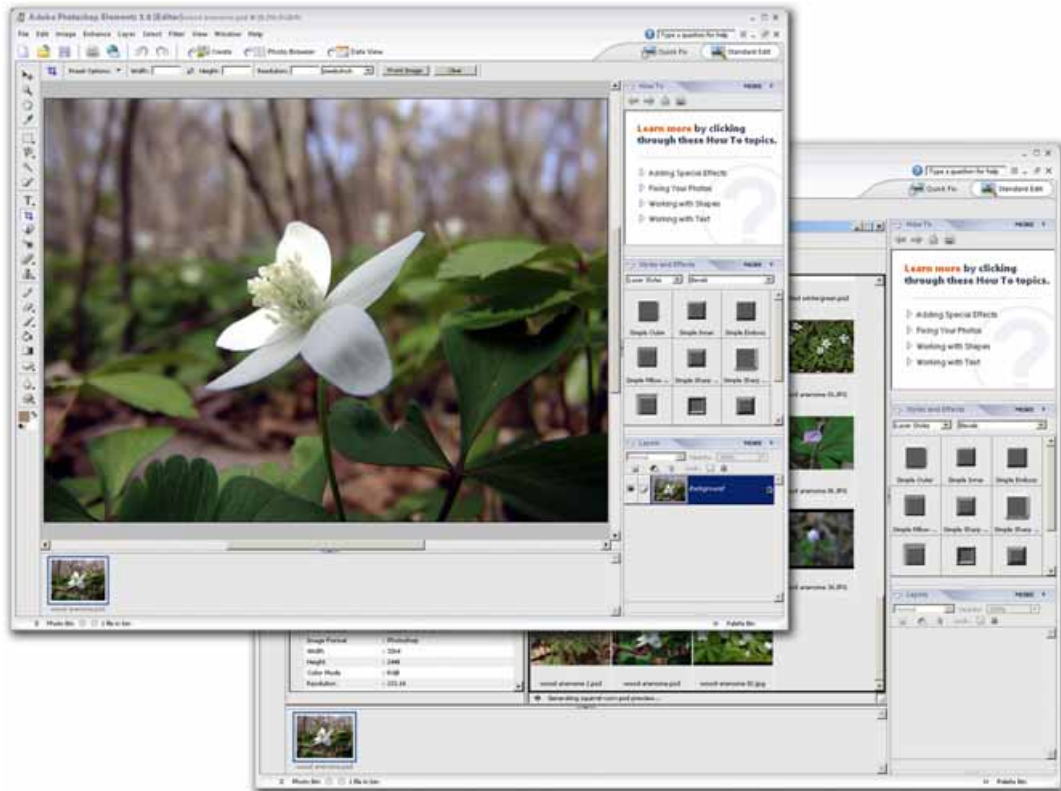


A SHORT COURSE IN

PHOTOSHOP ELEMENTS 3.0 THE EDITOR

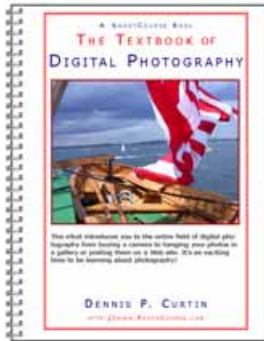


DENNIS P. CURTIN

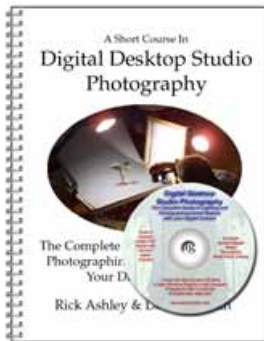
SHORTCOURSES.COM

[HTTP://WWW.SHORTCOURSES.COM](http://www.shortcourses.com)

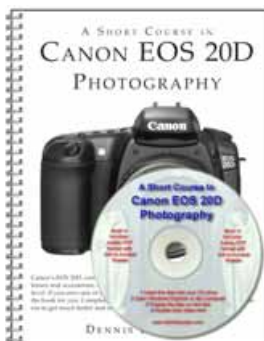
SHORT COURSES PUBLISHING PROGRAM



The Textbook of Digital Photography is used in hundreds of schools to teach the principles of digital photography.



The Digital Desktop Studio Photography book is the leading guide to tabletop and product photography.



The Short Course guides to Canon, Olympus, Nikon, Sony, and other digital cameras are considered the best available introductions to these leading cameras.

ISBN: 1-928873-56-1

Short Courses, the parent site of PhotoCourse.com, is the leading publisher of digital photography books, textbooks, and guides to specific cameras from Canon, Sony, Nikon, Olympus and others. All of these books are available on-line from the Short Courses bookstore at:

<http://www.shortcourses.com/bookstore/book.htm>

All recent books are available in both black & white print and full-color eBook (PDF) versions. The list of books we've published is rapidly expanding so be sure to visit the store to see if there is a book on your camera.

If you find any errors in this book, would like to make suggestions for improvements, or just want to let me know what you think—I welcome your feedback.

ShortCourses.com
16 Preston Beach Road
Marblehead, Massachusetts 01945
E-mail: denny@shortcourses.com
Web site: <http://www.shortcourses.com>

To learn more about digital photography visit our two Web sites:

- <http://www.photocourse.com>
- <http://www.shortcourses.com>

© Copyright 2005 by Dennis P. Curtin. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

SHORT COURSE BOOKS

Short Courses on Canon Camera Photography

■ EOS 20D ■ Pro 1 ■ EOS Digital Rebel/300D ■ EOS 10D ■ G5 ■ G3 ■ EOS D60 ■ EOS D30 ■ G2 ■ G1 ■ S300 ■ S110 ■ S100 ■ S20 ■ A5/A50 Zoom

Short Courses on Nikon Camera Photograph

■ D70 ■ D100 ■ 4500 ■ 5700 ■ 5000 ■ 995 ■ 990 ■ 950 ■ 880

Short Courses on Olympus Camera Photograph

■ C-5050 ■ C-4040 ■ C-700 Ultra Zoom ■ E-20 ■ E-10 ■ C-2100 Ultra Zoom ■ C-3040 Zoom ■ C-3030 Zoom ■ C-2500L ■ C-2040 Zoom ■ C-2020 Zoom ■ C-2000 Zoom

Short Courses on Sony Camera Photograph

■ DSC-F828 ■ DSC-F717 ■ DSC-F707

Textbooks & General

■ The Textbook of Digital Photography ■ Displaying & Sharing Digital Photos ■ Digital Desktop Studio Photography ■ Managing Digital Pictures with Windows XP and Beyond ■ Choosing and Using a Digital Camera ■ Using Your Digital Camera ■ The Digital Photographer's Ultimate Software Collection

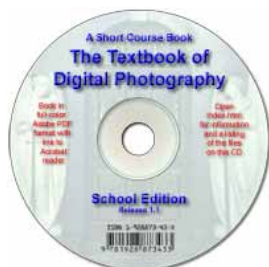
Photoshop Books

■ Photoshop CS ■ Photoshop Elements 3.0—The Editor ■ Photoshop Elements 3.0—The Organizer ■ Photoshop Elements 2.0

USING THIS BOOK IN THE CLASSROOM



If you are using this text in a class, you must have a personal copy of the printed and spiral book or the CD that contains the text in PDF format and also acts as your license agreement. If you do not have such a book or CD, you may be using an illegal copy. To see how to qualify for classroom copies or to determine if you are using a legal copy, visit our site at www.photocourse.com.



Special discounts are offered on copies of our texts shipped to school addresses. For more information, e-mail Peggy at peggy@shortcourses.com.

The *Textbook in Digital Photography Project* was established by ShortCourses.com to develop and distribute high-quality yet affordable materials in digital photography for both classroom and independent study. With photography texts from traditional publishers reaching \$80 or more, it is time to try a new approach more attuned to the digital era—full-color, fully searchable PDF eTexts that can be displayed on any computer using Adobe’s free Acrobat reader. eTexts and PDF files are revolutionizing the publishing and printing businesses in many ways including the following:

- **Timeliness.** Since large quantities of inventory aren’t required, we can revise and update materials as needed instead of on a fixed schedule every 2 or 3 years. In a rapidly evolving field such as digital photography these frequent revisions are often required to keep materials up to date.
- **Distribute and print.** Textbook publishers work on a *print and distribute* model. This means they take enormous risks, tie up massive amounts of capital, and bear high marketing, sales, warehouse, shipping, and billing costs. All of these costs are passed on to students. The emerging model, used by this eText, is called *distribute and print*. Using this model, materials are distributed around the world electronically and then printed where needed.
- **Print on demand.** Textbook publishers print in large runs, increasing their risks and prices. The *print on demand* model is to print only when a copy is ordered, eliminating warehousing expenses. This same model applies to using this eText. You only print selected pages or chapters when they are needed. You no longer have to carry a backpack full of books, and if you lose your materials, you just print another copy.

The materials included in *The Textbook in Digital Photography Project* introduce you to all aspects of the rapidly emerging world of digital photography. The project materials currently available include the following:

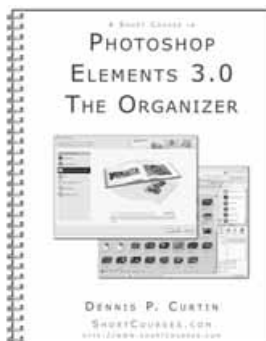
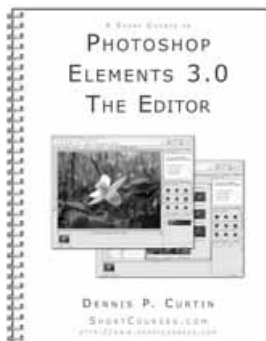
■ **The core text—*The Textbook of Digital Photography***—introduces the entire panorama of digital photography and includes the following topics:

- Introduction to the digital camera and digital images (Chapter 1)
- Introduction to the digital darkroom (Chapter 2)
- Camera controls and creative photography (Chapters 3–6)
- Flash and studio lighting (Chapter 7–8)
- Sharing and displaying digital images (Chapter 9–10)
- Exploring beyond the standard still image (Chapter 11)
- Understanding pixels and image sizes (Chapter 12)
- Caring for your camera, scanning, and shooting RAW images (Appendix)

■ **Lab manuals** on photo-editing present Photoshop and Photoshop Elements. These comprehensive, yet easy to follow guides, can be used with or without the core text.

■ **Supplements** are published periodically between editions to keep materials more timely or to expand coverage in selected areas. Be sure to frequently visit the project’s Web site (www.photocourse.com) for an up-to-date listing of what’s available. For additional information on digital photography, visit the publisher’s Web site at www.shortcourses.com.

PREFACE



This work on Photoshop Elements 3.0 comes in two parts—*The Editor* and *The Organizer*.

Photoshop Elements is a wonderful program, at an amazingly low price. Based on Photoshop—the acknowledged leader among existing photo-editing programs—Elements, like an acorn, hasn't fallen far from the tree. It has inherited both power and complexity. Our goal in this book is to present an introduction to Photoshop Elements that helps 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 direct route through the program. Detours along the many back roads of the program are for another time and another book.

Because Photoshop Elements 3.0 is really two programs bonded together—the old Photoshop Elements, now called the *Editor*, and Photoshop Album, now called the *Organizer*—this book is published in two parts. Although most users will be interested in both parts, photographers using other photo-editing programs, including Photoshop, can make great use of the Organizer, a powerful database-backed asset management and sharing program.

THE EDITOR

This book introduces you to the Editor, the part of Elements used to edit and improve your images. It 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. You'll see how to work with selections, layers, and painting and drawing tools needed to touch up images. 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're 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 for graphic arts.

THE ORGANIZER

This book introduces the new Organizer, an extremely well-done program that catalogs all of the photos (as well as video and audio files) already on your computer, and those you transfer to it in the future. It makes it easy to browse through these images or organize them in ways that make them instantly accessible. No longer will you have to remember where your images are on your system, or even try to recall what images you have. The Organizer puts them at your fingertips. It even keeps your original image and every edited version of it together in what it calls a *version stack*. This prevents the original image from being overwritten and you can instantly see it and all versions of it. The Organizer is so useful it should be your starting point for every photo and every project because it will track your photos and other media files through their entire life-cycle from the time you transfer them from your camera to when you archive them on CD/DVD discs to free up room on your system for more photos—and even then it knows where they are. It will even tell you which items you have shared, and you'll find that sharing has been made much easier because of the way the Organizer helps you print, e-mail, and burn your photos to CD/DVDs, send them to mobile phones, post them on Web sites including your own gallery, and organize them into slide shows with background music. It even has a wizard that guides you step-by-step when creating photo greeting cards, postcards, calendars, and photo book and album pages.

TIPS

This book focuses on Windows, but it can be used by Mac owners who can cope with a few differences between the versions. For example:

- Ctrl on PCs often performs the same functions as Command on Macs.
- Alt on PCs performs the same functions as Option on Macs.
- Enter on PCs performs the same role as Return on Macs.

