



**THE GRAPHICS
STUDIO™**

ACCOLADE™

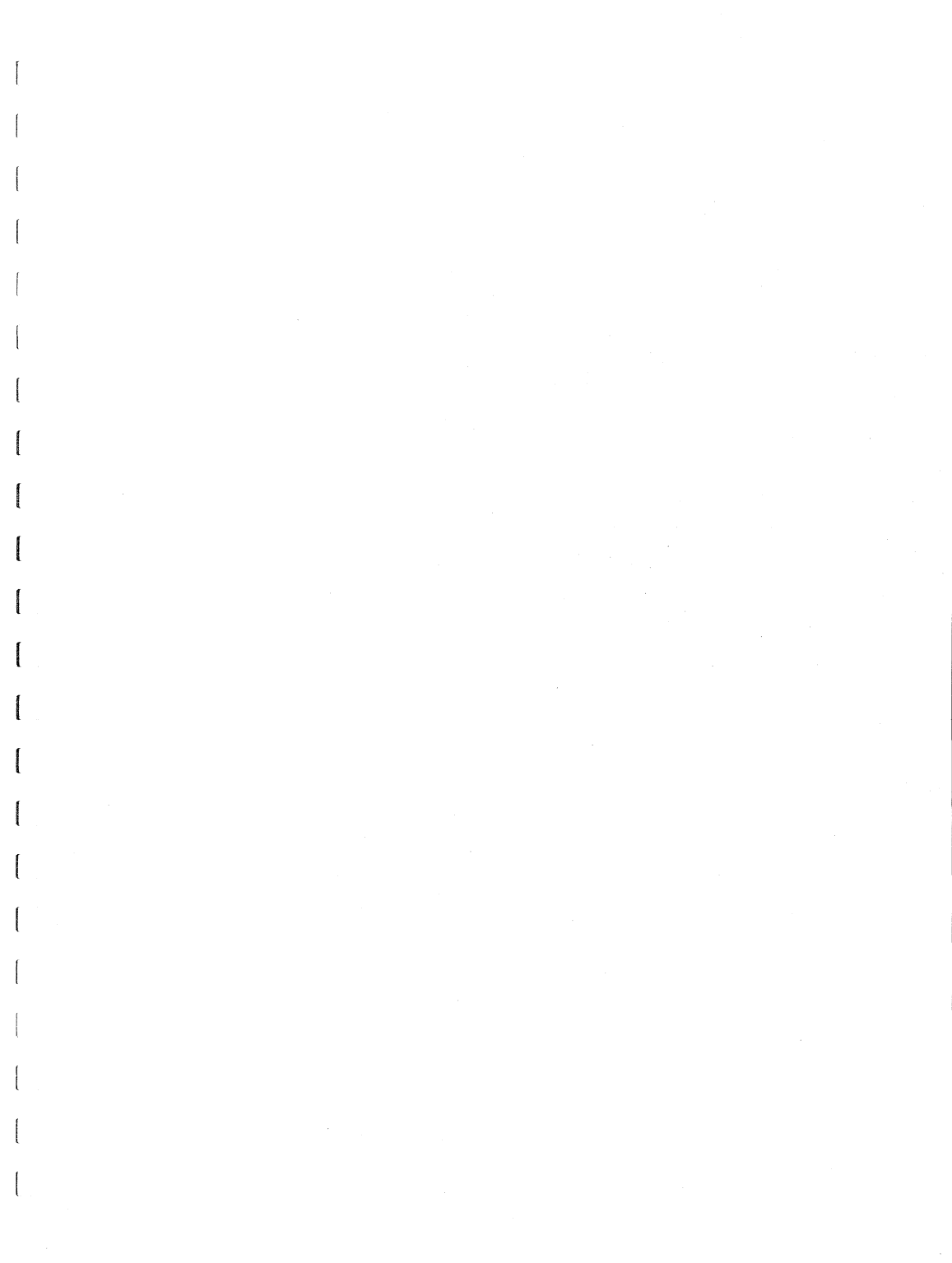
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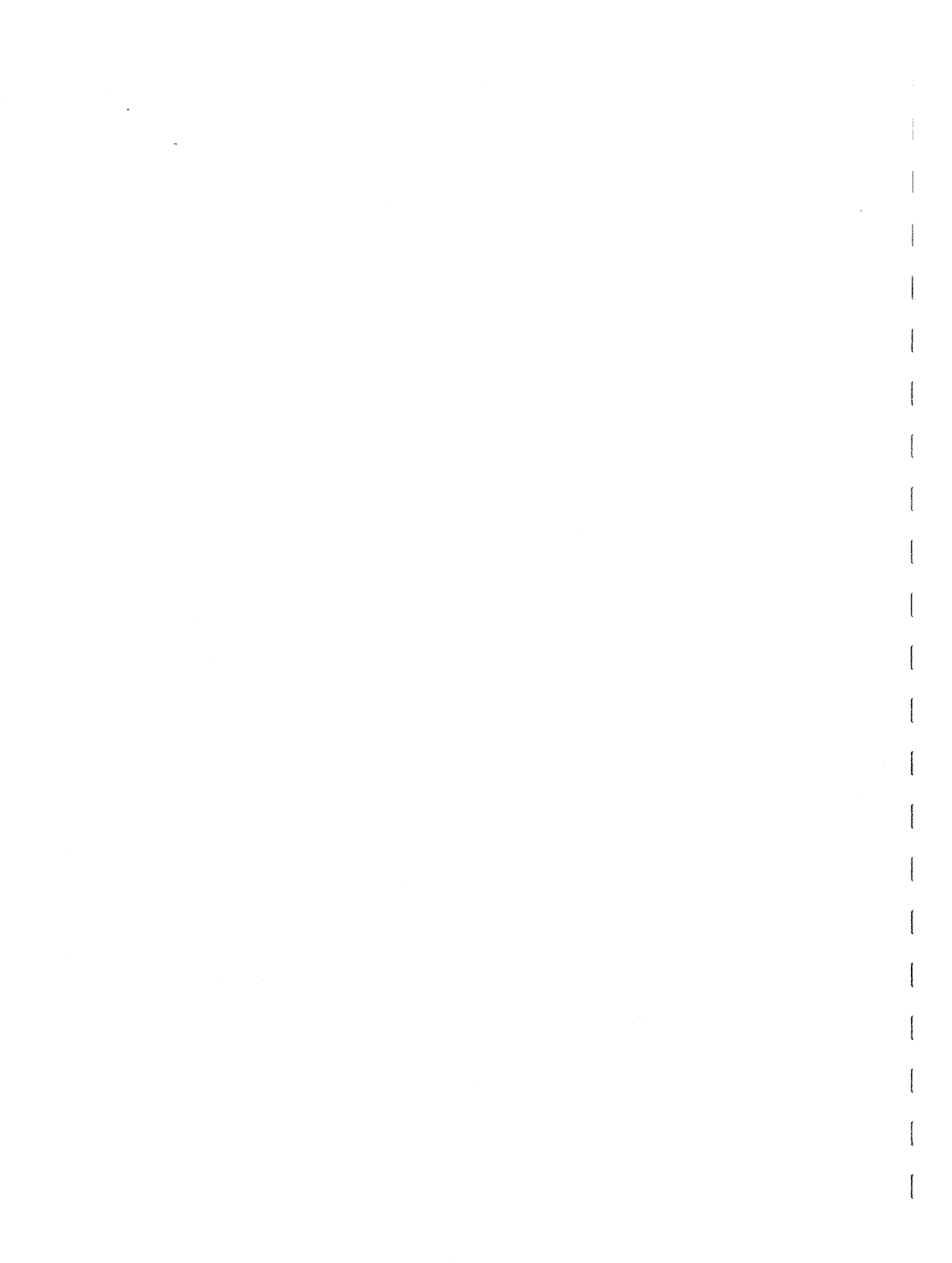


Table of Contents

| | | |
|---|-----------|-----|
| Introduction | | i |
| Chapter One: A Quick Overview | | .1 |
| System Requirements | | .1 |
| Booting Up | | .1 |
| Status Line/Menu Bar | | .3 |
| The Palette | | .3 |
| Erasing Your Work | | .4 |
| The Drawing Tools | | .5 |
| Free-Hand Tools | | .6 |
| Line-Draw Tools | | .7 |
| Box Tools | | .9 |
| Circle and Oval Tools | | .12 |
| Selecting Brushes | | .13 |
| Line Thickness | | .14 |
| Brush Shape | | .14 |
| Shading Density | | .15 |
| Fills | | .15 |
| Full Page Versus Clip Screen | | .17 |
| Picture Scrolling | | .18 |
| The XY Coordinates | | .18 |
| The Repeat Feature | | .18 |
| Chapter Two: Using The Graphics Studio | | .21 |
| The Mode Menu | | .21 |
| Drawing Tools | | .21 |
| Fills | | .25 |
| Zoom | | .25 |
| Drawing on the Grid | | .26 |
| The Copy Tools | | .28 |
| Copy Area | | .28 |
| Last Copy | | .30 |
| Capture Pattern | | .30 |
| Change Color in Area | | .30 |
| Rotate Area | | .31 |
| Scale Area | | .32 |
| Flip | | .33 |

| | |
|---|------------|
| Working With Patterns | .33 |
| Capture Pattern | .33 |
| Edit Pattern | .34 |
| Text Tools | .36 |
| Positioning Text | .36 |
| Text Modes | .37 |
| Selecting A Font | .38 |
| The Text Brush Shape | .38 |
| Opening A Picture | .38 |
| Saving A Picture | .39 |
| Save As | .39 |
| Save | .40 |
| Revert | .41 |
| Printing A Picture | .41 |
| | |
| Chapter Three: Advanced Features | .43 |
| Editing the Color Palette | .43 |
| Selecting a Color to Edit | .43 |
| Editing a Color | .44 |
| Copying Colors | .45 |
| Swapping Colors | .45 |
| Blending Colors | .45 |
| Other Commands | .46 |
| Restore Last Palette | .46 |
| Use One Palette | .46 |
| Color Cycling | .46 |
| Switching Resolutions | .48 |
| | |
| Appendix 1: For The Beginner | .49 |
| | |
| Appendix 2: Slideshows | .51 |





INTRODUCTION

Let's see,... you have your triangle and your ruler, your compass and protractor, a #2 lead pencil and a ruling pen for the real straight lines. You have a variety of paintbrushes - #0 for fine lines and #15 for the fat ones. Then, there's the rub-on letters, and the India Ink for that real black black. Of course, you need tubes of paint in every color of the rainbow, a duplication machine and plenty of paper. Now, hold it right there!! Pick all that up and put it away because you've got all that, plus a whole lot more, packed into The Graphics Studio. And just to make things really interesting, a couple of eye-dazzling tricks are thrown in at no extra charge. With The Graphics Studio, you're equipped to take on any challenge.

