Adobe

User Guide

Adobe Streamline™ version 3.1

Macir®

Adobe Streamline 3.1 User Guide

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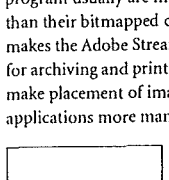
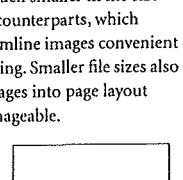
GETTING STARTED

Welcome to the Adobe Streamline™ 3.1 program, a computer graphics tool that literally streamlines the production process by converting bitmapped images into high-quality PostScript™ language images. You can use the program to convert black-and-white line art, as well as color or grayscale images, into different line art formats such as Adobe Illustrator™, PICT, or DXF. You can also convert a single image at a time, or quickly convert a batch of images.

Whether you want to apply custom colors to a corporate logo, create a line drawing from a scanned photograph, or produce a business form for editing, Adobe Streamline gives you quick, top-quality artwork—saving you hours of tracing and copying by hand. In addition, images you convert using the Adobe Streamline program usually are much smaller in file size than their bitmapped counterparts, which makes the Adobe Streamline images convenient for archiving and printing. Smaller file sizes also make placement of images into page layout applications more manageable.



Bitmapped image



PostScript language image produced by Adobe Streamline

The Adobe Streamline program offers several editing tools that let you change the original image as well as the converted image. For even more flexibility in editing a converted image, you can use Adobe Illustrator, Adobe Photoshop™, Macromedia FreeHand™, or other illustration and image-editing programs.

WHAT'S NEW IN ADOBE STREAMLINE 3.0 AND 3.1

New features added to the Adobe Streamline 3.0 and 3.1 program include the following:

- The ability to run in native mode on the Power Macintosh®, greatly enhancing Streamline's performance on these computers. For example, previewing and converting artwork on a Power Macintosh can be up to four times faster than on other Macintosh computers.
- Enhanced color capabilities. You can convert color photographic images or color drawings into PostScript language artwork containing up to 256 colors. You can also create and save custom colors, add these colors to your image, and import custom color styles from Adobe Illustrator files.
- Interactive editing. With the Adobe Streamline modeless dialog boxes—including the new Paint Style dialog box—you can edit and paint your image, see the effect instantly, and then make new changes interactively.
- Preview and Preview Selection views. You can edit an image in Preview mode, which allow you to see colors and illustration features as you edit. You can also preview only selected parts of the image, reducing the time it takes to redraw the screen during editing.

• Instantly save and retrieve conversion options. You can save conversion settings under a unique name, and instantly retrieve these settings at any time.

• Acquire images directly from a scanner. You can use plug-in modules to directly acquire images from a scanner and import them into Adobe Streamline for conversion.

• Expanded palette of editing tools. Adobe Streamline now includes new editing tools, such as the magic wand tool, to enhance editing capabilities before and after conversion.

• Cut and paste PostScript language artwork on the Clipboard. This lets you quickly copy and paste between Adobe Streamline and applications such as Adobe Illustrator and Adobe Photoshop.

• Copy line art into Adobe Photoshop file format. Adobe Streamline now supports versions 2.5 and later of Adobe Photoshop, letting you easily export converted images to Adobe Photoshop documents.

USING ADOBE STREAMLINE WITH THE ADOBE PHOTOSHOP PROGRAM

Adobe Streamline contains features for transporting images or converted paths to and from Adobe Photoshop 2.5 and later. You can acquire selected objects from Adobe Photoshop using the Clipboard and the Import Clipboard PICT command. You can also quickly transport selected paths from Adobe Streamline to an Adobe Photoshop document using the Copy Special command. (See Chapter 2 for detailed instructions on how to import and export artwork in Adobe Streamline.)

Users of Adobe Photoshop 2.5 and later will find that Adobe Streamline greatly enhances the editing of bitmapped images and streamlines the creation of special effects. For example, Adobe Streamline can be used to outline an object, and transport the resulting path to Adobe Photoshop as a clipping path. A clipping path can be edited in Adobe Photoshop or used to create a mask—that is, an object used to isolate part of an image—in an Adobe Photoshop document.

ABOUT THIS GUIDE

Before you begin using the Adobe Streamline program, be sure to read this chapter for installation instructions and other important information. This guide is organized into the following chapters:

• Chapter 1, "Overview and Tutorial," provides an overview of the Adobe Streamline program and shows how to convert a variety of images into PostScript language format.

• Chapter 2, "Basic Concepts," describes how the Streamline application works and describes some of the program's image conversion options.

• Chapter 3, "Editing a Bitmapped Image," describes how you can edit an image and change its colors before converting it.

• Chapter 4, "Setting Conversion Options," describes how to set the Adobe Streamline conversion options before converting the image.

• Chapter 5, "Working With a Converted Image," explains how you can modify a converted image using Adobe Streamline tools and color options.

• Appendix A, "Troubleshooting," describes problems that could arise in using the Adobe Streamline program and offers possible solutions to those problems.

• Appendix B, "Sample Conversions," contains sample illustrations comparing different conversion methods and options

• Appendix C, "Sample Art Gallery," contains a gallery of selected artwork created with the help of Adobe Streamline.

This manual assumes a basic familiarity with Macintosh operations and terminology. For complete instructions, see your Macintosh documentation.

THE ADOBE STREAMLINE PACKAGE

The Adobe Streamline program package contains the following items:

• Two disks, including sample bitmapped images

• The *Adobe Streamline User Guide*

• A registration card

SYSTEM REQUIREMENTS

The Adobe Streamline program requires the following hardware and software:

• An Apple® Macintosh® computer with a 68020, 68030, or 68040 processor (not an upgraded 68000 Macintosh), or a Power Macintosh

• A minimum of 2 megabytes (MB) of application random-access memory (RAM)

• Apple system software 6.07 or later

For optimal performance, Adobe recommends the following:

• An Apple® Macintosh® computer with a 68030 or 68040 processor, or a Power Macintosh

• 4 MB or more of application RAM

• System 7.0 or later

• A color monitor with a 24-bit video display card

REGISTRATION

We are confident you will find that the Adobe Streamline program greatly increases your productivity. So that we can continue to provide you with the highest quality software, offer technical support, and keep you informed about new Adobe Streamline software developments, please return the enclosed warranty registration card.

INSTALLING AND STARTING THE ADOBE STREAMLINE PROGRAM

Before you begin using Adobe Streamline, make a backup copy of the program disks to work with during installation. For instructions on how to copy disks, refer to your Macintosh documentation.

To install the Adobe Streamline program:

1 Choose one of two options:

• With System 6, turn off any virus-protection software with the software's control panel, or move the software to the desktop until the installation process is finished; then restart the computer.

• With System 7, hold down the Shift key as you choose Restart from the Special menu. This action disables all extensions, including any virus-protection software.

2 Insert Installer Disk 1 and double-click the Adobe Streamline installer icon. Click Continue to proceed.

3 From the installation dialog box, choose one of two options:

• Click Install to install everything from all the disks onto your hard drive.

• Choose Custom Install to select individual items for installation. This option enables you to choose from three versions of the Streamline program: one designed for the 68000 series of

Macintoshes, one designed for Power Macintoshes, and a universal version that runs on both types of Macintoshes (but which takes up more disk space than the other versions). Click Install to install the items you've chosen.

When installation is complete, a message appears indicating that the installation was successful.

4 Click Quit to exit the installer and return to the Finder.

5 Replace or turn on any virus protection software you removed in step 1; restart your Macintosh.

You are ready to begin using the Adobe Streamline program.

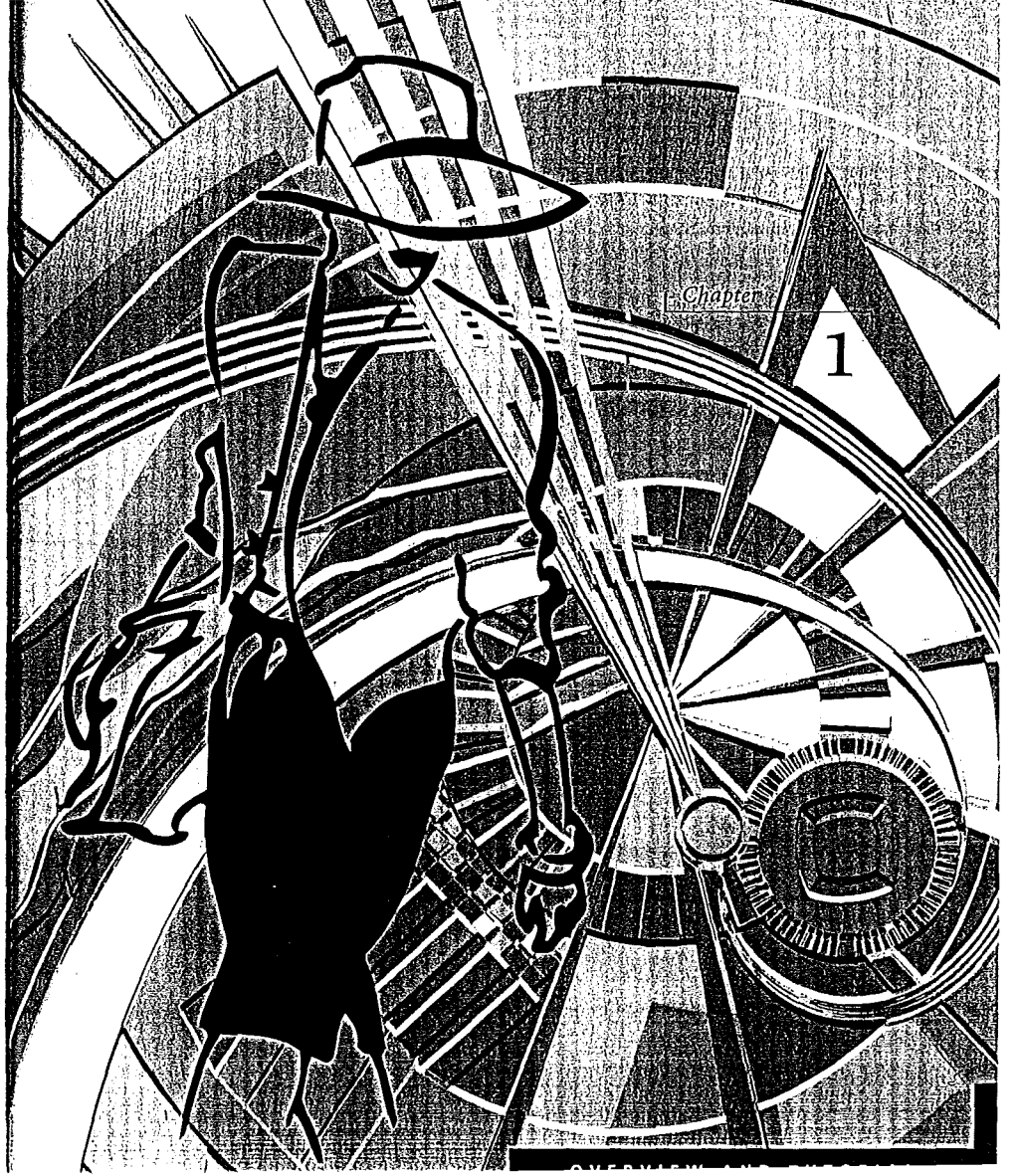
6 To start Adobe Streamline, open the Adobe Streamline folder, and double-click the Adobe Streamline program icon. A dialog box appears asking you to personalize your copy of the program.

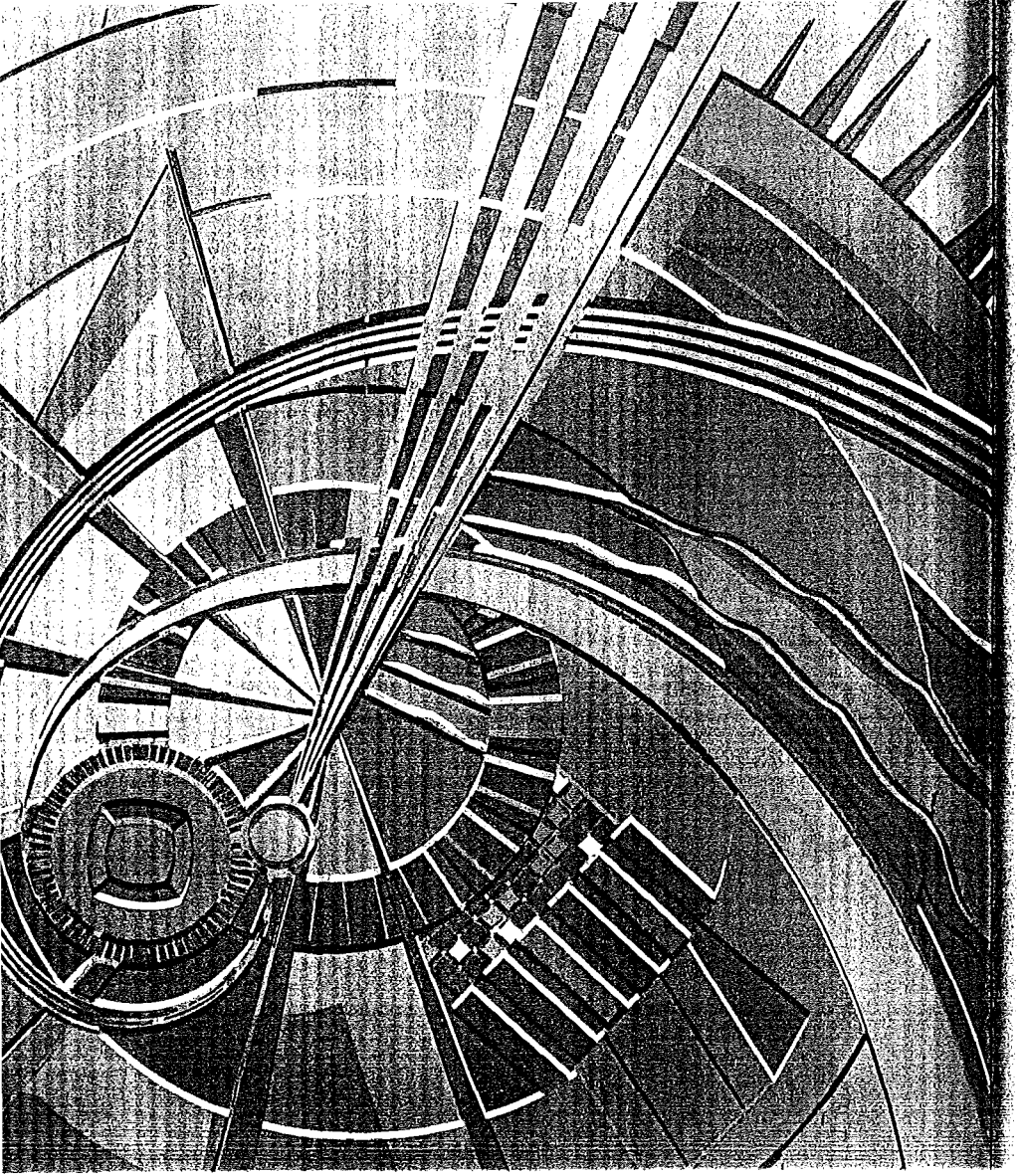
7 Type your name and the name of your organization. The organization name is optional.

8 Type the serial number of your Adobe Streamline program. The serial number is located on the Read Me First card, on the first page of the *Adobe Streamline User Guide*, and on the back of the Adobe Streamline program disk.

9 The program prompts you to select the Plug-Ins folder. Select the Plug-Ins folder and click Select "Plug-Ins". (If you do not want to select a plug-in filters folder, click Cancel; you do not need to select a plug-ins folder to use the Adobe Streamline program.)

The Adobe Streamline program desktop appears, with the toolbox on the left side of the screen. You are ready to open a document and start working.





Chapter 1: Overview and Tutorial

This chapter gives an overview of the Adobe Streamline program and provides a short tutorial on how to open a file, edit an image before conversion, convert a bitmapped image to line art, and edit the converted image. (To learn more about conversion, selection, and editing options, see Chapters 2 through 4.)

OVERVIEW OF USING THE ADOBE STREAMLINE PROGRAM

The following steps outline the basic procedure for converting images using the Adobe Streamline program.

1 Obtain an image for conversion by creating or acquiring an image in the PICT, TIFF, MacPaint®, or Adobe Photoshop 2.0 or 2.5 formats. You can draw an image, import it from a clip art collection, or acquire a picture or object using a scanner or video digitizer. The quality and resolution of the original file determines the quality of the converted image. (A resolution of 300 dots per inch (dpi) or higher is recommended.)

2 Start the Adobe Streamline program and open an image, and then edit the image using the selection and painting tools. For more extensive editing, you can use a paint or image-processing program, such as Adobe Photoshop, to touch up or alter the image before converting it.

3 Set the program options you want. If desired, save the options for later use with similar images. Program options include General Preferences options; the conversion method; color/grayscale setup options; custom colors; dialog box placement; and pencil, line, and eraser thickness.

4 Convert the image or convert a batch of images.

5 Modify the converted artwork in Adobe Streamline using the selection tools and the Paint Style dialog box. You can also smooth the paths in the artwork using the Smooth Path command and the anchor-point-deletion tool.

6 Import or place the final image in an illustration or image-processing program for further modification, or export the image to a page-layout or word-processing program. (For more information on placing an image in another application, see the application's documentation.)

TUTORIAL

In this tutorial you will learn how to select an image, add to or delete from the image, convert the image to PostScript language line art, and edit the converted image.

Select an image

The first step in using Adobe Streamline is to obtain an image for conversion. You can select an image in two ways: by scanning the image directly into Adobe Streamline using the Acquire command in the File menu, or by opening an existing image using the Open command in the File menu. (See "Acquiring Images Directly From a Scanner" in Chapter 2 for more information about the Acquire command.) In the following example, you will select an image saved in the TIFF format.

1 Start the Adobe Streamline program.

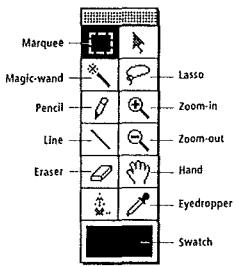
2 Choose Open from the File menu.

3 Open the *Tutorial* Images folder, select the file *lady.B&W*, and click OK.

A line drawing of a woman appears scaled to fit into the Adobe Streamline window.

Edit an image before conversion

Before converting an image to PostScript line art, you can edit it using Adobe Streamline's palette of editing tools. Adobe Streamline's toolbox of editing tools automatically appears when you first open an image in Adobe Streamline; however, only some of the tools are available for use before conversion:



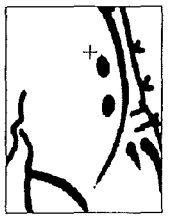
You can use these tools to select specific colors, to delete unwanted details from the image, or to select a part of the image and change its color. In this example, you will edit the black-and-white *lady.B&W* image that you just opened.

Delete part of an image

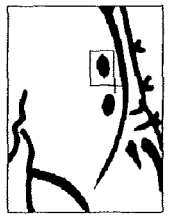
First you will select and delete a button on the woman's coat, and then you will erase the remaining button.

1 With the *lady.B&W* image open in the window, select the marquee tool.

2 Position the marquee tool at the upper left edge of the top button on the woman's coat.



Drag the marquee . . .



to select part of the image

3 Hold down the mouse button, drag to select the button, and then release the mouse button. The selected part of the image is highlighted with a marquee.

