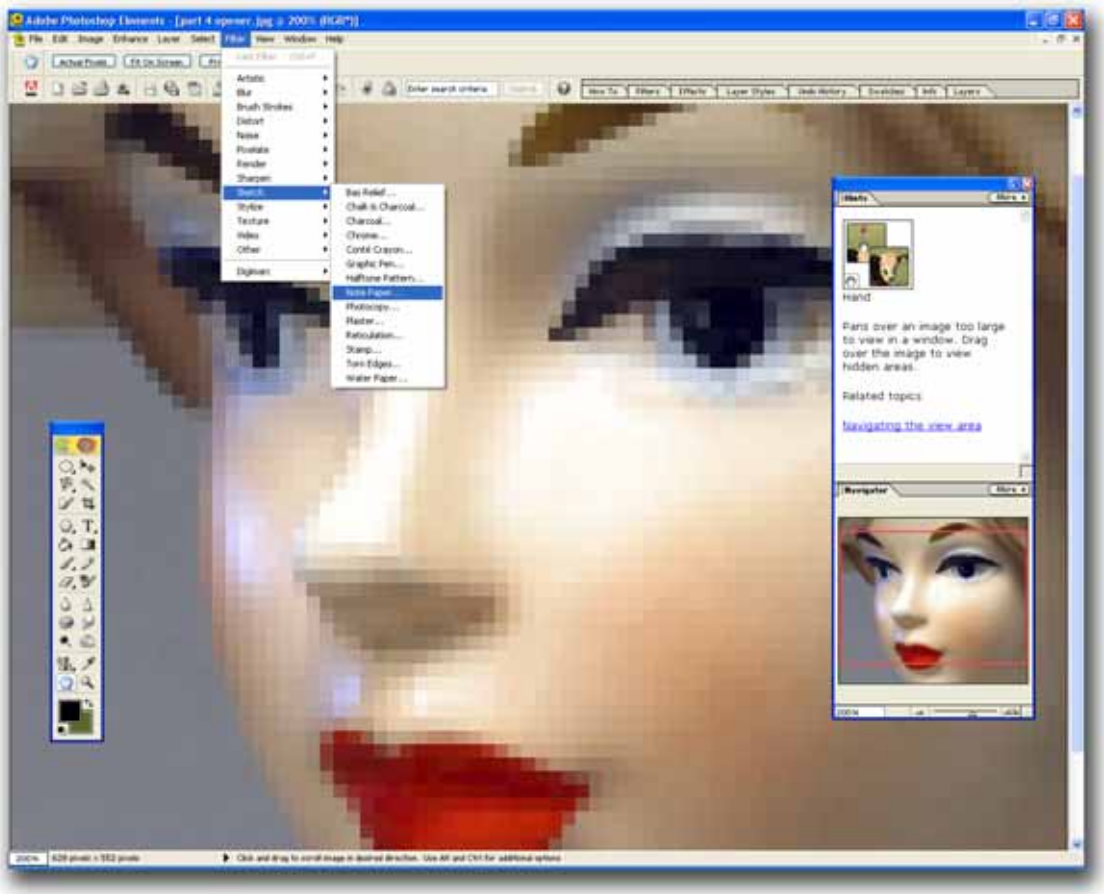
A Short Course in

Photoshop Elements 2.0



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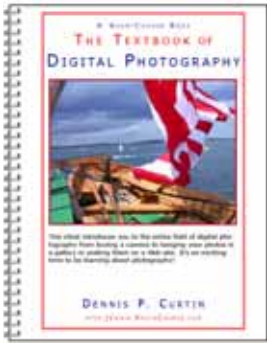

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PREFACE

It's not necessary for a digital photographer to use Photoshop when Photoshop Elements is available at a fraction of it's price and with 95% of the same digital photography features. Elements is also a direct adaptation of Photoshop, not an entirely different program. Everything you learn can be transferred to the more extensive program should you ever decide to migrate to it.

Photoshop Elements is a wonderful program, at an amazingly low price. Based on Photoshop—the acknowledged leader among the many existing photo-editing programs—Photoshop Elements, like an acorn, hasn't fallen far from the tree. It has inherited both power and complexity. Widely used by photographers, graphic artists, printers, designers, and other creative professionals, it has something for everyone. It's the program's breadth that lies at the heart of its complexity—there are tools for everyone and everything.

Our goal in this book is to present an introduction to Photoshop Elements that lets you master those aspects of the program most useful to digital photographers. From this single perspective, the program becomes a great deal easier to master because you follow a single main road through the program. Detours along the many back roads of the program are for another time and another book.

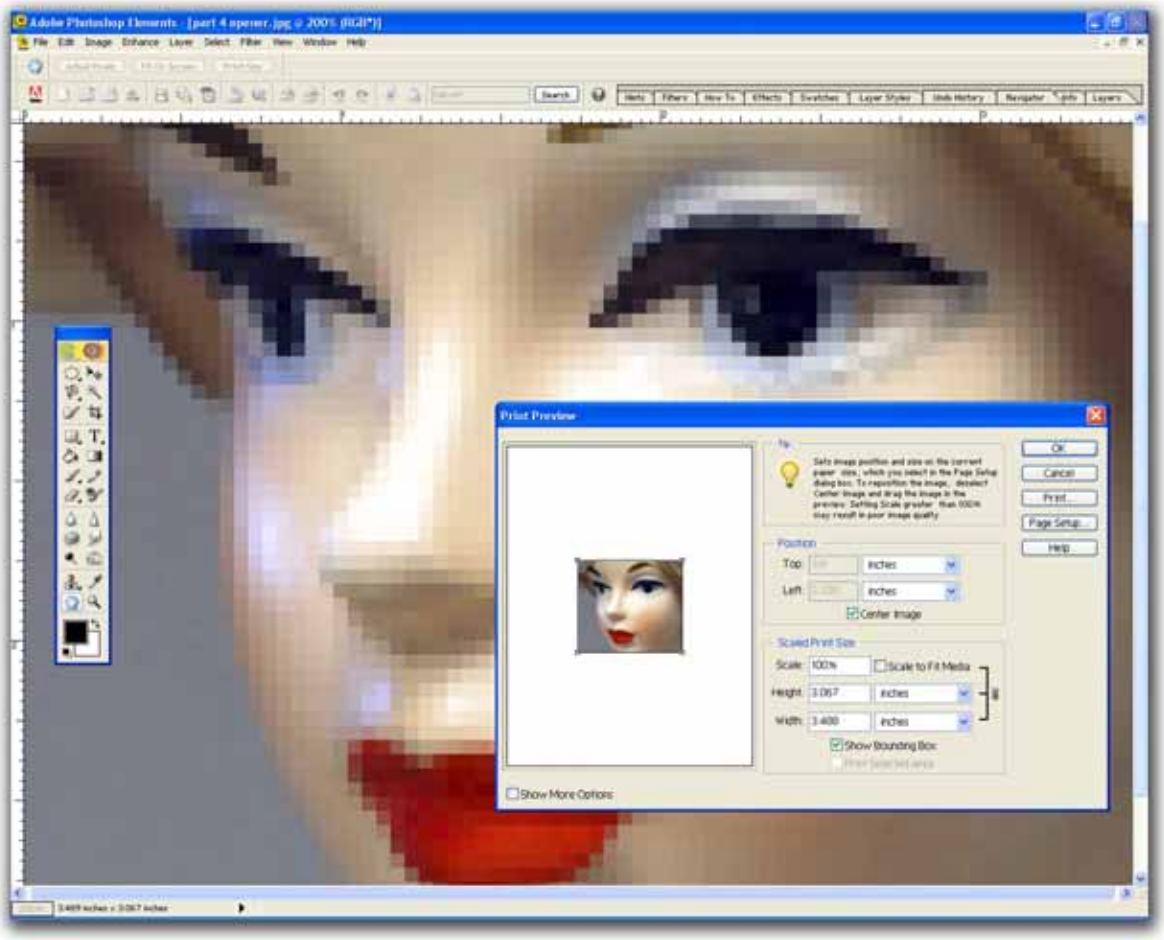
We recognize that digital images can be edited in a wide variety of ways. In some cases you're a photographer trying to improve an image by eliminating or reducing its flaws. In other cases you are a graphic artist taking an image to a new place, making it something it never was, or incorporating it as one element in a larger project. In this book we focus on the photographic aspects, but teach you the tools you need to do graphic arts.

This book is divided into six chapters.

- *Chapter 1 Getting Started* introduces you to Photoshop Elements' screen display, tools, and basic procedures such as opening, saving and printing images. This chapter lays the foundation for the rest of the book.
- *Chapter 2 Fixing Your Images* shows you how to evaluate tones, colors, sharpness, and other characteristics of an image and how to select the tools you use to fix or improve it.
- *Chapter 3 Working with Selections* shows you how to select areas of an image to copy, move, or enhance.
- *Chapter 4 Working with Layers* discusses how you use layers to adjust your images.
- *Chapter 5 Painting and Drawing* shows you how to use the program's painting, drawing, and erasing tools used to improve selected areas of an image.
- *Chapter 6 Applications* is where you put the program to work to create images for the Web, create animated GIFs, send images by e-Mail, create a Web photo gallery, merge images into a panorama, create a PDF Slide Show, transform images, and much more.

CONTENTS

Chapter 1
Getting Started



CONTENTS

Photoshop Elements, like the Photoshop program on which it is based, is a powerful program suitable to all but the most technically oriented photographer. Because it can do so much, it initially looks complicated, and in many ways it is. However, since it's a program you won't outgrow, it's worth the time it takes to master it. In this chapter we lay the foundation for everything to come. You'll learn about the screen display, help system, the toolbox, palettes, undoing mistakes, opening, closing, and printing images, and managing your work. Once you understand this material, you will be ready for the chapters that follow on editing your images. Photoshop Elements runs on both Windows and Macintosh systems. The areas covered in this chapter are where the two versions of the program diverge the most. This is because basic operations such as opening, saving, and printing images draw on operating system dialog boxes just as your other applications do. We have attempted to cover both versions of the program although the screen images are from the Windows version.

DEVELOPING A PROCESS

As unlikely as it seems, disasters do happen. Rick Ashley, my coauthor on "The Digital Desktop Studio" book took a short vacation during which he got a phone call that his studio was on fire. It contained a lifetime of work—negatives, prints, letters, equipment. All was lost. Rick was reduced to just the camera he had with him at the time and a few things he'd loaned to others. In this photo by Rick, his studio is in that floorless and ceilingless space on the third floor.

When working with digital photos it helps to have your own process for storing and backing up your photos. This process—often called a *workflow*—is simply a series of steps that you consistently follow to save time and reduce anxiety in the long run. The more methodical you are, the easier things are down the road. Here is one approach developed over the years by experienced photographers.

Step 1. Take the pictures. This is the fun part, but if there is one secret it's "take a lot of them." The more you take the more the law of averages works in your favor, but the more time you'll have to spend sorting and selecting the best.

Step 2. Create a folder system on your hard drive into which you copy the photos that you have taken.

Step 3. Copy the images to the computer, and after checking that they copied correctly, delete them from the camera's memory card. The best way to check that they copied correctly is to look at them with a thumbnail image viewer or asset manager. To be really cautious, don't delete images from the memory card until you have completed the next step, or even better—until you need the card for other photos.

Step 4. Copy the images from your camera's memory card or the computer to a CD/DVD or other storage device so you have a backup of everything you shot. This is the most important backup you will make because it protects the original images. If you don't make any additional backups, you may have to redo a lot of work, but at least your original images won't be lost. To be really cautious, make two backups and store them so the same accident can't happen to both.

Step 5. Delete bad photos from the computer's hard disk since they are just taking up space that you can use for other photos. You can be fairly aggressive, because you already have a backup of the original photos should your definition of "bad" ever change.

Step 6. Create a project folder and copy into it all of the photos you may want to include in the current project. A project may be as small as a series of photos to be e-mailed, or as large as a DVD slide show with background music. If you have used some of the images in a previous project, copy those images into this folder so each project folder contains all of the images that will be included in that project.

Step 7. Make your final selection of photos. Go through all of the project photos and delete any that you don't want included.

Step 8. Edit the photos if any of them need it. You may want to remove red-eye, boost saturation, or adjust levels and sharpness. Many digital photos can be improved dramatically with just a little tweaking.

Step 9. Copy the final photos to a project CD/DVD or other storage device. You've invested effort in selecting and editing these photos so backing them up at this point would be prudent.

Step 10. Assemble the final project, whatever it may be.

Step 11. Copy the final project to a CD/DVD or other storage device. In some cases this might be a master disc that you make copies from for distribution. In other cases it's a backup disc to put away in a safe place.

TIP

■ To manage a collection of images, you need a program called an *asset manager* that stores filenames, thumbnails, and other information about each image in a database. Leading programs in this area are Cumulus from Canto and Portfolio from Extensis.

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INTRODUCTION TO PHOTOSHOP ELEMENTS 2.0

Most images can be improved with a photo-editing program, but they can also be changed in other ways. In this text we explore things you can do with your images using Photoshop Elements 2.0, a program based on and closely related to the gold standard of photo editing—Photoshop 7.0. Photoshop Elements has most of the digital photography features of Photoshop, but includes some easy-to-use features of its own.

- *Connect to Camera or Scanner button* in the Welcome window transfers images to your system's hard drive from your camera of scanner.
- *Quick Fix* displays before and after views of your image to guide you as you visually adjust tones, colors, brightness and rotation.
- *Frame from Video* captures individual frames from digital videos.
- *Photomerge* creates panoramic views by seamlessly stitching together a series of images automatically.
- *File Browser* lets you view thumbnail images to locate, open and manage your photos.
- *Red Eye brush* removes red-eye caused by flash in a dark room.
- *Color variations* lets you visually adjust color by selecting the color adjustment you like best from a series of previews.
- *Auto straighten/auto crop* straightens and crops photos that are scanned at a slight angle.
- *Fill flash/adjust backlighting* corrects lighting in photos where the main subject in the foreground, or the background behind the subject, is too light.
- *Open and save images* in all commonly used formats for printing or Web display.
- *GIF animations* can be created and edited and you can even preview them before saving.
- *Save for Web* compresses your photos so they retain their sharpness and color while making files sizes small enough to download quickly.
- *PDF slide shows* with professional looking transitions are easy to assemble, share, and then view using the free Adobe Acrobat Reader.
- *Web Photo Gallery* does all of the work in assembling your photos onto a page you design yourself so they can be posted on the Web for all to see.
- *Picture package* prints a number of images on the same sheet of paper.
- *Contact sheet* prints small thumbnails of many images on the same sheet of paper so you have an index of your images.
- *e-mail* sends images attached to e-mail messages without leaving the program.
- *On-line printing services* provides a direct link to the Shutterfly on-line printing service that is in partnership with Adobe. There are many other such services that you can choose outside of the program.

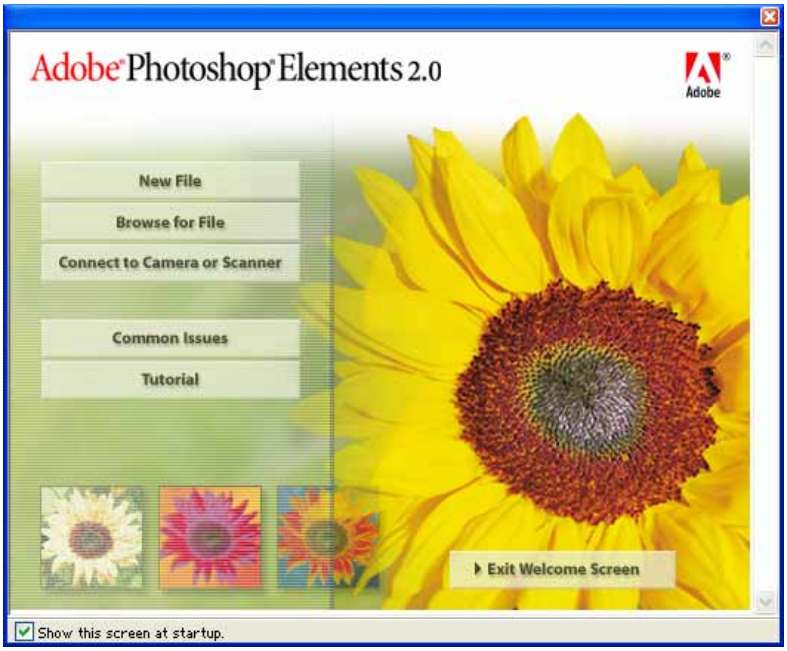
STARTING AND QUITTING THE PROGRAM

TIPS

- If you have problems launching the program, or if other users have changed settings, rebuild your Photoshop Elements preferences file. To do so, as you start the program, hold down Shift+Ctrl+Alt (Option+Command+ Shift on Macs). When asked if you want to delete the settings file, click *Yes*.
- If you click the Welcome screen's *Show this screen at Startup* check box to turn it off, you can still display the Welcome screen by selecting *Window>Welcome*. To then see it each time you start up the program, click the check box to turn it back on.

The Photoshop Elements *menu on Macs does not appear on Windows versions of the program. It's this menu and operating system dialog boxes such as those you use to open, save, and print images where the versions of the program differ most.*

You start Photoshop Elements just as you start other programs. When the program loads you may first see a welcome screen.



THE WELCOME SCREEN

The Welcome screen has a number of large buttons and one check box.