The Graphics Studio is more than a paint program, more than a graphics editor. It is designed to be an extension of the creative process. We realize that each user will come to the Graphics Studio with a different level of expertise and have designed The Graphics Studio to support and enhance that knowledge. From a simple doodle to a complex image, The Graphics Studio performs with ease.

The Graphics Studio lets you take any part of a picture and shrink it, expand it, rotate and flip it. Place it anywhere you want and add an automatic drop shadow with the touch of button. Zoom in for detail work, or instantly create a blended range of color, and cycle through them to create the feel of animation. Once you're finished, save it to disk, so you'll have it forever or print it out in blazing color. The Graphics Studio performs all of these functions and more with equal ease. To learn how to do it yourself, simply read on...

THE PHILOSOPHY OF THE GRAPHICS STUDIO

The Graphics Studio can turn a computer into a visual playground where experimentation is the order of the day, anything goes, and everyone is a winner. The tools are built-in, and technique is reduced to pressing buttons and selecting icons. This uninhibiting environment, provides the user with the ideal opportunity to express his ideas, to draw. This is the motivating force behind *The Graphic Studio's* design. While the program provides a dazzling array of tools, the smooth user interface is perhaps its most powerful feature. With it, complex operations are reduced to a simple point, click, and draw.

THE TOOLS

In most cases, the tools and features are represented by simple icons, which are grouped according to a common application or purpose. For example, all the Drawing Tools are located in the upper right-hand side of the Upper Menu. The majority of the editing tools, such as Copy, Xcolor, Scale, Flip and Rotate, are located to the left. Features that affect the size, shape, and color of the drawing tools are grouped together in the Lower Menu. Within the space occupied by these menus, there are over 60 drawing tools. Add in the additional features, and there are more than 100 drawing options to choose from, all of which are conveniently located within easy access of the Drawing Area. This doesn't seem possible considering how little information is present on the menu when it first appears. This is because a pop-out icon interface hides them out of sight until they are needed. Imagine how awkward the selection process would be if all the icons were placed end-to-end. It would greatly reduce the size of the working screen and place an unnecessary burden on the user when trying to find the correct tool to use.

THE SCREEN

Even though the tools do not take up a lot of room, you may still want to remove the menus and work on the entire screen. *The Graphics Studio* lets you do this quickly and easily, giving you a larger view of the picture, while maintaining the ability to use the same drawing options that were active when the menu was present.

If you prefer, a full page picture can be viewed quickly using the vertical scroll feature. Because you always see the full width of your picture, there is no need to move horizontally. This makes locating a particular area of the page a lot easier. Add to this an additional screen-sized clipboard, and you've got plenty of room to work with. Note: All the tools work on both the screens.

As mentioned, with *The Graphics Studio*, the full width of the screen is always visible. This makes it easier to visualize how the parts of a picture are arranged, and eliminates the jumping around required by other paint programs just to check an items' location.

THE MENUS

The menus in *The Graphics Studio* are unique. In the Mode menu, many of the items can be toggled on and off. When you select on of these items, the menu remains down. This alternative approach to pull-down menus allows you to turn a number of items on and off without having to pull the menu down again.

The Graphics Studio is simple to use and easy to master. It starts out with the obvious and ends up providing the power to create complex designs. It even has a few secrets

hidden just below the surface ready to use, if you're willing to scratch. Good luck and by all means enjoy yourself.

MANUAL ORGANIZATION

This manual is organized into three chapters, a few quick appendixes and an index. The first chapter, "A Quick Overview", lays out the system requirements and tells you how to load the program. In addition, it gives a brief introduction to the elementary tools and features of *The Graphics Studio*. If you are new to graphics programs and computers, you'll want to start here.

The second chapter, "Using the Graphics Studio", covers basic features such as rotation, copy, text, loading, saving, and printing. This is a good place to start if you are already familiar with graphics programs.

The third chapter, "Advanced Features", covers the more complex items such as color cycling, blending colors, etc. Once you are familiar with how *The Graphics Studios* basic features work, you'll want to look here to learn how to make the most of your investment.

The Appendixes cover everything from running the Slideshow, to tips on making the best use of the Graphics Studio.

CHAPTER ONE: **A QUICK OVERVIEW**

*This chapter lays out the system requirements and tells you how to load the program. In addition, it gives an introduction to the elementary tools and features of **The Graphics Studio**, such as selecting colors from the palette, using brushes and line tools, erasing and saving your work. If you're new to computer graphics, use the exercises here to learn the basics.*

SYSTEM REQUIREMENTS

*The **Graphics Studio** requires an Apple IIGS with 768K or more, a monitor, one disk drive, a mouse and a few initialized (formatted) blank disks to save your work on. A printer, second disk drive or hard drive are additional options.*

BOOTING UP

*The **Graphics Studio** uses a "key-disk" system that allows you to make back-up copies of your **Graphics Studio** program disk, so you do not have to worry about wearing out the original disk. Make a copy of the disk now, before you begin using **The Graphics Studio**. Refer to your Apple IIGS documentation for instructions on copying a disk.*

One Drive Systems: Insert your copy of **The Graphics Studio** disk in the disk drive and turn on your computer. A message will appear asking you to insert your original program disk. At this time, eject your copy and insert the **Graphics Studio** program disk. After the program loads and the disk drive stops spinning, eject the program disk and place it back in storage. Reinsert your copy in the disk drive.

A QUICK OVERVIEW

Two Drive Systems: Insert your copy of *The Graphics Studio* disk in Drive 1 and the original program disk into Drive 2. Turn on your computer. After the program has loaded (be sure the drive has stopped spinning), you can eject the original disk from Drive 2 and put it away.

Booting *The Graphics Studio* with your copy reduces the chance of damage to the original program disk. If you prefer, however, you can boot *The Graphics Studio* with the original disk and replace it with your copy once the program is loaded.

Hard Drive: To run *The Graphics Studio* from your hard drive, first copy all the files, except PRO-DOS and the System Folder, from the *Graphics Studio* disk onto your hard drive. When you start the program from the hard drive you will be prompted to insert your original program disk. At this time, insert the *Graphics Studio* program disk into Drive 1. After the program loads and the drive has stopped spinning, eject the program disk and put it away.

When *The Graphics Studio* has finished loading, the screen will appear as it does in Figure 1. The large area in the center of the screen is the "Drawing Area". This is where you will do your creating. The top line on the screen is the Status Line/Menu Bar. Its functions are explained below. The row of tools below the Status Line/Menu Bar are in the Upper Menu. The tools at the bottom of the screen are in the Lower Menu. The Menus and the Status Line/Menu Bar may be removed from (and returned to) the screen by holding down the Command key while clicking the mouse button, or by pressing the Command key and "D" simultaneously.

A QUICK OVERVIEW

STATUS LINE/MENU BAR

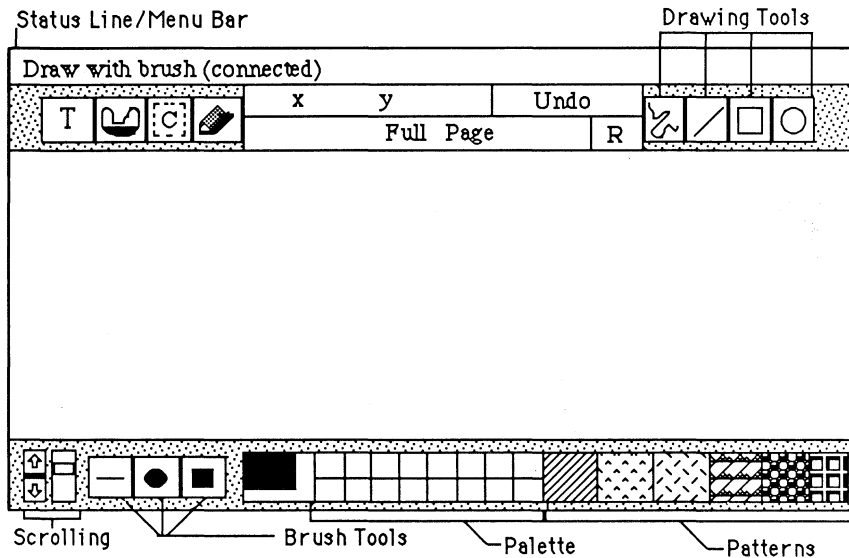
This area of the screen supports two functions depending on the location of the mouse. When the cursor is in the drawing area, the Status Line is visible. The Status Line tells you which tool is currently active (For example, when you first boot-up you are in "Draw with brush (connected)" mode.). At all other times, the Menu Bar is visible. If you do not wish to use the Status Line function, you may turn it off by pulling down on "Options" and selecting "No Status Line".

THE PALETTE

The palette in the Lower Menu is composed of 16 default colors which have been selected from an available range of 4,096. Later on, you will learn how to change these colors. At the far left of the palette is the Color Status Box. The inner color (currently black) is the foreground color. This is the color that you would be using if you were to start painting. Select a new color to work with by positioning the mouse over the desired color in the palette and clicking on it. That color now appears in the foreground area of the Color Status Box. In addition to the colors in the palette, you may use any of the patterns as a foreground color. Go ahead and paint with a few different colors. First, select your color and position the cursor on the Drawing Area. Then, hold down the mouse button while you move the mouse. It's that simple.

The outer color (currently white) in the Color Status Box is the background color. To change this color, click on the background area of the Color Status Box. Then, click on the desired color in the palette. The selected color now appears in the background area of the Color Status Box.

A QUICK OVERVIEW



ERASING YOUR WORK

By now, you may be wondering how to erase. There are three ways. The first is to click on the word "Undo" in the Upper Menu. Undo basically "undoes" your last action. To see how it works, draw a line, then click on Undo. The line disappears. Click on Undo again and it reappears (You have undone your undo.).

To learn the second way of erasing, click on the eraser to the left of Undo. The eraser is now highlighted indicating

A QUICK OVERVIEW

that it is the currently selected tool. Move the arrow cursor down to the portion of the picture you wish to erase. Press down on the mouse button and while continuing to hold it down, move the mouse down and to the right. You will see a box forming on-screen, This is your eraser. When the eraser is the size you want it to be, release the button. You now have an eraser that you can move around on the screen. Whenever you press the mouse button, anything within the boundary of the eraser disappears and is replaced by the currently selected background color. If you hold down the mouse button while you move the mouse, you can clear the screen in big wipes.

