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# SuperPaint

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# Part 1:

# Getting Started

Welcome to SuperPaint! By now you have probably experimented with the application a little, and may even feel somewhat proficient with it. If you have used any other graphics programs for the Macintosh, much of SuperPaint should seem familiar. Nevertheless, there's nothing like the last resort (reading the manual) for tying down loose ends, and learning how to really put a program to work!

## TWO LAYERS

SuperPaint's single most distinguishing feature is its ability to incorporate both painted (dot-by-dot) and drawn (object-oriented) images in a single document. You must use very different techniques to edit these two kinds of images. To simplify things, SuperPaint documents are split into two layers, one for each kind of image.

You will work with only one of these layers at a time. The layer you are currently working on is always "in front" of the other layer. You can either superimpose the layers, or hide the one you aren't working on (the one "in back"). To change from one layer to the other, you click on the icon in the top of the tool palette that contains the paint brush and the compass icons.

The Paint layer contains an image consisting of many dots. In it, you can use all sorts of painting tools, like a spray can, paint brush, eraser, and paint bucket to erase or paint more dots in the document. You can also paint rectangles, ovals, and round-cornered rectangles. Remember, though, that painted shapes are nothing more than a collection of dots. Once you create a rectangle, for example, you cannot go back and change the pattern it was painted with. Instead, you must erase the dots that made up the old rectangle and paint a new one in its place.

In the Draw layer, objects are distinct from each other. Since they remember all their characteristics, such as line width and pattern, it is easy to go back and change the pattern of a rectangle in the Draw layer. Changes are easy to make -- without erasing anything.

Objects are entities that are stored as mathematical information in the computer. They can overlap each other, and be stacked up. They **cannot** be edited dot-by-dot.

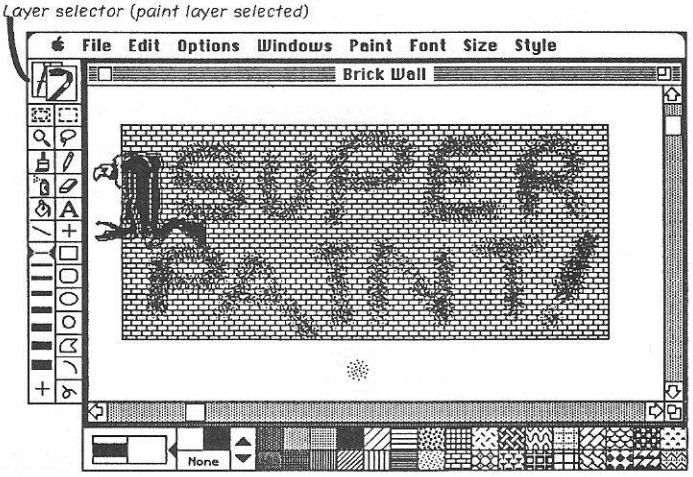
## DOCUMENT DIMENSION

When a program creates data or images and saves them to disk, it stores them in a file. The word "file" is the commonly-used computer term. With the Macintosh, files are normally referred to as documents. SuperPaint documents contain images that are 8 inches across and 10 inches high.

## THE TOOL PALETTE

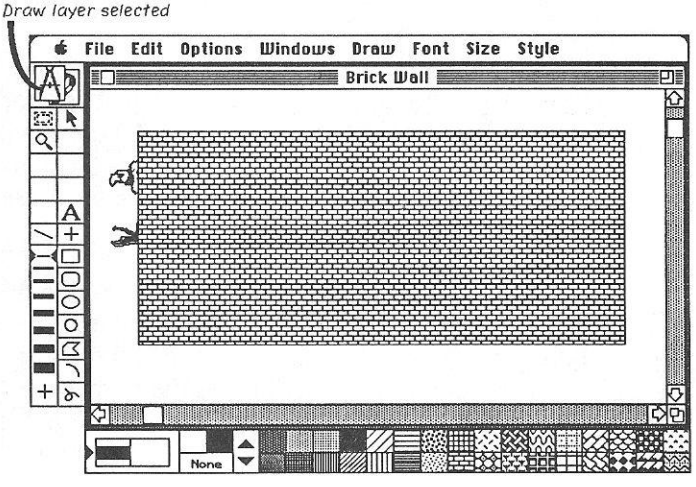
Along the left-hand side of the screen, there is a palette filled with various tool icons. Clicking on one of these icons tells SuperPaint what task you want to perform next. For instance, after clicking on the oval-shaped icon (the Oval tool), you can paint an oval. The tool you last clicked on remains selected until you click on a different tool. Thus, after painting your first oval, you can proceed to paint several more, without touching the tool palette again.

Figure 1.1




Since the Paint and Draw layers are so different from each other, it stands to reason that you need different tools for each one. Figure 1.1 depicts the tool palette when the Paint layer is active (in front). Compare it to Figure 1.2, which shows the Draw layer's tool palette.

Figure 1.2

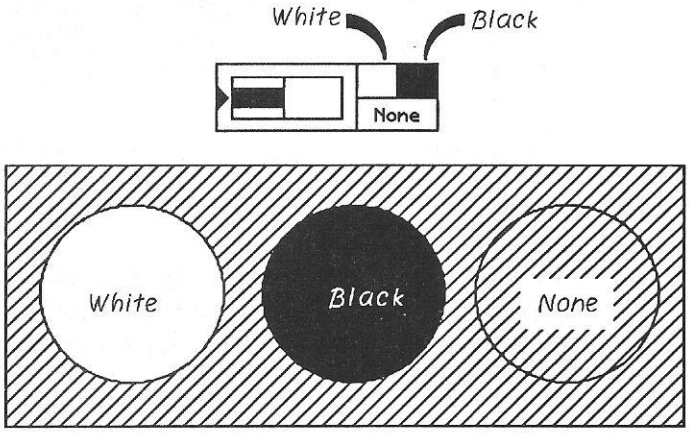


At the very top of the tool palette is an icon (the Layer selector) which distinguishes between the two sets of tools. When the compass is on top, the Draw layer is in front, where you can work on it, and the palette contains drawing tools. When the Layer selector displays a paint brush on top, the palette is filled with painting tools, and the Paint layer is in front. By clicking on the Layer selector , you can switch from one layer to the other.

## THE PATTERN PALETTE

Along the bottom of the screen is another palette, filled mostly with patterns. At any one time, 35 patterns are visible, and available for several uses. You can switch the rightmost 32 boxes between two sets of patterns by clicking on the arrowheads in the palette. The Black and White patterns are always available, as is the pattern marked "None." Areas painted with the None pattern are transparent, whereas things painted White are opaque.

Figure 1.3

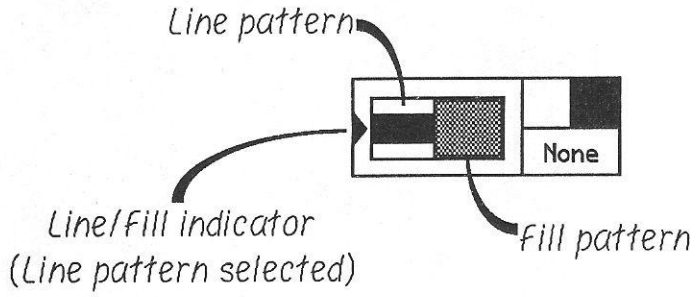



One set of patterns (the set that SuperPaint initially displays) looks fine when printed on either the ImageWriter or the LaserWriter. This set contains, for example, brick and woven patterns. The other set contains gray patterns that look particularly good on the LaserWriter. You will get the most benefit from these "LaserWriter grays," if you use them in Draw-layer objects.

At the left-hand side of the pattern palette is the Line/Fill selector. The selector applies any pattern selection either to area fills or to lines and borders. Clicking on the larger, filled rectangle (to the right) lets you select fill patterns. Clicking on the narrow rectangle permits selection of line and border-drawing patterns. The line and fill selectors are displayed with the currently selected line and fill patterns. The current

selector mode (Line or Fill) is indicated by a small arrowhead that points to the appropriate side of the selector.

Figure 1.4



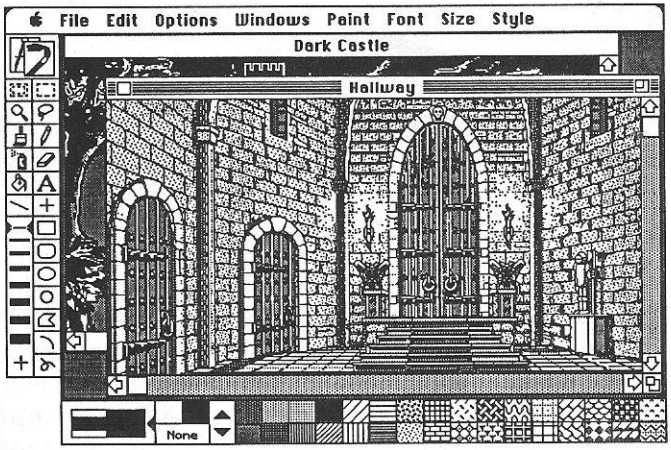

## MANIPULATING THE SCREEN DISPLAY

SuperPaint gives you plenty of control over the screen configuration. You can display and edit up to 10 documents at a time. You can even make the palettes and the menu bar invisible, and edit documents using the entire Macintosh screen.

### Multiple Windows

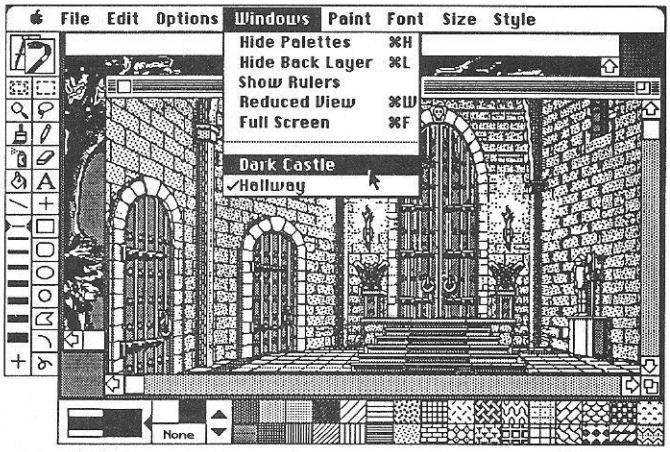
You can open several documents simultaneously. By choosing **Open** or **New** from the **File** menu, you add a window onto the desktop.

Figure 1.5




At any time, only one window is active. The active window shows the typical Macintosh highlighting (the Hallway document in Figure 1.5, for instance). To switch to a different document, click any exposed portion of its overlapped window. Sometimes that isn't possible -- a window might be completely obscured. In that case, simply choose the document you want from the **Windows** menu (as in Figure 1.6). Every open document is represented in the **Windows** menu.

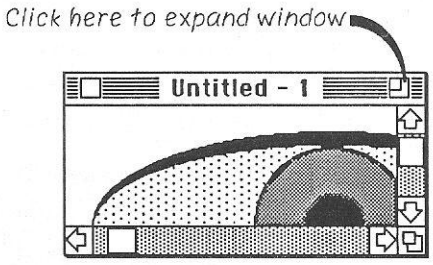
Figure 1.6




Multiple windows are extremely useful when you need to cut/copy and paste images between documents.

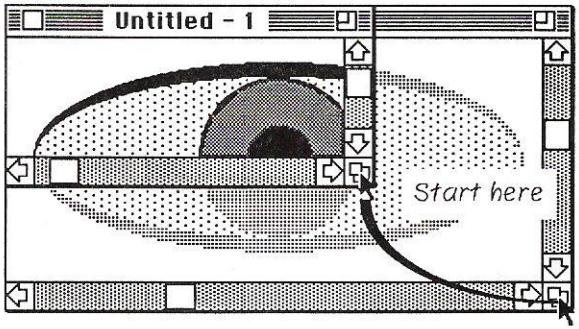
## Zooming Windows and the Full Screen Command

Figure 1.7




The active window can be expanded to maximum size by Zooming or with the **Full Screen** command. On versions of the Macintosh with enhanced Read-Only Memory (ROM) software, you can click in the Zoom box. This is the small box at the right-hand side of a window's title bar (see Figure 1.7). On an unenhanced Macintosh, zoom the active window by double-clicking anywhere in its title bar. Return the window to its unzoomed size by repeating the same operation (i.e., click in the Zoom box or double-click in the title bar). Of course, you can always adjust the size of a window by dragging the Size box in its lower right-hand corner (see Figure 1.8).

Figure 1.8




You can gain even more screen space by choosing the **Full Screen** command from the **Windows** menu (or by pressing Command-F). The **Full Screen** command takes the active document out of its window and places it directly on the desktop. While using Full Screen mode, there are no scroll bars, nor any windows. To scroll, you must use the Hand (see below). To switch to another document, choose it from the **Windows** menu. To bring a desk accessory out, choose it from the  menu.

Choosing **Full Screen** again places the open documents back in their normal windows.

## Hiding the Palettes and the Menu Bar

By choosing **Hide Palettes** in the **Windows** menu (or by pressing Command-H), you can remove the tool and pattern palettes from the screen. In combination with the **Full Screen** command, this lets you work with the most recently selected tool, using almost the entire screen at once.

To restore the Palettes to the screen, choose **Show Palettes** from the **Windows** menu, or press Command-H again.

You can even remove the menu bar whenever the palettes are hidden. To achieve this effect, turn on the "Hide menus when hiding palettes" option in the **Preferences** dialog box (reached by choosing **Preferences** in the **Options** menu). That way, you really can work with the entire Macintosh screen at one time. When you are done, press Command-H to restore the menu bar and palettes.

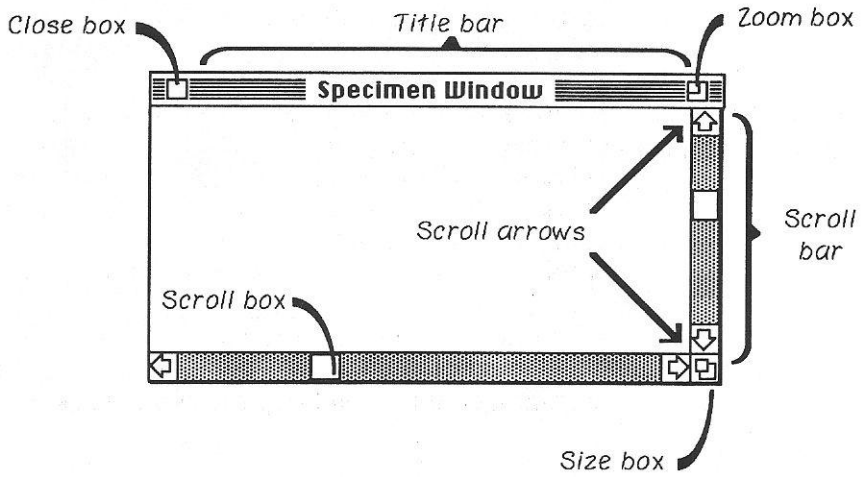
The Full Screen command and "Hide menus" option are not available when using a Macintosh that has a large screen of any sort. They work only on standard Macintoshes.

## Scrolling

At any moment, you can only see a portion of your document. To see and manipulate the rest of a document, you must scroll (i.e., shift) the viewing area. There are several ways to accomplish this.

### Scroll Bars

Figure 1.9




When you employ windows, you can use scroll bars to move around in the document. The vertical scroll bar (at the right-hand side of a window) is used to move the document up and down in the window. Likewise, the horizontal scroll bar shifts the window left and right. Clicking on a scroll bar's arrow slowly shifts the document in the window in the indicated direction. Dragging the scroll box lets you move to a position relative to the size of the document. For instance, dragging a scroll box to the middle of a scroll bar positions the viewing area halfway into the document. Finally, clicking in the gray area of the bar (the page bar) scrolls by one windowful in the direction of the arrow that is on the same side of the scroll box.

The best way to learn how the scroll bars work is to experiment with them. Open one of the sample SuperPaint documents included on the disk, and try scrolling it with the scroll bars.

### The Hand

Another way to scroll is by using the Hand. The Hand is always available, even in Full Screen mode. To use the Hand, press and hold the Space bar. The mouse cursor will change into the shape of an open hand. You can then drag the document in any direction you like. Just press the mouse button and drag the cursor in the direction you want the document to shift. Notice that the document moves along with the cursor, and that the scroll boxes shift automatically.

While entering text, press and hold Command-Space bar to use the Hand.

Holding down the Shift key constrains Hand motion to the vertical or horizontal. The direction depends on which way you initially move the cursor.

### Scrolling Tools and Dragging

All tools automatically scroll the document as necessary. For example, you can easily create a rectangle that is larger than the window. As you drag a corner of the rectangle past the edge of the window, the document will scroll obligingly, and the rectangle will continue to grow. When you bring the corner of the rectangle back within the window, the document will stop scrolling.

Likewise, you can drag selections anywhere in a document. As you drag a selection past the edge of the window, the document will scroll accordingly, until you bring the cursor back within the window.

You can disable this feature, if you desire. To do so, choose **Turn Scrolling Off** from the **Options** menu (or press Command-`). Turn it back on by choosing **Turn Scrolling On** from the **Options** menu (or press Command-` again).

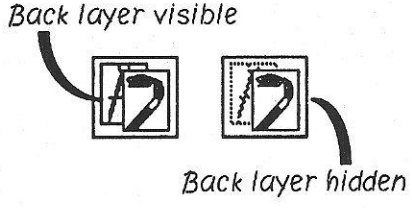
These rules also apply while in Full Screen mode.

### Hiding the Back Layer

Normally, you can see what you have created in both the Paint and the Draw layer at one time. Because this can be confusing, there is a command to hide the back layer (the one you are not currently working on). Choose **Hide Back Layer** from the **Options** menu. You can press Command-L to achieve the same effect, or click on the Layer selector with the Option key held down. To turn layer hiding off, choose **Show Back Layer** from the **Options** menu, or press Command-L again.

Note that when the back layer is not visible, the Layer selector indicates this. Either the paint brush or the compass is dimmed, whichever is the hidden back layer.

Figure 1.10



## UNDO

You can always reverse your most recent editing operation by choosing **Undo** from the **Edit** menu. Repeatedly choosing **Undo** will alternately restore or reverse the most recent editing command.

For example, let's say you are unhappy about the position to which you just dragged a selection. Choosing **Undo** will return the selection to its original position. Undoing again places the selection in the new position, etc.

There are two ways to use the Undo command from the keyboard. The first is Command-Z, which is standard in most Macintosh programs. The second way is by pressing the tilde (~) key in the upper left-hand corner. The latter shortcut originated from MacPaint and is very convenient. When entering text, this key simply enters the tilde character. Use the menu command or Command-Z to undo when entering text.

**You cannot undo File operations (e.g., printing, saving a document, etc.).**

## PREFERENCES

There are features of SuperPaint that you can tailor to your liking. If you choose **Preferences** from the **Options** menu, you will be presented with a dialog box containing these features and their current settings.

For example, you can choose whether you would prefer the pattern palette to be at the top or the bottom of the screen. You can also indicate whether you want the menu bar to disappear when you choose **Hide Palettes** from the **Windows** menu.

Your most recent Preferences selections will be remembered the next time you start SuperPaint. Your preferences are automatically stored in a file named "SuperPaint Prefs." The preferences file can reside in the same folder as SuperPaint, or in the same folder as your System file.

# Part 2:

# Painting

The most important thing to understand about the Paint layer is that you will use it to create patterns of dots. Once you paint something, the only way to alter it (besides using the Undo command) is to erase dots or add dots.

## CONSTRAINING

Constraining is used to restrict a shape you are painting to some particularly useful subset of the tool's capabilities. For example, when painting an unconstrained line, you can select any pair of endpoints. When painting a constrained line, though, SuperPaint will restrict it to certain angles (e.g., vertical, horizontal, 45 degrees). Once you have selected a tool, constraints are invoked by pressing and holding one or more keys (usually Shift, but sometimes both Shift and Option) while you press the mouse button to use the tool. Generally, you must hold the constraint key(s) throughout that use of the tool.

The description of each tool includes all the constraint variations.

## PAINTING SHAPES

### Paint from Center

Normally, you will paint a shape by specifying the locations of its corners. Sometimes, that is not the most convenient way. That's why SuperPaint includes the Paint from Center option. You can enter this mode by choosing **Paint From Center** in the **Options** menu, or by double-clicking the Rectangle, Rounded Rectangle, Oval, or Circle. The affected shape tools reflect this mode by displaying a small crosshair. While in this mode, pressing the mouse button specifies the center of the shape, while releasing the mouse specifies the outside location.

To restore the initial shape-drawing mode, choose **Paint from Corner** in the **Options** menu, or double-click one of the four shape tools.

### Patterns and Borders

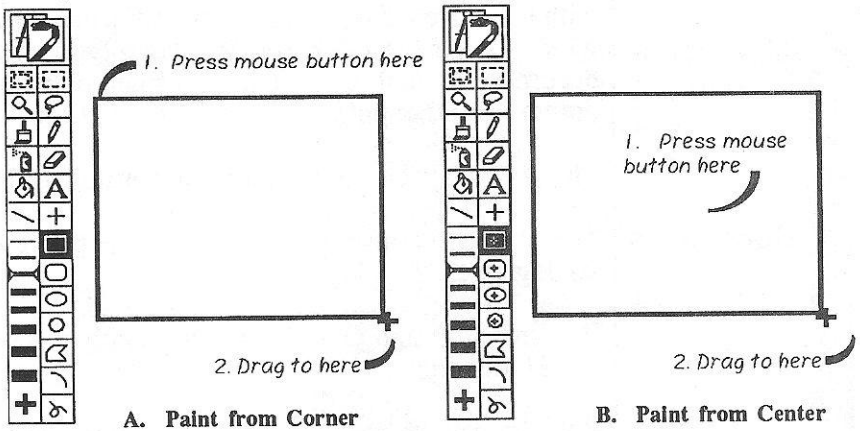
Remember that the patterns that are used to paint the borders and interiors of shapes are taken from the pattern palette. To paint a transparent shape, set the fill pattern to "None." For more information on patterns, see the discussion in Part 1.

You can also control the thickness of the border with the Line Size selector. See the discussion of the Line tool, below.

**Rectangle**

This tool lets you paint rectangular shapes. When you select it, the cursor becomes a solid crosshair. The thickness of the crosshair indicates which line thickness is currently selected. In Paint from Corner mode, move the cursor to a starting point, press the mouse button to select one corner, then drag the rectangle's opposite corner in any direction, as in Figure 2.1A.

Figure 2.1




**A. Paint from Corner** **B. Paint from Center**

In Paint from Center mode, press the mouse button on the center point, then drag the rectangle's corner wherever you want it (see Figure 2.1B).

Constraints

The Shift key restricts this tool to the creation of squares.

**Rounded Rectangle**

This tool works just like the Rectangle tool, except it paints shapes with rounded corners.

Constraints

The Shift key lets you create squares with rounded corners.

**Oval**

The Oval tool lets you draw ovals. You actually specify a rectangle, within which SuperPaint paints an oval. Paint from Center works just as with the Rectangle tool.

Constraints

The Shift key restricts this tool to creating circles.

**Circle**

The Circle tool works precisely like a constrained Oval. With it, you can draw only circles.

Constraints

None.

## Polygon

The Polygon tool lets you paint a shape with as many sides as you want. Click once to set the starting point. Move the pointer and click at the second corner, then the third, etc. Double-click the last corner to complete the polygon, or click outside the window.

SuperPaint will automatically paint the final edge and fill the polygon with the current fill pattern. If the fill pattern selected is "None," when you double-click to finish the polygon, the cursor location becomes the final point. Unlike a filled polygon, a line will not be drawn from that point to the beginning point.

The polygon's border is painted according to the current line size.

### Constraints

The Shift key constrains the sides of the polygon to angles of 45 and 90 degrees.

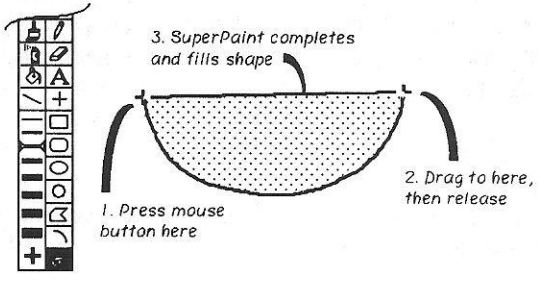
Holding Shift and Option constrains polygon sides to angles of 30, 60 and 90 degrees.