4 To delete what you have just selected, choose Clear from the Edit menu.

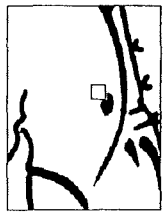
5 Select the eraser tool by clicking the eraser icon in the toolbox.

You can change the width of the eraser tool by double-clicking the eraser tool icon and selecting from the palette of choices.

6 Position the eraser tool over the remaining button on the woman's coat.

7 Drag to erase the button.

8 Move the eraser tool over the buttonholes on the left side of the jacket, and erase by dragging.



Drag the eraser tool . . .

to erase

Add parts to an image

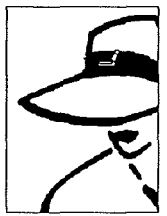
You can use the pencil tool and the line tool to add to the image. In this example, you will fill a gap in a hat band.

1 Select the pencil tool by clicking the pencil icon in the toolbox.

You can change the width of the pencil tool by first double-clicking the pencil tool icon and then selecting from the palette of choices.

2 Position the tip of the pencil over the gap in the hat band.

Drag the pencil tool . . .



to draw on the image

3 Hold down the mouse button, and begin dragging to fill in the hat band.

4 Release the mouse button when you have finished filling the gap.

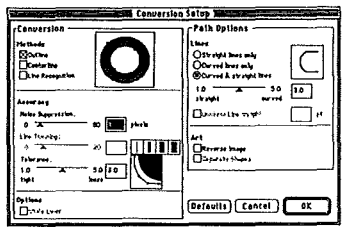
Select a conversion method

Once you have edited an image, you need to select conversion options that are appropriate for the type of image you are converting. (See Chapter 4, "Setting Conversion Options," for information on the types of conversion methods available in Adobe Streamline.)

Use the Conversion Setup dialog box

You can manually select conversion options using the Conversion Setup dialog box. In this example, you'll use the outline method of conversion to convert the line drawing of the woman.

1 Choose Conversion Setup from the Options menu (Command-J). The Conversion Setup dialog box appears.



2 In the Methods section of the Conversion box, select Outline.

3 In the Accuracy section of the Conversion box, set Noise Suppression to 10 pixels and Tolerance to 4.0, either by dragging the sliders or entering the correct value in the text boxes.

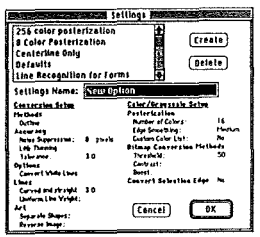
4 In the Lines section of the Path Options box, select Curved and Straight Lines, and move the slider to 3.0.

5 Click OK.

Use the Settings dialog box

You can save specific conversion options and settings—or choose from a list of preset options—using the Settings dialog box. In this example, you will assign a name for the black-and-white outlining conversion method you just set in the section above.

1 Choose Settings from the Options menu (Command-T). The Settings dialog box appears.



A list of preset conversion options appears in the Conversion Settings scroll box in the upper left of the dialog box. A list of the current conversion settings appears at the bottom of the dialog box.

2 In the Setting Name text box, enter Outline Black/White.

You can now retrieve these settings at any time, by clicking Outline Black/White in the Conversion Options scroll box.

3 Click OK.

Convert a single image

Once you have selected the appropriate conversion options for the image, you can then convert it to line art.

Choose Convert from the File menu (Command-R). The image is automatically converted using the current conversion settings.

As the conversion progresses, the progress bar displays the conversion method, the conversion percentage completed, and the number of paths created.

Once the conversion is complete, the converted image appears. To view the image as a wireframe *artwork* image, choose Artwork from the View menu (Command-E). In Artwork view, straight paths appear green, and curved paths appear red.

Converted image

Artwork view

The bitmapped image no longer appears on the screen. However, if you choose the Show Template command from the View menu, the bitmapped image (now called the *template*) can also be displayed.

The converted file has also been renamed (in this case, the *lady.B&W* file has been renamed *lady.art*) to prevent overwriting the original bitmapped image file.

You can edit the converted image using the Adobe Streamline program or a graphics program such as Adobe Illustrator, or you can place the artwork into a page-layout application without changes. For information on editing converted images, see Chapter 5, "Working With a Converted Image."

Convert a batch of images

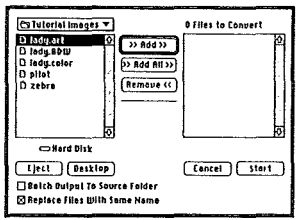
The Adobe Streamline program lets you select multiple files from various drives or folders and convert them as a group. (If you plan to use the Centerline conversion method, all images converted together in a directory should be scanned at the same resolution. For more information, see Chapter 4, "Setting Conversion Options.")

1 Close the *lady.B&W* and *lady.art* images without saving your changes.

2 Choose Settings from the Options menu (Command-T). The Settings dialog box appears.

3 Select the Defaults setting in the scroll box at the upper left of the dialog box, and click OK.

4 Choose Batch Select from the File menu. The Batch Select dialog box appears.



5 Select the Tutorial Images folder, and add the *zebra, pilot,* and *lady.B&W* files into the Files to Convert list.

Click Add to add a selected document to the Files to Convert list. Click Add All to place all available files in the folder into the File to Convert list. To remove a file from the Files to Convert list, select the file and click the Remove button.

6 Select the Batch Output to Source Folder option. This option automatically saves a converted file in the same folder as its source file.

7 Click Start. The Batch Save Format dialog box appears.

8 In the Compatibility box, select the Adobe Illustrator 5 option. In the Preview box select the None (Include EPSF Header) option.

9 Select the Tutorial Images folder and press Select "Tutorial Images" to start converting the batch of images.

The converted images are automatically named by appending the filename with the filename extension for the file format you selected in the Batch Select dialog box.

Convert a color image

One of Adobe Streamline's most powerful features is the ability to convert color drawings or photographs into PostScript language artwork. You can use these features to create special effects, such as a "posterization" effect on a color photographic image.

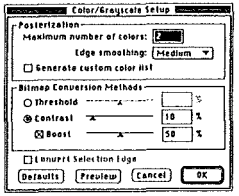
The color conversion process is very similar to that of converting a black-and-white image, but includes additional choices in the Color/Grayscale Setup and Conversion Setup dialog boxes.

The following example shows how to convert an eight-color drawing using the Outline conversion method.

1 Close all open images.

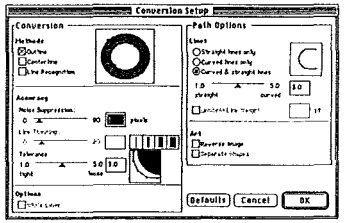
2 Open the *Tutorial* Images folder, and select the *lady.color* file. The color image appears scaled to fit the Streamline window.

3 Choose Color/Grayscale Setup from the Options menu (Command-B). The Color/Grayscale Setup dialog box appears.



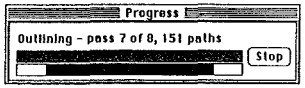
4 In the Posterization box, enter a value of 8 in the Maximum Number of Colors text box. Click OK.

5 Choose Conversion Setup from the Options menu. The Conversion Setup dialog box appears.



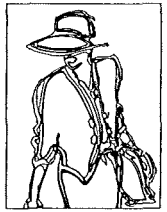
6 In the Conversion box, click Outline. Click OK.

7 Choose Convert from the File menu (Command-R). As the file is converted, a progress bar displays each color and the number of paths.



8 Choose Artwork from the View menu (Command-E) to see the converted artwork in a wireframe format.

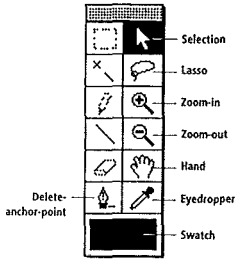
Preview



Artwork

Edit an image after conversion

You can edit a converted image using the Adobe Streamline editing tools, menu commands, and Paint Style palette. After you convert an image, the toolbox changes slightly, because only some of the tools are available for post-conversion editing. The tools available after converting an image include:



You can use these tools to change colors, to delete anchor points on the image, or to select a part of the image and change its color. In this example, you will select an object with the selection tool, and change the object's color using the Paint Style palette.

1 Make sure that you are in Preview view (Command-Y).

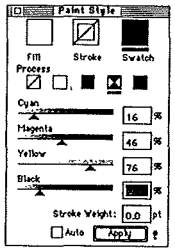
2 Click the selection tool in the toolbox.

3 Select the red section of the woman's hat by clicking directly on the section to be selected.

Click directly on an object to select the entire object

Result

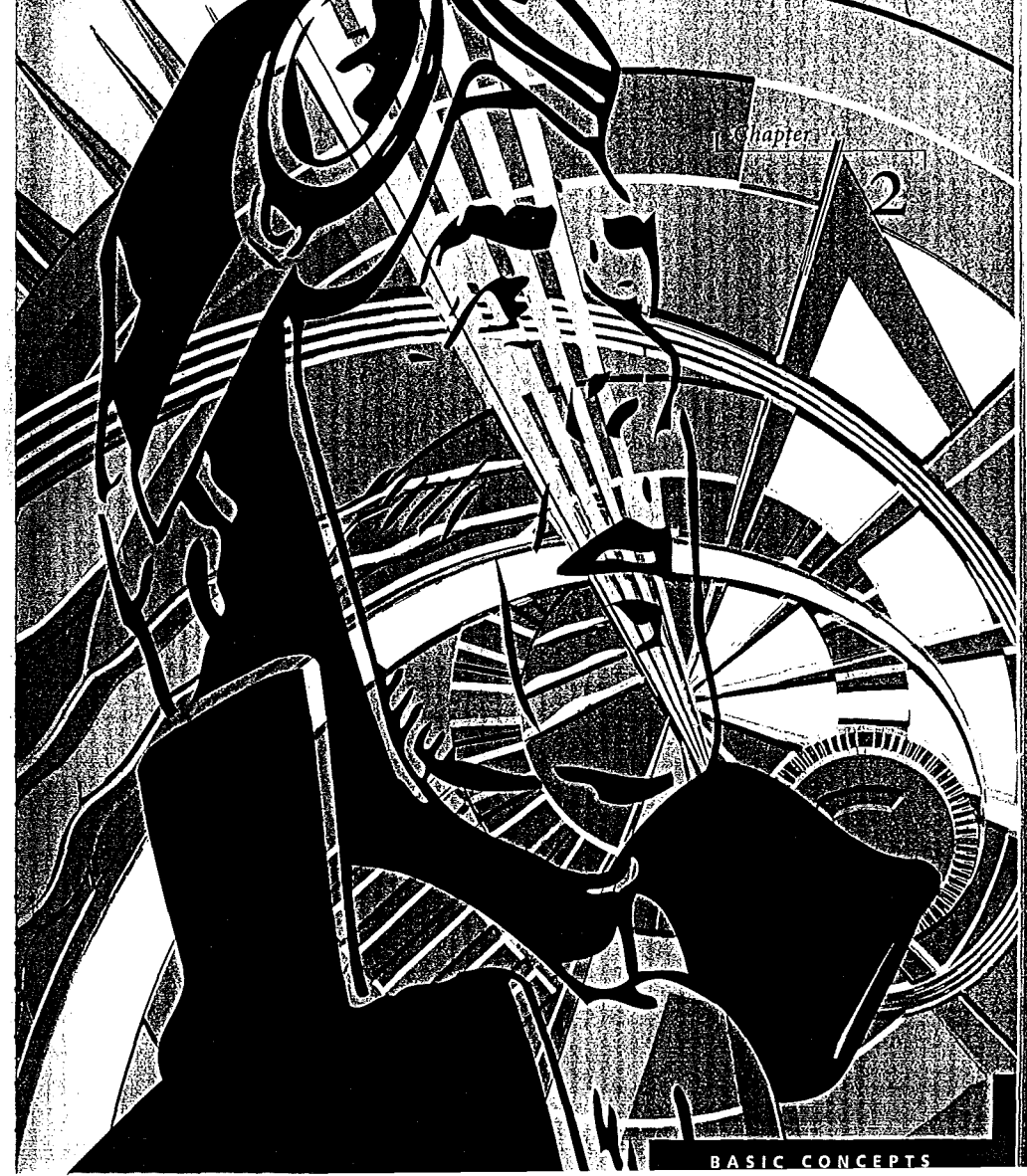
4 Choose Paint Style from the Options menu (Command-I). The Paint Style palette appears.



5 Click the Fill box at the top left of the dialog box. Notice that the Fill box is colored with the same red color as the selected object.

6 To change the red color to blue, enter a value of 100 percent in the Cyan text box, enter a value of 0 percent in the Magenta, Yellow, and Black text boxes, and press Tab. If the Auto box is selected, the color of the selected object automatically changes to the new color. Otherwise, click Apply to apply the new color.

7 Close the image without saving your changes.


Chapter
2
BASIC CONCEPTS

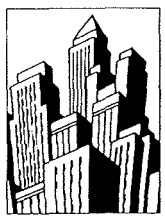
Chapter 2: Basic Concepts

This chapter describes some of the image requirements and conversion guidelines for the Adobe Streamline program, as well as preference and filter options. The chapter also reviews basic concepts such as importing and exporting files to and from Adobe Streamline, getting information about images, saving images, and changing your view of an image while editing.

IMAGE REQUIREMENTS

The Adobe Streamline program is designed to convert black-and-white (1-bit-per-pixel) images as well as color or grayscale (multiple-bits-per-pixel) images.

- Black-and-white images are those that have been scanned from original line art or created using a program such as Adobe Photoshop. Black-and-white images consist of only black or white *pixels*, or tiny dots.



- Color or grayscale images are those that have been scanned from original continuous-tone photographs, or illustrations, or that have been created using a paint or draw program that can save grayscale information (with more than 1 bit per pixel).

Images that you plan to convert using the Adobe Streamline program should meet the following requirements:

- Images should not contain type at sizes smaller than 36 points. If you plan to convert an image that contains small type, erase the type before you convert the image. (For more information about erasing, see "Using the Eraser Tool" in Chapter 3.)
- Images should not be halftones. Computer programs create halftones by converting an image to different-sized collections or patterns of dots. If you use Adobe Streamline to convert a halftone image, the program generates a path for each halftone dot. The result is too many paths for efficient conversion or printing. You should always use the original (that is, the non-halftone) image.
- Images you want to convert must be saved in TIFF (Tagged Image File Format), TIFF compressed, PICT, MacPaint, or Adobe Photoshop 2.0 or 2.5 format.

Note: *Adobe Streamline expands TIFF formats in memory during conversion, so that the file size in memory is larger than the file on the disk. The exact increase depends on the image, but an increase of about one-third is common.*

• For the best results, save an image you plan to convert at a minimum resolution of 300 dots per inch (dpi). Although the program supports low-resolution images (72 dpi), a low resolution limits the quality of the converted image. In general, the higher the resolution of the original image, the better the converted image. However, the higher an image's resolution, the larger the file size. Your computer must have enough memory to convert the image.

Compare the results of converting an image scanned at 72 dpi, 150 dpi, and 300 dpi:

Original image

Results using image scanned at 72 dpi

Results using image scanned at 150 dpi

Results using image scanned at 300 dpi

• The quality of the converted image depends largely on the quality of the original image. If you start with a poor-quality original, imperfections are picked up by the scanner and included in the bitmapped image. The Adobe Streamline program traces whatever information is contained in the bitmapped image. You can edit out imperfections, such as stray dots, in a bitmapped image as described in Chapter 3, "Editing a Bitmapped Image."

GENERAL CONVERSION GUIDELINES

In general, images with high contrast between the dark and light areas are better candidates for conversion than those with low contrast. The following guidelines will help you obtain maximum clarity in your converted images:

• To capture small details of a bitmapped image, scan the image at a high resolution; then in the Conversion Setup dialog box, reduce the noise suppression setting, increase the tolerance, or both.

• If your image contains areas that would benefit from conversions using different methods, convert areas separately, and then merge them back together in an illustration program such as Adobe Illustrator. For example, if you want to convert a business form that includes a company logo, you can select just the form and convert it using the Line Recognition method, and then select the logo and convert it using the Outline method. Then open both files in an illustration program, cut the logo, and paste it into the form.

• If your original image is very small (for example, only a few inches square), either enlarge the image before scanning it, or scan it at a resolution higher than 300 dpi.

• If the horizontal or vertical lines in your image are slightly skewed, use the Line Recognition method along with the Centerline or Outline method to correct the skewing.

• If the original image contains lines with more than one line weight and the lines intersect, convert the image using the Centerline conversion method with the Uniform Line Weight option. Then change the line weights in the Paint Style palette.

• If a color or grayscale image appears completely white or black when converted using two colors, adjust the Threshold, Contrast, and Boost options in the Color/Grayscale Setup dialog box.

• To include the most information when converting a continuous-tone picture, increase the Posterization/Maximum Number of Colors value in the Color/Grayscale Setup dialog box. Keep in mind that using 256 colors increases the file size and the conversion time. If you don't want such a large file, use fewer colors.

• If your original image has many stray pixels, erase the pixels before converting the image, using the eraser tool.

• If you are outlining an image that contains gradient shades or colors, set the Edge Smoothing option in the Color/Grayscale Setup dialog box to Maximum.

• For special effects, try scanning a black-and-white image using the grayscale setting on the scanner. The grayscale setting lets you use the Color/Grayscale Setup dialog box to adjust gray shades and achieve a variety of interesting effects.

SCANNING GUIDELINES

The following scanning guidelines will help you create the best possible bitmapped images for conversion with the Adobe Streamline program:

Note: Adobe Systems Incorporated strongly recommends that you observe the rights of the original artist or publisher of the images you scan. If you plan to use a previously published image, contact the artist or publisher for information on obtaining permission.

• Make sure that the original image is square on the scanning bed before scanning (unless the scanner adjusts the alignment for you). Most scanners have guides to line up the image correctly. If the image is slightly rotated, straight lines within the scanned image may appear broken or jagged. (You can use the Line Recognition option to straighten horizontal and vertical lines that are slightly skewed. If necessary, you may be able to correct jagged lines in a converted image by rotating the entire image in the Adobe Illustrator program.)

• The larger the image that you scan, the better the bitmapped image (and the larger the image file). If you first enlarge an image using a copy machine before you scan the image, you can often achieve better results than with a much smaller original.

• If the lines of your bitmapped image appear too thin (less than 1 point), increase the contrast of the scanner to make the lines appear thicker.

• If you are scanning small letterforms or logos, enlarge the bitmapped image to fill at least half an 8-1/2-inch by 11-inch page. After you have scanned the image, crop any unneeded areas from the image to reduce the file size.

• Scan at a resolution of 300 dpi or higher. A high-resolution bitmapped image provides more pixel information than a low-resolution image, and generally results in a more accurate converted image.

• Scan black-and-white line art using the line art setting on the scanner, and scan continuous-tone photographic images using the grayscale or color setting.

• If necessary, adjust the contrast to create a sharper scanned image.