The third way of erasing, erases the entire screen at once. To erase the screen, go back to the Eraser icon and hold the mouse button down. Another icon, a trashcan, appears below the eraser. Move the cursor down to the trashcan and release the mouse button. The screen will now be erased using the solid background color currently displayed in the background section of the Color Status Box. If you erase the entire screen and then change your mind, just click on Undo. After you have used the trashcan, you may notice a slight delay the first time you start to draw again. This is because the Undo area is being cleared.

THE DRAWING TOOLS

The Graphics Studio includes a number of different built-in drawing tools. The drawing tools are located in the four "pop-out" menus to the right of Undo. The first menu contains the tools for free-hand drawing; the second contains the tools for "line drawing". Next to the Line-Draw menu is the Box toolbox. The final menu contains the Circle/Oval tools.

A QUICK OVERVIEW

Free-Hand Tools

When using the Free-Hand tools, you can adjust the Line Thickness, Brush Shape and Shading Density (airbrush). These features are explained later in this chapter.



Connected Pixel Brush

Click on the squiggled line in the Free-Hand Draw menu. You are now ready to start drawing, just as you did before. The Connected Pixel Brush draws a solid line. No matter how quickly you draw, the line will not have gaps. While using the Connected Pixel Brush you can change the color or pattern (as you have already learned to do).



Unconnected Pixel Brush

The Unconnected Pixel Brush works just like the Connected Pixel Brush, except that the lines it draws may have gaps between the points in the line depending on how fast you move the mouse. This tool is especially useful with larger brushes, because it allows you draw faster while still achieving the same effect. Access the Unconnected Pixel Brush by placing the cursor on the Free-Hand Draw Menu, and depressing the mouse button. Hold the button down for a moment. Notice that the top box always displays your current menu choice. The three boxes below display all of your possible choices. As you move the cursor through the icons, the Status Line changes to tell you what each tool does. Now, move the cursor down to the dotted squiggly line and release the button. You can now draw with the

A QUICK OVERVIEW

Unconnected Pixel Brush (Note that the Status Line has changed to reflect your currently selected tool.). Try drawing a few lines to see the difference between it and the Connected Pixel Brush.

The third function in the Free-Hand Draw menu is the Zoom. It is explained in Chapter Two.

Line-Draw Tools

When using the Line-Draw tools, you can adjust the Line Thickness. Brush Shape and Shading Density (airbrush) have no effect on these tools.



Straight Line Tool

This tool lets you draw straight lines with a simple click and drag of the mouse. First, select the Straight Line tool by clicking on it and move the cursor to the point at which you would like to start your line. Now, press the mouse button down. While continuing to hold the button down, move the cursor away from the starting point to the point where you want the line to end. Release the mouse button. A line now appears on-screen and the cursor is free to continue drawing.



Connected Lines

Use the Connected Line tool to draw connected lines in which the end point of the first line becomes the starting point for the second line. Pull down on Line-Draw menu and select the Connected Line tool. Position the cursor at the starting point of the new line and click (press and

A QUICK OVERVIEW

release) the button. This sets the starting point of the line. Now, move the cursor to the location of the lines' end point (this is also the beginning point of your next line) and click again. Move to the end point of the next line and click once more. A second line appears. Continue drawing connected lines in this manner.

By holding down the mouse button while using the Connected Line tool, you can draw free-hand. When you release the mouse button, you can resume drawing in Connected Line mode. This feature allows you to create polygons that are composed of both curves and straight lines without having to change tools.

To reset the Connected Line Tool, press ESC. You can now start a new set of connected lines. You will see that the ESC key works with all the tools and is a very useful feature.



Radiating Lines

The Radiating Lines tool lets you create lines that radiate out from a central point like the spokes on a wheel. Select the Radiate Lines tool from the Line-Draw menu. Click the mouse button at the point on the screen that you want the lines to radiate from (the central point). Now, move the mouse to the point at which you want the line to end and click again. Continue to select new end points for your lines. The start point will always be the central point.

Note: A variety of interesting effects can be created by holding mouse button down while moving the cursor around the central point. Experiment by moving the mouse at different speeds and distances. Press ESC when you want to select a new central point.

A QUICK OVERVIEW



Constrained Lines

The Constrained Lines tool works just like the Straight Line tool, except that it only allows straight horizontal and vertical lines to be drawn. Select the Constrained Lines tool from the Line-Draw menu and experiment with it to see how it works.

Box Tools

Line Thickness may be adjusted with all the Box tools. Brush Shape and Shading Density have no effect on Box tools.



Outline Box

The first selection in the Box menu is the Outline Box tool. It is used to make square and rectangular shaped frames. It works in basically the same way as the Eraser tool. Select the Outline Box tool and press the button down at the location of one corner of your box. Now, while still holding the mouse button down, drag the mouse down and to the right. When the on-screen box is the correct size, release the mouse button. Experiment with different box sizes by anchoring the start point and moving the cursor around the screen. Remember that you can use patterns as well as the solid foreground colors.

A QUICK OVERVIEW



Filled Box

The Filled Box tool operates in exactly the same way as the Outline Box tool, except that when you release the mouse button, the box that appears is filled with the selected foreground color or pattern.



Concentric Boxes

The Concentric Box tool draws a series of boxes with the same center point and can be used in two different ways. The first method works almost like the Outline Box Tool. Press the button down and drag the mouse to form a box. Now, release the mouse button. You can still adjust the size of the box. When the box is the correct size, click the mouse button and the box appears on-screen. Move the mouse again, and another box outline appears. Its' central point is the same as that of the first box.

The second method of building concentric boxes allows you to first set the central point around which you will build the boxes. This is useful when you are doing precision work. Place the cursor at the point that will be the center of the box and click once. Now, as you move the mouse around, you see a box that builds around that central point. Click again to make the box appear on-screen. Reset the tool by pressing ESC.

A QUICK OVERVIEW



Outline Rounded Box

This tool works in exactly the same fashion as the Outline Box tool, except that the corners of the box will be rounded instead of square. Try making some boxes of different sizes to see how this works. You can set the degree of "roundness" for your corners. This feature is explained later in the manual.



Filled Rounded Box

The Filled Rounded Box tool works like the Filled Box tool, except that the corners of your filled box are rounded instead of square. The "roundness" of these corners may also be adjusted.



Concentric Rounded Boxes

This tool works like the Concentric Square tool, except that the corners of your box will be rounded, instead of square. As with the other "rounded" tools, the corners are adjustable.



Grid Box

This tool lets you draw "gridded" boxes. Select the Grid Box tool and make a box just as you would with any of the other Box tools. The spacing of the grid lines is adjustable. This feature is explained in Chapter Two.

A QUICK OVERVIEW

Circle and Oval Tools

Line Thickness may be adjusted with all the Circle and Oval tools. Brush Shape and Shading Density have no effect on Circle and Oval tools.



Outline Circle

The Outline Circle tool creates circles. To use this tool, select it from the Circle Tool menu. Place the cursor at the point that will be the center of the circle. Press the mouse button down and while holding it down, move the mouse away from the center point. When the circle is the desired size, release the mouse button.



Filled Circle

The Filled Circle tool works in exactly the same way as the Outline Circle tool, except that the finished circles will be filled with the currently selected foreground color or pattern.



Concentric Circle

The Concentric Circle tool works in the same way as the Concentric Square tool. You may simply draw your first circle around which all additional circles will be concentric, or you may point and click to set the exact center. All the circles created will have the same center point.

A QUICK OVERVIEW



Outline Oval

The Outline Oval tool works like the Outline Circle tool. The size and shape of the oval depend on the direction the cursor moves once the center point is fixed. Move the cursor vertically, and the oval is tall and narrow; move it horizontally and the oval is short and wide.



Filled Oval

This tool works like the Filled Circle tool, except that it makes oval-shaped objects.



Concentric Oval

Use this tool in the same manner as the Concentric Square and Concentric Circle tools to construct concentric ovals.

SELECTING BRUSHES

There are three factors affecting the brushes you draw with: line thickness, brush shape, and shading density. There is a different pop-out menu to control each of these factors. These three menus are located just to the left of the Color Status Box in the Lower Menu.

A QUICK OVERVIEW



Line Thickness

The line thickness may be set at five different points. To select a line thickness, move the cursor to the Line Thickness menu and hold the mouse button down. The different selections will pop up. Move the cursor up to the line thickness you want to draw with, and release the mouse button. Note how the Line Thickness menu has changed to reflect your choice. To draw with this new thickness, click on the Connected Line tool or one of the other drawing tools, and draw a few squiggles, lines, squares, etc. Remember that Line Thickness can adjust ALL the drawing tools.



Brush Shape

The menu directly to the right of the Line Thickness menu controls the shape of the brush. There are eight different brush shapes to choose from. The first six are fairly straight-forward and can be understood best through experimentation (Note: Diagonal lines work best for showing brush shape). Remember that Brush Shape only affects the Free-Hand tools.

The pencil brush draws a line that is one pixel in size. This is even narrower than the thinnest line thickness. Therefore, when this tool is selected, the Line Thickness menu has no effect. Use this brush shape for detail work.

A QUICK OVERVIEW

The Text brush shape (T), lets you use any letter, number, or string of text as a brush. The techniques for using this tool are explained in Chapter Two under Text.



Shading Density

The Shading Density menu lets you change the number of foreground pixels in relation to the background. It's like painting with an airbrush. Remember that Shading Density only affects the Free-Hand tools.

Currently, the Shading Density menu (located to the right of the Brush Shape menu) shows a solid black square. Before using the Shading Density tool, go back to the Line Thickness menu, and select a thick line. Also, be sure you are using one of the first six brush shapes. Now, activate the Shading Density menu. You will see five squares of varying degrees of blackness. Select the middle one of the five, then move the cursor to the painting area and click the mouse button once. A fine spray of color appears. Note that if you keep the mouse button down without moving to a new location, the paint continues to build up in one spot. Play with the different pixel densities and watch how they affect the airbrush. This feature works best with the Unconnected Pixel Brush.

Fills

The Graphics Studio provides you with the four types of fills detailed below.