CONTENTS

Cover...1
 Short Courses Publishing Program...2
 Using this Book in the Classroom...3
 Preface...4
 Contents...5

CHAPTER 1 GETTING STARTED...6



Developing A Process—Your Workflow...7
 Starting and Quitting the Program...8
 Learning Photoshop Elements...10
 Introduction to the Editor...11
 Managing the Editor Display...12
 Using the Toolbox...13
 Using Palettes...15
 Basic Commands...18
 Undoing Changes...21

CHAPTER 2 WORKING WITH IMAGE FILES...23

Opening and Closing Image Files...23
 Saving Image Files...25
 Importing Images from Videos and PDFs...29
 The File Browser—Introduction...30
 The File Browser—Viewing, Opening & Managing Files...31
 The File Browser—Organizing and Finding Files...33
 The File Browser—The Metadata Palette...35
 Zooming Images and Image Windows...36
 Working with Multiple Images...38
 Printing Images...39
 Optimizing Images for the Web...43
 Merging Images into a Panorama...46
 Processing Multiple Files...49

CHAPTER 3 FIXING YOUR IMAGES...51

Evaluating Your Images...52
 Quick Fixing Images...56
 Specifying Image Sizes...58
 Specifying Canvas Sizes...60
 Cropping Images...61
 Rotating Images...63
 Tones, Colors, and Channels...64
 Using the Histogram Palette...65
 Adjusting Brightness and Contrast...66
 Adjusting Shadows and Highlights...67
 Adjusting Levels...68
 Using Eyedroppers...71
 Adjusting Color...73
 Using Filters...77
 Sharpening Images...81
 Using the Camera Raw Plug-in...83
 Processing Multiple Images ...86

CHAPTER 4 WORKING WITH SELECTIONS...88

Introduction to Selecting...89
 Using Marquee Tools...91
 Using Lasso Tools...93
 Using the Selection Brush Tool...95
 Using the Magic Wand Tool...96
 Adjusting an Existing Selection...97
 Moving and Copying Selections...99
 Transforming Selections...101
 Using the Cookie Cutter Tool...104
 Saving and Reusing Selections...105

CHAPTER 5 WORKING WITH LAYERS...106

Using Layers...107
 The Layers Palette...108
 Creating and Preserving Layers...110
 Managing Layers...112
 Grouping Layers...117
 Using Adjustment Layers...118
 Using Fill Layers...120
 Editing a Layer Mask...122
 Entering Type...124
 Applying Layer Styles...128
 Creating Animated GIFs ...130

CHAPTER 6 PAINTING & DRAWING...133

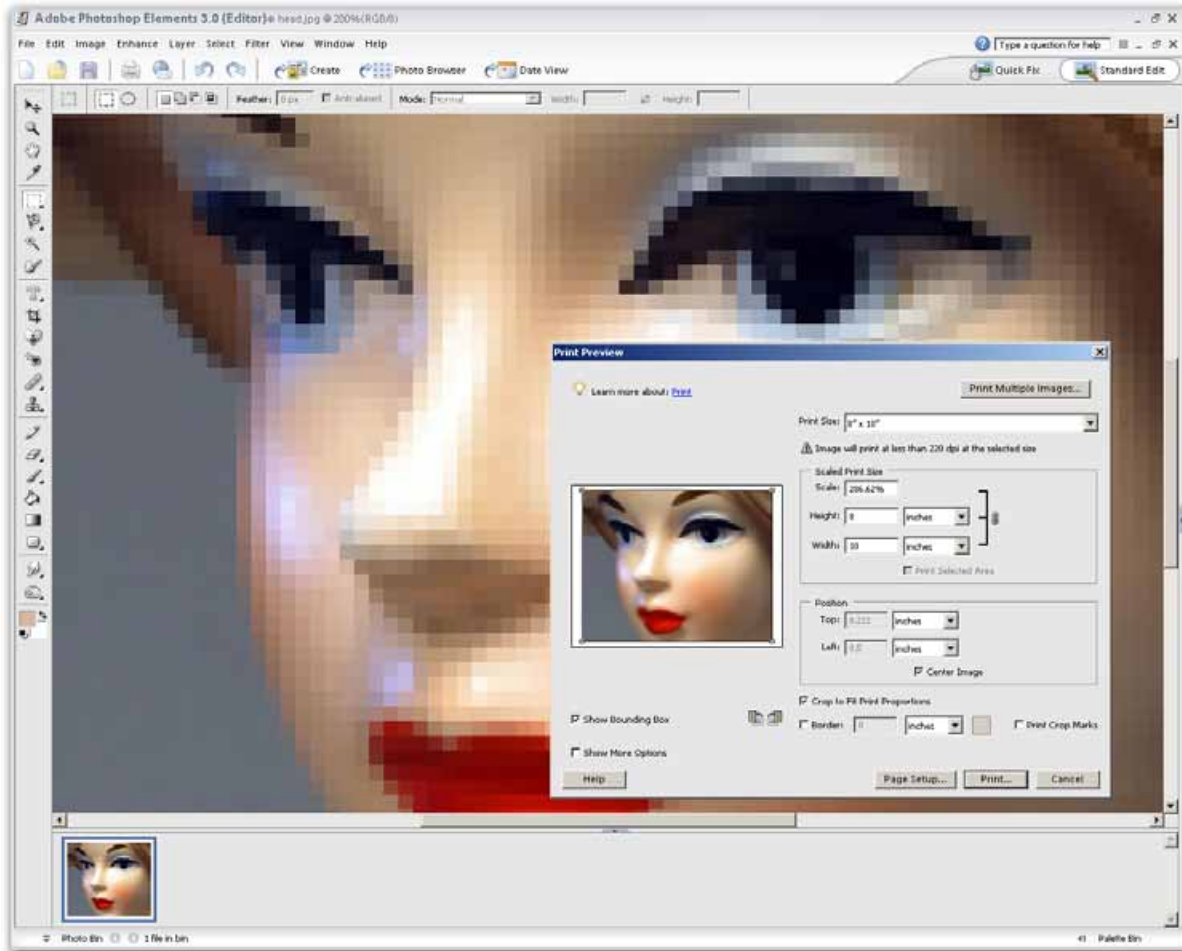
Selecting Foreground and Background Colors...134
 Using Brushes and Pencils...137
 Specifying Tool Options...139
 Erasing...143
 Retouching Images...145
 Filling and Stroking Selections and Layers...149
 Using the Gradient Tool...151
 Drawing Shapes...152
 Using Effects...154
 Replacing Color...155

CHAPTER 7 COLOR MANAGEMENT...156

Calibrating Your Monitor...157
 Color Managing Your Images...159

Chapter 1

Getting Started



CONTENTS

- Developing a Process—Your Workflow
- Starting and Quitting the Program
- Learning Photoshop Elements
- Introduction to The Editor
- Managing the Editor Display
- Using the Toolbox
- Using Palettes
- Basic Commands
- Undoing Changes

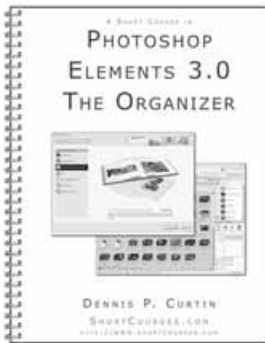
Photoshop Elements, like the Photoshop program on which it is based, is a powerful program suitable to all but the most technically oriented photographer. Because it can do so much, it initially looks complicated, and in many ways it is. However, since it's a program you won't outgrow, it's worth the time it takes to master it. In this chapter we lay the foundation for everything to come. You get started by learning how to approach digital photography, load the program, and learn more about Elements. You'll learn about the Editor's screen display, the toolbox, palettes, basic commands, and undoing mistakes. Once you understand this material, you will be ready for the chapters that follow on opening, editing, and printing your images.

Elements runs on both Windows and Macintosh systems. The major differences are the names of a few keys on the respective keyboards, a few menu names, and operating system level dialog boxes used for basic operations such as opening, saving, and printing images. This book features the Windows version from which all of our screen illustrations are taken. However, if you are familiar with the Mac, you should have no difficulty following the discussion presented here.

DEVELOPING A PROCESS—YOUR WORKFLOW



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.



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. Elements includes such an asset manager in the Organizer part of the program discussed in the companion book The Organizer.

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.

Step 2. Create a folder system on your hard drive into which you copy the photos that you have taken. The Organizer will transfer images from your camera or card into any folder on your system that you specify.

Step 3. Copy the images to the computer using the Organizer, and after they are added to the catalog so Elements can track them and display them in the Photo Browser, delete them from the camera's memory card.

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. The Organizer has a Burn command that will do this for you and 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. Review your photos in the Organizer and attach tags labeling them with such characteristics as location, event, or subject so you can easily find specific images later. 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 collection and gather in 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. Since gathering photos into collections doesn't actually copy the file, just a pointer to it, the same images can be in any number of collections without taking up additional disk space.

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.

STARTING AND QUITTING THE PROGRAM

TIPS

■ If you have problems launching Elements, or if other users have changed settings, rebuild your preferences file (page 9).

■ If you have changed the *Start Up In* option at the bottom of the Welcome Screen, the program may open directly in either the Organizer or Editor.

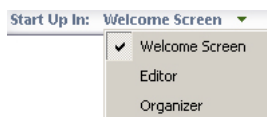
■ This book discusses the *Edit and Enhance Photos*, *Quickly Fix Photos*, and *Start from Scratch* choices on the Welcome screen. The other choices are discussed in the companion book on the Organizer.

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



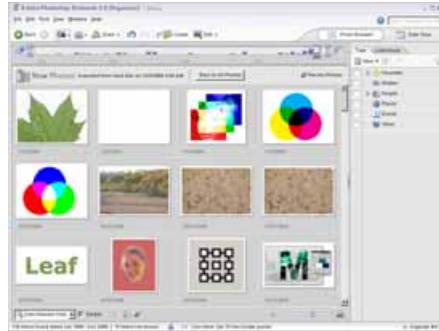
The Welcome screen acts much like a switching station, routing you to the activity of your choice. The six large icons each switch you to a specific activity and when you point to each, the screen displays a description of what that button does. When you click one these button, or one of the other buttons on the screen, here is what happens:

- *Product Overview* tells you a few things about the program.
- *View and Organize Files* starts the Organizer and displays the Photo Browser.
- *Quickly Fix Photos* starts the Editor and displays the Quick Fix workspace (page 56).
- *Edit and Enhance Photos* starts the Editor and displays the Standard Fix workspace (page 11).
- *Make Photo Creations* starts the Organizer and displays the Creation Setup screen.
- *Start from Scratch* starts the Editor and displays the New dialog box so you can specify the name, size, and other settings for a new image.
- *Tutorials* button in the upperright corner takes you to a section of help listing tutorials you can complete to learn more about the program.
- *Start Up In* drop-down arrow lets you specify if the program starts with the Welcome Screen, Editor or Organizer.
- *Close* button (X) in the upperright corner of the screen closes the program.



The Start Up In drop-down arrow on the Welcome Screen lets you have Elements start directly in the Organizer or the Editor. If you select one of these choices you can still display the Welcome Screen by choosing Window > Welcome.

If the Start Up In setting has been changed on the Welcome Screen, Elements may open the Organizer (left) or the Editor (right).



The Close button is an X. You'll find these buttons in the upper right corner of application and image windows.

QUITTING THE PROGRAM

When you are finished with the Organizer, you exit by clicking the application's close button or by choosing *File>Exit*. If you have also loaded the Organizer or the Welcome Screen, you have to exit them separately.

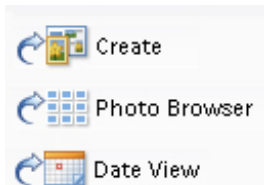
SYSTEM PROBLEMS

■ The Editor's File Browser uses disk space, called a *cache*, to store thumbnail and file information to make loading times quicker when you return to a previously viewed folder. If your system slows or you need to free up room on your hard disk drive you can purge the cache although this deletes the File Browser's stored thumbnails. To purge the cache for the selected folder, select *File>Purge Cache* from the File Browser's menu (not the main menu on the menu bar). To purge the entire cache select *File>Purge Entire Cache*.

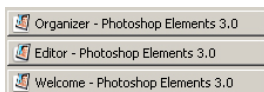
■ Photoshop Elements maintains a file of the preferences you can change in a series of dialog boxes displayed when you choose *Edit>Preferences*. If changes to these settings cause unexpected problems, if you have problems launching the program, or if other users have made changes that you don't want to use, you can restore the original settings. To do so first locate the Shift+Ctrl+Alt keys on your keyboard and be ready to hold them down immediately after launching the program as follows:

● If you have loaded the Welcome screen, click the *Edit and Enhance Photos* button on the Welcome Screen and then immediately hold down the keys.

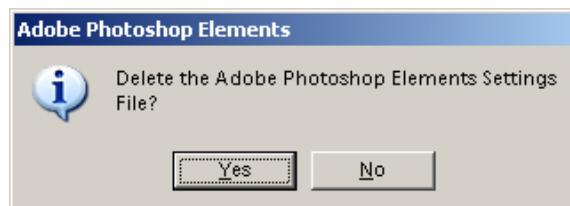
● If you have changed the *Start Up In* setting on the Welcome screen to first load the Editor, hold down the keys immediately after starting the program as you normally do. If you have changed the *Start Up In* setting on the Welcome screen to first load the Organizer you can't restore settings without first changing the setting to first load the Welcome Screen or the Editor.



Buttons on the Editor's shortcuts bar jump you to the Organizer.



It's possible to have three Elements buttons on the task bar at the same time because three programs are open.



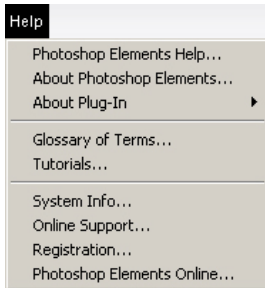
If you held the keys down at the right time, a dialog box asks *Delete the Adobe Photoshop Elements Settings File?* Click *Yes* to create a new settings file the next time you start Elements.

■ If your prints look different from the image on the screen, you have to use color management (page 156).

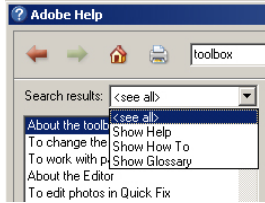
LEARNING PHOTOSHOP ELEMENTS



The Welcome screen Tutorials button.



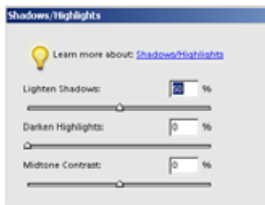
The Help menu commands.



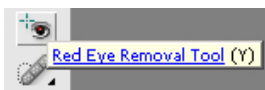
The Help Results drop-down menu lets you choose which results are displayed.



Buttons on help screens include (from left to right) Go back, Go forward, Contents Page, and Print.



A dialog box help button indicated with a light bulb icon.



When you point to a tool its name is displayed underlined. Click the name to display help on that specific tool.

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

- **Getting Started** booklet gives you a brief overview of the program and refers you to the program’s help system for in-depth guidance.
- **Tutorials** button on the Welcome screen takes you to the Adobe Web site where Photoshop Elements tutorials are listed.
- **Help** is displayed when you click the *Help* button at the far right end of the menu 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 help screen with three tabs: *Contents*, *Index*, and *Glossary*. You click triangle icons to expand and collapse headings.



You can also search help directly from the *Type a question for help* text box at the far right end of the menu bar. When you click in the text box, enter a word or a phrase, and then press Enter or click the *Help* button with a questions mark icon, a help screen appears. The Search results drop-down arrow lets you choose what’s shown: *All*, *Help*, *How To*, or *Glossary*. You can also enter a new help query and click the *Search* button. Clicking the *Contents Page* button displays the main help screen with the three tabs: *Contents*, *Index*, and *Glossary*. In the bottomleft corner is a link *Go To Adobe Help Online* that you can click to go to Adobe’s Web site.

- **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.)
- **How To** palette in the Editor’s palette bin lists categories of topics that show you how to do various editing tasks. Click the triangle icons on the category heading to open and close categories and then click a topic of interest. At times you can click a *Do this for me* link to have the task performed for you.
- **ReadMe** files containing late breaking information may have been installed along with the program.
- **Some dialog boxes** have a *light bulb icon* that you can click for help on the adjustment controlled by the dialog box.
- **When you point to a tool in the toolbox** (page 13) its name is displayed underlined. Click the name to display help on that specific tool.
- **All palette menus** (page 15) have a *help command* that displays help specific to the palette.