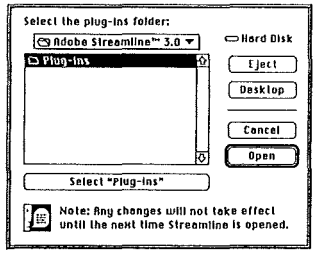
USING PLUG-IN FILTERS

Plug-in filters are software programs developed by third-party vendors in conjunction with Adobe Systems to extend the capabilities of the Adobe Streamline program. The Adobe Streamline program includes several plug-in filters for acquiring images from scanners and other input devices. (To install additional plug-in filters, drag the desired filters to the Plug-ins folder and restart Adobe Streamline.)

These plug-in filters work with the Acquire command under the File menu. Before using the Acquire command, you must first select the Plug-Ins folder using the Plug-Ins Preference dialog box.

To select the plug-in filter preferences:

1 Choose Preference from the File menu and Plug-Ins from the submenu. The Plug-Ins Preference dialog box appears.



2 Select the location of the Plug-Ins folder on your system's hard disk drive.

3 Click Select.

The plug-in filters are now available for use with the Acquire command. (See the next section, "Acquiring Images Directly From a Scanner" for more information about the Acquire command.)

ACQUIRING IMAGES DIRECTLY FROM A SCANNER

You can use the Acquire command in the File menu along with plug-in filters included with Adobe Streamline to scan images directly from a scanner into the Adobe Streamline program. To use plug-in filters, you must first locate the folder in which the plug-in filters are placed. (For more information on locating the plug-in folder, see the preceding section, "Using Plug-In Filters.")

To scan an image directly into Adobe Streamline:

1 Choose Acquire from the File menu.

2 Select a plug-in filter from the submenu.

3 Set any options for the selected plug-in filter.

Setting options for a TWAIN plug-in filter

TWAIN is a cross-platform interface for acquiring images captured by certain scanners and frame grabbers. The device manufacturer of the TWAIN device must provide a Source Manager and TWAIN data source for your device, or the filter will not work.

The first time you use a TWAIN device, choose TWAIN Acquire, and select the device you're using. You do not need to repeat this step for subsequent use of the TWAIN module unless you switch devices.

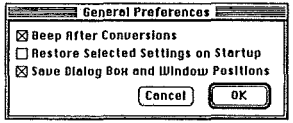
If more than one TWAIN device is connected to your system and you want to switch devices, use the TWAIN Select Source command to select the device.

SELECTING GENERAL PREFERENCES OPTIONS

The General Preferences options determine how the Adobe Streamline program functions in certain situations, and allows you to control what options are retained when you quit the program. It is a good idea to set General Preferences options when you start the program; you can then easily change the options or revert to the default options later.

To select General Preferences options:

1 Choose Preferences from the File menu and General from the submenu (Command-K). The General Preferences dialog box appears.



2 Select the options you want to use, as follows:

- The Beep After Conversion option lets you turn on or off the beep sound that occurs when each image conversion is complete.
- The Restore Selected Settings on Startup option retains the current settings—conversion options, tolerance, and so on—and displays these settings when you restart the Adobe Streamline program.
- The Save Dialog Box and Window Positions option retains the last position of all dialog boxes and windows when you quit the program. When you restart the program, the dialog boxes and windows are in the same position as when you last quit the program.

3 Click OK.

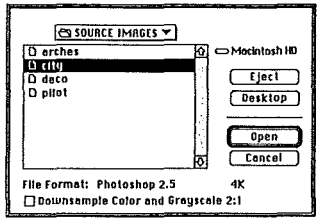
OPENING DOCUMENTS

You can open documents using the Open command in the File menu (Command-O). Adobe Streamline can open TIFF, TIFF compressed, PICT, MacPaint, and Adobe Photoshop 2.0 and 2.5 file formats. You can open only one document at a time.

If you are opening a very large document, you can also decrease the size of the document using the Downsample Color and Grayscale 2:1 option. With the Downsample Color and Grayscale 2:1 option selected, Adobe Streamline retrieves every other pixel in the image, decreasing the total size of the image to a fourth of the original image. Reducing the image size makes the image easier to work with, reduces memory requirements, and decreases the time it takes for Adobe Streamline to redraw the image on t he screen.

To open a document:

1 Choose Open from the File menu (Command-O). The Open dialog box appears.



2 Select the name of the artwork file you want to open. As you click a document, the format and file size of the document appear in the File Format box.

3 If desired, select the Downsample Color and Grayscale 2:1 option.

4 Click Open.

IMPORTING STYLES FROM ADOBE ILLUSTRATOR FILES

You can import custom colors directly from Adobe Illustrator files using the Import Styles command.

When you import custom colors from an Adobe Illustrator file using the Import Styles command, the additional colors are added to the bottom of the scroll box in the Custom Color dialog box. However, if there is a naming conflict, the new name will automatically overwrite the existing name. For example, if you have an existing custom color called "Apple Red" and you import styles from a file that contains a different custom color named "Apple Red," the original custom color will be overwritten.

To import styles from an Adobe Illustrator file:

1 Choose Import Styles from the File menu. The Import Styles dialog box appears.

2 Select the Adobe Illustrator file from which to import styles, and click Open. The new custom colors will appear in the bottom of the scroll box in the Custom Color dialog box.

IMPORTING PICT IMAGES FROM THE CLIPBOARD

You can quickly import PICT format images into Adobe Streamline using the Clipboard.

To import an image using the Clipboard:

1 Use a scanner or application program to create an image in the PICT format. See the documentation accompanying the scanner or application for information on saving an image in the PICT format.

2 Copy the image (Command-C) to the Clipboard.

3 Start the Adobe Streamline program.

4 Choose Import Clipboard PICT from the File menu.

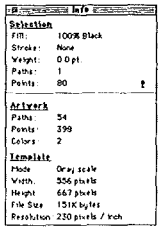
The PICT image is imported into Adobe Streamline, and appears in the current window.

GETTING INFORMATION ABOUT AN IMAGE

The Show Info command in the View menu lets you display information about the active image and template. You can view image, template, and selection statistics while an image is open.

To view information on the active image:

Choose Show Info from the View menu. The Info palette appears.



The Info palette includes information on the current selection, the image before conversion (also called the *template*), and the image after conversion (the *artwork*). The Info palette always shows information about the current selection; information about the template and artwork are shown in the Template and Artwork box at the bottom of the Info palette. If the box is hidden, click the "lever"—the palette display control—at the lower right of the Info palette. The dialog box includes the following information:

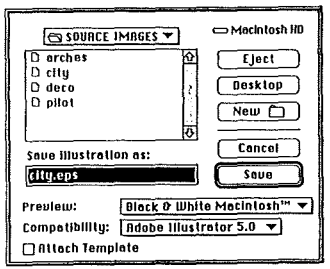
- The fill and stroke color values
- The line weight of the selected stroke, in points
- The number of paths selected
- The number of anchor points in the selection
- The number of paths in the converted image
- The total number of anchor points in the converted image
- The number of colors in the converted image
- The image file mode: Bitmap, Grayscale, RGB Color, or CMYK Color
- The width and height of the image in pixels
- The image file size in bytes
- The image resolution in units of pixels per inch

To hide the Info palette, choose Hide Info from the View menu.

SAVING IMAGES

To save a converted image under its original filename with the filename extension of the selected file format, choose Save Art from the File menu (Command-S).

To save artwork under a different name or in a different file format, or to save the bitmapped template along with the artwork, choose Save Art As from the File menu. Selecting the Save Art As command displays the Save Art As dialog box.



To save the converted image in an existing folder, double-click the desired folder name to open it. To save the converted image in a new folder, click New, type the folder name, and click OK. If you do not specify a folder, the converted image is saved in the same folder as the bitmapped image.

Adobe Streamline supports three file formats for saving converted images: Adobe Illustrator (version 5.0 is the default), DXF, and PICT.

Saving in the Adobe Illustrator format

Select an Adobe Illustrator file format if you want the converted image to be saved as a PostScript language file that you can open, preview, edit, and print from the corresponding version of Adobe Illustrator. In addition, if you save a converted image in Adobe Illustrator 3 format, you can work on it using Macromedia FreeHand 4.0.

If you save your artwork in one of the Adobe Illustrator file formats, you can include a screen-resolution preview of the converted image with the file. Four of the five preview options automatically save the document with an Encapsulated PostScript Format (EPSF) header, enabling you to import and print your document from applications that support the EPS format.

The five Preview options are:

- None (Omit EPSF Header). This format saves the document as an Adobe Illustrator file, but does not include an EPSF header and does not include a preview image of the artwork. Saving an illustration in this format reduces the amount of disk space that the file requires. However, the file can only be opened or printed using the Adobe Illustrator program or a program compatible with Adobe Illustrator.

- None (Include EPSF Header). This format saves the document as an Adobe Illustrator file and includes an EPSF header, but does not provide a preview image of the artwork. The EPSF header allows the file to be recognized and printed by any software application that supports the EPSF format.
- Color Macintosh. This format saves the file with an EPSF header, and also saves a preview version of the image in a color Macintosh QuickDraw®, PICT format.
- Black and White Macintosh. This format saves the file with an EPSF header, and also saves a preview image in a black-and-white Macintosh QuickDraw format.
- IBM PC. This format saves the document with an EPSF header and provides a preview image that can be viewed on IBM PC-compatible computers

Saving in the DXF format

Select DXF as the file format to preview, edit, and print a converted image in computer-aided design (CAD) programs such as AutoCad™, VersiCad™, or any other application that accepts the DXF Drawing Interchange file format.

Saving in the PICT format

Select PICT to save the file in a PostScript language PICT format. The PostScript language PICT format is recognized by many drawing programs, desktop publishing programs, and word processing programs, and can be used as an intermediary file format for transferring documents between applications.

Artwork that is saved in the PostScript language PICT format can also be opened by programs that recognize bitmapped PICT format images; however, when opened as a bitmapped PICT image, the artwork will be converted from PostScript language format to a bitmapped format and will lose the editability and compactness of a PostScript language file.

SAVING A TEMPLATE WITH THE CONVERTED IMAGE

You can save the template (the original or edited bitmapped image) with the converted image, using the Attach Template option in the Save Art As dialog box. The bitmapped image is saved as a 72-dpi PICT image.

To save a template with the converted image:

1 Choose Save Art As from the File menu.

2 Select the Attach Template option.

3 Click Save.

SAVING A PIXEL IMAGE

To save the bitmapped pixel image as an Adobe Photoshop, PICT, or TIFF file, use the Save Pixel Image As command in the File menu. You can use this feature to save an image that you have edited in Adobe Streamline before you convert the image to PostScript line art.

To save a pixel image:

1 Choose Save Pixel Image As from the File menu.

2 Choose a file format in which to save the file from the File Format pop-up menu. You can select the Photoshop 2.0, Photoshop 3.0, PICT, or TIFF format.

3 In the Save Pixel Image As text box, type the name of the file, and click OK.

COPYING IMAGES

You can copy parts of an image to the Clipboard using the Copy command in the Edit menu (Command-C). Once a converted image has been copied to the Clipboard, it can be exported to an application that recognizes PostScript language files on the Clipboard, such as Adobe Illustrator. You can also copy a path to Adobe Photoshop 2.5 and later (for example, to create a mask), using the Copy Special command in the Edit menu. Copy Special automatically copies the selected paths to the Clipboard in Adobe Photoshop format.

To copy a PostScript image to the Clipboard and export it to another application:

1 Use Adobe Streamline to convert an image into PostScript line art. (For more information about converting images into line art, see Chapter 4, "Setting Conversion Options," or Chapter 5, "Working With a Converted Image.")

2 Copy the PostScript image (or a selected part of the image) to the Clipboard (Command-C).

3 Start the Adobe Illustrator program (or another application that recognizes PostScript language files on the Clipboard), and open a document.

4 In the Adobe Illustrator program, choose Paste from the Edit menu (Command-V). The PostScript line art will be pasted into the Adobe Illustrator document.

To copy an object to Adobe Photoshop:

1 Using any selection tool, select the paths you want to copy to Adobe Photoshop 2.5 or later.

2 Choose Copy Special from the Edit menu. This command copies the selected path to the Clipboard in Adobe Photoshop format.

3 Start Adobe Photoshop, and open a new or existing document. Position the pointer where you want the objects to be pasted in the open document.

4 With Adobe Photoshop active, choose Paste from the Edit menu. The objects will be pasted inside the open Adobe Photoshop document.

CHANGING YOUR VIEW OF AN IMAGE

You can change the placement and viewing scale of an open image in several ways.

Scrolling with the hand tool

You can drag an image around the Adobe Streamline window when you want to see part of an image that extends beyond the edge of the window. To do so, you use the hand tool.

To scroll an image with the hand tool:

1 Select the hand tool in the toolbox, or press and hold the spacebar. The pointer becomes a hand when positioned anywhere inside the active window.

2 Drag the hand in the direction you want the image to scroll.

Magnifying and reducing with the zoom tools

The Adobe Streamline program has two zoom tools: the zoom-out tool and the zoom-in tool. These tools let you reduce or magnify the image. You can also use these tools to magnify or reduce a selected area.

To use the zoom tools:

1 Select the zoom-in or zoom-out tool in the toolbox; or to automatically zoom in or zoom out, choose the Zoom Out command (Command–) or Zoom In command (Command+) from the View menu.

2 Position the pointer on the area that you want to magnify or reduce, and click the mouse button.

The image is magnified or reduced by a factor of 1.5 for each mouse click. To magnify or reduce by a factor of 2, hold down the Control key as you click with the zoom-in or zoom-out tool.

The area beneath the pointer is centered in the new view. If you need to zoom more than once, click again to instantly move to the new view. You do not need to wait until the image has been completely repainted in the window before you zoom again.

Note: The plus or minus sign in the magnifying glass disappears when you've magnified or reduced the image to the fullest extent possible. Use the mouse button or the Option key to toggle between the two tools.

To magnify or reduce using a selection marquee:

1 Select the zoom-in or zoom-out tool.

2 Drag a marquee around the part of the image that you want to magnify or that is the size you want the image to fit into.

If you are magnifying the image, the area you selected fills the window as closely as possible. If you are reducing the image, the image is reduced as much as possible to fit inside the marquee. The magnification or reduction factor is determined by the size of the selection.

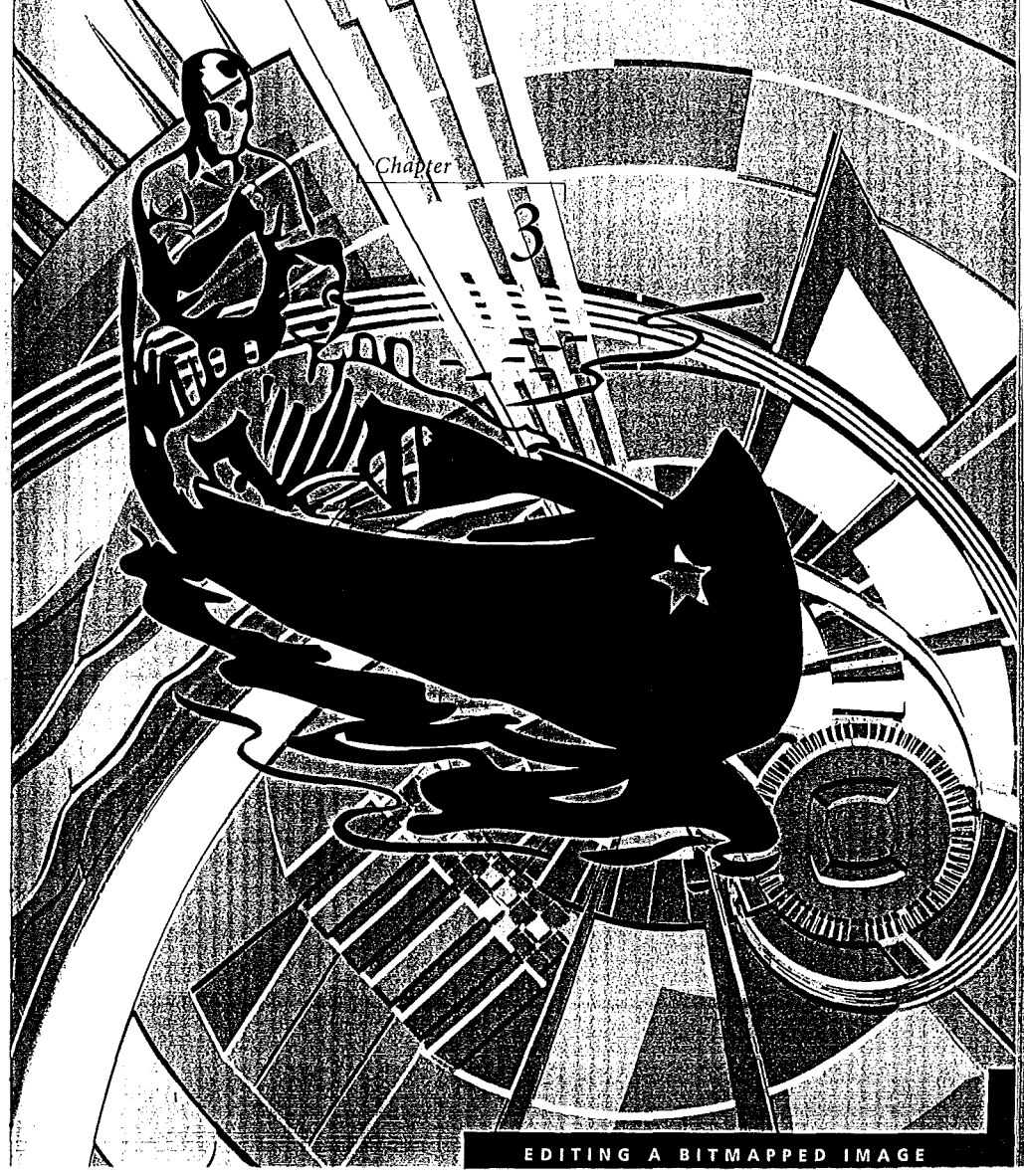
Area selected by dragging zoom-in tool

Enlarged view

Fitting an image in the window and restoring the image to actual size

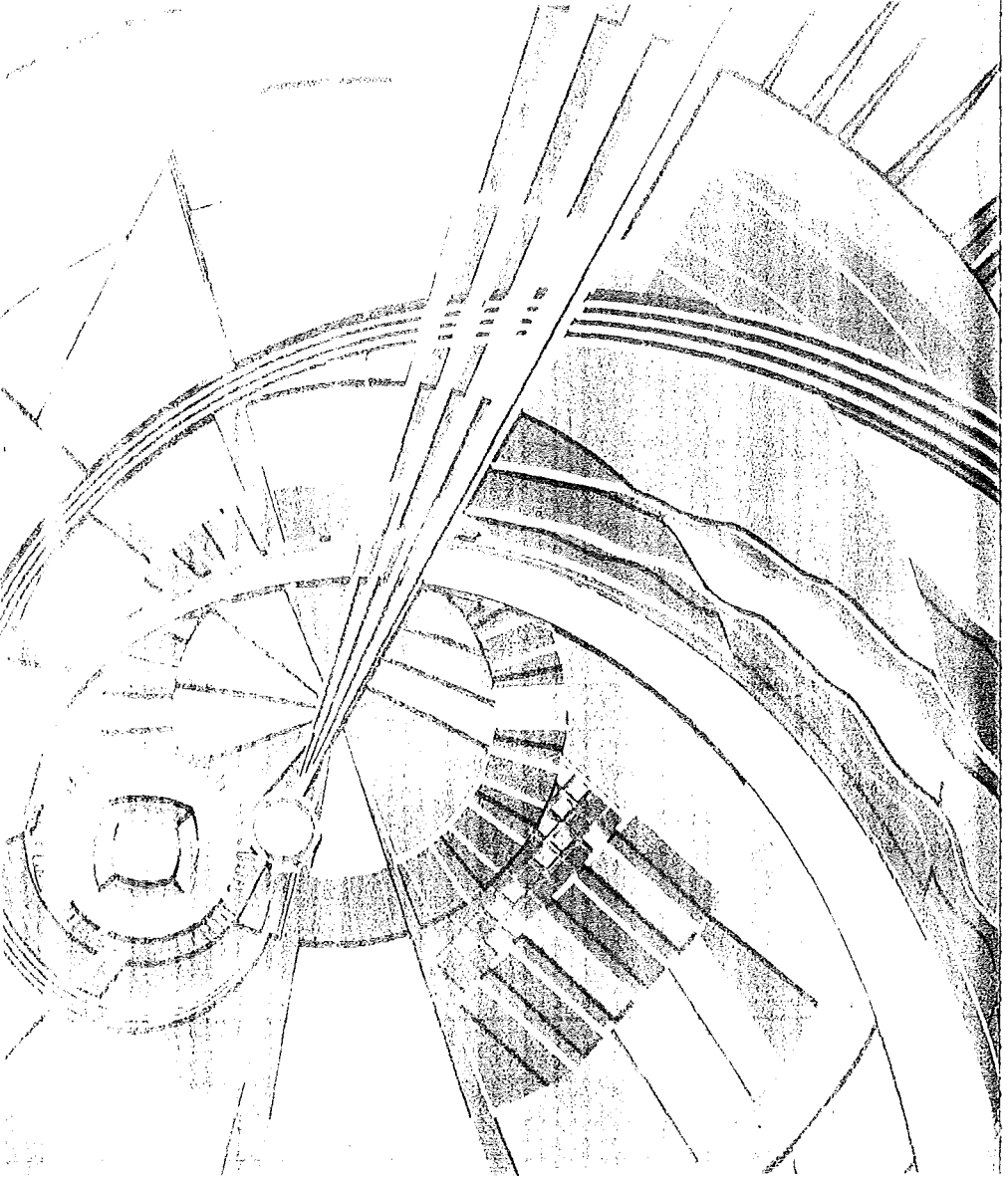
To display the entire image in the active window, choose Fit In Window (Command-M) from the View menu or double-click the hand tool.

