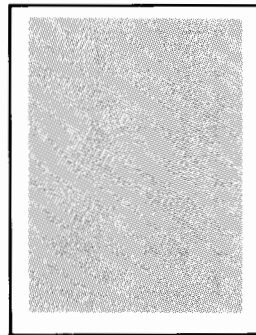
LOWER RIGHT

Margins

You can place a chart in an exact location on any size page by defining how much space you want to leave between the edge of the paper or transparency and the chart. For example, you can leave room for a three-hole punch or binding for reports by increasing the left margin.

The Margins option works with the Location option. The margins of your chart are measured from the edge of the space you define as the chart location. This allows you to make small adjustments to the location of the chart on the page as shown in the following figure.

At Full Page, margins are measured from the edge of the page.



At Upper Left, margins are measured from here.

Margins are measured in inches or millimeters, depending on the current choice for Units. The default is either 3/4 inch or 19 millimeters. Choosing **Next Choice** increases a margin by 1/16 inch or 1 millimeter. Choosing **Previous Choice** decreases a margin by 1/16 inch or 1 millimeter.

Some printers can't place a chart with the degree of accuracy allowed by the margin settings. To print your chart as accurately as possible, place the top edge of the paper under the printhead before you print.

Units

This option lets you choose measurement units for the Margins, Height, Width, and Resolution settings.

Margins are measured in either inches or millimeters.

Resolution is measured in either dots per inch (DPI) or dots per millimeter (DPMM).

The default choice is Inches.

Copies

This option lets you specify the number of copies of your chart are to be printed or plotted. You can specify from 1 to 99.

The default choice is 1.

Auto Feed

Auto Feed is the automatic feed feature that printers and some plotters use. If you want to use automatic feed and your device has this capability, choose Yes for this option. Choosing No lets you feed paper manually so you can draw multiple charts on a page.

This option applies to both continuous- and single-sheet-feed printers and to the HP 7550 plotter.

The default choice is Yes for printers. The default choice is Yes for continuous feed plotters and No for single sheet feed plotters.

If your LaserJet is connected to a local area network, specify No in the Auto Feed field on the Device Control screen. Otherwise, an extra sheet of blank paper will feed through your printer after your drawing prints.

Medium Medium lets you choose whether you want to plot your chart on paper or on a transparency.

The default choice is Paper.

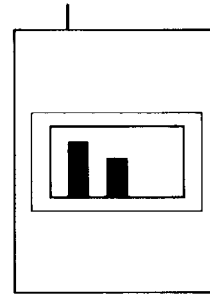
Because ink does not dry as fast on transparencies as on paper, drawing your picture on this medium takes a bit longer.

Picture Scaling Picture Scaling determines how Charting Gallery adjusts your chart horizontally and vertically to fit the space you specified. You have two choices for this option:

- Stretch Fit
- Best Fit

Best Fit centers the chart within the space, making it as large as possible without distortion.

Stretch Fit adjusts the shape of the chart so that it fits the space. Some distortion may result.



Stretch Fit adjusts both the horizontal and vertical dimensions of the chart so that it completely fills the space you defined with the location and margin options. If the proportions of the chart are different from the proportions of the space defined, distortion will occur. Pie charts are an exception since they always remain round, even when you choose Stretch Fit.

Best Fit centers your chart in the space you defined, maintaining the same horizontal/vertical ratio. Distortion never occurs when you use Best Fit.

The default choice is Best Fit.

Paper Size

This option specifies the size of the paper on which you will draw your chart. Your device may not support all the following sizes. Refer to the manual that came with your device to find out what your options are.

American Standard Paper Sizes (inches)

- A (8.5 x 11 inches)
- B (11 x 17 inches)
- C (17 x 22 inches)
- D (22 x 34 inches)
- E (34 x 44 inches)

European Paper Sizes (millimeters)

- A4 (210 x 297 mm)
- A3 (297 x 420 mm)
- A2 (420 x 594 mm)
- A1 (594 x 841 mm)
- A0 (841 x 1189 mm)

You can also choose Banner. Designed for continuous fan-fold printers, this choice lets you print banners 8-1/2 inches tall by several feet wide.

The default choice is A, 8-1/2 x 11 inch paper.

Resolution This option determines how clearly and distinctly your chart is drawn.

Resolution is measured in dots per inch (DPI) or dots per millimeters (DPMM). Generally, a higher number of dots gives a higher resolution and a clearer picture. The more dots you use, the longer it takes to draw your chart.

Your choices for this option depend on your printer. Some printers have only one DPI or DPMM size, while others have several. If you don't change this option, Charting Gallery uses the highest (300 x 300 DPI) resolution.

Choose **Next Choice** to see the available options for your printer, or TIFF or PC Paintbrush file. **Not Applicable** appears in this field when a plotter is the current device.

Draw to File This option lets you create a file containing device-dependent data that you can use to reproduce your chart using a specific device: a printer, plotter, slide presentation device, or desktop publishing program.

The format in which your file is created depends on the device you specified in the Device Name or File Type field of the Device Control screen.

See "Drawing to Files," later in this chapter, for detailed information about the Draw to File option. For details on transferring a chart file to other software, see Chapter 11, *Using Charting Gallery with Other Applications*.

Choose Yes if you want to draw your chart to a file. Choose No if you want to print or plot your chart directly on the current device.

The default choice is No.

Pen Sorting

Pen sorting determines how pens are sorted in a color plotter. You have two choices:

- Yes
- No

If you choose Yes, your plotter will use pen #1 to draw all the objects in your picture that are color 1. Next, it will use pen #2 to draw all objects that are color 2, and so on. This is the quickest method of plotting.

If you have an eight-pen plotter, always choose Yes. Yes is the default choice.

If you choose No, charts and pictures are plotted in the order you drew them. When you have overlapping charts and pictures in a layout, the plotter first draws the objects you put behind, then the objects you put in front. Pens are swapped as needed.

Shielding

Pen shielding determines how a pen plotter will plot overlapping objects. You have three choices:

- Partial
- Full
- None

When you choose Partial or Full Shielding and there are overlapping objects in your layout, the plotter will draw the chart or picture in front. It will *not* draw the hidden part of the object in back. With shielding, two pens do not draw over the same shape.

When you choose Partial, fill textures (the insides of shapes) are shielded. Lines and the outlines of shapes are *not* shielded. When lines overlap, they will be drawn with both pen colors. Partial is the default choice.

When you choose Full, all objects, including lines, are shielded. This choice causes the plotter to draw slowly.

When you choose None, there is no shielding. Pens will draw right over one another when you have overlapping objects.

File Name

If you choose Yes in the Draw to File field, type in the name of the file to which you want your chart drawn.

If you choose No, *Not Applicable* appears.

The default file name is **TEMPFILE**.

Drawing Directly to a Printer or Plotter

At any time during a Charting Gallery session, you can print or plot a chart that appears on your screen. Charting Gallery uses the Device Control settings currently in effect.

If you are plotting your chart in color, make sure that the colors of the pens in the pen holders match the colors of the corresponding pen numbers on the Color menu. If they don't match, place the pens in their correct positions.

1. Choose **Draw** from the Edit and Draw functions.
2. Make sure the **Draw to <device>** label shows the name of the printer or plotter you want.
3. If you want to use a different printer or plotter, follow these steps. Otherwise go to step 5.
 - a. Choose **Device Control**.
 - b. Use **Next Choice** or **Previous Choice** to display the name of the printer or plotter you want to use.
 - c. Choose **Back to Charting**.
4. Choose **Draw to <device>**.

Charting Gallery prints or plots your chart.

5. When the chart has been printed or plotted, choose **Done** to redisplay the Edit and Draw function labels.

When you draw to a printer, the message line continuously displays the percentage of the chart that is complete. If you notice that printing is going more slowly than you'd like, you can choose **Stop Drawing**. You then have two options. You can go to the Device Control screen and reduce the resolution. Or you can remove some other programs from your computer to increase the memory available to Charting Gallery.

Drawing to a Printer or Plotter File

This option allows you to create a file of your charts on disc. You can use the file with other applications that accept the same file format. Drawing to a printer or plotter file also enables you to plot or print out many charts at a later time, using a batch procedure. In addition, the disc can be transported to a device that doesn't have Charting Gallery, but prints or plots in the same format as the device you specify.

1. Choose **Draw** from the Edit and Draw function labels.
2. Choose **Device Control**.
3. Position the pointer on **Device Name/Port** and click the mouse or choose **Next Choice** until the device you want appears.
4. Choose Yes in the Draw to File field.

The default file name, **TEMPFILE**, appears in the File Name field.

5. Enter a name for the file in the File Name field.

You can draw the chart to an existing file, or create a new file by typing over `TEMPFILE` with another file name. The file name you enter remains on the screen until you exit Device Control.



If you draw your chart to an existing file, the contents of that file are written over with the new chart.

7. Look at the other options on the screen and change any that need to be changed.
8. Choose `Draw to <Device>`.

Your chart is drawn to the file you specified.

Drawing to Files

Draw your chart to a file if you want to:

- Use it with other software, such as a desktop publishing program.
- Use it with another device, such as a slide presentation device.
- Use it at another time with a printer or plotter.

By drawing your chart to a file, you create a file containing device-dependent data that will reproduce your charts only with a specific device or application.

See "Drawing to a Printer or Plotter File," earlier in this chapter, for instructions on how to use the draw to files option.

The next section describes how to choose a file format.

Choosing a Format

The format in which a chart is saved depends on which device or file type you choose; see Table 10-1. If you will be using the file with other software, check to see what file format the software accepts.

If you draw to this device or file type	Your file is saved in this format
PostScript Printer	Encapsulated PostScript (EPS)
TIFF PC Paintbrush	TIFF PC Paintbrush
VideoShow	VideoShow's extension of NAPLPS
Any plotter Any HP printer Any non-HP printer	HPGL PCL Printer-specific binary format

If you want to save your chart as a CGM file, you don't use Device Control. For more information about converting Gallery files to the CGM file format, see Appendix B.

If Charting Gallery can produce the file format you need, you're ready to begin.

Printing to PostScript Devices

You can draw your pictures to any PostScript printer such as the Apple LaserWriter.

PostScript is not an individual printer, but a graphic output language used by many devices. If your printer uses PostScript, be sure you have installed it as a PostScript device using the Identify Devices (DEVICEID) program. Refer to the *Setting Up Drawing Gallery and Charting Gallery* booklet for more information.

When you have created your chart in Charting Gallery, select `pscript` as your current device. You can draw directly to your PostScript printer by choosing **Draw to PostScri**.

Encapsulated PostScript Files

You can also create *encapsulated* PostScript files with Charting Gallery. Encapsulated PostScript files can be integrated easily with other drawing products.

To create an encapsulated PostScript file, select `PScript` as your current device. In the Device Control menu, choose the Draw to File option. For more information, see "Drawing to Files," earlier in this chapter.

CGM Files

You can convert your charts into Computer Graphics Metafile (CGM) files.

First be sure you saved your chart, or layout as a Gallery picture file. (Use `Save` and `Picture` from the Get and Save functions, or `Get/Save Layout` and `Save as Picture` from the Layout functions.) Then exit Charting Gallery and use the GAL2CGM utility to convert the files to CGM format. For more information about converting Gallery files to CGM, see Appendix B.