INTRODUCTION TO THE EDITOR

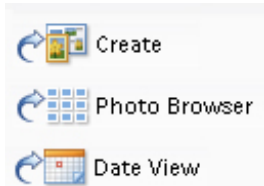
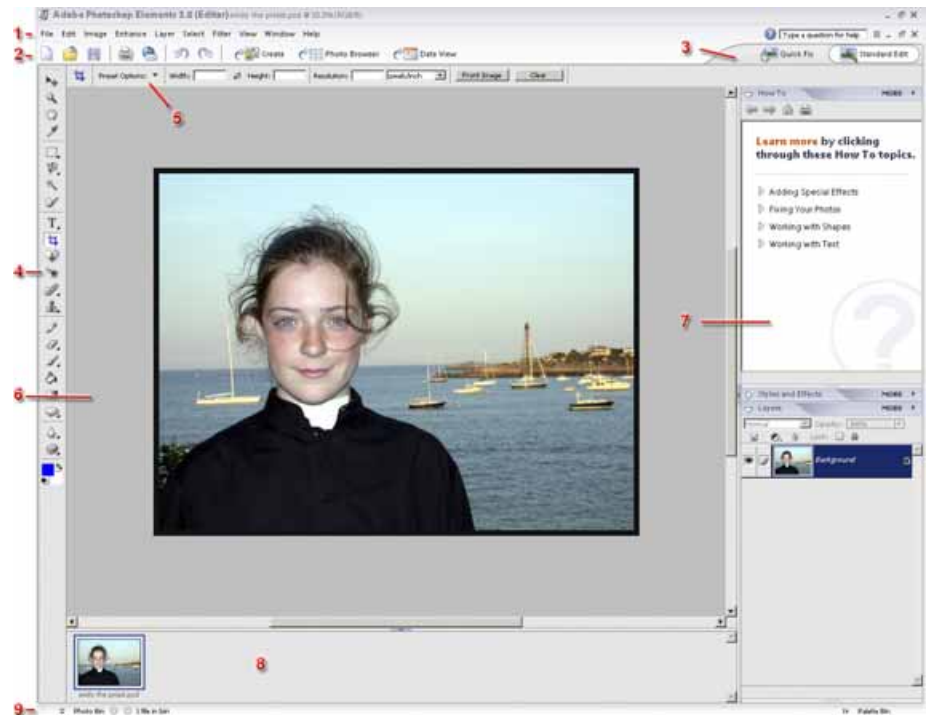


Clicking this icon on the Welcome screen opens the Editor.



Clicking either of these icons on the Welcome screen also opens the Editor, but with a dialog box open.

The Editor is the main workspace for correcting and adjusting photos.



Buttons on the Editor's shortcut bar jump you to the Organizer and it may take some time to load.

The Editor screen display has the following components:

1. Menu bar lists names of pull-down menus.



2. Shortcuts bar has buttons you click to execute frequently used commands such as those that create new documents, and open, save, print, and e-mail photos and undo commands. The *Create*, *Photo Browser*, and *Date View* buttons take you to the Organizer. To display the name or function of a button, point to it.

3. Workspace buttons switch you between the Quick Fix and Standard Edit workspaces.

4. Toolbox holds the various tools you use when editing images (page 13).

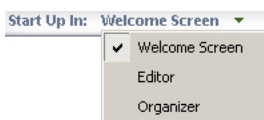
5. Options bar displays options for the tool that's currently selected in the toolbox (page 13).

6. Image area displays images you have opened to edit or print. You can adjust the size of the image area by dragging its right or bottom border.

7. Palettes in the *palette bin* display hints, settings, and other choices that you use to monitor and modify images (page 15).

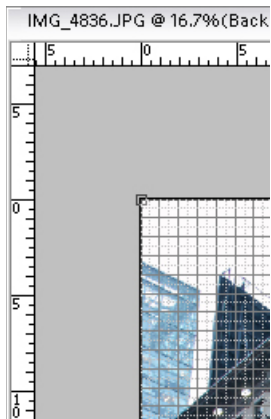
8. Photo bin displays all of the open photographs so you can click any one of them to make it the active image.

9. Status Bar at the bottom of the application window has two buttons that display and hide the photo and palette bins. When there are too many photos to be displayed in the photo bin at one time, there are also *Next File* or *Previous File* buttons you can click to scroll through them.



The Welcome screen has a drop-down menu that lets you bypass the Welcome screen and start the Editor when you start Elements.

MANAGING THE EDITOR DISPLAY



The rulers' origin is in the upperleft corner of the image. The grid lets you align tools and selections more accurately.

When editing images, you can display a grid and rulers, and change the size of the Photoshop Elements window.

GRID

Displaying a non-printing grid over the image provides a guide when performing operations such as selecting or rotating an image.

- To turn the grid on or off, choose *View>Grid*.
- To have things snap to the grid lines, choose *View>Snap to Grid*.
- To change the grid settings, pull down the *Edit* menu and select *Preferences>Grid*.

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'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. Also, the ruler origin determines the grid's alignment. When you drag the origin to a new position, the grid shifts so one intersection aligns with the origin.

- To move the origin, 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 before you drop it.
- To reset the ruler origin to its default position, double-click the upperleft corner where the rulers intersect.
- To change the ruler settings, for example, its units of measurement, pull down the *Edit* menu and select *Preferences>Units & Rulers*, or double-click either ruler to display the Preferences dialog box.

TIP

■ When menu commands turn something on or off, the command has a check mark when it's on.



Buttons on the image window include (from left to right), *Automatic Tile*, *Minimize*, *Maximize*, *Multi-window*, and *Close*.



The buttons you click to change the size of the Editor's screen display are in the upper right corner.

CHANGING THE EDITOR'S SIZE

In the upper right corner of the Editor's screen are three buttons that adjust its size. (Identical buttons below them adjust the size of the image window.)

- The leftmost button *Minimizes* the program.
- The middle button either *Maximizes* the window to fill the screen, or when maximized, *Restores* it so its size returns to what it was previously. When restored, you can change its size by dragging a corner.
- The rightmost button closes the Editor.

USING THE TOOLBOX



The docked toolbox gripper bar.



The floating toolbox title bar.

The toolbox has buttons you click to select tools when editing photos. The toolbox, normally displayed at the left edge of the screen, can float in the image area or even be hidden.

■ *To undock the toolbox so it floats anywhere on the screen, drag it by its gripper bar. To move the floating toolbox, drag it by its title bar (which has no title).*

■ *To dock the floating toolbox, drag it by its title bar back to the left side of the screen so its outline shows and drop it, or choose *Window>Reset Palette Locations*.*

■ *To display or hide the floating toolbox, choose *Window>Tools*. (You can't hide it when it's docked.)*



When you point to a tool its name is displayed underlined. Click the name to display help on that specific tool.

SELECTING TOOLS

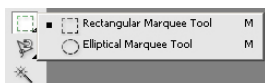
In the toolbox tools are labeled with icons that indicate their function. However, not all tools are displayed—some are hidden in sets indicated by triangle icons. Here is how you select both the displayed and hidden tools:

■ *To learn about a tool and its options point to it to display a tool tip listing its name and keyboard shortcut. Click the highlighted name to display help specific to the tool.*

■ *To select a tool, click it in the toolbox, or press the tool's keyboard shortcut (page 18) given in its tool tip. The currently selected tool is highlighted and its settings are displayed on the options bar below the menu bar.*

■ *To display hidden tools do one of the following:*

- Point to a tool in the toolbox that has a small triangle, and hold down the mouse button then click the tool you want to select. A small square indicates which tool is currently selected.
- When you select a tool from a set that contains hidden tools, buttons for all tools in that set are displayed next to the reset icon on the options bar.
- To cycle through tools, Alt+click a tool in the toolbox, or hold down Shift as you repeatedly press the tool's shortcut key.



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

TYPES OF TOOLS

The tools from which you can choose are briefly described below along with the keyboard shortcuts you press to select them. Page references indicate where each tool is discussed in the most detail in this book. For tools that have hidden tools, all versions are listed with the default tool boldfaced.

- 1. Move (V)** lets you drag selections, layers and other elements (pages 99 and 112). To temporarily switch to this tool while using another tool, hold down Ctrl.
- 2. Zoom (Z)** zooms the image in and out (page 36).
- 3. Hand (H)** moves an image within its window when it's too large to display completely in the window (page 36). To use this tool when another tool is selected, hold down the spacebar.

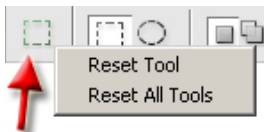
TIP

■ To set tool preferences pull down the *Edit* menu and select *Preferences>General*.



The toolbox.

4. **Eyedropper** (I) sets foreground or background colors (page 134).
5. **Rectangular** (M) and *Elliptical Marquee* tools select regularly shaped areas of your image by dragging the mouse (page 91).
6. **Magnetic Lasso** (L), *Lasso*, and *Polygonal Lasso* draw around an irregularly shaped area to select it (page 93).
7. **Magic Wand** (W) selects areas of the image with pixels of exactly the same or similar colors (page 96).
8. **Selection Brush** (A) selects areas by painting a mask with a variety of brushes (page 95).
9. **Horizontal Type** (T), *Vertical Type*, *Horizontal Type Mask*, and *Vertical Type Mask* enter text on an image (page 124).
10. **Crop** (C) selects a rectangular area of the image for cropping (page 61).
11. **Cookie Cutter** (Q) selects areas in the form of shapes (page 104).
12. **Red Eye Removal** (Y) removes red-eye caused by flash (page 145).
13. **Spot Healing Brush** (J) and *Healing Brush* tools paint with a sample or pattern to repair imperfections in a image (page 145).
14. **Clone stamp** (S) and *Pattern stamp* tools copy an area of the image, or a pattern, to other areas of the image (page 145).
15. **Pencil** (N) paints hard-edged strokes (page 137).
16. **Eraser** (E), *Background Eraser*, *Magic Eraser* tools erase pixels you drag over (page 143).
17. **Brush** (B) paints brush strokes (page 137), *Impressionist Brush* paints with stylized strokes (page 137), and *Color Replacement* replaces a selected color with a new color (page 145).
18. **Paint Bucket** (K) fills areas with a color or pattern (page 149).
19. **Gradient** (G) fills areas with a gradual blend of selected colors (page 151).
20. **Custom Shape** (U), *Rectangle*, *Rounded Rectangle*, *Ellipse*, *Polygon*, and *Line* tools draw shapes (page 152). The *Shape Selection* tool lets you select shapes to move them or change their size (page 152).
21. **Blur** (R) blurs edges you drag over, *Sharpen* sharpens them, and *Smudge* smudges them (page 147).
22. **Sponge** (O) changes the color saturation, *Dodge* lightens areas in an image, *Burn* darkens them, and (page 147).
23. **Foreground and background colors** show the currently selected colors and display the color picker when clicked so you can change the colors (page 134).

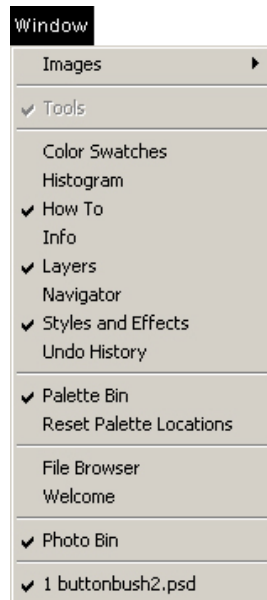


The Reset button at the left end of the options bar, indicated with the selected tool's icon, displays a menu with choices that reset tool options for the current tool or all tools.

RESETTING TOOLS

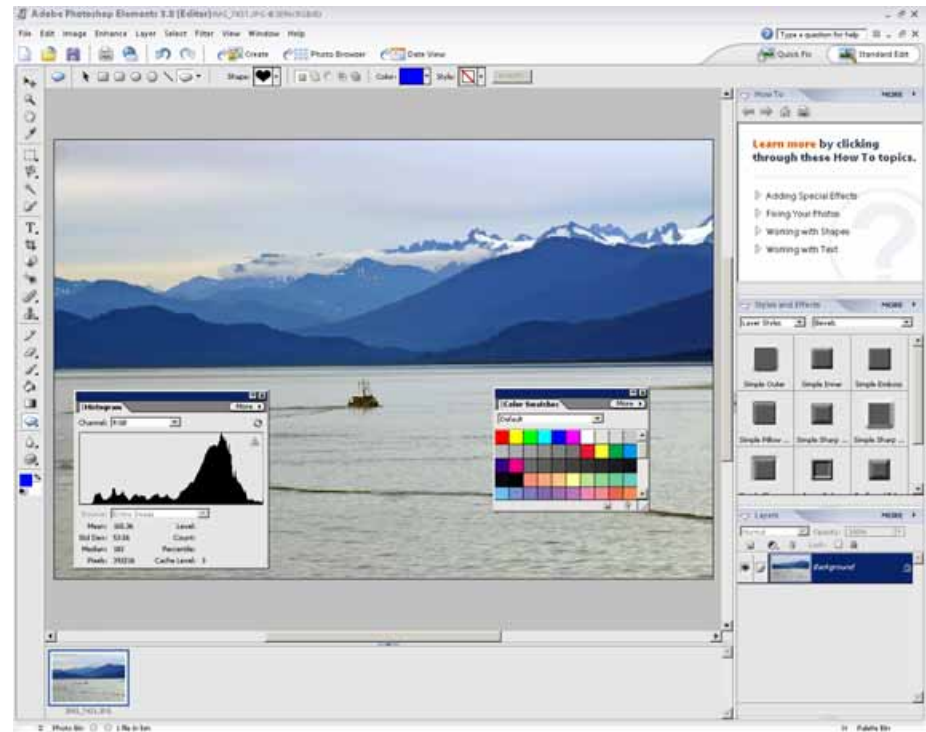
When you change any options for tools on the options bar, you can quickly reset them to their defaults. To do so, click the leftmost icon for the selected tool to display a menu with the choices *Reset Tool* and *Reset All Tools*. Selecting one or the other returns the current tool or all tools to their original default settings.

USING PALETTES



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

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 displayed in the palette bin at the right side of the screen. If the palette bin is hidden, click its button on the status bar.



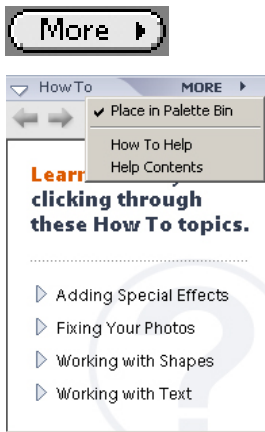
TIP

■ If you use choices on the *Window* menu to close any palette in the palette bin, the entire bin closes. You have to click the *Palette Bin* button on the status bar to reopen it.

TYPE OF PALETTES

When you first start the Editor, the *How To*, *Styles and Effects*, and *Layers* palettes are displayed in the palette bin but there are other palettes, listed along with these three on the *Window* menu.

- *Color Swatches palette* displays colors from which you can select a foreground or background color (page 134).
- *Histogram palette* (page 65) displays tonal and color information about your images.
- *How To palette* displays step-by-step instructions—called *recipes*—for image-editing activities (page 10).
- *Info palette* displays information about the pixels you point to in an image. The information includes the numeric values of the color (page 71), the vertical and horizontal distance of the pointer from the origin on the rulers, and the size of the selected area.
- *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 108).
- *Navigator palette* displays a thumbnail of the active image and has controls you can use to zoom and scroll around it (page 36).



To display a palette's menu, click the *More* button on a floating palette (top) or the *MORE* button on a palette that's docked (bottom).

- *Styles and Effects palette* displays thumbnails to give you an idea of what each layer style (page 128), filter (page 77), or effect (page 134) does when you apply it to the current layer or image.