Either constraint remains in effect only so long as you hold the key(s) down. You can even change (or eliminate) constraints in the midst of adding an edge to the polygon. If you press the Shift key while painting an edge, it immediately jumps to the nearest permitted angle. If you release the Shift key, it starts following the cursor again. Likewise for the Shift/Option constraint.

## Freehand

The Freehand tool allows you to paint any shape you want. Move the cursor to the starting point, then drag it to outline the shape you want. Release the mouse button to define the ending point. If you have selected a fill pattern other than "None," SuperPaint automatically connects the starting and ending points.

Figure 2.2




### Constraints

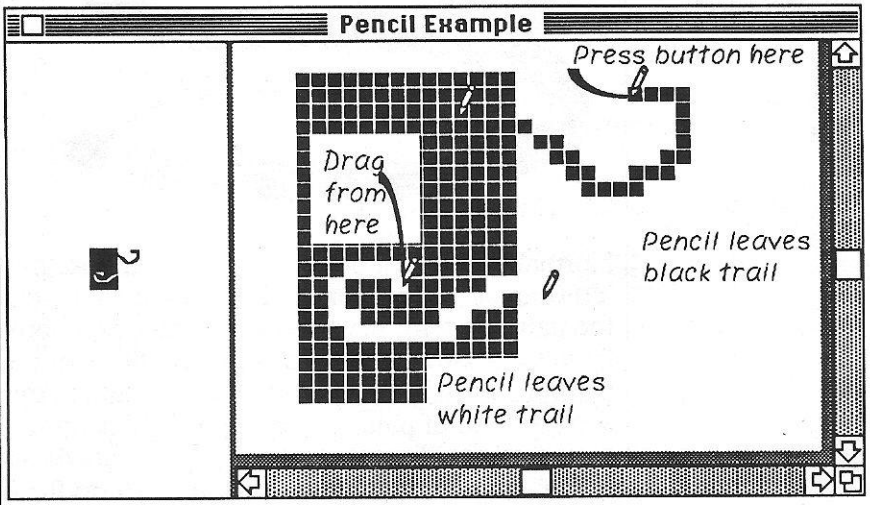
None.

## OTHER TOOLS

### Pencil

The Pencil tool lays down a thin trail of black or white paint while you hold the mouse button down. When you select this tool, the cursor changes to a small pencil. If, when you first press the mouse button to engage the pencil, the tip of the pencil cursor lies over a white area, it will leave a trail of black paint. The reverse is also true: If you start over a black area, the pencil will leave a white trail.

Figure 2.3




The pencil is extremely useful in the magnified mode (as in Figure 2.3), where it is easy to edit small details on a dot-by-dot basis.

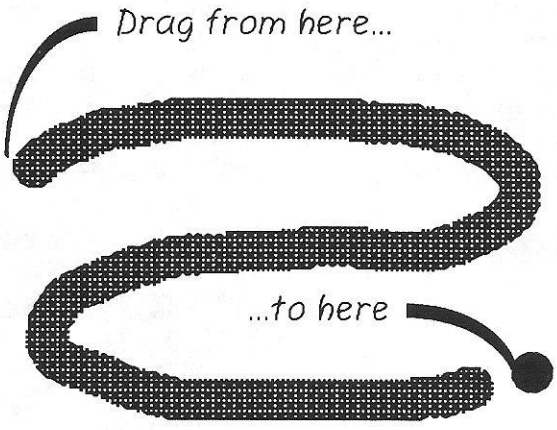
### Constraints

The Shift key restricts the pencil's trail to either vertical or horizontal motion. The direction of the constraint is based on the direction of the pencil's first motion.

### Paint Brush

The brush applies paint in the currently selected fill pattern and brush tip shape. To use it, click the tool, then drag the cursor across the window. As long as you hold the mouse button down, the paint will continue to flow.

Figure 2.4

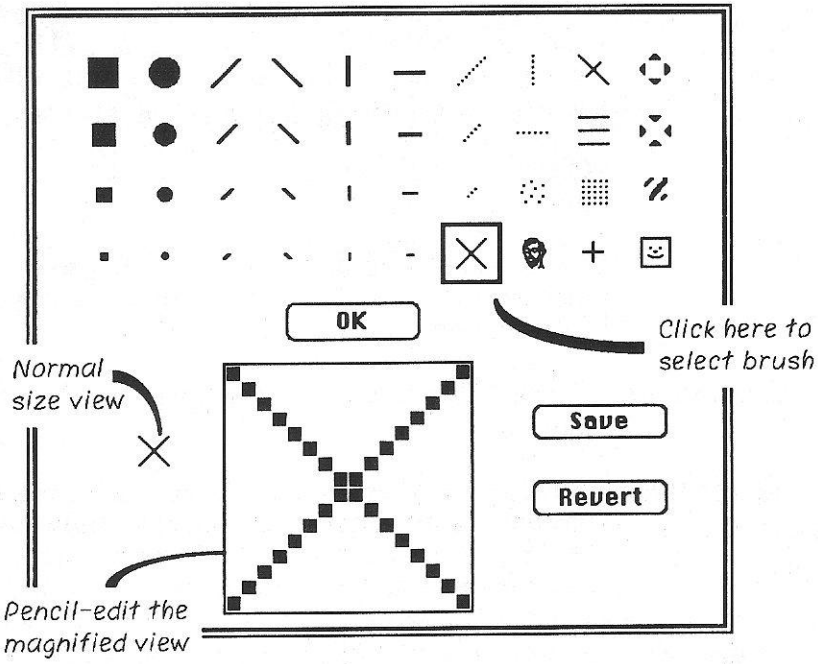



Normally, brushed paint is opaque -- it obscures any image beneath it. You can permit overpainted images to show through the white areas of the paint pattern, if you like. To do this, choose **Transparent Paint** from the **Paint** menu. You can also think of transparent paint as painting with the black portion of the pattern only. There is yet another kind of paint which applies the pattern only to black areas of the painting. To use it, choose **Paint on Black** from the **Paint** menu. Choose **Opaque Paint** to return to the original kind of paint. To temporarily use transparent paint, hold the Command key down while dragging the brush.

To select a different brush shape, choose **Brush Shapes** from the **Paint** menu or double-click on the Paint Brush tool. SuperPaint displays a dialog containing the various brush shapes. Click on the shape you want.

To customize a brush shape in the Brush Shape dialog, hold down the Option key when you click on one. You can then edit a magnified view of the brush. Click the cursor on a white square in the brush shape to convert it to a black one. Conversely, clicking on a black square changes it to a white one. A normal size view of the brush shape is displayed to the left of the magnified view. Click the OK button to accept the new shape, or click Cancel to reject it. Modified brush shapes are stored in the SuperPaint Prefs file.

Figure 2.5




The best way to learn how the various kinds of paint work is to try them out.

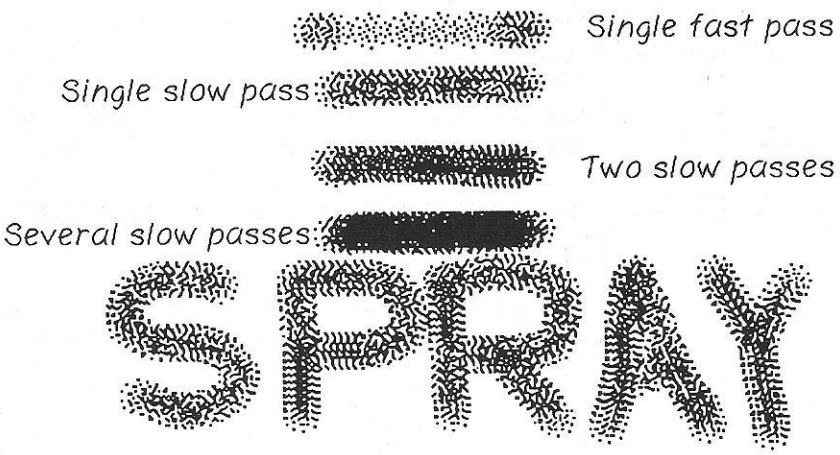
Constraints

The Shift key restricts the brush to horizontal or vertical movements.

**Spray Can**

The spray can applies a coat of paint to the image, in a manner similar to an airbrush. The paint is in the current fill pattern.

Figure 2.6



The spray can works like a can of real spray paint: The slower you drag the can, the heavier the paint coat will be. Drag faster and the coat gets lighter. If you use it with a white fill pattern, the spray can is able to create interesting "feathering" effects.

Opaque, Transparent and Paint on Black work just the same as with the Paint Brush.

The density of the paint varies according to the line size (see the Line tool, below). If the line size is small, the paint coat will be dense. A large line size yields a sparse coat.

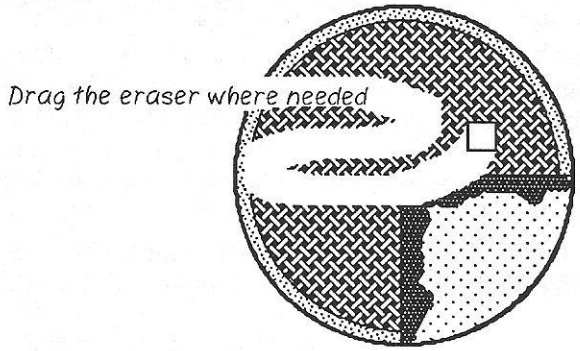
Constraints

The Shift key restricts the spray can to horizontal or vertical movements.

## Eraser

The Eraser tool provides a quick and efficient way to get rid of unwanted parts of your pictures. The tool works like a blackboard eraser (but without the dust). Simply hold down the mouse button and sweep it back and forth to erase everything underneath it.

Figure 2.7




Remember that if you make a mistake, you can always use the Undo command (in the Edit menu) to restore anything you erased in your most recent drag of the Eraser.

Variations

To erase the visible portion of the Paint layer, double-click on the Eraser tool.

To erase the document's entire Paint layer, double-click the Eraser tool while holding down the Command and Option keys.

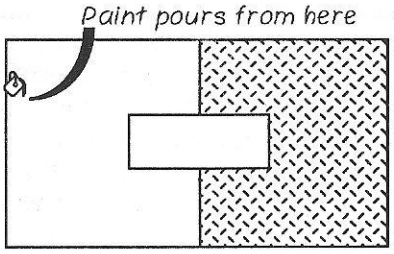
Constraints

The Shift key restricts the eraser to horizontal or vertical movement only.

**Paint Bucket**

Use the Paint Bucket tool to fill any enclosed area in the Paint layer. The bucket uses the currently selected fill pattern.

Figure 2.8




To use the Bucket, click its tool, place the bucket-shaped pointer within a white area to be filled, and click the mouse button. The paint flows from the very tip of the bucket's spill (see Figure 2.8).

The white area to be filled must be completely enclosed in black dots, or else paint will leak out and spread throughout the document. Should that happen, remember you can reverse the error by using the Undo command. Then go back and locate the gap. You might find the Magnifier tool (see Part 4) helpful in finding the leak.

You may also fill black areas that are completely enclosed by white dots.

Constraints

Normally, the paint bucket will fill any connected, enclosed area in the Paint layer, whether it is visible (within the active window) or not. To restrict the paint bucket to filling only those portions of the enclosed area that are visible, hold down the Option key when you click to fill an area.

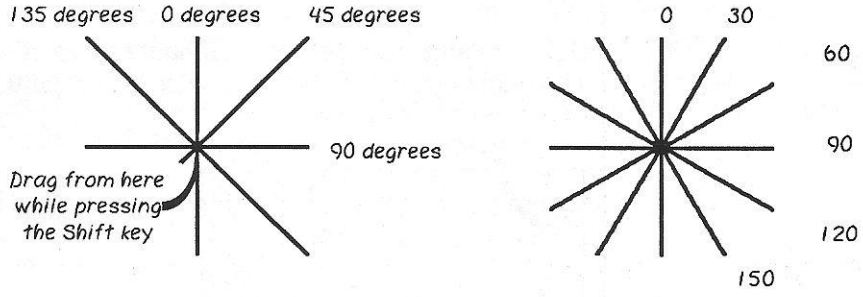
**Line**

To paint a line, click on the Line tool. Its icon looks like a diagonal line on the palette. The cursor will change to a crosshair shape. Drag from the starting point and release the mouse at the ending point. The line is painted in the current line pattern and size.

## Constraints

Holding the Shift key restricts line angles to 45 and 90 degree angles.

Figure 2.9



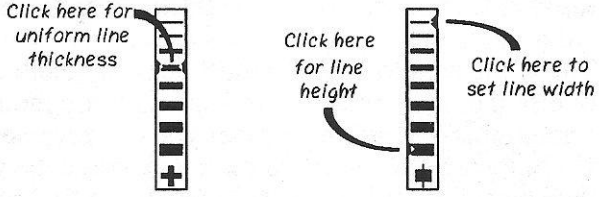

**A. Shift-constrained lines**

**B. Option-Shift-constrained lines**

Holding the Shift and Option keys restricts line angles to 30, 60 and 90 degree angles.

## Line Size

Figure 2.10




**A. Equal height and width**

**B. Different height and width**

In the tool palette is a Line Size selector as illustrated in Figure 2.10. Choose a thickness by clicking in the center of one of the lines. The selected line thickness is then highlighted by a small arrowhead on each side.

## Line Height vs. Line Width

You can paint lines that are of differing horizontal and vertical thickness. By clicking on the left side of a line size choice, you select the height (vertical thickness) of lines. Clicking the right side determines the width (horizontal thickness). The left arrowhead indicates the height selection while the right arrowhead indicates the width.

Below the thickest line size choice is a crosshair. This is the Line Size indicator. The horizontal segment reflects the selected line height, and the vertical segment, the width. You can think of the segments of the cross as depicting the thickness of the line if you were to paint it exactly horizontally or vertically. For example, Figure 2.10B

illustrates the appearance of the Line Size selector and indicator when the line height is at its maximum and width is at a minimum.

When the line height is set wide, and the width is set thin (or vice versa), lines that are neither horizontal nor vertical take on an in-between thickness.

When the Line tool is selected, the cursor takes the same shape as the Line Size indicator, telling you how thick the line will be.

**Perpendicular Line**

The Perpendicular Line functions precisely like the Line tool with the Shift key constraint engaged. With it, you can paint lines at 45 and 90 degree angles.

Constraints

Holding down the Option key permits line angles of 30, 60 and 90 dgrees.

**Arc**

The Arc tool paints a quarter of an oval. After selecting the Arc tool, move the cursor (which will change to a crosshair shape) to the starting point. Drag the cursor to the ending point and release the mouse button. The arc outline will be painted in the current line size and pattern, and its interior will be painted with the current fill pattern. To paint just the outline of the arc, set the fill pattern to "None" before you start dragging the cursor.

Figure 2.11


**A. Arc starts horizontally from point A**

**B. Arc starts vertically from point A**

There are two possible arcs that will fit any given pair of starting and ending points. One arc leaves the starting point horizontally, while the other starts out vertically. You select which of these you want by adjusting the cursor's initial dragging motion. If your cursor starts out by moving horizontally, you will get an arc that starts the same way.

Constraints

The Shift key restricts the Arc tool to generating quarter-circles.

## Text

You will use the Text tool to paint text into your document. You can incorporate text:

- In any font that is currently installed.
- In any size, up to 127 points.
- In any combination of styles (bold, italic, etc.).
- With line spacing of single, 1 1/2, or double spacing.
- Justified right, left, or centered.
- Filled with any pattern.

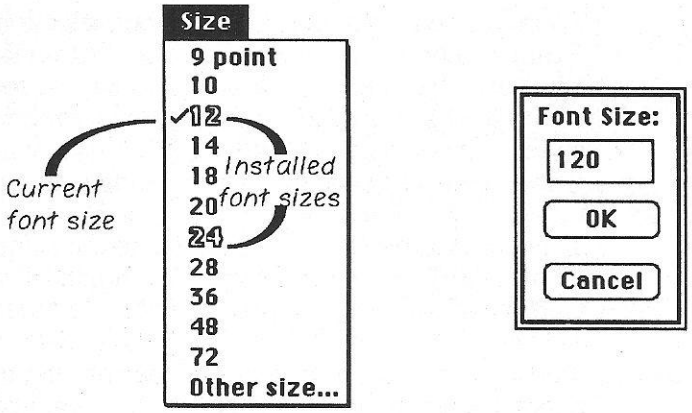
To use the Text tool, click on it in the palette. The cursor changes to an "I-beam." Click the mouse wherever you want to paint some text. SuperPaint displays a blinking vertical bar, which is the text insertion point, in the current font size. At this point, you can type in some text. If you make a mistake, you can correct it only by backspacing.

### Fonts, Sizes, and Styles

When you first start SuperPaint, the Text tool will use plain, 12 point Geneva characters. To use something different, make your choices from the **Font**, **Size**, and **Style** menus before or while entering text. Once you click the mouse again, the text is "pasted down" and becomes a collection of dots. That means subsequent font, size and style selections will no longer affect the painted characters.

The **Font** menu contains the names of all fonts that are currently installed. You can select any one of them. Each string of text can incorporate only one font, size, style, and inter-line spacing. As you are typing, if you want to end one string and start another, press the Enter key.

Figure 2.12

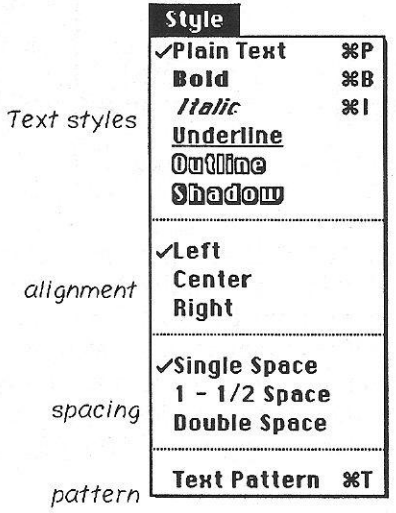



**A. Font Size menu** **B. Other size dialog**

The Size menu lets you select from several popular text sizes (see Figure 2.12A). SuperPaint indicates which of these sizes are installed by displaying their size numbers in outline style. In Figure 2.12A, for example, only the 12- and 24-point fonts are installed. If you choose an uninstalled size, the text might not look as good as it would in an installed font size.

You can choose a nonstandard size by choosing **Other Size...** from the Font Size menu and SuperPaint will display a dialog box (Figure 2.12B) in which you can enter any size you want from 1 to 127. Once again, if the size you indicate has not been installed, characters you type might not look very good.

Figure 2.13



To incorporate text styles, make your selection from the Style menu. You can choose from **Bold**, **Italic**, **Underline**, **Outline**, and **Shadow**. Examples of these styles can be found in the **Style** menu itself (see Figure 2.13). You can form any combination of these styles. Choosing an already-selected style will turn it off again. Choosing **Plain** cancels all other style selections.

There are Command-key shortcuts to choosing some font styles: Command-B selects Bold style, Command-I selects Italic, and Command-P (Plain) cancels all style selections.

## Line Spacing

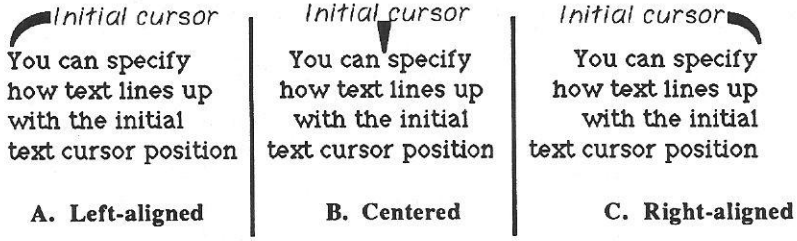
You can press the Return key while entering text. This brings the text cursor to the beginning of the next line, aligned beneath the initial position of the text cursor (the position you originally clicked on, or where you started a new string by pressing Enter).

When you first start SuperPaint, text lines are spaced closely (single-spaced). To obtain a different interline spacing, choose the desired spacing from the **Style** menu. You can choose from single, 1 1/2, or double spacing.

## Aligning the Text

You can specify how text lines up with the initial text cursor position. It will line up with the leftmost character if you choose Left alignment from the **Style** menu. This is the initial setting. You can also center the text, or make it align along the rightmost character by choosing **Center** or **Right**, respectively, from the **Style** menu.

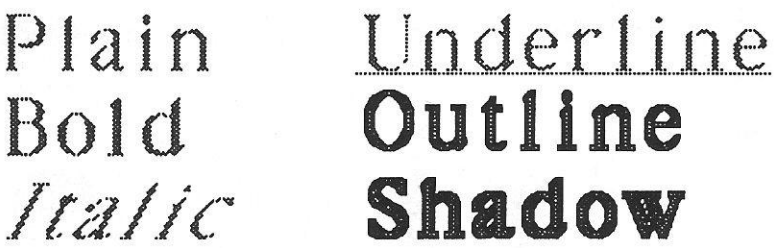
Figure 2.14




## Setting the Text Pattern

You can paint characters in any pattern. Set the fill pattern as desired. Select the Text tool and click in the document to position the insertion point. Then choose **Text Pattern** from the **Style** menu, or press Command-T. Solid characters (such as those in plain or bold styles) will be painted in the selected pattern as you type. Hollow characters (such as Outline and Shadow styles) will be outlined in black, then filled with the pattern. Figure 2.15 contains some examples.

Figure 2.15




The text pattern may be changed (as long as you do not click the mouse in the document) by selecting a different pattern from the palette and choosing **Text Pattern** again (from the **Style** menu).

The Line Size selector has no effect on text.

### Opaque vs. Transparent Background

Normally, anything you type will obscure whatever is behind it. SuperPaint lays down a white area beneath each character you type. If you want the image to show through your text, choose **Transparent Paint** from the **Paint** menu. To return to typing on a white background, choose **Opaque Paint** from the **Paint** menu.

## SELECTION

Once you have painted something, it is possible to go back and erase, move, or modify it. Often, you must first select a region of the Paint layer that you are interested in before you can do anything to it. In this section, we will discuss selection techniques, as well as the things you can do with a selection.

### Selection Rectangle

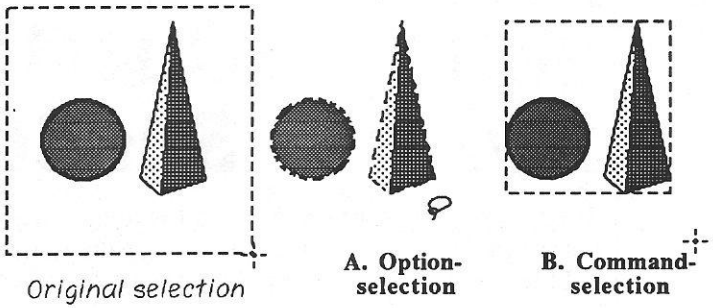
The Selection Rectangle tool shows up on the palette as a dashed rectangle. With it, you can mark off rectangular areas that you want to work on. Select the tool. The cursor will change into a dashed crosshair. Move the cursor to one corner of the area of interest and drag over to the other corner. When you release the mouse button, the boundary of the selected region will be highlighted with a pattern of moving dashes. Because this highlighting is reminiscent of a common theatrical sign, the Selection Rectangle is sometimes called the marquee. Bill Atkinson, author of MacPaint, refers to this effect as "marching ants."

The entire rectangular region is now selected, white space and all.

Constraints and Variations

The Shift key restricts the selection area to the shape of a square.

Figure 2.16




The Option key (Figure 2.16A): Upon button release, this lassoes all shapes enclosed in the rectangle and changes the selected tool to the Lasso (see the discussion of the Lasso, below).

The Command key (Figure 2.16B): When you release the mouse button, this causes the selection rectangle to shrink to the minimum size needed to enclose any shapes inside.

**Select All**

Double-click the Selection Rectangle tool to select all areas currently visible in the Paint layer. Choose Select All from the Edit menu (or press Command-A) to obtain a selection rectangle for the entire paint layer.

Variations

Holding down the Command key while choosing **Select All** from the **Edit** menu causes the selection rectangle to shrink to the minimum size needed to enclose any shapes in the Paint layer.