TIFF and PC Paintbrush Files

Using the Device Control screen, you can save your drawings as TIFF or PC Paintbrush files for integration with other applications, particularly desktop publishing programs. (TIFF and PC Paintbrush file types are automatically included in Device Control when you install Charting Gallery.)

Click the Device Name/Port field until File Type displays. You can also use the **Next Choice** and **Previous Choice** keys.

Device Control
Select a device and choose output options.

File Type **PC Paintbrush**

File Name **TEMP.PCX**

Height **2 1/2**

Width **2 1/2**

Units **Inches**

Picture
Scaling **Best Fit**

Resolution **150 X 150 DPI**

1 Draw to 2 Previous 3 Next 4 Default 5 Save 6 7 8 Back to

PC Paint Choice Choice Choices Choices Charting

The format displayed in the File Type field is the format in which your chart will be drawn to the file you name. Click the File Type field until the format you want appears.

The Units, Picture Scaling, and Resolution options are described in "Device Control Options," earlier in this chapter. The following options apply only to TIFF and PC Paintbrush files.

File Name

Enter the name of the file you want to create – the one to which your chart will be drawn. An extension will be automatically added if you do not type one, for example, .TIF for TIFF files.

The default file name is Temp.TIF. for TIFF, and Temp.PCX for PC Paintbrush.

Height, Width

If the Units option is set to inches, enter a value to the nearest 16th of an inch. The maximum height is 35 inches, and the maximum width is 35 inches.

The default is 2-1/2 inches for both height and width.

If Units is set to millimeters, enter the value in whole millimeters. The maximum height is 889 millimeters, and the maximum width is 889 millimeters.

VideoShow Files

VideoShow is an optional piece of equipment with a disc drive, serial port, and terminal. VideoShow comes with its own software manual called PictureIt!, and a software manual. You can use VideoShow with Charting Gallery to set up high quality slide presentations.

To create chart files you can use with VideoShow, choose the VideoShow format on the Device Control screen. The best way to work with VideoShow is to draw your charts to files (choose the Draw to File option). Then store the files on a flexible disc. You can also display Charting Gallery charts directly on the VideoShow monitor.

Using PictureIt!

After you create all your pictures, you use PictureIt! to order them and merge them so that you can set up your final slide presentation. You can then give the slide presentation with the disc and VideoShow equipment – you don't need your computer.

You can also create pictures using PictureIt! The best use of Drawing Gallery and Charting Gallery is to create illustrations and charts rather than text pictures.

Creating Overlays

You can create overlays in VideoShow by choosing the color None as a background color for your picture. You use the Color menu to choose colors.

When viewed through VideoShow, a picture with None as the background color will be drawn over the picture previously displayed. The picture becomes, in effect, an overlay. By creating a series of slides with no background color, you can build up a picture one portion at a time, or cover up areas previously displayed.

Device Control Options for VideoShow

The Margins, Picture Scaling, and Units options are described in "Device Control Options," earlier in this chapter. The options described below apply only to VideoShow.

Device Control
Select a device and choose output options.

File Type **VideoShow 160/COM1**

<p>Margins (inches)</p> <table border="1" style="margin-left: auto; margin-right: auto;"><tr><td style="width: 50px; height: 20px; text-align: center;">3/4</td></tr><tr><td style="width: 50px; height: 20px; text-align: center;">3/4</td></tr><tr><td style="width: 50px; height: 20px; text-align: center;">3/4</td></tr></table>	3/4	3/4	3/4	<p>Hardware Font Yes</p> <p>Picture Scaling Best Fit</p> <p>Units Inches</p>
3/4				
3/4				
3/4				

Draw to File **No**

File Name **Not Applicable**

Table of Contents

Picture Name **Not Applicable**

1 Draw to VideoShow 2 Previous Choice 3 Next Choice 4 Default Choices 5 Save Choices 6 7 8 Back to Drawing

Draw to File

The default is No. When this option is set to No, the picture is displayed directly to the monitor connected to VideoShow, which is in turn connected to your computer.

If you set this option to Yes, Charting Gallery will create a file version of your chart in VideoShow format (NAPLPS).

File Name

The file name you enter in this field becomes the name of the file in the VideoShow directory.

If your chart takes too much memory for VideoShow to store on one slide, your chart may be represented as a series of overlays having one file name with several extensions. See "If your Picture is Too Complex," later in this chapter, for detailed information.



Table of Contents Chart Name

Not Applicable appears in this field if you choose No in the Draw to File field.

If you chose Yes in the Draw to File field, this option allows you to list a chart in the Table of Contents menu. In this way you can give your chart a name better suited to your slide presentation than the VideoShow file name. For example, a drawing with the chart name `julsat` can be listed as "July Sales" in the Table of Contents.

When this field is highlighted, type the Table of Contents menu name for your chart. The VideoShow *file name* of the chart does not change. The Table of Contents chart name is added to an automatically created TOFC (Table of Contents) file in the same directory as the VideoShow file name.

Suppose you are creating a VideoShow presentation disc in drive B. For the last file, you type `wrapup` in the file name field, but type `That's all, let's go to lunch` in the Table of Contents field. If you list the files in drive B, you see two files, `Wrapup` and `TOFC`. List the contents of `TOFC` to see the phrase `That's all...` When the disc is inserted into VideoShow and you make your presentation, `That's all...` is what is displayed—the file name `Wrapup` never appears.

There is no default for the Table of Contents field. You must enter a name.

Hardware Fonts

This option has two choices: Yes and No. If you choose No, VideoShow will use Charting Gallery fonts all the time. If you choose Yes, VideoShow will use its own fonts – Hardware fonts – when possible. Some Charting Gallery fonts can be represented on VideoShow slides using Hardware fonts. (See the table below.) Hardware fonts cannot represent Charting Gallery text that is:

- Rotated.
- In a font smaller than the smallest Hardware font.
- In Gothic, Script, or any Slanted or Light font.

In the above cases, you must specify Yes to use Charting Gallery fonts, or change the fonts used in your picture to ones that can be represented by Hardware fonts. Charting Gallery fonts are represented very precisely in VideoShow, but display very slowly and take up a lot of VideoShow disc space. It is recommended that you use them only when speed is not critical and/or you have to achieve a specific look that you cannot get using the Hardware fonts described below.

Hardware fonts are processed much faster and take up less space on the disc. They come in three sizes – Small, Medium, and Large (approximately 18, 24, and 36 points), and two typefaces – Sans Serif and Serif (similar to Modern Medium and Classic Medium, respectively). Both Charting Gallery and Hardware fonts can be displayed in outline style.

If you use Hardware fonts, your chart may look somewhat different than it did in Charting Gallery. You can preview the way your chart will look by choosing No in the Draw to File field and displaying the chart on the VideoShow monitor.

The following chart shows how the Charting Gallery fonts that can be represented by hardware fonts will appear on your VideoShow slides.

This Charting Gallery Font...	Will Appear As:
M2, U2, M7M U7	Sans Serif
M3, U3, M8, U8 M4, U4, M5, U5	Sans Serif with black outline Black outline only
C2, C7 C4, C9	Serif Serif with black outline

If Your Picture Is Too Complex

If your Charting Gallery picture takes too much memory to fit into one VideoShow file, your picture is represented on a series of slides, with the second and subsequent slides *automatically* becoming overlays. When this happens, you must display more than one slide at a time to accurately recreate the original picture, as described below.

The overlay slides are named with extensions of the original picture; for example, Agenda.001, Agenda.002, Agenda.003, and so on. The file name of the *last* overlay of the series appears in the Table of Contents. Display this slide, then keep clicking to display the rest of the slides and recreate your entire picture.

You can combine such a series of slides into one picture by using PictureIt!, the program that comes with VideoShow. See your PictureIt! manual for instructions.

A Few Hints

Sometimes a chart you create in Charting Gallery does not look the way you expected when you display it in VideoShow. Charts with text in the Hardware fonts are especially likely to look different.

To keep the font size ratio as consistent as possible between the two programs, follow these hints.

- If you choose the Hardware text option on the Device Control screen, always use Light text styles (in any size) so that there is no need for a mix of Hardware and Charting Gallery fonts. Your chart will print much faster.
- If you want to use VideoShow Hardware fonts with Bold style, save your chart as a picture (using **Picture** from the **Save** function), go to Drawing Gallery, and set the text sizes to either 18, 24, or 36 to get three font sizes.

Using Polaroid Palette PLUS

Polaroid Palette PLUS is an optional device that photographs your Charting Gallery charts and layouts. You can use Polaroid Palette PLUS with Charting Gallery to create slide presentations or photographs.

Before you begin drawing to the Polaroid Palette PLUS, be sure you have installed Palette as an output device. See the *Setting Up Drawing Gallery and Charting Gallery* booklet for more information.

When you are ready to photograph the chart, select Palette as your current device.

Palette Device Control Options

Select the device control options as you would on any other Device Control screen. See "Device Control Options," earlier in this chapter.

Choose a film type in the Film Type option. All of the film types available on the Palette PLUS are provided in this option.

You cannot draw to a file using the Palette PLUS.

Photographing with the Palette PLUS

After you set your Device Control options, choose **Draw to Palette**.

You'll see colors and parts of your chart flash on your screen. The Polaroid Palette PLUS is literally photographing the information shown on your monitor, taking separate exposures for each color. When the photograph is finished, your monitor redisplay the Device Control screen.

Refer to your Polaroid Palette PLUS user's manual for more information.

Printing to HP LaserJet Printers

Four examples of HP LaserJet printers that can be used with Charting Gallery are:

- HP LaserJet
- HP LaserJet PLUS
- HP LaserJet Series II
- HP LaserJet 500

Resolution is memory-dependent. Therefore, the resolution you can achieve will be affected by the amount of base memory your printer has, the memory taken up by resident fonts, and any upgrades that have been performed. LaserJets other than the original LaserJet can print parts of a page at higher resolutions. A LaserJet with 2MB of memory can print a full page of graphics at 300 DPI.

For LaserJets with less than 1MB of memory, graphics can occupy only part of a page when you use higher resolutions. This is because higher resolutions require more memory. If the printer's available memory runs out, the page ejects and the printer's error indicator light goes on.

Caution



If the error indicator light goes on, hold down the reset button. Then choose a lower resolution or include fewer charts on the page.

Using Charting Gallery with Other Applications

This chapter explains how to use Charting Gallery with other programs. You'll learn how to:

- Bring a Lotus 1-2-3 or Symphony graph into Charting Gallery for enhancement.
- Bring data from a spreadsheet or database into Charting Gallery.
- Bring a chart you have created into Drawing Gallery for enhancement.
- Bring a chart you have created into Executive MemoMaker for inclusion in a document you are writing.
- Bring a chart into desktop publishing software for integration with a document you are designing.

Transferring a Chart to Desktop Publishing Software

Several software companies have developed *page layout* programs. A page layout program provides desktop publishing tools that streamline publication design, layout, and production. With a page layout program, you can integrate files created with other programs including many word processors and graphics applications.

Before you can transfer a chart to a desktop publishing program, you must be sure you have followed the Desktop Publishing installation procedure described in the *Setting Up Drawing Gallery and Charting Gallery* booklet.

As discussed in "Drawing to Files," in Chapter 10, you can create chart files in specific file formats. These chart files can then be integrated into documents created with page layout programs.

The transfer process has three stages:

1. Checking the file format.
2. Estimating the size of the chart.
3. Creating the chart file.

Checking the File Format

Before you create a chart file for use with a specific page layout program, you must determine what kind of file format your page layout program accepts.