- *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 by deleting changes (page 21).

PALETTE MENUS AND OTHER SETTINGS

All palettes have menus listing commands specific to the palette. The only exception is the *Place in Palette Bin* command that appears on all palette menus.

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

- To learn what palette buttons or other settings do, point to them to display a tool tip.

MANAGING PALETTES IN THE PALETTE BIN

You can store frequently used palettes in the palette bin. This makes it easy to access them when they are needed and keeps them out of your way when they are not.

- To close or open the palette bin, choose *Window > Palette Bin* or click the *Close/Open Palette Bin* button on the status bar. You can also pull down the *Window* menu and turn off any palette currently in the bin.

- To scroll a palette's contents, click the scroll bar.

- To adjust the size of a palette in the bin, drag its borders.

- To expand or collapse palettes in the palette bin, click the triangle icons on their headings.

- To remove a palette from the palette well, drag it by its tab into the work area so it floats and then click its close (X) button. If necessary, first turn off *Place in Palette Bin* on the palette's menu so it doesn't just move back to the palette bin when you close it.

MANAGING FLOATING PALETTES

By default the *How To*, *Styles and Effects*, and *Layers* palettes are stored in the palette bin. When you open any other palette, it floats in the image area. What determines if a palette floats or not is whether the palette menu's *Place in Palette Bin* command is on or off.

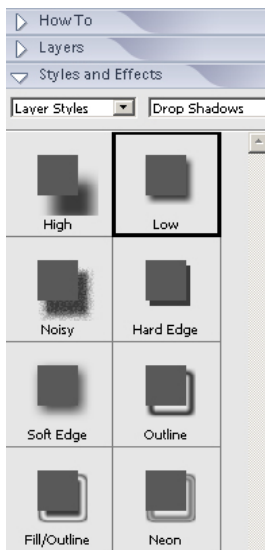
- To open a palette, pull down the *Window* menu and click its name.

- To undock a palette so it floats, drag it by its tab and drop it anywhere outside the palette bin.

- To dock a floating palette in the palette bin, do one of the following:

- Drag the palette (and not the entire group) by its tab into the palette well so it's displayed with a dotted outline and drop it

- Click the *More* button in the upperright corner of the palette to display the palette menu and then click *Place in Palette Bin*. When you then close the palette, it moves to the palette bin.



You click triangle icons to collapse or expand palettes in the palette bin.

TIP

■ All palette menus have a help command that displays help on that specific palette.



A palette group that includes the Styles and Effects, Layers, and How To palettes.

■ To close a floating palette click its close (X) button or select its name on the Window menu. If *Place in Palette Bin* is on in the palette's menu, it moves to the palette bin.

■ To show or hide all floating palettes (not those in the palette bin) press Tab.

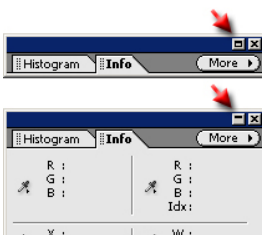
Floating palettes are always contained in a group window and you can group other palettes in the same window so you can move and size them together. The only rule is that you have to drag a palette into or out of a group window by its tab, one at a time.

■ To move a palette from the palette bin or another group window into a floating group window, drag it by its tab onto the body of the target palette. When a thick line surrounds the target palette's contents, drop it.

■ To remove a palette from a group window, drag it by its tab and drop it outside of any existing group to create a new group.

■ To move a palette to the front of its group, click its tab or select its name on the Window menu.

Since palettes often cover part of the image area, there are times when you want to move their group windows or even change their size.



The Minimize button (top) collapses a palette group window and the Maximize button (bottom) expands it to display all of its options.

■ To move a group window, drag the group window's title bar. To move it to the closest side of the screen, hold down Shift as you drag and release it.

■ To collapse a group window to display palette titles only, click the group window's Minimize button, or double-click a palette's tab.

■ To expand a group window to see the palette's contents, click the group window's Maximize button, or click a palette's tab.

■ To change the size of a group window, drag one of its corners. Not all palettes can be resized.

SETTING PALETTE DEFAULT POSITIONS

After rearranging palette groups, their positions are remembered when you exit Photoshop and restart it later. However, you can return everything to its default position.

■ To reset palettes to their default positions, select *Window>Reset Palette Locations*.

■ To specify palette locations when you start Photoshop, select *Edit>Preferences>General*, and then turn the *Save Palette Locations* check box on or off. When on, palettes reappear as they were when you quit and restart the program. When off, all palettes return to their default locations.



Palettes that can be resized have a Size box in their lowerright corner although you can actually drag any corner.

BASIC COMMANDS

This book assumes some computer background because the Editor works in many respects just as hundreds of other programs do. However, there are a few things to be aware of that may be new to you. Here are some of them.

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. You can sometimes keep track of a process by checking a progress bar in the dialog box but not all have them. To have a beep alert you when a process is completed, pull down the *Edit* menu, select *Preferences>General*, and turn on the *Beep When Done* check box. To stop a process before it has finished, try holding down *Esc* although this won't always work.



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

MENUS

The Editor 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 “... choose *Enhance>Adjust Lighting>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 Lighting*, 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 images in the image window or photo bin. What menu appears depends on what tool is selected.

- *Palette menus* are displayed when you click the palette's *More* button.

KEYBOARD 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. As you work through menu commands, you'll see that some command names are followed by keyboard shortcuts such as *Ctrl+Z* 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.

TIP

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

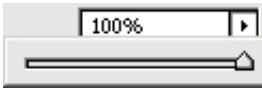
MODIFIER KEYS

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*, *Shift*, and *Alt*.

- *When keys are used in combination*, they are shown connected by a plus sign. For example, *Shift+Ctrl+Alt*.



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.



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



When you see a Cancel button in a dialog box, hold down Alt to see if it changes to a Reset button that lets you start over.

TIP

- To adjust the entire image, make sure nothing is selected (page 89).
- To adjust only a single layer, select that layer in the Layers palette (page 108).
- To adjust just a portion of your image, select that portion (page 89).

■ When a key should be held down when you click or drag the mouse, it is indicated by +click or +drag added to the key as in Alt+click.

■ At 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.

DIALOG BOXES

When you select many commands, particularly menu commands followed by an ellipsis (...), a dialog box is displayed. Although some dialog boxes have many settings, in most cases you'll probably only adjust a few. The rest can be left set to the defaults that Adobe has chosen because they work with most images, most times.

■ To increment the value in numeric text boxes click in the text box then press the up or down arrow keys to change the value in increments of 1, or hold down Shift while you press the arrow keys to increment the value in steps of 10. You can also point to the title of the box and drag left or right to change the value in the box just as if you were dragging a slider.

■ To display drop-down menus, click the drop-down arrows or triangle buttons.

■ To turn square check boxes on and off, click them. When on, they have a check mark in them.

■ To turn on an option button (sometimes called a radio button), click it and any other button in the same set that's on, turns off.

■ To move between text boxes, when the cursor is already in one text box, press Tab or Shift+Tab.

■ To close a dialog box without applying your adjustments to the image, click Cancel or press Esc. In some cases, you can hold down Alt and the button changes to Reset so you can click it to restore the default settings and try again.

■ To see the effects of your changes as you make them, turn on the Preview check box. Sometimes, clicking the check box on or off, or even clicking the preview itself, toggles the change on and off so you can see it more clearly.

■ To apply your changes to the image and close the dialog box, click OK.

LAYERS AND SELECTIONS

When learning Photoshop, 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 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 107) 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.

■ *Selection* (page 89) 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.

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*.

SELECTING ITEMS

Whenever you are offered a list of items from which to choose, be they filenames, tags, or thumbnails, here's how you select and deselect them.

- *To select or unselect an item*, click it. Selecting a folder, selects all of the photos within it. Selecting a drive, selects all of the folders and photos on it.
- *To select or unselect multiple items*, click the first then hold down Ctrl while you click others to select or unselect them.
- *To select a series of consecutive items*, click the first in the series and hold down Shift when you click the last.
- *To select more than one set of consecutive items*, click the first one in the first set and hold down Shift when you click the last one in that set. Then, hold down Ctrl to select the first one in the second set, and Ctrl+Shift while you click the last one in that set.

TIP

Elements is really two separate programs loosely linked together through the *Create*, *Photo Browser*, and *Date View* buttons and menu commands such as the *File* menu's *Print Multiple Photos* (page 39). Since most people are more familiar with single programs, this linking can be disorienting at first, but you will soon get used to it. The two most noticeable effects of clicking buttons or commands that link you between the two components are the following:

- The program seems to slow down from its usual response because an entirely different program is being started. A dialog box is displayed telling you the Organizer is being loaded.
- The new program opens, covering the program you were working on. Suddenly everything seems to have changed.

TIPS

- The *Goodies* folder on the Photoshop Elements 3.0 CD may contain extra files, graphics and resources.
- The minimum screen resolution for Photoshop Elements 3.0 is 1024 x 768.
- Online Services vary depending on geographic regions. While Online choose *Edit>Preferences>Organize & Share>Services* to see if any new services are available.

UNDOING CHANGES



The Undo and Redo buttons on the shortcuts bar.

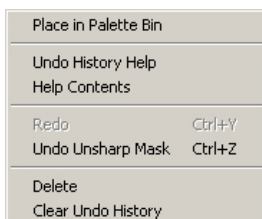
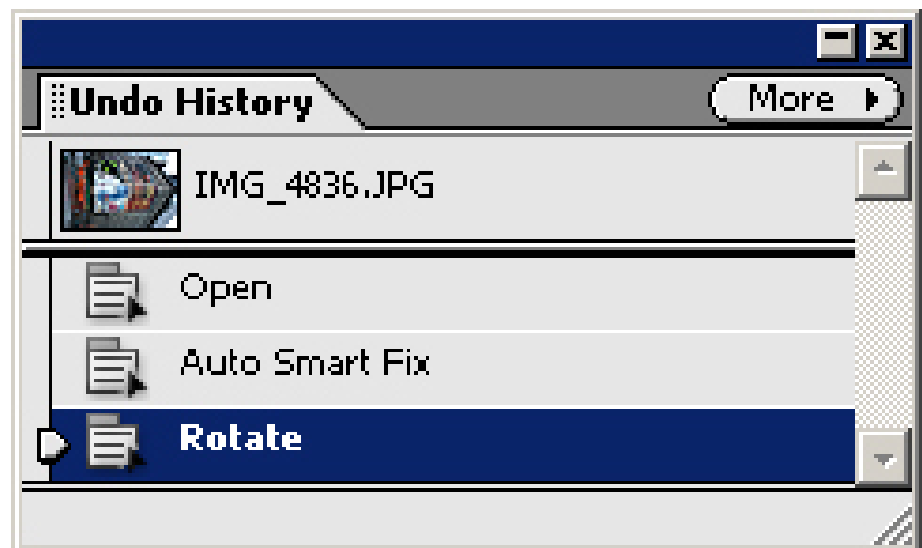
TIPS

■ 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. To capture images so these settings can be changed later, use the camera's RAW format if it has one. The camera does not adjust these images. You do that later on your computer.

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. 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 107).

When editing images, you should save them in Photoshop Element's native format—PSD (page 25) to preserve some characteristics of an image that won't be preserved if you save it in other formats.

- The *Edit>Undo* and *Edit>Redo* 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 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, displayed by choosing *Window>Undo History*, lists all changes you have made in the current session.

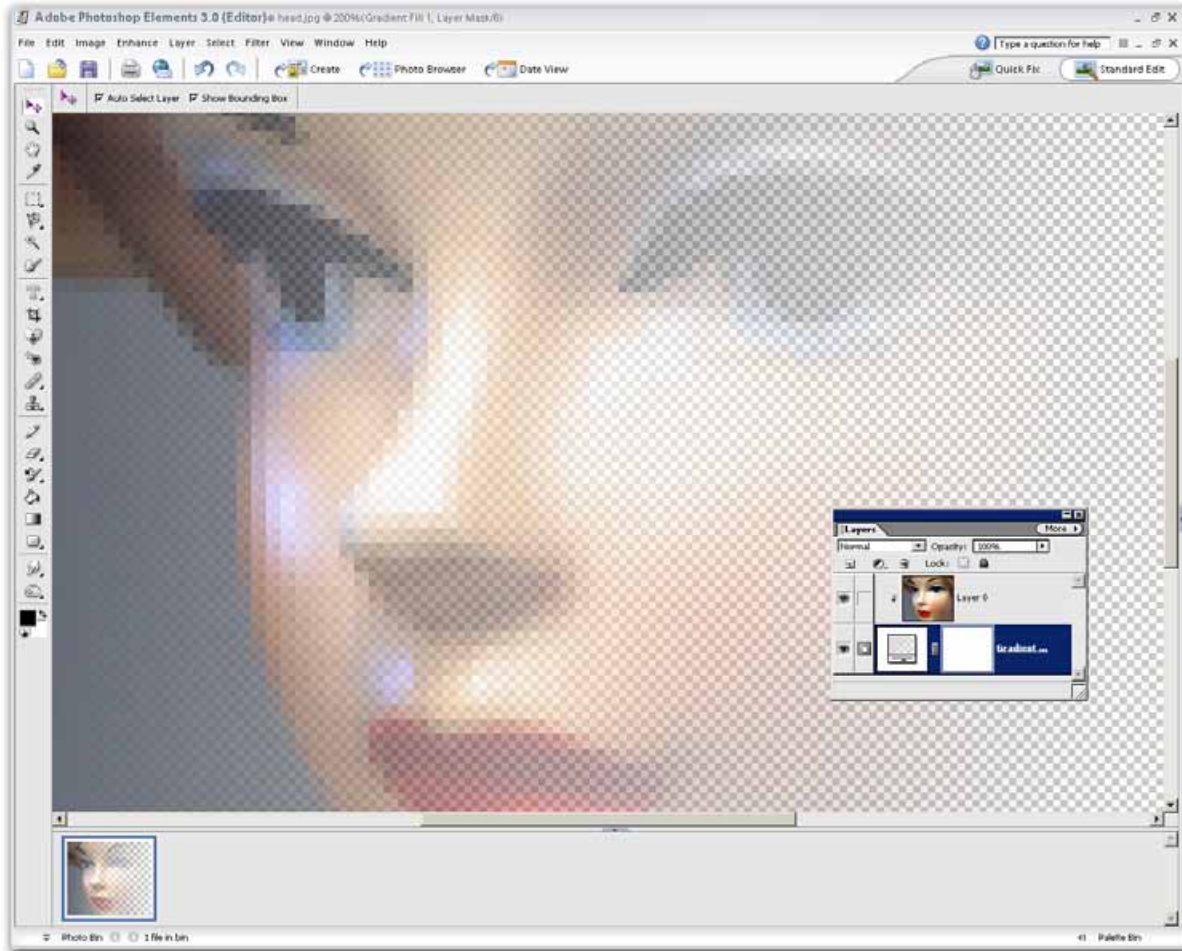


The Undo History palette menu displayed when you click the More button.

