ARCSOFT PHOTOSTUDIO FOR MACINTOSH

Introduction

Thank you for choosing PhotoStudio, the affordable, easy to use alternative to today's complex photo retouching applications for the Macintosh®. Designed for novices as well as professionals, PhotoStudio provides all the tools you need to enhance scanned or Photo CD images and produce professional quality artwork.

PhotoStudio includes a wide range of painting, drawing and retouching tools, as well as numerous editing functions like cloning, feathering and masking. For added convenience, PhotoStudio also includes a browser utility for cataloging and retrieving frequently used images.

ARCSOFT PhotoStudio

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ArcSoft PhotoStudio™ For Macintosh

System Requirements

Macintosh Platform

Any Macintosh with a 68020 processor or any Power Macintosh™

System 7.0™

System 7.5™ requires a patch for math library

2.5MB RAM

Sound card

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Chapter 1 - Getting Started

Introduction

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PhotoStudio includes a wide range of painting, drawing and retouching tools, as well as numerous editing functions like cloning, feathering and masking. For added convenience, PhotoStudio also includes a browser utility for cataloging and retrieving frequently used images.

Requirements - PhotoStudio minimally requires:

- Any Macintosh with a 68020 processor or any Power Macintosh™
- System 7.0™
- 2.5 Mb RAM

Installation

Double-click on the PhotoStudio Installer icon to install the program on your hard drive. Note that the Installer may not work correctly if you are running virus protection software. If you encounter problems, please restart your computer with Extensions disabled (hold down the Shift key at startup). Then, double-click on the Installer and try again. The following items will be placed on your hard drive:

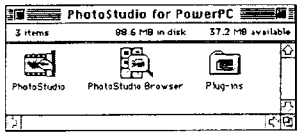


Figure 1.1

Working Efficiently

File size is an important parameter that will affect the overall time it takes to edit your image. Make sure you choose a resolution that is suitable for your printer since the higher the resolution, the larger the size of the file and thus the longer the calculation time.

If your computer has limited memory, you may want to decrease the amount of RAM allocated to PhotoStudio. To find out how much memory is available, quit all applications then pull down the Apple menu and select About This Macintosh.

Note the Largest Unused Block section of this dialog. To use PhotoStudio and the PhotoStudio Browser on a 68020 Mac, you will need at least 2 MB of free RAM. To use the applications on a Power Macintosh, you will need at least 3 MB.

Close the About This Macintosh window. Click once on the PhotoStudio application icon and choose Get Info from the File menu. Check the minimum and maximum suggested RAM values, then enter a value in the Preferred Size textbox. Do the same for the PhotoStudio Browser, making sure not to allocate more RAM (between both applications) than is available.

Although you should set PhotoStudio's RAM as high as possible, keep in mind that you may want to use other applications while you are using PhotoStudio.

NOTE: You can find the optimum RAM value for an open image by choosing Memory Space from the Edit menu.

Technical Support

You must complete and return the enclosed product registration card in order to receive technical support, as well as upgrade and new product information. In North America, South America and the Far East, please contact:

Ricoh Corporation
475 Lillard Drive
Sparks, NV 89434
Tel 702.352.1600
FAX 800.544.8246

Visit us at: www.ricohcpg.com

Tutorial

Even if you do not read the Reference section of this manual, we strongly urge you to follow the PhotoStudio tutorial in order to gain a working knowledge of the product's powerful features.

Chapter 2 - Tutorial

The PhotoStudio Browser

The PhotoStudio Browser allows you to catalog and view images as thumbnails (miniature representations) so you can easily categorize and retrieve them. Each time a catalog reaches its storage limit (150 images), the PhotoStudio Browser will automatically create a new catalog with the same name as the previous catalog, followed by a sequential number (i.e., Landscapes - Landscapes 2 - Landscapes 3, etc.).

EXERCISE: Catalog the images found on the "Images of France" PhotoCD. Or, if you are running the PhotoStudio demo without the PhotoCD, catalog the images in the Photos folder.

STEPS:

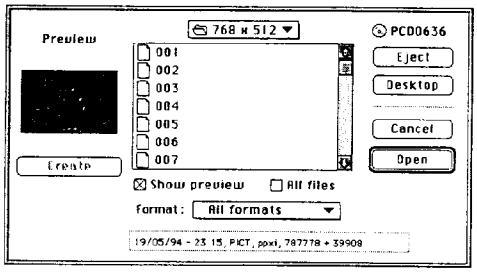
1. Double-click on the PhotoStudio Browser.

2. Select New Catalog from the File menu. Name the catalog "Browser Exercises" and Save it in the desired location.

3. When you are asked to make a selection, select Desktop: PCD0636: Photos. Highlight the 768 x 512 folder, then click on Catalog: "768 x 512" at the bottom of the dialog. Or, if due to memory restrictions you have allocated less than 4 MB of RAM to PhotoStudio, choose the 384 x 256 folder:

4. A dialog will appear to inform you that the PhotoStudio Browser is cataloging images, which may take a few minutes. If you need to stop this procedure, click on the Stop button.

Figure 2.1



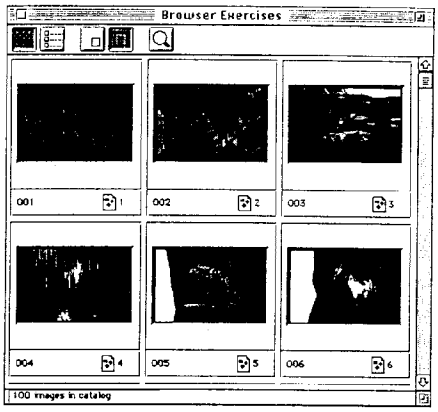
Cataloging Additional Images

If you want to add images to an existing catalog, select Add from the File menu, then select the desired image(s) or folders. To catalog image folders contained in the selected image folder, select the "Look for images in nested folders" option, as shown in Figure 2.1.

IMPORTANT: If you make modifications to the original images, you must choose Update from the File menu in order for the PhotoStudio Browser to reflect those changes. A red checkmark will appear below each image to confirm that it has been updated.

Viewing Cataloged Images

Figure 2.2



The PhotoStudio Browser opens in Gallery view (shown above), however you can view images in several ways:

Gallery View: Allows you to view a thumbnail representation of each image. Click on the small square icon (third button from the left) to display smaller thumbnails, and therefore view more images at the same time. To return to large thumbnails, click on the large square icon.

List View: Click on the second button in the top left-hand corner of the PhotoStudio Browser to view thumbnails as a list. As with the Gallery view, you can also choose to display large or small thumbnails while in the List view. The Large view allows you to display any text associated with your images, as well as apply up to four keywords to each image.

Adding Keywords to Images

In addition to traditional sorting and searching by name, date and file type, the PhotoStudio Browser offers keyword capabilities similar to those found in professional image databases. To take full advantage of the its keyword capabilities, you should try to put the same type of information in the same text field for each image. For example:

1st Field: Name of the photographer or publisher

2nd Field: Date

3rd Field: Potential uses (newsletters, ads, brochures, etc.)

4th Field: Particular information (copyrights, image formats, etc.)

Search by Example

To find an image, click on the PhotoStudio Browser's magnifier icon to display the following dialog:

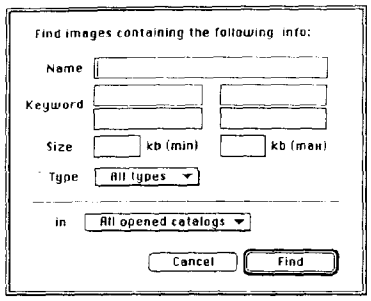


Figure 2.3

Enter your criteria, then click on Find. At the end of its search, the PhotoStudio Browser will tell you how many matching images were found, and display them at the top of the file. Double-click on the desired image to open it and launch the PhotoStudio application.

NOTE: If you are performing this operation for the first time, the PhotoStudio Browser will ask you to locate PhotoStudio.

Setting PhotoStudio Preferences

EXERCISE: Customize PhotoStudio's General Preferences.

STEPS: 1. To launch the application from within the PhotoStudio Browser without opening an image, pull down the File menu and select the PhotoStudio option. (Of course, you can always open the PhotoStudio folder and double-click on the application icon to launch the program.) Once launched, pull down the File menu and highlight the Preferences option.

2. Select General to display the General Preferences dialog:

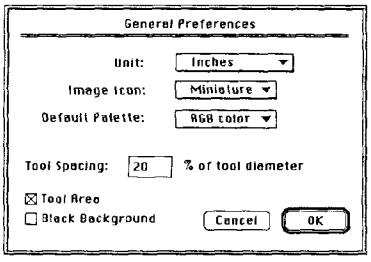


Figure 2.4

3. Unit: Select inches from the pop-up menu. (You can also display units of measure in pixels or centimeters.)

4. Image Icon: Choose the Miniature option to display file icons as miniature representations of the images they contain. If you choose the Standard option, files are displayed with the PhotoStudio icon and will show the format type (PICT or TIFF).

5. Default Palette: This allows you to set a default palette for use with new documents. The options are Bitmapped, Grayscale, System or RGB. Select RGB.

6. Click OK.

EXERCISE: Customize PhotoStudio's Memory and Plug-ins Preferences.

STEPS:

1. Pull down the File menu and highlight the Preferences option.

2. Select Memory and Plug-ins to display the following Preferences dialog:

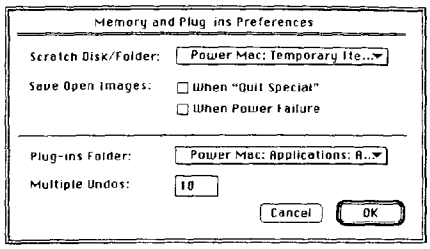


Figure 2.5

Scratch Disk/Folder

IMPORTANT: You must select a scratch disk or folder other than the default Temporary Items folder if you enable the When Power Failure option (discussed below). This is very important since the Temporary Items folder is automatically put in the Trash upon startup.

3. To choose a different scratch disk (the place where PhotoStudio will save any temporary items) or folder, click on the pop-up menu and select Other. Choose the PhotoStudio folder using the dialog that appears.

Save Open Images

An important benefit of PhotoStudio's unique virtual memory management is the ability to recover unsaved data. If you enable the When "Quit Special" option, PhotoStudio will allow you to quit without saving changes to yourwork, then later reopen the same file in a fraction of the time with yourchanges intact.

4. Click on the When "Quit Special" option to enable it. To ensure recovery of unsaved data after a power failure or computer crash, click on the When Power Failure option, as well.

5. Use the pop-up menu to select the Plug-ins folder found in the PhotoStudio folder.

Multiple Undos

PhotoStudio allows you to specify up to 32 levels of Undo. While defining multiple levels of Undo is practical for design and creation, specifying fewer levels of Undo minimizes disk transfers, saving time and energy.

Keep in mind that multiple Undo files take up disk space. If you need to increase your free disk space, you can delete temporary Undo files via the Memory Space option found in the Edit menu.

6. Set Multiple Undos at 6.

7. Click OK.

PhotoStudio Palettes

EXERCISE: Explore PhotoStudio's palettes.

STEPS: 1. In order to display PhotoStudio's palettes, you must first open a document. Select Browser from the File menu, then open the BrowseExercises catalog. Double-click on any image.

NOTE: For in-depth information about PhotoStudio's palettes, refer to Chapter 4 - Tool Palettes. For more information about any tool, click on the desired tool then pull down the Help menu (? icon) in the top right-hand corner of your screen and select Tool Help.

Tool Palette

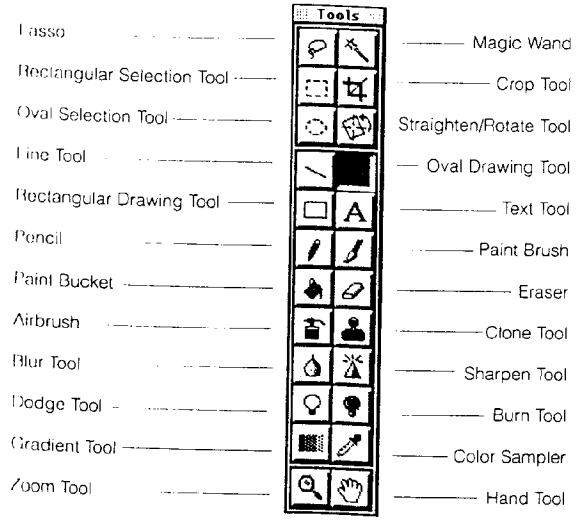


Figure 2.6

2. When you click on a tool, a Tool Settings dialog will display so you can configure the selected tool for your particular needs. .

Color Palette

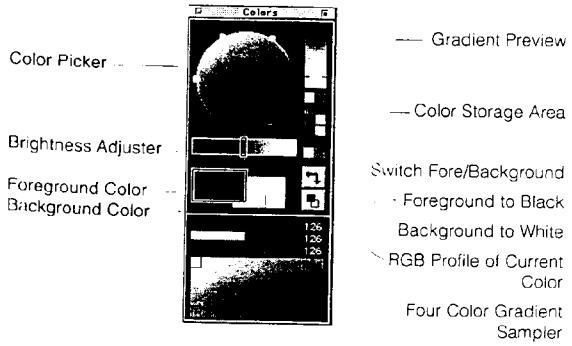


Figure 2.7

3. If the bottom portion of the Color Palette is not visible, click the small square in the top right-hand corner of the palette to extend it.

4. Click on the Foreground Color Indicator and drag the Brightness Adjuster slider to the center.

5. Drag the small circle in the Color Picker to see how the foreground color changes. Slide the Brightness Adjuster from left to right to view the changes in shades. (This can be done for the Background Color Indicator, as well.) Notice how the Gradient Preview displays the gradient between the foreground and background colors.