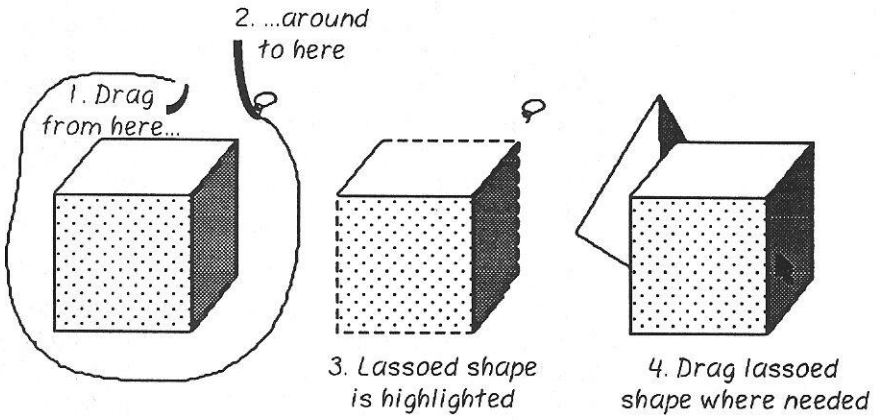
Holding down the Option key while choosing **Select All** from the **Edit** menu causes all shapes in the Paint layer to be selected. This is the equivalent of drawing a lasso around the entire document.

**Lasso**

The area you want to work on will not always be rectangular. To select regions of an arbitrary shape, you will need the Lasso. The Lasso tool looks like a rope with a loop in it. When you select the Lasso tool, the cursor takes on a shape similar to the tool's icon. Move the cursor to the starting point of the boundary. The base of the lasso cursor is the point that draws the border. Press the mouse button and pause for a second. Now drag the cursor around the desired boundary until you reach the starting point again. When you release the button, SuperPaint will automatically complete the

boundary, and will select all shapes enclosed therein, not including exterior white space. Figure 2.17 illustrates this process.

Figure 2.17




Variations

The Option key causes the lasso to incorporate the entire enclosed area into the selection, including white space.

Double-clicking the Lasso tool lassoes all visible, on-screen shapes in the Paint layer.

## Moving Selections

To move a selection around, you must begin by using the Selection Rectangle or Lasso tool. Then move the tip of the cursor over a part of the selection that is inside the moving outline and the cursor will change to an arrow. When the tool cursor changes to an arrow, you can drag the selection wherever you want it (see Figure 2.17, step 4).

Dragging

You can drag a selection outside of the visible portion of the Paint layer. As the cursor reaches the edge, the document will automatically scroll in the direction you are dragging (unless you have turned off the automatic scrolling feature). To stop scrolling, return the cursor to the visible portion of the document, or release the mouse button.

Constraints and Variations

The Shift key constrains the motion of a dragged selection to horizontal or vertical movements.

The Option key lets you drag a copy of the selection. The original remains in place.

Holding Command and Option causes the dragged selection to leave a trail of copies behind it. You can use this as a different kind of paint brush.

### Cut, Copy, Paste, and Clear

There is a holding area in which you can place a single selection for temporary storage. This area is known as the Clipboard.

To remove a selected portion of the Paint layer and place it in the Clipboard, choose **Cut** from the **Edit** menu, or press Command-X. The selection will disappear from the document.

You may also place a copy of your selection in the Clipboard without removing it from the Paint layer. To do so, choose **Copy** from the **Edit** menu, or press Command-C.

To take a copy of the Clipboard contents and place it in your document, choose **Paste** from the **Edit** menu, or press Command-V. The contents will appear in the center of the display area in whichever kind of selection (Lasso or Selection Rectangle) you used to place it in the Clipboard in the first place. You can then drag it wherever you want it. The Clipboard copy of the selection can be pasted into your document again and again if you want. It will not be displaced from the Clipboard until you Cut or Copy another selection.

To remove a selection from the document, choose Clear from the Edit menu, or simply press the Backspace key. The Clipboard is not affected by the Clear command or the Backspace key.

### Invert

The **Invert** command in the **Paint** menu changes all white areas to black, and black areas to white, within the selection. Choosing **Invert** again will restore the selection to its original state.

### Flip Horizontal and Flip Vertical

To change a rectangular selection into a mirror image of itself, use the **Flip Horizontal** command, from the **Edit** menu. The right side becomes the left side, and vice versa. You cannot flip a lassoed selection.

You can flip a shape so that its top and bottom trade places. Use **Flip Vertical** to achieve this effect. You can reverse either kind of flip by repeating it.

### Rotate Left and Rotate Right

You can rotate a rectangular selection by 90 degrees left (counter-clockwise) or right (clockwise). To rotate counter-clockwise, choose **Rotate Left** from the **Edit** menu. Choose **Rotate Right** to rotate the selection clockwise. You cannot rotate a lassoed selection.

## FREE ROTATE, STRETCH, DISTORT, SLANT, AND PERSPECTIVE

With these five commands, you can create some interesting effects in the Paint layer. They let you rotate selections to arbitrary angles, stretch them, distort them out of shape, lean them over to one side, or impart an illusion of depth.

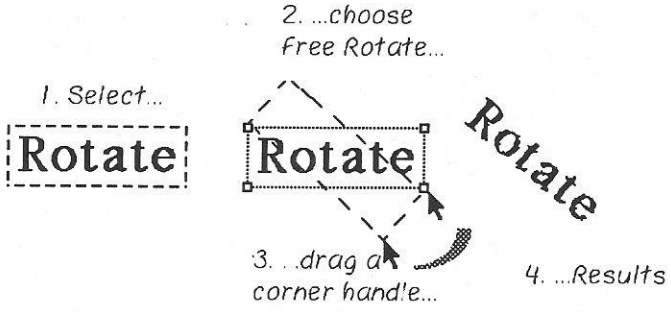
Each of these effects necessarily distorts your original image to some extent. For that reason, you will be better served by keeping a copy of the original, and using the effects only on copies. If you use more than one effect on a figure, or use the same effect multiple times, the distortion can become pronounced.

Patterns do not tend to survive these effects very well. If you know ahead of time that you will probably be rotating or changing the perspective (for example) of a figure, paint it without any patterns. After you have used the effects you need, you can safely go back and fill them as you wish.

These five effects only work on selections made with the Selection Rectangle tool. They are not available when you lasso something.

### Free Rotate

Figure 2.18

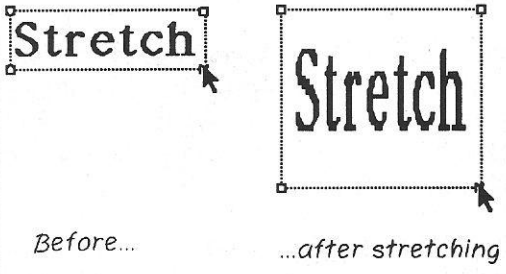



You can rotate a rectangular selection in finer increments than Rotate Left and Right allow, by using the **Free Rotate** command in the **Paint** menu. After you have made your selection, choose **Free Rotate**. The selection rectangle will turn gray, and a small hollow "handle" will appear at each of the rectangle's corners. Move the cursor over one of these handles. When the crosshair cursor turns into an arrow, you can drag the corner about the center of the rectangle, until you have reached the angle desired (see Figure 2.18). You can continue to rotate the selection in this way until you are satisfied with the rotation angle. To fix the selection in place, click anywhere in the window other than on a handle. The gray selection rectangle and handles will then disappear.

## Stretch

This command lets you change the size and proportion of a rectangular selection. After selecting the portion of the Paint layer to be stretched, choose the **Stretch** command from the **Paint** menu. The selection rectangle will turn gray and small rectangular handles will appear at each corner. If you drag one of these handles, the opposite corner will remain fixed while the selection rectangle grows or shrinks to follow the cursor (see Figure 2.19). When you release the mouse button, the contents of the selection rectangle stretch to match the new size and shape.

Figure 2.19




*Before...* *...after stretching*

When you stretch a selection by its handles, you adjust its width and height at the same time. You can adjust only the width or only the height, if you like. Simply move the cursor over one of the edges of the selection rectangle until it turns into an arrow, and then drag it. If you drag a vertical side, you can move it to the left or right. Similarly, you can drag horizontal sides up and down only.

### Constraints and Variations

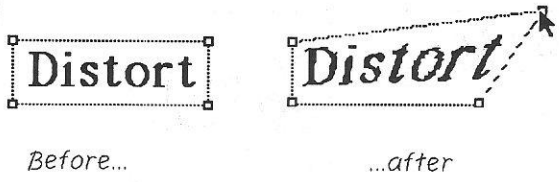
Pressing the Shift key before dragging a Stretch selection handle causes the rectangular selection to remain in its original proportions. For example, if the selection rectangle was initially twice as high as it was wide, that relationship will still hold after Shift-stretching.

You can also stretch a rectangular selection without using the Stretch command. After selecting a portion of the Paint layer with the Selection Rectangle tool, press the Command key while dragging a corner or a side of the selection rectangle. Holding down the Command and Shift keys allows you to keep the selection in proportion as you stretch it (just like pressing Shift while dragging a stretched selection). These variations were included in SuperPaint because they are familiar to so many MacPaint users.

## Distort

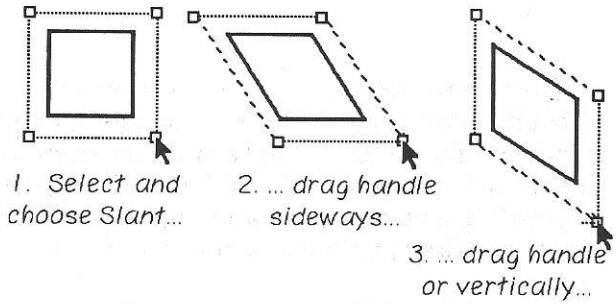
You can distort a rectangular selection much as if you had painted it on a sheet of rubber, and were tugging on a corner. After making your selection, choose **Distort** from the **Paint** menu. The selection rectangle will turn gray, and a small, hollow handle will appear at each corner. Move the crosshair cursor over one of these handles, until it turns into an arrow. Then drag the corner wherever you want it. The contents of the selection will distort accordingly. To stop distorting the selection, click the cursor anywhere but on a handle. Figure 2.20 illustrates this process.

Figure 2.20




## Slant

Figure 2.21

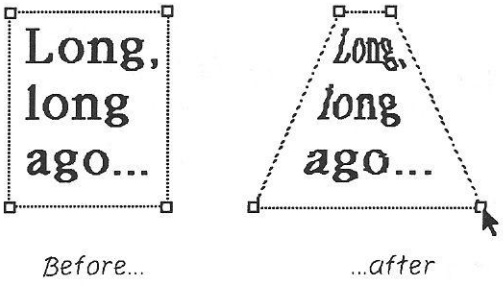



SuperPaint lets you slant a rectangular selection to the right or left (or up or down). Once you have made your selection, choose **Slant** from the **Paint** menu. The selection rectangle will turn gray, and a small, hollow handle will appear at each corner of the selection rectangle. Move the crosshair cursor over one of these handles, until it turns into an arrow. Then drag the corner left or right (or up or down), until the selection is slanted to the desired degree. If your initial dragging motion is vertical, you can only adjust the height of the side attached to the handle. Conversely, if your initial dragging motion is horizontal, you can adjust only the side-to-side position of the side attached to the handle.

## Perspective

To create an artificial perspective effect, you can stretch or shrink the top or bottom edge of a rectangular selection. This can give the illusion of depth, when used properly. After making your selection, choose **Perspective** from the **Paint** menu. The selection rectangle will turn gray, and a small, hollow handle will appear at each corner of the selection rectangle. Move the crosshair cursor over one of these handles, until it turns into an arrow. Then drag the corner left and right, until you have achieved the desired perspective effect. See Figure 2.22.

Figure 2.22




## COPY TO DRAWING

It is possible to take a portion of the Paint layer and move it into the Draw layer. To do so, begin by selecting the desired region with the Selection Rectangle or Lasso tool. Then choose **Copy to Drawing** from the **Edit** menu, or press Command-E. The screen flashes to tell you something happened.

All the dots in the selection are copied to the Draw layer, and are contained in a single painted object. That object is simply a collection of dots. It is not the same as a normal object created in the Draw layer.

# Part 3:

# Drawing

Unlike painted shapes and lines, objects created in the Draw layer are not just a collection of dots. Each object is an entity. Inside SuperPaint, an object is stored as mathematical information. In the technical jargon, they are sometimes called "vector" objects.

Objects created in the Draw layer will normally look better when printed than they do on the screen. That's because printers usually have higher resolution than the Macintosh screen. SuperPaint takes the formula that defines the object and turns it into an image that contains as many dots per inch as the printer can produce. For example, using Apple's LaserWriter, these "vector" objects are printed at 300 dots-per-inch resolution.

## CONSTRAINING

Constraining is used to restrict an object that you are drawing to some particularly useful subset of the tool's capabilities. For example, when drawing an unconstrained line, you can select any pair of endpoints. When drawing a constrained line, though, SuperPaint will restrict it to certain angles (e.g., vertical, horizontal, 45 degrees). Once you have selected a tool, constraints are invoked by pressing and holding one or more keys (usually Shift, but sometimes one or more of Shift, Option or Command) while you press the mouse button to use the tool. Generally, you must hold the constraint key(s) throughout that use of the tool.

Objects drawn with constraints do not remember these constraints. For example, let's say you create a 45 degree line by using the Shift constraint with the Line tool. If you go back and modify the location of an ending point, you must press Shift to maintain the constraint. If you don't, you can move the ending point anywhere.

For this reason, the Circle and Perpendicular Line tools are very useful in the Draw Layer. When you draw with these two tools, SuperPaint remembers that the circle or constrained line was created by these tools. When you modify a circle, for example, it will always remain a circle.

The description of each tool includes all the constraint variations.

## TOOLS

### Patterns and Borders

Objects you draw will use the current line size and the current line and fill patterns. You can change these parameters at any time. When you set different patterns or line sizes they are immediately applied to all selected objects. For more on this subject, see the discussion of Selection, a little later in this section.

## Draw from Center vs. Draw from Corner

Normally, you will draw an object by specifying the locations of its corners. Sometimes, that is not the most convenient way. That's why SuperPaint includes the Draw from Center option. You can enter this mode by choosing **Draw From Center** in the **Options** menu, or by double-clicking on certain tools, namely the Rectangle, Rounded Rectangle, Oval or Circle. The affected tools reflect this mode by displaying a small crosshair. While in this mode, pressing the mouse button specifies the center of the shape, while releasing the mouse (after dragging) specifies the outside location.

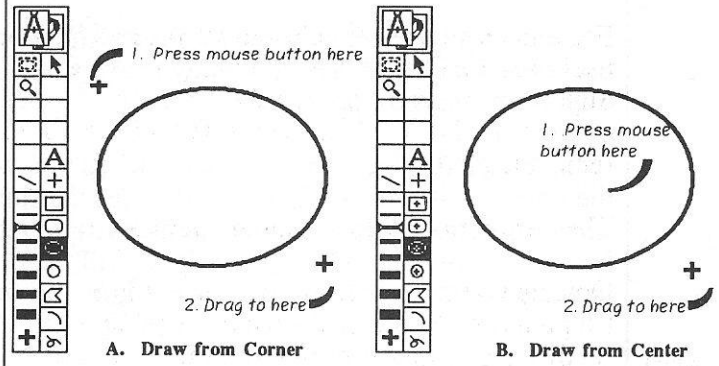
To return to the initial shape drawing mode, choose **Draw from Corner** in the **Options** menu, or double-click one of the four tools.

Objects remember which mode they were drawn in. When you resize an object, it will react accordingly. If it was created in Draw from Corner mode (the default setting), one corner will remain fixed while you adjust an edge or the opposite corner. If it was created in Draw from Center mode, the object's center will remain fixed while you adjust its corners or edges. When you select a shape that was created in Draw from Center mode, it displays a small crosshair at its centerpoint.

## Rectangle

This tool lets you draw rectangular shapes. When you select it, the cursor takes the shape of the Line Size selector (a cross that reflects the border line's thickness). In Draw from Corner mode, move the cursor to a starting point, press the mouse button to select one corner, then drag the rectangle's opposite corner in any direction, as in Figure 3.1A.

Figure 3.1




**A. Draw from Corner** **B. Draw from Center**

In Draw from Center mode, you press the mouse button on the center point, then drag the rectangle's corner wherever you want it (see Figure 3.1B).

Constraints | The Shift key restricts this tool to the creation of squares.

**Rounded Rectangle** | This tool works just like the Rectangle tool, except it draws shapes with rounded corners.

Constraints | The Shift key lets you create squares with rounded corners.

**Oval** | The Oval tool lets you draw oval objects. You actually specify a rectangle, within which SuperPaint draws an oval. Draw from Center works just as with the Rectangle tool.

Constraints | The Shift key restricts this tool to creating circles.

**Circle** | The Circle tool works almost exactly like a constrained oval. With it, you can draw only circles. The difference between a constrained oval and a circle makes itself evident when you resize the object. A constrained oval can be stretched out of shape, while a circle always remains circular.

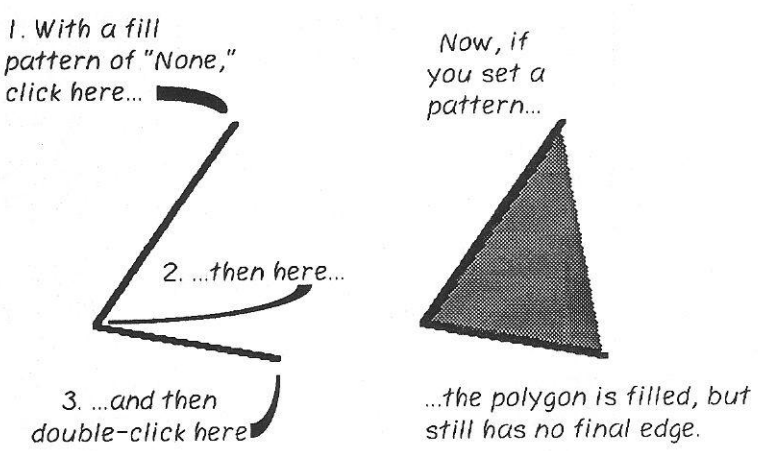
Constraints | None.

**Polygon** | The Polygon tool lets you draw a shape with as many sides as you want. Click once to set the starting point. Move the pointer and click at the second corner, then the third, etc. Double-click the last corner to complete the polygon, or click outside the window.

If the currently selected fill pattern is anything other than "None," SuperPaint will automatically draw the final edge and fill the polygon with the current fill pattern.

If the selected fill pattern is "None," when you double-click to finish the polygon, the cursor location becomes the final point. Unlike a filled polygon, a line will not be drawn from that point to the beginning point. You can go back and fill the polygon later, but that last edge will never be drawn. See Figure 3.2 for examples.

Figure 3.2




The polygon's border is drawn according to the current line size.

### Constraints

You can adjust the location of a polygon's vertices, or even add new vertices. See the discussion of the **Reshape** command, later in this section.

The Shift key constrains the sides of the polygon to angles of 45 and 90 degrees.

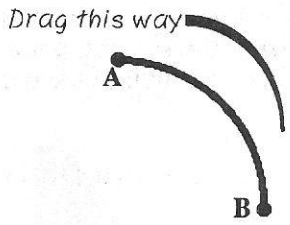
Holding the Shift and Option keys constrains polygon sides to angles of 30, 60, and 90 degrees.

Either constraint remains in effect only so long as you hold the key(s) down. You can even change (or eliminate) constraints in the midst of adding an edge to the polygon. If you press the Shift key while drawing an edge, it immediately jumps to the nearest permitted angle. If you release the Shift key, it starts following the cursor again. Likewise for the Shift/Option constraint.

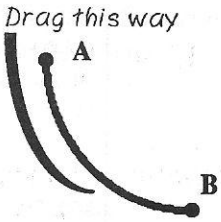
### Arc

The Arc tool draws a quarter of an oval. After selecting the Arc tool, move the cursor (which will change to look like the Line Size indicator) to the starting point. Drag the cursor to the ending point and release the mouse button. The arc outline will be drawn in the current line size and pattern, and its interior will be filled with the current fill pattern.

Figure 3.3




A. Arc starts horizontally from point A




B. Arc starts vertically from point A

There are two possible arcs that will fit any given pair of starting and ending points. One arc leaves the starting point horizontally, while the other starts out vertically. You indicate which of these you want by adjusting the cursor's initial dragging motion. If your cursor starts out by moving horizontally, you will get an arc that starts the same way.

Use the "None" pattern to draw an unfilled arc.

Arcs are not restricted to 90 degree wedges. See the description of the **Reshape** command, later in this section.

Constraints

The Shift key restricts the Arc tool to generating quarter-circles.

## Freehand

The Freehand tool allows you to draw any shape you want. Begin by clicking on the Freehand tool. Move the cursor to the starting point, then drag it to outline the shape you want. Release the mouse button to define the ending point. If you have selected a fill pattern other than "None," SuperPaint will automatically connect the starting and ending points before filling the shape.

If the selected fill pattern is "None," when you release the mouse button to finish the shape, the cursor location becomes the final point. A line will not be drawn from that point to the beginning point. You can go back and fill the shape later, but that last edge will never be drawn.

Constraints

None.

## LINES

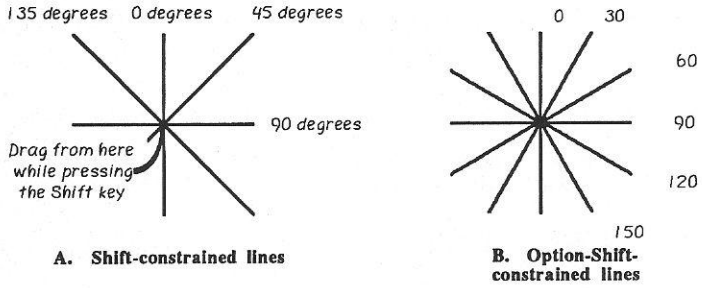
### Line

To draw a line, click on the Line tool. The cursor will change to a cross shape. Then drag from the starting point and release the mouse at the ending point. The line is drawn in the current line pattern and size.

### Constraints

Holding the Shift key restricts line angles to 45 and 90 degrees, as in Figure 3.4A.

Figure 3.4




**A. Shift-constrained lines**

**B. Option-Shift-constrained lines**

Holding the Shift and Option keys restricts line angles to 30, 60 and 90 degrees, as in Figure 3.4B.

### Perpendicular Line

The Perpendicular Line functions precisely like the Line tool with the Shift key constraint engaged. With it, you can draw lines of 45 and 90 degrees. SuperPaint remembers that lines drawn with the Perpendicular Line tool are restricted to 45 and 90 degree angles.

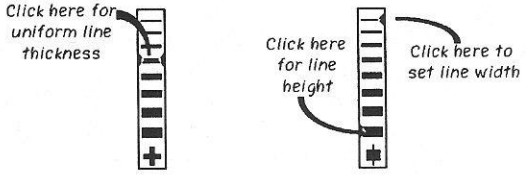
### Constraints

Holding down the Option key permits line angles of 30, 60 and 90 degrees. Lines drawn this way retain the constraint. That is, you cannot change such a line to attain a 45 degree angle.

### Line Size

In the tool palette is a Line Size selector as illustrated in Figure 3.5. Select a thickness by clicking in the center of one of the lines. The selected line thickness is then highlighted by a small arrowhead on each side.

Figure 3.5




**A. Equal height and width**

**B. Different height and width**

### Line Height vs. Line Width

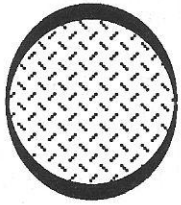
You can also draw lines that are of differing horizontal and vertical thickness. By clicking on the left side of a line size choice, you select the height (vertical thickness) of lines. Clicking the right side determines the width (horizontal thickness). The left arrowhead indicates the height selection while the right arrowhead shows the width.

Below the thickest line size choice is a cross. This is the Line Size indicator. The horizontal segment reflects the selected line height, and the vertical segment, the width. You can think of the cross segments as depicting the thickness of the line if you were to draw it exactly horizontally or vertically. For example, Figure 3.5B illustrates the appearance of the Line Size selector and indicator when the line height is at its maximum and width is at a minimum.