To restore an image to its actual size, choose Actual Size (Command-H) from the View menu.



Chapter 3

EDITING A BITMAPPED IMAGE



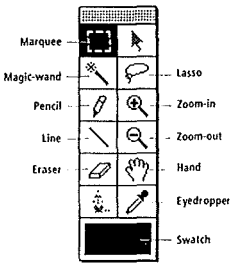
Chapter 3: Editing a Bitmapped Image

Before converting a bitmapped image, you can edit it using the Adobe Streamline tools and commands. (After conversion, the bitmapped image becomes a template, and cannot be changed or edited.) This chapter describes how to

- Use the tools available for editing the original bitmapped image;
- Select areas with the marquee tool, lasso tool, and magic-wand tool;
- Use the pencil, line, and eraser tools;
- Change the swatch color using the eyedropper tool or Paint Style palette; and
- Apply color to the selected area of the image.

USING THE TOOLBOX TO EDIT THE ORIGINAL BITMAPPED IMAGE

The first time you open an image, the toolbox appears on the left of the active Adobe Streamline window. After you convert the image, the available tools change so that you can edit the converted image as explained in Chapter 5, "Working With a Converted Image."



- The marquee tool lets you make rectangular selections.
- The lasso tool lets you select by drawing freehand boundaries.
- The zoom-in and zoom-out tools allow you to magnify and reduce the image display.
- The hand tool lets you scroll through an image that is too large for the window.
- The magic-wand tool lets you select image areas based on the color similarities of adjacent pixels. This tool can be useful when you want to select part of an image (for example, a red flower) without tracing the outline with the lasso tool.
- The eyedropper tool lets you select a swatch color from a bitmapped image.
- The pencil tool lets you paint freehand lines in the color displayed in the toolbox swatch.
- The eraser tool lets you change the color values of pixels ("erase" them) to white.
- The line tool lets you paint constrained or unconstrained straight lines.
- The toolbox color swatch indicates the active color. You can use the toolbox swatch along with the Paint Style palette to apply a color to a selected part of the image.

MAKING SELECTIONS

You can make selections in a bitmapped image using the lasso, marquee, and magic-wand tools. You make selections to change the color of the selected area or to convert only the selected part of an image.

Selecting an area for conversion

If you are interested in converting only part of an image, you can select that part of the image before choosing Convert from the File menu; Adobe Streamline will then convert only the selected area. Converting just a selected area, especially with large or complex images, can significantly speed up the conversion process and reduce memory requirements.

Note: Using the Convert Selection Edge option in the Color/Gray scale Setup dialog box creates paths around the selection edges of the object. This is useful for creating masks or outlining areas.

Selecting only part of an image for conversion is also helpful if you want to use different conversion methods to convert different areas of an image. Each time you convert part of an image, you need to save the converted file under a different filename. To convert a different part of the image, you can then reopen the original file, select a new area to convert, and save the converted file under a different filename. To combine the converted images, you can copy and paste converted areas into a single document using a graphic illustration program such as Adobe Illustrator.

Using the lasso tool

The lasso tool lets you select any area of an image by drawing an outline around the area.

To select an area with the lasso tool:

1 Select the lasso tool in the toolbox. The pointer becomes a lasso when you point inside the image area.

2 Drag to draw an outline around the part of the image that you want to select. If you do not draw a closed shape, the program closes the selected area for you when you release the mouse button.

Using the marquee tool

The marquee tool lets you select rectangular areas of a bitmapped image by dragging a marquee, or selection border, on the image.

Tip: To select a very small area, zoom in to an increased magnification before making the selection.

To make a rectangular selection:

1 Select the marquee tool in the toolbox. The pointer becomes a crosshair when you point inside the active window.

2 Drag a marquee around the part of the image you want to select.

Using the magic-wand tool

The magic-wand tool lets you select areas of a bitmapped image based on the color or grayscale similarities of adjacent pixels.

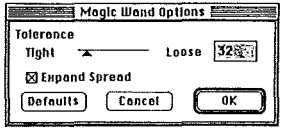
To select with the magic-wand tool:

1 Select the magic wand tool in the toolbox.

2 Click the colored area or shade of gray you want to select. The magic-wand tool evaluates color values of adjacent pixels to determine if they are within the specified range, or *tolerance*. All pixels that fall within the specified tolerance are selected.

To select magic wand options:

1 Double-click the magic-wand tool. The Magic Wand Options dialog box appears.



2 Enter a Tolerance value from 0 to 255, or drag the slider to change the value.

Tolerance determines how similar pixels must be in color (or brightness, for grayscale images) to be included a selection. Tolerance specifies a range of colors and brightness, from very similar to very dissimilar. A low number (called a tight tolerance) causes the magic wand to select pixels with very similar color or brightness values. A high number (called a loose tolerance) causes the magic wand to select a wider range of colors or brightness. The range of tolerance values is from 0 to 255—the default value is 32.

Tolerance: 32

Tolerance: 99

3 Select the Expand Spread option, if desired.

Use the Expand Spread option if you want Adobe Streamline to make the magic-wand selection based on a 3-pixel "spread" of pixels surrounding the pixel you click with the magic wand. Adobe Streamline will then select pixels that fall within the tolerance range of any of the pixels in the spread.

Extending and reducing selections

You can extend or reduce your selection in many ways. You can select more than one area of an image at a time, or select the entire image. You can also extend and reduce selections by selecting the intersection of two or more selection borders.

Note: To deselect everything in the image, move the marquee selection pointer anywhere inside the image area and click the mouse, or choose Select None from the Edit menu (Command-I).

To add to a selection:

1 Make your first selection using any of the selection tools in the toolbox.

2 Hold down the Shift key and select the area you want to add to the first one. The first selection is extended to include the second selection.

Extending selection using the Shift key

Result

To subtract from a selection:

1 Once you have defined your first selection, click any of the selection tools in the toolbox.

2 Hold down the Command key and select the area you want to subtract from the selection.

To select the intersection of selections:

1 Once you have made a selection, select any selection tool in the toolbox.

2 Hold down the Command and Shift keys, and drag to define the area of intersection that you want to select. If you have selected the magic-wand tool, hold down the Command and Shift keys and click to select pixels based on the color or grayscale similarities within the boundaries of the selection.

The areas of the selections that are within the new selection border are selected.

Selecting the intersection of selections using the Command and Shift keys

Result

To select the entire image:

Choose Select All from the Edit menu (Command-A). The selection border surrounds the entire image.

To select all objects not currently selected:

Choose Select Inverse from the Edit menu. You will select every object in the image that was *not* selected when the Select Inverse command was applied.

To deselect the entire image:

Choose Select None from the Edit menu (Command-D). Any selected parts of the image are now deselected.

Extending a selection based on color or grayscale brightness

The Grow Selection and Select Similar commands allow you to expand a selection to include parts of the image that are similar in color (or in the case of grayscale images, similar in brightness) to the current selection. These commands use the tolerance specified in the Magic Wand Options dialog box to define the color range of pixels to be included in the expanded selection.

To extend a color-based or gray-based selection:

- Choose Grow Selection from the Edit menu (Command-G) to include pixels adjacent to the selection that fall within the specified tolerance range.
- Choose Select Similar from the Edit menu to include pixels throughout the image, not just the ones next to the current selection, that fall within the specified range.

To increase the selection in increments, choose either command repeatedly.

Grow Selection command

Result

Select Similar command

Result

EDITING A BITMAPPED IMAGE

You can edit a bitmapped image using the pencil, line, or eraser tools. The pencil and line tools let you draw in the bitmapped image using the current swatch color. (For information on selecting a swatch color, see "Applying Color to a Bitmapped Image" later in this chapter.) The eraser tool lets you remove colors or gray shades, leaving white where you click or drag.

You can undo the last editing action you have performed. For example, if you draw a line that isn't exactly the size you want, simply choose Undo from the Edit menu to undo the line.

By default, the shape of the pencil, line, and eraser tools is square. You can change the thickness of these drawing tools using the Draw Options dialog box as described below.

To change the thickness of the pencil, line, and eraser tools:

1 Double-click the pencil, line, or eraser tool. The Draw Options dialog box appears with the current thickness enclosed in a box.

2 Select the thickness you want and click OK.

Using the pencil tool

The pencil tool lets you draw freehand lines in the swatch color and selected pencil thickness. You can also edit an image pixel-by-pixel by zooming in on an area and clicking with the pencil.

To draw a freehand line:

1 Select the pencil tool in the toolbox.

2 Drag to draw a line. To constrain the line to the nearest 90-degree angle, hold down the Shift key as you drag. To draw a line from anywhere on the document to the end of the last line drawn, press Shift and click the mouse.

Before

After

Using the line tool

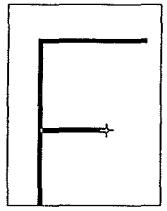
The line tool lets you draw straight, hard-edged lines in the swatch color and selected line thickness.

To draw a straight line:

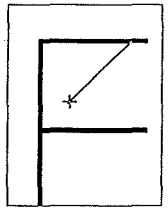
1 Select the line tool in the toolbox.

2 Drag from one point to another in the image area.

To constrain the line to the nearest 45-degree angle, hold down the Shift key as you drag.



A horizontally constrained line



A diagonal line constrained to a 45-degree axis by holding down the Shift key

Using the eraser tool

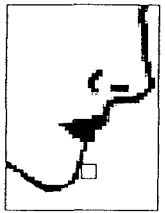
The eraser tool allows you to "erase" pixels in a bitmapped image by painting in white where you click or drag. This tool is especially useful for removing stray dots from a scanned image or for removing very small type that would not convert usefully. The eraser tool is unaffected by the toolbox color swatch.

To erase part of an image:

1 Select the eraser tool in the toolbox.

2 Click or drag to erase the pixels beneath the eraser pointer.

Erasing an image



Erasing single pixels in a magnified image

Use the zoom tool to help you erase more efficiently and more precisely. For example, to erase a large part of an image, reduce the view using the zoom-out tool; then erase most of the area, avoiding the edges. When you finish, enlarge the view using the zoom-in tool, and erase the edges.

ADJUSTING BRIGHTNESS, CONTRAST, AND GAMMA LEVELS

You can adjust the brightness and contrast of a color or grayscale image using the Adjust Levels dialog box. You can also use the Adjust Levels dialog box to adjust the gamma in the image. Gamma measures the contrast that affects the mid-level grays (the midtones) of an image.

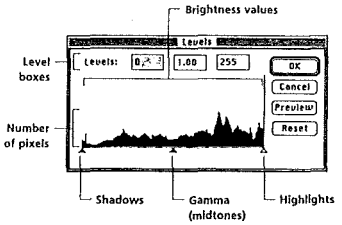
Adjusting the gamma lets you change the brightness values of the middle range of gray tones without dramatically changing the shadows (very dark pixels) and highlights (very light pixels).

Adjusting gamma is an easy way to change the contrast of an image. You can quickly fine-tune the contrast of your image before conversion by adjusting the gamma slider and using the Preview button to check the result.

Note: Often a white background appears gray in a scanned image. You can change the gray background back to white by adjusting the gamma level in the Adjust Levels dialog box.

To use the Adjust Levels dialog box:

1 Choose Adjust Levels from the Edit menu. The Adjust Levels dialog box appears, displaying a histogram of the image.



The histogram plots the brightness values versus the number of pixels at each level. The darkest pixels appear at the left; the brightest pixels appear at the right.

2 Adjust the contrast by using the slider controls below the histogram. The black triangle controls the shadows, the white triangle controls the highlights, and the gray slider controls the gamma. You can also enter values directly into the Levels text boxes.

3 Click Preview to see how the changes in contrast and gamma will appear on-screen before conversion. Click Reset to return to the original values. Click Cancel to return to the main window. Click OK to apply the new values permanently. to the image.

Original image

Gamma decreased (midtones lightened)

Gamma increased (midtones darkened)

Shadows and highlights both increased

APPLYING COLOR TO A BITMAPPED IMAGE

The toolbox swatch color determines the color of lines drawn with the pencil or line tool. You can select an area of the image and apply the swatch color to that area using the Fill command in the Edit menu (Command-F).

To apply color to the image, you need to change the color of the toolbox swatch. You can change the swatch color in two ways: you can select a color from the bitmapped image using the eyedropper tool, or you can apply a new color to the swatch by selecting a color in the Paint Style palette.

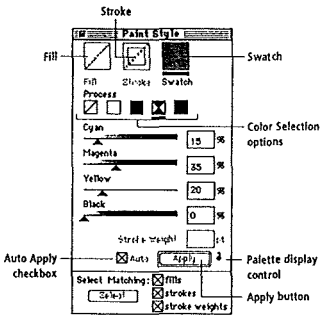
To change the swatch color with the eyedropper:

1 Click the eyedropper tool in the toolbox.

2 Position the eyedropper over the color you want to select, and click the mouse button.

To change the swatch color using the Paint Style palette:

1 Choose Paint Style from the Options menu (Command-I), or double-click the swatch in the toolbox. The Paint Style palette appears.



2 Select the color type you want from the color selection options. (Only some of the color selection options are available before conversion. For a detailed description of all the color selection options, see "Using the Paint Style Palette" in Chapter 5.)

- Click Black or White, and specify a percentage of black or white for the swatch color.
- Click Process Color, and specify a percentage of C (cyan), M (magenta), Y (yellow), and K (black) for the swatch color.

• Click Custom Color, and select a custom color from the list; then specify a Tint value for the swatch color. (For more information about custom colors, see "Working With Colors" in Chapter 5.)

Note. *If you assign a custom color to a bitmapped image, Adobe Streamline retains the CMYK color values after conversion, but removes the association with the custom color name. Therefore, it is often preferable to apply custom colors to images after conversion.*

To apply a swatch color to the image:

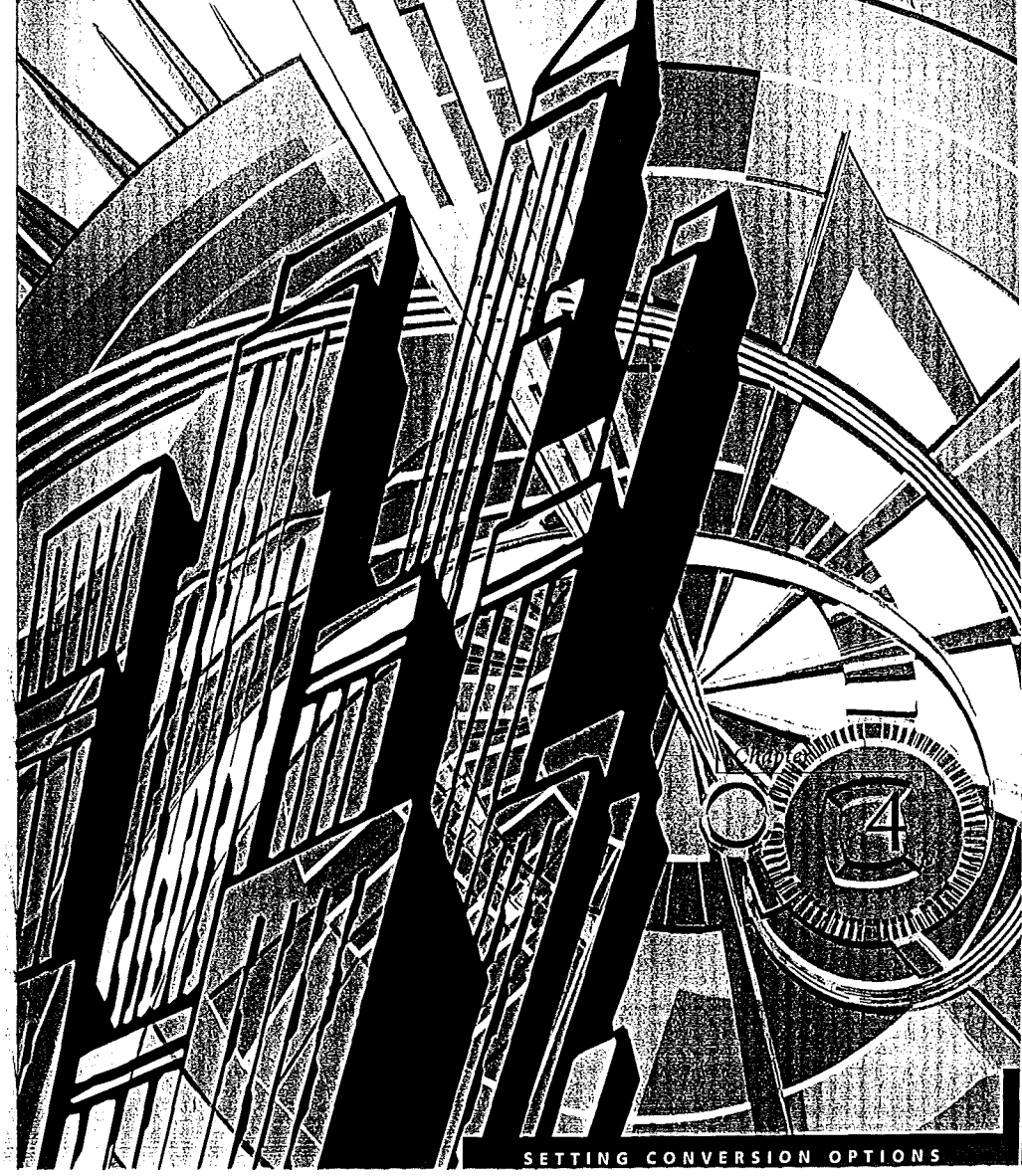
1 Select the part of the image you want to color using a selection tool.