A QUICK OVERVIEW



Flood Fill

The Flood Fill fills an entire enclosed area with a single color or a pattern. Select the Flood Fill tool and a color or pattern to fill with. Position the cursor inside the area to be filled and press the button. Remember that any time you fill an area you must be sure that the area is entirely enclosed, so the color can not "leak" out. If the color does leak, press ESC to stop the fill process, then remove the incorrect fill with Undo.



Horizontal Line Fill

This tool fills in a horizontal line with the current color or pattern. The width of the line drawn depends on the line thickness selected. Position the cursor on the screen and press the mouse button to start a fill. For an interesting effect, hold down the mouse button and move the cursor around the screen.



Vertical Line Fill

The Vertical Line Fill works as above, except that it fills with a vertical line as opposed to horizontal.



Polygon Fill

To draw and fill a polygon with up to 255 sides, use the Polygon Fill tool. After selecting the Polygon Fill, position the cursor at the starting point of the polygon and click

A QUICK OVERVIEW

the mouse button. Move the cursor to the end point of the first line of the polygon and click again. Continue drawing in this manner until you have your completed polygon. After you have set your last point, click the mouse button again without moving the mouse (or press the Return key). The enclosed area will be filled with the selected color or pattern. If the polygon does not fill, this means that the mouse has moved since you set your last point.

Note: After completing your first line, you may hold down the mouse button and move the cursor to create curves and shapes as if you were in Free-Hand Draw. When you release the button, you can continue making straight lines. This feature allows you to create filled polygons that are composed of both curves and straight lines without having to change tools.

FULL PAGE VERSUS CLIP SCREEN

The Graphics Studio gives you two separate pages to draw on at one time. They are called "Full Page" and "Clip Screen". "Full Page" describes the working area that appears when you first start *The Graphics Studio*. The "Clip Screen" is a second separate screen that can be accessed by clicking on the words "Full Page" in the Upper Menu. To get back to the Full Page, click on "Clip Screen".

All the features of *The Graphics Studio* are available, no matter which screen you are on. You can even perform functions such as copy or rotate from one screen to the other. The only difference between the two screens is the size of the accessible work area. The Clip Screen is limited to one full screen in height, while the Full Page allows you to work with a page that is two full screens high at once. To learn more about using these two pages, see "Picture Scrolling" below.

A QUICK OVERVIEW

To view the two Full Page screens at the same time, select Show Page from the Options menu. The new screen will show your entire picture. The jog in the vertical line shows you what part of the picture you will return to when you exit the Show Page feature. This area may be changed by holding the mouse button down and sliding the line up or down to the correct area.

PICTURE SCROLLING

This is a very important and powerful feature. While on the Full Page, it allows you to scroll the screen up and down giving you the equivalent of two screens of drawing area. If you are on the Clip Screen, the scrolling allows you to move up or down to see and work the area covered by the menus.

To make small changes in the position of the screen, click on the up or down arrow. This causes the screen to move in one line increments. To move quickly from one place to another, click on the Slide Bar (next to the arrows), and while holding the mouse button down, move the Slide Bar. Note that the Drawing Area will be updated while you are still holding down the button allowing you to get the exact placement you wish..

THE X Y COORDINATES

Your drawing is divided into dots called pixels each of which has a defined location in terms of its' x (horizontal) and y (vertical) coordinates. The numbering of the coordinates starts in the upper left-hand corner of your drawing at $x = 0$, $y = 0$. To activate this feature, click on "X Y" in the Upper Menu. Now, whenever you are working in the drawing area, the X and Y coordinates of your current cursor position are displayed. The x and y values for the area under the menus can be determined by

A QUICK OVERVIEW

scrolling it into the visible portion of the screen. Note: This feature may slow down some drawing tools, especially drawing with brushes.

THE REPEAT FEATURE

The letter "R" under Undo, is the Repeat feature. By clicking on (thus highlighting) "R", it makes the currently selected function repeatable. If the "R" does not highlight, it means that the Repeat feature is not available with this function. To turn the Repeat feature off, click on "R" once more. Repeat works with the following tools: All Line-Draw, Box, and Circle/Oval tools, Copy and Last Copy, X-Copy, and Rotate.

To get a feel for how it works, select the Straight Line tool and turn on Repeat. Now, draw a straight line. When you release the mouse button, you have a straight line that you can place anywhere on-screen. No matter how many lines you put down, you can always place another one exactly like the first. This is because Repeat is selected.

You have now learned about some of the basic drawing functions, brushes and effects possible with The Graphics Studio. In the next chapter, we will discuss capabilities such as rotation, text, loading and saving pictures, copying, and patterns.

CHAPTER TWO: **USING THE GRAPHICS STUDIO**

This chapter of the manual covers the bulk of The Graphics Studio program. Here, you will learn how to use features such as text, zoom, and rotation. If you are already familiar with how graphics programs work, this is a good place to start. If you are new to this type of program, you will want to start with Chapter One.

THE MODE MENU

One of the truly unique features of *The Graphics Studio* is the Mode menu located at the far right of the Menu Bar. Depending on the feature currently selected, the Mode menu displays different options. All of the features covered in Chapter One will have their mode options explained below. Note: Shadow and Mirror will stay on no matter which Drawing Tool you select until you turn them off.

In the Mode menu many of the items can be toggled on and off. When you select one of these items the menu remains down. This alternative approach to pull-downs allows you to turn a number of items on and off without having to pull the menu down again.

The Drawing Tools

All of the Drawing Tools covered in Chapter One have the following options in the Mode menu: Rotate Colors and Random Colors, Shadow and Mirror, and Set Shadow, Set Mirror Type and Set Mirror Origin. A lot of fun can be had by turning on all the modes at once and working with the different drawing tools. If that's not enough excitement for you, add Repeat, Airbrush, and Color Cycling!!

USING THE GRAPHICS STUDIO

Rotate Colors

The Rotate Colors feature allows you to rotate through a sequence of colors as you draw. Simply select any Drawing tool (let's use the Outline Circle with Repeat as an example), then move to the Mode menu and turn on Rotate Colors. Now, each circle you draw will be a different color as the program rotates sequentially through the selected range of colors.

To set the color range, select Edit Colors/Cycling from the Edit menu (or place the cursor on the palette and press Command-D). The Palette Edit menu will appear. At the top of the menu, is a Color Bar displaying the current colors in your palette. Attached to the Color Bar is a horizontal line stretching from one end of the bar to the other. By placing the cursor at either end of this line and holding the mouse button down, you can slide the ends of the line. The color range is made up of the colors enclosed by the attached line.

This menu contains many additional features. For a full explanation of the color palette editing features see Chapter Three.

Random Colors

The Random Colors option works like Rotate Colors, except that the colors are selected at random from the entire palette.

You may turn on Random Colors and Rotate Colors at the same time. In this case, only the colors in the color range are used, and they are selected at random.

Shadow

If you select Shadow from the Mode menu, an off-set drop shadow function is automatically added to your currently selected Drawing tool. As an example, select the Filled Box

USING THE GRAPHICS STUDIO

tool, then go to the Mode menu and turn on Shadow. Go back to the Drawing Area and make a few boxes.

Set Shadow

Let's say you want to change the color or the off-set of the Shadow. To do this, select Set Shadow from the Mode menu. To change the shadow color simply click on any color in the palette (Patterns can not be selected as shadows).

To change the drop shadow off-set, you need to adjust the X and Y settings. To do this, place the cursor on the number you wish to change, hold the mouse button down and move the mouse up to increase the number or down to decrease it. The numbers may range from -20 to 20. The following chart shows how the numbers affect the shadow.

| | |
|---------------|---|
| X is positive | Shadow is to the right of the original. |
| X is negative | Shadow is to the left of the original. |
| Y is positive | Shadow is below the original. |
| Y is negative | Shadow is above the original. |

By varying the different X and Y settings, you can achieve a number of shadow effects. As an example, if X is positive and Y is negative, the shadow will be to the right of and above the original.

Mirror

The Mirror effect reflects your drawing actions. Select the Straight Line tool and turn on Mirror. When you move the cursor back on to the Drawing Area, a number of lines will divide the Drawing Area into the reflection areas that will be there when you draw. The default number is eight. For a quick visual example of how this works, hold down the mouse button and draw a straight line. You will see the effect on-screen. Now, with the button still down, continue to move the mouse. Practice like this to see the different

USING THE GRAPHICS STUDIO

effects. Now, try it with Repeat on.

Mirror Type

To adjust the number and type of reflection, select Set Mirror Type from the Mode menu. A dialog box shows the reflections available. Click on your choice, then on OK to confirm it, and return to the Drawing Area. The dividing lines now reflect your new selection.

Mirror Origin

To change the origin (center point) of the mirror, select Set Mirror Origin from the Mode menu. When you move back to the Drawing Area, the dividing lines follow the cursor. The new origin point is set by clicking the button.

In addition to the general options above, the following special mode options are available.

Use Brushes

Use brushes works with Connected and Unconnected Pixel Brushes. When it is off, you can draw at the highest speed, but can only alter the Line Thickness. Brush Shape and Density have no effect. When it is turned on, these tools operate more slowly, but you can change Brush Shape and Density, as well as Line Thickness. When *The Graphics Studio* starts, Use Brushes is turned off.

Outlining Filled Objects

To give a filled object a border of a different color, turn on Outline Filled Shape. To set the outline color, first set the foreground color to the desired outline color. Then, select Set Outline Color from the Mode menu. Now, return to the Color Status Box and select the color for the filled object.

Setting the Corner Roundness

To set the corner roundness of the Rounded Box tools, select Set Corner Roundness from the Mode menu. You can change the X and Y radii in two ways. You may click in the

USING THE GRAPHICS STUDIO

box displaying the current radius setting and type in your new choice followed by Return, or you may position the cursor over the box, and while depressing the mouse button, slide the mouse upwards to increase the number or down to decrease it. As the numbers change, the box above automatically reflects these changes. The setting can range from 1 to 100. If both radii are set at 1, the corner is square. If they are both at 100, you can make circles and ovals. When the corner is correct, click OK to exit. If you don't want to use your changes, click on Cancel.

Fills

Rotate and Random Color work with the Horizontal and Vertical Line Fills as they do with the Drawing Tools. They are not available with the Flood and Polygon Fills.

Outlining is available with the Polygon Fill tool. It works in the same manner as the Outline modes described above. The Outline options are not available with the other fills.



ZOOM

Zoom magnifies the selected portion of a picture, making detailed precision work a lot easier. The levels of magnification are: 2X, 4X, and 8X.