6. Move the cursor to the Color Storage Area and notice that it becomes a Color Sampler tool. Click any color in the Color Storage Area and either the foreground or background color (depending upon which one is currently selected) will change to that color.

7. Use the Four Color Gradient Sampler to mix colors. Click on a color in the Color Storage Area, then move the cursor to one of the four squares in the Gradient Sampler and click again. (Note that the cursor will change from a Color Sampler to a Paint Bucket). Repeat this procedure until each square contains a different color.

You can now use the Color Sampler tool to sample any color from the Four Color Gradient Sampler, then apply it to your document using one of the painting or drawing tools.

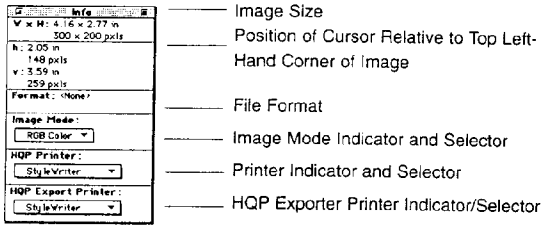


Figure 2.8

Image Controls

Two other useful controls can be found at the bottom of PhotoStudio image windows:

Figure 2.9

PhotoStudio provides a convenient pop-up menu so you can easily zoom in for close-up views, or zoom out to fit an entire image on your screen. You can use the View/Change Resolution pop-up menu to increase or decrease an image's resolution, and therefore its physical dimensions, while maintaining its file size.

8. Close the document. Do not save it.

Creating A New Image

EXERCISE: Design a postcard.

STEPS: 1. Select New from the File menu:

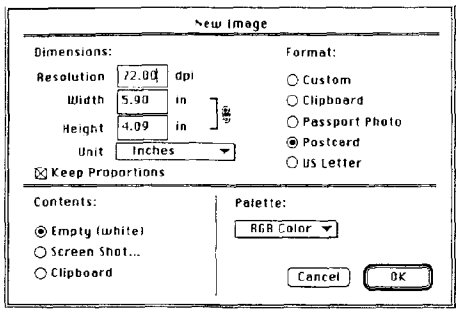


Figure 2.10

2. Give the new file a resolution of 72.00 dpi.

3. Choose the Postcard option under Format, then select Empty (white) under Contents. Click OK.

4. To add colors to the Color Palette, begin by dragging the Brightness Adjuster slider to the center. Then, click on a color in the Color Picker.

Move the cursor to the Color Storage area, position it over one of the squares and hold down the Option key. When the cursor changes to a Paint Bucket, click on the square to save the chosen color.

Repeat these steps until you have several colors to choose from:

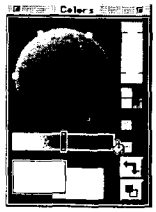


Figure 2.11

5.Apply a color to the postcard by selecting the Paint Bucket tool and moving it to the Color Storage Area. (The cursor will change to a Color Sampler tool.) Click on a color, move the Paint Bucket to the canvas and click again:

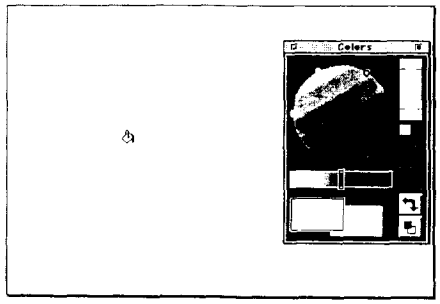


Figure 2.12

6. Click on the Line tool and set vertical and horizontal line thickness at 1.

7. To make the foreground black, go to the Color Palette and click the Change Foreground to Black and Background to White option. Then hold down the Shift key and draw two parallel horizontal lines in the top left corner.

8. Click on the Rectangular Drawing tool and draw a square in the top right corner.

9. Select the Text tool and click on the image. When the Text Settings dialog displays, enter an address in the textbox. Choose a font and other attributes, click on the Floating Selection checkbox, then click OK:

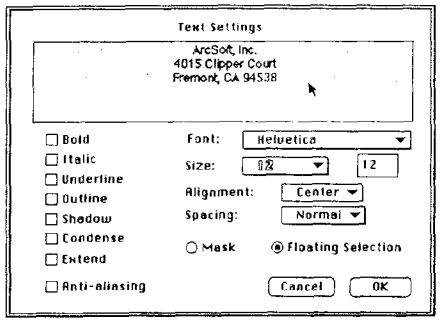


Figure 2.13

10. The cursor will become a Hand tool when you move it over the text. Click the mouse and drag the text to the center of the card. Choose Select None from the Selection menu to deselect the text:

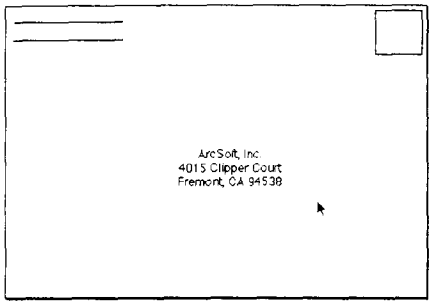


Figure 2.14

NOTE: If the Text Settings dialog reappears as you attempt to move the text, click on Cancel. Or, if you accidentally place the text in the wrong spot, select Undo from the Edit menu until the text starts floating again. You can then try to reposition it.

11. Choose Save As from the File menu and name your file "Postcard Back."

File Format

PhotoStudio allows you to save files in the following formats: PICT, PICT with Alpha Channel, PICT with JPEG compression, TIFF, TIFF with LZW compression, TIFF with Alpha Channel, EPS, EPS with mask, and PhotoStudio internal format. If you are planning to place images in a layout application, saving them as TIFF files will allow you to modify their brightness and contrast from within the layout application.

Compression Format

You can also compress images to save disk space. In some cases, a compressed file may take up to 10 times less space than the same uncompressed file. JPEG compression offers the greatest reduction in file size, however it also proportionately reduces the quality of the image. TIFF LZW compression will maintain the quality of the image as it applies less compression than JPEG. You may want to try each of the compression modes, then choose the one that best suits your needs.

12. Save the file and choose a type of compression (if desired):

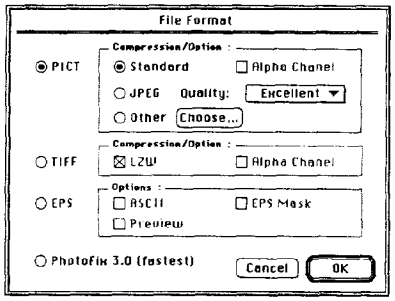


Figure 2.15

13. Close the file.

Making a Constrained Selection

EXERCISE: Add a graphic to the front of your postcard.

STEPS: 1. Select Browser from the File menu and open the Browser Exercises catalog. Click on the Magnifier icon. When the Find dialog appears, enter 021 in the Image Name textbox and click on Find. Double-click on image 021 to open it. If necessary, zoom out so you can see the entire image.

2. Click on the Rectangular Selection tool and configure it as shown below. (Note that the dimensions displayed are relative, not actual.):

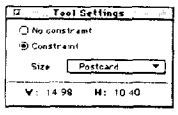


Figure 2.16

3. The cursor will display as a cross with a small "c" next to it to remind you that a constraint is applied. Click and drag the Rectangular Selection tool to define a large section of the image, then choose Copy from the Edit menu to copy the image in postcard proportions:

Figure 2.17

4. Select New from the File menu. When the New Image dialog displays, select Postcard for the Format, then click OK.

5. When the new (empty) file displays, pull down the Selection menu and choose Select All. Then select Paste from the Edit menu to place the image in postcard proportions.

6. Choose Select None from the Selection menu, then go to the File menu and save the image as "Postcard Front."

7. Close the file.

Image Correction

EXERCISE: Automatically correct an image's brightness and contrast.

STEPS: 1. Open image 013. If necessary, zoom out so you can see the entire image.

2. Using the Crop tool, select the entire image except for the black frame. (Adjust the corners by dragging them into position.) Move the cursor inside the selected area. When it becomes a pair of scissors, click the mouse to remove the black frame:

Figure 2.18

3. Pull down the Image menu and select Settings - Bright/Cont & RGB. Click on Auto to automatically correct the image:

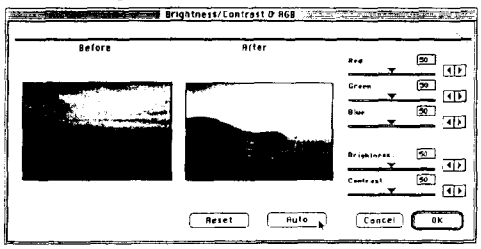


Figure 2.19

4. Close the file. Do not save it.

Simple Image Retouching

EXERCISE: Remove a hair (or scratch) from an image.

STEPS: 1. Open image 034.

2.Select the Zoom tool and click on the center of the image. You will see a black hair that needs to be removed:

Figure 2.20

3. Click on the Clone tool. Set the Diameter at 8 pixels, and the Density at 100. Click OK:

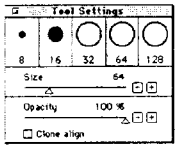


Figure 2.21

4. Move the Clone tool to a part of the sky which has colors similar to the area around the hair. Hold down the Option key (the arrow at the bottom of the Clone tool will become white) and click once on the mouse. Release the Option key and move the mouse close to the hair.

5. Hold down the mouse and drag the Clone tool across the hair.

6. The hair will gradually disappear as it is covered with the pixels corresponding to the portion of the image you cloned from:

Figure 2.22

7. Repeat Step #4 by starting from new reference points until you cannot see the effect of cloning.

8. Close the file. Do not save it.

In addition to removing unwanted items, the Clone tool is very useful for duplicating items. Try repeating this exercise but instead of removing the hair, duplicate it elsewhere in the sky.

Rotating & Straightening Images

EXERCISE: Rotate the same image using two different methods.

STEPS: 1. Open image 015. If necessary, zoom out so you can see the entire image.

2. Rotate the image by choosing Rotate +90° from the Image menu. Select Undo from the Edit menu.

To manually rotate the same image:

1. Go to the Tool Palette and click on the Straighten/Rotate tool. Two perpendicular crossbars will appear on the image:

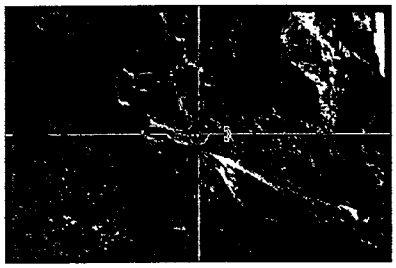


Figure 2.23

2. Position the cursor on one of the crossbars. (The cursor will become a curved line with arrows at both ends.)

3. Hold down the mouse and drag the crossbar 90° clockwise.

4.Release the mouse and click on the image:

Figure 2.24

5. The image will be rotated 90° clockwise.

6. Close the file. Do not save it.

EXERCISE: Straighten an image.

STEPS: 1. Open image 023.

2. You will see that the line created by the city lights is not perfectly horizontal. To correct this, click on the Straighten/Rotate tool and position the cursor over the small circle where the crossbars intersect.

3. Drag the circle as close as possible to the city lights line, then position the cursor on one of the crossbars. Holding down the mouse, drag and rotate one of the crossbars counterclockwise until the horizontal crossbar is aligned with the city lights line:

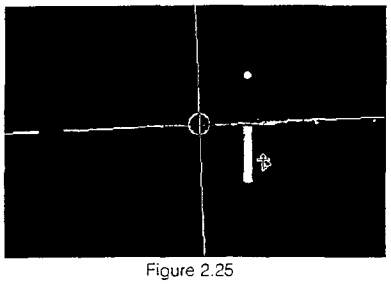


Figure 2.25

4. Release the mouse, hold down the Option key and click on the image. The city lights are now perfectly horizontal. You can straighten the entire image on your screen by using the Crop tool to delete the outside edges of the image:

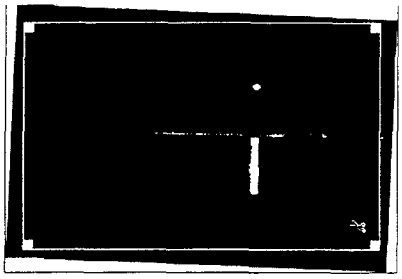


Figure 2.26

5. Close the file. Do not save it.

Working With Selections

EXERCISE: Define a selection, create a mask and feather its edges, then blend it back into the image.

STEPS: 1. Open image 089. If necessary, zoom out so you can see the entire image.

2. Click on the Rectangular Selection tool and select No Constraint in the Preferences dialog that appears. Use the Rectangular Selection tool to select the duck and its reflection. (This is an example of a binary selection, in which only a portion of an image is selected.):

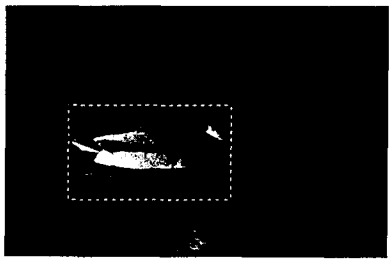


Figure 2.27

If this binary selection is copied and pasted onto another image, the result will be the same as sticking a small picture on top of a big one. The borders of the small picture will show, resulting in a poorly finished montage.

To make professional-quality montages, you must progressively feather a selection's borders and/or apply transparency effects.

3. Select Feather/Transparency from the Selection menu. Enter a radius of 15 pixels, then click OK:

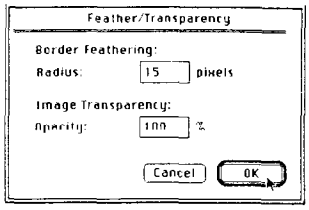


Figure 2.28

A progressive transparency is created around the selection border. These pixels will form an area where the borders of the pasted image and those of the background will blend together.