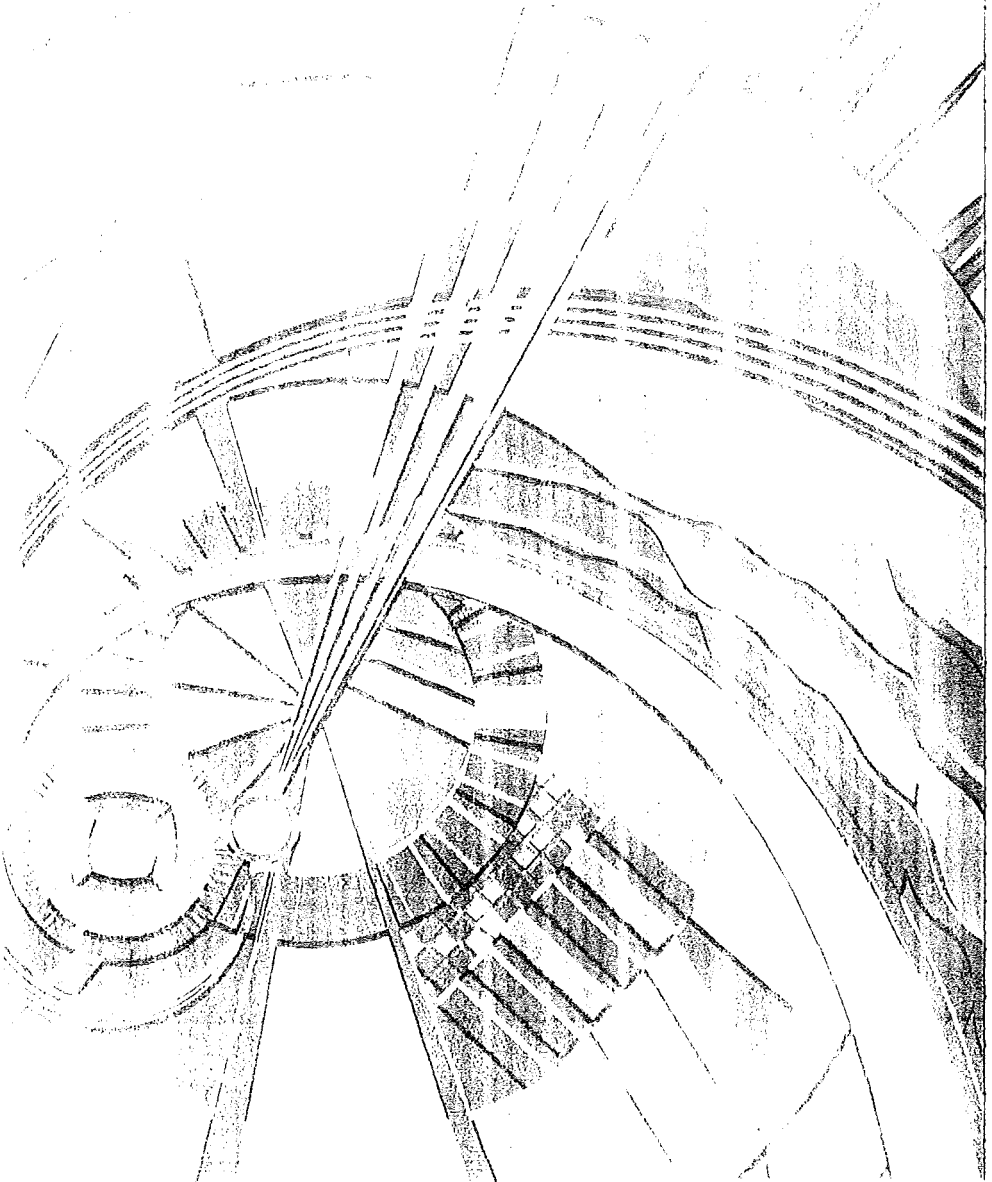
2 Change the swatch color as described in the preceding procedure.

3 Choose Fill from the Edit menu (Command-F) to apply the new swatch color. To restore the previous swatch color, choose Revert from the File menu.

Area selected...

and color changed





Chapter 4: Setting Conversion Options

This chapter describes conversion settings and options for converting black-and-white, grayscale, and color bitmapped images into PostScript line art.

Conversion options appear in the Conversion Setup dialog box and the Color/Grayscale Setup dialog box. For all images—color, grayscale, or black-and-white—you must set conversion options in the Conversion Setup dialog box. You can combine conversion methods for more accurate image output. If your image is color, or if it will be converted as a grayscale image, you will also need to set options in the Color/Grayscale Setup dialog box.

This chapter also describes how to save a set of conversion settings under a given name, for easy retrieval.

Suggested Conversion Methods

	Outline	Centerline	Line Recognition
Photographs	●	○	○
Hand-drawn sketches	●	○	○
Clip art	●	○	○
Logos/Typefaces	●	○	○
Inked drawings	●	◓	○
Technical illustrations	◓	●	◓
Blueprints	○	●	◓
Business forms	○	◓	●

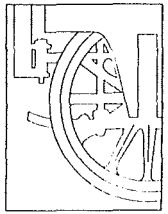
SELECTING A CONVERSION METHOD

The Adobe Streamline program provides three conversion methods:

- The Outline method converts images that contain filled areas and lines that vary in weight, such as clip art, hand-drawn images, or photographs. This method is the most appropriate conversion method for color images.
- The Centerline method converts images that contain consistent line weights and no filled areas, such as schematics.
- The Line Recognition method converts images that contain horizontal and vertical lines, such as forms, charts, and graphs. This method only recognizes and converts straight lines that are within 5 percent of the vertical or horizontal axis.

Black-and-white image suited for Outline conversion

Photograph suited for Outline conversion



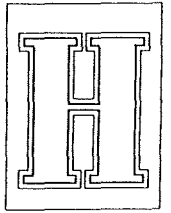


Image suited for Line Recognition conversion

You can mix conversion methods for images that combine features suited for more than one method. For example, you can combine the Outline and Centerline methods to convert images that have a mix of consistent line weights and filled areas; or you can combine the Centerline and Line Recognition methods to convert images with horizontal, vertical, slanted, and curved lines. For more information, see "Combining the Outline and Centerline Methods" and "Combining the Centerline and Line Recognition Methods" later in this chapter.

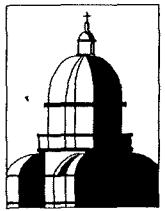


Image suited for Outline and Centerline conversion

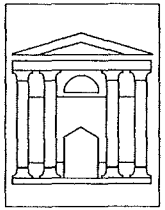
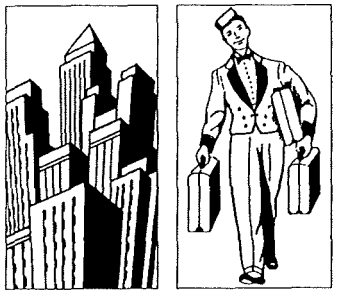


Image suited for Centerline and Line Recognition conversion

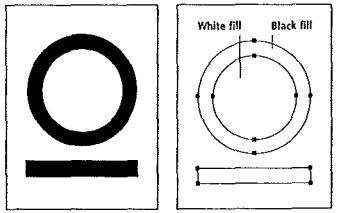
Converting images using the Outline method

The Outline conversion method is designed to convert images that contain more than two colors or inconsistent line weights and filled areas, such as illustrative, graphic design, and nontechnical line art images. The Outline method converts images by tracing an outline of each element in the image and filling it with black, white, a color, or some value or tint specified in the Paint Style palette. During conversion of an image containing three or more colors, a process color is assigned to each color in the image, up to the maximum number of colors set in the Maximum Number of Colors text box in the Color/Grayscale Setup dialog box.



Images suited for Outline conversion

Two-color images converted using the Outline method contain only filled areas. Images containing three or more colors converted using the Outline method contain both stroked and filled areas. Lines are converted to filled paths and circles are converted to layered areas. The following examples illustrate how the figures of an outlined image appear when you choose Preview from the View menu:

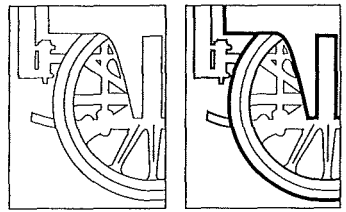


Preview view *Artwork view*

Compare the preceding examples. The circle is not a stroked line, but is created with two filled areas placed on top of each other. To edit these images, you must edit the anchor points surrounding each of the filled areas.

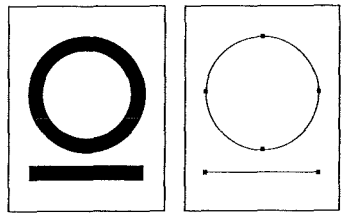
Converting images using the Centerline method

The Centerline conversion method affects only black-and-white (not grayscale) images, and is designed to convert technical images and other images that contain consistent line weights and no filled areas. The Centerline method converts bitmapped images by locating the center of each line and creating a stroked path.



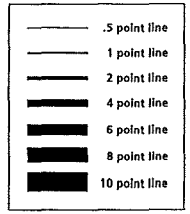
Images suited for Centerline conversion

Images converted using the Centerline method contain only stroked paths. The following examples illustrate how the figures of a centerlined image appear in Preview view. The circle and the line are created as stroked lines.



Preview view *Artwork view*

Bitmapped images with lines less than 6 points in weight are suitable for converting with the Centerline conversion method. If an image contains lines heavier than 6 points, combine the Centerline and Outline conversion methods. If you do not have a copy of the original scanned image to measure the heaviest line weight, you should print the bitmapped image. Keep in mind that very thin lines may not print at their true weight, depending on the resolution of the printer.

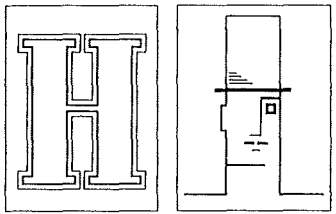


Scale for measuring point sizes

Converting images using the Line Recognition method

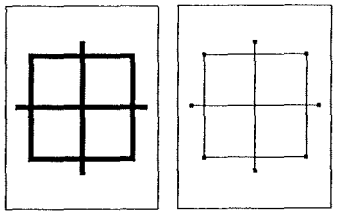
The Line Recognition conversion method is designed to convert images such as forms, charts, graphs, or any image containing horizontal and vertical lines. Line Recognition only affects a black-and-white image or a two-color image. Because it is practically impossible to place an image in a scanner perfectly straight, vertical and horizontal lines usually appear slightly skewed in the resulting bitmapped image. The Line Recognition option straightens horizontal and vertical lines that are skewed less than 5 degrees. No other lines in the image are

converted (unless you are combining Line Recognition with the Centerline conversion method).



Images suited for Line Recognition conversion

Images converted using the Line Recognition method contain only stroked paths. Rather than locating the center of each line as does the Centerline method, the Line Recognition method uses pattern recognition between end points to create stroked paths. The following examples illustrate how the figures of a Line Recognition image appear in Preview view:



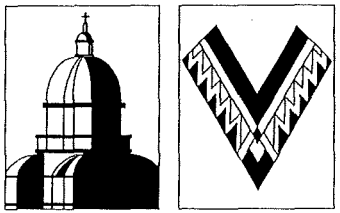
Preview view *Artwork view with all paths selected*

The Line Recognition method ignores lines in the image that are shorter than 1/4 inch. In addition, the Line Recognition method ignores any lines in the original image that are thicker than 1/2 inch.

Other options become available as you combine the Line Recognition method with the other two methods. For example, when you combine the Line Recognition and Outline methods, the Line Thinning option becomes available.

Combining the Outline and Centerline methods

You can combine the Outline and Centerline conversion methods to convert images that use both filled areas and consistent line weights. Keep in mind that the Centerline method always converts images to two-color (that is, black-and-white) images.



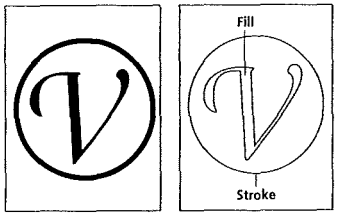
Images suited for Centerline and Outline conversion

When you convert an image combining the Outline and Centerline methods, the Outline method is used to convert any lines that are heavier than the setting in the Line Thinning option and all filled areas. The Centerline method is used to convert lines that are lighter than the setting in the Line Thinning option. For more information, see "The Line Thinning Option" later in this chapter.

You can set options for both the Outline and Centerline conversion methods when combining the two methods.

The following examples show how the elements of an image converted by combining the Outline and Centerline methods appear in Preview view:

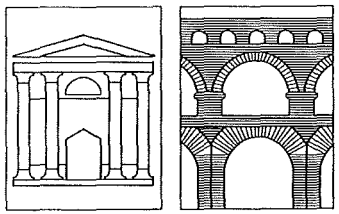
The circle and the line are created as stroked lines, and the letterform within the circle is created as a filled area.



Preview view *Artwork view*

Combining the Centerline and Line Recognition methods

You can combine the Centerline and Line Recognition conversion methods to convert images that use horizontal, vertical, slanted, and curved lines.

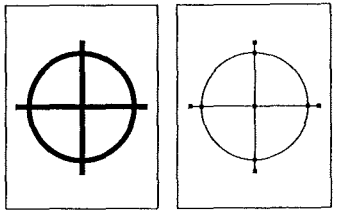


Images suited for Centerline and Line Recognition conversion

When you convert an image combining the Centerline and Line Recognition methods, the Line Recognition method first converts horizontal and vertical lines, and the Centerline method then converts curved lines.

You can use the options for both the Centerline and Line Recognition conversion methods when combining the two methods.

These examples show how the elements of an image converted by combining the Centerline and Line Recognition methods appear in Preview view. Note that the circle and the line are created as stroked lines.



Preview view *Artwork view with all paths selected*

DETERMINING PATH TYPES

When Streamline converts a bitmapped image, the type of path the program creates in the converted image depends on the conversion method.

The Centerline and Line Recognition methods create only stroked paths. The Outline method can create both filled and stroked paths.

Stroked paths precisely follow an object's border. *Filled* paths enclose an area, and can be painted ("filled") with color. (For more information on painting a stroked path or a filled path, see "Working with Colors" in Chapter 5.)

Paths created by conversion method

RESULT		OUTLINE	CENTERLINE	LINE RECOGNITION
Filled paths		YES	NO	NO
Stroked paths	>2 colors = YES 2 colors = NO		YES	YES
Uniform line wt.		NO	Specified*	YES

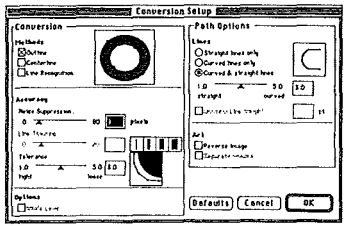
*Set in Conversion Setup dialog box

SETTING UP A CONVERSION

You use the Conversion Setup dialog box to choose conversion methods, set various line options, or reverse the bitmapped image. Unless you plan to use the default conversion settings (the Outline conversion method with the Noise Suppression set to 8 pixels), you should set your conversion options before beginning the conversion. You can then save the conversion settings, along with the Color/Grayscale Setup options, using the Settings dialog box.

To set conversion options:

1 Choose Conversion Setup from the Options menu (Command-J). The Conversion Setup dialog box appears.



2 In the Conversion box, select one or more conversion methods (Outline, Centerline, or Line Recognition), as described earlier in the chapter.

3 Set the Noise Suppression level by dragging the slider or entering a value in the text box.

Noise Suppression allows you to set the level at which Adobe Streamline will ignore stray pixels during conversion. For more information, see "The Noise Suppression Option" later in t his chapter.

4 Set the Line Thinning level by dragging the slider or entering a value in the text box.

Line thinning is used by Adobe Streamline to best determine the center of each path during Centerline conversion. For more information, see "The Line Thinning Option" later in this chapter.

5 Set the Tolerance by dragging the slider or entering a value in the text box.

Tolerance determines how closely the converted image has traced the lines of the bitmapped image. For more information, see "The Tolerance Option" later in this chapter.

6 If desired, select the White Lines option.

The White Lines option must be selected if you are converting an image with white lines using the Centerline method. For more information, see "The White Lines Option" later in this chapter.

7 In the Path Options section, set the Lines attributes.

Lines options allow you to select the tolerance at which a line segment becomes straight or curved between anchor points. You can also choose to create only straight lines, or only curved lines.

If you are using the Line Recognition or Centerline conversion methods, you can also select the Uniform Line Width option. This option converts all lines in the image to the same line width.

For more information, see "The Curved and Straight Line options" and "The Uniform Line Weight option" later in this chapter.

8 If desired, select the Art options:

- Select the Reverse Image option to reverse the black-and-white areas of an image. For more information, see "The Reverse Image Option" later in this chapter.
- Select the Separate Shapes option to create a unique path for each areas in the bitmapped image that is surrounded by a stroked line. For more information, see "The Separate Shapes Option" later in this chapter.

9 When you have finished selecting conversion options, click OK.

GENERAL CONVERSION OPTIONS

The following sections describe in detail the options available in the Conversion Setup dialog box. Unless noted, these options apply to any conversion method you choose.

The Noise Suppression option

The Noise Suppression option is available only when you select the Outline conversion method. Use this option to eliminate the stray pixels (noise) introduced by scanning a poor-quality original. If you combine the Outline and Centerline methods, the noise suppression setting applies only to the areas that will be outlined.

Note: To eliminate noise outside of the image area, use the eraser tool to erase stray pixels before converting the image, or select the pixels with any selection tool and choose Clear from the Edit menu. You can also edit the image using the pencil or line tool before converting the image. For more information about these tools, see Chapter 3, "Editing a Bitmapped Image."

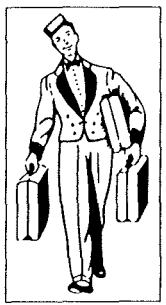
You can select a noise suppression setting between 1 and 80; the default setting is 8. Areas that are smaller than the noise suppression setting are ignored when the image is converted. For example, if the noise suppression is set at 8, the program ignores any elements of an image with a diameter of 8 or fewer pixels.

You can increase noise suppression if you want Adobe Streamline to ignore larger pixel areas, or you can decrease the setting to capture all of the small details of a bitmapped image. For very small images, reduce the noise suppression setting to retain the details of the image.

In the following examples notice how the various noise suppression settings change the level of detail in the image:

Original image

Noise suppression: 1 pixel



Noise suppression: 40 pixels

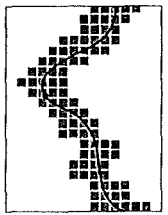
Noise suppression: 80 pixels

The Line Thinning option

The Line Thinning option is available only when you use the Centerline method. This option changes the way Adobe Streamline calculates the center of the line when it converts the line to a stroked path. To convert the small details of a bitmapped line, it is best to use the minimum required line thinning.