When the line height is set wide, and the width is set thin (or vice versa), lines that are neither horizontal nor vertical take on an in-between thickness.

Figure 3.6

*Thin height, thick width*



*Thick height, thin width*

When drawing any kind of shape, the cursor takes on the shape of the Line Size indicator, telling you how thick the line will be.

Line size changes are immediately applied to all selected objects.

## TEXT

The Text tool is used to add text objects to your document. You can incorporate text:

- In any font that is currently installed.
- In any size, up to 127 points.
- In any combination of styles (bold, italic, etc.).
- With line spacing of single, 1 1/2, or double spacing.
- Justified right, left, or centered.
- Filled with any pattern.

Text objects print with the maximum resolution available on the printer you use, providing you choose the proper font for the printer. On the LaserWriter, for example, Helvetica, Times, Symbol, and Courier always print at the highest possible resolution.

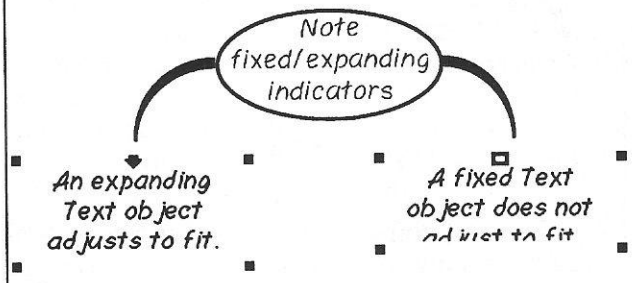
A text object is a rectangle into which you can type or paste text. Within the rectangle, text automatically adjusts to fill the full width of each line, without chopping words in half, if possible. This is known as word wrap. What happens when the text reaches the bottom of the rectangle depends on the kind of text object.

There are two kinds of text objects, fixed and expanding.

In a fixed text object, you manually set the height and width of the rectangle. When the text reaches the bottom of the rectangle, no more is displayed. Additional text is retained in the text object, but it cannot be seen.

You can only set the width of an expanding text object's rectangle. As you type more text, the bottom of the rectangle automatically expands to contain it. Conversely, if you delete characters from an expanding text object, the bottom of the rectangle shrinks as necessary.

Figure 3.7




When selected, text objects display a Text Type indicator, between the top right- and left-hand handles (see Figure 3.7). To change a text object from fixed to expanding, or vice versa, select it and click on the Text Type indicator. The indicator looks like a small, hollow rectangle on fixed text objects. On expanding text objects, it looks like a downward-pointing arrow.

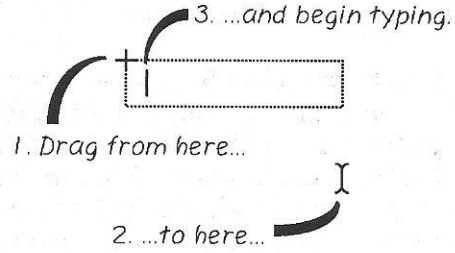
## Text Tool

To create a text object, begin by clicking on the Text tool in the palette. The cursor will change to an "I–beam." To create an expanding text object, drag the mouse to define its width (remember that its height is automatically determined). Fixed text objects can be created by holding down the Option key while dragging. You may specify both the height and width of a fixed text object.

To help you place a text object precisely, you can temporarily change the I–beam cursor into a crosshair by holding down the Command key. Place the center of the crosshair where you want the upper left-hand corner of the text object to begin. Then, press the mouse button and drag to the right. Release the button when the desired width is reached.

Once you have created a text object, SuperPaint outlines it with a dotted line, and temporarily fills it with an opaque white background, against which you can type. The rectangle contains a blinking vertical bar (the insertion point) in the current font size. Figure 3.8 illustrates this process.

Figure 3.8




At this point, you can begin to enter text by typing at the keyboard, or even by pasting from the Clipboard. If you make a mistake while typing, correct it by backspacing. Move the insertion point anywhere within the object by clicking the cursor where you want it. Select text by dragging the cursor from the first character you want through to the last. Then Cut, Copy, Clear, Paste, or type right over the selection. Double-clicking the cursor within the text will select a word.

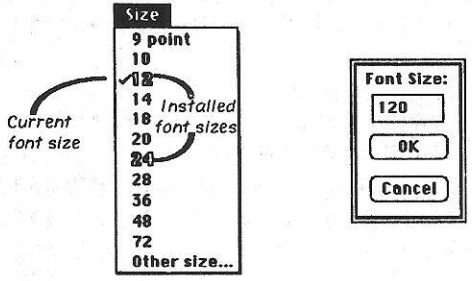
To edit an existing text object, choose the Text tool, and click the I–beam cursor inside it. You can then backspace, insert, or replace text that was already in the object.

## Fonts, Sizes, and Styles

When you first start SuperPaint, text objects use plain, 12 point Geneva characters (a conservative correspondence typeface). To use a different typeface, make your choices from the **Font**, **Size**, and **Style** menus. Change these parameters on a preexisting text object simply by selecting it, then choosing from the appropriate menus.

The Font menu contains the names of all fonts that are currently installed. You can choose any one of them. Each text object can incorporate only one font, size, style combination, and inter-line spacing.

Figure 3.9




A. Font Size menu B. Other size dialog

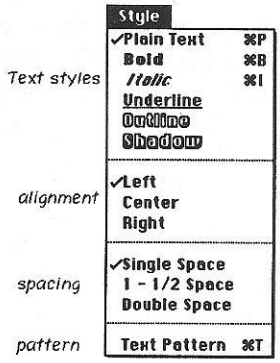
The Size menu lets you select from several popular text sizes (see Figure 3.9A). SuperPaint indicates which of these sizes are installed by displaying their size numbers in outline style. In Figure 3.9A, for example, only the 12- and 24-point fonts are installed. If you choose an uninstalled size, the text will not look as good as it would in an installed font size. If you are using a LaserWriter font (e.g., Helvetica, Times, etc.) and printing on a LaserWriter, this will not be a problem. The text will come out just fine. Otherwise, the printed results will look similar to what you see on the screen.

You can choose a size not included in the Size menu by choosing **Other Size...** from the **Font Size** menu. SuperPaint will display a dialog box (Figure 3.9B) in which you can enter any size you want. If the size you request has not been installed, characters you type might not look very good. Nevertheless, SuperPaint will try to approximate the typeface as best it can. If you use a LaserWriter font (e.g., Helvetica, Times, etc.), it will come out very nicely when printed on a LaserWriter, regardless of whether the size is installed.

When very large size fonts or certain styles are used, parts of the text may appear to be cut off on the screen. This text will be printed properly, despite the incorrect screen display.

To incorporate text styles, make your choice from the **Style** menu. You can choose any combination of **Bold**, **Italic**, **Underline**, **Outline**, and **Shadow**. The **Style** menu itself (see Figure 3.10) contains examples of these styles. Choosing an already-selected style will turn it off. Choosing **Plain** cancels all other style selections.

Figure 3.10




There are Command-key shortcuts to choosing some font styles: Command-B chooses Bold style, Command-I chooses Italic, and Command-P (Plain) cancels all style choices.

## Line Spacing

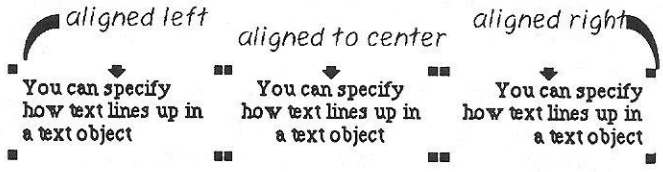
Text objects can contain multiple lines. You can start a new line by pressing Return. Lines are also formed automatically, as you type past the rightmost border of the text object.

When you first start SuperPaint, text lines in new objects are spaced closely (single-spaced). To obtain a different interline spacing, choose the desired spacing from the Style menu. You can choose from single, 1 1/2, or double spacing.

## Aligning the Text

You can specify how text will line up relative to the object rectangle. All lines will start at the leftmost column if you choose **Left** alignment (from the **Style** menu). This is the initial setting. You can also center the text, or make it align along the rightmost column by choosing **Center** or **Right** respectively, from the **Style** menu. See Figure 3.11 for examples.

Figure 3.11



### Setting the Text, Line, and Fill Patterns

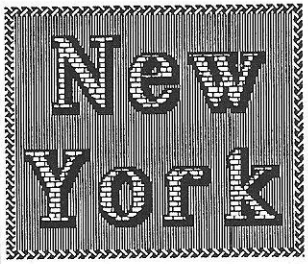
Characters can be drawn with any pattern. First, before selecting the text object, click on the fill pattern desired (this prevents the text object from being filled with the pattern). Next, select the text object and then choose **Text Pattern** from the **Style** menu, or press Command-T. Solid characters (such as those in plain, italic, or bold styles) are drawn in the selected pattern. Hollow characters (such as outline and shadow styles) are outlined in black, then filled with the pattern. Figure 3.12 illustrates the various styles of text drawn with a pattern.

Figure 3.12

Plain Underline
Bold **Outline**
*Italic* **Shadow**

Initially, a text object is filled with a pattern of "None." Its border's line pattern is also "None." You can adjust the line size and patterns in exactly the same way as for Rectangle objects. Select the text object and click on the patterns and line sizes you want. Figure 3.13 illustrates this.

Figure 3.13




Not on the LaserWriter

In general, text consisting of patterns cannot be printed on a LaserWriter as shown on the screen. To produce these effects on the LaserWriter, the text must be in the Paint layer.

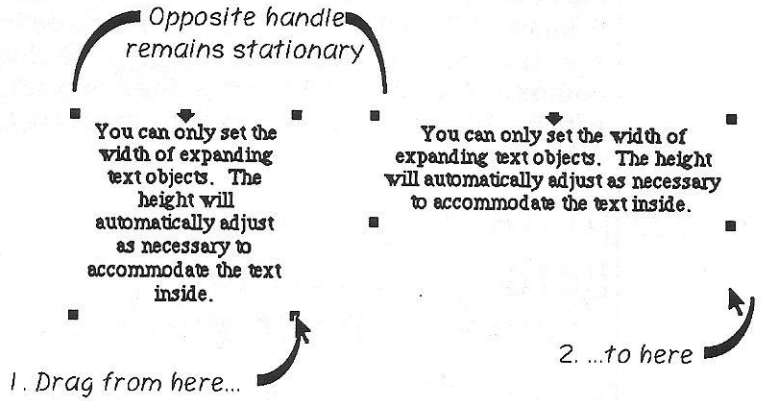
### Resizing Text Objects

Like other objects in the Draw layer, you can adjust the size of text objects. Using the Selection tool, click on the object, then drag a corner handle.

You can only set the width of expanding text objects. The height will automatically adjust as necessary to accommodate the text inside. If you drag a handle at the top of an expanding text object, you can shift the attached side edge to the right or left. The top edge will automatically shift up or down to accommodate the text inside.

Likewise, dragging a handle at the bottom of the text object causes the top edge to remain fixed while the bottom edge floats to accommodate the new width. Figure 3.14 illustrates this.

Figure 3.14




With fixed text objects, you can drag the corner handles anywhere you want. The text inside will reformat to try to stay inside the new rectangle. If the rectangle is too small, some of the text will be cut off (it will reappear when you expand the rectangle). If it is too large, you will simply have some empty space at the bottom.

In either case, you can rapidly correct the size of a fixed text object by clicking twice on its Text Type indicator (the hollow rectangle at the top center of the selected object). This temporarily changes it to an expanding text object (at which point the height of the rectangle adjusts automatically), then back again.

### Constraints

You can resize just the width or just the height of a fixed text object by holding down the Shift key while dragging a handle. If you first drag the handle sideways, you can only adjust the width. Dragging vertically lets you change only the height.

## SELECTION

Once you have drawn an object, it is possible to go back and clear, move, duplicate, or modify it. To do so, you must first select the object of interest. This section discusses how you select objects, and what you can do with those selections.

### Selection Tool

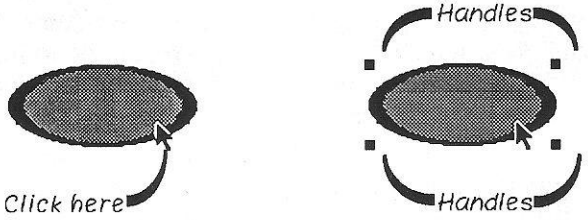
Begin by clicking on the Selection tool from the palette. The cursor remains in the shape of an arrow as long as the Selection tool is in effect.

## Selecting Single Objects

To select a single object, all you need do is click the cursor on a filled portion of the object. In other words, if an object is filled with any pattern except "None," you can select it by clicking in its interior or on its border. If the object is filled with a pattern of "None," you must click on its border to select it.

You can always select a text object, a LaserBits object (see Part 5), or a painted object by clicking within its interior, regardless of its fill pattern.

Figure 3.15




If you have successfully selected the object, it will display its handles (see Figure 3.15). We will discuss the handles' usefulness later in this section.

## Selecting Multiple Objects

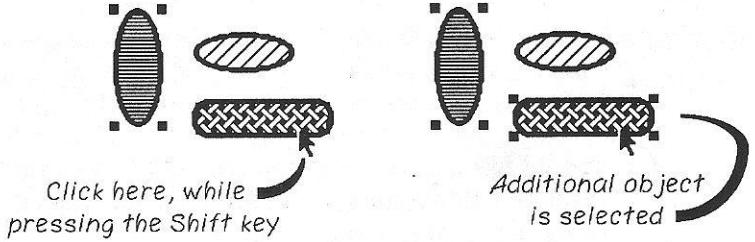
Sometimes you will want to work with more than one object at a time. This is most useful when you want to make the same change (e.g., fill pattern, border thickness, printing color, etc.) to several objects at once.

There are four ways to select multiple objects at one time.

### Shift-Click

Normally, when you click the Selection tool on one object, all other selections are automatically canceled. If, however, you hold down the Shift key when you click on an object, previously selected objects remain selected, and the new object becomes selected as well (see Figure 3.16).

Figure 3.16



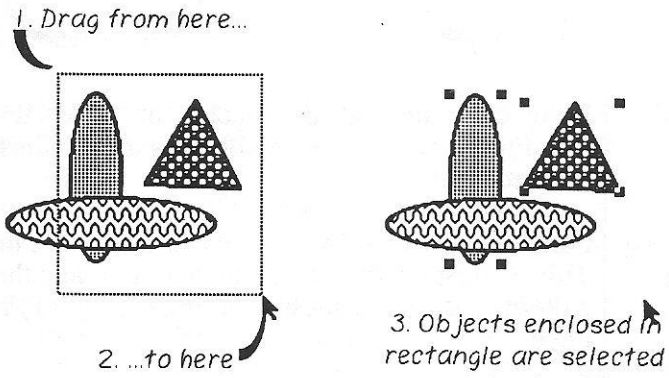
Likewise, if you have multiple objects selected, you can deselect one of them by holding Shift while clicking on a filled portion of it.

In general, holding Shift while clicking on an object alternately selects or deselects it, while preserving the selection status of other objects.

## Selection Rectangle

Another way to select several objects that are in close proximity to each other is to enclose them in a selection rectangle, as illustrated in Figure 3.17. With the Selection tool in effect, place the cursor at one corner of an imaginary rectangle that will fully enclose the intended selection. Then drag the cursor to the other corner of that rectangle. SuperPaint will display a dotted rectangle to indicate the selection area. When you release the mouse button, all objects completely contained in the rectangle are selected. All other objects are deselected.

Figure 3.17



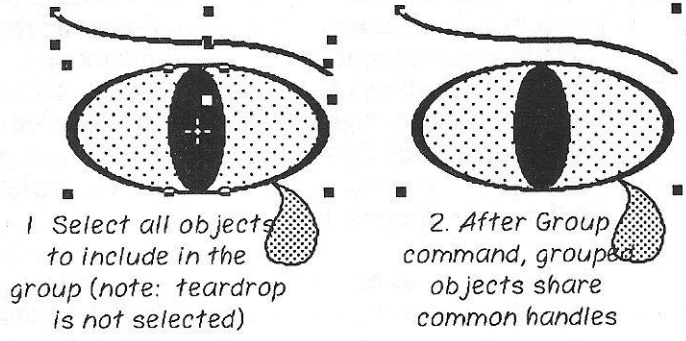

The selection rectangle can be used in conjunction with the Shift key. If you hold the Shift key down while drawing a selection rectangle, the selection status of all completely enclosed objects will be reversed. That is, enclosed objects that were selected will become deselected, and vice versa. The selection status of objects outside the selection rectangle is unaffected. This is just like using the Shift-click technique on all enclosed objects.

## Group and Ungroup

Often, you will need to treat a group of associated objects as if they were a single object. For example, you may have created a cube out of rectangles and polygons. Most of the time, you'll want to move or change the cube, and not one or two of its individual objects. You could use a selection rectangle every time you select the cube, but that can be inconvenient. To ease the task, you can tell SuperPaint to consider multiple objects to be a group. Selecting one member of the group selects them all.

To create a group, begin by selecting all its members. Use the Shift-click or selection rectangle techniques. Then choose **Group** from the **Draw** menu (or press Command-G). All the individual objects' handles will disappear, to be replaced with a single set of handles for the group, as in Figure 3.18. So long as the objects remain in the group, they are treated as a single object.

Figure 3.18




You can also release a group, to gain access to individual objects. Choosing **Ungroup** from the **Draw** menu (or pressing Command-U) replaces the selected group's single handle set with all its constituent objects' handles. SuperPaint now treats these as discrete objects again.

Select All

To select all objects in the Draw layer, choose **Select All** from the **Edit** menu, or press Command-A. Keep in mind that some of the objects selected may not be visible in the window.

To deselect all objects (e.g., select no object), click on a shape tool (e.g., Rectangle, Polygon, etc.) or click anywhere in the document where there are no objects.

## Moving Selections

To move a selection, press and hold the mouse button while the selection cursor is over a filled portion of a selected object (not one of its handles). Then, drag the selection wherever you want it. Release the mouse button when the object has reached its destination. Objects remain selected after you drag them around. Figure 3.19 illustrates this process.

### Dragging

Figure 3.19

As a shortcut, you can select and drag an object (or a Group of objects) in one motion. With the Selection tool engaged, move the cursor over a filled portion of an unselected object, and press the mouse button. Then, drag the object to its destination.

### Drag as Outlines vs. Drag as Objects

Normally, SuperPaint shows you a fully rendered version of the selection while you drag it around. Because large or complex selections can take a extra time to draw, the motion of the dragged selection can appear to lag behind the mouse. Actually, the selection itself follows the cursor perfectly. It is just the image of the selection that temporarily lags behind. When you release the mouse button, the selection will be drawn at precisely the corresponding position in the document. To be certain of the selection's placement, just pause before releasing the button.

If you prefer to eliminate the lag, try choosing **Drag as Outlines** from the **Draw** menu. Instead of depicting the complete selection while dragging, SuperPaint will draw only a dotted outline. The outline tracks the mouse more closely, since it is easier to display. As soon as you finish dragging the selection, it will once again be displayed normally. To return to the original dragging style, choose **Drag as Objects** from the **Draw** menu.

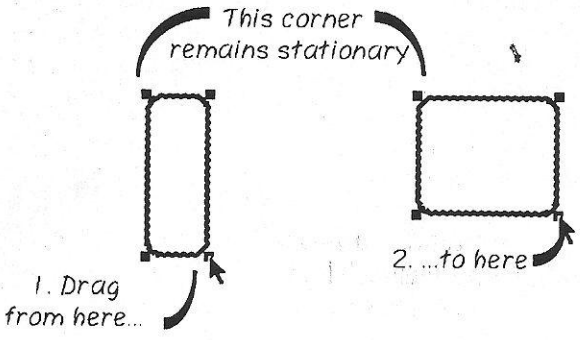
### Constraints

Holding the Shift key down while dragging a selection restricts its motion to horizontal or vertical, whichever is the initial direction of the movement.

### Resizing

After you have drawn an object, you can always go back and alter its shape. Begin by selecting the object. Four corner handles will appear. Move the cursor onto a handle and drag it (see Figure 3.20). The handle at the opposite corner will remain fixed, while the dragged corner follows the cursor as you wish. Use this process to shrink the object, expand it, or adjust its ratio of height to width.

Figure 3.20



Note that you cannot resize multiple objects at one time if they were individually selected. You cannot resize LaserBits objects. You can resize a Grouped set of objects.

### Constraints

The Shift key constrains the resize operation to a single dimension: horizontal or vertical. The constraint dimension depends on the initial drag direction. If you begin by dragging the handle horizontally, you will only be able to resize horizontally.

Holding the Command and Shift keys while resizing causes the object to maintain its original proportions. In other words, you can expand or shrink it, but its ratio of height to width will remain the same. An example: Say the original selection's height is 4 inches, and its width is 2 inches. If you resize it proportionally so that its height becomes 2 inches, its width will be 1 inch.

### Cut, Copy, Paste, Duplicate, and Clear

There is a holding area in which you can place a selection for temporary storage. This area is known as the Clipboard.

To remove a selection from the Draw layer and place it in the Clipboard, choose **Cut** from the **Edit** menu, or press Command-X. The selection will disappear from the document.

You can also place a copy of your selection in the Clipboard, without removing it from the Draw layer. To do this, choose **Copy** from the **Edit** menu, or press Command-C.

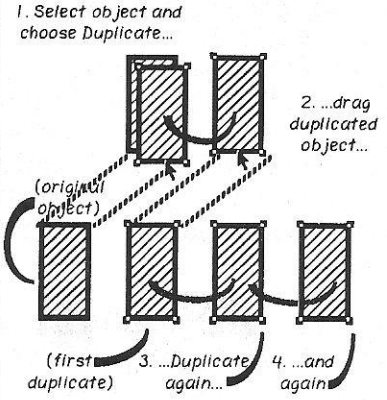
To take a copy of the Clipboard object and place it in your document, choose **Paste** from the **Edit** menu, or press Command-V. The Clipboard contents will appear in the center of the viewing area. You can then drag it wherever you want it. The Clipboard copy of the selection can be pasted into your document again and again, should you so desire. It will not be displaced from the Clipboard until you Cut or Copy another selection.

If you want to make a copy of a selection and have it appear immediately in the document, choose **Duplicate** from the **Edit** menu, or press Command-D. The selection will remain in place, and an identical copy will appear nearby. You can drag the duplicated selection wherever you want it.

The **Duplicate** command has a handy feature that distinguishes it from Copy/Paste. The first time you duplicate a selection, the new copy usually appears to the right, and slightly below the original.

Now, let's say you move this copy two inches to the right of the original, and then duplicate the new copy. This second duplicated object will appear two inches to the right of the second, if there is room for it. In fact, if you continue to use the Duplicate command, the cloned objects will line right up. Figure 3.21 illustrates this effect.

Figure 3.21




To remove a selection from the document, choose **Clear** from the **Edit** menu, or simply press the Backspace key. The Clipboard is not affected by the Clear command.

## Copy to Painting

It is possible to take a selection in the Draw layer and move it into the Paint layer. Start by selecting the desired object(s). Then choose **Copy to Painting** from the **Edit** menu, or press Command-E. The screen flashes to tell you something has happened. An image of the selected objects has been copied to the Paint layer.

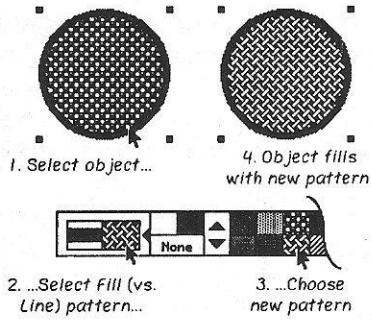
The image that appears in the Paint layer is, of course, a collection of dots. It is not an object entity like in the Draw layer. These dots can never be reconverted to become a true object.

The Clipboard is not affected by the Copy to Painting command.

## Selecting Patterns and Line Size

Just as you can alter the size of previously-drawn objects, you can also change their fill patterns, line patterns, and line widths. Begin by selecting the object or objects you want to alter. Then, make your changes via the pattern palette (see Part 1), or with the Line Size selector.

Figure 3.22




## PAINTED OBJECTS

A painted object is a rectangle which contains a collection of dots from the Paint layer. You cannot actually create painted objects in the Draw layer. You must create them elsewhere, and then paste them into the Draw layer.