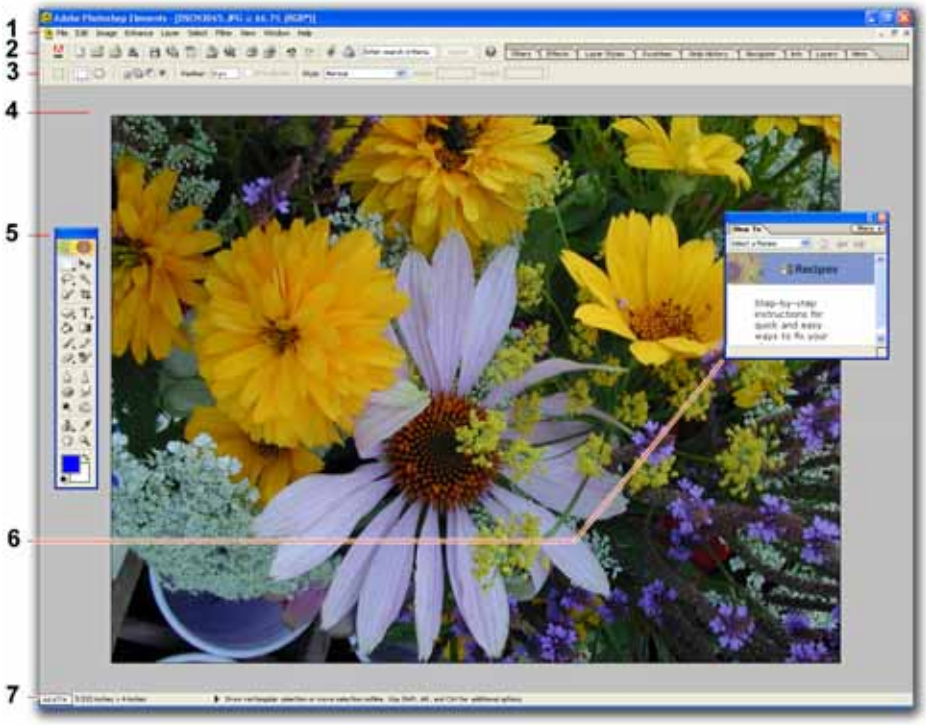
- *New File* displays the New dialog box so you can specify the name, size, and other settings for a new image. (You don't often use this command in digital photography.)
- *Browse for File* displays the File Browser so you can scroll through thumbnails to locate the image you want to edit (page 22).
- *Connect to Camera or Scanner* displays the *Select Input Source* dialog box so you can transfer images from your camera to the computer.
- *Common Issues* opens the How To palette (page 11) and displays a list of recipes you can follow to accomplish selected tasks.
- *Tutorial* takes you to a section of help listing tutorials you can complete to learn more about the program.
- *Exit Welcome Screen* closes the Welcome screen so you can use Photoshop Elements itself.
- *Show this screen at startup* check box has to be on (containing a check mark) for the Welcome screen to appear when you start the program.

PHOTOSHOP ELEMENTS SCREEN DISPLAY

The program has a work area containing elements with which you should be familiar.

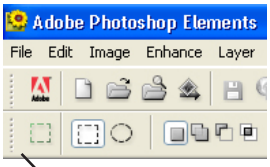
1. *Menu bar* lists the names of menus you pull down to select commands while performing many tasks.

The work area displays menu, shortcuts, and options bars, a toolbox, and a palette well. Images are opened in their own document windows and palettes can be opened on the palette well or dragged into the work area.



TIP

The shortcuts and options bars are usually "docked" at the top of the application window and palettes are docked in the palette well. You can drag and drop them into the image area where they "float." Drag bars by their gripper bar and palettes by their tabs. To return them to their default positions, select *Window>Reset Palette Locations*.



Gripper bar

TIP

■ To change the grid settings, pull down the *Edit* menu *(Photoshop Elements* menu on Macs) and select *Preferences>Grid*.

2. *Shortcuts bar* offers a variety of tools:

- Buttons you click to execute frequently used commands such as those that open, save, and print images. To display the name or function of a button, point to it.
- The *Enter search criteria* text box searches for help (page 11). Just enter a word or phrase and click the *Search* button.
- The palette well displays tabs for the palettes you use to edit your images (page 14). This isn't displayed when the screen is set to a resolution lower than 800 x 600.

3. *Options bar* displays options for the tool that's currently selected in the toolbox (page 12).

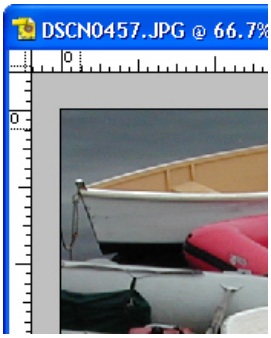
4. *Image area* displays images you have opened to edit or print.

5. *Toolbox* holds the various tools you use when editing images (page 12).

6. *Palettes* display hints, settings, and other choices that you use to monitor and modify images (page 14).

7. *Status Bar* at the bottom of the application window (or document window on Macs) displays information arranged in three sections when an image is open:

- *The leftmost section* displays the current magnification of the image (page 27).
- *The middle section* displays information about the current file. You can click the triangle to select what information is displayed here.
- *The rightmost section* (Windows only) displays information about the currently selected tool and a progress bar that helps you follow the progress of an operation.



The rulers' origin is in the upperleft corner of the image.

GRID

Displaying a non-printing grid over the image provides a guide when performing operations such as selecting or rotating an image. To turn this grid on or off, select *View>Grid*. To have things snap to the grid lines ,select *View>Snap to Grid*. When on, the menu commands have check marks.

RULERS

Rulers along the left and top of the image window help you precisely position the cursor, selections, shapes, type, and other tools and image elements. You can turn these rulers on and off by selecting *View>Rulers*.

As you move the mouse pointer about the screen, markers on the rulers track its position. You can use these markers to measure the width or height of any part of an part, or precisely position tools. The ruler is initially set to inches, but you can change to another unit of measurement by double-clicking either ruler to display the Preferences dialog box.

The grid lets you align tools and selections more accurately.

The ruler's origin—the place where the two rulers intersect and numbering starts at zero (0)—is initially aligned on the top left corner of the image. At times you may want to move the origin so you can measure from a different point on the image. To move it, point to the intersection of the rulers in the upperleft corner of the window, and drag diagonally down into the image area. A set of cross hairs lets you position it precisely and the new zero origin is set where you release the mouse button. To reset the ruler origin to its default value, double-click the upperleft corner where the rulers intersect.

The ruler origin determines the grid's alignment. If you drag the origin to a new position, the grid will shift so one intersection aligns with the origin.

TIP

■ The palette well isn't displayed when the screen's resolution is set below 800 x 600.

QuickSteps MANAGING THE WORK AREA

- *To hide or display the tools, shortcuts,* or *options bars,* pull down the *Window* menu and click their names.
- *To open a palette,* click it's tab in the palette well, drag it into the image area by its tab, or pull down the *Window* menu and click its name.
- *To show or hide all open palettes,* the options bar, the shortcuts bar, and the toolbox, press Tab. To hide just palettes, press Shift+Tab.
- *To change the ruler origin,* drag the intersection of the rulers into the image area.
- *To turn the grid on and off,* pull down the *View* menu and click *Grid*.

QUITTING THE PROGRAM

When you are finished with Photoshop elements, you exit the program by clicking the application's close button or by selecting *File>Exit* (*Photoshop Elements>Quit Photoshop Elements* on Macs). When you do so while there is an unsaved image open, you will be asked if you want to save it. Click *Yes* (*Save* on Macs) to save the file. Click *No* (*Don't Save* on Macs) to exit without saving it.

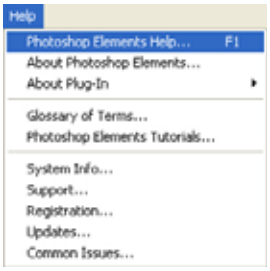
QuickSteps EXITING PHOTOSHOP ELEMENTS

- Click the application's close button or select *File>Exit* (*Photoshop Elements>Quit Photoshop Elements* on Macs)

LEARNING PHOTOSHOP ELEMENTS

TIPS

- If a help page doesn't automatically appear in front of the Photoshop Elements window when you click a help link, switch to your Web browser to see the updated help contents.
- Many dialog boxes have a *Help* button that displays help specific to the procedure.



The Help menu commands.

Using Help contents screen

Adobe Online dialog box.

Photoshop Elements provides you with many forms of help including tool tips, a searchable help system, detailed step-by-step instructions, and tutorials.

- *Tool tips* are displayed when you point to a tool, button, or some other screen elements, and pause. (Tool tips are usually not available in dialog boxes.) For more information and links to help about tools and palettes when you point to them with your mouse, drag the *Hints* palette in the palette well by its tab and drop it in the work area (page 14), or select *Window>Hints*.

- *Help* is displayed when you click the *Help* button on the shortcuts bar (a question mark icon) or you pull down the *Help* menu and select one of the help commands. *Photoshop Elements Help* is the main source of help. Clicking this link displays a table of contents listing topics on using help. You can also choose other help from the *Help* menu including *Glossary of Terms*, *Photoshop Elements Tutorials*, and *Common Issues*.

You can also search help directly from the *Enter search criteria* text box on the shortcuts bar. When you click in the text box, enter a word or a phrase, and then click the *Search* button, the Search Results palette appears. Icons in the palette indicate if the search term was found in help or in a recipe. The drop-down arrow lets you display just one or the other kind of result. You can click on a link in the Search Results palette for more information about your search topic.

- *How To* palette contains a list of *recipes* that show you how to do various editing tasks. To display the How To palette, click its tab in the palette well (page 14). Click the palette's drop-down arrow, then click the recipe you want to use. At times a *Do this step for me* button appears in a recipe and you can click it to have the task performed for you. You can use the *Download New Recipes* command to expand the number of recipes as new ones become available.

- *Adobe Online*. Adobe periodically issues updates that correct bugs, enhance features, or provide additional help. With your computer connected to the Internet, try these:

  - *To go to Adobe Online's Photoshop Elements site*, click the flower icon at the top of the toolbox. At times, a dialog box appears so you can download updates or set preferences.

  - *To download updates when available*, click the *Online Services* button on the shortcuts bar, select *File>Online Services*, or select *Help>Updates*.

Adobe Online is constantly changing, so you should update it to be sure you access the most current content available. Pull down the *Edit* menu (*Photoshop Elements* menu on Macs) and select *Preferences>Adobe Online* to specify that it be automatically updated daily, weekly, or monthly.

- *User Guide* and *Quick Reference Card* are available on the Photoshop Elements CD in PDF format. You can read or search these documents using Adobe's free Acrobat Reader.

- *ReadMe* files containing late breaking information not in the manual may have been installed along with the program.

USING THE TOOLBOX

TIP

■ To set tool preferences pull down the *Edit* menu (*Photoshop Elements* menu on Macs) and select *Preferences> General.*

The toolbox contains icons representing tools you use to edit photos. To see what each tool does, point to it and its name is displayed in a tool tip. For more information on tools, drag the *Hints* palette tab in the palette well and drop it in the image area (page 14). When you then point to a tool, it is described in the Hints palette along with links to additional help topics.

To use a tool you click it to select it or press its shortcut key listed in its tool tip. The currently selected tool is highlighted in the toolbox. Some tools are actually sets of related tools with all but one of them hidden. When you select a hidden tool, its icon replaces the original icon in the toolbox. If there is a small triangle at a tool's lower right corner, do one of the following:

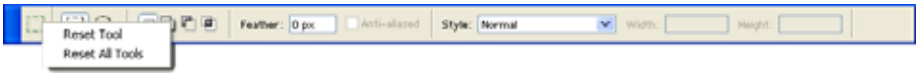
■ Point to the tool and hold down the mouse button to view the hidden tools, then click the tool you want to use.

■ Click the displayed tool to display all tools in the set at the left end of the options bar.

■ Hold down Alt (Options on Macs) as you click to cycle through the tools.

When you select a tool, the options bar displays settings you can change to affect the way the tool operates. These vary from tool to tool, but two remain constant.

■ The leftmost icon is for the selected tool. Clicking it displays a menu with the choices *Reset Tool* and *Reset All Tools*. Selecting one or the other returns the current tool or all tools to their original default settings.



■ When you select a tool from a set that also contains hidden tools, icons for all tools from that set are displayed next to the reset icon. This lets you quickly switch among the various tools in the set.

To learn the name of each tool, point to each on the screen to display a tool tip. If you first drag the Hints palette out of the palette well so it floats in the image area, when you point to each tool you'll get a brief description and links to where it is discussed in help. Another way to learn about a tool and its options is to search for the tool's name in help.

To display hidden tools, point to any tool with a small triangle in its lowerright corner and hold down the mouse button.

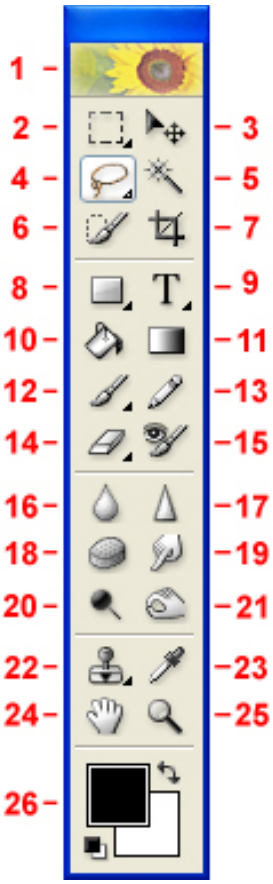
The tools from which you can choose are briefly described here along with the shortcut letters you can press to select them, and page references to where they are discussed in the most detail in this book. For tools that have hidden tools, all versions are listed with the default tool boldfaced.

1. *Adobe Online* takes you to Adobe's Photoshop Elements Web site (page 11).

2. *Marquee* (M)— **Rectangular Marquee**, Elliptical Marquee—select regularly shaped areas of your image by dragging with the mouse (page 78).

3. *Move* (V) moves selected areas of the image by dragging (page 85). To temporarily switch to this tool while using another tool, hold down Ctrl (Command on Macs).

4. *Lasso* (L)—**Lasso**, Polygonal Lasso, Magnetic Lasso—draw around an irregularly shaped area to select it (page 79).



The toolbox.

The Quick Reference card should be at your side as you work.

5. *Magic Wand* (W) selects adjacent areas with pixels of exactly the same or similar colors (page 82).

6. *Selection Brush* (A) selects areas by painting a mask with a variety of brushes (page 81).

7. *Crop* (C) selects an area of the image for cropping (page 50).

8. *Custom Shape* (U)—Rectangle, Rounded rectangle, Ellipse, Polygon, Line, **Custom shape**, Shape selection—draw areas shapes (page 122).

9. *Type* (T)— **Horizontal type**, Vertical type, Horizontal type mask, Vertical type mask—enter text on an image (page 124).

10. *Paint Bucket* (K) fills areas with a color or pattern (page 117).

11. *Gradient* (G) fills areas with a gradual blend of selected colors (page 119).

12. *Brush* (B)—**Brush**, Impressionist brush—paint brush strokes on an image with a variety of brushes (page 111).

13. *Pencil* (N) draws freehand lines on an image (page 111).

14. *Eraser* (E)—**Eraser**, Background eraser, Magic eraser—erase pixels you drag over (page 115).

15. *Red Eye brush* (Y) removes red-eye caused by flash (page 66).

16. *Blur* (R) blurs edges you drag over (page 112).

17. *Sharpen* (P) sharpens edges you drag over (page 112).

18. *Sponge* (Q) changes the color saturation of areas you drag over (page 112).

19. *Smudge* (F) smudges colors you drag over (page 112).

20. *Dodge* (O) lightens areas you drag over (page 67).

21. *Burn* (J) darkens areas you drag over (page 67).

22. *Clone stamp* (S)—**Clone stamp**, Pattern stamp—copies an area of the image, or a pattern, to other areas of the image (page 68).

23. *Eyedropper* (I) samples colors in an image and displays their numeric values in the Info palette or sets them as foreground or background colors (page 58).

24. *Hand* (H) moves an image that's too large to display completely in the window (page 27).

25. *Zoom* (Z) zooms the image in and out (page 27).

26. *Foreground and background colors* display the color picker when you click them so you can select colors (page 108).

TIP

■ When you right-click the image (Control+click on Macs), a menu pops up. The menu choices depend on what tool you have selected.

QuickSteps SELECTING TOOLS

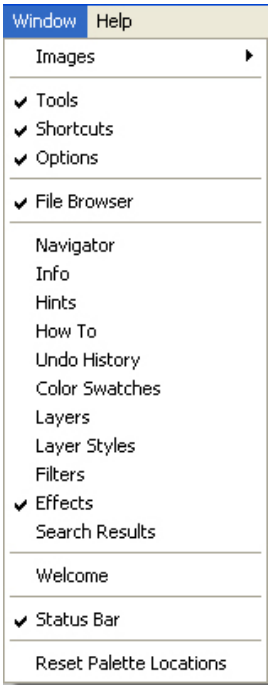
■ *To select a tool*, click it in the toolbox, or press the tool's keyboard shortcut given in its tool tip.

■ *To display hidden tools* when a tool has a small arrowhead, point to the tool and hold down the mouse button. To cycle through the hidden tools, hold down Alt (Option on Mac) as you click the tool.

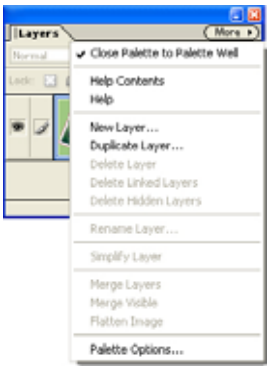
■ *To move the toolbox*, drag it by its top border.

■ *To display or hide the toolbox*, choose *Window>Tools*.

USING PALETTES



The Window menu on the menu bar lists all of the palettes and clicking the name of one opens or closes it.



To display a palette's menu, click the More button in its upperright corner.

The palette Size box that you drag to size the palette.

When editing images, you'll find many controls and much information organized into compact and convenient palettes. All of these palettes are listed on the *Window* menu and some are stored in the palette well on the right end of the options bar at the top of the screen. (The palette well isn't displayed when the screen resolution is set below 800 x 600.)

- *File Browser palette* displays thumbnails of the images in the currently selected folder on your computer (page 22).
- *Navigator palette* displays a thumbnail of the active image and has controls you can use to zoom and scroll around it (page 27).
- *Info palette* displays information about the pixels you point to. The information includes the numeric values of the color (page 58), the vertical and horizontal distance of the pointer from the origin on the rulers, and the size of the selected area.
- *Hints palette* displays information and links to help about tools and palettes when you point to them with your mouse (page 11).
- *How To palette* displays step-by-step instructions—called *recipes*— for image-editing activities (page 11).
- *Undo History palette* displays a list of the changes made to an image in the order they were made so you can revert to a previous version just be deleting changes (page 11).
- *Swatches (or Color Swatches) palette* displays colors from which you can select a foreground or background color (page 108).
- *Layers palette* displays a thumbnail for each layer in the active image and menu commands or other controls you use to perform such actions as adding, moving, duplicating, and linking layers (page 90).
- *Layer Styles palette* displays a thumbnail to give you an idea of what each layer style does when you apply it to the current layer (page 105).
- *Filters palette* displays a thumbnail to give you an idea of what each filter does when you apply it to the current image (page 69).
- *Effects palette* displays a thumbnail to give you an idea of what each effect does when you apply it to the current image (page 128).
- *Search Results palette* displays the results of searches you perform when looking for help (page 11).