4. To understand this visually, select Separate Mask from the Selection menu. Before feathering (see left image), the mask is binary and has solid black edges. After feathering, the edges of the mask's border are softened into a graduated grayscale:

Figure 2.29

5. Close the mask window (do not save the mask) and return to the image. With the duck and its reflection still selected, move the cursor inside the selected area until it becomes a Hand tool. Hold down the Option key and click the mouse. A plus sign will appear, which means that the selection has been duplicated so you can move it without leaving a blank area.

6. Hold down the mouse and drag the selection to the upper left-hand corner of the image. Release the mouse and select Flip Horizontal from the Image menu:

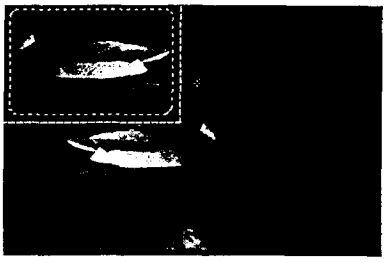


Figure 2.30

7. Click outside of the selection to deselect it. Next, use the Lasso tool to select the duck's head (but not its beak). Then, hold down the Command key and use the Lasso to select (or actually subtract) the duck's eye.(Holding down the Command key while using a selection tool allows you to subtract pixels from a selection, whereas holding down the Shift key lets you add pixels to a selection.)

8. Select Settings - Bright/Cont & RGB from the Image menu. Modify the color of the duck's head by decreasing the Green color value and increasing the Blue color value. Click OK to view the results, which demonstrate that only the selected area is affected by the correction:

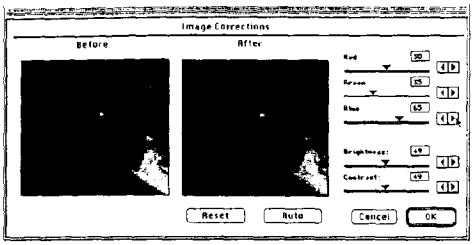


Figure 2.31

9. Close the file. Do not save it.

EXERCISE: Copy, resize and paste one image into another.

STEPS: 1. Open images 089 and 014 .

2. Select the duck and its reflection with the Lasso. Go to the Selection menu and select Feather/Transparency. Enter a radius of 8 (pixels) and click OK:

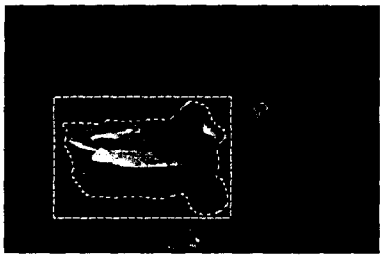


Figure 2.32

3. Copy the selection, then use the View menu to display image 014. Click on the Rectangular Selection tool and choose Clipboard from the pop-up menu.

4. Draw a selection area on the water, then select Paste from the Edit menu. Click outside the selection to deselect it. The duck has been proportionately resized and smoothly integrated into its new environment:

Figure 2.33

5. Close both files. Do not save them.

Applying Gradients

EXERCISE: Apply a gradient to an image.

STEPS: 1. Open image 016. If necessary, zoom out so you can see the entire image.

2. Click on the Magic Wand, then configure it as shown below:

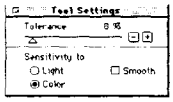


Figure 2.34

3. Click on the sky to select it. If the sky is not properly selected, use the Lasso and Shift/Command keys to add or subtract pixels:

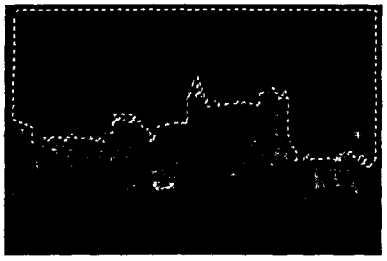


Figure 2.35

4. Select the Color Sampler tool and click on the sky to select a color for the foreground. To define a second color, click on the Background Color Indicator in the Color Palette and choose a color from the Color Picker (adjust brightness, if necessary) or the Color Storage Area. You will see a preview of your gradient effect on the top right side of the Color Palette:

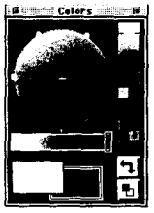


Figure 2.36

5. Select the Gradient tool. With the sky still selected, click in the top left corner, hold down the mouse and drag the Gradient tool to the bottom right corner to apply the gradient:

Figure 2.37

6. Choose Invert from the Selection menu to select the remainder of the image.

7. Pull down the Image menu and select Settings - Bright/Cont & RGB. Click on Auto to correct the image, then click OK:

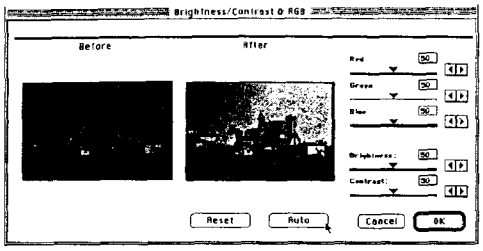


Figure 2.38

8. Test PhotoStudio's ability to perform multiple Undos by selecting Undo from the Edit menu to undo Auto Bright/Cont & RGB corrections. Select Undo again to de-select the inverted portion of the image, then again to remove the gradient.

9. Select Redo from the Edit menu three times to replace the gradient, re-select the inverted portion of the image and redo Auto Bright/Cont & RGB corrections.

10. Do not close the file as you will need it for the next exercise.

EXERCISE: Apply a gradient to floating text.

STEPS: 1. Using the Color Palette, choose white as the foreground color (simply slide the Brightness Adjuster all the way to the left). Then, select the Text tool and click on the upper left-hand side of the sky.

2. Type "How would you like to spend your next vacation here?". Choose the font and attributes shown below, then click OK:

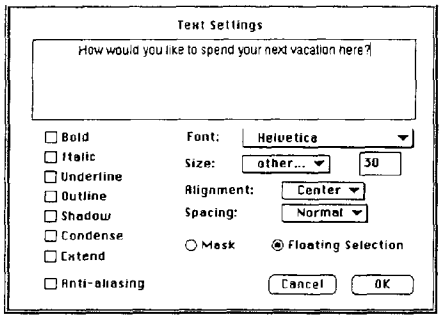


Figure 2.39

3. The text will appear as a floating selection. Move the cursor over the text. When it changes to a Hand tool, click the mouse and drag the text to center it near the top of the image. (Note that you can also use the keyboard's directional arrow keys to move the text.)

NOTE: If the Text Settings dialog reappears as you attempt to move the text, click on Cancel. Or, if you accidentally place the text in the wrong spot, select Undo from the Edit menu until the text starts floating again. You can then try to reposition it.

4. Without de-selecting the floating text, select a foreground and a background color for the text gradient. Choose colors that are very different from the color of the sky.

5. Using the Gradient tool, click on the left edge of the text and drag the mouse across to the right edge. Preview the gradient effect by selecting Hide Edges from the Selection menu:

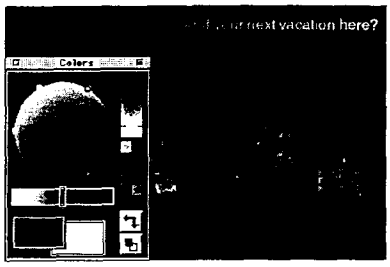


Figure 2.40

6. Choose Select None from the Selection menu to place the text.

7. Close the file. Do not save it.

Photo Montages and Masks

EXERCISE: Replace the sky in one image with a sky from another image

STEPS: 1. Open images 016 and 026. If necessary, zoom out so you can see each image in its entirety.

2. Set the Magic Wand's tolerance at 8, then click on the sky in image 016 to select it:

Figure 2.41

3. Choose Separate Mask from the Selection menu.

4. Select 026 from the View menu, then go to the Selection menu and select Load Mask. Click on the Image button and select the Untitled mask from the pop-up menu.

5. Click OK. The borders of the selected mask will appear on image 026:

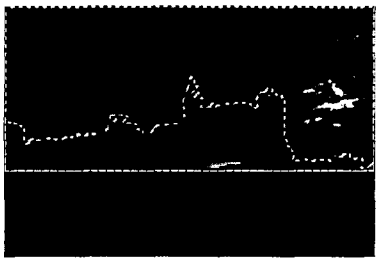


Figure 2.42

6. Select Copy from the Edit menu. Return to image 016 and select Paste:

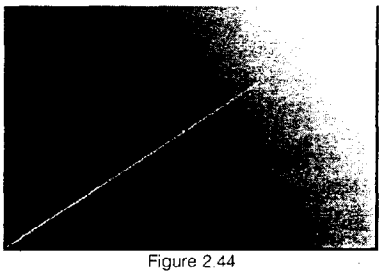


Figure 2.44

6. Return to image 013. Use the Selection menu to load the untitled mask.

7. Click on the Paint Bucket and set its tolerance at 100%.

8. Use the color palette to select a shade of gray for the foreground, then click on the sky:

Figure 2.45

Notice how the fog is thicker towards the top right-hand corner of the image. This is because the darker portions of the mask protect the image from the gray paint, whereas the lighter portions allow the paint to show through. As in this example, you can apply different special effects by creating, editing and applying masks to your images.

9. Close the file. Do not save it.

Retouching RGB Layers

EXERCISE: Remove a dominant color from an image.

STEPS: 1. Open image 001 and crop out the black frame.

2. Select Settings - Bright/Cont & RGB from the Image menu, then click on Auto to automatically correct the image. Click OK.

3. This image has a dominant yellow color (which is quite common with scanned and PhotoCD images). To correct this, select Separate RGB Layers - Red - Green - Blue from the Image menu.

4. To decrease the yellow, you'll need to modify the red and green layers. Since the blue layer is not useful in this case, close the 001.B window. Do not save it.

5. Click on the 001.G layer, then choose Settings - Bright/Cont & RGB from the Image menu. Decrease the Brightness value by 9%.

6. Click on the 001.R layer and choose Settings - Bright/Cont & RGB from the Image menu. Decrease the Brightness value by 5%.

7. Return to image 001 and select Load RGB Layers from the Image menu.

8. Make sure the 001.R layer is chosen in the Red pop-up menu, and the 001.G layer is chosen in the Green pop-up menu. Click OK to replace the original layers with the new ones. You will see that the yellow dominance has been diluted.

9. Try undoing and redoing the Load RGB Layers operation to see how it affects the image.

10. Close the file and layers. Do not save them.

Converting Color Modes

EXERCISE: Convert an image from RGB to 256 Indexed colors.

WHY: If your printer cannot print 16 million colors, you may want to reduce the pixel depth of your image to save disk space. For example, a 24 Bit RGB image may use 1 MB of disk space, whereas the same image in 8 Bit Indexed mode may take up just 333K of disk space.

Modes

Bitmap: Images are coded with 1 Bit, meaning that pixels can only be either black or white. A binary mask (with no progressive borders), for example, is in Bitmap mode.

Grayscale: Images are coded with 8 Bits and contain 256 shades of gray. Thus, progressive masks are created in grayscale mode.

Indexed: Images are offered three depth options: 8 Bit (256 colors); 4 Bit (16 colors); and 2 Bit (4 colors). The Indexed mode allows you to choose between two color palettes:

Adaptive: Converts the image using fine diffusion algorithms which incorporate the 256 colors most heavily represented in the image. This option produces the best conversion results.

System: Converts an image's colors using the Macintosh system color palette.

RGB: Images contain up to 16 million colors, and thus offer full color.

STEPS: 1. Open image 012 and crop the black border.

2. Choose Mode - Indexed Colors from the Image menu. Select 4 Bit and click on the Adaptive palette.

3. Undo and Redo the mode change to compare the look of the two images. Keep an eye on the file size indicator in the bottom right-hand corner of the window so you can also compare the changes in file size:

Figure 2.46

4. Experiment with different image modes by continuing to Undo and Redo the mode change.

5. Close the file. Do not save it.

Creating a Customized Palette

EXERCISE: Customize an Indexed palette and apply color effects to a grayscale image.

STEPS: 1. Open image 012.

2. Convert the image to grayscale by pulling down the Image menu and selecting Mode - Grayscale.

3. Use the Color Sampler to select a dark shade of gray from the color palette.

4. Hold down the Option key (note that the cursor changes to NEW when positioned on the foreground or background color, and MIX when placed on the color palette) and double-click on the foreground color to display the standard Macintosh color wheel.

5. Drag the Brightness Adjuster slider to the middle. Click on a shade of green, then click OK. Green will replace all pixels in the image that have the same value as the shade of gray you choose in the color palette:

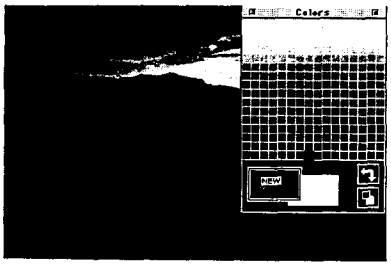


Figure 2.47

6. Hold down the Option key and click on the darkest tone in the color palette. The cursor changes to MIX. All of the intermediary tones, ranging from the first gray you selected to black, have been mixed with the green color:

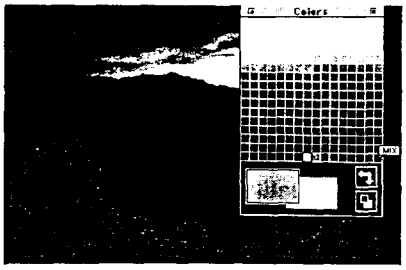


Figure 2.48

Repeat these steps with other colors to customize an Indexed palette and create original, surrealistic images. Avoid using too many colors; simplicity is recommended. The best results are obtained using soft, progressive tones.

7. Close the file. Do not save it.

Quit Special

EXERCISE: Use PhotoStudio's "Quit Special" option to quickly open an image.

STEPS: 1. If you have the Scenes of France PhotoCD, use PhotoStudio to open a file from the 1536 x 1024 folder. If you do not have the PhotoCD, open any file. Keep track of how long it takes the file to open.