The most common source of images for painted objects is the Paint layer. First, select a portion of the Paint layer (with the Selection Rectangle or Lasso) and cut or copy it to the Clipboard with the appropriate Edit menu commands. Then you can switch to the Draw layer and paste the Clipboard contents into the document.

While in the Paint layer, you could also move a selection directly to the Draw layer with the **Copy to Drawing** command in the **Paint** menu.

Finally, selections that are cut or copied from some other kinds of documents will create painted objects when you paste them into the Draw layer. In particular, a selection from a MacPaint document can produce a painted object.

### Line Sizes and Patterns

A painted object is contained in a rectangle that is initially filled with a pattern of "None," and has a border pattern of "None." Thus, painted objects initially appear to be transparent, and all objects behind them show through. To provide an opaque background for a painting, select a fill pattern as you might for a rectangle or text object. You can also frame the painted object by setting a border pattern and size.

### Resizing

To adjust the size of a painted object, first select it (with the Selection tool), then drag a handle until the image has the size and shape you are looking for. Also see the discussion of the Scale Selection command, in Part 4.

Since a painted object is a collection of dots, stretching it to make it larger will usually cause distortion.

Constraints

Holding down the Shift key while resizing a painted object lets you stretch it horizontally or vertically, depending on your initial drag direction.

Holding the Command and Shift keys while dragging the handle forces the resized object to maintain its original proportions (i.e., it will keep its original ratio of height to width).

## THE DRAW MENU

Please note that the descriptions of the Group ,Ungroup and Duplicate commands are included in the Selection discussion, earlier in Part 3.

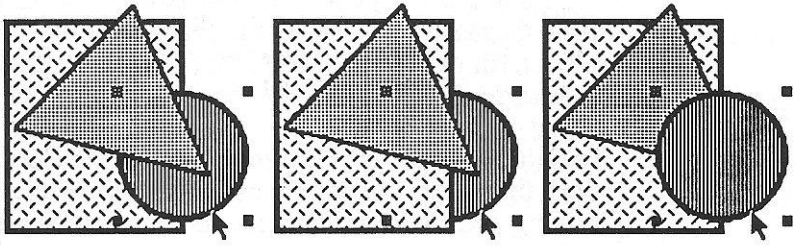
### Bring to Front and Send to Back

Objects in the Draw layer can overlap. Usually, recently created objects are displayed in front of older ones. It is as if you were throwing cards on the table. They stack up. What if you want to rearrange the objects? SuperPaint provides two commands to help you do this.

To move an obscuring object behind all others, select it and choose **Send to Back** from the **Draw** menu.

To take a partially obscured object and bring it out on top of all others, click on the visible portion and choose **Bring to Front** from the **Draw** menu. If the object is entirely obscured, you can still bring it to the front. Simply send the intervening objects to the back of the Draw layer (with **Send to Back**), until you can see the one you want. Move it into a clear space (or place it in the Clipboard), and then restore the objects you moved to their original order. Finally, drag the newly revealed object where you want it. Figure 3.23 illustrates this process.

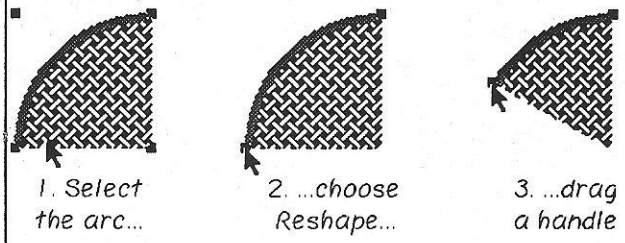
Figure 3.23



## Reshape

The Reshape command lets you adjust the shape of arcs or polygons. First, click on the Selection tool, then click on the object that you want to modify.

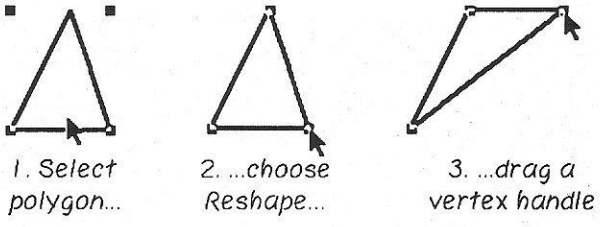
Figure 3.24




If the selected object is an arc, the **Draw** menu contains the command **Reshape Arc**. When you choose it, the four corner handles are replaced with two (see Figure 3.24). There is one handle for each end of the arc. Drag these handles to open or close the arc. By reshaping an arc, you can create a pie-section of any angle you want.

If you select a polygon, this command reads **Reshape Polygon**. It allows you to adjust the positions of individual vertices (corners) of a polygon. You may only reshape one polygon at a time. When you choose this command, the four corner handles disappear, to be replaced by one handle at each vertex. To adjust the position of a vertex, drag its handle where you want it.

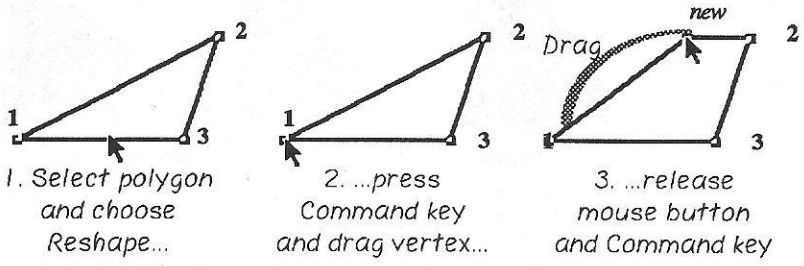
Figure 3.25




With the **Reshape Polygon** command, you can add new vertices. Select the polygon and choose the **Reshape** command. Then hold down the Command key as you drag a handle. The vertex you drag will remain in place. Instead, SuperPaint will insert a new vertex between the selected one and the next in the sequence (the one you originally drew after the dragged vertex).

In Figure 3.26, for example, assume the triangle was drawn in vertex order 1, then 2, then 3. After choosing **Reshape** from the **Draw** menu and Command-dragging vertex 2, the new vertex has been inserted between vertices 2 and 3.

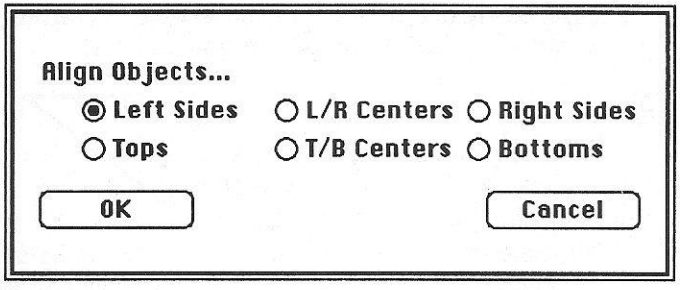
Figure 3.26




## Align Objects

SuperPaint can adjust objects' positions so that they line up along their tops, bottoms, sides, etc. To use this capability, select the objects you want to align, and choose **Align Objects...** from the **Draw** menu. SuperPaint will display a dialog like the one in Figure 3.27. In this dialog, you may specify a horizontal alignment (i.e., line the objects up along their left or right edges, or their centers), or a vertical alignment (i.e., line them up along their top or bottom edges, or their centers), or both.

Figure 3.27

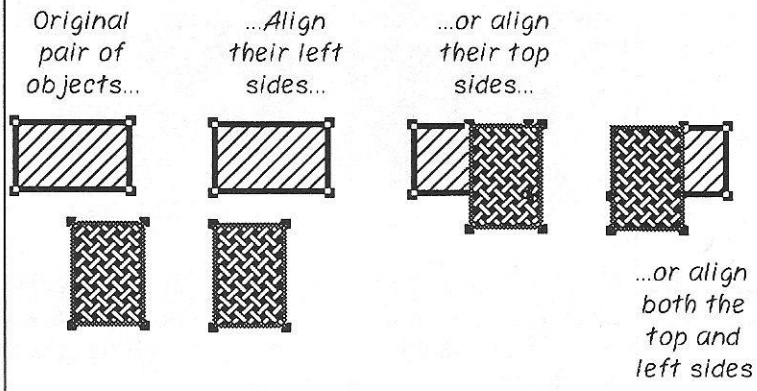



If you specify just a horizontal alignment, SuperPaint will move the objects so that they line up vertically. Specifying a vertical alignment causes the objects to line up horizontally. If you specify both vertical and horizontal alignment, the objects will stack up on top of each other.

After you make your alignment choice, click the OK button to line the objects up. Click the Cancel button to leave the objects as they were.

Figure 3.28 illustrates horizontal and vertical alignment of objects.

Figure 3.28




## Transparent and Not Transparent

When you first start SuperPaint, drawing a new object (except for an object drawn with a pattern of "None") will obscure any older objects beneath it. If you would like to be able to see through holes in an object's pattern, choose **Transparent** from the **Draw** menu. You can change the transparency of existing objects by selecting them and then using the Transparent command.

To prevent covered objects from showing through, you must make the object opaque. Select the object and choose **Not Transparent** from the **Draw** menu.

Figure 3.29

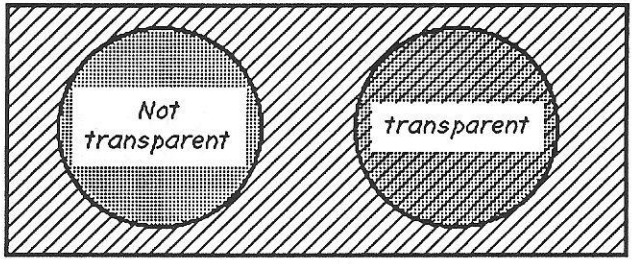
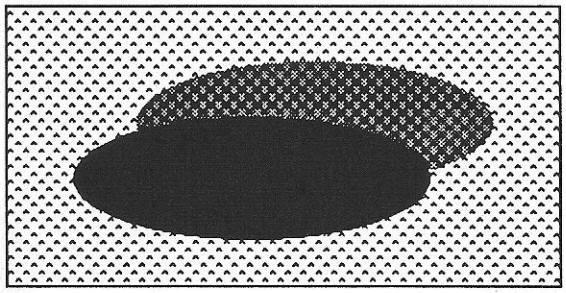



Figure 3.29 shows the difference between opaque (Not Transparent) and transparent objects, respectively. Transparent objects are particularly useful for creating shadow effects, as in Figure 3.30.

Figure 3.30



Not on the LaserWriter

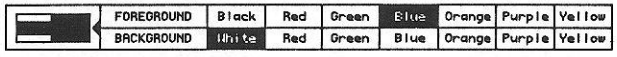
Note: Objects print transparently on an ImageWriter, but not on a LaserWriter. On a LaserWriter, objects are always opaque, regardless of the Transparent/Not Transparent setting, except for painted objects, which are always transparent.

## Color Palette

You can assign printing colors to objects. If you print a document on a color-capable printer, such as the ImageWriter II, colored objects will then print in color. On monochrome printers, like the LaserWriter or the original ImageWriter, colored objects simply print in black and white.

To add printing colors to your Draw layer, begin by choosing **Show Color Palette** from the **Options** menu. SuperPaint will replace the pattern palette with a palette of the available colors, as depicted in Figure 3.31.

Figure 3.31




You must separately specify the colors to be used in an object's fill pattern and those to be used in its line pattern. At the left-hand side of the color palette is a line/fill selector which works just like the one for patterns. Click on the large, filled rectangle to adjust the fill colors, or on the narrow rectangle to adjust line colors. An arrowhead indicates which (line or fill) has been selected.

You may specify both a foreground and a background color. Black dots on the screen will print in the foreground color, while white dots on the screen print in the background color. You cannot specify a foreground color of White, nor a background color of Black.

For example, let's color a stripe-filled rectangle that has a solid Black border. Begin by selecting it. To color the border, click on the left-hand (line) side of the line/fill selector. Then, click in the Foreground portion of the palette labeled Purple. You need not set the background color of a solid Black pattern. Next, click on the right-hand (fill) side of the line/fill selector. Let's make the pinstripes blue, on a yellow background. Choose Blue in the Foreground portion of the color palette, and Yellow in the Background portion.

To find out what an object's printing colors are, display the color palette and click on the object. The color palette highlights the selected object's foreground and background colors according to the line/fill selector setting. When set to "line," the color palette displays the current line colors. Likewise for "fill."

When you first create an object, its line and fill colors are the same: The foreground color is Black and the background color is White.

To restore the pattern palette, choose **Pattern Palette** from the **Draw** menu.

# Part 4:

# Things Common to Both Layers

## CREATING, OPENING AND SAVING DOCUMENTS

### Creating a Document

To create a new document, choose **New** from the **File** menu (or press Command-N). SuperPaint will open a window with a blank document in it. A freshly created document is automatically given the name "Untitled - #", where "#" is replaced by a number (e.g., "Untitled - 1", etc.). You can change the name when you save the document on disk.

### Opening a Document

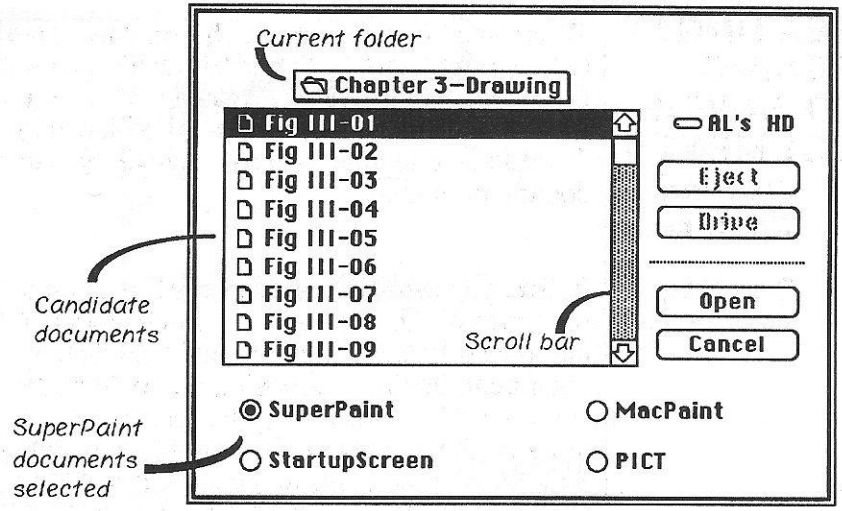
Before you can work with an existing document, SuperPaint must first open it. Opening a document causes it to be loaded from disk into the computer's memory and then displayed. To open a document, begin by choosing **Open** from the **File** menu (or press Command-O). The dialog illustrated in Figure 4.1 will be displayed. Initially, the window within the dialog displays all folders and SuperPaint documents in the current folder (the one from which you started SuperPaint). Besides SuperPaint documents, you can also open three other kinds of documents by clicking on the appropriate button in the dialog:

- MacPaint documents
- MacDraw "PICT" documents. MacDraw can save documents in this format by clicking the button labeled PICT, in its Save As... dialog. PICT documents contain nearly all the information in a MacDraw document.
- StartupScreens. When you place a StartupScreen document in the folder containing the System file, the full-screen image stored in it will be displayed when you start the Macintosh from that disk. The document must be named "StartupScreen" for this to work. Often, disks containing game programs include an entertaining StartupScreen.

The list of files in the dialog window will display only one kind of document at a time. In Figure 4.1, for instance, the button labeled SuperPaint has been selected. Thus, all the documents in the window are SuperPaint documents. To open a PICT document, press the button labeled PICT. The SuperPaint documents will disappear, to be replaced by any PICT documents in the current folder.

If there are more documents and folders than can fit in the window, a scroll bar is activated, so you can look at the rest. To look in a folder enclosed by the current one, simply double-click on its name. To look at a folder that encloses the current one, move the cursor to the current

Figure 4.1




folder name (above the window) and hold the mouse button down. A menu of enclosing folders will drop down, including, at the very bottom, the name of the disk on which the folders reside. To look inside one of these folders, drag the cursor to its name and release the mouse button. Figures 4.2 and 4.3 illustrate the relationship between folders and this menu.

Figure 4.2

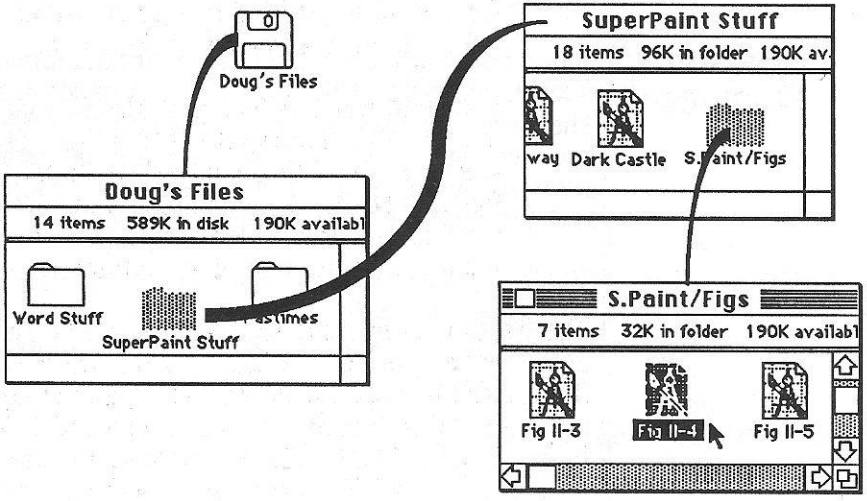
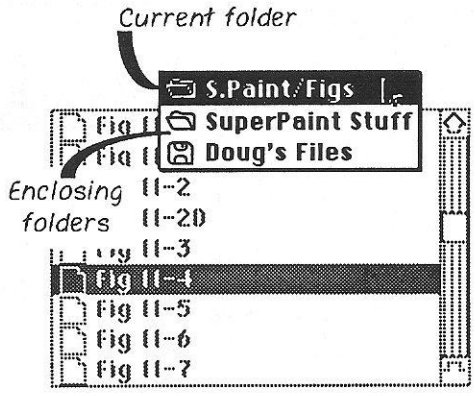


Figure 4.3




To look in a different (already-inserted) disk, click the Drive button. Click the Eject button to eject the disk in the current drive so you can insert another one.

When you locate the document you want to work on, click on its name and click the Open button (or just double-click on its name). SuperPaint will open it into a new window.

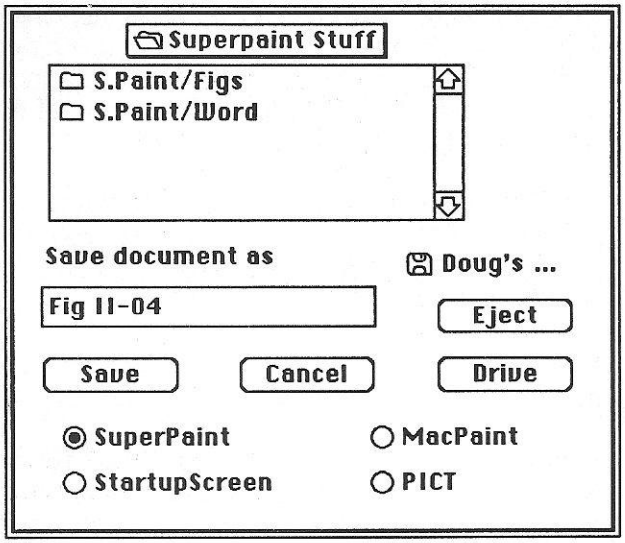
If, instead, you decide not to open a document, click the Cancel button.

## Saving a Document

When you want to store a SuperPaint document on disk, use the **Save** (Command-S) and **Save As...** commands from the **File** menu. The Save command replaces an old copy of the document with the latest version. Save As leaves the original version intact, while allowing you to store the document with an alternate name or format, and perhaps in a different disk or folder.

Saving a SuperPaint document is very similar to opening one. Choosing **Save** on a brand new document (whose window title is "Untitled - #"), or using **Save As...** on an existing one, displays a dialog such as the one in Figure 4.4.

Figure 4.4




The window within the dialog displays only the folders contained in the current folder. When you save your document, it will reside in the folder named above the window. In Figure 4.4, for example, the document would be saved in a folder named SuperPaint Stuff. You can select a different folder or disk in precisely the same manner described under Opening a Document.

Before saving the document, you may type in a name for it. Try to use a name that easily identifies the contents or purpose of the document.

Finally, you can choose the document format to use. As with Open, you can save a document in SuperPaint format (the initial setting), MacPaint, PICT, or as a StartupScreen document. If you will only want to use the document with SuperPaint, save it in that format. SuperPaint documents retain all the information you place in them.

Documents saved as MacPaint can be viewed or modified by MacPaint, but are only painted (dot-by-dot) images -- all information in the Draw layer is turned into dots in the MacPaint document.

PICT documents retain most of their information. When you load a PICT document into MacDraw, you can edit most objects in the Draw Layer. The Paint layer becomes a large painted (bit mapped, in MacDraw terminology) object. Most page layout programs can read PICT documents, too.

StartupScreens, like MacPaint documents, have all the Draw layer painted into their Paint layer. StartupScreen documents consist of an image that will fill the entire screen, and no more. The top left corner of the window becomes the top left corner of the document, and only what is needed to fill a screen is saved.

To preview what the StartupScreen will look like, view your document in Full Screen (Command-F) mode, with menus and palettes hidden (Hide Menu Bars turned on in the Preferences dialog, and Command-H).

When all these decisions about folder, document name and format are made, click the Save button to store the document on disk.

If an identically-named document already resides in that folder (differences in capitalization don't count), SuperPaint will ask whether you want to replace the original. Let it proceed by clicking the Yes button. To go back and give the new document a different name or store it in a different folder, click the No button.

SuperPaint does not allow you to replace a document that has the same name, but a different format. For example, if you already have a MacDraw document named Invoice, you cannot replace it with a SuperPaint document of the same name. If you really do want to replace it, save the document under a different name, for the moment. When you exit from SuperPaint (by choosing **Quit** from the **File** menu or by pressing Command-Q), delete or rename the original document, and then rename the new one.

### Save a Selection

If you only want to save a portion of a SuperPaint document, choose the **Save Selection...** command from the **File** menu. SuperPaint will display a dialog similar to **Save As...** The only significant difference (from Save or Save As) is that you cannot save a selection in StartupScreen or MacDraw PICT format. You can, however, save the selection as a MacPaint or SuperPaint document. The latter choice retains all information in the selection.

### Revert

You can restore the open version of a document to the state that it was in when last you Saved it, as long as it is a SuperPaint document. You might want to do this after an unsuccessful "what-if" session. To restore the document, choose **Revert** from the **File** menu.

## PRINTING

You can print SuperPaint documents on a LaserWriter, LaserWriter Plus, or an ImageWriter I or II. You should also be able to use printers or typesetting machines that are compatible with the LaserWriter or ImageWriter.

With an ImageWriter II, you can take advantage of SuperPaint's color capabilities (see the discussion of the color palette in Part 3). To print in color, make sure the Preferences option, Print in Color, is turned on. Conversely, if you want to print in black and white despite any color choices in a document, turn Print in Color off. See the discussion of Preferences in Part 1.

To print, you choose **Print...** from the **File** menu and then click the OK button. There are some other issues you may want to be familiar with, though...

### Document Setup

A cardinal rule: A printed SuperPaint document looks like its image in the window when you start to print. In other words, if the Paint layer is in front, it will also be in front on the printed page. If the back layer is hidden (with the **Hide Back Layer** command from the **Window** menu), it will not appear when you print the document. Be sure to set the layers as you want them to appear before you start to print.

### Choose Your Printer

You must begin by choosing the printer you want to use. With older Macintosh system software, you will use the Choose Printer desk accessory. Newer systems use the Chooser desk accessory. You may also need to use the Control Panel.

### Choose Printer

Start the desk accessory by choosing **Choose Printer** from the  menu. Click on the appropriate port and printer. If you are using a LaserWriter, click on the Printer port icon, click the AppleTalk Connected button and then click "LaserWriter." To use the ImageWriter, click on the port to which the ImageWriter is attached and click on "ImageWriter." Finally, click the OK button.