You can get file format information by looking in the manual or on the data sheet that comes with the page layout program. Check the table of contents in the manual. File information may be in a section called "Adding Graphics," or "Preparing Files from Other Applications." Page layout programs may use encapsulated PostScript, CGM, TIFF, PC Paintbrush, or HPGL format.

Estimating the Size of the Chart

With encapsulated PostScript, CGM, or HPGL format, size is not a concern. You can easily resize charts in these formats in your desktop publishing program.

With the TIFF and PC Paintbrush raster formats, trial and error are a normal part of the sizing process. First, try to determine what size the chart should be in the page layout program. Then use this estimate to fill in the Height and Width fields of Charting Gallery's Device Control screen when you create the file to use with your page layout program.

Measuring the size of the chart

1. In your page layout program, display the page on which you want to place the chart.
2. Display the layout rulers.
3. Read the rulers to determine the desired size for the chart.

If you bring your chart into a page layout program and it is not the right size, you can resize it by using the page layout program. However, if the chart contains any gray shades, it may not print as you expect it to. In this event, go back to Charting Gallery, specify the new size on the Device Control screen, and bring the resized chart back into the page layout program.

Creating the Chart File

With the encapsulated PostScript, TIFF, PC Paintbrush, and HPGL formats, you use the Device Control screen to create the file you use with your page layout program.

On the Device Control screen, choose a file type, change any options you want to change, and save the file in the selected format. For more information, see "Drawing to Files," in Chapter 10, *Printing and Plotting a Chart*.

If you are creating a TIFF or PC Paintbrush file, be sure to use the Height and Width options to size your chart, and use the Resolution option to match the resolution as closely as possible to the printer you're using.

To create a file in CGM format, you don't use Device Control. Instead, save your picture as a standard Gallery file, exit Drawing Gallery, and use the GAL2CGM utility to convert your picture file to CGM. See Appendix B.

Using Chart Files in PageMaker

Using Charting Gallery files in PageMaker is very simple. Once you create a file for your picture in the encapsulated PostScript, CGM, TIFF, or HPGL format, you are ready to use it with PageMaker. You may sometimes need to adjust the size of a TIFF chart before you get it just the way you want it.

To add a Gallery chart file to your PageMaker document, exit Charting Gallery, start PageMaker, and follow the standard procedure using **Place** on the File menu.

If you are using another page layout program, refer to the manual that came with it for specific information on using graphics files.

Using Charting Gallery with Lotus 1-2-3 or Symphony

You can get graphs from Lotus 1-2-3 or Symphony worksheets and create Charting Gallery charts with them. Once you have transferred a graph, you can work with it just as if you had created it with Charting Gallery.

By going to the Data screen, you can view and edit the data that you've transferred. When you're satisfied with the changes you've made, you can print, plot, or save the chart.

What Type of Graphs Can You Transfer?

You can transfer many graph types available in Lotus 1-2-3 and Symphony, including the following:

- Line
- Bar
- Stacked Bar
- Clustered Bar
- Pie
- XY

Charting Gallery converts each of these graph types to the chart type you select.

You can also transfer data from Lotus 1-2-3 or Symphony to Charting Gallery by storing the data as a .DIF file. We recommend, however, that you use the graph transfer process described here instead. When you transfer data to Charting Gallery by way of a .DIF file, you need to pay special attention to how you set up your worksheet before you create the .DIF file.

Transferring a Graph

Before beginning this procedure, read "Retrieving Chart Information," in Chapter 8, *Getting and Saving a Chart*.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. If the worksheet file resides on a data disc, insert the data disc into a disc drive.
3. Choose **Get**.
4. Choose **Worksheet Graph**.
5. From the side bar menu, select the worksheet file name that you want.

Worksheet files can have the following extensions:

- .WKS for Lotus 1-2-3 Version 1A
- .WK1 for Lotus 1-2-3 Release 2
- .WRK for Symphony 1.0
- .WR1 for Symphony 1.1

6. To display the indicated worksheet file, click the file name enclosed by the selection box, or choose **Enter**.

Charting Gallery gets the graph from the worksheet file. A message at the top of the screen tells you when the operation is finished.

7. Save your new chart, using the procedures described in "Storing Chart Information" and "Saving a Chart," in Chapter 8, *Getting and Saving a Chart*.

After you have transferred the graph, you can work with it just as if you created it in Charting Gallery.

Transferring Data from a Spreadsheet

If you use a spreadsheet program to analyze and evaluate data, you can transfer your data to Charting Gallery. Then you can use Charting Gallery to make high-quality charts that convey the results of your analysis.

When you transfer data from a spreadsheet, you store the data in an intermediate file called a .DIF file. The .DIF file is a standard file format used by programs like Executive Spreadsheet and VisiCalc to transfer data to other programs. Most popular spreadsheet programs can create .DIF files.

The complete transfer process has four stages:

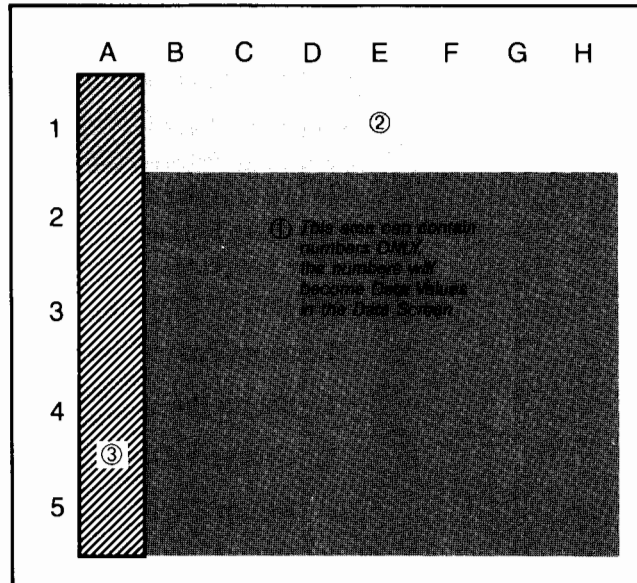
1. Set up the spreadsheet.
2. Create a .DIF file.
3. Set up Charting Gallery
4. Transfer the data.

Some spreadsheet programs, such as Multiplan, don't have the ability to save data in .DIF format. If the program you are using cannot save .DIF files, you can still transfer data to Charting Gallery by saving the data as a *print file*.

Setting Up the Spreadsheet

Before you can transfer data, you need to set up your spreadsheet so that Charting Gallery can interpret it correctly. In general, Charting Gallery attempts to match the rectangle of data in your spreadsheet to the layout of the Data screen. This allows you to include legend labels, X-axis labels, and pie segment labels along with your numeric data.

The illustration below shows what you must consider when you set up a spreadsheet for transfer to Charting Gallery.



- ② The first row may contain text.
IF IT DOES, the text items become Legend Labels.
- ③ The first column also may contain text.
IF IT DOES, the text becomes either X-Axis Labels
or Segment Labels.

Here are some guidelines you can follow:

- Text that is to appear as legend labels should be entered horizontally across the first row.

Each legend label must begin with a letter. Charting Gallery places the labels in the legend fields across the top of the Data screen.

- Information that is to appear as X-axis or pie segment labels should be entered vertically in the first column.

These labels can begin with either a letter or a number. Charting Gallery places the labels in the X-Axis Labels column or the Segment Labels column of the Data screen, depending on the chart type you're using.

- Limit the spreadsheet to 10 columns and 640 rows of numeric data.

If you exceed these limits, Charting Gallery won't be able to complete the data transfer. These limits do not include the first row if it is reserved for legend labels; or the first column if it is reserved for X-axis or pie segment labels.

Creating the DIF File

After you have created the spreadsheet, save the data in the spreadsheet as a .DIF file. Since procedures for creating a .DIF file vary from program to program, consult the manual that came with your spreadsheet program for specific instructions.

Setting Up Charting Gallery

If you are going to create any chart other than a pie chart, you need to check the setting of the X-Axis Labels column on the Data screen. This setting (textual, numeric, units of time) determines how Charting Gallery interprets the first column of information in your spreadsheet. If you're working with a pie chart, the Data screen uses a Segment Labels column.

1. Select the type of chart you want. For more information, refer to Chapter 3, *What Charts Can You Create?*.
2. Select the chart options you want. For more information, refer to Chapter 4, *Using the Chart Options*.
3. Choose **Data** from the main Charting Gallery functions.
4. Check the current setting of the X-Axis Labels column.

If you need to change the setting, refer to "Working with X-Axis Unit Labels," in Chapter 5, *Working with Chart Data*.

Transferring the Data

Now you are ready to transfer the data in the .DIF file to Charting Gallery. Here's the procedure:

1. Choose **Get and Save** from the main Charting Gallery functions.
2. If you are working on another chart and have not saved it, save the chart now.
3. Choose **Get**.
4. Choose **Data**.
5. Choose **Set File Search**.

To find the .DIF file you want, see "Searching for a File," in Chapter 8 *Getting and Saving a Chart*. Be sure to specify the correct disc drive and directory.

If you omit the .DIF extension, Charting Gallery assumes that you want to get a chart data file and automatically adds the extension .GPD after the file name.

If the .DIF file resides on a data disc, insert the data disc into a disc drive.

Charting Gallery receives the .DIF file. A message at the top of the screen tells you when the operation is finished.

Transferring Data from a Database

When you transfer data from a database, the data is stored as either a print file or a .DIF file. Print files store your data in a row/column format. The .DIF files follow a standard file format for transferring data between programs. Charting Gallery accepts either print files or .DIF files.

The transfer process has three stages:

1. Preparing the data.
2. Creating a print or .DIF file using the procedures described in your database application's manual.
3. Transferring the data.

Preparing the Data

As you prepare your data for transfer to Charting Gallery, observe these guidelines:

- Limit text data to the first column only.

The data you transfer can have one column, or field, of text data. If you include a text column, it must be the first column. Charting Gallery places this text data into the column reserved for X-axis or pie segment labels on the Data screen. This allows you to specify X-axis or pie segment labels before you transfer the data.



- Limit numeric data to ten columns.

The data you transfer can have up to ten columns (fields) of numeric data in addition to a single text column. Charting Gallery places numeric data into the range columns on the Data screen. Data in the first numeric column goes into range 1, data in the second numeric column goes into range 2, and so on, up to the data in the tenth column, which goes into range 10.

- Limit rows of data to 640.

The data you transfer should have no more than 640 rows (records) of data. If you exceed this limit, Charting Gallery ignores the additional rows.

What Data Types Can You Use?

The following table shows the data types you can use in the data fields when you transfer a database to Charting Gallery:

R:base:	dBASE:	Condor:
Text ---	Character ---	Alphanumeric Alphabetic
Integer Real	Numeric ---	Numeric ---
Dollars Date Time ---	--- --- --- Logical	Dollar Date --- ---

The data types associated with text or dates are allowed in the first field or table column only. Data types associated with numbers are allowed in any field or column. You cannot use special-purpose data types like Dollar, Dates, or Logical in the data fields.

Creating a Print or DIF File

After you have prepared the database, save the data as either a print file or a .DIF file. Since the procedure you follow varies from program to program, consult the manual that came with your database program.

Now you are ready to transfer the data from the print or .DIF file to Charting Gallery.