When working on images, you often open these palettes in the palette well or drag them by their tabs to the work area so they float. They can become a problem because they also cover part of the image area. To keep them accessible but out of the way, you can keep them closed in the palette well, group or dock them, or just move them. There are a number of tricks to managing your palettes and all are discussed in the "Using Palettes" QuickSteps box on the next page.

Most palettes have icons along their bottom border such as a trash can, list view, thumbnail view, and so on. Point to these icons for a tool tip describing what they are used for.

TIP

- To see the palette well, the shortcuts bar must be displayed. If it isn't, select *Window>Shortcuts*.
- To position palettes, pull down the *Edit* menu *(Photoshop Elements* menu on Macs) and select *Preferences>General* to displays a dialog box with a *Save Palette Locations* check box. When on, palettes reappear as they were when you quit and restart the program. When off, all palettes return to their default locations.
- If you drag palettes close to the right edge of the screen the image window may not slide under them when enlarged. The zoom tool's *Ignore Palettes* check box on the options bar, when on, allows the window to enlarge past any palettes.

Clicking a palette's More button displays the palette menu.

QuickSteps USING PALETTES

- *To open a palette*, click its tab in the palette well, or pull down the *Window* menu and click its name. When you select a palette from the *Window* menu, it is pulled down from the palette well if it's stored there, or displayed floating in the work area if it isn't. To close the palette, click its tab a second time, click another tab, or click anywhere outside the palette in the work area. You can also select the palette's name on the *Window* menu.
- *To drag a palette from the palette well into the work area*, drag it by its tab and drop it where you want it to float. To close a palette floating in the image area, click its close button, drag it back into the palette well, or pull down the *Window* menu and click its name.
- *To change the size of a palette* (not all can be) drag the size box in its lower right corner. To collapse (minimize) or open (restore) a palette that's floating in the image area, click the close or open icon on its top border or double-click the tab. If the palette is in a palette group, click the close icon on the top border for the group.
- *To move a palette elsewhere on the screen*, drag it by its tab. To move it to one of the corners of the screen, hold down Shift as you drag and release it. It will snap to the closest corner.
- *To display a palette's menu*, drag it out of the palette well and click the *More* button.
- *To specify that an open palette is stored in the palette well when you close it*, click the palette's *More* button to display the palette menu and then click *Close Palette to Palette Well*.
- *To show or hide all palettes floating in the image area* (not in the palette well) press Shift+Tab.
- *To display palettes in their original default positions on the screen*, select *Window>Reset Palette Locations*.
- *To group palettes together so the tabs for each are in the same window* (not all palettes can be grouped), drag at least one of them into the work area. Drag another palette by its tab onto the body of the target palette so a thick line surrounds the palette's contents. To separate a palette from a group, drag the palette's tab outside the group and drop it.
- *To dock palettes so they move as one* (not all palette's can be docked), drag one palette by its tab to the bottom of another palette. A double line appears at the bottom of the target palette when the pointer is over the correct area where you drop it.

BASIC COMMANDS

TIP

- To adjust the entire image, make sure nothing is selected (page 76).
- To adjust only a single layer, select that layer in the Layers palette (page 90).
- To adjust just a portion of your image, select that portion (page 76).

This book assumes some computer background because Photoshop Elements works in many respects just as hundreds of other programs do. Covering all of the basics would make it a much longer book. However, there are a few things to be aware of that may be new to you. Here are some of them.

LAYERS AND SELECTIONS

When using help, referring to the user guide, or even when reading this book, you will often encounter the terms *layer* and *selection* before they are discussed in detail. When first learning how to edit digital photos you can safely ignore these terms. This is because all commands affect the entire digital photo when you first open it. However, if you add layers or make a selection, the effect of many commands are limited to just areas of the image. Here is an advance look at what these two terms mean.

- *Layers* (page 90) are like panes of glass laid over an image to make adjustments, add type, draw shapes, or copy one image into another. If you want to delete the effects a layer has on the image beneath it, you just delete the layer. The image itself remains unaffected. When you first open a digital photo, it always has only one layer so there is no need to select a specific layer. Commands you use will affect the entire image, provided you haven't selected a part of it.

TIP

- The *Preview* check box in many dialog boxes, when on, lets you see the effects of your changes.

- *Selection* (page 76) refers to using tools to draw a selection border around one or more areas in an image. When you first open an image no areas are selected so the effects of commands are not restricted to a specific area.

CANCELLING AN OPERATION

Some of the operations that you perform on an image take time, and when the operation is in progress, you can't perform other tasks. As the process is taking place, you can keep track of its progress on Windows systems by checking the progress bar on the status bar at the bottom of the screen. To have a beep alert you when a process is complete, pull down the *Edit* menu (*Photoshop Elements* menu on Macs), select *Preferences>General*, and turn on the *Beep When Done* check box. To stop a process before it has finished, hold down Esc. (On Macs, you can also press Command+period.)

When you see a Cancel *button in a dialog box, hold down Alt (Option on Macs) to see if it changes to a* Reset *button that lets you start over.*

Many tools are adjusted by dragging sliders along a slider bar.

Icons that indicate drop-down or pop-up menus. They are always arrow-like or triangular.

MENUS

Photoshop Elements has a variety of menus you use to execute commands.

- *Menu bar* at the top of the work area lists names of menus that pull down to list commands. In this book we use the style "....select *Enhance>Adjust Brightness/Contrast>Levels*" to guide you through the menu commands. In this example, the first name in the sequence, *Enhance*, is the name of a menu on the menu bar. After clicking that menu name, you then click the second command, *Adjust Brightness/Contrast*, to display a submenu displaying the *Levels* command that you click to display a dialog box.
- *Drop-down or pop-up menus* are displayed when you click drop-down arrows or triangle icons on the options bar, in dialog boxes, or on palettes.
- *Context-sensitive menus* or palettes appear when you right-click (Control+click on Macs) in the image window. What appears depends on what tool is selected.

TIPS

- Ctrl on PCs often performs the same functions as Command (key with symbol) on Macs.
- Alt on PCs performs the same functions as Option on Macs.

The Mac Command key symbol.

- *Palette menus* are displayed when you click the palette's *More* button. This button is only displayed when a palette is floating in the work area.

SHORTCUTS

In some cases, you have to work through 2 or 3 menus to get to the setting you want. When learning the program, or when only a casual user, this is a good way to work because it's easier to remember how to do things. However, there is a much faster way to work that you can adopt over time. To begin, you'll find that some of the most frequently used menu commands are also available as clickable buttons on the shortcuts bar. Also, as you work through menu commands, you'll see that some command names are followed by keyboard commands such as Alt+Ctrl+Z (Option+Command+Z on Macs) to undo changes. The plus signs connecting the keys means you press them together, not one after another. Pressing these shortcut keys bypasses the menus. To work faster, begin by memorizing the keyboard commands for the commands you use most often.

MODIFIER KEYS

In many situations, tools work one way when you use them alone and another way when you hold down a key as you use them. These *modifier keys* include Ctrl (Command on Macs), Shift, and Alt (Option on Macs).

- When keys are used in combination they are shown connected by a plus sign. For example, Shift+Ctrl+Alt.
- When a key should be held down when you click the mouse, it is indicated by *+click* added to the key as in *Alt+click*.
- Many times, when you press a key is important. For example, you may need to start dragging and then press a key. Pressing it before you drag won't have the same result.

TIPS

- In many dialog boxes, hold down Alt to change the *Cancel* button to *Reset*.
- To close any dialog box without making changes, press Esc.

DIALOG BOXES

When you execute many commands, a dialog box appears on the screen. Some of these have many settings that can be changed. However, in many cases it's only essential that you change a few of the available settings. The rest are set to defaults that Adobe believes work with most images, most times. Don't let all of these optional settings discourage you, you'll learn about them as you need them.

Dialog boxes can appear complicated because they offer so many choices. In most cases, however, you need to change only a few settings and leave the others set to their default values.

- *To select the entire entry in a text box*, click in the text box and press Shift+Enter (Shift+Return on Macs).
- *To increment the value in many numeric text boxes*, click in the text box then press the up or down arrow keys to change in increments of 1 or hold down Shift while you press them to increment in steps of 10.
- *To display drop-down menus*, click the drop-down arrows or triangle buttons.
- *To turn check boxes on and off*, click them.
- *To turn on an option button* (sometimes called a radio button), click it and any other buttons that's on, turns off.
- *To move between text boxes*, when the cursor is already in one text box, press Tab or Shift+Tab.

UNDOING CHANGES

One of the best things about editing images is how many ways there are to undo mistakes short of closing a file without saving it.

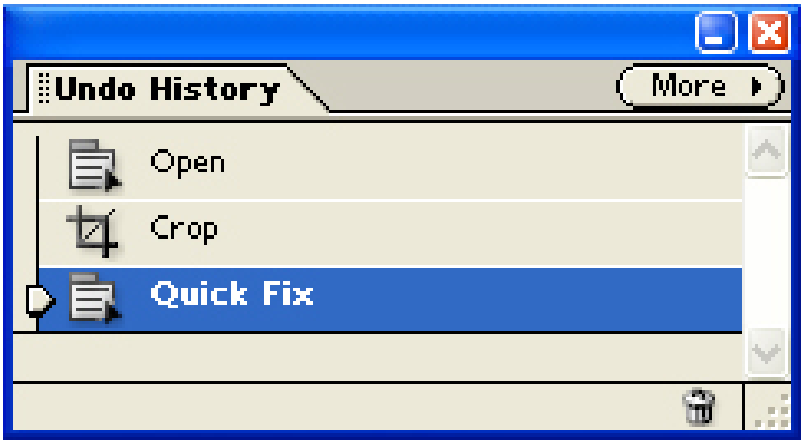
- The *Edit>Undo...* command undoes the most recent change.

The Step Forward and Step Backward buttons on the shortcuts bar.

- The *Edit>Step Forward* and *Edit>Step Backward* commands or equivalent buttons on the shortcuts bar scroll you through changes you have made so you can select a stage from which to continue. You can also press Ctrl+Y and Ctrl+Z (Command+Y and Command+Z on Macs) to move backward and forward through your changes.

- The *File>Revert* command restores the image to the last saved version. This is the same as closing the file without saving it and then reopening it.

The Undo History palette displays a list of the changes you made to the image in the current session.



- The Undo History palette, displayed by clicking its tab in the palette well, dragging it into the image area, or by selecting *Window>Undo History*, lists all changes you have made in the current session. You can select any change and then delete it by clicking the palette's trash can icon. This deletes the selected change and all of the subsequent changes listed below it in the palette. (You can also delete a selected change by right-clicking (Control-clicking on Macs) the change, or by selecting the change and then clicking the palette's *More* button and *Delete* command.)

It's important to note that these undo techniques only undo changes made during the current session. Once you close an image and reopen it, you can no longer undo changes. To be sure you don't inadvertently destroy an image or irrevocably change it, always work on a copy of the image, not the original. To be able to undo changes at a later date, you use layers (page 90).

When editing images, you should save them in Photoshop Element's native format—PSD (page 30) to preserve some characteristics of an image that won't be preserved if you save it in other formats.

TIPS

- Without you even being aware of it, your camera is making changes to your images that cannot always be undone. These include such things as sharpness, white balance, and contrast. If you want to be able to set these in a way they can be changed, use the camera's RAW format if it has one. The camera does not adjust these images. You do that later on your computer.

- The *Clear Undo History* command on the palette menu deletes the list of commands you can undo, without undoing them.

QuickSteps USING THE UNDO HISTORY PALETTE

1. Click the *Undo History* tab in the palette well, drag it into the image area, or pull down the *Window* menu and click the *Undo History* command.
2. Click the change you want to undo, then click the palette's trash can icon.

CALIBRATING YOUR MONITOR

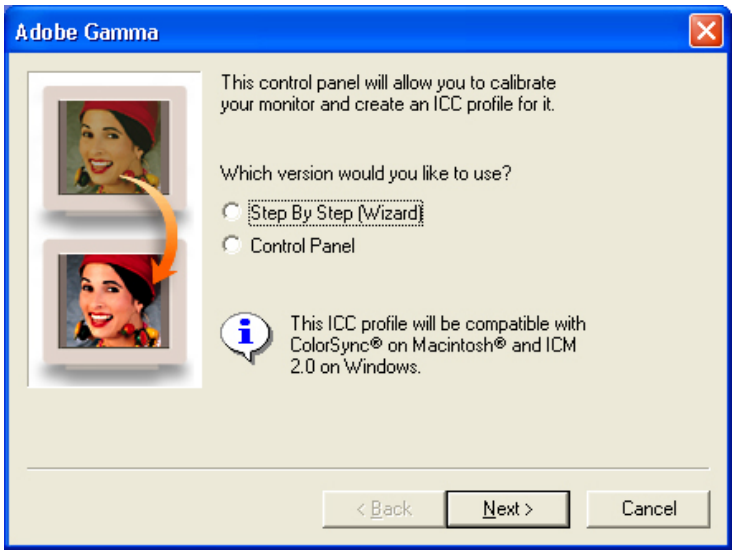
TIPS

- Adobe recommends that your screen resolution be set to at least 1024 x 768 and colors to 24-bits (Windows) or Millions (Macs).
- Before calibrating the monitor make sure it has been on for at least 30 minutes. Set the desktop to display neutral grays only.
- If you do not have a default profile, contact your monitor manufacturer for appropriate phosphor specifications.

One of the first things you should do when you start photo-editing is calibrate your monitor. This standardizes at least one part of your system so grays are neutral without color casts and your prints aren't always too dark or too light. To create a monitor profile on a Windows system, you use the Adobe Gamma software that was installed with Photoshop Elements and which should be listed on Windows' control panel under *Appearance and Themes*. (On a Mac, you use the Display Calibrator Assistant). When you start Adobe Gamma, you can use the *Step by Step (Wizard)* or the more technically oriented *Control Panel*. Most of us choose the easier to understand Wizard since it provides guidance along the way and takes us to the same point. Monitor calibration (Windows) involves adjusting the following settings:

- *Brightness and contrast* adjusts the level and range of the monitor's intensity just as they do on a television set or camera monitor.
- *Phosphors* adjusts for the type of phosphors used to display colors on a CRT display.
- *Gamma* adjusts the brightness of the middle tones and is necessary because the range of tones displayed on a monitor is not linear. If you graphed the brightness of all tones between white and black, they would form a curve, not a straight line. As a result, tones in the middle get crunched together so image gradations aren't as smooth as they could be. Gamma adjusts the middle tones so they more closely match a printer's output.
- *White point* sets the point at which red, green, and blue screen elements create white.

The Adobe Gamma control panel (top) and wizard (right).



QuickSteps CALIBRATING WITH ADOBE GAMMA (WINDOWS)

1. Start Adobe Gamma, located on Windows' Control Panel under *Appearances and Themes* or stored in the *Program Files/Common Files/Adobe/Calibration* folder on your hard drive.
2. Click the *Step by Step (Wizard)* option button, and then click *Next >* to navigate through the steps following the instructions provided.
3. When finished, save the profile.

OPENING AND CLOSING IMAGE FILES

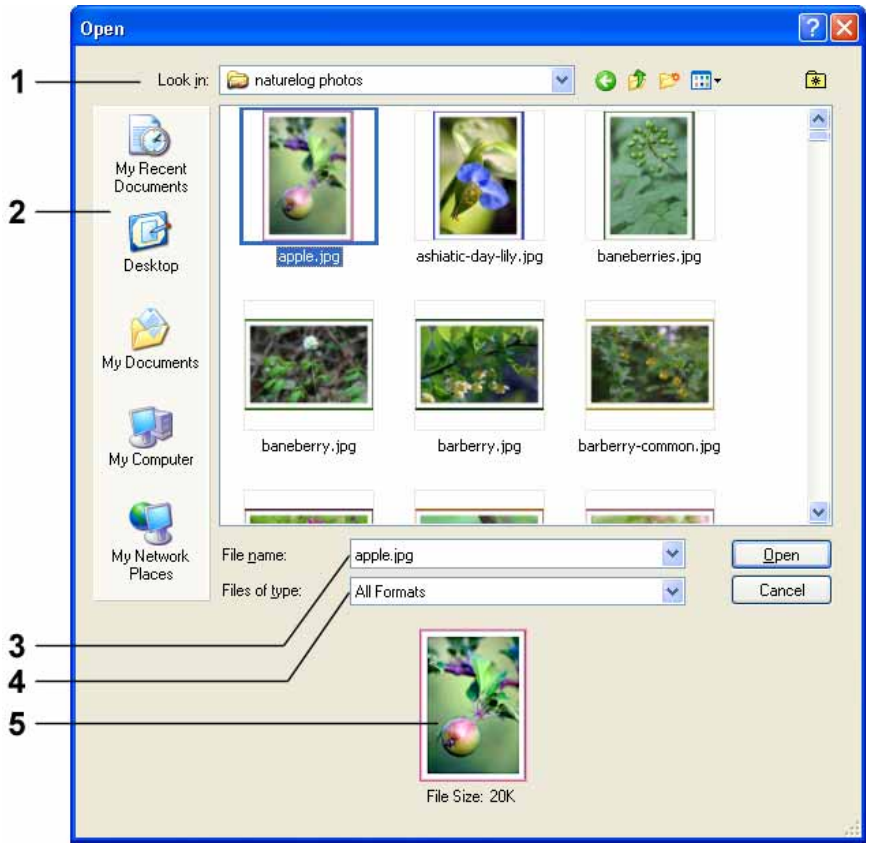
TIPS

- Select *Edit>File Association* to specify which files open in Photoshop Elements when you double-click them in one of the operating system file management tools.
- To change the displayed size of the photo you're editing (not its actual size), hold down Ctrl (Command on Macs) and press the + and - keys on the keyboard.
- If you are planning to edit the image, are you working on a copy? If not, immediately save the image under a new name using the *File, Save As* command.

To work on an image the first step is to open it. To be safe, always open a duplicate of the image rather than the original. That way if anything goes wrong, you haven't permanently lost the image. If you haven't already made a copy to work on, one way to do this is to open the image, then immediately save it in the Photoshop (PSD) format with the *Save As* command (page 30). This ensures that you are working on a duplicate image in a format that preserves all of the file's characteristic. Repeatedly opening, saving, and closing JPEG images degrades them slightly each time.