2. Choose Quit from the file menu to quit PhotoStudio. When the following dialog displays, click on the Quit Special option. (Note that if you did not enable this option as explained in the Setting Preferences section at the beginning of this tutorial, you must first do so.):

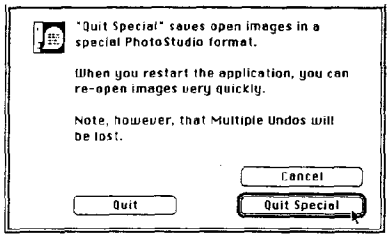


Figure 2.49

3. Double-click on the PhotoStudio application, or choose it from the PhotoStudio Browser's File menu. When the following dialog displays, click on Open Fast. The file will open very quickly, no matter how large it is:

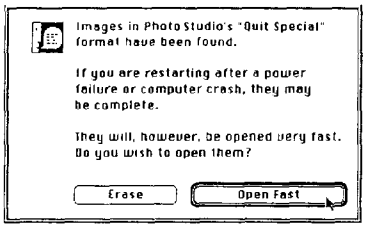


Figure 2.50

The Quit Special feature can be very useful if you need to quit PhotoStudio often in order to work in other applications, then return to a PhotoStudio document.

Quit Special also works when there is a power failure, or when your computer crashes, as long as you have not chosen the Temporary Items folder as the scratch disk or folder in the Memory and Plug-ins Preferences dialog. Refer to the Setting Preferences section of this Tutorial for further information.

HQP® (High Quality Printing)

Now that you have learned how to edit and retouch images, you need to know how to print them. PhotoStudio incorporates an exclusive HQP (High Quality Printing) feature, which has two main functions:

HQP Dither

If you have a black & white printer that does not print grayscales, HQP will dither your image before sending it to the printer. HQP uses a random dither which produces excellent results, even on low-end printers.

HQP Preview

As PhotoStudio loads your image, it checks for any dominant colors and analyzes which brightness, contrast and color corrections best suit your printer. You can choose to apply these corrections automatically, or override them and apply corrections manually. You can also print variants, which consist of many small versions of your image with varying brightness and contrast settings. If you have a color printer, you can additionally print variations that show a range of Cyan, Magenta and Yellow values to help you select the best correction values for your image.

Calibrating Your Printer

Before printing, you need to calibrate your printer. Go to the Chooser and select your printer, then turn to page 3-10 and follow the instructions found in the section Printer Profile.

Printing Your Image

Once your printer is calibrated, follow the steps below to print an image:

STEPS: 1. Open image 080 and crop its black border.

2. Choose Page Setup from the File menu and configure as follows:
Paper: US Letter
Reduce or Enlarge: 100%
Orientation: Landscape

3. Click OK to close the Page Setup dialog.

4. Select Page Format from the File menu. Set Scale at 50%, then drag the image to position it wherever you want on the page. Click OK. (For further information about the Page Format dialog, refer to Section 3 - HQP Menu in Chapter 3.)

5. Pull down the File menu and select HQP Preview. You will see that HQP Auto is selected in the Corrections pop-up menu. Click OK to automatically apply HQP Corrections to your image.

6. Choose Print from the File menu to print a copy of your image.

7. Examine your print. If it is black & white with very little detail, you need to re-configure your printer. To do so, select Printer Profile from the HQP menu:

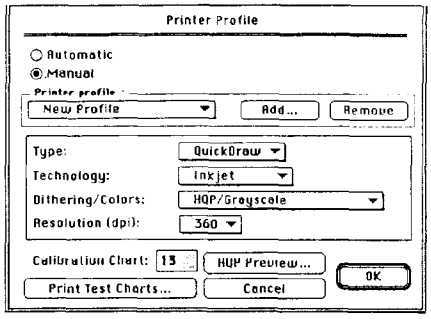


Figure 2.51

8. Select New Profile from the pop-up list of printers.

9. Select HQP/Grayscale from the Dithering/Colors menu, click OK and print your image again.

Print Variants

As previously mentioned, you can try to further improve upon the quality of your printed image by printing variants to help you select the best correction values.

STEPS: 1. Go to the HQP menu and select Print Variants:

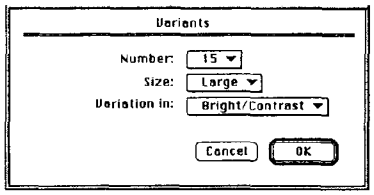


Figure 2.52

2. Configure the Variants dialog as shown above. When the Page Setup dialog automatically displays, check that the paper size is US Letter and click OK. When the Print dialog displays, select one copy, then click on Print to print the variants.

3. If you have a color printer, return to the Variants dialog and configure as follows to additionally produce C M & Y variants:

Variation In: Color

Size: Large

Number: 19

4. Click OK. When the Page Setup dialog automatically displays, once again check that the paper size is US Letter and click OK. When the Print dialog displays, select one copy and click on Print to print the variants.

5. Look carefully at your prints, then choose HQP Corrections from the File menu.

6. Select Manual from the Corrections pop-up menu. Set the Brightness and Contrast controls to correspond with the Brightness and Contrast values of the variant you chose. (Note that if you have a black & white printer, the C M & Y sliders will be disabled.) Click OK.

If you have a color printer, also set the C M & Y controls to correspond with the C M & Y values of the variant you chose, then click OK:

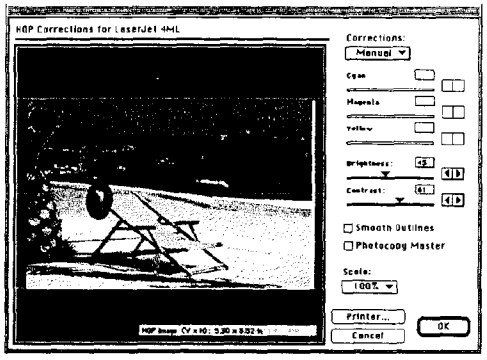


Figure 2.53

7. Choose Print HQP from the File menu and print one copy.

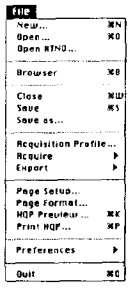
8. Compare this image to the original print to see the difference your manual changes have made. You may now experiment with these techniques to obtain the best results for your printer.

Chapter 3 - Menus

SECTION 1 - FILE MENU

New

Allows you to create a new image.



Open

Allows you to open one image, or several images simultaneously. The open dialog displays a preview of the selected image. However, if a preview has not been embedded in the image, you can click on the Create button to create one:

Figure 3.1

The date and hour of creation, graphic format, creator (software) code, image size, and resource size (in bytes) are displayed at the bottom of the dialog.

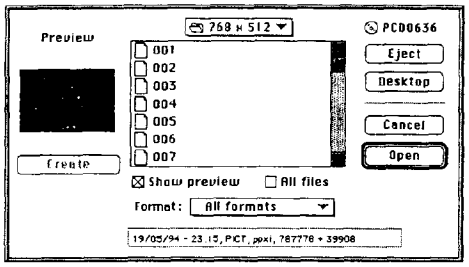


Figure 3.2

Graphic Formats

PhotoStudio recognizes the following graphic formats: PICT, PICT with alpha channel, PICT with JPEG compression, TIFF, TIFF with LZW compression, EPS with mask, JPEG/JFIF, GIF, Kodak PhotoCD and the super fast PhotoStudio file format.

Opening a PhotoCD

Now when you choose Open and select a PhotoCD image, you can manipulate the selected image in a preview dialog before you actually open it:

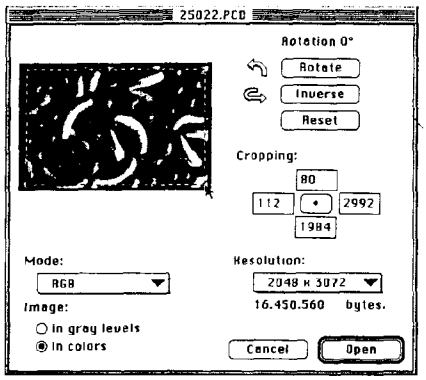


Figure 3-3

The dialog that displays when you open a PhotoCD allows you to rotate the image, change its mode and/or resolution, and open it in either grayscale or color. You can also crop the image either by entering specific Cropping coordinates, or by dragging the cursor around the portion of the image you want to open (as shown above). When you have finished, click on Open to open the image according to your specifications.

Open XTND

You can also open any format for which a Claris XTND translator exists in your System (Claris or Extensions) folder. When you click on the Show pop-up menu in the Open XTND dialog, the translator formats available will be displayed in the second half of the list. Note that image previews and information are not available when you select a translated image.

Browser

Launches the browser application included with PhotoStudio.

Close

Closes the active window. Choose the Close option while holding down the Option key to close all application windows.

Save

Saves image modifications.

Save As

Saves image modifications as a new image. PhotoStudio can save the following file formats: PICT, PICT with Alpha Channel, PICT with JPEG compression, TIFF, TIFF with LZW compression, TIFF with Alpha Channel, EPS, EPS with mask, and PhotoStudio internal format, which allows you to save and open images 2-3 times faster than any other format:

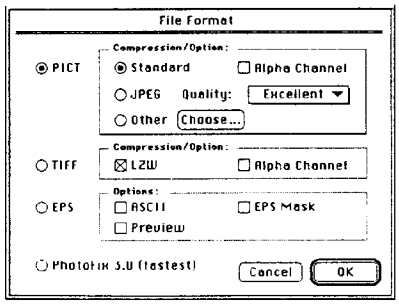


Figure 3-4

EPS Format

PhotoStudio's EPS format supports paths (EPS masks) which are very useful with page layout software like QuarkXPress and Adobe PageMaker. When an EPS mask is saved with an RGB or CMYK image, only the contents of the mask are displayed on your screen and printed with an EPS printer or imagesetter. For further information, please refer to the discussion of the Pen tool near the end of this addendum.

NOTE: If you open a PhotoStudio format image while holding down the Alt/Opt key, it will be opened in DPA (Direct Pixel Access) mode in five to ten seconds, regardless of its size. You should remember, however, that when working with images opened in DPA mode any modification alters the image, even if it is not saved. This option is practical when working with frequently opened images.

Acquisition Profile

PhotoStudio creates a profile which corrects your scanner's response in the black and white points, as well as its response curve in the red, green and blue color bands. These corrections will allow you to remove any color casts, to obtain pure whites and deep blacks and to correct your scanner's nonlinear color response. Once you create and select a profile, it will automatically be applied to your scanned images. In most cases, the result will be closer to the original image. If you do not like the corrections that are made to your scan, you can undo them by choosing Undo Filtering from the Edit menu.

NOTE: If you have a 10 or 12 bit scanner (refer to your scanner specifications sheet) we strongly recommend that you correct its response using the scanner's driver options.

Profile Creation

Even if a list of lab-tested scanners is available with your software, it is better to create a profile which corresponds to your own source.

Using the Supplied Target

1. Select Acquisition Profile from the File menu. Make sure that no profile has been selected in the Acquisition Profile dialog. Also, make sure that the Color Palette is open and extended so you can see the RGB Profiles at the bottom.

2. Go to the File menu, select Acquire and choose your scanner. Scan the target supplied with PhotoStudio in color at 72 dpi:

PhotoFix Scanning Target

Figure 3-5

3. Go to the Settings option under the Image menu and choose Levels:

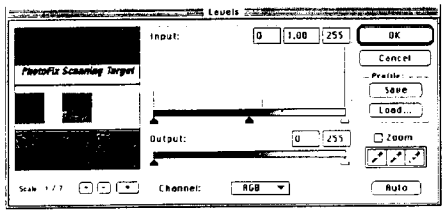


Figure 3-6

4. Double-click on the first eyedropper (which represents black) to display the Target Settings dialog:

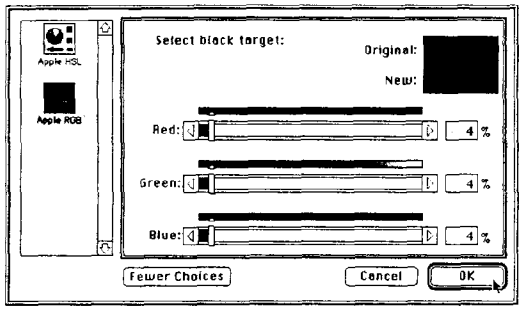


Figure 3-7

Select the Apple RGB profile on the left side of the dialog, then use the slider controls to set each of the RGB values at 4 and click OK. When you are returned to the Levels dialog, double-click on the middle eyedropper (which represents gray) and set the RGB values at 50. Do the same for the white eyedropper, setting the values at 97, or whatever your personal preference is for displaying white print.

(For more information about the Levels option, please refer to the Filters section of this addendum.)

5 Use the black point eyedropper in the Levels dialog to click on the black square in the scanning target. Then use the white paint eyedropper to click on the white square.

6. Put the middle eyedropper on the gray square in the scanning target (do not click) and look at the RGB Profile section of the Color Pallette. The color value for each of the RGB channels should be approximately 125 - 130:

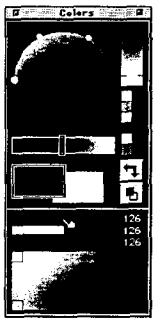


Figure 3.8

7. If the value of any channel does not fall into this range, select the corresponding Red, Green or Blue channel from the Channels pop-up menu in the Levels dialog. Modify the channel's new value by placing the cursor on the gray square in the scanning target while holding down the option key.

8. If necessary, repeat this procedure for each of the channels until you obtain a value of 125 - 130.

9. Click on Save and enter a name for your new profile:

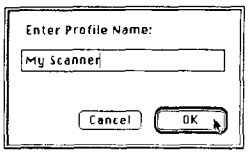


Figure 3.9

10. Click OK to apply the corrections to the image.

11. Select the new Profile from the Acquisition profile dialog in the File menu.

From now on, this profile will be applied to each scanned image.