Follow the procedure given in "Transferring the Data," earlier in this chapter.

Transferring a Chart to Drawing Gallery

You can enhance your charts by transferring them to HP's Drawing Gallery, a presentation graphics application. Drawing Gallery lets you add logos or other artwork to your charts. Basically, you use Charting Gallery to enter the chart's data and descriptions, and Drawing Gallery to add other artwork to the chart.

Before you transfer a chart to Drawing Gallery, you save it in Charting Gallery as a picture file. Saving a chart as a Gallery picture file converts your chart to the .GAL format required by Drawing Gallery.

1. Choose **Get and Save** from the main Charting Gallery functions.
2. Save your chart as a picture according to the procedures provided in "Saving Chart Data, Pictures, and Descriptions Separately," in Chapter 8, *Getting and Saving a Chart*.

Charting Gallery creates the picture file. A message at the top of the screen tells you when the operation is finished.

3. Choose **Charting Main**.
4. Choose **Go to Drawing**.
5. Choose **File Keys**.
6. Choose **Get Keys**.
7. Choose **Get a Picture**.
8. Choose the .GAL file you want from the menu.

When the operation is finished, your chart appears on the Drawing Gallery drawing board.

When you use **Get a Picture** to bring a chart into Drawing Gallery, the chart fills the central part of the drawing board. If you would like the chart to fill a different area of the drawing board, use **Add a Picture** instead of **Get a Picture** to bring the chart into Drawing Gallery. **Add a Picture** allows you to specify exactly what part of the drawing board the chart fills.

If you want your chart to fill the entire drawing board, set the view indicator to full view before you use **Add a Picture**. This allows you to extend the area the chart fills to the entire drawing board.


Transferring a Chart to Executive MemoMaker

You can add charts to the memos and reports you write with Executive MemoMaker. Before you transfer a chart to Executive MemoMaker, save the chart as a picture. See "Saving Chart Data, Pictures, and Descriptions Separately," in Chapter 8, *Getting and Saving a Chart*.

This procedure does not apply to Release 1.0 of Executive MemoMaker for the Vectra. To bring picture files into Executive MemoMaker, you need Release A.02.00 or a later release.

Follow these steps to transfer a chart to Executive MemoMaker.

1. Follow the procedure in, "Transferring a Chart to Drawing Gallery," earlier in this chapter.
2. Start Executive MemoMaker.
3. Use **File Keys** to move to the place in the document where you want the chart to appear.
4. Move the cursor to the location in your document where you want the upper-left corner of the chart to appear.

5. From the MemoMaker main functions, choose **Picture Keys**.
6. Choose **Get Picture**.
7. Type the name of the picture file on the input line. Include the disc drive and directory path if they are different than those shown on the input line.
8. Press .

Executive MemoMaker gets the picture file. When the operation is finished, an outline of your chart appears in the document. The outline is your confirmation that the chart has been transferred.

Transferring a Chart to HP Word/PC

To transfer a chart to HP Word/PC, include the chart picture (.GAL file) in your document using the HP Word/PC Figure Space command. Refer to Chapter 9, *Adding Illustrations* in the *HP Word User's Manual*, for details.

Production Charting

You can create a chart – or several – without going through all of the interactive steps required in the chart-making procedure. The *production charting* process described in this chapter is especially useful when you need to produce a routine set of charts that have similar formats.

With the Command File Interface, you can create charts automatically, in a non-interactive process. Specifically, the Command File Interface lets you do these tasks automatically:

- Initialize a Charting Gallery session.
- Produce the desired charts.
- Batch print or plot the charts.

Creating a Command File

The first step in using the Command File Interface is to create a command file. A command file is simply a list of commands that tell Charting Gallery to perform certain tasks. The commands are listed in "The Command List," later in this chapter.

You need to determine what task you want to perform, then build a command file to do the job for you.

Follow these steps to create a command file.

1. Read through the commands in "The Command List." Pick the commands that perform each step in your task.
2. Create an ASCII file that will contain your commands.

You can create it using any word processor that can save ASCII files or by using the MS-DOS COPY CON command.

3. Write each command in sequence. Each command must be on its own line, terminated by a line feed.

Include the appropriate parameter with each command. You must enclose certain parameters in double quotes; these include file and directory names, chart names, graph names, and device names.

- If you want Charting Gallery to exit to DOS after the command file finishes running, end your command file with the EXIT_PROGRAM command.
- If you want to stay in Charting Gallery after the command file finishes running, do not include EXIT_PROGRAM.

Before you can create a command file that performs automatic chart production, you need to know:

- The initial state you want for Charting Gallery operation – specifically, the first screen you want to display.
- Where you want to get the chart data.
- The chart type and chart options you want to use.
- Whether you want to print, plot, or save the chart output in a file.

You can create as many command files as you like.

Running a Command File

To run a command file, type the following at the DOS prompt:

```
chartgal /c <command file name>
```

If your command file is not in the current directory, be sure to include its full path name.

When the command file starts running, the Charting Gallery screen appears. You see charts, side bars, and function labels just as you do in an interactive session. Status messages appear on the message line to inform you of the program's progress.

During command file processing, each command is echoed on the prompt line as it is executed. Error messages are written to a log file, such as a file named CHARTGAL.LOG. Then you can display the error messages from DOS by typing:

```
>type CHARTGAL.LOG
```

You can batch print or plot charts without using a command file. However, batch printing from DOS does not give you as much automated control over your printing as a command file does.

A Sample Command File

This an example of a simple command file. It creates a three-dimensional pie chart, alters the text of the chart, prints and saves the chart, then exits the program. It assumes the chart you're going to get is in the directory C:\GALLERY.

The & character is used as a continuation character to signify that more parameters are on the next line. Notice also that you must enclose directory and file names in double quotes.

```
LOGFILE "CHARTGAL.LOG"  
SET_DIRECTORY "C:\GALLERY"  
GET_CHART "CHART1"  
SET_CHART_TYPE PIE_CHART &  
PIE_3D_75_DEGREE BLACK_OUTLINE &  
UNSORT_SEGMENTS  
MAIN_TITLE_TEXT "Main1"  
SUB_TITLE_TEXT "Subtitle1"  
FOOTNOTE_TEXT "Footnote1"  
SELECT_DEVICE "PaintJet"  
LOCATION TOP_HALF  
ORIENTATION VERTICAL  
DRAW_TO_DEVICE  
SAVE_CHART "CHART2"  
EXIT_PROGRAM
```

Setting Up Your Charting Features

You can create an initialization file that automatically changes certain features to a desired status whenever you start Charting Gallery. The initialization file saves you from having to set these features every time you start Charting Gallery.

This file works just like a command file, except that Charting Gallery automatically invokes it *every time* you start Charting Gallery.

Creating the Initialization File

To create the initialization file, follow the steps outlined in "Creating a Command File," earlier in this chapter.

Include the commands that set Charting Gallery features to the status you want.

Name the file `CHARTGAL.INI`.

Running the Initialization File

Before you run your initialization file, be sure it is in your Gallery subdirectory.

Then type `chartgal` to start a normal session of Charting Gallery.

Charting Gallery automatically looks for a file named `CHARTGAL.INI`. If the file exists, Charting Gallery performs the commands in the file. Then, when you begin using Charting Gallery, the settings you specified will be in place.

You can also run a command file with your initialization file. First Charting Gallery runs `CHARTGAL.INI`. Then it runs your command file. If the command file changes a setting made in `CHARTGAL.INI`, the command file's setting will be in effect when both files finish running.

Do not use `EXIT_PROGRAM` in the initialization file. When the file finishes running, you should be in Charting Gallery, ready to start your interactive session.

Making Slide Show Presentations on Your Monitor

You need to use Drawing Gallery to make a slide show of your charts.

If you have access to Drawing Gallery, save your charts as Gallery picture files, then see "Making Slide Show Presentations on Your Monitor," in chapter 9 of the *Drawing Gallery User's Guide*.

The Command Sequence

There are approximately 27 Charting Gallery commands. These commands fall under the following categories. These categories have a specific process flow order outlined here that you must follow when entering them into the command file. For example, use GET_DESCRIPTION before GET_DATA, and use a Setting Features command before a Retrieving Files command.

On the pages following this list, you'll find complete descriptions of each command, arranged in alphabetical order.

Setting Features (Initialization)

- SET_DIRECTORY <"*path name*">
- ENTRY_POINT <*screen name*>
- INITIALIZE_CHART (no parameters)
- NO_SAMPLE_DATA (no parameters)

Retrieving Files

- GET_CHART <"*file name*">
- GET_WORKSHEET <"*file name*">
[<"*graph name*">]
- GET_DESCRIPTION <"*file name*">
- GET_DATA <"*file name*">
- GET_LAYOUT <"*file name*">

Setting Chart Type and Options

- SET_CHART_TYPE <*chart type*>
[<*chart option*>]
- RESCALE_X_AXIS (no parameters)
- RESCALE_Y_AXIS (no parameters)
- MAIN_TITLE_TEXT <"*text for main title*">
- SUB_TITLE_TEXT <"*text for subtitle*">
- FOOTNOTE_TEXT <"*text for footnote*">
- X_AXIS_TEXT <"*text for x-axis*">
- Y_AXIS_TEXT <"*text for y-axis*">

Drawing to Devices and Saving Files

- SELECT_DEVICE <"*device name*">
- LOCATION <*location name*>
- ORIENTATION <*orientation name*>
- DRAW_TO_DEVICE [NO_FORM_FEED]
- DRAW_TO_FILE <"*file name*">
- SAVE_PICTURE <"*file name*">
- SAVE_CHART <"*file name*">

Entering Comments

- * <*comment text*>

Logging Error Messages

- LOGFILE <"*log file name*">

Leaving Charting Gallery

- EXIT_PROGRAM (no parameters)

The Command List

Use the commands defined in this alphabetic list to create the command file that does the job you want. Refer to the information in the "The Command Sequence," earlier in this chapter to determine the correct order for the commands.

When writing your command file, use the full command name followed by the specified parameter, if any.

* <comment text>

To write text into the command file that the program disregards, but that you can see for your own information, use * <comment text>.

Begin in the first column with the an asterisk (*) then type your comment. If your comment extends to a second line, be sure to begin that line with an asterisk.

DRAW_TO_DEVICE [NO_FORM_FEED]

To draw a chart to the currently specified printer or plotter, as specified by the current Device Control settings, use DRAW_TO_DEVICE [NO_FORM_FEED].

You can use this command with the GET_CHART, GET_DESCRIPTION, GET_DATA, GET_LAYOUT, or GET_WORKSHEET commands to draw charts. You can select a drawing device with SELECT_DEVICE. You can change the location and orientation of your chart with the LOCATION and ORIENTATION commands.

The NO_FORM_FEED parameter tells your drawing device not to do a form feed after printing the chart. This parameter is useful for printing several charts on one page.

You do not have to include the NO_FORM_FEED parameter. If you do not, DRAW_TO_DEVICE uses its default setting – automatic sheet feed. An automatic sheet feeder is required to print multiple copies.

The other device-control options – margins, scaling, and so on – are set by the current Device Control menu.

DRAW_TO_FILE
<"file name">

To redirect the printing or plotting of a chart to the specified disc file name, as indicated by the current Device Control settings for device and output options, use DRAW_TO_FILE <"file name">. This command is particularly intended to be used following a SELECT_DEVICE "TIFF" or "PC Paintbrush." It may also be used with a SELECT_DEVICE of hardware devices to create files in HPGL or PCL file formats.