- To select a change, click it or drag the slider to it. The selected change is highlighted.
- To delete the selected change and all of the changes listed below it in the palette, click the *More* button to display the palette's menu, then click *Delete*. (You can also right-click a change, and choose *Delete* from the context menu.)
- To display the palette's menu, click the *More* button. The *Clear Undo History* command on the palette menu deletes the list of commands you can undo, without undoing them.

Chapter 5

Working with Layers

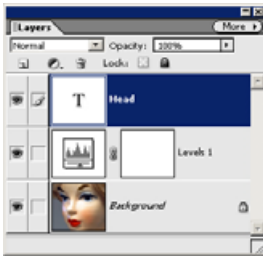


CONTENTS

- Using Layers ■ The Layers Palette ■
- Creating and Preserving Layers ■ Managing Layers ■ Grouping Layers ■ Using Adjustment Layers ■
- Using Fill Layers ■ Editing a Layer Mask ■ Entering Type ■
- Applying Layer Styles ■ Creating Animated GIFs

When you first open a digital photograph it contains a single layer. However, you can add additional layers either directly or indirectly. Why would you want to do so? In some cases you have no choice. For example, if you use the Type tool to add text to an image, or a shape tool to add a shape, the text or shape is automatically entered on a new layer. In other situations you want to add layers yourself. For example, you can add an adjustment layer to change such image characteristics as levels, brightness and contrast, or hue and saturation. If you later hide or delete this layer, the image reverts to its original form. Before layers were introduced, changes were always made to the original image and were difficult or impossible to undo later. Every change had to be well planned, as if you were carving in stone. Now you can use layers to make changes and modify and delete them at will without affecting the original image. The more you learn about layers, and the tools you use to manage them, the more uses you will find for them—even using them to create animations.

USING LAYERS



The Layers palette displays all of the layers in an image. Here they are (from bottom to top), the base layer, an adjustment layer, and a text layer.



Adjustment layers affect the layers below them. Here a posterize adjustment layer has been added to posterize the image.

TIPS

- Type, shape, and fill layers are different from other layers. Their content is not in the form of pixels, but in the form of vector graphics.

- Whenever you plan on painting or drawing on an image, you should create a layer to do it on so you won't change the original image.

When you first open a digital photo, it has only one layer—the background layer containing the image. Any changes you make to this layer become part of the image and permanently change its pixels. To avoid permanent changes, you add additional layers and make your changes on those layers. It's as if you were covering an original photo with sheets of glass on which you drew, painted, made adjustments to the image below, entered text, or added fills.

Although layers can dramatically increase the size of a file, there are advantages that outweigh this one disadvantage.

- **Changing a layer** affects only that layer and doesn't affect other layers except in intended ways. For example, one layer may contain adjustments to the image's levels, while another layer has adjustments to its saturation. These layers only effect the appearance of the image layer below them.

- **Hiding a layer**, by clicking its eye icon in the Layers palette, temporarily hides the layer's contents and removes its effects from the image. For example, if you add text on a layer, you can hide that layer and make a print without the text. You can then unhide the layer and make a print with the text. (One trick is to quickly toggle an adjustment layer on and off a number of times to see exactly what effects it's having on the image.)

- **Deleting a layer** removes its effects from the underlying image. You can delete a layer at any time, unlike the *Edit>Undo* command or Undo History palette that only undo changes made during the current session.

- **Adjusting or revising a layer** is possible at any time, unlike changes made to the image itself that are permanent. For example, if you use a layer to adjust an image or add type, you can always go back later and change the adjustment or change the size or color of the text.

- **Repositioning layers** makes it easy to revise a layout. For example, if you've added text or combined multiple images, you can drag their layers into new positions at any time.

- **Adding or deleting layer styles** such as drop shadows under text can be done at any time.

Although you can create regular layers on which to place other images, paint, or draw, there are some types of layers that are dedicated to specific functions.

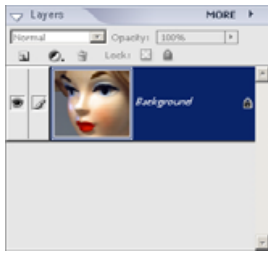
- **Adjustment layers** can change an image's levels, color balance, brightness, contrast, hue, and saturation without changing the original image. Any adjustments made to the adjustment layer are "projected" onto the layers below where you see their affects.

- **Fill layers** (page 120) add a solid color, gradient, or pattern to an image. You can then make the fill layer semitransparent or cut holes in it so the image below shows through much like a photo shows through an opening cut in a mat.

- **Type layers** (page 124) are created automatically when you select the Type tool from the tool box and click in the image to enter text. Having text on its own layer makes it easy to edit, manipulate, move, and delete.

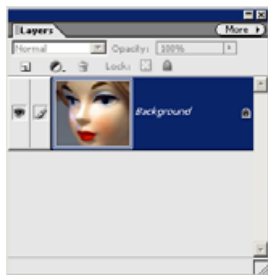
- **Shape layers** (page 152) are created automatically when you select a Shape tool in the toolbox and use it to draw a shape on the image.

THE LAYERS PALETTE



When you open a digital photo, it is the background layer.

The Layers palette displays the layers in an image and lets you set the selected layers mode and opacity. The More button displays the palette menu and buttons let you create, delete or lock layers.

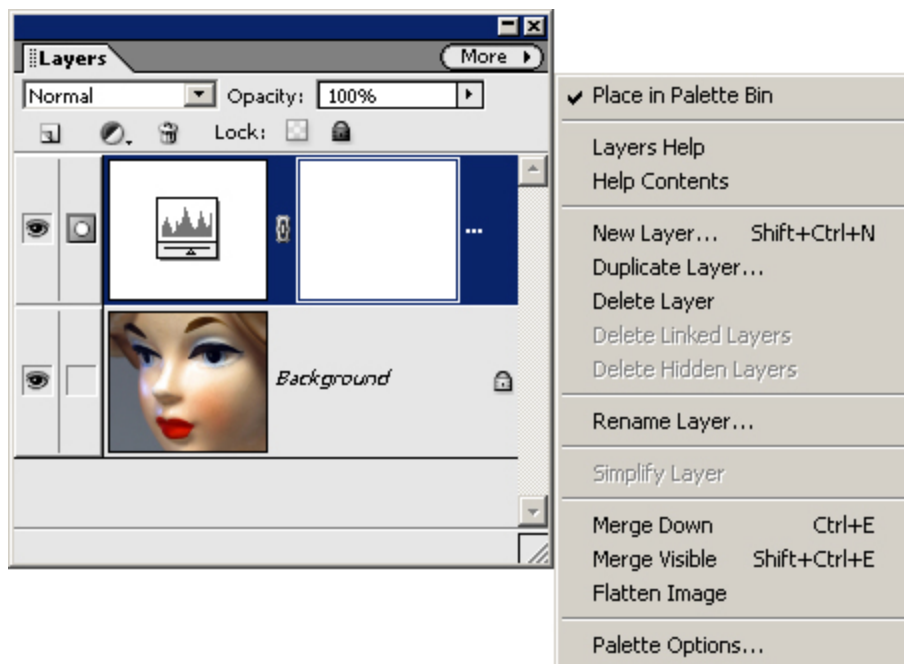


You can drag the palette by its tab and drop it into the image area where it floats (page 15).



Buttons at the top of the Layers palette include (from left to right) Create a new layer, Create adjustment layer, and Delete layer.

The Layers palette is your control panel as you create, manage, and select an image's layers. To display the Layers palette, if it isn't already in the palette bin, choose *Window>Layers*. Once you have more than a few layers you may want drag it out of the palette bin so it floats in the work area where you can enlarge it. If you have just opened a digital photograph, the layers palette displays only a single layer—labeled *Background* and displaying a lock icon. As you edit an image, you may add additional layers that are then listed in the palette. You can click any one of the layers to make it the *active layer* and many procedures then affect only that layer. To manage layers you click buttons in the Layers palette, select commands on the *Layer* menu, and click the triangle button to display the palette menu. Here are some of the options you have:



- **More button** displays the palette menu with commands you use to manage layers. For example, *Palette Options* on the menu changes the size of the thumbnail displayed in the palette or even hides it.

- **Blending Mode**, set to *Normal* by default, has a drop-down arrow you can click to select from a list of blending modes (page 141) you can assign to the selected layer.

- **Opacity**, set to 100% by default, has a drop-down arrow that displays a slider you drag to change the selected layer's opacity (page 139).

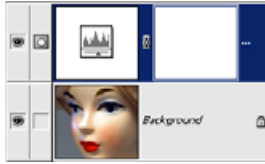
- **Create a new layer button** creates a regular layer above the currently selected layer. If you drag and drop an existing layer on the button, that layer is duplicated in the image.

- **Create adjustment layer button** displays a menu listing the kinds of adjustment layers you can insert above the currently selected layer (page 118).

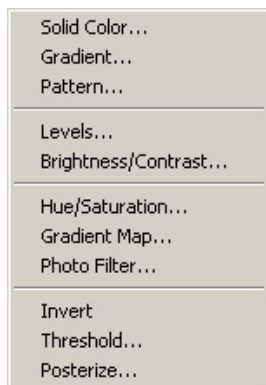
- **Delete layer button** deletes the selected layer. You can also drag a layer and drop it onto the button to delete it.



The Lock transparent pixels (left) and Lock all (right) buttons.



In the Layers palette, each layer has three sections that present information about the layer.



Clicking the Create adjustment layer button displays a menu of both adjustments and fills (pages 118 and 120).

The Layers palette lists all of the layers in an image in the same order in which they are stacked. This image has three layers (from top to bottom) a type layer, a levels adjustment layer, and the background layer containing the photo.

■ *Lock icons* lock and unlock either transparent pixels or all pixels so you can't change them (page 112).

■ *Layers* are shown on the palette in the order in which they are stacked in the image—the topmost layer in the Layers palette is the topmost layer in the image. The order of layers is important because it can determine what you see and what layers are affected by changes in layers above them. For example, if a type layer is below a fill layer or any other layer with 100% opacity, it is hidden. You can drag any layer except the background layer up or down in the Layers palette to change its position in the stacking order.

- *The left column* displays a eye icon when the layer is visible (page 112) and no icon when a layer is hidden.
- *The middle column* displays a paintbrush (or a mask icon if the layer has a mask—page 122) when you click it to select it as the active layer. This is the layer to which editing changes will be made. If other layers are linked to the selected layer, this column on those layers displays a link icon (page 112).
- *The right column* displays a thumbnail indicating the layer's contents or function and the layer's name. If a layer is locked, a lock icon is displayed in this column.

When you drag the palette out of the palette bin so it floats, you can change its size. Although you can do so by dragging any corner, the best way is to click the palette's minimize button then its maximize button. This enlarges the palette to the exact size needed to fully display all layers and their names.



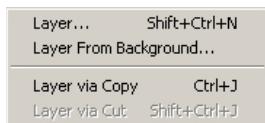
CREATING AND PRESERVING LAYERS

TIP

■ Whenever you plan on painting or drawing on an image, you should create a layer to do it on so you won't change the original image.



Buttons at the top of the Layers palette include (from left to right) Create a new layer, Create adjustment layer, and Delete layer.



The Layer > New submenu displays choices used to create layers.



Here the Layers palette shows a variety of layer types including (from top to bottom) a regular layer, a shape layer, a text layer, a fill layer, an adjustment layer, and a background layer.

Although a new digital photo has only a background layer you can convert that layer into a regular layer and add as many additional layers as your system has memory for.

THE BACKGROUND LAYER

The background layer, such as the one containing a digital photo that you open for the first time, is unique in that there is only one and you can't move it in the stacking order or change its blending mode or opacity. However, you can do all of these things and more if you first convert it into a regular layer.

■ To convert the background layer into a regular layer, do one of the following to display the New Layer dialog box (page 110):

- Double-click its layer thumbnail or name in the Layers palette.
- Select *Layer > New > Layer from Background*.

■ To make a duplicate copy of the background layer while leaving the background intact, select the background layer and drag it onto the *Create a new layer* button, or choose *Duplicate Layer* from the *Layer* menu or the Layers palette menu to display the Duplicate Layer dialog box (page 112).

■ To convert a regular layer into a background layer, when the image doesn't already have a background layer, select the layer and choose *Layer > New > Background from Layer*. Any transparent areas in the original layer are filled with the background color (page 134).

CREATING NEW LAYERS

When you add a new layer or perform an action such as adding type, a shape, or a fill that creates a layer automatically, the new layer is listed in the palette above the currently selected layer. Since layers are usually created to affect the layer below them—referred to as the *stacking order*—the first step in creating a new layer is to select the layer above which you want it to appear. In the case of an adjustment layer (page 118), this would be the layer with the photo on it—usually the background layer. To add a new layer, do one of the following:

■ To create a new layer above the selected layer, click the *Create a new layer* button on the Layers palette.

■ To create a new layer below the selected layer, when any layer other than the background layer is selected, Ctrl+click the *Create a new layer* button on the Layers palette.

■ To create a new layer using the *New Layer* dialog box (page 110) do one of the following:

- Select *Layer > New > Layer* to create a new regular layer.
- Click the Layers palette triangle button to display the palette menu and select *New Layer*.
- Alt+click the Layers palette *Create a new layer* button.

■ To create a new layer from a selection by cutting and pasting, first copy or cut the selection to the clipboard and then paste it back into the same or a

TIPS

■ One technique with a high-contrast scene is to use a tripod and take two pictures—one exposed to capture the shadows correctly and one to capture the highlights. You then copy one of these images into the other so its on its own layer. You can erase through various parts of the top image so the entire image looks properly exposed. You can also generate the two files from a single RAW image.

■ When you use the Background Eraser tool (page 143) on the background layer, it turns it into a regular layer and erased areas become transparent.



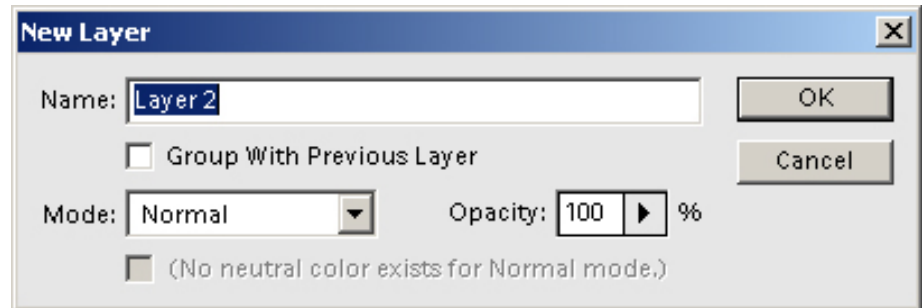
When saving an image with layers, if you choose a format that does not support layers, this warning icon is displayed next to the Layers check box in the dialog box. To save all of your data, be sure to save one copy in Photoshop's PSD format.

different image. Alternatively, you can choose *Layer>New* and then select *Layer via Copy* or *Layer via Cut*.

■ To duplicate a layer, select the layer and drag it onto the *Create a new layer* button, or choose *Duplicate Layer* from the *Layer* menu or the Layers palette menu to display the Duplicate Layer dialog box (page 112).