Acquire

Allows you to acquire images using plug-ins from sources such as external acquisition devices, scanners and special decompression software. Plug-ins must be located in PhotoStudio's Plug-ins folder.

Export

Allows you to export images in special formats using external plug-ins such as CMYK Separation and compression software.

Page Setup

Allows you to configure parameters such as paper size, layout and orientation.

Page Format

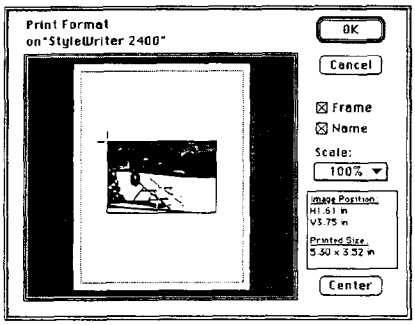


Figure 3.10

The Page Format dialog lets you preview, resize and position images on a page. Note that page size and orientation are dependent upon the choices you make in the Page Setup dialog.

Click on the Frame checkbox to add a frame to your print. To add the name of the file to your print, click on the Name checkbox. Use the Scale pop-up menu to reduce the size of your image. To increase the image size, return to the Page Setup dialog.

Images are placed in the center of the page, however you can drag and reposition them wherever you like. Click the Center button to return an image to the center of the page. Image position and size are located in the information block in the Page Format dialog.

HQP Preview

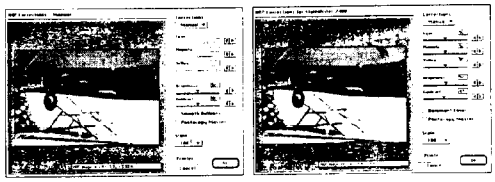


Figure 3.11

The dialog displayed when you choose HQP Corrections varies depending on whether a black & white (left side above) or color (right side above) printer is chosen. The primary differences between the two dialogs are discussed below:

Corrections

HQP
Automatically applies optimal settings to your image. Adjustment sliders are disabled.

Manual
Overrides the automatic HQP settings, allowing you to make your own corrections. Note that if a black & white printer is chosen, the Cyan, Magenta and Yellow Adjustment sliders will be disabled.

None
Applies no corrections. All Adjustment sliders are disabled.

Smooth Outline
The Smooth Outline option will be displayed only if you have selected a black & white printer and one of the HQP Dither options. Click the Smooth Outline option to apply anti-aliasing and soften your image outlines.

Dominant Color
The Dominant Color option will be enabled only if a dominant color is present. Click on this option to automatically filter any dominant color found in an image.

Photocopy Master
Prints a copy of the original image which can be photocopied with no loss of quality.

Scale
Reduces the size of the image, which may enhance its print quality.

Print HQP
Opens the Print dialog so you can print your image.

Preferences - General

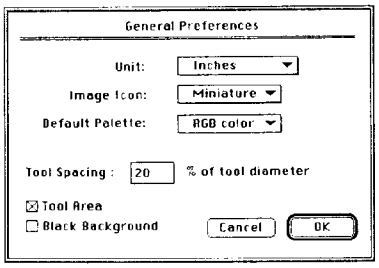


Figure 3.12

Unit
Allows you to display units of measure in pixels, inches or centimeters.

Image Icon
Choose the Miniature option to display file icons as miniature representations of the images they contain. Or, choose the Standard option to display files with the PhotoStudio icon and format type (PICT or TIFF).

Default Palette
Allows you to set the palette that will be used when opening new documents. The options are Bitmapped, Grayscale, System or RGB.

Tool Spacing
Allows you to set the distance between two tool marks. For example, if you select the paint brush and set Tool Spacing at 110%, there will be a gap between each mark left by the brush. Smaller spacing percentages produce continuous patterns. Spacing should be based on the desired effect and on the shape of the selected tool.

Tool Area
Allows you to see the tool's size and shape on the image before you apply it.

Black Background
Makes the border space around the image black. (The default is gray.)

Preferences - Memory and Plug-ins

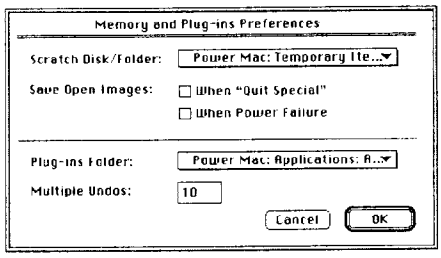


Figure 3.13

Scratch Disk/Folder
Allows you to select the disk and folder where temporary backup files will be stored. The default setting is a Temporary Items folder, however we do not recommend using the default if you plan to use the When "Quit Special" or When Power Failure options (discussed on the following page) since the contents of the Temporary Items folder are automatically trashed during startup.

Save Open Images

When "Quit Special"
Enabling this option allows you to quit the program at any time without saving changes to your image. When you reload PhotoStudio, you are given the option to quickly reopen the same image with your changes intact. This option is very practical when you are working with limited RAM and must quit one application in order to use another, or when you quit knowing that you will be continuing work on the same image. Note that Multiple Undos are lost when this option is enabled.

When Power Failure
This option saves your work should a power failure or system crash occur. When you restart your machine and reopen the file you were working in, any changes you made before the power failure or system crash occurred will be intact.

Plug-ins Folder
Allows you to select the Plug-ins folder you wish to use (Acquisition, Export or Filters). The default setting is the PhotoStudio folder.

Multiple Undos
Lets you choose from 0 to 32 levels of Undo. The default setting is 1.

Quit
Quits the program.

SECTION 2 - EDIT MENU

Undo
Cancels the last operation(s).

Redo
Restores the last operation(s).

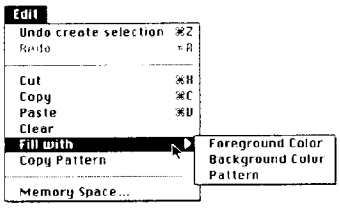


Figure 3.14

Cut
Cuts the selected part of an image and places it on the clipboard.

Copy
Copies the selected part of an image and places it on the clipboard.

Paste
Pastes the contents of the clipboard into an image. If a portion of the image has been selected, the clipboard contents will be pasted inside the selection.

Clear
Erases the selected part of an image and replaces it with the current background color.

Fill With
Foreground color
Fills a selection with the Color palette's foreground color.

Background color
Fills a selection with the Color palette's background color.

Pattern
Fills a selection with the pattern that you copied using the Copy Pattern option in the Edit menu

Copy Pattern

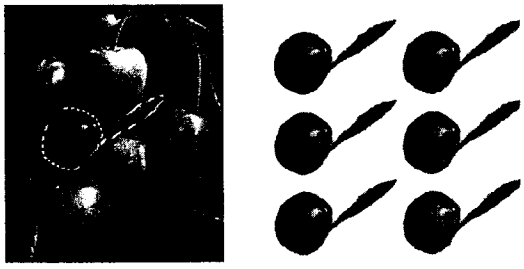


Figure 3-15

This option allows you to copy a selection as a pattern and apply that pattern to another image or selection. Use a selection tool to define a pattern, then use a selection tool again to define where you want to apply the pattern. Choose Pattern from the Fill With option in the Edit menu to fill the selection with the pattern.

Memory Space

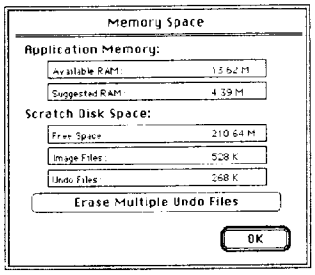


Figure 3.16

Application Memory
Indicates the available and suggested RAM for an opened image.

Scratch Disk Space
Indicates the amount of free disk space, as well as the amount being used by image and undo files.

Erase Multiple Undo Files
Erases saved multiple Undos to free disk space.

SECTION 3 - HQP MENU

Copy HQP
Allows you to copy an image and its HQP settings into another document.

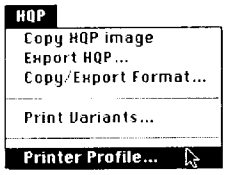


Figure 3.17

Export HQP
Allows you to export an image and its HQP settings, then import it into another document.

Copy/Export Format
Allows you to select a specific printer, as well as a suitable PICT format for the target application. Choosing this option displays the HQP Copy/Export Format dialog:

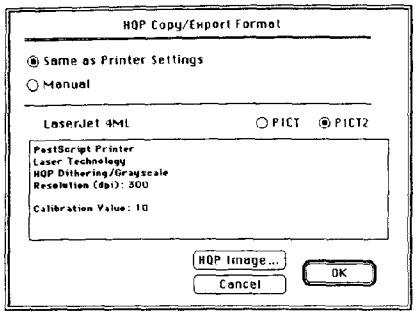


Figure 3.18

Select the Same as Printer Settings option to apply the current printer settings to the Copy/Export Format. Select the Manual option to choose a different printer from the pop-up menu, or the Manual Settings option if the target printer is not listed in the menu. Refer to the Printer Settings section which follows for further information about these settings.

Select PICT1 or PICT2 depending upon your target application. Click the HQP Image button to apply HQP Corrections, as described in Section 1 - File Menu.

Print Variants

If you are not satisfied with the quality of an image printed using HQP, you can print variations of the image with different brightness and contrast settings. If you have a color printer, you can also print variations that show a range of Cyan, Magenta and Yellow levels. Doing so helps you to manually set HQP Corrections to achieve optimum results:

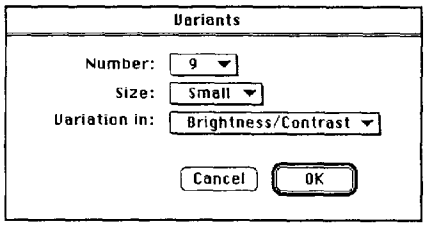


Figure 3.19

Use the Number pop-up menu to select the number of images to print. Next, use the Size menu to print either small or large images. Lastly, use the Variation In menu to produce images that vary in either Brightness/Contrast or in Color.

When you have finished printing variations, prepare to print your image (at its original size) by pulling down the File menu and sequentially configuring the Page Setup, Page Format and HQP Corrections options. When you reach the HQP Corrections dialog, enter the C M & Y values (if you have a color printer) and the Brightness and Contrast values of the variants you liked best. Click OK.

Printer Profile

Allows you to setup and calibrate your printer:

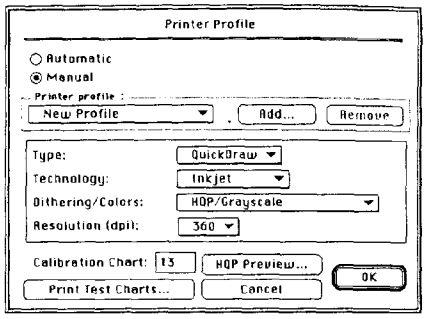


Figure 3.20

IMPORTANT: Select a printer in the Chooser before proceeding with printer calibration.

Automatic

Click on the Automatic Recognition option. If the name of your target printer is displayed, PhotoStudio will recognize it and use the printer settings stored for it.

Manual

Click on the Manual option if your target printer is not displayed, then choose your printer from the New Profile pop-up menu. If your printer is not listed in the menu, select the New Profile option and use the pop-up menus provided to specify the following criteria for your target printer:

Type: QuickDraw or Postscript

Technology: Dot Matrix, Inkjet, Laser or Sublimation

Dithering/ Colors: HQP Grayscale - select to use QP's random dither;

HQP Grayscale (negative) - select to use HQP's random dither when reversing black & white;

Printer/B&W or Grayscale - select if your printer is capable of printing good grayscale images using its own dithering pattern

Color/CMYK - select to use with color printers

Resolution: If you select HQP Grayscale or HQP Grayscale (negative) from the Dithering/Colors menu, the Resolution pop-up menu isenabled so you can select a resolution. If you select Printer/B&W or Grayscale or Color/CMYK, resolution is set to Auto.

Once you have selected your printer's criteria, click the Add button. Type a name for your printer in the dialog that displays to add your printer to the pop-up list for future use. Once you've done so, the Page Setup and Print dialogs will automatically display. Click OK in the Page Setup dialog, then click on Print

in the Print dialog. (Note that these steps are part of the printer configuration process and will not actually produce output.)

You are now ready to print Test Charts and calibrate your printer. Click the Print Test Charts button, configure the Page Setup dialog that automatically displays, and click OK. When the Print dialog displays, click on Print. The following dialog will appear:

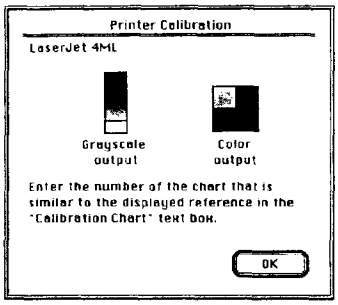


Figure 3.21

If you have a black & white printer, either 20 or 24 grayscale images (left side above) will print. Select the image that best matches the Grayscale Output image in the Printer Calibration dialog on your screen. Then, select Printer Settings from the HQP menu and enter the number of the chosen image in the Calibration Chart textbox and click OK.

If you have a color printer, 37 images of varying color (right side above) will print. Select the image that is the truest gray and does not show any other color. Enter its number in the Calibration Chart textbox found in the Printer Settings dialog and click OK.

Your printer is now calibrated.

SECTION 4 - IMAGE MENU

Among other options, the image menu offers you several different ways to correct images. These methods range from selecting automatic correction options to manually defining color, contrast and brightness values.

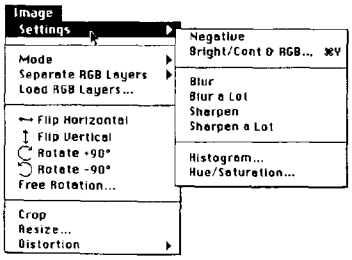


Figure 3.22

Settings

Negative

Inverts image colors.