You can use this command with the GET_CHART, GET_DATA, GET_DESCRIPTION, GET_LAYOUT, or GET_WORKSHEET commands to draw charts.

ENTRY_POINT
<screen name>

To have Charting Gallery jump to a specified screen when you first start it up, use ENTRY_POINT <screen name>.

The screen name choices are:

- CHART_TYPES
- DATA
- EDIT_AND_DRAW
- GET_AND_SAVE
- LAYOUT

ENTRY_POINT is most appropriately used in the CHARTGAL.INI command file. Multiple instances of this command are not valid. ENTRY_POINT and EXIT_PROGRAM are mutually exclusive.

EXIT_PROGRAM
(no parameters)

To exit Charting Gallery after all the previous commands in the command file have been processed, use EXIT_PROGRAM.

Do not use this command in the CHARTGAL.INI file. EXIT_PROGRAM and ENTRY_POINT are mutually exclusive.

FOOTNOTE_TEXT
<"text for footnote">

To specify the footnote for your chart, use
FOOTNOTE_TEXT <"text for footnote">.

GET_CHART
<"file name">

To load the specified description and data file, use
GET_CHART <"file name">.

You must specify the file name, and include the directory if it is different from the Charting Gallery directory, yet *exclude* the file extension. Charting Gallery looks for files with the extension <file name>.GPH and <file name>.GPD.

GET_DATA
<"file name">

To load the specified data file, use GET_DATA <"file name">.

You must specify the file name and specify the directory if it is different from the Charting Gallery directory.

GET_DESCRIPTION
<"file name">

To retrieve the specified chart description file, use
GET_DESCRIPTION <"file name">.

You must specify the file name and specify the directory if it is different from the Charting Gallery directory.

The description file contains title and scaling information that overrides any current settings, including those set by previous commands within your command file.

Use the GET_DESCRIPTION command before using the following commands:

- GET_DATA
- MAIN_TITLE_TEXT
- SUB_TITLE_TEXT
- FOOTNOTE_TEXT
- RESCALE_X_AXIS
- RESCALE_Y_AXIS

GET_LAYOUT
<"file name">

To load the specified data file, use GET_LAYOUT <"file name">.

You must specify the file name and specify the directory if it is different from the Charting Gallery directory.

GET_WORKSHEET
<"file name">
[<"graph name">]

To load a graph from a Lotus 1-2-3 or Symphony worksheet file, use GET_WORKSHEET <"file name"> [<"graph name">].

Specify the entire worksheet file name, including the extension. If the worksheet file is not in your Charting Gallery subdirectory, you must either specify the entire path and file name or set the current subdirectory with SET_DIRECTORY.

If you don't specify a graph name with the command, Charting Gallery uses the current graph.

GET_WORKSHEET will not read .PIC files from Lotus 1-2-3 or Symphony.

INITIALIZE_CHART
(no parameters)

To initialize the Charting Gallery internal data structure, use INITIALIZE_CHART.

This command allows you to create a chart without first having to create a description in interactive mode. With this command, Charting Gallery automatically graphs all data, without minimum and maximum values for scaling, and without title, subtitle, Y-axis, X-axis, or footnote text.

LOCATION
<location name>

To select the location on the page where the current picture will print, use LOCATION <location name>.

Use this command before using DRAW_TO_DEVICE and after SELECT_DEVICE>. In the absence of a Location command the initial value for location is taken from the current setting of the Device Control menu.

The location name choices are:

- FULL_PAGE
- TOP_HALF
- BOTTOM_HALF
- LEFT_HALF
- RIGHT_HALF
- UPPER_LEFT
- UPPER_RIGHT
- LOWER_LEFT
- LOWER_RIGHT



LOGFILE
<"log file name">

To save in a log file any error messages and warnings generated by the command file, use LOGFILE <"log file name">.

If an error occurs while the command file is executing, the command file continues running. If you do not use LOGFILE, error messages and warnings are not saved.

You can save messages for a selected portion of a command file. Enter LOGFILE <"log file name"> at the point in the file where you want to begin saving messages. Enter LOGFILE, followed by no file name, to turn off the logging of messages.

The log file is closed at the end of any command file. A log file specified in CHARTGAL.INI cannot be used to record error messages for both the initialization file and a subsequent command file.

MAIN_TITLE_TEXT
<"text for main title">

To specify the main title for your chart, use MAIN_TITLE_TEXT <"text for main title">.

NO_SAMPLE_DATA
(no parameters)

To have Charting Gallery come up with no predefined information, use NO_SAMPLE_DATA.

ORIENTATION
< orientation name >

To specify whether Charting Gallery is to print the current chart horizontally or vertically on the page, use ORIENTATION <*orientation name*>.

The orientation name can be HORIZONTAL or VERTICAL.

Use this command before using DRAW_TO_DEVICE and after SELECT_DEVICE. In the absence of an Orientation command the initial value for orientation is taken from the current setting of the Device Control menu.

RESCALE_X_AXIS
(no parameters)

To automatically rescale the X-axis so that all of your data fits on the chart, use RESCALE_X_AXIS.

RESCALE_Y_AXIS
(no parameters)

To automatically rescale the Y-axis so that all of your data fits on the chart, use RESCALE_Y_AXIS.

SAVE_CHART
<"file name">

To save the current chart, use SAVE_CHART <*file name*>.

You must specify the directory if it is different from the Charting Gallery directory.

SAVE_PICTURE
<"file name">

To save the current chart or layout as a picture file (.GAL), use SAVE_PICTURE <*file name*>.

You can use this picture file in Drawing Gallery or in Executive MemoMaker documents. You can also use this command in conjunction with GET_WORKSHEET to transfer a Lotus graph into Charting Gallery and then out to Drawing Gallery or to Executive MemoMaker file format.

SELECT_DEVICE
<"device name">

To select the device to which you want the command file to print, use **SELECT_DEVICE <"device name">**.

Type the device name as it appears in the Device Name/Port field of the Device Control menu. Type the device name, but omit the port. The device will use the settings specified in its Device Control menu. If there are two or more devices installed of the same type (for example, two printers or two plotters) and of the same name, then the command file uses the first device in the list.

Use this command before using **LOCATION** and/or **ORIENTATION**.

SET_CHART_TYPE
<chart type>
[<chart option>]

To set the chart type for the current chart, use **SET_CHART_TYPE <chart type>** followed by [**<chart option>**]. You can use more than one chart option.

The eight chart type choices are:

- **AREA_CHART**
- **BAR_CHART**
- **BAR_LINE_CHART**
- **HLOC_CHART**
- **LINE_CHART**
- **PIE_CHART**
- **SCATTER_CHART**
- **X_Y_CHART**

To set the chart options for the current chart type, indicate the options of your choice after designating a chart type. The options available for each chart type are listed below, with the default options printed in boldface.

AREA

- **THICK_LINES**
- **THIN_LINES**
- **LINEAR_Y_SCALE**
- **Y_SCALE_100%**

BAR

- **THICK_LINES**
- **THIN_LINES**
- **VERTICAL_CLUST**
- **VER_CLUST_DUAL_Y**
- **HORIZONTAL_CLUST**
- **VERTICAL_STACK**
- **VERT_STACK_100%**
- **HORIZONTAL_STACK**
- **HORIZ_STACK_100%**
- **BARS_2D**
- **BARS_3D_SHALLOW**
- **BARS_3D_DEEP**
- **MATCH_OUTLINE**
- **BLACK_OUTLINE**

BAR/LINE

- **THICK_LINES**
- **THIN_LINES**
- **VERTICAL_CLUST**
- **VER_CLUST_DUAL_Y**
- **HORIZONTAL_CLUST**
- **VERTICAL_STACK**
- **HORIZONTAL_STACK**
- **BARS_2D**
- **BARS_3D_SHALLOW**
- **BARS_3D_DEEP**
- **MATCH_OUTLINE**
- **BLACK_OUTLINE**

HLOC

- **THICK_LINES**
- **THIN_LINES**
- **LINEAR_Y_SCALE**
- **DUAL_LIN_Y_SCALE**

LINE

- **THICK_LINES**
- **THIN_LINES**
- **LINEAR_X_SCALE**
- **LOG_X_SCALE**
- **LINEAR_Y_SCALE**
- **LOG_Y_SCALE**
- **DUAL_LIN_Y_SCALE**
- **LOG_LIN_Y_SCALE**
- **LIN_LOG_Y_SCALE**
- **DUAL_LOG_Y_SCALE**

PIE

- **PIE_2D**
- **PIE_3D_75_DEGREE**
- **PIE_3D_50_DEGREE**
- **SORTED_SEGMENTS**
- **UNSORT_SEGMENTS**
- **MATCH_OUTLINE**
- **BLACK_OUTLINE**

SCATTER

- **THICK_LINES**
- **THIN_LINES**
- **LINEAR_X_SCALE**
- **LOG_X_SCALE**
- **LINEAR_Y_SCALE**
- **LOG_Y_SCALE**
- **DUAL_LINEAR_Y_SCALE**
- **LOG_LIN_Y_SCALE**
- **LIN_LOG_Y_SCALE**
- **DUAL_LOG_Y_SCALE**

XY

- THICK_LINES
- THIN_LINES
- LINEAR_X_SCALE
- LOG_X_SCALE
- LINEAR_Y_SCALE
- LOG_Y_SCALE
- DUAL_LINEAR_Y_SCALE
- LOG_LIN_Y_SCALE
- LIN_LOG_Y_SCALE
- DUAL_LOG_Y_SCALE

SET_DIRECTORY <"path name">

To specify the default directory for the file name field when getting or saving files, use SET_DIRECTORY <"path name">.

This default directory information is *not* used by the DRAW_TO_FILE and LOGFILE commands. Commands that use file names and that are effected by SET_DIRECTORY are GET_CHART, GET_DATA, GET_DESCRIPTION, GET_LAYOUT, and GET_WORKSHEET.

SUB_TITLE_TEXT <"text for subtitle">

To specify the subtitle for your chart, use SUB_TITLE_TEXT <"text for subtitle">.

X_AXIS_TEXT <"text for x-axis">

To specify the X-axis for your chart, use X_AXIS_TEXT <"text for x-axis">.

Y_AXIS_TEXT <"text for y-axis">

To specify the Y-axis for your chart, use Y_AXIS_TEXT <"text for y-axis">.

A

Error Messages

Charting Gallery displays an error message if you make a mistake or request something inappropriate. This appendix lists all the messages in alphabetical order, explains the probable cause of each, and suggests a remedy.

Message: A part of Charting Gallery is missing. Reinstall and try again.



Cause: One of the installed files required for Charting Gallery has been deleted, damaged, or modified.

Remedy: Reinstall Charting Gallery from the master application disc. See the *Setting Up* booklet.

Message: Charting Gallery cannot create and open your file.

Cause: You requested Charting Gallery save a file or draw to a file that it can't open. The disc or directory you are saving to may be too full. You may have specified an invalid file name.

Remedy: There are several possible solutions:

- If there is not enough space to create the file on the present disc, exchange it for a blank, formatted data disc. You could use File Manager to delete some files from the present disc.
- If the directory to which you are saving is too full, use delete some files, or change the directory and press .
- If the file name to which you are saving is invalid, make sure you typed the name correctly. If necessary, change the file name and press .