### Control Panel and Chooser

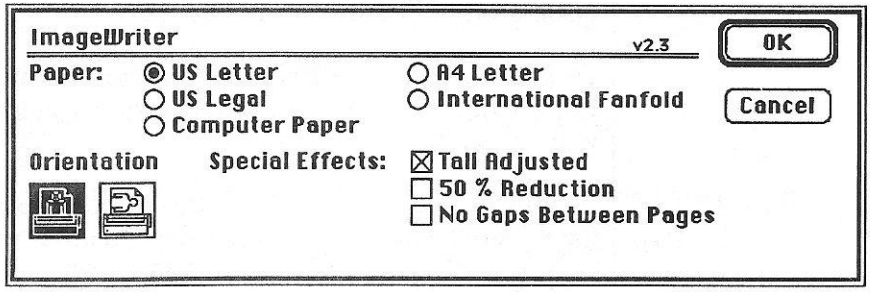
With more recent system software, you may need to use the Control Panel. If you will be using an AppleTalk printer, such as the LaserWriter or the AppleTalk ImageWriter, you must make sure AppleTalk is connected. Choose the **Control Panel** from the  menu. In the AppleTalk box, click the Connected button to turn on AppleTalk. Close the Control Panel by choosing **Close** from the **File** menu (or click in its close box). Now choose the **Chooser** from the  menu. Click on the LaserWriter or ImageWriter icon and then the Printer port icon. Then close the Chooser.

To use a local (non-AppleTalk) ImageWriter, you need not connect AppleTalk. With the Chooser, simply select the port to which the ImageWriter is attached (Printer or Modem), and click on "ImageWriter." Then close the Chooser.

## Page Setup

Before you print, make sure the Macintosh knows what kind of paper and, if desired, what image reduction/expansion you want. Choose **Page Setup** from the **File** menu. The dialog you get will depend on the kind of printer you selected. Figure 4.5 shows the dialog for an ImageWriter.

Figure 4.5




With the **Page Setup** dialog, you can choose from several kinds of paper. You will probably use US Letter, or A4 in Europe. Remember that SuperPaint documents are 8 inches wide by 10 inches high, no matter what size paper you choose.

You can also select the image's orientation on the page. The image can either be printed upright (Portrait, the most common setting) or on its side (Landscape).

Under "Special Effects," when printing pages in upright orientation on the ImageWriter, be sure the Tall Adjusted option is turned on. This keeps the printed dots square, as they appear on the screen.

On an ImageWriter, you can choose to print your document at full size, or reduce it to 50% of its screen size (4 by 5 inches). On the LaserWriter, you can reduce a document as far as 25% size (2 by 2.5 inches), or expand it to as much as 400% (equivalent to 32 by 40 inches). Just enter the reduction or expansion percentage.

If you print sideways, or if you expand the printed image (on a LaserWriter), it may take two or more sheets of paper to contain the complete image. Printing a document sideways, with no reduction, takes two pages. Printing a document with a 400% expansion on the Laserwriter takes 16 pages.

On the ImageWriter, there is one more "Special Effects" option, labeled No Gaps Between Pages. Normally, SuperPaint centers the 8 by 10 inch document on the page. Turning this option on causes the image to be printed at the very top, left-hand corner of the page, with no margin at all.

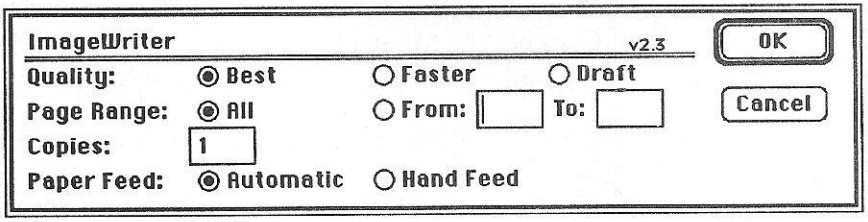
There are two more options on the LaserWriter. If you choose Font Substitution, non-LaserWriter (i.e., non-PostScript) fonts in your document in the Draw layer will be automatically translated to the closest LaserWriter fonts. If you do not use this option, text in non-LaserWriter fonts will print at ImageWriter resolution. The second option is called Smoothing. When you use Smoothing, painted images are digitally processed to look slightly better on the LaserWriter. Primarily, Smoothing decreases the prominence of the "stair-step" effect of diagonal lines (the infamous "jaggies"). Try printing with and without Smoothing, to see which you prefer.

When Smoothing is on, it takes significantly longer to print a document that has anything in its Paint layer.

## Printing

So much for the preliminaries. Choosing **Print...** from the **File** menu will produce a dialog similar to the one in Figure 4.6.

Figure 4.6



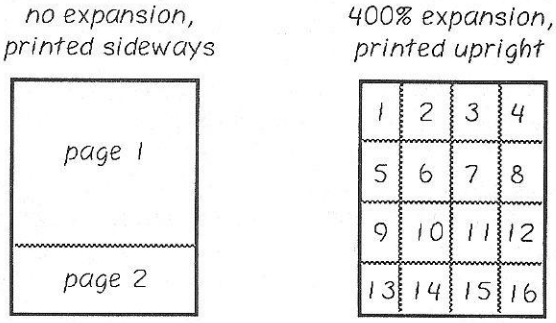

On the ImageWriter, you can select the quality of print to use. There are three print qualities, but only two are used by SuperPaint. The highest quality is called Best. Best quality images are well-formed and quite dark. They also print rather slowly. Faster quality prints more quickly. The resulting images are still very good, though not as dark as when using Best quality. Draft quality is for printing text only, and is therefore not relevant to SuperPaint.

The LaserWriter always uses the very highest quality printing.

With either printer, you can select how many copies to print. Just type a number from 1 to 999. Initially, this field is always set to give you one copy.

You can specify a range of pages to print. This is only pertinent if your document spans multiple pages when printed (i.e., if you are printing it sideways, or with an expansion factor--see the discussion of Page Setup). When a document is split into multiple pages, the top, left-hand corner page is page 1, with subsequent pages numbered across, then down. See Figure 4.7. For example, to print out just the bottom strip of pages in a document expanded by 400%, indicate a page range from 13 to 16.

Figure 4.7




Finally, you can select the paper source. ImageWriter paper can either be fed manually or automatically. When you click Automatic from the Paper Feed selection (or Continuous Feed on older versions of the Macintosh System), the printer will transport the paper by itself. Clicking the Manual Feed button (this used to be called Cut Sheet ) causes the Macintosh to prompt you to insert each new sheet.

On the LaserWriter, clicking the Paper Cassette button causes paper to be fed automatically. If you click the Manual Feed button, the Macintosh will prompt you to insert each new sheet.

You are almost ready to print. If you are using an ImageWriter, load the paper so that the very top of the sheet is covered by the paper bail. The bail is a metal bar that supports several rubber rollers against the platen (the large black rubber cylinder that carries the paper). If you are using tractor-fed paper, make sure the tension lever is off (toward the rear of the printer on an ImageWriter I, toward the front on an ImageWriter II). When printing on individual sheets, turn the tension lever on.

When you are ready to print, click the OK button, or press the Return key.

While printing, SuperPaint displays a dialog box with three buttons. Click Cancel to stop the printer and eject the page. If you click the Pause button, the printer will halt, and the Continue button will be enabled. You can now straighten the paper, replace the ribbon, etc. When you are ready to proceed, click the Continue button.

## TWO-LAYER SELECTION

You may have noticed that there is one tool on the palette that we have yet to discuss. This is the Two-Layer Selection (TLS) tool. This tool lets you make a special kind of document selection. With it, you can select a section of both the Paint and the Draw layer at the same time.

Clicking on the TLS tool automatically turns off layer-hiding. That way, you will always see what you are selecting.

What can you do with a TLS selection? Only one thing: You can copy it to the Clipboard. From there, you can paste the results in either layer, into the Scrapbook, or into another program's document (after quitting SuperPaint or by using Switcher).

The TLS tool works a little differently in each layer.

### From the Paint Layer

In the Paint Layer, this tool works almost exactly like the Selection Rectangle tool. Choose the TLS tool from the palette and move the cursor to one corner of the desired selection. The TLS cursor is shaped like a dotted crosshair. Press the mouse button and drag it to the opposite corner of the selection. When you release the mouse button, dashes on the boundary of the selection jitter back and forth (to distinguish it from the Selection Rectangle border's smooth, unidirectional flow). Choose **Copy** from the **Edit** menu, or press Command-C. Everything inside the rectangle will be included in the selection, even if it is actually in the Draw layer. Any portion of the Draw layer that is included is turned into dots that are incorporated into the selection.

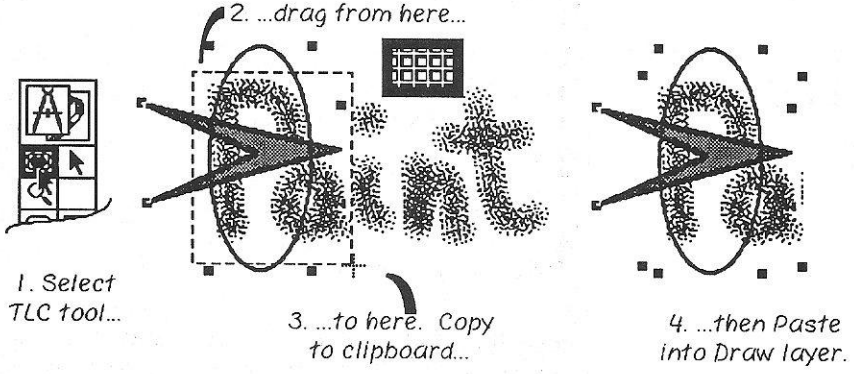
You can paste the resulting contents of the Clipboard into either layer. In the Paint layer, the pasted results are incorporated into the painting. In the Draw layer, the result is a painted object, the size of the TLS rectangle.

### From the Draw Layer

The TLS tool is a little more complicated when used in the Draw layer. You draw the TLS rectangle in exactly the same way as in the Paint layer. As you can see from Figure 4.8, not only are the contents of the rectangle selected, but so too are all Draw layer objects intersecting the rectangle. (Unlike the Selection Rectangle, Draw layer objects

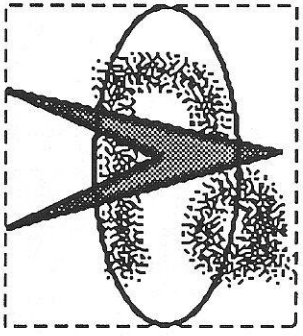
need not be entirely enclosed in a TLS rectangle to be selected.) When you are satisfied with the selection, Copy it to the Clipboard. Anything in the Paint layer that falls within the selection area is included as one painted object.

Figure 4.8




When you paste the results into the Draw layer, you get a painted object the size of the TLS rectangle. In addition, you get copies of all objects that intersected it.

Figure 4.9



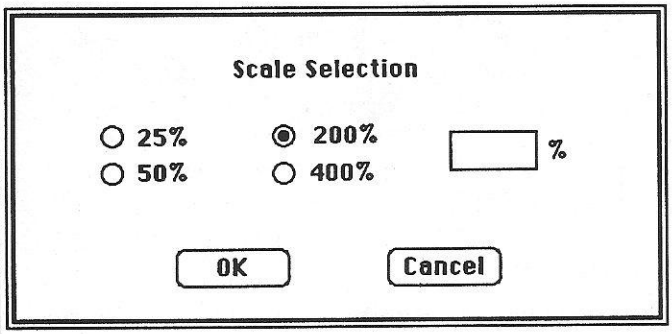
When you paste the results into the Paint layer, you get a selection rectangle of minimum size to contain all selected objects and the TLS rectangle (see Figure 4.9). Inside the selection rectangle is the portion of the Paint layer that was inside the TLS rectangle, along with all selected objects. The background of the selection rectangle is solid white.

## SCALE SELECTION

The **Scale Selection** command, in the **Edit** menu, allows you to specify an expansion or contraction factor to apply to the current selection. When you choose **Scale Selection**, SuperPaint displays the dialog depicted in Figure 4.10. Choosing a scaling factor larger

than 100% expands the selection. Factors less than 100 percent shrink it.

Figure 4.10




Scaling factors of 25, 50, 200, and 400% work well, so they are included as buttons in the Scale Selection dialog. If none of the four preset factors suits you, type in any scaling factor you need.

Drawn objects scale very nicely, since they are stored as mathematical information. Selections in the Paint layer tend not to scale quite as nicely.

If you are using a LaserWriter, and want to reduce a Paint layer selection, turn it into a painted object in the Draw layer first (see Copy to Drawing, in Part 2). The LaserWriter prints all the dots in a painted object, even when reduced to as little as 25% of original size. All the original dots are printed, but smaller.

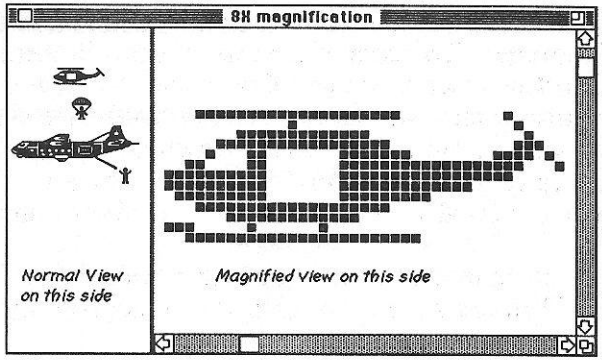
## MAGNIFICATION

### Magnifier Tool

The Magnifier tool gives you close-up views of any portion of the document. When you click the magnifier icon in the tool palette, the cursor turns into a miniature magnifying glass. When you click the magnifier in the document, the viewing area will split vertically. The left side of the window becomes a pane that shows a normal magnification view centered on the clicked area. The right-hand side is a magnified view, centered on the same area, the location where you clicked the magnifier.

You can use any tool in the magnified area. Anything you do to the magnified document is reflected in the unmagnified side. You can even use the magnifier on the close-up view. The first click of the magnifier displays a 2X view (all features appear at twice their actual size), the second click displays a 4X view, and the third click displays an 8X view.

Figure 4.11




To decrease magnification, click in the normal-size view, with any tool selected. Magnification will decrease by half for each click. When you reach 1X, the split view is replaced by the original, normal size view.

The most common way to use the magnified mode is to edit dots in the Paint layer, using the Pencil. Clicking on a dot with the tip of the pencil turns it white. Clicking on white space creates a black dot.

Although objects created in the Draw layer are displayed on the screen with dots, these dots cannot be edited as they can in the Paint layer (not even in a painted object). Draw-layer objects can only be created, moved, resized, or deleted. Magnifying the Draw layer can be useful for precision resizing or reshaping.

## Variations

Holding down the Command key when you click the magnifier brings the magnification directly up to 8X (or double-click on the Magnifier tool). While working on the Paint layer, you can also obtain maximum magnification by selecting the Pencil tool and then holding down the Command key while you click in the window at the location you want magnified, or by simply double-clicking on the Pencil tool.

Each of these shortcuts centers the magnified view on the clicked area.

To return directly to normal magnification, hold down the Command key while you click on the unmagnified view, with any tool selected. You can also restore normal magnification by double-clicking on the Magnifier tool in its palette.

## REDUCED VIEW

SuperPaint lets you see, at a glance, an overview of the complete document. To accomplish this, choose **Reduced View** from the **Windows** menu, or press Command-W. The viewing area splits vertically into two panes. The left-hand pane shows a compressed view of the entire 8 by 10 inch document page. The right-hand pane is a fully functional normal-view working area. You can use any tool on the normal view side, and see its effects immediately on both sides.

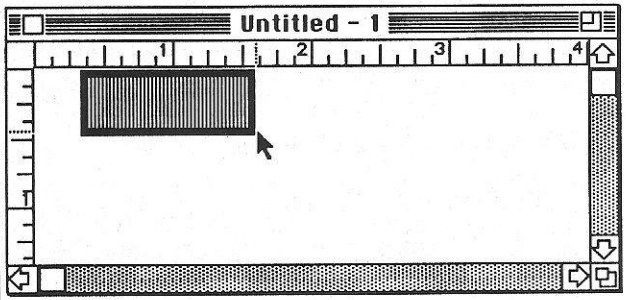
To return to the normal viewing mode, choose **Normal View** from the **Windows** menu, or press Command-W again.

Any attempt to use the Magnifier tool automatically cancels the reduced view mode.

## RULERS

Sometimes it is helpful to know your exact position within a document. Choosing **Show Rulers** from the **Windows** menu displays two rulers in the display area. One stretches across the top edge, and the other along the left-hand side. The rulers are initially marked in inches. They scroll along with the document. The current position of the cursor is marked on the rulers with a dotted line. Figure 4.12 illustrates what rulers look like.

Figure 4.12




Choose **Hide Rulers** from the **Windows** menu to turn them off again.

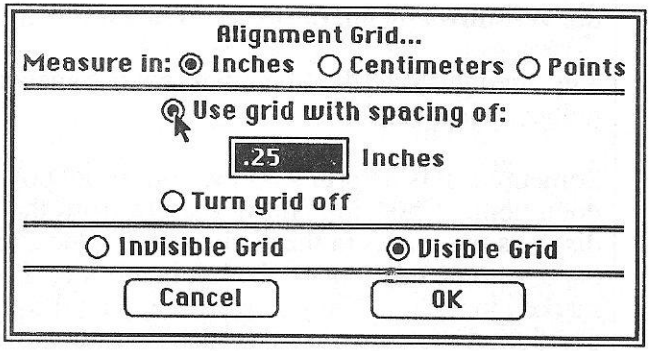
The rulers can show centimeters, if desired. Choose **Preferences** from the **Options** menu, and choose Centimeters under Ruler Measure.

## GRID

SuperPaint usually lets you create objects anywhere in a document. Sometimes it is useful to restrict the placement of corners of objects to a regular grid of points. Having such a grid makes it easy to align the shapes you create, resize, or move.

You can enable, disable, and otherwise control this kind of grid by choosing the **Grid...** command from the **Options** menu. When you do, you will see the dialog in Figure 4.13.

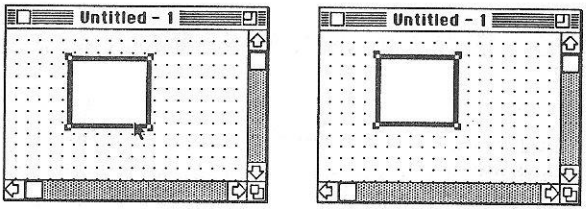
Figure 4.13




You can set the grid spacing in terms of inches, millimeters, or points (1/72 inch, which is one screen dot). Let's say you set the grid spacing to .25 inch. That means the grid consists of a rectangular matrix of points, each .25 inch from its neighbor (as in Figure 4.14).

You can make the grid visible or invisible. If it is visible, SuperPaint will display a dot at each grid point. Turn on the button labeled Visible Grid, to see the grid. The grid dots, though visible in the window, are not part of your document. They will not, for instance, print out with the rest of a document.

Figure 4.14




*1. Drag the object...*

*2. ...when you release it, the object shifts so that its top left-hand corner coincides with a grid intersection.*

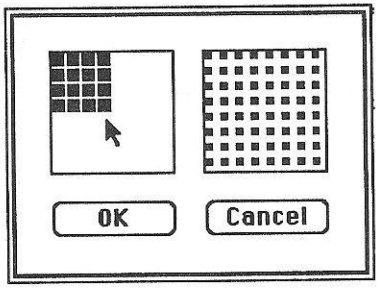
To enable the grid (i.e., turn it on), turn on the button labeled Turn Grid On. While the grid is on, you will notice a few changes: First of all, when you drag a selection and release it, the selection will automatically shift so that its top left-hand corner coincides with the nearest grid point (see Figure 4.13). The corners of any shapes or lines you create will automatically align with the nearest grid intersection.

The grid need not be turned on for it to be visible. Likewise, the grid need not be visible for it to be turned on. All in all, you will probably find the grid easiest to use if you make it visible when you turn it on.

## EDIT PATTERN

Though SuperPaint comes with approximately 60 patterns, chances are that someday you won't find exactly the one you need. That's no problem. Just modify an existing pattern. Choose **Edit Patterns...** from the **Options** menu, or double-click on the pattern you want to edit (if you're in the Draw layer, be sure that no objects are selected, or else the first click will cause their fill or pen pattern to change).

Figure 4.15




Once you have selected the pattern to edit, SuperPaint shows it to you in a magnified view, along with a sample figure filled with the pattern (see Figure 4.15). If you click on one of the black dots in the pattern, it turns white. If you click on white space, it turns black. The change is immediately reflected in the filled figure.

When you have edited the pattern to your satisfaction, click the OK button. If you change your mind, and do not want to save the edited pattern, click the Cancel button.

Modified patterns are stored in your SuperPaint document. If you create a set of patterns that you find particularly handy, make a copy of the document that contains them (use the **Save As...** command in the **File** menu), named (for instance) "Handy Patterns." Erase everything from both layers of Handy Patterns. From then on, when you want to use that set of patterns, start out with a copy of the Handy Patterns document instead of using the New command.

When you create a document with the **New** command, you will start out with the basic, unedited set of patterns included with SuperPaint.

## SCROLL OFF/ON

Normally, tools automatically scroll the document when you move them past the edge of the viewing area. Occasionally, this behavior could hamper your efforts. To disable automatic scrolling, choose **Scroll Off** from the **Options** menu. Conversely, choose **Scroll On** to enable automatic scrolling again.

# Part 5:

# LaserBits

LaserBits™ is the feature that allows you to edit dots at 300 dots-per-inch resolution. The name comes from the fact that in Apple's MacPaint program, 8 times magnification has always been called FatBits. LaserBits is also a type of magnification, but instead of seeing dots at 72 dots-per-inch (dpi) resolution, the magnification is blown up even more, so that each dot is one of 300 dots per inch.

Keeping that many dots in the SuperPaint document that you're working on would take a lot of memory. If you wanted to edit several portions of the Paint layer at 300 dpi, you would run out of memory. So, SuperPaint keeps the images that are being edited at 300 dpi in separate SuperPaint documents.

## Overview

Here's a brief overview of how the LaserBits feature works. You select a portion of the Paint layer with the Selection Rectangle tool. Then, you choose **New LaserBits** from the **File** menu. You type in a name and then get another window. In that window you see your selection, only it is blown up four times as big as it was originally.

You can then use all of SuperPaint's editing tools, including the Pencil at 8X magnification. Each of the dots in this window are one of 300 dots per inch. When you're done editing, you close the window.

At that point you're back to your original document and in it you see a new painted object in the Draw layer. It looks roughly like your image that you edited at 300 dpi, but it's actually just a representation of it, since the screen is only capable of showing dots at 72 dpi.

This object is called a LaserBits object. It can be moved around in your document. Wherever you place it is exactly where it will be printed at 300 dpi on a LaserWriter (72 dpi on an ImageWriter). When you print, SuperPaint knows how to go find the additional image or images on the disk and include them in the printout.

If you decide to do some more editing of your LaserBits object, you just select it (click on it) and then choose **Open LaserBits** from the **File** menu. This reopens the special window that shows the image at 300 dpi. You can then edit again and save your changes, closing the window when you're done.

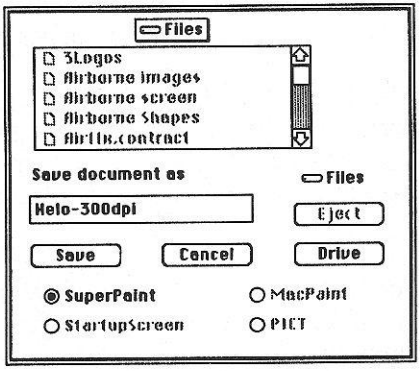
There is no limit on the number of LaserBits objects permitted in a SuperPaint document. The only limitation is the amount of disk space you have available.

## NEW LASERBITS

To create a LaserBits object, begin by opening a SuperPaint document and switching to its Paint layer. Next, make a selection with the Selection Rectangle tool. This selection must not be larger than two inches wide by two and a half inches high. The reason for this limitation is that when the selection is blown up four times, it must still fit in a SuperPaint document. Two inches times four takes up the maximum eight inches width, and two and a half inches times four takes up the maximum ten inches high.

Choose **New LaserBits** from the **File** menu. If your selection is too large, SuperPaint will let you know at this point and you'll have to try again, selecting a smaller portion.