OPENING IMAGE FILES

You can open an image file by clicking the *Open* button on the shortcuts bar or by selecting *File>Open* to display the Open dialog box with the following settings:



1. *Look in* displays the name of the selected folder. Click it's drop-down arrow to display a tree so you can select another drive or folder. *Buttons* to the right (on Windows) include *Go To Last Folder Visited*, *Up One Level*, *Create New Folder*, *View Menu*, and *Favorites*. (Point to any button to display its name.)

2. *File area* displays files in the selected folder. Since most image filenames are meaningless, you can click the *View Menu* drop-down arrow and click the *Thumbnails* command to see what each image looks like.

3. *File name* text box displays the name of the file that will open when you click the *Open* button. Click any image file to enter its name in this box or

TO DETERMINE IF THIS IS A LEGAL COPY OR REPORT SUSPECTED ABUSE, SEE PAGE 3.

TIP

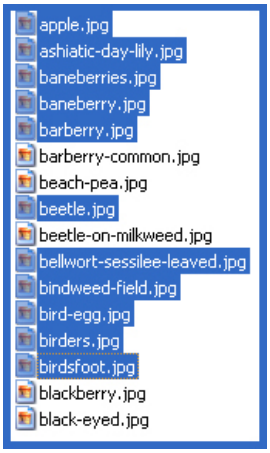
■ You can change the number of file names listed in the *Open Recent* submenu using the *Preferences>Saving Files* command.

click the drop-down arrow to select from a list of the most recently opened files.

4. *Files of type* is normally set to *All Formats* so all files are displayed but you can click it's drop-down arrow and select a specific file type so only files in that format are listed.

5. *Thumbnail* of the selected file, and it's file size, is displayed at the bottom of the dialog box when you select a file and pause a moment.

After closing a file, you can reopen it by selecting *File>Open Recent* to display a list of the files you have worked with most recently.



Keyboard commands can select any groupings of files to open.

SELECTING MULTIPLE FILES

Whenever a dialog box opens for you to select files, you can select more than one file so they open together. Many of these procedures work in combination with each other.

■ *To select or unselect a single file*, click it.

■ *To select or unselect multiple files*, click the first then hold down Ctrl (Command on Macs) while you click other files to select or unselect them.

■ *To select a series of consecutive files*, click the first image in the series and hold down Shift when you click the last.

■ *To select more than one set of consecutive files*, click the first image in the first set and hold down Shift when you click the last image in that set. Now, hold down Ctrl (Command on Macs) to select the first image in the second set, and Ctrl+Shift (Command+Shift on Macs) while you click the last image in that set.

QuickSteps OPENING IMAGE FILES

1. Pull down the *File* menu and click *Open* to display the Open dialog box.
2. Use the *Look in* drop-down arrow and the buttons to its right to open the folder containing the file you want to open.
3. Select the file(s) you want to open and click the *Open* button.

TIP

■ One way to open a group of image files is to select them in Windows Explorer or My Computer (iPhoto or Finder on Macs) and drag them to the Photoshop Elements icon on the task bar (Dock on Macs). If you pause a moment, the program opens and you can drop them into the working area.

CLOSING IMAGE FILES

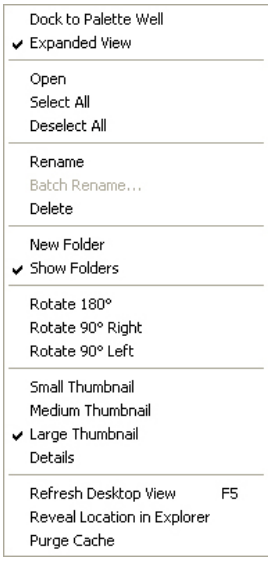
When you are finished with a file, you close it. When you do so without first saving it, you will be asked if you want to save it. Click *Yes* (*Save* on Macs) to save the file. Click *No* (*Don't Save* on Macs) to close the file without saving it. Closing a file without saving it is a good way to abandon any changes you don't want to keep.

QuickSteps CLOSING IMAGE FILES

■ *To close the active image*, click the close button on its window or pull down the *File* menu and click the *Close* command.

■ *To close all images*, pull down the *Window* menu and click the *Images*, then *Close All* commands (On Macs pull down the *File* menu and click *Close All*.)

USING THE FILE BROWSER



Clicking the More button displays the File Browser menu.

The File Browser makes locating and opening images much easier. To display the File Browser, click the *Browse* button on the shortcuts bar or select *Window>File Browser*.

The File Browser screen is divided into sections called *panes*. (If you don't see all of the panes shown here, click the *More* button to display the File Browser menu and click *Expanded View*.

1. *Tree* pane displays drives on the system and folders that you can open, close, or select.

2. *Folder contents* pane displays thumbnails of the images in the selected folder.

3. *Thumbnail* pane displays a large thumbnail of the selected image.

4. *File information* pane displays information about the selected file (page 24).

5. *Last line* displays triangles or arrowheads you click to do the following (from left to right):

- Display All or EXIF information in the File Information pane.
- Toggle expanded view on or off.
- Sort thumbnails by name, date, size, and so on.
- View small, medium, or large thumbnails; or details.
- Rotate and trash buttons that rotate or delete selected images.

TIPS

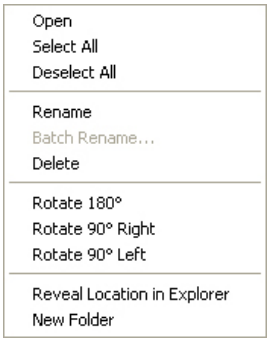
- The tree, file information, and folder contents panes display scroll bars when the pane's contents can be scrolled.
- To change the size of panes, drag their borders.

QuickSteps DISPLAYING THE FILE BROWSER

- Click the *Browse for File* button in the Welcome window or the *Browse* button on the shortcuts bar.
- Pull down the *File* menu and click *Browse*, or pull down the *Window* menu and click *File Browser*.

TIPS

- To select or open images, click their thumbnail, not their name. Clicking the name selects it so you can rename the file.
- You can't use the File Browser to rotate or batch rename files stored on your computer's desktop.
- A cache stores thumbnail and file information to make loading times quicker when you return to a previously viewed folder. Purging the cache frees up disk space on your computer. To purge the cache click the *More* button then *Purge Cache*.



If you right-click (Control+click on Macs) a thumbnail in the File Browser, a context-sensitive menu displays commands you can choose to manage files.

QuickSteps USING THE FILE BROWSER

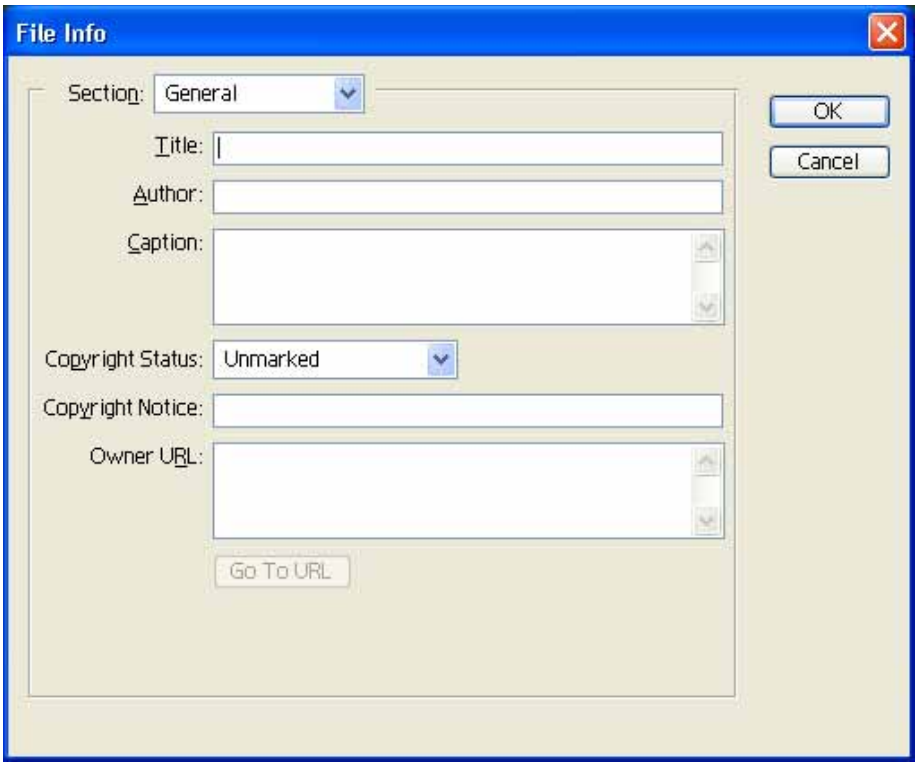
- *To display the file browser full-screen*, click the window's Maximize button.
- *To display the images in a specific folder*, select the folder's name on the tree.
- *To display the file browser's menu*, click the *More* button.
- *To select or deselect individual files*, click a thumbnail.
- *To select multiple files*, see the box "Selecting Multiple Files" on page 21.
- *To select or deselect all files* in the current folder, click *More*, then click *Select All* or *Deselect All*.
- *To open a file*, double-click its thumbnail, select it and press Enter (Return on Macs), drag and drop it into the image area, or select it, then click *More* and *Open*.
- *To rotate selected files* click the *Rotate* button at the right end of the status bar to rotate an image clockwise, or hold down Alt (Option on Macs) as you click the *Rotate* button to rotate the image(s) counter-clockwise. You can also click *More* and then select a rotation choice,
- *To change what and how information is displayed* click the triangles at the bottom of the browser to (from left to right) select what is displayed in the File Information pane (*All* or *EXIF)*, toggle expanded view on or off, select how thumbnails are sorted, or select the size of the thumbnails (or display details instead).

- *To move selected files*, drag and drop them on or into a different folder. To copy the files instead of moving them, hold down Ctrl (Command on Macs) as you drag them.
- *To delete selected files* click the Trash button, drag the files to the Trash button, press the Delete key, or click *More* and then *Delete*.
- *To create a new folder*, select the drive or folder on the tree in which you want to place it, click *More* and then *New Folder*, type a filename, and press Enter (Return on Macs).
- *To rename a file or folder*, click its name in the folder contents pane, or select it and then click *More* and *Rename*. Type a new name, and press Enter (Return on Macs).
- *To refresh the view* to be sure you have the most recent list of images after renaming one or more files, click *More* then *Refresh Desktop View* or close and reopen the File Browser. On Windows you can also press F5 or right-click in the tree pane (Control+click on Macs) and select *Refresh*.
- *To display files in Windows Explorer or Mac OS Finder* click the *More* button then click *Reveal Location in Explorer* (or *Reveal Location in Finder* on Macs).

VIEWING A FILE'S INFORMATION

When you capture a photo, much information about it and the camera settings used to capture it are stored in the image's file along with the picture. This information, such as the date and time the picture was taken, its resolution, the ISO speed rating, f/stop, compression, and exposure time is called *EXIF file information*. To display this information while editing images, or to add your own copyright information, select *File>File Info* to display the File Info dialog box. The *Section* drop-down arrow selects *General* or *EXIF*.

The Section drop-down arrow on the File Info dialog box lets you view EXIF information stored by the camera or enter your own copyright information so others will see it when the open the image.



■ *EXIF displays* information imported from your digital camera. You can also see this information in one of the File Browser's panes (page 22).

■ *General* displays a form you can fill out to add your own information to the file. Unlike information added in an asset management program, this information travels with the image. If you share the image, or post it on the Web, other users will be able to read it. (On Windows you can only add information to images saved in Photoshop, TIFF, JPEG, EPS, and PDF formats.)

- *Caption* information can be printed under an image or displayed on a Web browser's title bar. To print a caption, select *File>Print Preview> Caption (Show More Options* check box must be on*)*, then print as usual (page 34).
- *Copyright Status* lets you select *Copyrighted Work* so a copyright symbol is displayed on the window's title bar when someone else opens the image in Photoshop or Photoshop Elements. If you select this choice, enter the copyright notice text in the *Copyright Notice* text box. For example, you could enter *Copyright 2005 by Weegee. All rights reserved.*
- *Owner URL* is where you would enter a link to your own site where you post information about you or the image. If you enter a URL, click the *Go To URL* button to test the link.

DIGIMARK WATERMARKS

If you open an image that's protected from misuse by a watermark that specifies copyright and authorship information, a copyright symbol is displayed in the image window's title bar. For information about the copyright select *Filter>Digimarc> Read Watermark*. For information about the owner of the image, click *Web Lookup*.

COLOR MANAGING YOUR IMAGES

TIP

■ Some digital cameras don't attach profiles to images although their EXIF data list sRGB. Since Photoshop Elements relies on this information to display colors, images will suffer. To prevent this, Adobe offers a free plug-in called *Ignore EXIF Color Space* that you copy into the Adobe Photoshop Elements 2 Plug-Ins folder. Photoshop Elements will continue to ignore the EXIF color space setting in files until you remove the plug-in and restart the program.

One problem digital photographers have to cope with is the way the colors and tones in our images look different on different devices. This becomes especially apparent when we print an image and it doesn't look the same as it does on the screen. What is the point in our getting an image to look perfect on the screen if it looks different on other screens, or if prints made from it are too light or dark or have color casts? To keep colors and tones as consistent as possible, we use a process called *color management*. The basic idea is to attach a profile to each image that describes what colors the image contains—technically called a *color space*. Many cameras use a color space called sRGB when capturing an image and then attach a profile for sRGB colors so other devices will know what color space was used. A few cameras let you choose a color space. If so, one called *Adobe RGB* has a wider range of colors—called a *gamut*. Attaching a profile to an image is only the first step. To give it value, other devices such as monitors and printers must be able to interpret the profile so they can accurately display or print the colors it contains. This is done by assigning each device its own profile that acts much like a translation table when the image is printed or displayed on a monitor. The process goes something like this:

1. The printer or monitor looks at the image's attached profile to see what color space it uses and then sets its profile to the same color space. It's as if a tour guide meets two tourist and asks "What language do you speak?" If one responds "English" and the other "Deutsch" the guide knows how to interpret between the two.

2. As each pixel now arrives from the image, the printer or monitor checks its color value and then looks up that color in its profile to see how to print or display it. Without profiles to translate between devices, the devices would just be able to display a fixed set of unadjusted colors.

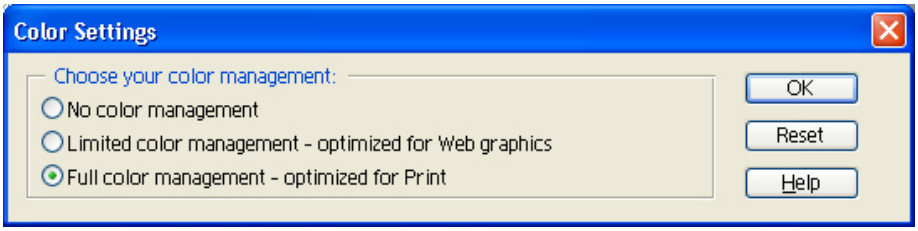
To make this system of profiles as universal as possible, a group called the International Color Consortium writes the rules, so many profiles are identified as *ICC profiles*.

When you open an image, you can check to see what color profile is attached, and then leave it as is, or change it. You would change the profile to better match the colors to the device you are planning to output it to. For example, if you are going to display an image on the Web, you can let an sRGB profile attached by the camera manage the image, or if the camera attached an Adobe RGB profile, you can attach an sRGB profile to override it.

■ To see which, if any, color space the camera used to capture your image, select *File>File Info* and then click the *Section* drop-down arrow and select *EXIF*. You can also see what profile is attached by selecting the file in the File Browser (page 22), or when using the *File>Save As* (page 30) and *File>Print Preview* (page 34) commands.

■ To change the color profile attached to the image, select *Edit>Color Settings* to display the Color Settings dialog box with the following choices:

The colors of prints depend on the light under which you view them. Many photographers are using Solux bulbs and lamps to evaluate their prints because they so closely approximate daylight. Courtesy of Solux (http://www.solux.net).



■ *No color management* leaves your image as-is so color is managed by the profile attached by the camera.

■ *Limited color management* attaches an sRGB profile to optimize the image for screen display.

■ *Full color management* attaches the Adobe RGB color profile so the fullest range of colors is used when making prints.

Once you have select a setting, you need to save the file to retain it. To do so, select *File>Save As* and turn off the *ICC Profile* check box. If you leave this check box on, the original profile will remain attached to the file. If you selected *Full color management*, you must save the file in the PSD or TIF format.

TIP

■ To complete the color management process when printing, you should select a printer profile using the *File>Print Preview* command (page 34).

QuickSteps COLOR MANAGING IMAGES

1. With the image open and active, pull down the *Edit* menu and click *Color Settings*. The option button for the current setting is selected.
2. Click the option button for one of the color management options and then click OK.
3. Pull down the *File* menu, and click the *Save As* command. If you selected *Full color management*, be sure *Format* is set to PSD or TIFF.
4. Turn off the *ICC Profile* check box (*Embed Color Profile* on Macs) in the Save As dialog box so the original profile isn't saved with the image and then click *Save*.

ZOOMING AND VIEWING IMAGES

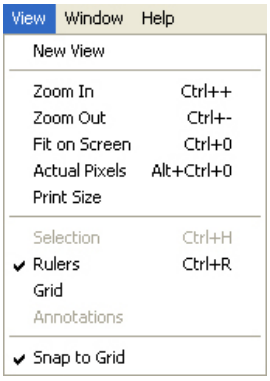
TIP

■ Colors are displayed most accurately when an image is displayed at its actual size (100%). You should use this setting when making color corrections.

When you open a digital photo, it appears in an *image window* (Adobe calls it a *document window*). While editing, you can zoom both the photo and its window, rearrange windows, and scroll around enlarged images to examine details or make precise selections.

SIZING WINDOWS

Windows application and image windows have three buttons in their upperright corner that size or close windows or applications. On Mac systems there are three buttons in the upper left corner of image windows that do much the same thing. Normally, when you zoom an image its image window doesn't automatically change size. To make it do so when you change its size with keyboard commands, pull down the *Edit* menu *(Photoshop Elements* on Macs) and select *Preferences>General*. Turn on the *Keyboard Zoom Resizes Windows* check box.

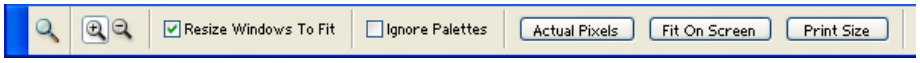


The View menu lists zoom commands and their keyboard equivalents.