Message: Charting Gallery cannot find the chart file you requested.

Cause: Charting Gallery cannot find the appropriate .GPH file.

Remedy: Use the side bar menu area to click on the chart file you want. Make sure you identified the correct disc drive and directory.

If all these remedies fail, it is likely that the file has been lost or erased.

Message: Charting Gallery cannot find the data file you requested.

Cause: Charting Gallery cannot find the appropriate data file. (This could be a .GPD file, a .DIF file, a .PRN file, or another ASCII file.)

Remedy: Use the side bar menu area to click on the data file you want. Make sure you identified the correct disc drive and directory.

If all these attempted remedies fail, it is likely that the file has been lost or erased.

Message: Charting Gallery cannot find the worksheet file you requested.

Cause: Charting Gallery cannot find the worksheet file you want.

Remedy: Use the side bar menu area to click on the worksheet file you want. Make sure you identified the correct disc drive and directory. Check your other working discs to see if it's on one of them.

Message: Charting Gallery cannot get your file.

Cause: Charting Gallery is unable to retrieve the file you specified. (This is a status message; it usually accompanies another message telling more specifically what went wrong.)

Remedy: Use the side bar menu area to click on the chart file you want. Make sure you identified the correct disc drive and directory. Check your other working discs to see if it's on one of them.

Message: Charting Gallery cannot read the <chart> <data> <worksheet> file you requested.

Cause: You are attempting to get a chart, data or worksheet file, but for some reason the file cannot be read. It may be a non-ASCII file, or it may be damaged, incomplete, or improperly saved.

Remedy: If the file is from another application, check the manual for that application to be sure you have saved the file correctly. See Chapter 11, *Using Charting Gallery with Other Applications*.

Use the side bar menu area to click on the file you want. Make sure you identified the correct disc drive and directory. If the file has been damaged or is incomplete, you may need to recreate it or copy it from your backup disc.

Message: Charting Gallery cannot recognize your printer/plotter.

Cause: An essential file has been damaged or installed improperly. Charting Gallery cannot communicate with the printer/plotter.

Remedy: Reinstall your printer or plotter. See the *Setting Up Drawing Gallery and Charting Gallery* booklet.

Message: Charting Gallery cannot use this file name as specified.

Cause: The highlighted file name is not specified properly; there is a syntax error in the name.

Remedy: Check to see that:

- The file name you have specified contains no more than 12 characters: an 8-character name, plus a "dot" and 3-letter extension, if any. For example, the name MYFILE86.CSZ contains exactly 12 characters.
- The file name you have specified does not contain any of these special characters:

" ; , = + /] [< > | ? *

Message: Charting Gallery did not save your file.


Cause: Charting Gallery was not able to save the file you specified. (This is a status message and usually accompanies another message telling more specifically what went wrong.)

Remedy: Check the syntax of the file name you used. Remember, the entire name (including a "dot" and 3-letter extension) cannot exceed 12 characters. Also make sure you have not used any of these special characters:

" ; , + = /] [< > | ? *

Message: Communication error with printer/plotter; press Enter and try again.

Cause: For some reason, communication between your computer and your printer or plotter was interrupted or became garbled.

Remedy: This is an unusual situation. Press , reset your printer or plotter, and try again to print your chart.

Message: Currently there are no line annotations.

Cause: You are probably trying to erase lines or boxes that are not there.

Remedy: Choose **Add Line** or **Add Box** to add an annotation, or select **Done** to redraw your screen and display the other Edit and Draw functions.

Message: Currently there are no textual annotations.

Cause: You are probably trying to edit or erase text annotations that are not there.

Remedy: Choose **Add Text** to add an annotation, or choose **Done** to redraw your chart and display the other Edit and Draw functions.

Message: Cursor must be positioned on an active data row.

Cause: You attempted to Show or Hide a label without positioning the cursor on a data row, or the cursor is positioned on a data row outside the subset.

Remedy: Move the cursor to the desired row, and try the operation again.


Message: Delete the blank row(s) on a following <previous> page.

Cause: There is at least one blank row on a following page of the Data screen. This means Charting Gallery cannot create a chart.

Remedy: Use **Pg Dn** or **Pg Up** to move to any pages containing blank rows. Delete each blank row by clicking the row you want to delete, then choosing **Delete Row**.

Message: Disc error: Insert the XXXX Charts disc and press Enter to continue.

Cause: The chart application disc named in the message (represented by xxx) is not properly inserted in a disc drive. You may have inadvertently removed the disc out from the drive.

Remedy: When you press  you will leave Charting Gallery. Reinsert the application disc specified in the message and start the application again.

Remember, you should not remove application discs while Charting Gallery is running. (You can switch data discs while the program is active.)


Message: Disc error: Unformatted disc; the unusable disc is in drive \.

Cause: The disc is damaged or has not been properly formatted.

Remedy: Format the disc according to the instructions that came with your personal computer. If the disc is damaged, replace it with an undamaged, formatted disc.

Message: Disc error: Unprotect the disc and press Enter to continue.

Cause: The disc you're using is write-protected.

Remedy: Remove the disc from the drive it's in. Then remove the write protection from the disc, reinsert the disc in the drive, and press .

Message: Disc error: Write protected disc; the unusable disc is in drive \\. .

Cause: You tried to write to a write-protected disc.

Remedy: Take the disc out of the drive and remove the write protection. Then reinsert the disc and try again.

Message: Disc error: Your data disc is not in the drive or is damaged.

Cause: You have told Charting Gallery to look for data on a disc that is not in the drive or is damaged.

Remedy: Check to see that your data disc is properly inserted in the selected drive. If you used the wrong drive ID, retype the path name. If the disc is damaged, try another data disc.

Message: Drawing Options for features <text> you can edit <view> are turned off.

Cause: You (or someone else) chose **Drawing Options** from the Edit and Draw functions labels, then turned "off" the Draw Titles, Draw Axes, or Draw Legends options.

None of these items has a selection box drawn around it in the side bar. You cannot use these features on your chart.

Remedy: Choose **Drawing Options** from the Edit and Draw functions, then click the items you want to turn on.

Message: Device (printer/plotter/other) does not respond; check connections and power.

Cause: Your printer/plotter will not work with Gallery.

Remedy: Check to be sure the device is properly plugged in, turned on and the paper is loaded. Mistakes in paper loading can cause paper jams.

Perhaps the printer/plotter was not configured properly. Check to see that:

- The switches, including the address switch, are set properly. See the manual that came with your printer/plotter.
- Your printer/plotter was installed correctly when you installed Charting Gallery. See the *Setting Up Drawing Gallery and Charting Gallery* booklet.
- Your printer/plotter is configured for Charting Gallery. See Chapter 10, *Printing and Plotting a Chart*, for instructions on using the Device Control screen.

If your printer/plotter still does not work, contact your dealer or HP service representative.

Message: File Manager is not available; memory shortage.

Cause: Charting Gallery is unable to bring up File Manager for you. This is because of a shortage of available memory.

Remedy: The remedy depends on the computer you have:

- If you have dual flexible disc drives (no hard disc), the GOLD disc *must* be inserted into drive B before you can gain access to File Manager.
- If your system has a shortage of available memory, it may be because the current chart is very large and complex. To make room in memory for File Manager, simply save the current chart (or erase it from the Data screen). Then try again to get to File Manager. (You may want to consider buying and installing an additional memory board.)

Message: Installed video board is not the same as that specified in the configuration.

Cause: Either there was an error in the original configuration, or you have switched video boards without reconfiguring.

Remedy: Exit immediately and reinstall Charting Gallery. For instructions, see the *Setting Up Drawing Gallery and Charting Gallery* booklet. Also be sure the video board you have is supported by HP.

Message: Insufficient computer memory for printer/plotter support software.

Cause: There is not enough available memory for the program to hold the chart you want to print/plot and the information necessary for the printer/plotter.

Remedy: There are two possible solutions:

- Buy and install an additional memory board.
- If the chart is *very* large and complex, reduce the number of data rows and columns it contains by erasing the data. You may have to do this on a trial-and-error basis until the chart is small enough to fit in the computer memory along with the printer/plotter software.

Message: Insufficient computer memory to print the chart at current resolution.

Cause: There is not enough memory available for the program to hold both the chart you want to print and the information necessary for your printer.

Remedy: Go to the Device Control screen and select a lower setting for resolution on your printer. If the **Resolution** setting is already as low as it can be, you will not be able to print the chart as is. You can try reducing the size of the chart by erasing some data, or you can buy and install an additional memory board.

Message: Missing or invalid date labels on another page.

Cause: You used the Data screen in Dates mode and attempted to exit the Data screen with at least one invalid date label.

Remedy Check the dates you entered to insure they are all valid dates and correctly entered.

Message: Missing or invalid numeric labels on another page.

Cause: You have attempted to exit the Data screen, and Charting Gallery won't let you do it. There are two possible causes:

You have chosen **Numeric** X-axis labels on the Data screen but have entered text for an X-axis label.

You have chosen **Numeric** X-axis labels on the Data screen but one or more of your X-axis labels is blank.

Remedy: Correct any contradictory labels. If you really don't require numeric labels, choose **Textual** X-axis labels to solve the problem.

Message: Missing Y values are not allowed in Area charts. Changed to a Line chart.

Cause: While using the Get and Save screen, you may have tried to bring in data that contains missing Y values.

Remedy: Charting Gallery has changed the chart type to Line. If you want to create an area chart, make sure there are no missing Y values in the data you want to use.


Message: Missing Y values are not allowed in Area charts. Fill in the missing values.

Cause: While using the Get and Save screen, you may have tried to bring in data with missing Y values.

Remedy: Fill in the missing Y values, or change to another chart type.

Message: Negative values are changed to positive values for pie charts. Press Enter to continue.

Cause: You are using data that contains a negative value. Charting Gallery automatically changes any negative values to positive ones in creating the pie chart.

Remedy: This message is to inform you that your data has been modified. Press  to continue working with Charting Gallery.

Message: Negative numbers are not allowed in Area charts. Change the negative numbers.

Cause: You've tried to create an area chart with data that contains negative numbers.

Remedy: Eliminate the negative numbers, or change to another chart type.

Message: Negative numbers are not allowed in Area charts. Changed to a Line chart.

Cause: You've tried to create an area chart with data that contains negative numbers.

Remedy: Charting Gallery has changed the chart type to Line. If you want an area chart, you need to eliminate the negative numbers.

Message: No named graphs found in worksheet file.

Cause: Charting Gallery is unable to find the *named* graph you requested.

Remedy: Choose a graph file from the list of available graph files listed in the side bar menu area. Check the disc and directory to be sure its the path you want.

Message: No printer/plotter has been selected. See the "Setting Up" guide.

Cause: During the installation of Charting Gallery you did not identify a printer or plotter.

Remedy: Follow the instructions for identifying printers or plotters to work with your computer in the *Setting Up Drawing Gallery and Charting Gallery* booklet. When you return to Charting Gallery, remember to set up your printer/plotter on the Device Control screen, too.

Message: No video adapter/monitor has been selected. See "Setting Up" guide.

Cause: During the installation of Charting Gallery, you did not identify a video adapter and monitor.

Remedy: Follow the instructions in the *Setting Up Drawing Gallery and Charting Gallery* guide for identifying a video adapter and monitor for your computer.


Message: Not enough room on the disc to save your file.