Increasing the line thinning value results in more pixels being "shaved off" of variable weight lines, resulting in more accurately rendered artwork and a reduction in the number of *junction points* (anchor points where two or more lines intersect). Decreasing the number of junction points makes the image easier to edit in your graphics application, and reduces the final file size. The higher the line thinning you specify, the more layers of pixels will be shaved off or eliminated when Adobe Streamline calculates the center of the line. Specifying too many steps, however, will shorten lines that don't meet another line or object.

The following illustration shows traced lines as they appear with a template behind them in the Adobe Illustrator program (enlarged view). Notice how the Adobe Streamline program is able to approximate the center of the lines.



Finding the center of a line

To approximate the center of lines, use the Line Thinning option to create lines that are 1 pixel wide as described below. One-pixel lines will have fewer junction points than lines that are 2 or more pixels wide. For each step you select, the program strips a layer of pixels from each edge of lines in the image to locate the center of the lines.

Note: The pixel width approximated by the Line Thinning option only affects how the path is drawn; it does not affect the final point size of the converted line.

The following chart shows some general guidelines for using the Line Thinning option at various image resolutions. Use the suggested settings as approximate guides. For the best results, try converting your bitmapped image at various settings until you find the most appropriate setting.

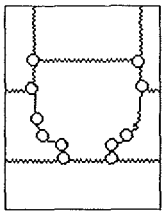
Suggested Line Thinning Settings

BITMAP RESOLUTION	LINE WEIGHT 3 pts	4 pts	5 pts
72 dpi	1	2	3
150 dpi	2	3	4
300 dpi	3	4	5
400 dpi	4	5	6
600 dpi	4-5	5-6	6-7

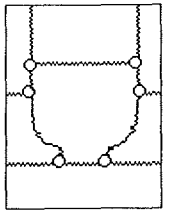
▩ default settings

Suggested settings for the Line Thinning option using the Centerline method

During the conversion process, the program displays small circles at all junction points (that is, the anchor points where two or more lines intersect). If the number of circles seems excessive, appearing in places other than true junction points, try increasing the line thinning until circles appear only at true junction points. You can also use the delete-anchor-point tool or the Smooth Path command to reduce the number of anchor points in the converted image, as described in Chapter 5, "Working with a Converted Image."



Junction circles with Line Thinning = 1



Junction circles with Line Thinning = 3

The recommended Line Thinning setting depends on the resolution of the original bitmapped image and the point size of the heaviest line in the image. The line thinning you select should be equal to or greater than the point size of the heaviest line in the bitmapped image. Such a value calculates the center of all lines in the image as if they were 1 pixel wide. For example, if the heaviest line in a 300 dip image is 3 points, set the line thinning to at least 3 (the default).

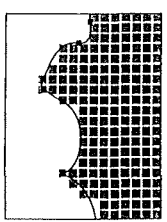
If your bitmapped image contains lines heavier than 6 points, combine the Centerline and Outline conversion methods, and set the Line Thinning option to 6. By combining these two methods, lines that are less than or equal to 6 points will be converted into stroked paths by the Centerline method, and lines that are greater than 6 points will be converted into filled areas by the Outline method.

Note: Because you may have to adjust the line thinning for different image resolutions, when converting a batch of images, make sure that all images in the Files to Process list in the Batch Select dialog box have the same resolution.

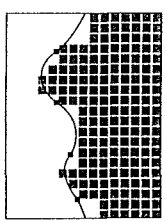
The Tolerance option

The Tolerance option allows you to adjust how closely the program converts paths that follow curved and straight lines in the original image. The tolerance setting can range anywhere from 1.0 (tight) to 5.0 (loose). The default setting is 3.0 and is adequate for most image conversions. A loose tolerance setting creates longer line segments and fewer anchor points, resulting in a smaller converted image file.

Compare the following illustrations of tight and loose tolerance settings. If you want to maintain the exact detail of the original image, use a tight tolerance setting; if you want to reduce the jagged edges or flaws of the image, use a loose tolerance setting.



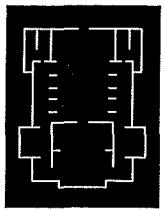
Tight tolerance setting



Loose tolerance setting

The White Lines option

Normally, the Adobe Streamline program recognizes only black lines on a white background. If you want to convert an image that uses white lines on a black background (for example, a blueprint), select the White Lines option. When you select this option, the program reverses the white lines to black, converts the image, and then reverses the lines to white before saving the converted image.



Blueprint image with white lines

The Curved & Straight Line options

The Curved & Straight Line options control how lines are drawn in the converted image. Since most bitmapped images contain both curved and straight lines, the default setting is Curved & Straight Lines.

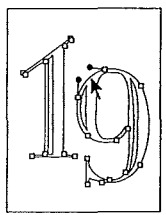
Within the Curved & Straight Lines option, you can select a setting for converting long lines. If your original image includes long, straight lines, set this option to 1.0 (straight); this setting causes long, straight lines to be created between anchor points. If your bitmapped image includes long, curved lines, set this option to 5.0 (curved); this causes curved lines to be created between anchor points. The default setting is 3.0.

When you convert an image with curved lines, anchor points on the curve contain *direction lines.* Direction lines are used in illustration programs such as Adobe Illustrator to change the direction and shape of the curve.

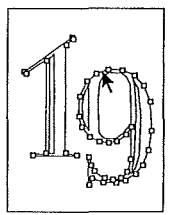
Note: You cannot see direction lines or edit anchor points (except to delete them) in Adobe Streamline; you can, however, do this once the converted image has been opened in Adobe Illustrator. For more information on anchor points and direction lines, see your Adobe Illustrator User Guide.

If the original image includes only curved lines, select the Curved Lines Only option. If it includes only straight lines, select the Straight Lines Only option.

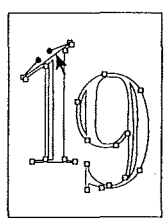
The following examples show the same image converted using the three Line options, and then opened in Adobe Illustrator. The anchor points are shown as solid black or hollow squares; the direction lines associated with the curved line anchor points are tangent to the curves.



Curved and straight lines



Straight lines only



Curved lines only

Note: If you plan to save the converted image in a file format that does not recognize direction lines (such as the DXF format), you should use he Straight Lines Only option to achieve the best results.

The Uniform Line Weight option

The Uniform Line Weight option allows you to select a specific line weight for the converted image. If you are combining the Centerline and Outline conversion methods, only lines that are centerlined are affected. You can select a line weight of 0 points to 12 points; the default line weight is 1 point.

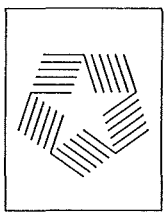


Image suited for Centerline conversion with Uniform Line Weight turned on

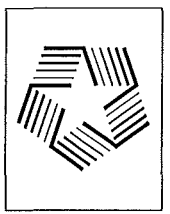


Image suited for Centerline conversion with Uniform Line Weight turned off

If your bitmapped image contains lines of varying weights, deselect the Uniform Line Weight option to reproduce results as close to the original as possible. When the Uniform Line Weight option is deselected, the program measures the line weight of each line segment and averages the line weight over the entire path. If lines with different weights intersect or connect, the program may average the two line weights together and convert both lines to a single line weight.

If your bitmapped image contains lines with varying line weights and the lines intersect, you may want to convert the image using the Uniform Line Weight option, and then change the stroke weight in the Paint Style palette after converting the image. For more information about changing the stroke weight, see "Using the Paint Style Palette" in Chapter 5.

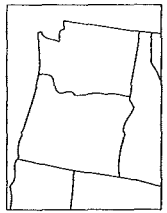
If you use the Uniform Line Weight option and the lines of the bitmapped image vary in weight by more than 1 point, set the Line Thinning option to match the point size of the heaviest line.

The Separate Shapes option

The Separate Shapes option (available when using the Centerline method) determines how the Adobe Streamline program constructs paths surrounding adjacent areas. If you choose this option, the program will create a unique path for each area in the bitmapped image that is completely surrounded by a stroked line. If a single line separates two enclosed areas, the line will be converted twice—once for each path.

Using the Separate Shapes option lets you edit an individual shape in an image without disturbing its surrounding shapes. Creating separate shapes can be particularly helpful if you want to move the enclosed paths in the image using the Adobe Illustrator program.

The following illustrations demonstrate how the Separate Shapes option works. Each state in the map is completely surrounded by its own unique path. The borders between states consist of two lines on top of each other, one for each state. With Separate Shapes turned off, the border between two states would be drawn only once, and that same line could traverse many states. By default, the Separate Shapes option is turned off.



Converted image

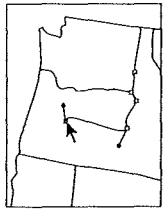


Image with Separate Shapes turned off

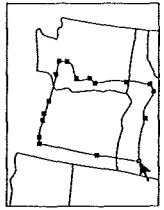


Image with Separate Shapes turned on

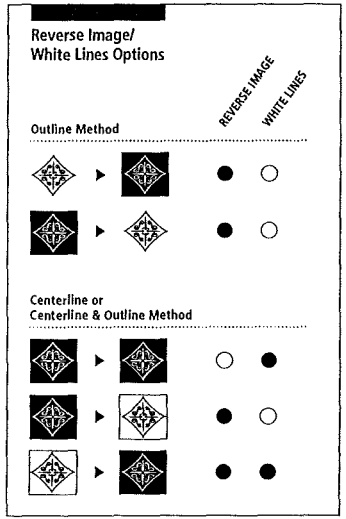
The Reverse Image option

The Reverse Image option lets you reverse the black-and-white areas of an image before it is converted.

Original image

Reversed image

If a reversed image includes white lines and you plan to convert it using the Centerline conversion method, you must also select the White Lines option. If you select both the Reverse Image and White Lines options, the resulting image will show white lines against a black background. The chart below illustrates using the Reverse Image option and the White Lines option. Compare the bitmapped image to the converted image, and use the options shown on the right to achieve the effect you want.

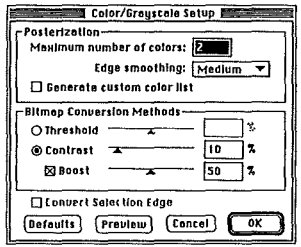


SELECTING COLOR/GRAYSCALE SETUP OPTIONS

Before converting an image, you can select color/grayscale setup options that alter how the Adobe Streamline program converts a grayscale or color image.

To select color/grayscale options:

1 Choose Color/Grayscale Setup from the Options menu. The Color/Grayscale Setup dialog box appears.



2 Enter a value in the Maximum Number of Colors text box in the Posterization section. The Maximum Number of Colors value determines how many color or grayscale levels are used to convert the image. For color images, you can enter any number between 2 and 256; for grayscale images, you can enter any number between 2 and 16. If you select two colors for the image, you can specify the threshold, contrast, and how much to boost the contrast. For more information, see the next section, "The Maximum Number of Colors Option."

3 Select one of the three Edge Smoothing options in the Posterization section. You can select None, Medium, or Maximum. The default is Medium.

The Edge Smoothing option smooths the bitmapped image during the conversion, thus reducing the number of anchor points in the converted image and creating smoother paths from one anchor point to the next. If areas are clearly defined, you may not need to increase the smoothing. Smoothing more than is necessary can remove too many anchor points, resulting in crooked lines. For more information, see "The Edge Smoothing Option" later in this chapter.

4 If desired, select the Generate Custom Color List option. This option evaluates each color in the bitmapped image during conversion, assigns a name to each distinct color, and adds the names to the bottom of the Custom Color scroll box in the Custom Color dialog box.

5 Select any of the three Bitmap Conversion Method options as follows:

- The Threshold option determines whether a pixel is converted to black or white, based on the color value of the pixel. The higher the threshold percentage, the darker a color or grayscale value must be before it is converted to black. Possible values range from 0 percent to 100 percent. For more information, see "The Threshold Option" later in this chapter.
- The Contrast option determines whether a pixel is converted to black or white, based on the color value of the pixel in relation to adjacent pixels. The higher the contrast percentage, the more contrast between neighboring pixels is required for a pixel to be converted as black. Possible values range from 0 percent to 100 percent. For more information, see "The Contrast Option" later in this chapter.
- The Boost option is available when the Contrast option is selected. This option lets you artificially enhance the contrast to bring out more details in the light or dark areas. Possible values range from 0 percent to 100 percent. For more information, see "The Boost Option" later in this chapter.

6 To create a path along a selection border if you have selected an area of an image, select the Convert Selection Edge option. This is useful for creating masks or for outlining areas that contain the same color.

7 To see how the Color/Grayscale Setup settings affect an image before you convert the image, click Preview. If the results are not what you expect, adjust the settings and preview the image again. When the results are what you want, click OK.

The Maximum Number of Colors (Posterization) option

The Maximum Number of Colors option determines how many colors are used to convert the image. The range of color values is between 2 and 256; the range of grayscale values is between 2 and 16. You can create a posterizing effect by entering a lower number in the Maximum Number of Colors box than the actual number of colors or grayscale levels in the original image.

Because Adobe Streamline converts images one color at a time (and a 24-bit image may contain more than 16 million colors), it's necessary to limit the number of colors that are converted. To do this, Adobe Streamline creates an internal *histogram*, or graph of the image color values. This graph identifies the frequency of each color in the image. The program then divides these colors evenly into a color palette that contains the number of colors selected in the Color/Grayscale Setup dialog box. If more colors exist in the image than in the palette or if colors are very similar, Adobe Streamline converts the colors that occur less frequently in the image to the closest color in the palette. As the image is converted, a progress bar displays each color as it is processed.

The following illustrations show an 8-bit, 16-level grayscale image converted using three different Number of Color settings:

Original image

Number of colors: 4

Number of colors: 8

Number of colors: 16

The Edge Smoothing option

The Edge Smoothing options in the Posterization section let you smooth the lines in the converted image by averaging the color or gray levels surrounding each pixel. As you increase the smoothing, edges are assigned fewer anchor points, making the paths less complex and decreasing the converted file size.

The amount of smoothing you should apply to an image depends on the complexity of the lines; if the lines are simple, as in a checkerboard pattern, smoothing may remove too many anchor points and distort the shapes in the artwork.

Note: Once an image has been converted, you can use the Smooth Path command or the anchor-point-deletion tool to reduce the number of anchor points in the image. For information on using these features, see Chapter 5, "Working with a Converted Image."

The following illustrations show the same image converted using the different Edge Smoothing options:

Original image

Smoothing: None

Area of zoom

Smoothing: Maximum

Area of zoom

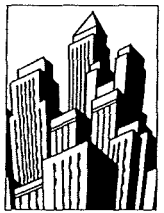
The Threshold option

The Threshold option is available when you are converting a color or grayscale image and the Number of Colors value is 2.

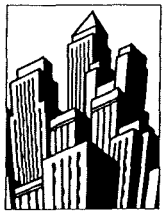
The Threshold option lets you specify as a percentage the gray level above which Adobe Streamline will convert a pixel to black. For example, an 8-bit grayscale image has 256 levels of gray, numbered 0 (black) to 255 (white). A threshold of 50 percent causes all pixels with a gray level value above 128 (50 percent of 256) to be converted to black, and all pixels with a gray level value below 128 to remain white. The higher the percentage, the lower the number of black pixels that remain. The default threshold value is 50 percent.

For a color image with the Number of Colors option set to 2 in the Color/Grayscale Setup dialog box, the initial gray level of each pixel is defined as the sum of the red, green, and blue values.

The following illustrations show an 8-bit gray-level image converted using different thresholds:

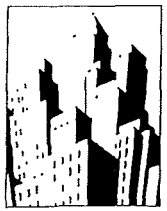


Original image



Threshold 15%

Threshold 30%



Threshold 85%

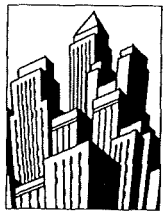
The Contrast option

The Contrast option is available when you convert a color or grayscale image and the Number of Colors value is 2.

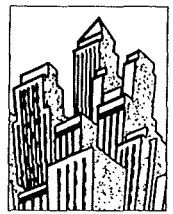
With the Contrast option selected, the program compares how much each pixel contrasts with its neighboring pixels. Pixels exceeding the specified percentage are converted to black, thereby creating an edge.

For example, if you specify a contrast level of 20 percent, only pixels that contrast more than 20 percent with their neighboring pixels will be converted to black. This means that with an 8-bit gray-level image containing 256 gray levels, any contrast greater than 51.2 levels (20 percent of 256) will cause the pixel to be converted to black. As with the Threshold option, the higher the percentage specified, the smaller the resulting number of black pixels. The default value for the Contrast option is 10 percent.

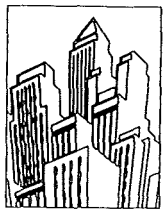
The following illustrations show the same 8-bit grayscale image converted using different contrast levels:



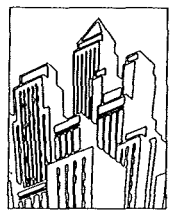
Original image



Contrast 3%



Contrast 20%



Contrast 80%

The Boost option

The Boost option is available when you select the Contrast option.

The Boost option lets you artificially bring out details in the light or dark areas; this option is useful when you convert color or grayscale images in which the stroke contrast is not very pronounced. To increase details in lighter areas, select the boost option and drag the Boost slider toward a lower percentage; to increase details in darker areas, drag the slider toward a higher percentage.

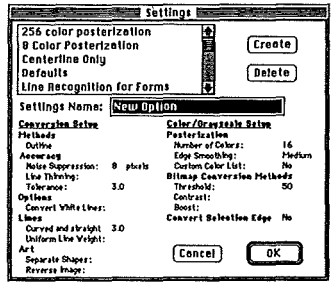
SAVING CONVERSION OPTIONS

You use the Settings dialog box to save all of the current conversion settings. This provides a quick and easy way to retrieve a particular combination of conversion options that you may use frequently. The conversion settings available for each conversion method are as follows:

Conversion Options	OUTLINE	CENTERLINE	LINE RECOGNITION
Noise suppression	●	○	○
Line thinning	○	●	○
Tolerance	●	●	○
White lines	○	●	●
Straight lines only	●	●	●
Curved lines only	●	●	○
Curved & straight lines	●	●	○
Uniform line weight	○	●	●
Reverse image	●	●	●
Separate shapes	○	●	○

To save conversion settings:

1 Choose Settings from the Options menu (Command-T). The Settings dialog box appears:



A list of the current conversion settings is displayed in the Conversion Settings box. (If you want to change the conversion settings, click Cancel, and change the settings in the Conversion Setup dialog box.)

2 Enter a name for your settings in the Setting Names text box. Click OK.

To retrieve conversion settings:

1 Choose Settings from the Options menu (Command-T). The Settings dialog box appears.

2 From the scroll box at the upper left of the Settings dialog box, select a setting name. (The settings represented by the setting name are displayed in the Conversion Setup box.) Click OK. The selected conversion settings are automatically updated in the Conversion Setup dialog box and in the Color/Grayscale Setup dialog box.

To delete a conversion setting:

1 Choose Settings from the Options menu (Command-T). The Settings dialog box appears.

2 From the scroll box at the upper left of the Settings dialog box, select a name. Click Delete. The saved conversion setting is now deleted.