THE NEW LAYER DIALOG BOX

When adding a new layer to an image, a number of commands display the New Layer dialog box where you can enter a name or specify the following settings:



■ *Name* text box displays a name that has been assigned automatically based on the type of layer and the order in which it was created. You can type in a new name or change it later (page 112).

■ *Group with Previous Layer* groups the layer with the layer below it for special effects (page 117).

■ *Mode* specifies how pixels in the new layer blend with the layers below (page 139). When you set this to a mode other than *Normal*, *Dissolve*, *Hue*, *Saturation*, *Color*, or *Luminosity* the check box below becomes active. Since some filters cannot be applied to layers with no pixels, turning on this check box fills the layer with a preset, neutral color. The neutral color uses the layer's blending mode and is invisible unless an effect is applied.

■ *Opacity* specifies how transparent the layer is and how much the layer below shows through it (page 139).

■ *OK* button closes the dialog box and adds the layer to the image and Layers palette.

■ *Cancel* button closes the dialog box without creating the layer.

PRESERVING LAYERS

Because you usually want to preserve layers in your working copy, you should always save the image in a format such as PSD, TIFF, or PDF. (When you use the *Save As* command, the Layers check box is available for formats that preserve layers. If the check box is dimmed, the selected format won't preserve them.) If you want a JPEG image, where all layers are flattened, you can always use the *Save As* command to create it from the working copy.

MANAGING LAYERS

TIPS

- If editing changes don't seem to be having the expected effect, it may be because you haven't selected the correct layer, or an area within the layer is selected.
- To move the selected layer, drag it with the Move tool. You can't move the background layer without first converting it into a regular layer (page 110).
- The background layer is partially locked, but unlike other locked layers, it can still be edited and even deleted.

Once an image has more than one layer, you may want to select, move, and otherwise manage them to get the best results.

SELECTING LAYERS

When an image has multiple layers, most editing commands affect only the selected, or *active layer*. For example, if you make a selection and can't delete the selected area, it's probably because you haven't selected the layer that contains the area you want to delete. For this reason it's important to know how to select layers and know which layer is active. Only one layer can be active at a time and you can tell which it is by opening the Layers palette where its name and thumbnail are highlighted and a paintbrush or mask icon is displayed in the second column to indicate the layer is being edited. To select a layer, do one of the following:

- *To select a layer in the Layers palette*, click its thumbnail or name.
- *To select a layer by clicking in the image*, select the Move tool and right-click. A context menu lists all layers containing pixels at the point you clicked along with all fill and adjustment layers. Layers that are transparent at the place you clicked and layers for text and shapes aren't listed. Click the name of the layer you want to select.
- *To select the topmost layer that contains opaque pixels* at the place where you click, select the Move tool and turn on the *Auto Select Layer* check box on the options bar.

HIDING AND SHOWING LAYERS

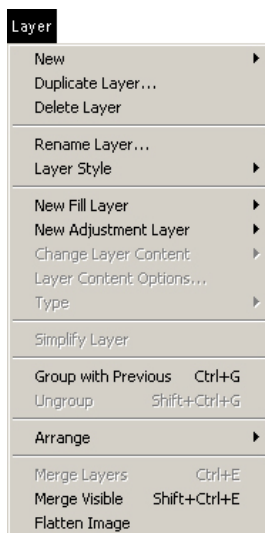
You can hide and show layers at any point. You might do this to prevent a layer from printing since only visible layers print. You might also do it to hide an adjustment layer so it no longer affects the image. In fact, you can click an adjustment layer on and off to compare “before” and “after” versions of the image. When the eye icon is displayed, the layer's contents or effects on the image are shown. When the icon isn't displayed, the layer's contents or effects are hidden. To show or hide a layer do one of the following in the first column of the Layers palette:

- *To hide a single layer*, click its eye icon. To hide or show multiple layers drag through the eye column.
- *To hide or show all layers but one*, Alt+click the eye icon for the one layer you want to see.

CHANGING THE STACKING ORDER

The stacking order determines whether a layer appears above or below other layers in the Layers palette. This can sometimes affect whether a layer's contents are displayed or not, or determine if it's adjustments affect the desired layer. To rearrange the stacking order, do one of the following in the Layers palette:

- *To change the order of layers by dragging*, select the layer that you want to move then drag it by its name up or down. Drop it when the highlighted line appears in the desired position between other layers or above the top-most layer.



Many of the commands you use to manage layers are on the Layer menu and the Layers palette menu.



When you hide all layers, a checkerboard pattern appears. This pattern is often used to indicate transparent areas of an image. You can change the look of this display using the Transparency section in the Edit>Preferences dialog box.

■ To change the order of a layer using menu commands, select the layer that you want to move, then select *Layer>Arrange*, and choose a command from the submenu to arrange the layer:

- *Bring to Front* makes the layer the topmost layer.
- *Bring Forward* moves the layer one level up in the stacking order.
- *Send Backward* moves the layer one level down in the stacking order.
- *Send to Back* makes the layer the bottommost layer in the image (except for the background).

RENAMING LAYERS

As you add more layers to an image, they are automatically named to indicate their type and the order in which they were created. If you didn't name them at the time you created them you'll find that it's helpful to give them descriptive names reflecting their content or purpose. (Renaming the background layer changes it into a regular layer.) To rename a layer do one of the following:

- Double-click the layer's name in the Layers palette to highlight it, and enter a new name.
- Double-click the layer's thumbnail in the Layers palette to display the Layer Properties dialog box, type in a name, and click *OK*.
- Select the layer in the Layers palette, pull down the *Layer* menu or display the palette's menu and select *Rename Layer* to display the Layer Properties dialog box, type in a name, and click *OK*.

DELETING LAYERS

When you no longer need a layer, you can delete it to free up memory and simplify the Layers palette. To do so, select the layer in the Layers palette and do one of the following. If prompted to confirm the deletion, click *Yes*:

- To delete a layer by dragging, drag and drop it on the *Delete layer* button on the Layers palette.
- To delete the selected layer by clicking, click the *Delete layer* button on the Layers palette. To bypass the dialog box requesting confirmation of the deletion, Alt+click the *Delete layer* button.
- To delete the selected layer using a menu, pull down the *Layer* menu or display the Layers palette menu, and choose *Delete Layer*.
- To delete hidden or linked layers, display the Layers palette menu and choose *Delete Hidden Layers* or *Delete Linked Layers*.

DUPLICATING LAYERS

You can duplicate a layer into the same image, another image, or a new image. If duplicating it to another image, be sure that image is open and select *Window>Images>Tile* to arrange them side by side. To duplicate any layer including the background layer, select it in the Layers palette, and do one of the following:

- To duplicate the selected layer and specify options, pull down the *Layer* menu, display the Layers palette menu, or right-click the layer's name (not

TIPS

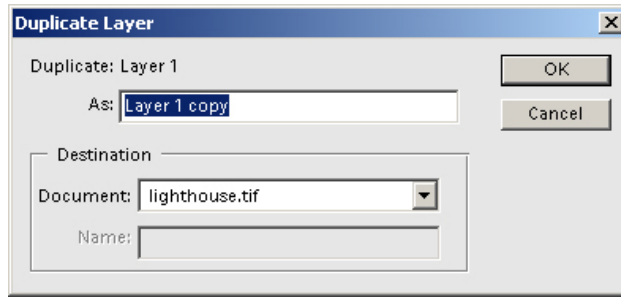
- When you move part of one or more layers outside of the image area and know you won't need those areas choose *Select>All* and then *Image>Crop* to delete them and reduce the file's size.
- You can't move the background layer from the bottom of the layer stack without first converting it into a regular layer (page 110).
- The *Image>Rotate>Free Rotate Layer* command lets you drag the image to rotate it.
- A composite of all visible layers is printed. To print an individual layer, make it the only visible layer in the Layers palette before choosing the *Print* command.

TIPS

■ To align layers, you can reduce the opacity of the top layer so the layer below shows through. After aligning the two layers, return the top layer's opacity to the setting you want to use.

■ When you copy a selection to the clipboard and then create a new document, the new document has the same pixel dimensions as the selection.

the thumbnail) and choose *Duplicate Layer* to display the Duplicate Layer dialog box with the following options:



- As text box lists the default name assigned to the duplicate, but you can type over it with your own descriptive layer name.
- *Document* lists the name of the active image as the destination but the drop-down arrow lets you select any other open image, or a *New* file. If you select *New*, the *Name* text box becomes available to enter a name for the new file.
- *OK* duplicates the layer. If you duplicate the layer into a new image, that image has no background layer.

■ To duplicate the selected layer without specifying options, select it and drag and drop it on the *Create a new layer* button on the Layers palette. The duplicate is given the same name as the original, followed by *copy*.

COPYING AND MOVING LAYERS TO ANOTHER IMAGE

To copy or move layers between images, you can drag and drop them. It helps if the image windows are tiled (page 38) or you can at least see parts of each image.

■ To drag a copy of layer to another image from the Layers palette, select the layer in the palette and drag and drop it into the other image. To center it in the new image, hold down the mouse button, then Shift, then drag and drop it. To copy or move multiple layers at the same time, link them together and select any of the linked layers to drag by (page 115).

■ To use the clipboard to copy or move a selection from one image to another, select the area to be moved (*Select>All* to select all of the pixels on the layer), and then select *Edit>Copy* or *Edit>Cut* to copy or move the selection to the clipboard. Make the destination image active, select the layer you want the copied layer above and select *Edit>Paste* to copy the selection from the clipboard to a new layer.

MOVING LAYERS WITHIN AN IMAGE

When working with multiple layers, you may want to move individual layers vertically or horizontally. Perhaps you want to align one image with another or align text on an image. Even if you move a layer partially out of the image area, its contents are preserved so you can drag it back into view. To move multiple layers at the same time, link them and select any of the linked layers (page 115). To move a selected layer do one of the following:

■ To freely drag the selected layer, drag it with the Move tool. Shift+drag to constrain the movement to up or down, left or right, or to a 45° diagonal.



The *Lock transparent pixels* (left) and *Lock all* (right) icons.

TIPS

■ Copying or moving layers between images is almost identical to doing the same with selections. For details not covered here, see the section on *Moving and Copying Selections* (page 99).

■ Dragging and dropping layers between images takes up less memory than copying and pasting them because they aren't first copied to the clipboard.

■ When you copy or move a layer between images with different resolutions, the pasted data retains its original pixel dimensions. This can make the pasted portion appear out of proportion to the new image. Use the *Image>Resize>Image Size* command (page 58) to make the source and destination images the desired sizes before copying and pasting.

■ *To move the layer in small increments*, select the Move tool and then press the arrow keys on the keyboard to move it in 1-pixel increments, or hold down Shift while pressing the arrow keys to move the layer in 10-pixel increments.

■ *To move the topmost layer that contains opaque pixels* at the place where you click, select the Move tool and turn on the *Auto Select Layer* check box on the options bar.

■ *To align layers*, reduce the opacity of the top layer so the layer below shows through. After aligning the two layers, return the top layer's opacity to the setting you want to use.

LOCKING LAYERS

Locking layers is a way to protect their contents from inadvertent changes. For example, if you lock transparency, you can't paint in transparent areas. When a layer is locked, a lock icon is displayed to the right of the layer's name. When the layer isn't selected, the *Lock all* icon is black, and the *Lock transparent pixels* icon is white. To see what a lock icon indicates, point to it to display a tool tip.

To lock a layer's properties, select the layer and then click one of the lock buttons at the top of the Layers palette:

■ *Lock transparent pixels* confines editing such as painting and erasing to the opaque or semitransparent portions of the layer.

■ *Lock all* prevents modification of the layer's pixels using the painting and erasing tools and you can't move the layer (except in the layer stack) or change its opacity, blending mode, or layer style.

LINKING LAYERS

Linking layers lets you save time because you can move their contents together. You can also copy, paste, merge, and apply transformations to the linked layers. To link layers, first select one of the layers you want to link, then in the other layers you want linked together, click the column to the immediate left of the layer thumbnail to display a link icon. When you select a layer, if link icons are displayed for other layers, it means those layers are linked to the selected layer. To unlink a layer, click its link icon.

MERGING AND FLATTENING LAYERS

Adding layers to an image increases its file size, the amount of memory it needs, and the complexity of the Layers palette. To reduce file sizes and simplify the palette, you can merge layers when you have finished editing them. There is a downside in that once merged you can no longer edit them the same way you did before merging. For example, if you merge a type layer into an image, you can no longer change the font styles.

To merge layers, select the appropriate layer and pull down the *Layer* menu from the main menu or display the palette's menu and choose one of the following commands (the choices listed on the menu depend on the type of layer you have selected):

■ *Merge Down* merges the selected layer with the layer below it. Make sure both layers display an eye icon and select the top layer of the pair. The merged layers take on the name of the bottom layer.

TIPS

■ Two layer options that are commonly used with multiple layers are blending modes and opacity. The blending mode determines how the pixels in one layer blend into the pixels on the layer below. Opacity determines how transparent a layer is and how much the layer below it shows through. These settings are discussed in detail on page 139.

■ When merging layers, the intersection of all transparent areas in the merged layers remains transparent.

■ If you can't print an image because its file is too large, flatten the image to make it smaller.

- If the bottom layer in the pair is a shape, type, or fill layer, you can't choose *Merge Down* until you've simplified the layer (see below).
- If the bottom layer in the pair is linked to another layer or is an adjustment layer (page 118), you can't choose *Merge Down*.

■ *Merge Linked* (available only when you select a layer with other layers linked to it) merges all visible layers linked to the layer you select—those displaying both the eye and link icons. Hide any linked layers you don't want merged. The merged layers retain the name of the bottom layer.

■ *Merge Visible* merges all layers with an eye icon, so hide any layers you don't want to merge. If all layers are visible, this command is the same as flattening the image. The merged layers retain the name of the top layer.

■ *Flatten Image* merges all layers in the image. Hidden layers are discarded and transparent areas are filled with white. The flattened image layer is named *Background*.

SIMPLIFYING LAYERS

Although we're getting ahead of ourselves a little, type (page 124), shape (page 152), and fill (page 120) layers are different from other layers. Their content is not in the form of pixels, but in the form of points, lines, and curves defined by mathematical formulas. This format, called *vector graphics*, lets you size these elements without their losing any sharpness. However, at some point you may want to convert one of these layers to pixels—called *rasterizing* or simplifying them—so you can apply filters or use selection and painting tools. However, once you do this you can no longer make changes to the layer using the type- and shape-editing options. To simplify a layer, select it, pull down the *Layer* menu or click the Layers palette *More* button, and select *Simplify Layer*. (On a shape layer, click the *Simplify* button on the options bar.)

SAMPLING FROM LAYERS

Normally the Magic Wand, Smudge, Blur, Sharpen, Paint Bucket, Clone Stamp, and Healing brush tools only sample pixels from the active layer. This allows you to work on a single layer without affecting others, even when they are visible. However, if you want to sample and affect all visible layers you can sometimes do so. Just select one of the tools and turn on the *Use All Layers* check box on the options bar.