Cause: Charting Gallery could not save your file because the disc you specified is too full.

Remedy: Save the file on another data disc. If that's not possible, delete some files from the present disc to make more room; then try saving the file again.

Message: Only 640 data rows will fit into Charting Gallery. Press Enter to continue.

Cause: You have transferred a named graph from Lotus with more than 640 rows of data in it.

Remedy: This message is simply a warning. Any data rows in excess of 640 have been truncated from the file. Press  to continue working with Charting Gallery.

Message: Selected paper size is not supported on this plotter. Change paper size setting.

Cause: You selected a paper size setting or left the default setting in place on the Device Control screen.

Now that you are attempting to use your printer or plotter, the system has identified a discrepancy. The Paper Size specified is *not* appropriate for your printer or plotter.

Remedy: Go to the Device Control screen and select an appropriate Paper Size setting. See the manual that came with your printer or plotter for help.

Message: Some of the numbers on bars overlap or will not fit in the chart area.

Cause: Numbers won't fit above the bars.

Remedy: Turn the numbers off.


Message: The maximum number of graphs (32) have been read. Select Enter to continue.

Cause: You are transferring a worksheet file from Lotus containing named graphs.

Remedy: This message is simply a warning. If a worksheet file contains more than 32 named graphs, only the first 32 will be transferred to Charting Gallery.

Message: The maximum number of pie segments (16) will be displayed.
Press Enter to continue.

Cause: Charting Gallery allows a maximum of 16 segments (data points) to be displayed in a pie chart. The file you are using contains more than 16 data points.

Remedy: Some of your data points (any in excess of 16) will not be included in the pie chart. Press  to continue working with Charting Gallery.

If you want to see the points that have been omitted, use **Subset Data** to specify other segments for display.

Message: The directory name returned from File Manager is too long.

Cause: While in File Manager, you identified a long file name to be returned to Charting Gallery. There is a limit of 65 characters for a file name on Charting Gallery's Get and Save screen.

Remedy: There are two suggested remedies:

- Use File Manager to move the file in question to the *current* directory. This will shorten the path.
- Rename the file with a shorter name so that the complete file/path name contains fewer than 65 characters.

Message: The resulting size is too large; you must perform a move before retrying.

Cause: You're trying to use Match Size to make an object in a layout larger, but there is not enough room for the selected object to grow without going over the boundaries of the work area.

Remedy: Move the object toward the center of the available work area. Then try Match Size again.

Message: There is an error in Charting Gallery. Report error in plotter setup.

Cause: There is an error in Charting Gallery that you cannot fix.

Remedy: Record all details about the chart you are working on, including specific data values if possible, and report the error to your dealer or HP service representative.

Message: There is an error in Charting Gallery. Report error number #.

Cause: Charting Gallery has an error that you cannot fix.

Remedy: Record all details about the chart you are working on, including specific data values if possible, and what you were doing when the error occurred. Please contact your dealer or HP service representative and report the error.

Message: This file exists. Save it again or rename your file.

Cause: A file already exists with the same file name as the one you are attempting to save.

Remedy: If you want to replace the present file with the version you just made, simply choose the appropriate "save" function again. If you do *not* want to overwrite the existing file, give the file you are saving a different name.

Message: This needs to be a date of the form M-D-Y.

Cause: You attempted to enter a date that was not in an acceptable month, day, year format.

Remedy: Charting Gallery automatically moves the cursor to the correct area. Retype the date using the MM-DD-YY, or MM/DD/YY format.

Message: This needs to be a number.

Cause: Charting Gallery is expecting a numeric entry here. You may have chosen **Numeric** X-axis labels on the Data screen but typed a non-numeric X-axis label; you may have typed a non-numeric entry in a data range; or you may have responded to a prompt with something other than a number.

Remedy: The cursor will be located at the area in question. If there is a text label, replace it with a number. If the problem is that the area is *blank*, simply type a number.

If you want to delete the row containing the entry in question, click on the row you want to delete, then choose **Delete Row**.

If you actually *want* a text label, choose **Textual** X-axis labels on the Data screen.

Message: This needs to be a positive, whole number.

Cause: The number required cannot be negative or a fraction.

Remedy: Change the number you have entered to a positive whole number.

Message: This number must be less than 1E+30.

Cause: You have typed a positive number (at the cursor location) that is too large for Charting Gallery to use.

Remedy: Type a smaller number. For information on data values, see Chapter 5, *Working with Chart Data*.


Message: This number must be less than -1E+30.

Cause: You have typed a negative number at the cursor location that is too large for Charting Gallery to use.

Remedy: Type a smaller number. For information on data values, see Chapter 5, *Working with Chart Data*.


Message: This number must be greater than 1E-30, or it must be 0.

Cause: You have typed a positive number at the cursor location that is too small for Charting Gallery to use.

Remedy: Type a larger number, or type zero, and press .

Message: This number must be greater than -1E-30, or it must be 0.

Cause: You have typed a negative number at the cursor location that is too small for Charting Gallery to use.

Remedy: Type a larger number, or type zero, and press .

Message: This chart is too complex for VideoShow; overlays have been created.

Cause: Your chart was too complex to be a single VideoShow picture. It was split into two or more pictures that VideoShow can overlay on top of one another to complete the picture.

Remedy: When you present your slides, the file name of the *last* overlay appears in the Table of Contents. Display this slide, then keep clicking to recreate your picture. Or use PictureIt! to combine the slides. See the PictureIt! manual.

Message: This range is already set to (High | Low | Open | Close | Line-Left | Line-Right)

Cause: You are trying to set a column to a specification which is already set.

Remedy: Check to see if you are working on the column you want, or if the column has the settings you want.

Message: This range is currently plotted on the Left Axis.

Cause: The range is already set to the axis you are choosing.

Remedy: Choose a different axis if appropriate.

Message: This range is currently plotted on the Right Axis.

Cause: The range is already set to the axis you are choosing.

Remedy: Choose a different axis if appropriate.

Message: Type in a label or remove the blank line.

Cause: You have specified that you want numeric labels by choosing **Numeric** X-axis labels on the Data screen. When you do this, you *must* define labels for *all* X-axis entries.

Remedy: Type an X-axis label on the blank line. If you'd prefer to delete the line entirely, choose **Edit Data**, click on row you want to delete, then choose **Delete Row**.

Message: Unable to change to Area chart because data contains missing Y values.

Cause: You are trying to create an area chart with data containing missing Y values.

Remedy: Fill in the missing Y values, or change to a different chart type.



- Message:** Unable to change to Area chart because data contains negative Y values.
- Cause:** You are trying to create an area chart with data containing negative Y values.
- Remedy:** Eliminate the negative values, or change to another chart type.
- Message:** You have entered the maximum number of line annotations.
- Cause:** Charting Gallery cannot add more than 30 line annotations to your chart.
- Remedy:** To make room for more annotations, delete some of the existing ones.
- Message:** You have entered the maximum number of textual annotations.
- Cause:** Charting Gallery cannot add more than ten textual annotations to your chart.
- Remedy:** If you want to add more annotations, delete some of the existing ones.
- Message:** You must have at least two active columns for HLOC charts.
- Cause:** You attempted to select a high low open close chart from the Chart Types menu and you have fewer than two data columns active on the Data screen.
- Remedy:** Display the Data screen and make at least two columns active. Then display the Chart Types menu and try selecting the high low open close chart type again

Converting Gallery Files to CGM and CGM Files to Gallery

Charting Gallery comes with two file-conversion utilities. GAL2CGM converts your Gallery picture files into Computer Graphics Metafile (CGM) files. CGM2GAL converts CGM picture files into Gallery files.

CGM, the ANSI (American National Standards Institute) standard, is becoming a common format for storing picture information. Many graphics programs understand the CGM standard—they can retrieve and display CGM files.

When you convert your Gallery picture files to CGM, you make them available to other graphics programs such as Lotus Freelance Plus, Harvard Graphics, and Ashton-Tate Draw Applause.

When you convert CGM files into Gallery files, you give Charting Gallery access to pictures created in other graphics programs. (First you must save these picture files from the other programs in CGM format.)


The utilities use the standard encoding of the CGM standard. GAL2CGM exports (and CGM2GAL imports) a binary-encoded, 16-bit, integer version 1 CGM.

Running the File-Conversion Utilities

Start the utilities from DOS.

1. Be sure you are in the directory that holds the GAL2CGM or CGM2GAL program.

If possible, put GAL2CGM in the directory that holds your Gallery picture files. Put CGM2GAL in the directory that holds your CGM picture files.

2. At the DOS prompt, type GAL2CGM *<options>* OR CGM2GAL *<options>* and press .

The options are described on the following pages.

After you start GAL2CGM, the screen prompts you for the name of the .GAL file you are converting and the CGM file you are creating (if you did not include them in the command line).

After you start CGM2GAL, the screen prompts you for the name of the CGM file you are converting and the .GAL file you are creating (if you did not include them in the command line).

Screen messages show each step in the conversion. You can abort the conversion by typing [Ctrl]-C.

Caution



Some graphics programs do not support every feature in CGM—particularly those features which they don't support in their own programs. Therefore, a Gallery file converted to CGM and imported into another program may not look exactly as it did in Charting Gallery. Also, because CGM is not supported identically by all graphics programs, CGM pictures converted to Charting Gallery may look slightly different than in the original program.

Utility Command Options

You can include the following options on the GAL2CGM command line:

```
GAL2CGM [/a] [/f] [/r] [/s] [/?] <input file name> <output file name>
```

You can include the following options on the CGM2GAL command line:

```
CGM2GAL [/e] [/f] [/?] <input file name> <output file name>
```

You may concatenate the letter options.

You may use a dash (-) instead of a forward slash (/) with the letter options.

Here is a sample GAL2CGM command line:

```
GAL2CGM /rs MYPIC.GAL NEWPIC.CGM
```

Here is a sample CGM2GAL command line:

```
CGM2GAL /e MYPIC.CGM NEWPIC.GAL
```

The options are described on the following pages.

While the /a option is available, you don't need to use it if you've created your Gallery picture files from Charting Gallery.

/e CGM2GAL only.

The /e option disables error checking of the CGM file.

CGM2GAL imports a standard binary-encoded, 16-bit integer CGM file. If CGM2GAL detects a non-standard format parameter, it reports the error and exits the program.

If you use the /e option, CGM2GAL will display an error message and continue to process the CGM file when it encounters a file parameter error. Fatal DOS errors will still cause CGM2GAL to halt.

/f GAL2CGM and CGM2GAL.

Text fonts in CGM and Gallery files are indicated by index values. Each index number identifies a font. However, the CGM fonts are numbered in a continuous integer range. Gallery font indexes are not continuous.

In GAL2CGM, the /f option disables the remapping of Gallery text font indexes to a continuous integer range.

If you do *not* include the /f option, GAL2CGM remaps Gallery text font indexes into a continuous integer range—the CGM standard. The /f option lets you keep the Gallery index values.

In CGM2GAL, the /f option disables the remapping of CGM text font indexes from a continuous integer range.

If you do *not* include the /f option, CGM2GAL remaps CGM text font indexes from a continuous integer range into Charting Gallery's range. The /f option lets you keep the CGM index values.

/r GAL2CGM only.

The **/r** option remaps Gallery coordinate data to CGM default values.

If you do not use the **/r** option, GAL2CGM leaves the Gallery coordinate data unchanged. GAL2CGM also specifies the VDC (virtual device coordinates) of the Gallery picture.