THE ZOOM TOOL AND NAVIGATOR PALETTE

You can zoom the size at which a photo is displayed a number of ways. The window's title bar displays the zoom percentage (unless the window is too small for the display to fit), as does the status bar.

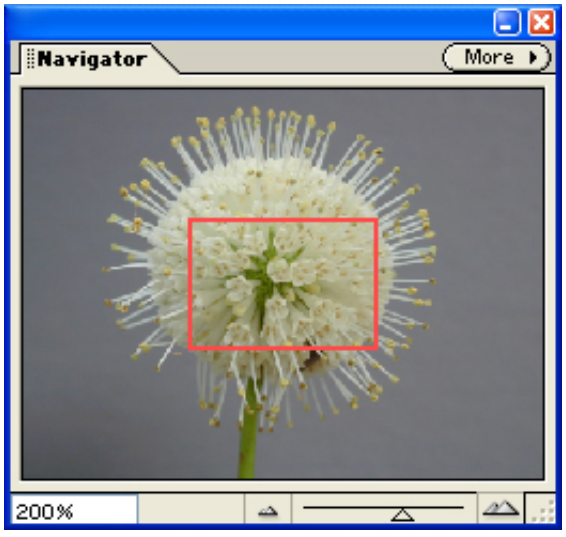
■ The Zoom tool quickly zooms an image up or down. To use it, click the Zoom tool to select it and display it's options bar.



- *Resize Windows to Fit* check box, when on, resizes the window when you magnify or reduce the view of the image. When off, the window maintains a constant size regardless of the image's magnification.
- *Ignore Palettes* check box, when on, allows image windows to enlarge under any palettes open close to the right edge of the screen. When off, some commands won't enlarge the window past these palettes.

■ The navigator palette zooms and navigates the image. To display it, click the *Navigator* tab in the palette well, drag it into the image area, or select *Window>Navigator*.

The Navigator palette displays a red view box outlining the area displayed on the screen. You can drag the box to scroll around the enlarged image.



TIP

■ To display the same image in two windows so you can see it at different magnifications select *View>New View*.

■ When the Zoom tool is selected, you can right-click (Command+click on Macs) in the image area and select a number of zoom settings from the men that appears.

ZOOMING AN IMAGE

■ *To zoom the image incrementally*:

- Hold down Ctrl (Command on Macs) and press + or - on the numeric keypad.
- Drag the slider in the Navigator palette or click the zoom buttons.
- Select the Zoom tool and drag over the part of the image you want to zoom. The area inside the zoom marquee is displayed full screen when you release the mouse button. After selecting an area you can move the marquee if you don't release the mouse button while you press the spacebar and then drag.
- Select the Zoom tool, click the + or - buttons on the options bar, then click the center of the area you want to size. When the maximum (1600%) or minimum (1 pixel) zoom limit is reached, the + or - in the magnifying glass disappears. To switch between zooming in and zooming out without clicking the options bar, hold down Alt (Option on Macs).
- Select *View>Zoom In* or *View>Zoom Out*. When a limit of zoom is reached, the command is dimmed.

■ *To zoom the image to a specific percentage*, type the desired magnification into the *Zoom* text box on the status bar or in the Navigator palette and press Enter (Return on Macs).

■ *To zoom the image to its actual pixel size* (100%), so you can see what it will actually look like when displayed on a monitor just like yours:

- Double-click the zoom tool.
- Select the Zoom or Hand tool and click the *Actual Pixels* button on the options bar.
- Select *View>Actual Pixels* (Alt+Ctrl+0 or Option+Command+0 on Macs).

■ *To enlarge the image to fill the screen*:

- Double-click the hand tool.
- Select the Hand or Zoom tool and click the *Fit On Screen* button on the options bar.
- Select *View>Fit on Screen* (Ctrl+0 or Command+0 on Macs).

■ *To zoom to the approximate printed size*, as specified in the *Document Size* section of the Image Size dialog box (page 47).

- Select the Zoom tool, click the *Print Size* button on the options bar.
- Select *View>Print Size*.

SCROLLING AROUND AN ENLARGED IMAGE

When the image is zoomed larger than its window, you can scroll around it.

■ Select the Hand tool and drag the image. To use the Hand tool while another tool is selected, hold down the spacebar as you drag the image.

■ Use the window scroll bars.

■ Display the Navigator palette (page 27) and drag the red view box or click anywhere in the thumbnail to center the view box on that point.

WORKING WITH MULTIPLE IMAGES

You can open a number of different images when you want to copy, move, or compare them. But that isn't the only reason to have more than one image window open. One important reason is to have two views of the same image at different levels of zoom. Another is to have two copies of the same image—one edited and the other unedited.

TWO VIEWS OF THE SAME IMAGE

Having two views of the same image lets you see it at two levels of magnification. For example, you can have one view zoomed to a high magnification to work on a detail while the other view shows the effects of your changes on the image displayed at its actual size (100%). Editing changes made to either view are reflected in both windows because both are displaying the same image. To open multiple views of the same image, select *View>New View*.

DUPLICATING AN IMAGE

Duplicating an image lets you experiment with and compare before and after versions as you make changes. The changes made to one copy don't affect the other so its easier to see the effects your changes are having. To duplicate an image choose *Image>Duplicate Image* to display the Duplicate Image dialog box. Enter a name for the duplicated image and click *OK*. Although named, the duplicate image isn't saved unless you use the *File>Save* command.

ARRANGING MULTIPLE IMAGES

When two or more windows are open at the same time, you can size and drag them as needed or select *Window>Images* to display a submenu, then select one of the following commands:

- *Tile* displays windows side by side.
- *Cascade* displays overlapping windows cascading down and across the screen.

Tiled windows (left) and cascaded windows (right).

SELECTING WINDOWS

When there is more than one image open, the title bar of the active window is a darker blue. You can quickly switch between or among images by pressing Ctrl+Tab (Control+Tab on Macs), or by selecting *Window>Images* and then selecting one of the images listed at the bottom of the menu.

SAVING IMAGE FILES

TIPS

- The *Save for Web* command is discussed on page 131)
- Saving GIF images is discussed on page 134.
- To save an image that arrives by e-mail or that you see on a Web page, right-click it (Control+click on Macs) to display a menu with a save command.
- When working on a JPEG image you can save it repeatedly during a session without affecting its quality. It's only compressed once, when you close it.

When saving image files, there are a few basic rules that make your life easier and less anxious:

- Always work on a copy and not the original. If you open an original image to edit it, your very first step should be to save it in a new folder, under a new name, or in a new format (ideally PSD) so you don't inadvertently overwrite the original file later.
- Save your working copy in Photoshop Element's native (PSD) format. This format ensures that all of the image data are saved.
- Save the final copy in a format fit to it's purpose. Different file formats cater to the needs of different applications. The file format you choose depends on the content of your image and how you plan to use it. For example, if you're saving a digital photo for use on the Web, you should choose the JPEG format, or possibly PNG. If you are just going to make a print from the image, save it in PSD format. If you are moving the image to another application such as a desktop publishing program, you might save it as a TIFF file or even leave it in the PSD format if the application program supports that format.

THE SAVE COMMAND

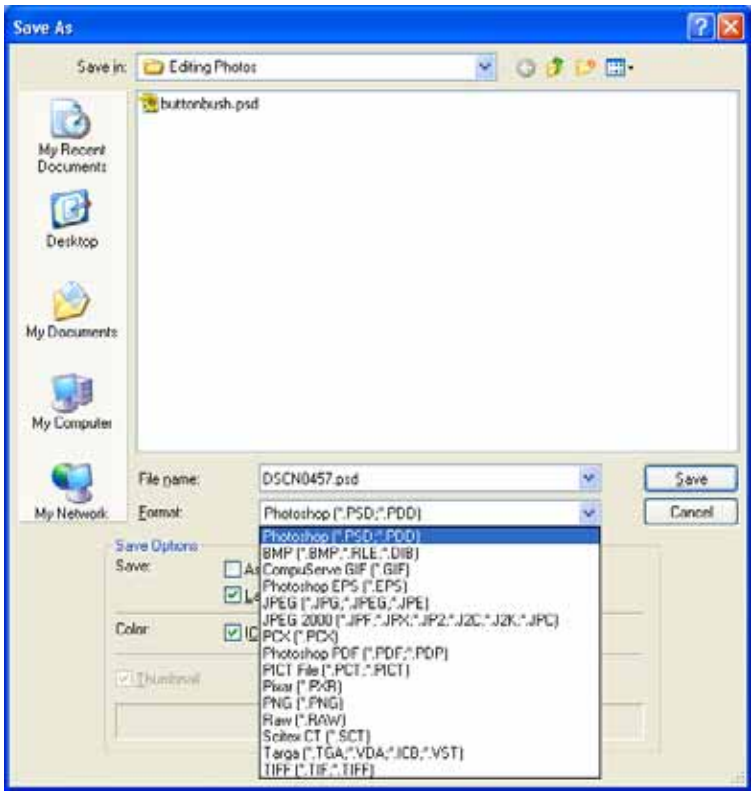
The *File>Save* command and the *Save* button on the shortcuts bar saves changes you've made to the current file using the current format. If you use this command to save a new file that hasn't been saved before, the Save As dialog box described below appears. The problem with using this command to save a JPEG image is that each time you close, reopen, and resave a JPEG file, it is compressed again—gradually reducing its quality over time. It's best to first save the image in PSD format with the *File>Save As* command and then use this command to save that file whenever you want. PSD files aren't compressed.

THE SAVE AS COMMAND

The *File>Save As* command displays the Save As dialog box where you can specify a new location, filename, and/or format when you save a file. In the dialog box, select one or more of the following options although not all are available for all formats:

- *Save in* is where you browse for the folder in which you want to save the image. The four buttons to the right are *Go to last folder visited, Up one level, Create new folder*, and *View Menu*.
- *File name* text box displays the current filename and is where you type a new one. If you enter a name that's already in the same folder, you will be asked if you want to replace it when you save the file.
- *Format* drop-down arrow displays a list of formats in which to save the image. The image's current format is selected.
- *Save Options* has two check boxes.
  - *As a Copy* saves a copy of the file while keeping the current file open in Photoshop Elements.

The Save As dialog box lets you save an image in a variety of formats.



If you choose a format that does not support all of the data in an image, this warning icon is displayed. To save all of you data, be sure to save one copy in Photoshop's PSD format.

- *Layers* preserves all layers in the image (page 93). If this option is dimmed, the image has no layers or the format you have chosen doesn't save them. If you see the warning icon displayed, the layers in your image are automatically flattened. To preserve layers, select another format.

- *Color* has a check box for *ICC Profile* (*Embed Color Profile* on Macs) and, when on, the listed color profile is saved in the image.

- *Thumbnail* check box (Windows) indicates if a thumbnail image is being saved in the image file (see Tips).

- *Use Lower Case Extensions* check box (Windows) makes the file's extension lowercase.

- *Save* button completes the save using the current settings. With some image formats, a format specific dialog box appears. In the following pages we discuss the most common formats–JPEG, PSD, and TIFF. To learn more about other formats use help.

TIPS

- The *Thumbnail* check box is only available if you set *Image Previews* to *Ask When Saving* on the Preferences menu.

- UNIX file servers, widely used on the Web, do not always recognize upper-case extensions. To ensure that your images are transferred properly, use lower case extensions.

QuickSteps SAVING IMAGES WITH THE SAVE AS COMMAND

1. Pull down the *File* menu and click the *Save As* command to display the Save As dialog box.
2. Do the following and change any other settings.
   - Click the *Save in* drop-down arrow to select a folder.
   - Type a filename in the *File name* text box
   - Click the *Format* drop-down arrow to select a file format.
3. Click the *Save* button to save the file. In some cases, a dialog box specific to the chosen format appears.

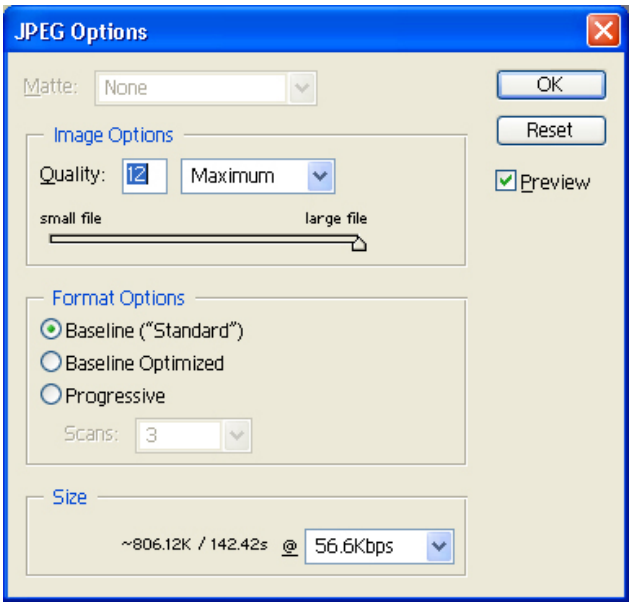
SAVING PSD IMAGES

When editing images, the master working copy should always be saved in Photoshop's native PSD format. This format preserves the most information about the image and makes it available each time you reopen the file. When you select this format, the file is saved without displaying an additional dialog box.

SAVING JPEG IMAGES

The JPEG format is the most widely used file format in digital photography. One of it's main features is your ability to control how much the image is compressed—trading off its file size against its quality. When you select the JPEG format in the Save As dialog box and click the *Save* button, the JPEG Options dialog box appears with the following options:

The JPEG Options dialog box lets you specify how much the image is compressed.



- *Matte* selects a background color for an image with transparent areas (page 114). If there are no transparent areas, the option is dimmed.
- *Quality* sets the amount of compression used between 1 (highest compression, lowest quality) and 12 (lowest compression, highest quality). To change the setting, click the drop-down arrow, drag the slider, or type a value between 1 and 12 in the text box.
- *Format Options* section includes the following option buttons:
  - *Baseline ("Standard")* creates images recognizable to most Web browsers.
  - *Baseline Optimized* optimizes the image's color and creates a slightly smaller file that is not recognized by all Web browsers.
  - *Progressive* creates an image that displays itself in a Web browser in steps, the number of which you specify with the in the *Scans* text box. It appears first as a low-resolution image and then gradually gets sharper and more detailed as additional scans arrive. Files are slightly larger and are not recognized by all Web browsers and other applications.
- *Size* lists the size of the file. When the *Preview* check box is on you can also click the drop-down arrow and select the speed of any Internet connection to see an estimated download time for the image.

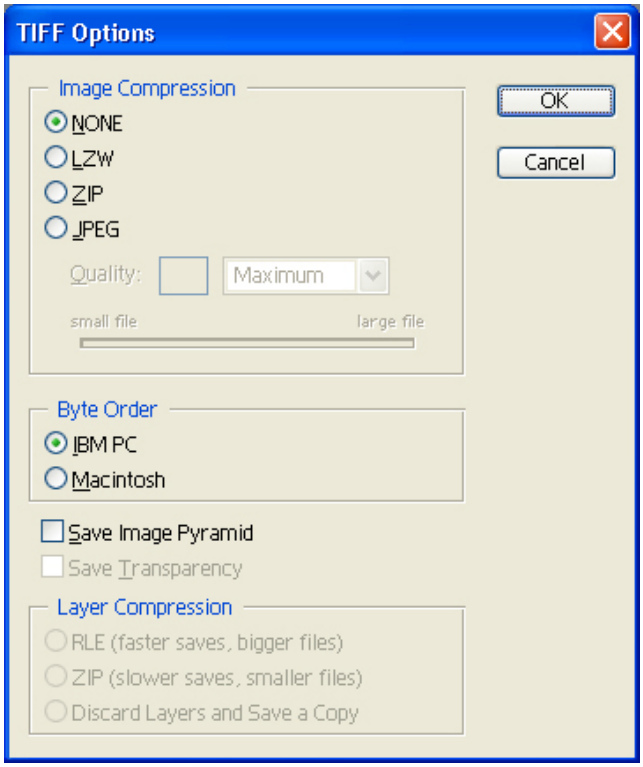
TIPS

- You occasionally encounter references to *transparent areas* in an image. Digital photos don't have such areas unless you add layers (page 90) and then cut holes through them to show layers beneath them.
- You can't save Indexed Color and Bitmap mode images in JPEG format.

SAVING TIFF IMAGES

Tagged-Image File Format (TIFF) is a high-quality format often used for print applications and to exchange images among applications and computer platforms. When you select the TIFF format in the Save As dialog box and click the *Save* button, the TIFF Options dialog box appears with the following options:

The TIFF Options dialog box lets you specify which type of compression is used.



■ *Image Compression* specifies what method is used to compress the image. Since this format is usually used to retain the highest possible quality, you would normally leave this set to *None*.

■ *Byte Order* is a question with no answer unless you know that your image will be opened on only one of the two offered systems—IBM PC or Macintosh. Luckily most applications can now read files using either byte order.

■ *Save Image Pyramid* retains multi-resolutions if the file contains them (few do).

■ *Save Transparency*, available only if the image has transparent areas, retains transparency (page 114) when an image is opened using another application. (Transparency is always preserved when the file is reopened in Photoshop Elements.)