Bright/Cont and RGB

Allows you to adjust image colors, brightness and contrast. You can either click on the Auto button to automatically make corrections, or use the sliders to make manual corrections:

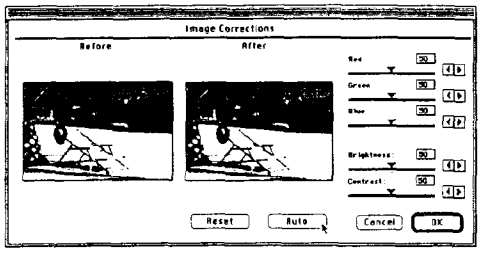


Figure 3.23

Blur/Blur a lot/Sharpen/Sharpen a lot

Internal filters available in the RGB and grayscale modes.

Histogram

A histogram is a graphic representation of the pixel value distribution in an image from the lowest (0 at the left) to the highest (255 at the right):

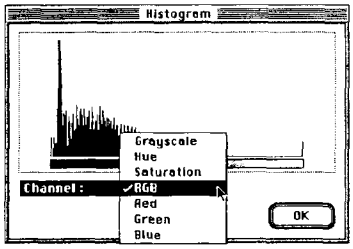


Figure 3.24

When you display a histogram of an RGB image, for example, you can view the distribution of all pixels within the image, or use the Channel pop-up menu to view the Red, Green, Blue, RGB, Hue, Saturation and Grayscale pixel distributions individually.

Hue/Saturation

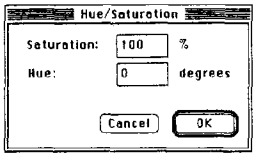


Figure 3.25

Hue

When you specify an angle (0° to 360°), hue replaces each color with the color in the color wheel that lies at the defined angle to the present color. For example, choosing 60° will make reds become yellows, yellows become greens, etc.

Saturation

Saturation modifies color saturation from 0 (minimum) to 500 (maximum). A value of 100 will not cause color to change.

Mode

This option allows you to choose whether the image mode is RGB, indexed, grayscale or bitmap. Note that this item is also found in the Info palette (discussed later).

Bitmap Mode

Black and white images.

Grayscale Mode
8 bit images that contain up to 256 shades of gray.

Indexed Mode
8 bit images that contain up to 256 colors.

RGB Mode (Red, Green, Blue) – 24 bit images that contain up to 16.7 million colors.

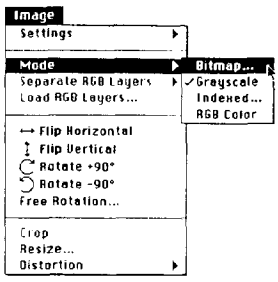


Figure 3.26

Converting Images Modes

Grayscale to Bitmap Mode
If you would like to convert a grayscale image to black and white, select the Bitmap option from the Mode menu to display the Bitmap Mode dialog:

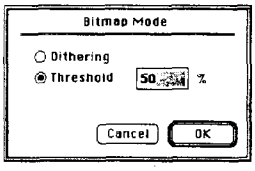


Figure 3.27

You can covert a grayscale image to black and white either by Dithering black and white points, or by adjusting the Threshold so bright grays become white and dark grays become black. A higher Threshold value will convert brighter pixels to black.

RGB to Indexed Mode
If you don't have a printer that prints millions of colors, you may want to convert RGB images to the Indexed mode in order to save disk space. To do so, select the Indexed option from the Mode menu to display the Indexed Colors dialog:

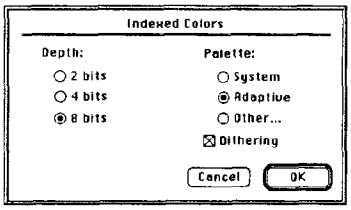


Figure 3.28

Color Combinations
8 Bits (256 colors) + Adaptive Palette offers the highest quality conversion from RGB to Indexed color.

4 Bits (16 colors) + Adaptive Palette further reduces the size of the image, as well as its quality.

2 Bits (4 colors) + Adaptive Palette offers the greatest reduction in both size and quality.

NOTE: The Adaptive Palette offers a closer match to the original image colors than the standard 256 color system palette.

Other
Select the Other option to use a saved custom color palette (see Chapter 4 - Tool Palettes).

Dithering
Click in the Dithering checkbox to dither colors.

Separate RGB Layers
Separates the image into three different layers (Red, Green and Blue). You can correct, edit, save and load each layer back into the image, thus replacing the original layers:

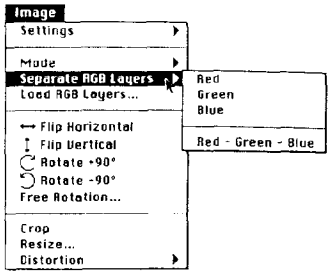


Figure 3.29

Load RGB Layers
Applies modified layers to the image.

Flip/Rotate
Allows you to flip or rotate an image or a selected portion of an image.

Free Rotation
When a rotation angle is entered in the Free Rotation dialog, an image or the selected portion of an image will be rotated with 1/100 degree precision. Note that you can also rotate images using the Rotate tool.

Crop
Deletes all but the selected part of an image. To crop an image, use the Rectangular selection tool to define the portion you wish to keep, then select the Crop option. You can also crop images using the Crop tool.

Resize
Allows you to modify the size and resolution of the image or the canvas (page):

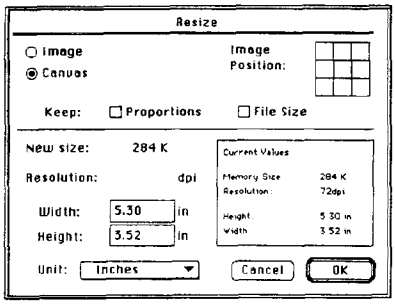


Figure 3.30

Canvas
Click on Canvas to increase the size of the document without changing the size of your image. This allows you to add borders or additional images to a document without affecting the size of the original image.

When you select Canvas, you can also reposition your image on the canvas by clicking on the desired square in the canvas representation shown in the Image Position field.

Keep: Proportions
When enabled, any changes made to one dimension of an image will proportionately modify the other dimension. This prevents an image from becoming distorted.

Keep: File Size
When enabled, any changes made to the dimensions of an image will also modify its resolution, and vice-versa. This prevents an image from taking up additional memory.

NOTE: If you choose Resize and keep neither Proportions nor File Size, you can distort an image and change its file size by changing its dimensions and resolution.

Image
Click on Image to resize your image.

Distortion

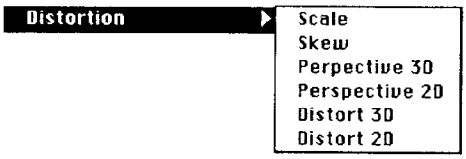


Figure 3.31

The Distortion options enable you to change the shape of a selection. Follow the steps below to distort the shapes of selections within images:

1. Use the Rectangular Selection tool to define a selection.

2. Select Distortion from the Image menu, then choose a distortion option.

3. Handles will display at the four corners of your selection. Drag the handles to create a distorted shape, then click inside the selection to apply the distortion. Click outside the selection to Cancel the distortion effect.

Scale
The Scale option lets you modify the length or width of a selection:

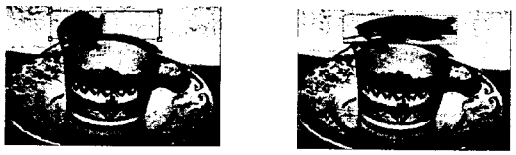


Figure 3.32

If you hold down the Option key, you can scale your selection without changing its original proportions:

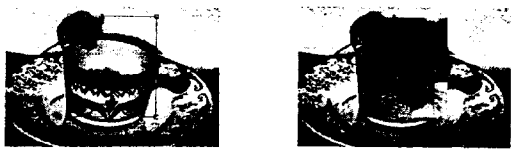


Figure 3.33

Skew
The Skew option lets you slant a selection vertically or horizontally. If you release the mouse and drag another handle, it will move independently:

Figure 3.34

Perspective 3D
The Perspective 3D option distorts an image by giving it a three-dimensional effect. You will achieve different effects depending upon whether you choose to distort a floating (left side) or non-floating (right side) selection:

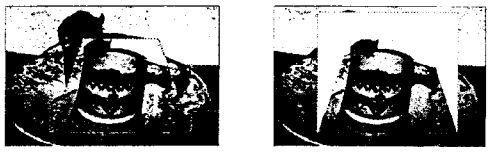


Figure 3.35

Perspective 2D
The Perspective 2D option lets you create a perspective effect in two dimensions. When you drag on one handle, the other end of the line moves in the opposite direction:

Figure 3.36

Distort 3D
The Distort 3D option lets you distort a selection three-dimensionally by creating a vanishing effect at the close handles angle:

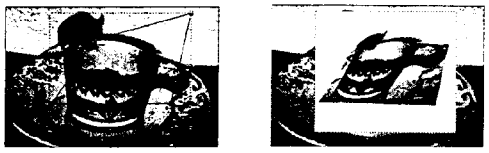


Figure 3.37

Distort 2D
The Distort 2D option lets you distort a selection in two dimensions by moving any handle in any direction:

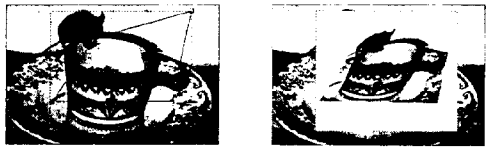


Figure 3.38

NOTE: When distorting selections, make sure that none of the corners inside the surrounding polygon exceed 180 degrees as this will produce unpredictable results.

SECTION 5 - FILTER MENU

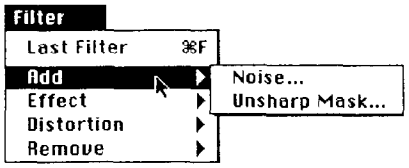


Figure 3.39

The Filter menu allows you to apply a wide range of special effects to your images.

Add

Noise

This option applies random pixels to an image. You can enter a value between 1 and 999 in the Add Noise dialog:

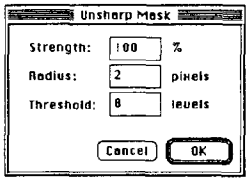


Figure 3.40

Monochrome

Check the Monochrome option to apply filtering to the tonal elements in the image without changing the colors.

Unsharp Mask

The Unsharp Mask filter sharpens areas in the image where significant color changes occur by adjusting the contrast of edge detail to increase an image's sharpness. This filter can be useful for sharpening an image that has become blurry from interpolation or scanning:

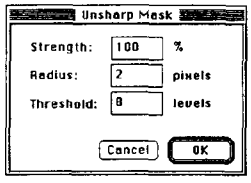


Figure 3.41

Strength

Enter a Strength value from 1 to 500. The higher the percentage, the stronger the effect of the filter.

Radius

Enter a Radius value from 1 to 250 to determine the number of pixels used for calculating the sharpness of each point. Radius value should be adapted to image resolution. A radius of 1 on a 72 dpi image has an equivalent effect of a radius of 4 on a 288 dpi image.

Threshold

Threshold specifies the difference in brightness levels between adjacent pixels (from 0 to 255) before sharpening is applied to an edge. Lower values produce a more pronounced effect.

Effect

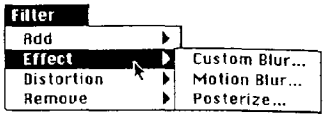


Figure 3.42

Custom Blur

The Custom Blur filter allows you to choose an exact blur strength. By entering a value for the Radius, you can determine the number of pixels that will be used for calculations. The larger the radius, the stronger the effect:

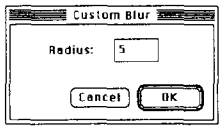


Figure 3.43

Motion Blur

The Motion Blur filter produces a blurred effect similar to taking a picture of a moving object:

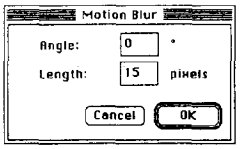


Figure 3.44

Angle

In degrees, the Angle determines the direction in which the object appears to be moving.

Length

Specified from 1 to 64, the Length determines the intensity of the blur.

Posterize

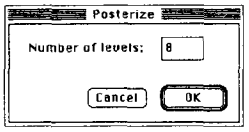


Figure 3.45

The Posterize filter lets you modify the number of grays or colors in an image. It's useful for creating special effects, such as in large, flat areas in a photograph, to make them look more like a painting:

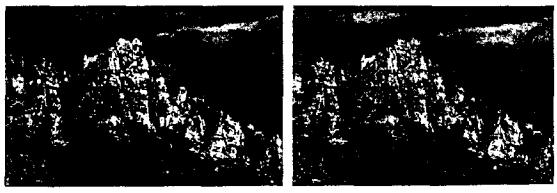


Figure 3.46

Before applying the Posterize filter to an image, we recommend you to first convert the image to a limited number of grayscales (such as six). Retouch the image, if necessary, then fill each gray level with a solid color (using the paint bucket, for example).

Distortion

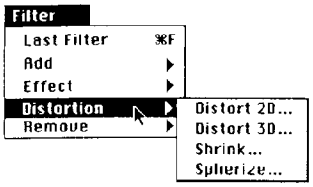


Figure 3.47

Distortion 2D/Distortion 3D

These filters produce the same effects as the distortion tools described in the Image Menu section earlier in this addendum. However, if you choose the Distortion options from the Filters menu, you can use the dialog below to enter precise horizontal (to the right for positive numbers) and vertical (down for positive numbers) displacements for each corner of a selection:

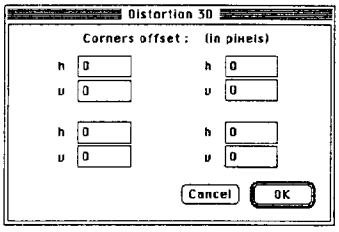


Figure 3.48

Shrink

The Shrink filter bends an image inwards or outwards with respect to one or more axes. You can enter positive (Shrink effect) or negative (Stretch effect) values in the Shrink dialog:

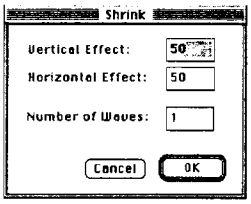


Figure 3.49

Vertical Effect

Specifies the strength of the effect of shrink or stretch vertically.