Select Zoom from the Line-Draw menu. A rectangular box appears. Position the box over the area to be magnified, and click the button. A new screen divided into two parts appears. The upper portion displays part of your picture with the Zoom box on the selected portion. The lower half

USING THE GRAPHICS STUDIO

displays a copy of the area within the rectangle at the default level of 4X magnification. Note: Before entering Zoom, the Mode menu may be used to change the magnification level.

Use the X icon in the new Lower Menu to change the magnification level. The screen updates automatically. The Zoom box in the upper half of the screen shows the new area of magnification.

To zoom in on another area of the picture, move the cursor to the top half of the screen and press the button to move the Zoom box to the new area. The bottom portion is instantly updated.

While in the Zoom mode, you can use the Pencil and Fill tools in combination with any of the solid colors or patterns. Note that if the pixel you start painting on is the same as the currently selected foreground color, it will paint over it with the current background color (This is a handy quick-erase feature.).

Additional options are available in the menu bar which separates the upper and lower portions of the screen: X Y Coordinates (just click on it to activate) and Undo. To exit Zoom, click on the box at the left end of the menu bar or press Esc.

DRAWING ON THE GRID

The Graphics Studios' Draw On Grid feature constrains your drawing functions to grid of dots in the Drawing Area. The grid itself is not visible, but the effect can easily be seen by turning on the X Y coordinates and watching the X Y values as you move the cursor around the Drawing Area.

USING THE GRAPHICS STUDIO

This is handy for precision cursor placement, and makes it easy to draw parallel lines or a series of geometric designs of any type. If you're drawing a floor plan, use this feature to be sure everything is to scale. To get a feel for how it works, use the Unconnected Pixel tool with the grid off and then turn the grid on and draw again. See the difference?

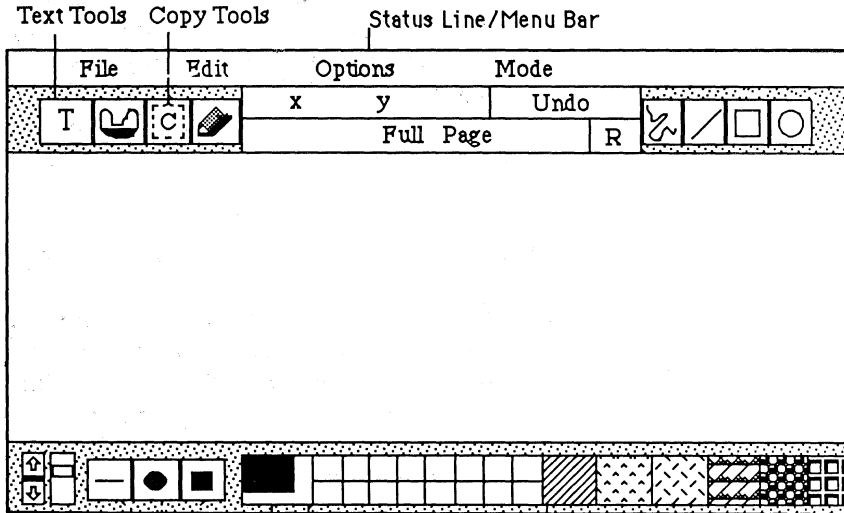
To turn it on, select Draw On Grid from the Options menu.

You can alter the spacing between grid points quickly and easily. Select Set Grid Spacing from the Options menu to bring up the Grid Dialog Box. Set the X and Y coordinates by clicking in the box and typing in a new number, or by holding the mouse button down and moving the mouse up to increase the number or down to decrease it. As the numbers change, the grid in the dialog box will change to show you the spacing. The spacing can range from 1 to 50.

The Grid Box tool, explained in Chapter One, lets you draw boxes that are filled with a grid pattern. The spacing of these grid lines is determined by the current settings in the Grid Dialog Box.

To reposition the points on the grid by selecting Change Grid Origin from the Options menu. When you return to the drawing area, the cursor changes to a large crosshair. Set the intersection of the two lines in the crosshair at the new grid point. Note: If you want to set the grid point to a specific coordinate on the Drawing Area, turn on the X Y Coordinate feature prior to changing the grid origin. For example, if the grid spacing setting is 8,8, and the grid origin is set at 5,5, your X Y coordinates will move from 5,5 to 13,13, then to 21,21, etc.

USING THE GRAPHICS STUDIO



THE COPY TOOLS

The Copy tools are located to the right of the Fill tools (See Figure 2). The Copy menu contains the following features: copy, last copy, capture pattern, rotate, scale, exchange colors and flip.



Copy Area

To use the Copy feature, select it from the Copy Menu. Move to the Drawing Area. Press the mouse button down and drag the mouse and to form a frame around the area

USING THE GRAPHICS STUDIO

you wish to copy. Release the button and your copy is picked up from the screen. Simply move the on-screen frame to the location you wish to copy to, and press the button to drop the copy into place. For more precise placement, use the arrow keys to position the copy, and press Return to place it. You can also hold the mouse button down and use the copy like a paintbrush. Don't forget that you can copy from the Full Page to the Clip Screen and vice-versa.

The frame containing your copy will appear to be empty while the mouse is in motion. When the mouse stops moving, your copy reappears (Note: If the Repeat function is turned on, the copy will not appear until it is actually dropped onto the picture.).

There are a number of options available in the Mode Menu during copy. They are explained below.

Replace

If Replace mode is on, the copied section will completely replace whatever area of the picture it is dropped on.

Transparent

In Transparent mode, the currently selected background color becomes "invisible". When the copied section is placed over another part of the picture, the picture will show through the "invisible" portions of the copied section.

Copy and Cut

If you select Copy from the Mode menu, the area you lift your copy section from will not change. If you select Cut, the area you lift your copy section from will be replaced with the current background color. Either Copy or Cut may be used in conjunction with either Replace or Transparent.

USING THE GRAPHICS STUDIO



Last Copy

Last Copy allows you to recall and use the information in the last Copy Area executed. Other drawing tools can be used in between and the last copied area will still be available. Note: If you edit Color Cycling or load a picture with Color Cycling off the disk, the last copied area will no longer be available. It's just one of those things...



Capture Pattern

Capture Pattern allows you to grab any 8 x 8 area of your picture and place it in the Pattern Palette. This feature is explained below in "Working with Patterns".



Change Color in Area

This feature lets you replace a color in the picture with any other color from the palette, or you may swap two colors in the picture with each other.

Replace

To replace a color in the picture, select the "XC" tool from the Copy menu and set the mode to Replace Color. Set the currently selected foreground color to the color to be changed and set the background color to the target color (Remember, to set the background color, click in the background area of the Color Status Box, and then click on

USING THE GRAPHICS STUDIO

the desired color.). Move to the Drawing area and construct a frame (just as you do in Copy Area) around the area to be changed. When you release the mouse button, the foreground color in this area will be replaced by the background color. If Repeat is turned on, you will have a box that you can move around the screen. Anytime you click the button, the replacement will occur.

Swap

To swap two colors in the picture, select the "XC" tool and set the mode to Swap Colors. Set the foreground and background colors to the two colors you wish to swap. Move to the Drawing area and construct a frame (just as you do in Copy Area) around the area to be changed. When you release the mouse button, any area inside the frame which is the foreground color will change to the background color and vice-versa. If Repeat is turned on, you will have a box that you can move around the screen. Anytime you click the button, the replacement will occur.



Rotate Area

To rotate a section of the picture, select the Rotate Area tool from the Copy menu. Set the cursor at the center point of the area you wish to rotate. Hold down the mouse button and move the mouse until the area you wish to rotate is enclosed by the on-screen frame, then release the mouse button. You can now use the mouse to rotate the box to its' new location. When the box is in position, click the mouse button. The computer will redraw the selected area in its' new rotated position. Note: As you rotate the frame, you may notice that it changes shape. This is because the pixels are not square.

USING THE GRAPHICS STUDIO

The Mode menu has a number of options that can be used with Rotate Area. Replace, Transparent, Copy, and Cut work as they do with the Copy Area tool explained above (See this section of the manual for information on how these four options can be used in combination). If you turn on the Replace feature, everything enclosed in the box will paint over the area on which you place your new rotation. With Transparent selected, the currently selected background color is considered "invisible". When the rotated section is put into place, the original picture will show through the "invisible" portions of the rotated section. Just for fun, you might like to turn on Repeat while rotating in Transparent mode, to create a fan-like effect.

Free Rotation

This Mode menu option allows you to rotate the selected area to any angle you desire. This is the initial setting for the Rotate Area tool.

45 Degree

This option allows you to rotate your selected area in 45 degree increments.



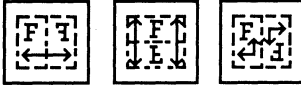
Scale Area

Scaling gives you the ability to change the size of an object to make it either larger or smaller. Select Scale Area from the Copy menu. Form a frame around the area you wish to scale. Now, move the cursor to the area that you want the scaled image to appear in, and form another frame that is the size and shape that you want your scaled image to be.

USING THE GRAPHICS STUDIO

Release the mouse button and your scaled image will be drawn on-screen.

The Copy and Cut mode selections work with Scale as they do with the other Copy tools.



Flip

The Graphics Studio gives you the ability to flip images horizontally, vertically, or both. Simply select the appropriate Flip tool from the Copy menu, and form a frame around the area you want to flip. When you release the button, the selected area will be flipped.

WORKING WITH PATTERNS

The Graphics Studio gives you a wide range of capabilities to work with. This is especially true when you are working with patterns. As we have already seen, patterns can be selected and used as the foreground color in combination with any function. In addition to the patterns that come with *The Graphics Studio*, you can create and save an infinite number of additional ones.



Capture Pattern

The Capture Pattern tool is found in the Copy Menu. It allows you to capture any 8 x 8 pixel area of your picture and store it in the pattern area of your palette.

USING THE GRAPHICS STUDIO

To capture a pattern, first select one of the patterns already in your palette. Your new captured pattern will replace this one (If you do not select a pattern to replace, the program will automatically use the first pattern slot.). Next, select Capture Pattern from the Copy Menu. When you move to the drawing area, you will notice that the cursor has been replaced by a small box. Move the box to the area of the screen that you want to "capture" and click the mouse button. Your new pattern appears in the currently selected pattern position in the palette.

If you don't like what you see, simply move the rectangle and click again. You can also hold the mouse button down and move the rectangle until the desired pattern appears in the palette, and then release the button.

Edit Pattern

The Edit Pattern function allows you to modify existing patterns, or design a new one from scratch. To access this feature, you may double-click (or Command-click) on the pattern area of the palette, or select "Edit Pattern" from the Edit pull-down menu at the top of the screen.