■ *Layer Compression* specifies how layers (page 90) are compressed. The choices include the following:

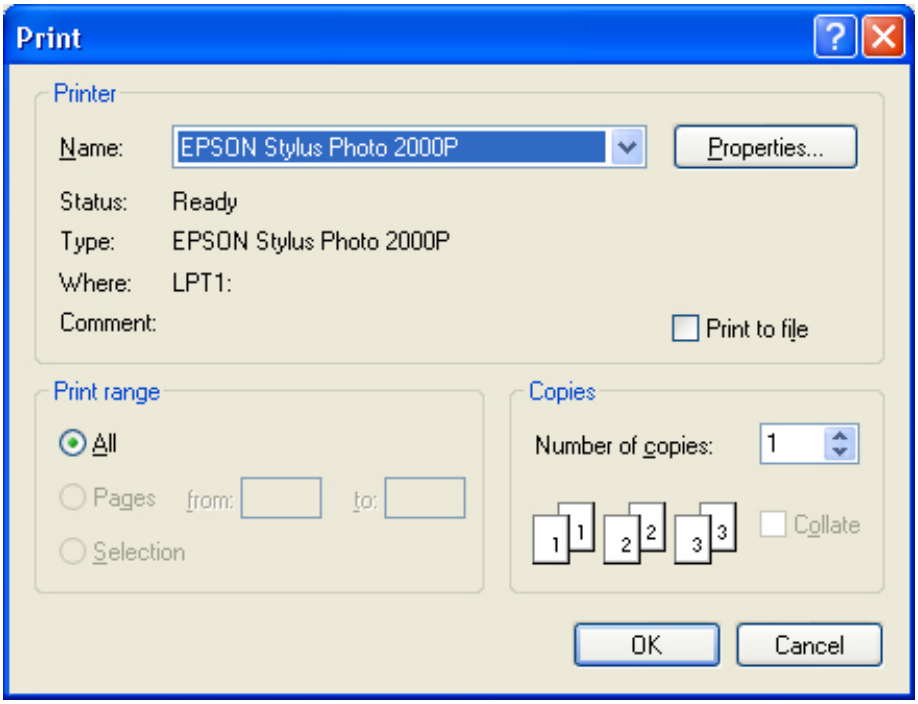
- *RLE (faster saves, bigger files).*
- *ZIP (slower saves, smaller files).*
- *Discard Layers and Save a Copy* flattens the layers (page 99).

PRINTING IMAGES

When you use the Print command without first changing the size or orientation of an image, a warning is displayed. You can click the Scale to Fit Media check box or the Preview button.

One of the most exciting procedures in digital photography is printing your images. One way to do so is to click the *Print* button on the shortcuts bar, or select *File>Print* to display the Print dialog box so familiar from other applications. If the image is too large for the paper you are printing on, the Print Clipping Warning dialog box appears. You can click the *Scale to Fit Media* check box to make the image fit on the paper, or click the *Preview* button to switch to the Print Preview dialog box where you can drag the image to the size you want it.

When you print an image, you use dialog boxes that are part of your printer's driver. The choices depend on what printer you are using.



- *Name* drop-down arrow selects a printer from those installed. Details on the selected printer are listed below.
- *Properties* button displays that printer driver's dialog box. The choices offered in this dialog box depend on the printer you are using but usually include the paper type and size, the orientation of the image on the page, and even printer adjustments and head cleaning.
- *Print range* section specifies which pages are printed in multi-page documents.
- *Copies* specifies how many copies are printed.

TIPS

- If you can't print an image because it's too large for the paper, resize the image to reduce its height and width.
- To control the size of an image when you print it out, use the *File>Print Preview* command or use the *Image>Resize>Image Size* command (page 47)

QuickSteps PRINTING AN IMAGE

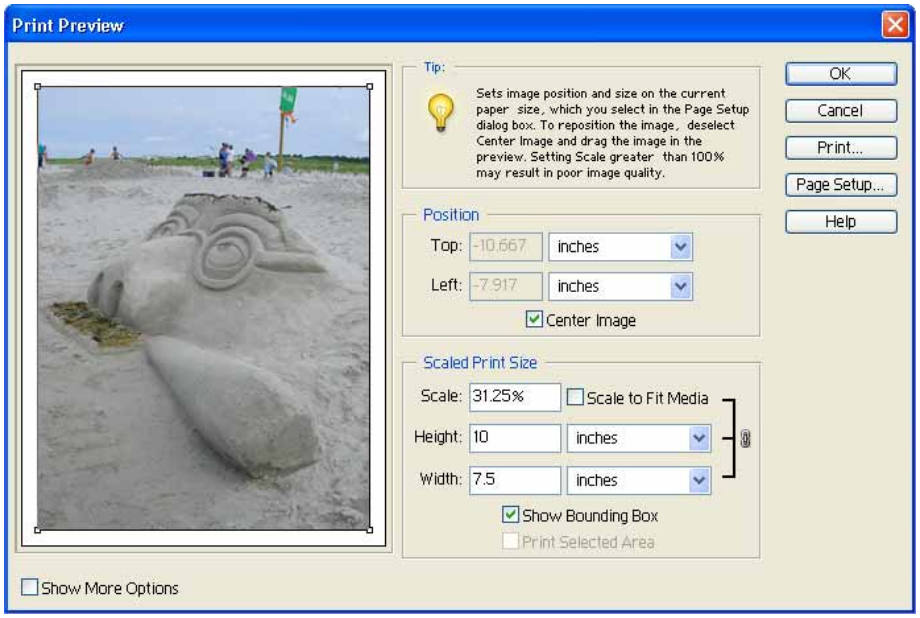
1. Click the *Print* button in the shortcuts bar, or pull down the *File* menu and click the *Print* command to display the Print dialog box.
2. Click the *Name* drop down arrow to select a printer and change any other settings. (Click the *Properties* button to specify a paper type or orientation.)
3. When finished, click *OK* to begin printing.

TIPS

- As you drag or size the image in the preview pane, the text boxes update to reflect the changes.
- When you point to the bounding box, the mouse pointer changes when it's in a position to size or drag the image.

USING PRINT PREVIEW

When you print an image, it normally prints at the size specified by the camera or the *Image>Resize>Image Size* command (page 47). To preview how your image will look on the page, or to adjust its size and other settings before you print it, click the *Print Preview* button on the shortcuts bar or select *File>Print Preview* to display the Print Preview dialog box with the following choices:



The Page Setup dialog box.

- *Preview pane* on the left shows how the image will look on the page when printed. The image is bordered with a bounding box that you can use to size it by dragging the corners or sides of the image. (You may have to drag the image to see the border, or turn on *Show Bounding Box*.) The white area of the preview represents the printable area of the selected paper size and the gray area represents the unprintable borders, the width of which vary from printer to printer.
- *Show More Options* check box, when on, displays additional settings for *Output* (page 36) or *Color Management* (see page 37).
- *Tip* displays help on Print Preview.
- *Position* section aligns the image on the page using the following techniques:
  - *To center the image*, turn on *Center Image*. If the check box is dimmed, turn off *Scale to Fit Media*.
  - *To drag the image to a new position*, turn off *Center Image* and turn on *Show Bounding Box*. If the *Center Image* check box is dimmed, turn off *Scale to Fit Media*. Point anywhere in the image and drag it to a new position.
  - *To specify offset distances*, type in values for the distance from the *Top* and *Left* edges of the paper when *Center Image* and *Scale to Fit Media* are off. The drop-down arrows let you select your preferred unit of measurement.
- *Scaled Print Size* section specifies the height and width of the printed image—not the file's actual size in pixels. The initial settings are those set by

The orientation of your paper should match the orientations of your image—either landscape (top) or portrait (bottom). To change it click the Page Preview button.

TIP

■ The *File>Online Services* feature allows you to send images from Photoshop Elements to online photo printing companies.

the camera or the *Image>Resize>Image Size* command (page 47). Scale the print size of the image—being sure it fits in the printable area of the paper—using one of the following techniques:

- *To have the image fill the printable area of the paper* in at least one dimension, turn on *Scale to Fit Media*.
- *To change the size of the image by dragging*, turn on *Show Bounding Box* and drag a bounding box handle. If you can't see or drag the bounding box, turn off *Scale to Fit Media* or drag the image.
- *To specify a specific size*, enter a value for the *Scale*, *Height*, or *Width*. As you change one size, the others change automatically. Drop-down arrows let you select your preferred unit of measurement. If these boxes are dimmed, turn off *Scale to Fit Media*.

■ *OK* saves the settings you have made in the dialog box. They are then saved along with the image if you save it.

■ *Cancel*/*Reset* cancels the command and closes the dialog box. *Reset*, displayed when you hold down Alt, resets all settings to their defaults so you can try again.

■ *Print* /*Print One* displays the Print dialog box (page 34) so you can print the image. *Print One* is displayed when you hold down Alt.

■ *Page Setup* displays the Page Setup dialog box where you can select the paper size, source, and orientation of portrait (vertical) or landscape (horizontal).

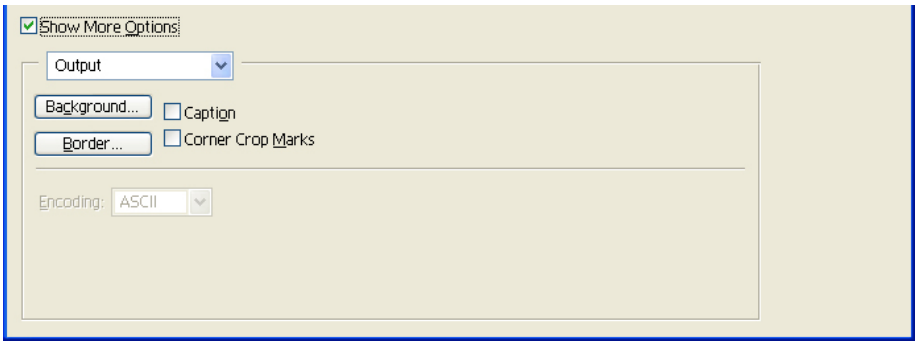
■ *Help* displays help on the Print Preview command.

QuickSteps USING PRINT PREVIEW

1. Pull down the *File* menu and click the *Print Preview* command to display the Print Preview dialog box.
2. Make any changes to settings and then click *OK* to save the settings.
3. Click *Print* to display the Print dialog box (page 34)

SETTING OUTPUT OPTIONS

When you turn on the *Show More Options* check box, the Print Preview dialog box expands to show *Output* choices. Options not supported by the selected printer are dimmed.



■ *Background* displays the color picker (page 108) so you can print a background color around the image. (The background does not appear in the image file.)

■ *Border* prints a black border around an image. Click the drop-down arrow to select a unit of measurement and type in the desired width of the border.

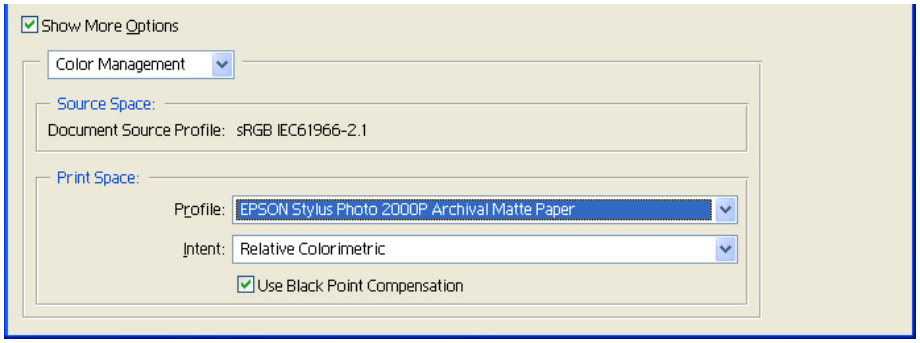
■ *Caption* prints any caption text entered in the File Info dialog box (page 24) using 9-point Helvetica plain type.

■ *Corner Crop Marks* prints crop marks that can guide you when trimming a print.

■ *Encoding* methods determine how image data is sent to a printer over a network. By default, binary is used but you can choose JPEG or ASCII encoding. If you are interested in this setting, check the manual and on-line help for details.

USING COLOR MANAGEMENT WHEN PRINTING

When the dialog box is expanded to show *Output* choices, you can click the *Output* drop-down arrow and select *Color Management* to better match the way the image looks on the screen and in the print. Images are displayed on the screen using red, green, and blue (RGB) colors but are printed using cyan, yellow, magenta, and black (CMYK) inks. Color management bridges this gap by using profiles that match screen and printer images.



■ *Source Space* displays the image's attached color profile (page 25).

■ *Profile* drop-down arrow displays a list of profiles from which to choose.

- If available, your first choice should be a predefined color profile for your printer so colors are converted specifically for that printer and in some cases even paper type.
- Choose *Same As Source* to print using the image's color profile without using the printer's profile.
- Choose *Printer Color Management* or *PostScript Color Management* to manage color conversions using the printer's driver. *PostScript Color Management* is only available when printing to a PostScript device.

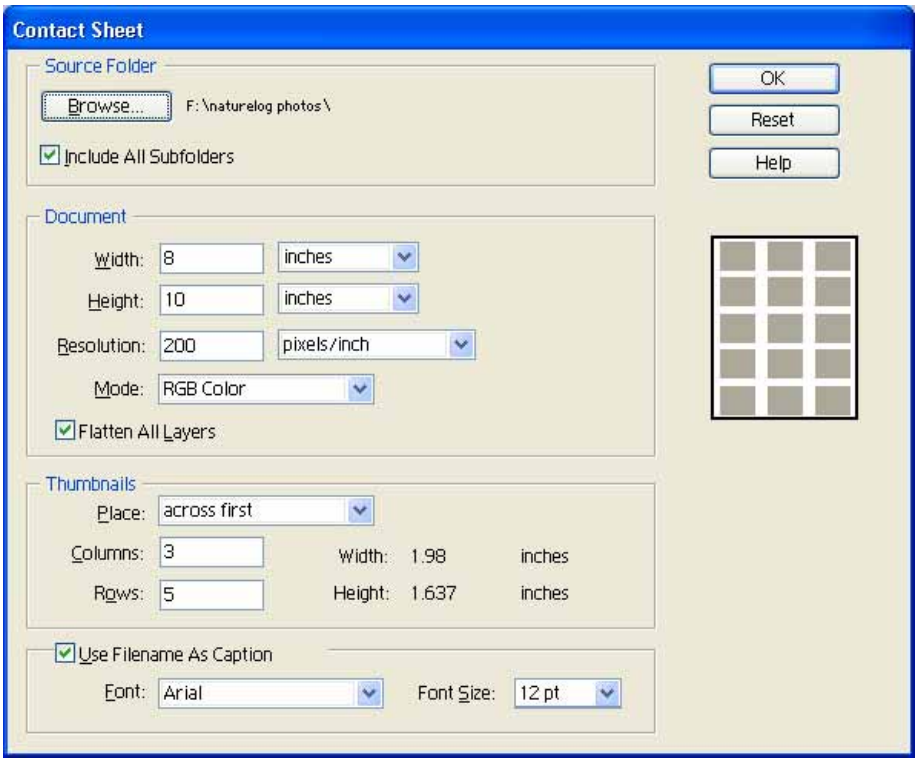
■ *Intent* drop-down arrow displays a list of rendering intents that adjusts how colors are converted. *Perceptual* is the best for photographic images because it preserves the visual relationships among colors so they look natural. For information on the other choices, use help.

■ *Use Dark Point Compensation* check box should always be on so adjustments are made for the differences in black points when colors are converted. If turned off, your image may have shadows printed without details.

PRINTING CONTACT SHEETS

A contact sheet.

Contact sheets contain small thumbnails of each image in a selected folder. You can use these indexes to manage your collection of images or include an index along with a CD/DVD you send to someone so they can see what's on the disc without opening the files. To select images and lay out a contact sheet, select *File>Print Layouts>Contact Sheet* to display the Contact Sheet dialog box. A preview shows you the effects of your choices.



- *Source Folder* section's *Browse* button lets you select a folder containing the images you want included. The *Include All Subfolders* check box specifies if the images in subfolders are also included.
- *Document* section specifies the size of the area in which the thumbnails will print—not the size of the paper. The *Mode* drop-down arrow lets you print the contact sheet in RGB color or grayscale. The *Flatten All Layers* check box, when on, flattens all layers (page 99). When off, layers are preserved.
- *Thumbnails* section specifies the order of the images on the page and the number of rows and columns in which they will print. Changing the rows and columns also changes the size of each thumbnail.
- *Use Filename as Caption* section specifies if the filename is printed below each thumbnail and if so, in what typeface.

TIPS

- Contact sheets include every image in a folder. You can't pick and choose. To print a contact sheet of just selected images, first copy them to a folder of their own.
- Photoshop Elements takes a long time to create contact sheets because it has to extract thumbnails from the images. Image management programs generate these pages of thumbnails much more quickly because the thumbnails are already extracted and stored separately in a database.

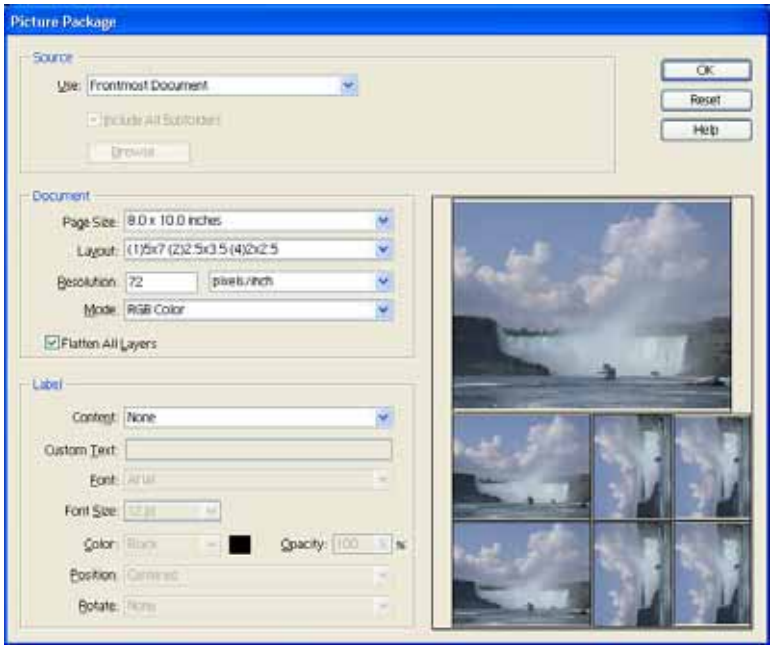
QuickSteps PRINTING A CONTACT SHEET

1. Pull down the *File* menu then click the *Print Layouts* and *Contact Sheet* commands to display the Contact Sheet dialog box.
2. Browse for the folder containing the images.
3. Specify the layout for the page and then click *OK*.

PRINTING PICTURE PACKAGES

To change any image in the layout, click it in the preview and select a new image.

Picture packages print one or more images on a single sheet of paper. To select images and lay out a print package, select *File>Print Layouts>Picture Package* to display the Picture Package dialog box. A preview shows you the effects of your choices.



TIP

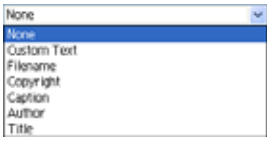
■ You can create your own layouts. If interested search help or the user guide for "customizing picture package layouts."

■ *Source* section specifies what image to print. The *Use* drop-down arrow lets you select a *File*, *Folder* (to create a page for each image in the folder), or the *Frontmost Document* that's open. The *Browse* button let you select a file or folder containing the images you want picture packages of. The *Include All Subfolders* check box specifies if the images in subfolders are also included.