Horizontal Effect

Specifies the strength of the effect of shrink or stretch horizontally.

Number of Waves

Corresponds to the number of axes used to shrink or stretch the image. For example, choosing one wave will shrink or stretch an image with respect to one axis situated at the middle of the image.

Spherize

The Spherize filter wraps an image around a spherical shape. It is useful for giving objects and text a three-dimensional effect:

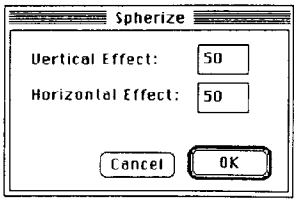


Figure 3.50

Vertical Effect

Allows you to specify the vertical effect strength.

Horizontal Effect

Allows you to specify the horizontal effect strength.

Note that negative values undo the effects applied by previous use of the Spherize filter.

Remove

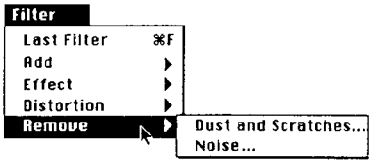


Figure 3.51

Dust and Scratches

This filter allows you to easily remove dust or scratches from an image. We recommend selecting the area where you want the filter to be applied rather than applying the filter to the entire image:

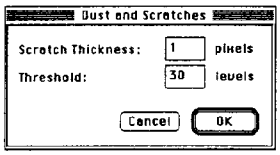


Figure 3.52

Scratch Thickness

Determines (from 0 to 16) the width of the scratches and dust that will be eliminated.

Threshold

Determines how different the value of pixels need to be (from 0 to 255) in order for the filtering to apply.

Note that low values may alter uniform color areas in the image.

Noise

The Noise filter detects areas where significant color changes occur and blurs them without altering the edges. This has the effect of removing noise while preserving detail:

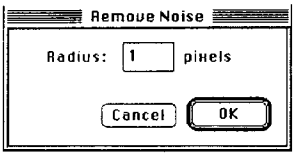


Figure 3.53

Radius
The radius (in pixels) determines the noise calculation area. Higher values produce stronger effects.

Using Third Party Filters
If you want to use filters in addition to those supplied with PhotoStudio, you can choose a different Plug-in folder without quitting the application. Select Memory and Plug-ins Preferences under the File menu, then use the Plug-ins Folder pop-up menu to select a new Plug-ins folder.

Note that you can also put your third party filters folders in the PhotoStudio Plug-ins folder.

SECTION 6 - SELECTION MENU

Invert
Selects the complementary portion of an image.

Border
Lets you define a border for the active selection, which is useful for creating frames and painting outlines.

Grow
When the Magic Wand has been used to make a selection, this option increases its tolerance and therefore "grows" the size of the selection.

Similar
When the Magic Wand has been used to make a selection, this option selects all pixels in an image that have the same color or light characteristics as the selection. This is useful for modifying color or brightness.

Float
The Float option allows you to duplicate a selected portion of an image so you can retouch and move it without altering the original image. The Defloat option integrates the floating selection into the image.

Feather/Transparency

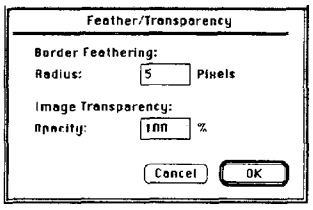


Figure 3.55

Border Feathering
Allows you to set the number of transition pixels that will be feathered around the edges of a selected image.

Image Transparency
Allows you to increase or decrease the opacity of a selected image.

Separate Mask
Creates either a bitmap or grayscale image of the active mask. If you haven't feathered the mask, or created it in grayscale mode, it will be bitmapped. If you have feathered the mask, it will be created in grayscale.

Load Mask
After separating (and possibly editing) a mask, this option allows you to load it and use it to edit an image.

Hide Edges
Hiding a selection's edges allows for precise retouching of its borders, and makes it easier to see modifications.

Select None
Deactivates all active selections.

Select All
Selects the entire image.

SECTION 7 - VIEW MENU

Zoom In
Enlarges the image to a factor of x16.

Zoom Out
Reduces the image to a factor of ÷32.

Adjust Window
Adjusts the window to fit the displayed image.

Show/Hide Colors
Displays or hides the Color palette.

Show/Hide Info
Displays or hides the Info palette.

Show/Hide Tools
Displays or hides the Tool palette.

Next Window
Allows you to choose and view another image if you have more than one PhotoStudio file open.

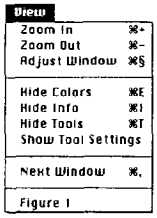


Figure 3.56

Chapter 4 - Tool Palettes

NOTE: For further information about any tool, pull down the Help menu in the top right-hand corner of your screen and select Tool Help.

Lasso/Pen

The Lasso tool allows you to create selections of any shape by dragging the cursor around the desired area. You can also make polygonal selections and selections with straight edges.

To draw a selection with straight edges:

1. Draw a selection of any shape using the Lasso tool.
2. Without releasing the mouse, hold down the Option key.
3. Release the mouse where you want to begin your straight selection.
4. When you move the mouse, you will notice that the additional selection is straight.
5. Click as many times as you need to create straight edges.
6. Release the Option key and the mouse to finish the selection:

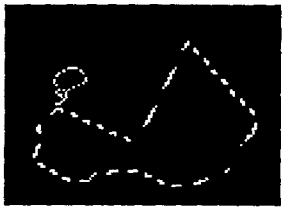


Figure 4.1

To select an entire image, double-click on the Lasso icon. To add pixels to a selection, hold down the Shift key and continue to drag. To subtract pixels from a selection, hold down the Command key and drag around the area you want to eliminate.

To copy a selection, hold down the Option key and drag the selection to the desired area. To select only the overlapping area between two selections, drag the cursor to make a selection, hold down the Shift and Option keys, then drag the cursor again so it intersects your initial selection. To move the selection outline, hold down the Option and Command keys and drag the selection outline to the desired area.

Saving Selections

PhotoStudio allows you to save defined selections within an image. To do so, you should save the image in PICT format using the alpha channel option.

Pen Tool

The Lasso can now behave like the Pen tool. To activate the Pen tool, double-click on the Lasso tool and click on the Polygonal EPS mask option when the Tool Settings palette displays:

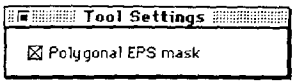


Figure 4.2

The cursor will become a Pen tool with which you can draw polygonal selections. To close a path, return to the starting point.

When a small circle appears next to the Pen icon, click the mouse. You can now use this path as an EPS mask. If you save the image in the EPS with mask format then import it into any EPS-compatible page layout program, only the contents of the mask will be displayed and printed on a PostScript printer.

EPS masks can also be saved in CMYK mode if you have the CMYK Separation plug-in.

Magic Wand

When you select the Magic Wand and click anywhere within an image, it automatically selects adjacent pixels of similar color or brightness:

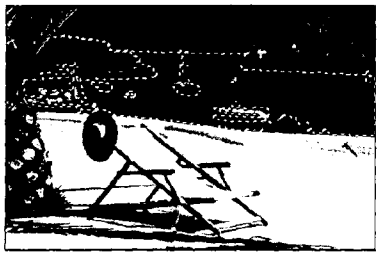


Figure 4.3

Use the Tolerance slide bar to adjust the Magic Wand's tolerance:

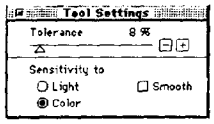


Figure 4.4

When Tolerance is set at 0%, the Magic Wand will only select adjacent pixels with the exact same color or brightness. When Tolerance is set at 100%, it will select all adjacent pixels regardless of their color or brightness.

The Magic Wand is very useful for editing and retouching images. By default, it will select adjacent pixels with the same color. If you want it to select adjacent pixels with the same brightness, click the Light radio button. To ensure a smooth selection outline, click on the Smooth checkbox.

To add pixels to a selection, hold down the Shift key and click on the desired area. To subtract pixels from a selection, hold down the Command key and click on the area you want to eliminate. To copy a selection, hold down the Option key and drag the selection to the desired area. To select only the overlapping area between two selections, click on the desired area, hold down the Shift and Option keys, then click on an area that borders your initial selection. To move the selection outline, hold down the Option and Command keys and drag the selection outline to the desired area.

Rectangular Selection Tool

The Rectangular Selection tool allows you to make rectangular selections. Select the tool, click on the image, then drag it over the desired area to make a rectangular selection.

To make selections with specific constraints, click on the Constraint option and select a size from the pop-up menu. (Note that the units shown are proportions, not specific units of measure.) You may also choose Other from the Size pop-up menu, then enter your dimensions in the Proportion Settings dialog that automatically displays:

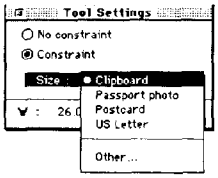


Figure 4.5

Using a constrained size allows you to configure the Rectangular Selection tool to select images or portions of images in predefined proportions. You can then paste your selections into new or existing documents while maintaining the same proportions.

To add pixels to a selection, hold down the Shift key and continue to drag. To subtract pixels from a selection, hold down the Command key and drag around the area you want to eliminate. To copy a selection, hold down the Option key and drag the selection to the desired area. To select only the overlapping area between two selections, drag the cursor to make a selection, hold down the Shift and Option keys, then drag the cursor again so it intersects your initial selection. To move the selection outline, hold down the Option and Command keys and drag the selection outline to the desired area.

Crop Tool

The Crop tool lets you remove unwanted parts of an image. Select the Crop tool, then click and drag an outline around the area you want to save. If you need to adjust your selection, simply move the corners of the selection area. When you have finished, click inside your selection to crop it (the tool will change to a pair of scissors).

Oval Selection Tool

The Oval Selection tool allows you to make oval-shaped selections. The tool works the same way as the Rectangular Selection tool, except that the selection will be oval or circular rather than rectangular or square.

To add pixels to a selection, hold down the Shift key and continue to drag. To subtract pixels from a selection, hold down the Command key and drag around the area you want to eliminate. To copy a selection, hold down the Option key and drag the selection to the desired area. To select only the overlapping area between two selections, drag the cursor to make a selection, hold down the Shift and Option keys, then drag the cursor again so it intersects your initial selection. To move the selection outline, hold down the Option and Command keys and drag the selection outline to the desired area.

Straighten/Rotate Tool

The Straighten/Rotate tool allows you to straighten or rotate an entire image, or selected portions of an image. When you click on the Straighten/Rotate tool, two perpendicular crossbars with a circle where the lines intersect will appear in the center of your image:

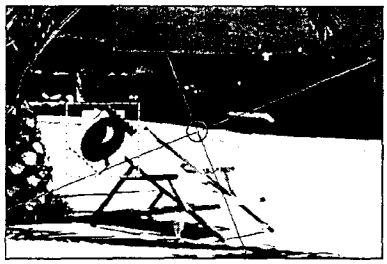


Figure 4.6

To rotate an entire image, position the cursor on one of the crossbars and drag it to the desired angle. Let go of the mouse and click on the image. To rotate just a portion of an image, use a Selection tool to define an area, then follow the steps described above.

To straighten an entire image, click on the Straighten/Rotate tool and position the cursor over the small circle where the crossbars intersect. Drag the circle to a reference point in the image, then position the cursor on one of the crossbars. Holding down the mouse, drag and rotate one of the crossbars until the horizontal line is at an angle that will be horizontal after the image is straightened.

Release the mouse, hold down the Option key and click on the image to straighten it. To straighten just a portion of an image, use a Selection tool to define an area, then follow the steps described above.

Drawing Tools

To set the line thickness of the Line, Oval and Rectangular Drawing tools, lick on the desired tool and enter your specifications in the Line Settings dialog that displays. For the Oval and Rectangular Drawing tools, you can also click on the Fill checkbox to draw filled shapes:

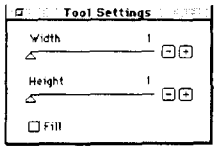


Figure 4.7

Line Tool

The Line tool allows you to draw straight lines simply by clicking and dragging the mouse. Holding down the Shift key allows you to draw a vertical or horizontal line, or a 45° angle.

Oval Drawing Tool

The Oval Drawing tool lets you draw empty or filled ovals by clicking and dragging the mouse. To draw a circle, hold down the Shift key while drawing.

Rectangular Drawing Tool

The Rectangular Drawing tool allows you to draw empty or filled rectangles by clicking and dragging the mouse. To draw a square, hold down the Shift key while drawing.

Text Tool

The Text tool enables you to add text to your image. Click on the Text tool to display the Text Settings dialog:

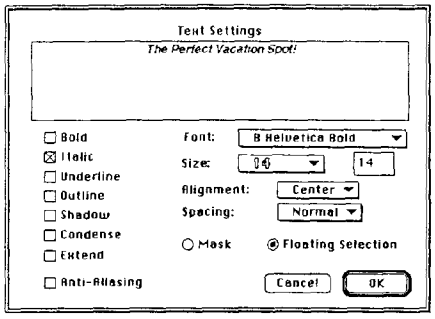


Figure 4.8

Choose a font, size, etc., then click on the Floating Selection radio button if you would like to be able to move your text around the image before permanently placing it. Click the Mask button to paint the text area, or to invert the selection and paint the background. Note that if you move the mask, it erases the area beneath it. Click the Anti-aliasing checkbox to soften the edges of very large text. When you have finished, click OK to return to the image and place your text.