Once selected, the Edit Pattern dialog box appears. The large box on the left shows a magnified version of the currently selected pattern. This is the area where you will do your editing. The smaller box below shows the pattern as it will appear when in use. As you make changes to the pattern, these alterations are instantaneously reflected here. The group of patterns on the right side are your Auxiliary Patterns. You may swap them into the palette in the Lower Menu, and then edit them. Additional files can be called up by clicking on the Files option.

To edit an Auxiliary Pattern, click on the pattern you wish to edit. The pattern will be displayed in the magnified edit

USING THE GRAPHICS STUDIO

area and in the currently selected pattern slot in the Lower Menu. The pattern that was in the selected slot in the Lower Menu moves to the Auxiliary Pattern area. Alternatively, you may drag an Auxiliary Pattern onto a pattern slot in the Lower Menu.

If you wish to edit a pattern from the Lower Menu, click on the desired pattern and it will be displayed in the magnified area. Once you are finished editing, click on the Put Pattern option to place your new pattern in the Lower Menu palette.

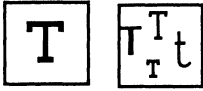
Along the left side of the Magnification Box are four positioning arrows. They will move the pattern in any of the four directions. This feature is quite useful when a pattern has been captured from the screen and it needs to be realigned.

Xcolor will replace one color in the pattern with the currently selected foreground color. To use, just select Xcolor and click on the color in the pattern that you wish to replace.

Fill and Undo work in the same manner here as they do in other parts of the program. Fill can be toggled on and off. You can also edit your pattern using any of the solid colors from the palette. Simply select a color, move the cursor to the editing area, and draw. The first mouse click puts down the foreground color. A second mouse click in the same spot puts down the background color. The Clear option clears the editing area to the currently selected background color.

Once your changes are completed, click on OK to exit. If you decide you don't like the changes, click on Cancel. This exits you from the Pattern Editing feature without changing anything. Note: If you accidentally select Cancel, you may still recover by going back to the Edit Pattern menu and immediately clicking on Undo.

USING THE GRAPHICS STUDIO



TEXT TOOLS

The Graphics Studio lets you add text to any of your pictures using a number of fonts of various sizes and styles. Once it has been placed on your picture, it can be rotated, flipped, or sized just like any other part of the picture. You can use any IIGS font as long as it is on your disk. See your IIGS documentation for instructions on moving fonts from one disk to another.

The Text tools are located at the far left of the Upper Menu. Click on the T and move the cursor to the drawing area. Click the mouse button at the point you want the text to begin and start typing (Note the new cursor shape.)!

The appearance of the text can be changed in a number of ways. You can change the color, the font, or use any of the special effects detailed below. When you make a change of this type, the change is not reflected on-screen until the cursor has been moved into the Drawing Area.

When you finish a line of text, it is not anchored on the screen until you press Esc or Return (Note: Once a line of text is anchored, it can no longer be edited). Return starts a new line of text directly below the previous line. Esc starts a new line of text where the previous line ended. This feature let you mix colors and styles in one line.

Positioning Text

To move unanchored text, place the cursor at the new location and click the mouse button. The text will jump to the new location. Alternatively, you can hold the mouse

USING THE GRAPHICS STUDIO

button down and drag the text to the desired location. To make fine adjustments to the location, use the appropriate arrow key to move the text in one pixel increments.

Text Modes

The Mode Menu contains a number of options for modifying text. Replace and Transparent work as they do in other areas. In Replace mode, the currently selected background color is part of the letter and writes over the picture. In the Transparent mode, only the letters are placed on the picture.

You can change the look of your text with five different "special effects": bold (a heavy thick line), underline (a solid line placed under each character), shadow (adds a drop shadow), outline (uses the foreground color to create a line around a character's shape, leaving a hollow center in the background color), and italic (slants the vertical line of the text to the right). You may have as many of the special effects on at once as you desire. A check-mark next to the effect indicates that it is turned on. It is best to type in your text without special effects. Add the desired effects just before anchoring the text. Note: Some effects are not available on some font sizes.

"Center Text" lets you center a string of text along the X (horizontal) or Y (vertical) axis, or both. Select the centering method from the dialog box that appears after selecting "Center Text..." from the Mode menu. *The Graphics Studio* centers text as follows. To center on both axes, it searches outward from the center of each side of the text string until it encounters a color other than the currently selected background color. The text is then centered between these four points. When centering vertically or horizontally, it searches from the top and bottom or left and right respectively.

USING THE GRAPHICS STUDIO

Selecting a Font

To select a Font, click on the Select Font tool. The dialog box allows you to choose your font and size. Just click on your choice and it will be selected. Note: The style settings have no effect. To select style settings, use the Mode menu after you have made your other font selections.

The Text Brush Shape

The Text Brush can be a fun, if somewhat confusing, feature. There are two ways to use the Text Brush. The first is to enter some text using the Text tool (as described above) without anchoring it. Now, select the Text Brush from the Brush Shape menu, and either of the drawing tools in the Free-Hand Draw menu (Unconnected Pixel works best). You may now use the text you typed in as a brush.

To use the second method, you must first get rid of any text you may have typed in. Select the Text tool, move the cursor into the Drawing Area, and press Esc. Select the Text Brush from the Brush Shape menu, and either of the drawing tools in the Free-Hand Draw menu (Unconnected Pixel works best). Now, type a single character. This character is now your brush. To change brushes, simply type in a new character. This feature is useful if you want to drop a series of asterisks (as an example) in the background.

You can use this effect to create any number of interesting effects. Try using it with Draw On Grid selected.

OPENING A PICTURE

To open (or load) a picture, select Open from the File menu. A dialog box appears. At the top of the box is the name of

USING THE GRAPHICS STUDIO

your disk. Below that is a list of the pictures on the disk. You can scroll through these by using the scroll bar located just to the right of the filenames. It works just like the vertical scroll bar in the Lower Menu. To change drives, click on Disk. Open lets you open a file folder or load a picture, while Close lets you close a file folder. Exit lets you leave the dialog box without loading a new picture.

Load Palette and Load Patterns are two options that appear at the bottom of the dialog box. An open circle indicates that the option is turned off. A solid circle indicates that it is on. Anytime you save a picture, the current patterns and palette are saved too. The Color Palette and the Patterns are only loaded if these options are turned on. Before loading a picture, make sure that your Load Patterns and Load Palette options are set correctly. Note: Because in most circumstances, you will want to load the picture with its corresponding palette, this selection is turned on when you first start *The Graphics Studio*.

To open a picture, just click on the name of the picture you wish to load, then on Open, or simply click twice on the filename. *The Graphics Studio* loads pictures created with Deluxe Paint or Paintworks Plus. Just load your pictures into *The Graphics Studio* and have at it! Now, you can do things you've never done before, like automatic drop shadows and truly powerful color cycling.

SAVING A PICTURE

The two ways to save your files are described below:

Save as

Select Save As from the File menu. A dialog box appears with the cursor in place and ready for you to type in your filename. If you wish to perform other activities first, simply press the Return key (or click the mouse button) and the arrow cursor appears. At the top of the box is the name of your disk and the amount of space remaining on it

USING THE GRAPHICS STUDIO

(Free). Below that is list of the pictures on the disk. You can scroll through these by using the scroll bar located just to the right of the filenames. It works just like the vertical scroll bar in the Lower Menu. To change drives, click on Disk. Make Folder allows you to create a new folder to put your files in. Just click on Make Folder and type the new folder name in the the box below the words "Save As". Open lets you open a file folder, but will not allow you to load a picture while in the Save As Dialog Box. Close lets you close a file folder. Exit lets you leave the dialog box without saving anything.

To save a picture, just type in the filename in the box below the words "Save As", and press Return. Alternatively, you may click on the filename and then on Save. Note: When saving from the Full Page, be sure that you have correctly selected either Page Format or Screen Format. Page Format saves the entire two screens in height, while Screen Format saves the area that is visible on the screen (including the parts of your work that are under the Menu Bars).

To rename a file, click on the file you wish to rename, and then on Rename. Now, type in the new file name and press Return. To delete a file, click on the file you wish to delete, then click on Delete. Note: If you accidentally select Rename or Delete, you may click the mouse button to cancel.

Save

Selecting Save from the File menu, lets you do a quick save using the filename that was last used. Simply select Save

USING THE GRAPHICS STUDIO

from the File menu. Note: If you are saving the Full Page , it will ask whether you want to save the screen or the page, or cancel your request. Make your selection and *The Graphics Studio* will carry it out.

REVERT

Revert loads your last saved version of the picture from disk. When you are working, it is advised that you save your work periodically. This way, if the electricity goes out, or you make an uncorrectable mistake, you can recover your previous version.

PRINTING A PICTURE

If your printer is set up and ready to go, select Print from the File menu. Choose whether you wish to print the Page or the Screen and then sit back and wait for the output from your printer. Note: You may cancel the printing process by holding down the Command key and pressing period (.) .

Selecting Print Setup... from the File menu, brings up a new dialog box with the options outlined below:

Set Print Attributes:

Quality: Select Better Text or Better Color depending on the type of picture you are printing. Draft gives you the printout faster, but the quality is lower.

Page Range: You can set it to print everything (All) or set the range.

USING THE GRAPHICS STUDIO

Copies: Select the number of times you wish to print the picture.

Color: Select this if you are using a color printer.

Set Page Style:

Paper: Tells the program what type of paper you have in your printer.

Vertical Sizing: Normal prints in the regular fashion. Condensed gives you a printout that is the normal width, while the vertical height is shorter.

Printer Effects: 50% Reduction prints your picture at one half its normal size. No Gaps Between Pages prints a 396 line picture. This is 4 lines short of the 400 lines that equals 2 Full Page screen heights. If No Gaps Between Pages is not selected, a 378 line picture is printed.

Orientation: This determines which side of the paper the top of your picture will appear.

Choose Printer: Lets you select the Printer Type and Port.

Start Printing: Prints your picture.

Done: Exits the Print Setup Dialog Box.

In the next chapter, you will learn how to use the more advanced color editing and cycling features.

CHAPTER THREE:

ADVANCED FEATURES

This Chapter covers the powerful features available for editing your Color Palette and adding Color Cycling capabilities to your works of art. Try doing that with an ordinary pen and paper!!! To learn how to add an entirely new dimension to your creativity, look here.