3 From the scroll box at the upper left of the Setting dialog box, select a new setting name. Click OK.

CONVERTING IMAGES

Once you have selected the appropriate conversion options for the image, you can then convert it to line art. The Adobe Streamline program also lets you select multiple files from various drives or folders and convert them as a group.

To convert a single image:

Choose Convert from the File menu (Command-R). The image is automatically converted using the current conversion settings.

As the conversion progresses, the progress bar displays the conversion method, the conversion percentage completed, and the number of paths created.

To convert a batch of images:

1 Choose Batch Select from the File menu. The Batch Select dialog box appears.

2 Click Add to add a selected document to the Files to Convert list. Click Add All to place all available files in the folder into the File to Convert list. Click Remove to remove a file from the Files to Convert list.

3 If desired, select one of two output options:

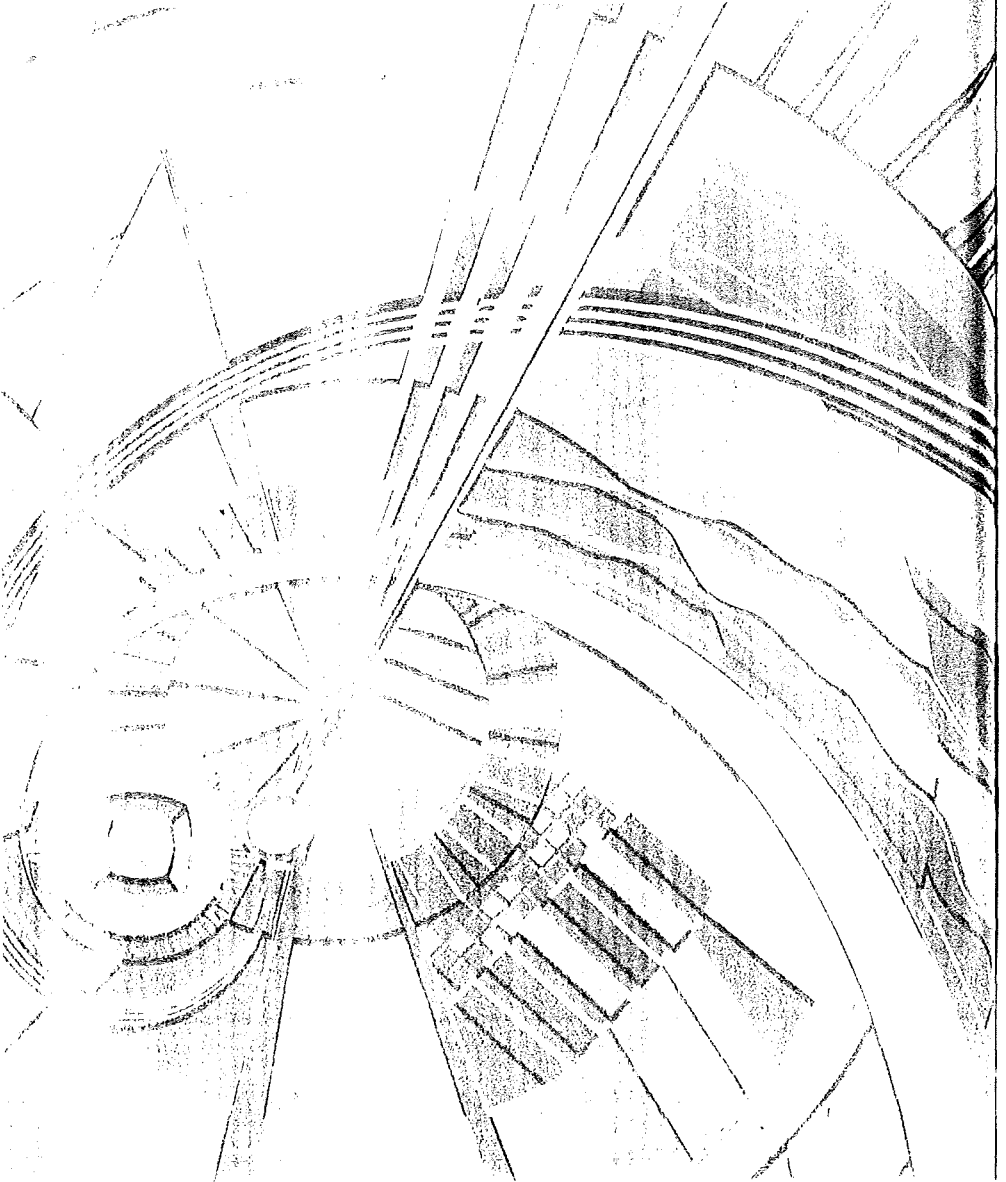
- The Batch Output to Source Folder option automatically saves a converted file in the same folder as its source file.
- The Replace Files with Same Name option saves the converted file and automatically overwrites any file with the identical name in the same folder.

4 Click Start. The Batch Select Format dialog box appears.

5 If desired, select Compatibility and Preview options from the submenus. (For more information about Compatibility and Preview options, see "Saving Images" in Chapter 2.)

6 Select a folder in which to save the converted images, and click Select.

The converted images are automatically named by appending the filename with the filename extension for the file format you selected in the Batch Select dialog box.



Chapter 5: Working with a Converted Image

After you convert an image, the Adobe Streamline program displays the converted image in Preview view. To view the image as wireframe artwork, choose the Artwork command from the View menu (Command-E). If desired, you can also show the original bitmapped image, now called the template, using the Show Template command in the View menu. You can use Streamline post-conversion editing tools and commands to edit the artwork, and the eyedropper tool to select colors from the template.

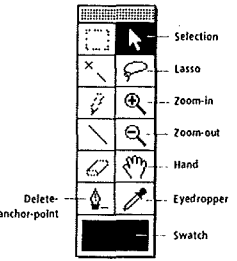
The converted image contains anchor points that determine the shape of curved and straight paths. By default, each path is assigned a stroke color, a fill color, or both.

This chapter explains how to

- Edit the artwork and select colors from the template;
- Display the image;
- Work with colors in the template and artwork;
- Smooth a selected path; and
- Save an image in different formats.

USING THE TOOLBOX TO EDIT A CONVERTED IMAGE

After you convert an image, the toolbox changes to offer tools for editing the artwork and selecting colors from the template. To hide the toolbox at any time, choose Hide Toolbox from the View menu.



- The selection tool lets you select one or more paths.
- The delete-anchor-point tool lets you remove one or more anchor points from a selected path.
- The eyedropper tool lets you select a swatch color from the template. For more information about using the eyedropper tool with a converted image, see "Changing the Swatch Color" later in this chapter.

The lasso, zoom, and hand tools work the same way in converted images as in bitmapped images. For information on using these tools, see Chapter 3, "Editing a Bitmapped Image."

The marquee, magic-wand, pencil, line, and eraser tools are not available after an image has been converted.

Using the selection tool

The selection tool lets you select one or more paths in the artwork. You can also extend or reduce a path selection.

To select a single path:

1 Click the selection tool in the toolbox.

2 Position the pointer on the path you want to select (in Artwork view), or position the pointer inside a filled path (in Preview view).

3 Click the mouse button. In Artwork view, all the anchor points on the path are displayed as solid squares. Straight segments are displayed as green, and curved segments are displayed as red.

To select multiple paths:

1 Click the selection tool.

2 Position the pointer on one of the paths you want to select.

3 Drag the marquee to touch the paths you want to select.

When you release the mouse button, the program selects every path that crosses the selection border.

To extend a path selection:

1 Select one or more paths.

2 Hold down the Shift key while clicking or dragging a marquee to select one or more additional paths. Repeat this step until you have finished extending the selection.

To deselect paths:

1 Select the multiple paths.

2 Hold down the Shift key while clicking or dragging a marquee to deselect one or more of the selected paths. Repeat this step until you finish deselecting paths.

Using the delete-anchor-point tool

You can use the delete-anchor-point tool to selectively remove one or more extraneous anchor points. Anchor points are represented by solid black squares on the path. Deleting anchor points can make the artwork easier to work with in the Adobe Illustrator program; it can also result in smaller, more efficient files.

To delete one anchor point at a time:

1 Select one or more paths containing anchor points you want to delete. The anchor points become visible when you select a path.

2 Click the delete-anchor-point tool.

3 Click the anchor point you want to delete.

The anchor point is removed, and the path is reconnected. You can repeat this step to remove more anchor points one at a time. You may want to do this to see the path that results after deleting each anchor point.

To delete multiple anchor points:

1 Select one or more paths whose anchor points you want to delete.

2 Click the delete-anchor-point tool.

3 Position the tool just outside one of the anchor points that you want to delete.

4 Click and drag to surround the anchor points you want to delete within the selection border.

When you release the mouse button, the program deletes the anchor points and reconnects the paths.

DISPLAYING CONVERTED IMAGES

After an image is converted, the program displays the converted artwork and bitmapped template. You can use commands in the View menu to view either the artwork or template individually. You can also preview how the illustration will look when printed. The default view after you convert an image is Preview.

Note: To adjust the placement of an image in the window, you can use the hand, zoom, and selection tools. You can fit the image into the window (as it appears when you first open an image) and restore the image to its actual size. For more information about changing your view of an image, see "Changing Your View of an Image" in Chapter 2.

To change the way the image is displayed:

Choose one of the viewing commands from the View menu, as follows:

- Artwork displays the converted artwork as a wire-frame image. In Artwork view the image does not display color or printing effects.
- Preview displays what your artwork will look like when it's printed. Preview view displays all colors and printing images, so that you can see how editing changes you make on the image will affect the printed illustration. You can interactively edit the artwork in Preview view, just as you can in Artwork view.
- Preview Selection lets you select part of the image to preview, while leaving other parts of the image in Artwork view. In Preview Selection view, the entire image remains in Artwork view; you can then use any selection tool to select parts of the image to display in Preview view.

Using Preview Selection can speed up the editing process by reducing the time it takes the program to redraw the screen while editing.

Artwork (Show Template option selected)

Artwork (Hide Template option selected)

Preview Selection

Preview

WORKING WITH COLORS

You can use Adobe Streamline's color editing capabilities to change the fill and stroke colors of paths in the converted image. *Filling* a path paints the area that is enclosed by the path. *Stroking* a path paints a line that is centered on the object's outline.

Paths converted using the Outline conversion method can have a stroke color, a fill color, or both a stroke and a fill color, depending on the characteristics of the image and the maximum number of colors selected in the Color/Grayscale Setup dialog box. Paths converted using the Centerline or Line Recognition conversion methods can only have a stroke color.

It helps to understand the following about fills and strokes:

- With the Outline conversion method, the stroke is the surrounding edge of the area, and the fill is the space surrounded by the stroke. Images converted using more than two colors (as defined in the Maximum Number of Colors text box of the Color/Grayscale Setup dialog box) contain both stroked and filled paths; images converted with two colors contain only filled paths.
- Setting the fill and stroke to the same color is similar to setting the stroke to None because there will be no visible border around the area. The difference between the two is that with the fill and stroke set to the same color, the image area will be larger than with the stroke set to None.
- With the Centerline conversion method, there are no fills, only black strokes. Settings for fills and white strokes are ignored.

You can also select paths based on their stroke colors, fill colors, or both stroke and fill colors. When applying a color, you can specify a tint, or process color, or define a new custom color using the Custom Color dialog box.

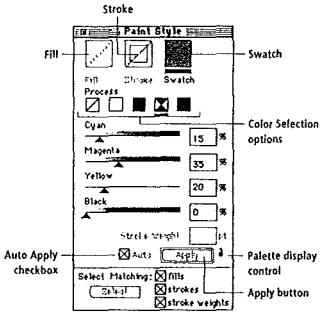
USING THE PAINT STYLE PALETTE

You can locate and edit colors in the converted image using the Paint Style palette. You can keep the Paint Style palette open while editing an image so that you can interactively change colors, preview the change, and then reapply new colors as needed. You can also use the Paint Style palette to select matching fills, strokes, or stroke weights.

To set paint attributes:

1 Select one or more paths whose paint attributes you want to change.

2 Choose Paint Style from the Options menu (Command-I), or double-click the swatch in the toolbox. The Paint Style palette appears.



3 Select the Auto check box if you want the Paint Style settings to be automatically applied to all selected objects in the artwork. Deselect this option if you want to apply the Paint Style settings manually.

4 Select the Fill box to set the fill attributes, the Stroke box to set the stroke attributes, or the Swatch box to change the color of the toolbox swatch.

5 Choose a fill or stroke color using one of the following procedures:

- Choose a color selection option—None, White, Black, Process, or Custom—from the choices directly below the Fill, Stroke, and Swatch boxes. The color selection options are described in detail later in this chapter.
- Drag a color from the Swatch box directly to the Fill or Stroke box.

6 If you selected the Auto check box, the paint attributes are applied automatically. If the Auto check box is not selected, you can apply the selected paint attributes by clicking Apply.

Changing the swatch color

As with bitmapped images, you can change the swatch color using the eyedropper tool or the Paint Style palette. Any change you make in the swatch color is reflected in the swatch in the toolbox, and in the swatch in the Paint Style palette.

To select a swatch color from the template using the eyedropper tool:

1 Click the eyedropper tool.

2 Position the eyedropper tool over the color in the bitmapped image you want to select, and click the mouse button. The swatch color changes.

Note: Keep in mind that the eyedropper tool can select colors only from the bitmapped image regardless of the displayed view. This is useful if you have been experimenting with colors in the artwork and decide to revert to a color that is available only in the original image. It is also a good way to create a custom color from the original image colors.

To select a swatch color using the Paint Style palette:

1 Make sure that no paths are selected, by clicking anywhere away from a path or choosing the Select None command from the Edit menu (Command-D). (You should see no anchor points).

2 Choose Paint Style from the Options menu (Command-I, or double-click the swatch).

3 Click the Swatch box in the Paint Style dialog box.

4 Select the color you want from one of the color selection options. The Swatch box is automatically changed with each color selection.

Selecting matching colors or stroke weights

You can select matching fill colors, stroke colors, or stroke weights using the Paint Style palette. This feature is useful for selecting all instances of a particular fill or stroke and changing the color to a new process color or custom color.

The Select Matching box is located at the bottom of the Paint Style palette; if the box is hidden, click the "lever"—the palette display control—at the lower right of the Paint Style palette.

To select all paths matching another path:

1 Select a path whose fill, stroke, or both fill and stroke values you want to use in selecting new paths.

2 Choose Paint Style from the Options menu (Command-I).

The fill and stroke values of the selected path (or paths) appear in the dialog box.

3 Select any combination of the Fill, Stroke, or Stroke Weight check boxes to indicate the kind of match you are looking for. If you select Stroke or Fill, the program will find all colors in the image that match the fill or stroke colors of the selected object. If you select Stroke Weight, the program will find all stroked paths that match the stroke weight of the selected object.

The program will not find a match if a stroke or fill color is a slightly different shade than is used in other paths.

4 Click Select.

The program selects all paths with a matching fill color, stroke color, stroke weight, or a combination of these matches (if you have selected more than one check box). If no match is found, the program displays a message.

Note: The Paint Style palette "Select Matching" commands choose colors based on the colors displayed in the Fill and Stroke boxes. If you change these colors after selecting the path you want to match, Adobe Streamline will attempt to match the colors in the Paint Style palette, and not colors of the selected path.

Using custom colors

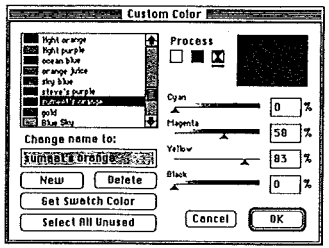
Custom colors in Adobe Streamline are process colors defined by name so that you can easily select or change them later. You can globally change all instances of a custom color by changing its color value in the Adobe Streamline and Adobe Illustrator programs. When you change a custom color, the change takes effect on all areas currently using that custom color.

You can use the Import Styles command in the File menu to import custom colors from an Adobe Illustrator file. See "Importing Styles from Adobe Illustrator Files" in Chapter 2 for more information about importing custom colors.

You can define your own custom colors using CMYK values at any time. Defining a custom color using CMYK percentages is similar to defining a process color in the Paint Style palette.

To set custom color options:

1 Choose Custom Color from the Options menu (Control-U). The Custom Color dialog box appears.



2 Select a custom color from the scrolling list. If desired, you can create new custom colors by selecting one of the custom color options:

- New allows you to define a new name for a custom color, as described in the following section.
- Get Swatch Color places the color currently displayed in the toolbox swatch into the Custom Color dialog box swatch.
- Select All Unused allows you to automatically select all custom colors that are not currently used in the image. This option is convenient for selecting custom colors to delete from the custom color scroll list.

To define a new custom color:

1 Choose Custom Color from the Options menu.

2 Select a color from the list you want to edit, or click New to create your own new custom color.

3 Enter the CMYK percentages for the color you want, or move the sliders to change the CMYK percentages.

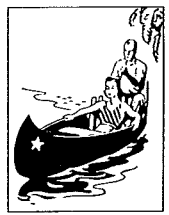
4 Type the name that you want to assign to the color, and click OK.

To delete a custom color, click Delete. If you delete a custom color that is in use in the current artwork, the program automatically changes the custom color to the equivalent value of a process color.

When an image converted in Adobe Streamline using custom colors is saved in an Adobe Illustrator file format and then opened in the appropriate version of the Adobe Illustrator program, the custom colors named in the image will be correctly displayed.

In the following illustration, the custom color Streamline Orange has been created by assigning percentages to the CMYK values.

Black-and-white image



Custom color assigned to closed paths

Adding color to the strokes and fills of a black-and-white or grayscale image

You can add color to the paths of a converted black-and-white or grayscale image using the Paint Style palette. You can also assign a custom color name to each gray level in a grayscale image, using the Generate Custom Color List option in the Color/Grayscale Setup dialog box; you can change all instances of a gray level to a different color using the Custom Color dialog box. (For an example of this procedure, see Appendix B, "Sample Conversions.")

To add color to a stroke or fill:

1 Select a path to color in a converted image using any selection tool.

2 Choose Paint Style from the Options menu (Command-I).

3 Select the Fill box to set the fill color, or select the Stroke box to set the stroke color.

4 Choose a fill or stroke color using one of the following procedures:

- Select a color selection option—None, White, Black, Process, or Custom—from the choices directly below the Fill, Stroke, and Swatch boxes.
- Drag a color from the Swatch box directly to the Fill or Stroke box.

5 If you selected the Auto check box, the paint attributes are applied automatically. If the Auto check box is not selected, you can apply the selected paint attributes by clicking Apply.

To add color to all instances of a gray level in a grayscale image:

1 Select a grayscale image to convert, and choose Color/Grayscale Setup from the Options menu (Command-B).

2 Enter a value of 3 or more in the Maximum Number of Colors text box. Select the Generate Custom Color List option.

3 Choose the Convert command from the File menu (Command-R) to convert the image.

4 After the conversion is complete, choose Custom Color from the Options menu (Command-U).

Scroll down to the bottom of the scroll list to find the new custom colors generated by Adobe Streamline (Auto Color 1, Auto Color 2, and so on). Each new custom color represents a distinct gray level in the converted image.

5 Select a custom color by clicking the name (The shade of gray represented by the custom color name appears in the Swatch box).

6 Change the color by moving the sliders for the C, M, Y, K colors, or enter a value in the text box associated with each slider.