Pencil

The Pencil tool is used for drawing dots, curves and lines. Use the Tool Settings dialog to adjust its diameter, then click or drag the mouse to apply the pencil. To draw straight horizontal or vertical lines, hold down the Shift key while drawing. If you have a graphic tablet, you can adjust the Pencil tool's opacity by varying the pressure on the pen.

Paint Brush

The Paint Brush tool lets you paint with brushes of various shapes and widths. You can choose a shape and radius for the tool, as well as change the Opacity controls for bright and dark tones.

You can also modify the shape of the Paint Brush to create custom and special effect tools:

1. Use a selection tool to define a shape.

2. Choose the Copy Pattern option from the Edit menu to copy your selection. (Color patterns will be converted to grayscales. Black and white patterns will trace neatly since white is considered transparent.)

3. Select the Paint Brush tool and click on the Change the Shape option in the Tool Settings dialog:

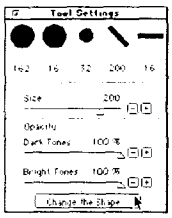


Figure 4.9

The Brush Shape dialog will display:

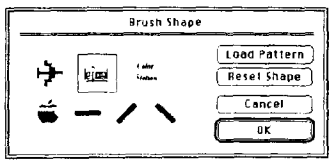


Figure 4.10

4. Click on Load Pattern.

5. Click OK. The new brush shape will appear in the Tool Settings Pallette.

Use the Reset Shape option to return tools to their original settings. Note that the maximum diameter of any tool is 256 pixels.

Pressure Sensitivity

If you have a graphic tablet, you can adjust the Paint Tool's opacity by varying the pressure on the pen. Increase the pressure to apply more opaque paint. Decrease the pressure to apply more transparent paint.

Paint Bucket

When you choose the Paint Bucket tool and click on an image or a selection within an image, the current foreground color will be spread over adjacent pixels with similar colors. you can set the Paint Bucket tool's Tolerance from 0% to 100%. At 0%, paint will be spread only on adjacent pixels with exactly the same color. At 100%, paint will be spread on all adjacent pixels, regardless of their color.

Eraser

The Eraser tool allows you to remove undesired parts of an image and replace them with the background color. You can also double-click on the Eraser tool icon to erase an entire image, or the contents of a selection.

Airbrush

The Airbrush tool is used to spray a fine-grained paint on your image. Use the Diameter controller to set the Airbrush's width. Then, choose a paint flow setting:

Natural Flow:	Sprays paint as you click the mouse. The faster the mouse is moved, the lighter the paint flow.
Regular Flow:	Sprays paint of an equal thickness on all areas, regardless of the speed of the mouse.

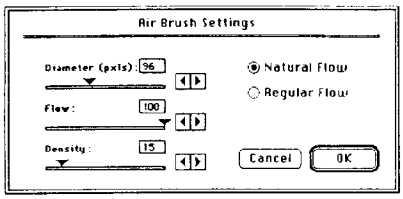


Figure 4.12

If you choose the Natural Flow setting, the Flow controller will become enabled. This allows you to adjust the flow speed, which is measured on a scale from 1 to 10. You can use the Density controller for either the Regular or Natural Flow setting to control the strength of the paint flow. When you have finished configuring the tool, click on the image to begin painting.

Clone Tool

The Clone tool allows you to precisely duplicate portions of an image. Begin by choosing a reference point (the section you want to duplicate or clone from). Hold down the Option key (a small, white arrow will appear at the bottom of the tool) and click the Clone tool on this point.

Move the Clone tool to the area where you want to begin cloning. Click and drag the tool to replicate the pixels around your reference point. The pixels you replicate depend on the direction you move the mouse. Keep an eye on the crosshairs near your reference point as they will be your guide.

Use the Diameter controller to set the size of the area to be reproduced, and the Opacity controller to adjust the opacity of the area to be reproduced:

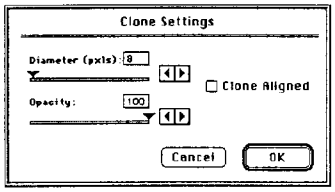


Figure 4.13

Clone Aligned

Click on the Clone Aligned checkbox to allow for continuous cloning of an image, no matter how often you start and stop. Disabling the Clone Aligned option means that whenever you start cloning, it will always begin from your initial reference point.

Blur Tool

Sharpen Tool

Use the Blur tool to blur an image, or the Sharpen tool to increase the detail of an image. The Diameter controller allows you to adjust the radius of each tool, while the Pressure slide bar lets you adjust the tools' effects:

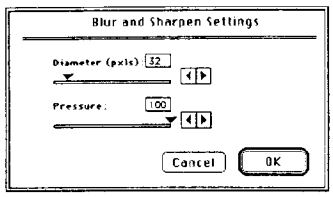


Figure 4.14

When you have finished configuring the selected tool, click OK to return to your image. Select either the Blur or Sharpen tool, hold down the mouse and drag the tool over the portion of the image you want to modify.

Dodge Tool

Burn Tool

Use the Dodge tool to lighten areas of your image, and the Burn tool to darken your image. Use the Diameter controller to adjust the Dodge and Burn tools' diameters, and the Exposure controller to adjust their respective effects:

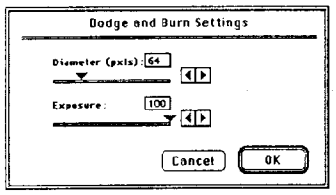


Figure 4.15

Click OK to return to your image, then drag the desired tool over the portions of the image you want to modify.

Gradient Tool

The Gradient tool allows you to apply graduated colors to selected areas and masks. Before using the Gradient tool, you should go to the color palette and choose the foreground and background colors you want to blend. (For a preview of the gradient produced by the colors you choose, look at the top right corner of the color palette.)

Using the Gradient tool, click and drag on the selected area to apply the gradient. The foreground color will begin where you initially click the mouse. The background color will be applied where you release the mouse.

Color Sampler Tool

The Color Sampler lets you pick up colors from within your image and apply them to other areas. Click on the Color Sampler, then click anywhere in your image. The color you have picked up will be displayed as the foreground color in the color palette. You can then select a painting or drawing tool to apply this color to your image.

The Color Sampler tool can also be used to sample colors from the Color Storage Area, the Gradient Preview and the Four Color Gradient Sampler found in the color palette.

NOTE: You can turn any painting or drawing tool into a Color Sampler by holding down the Option key.

Zoom Tool

The Zoom tool lets you enlarge (zoom in) or reduce (zoom out) your view of an image. You can either choose these options under the View menu, pull down the pop-up menu in the bottom left-hand corner of the window, or use the key sequence Command + to zoom in, and Command - to zoom out.

Hand Tool

The Hand tool allows you to move an image in any direction so you can view an area that is outside of the window.

Info Palette

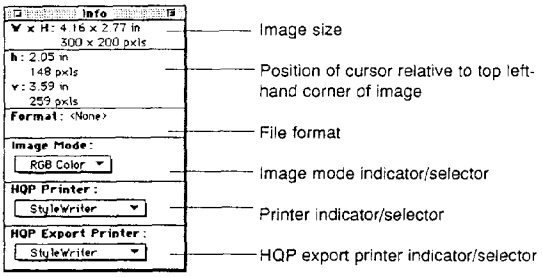


Figure 4.16

Image Modes

PhotoStudio offers four image modes:

Bitmap: Black and white images.

Grayscale: 8 Bit images that contain up to 256 shades of gray.

Indexed: 8 Bit images that contain up to 256 colors.

RGB: 24 Bit images that contain up to 16.7 million colors.

Converting Image Modes

If you don't have a printer that prints millions of colors, you may want to convert RGB images to the Indexed mode in order to save disk space. To do so, select Mode from the Image menu. Then, choose the Indexed option to display the following dialog:

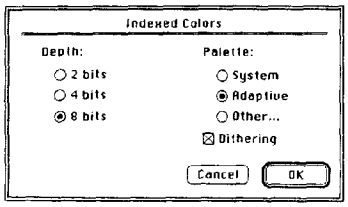


Figure 4.17

Color Combinations

8 Bits (256 colors) + Adaptive Palette offers the highest quality conversion from RGB to Indexed color.

4 Bits (16 colors) + Adaptive Palette further reduces the size of the image, as well as its quality.

2 Bits (4 colors) + Adaptive Palette offers the greatest reduction in both size and quality.

NOTE: The Adaptive Palette offers a closer match to the original image colors than the standard 256 color system palette.

Other

Select the Other option to open a saved custom color palette (described in the next section).

Creating Custom Color Palettes

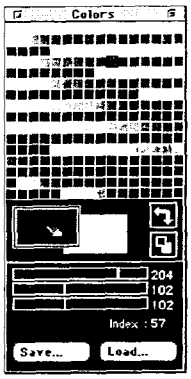


Figure 4.18

When you have finished selecting your color combinations, click OK. If the Color Palette is not already displayed, select it from the View menu.

When you click on a color in the Indexed Color Palette, it will appear in the Foreground Color Indicator (as shown above). To create a customized color, double-click on the Foreground Color Indicator to display the Apple Color Wheel:

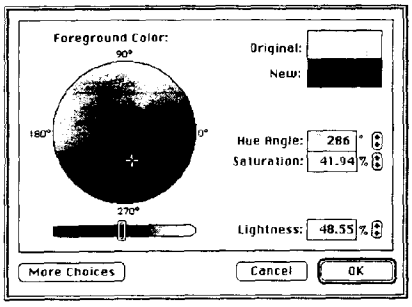


Figure 4.19

Click on the Color Wheel to select a different color, and/or use the slider control to change the shade of your color. Click OK when you have finished. When you return to the Indexed Color Palette, you will see that the color you originally selected has been replaced by your customized color.

Follow the same steps to add additional custom colors. When you have finished, click on the Save button to display the following dialog:

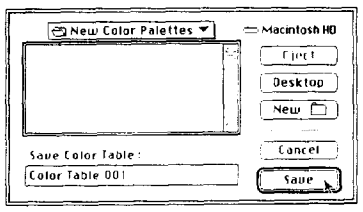


Figure 4.21

Choose a name and location for your custom color palette. Whenever you want to use any of the custom color palettes you have saved, you can either choose

the Other option from the Indexed Colors dialog (see Figure 4.17), or click on the Load button in the Indexed Color Palette (Figure 4.21).

Color Palettes

PhotoStudio offers a different color palette for each image mode:

Bitmap Palette

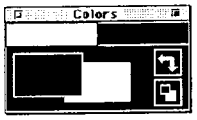


Figure 4.22

Grayscale Palette

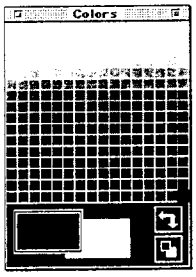


Figure 4.23

Indexed Color Palette

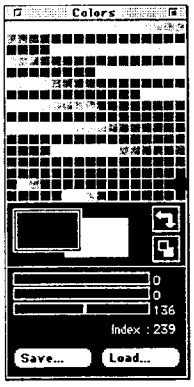


Figure 4.24

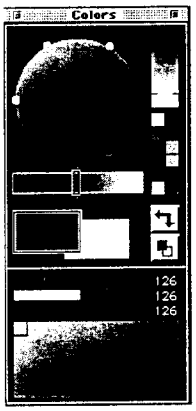


Figure 4.25

RGB Color Palette

NOTE: If the bottom portion of the RGB color palette is not visible, click the small square in the top right-hand corner to extend the Palette.

The RGB color palette allows you to choose colors, preview the effects of gradients and choose intermediate colors from the blending of up to four colors. To change the foreground color, drag the small circle in the middle of the Color Picker. To change a color's shade, drag the Brightness Adjuster from left to right (this can be done for the Background Color Indicator, as well).

The RGB Color Storage Area automatically displays the 12 main colors found in an image. When you move the cursor to the Color Storage Area, it becomes a Color Sampler tool. Click any color in the Color Storage Area and it will become either the foreground or background color, depending upon which one is currently selected.

The Gradient Preview displays the gradient between the foreground and background colors, whereas the Four Color Gradient Sampler allows you to mix colors. To do so, click on a color in the Color Storage Area, then move the cursor (which changes from a Color Sampler tool to a Paint Bucket) to one of the four squares in the Gradient Sampler and click again. Repeat this procedure until each square contains a different color.

Storing New Colors

You can also store new colors in the Color Storage Area. Select the Color Sampler tool, then click on the desired color. Move the tool over the desired square in the Color Storage Area, hold down the Option key and click to replace the existing color.

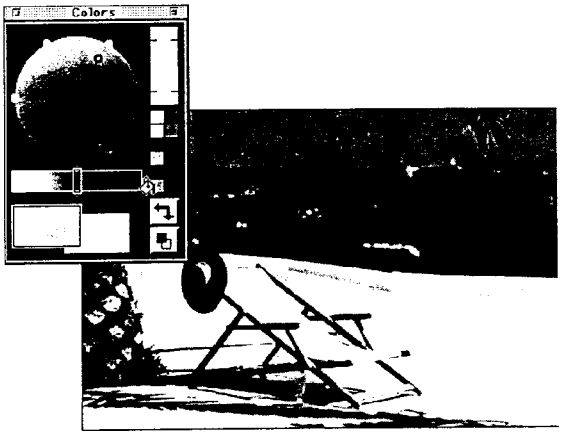


Figure 4.26

View Scale and Resolution

Click in the bottom left corner of the window to display a pop-up menu which lets you increase or decrease your view of an image:

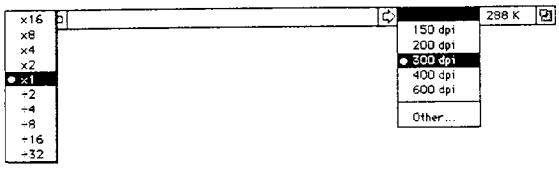


Figure 4.27

Click in the bottom right corner of the window to modify an image's resolution. Note that you can also change resolution by choosing the Resize option from the Image menu.