However, some graphics programs ignore the passed VDC values and use CGM defaults. Because of this, part of a converted Gallery file may be clipped outside the viewing screen, squeezed against screen boundaries, or not be visible at all.

The **/r** option remaps the Gallery coordinates into a range corresponding to the default VDC in CGM. The aspect ratio is preserved unless you also use the **/s** option.

/s GAL2CGM only.

The **/s** option stretches the aspect ratio of the picture.

Stretching scales the horizontal and vertical axes independently to fill the default VDC space in CGM.

Use the **/s** option only if you are also using the **/r** option.

/? The **/?** option displays a help screen summarizing the functions, options, and use of the utility.

Input and Output File Names

Enter the input file name first, the output file name second. If you enter only one file name, the utility assumes it is the input file.

If you don't enter a file name on the command line, the utility prompts you for the name after you start the program.

< input file name >

Enter the name of the file you want to convert. For GAL2CGM, the input file must be a Gallery picture file. For CGM2GAL, the input file must be a CGM file. If the file is not in your current directory, include the full path name.

You don't have to include an extension with the input file name. GAL2CGM will assume the extension is .GAL. CGM2GAL will assume the extension is .CGM. Be sure to include the extension if it is *not* the default.

< output file name >

Enter the name of the file you want to create. GAL2CGM will create a CGM file. CGM2GAL will create a Gallery file. If you want the output file to reside in a directory different than the current directory, include the full path name.

You do not have to include an extension with the output file name. GAL2CGM will add an extension of .CGM. CGM2GAL will add an extension of .GAL.

C

Charting Gallery Version Information

This appendix describes:

- the version history of Charting Gallery.
- the new features of Charting Gallery 3.0.
- file compatibility details between different versions of Charting Gallery.

Gallery Chronology

Here is a quick chronology of the Graphics Gallery products.

Date	Product	Version Notes
May 1985	Drawing Gallery A.01.01 Charting Gallery B.01.00	Touchscreen only - both products introduced for the Touchscreen
Sept. 1985	Drawing Gallery A.02.01 Charting Gallery B.02.00	Touchscreen only - copy protection removed and minor mouse bug fixed
July 1986	Drawing Gallery A.01.00 Charting Gallery A.01.00	Vectra only - introduction of both products on Vectra - more features than on Touchscreen version
October 1986	Charting Gallery A.01.01	Vectra only - localization bug fix
July 1987	Drawing Gallery B.03.00 Charting Gallery B.03.00	Vectra/Touchscreen - both products enhanced (new chart types, rotate and text handling) - same feature set on Vectra and Touchscreen

New Charting Gallery Features

For those familiar with previous versions of Charting Gallery, the following list indicates features new to Gallery 3.0.

Chart Types

- Consolidated chart types
- Added high low open close chart
- Added three-dimensional options for bar and pie charts
- Added log scaling
- Added 100% scaling

Data

- Date labels
- Label selection for text

Attributes/Enhancements

- Added Layout functions
- Enhanced Get and Save features
- Direct exit to Drawing Gallery

Printing/Plotting

- Color palette support on output
- Gray scale modes

Supported Output Devices

Refer to the *Supported Configurations Sheet* for a complete list.

Miscellaneous Improvements

- Mouse interface required

File Compatibilities

- Complete backwards file compatibility maintained.
- Charts created in the new version of Charting Gallery can be edited in the previous version, but any new features will be lost.

D

Using Your Keyboard

This appendix shows you how to do the following to perform Charting Gallery tasks:

- Use the direction keys on the Data screen.
- Use the direction keys on the charting work area in connection with the Edit and Draw functions.
- Use the direction keys on the charting work area in connection with the Get and Save functions.
- Use the direction keys on the charting work area in connection with the Layout functions.
- Use the direction keys on the charting work area in connection with the Annotation functions.

Using the Direction Keys

A set of direction keys appear in the numeric keypad on the right side of your keyboard. Use these keys to move the cursor around on the screen. In addition, you'll find a second set of direction keys just to the left of the numeric keypad. These direction keys have the same effect as the first set of direction keys.

In Charting Gallery, you can use the direction keys *only when both num lock and scroll lock are off* and when the screen you are using does not require a mouse to move the cursor.

You can tell whether num lock and scroll lock are on or off by looking at the function labels at the bottom of the screen. If num lock is on, you'll see **NL** between the second and third function labels. If scroll lock is on, you'll see **SL** between the sixth and seventh function labels. To turn them off, press the **Num lock** and the **ScrLck** keys.

The HP Vectra and IBM AT keyboards have lights that indicate when num lock and scroll lock are on. You'll find these just above the numeric keypad.

The following tables show you how to use the keyboard with each screen to move the cursor and pointer.

Table D-1. Data Screen







Press	Action
Tab	Moves the cursor forward to the next column.
Shift + Tab	Moves the cursor back to the previous column.
	Moves the cursor to the next row of the current column.
Shift + 	Moves the cursor up to the previous row of the current column.
	Moves the cursor left.
	Moves the cursor right.
	Moves the cursor up.
	Moves the cursor down.
Home	Moves the cursor to the first field on the screen.
End	Moves the cursor to the last field on the screen.
Pg Up	Displays the previous 16 rows.
Pg Dn	Displays the next 16 rows.

Table D-2. Edit and Draw Functions







Press	Action
	Moves the cursor forward through fields.
 + 	Moves the cursor backward through fields.
	Moves the text from the input line to the chart.
	Moves the cursor left.
	Moves the cursor right.

Table D-3. Layout Screen


















Press	Action
	Moves the cursor left.
	Moves the cursor right.
	Moves the cursor forward through fields.
 + 	Moves the cursor backward through fields.

Table D-4. Annotation Functions

Press	Action
	Moves box through annotations.
	Accepts annotation.
	Moves the pointer left.
	Moves the pointer right.
	Moves the pointer up.
	Moves the pointer down.
	Moves the pointer up <i>and</i> left.
	Moves the pointer up <i>and</i> right.
	Moves the pointer down <i>and</i> left.
	Moves the pointer down <i>and</i> right.
	Turns on fast pointer movement.
	Turns on slow pointer movement.

Glossary for Charting Gallery

Annotation	A line, box, or text label you add to a chart to draw attention to important information.
Area chart	A chart that represents data as total volume or quantity. The total volume of the chart is the sum of the parts.
Bar chart	A chart that represents data values as individual bars or clusters of bars that compare information.
Bar/Line chart	A chart that represents data values as a combination of individual bars and lines, or clusters of bars and lines that show progress towards a goal.
Chart data file	The file that stores the chart information entered on the Data screen. It is identified by the .GPD file extension.
Chart description file	The file that stores the design of your chart. It is identified by the the .GPH file extension and includes the chart type, chart options, draw options, titles, fonts, colors and so on.

Chart Types	The eight basic charts you combine with chart options to create a chart that depicts the data you want to show. The eight types are: area, bar, bar/line, high low open close, line, pie, scatter, and xy.
Chart options	The chart information that controls your chart's appearance. With chart options you control: clustering, dimensions, line thickness, numbering, scaling, segments, stacking, outline color.
Charting Gallery Application disc	The flexible disc that contains the information necessary to run Charting Gallery from a flexible disc drive.
Charting Main screen	The Charting Gallery screen that includes the function labels, side bar menu area, and charting work area, as well as the input line, prompt line, and file name.
Charting work area	The area of the screen where you build your chart or layout.

Clustering	The chart option that allows you to group bars together to make comparisons between data sets easier to see.
Column	The area on the Data screen where you enter chart information. The column usually has the heading Range, but if you're creating a high low open close chart, the headings can be High, Low, Close, Open, or Line-Left and Line-Right.
Command file	A file that contains a sequence of commands used to cause Charting Gallery to create, modify, or print charts automatically.
Data screen	The screen where you enter the information you want your chart to represent.
Device Control screen	The screen where you identify the device that is to print you chart, or the print file where you want to store the ready-to-print chart information for future use by another program.

Dimension	The chart option that allows you to control the appearance of the depth of your pie chart, bar chart, or bar/line chart. You can use two-dimensional charts, or three-dimensional charts without affecting your data's meaning.
Dual Y-axis chart	Any chart (except a pie chart) that has a two Y-axes. When the first Y-axis is on the left or the bottom (such as in a vertical bar chart), the second Y-axis is on the right or on the top. You can tie the scaling of a chart's data to both Y-axes, or tie one data set to one axis only.
Edit and Draw functions	The functions you use to work with chart titles, text, colors, textures, and patterns, as well as to draw the chart to a printer, plotter, or file.
Function labels	The softkey labels that appear at the bottom of your screen and enable you to perform all the Charting tasks.
Gallery picture file	The file that contains the picture image of your chart or layout. This file is identified by the .GAL extension and can be used in Drawing Gallery or converted to another format.

Get and Save functions	The functions you use to retrieve and store the charts, pictures, and graph worksheet files.
Grid	The lines you draw on the Chart to help distinguish units of measurement within the chart.
High Low Open Close chart	A chart that is especially useful for showing stock market trends as it represents the fluctuation of data within a given time period. .
Input line	The area on the upper left of the Charting Main screen where you type information such as disc drives, directories, and file names.
Layout functions	The functions that allow you to place and print multiple charts, pictures, and worksheet graphs on a single page.

Layout file	The file that contains the layout information. It is identified by the .LYT file extension.
Layout screen	The screen where you add multiple charts, pictures, and worksheet graphs to the layout work area. This screen also includes a side bar menu area, and layout function labels.
Legend	A legend is the field at the top of the Charting work area that depicts the data sets represented on the chart.
Line chart	A chart that uses lines to depict the trends of the charted information.
Line thickness	A chart option you use to control the size of the lines drawn on your chart.
Linear scaling	A chart option you can use to create a chart with equal distance between each tick mark along the Y-axis.

Log scaling	A chart option you can use to create a chart that shows relative change when there is a large difference between baseline quantities.
Markers	Symbols that show the location of each data point on a line or scatter chart.
PAM	The <i>Personal Applications Manager</i> used with Hewlett - Packard Vectra Personal Computers. You do not need PAM to run Charting Gallery.
Pie chart	A chart that shows the relationship of parts to a whole.
Prompt line	The area on the Main Charting screen that displays messages and instructions from Charting Gallery.
Range	The column heading used on the Data screen for all chart types, except high low open close chart types, showing you where to enter your data set information.

Regression line	A line you can add to a scatter chart to help show the relationship between two variables.
Scaling	The chart options that control how the distance between the minimum and maximum Y-axis values will be represented.
Scatter chart	A chart that emphasizes data points and shows general trends with makers placed at specific points on the chart.
Segment	An area of a pie chart that represents a data value.
Selection box	The box that you can move around in the side bar menu area, on the legends, or on the charting work area to show which items you have selected.
Side bar	The area to the left of Charting work area or layout work area that lists items you can choose from to complete your task.

Stacking	The chart option that enables you to put one data set on top of another in a bar chart.
Utility disc	The flexible disc that contains the configuration information Charting Gallery needs to work with the output devices.
Vectra	A Hewlett - Packard manufactured, IBM-compatible, personal computer. You do not need a Vectra to run Charting Gallery.
XY chart	A chart that shows a trend or shows how two variables relate to each other when the order of the data is important.

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Printed in U.S.A. 11/88
5958-9663