EDITING THE COLOR PALETTE

To edit your current color palette, access the Color Palette Menu by one placing the cursor on the Palette and clicking the mouse button while holding down the Command key (or press the Command key and "D" simultaneously), or by selecting Edit Colors/Cycling from the Options menu. In Chapter Two, we explained how to quickly and easily change your Color Range when using the Rotate Colors and Random Colors selections. Now, you will learn how to move the colors from one position in the palette to another, create blended ranges, swap color positions and create totally new colors all with a simple point and click of the mouse.

Selecting a Color to Edit

As you look at the Color Bar across the top of the menu, you will notice that one of the colors has a small notch below it. This notch indicates that that color is the currently selected color for editing. Note that the Color Editing Box also displays the currently selected color.

To select a different color to edit, simply point the cursor to the color you wish to edit and click the mouse button. The notch will move to that color and the Color Editing Box will change to reflect the new color. If you want to change one of the colors in your drawing, but you're not quite sure which color in the Color Bar is the correct one, simply move the cursor to the top half of your screen where your drawing is still visible, and click on the color you want to

ADVANCED FEATURES

change. The notch will move to the selected color and the Color Editing Box will be updated. Note: You can move the area of your picture that is visible in the top portion of the screen by scrolling your picture prior to entering the Edit Color Palette menu.

Editing a Color

The Graphics Studio gives you two powerful ways to change a single color in your palette. The box containing the letters RGB controls the Red, Green and Blue values of the selected color. Under each of these letters is a number that can range from 1 to 15. As with most other *Graphics Studio* features of this type, you may change the number by clicking on it and typing a new one in, or by holding the mouse button down and moving the mouse upward to increase the number and down to decrease it. As you do this, notice that the color in Color Editing Box changes to reflect the new values.

For quicker and more precise color editing, use the Color Editing Box. This allows you to hold one value (red, green, or blue) constant, while you adjust the other two simultaneously. As an example, click on R. It will be highlighted (white R on a black background) and locked. The Color Editing Box will now let you adjust the Green and Blue values. If you look closely at the Color Editing Box, you will see a small square. This small square represents the current green and blue values. By moving this box, you can adjust these values. Simply move the cursor to the Color Editing Box, hold the button down and move the mouse to change the color. Up and to the right increases the color values. Down and to the left decreases them. You can access 256 different colors just by moving the mouse.

ADVANCED FEATURES

Copying Colors

You can copy colors from one position in the palette to another with great ease. Simply place the cursor on the color you wish to copy, hold the mouse button down, and slide the color to its new location.

The color that is in the position you are copying to will be replaced by the new color. If the replaced color was being used in your picture, your picture will be updated with the new color as well.

Swapping Colors

To cause two colors in the Color Bar to exchange places, simply click on Swap, then move the first color in the swap of the position of the second color and release the mouse button. The two colors will swap places. As with the Copy, the swap will also cause the two colors in your picture to switch places.

Blending Colors

Use Blend to create a smooth gradation of color across your palette. Attached to the Color Bar is a horizontal line stretching from one end of the palette to the other. By placing the cursor at either end of this line and holding the mouse button down, you can slide the ends of the line. The color range is made up of the colors enclosed by the attached line.

After setting the range, click on blend. The colors will change to create a smooth gradual blend from the color at the left end of the range, to the color at the right end. The colors in your picture will be updated to reflect this new palette.

ADVANCED FEATURES

Other Commands

Undo cancels the last change made to the palette, while Reset lets you cancel ALL of your changes and start over again. OK exits the Color Palette Menu and updates the palette to reflect your changes. Cancel exits without making any changes.

Restore Last Palette

Should you exit the Color Palette menu by selecting OK when you meant to hit Cancel. You can always get your last palette back by selecting Restore Last Palette from the Options menu. This feature will also recover the last palette when you load in a new picture, or when you switch from the Full Page to the Clip Screen or vice-versa.

Use One Palette

When Use One Palette (in the Options menu) is turned on, and a new file is loaded, its palette is loaded in to both the Clip Screen and the Full Page. If you want the Clip Screen and Full Page to use separate palettes, turn the Use One Palette selection off.

COLOR CYCLING

The Graphics Studio includes a powerful color cycling feature that allows you to animate your picture by dynamically changing the colors in the picture. This is accomplished by "playing" a sequence of color palettes, much like the frames in a film. Most graphics programs limit you to cycling through the colors of one palette. *The Graphics Studio* lets you cycle through many palettes. Here's how it works. The color that is in Position 1, Palette 1 changes to the color of Position 1, Palette 2, then Position

ADVANCED FEATURES

1, Palette 3 and so on, as the color cycling progresses. With 16 different positions available at once, you can see how powerful and unlimited *The Graphics Studio* is.

To access the Color Cycling menu, open the Color Palette menu and click on cycling. When you first enter Color Cycling, you will notice the menu is divided into two sections. The left side controls the currently selected color cycling palette. The right side contains the overall controls for color cycling through all the palettes. Let's discuss the left side first:

Slot: Each "slot" is an entire color palette. The number displayed under Slot, tells you which palette in the sequence is currently being edited. This palette is displayed in the Color Editing menu. Use the up and down arrows to step through the palettes.

Rotate: This feature changes the position of the colors within the selected palette. Clicking on the left side of the Rotate selection moves the colors one position to the left. Clicking on the right side, moves them one position to the right.

Add: This adds a new palette to the sequence. The new palette is inserted into the sequence directly after the palette you had been working on.

Delete: Removes the currently selected palette from the sequence. Use Slot to select the palette you wish to delete. Then, click on Delete.

Ticks: Displays the number of "ticks" (length of time) that the current palette is displayed when the cycling is played. The smaller the tick setting, the shorter the display period. This allows you to control the length of time one palette is displayed relative to the other palettes in the sequence.

ADVANCED FEATURES

The right side:

Play: This starts the color cycling. Color cycling can also be turned on and off by selecting Cycle Colors from the Options menu.

Slots: This tells you how many palettes are in the color cycling sequence.

Rate: Controls the overall speed of the color cycling. The higher the Rate, the more quickly it plays through the sequence of palettes.

New: Discards the current color cycling and lets you start over again.

Files: This allows you to save a color cycling sequence separate from your picture files.

For some interesting examples of Color Cycling, watch the slideshow (See Appendix 2).

SWITCHING RESOLUTIONS

The Graphics Studio has low resolution and medium resolution settings. In low-res the screen is 320 x 200 pixels with 16 colors. In med-res, it is 640 x 400 with 4 colors. When the program starts, it is in low-res.

To change resolutions, select Change Resolution from the Options menu. Save any work you want to keep before changing resolutions. Once the resolution change has been made, you can reload your picture into the new resolution setting. Note: If you load a 16 color low-res picture into med-res, the picture will be remapped into a 4 color picture.

APPENDIX ONE: FOR THE BEGINNER

This appendix covers a few simple effects that are possible with The Graphics Studio, and helps the beginner to learn how to use their imagination as a starting point for new ideas.

Often times, even the most ornate, complex picture begins with a simple design concept. Consider a Christmas tree. Instead of going up and down the sides drawing each branch separately, start by looking at its simplest shape - a triangle with a rectangle for a base. It could be short and fat, tall and skinny, or somewhere in between. Color it green, and for the trunk, attach a brown Filled Box to the base. Branches are quick and easy. Using the color surrounding the triangle (most likely the background color) select a small brush shape and cut out wedge shapes from the side of the tree. Add a few Filled Circles of different colors offset with a dark green shadow for ornaments (see pg 22 for details on setting a shadow), and presto - a Christmas Tree. Ok, so it's not like the one you see each year at Macy's. That's the whole point! The image described is the start of an idea. The original green triangle could be much more. The image could be of the tree that stands in front of the White House each year for the holidays. Or leaving off the ornaments, it is the start of a forest of trees on a snowy hillside. Begin by coloring the ones in front a bright green and those in back darker shades of the same color. In front, a horse drawn carriage, full of passengers approaches a covered bridge. Let your imagination take you wherever you want to go.

For this next one, first turn on the Repeat function. The moon is a great jumping off point for an idea and this one is a snap! With the screen filled with the black of an circle. Once the desired moon shape is achieved, click the mouse button. To expand the idea, fill in the sky with dots

FOR THE BEGINNER

autumn night and the Repeat function turned on, place a pale yellow filled circle somewhere in the upper portion of the screen. Using the same circle shape, select the background color and position it over the pale yellow of different sizes and colors for stars, put in a few clouds (gray for a night sky), add a dark gray silhouette of a howling coyote and you're done.

Daisies can be made quickly and easily using the Radiating Line feature. To make the petals, set the starting point for the ray, and move the cursor a short distance - the radius of the flower. Press the mouse button down and hold it as you move around the starting point in a circular direction. Next, with the starting point still anchored to the picture, go to the palette and select a yellow color for the flowers center. Repeat the move around the center point. This time begin the sweep at a point closer to the center. The finished picture should look like an Astor Daisy. Repeat this process several times starting each time at a new center. Experiment as you do this. Try different colors and sizes. What would they look like in the morning or in a rain storm? You may even want to overlap one or two flowers to give the illusion of depth. To make a field of daisies from a single flower, start with the Copy function in the Transparent mode. Set the background color to the color around the flowers and select a group of daisies to copy. Make several copies of the flowers and return to the menu. Select the scaling feature. Mark a row or two of the daisies and reduce them in size. Use your imagination to create new looks.

As you explore new features try your skill at making a teddy bear using just the Filled Circle and Filled Oval.

APPENDIX TWO: SLIDESHOWS

To run the Slideshow included with The Graphics Studio, simply choose GSSHOW from the Launcher. The Slideshow will load and run automatically. To pause the Slideshow, press S. To continue it, press N. To exit the Slideshow before it is finished, press X.

Designing Your Own Slideshow

To design a slideshow, follow the steps outlined below:

1. Copy the file GSSHOW from the Graphics Studio disk on to a blank formatted disk.
2. Open a text file and name it SHOWSCRIPT. This text file will consist of commands and comments. Commands are directions to the computer on executing the slideshow. In this Appendix, commands will be typed in capital letters. This is not necessary in your script. Comments are reminders you may put in the text file to help you remember what you've asked the program to do. Comments must be enclosed by parentheses.
3. Type in your commands and comments. The valid commands are listed below. Only the first letter of each command is needed in your script. Always press Return at the end of each line in the script. Always put a space between the command and its "argument". An argument modifies the command.