GROUPING LAYERS



Grouping a photo and a shape crops the image in the form of the shape and you can even add styles such as ridges or embossing.



Grouping a photo and text fills the text with the image.



Here the image was made a regular layer and then a gradient fill layer (page 120) was grouped below it (top). Because the gradient fades from solid to transparent, the image, when flattened, fades in from right to left (below).

Grouping layers is really a graphic arts technique used to fill shapes with photos. In a group, the bottommost layer, called the *base layer*, defines the visible boundaries for the entire group. For example, if you create an image with two layers, a shape or text on the bottom and a photo on the top, when you group the two layers, the photo is cropped in the shape of the base layer. The group also takes on the opacity and blending mode of the base layer. In the Layers palette the name of the base layer in the group is underlined, and the thumbnails for the overlying layers are indented.

■ *To group layers, do one of the following:*

- Hold down Alt and point to the line in the Layers palette that divides two layers. Click when the pointer changes to two overlapping circles.
- In the Layers palette, select the top layer of a pair of layers you want to group, and select *Layer>Group with Previous*.
- Link together the desired layers in the Layers palette, then select the layer they are linked to and select *Layer>Group Linked*. The bottom layer becomes the base layer.
- When creating a new layer to group with an existing layer, select the existing layer in the Layers palette, and then pull down the *Layer* menu or click the palette's *More* button to display the palette menu, and select *New Layer*. In the New Layer dialog box, turn on the *Group with Previous Layer* check box, and click *OK*.

■ *To move a group within the stacking order, drag the group's base layer up or down in the Layers palette. (Dragging any other layer in the group will remove that layer from the group if you drag it below the base layer, or between two ungrouped layers in the image.)*

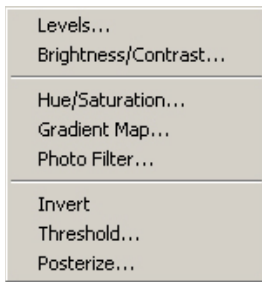
■ *To copy a group to another image, drag the group's base layer to the other image and drop it. Dragging any other layer in the group will copy just that layer.*

■ *To remove a layer from a group, do one of the following in the Layers palette. (Since removing a layer from a group, also removes all of the layers above it. To prevent this, drag the layer you want to remove to the top of the group and then remove it.)*

- Select any layer in the group other than the base layer, and either drag the layer below the base layer, or between two ungrouped layers in the image.
- While holding down Alt, point to the line between two grouped layers. Click when the pointer changes to two overlapping circles. Ungrouping the base layer from the layer above it will ungroup all layers in the group.
- Select a layer in the group, and choose *Layer>Ungroup*. This command removes the selected layer and any layers above it from the grouped layer.

■ *To ungroup all layers, select the base layer in the grouped layer, or the layer immediately above the base layer and select *Layer>Ungroup*.*

USING ADJUSTMENT LAYERS



Choosing Layer > New Adjustment Layer displays a submenu listing the kinds of adjustment layers you can create.

TIPS

- To limit the effects of an adjustment layer to only a part of the image, select that area first, or edit the adjustment layer's mask (page 122).
- Adjustment layers are assigned a name that reflects their type of adjustment.
- To reduce an adjustment layer's effects, reduce its opacity.



Adjustment and fill layers have two thumbnails—Layer (left) and Mask (right).

Adjustment layers let you experiment with color and tonal adjustments to an image without permanently modifying it. Adjustments are stored in the adjustment layer, and only their effects are “projected” onto the underlying image. There are a number of reasons why you always want to use adjustment layers when you can.

- You can undo changes to an image at any time just by deleting the adjustment layer that created them.
- You can hide and show an adjustment layer to compare, save, or print before and after views of the same image. (One trick is to quickly toggle an adjustment layer on and off a number of times to see exactly what effects it's having on the image.)
- You can fine-tune adjustments at any time.
- You can copy an adjustment layer to other photos needing the same adjustment. For example, if you have photographed a series of portraits under the same lighting, you can adjust one image and then copy the adjustment layer to each of the other images in the series.
- Most commands affect only a single layer but an adjustment layer affects all layers below it or in its group.

TYPES OF ADJUSTMENT LAYERS

The characteristics of an image that you can adjust with these layers include the following:

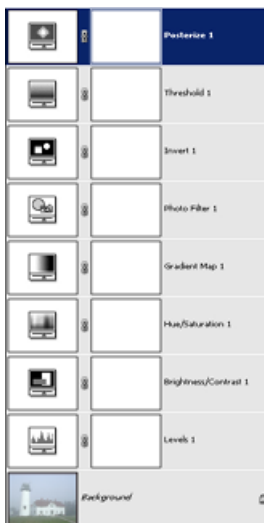
- *Levels* displays the levels dialog box so you can adjust the tonal range of the image (page 68).
- *Brightness/Contrast* displays the Brightness/Contrast dialog box (page 66).
- *Hue/Saturation* displays the Hue/Saturation dialog box so you can adjust hue, saturation, and lightness (page 73).
- *Gradient Map* displays the Gradient Fill dialog box so you can select a gradient that maps the shadows, midtones, and highlights in the image to the left, middle, and right colors of the gradient.
- *Photo Filter* displays the Photo Filter dialog box (page 73).
- *Invert* inverts the colors in an image making a positive image look like a film negative and vice versa.
- *Threshold*, used to convert an image to a high-contrast, black-and-white image, displays the Threshold dialog box and histogram. You drag a slider to specify a threshold between 0 and 255. All pixels lighter than the threshold become white; and all pixels darker become black.
- *Posterize*, used for special effects, displays the Posterize dialog box where you specify the number of levels for each color channel. To see how it works, click in the dialog box's *Levels* text box and press the up and down arrows to change the levels as you watch the effect on the image. (Hold down Shift to change the levels by 10.)

TIP

■ If an adjustment layer's mask thumbnail (the rightmost one in the Layers palette) contains only white values, the layer isn't adding much to the file's size, so you won't save much by merging the layers.



The Create adjustment layer button is a circle that's half black and half white.



Each adjustment layer has a unique icon and its default name indicates its adjustment function.

CREATING AN ADJUSTMENT LAYER

In many ways, adjustment layers are just like other layers. They have the same opacity and blending mode options, and can be moved within the layer stacking order, deleted, hidden, and duplicated.

When you create an adjustment layer, it has a layer mask—indicated by the mask thumbnail to the right of the layer thumbnail in the Layers palette. If you create the adjustment layer when a part of the image is selected, that selection is reflected in the mask. The purpose of the mask is to confine the adjustment to a specific part of the image and you can edit it at any point to change its size, shape, feathering, opacity and so on (page 122).

To create a new adjustment layer, open the Layers palette and do one of the following:

- *To affect all the layers below the adjustment layer*, select the topmost layer to be affected, click the *Create adjustment layer* button on the Layers palette, and choose the adjustment type you want to create. (Note that the first three commands listed on the menu are fill layers (page 120), not adjustment layers.)
- *To affect only one or more layers below the adjustment layer*, do one of the following:
 - *To affect only one layer*, select that layer, select *Layer>New Adjustment Layer*, and select the type of adjustment to display the New Layer dialog box (page 110). Turn on the *Group With Previous Layer* check box so the adjustment layer is grouped with the layer immediately below it and any effects are limited to the layer.

- *To affect multiple layers*, create a group (page 117) and make the adjustment layer the topmost layer in that group. You can also position the adjustment layer anywhere inside a group so it only affects the layers below it.

EDITING ADJUSTMENT LAYER OPTIONS OR LAYER TYPE

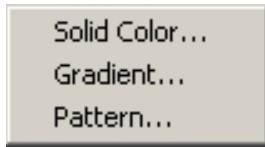
Once you create an adjustment layer, you can easily edit the settings, or even change the layer to a different type of adjustment.

- *To edit an adjustment layer*, double-click its layer thumbnail (the left one) in the Layers palette, or select the layer, then select *Layer>Layer Content Options*. Make the desired changes in the dialog box and click OK.
- *To change the adjustment layer to a different type*, select the layer then select *Layer>Change Layer Content* and select a different type of adjustment from the list.

MERGING ADJUSTMENT LAYERS

You can merge an adjustment just like any other layer (page 112) however, you can't use it as the base or target layer for a merge. When you merge an adjustment layer with the layer or layers below it, the adjustments are simplified (page 112) and permanently applied to the merged layer.

USING FILL LAYERS



The Layer > New Fill Layer submenu.

Fill layers are filled with a solid color, a gradient, or a pattern. Unlike adjustment layers, fill layers do not affect the layers below them. Normally you would place a fill layer below another layer that has transparent areas—perhaps a text or shape layer so the fill shows through. Alternatively, you might place it above another layer and cut holes in it or change its opacity so the layer below shows through. You can also change the fill layer’s blending mode to control how it interacts with pixels on the layers below.

When you create a fill layer, it has a layer mask—indicated by the mask thumbnail to the right of the layer thumbnail in the Layers palette. If you create the fill layer when a part of the image is selected, that selection is reflected in the mask. The purpose of the mask is to confine the fill to a specific part of the image and you can edit it at any point to change its size, shape, feathering, opacity and so on (page 122).

CREATING A FILL LAYER

There are two ways to create a fill layer; using the main menu or the palette button. To begin, select the layer above which you want to fill layer to appear. To confine the effects of the fill to a selected area of the image, make a selection. Then do one of the following:

- Choose *Layer > New Fill Layer* to display a submenu listing the kinds of fill layers you can create. Click one of those listed on the menu and described below to display the New Layer dialog box where you name the layer, make any other settings of your choice (page 110), and click *OK* to display the dialog box specific to the fill you selected.

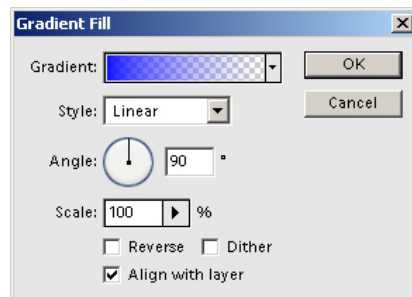
- Click the *Create adjustment layer* button on the Layers palette, and click the fill of your choice to display the dialog box specific to that fill.

The types of fill layers you can create include the following:

- *Solid Color* displays the color picker (page 134) so you can select a solid fill color for the layer.
- *Gradient* displays the Gradient Fill dialog box so you can select a gradient, and make other optional settings discussed below, and click *OK*.



Gradient types (top down) linear, radial, angle, reflected, and diamond.



- *Gradient* shows a thumbnail of the selected gradient and you can click the drop-down arrow to display a palette of preset gradients from which to choose. Gradients with a checker board pattern fade to transparency. You can also click the triangle icon to display a menu listing other libraries of gradients from which to choose.

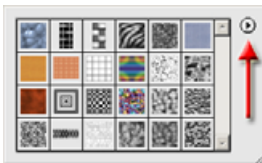
- *Style* specifies the shape of the gradient. Your choices include *Linear*, *Radial*, *Angle*, *Reflected*, and *Diamond*.



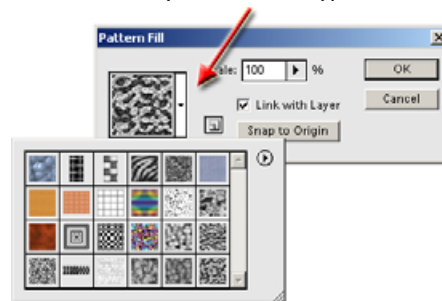
The Create adjustment layer button a circle that's half black and half white.

- *Angle* compass specifies the angle at which the gradient is applied. To change the angle, drag the compass needle or type an angle into the text box.
- *Scale* slider changes the size of the gradient.
- *Reverse* check box, when on, reverses the order of the colors in the gradient fill.
- *Dither* check box, when on, creates a smoother blend with less banding.
- *Align With Layer* check box, when on, aligns the gradient with the edges of the image.

■ *Pattern* displays the Pattern Fill dialog box so you can select a pattern, make other optional settings discussed below, and click *OK*.



Clicking the triangle icon in the gradient or fill palette displays a menu listing other libraries of gradients and fills.



- *The pattern swatch* shows a thumbnail of the selected pattern. You can click the drop-down arrow to display a palette of preset patterns from which to choose. You can also then click the triangle icon to display a menu listing other libraries of patterns from which to choose.
- *Scale* slider makes the elements in the pattern larger or smaller.
- *Link With Layer* check box, when on, moves the pattern and layer together when you drag them. When off, you can't drag the pattern which is always aligned with the image window.
- *Snap to Origin* button aligns the upperleft corner of the pattern with the ruler origin in the upperleft corner of the image.
- *Create a new preset from this pattern* button saves a pattern you have created or revised for future use.

TIPS

■ When the gradient or pattern fill dialog box is displayed you can click in the image area and drag the gradient or pattern to align it the way you want.

■ To resize a pattern, choose *Select>All* and drag the bounding box handles.

■ Fill layers are assigned a name that reflects their type of fill.

■ To see through a fill layer to the layers below, adjust its opacity.

EDITING FILL LAYERS OPTIONS OR TYPES

Just as with adjustment layers, you can edit a fill layer's settings using the same dialog box you used to create it, or even change the layer to a different type of fill.

■ *To edit a fill layer using the original dialog box*, double-click its layer thumbnail (the left one) in the Layers palette, or select the layer and then choose *Layer>Layer Content Options*. Make the desired changes in the dialog box and click *OK*.

■ *To change the fill layer to a different type*, select the layer then choose *Layer>Change Layer Content* and select a different type of fill from the list.

MERGING FILL LAYERS

You can merge or simplify a fill layer just like any other layer (page 112). When you merge a fill layer with the layer below it, the fill is permanently applied to the merged layer.

EDITING A LAYER MASK

TIPS

- To return an image to the way it looked originally, click the adjustment or fill layer's eye icon in the leftmost column of the Layers palette to hide the layer.
- The Selection Brush tool has a mask mode that works much like a layer mask (page 95).

One of the best ways to limit the effects of an adjustment or fill layer to just part of an image, is to edit the layer's mask. The mask's thumbnail is displayed on the Layers palette to the right of the layer thumbnail that indicates its function.

- *The masked area* is protected from the effects of the adjustment.
- *The unmasked area* is affected by the effects of the adjustment.

If you don't select an area of the image before creating an adjustment or fill layer, all areas are unmasked and will be affected by the adjustment or fill. It's sometimes easier if you first make a rough selection of the area you want affected, and then display and edit the mask instead of having to create it from scratch. The area within the selection is unmasked and will be affected by the adjustment or fill. All other areas are masked and protected from its effects.

EDITING A MASK

After creating an adjustment or fill layer and then selecting it in the Layers palette, the color swatches at the bottom of the toolbox show a black foreground and a white background color. The mask is a grayscale image so you can paint or draw on it just like any other layer. (Painting is discussed in detail in Chapter 6.) You can even select areas to fill with the Paint Bucket tool or select and delete areas to create holes in the mask. The tools used most often are the Brush and Eraser tools. After selecting the Brush tool in the toolbox, click the *Brush* presets drop-down arrow on the options bar, or right-click in the image, and choose a brush that's feathered or sharp depending on your goals.