Figure 5.1

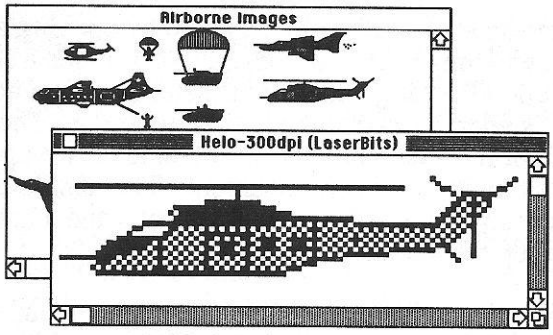



If your selection is not too large, you will see a dialog that is the same as the kind produced by a **Save As...** command.

Each LaserBits object is actually stored in a separate SuperPaint document. So, you must provide this new SuperPaint document with a name. Notice that you can only save the LaserBits object in SuperPaint format. The other three choices are dimmed.

Enter a name and click the Save button or press Return. A new window is opened and your selection from the Paint layer is pasted into it, only it is four times as big as it was before. Notice in the title bar of the new window that it shows the name you entered, followed by (LaserBits).

Figure 5.2



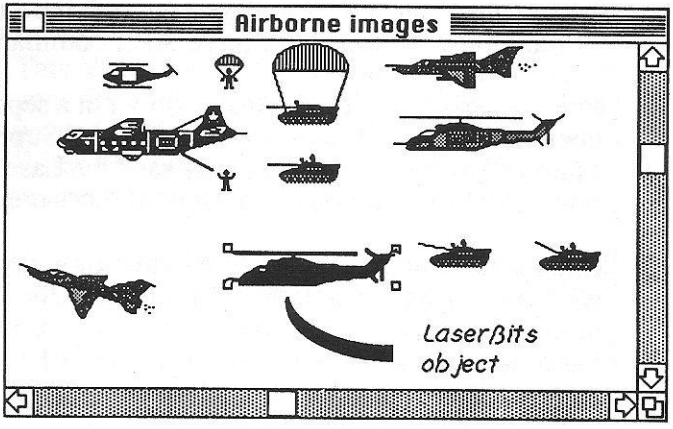

You can use all the painting and drawing capabilities of SuperPaint in the LaserBits window. When you close this LaserBits window and save your changes, a LaserBits object appears in the Draw layer.

## LASERBITS OBJECTS

A LaserBits object has hollow handles so that it can be distinguished from other objects. LaserBits objects are like painted objects - they consist of a collection of dots. But the dots are merely the closest representation possible on the screen of an image that consists of 300 dpi.

The screen can only show 72 dots-per-inch resolution, so only one out of every sixteen dots in the LaserBits object is actually displayed. Nevertheless, when you print your document, its LaserBits objects will be printed in full detail on a LaserWriter.

Figure 5.3



You can manipulate LaserBits objects just like painted objects, with a few exceptions. You can drag them to position them in the document. You can cut, copy, paste, duplicate, or clear them. You cannot, however, resize, flip or rotate a LaserBits object. Nor can you include a LaserBits object in a group.

## OPEN LASERBITS

To edit a LaserBits object, select it, then choose **Open LaserBits** from the **File** menu. SuperPaint will reopen the document that contains the 300 dpi image. If it cannot locate the document on any inserted disk, SuperPaint will ask you to insert a disk.

Once it has located the LaserBits object's document, SuperPaint displays the contents in a LaserBits window. You can edit this document exactly like any other SuperPaint document. Use any tool, in either layer.

Each dot in this document is 1/300 inch across when printed on a LaserWriter. If you created this image with the New LaserBits command, the source of the image consisted of dots 1/72 inch across. Thus, each dot in the original image has been replaced with 16 dots (4 across by 4 high) in the LaserBits document. That's why the image will initially look very jagged. You will have to smooth these "jaggies" manually, using the Paint layer tools. Although adding and deleting all those dots can be tedious, the resulting image on the LaserWriter can be startling.

When you have finished editing the document, close the window in the usual way (click in the window's Close box or choose **Close** from the **File** menu). SuperPaint will ask whether you want to save your changes. Click on the appropriate button (Yes, No, or Cancel). Clicking on the Cancel button lets you continue to edit the document without saving it on disk. Once you have closed the window, the associated LaserBits object will be updated with your changes.

You cannot open more than one LaserBits window at a time. You must close any open LaserBits document before you can edit another one.

## PLACE LASERBITS

Sometimes you will want to incorporate existing LaserBits objects into the document that you are working on. You might, for example, insert a company logo at the top of an invoice.

To do this, simply choose the **Place LaserBits...** command from the **File** menu. SuperPaint will ask you to identify which document to open. Once you select the document, a LaserBits object is placed in your current document.

You can also select a normal SuperPaint document with the **Place LaserBits...** command, but its contents will appear in the current document at 1/4 the original size and print that way on a LaserWriter.

You see, a LaserBits document is really just another SuperPaint document. It just contains a blown up image (remember, the New LaserBits command took care of enlarging it four times) that is reduced when printing takes place. The key is that when it is reduced and printed, SuperPaint can still keep track of all the dots, producing a resolution of 300 dpi.

## COPYING

### To the Clipboard

When you copy a LaserBits object to the Clipboard, SuperPaint opens the separate LaserBits document, retrieves the image and places it in the Clipboard, all 300 dots per inch of it. Since a lot of dots are being moved around, this may take awhile. It also may require a lot of disk space to hold this large Clipboard.

This is the way you will want SuperPaint to work if the Clipboard is the only way to transfer the image (for example, to MacWrite). But if the program that you are copying to can open PICT documents, it may be easier to save the SuperPaint document that contains the LaserBits object as a PICT document. This PICT document will contain a painted object (they are called "bit mapped" objects in MacDraw) that contains all the dots. Most page layout programs have the capability of "importing" PICT documents.

If you are cutting and pasting LaserBits objects between SuperPaint documents only, you can speed up the process by unchecking "Put LaserBits in Clipboard for other programs" in the Preferences dialog. When this item is not checked, SuperPaint puts only the screen image in the Clipboard, but keeps track of the LaserBits document associated with it that contains the actual 300 dpi image.

Then, when you paste from the Clipboard into another SuperPaint document, the LaserBits object appears in the Draw layer, and the link to its separate LaserBits document is established. If you paste this same image from the Clipboard into some other program, only the screen image, at 72 dpi, will be pasted.

### To Another Disk

If you are copying a SuperPaint document which contains LaserBits objects from one disk to another so that you can take it to another computer, be sure to also copy all of the associated LaserBits documents. They are simply SuperPaint documents with the name that you have given them.

## PRINTING

Printing a document on the LaserWriter that contains a couple of LaserBits objects will take longer than normal documents. One way to speed this process up is to turn the Smoothing option off. This is done by choosing the **Page Setup...** command in the **File** menu. If Smoothing has a check mark next to it, it is on. If there is no check mark, it is off.

If, while printing a SuperPaint document that contains LaserBits objects, SuperPaint cannot locate a LaserBits document it needs, it will ask you to insert the disk containing the document. Once you insert a disk, SuperPaint will search for the needed document on the disk. If that document is not on the inserted disk, SuperPaint will put a dialog box on the screen that will allow you to Eject the inserted disk and try another, or to Cancel.

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# *SuperPaint*
# Version 1.1 Addendum

## Version Compatibility

Documents created with *SuperPaint* 1.0 are fully compatible with *SuperPaint* 1.1.

## Which System and Finder to Use

*SuperPaint* 1.1 is shipped on a 400K non-startup disk. You can copy *SuperPaint* to a hard disk or prepare a working copy on a floppy disk. Apple Computer has provided the recommended configurations shown in the chart below. You should locate your machine in the chart and use the System and Finder versions listed there.

| Recommended Systems | XL | 512 | 512E | Plus | SE | II |
|---|---|---|---|---|---|---|
| System 3.2 - Finder 5.3 | ☺ | ☺ | ☺ | ☺ | | |
| System 3.3 - Finder 5.4 | | AS | AS | aS | | |
| System 4.2 - Finder 6.0 | | | | ☺ AS | ☺ AS | ☺ AS |

☺ Best System for hardware ☺ OK to use

AS Best System for AppleShare aS OK with AppleShare

## Memory Considerations

**Macintosh 512:** You can usually open two windows at once. If you have the maximum number of windows open, the **New**, **Open**, **New LaserBits**, and **Open LaserBits** commands are not available, and are dimmed in the **File** menu. To use LaserBits™, simply close one of the two open windows.

*SuperPaint* will not run on a 512K Macintosh if more than 35K of memory has been allocated to "resident" software. This includes such things as RAM Cache, RAM Disk, HyperDrive System software, etc. If it runs into this problem, *SuperPaint* will alert you with a message that indicates there is insufficient memory for it to run. Or, if it does run, it may limit the maximum number of open windows to one. Eliminate any cache, RAM Disks, large desk accessories, or other such items, and then try again. Once *SuperPaint* is running, choose **About SuperPaint** from the **Apple** menu to find out how much memory is available.

**Macintosh Plus:** You can usually open 9 to 10 windows at once.

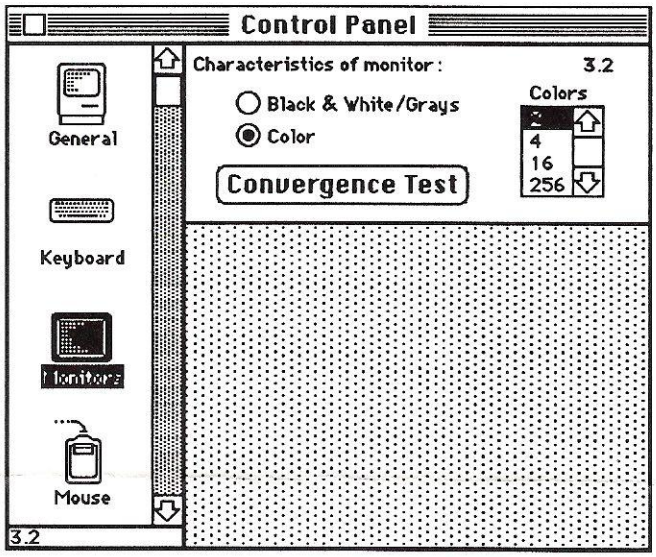
**Macintosh SE:** You can usually open 9 to 10 windows at once.

**Macintosh II:** *SuperPaint* runs in the "2 color/2 grays" (black and white) mode only. To switch to this mode, choose the Control Panel from the Apple menu, click on Monitors, and set the number of colors or grays to 2. If the Monitors icon does not appear in the Control Panel (even after scrolling), consult your Macintosh II manual for instructions on installing Control Panel resources.

If you are not in the 2-color or 2-grays mode when you attempt to run *SuperPaint*, a dialog box opens with a Quit button. Press the Quit button and reset the number of colors/grays to 2, then run *SuperPaint*.

You can usually open 9 to 10 windows at once.

## Setting the Macintosh II to 2-Color/Grays Mode




1. Select Monitors icon
2. Select 2 Colors or 2 Grays

## Using MultiFinder

*SuperPaint* 1.1 is compatible with MultiFinder, Apple's multi-tasking operating system option. *SuperPaint* 1.1 is also "MultiFinder aware," which means it has been optimized to work in the MultiFinder environment. This optimization permits quick switching between programs, allows as much time as possible for programs running in the background, and supports background printing with PostScript® LaserWriters.

The minimum memory size required to use *SuperPaint* 1.1 with MultiFinder is 410K. The suggested memory setting is 520K which allows you to have three documents open. See your MultiFinder User's Guide for details on changing an application's memory size. Also note that *SuperPaint* hides its palettes when it is in the background.

Occasionally when quitting an application under MultiFinder 1.0, the Macintosh can either crash or hang immediately after returning to the Finder. This is not a *SuperPaint* problem. Apple has confirmed this as a known MultiFinder 1.0 bug which will be fixed before their next system software release.

## Running with Switcher

*SuperPaint* 1.1 is compatible with version 5.1 of Switcher. *SuperPaint* 1.1's memory partitions are optimized for use with MultiFinder. Therefore, if you are using Switcher, you need to specify the memory partition sizes directly; you cannot use the defaults. The recommended minimum partition is 445K while the preferred setting is 625K. In order to open as many as 10 documents under Switcher, the partition would have to be 875K. You can specify memory partitions by using the "Configure then Install..." command from the **Switcher** menu in Switcher.

If you allocate only the minimum amount, you may run out of memory while working on a document that has a large number of objects, particularly if there are many bitmapped objects in the Draw layer. You can only open one window at a time with 445K of memory. Therefore, you cannot create or edit LaserBits objects with only 445K bytes of memory allocated.

*SuperPaint* works better if you let it allocate the preferred amount of 625K. With this amount, *SuperPaint* can open up to four windows at once. With a single document open, that document can have a very large number of objects.

For *SuperPaint* to work properly with Switcher and other programs, all the programs being loaded into Switcher, including Switcher, must reside on the System disk. This is because of the way the Clipboard works in *SuperPaint*—it is not a constraint inherent in Switcher. This will not be a problem for hard disk owners, since the hard disk is usually the System disk, and also contains all the programs. With an 800K disk, you may need to set up different disks that contain the groups of programs that you want to load into Switcher.

## Networking with AppleShare

*SuperPaint* 1.1 is compatible with AppleShare and is "multi-launchable." This means more than one person can run the same copy of *SuperPaint* when it is residing on an AppleShare server. However, all users running *SuperPaint* from the server must have their own "SuperPaint Prefs" file in their system folder, and "SuperPaint Prefs" files on the server must not be in the same folder as *SuperPaint*. *SuperPaint* 1.1 will display an error message if more than one user tries to open the same document from the server.

## Printing with LaserWriters

*SuperPaint* 1.1 requires LaserWriter driver 4.0 or later and ImageWriter driver 2.5 or later. If you are using *SuperPaint* on a network with other Macintoshes, all machines should be using the same driver version.

The 4.0 or later LaserWriter drivers have some options worth noting. When printing from *SuperPaint*, the **Larger Print Area** option should always be turned **ON** (click in the box so that an X appears). The **Precision Bitmap Alignment** option determines the look of painted images and the size of the printed document. If this option is **ON** (the box is checked), then Draw objects are reduced slightly in size and the painted images are left intact. The size of the actual printout will be 7.66" x 9.60". If the **Rulers match Precision Bitmap Alignment** option is **ON** in the Preferences dialog box, the on-screen rulers will match the printout. This choice provides the best printout of the Paint layer, bitmapped objects in the Draw layer, and LaserBits.

Conversely, if **Precision Bitmap Alignment** is **OFF** (not checked), painted images get stretched, causing distortion or misalignment of the Paint layer, bitmapped objects in the Draw layer, and LaserBits. If the **Rulers match Precision Bitmap Alignment** option is **OFF**, the on-screen rulers will match the printout. The size of the actual printout will be 8" x 10". This is the maximum printing area available in this version of *SuperPaint*.

The **Faster Bitmap Printing** option can speed up printing with *SuperPaint*, but Apple warns that you may have problems (such as a system or printer error) when using this option. We have also noted distortion of LaserBits and scaled painted objects when this option is **ON**. If you experience difficulties printing, turn the **Faster Bitmap Printing** option **OFF**.

The LaserWriter smoothing setting only effects painted images. Objects in *SuperPaint's* Draw layer are not effected by "smoothing." These objects always print at the full resolution of the output device.

In the *SuperPaint* 1.1 **Page Setup** dialog, you can now use values greater than 100% to produce LaserWriter enlargements. For example, by setting this value to 200%, *SuperPaint* 1.1 will print four 8" x 10" documents which could be pasted together for a large-scale layout.

At the bottom of the **Page Setup** dialog for PostScript LaserWriters is a setting labeled **Align Patterns on LaserWriter/LaserWriter Plus**. This box should normally be checked if you're printing to a LaserWriter or a LaserWriter Plus. If you're printing to a LaserWriter IINT or LaserWriter IINTX this box should not be checked.

This setting turns on or off a fix for a pattern alignment problem that exists on the LaserWriter and LaserWriter Plus. This pattern alignment problem has been corrected in the LaserWriter IINT and LaserWriter IINTX printers.

*SuperPaint* uses custom PostScript code to accelerate the printing of LaserBits, and to map QuickDraw gray patterns in the Laser Grays palette to their PostScript halftone equivalents. This may cause problems with print spoolers, other non-standard printing software, or non-Apple laser printers. The **Send Custom PostScript to Printer** setting found in the LaserWriter's **Page Setup** dialog allows you to turn off this feature if it is causing problems with your printing setup.

The recommended settings for PostScript LaserWriters for most *SuperPaint* printouts are:

| **Command** | **Setting** | **Status** |
|---|---|---|
| Page Setup | Faster Bitmap Printing | OFF |
| Page Setup/Options | Larger Print Area | ON |
| Page Setup/Options | Precision Bitmap Alignment | ON |
| Options/Preferences | Rulers match Precision Bitmap Alignment | ON |

Use the following settings if you need a full 8" x 10" print area. Note the bitmaps will be distorted but not reduced:

| | | |
|---|---|---|
| Page Setup | Faster Bitmap Printing | OFF |
| Page Setup/Options | Larger Print Area | ON |
| Page Setup/Options | Precision Bitmap Alignment | OFF |
| Options/Preferences | Rulers match Precision Bitmap Alignment | OFF |

The recommended LaserWriter IISC settings for most *SuperPaint* printouts are:

| | | |
|---|---|---|
| Page Setup | Exact Bit Images | ON |
| Page Setup | Text Smoothing | ON |

The "Exact Bit Images" option on the LaserWriter IISC makes bit images print perfectly, but everything on the page will be shrunk by 4% and the quality of the printed text will suffer. The "Send Color to Printer" option has no effect on the quality of the printout.

## Printing with GCC LaserPrinters

The recommended GCC Personal LaserPrinter settings (using PLP driver 2.0) for most *SuperPaint* printouts are:

| **Command** | **Setting** | **Status** |
|---|---|---|
| Page Setup | Send Color to Printer | OFF |
| Page Setup | Smooth Bitmaps? | ON |
| Page Setup/Options | Best-looking bitmaps? | ON |
| Page Setup/Options | Always align objects with bitmaps? | ON |
| Page Setup/Options | Enlarged printable area? | ON |

Whenever you have "Best-looking bitmaps" turned on, you should also turn on "Always align objects with bitmaps." *SuperPaint* documents will print on the Personal LaserPrinter in the High, Medium Draft (150 dpi), and Draft (75 dpi) modes. When the Personal LaserPrinter prints at 300 dpi, it does not scale patterns to match the screen display. Thus, patterns printed on this printer do not match the screen display.

## Printing with ImageWriters

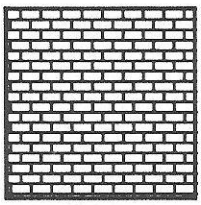
A **Print Darker on ImageWriter I at Best Quality** option is available in the **Page Setup** dialog when printing with an ImageWriter I or II. This setting only effects **Best** quality printing on the ImageWriter I and ImageWriter I wide carriage printers. When this box is checked, the Paint layer and all bitmapped images will be printed dark in the Best mode.

Like most Macintosh programs, *SuperPaint* needs some free space on your startup disk when you print the document to an ImageWriter. A rule of thumb is the startup disk must have free space equal to two to three times the size of the document to be printed.

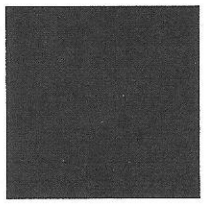
## Printing with Other Printers

On printers other than ImagerWriters or PostScript LaserWriters, the **Page Setup** dialog has an additional check box labeled **Send Color to Printer**. This setting is for use only with black and white printers that do not correctly ignore or remap any color information in the document such as the GCC Personal LaserPrinter with GCC driver 2.0. An example of this problem is shown below.

Draw Layer Object
Blue Foreground Color — Red Background Color



Appearance on screen and correctly printed



Appearance when incorrectly printed

If the output from your printer has the problem shown above, choose **Page Setup...** from the **File** menu and click to turn off the **Send Color to Printer** command. The color information will not be sent to your printer and the problem illustrated above will not occur.

## Compatibility with New Hardware Products

*SuperPaint* 1.1 is compatible with the AppleFax Modem, the LaserWriter IISC, IINT, and IINTX printers, the ImageWriter LQ printer, the General Computer Corp. Personal LaserPrinter and other "non-PostScript" printers. *SuperPaint* 1.1 supports the slightly smaller page size used by some of these printers, as well as the standard A4 paper size used in Europe. If you are using a LaserWriter, be sure to turn on the **Precision Bitmap Alignment** and **Larger Print Area** options to avoid clipping a small portion of the right side of the document.

## Prefs Notes

If *SuperPaint* 1.1 does not find a "SuperPaint Prefs" file in the system folder or in the same folder as *SuperPaint*, it will create a new "SuperPaint Prefs" file.

## *SuperConvert™* 1.1

The *SuperPaint* 1.1 disk includes *SuperConvert* 1.1, a utility program that provides conversions to and from LaserBits and other high-resolution bitmap formats. The *SuperConvert* 1.1 documentation is on the disk in the MacWrite file called "SC 1.1 User Manual."

*SuperConvert* converts *SuperPaint* files containing LaserBits objects to and from the following high-resolution bitmapped file formats: ThunderScan®, Tagged Image File Format (TIFF), and Encapsulated PostScript® (EPS). Its main function is to convert scanned images from ThunderScan and TIFF to LaserBits format for editing, and to convert LaserBits images to TIFF or EPS formats for importing into other programs, such as page-layout programs.

If a scanned-image TIFF file contains gray-scale information, an alert appears to inform you that this file cannot be converted into a bitmap. For best results when importing scanned images into *SuperPaint*, save the scanned image in the *SuperPaint* LaserBits file format whenever possible.

# Part 1: Getting Started

## Errata

Page 4: The second paragraph says there are two pattern palettes. Actually, there are four. The first palette contains the common "design" patterns. The second palette contains a range of gray patterns referred to as the "LaserWriter Grays." The third pattern palette is blank, allowing you to easily add and save your own patterns. The fourth palette contains various line-patterns and cross-hatches.

Page 5: As mentioned above in Memory Considerations, you cannot open more than 2 windows on a 512K Macintosh. On a Macintosh Plus, SE, or II, you can usually open 9 to 10 windows at once.

Page 9: The seventh paragraph says that the **Hide Back Layer** command is in the **Options** menu. Actually, it is in the **Windows** menu.

## Enhancements

It is possible to have your own patterns available at all times by placing them in the "SuperPaint Prefs" (short for preferences) file. To do so, close all document windows and **then** modify the pattern(s). The changes will be recorded in "SuperPaint Prefs" as soon as you click the **OK** button in the **Edit Patterns** dialog.

When you edit patterns with a document open, the changes are saved with the current open document. These changes are not recorded in the "SuperPaint Prefs" file. The next time you open that particular document, you'll have the modified patterns available. If you open a different document, or use the **New** command, you'll get the pattern palettes that are stored in "SuperPaint Prefs."

# Part 2: Painting

## Errata

Pages 29-32: For selections in the Paint layer that are being rotated, distorted, stretched, etc., the handles are not hollow, as illustrated in the manual. They are filled. This helps distinguish them from the handles on LaserBits objects, which are hollow.

Page 30: The second paragraph on the **Stretch** command says you can stretch a selection by moving the cursor over one of the edges after selecting the **Stretch** command. This is not correct. The shortcut discussed at the bottom of page 30 (Command-Shift dragging a rectangular selection) does work, but it does not involve the **Stretch** command. Once you choose **Stretch**, you can only pull on the handles. You can constrain a stretch to the first direction in which you move the cursor, either vertical or horizontal, by holding down the Shift key while stretching. You can also enable proportional stretching by holding down the Command and Shift keys while dragging the handle.

## Enhancements

Two handy features have been added to the **Brush Shapes** dialog. First, while editing a brush shape, you can replace the current brush with a design taken from anywhere on the screen. Simply move the cursor outside the dialog and press the mouse button. Drag the cursor while holding down the mouse button. Whatever is under the cursor also appears magnified in the brush editing box. Adjust the cursor position until the box contains the design you want, then release the button. This is called "Picking up a Brush." If you don't like the design, click the **Revert** button and try again. Second, if you Command-click in the brush editing box, all dots in the design are inverted.