Setting the Resolution

The first command you will want to type in tells the program which resolution your pictures are in. If they are in Low-Res (320 x 200), type a 3 and press the RETURN key. If they are in Med-Res (640 x 200), type a 6 and then RETURN. Note: You may also type 320 for Low-Res or 640 for Med-Res.

SLIDESHOWS

Loading a Picture

To load and display a picture, use the Image command. The Image command may be typed as **I**, **IM**, or **IMAGE**. After the Image command, type in the name of the picture you wish to load. If your pictures are in a subdirectory (as in the example below) be sure to include it in the filename. If the filename is missing, the previous picture will be redisplayed. Note: There must be a space between the Image command and the name of the picture. Image is the command and the name of the picture is the argument. The slideshows capacity is 50 images. Any images above 50 will be ignored when the slideshow is run.

Examples:

I \pictures\kittycat In this example, Kittycat, is in the Pictures subdirectory.

IM kittycat

Displaying the Picture

Once the picture is loaded, you have to tell the computer how long to show it. To do this, use the Wait command which may be typed as **W** or **WAIT**. Then, add the argument which tells the computer how many seconds to wait.

Example:

WAIT 5 In this example, the picture will be displayed for 5 seconds.

The **C** command is used with a picture that contains cycling. Add **C** to the Wait command line as shown in the examples below:

SLIDESHOWS

Examples:

```
W C5
```

```
W C
```

In the first example, you are telling the computer to wait until the cycling has played through 5 times before moving on to the next command. If a number is not included, as in the second example (W C), the cycling will be shown once. If the Wait command is not properly used, the picture changes immediately.

Transitions From One Picture To The Next

When you move from one picture to the next, the screen will turn black for a few seconds before displaying the next picture. If you do not want this black screen included, use the F command, which may be typed as F or FX. This command goes directly after the Image command.

Changing Disks

The Slideshow loads all pictures into RAM before running the slideshow. If some of your pictures are on another disk, you can use the Volume command (V or VOL) to load them. During the slideshow loading process, you will be prompted to insert the other disk. You may include subdirectories in the Volume command.

Examples:

```
Vol /morepics
```

```
Vol /morepics/animals/dog
```

Repeating the Slideshow

To play through the slideshow more than once, use the Repeat command (R or REP) at the end of the script. The

SLIDESHOWS

argument defines the number of times the slideshow is repeated.

Sample Script

The following sample script is explained below:

```
320
IMAGE flower.scr (iris and orchids)
WAIT C2

VO /disk2/sub

I hai.scr
FX
W 10

V /sample
REP 10
```

This script will display Low-Res pictures. The first picture is flower.scr (Note the comment in the parentheses.). It will be displayed until the cycling has been executed twice. At this point, hai.scr will be displayed for 10 seconds. Note that hai.scr is loaded from the path disk2/sub and the screen will not be blanked before it is displayed. Also note that the original volume (/sample) is reloaded. In this way, you will exit into the original path when the slideshow finishes. The slideshow is shown 10 times. Of course, it is only loaded once.

UPGRADE COUPON

To receive information on low-cost upgrades and new products that will become available for use with The Graphics Studio, please fill out the form below and mail it to:

Accolade IIGS Update
20813 Stevens Creek Blvd.
Cupertino, Ca. 95014

Name _____
Address _____
City _____ State _____ Zip _____
Phone Number _____ Age _____ Sex _____

By answering the questions below, you can help us make The Graphics Studio an even better product. Thank You.

What I like most about The Graphics Studio:

What I like least about The Graphics Studio:

Features I'd like to see added:

of Accolade products owned: _____

of IIGS products owned: _____

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INDEX

A

Auxiliary Patterns, 34-35

B

Background Color, 3, 30

Brushes, 13-15

Brush Shape, 13, 14, 38

Line Thickness, 13, 14

Shading Density, 13, 15

Box Tools, 9-11, 19

Concentric Boxes, 10

Concentric Rounded Boxes, 11

Filled Box, 10

Filled Rounded Box, 11

Grid Box, 11, 27

Outline Box, 9

Outline Rounded Box, 11

C

Capture Pattern, 30, 33

Centering Text, 37

Change Color in Area, 30

Replace Color, 30

Swap Colors, 31

Change Grid Origin, 27

Change Resolution, 48

Circle Tools, 12, 19

Concentric Circle, 12

Filled Circle, 12

Outline Circle, 12

Clip Screen, 17-18, 29, 46

Color Bar, 22

Color Cycling, 30, 46-48

Color Editing Box, 43-44

Color Palette Menu, 43-46, 47

Color Status Box, 3, 30

Command-D Key, 2, 22, 34, 43

Concentric Boxes, 10

Concentric Circle, 12

Concentric Rounded Boxes, 11

Connected Pixel Brush, 6

Coordinates, XY, 18, 26, 27

Copy Area, 28-29

Copy, 29

Cut, 29

Replace, 29

Transparent, 29

Copy Tools, 28-33

Capture Pattern, 30, 33

Change Color in Area, 30

Copy Area, 28-29

Flip, 33

Last Copy, 30

Rotate Area, 31

Scale Area, 32-33

D

Deleting A Picture, 40

Drawing Area, 2

Drawing Tools, 5-13, 19, 21-25

Box Tools, 9-11, 19

Circle and Oval Tools, 12-13, 19

Free-Hand Tools, 6-7, 19

Line-Draw Tools, 7-9, 19

Mode Menu, 21-25

Draw on Grid, 26-27, 38

E

Editing the Color Palette, 22, 43-46

Blending Colors, 45

Copying Colors, 45

Swapping Colors, 45

Edit Menu, 34

Edit Pattern, 34-35

Eraser, 4-5

Esc Key, 8, 16, 26, 36, 38

F

File Menu, 38, 39, 40, 41, 42

Open, 38-39

Print Setup, 41

Revert, 41

Save As, 39-40

Save, 40

Filled Box, 10

Filled Circle, 12

Filled Rounded Box, 11

Fills, 15-17, 25

Flood Fill, 16

Horizontal Line Fill, 16, 25

Mode Menu, 25

INDEX

- Polygon Fill, 16-17, 25
- Vertical Line Fill, 16, 25
- Flip, 33
- Flood Fill, 16
- Fonts, 38
- Foreground Color, 3
- Free-Hand Tools, 6-7
 - Connected Pixel Brush, 6
 - Unconnected Pixel Brush, 6, 15
 - Zoom, 25-26
- Free Rotation, 32
- Full Page, 17-18, 29, 40, 46
- G**
- Grid Box, 11, 27
- Grid Dialog Box, 27
- H**
- Horizontal Line Fill, 16, 25
- L**
- Last Copy, 30
- Line-Draw Tools, 7-9, 19
 - Connected Lines, 7-8
 - Constrained Lines, 9
 - Radiating Lines, 8
 - Straight Line Tool, 7
- Line Thickness, 13, 14, 16
- Low Resolution, 48
- Loading A Picture, 38-39
 - Load Palette, 39
 - Load Patterns, 39
- Lower Menu, 3
- M**
- Medium Resolution, 48
- Menu Bar, 2, 3
- Mirror, 21, 23-24
- Mirror Origin, 24
- Mirror Type, 24
- Mode Menu, 21-25, 29, 30, 31, 32, 37
 - Center Text, 37
 - Copy, 29, 32, 33
 - Cut, 29, 32, 33
 - 45 Degree Rotation, 32
 - Free Rotation, 32
 - Mirror, 23-24
 - Mirror Origin, 24
 - Mirror Type, 24
 - Outline Filled Shape, 24, 25
 - Random Colors, 22, 25
 - Replace, 29, 30, 32, 37
 - Rotate Colors, 22, 25
 - Set Corner Roundness, 24
 - Set Outline Color, 24, 25
 - Set Shadow, 23
 - Shadow, 22-23
 - Swap, 31
 - Transparent, 29, 32, 37
 - Use Brushes, 24
 - Zoom, 26
- O**
- Opening A Picture, 38-39
 - Load Palette, 39
 - Load Patterns, 39
- Options Menu, 26-27
 - Change Grid Setting, 27
 - Change Resolution, 48
 - Draw on Grid, 26-27, 38
 - Restore Last Palette, 46
 - Set Grid Spacing, 27
 - Use One Palette, 46
- Outline Box, 9
- Outline Circle, 12
- Outline Filled Shape, 24, 25
- Outline Rounded Box, 11
- Oval Tools, 13, 19
 - Concentric Oval, 13
 - Filled Oval, 13
 - Outline Oval, 13
- P**
- Page Format, 40
- Palette, 3
- Patterns, 3, 12, 30, 33-35
 - Capture Pattern, 30, 33
 - Edit Pattern, 34-35
- Polygon Fill, 16-17, 25
- Printing A Picture, 41-42
- Put Pattern, 35

INDEX

R

- Random Colors, 22, 25
- Removing the Menu Bars, 2
- Renaming a Picture, 40
- Replace, 29, 30, 32, 37
- Resolution, switching, 48
- Restore Last Palette, 46
- Revert, 41
- RGB Controls, 44
- Rotate Colors, 22, 25
- Repeat, 18-19, 24, 29, 30, 31, 32
- Return Key, 36, 39
- Rotate, 19
- Rotate Area, 31-32
 - 45 Degree Rotation, 32
 - Free Rotation, 32
- Rotate Colors, 22, 25

S

- Saving A Picture, 39-40
 - Save As, 39-40
 - Save, 40
- Scale Area, 32-33
- Screen Format, 40
- Scrolling, 18, 44
- Select Font, 38
- Set Corner Roundness, 24
- Set Grid Spacing, 27
- Set Mirror Origin, 24
- Set Mirror Type, 24
- Set Outline Color, 24
- Setting A Color Range, 22
- Set Shadow, 23
- Shading Density, 13, 15
- Shadow, 21, 22-23
- Slideshow, 51-54
- Status Line, 2, 3, 6
- Swap Colors, 31

T

- Text, 37, 38
 - Centering, 37
 - Fonts, 38
 - Replace, 37
 - Transparent, 37
- Text Brush, 38

- Text Tools, 36-38
- Trashcan, 5
- Transparent, 29, 32, 37

U

- Unconnected Pixel Brush, 6, 15
- Undo, 4, 16
- Use Brushes, 24
- Use One Palette, 46

V

- Vertical Line Fill, 16, 25

X

- X Color, 30-31
 - Replace, 30
 - Swap Colors, 31
 - Pattern Edit, 35
- X Copy, 19
- XY Coordinates, 18, 26, 27

Z

- Zoom, 25-26

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