Picture Package layout choices

■ *Document* specifies the size of the area in which the images will print—not the size of the paper on which you will print them. The *Layout* drop-down arrow selects the sizing and number of images. The *Mode* drop-down arrow lets you print the images in RGB color or grayscale. The *Flatten All Layers* check box, when on, flattens all layers (page 99).

When you select the first image for the picture package, the preview shows it repeated in all of the layout's print positions. To print a different image in any space, click in that space to display the Select an Image File dialog box and browse for the image. For example, select a layout for two 5 x 7 prints and click one of them on the preview to select a second image for the same page. Do this after selecting a layout because changing the layout restores the same image to all positions.



Picture Package label choices

■ *Label* specifies if a label is printed and if so, what its content and format is.

QuickSteps PRINTING A PICTURE PACKAGE

1. Pull down the *File* menu then click the *Print Layouts* and *Picture Package* commands to display the Picture Package dialog box.
2. Browse for the folder containing the images.
3. Specify the layout for the page and then click *OK*.

Chapter 2
Fixing Your Images

CONTENTS

It is the rare image that can't be improved by tweaking. These adjustments include adjusting the image's size, tonal range, colors, sharpness, and retouching small defects or blemishes. In this chapter we start by showing how you analyze an image to see how it can be improved. Until you can look at your images critically, it's hard to tell what needs to be done to make them better. You'll see how to evaluate tones, colors, sharpness, and details. In this same section we help you choose the tools for making the adjustments you decide to make—with the best highlighted. The rest of the chapter covers each tool in detail, showing you how to use it and the many options you are presented with. As with most things in life, knowing what to do and how to do it well can make all of the difference in the outcome.

EVALUATING YOUR IMAGES

TIPS

- To adjust the entire image, make sure nothing is selected (page 76).
- To adjust only a single layer, select that layer in the Layers palette (page 90).
- To adjust just a portion of your image, select that portion (page 76).

When you open an image, you really get to see it for the first time. The display on the camera's monitor is so small, captured images are hard to evaluate. So what do you look for when deciding if the image you are looking at can be improved? In this section we'll look at those things you evaluate first, and then help you choose the tools to make any changes you decide on. As you'll see, there is almost always more than one way to adjust a characteristic such as tones or colors. Many people start with the automatic adjustments because they are so easy. However, it won't be long before you find yourself migrating to the much more powerful tools that take more practice, but which give results that make the extra effort worthwhile.

EVALUATING IMAGE SIZE AND ORIENTATION

The initial size and orientation of an image is determined by what the camera captured. There are situations in which you may want to change these characteristics.

- *Resizing* can be done in two ways, by changing the number of pixels in the image, called its *pixel dimensions*, through a procedure called *resampling*. This process adds or deletes pixels to make the image larger or smaller. You might want to do this to reduce the size of images you will be sending by e-mail or posting on the Web. You might also want to increase the size of the image when making large prints. You can also change the size of the image without changing the number of pixels it contains, called its *document size*. You normally do this when making a print or exporting an image to another application.
- *Cropping* removes distracting or unimportant parts of an image. You might also want to crop if the image has to fit into a specific design such as a newsletter or greeting card.
- *Rotating* an image may be necessary if you turned the camera vertically to capture a picture, or if the horizon line is tilted.

Stars next to tools indicate they are the first ones you should try, because they are the most powerful. Other tools may be easier to use, but probably won't give the same results.

To adjust the image size and orientation, here are some of the tools to consider:

★ The *Image>Resize>Image Size* command (page 47) can add or subtract pixels or specify the size at which the image prints.

★ The *File>Print Preview* command (page 34) changes the size at which the image prints, but not the number of pixels that it contains.

★ The Crop tool in the toolbox (page 50) crops and rotates the image at the same time.

★ The File Browser's *Rotate* command and button (page 22) rotates images in 90° increments.

- The *Enhance>Quick Fix* command (page 45) rotates the image in 90° increments.
- The *Image>Rotate* commands (page 52) rotate and crop images.

TIP

When evaluating tones, colors, and sharpness, display the image at 100% (page 27) because that's where it is displayed most accurately.

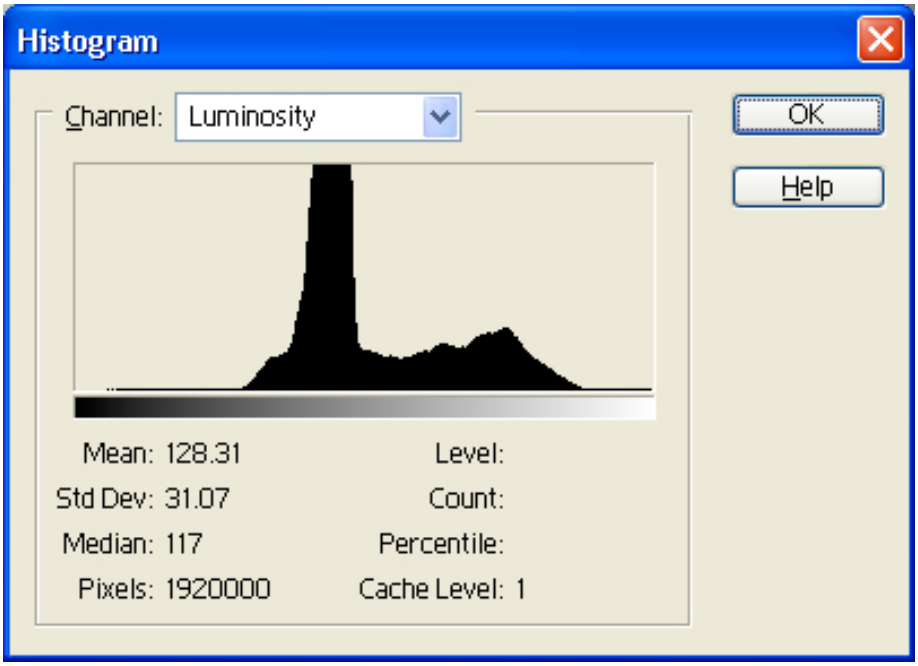
EVALUATING THE TONAL RANGE

Dynamic range in music is the range between the faintest and loudest sounds that can be reproduced without distortion. In photography the

dynamic range, also called the *tonal range* or contrast, indicates the range of brightness in an image between pure white and pure black. There are two ways to evaluate the tonal range of an image—visually and using a histogram. You should use both approaches because they are not mutually exclusive.

Visually, images that use the full tonal range look rich, with smooth transitions in tones. Those that don't use the full range lack contrast, often looking flat and dull. Details may be missing in highlight and shadow areas or the image may be too dark or light.

If you select Image>Histogram and point to any bar on the histogram, its brightness (Level) and the number of pixels at that level (Count) are displayed below. Percentile *is the cumulative number of pixels at or below that level expressed as a percentage of all the pixels in the image, from 0% at the far left to 100% at the far right.*



The image's histogram gives you a more quantified look at the tonal range. The histogram is a bar graph with the horizontal x-axis representing the full tonal range with pure black on the left and pure white on the right. Along this axis are 256 levels of brightness ranging from 0 (black) on the left to 255 (white) on the right. The tones themselves are shown on the gradient immediately below the histogram. The vertical bars show you how many pixels in the image have each of the 256 tones. Many photos, but not all, look best when there are some pixels at every position because they are using the entire available tonal range. In many images, however, pixel values are grouped together and occupy only a part of the available tonal range. These images lack contrast because the difference between the brightest and darkest areas isn't as great as it could be. If the image is low contrast, you can also tell if it's low-, average-, or high-key from the histogram because the pixels will be clustered in the left, center, or right part of the histogram.

To adjust the tonal range of an image, here are some of the tools to consider:

★ The *Image>Histogram* command displays an image's histogram and statistics about the pixels in the image.

★ The *Enhance>Adjust Brightness/Contrast>Levels* command (page 54) is the best tool for adjusting the tonal range because you can adjust shadow, midtone, and highlight areas independently.

★ The Dodge and Burn tools in the toolbox (page 67) lighten or darken small areas in the image that you drag over.

TIP

■ You'll frequently encounter the term *grayscale*. It's the same as a black & white photograph. The term in used instead of *black & white* because images are actually created from 256 shades of gray ranging from pure white to pure black.

■ When talking about colors, the term *neutral* is often used. A neutral color is always gray and all three components (R, G, and B) have the same numeric value. If any values are higher or lower, the color is no longer neutral.

TIP

Auto commands have unpredictable results. They can have great effects on one image, and strange effects on another. Be sure to try them, but when you do so, remember you can select *Edit>Undo* or use any of the other undo techniques (page 18).

■ The *Enhance>Quick Fix* command (page 45) adjusts brightness, contrast, and levels.

■ The *Enhance>Auto Levels* command (page 54) adjusts tones automatically.

■ The *Enhance>Adjust Lighting* commands (page 60) adjust images with backgrounds or foregrounds that are too light.

■ The *Enhance>Auto Contrast* command (page 61) automatically adjusts the contrast in the image without affecting colors.

■ The *Adjust>Brightness/Contrast>Brightness/Contrast* command (page 61) adjusts brightness and contrast by dragging sliders.

EVALUATING COLORS

In film photography, most photographers adjust color by visually analyzing test prints and then making adjustments with color filters. In digital photography, we can use the same visual approach, but back it up with an analysis of an image's histogram. So what do we look for? The human eye perceives color in terms of three characteristics—hue, saturation, and brightness and there is even a color model, called HSB. The color monitor uses a different color model called RGB because images are displayed using varying amounts of red, green, and blue light. When evaluating images, you can think in terms of these two models—one to evaluate colors and the other to look for color casts.

To evaluate colors in an image, think of them in terms of hue, saturation, and brightness because these three aspects can be adjusted.

■ *Hue* is the color—what we refer to by names such as red, orange, or green. If colors are off, color balance should be adjusted by adjusting the mix of red, green, and blue colors in the image.

■ *Saturation*, sometimes called *chroma*, is the strength or purity of the color. Saturation decreases as the amount of gray mixed into the pure color increases. If colors look dull, saturation should be increased.

■ *Brightness* is the relative lightness or darkness of the color. Brightness is reduced by adding black to the color mix and increased by adding white. If colors look too dark or light, brightness should be adjusted.

A color cast is usually caused when one or more of the three color components (red, green, and blue) are too high or low over the entire image. This can be caused by not setting white balance correctly, because the scene was lit by more than one type of light source, or because the main subject was picking up reflections from a colored surface. Color casts are very noticeable when shooting sunrises and sunsets—but there we usually like the effects. It's easiest to identify a color cast by looking at areas that should be neutral white or gray. If these areas have any colors mixed in, the image has a color cast that you should remove. If you use the eyedropper and Info palette (page 58) to examine colors in an image, pure white areas should have R, G, and B settings of 255. Gray areas should have R, G, and B settings that are equal, for example, 128, 128, and 128 for middle gray. Pure black areas should have R, G, and B settings of 0. If one or more of the RGB values is higher or lower than the others, the grays will have a color cast to them.

To adjust colors in an image, here are some of the tools to consider:

★ The *Enhance>Adjust Brightness/Contrast>Levels* command (page 54) adjusts individual colors.

★ The *Enhance>Adjust Color>Color Variations* command (page 62) adjust colors visually as you select from a possible range of adjustments. You can adjust highlight, midtones, shadows, or saturation.

★ The Red Eye Brush tool in the toolbox (page 66) removes red-eye caused by flash.

■ The *Enhance>Quick Fix* command (page 45) lets you adjust colors.

■ The *Enhance>Auto Color Correction* command (page 62) adjusts colors automatically.

■ The *Enhance>Adjust Color>Color Cast* command (page 64) removes color casts.

■ The *Enhance>Adjust Color>Hue and Saturation* command (page 64) lets you adjust hue, saturation, and lightness with sliders.

EVALUATING SHARPNESS

The apparent sharpness of an image depends a great deal on how much contrast there is along edges and lines. If an image looks a little soft, it can often be improved by sharpening (page 73). Many photographers sharpen almost every image, ignoring this aspect only for images that are deliberately soft such as fog scenes. Just be aware that sharpness is easier to evaluate on a print than on the screen.

To adjust the sharpness of an image, here are some of the tools to consider:

★ There are a number of sharpening tools available when you select *Filter>Sharpen* or display the Filters palette and select the Sharpen category. By far the best is the Unsharp Mask Filter (page 73).

■ The *Enhance>Quick Fix* command (page 45) adjusts focus.

■ The Sharpen tool in the toolbox (page 112) sharpens areas that you drag over.

EVALUATING DETAILS

When examining an image, look for small imperfections that can be retouched. A portrait subject might have a small blemish that will be the size of a baseball if you enlarge the image. There may be reflections, or even telephone wires you want to remove. Small areas may benefit by being made a little lighter or darker than their surroundings. Portrait subjects may have red-eye caused by flash in a dark room.

To retouch images, here are some of the tools to consider:

★ The Red Eye brush will remove red-eye from portraits (page 66).

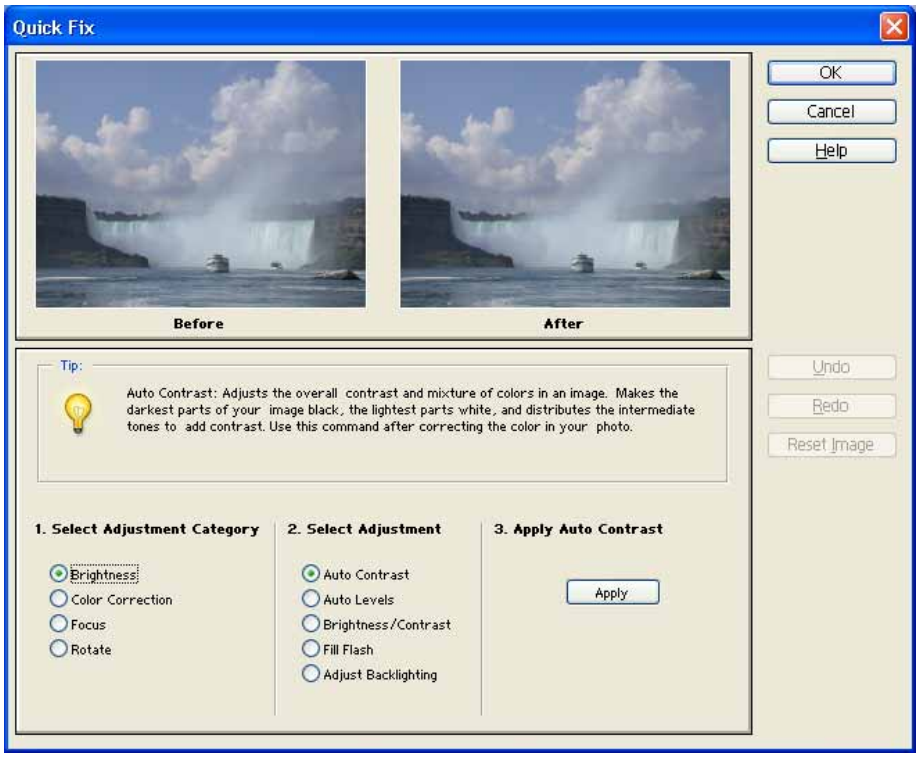
★ The Dodge and Burn tools will lighten or darken small areas as you drag over them (page 67).

★ The Clone Stamp tool will copy an area of the image to another area and is ideal for covering blemishes or removing elements from a scene (page 68).

QUICK FIXING IMAGES

The Quick Fix command groups together, in one dialog box, the most frequently used adjustments that are also available individually through menus. It's an ideal place to start if your image is too dark or too light, has too much or too little contrast or brightness, needs sharpening, or has an undesired color cast. To display the Quick Fix dialog box, click the *Quick Fix* button on the shortcuts bar or select *Enhance>Quick Fix*.

As you select adjustments, be sure to read the Tip section in the dialog box.



The Quick Fix dialog box has three numbered sections where you make adjustments to an image.

1. Select Adjustment Category selects one of the major categories of adjustments you can make—brightness, color, focus, and rotation.

2. Select Adjustment displays choices that change depending on the adjustment category you make. The categories of adjustments you can make include the following (page numbers refer to where these adjustments are discussed in greater detail):

- *Brightness* adjusts images that are too light or too dark. Adjustments in this category include *Auto Contrast* (page 61), *Auto Levels* (page 54), *Brightness/Contrast* (page 61), *Fill Flash* (page 60), and *Adjust Backlighting* (page 60).
- *Color Correction* adjusts the color in the image. Adjustments in this category include *Auto Color* (page 62) and *Hue/Saturation* (page 64).
- *Focus* sharpens or blurs images. Adjustments in this category include *Auto Focus* and *Blur* .
- *Rotate* rotates the image in 90° increments, or flips it horizontally or vertically (page 52).

TIP

The adjustments available in the Quick Fix dialog box are also available individually from menus. The pages on which these commands are discussed in more detail are given in the text.

3. Apply displays an *Apply* button if you have selected an auto adjustment and a slider bar for other adjustments. As you make adjustments, you can evaluate their effects using the *Before* and *After* images. Changes are only applied to the image when you click *OK*.

When first making adjustments with slider bars, make large changes so you can see what the effects really are. Then make small changes to get the effect you'd really like. If you make changes that you don't like you can always click the *Reset* or *Undo* buttons in the Quick Fix dialog box, or select *Edit>Undo Quick Fix* after closing the dialog box.

QuickSteps USING QUICK FIX

1. Click the *Quick Fix* button on the shortcuts bar, or pull down the *Enhance* menu and click *Quick Fix* to open the Quick Fix dialog box.
2. Click the category of the adjustment you want to make in the *1. Select Adjustment Category* section.
3. Click the adjustment to be made in the *2. Select Adjustment* section.
4. Do one of the following:
   - If you selected an auto setting, click the *Apply* button. (Click *Apply* more than once to increase some effects.)
   - If you selected any adjustment that isn't auto, drag the slider to increase or decrease the level of adjustment.
5. To undo, redo, or apply your adjustments do one of the following:
   - Click *Reset Image* to start over from the beginning.
   - Click *Undo* one or more times to back up through your changes including the *Reset Image* command.
   - Click *Redo* for each adjustment you'd like to redo that was undone.
6. To apply the adjustments to your image, click *OK*.