You can use the current fill pattern to fill a selection made with the Selection Rectangle tool. To do so, choose **Fill** from the **Paint** menu. If you are using **Transparent** paint (see page 16), the original contents of the selection rectangle will show through any white portions of the pattern. If you **Fill** with **Opaque** paint (again, see page 16), the previous contents of the selection rectangle will be completely obscured.

The **Free Rotate** effect can be constrained to rotations in increments of 5 degrees by holding the Shift key while rotating. Unlike **Rotate Left** and **Rotate Right**, which are restricted to a maximum size of 8 inches by 8 inches, you can select and rotate the entire Paint layer with the **Free Rotate** effect. Of course, any portion of the Paint layer that ends up off the 8" by 10" page will be lost. For best results when rotating in the Paint layer, leave a little white area showing around the object by making the selection rectangle slightly larger than the area to be rotated.

While using the **Distort** effect, you can constrain your movement to the first direction in which you move the mouse, either vertical or horizontal, by holding down the Shift key while dragging.

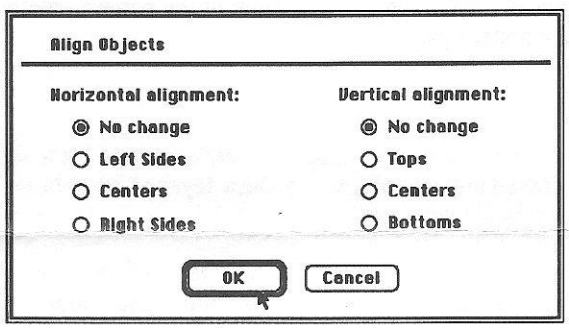
When using **Perspective**, you can drag the handles either vertically or horizontally. For a symmetrical effect, you can hold down the Shift key while dragging and the corresponding corner will move toward or away from the center.

# Part 3: Drawing

## Errata

Page 56: The vertex numbers referenced in the first paragraph are incorrect. Figure 3.26 shows vertex 1 being dragged, and the new vertex is inserted between vertices 1 and 2.

Page 56: Figure 3.27, illustrating the **Align Objects** dialog, is incorrect. While the description on page 56 is correct, the dialog looks like this:




Page 57: The "Not Transparent" choice mentioned in the second paragraph has been renamed as **Opaque**. Thus, the Draw menu now contains the choices, **Opaque** and **Transparent**.

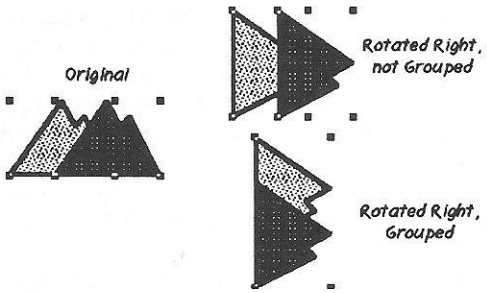
Page 58: The last paragraph states you cannot specify a foreground color of white nor a background color of black. This restriction has been lifted. You can assign any color to either the foreground or the background.

## Enhancements

The Draw menu contains three new commands: Lock, Unlock and Align to Grid. By locking an object, you preclude any modifications to it. For example, while an object is locked, you cannot change its size, shape, position, border thickness, colors, or patterns. However, you can change its stacking order with the **Bring to Front** or **Send to Back** commands. To lock or unlock an object or objects, select the object(s) and choose **Lock** or **Unlock** from the **Draw** menu. The handles of locked objects are drawn in a gray pattern to distinguish them from unlocked objects.

If you have checked the **Grid snap on** button in the Grids and Rulers dialog, the **Align to Grid** command is enabled. When this command is chosen, all selected objects will shift so that the top left-hand corner coincides with the nearest grid point.

You can rotate most drawn objects, however, painted objects, text objects and LaserBits objects will not rotate. All other objects can rotate 90 degrees at a time by using the **Rotate Right** and **Rotate Left** commands in the **Edit** menu. If you rotate several objects at once, each will rotate in place. You can **Group** multiple objects and then rotate the group around a single point. If the group contains objects that cannot be rotated (i.e., painted objects, text objects and LaserBits objects), all objects that can be rotated will rotate, and the remainder will be moved but not rotated.




There are a few more details regarding text in the Draw layer that need to be mentioned:

- A text object cannot be edited when it has been grouped. You must choose Ungroup before editing.
- Some spelling checker programs, such as MacProof, will work on text in *SuperPaint*. However, you may have to reformat the text after using these programs.
- Creating a new text object in front of an existing one can be tricky. When you press the mouse button to define the boundaries of the new object, *SuperPaint* may decide you are defining an insertion point in the old one instead. To avoid this problem, just hold down the Command key while you drag the new text object.
- Text is not resized when a selection is scaled.

There are two ways to display the color palette. The standard way is to choose **Show Color Palette** from the **Options** menu. A shortcut is to hold the Option key and click in the pattern palette. If you "Option-click" again, *SuperPaint* will switch back to the pattern palette.

### Miscellaneous

In Apple's MacDraw, polygons can be "smoothed." Since *SuperPaint* does not have this feature yet, any polygons smoothed in MacDraw and then copied and pasted into the Draw layer of *SuperPaint* will not retain their smoothing. Pasting into the Paint layer will retain the smoothed shape, but the polygon becomes a bitmapped image.

There is a bug in the ImageWriter 2.3 driver that effects text objects in Outline or Shadow style when printing on an ImageWriter II with a color ribbon. The ImageWriter does not follow your color assignments, and you may find text filled or outlined with some unexpected colors. To avoid this problem, use ImageWriter driver 2.5 or later.

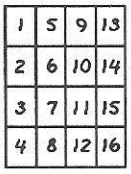
## Part 4: Both Layers

### Errata

Page 66: The first paragraph states the top left of the **document** is saved as the StartUpScreen. This is not correct. The **upper-left corner of the visible portion of the document** becomes the upper-left corner of the StartUpScreen. If you use the Full Screen mode to preview the StartUpScreen and then go back to having the menu bar and palettes on screen, the visible upper-left corner will be different. You can use Full Screen to figure out which portion of the document you want to be the StartUpScreen, noting carefully the upper-left corner. When you change back to normal screen with menu bar and palettes showing, you will need to shift the viewing area so that the visible upper-left corner is the same as it was in Full Screen mode. Then do a **Save As...** and click in the StartUpScreen button in the dialog.

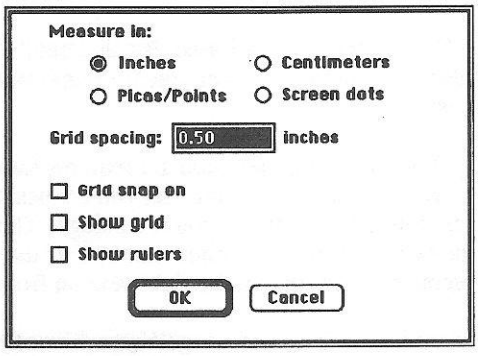
Page 67: The second paragraph says you must turn on a "Print in Color" option in the **Preferences** dialog in order to print in color. This has been changed. If you assign colors to objects and have a 4-color ribbon in an ImageWriter II, the printout will be in color. To print in black and white, use a black-only ribbon.

Page 70: The right side of Figure 4.7 which depicts how the LaserWriter breaks a 400% expanded document into pages, and the associated description, is incorrect. In fact, when a document is split into multiple pages, the top left-hand corner is page 1. Subsequent pages are numbered down, then across. Thus, reading across, the right side of Figure 4.7 should be page 1, 5, 9, and 13, etc., as shown below.




Page 73: Figure 4.10 is incorrect. The **Scale Selection** dialog contains an additional button labeled **Other**. Click this button to enter a scale factor other than 25, 50, 200, or 400%.

Pages 75-76: The procedures for using the Grid and Rulers have changed a bit from the way they are described in the manual. First, they have been combined into one command, **Grid & Rulers...** in the **Options** menu. Any changes you make in this dialog will be saved with the document that you are working on. For example, let's say you check "Show rulers" and "Grid snap on," and then save the document. The next time you open that document, the rulers will be visible and "Grid snap" will be in effect.




Page 77: Figure 4.15 and the accompanying description are incorrect. The **Edit Patterns...** dialog contains three buttons: OK, Save, and Revert. To replace the selected pattern with one you have edited, click the Save button. To return the edit box to its original pattern, click Revert. To exit the Edit Pattern dialog after modifying the original pattern, you must click either the Save or Revert button, then the OK button.

While editing a pattern, you can "pick up" a pattern from anywhere on the screen. Simply move the cursor outside the dialog and press the mouse button. Drag the cursor while holding down the mouse button. For added precision, press the Option key while dragging the mouse. This allows the pointer to move in increments of one pixel instead of eight. Whatever is under the cursor also appears in the pattern editing box. Adjust the cursor position until the box contains the desired pattern, then release the button. If you don't like the pattern, click the Revert button and try again. If you want to invert all the dots in the edit box, just Command-click inside the box.

There is a shortcut for choosing the font size already contained in the **Size** menu's **Other** command. For example, if the "Other" font size is 6 points, and you want to use a 6 point font size, hold down the Option key while you choose **Other...** from the **Size** menu. The dialog in which you normally enter the "Other" size will not appear. Instead, the current "Other" font size will immediately become the current font size. The current **Other** size is displayed in parentheses in the **Size** menu (e.g., **Other (6)...**). In fact, like the rest of the **Size** menu choices, the **Other** choice displays in outline style if its current setting is an installed font size.

## Enhancements

If you need to use **Scale Selection...** over and over again, applying the same scaling factor each time, there is a shortcut. Hold down the Option key while you choose the **Scale Selection...** command from the Edit menu. *SuperPaint* will immediately scale the selection without making you fill out a dialog. It will automatically apply the percentage of scaling you used last.

There is a shortcut for changing between the current **Grid & Rulers...** settings and having them all turned off. Hold down the Option key while you choose **Grid & Rulers...** from the **Options** menu. Instead of having to fill out the associated dialog, *SuperPaint* will switch from your customized settings to everything off, or from everything off to your original settings.

There are shortcuts for turning the Rulers and Grid on and off individually. Press Command-Shift-G to turn the Grid on. This also enables "Grid snap" if it was off, or vice versa. Command-Shift-R works similarly for the Rulers.

The description of the **Turn Scrolling On/Off** command on page 78 neglects to mention a keyboard shortcut: To switch between the automatic Scrolling On and Off modes, press Command-` (the reverse apostrophe).

You can move selections in either layer by a single screen dot (1/72 inch) at a time, using the **Nudge** commands in the **Option** menu. You can nudge the selection up, down, left, or right. Each of the Nudge directions has a Command key equivalent. Command-Y is the same as Nudge Up, Command-J is Nudge Left, Command-K is Nudge Right, and Command-M is Nudge Down. These keys form a kind of skewed diamond on the keyboard. The top of the diamond (Command-Y) moves the selection up, just as the remaining keys move in directions corresponding to their positions on the diamond. On a Macintosh Plus, SE, or II keyboard, you can use the arrow keys as shortcuts for the Nudge commands. Each time you press an arrow key, the selection moves one screen dot in the direction of the arrow.

### Miscellaneous

Certain tools ignore the "Grid snap" effect. These are the Lasso, Brush, Pencil, Spray Can, Eraser, and the Freehand Tool in both layers. Grid snap will also be ignored whenever you are proportionally sizing something. The Grid is never visible when you hide the back layer.

If you intend to print with a PostScript LaserWriter, *SuperPaint* 1.1 requires LaserWriter driver version 4.0 or later. If you have problems printing on a LaserWriter, check to be sure that you are using the correct version of the driver. How can you tell which version of the LaserWriter driver you are using? The **Page Setup Print...** dialog will tell you. The top, right-hand corner of the box contains the version number. If there is no number, or if the number is not at least 4.0, you have the wrong version. You can get the right version from your Apple dealer.

The fact that *SuperPaint* uses the standard LaserWriter and ImageWriter driver files provided by Apple Computer has such benefits as making *SuperPaint* work readily with spooler software, enabling foreground and background colors, and having colored objects print in color when pasted into other applications. This also means that we must accept the output these standard drivers produce. Depending on whether you're using an ImageWriter I or II and whether you've selected Best or Faster mode, the quality of the printouts will vary. In some cases the images in one layer may not be as dark as those in the other layer.

## Part 5: LaserBits™

### Errata

Page 81: The first paragraph says to start by making a selection with the Selection Rectangle. Actually, selections that will be turned into LaserBits objects may be made with the Lasso or Two-Layer Selection tool as well.

### Miscellaneous

If you use *SuperPaint* 1.1 to open a LaserBits document created with *SuperPaint* 1.0, the panels may be slightly shifted. Just realign the panels and save the LaserBits document with *SuperPaint* 1.1. Do not use *SuperPaint* 1.0 with this LaserBits document since the panels will be misaligned again.

A LaserBits document can contain anything in both the Paint and Draw layers, including object text.

A LaserBits object prints at full 300 dots-per-inch resolution on the LaserWriter only when you print the document that contains that LaserBits object. If you open a LaserBits document with the **Open** or the **Open LaserBits** commands and print it while you're working in that LaserBits window, it will be printed in the normal 8 by 10 inch, 72 dots-per-inch resolution.

When you make a selection and create a LaserBits object from it, the original selection is not automatically erased from the current layer. Thus, you can leave it intact and move the LaserBits object elsewhere, if you like. However, in most cases you will probably want to cut the portion of the layer that was originally selected to create the LaserBits object. It won't be obvious that it is still there because the LaserBits object may obscure it.

When you select a LaserBits, text, or painted object, the **Flip** and **Rotate** commands in the **Edit** menu should be dimmed but aren't. Though these commands are not available at that point, this is not an oversight. Instead, it stems from a decision made in the interest of speeding up the program. If *SuperPaint* were to dim these commands when appropriate, the extra processing would cause a delay of up to a full second every time you wanted to use one of these commands. If you try to use **Flip** and **Rotate** when a LaserBits, text, or painted object is selected, nothing happens. While this is not the way a Macintosh program is supposed to behave, we assumed you would prefer this minor inconvenience to a sluggish program.

# Tips and Techniques

## Shifting An Entire Document

Occasionally, you may need to shift the position of an entire document on the page, while keeping both layers together. To do this, you must shift each layer's contents individually. Here is the best way to accomplish this:

Start with the Draw layer. Choose **Reduced View** from the **Windows** menu. Draw a small, hollow rectangle in a convenient corner of the document. Be sure to place the rectangle in a location that does not overlap anything in the Paint layer. The rectangle should be in a portion of the document that will remain on the page. Select the rectangle and choose **Copy to Painting** from the **Edit** menu. You will use this rectangle to align the layers.

Choose **Select All** from the **Edit** menu and drag the Draw layer's contents wherever you need them. Then switch to the Paint layer and choose **Select All**. Drag the Paint layer's contents until the two rectangles or "registration marks" are superimposed. When you have finished repositioning the document, clear the rectangle from the Draw layer and erase it from the Paint layer.

## Getting the Most Out of a LaserWriter

The LaserWriter is capable of 300 dots-per-inch (dpi) resolution, as opposed to 72 dpi resolution with the ImageWriter. There are two ways to get this higher resolution: use objects that are created in the Draw layer and use LaserBits. One good rule of thumb is to create your graphics in the Draw layer whenever you can. This is especially true for text.

The patterns in the "gray" pattern palette are special. With **Precision Bitmap Alignment** off, all other patterns print at 75 dpi, even on the LaserWriter. The LaserWriter prints at 75 dpi, which is why the rulers are different for the ImageWriter and the LaserWriter. However, the Draw layer grays are printed at 300 dpi on a LaserWriter. Since the screen can only show 72 dpi, these gray patterns will look much better on a LaserWriter printout than on the screen.

When you copy from the Paint layer to the Draw layer, or paste something that consists of dots into the Draw layer from some other program, you get a "painted object." These normally print at 75 dpi on the LaserWriter, as they are just collections of dots. But having the dots in the Draw layer allows you to do something you can't do in the Paint layer—scale the painted object down in size **and not lose any of the dots.** If you select a painted object and scale it to 50% of its original size, even though it looks so-so on the screen, it will still print all those dots in half the area.

Scaling a painted object to half size packs the dots in to 150 dpi. If you scale the image to 25%, it packs the dots in to 300 dpi. These packed bitmapped objects will normally look terrible on the screen and be sluggish to move around. They also take a lot of memory and will make the files they are saved in quite large, requiring a lot of disk space. But they can produce some beautiful results on the LaserWriter. They also can be copied to the clipboard or scrapbook and pasted into other programs.

## Finding LaserBits Files

*SuperPaint* first looks for a LaserBits document in the same folder as the master document. If the LaserBits document is not found, it looks where the master document was originally located. If the LaserBits document still cannot be found, it opens a search dialog. To avoid this problem, if you copy a *SuperPaint* document to a new disk, you should copy all of its LaserBits files to the new disk, too.

## An Entire Page of LaserBits

You can create a 300 dots-per-inch painted document with *SuperPaint* fairly easily. This super-high-resolution document will contain over 7 million dots—16 times the number of dots in a typical paint layer.
First, start with an image in the Paint layer. You will have to split this 8" x 10" image into sixteen 2" x 2.5" LaserBits documents. Choose the **Grid & Rulers...** command from the **Options** menu and set up a 0.5" grid. Then turn on the **Grid Snap** and **Show Rulers** options. Click the OK button. Starting at the top left corner of the document, use the Selection Rectangle tool to select a segment of the document that is 2" wide by 2.5" high, i.e., 4 snaps over and 5 snaps down. Then choose **New LaserBits** from the **File** menu. *SuperPaint* will create a LaserBits document from the original segment. Save it, assigning the LaserBits document an appropriate name. Next, start at the upper right corner of that first segment and select the next 2" x 2.5" segment. The Grid will not allow you to select any portion that has already been selected, nor will it allow you to miss anything just to the right of that first segment. The Grid makes sure that everything gets selected eventually, and that there is no overlap. Remember that you will probably want to erase all the dots in the Paint layer when you are done with this process.

Repeat this sequence for each of the 16 segments. The rest is up to you. You can open each of the LaserBits versions of the segments and add all the details you want. You can make full use of both the Draw and Paint layers in the LaserBits documents. Before printing, switch to the Draw layer and choose **Hide Back Layer** from the **Windows** menu. This will prevent the original Paint layer from showing if it had not been erased.

If you are working with 300 dpi scanned images, it is worth noting that most of the major manufacturers of 300 dpi scanners provide an option to save their scanned image directly into the *SuperPaint* document format. The result is a "master" document that has 16 LaserBits objects, each 2" x 2.5" in size. Of course, all of the actual dots are being held in 16 separate LaserBits documents which are automatically "linked" to the master document.

You should always open the master document when making changes to a LaserBits document. Then, when you save the changes to the LaserBits document, a dialog opens to remind you to save the changes to the master document also.

## Printing in Color

Having trouble with the concepts of Foreground and Background colors? It's no real trick. When you set an object's Foreground color, you're telling *SuperPaint* which color to print for the black parts of the object. Likewise, the Background color substitutes for the white parts, but not the transparent parts, of the object. You can separately color the Line (border) and Fill (interior) portions of an object. Thus, an object can have as many as four colors: two for the interior and two for the border.

Want to use more than one color in the Paint layer? You can't do it directly, but there is an alternate method: Using the Lasso or Selection Rectangle tool, select each portion you want to color and make a painted object out of it by choosing **Copy to Drawing** from the **Edit** menu. Erase the Paint layer copy by pressing the Backspace or Delete key, then switch to the Draw layer, select the new painted object, and assign the desired colors to it.

Need more than the eight colors provided by the Color palette? There's a method called "dithering" which can be used to simulate more colors. Instead of using a solid color, choose a gray pattern. Then choose foreground and background colors that mix to produce the desired result. For example, to produce yellow-green, choose yellow and green as your foreground and background colors. You can adjust dithered colors by choosing gray patterns that are more or less dense. The denser or darker the gray, the more emphasis there will be on the foreground color, and vice versa.

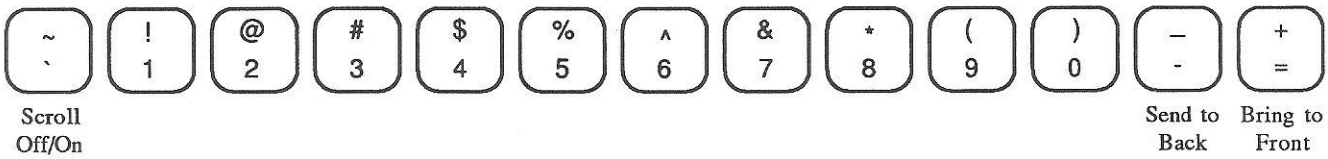
You can assign only one color to the entire Paint layer. With the color palette visible, the Line/Fill selector set to Fill and the Paint layer on top, you can choose a foreground color. The black dots in the Paint layer will be printed in this color. Since the Paint layer is always transparent, you cannot designate a background color.

You can **Copy** objects that have been assigned colors and then **Paste** them into other programs such as MacWrite or Microsoft Works. When you print using an ImageWriter II with a 4-color ribbon, these copied objects should still print in color. However, assigned colors do not carry over to *Silicon Press*, the label printing utility. It was developed before Apple provided color printing in the ImageWriter driver file and so it has its own color printing software.

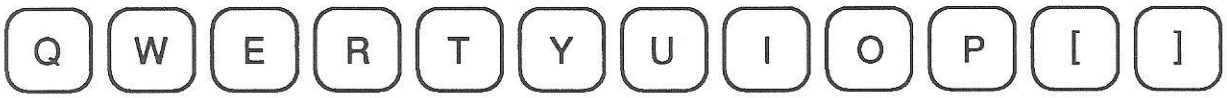
SBS 2-24-88
TJB

# *SuperPaint Shortcuts*

## Command Keys




Scroll Off/On — Send to Back — Bring to Front




Quit — Reduce View — Copy to Other Layer — Reshape Polygon — Text Pattern — Nudge Up — Ungroup — Italic — Open — Plain


Select All — Save — Duplicate — Full Screen — Group — Hide Palettes — Nudge Left — Nudge Right — Hide/Show Back Layer — Print


Undo — Cut — Copy — Paste — Bold — New — Nudge Down — Change Layer

### Press Command key and...

| | | |
|---|---|---|
| Choose Select All (Paint) | – | Minimal selection on page |
| Use Selection Rectangle | – | Minimal selection within rectangle |
| Pencil in painting | – | Direct to 8X magnification |
| Click non-magnified side | – | Direct to no magnification |
| Shift-R | – | Show/Hide Rulers |
| Shift-G | – | Show Grid and Grid snap on/ Hide Grid and Grid snap off |

### Press Option key and...

| | | |
|---|---|---|
| Choose Select All (Paint) | – | Lasso entire Paint layer |
| Use Selection Rectangle | – | Lasso the selection |
| Use Lasso | – | Include white area |
| Use Paint Bucket | – | Fill on-screen only |
| Click on a pattern | – | Change to color palette |
| Click on color palette | – | Change to normal palette |
| Click on Layer Selector | – | Hide/Show Back Layer |
| Choose Scale Selection | – | Use last scale percentage |
| Drag a selection (Paint) | – | Leave a single copy behind |
| Command key and drag a selection (Paint) | – | Leave multiple copies behind |

### Double click...

| | | |
|---|---|---|
| Selection Rectangle tool | – | Select entire window |
| Paint Brush | – | Edit brush shape |
| Pencil | – | Direct to 8X magnification |
| Magnifier | – | Direct to 8X magnification |
| Eraser | – | Erase window |
| Command-Option-Eraser | – | Erase entire Paint layer |
| Rectangles, Oval, Circle | – | Paint/draw from center |
| Any pattern | – | Edit that pattern |
| Title Bar (old ROMs only) | – | Zoom the window |
| Polygon | – | Complete polygon |

### Press Shift key and...

| | | |
|---|---|---|
| Make lines & shapes | – | Constrain lines to 45° & 90° |
| Option-lines and shapes | – | Constrain lines to 30°, 60°, 90° |
| Use Perspective | – | Opposite corner moves too |
| Click on objects | – | Select/deselect multiple objects |
| Move selection(s) | – | Constrain movement to horizontal or vertical |

### Miscellaneous

| | | |
|---|---|---|
| Space Bar | – | Hand |