7 Click OK.

Selecting paths by stroke weight

Adobe Streamline lets you select paths with matching stroke weights. This is a good way to select and change the stroke weight of a group of paths.

To select paths with the same stroke weight:

1 Select a path.

2 Choose Paint Style from the Options menu (Command-I). If the entire palette does not appear, click the "lever"—the palette display control— at the lower right of the Paint Style palette.

3 In the Select Matching box of the Paint Style palette, select the Stroke Weights option.

4 Click Select.

If the Stroke Weights option is not selected when you click Select, the program will not select additional paths.

Changing the stroke weight of selected paths

You can change the stroke weight for the selected path with accuracy up to tenths of points. The following illustration shows how changing the stroke weight affects a grayscale image:

Image with stroke set to None

Image with stroke weight of .75 points

To change the stroke weight:

1 Select the paths whose stroke weight you want to change.

2 Choose Paint Style from the Options menu (Command-I).

3 Enter the desired stroke weight in points.

If you enter 0 points for the weight, the program draws a line with the minimum line weight available for PostScript devices. If you want no line weight, select a stroke color of None.

4 Click Apply.

SMOOTHING PATHS

The Smooth Path command smooths a selected path by reducing the number of anchor points. When you use the Smooth Path command, the program attempts to retain the original shape of the path while removing anchor points from the path. If the shape is not what you want, you can edit it using Adobe Illustrator or another compatible drawing program such as Macromedia FreeHand.

To smooth the selected path:

1 Select the path you want to smooth.

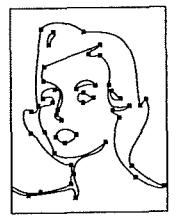
2 Choose Smooth Path from the Edit menu and one of the submenu options, as follows: Minimum, Normal, or Maximum.

- Minimum smoothing (Command-1) removes one-tenth of the anchor points.
- Normal smoothing (Command-2) removes one-fifth of the points.
- Maximum smoothing (Command-3) removes one-third of the points.

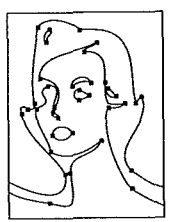
Note: If you are saving the artwork in a file format that recognizes only straight lines (such as the DXF format), do not use the Smooth Path command.

3 Choose Smooth Path as many times as needed until you reduce the anchor points for the desired effect.

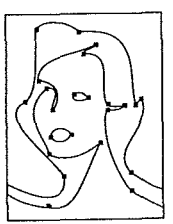
Unsmoothed path



Minimum smoothing applied



Medium smoothing applied



Maximum smoothing applied

Appendix A: Troubleshooting

This appendix describes solutions to problems you may encounter when using the Adobe Streamline program.

When you convert a color image to a posterized color artwork, the colors do not match the original image.

Adobe Streamline will only match as many colors as are listed in the Maximum Number of Colors box in the Color/Grayscale Setup dialog box. To match the original artwork's colors as closely as possible, increase the Maximum Number of Colors value.

There are too many point in a converted image.

Try any of these options: use the Smooth Path command in the Edit menu to reduce the number of points, use the delete-anchor-point tool to delete the extra points, increase the Tolerance value in the Conversion Setup dialog box, or turn on Edge Smoothing the Color/Grayscale Setup dialog box.

The file you wan to open does not appear in the Open dialog box.

The file is not in a format that is recognized by Adobe Streamline. The file must be in the TIFF, PICT, MacPaint, or Adobe Photoshop 2.0 or 2.5 format to be opened by Adobe Streamline.

The lines of your bitmapped image appear too light (less than 1 point).

Your scanner is not scanning at a high enough contrast. Increase the contrast of the scanner to make the lines heavier.

The converted image has jagged edges.

The resolution of the original image may not be high enough. The quality of the converted image is directly related to the quality of the original. The higher the resolution of the original image, the better the converted image. A minimum resolution of 300 dpi is recommended.

The converted image does not accurately match the outline of the original image.

A number of options can be changed to more accurately convert the image. You can decrease the tolerance value, the noise suppression value, or the line thinning value in the Conversion Setup dialog box. You can also scan the image at a higher resolution.

When you use the Centerline method, the lines of the converted image appear to have extra points extending at an angle from the ends.

Increase the number of line thinning steps in the Conversion Setup dialog box, and reconvert the image.

You have converted an image with distinct color edges using the Outline method, and the lines in the image are skewed.

Set the Smoothing option to None in the Color/ Grayscale Setup dialog box and reconvert the image.

When you use the Centerline method the converted images shows anchor points in the middle of long, straight lines.

Use the delete-anchor-point tool to delete selected anchor points or the Smooth Path command to reduce the number of anchor points for the selected paths. If you plan to convert the image again, you can also increase the number of line thinning steps in the Conversion Setup dialog box to create fewer anchor points.

Appendix B: Sample Conversions

This section provides information about Adobe Streamline conversions to help you achieve the results you want. It includes a selection of sample images that have been converted by the Adobe Streamline program using a variety of conversion methods and options.

By comparing the results of these sample conversions, you can better anticipate how your images will turn out. For additional guidelines on correcting undesirable results in converted images, see the Appendix A, "Troubleshooting."

Creating a line drawing from a photo

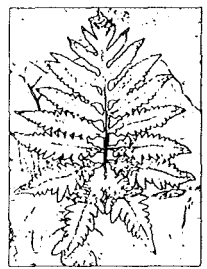
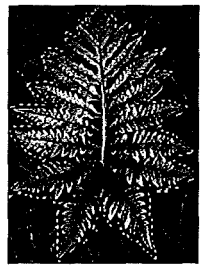


Photo previewed in Color/Grayscale Setup dialog box. Maximum Number of Colors set to 2 and contrast adjusted



Selection made around leaf using lasso tool to avoid converting unwanted background detail.

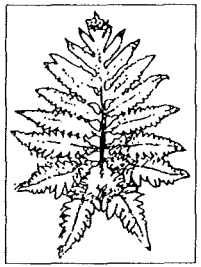
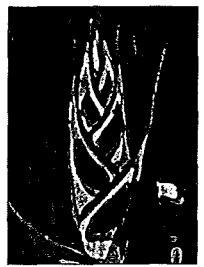
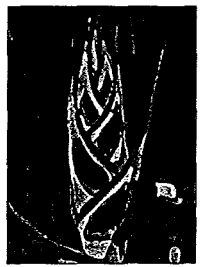


Image converted using Outline conversion method. Resulting black fills painted.

Posterizing a photo and editing color



Maximum Number of Colors set to 4 in the Color/ Grayscale Setup dialog box. Converted using default Outline conversion values



Color object selected using the selection tool.

Select Same Fill option selected in Paint Style palette. Color then changed using CMYK sliders.

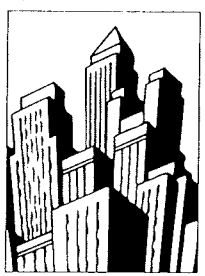
Colorizing Grayscale Images

Maximum Number of Colors set to 4, Generate Custom Color List option selected in Color/Grayscale Setup dialog box. Converted by Outline method.

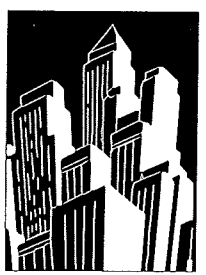
Custom Color dialog box chosen, and "Auto Color 1" custom color selected. Color altered by changing the CMYK sliders.

Custom colors "Auto Color 2," "Auto Color 3," and "Auto Color 4" edited by changing the CMYK sliders.

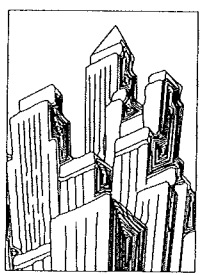
Using Different Conversion Methods for Special Effects



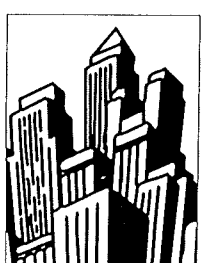
Outline method.



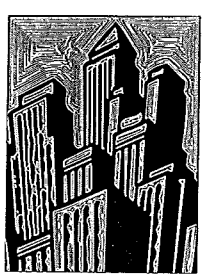
Outline and Centerline methods, White Lines, Uniform Line Weight of 0.5 point.



Centerline method.



Centerline method, Uniform Line Weight of 2 points.



Centerline method, White Lines, Uniform Line Weight of 0.5 point.

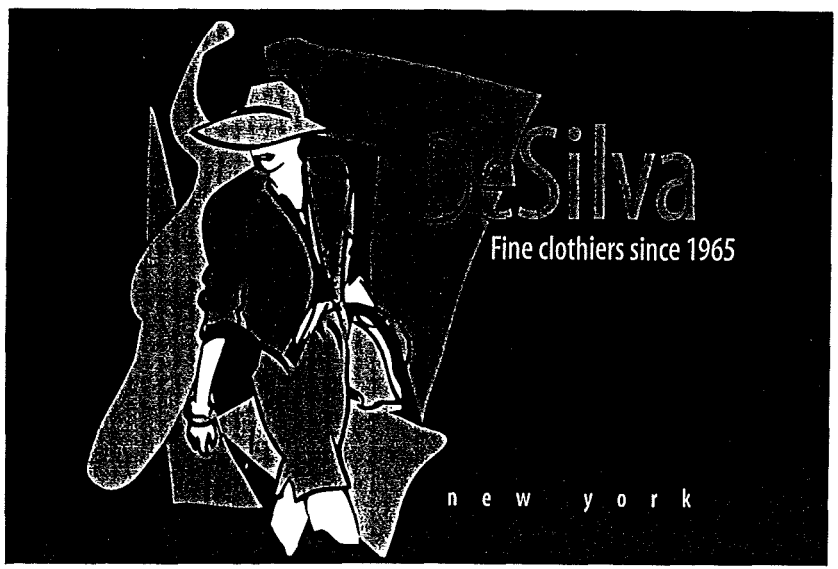
Outline method, Straight Lines Only, Reverse Image.

Appendix C: Sample Art Gallery

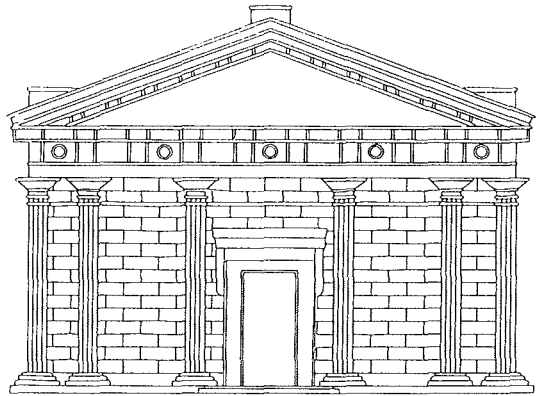
▶ This poster was created by scanning a 35 mm slide and converting it using the Outline method. Different paths were selected and custom colors applied. Other paths were selected and deleted to break up the image. All paths were then selected and assigned a stroke weight of 1 point. The image was combined with type and a border in Adobe Illustrator.

▶ This sticker was created using the Taj Mahal image as three separate duotones. Each image was converted using the Outline method with four colors. The pencil and eraser tools were used to manipulate the type, which was created using Adobe Type Align. The type was converted using the Outline method with a tight Tolerance setting and the Straight Lines Only option turned on. These images were combined and further enhanced in Adobe Illustrator.

▼ A line art figure drawing was scanned and brought into Adobe Streamline. It was converted using default Outline conversion settings; Maximum Number of Colors was set to 2. The remaining features were drawn in Adobe Illustrator.

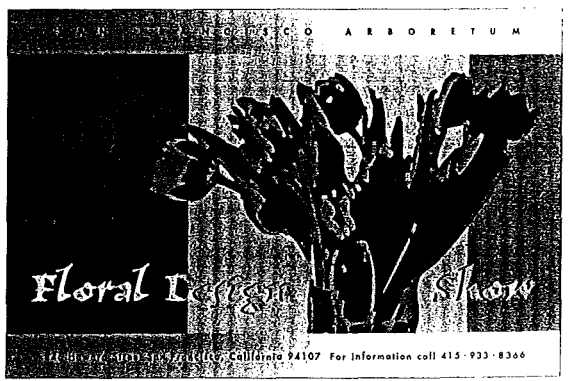


▶ This image was created by scanning the original line art image and converting it using the Centerline method. Although the image was a good candidate for the Line Recognition method, this method was not used in order to retain the "organic" look of real bricks. If an architectural look had been desired, the Line Recognition method would have been used along with the Centerline method.

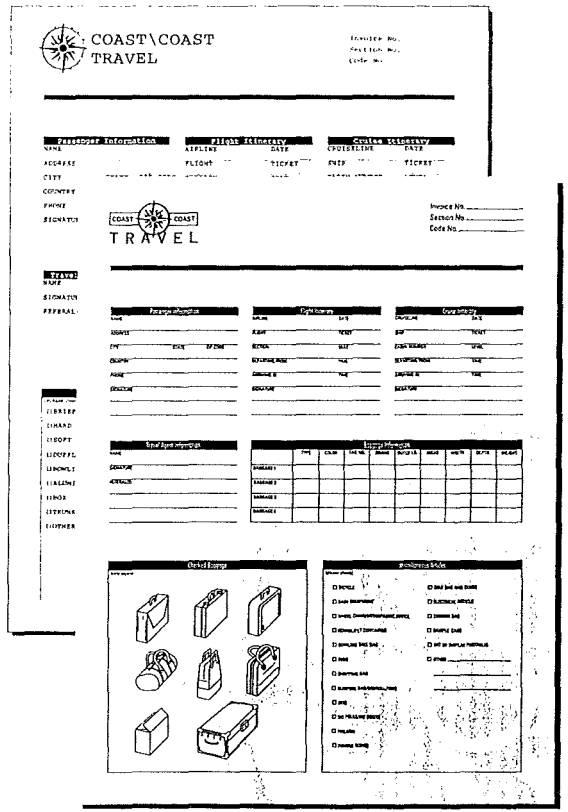


▼ This announcement was created by scanning a 35mm color slide of the flowers. The image was opened in Streamline, where the background was selected and then dropped out. The default Outline conversion settings were used; Maximum Number of Colors was set to four.

The image was converted and then placed into the layout.

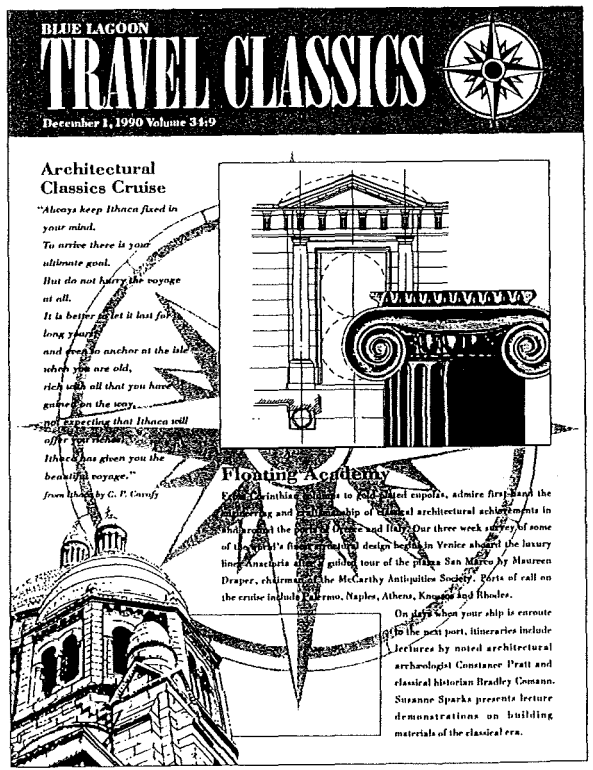


▶ This form was created by scanning an original form and then converting it using the Line Recognition method. The suitcases were scanned and then converted using the Centerline method. Colors were assigned using the Paint Style palette. Files were combined and type was added using Adobe Illustrator.

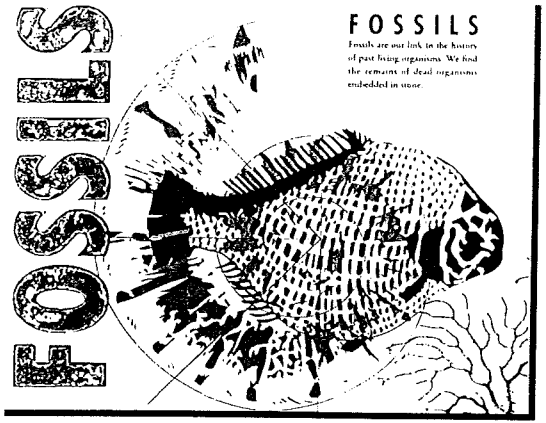


▲ This logo was created by scanning the original line art and then converting it using the Outline conversion method. Colors were assigned using the Paint Style palette; the illustration was then edited and type added in Adobe Illustrator.

▶ This newsletter cover contains four images. The faint star in the background and in the title bar were scanned and edited in Adobe Streamline. The building image at the bottom of the page was converted using default Outline conversion method settings. The architectural drawing of the doorway was converted using the Centerline method. The grayscale column next to the doorway was converted using the Outline method, and the white was filled with a custom color. All images were combined in Adobe Illustrator.



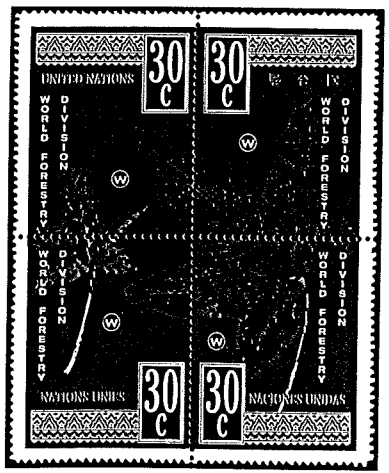
▶ Four images—the nautilus shell, coral, fish, and line—were scanned and converted using the Outline method. Colors were assigned using the Paint Style palette. Images were combined and type was added in Adobe Illustrator.



▼ This stamp block was created by scanning real leaves and converting the image using the Outline method. Maximum Number of Colors was set to 64 colors in the Color/Grayscale dialog box. In Adobe Illustrator, mustard backgrounds were drawn and placed between the leaves and background.

The motif design next to the stamp value was hand-drawn, scanned, and converted with the Outline method. Custom colors were applied in Adobe Streamline.

Finally, a block of stamps was scanned. The stamp outline was selected with the magic-wand tool and converted using the Convert Selection Edge option in the Color/Grayscale Setup dialog box. The stamps were filled with white. The images were combined and type was added in Adobe Illustrator.



▶ A grayscale photo was scanned and saved in the Adobe Photoshop file format. The file was then opened in Adobe Streamline.

The photo was posterized by setting the Maximum Number of Colors to 4 in the Color/Grayscale Setup dialog box. The Generate Custom Colors option was selected, and the image converted using the Outline method. The grayscale custom colors were selected and assigned process color values in the Custom Color dialog box.

The headline type was created in Adobe Photoshop, and the Diffuse filter used to create rough edges on the letters. The type was then converted in Streamline using the Outline method.

The posterized photo and the headline type were combined in an Adobe Illustrator document. Smaller type was added in Adobe Illustrator to create the final design.

▶ This illustration was created by scanning a line-art drawing, which was then converted in Adobe Streamline using the Outline method. The blends were then added in Adobe Illustrator.

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