SPECIFYING IMAGE SIZES

TIPS

- The document size that you specify for an image determines its size if you copy or place it into a document created with another application.
- To display an image's size in pixels, point to the file information box on the status bar and hold down the mouse button.
- You can change the document size by dragging its borders using the *Print Preview* command (page 34).
- Some people swear that when you enlarge an image by resampling it, you get better results if you enlarge it by no more than 10% at a time, and repeat as necessary until it reaches the size you want.

There are two ways you can change an image's size—by changing the number of pixels in the image; or by changing the size of the area in which the available pixels are printed or displayed—the document size. These two procedures are separate but related.

■ *Pixel Dimensions* specifies the number of pixels an image contains. Initially determined by the number of pixels captured by the camera there are times you may want to change this size by deleting or adding pixels. For example, you may want to e-mail or post an image on a Web site. For this purpose it's best if an image is no larger than the lowest common denominator screen, usually 640 x 480, or 800 x 600. Reducing an image's size also makes the file size smaller so the image can be sent or displayed more quickly. The main reason you would increase the number of pixels in an image is to make large prints. Since most images print best when they are printed at 200-300 ppi you may get better results by enlarging the image rather than letting the pixels per inch fall below 200.

To change the number of pixels in an image, you *resample* it to make it smaller by removing pixels, or larger by adding them. Reducing an image usually has less affect on its appearance than does enlarging one. This is because enlarging requires the program to add pixels—a process called *interpolation*. The computer analyzes adjoining pixels to determine the color of the new ones it inserts. Normally, you can double the size of an image without effects showing. However, trial and error is the only way to be sure because images vary so much. Look for the image becoming soft, as if it's not sharply focused. If you are making other changes to the image, resampling it should be done after all other changes other than sharpening (page 73). This is because most adjustments work best where there are the maximum number of original pixels to work with.

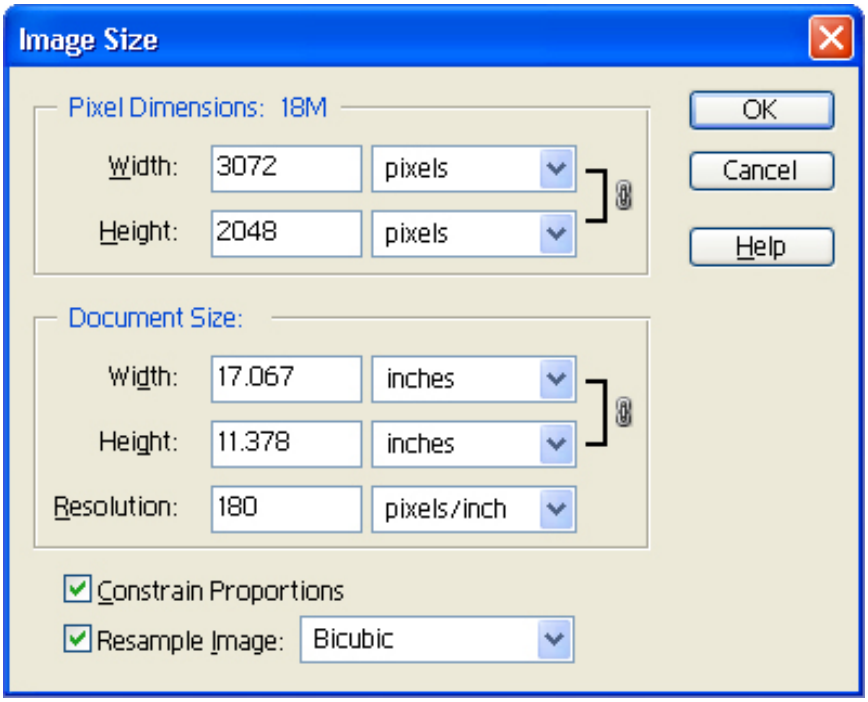
■ *Document Size* specifies how large an image will be printed or displayed, especially in other applications. Normally you change the document size with resampling turned off. As a result, as the size increases, the pixels per inch decrease because the same number of pixels are spread over a wider area. If the resolution falls below 200 or so pixels per inch, you may want to consider resampling the image. There are problems printing with less than 200 pixels per inch and with resampling to increase the number of pixels so you'll have to experiment to see which works best for a particular image. Just be sure your image is not too large to fit on the page. Many printers can't print to the edge of the sheet so there is always a border. To print the full image, it must fit inside this border area.

To change either the pixel dimensions or document size, select *Image*>*Resize*>*Image Size* to display the Image Size dialog box having the following settings:

■ *Pixel Dimensions* shows the image's *Width* and *Height* in pixels and next to the heading is the size of the image file. You can click the drop-down arrow to specify changes as a percentage.

■ *Document Size* shows you the current *Width* and *Height* of the image in inches, centimeters, or any other unit of measurement you select with the drop-down arrow. *Resolution* displays the image's pixels per inch at the current document size. This number changes as you change image width and height. If you make the image larger, the existing pixels are spread over a

The size you specify for a printout is independent of the number of pixels in the image although it determines the resolution or pixels per inch used to make the print.



TIP

■ If you make any mistakes in the dialog box, hold down Alt (Option on Macs) to change the *Cancel* button to *Reset* and click it to start over.

larger area so the pixels per inch decreases. The only way to change this relationship is to add more pixels to the image by resampling it.

■ *Constrain Proportions* check box determines if one of the photo's dimensions will adjust automatically when you change the other. If you turn this off, the image's proportions or aspect ratio changes and the image is stretched in one direction. Unless you are after a special effect, you normally leave this check box on. Chain link icons connecting the width and height settings indicate when this setting is on.

■ *Resample Image* check box determines if the number of pixels in the image will change when you change the size. When specifying a size for printing you usually turn this off. When you resample an image to add or subtract pixels, you can choose a process that trades off quality versus speed. *Nearest Neighbor* is fast but doesn't give the best results, *Bilinear* is faster and gives better results, and *Bicubic*, the default, is slowest but best.

TIP

There are a number of third-party programs available for resizing images.

■ pxl SmartScale from Extensis (http://www.extensis.com).

■ S-Spline from Shortcut Software (http://www.s-spline.com).

■ Genuine Fractals from LizardTech (http://www.lizardtech.com).

QuickSteps SPECIFYING AN IMAGE SIZE

1. Pull down the *Image* menu, then click the *Resize* and *Image Size* commands to display the Image Size dialog box.
2. Set the *Resample Image* check box as follows:
   - ■ If changing the image's size in pixels, turn it on.
   - ■ If specifying a print size, turn it off.

   Normally the *Constrain Proportions* check box should be on.
3. Change the size by entering a width and height as follows:
   - ■ *If changing the image's size in pixels*, enter the new size in the *Pixel Dimensions* or *Document Size* sections of the dialog box.
   - ■ *If specifying a print size*, enter the width or height in the *Document Size* section of the dialog box and check the *Resolution* to see how many pixels per inch there are.

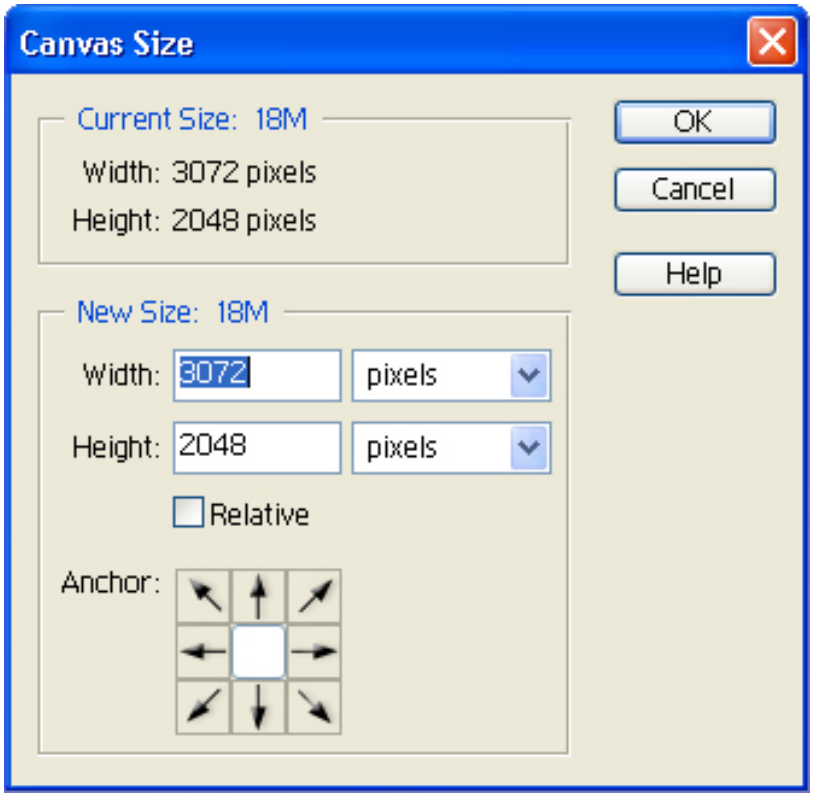
SPECIFYING CANVAS SIZES

There are some images that seem to have no edge. Adding a border to these images shows where the image area ends.

When you first open a digital photo, the image and the canvas on which it is placed are both the same size. However, you can enlarge the canvas and it will be filled with the current background color (page 108). (If you decrease the size of the canvas so its smaller than the image, the image is cropped to fit the new size.) There are a number of reasons why you might want to increase the size of the canvas.

- To make room for other images that you copy and paste to create a collage.
- To put a border about the image.
- To add an area outside of the image where you can enter your name, the image's title, or a copyright notice.

To change the canvas size, select *Image>Resize>Canvas Size* to display the Canvas Size dialog box having the following settings:



- *New Size* shows you the current *Width* and *Height* of the image in pixels, centimeters, or any other unit of measurement you select with the drop-down arrow. If you select *Columns*, width is measured in terms of the columns specified in the *Units & Rulers* section of the *Preferences* dialog box.
- *Relative* check box, when on, lets you enter a positive or negative number by which you want to increase or decrease the size of the canvas. For example, if you want to add a 30 pixel wide border around the image, turn on *Relative* and enter 30 in both the *Width* and *Height* text boxes with them set to pixels.
- *Anchor* specifies where on the new canvas you want to position the image. Click the square representing where you want to image to be.

TIPS

- You can enlarge the canvas area with the Crop tool. Use it to select the entire image, then drag the corners or edges of the bounding box larger than the image. Hold down Alt (Option on Macs) as you drag to keep the image centered in the new canvas. When finished selecting, click the *Commit* button on the options bar.

CROPPING IMAGES

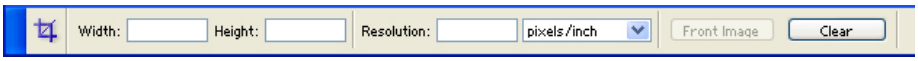
Many film photographers feel so strongly that you should compose images in the viewfinder that they file their negative carriers to show a black border, proving it's a full frame image.

Many photographers try as often as possible to compose, capture, and print images full-frame. However, editors and others love to crop images to fit unusual shapes in layouts, or to make an image more dramatic. It's like looking for a better photograph within a photograph. At other times, you crop for more practical reasons, perhaps to remove the tilted sides from a rotated image (page 52) or to remove distracting elements. There is one drawback. Cropping reduces the number of pixels and that reduces the maximum size at which you can get a good print. However, reducing an image's size isn't always bad. If you plan on e-mailing an image or posting it on a Web site, a smaller size is an advantage. In these cases, it's almost always better to crop before reducing the image size because you may not need to reduce it as much. The Crop tool in the toolbox lets you not only crop an image visually, but also rotate it as you do so.

SETTING CROP OPTIONS

The Crop tool icon

When you select the Crop tool from the toolbox, the options bar displays settings you can make:



- *Width, Height,* and *Resolution* text boxes specify the aspect ratio—the shape or proportions of the image (page 78) and resolution of the crop. If you enter a width and height, you will only be able to select areas with the same aspect ratio. For example, if you enter a width of 1.5 and a height of 1, your selections will always be 1.5x wider than they are high. If you leave the width and height blank you can select any aspect ratio.
- *Front Image* button enters the values of the currently active image into the *Width, Height,* and *Resolution* text boxes. When you want to crop the image while retaining it's current aspect ratio and resolution, this is the perfect way to do so.
- *Clear* button clears entries from the *Width, Height,* and *Resolution* text boxes.

After you drag to make a selection, the choices on the options bar change.

- *Shield* check box, when on, covers with color the part of the image that will be cropped.
- *Color* swatch displays the current color of the shield. Clicking it displays the color picker (page 108) so you can change the color.
- *Opacity* text box and triangle changes the opacity or "see-through" of the shield.
- *Cancel* icon cancels the selection.
- *Commit* icon crops the image.

CROPPING AN IMAGE

To select the area to be retained click the Crop tool in the toolbox:

- *To select from a corner,* start in one of the corners of the area you want to save and drag the tool.

TIPS

- You can use the rectangular or elliptical marquee tools to select the area of an image you want to retain (page 78) and then select *Image>Crop* to crop away the rest.
- The *Image>Rotate>Straighten and Crop* fixes images that were scanned at an angle.

TIP

■ The Opacity setting is common to many tools. While cropping, you can get a good feeling for what it does by selecting an area and then clicking the *Opacity* drop-down arrow to display a slider. Drag it to see the effects of opacity on the shield covering the part of the image to be cropped away.

■ *To select from the center point and expand outward*, hold down Alt (Option on Macs) after pressing the mouse button before you begin to drag.

■ *To constrain the selection to a square shape* (when there is no width or height entered), hold down Shift after pressing the mouse button before you begin to drag.

■ *To reposition the selection border*, without releasing the mouse button, press the spacebar and drag it.

The part of the image that will be removed is displayed darker than the part that will be retained. When you release the mouse button, the area that will be retained is indicated by a bounding box with handles at the corners and sides that you drag to adjust the selection.

■ *To move the bounding box*, point inside it and drag.

■ *To change the shape or size of the bounding box*, drag a handle.

- To retain the current proportions when no width or height has been specified, hold down Shift as you drag a corner handle. If you specified a height and width on the options bar you can only drag corners. If you left those text boxes blank, you can also drag the sides.
- To change the size of the selection without moving the center point, hold down Ctrl (Command on Macs).

The Cancel and Commit icons.

■ *To rotate the bounding box*, point outside of it so the pointer turns into a curved arrow, and drag. You can also drag the center point to change the point around which the selection rotates.

■ *To complete cropping*, double-click within the selection, click the *Commit* icon on the options bar, select a different tool in the toolbox, press Enter (Return on Macs), or select *Image>Crop*.

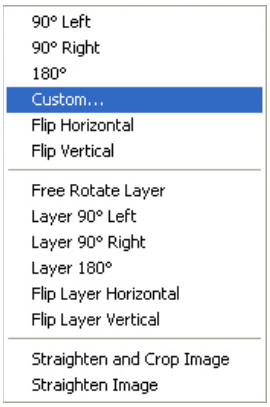
■ *To cancel cropping*, click the *Cancel* icon on the options bar or press Esc.

The shield (right) covers the area of the image that will be cropped away (above). This helps you visualize what the cropped image will look like.

QuickSteps CROPPING AN IMAGE

1. Click the Crop tool in the toolbox.
2. Drag the tool in the image to select the area to be retained and then drag the bounding box corners or sides to adjust the selection.
3. Click the *Commit* icon on the options bar to complete the crop.

ROTATING IMAGES



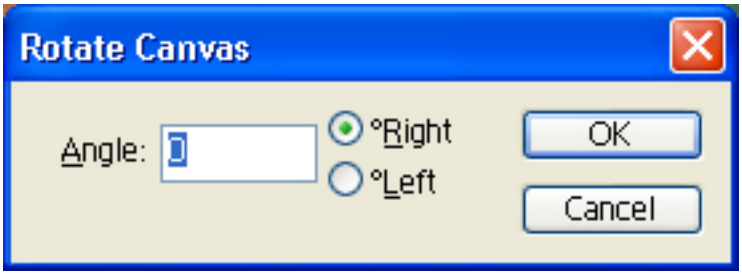
The Image>Rotate command displays a submenu with many rotation commands.

There are a number of reasons why you might want to rotate an image. Perhaps you rotated the camera into a vertical position when you took the photo, the horizon or other strong horizontal or vertical line is tilted, or the image was scanned at an angle.

■ *To rotate an image in 90° increments*, for example, to rotate an image taken with the camera rotated into portrait mode, do one of the following:

- Select *Enhance>Quick Fix* and click the *Rotate* command in the Quick Fix dialog box (page 45).
- Select *Image>Rotate* and select one of the rotation commands.
- Select *Window>File Browser*, select one or more photos, and use the *Rotate* button or menu commands (page 22).

■ *To rotate by a specific amount*, perhaps to straighten a horizon, select *Image>Rotate>Custom* to display the Rotate Canvas dialog box.



Click the *Right* (clockwise) or *Left* (counterclockwise) option button and enter the number of degrees. One technique is to guess at the number of degrees of rotation needed and use that as a starting point. After evaluating the results, select *Edit>Undo Rotation* to try again and enter a revised number. Through a process of trial and error, you'll find the exact angle of rotation needed. When you use this command, the canvas size increases to accommodate the angled image and the blank space takes on the background color (page 108). You'll always loose a part of the image when you crop the image back to a square or rectangular shape.

■ *To straighten an image that's been scanned at an angle*, select *Image>Rotate* to display a submenu and then select *Straighten Image* or *Straighten and Crop Image*. The later command isn't recommended unless the image has a uniformly colored area surrounding the image itself. In other cases the commands can have very unpredictable results.

■ *To rotate an image while you are also cropping it*, select the Crop tool, select the area to be cropped, point outside the bounding box so the pointer turns into a curved arrow, and then drag. To move the center point, around which the selection marquee rotates, drag the circle at the center of the bounding box. When finished, click the *Commit* button on the options bar.

TIPS

■ To guide you when rotating, select *View>Grid* to display a non-printing grid over the image. Use the same commands to hide it when finished.

■ If you under or over rotate you can select *Edit>Undo* to return to the starting point.

■ The *Image>Rotate>Free Rotate Layer* command lets you drag the image to rotate it.

QuickSteps ROTATING AN IMAGE

1. Pull down the *Image* menu and click the *Rotate* and *Custom* commands to display the Rotate Canvas dialog box.
2. Specify the *Angle* (the number of degrees of rotation) and the direction *Right* or *Left*, then click OK.