When editing a layer mask, it helps if you can see it either as a transparent red shield over the image, or as a grayscale image. To display the mask, click either thumbnail on the layer in the Layers palette in one of the following ways:

- *To view the mask in a red masking color*, Alt+Shift+click either thumbnail. If no areas have yet been masked, you won't see any red until you start to edit the mask. Repeat the command to hide the mask.

- *Unmasked areas* that will be affected by any adjustments or fills are transparent.



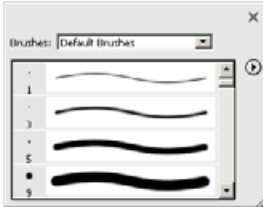
All painting tool options bars display a drop-down arrow you click to display the brushes palette.



An adjustment or fill layer has a mask icon in the second column from the left and two thumbnails. The layer thumbnail (left) indicates the type of layer it is. The right thumbnail is the mask.

When you display a mask, masked areas protected from the effect or fill are covered by a red overlay and unmasked areas that are affected by the adjustment or fill look normal.





When using brush tools, you can right-click in the image to display a set of brushes from which to choose.



When painting a mask, click the Default Colors button (lowerleft) to set the foreground and background colors to black and white. Click the Switch Colors button (upperright) to switch them.

TIPS

- When editing a mask, it helps to use shortcuts to zoom in on details and quickly adjust brush sizes.
 - To zoom in and out hold down Ctrl while pressing the + and - keys.
 - To change the size of the paintbrush, eraser, or other tool, press the square brackets [and].
- If you select an area of the mask and delete it, whether you add to the mask or subtract from it depends on the current background color.

- *Masked areas* that are protected are covered with a red shield.
- *Feathered areas* that will be partially affected, have a gradient in the mask.

■ *To display or hide the gray scale mask*, Alt+click either thumbnail. When displayed, you see just the mask with unmasked areas white, and masked areas black.

■ *To edit the mask*, click the mask thumbnail (the one on the right). The foreground and background colors change to grayscale values, a mask icon is displayed in the second column, and the thumbnail is surrounded by a border to indicate you are editing the mask.

■ *To edit the mask*, select the Brush tool in the toolbox and paint the mask with black, white, or shades of gray. (To switch between black and white foreground colors, click the *Switch Colors* button to the right of the foreground color at the bottom of the toolbox.)

- *To mask areas and protect them*, paint with the black foreground color or erase with white.
- *To unmask areas so the adjustment or fill affects them*, paint with the white foreground color or erase with black.
- *To mask with some transparency*, so the adjustment or fill affects the image to a degree somewhere between all the way and not at all, paint the layer mask with gray. (Double-click the foreground color swatch in the toolbox to choose a gray shade in the color picker—page 134.) The extent to which the effect or fill is removed depends on the tones of gray you paint with. The darker the gray, the more the adjustment or fill is blocked.

■ *To constrain editing to a specific area*, select that area of the mask.

■ *To select the unmasked area*, Ctrl+Shift+click the mask thumbnail (the right one) in the Layers palette. To unselect the unmasked areas and select the entire layer, Ctrl+Shift+click the layer thumbnail (the left one) in the Layers palette.

TURNING A MASK ON AND OFF

After creating a mask, you can turn it on or off. When on, it limits the adjustment or fill to the unmasked area. When off, the adjustment or fill affects the entire layer. To turn the mask on or off, Shift+click the layer's mask thumbnail (the right one) in the Layers palette. When off, the mask thumbnail is displayed with a large red X through it. To remove the X and turn the mask back on, click the thumbnail.

DELETING A LAYER MASK

To delete a layer mask, drag it onto the palette's *Delete layer* button. When a dialog box asks you to confirm the deletion, click *Yes*.

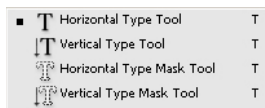
USING A MASK WITH OTHER ADJUSTMENT LAYERS

It takes time to create some masks, so if you want to confine other fills or adjustments to the same areas of the image, you can reuse the mask. To do so, duplicate the layer (page 112) so you have two copies of the same adjustment. Select the duplicate layer and select *Layer>Change Layer Content* to display a submenu of layer types to choose from.

ENTERING TYPE

Adding text to images is usually the realm of graphic designers, not photographers, especially those doing straight photography. However, it's so easy to do, you should know how so you can create title slides for your slide shows, add copyright notices to your images, or just invent ways to combine text and images in creative ways. The type tools enter horizontal or vertical type or horizontal or vertical masks (selections in the shape of type). As you type, a new layer is automatically created and text appears on-screen so you can always see how it looks in your layout.

To enter type you first select a type tool, set formats on the options bar, click in the image and type, pressing Enter when you want a new line to start. When finished, click the *Commit* button on the options bar. The text is on its own layer so you can move it around at will.



The four Type tools in the toolbox.

SELECTING A TYPE TOOL

The toolbox displays one of the four available type tools. To select one, click the Type tool in the toolbox and then click the tool you want to use on the options bar. Alternatively, point to the Type tool and hold down the mouse button to display the four tools that include the following:

- *Horizontal Type tool* enters or selects horizontal text.
- *Vertical Type tool* enters or selects vertical text.
- *Horizontal and Vertical Type Mask tools* create selections in the shape of type. These sections can be used just like any other selection (see Chapter 4) and edited and formatted like any other text, except for changing its color.

TIPS

■ To explore the type mask tools, use them to cut some text from one image to paste into another or cut text out of one layer to show the image on the layer below.

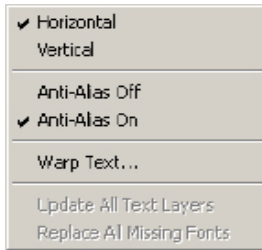
■ You can change the unit of measurement in the *Units & Rulers* section of the *Edit>Preferences* dialog box.

TYPE TOOL OPTIONS

After selecting a type tool you then select formats on the options bar. You can make changes before, during, or after entering text. Those formats that affect individual characters, such as font family, style, size, or color will affect all subsequent characters. When you select a type tool, the options bar displays the following choices:



- *Font family* specifies a font—a set of characters that share a common style. Well-known fonts include Times Roman and Helvetica.
- *Font style* specifies if the selected font will be Regular, Bold, or Italic. The range of available type styles varies with each font.
- *Font size* specifies how large the type is. The default unit of measurement for type is points (there are 72 points to the inch), however, you can use an alternate unit of measurement by entering the following abbreviations following the number—*in*, *cm*, *pt*, *px*, or *pica*. The value you enter is converted to the default unit of measurement. To enter a size larger than 72 points click in the font size text box and type in a number between 0.10 and 1296 in points or the equivalent in any other unit of measurement.
- *Anti-aliased*, when on, creates smooth edges by partially filling edge pixels, so type blends into the background. When off, type may have jaggies—stair-step like curves and diagonals. Anti-aliasing may increase file sizes and may create unwanted colors along the edges of type.



The Layer > Type submenu lists some of the commands also available on the options bar.

■ **Font buttons** let you use *faux* (fake) versions of bold and italic if the font family you selected doesn't have a bold or italic font set. The *Underline* button applies a line under horizontal type or to the right side of vertical type. The *Strikethrough* button applies a line through horizontal or vertical type. The lines are the same color as the type.

■ **Alignment buttons** including left/top, center, and right/bottom, align selected text relative to where you first clicked to begin typing. Alignment affects all type on a layer.

■ **Leading**, normally set to *Auto*, has a drop-down arrow you use to change the spacing between lines of type on the same layer. It only works with type you have already entered if you first click the *Commit* button

■ **Color swatch** displays the current font color. To change it for new or selected type, click the swatch to display the color picker (page 134), or the drop-down arrow to display a swatch palette and select a new color.

■ **Style**, normally set to *None*, has a drop-down arrow that lets you select a style for the type. Click the triangle icon to display libraries of other styles from which to choose. Also on this menu is the *Remove Style* command you can use to remove any style you previously applied.

■ **Warping** button distorts type in a variety of shapes; for example, you can warp type in the shape of an arc or a wave. (You can't warp text that uses faux bold formatting.) Warping applies to all characters on a type layer.

- *To warp text*, select the Type tool and click the *Warp* button to display the Warp text dialog box. Click the *Style* drop-down arrow to specify the basic shape of the warped layer, and use the option buttons and sliders to set the orientation and perspective of the warp effect and click *OK*.

- *To unwarpage type*, select the type layer and Type tool and repeat the process, but select *None* on the *Style* drop-down menu, and click *OK*.

■ **Text orientation** button changes the text from horizontal to vertical or vice versa much as if you were switching between the Horizontal and Vertical Type tools.

TIP

■ When you select a Type tool, the mouse pointer changes into a vertical or horizontal I-beam. The small line through the I-beam indicates the line on which the text you enter will rest. When entering vertical type, it indicates the center line of the type.

Point

Text being entered.

ENTERING AND FORMATTING NEW TYPE

Clicking in an image with a Type tool puts the tool in *edit mode* so you can enter and edit type. When in edit mode, a blinking cursor, the height of the selected type size and in the same orientation as the Type tool, appears at the point you click (called the *insertion point*). The options bar displays *Cancel* and *Commit* buttons that you use to exit edit mode. As you enter type, it has the format and alignment specified on the options bar. If you change any character formats such as style or size after you start typing, the changes only affect new type. To change previously entered type you have to first select it (page 126).

■ *To enter type* with the tool and formats you have selected, click in the image to set an insertion point for the type, then type in your text.

- *To begin a new line*, press Enter on the main keyboard.

- *To delete characters*, press backspace.

- *To reposition text as you are entering it*, Ctrl+drag it.

■ *To transform text*, perhaps to rotate, scale or distort it, drag handles on the bounding box that is displayed when you hold down Ctrl. You can use the



The Cancel and Commit buttons.

same commands as those discussed for the Transform command (page 101) except for perspective. For example, Ctrl+drag a side handle to skew.

■ *To commit the type* and leave edit mode so you can perform other operations, such as selecting menu commands or moving the type to a new position, do one of the following:

- Click the *Commit* button on the options bar.
- Press the Enter key on the numeric keypad, or Ctrl+Enter on the main keyboard.
- Select a different tool in the toolbox.

When you commit text it basically closes the layer although you can still select, edit, and format it. When you enter new text, a new layer is created for it. Committing type in sections lets you keep separated those text elements you want to format differently.

SELECTING TEXT FOR EDITING AND FORMATTING

To edit or format existing text, you have to first select it in edit mode. When you are not already in edit mode, first select the text layer in the Layers palette and a Type tool in the toolbox, then enter edit mode as follows:

■ *To select all text on a type layer*, double-click the text layer's thumbnail (the one on the left). You can press the left or right arrow key to unselect the text and move the insertion point.

■ *To select an entire line or paragraph*, click anywhere in it with a Type tool so it contains the insertion point.

■ *To select individual characters, lines, or paragraphs*, click in the text where you want the insertion point to be, and do one of the following:

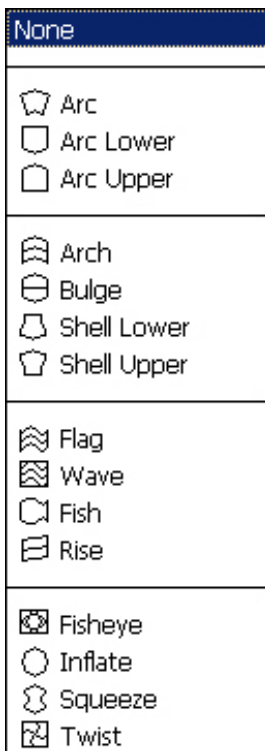
- *To move the insertion point through the text*, press the left or right arrow keys.
- *To select text a character at a time*, drag through it with the mouse, or hold down Shift and press the right or left arrow key.
- *To select larger elements*, multi-click as follows—to select a single word (double-click), a line (triple-click), or all text (quintuple-click).
- *To select a sequence between two points*, position the insertion point to the left of the first character in a sequence, then Shift+click to the right of the last character.
- *To select all text*, right-click the text and choose *Select All*.

FORMATTING TEXT

There are three kinds of formats you can apply to text—character, line, and layer—and each has its own requirements about what you select to apply the format. For example, alignment commands effect entire lines but not individually selected characters or words within lines.

■ *Character formats* such as type size, style, and color affect only selected or new characters. To apply character formats, change settings on the options bar.

■ *Line formats*, such as alignment, affect entire lines that either contain the insertion point or have been selected in whole or part. To apply line formats, change settings on the options bar.



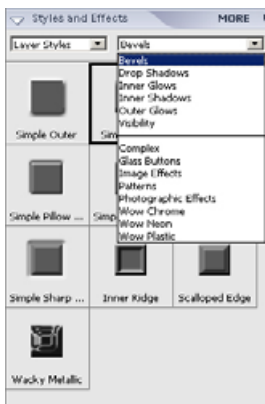
When you click the Warp text button it displays the menu (top) and selecting a choice displays the dialog box (bottom).

Format to your heart's content

Text can be easily formatted using the Styles and Effects palette (page 128).



The "f" icon indicates a layer has a style.



The drop-down arrow on the Styles and Effects palette (page 128) lets you select Layer styles, Effects, and Filters.

Here text was typed over an image of pine needles (top) and then cut and pasted into another image (bottom).

■ *Layer formats*, such as warping affect all text on the selected layer even when smaller elements such as words or paragraphs are selected. To apply some layer formats the text must first be committed:

- Click the *Warping* or *Text orientation buttons*, or the *Style* drop-down arrow on the options bar.
- Choose *Layer > Layer Style* to display a dialog box you use to apply such effects as a drop shadow or beveled edges.
- Choose *Window > Styles and Effects* to display the Styles and Effects palette (page 128) if it isn't already in the palette bin. Be sure to click the palette's drop-down arrows to explore styles you can apply.
- Choose *Layer > Type* and choose a format command from the submenu.

■ *To move or transform existing text*, select the text layer and Move tool. To move the text, point inside the bounding box and drag it. To transform the text, drag handles on the bounding box.

SIMPLIFYING TYPE LAYERS

Type layers are different from other layers. Their content is not in the form of pixels, but in the form of points, lines, and curves defined by mathematical formulas. This format, called *vector graphics*, lets you size these elements without their losing any sharpness. However, at some point you may want to convert one of these layers to pixels—called *rasterizing* or simplifying them—so you can apply filters or use selection and painting tools. However, once you do this you can no longer make changes to the layer using the type- and shape-editing options. To simplify a layer, select it, pull down the *Layer* menu or click the Layers palette *More* button, and select *Simplify Layer*. (On a shape layer, click the *Simplify* button on the options bar.)

CREATING A TYPE SELECTION

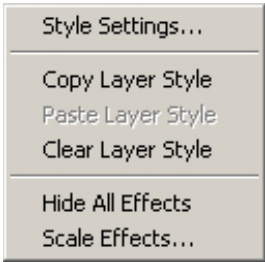
Using the Horizontal Type Mask and Vertical Type Mask tools, you can select areas of an image in the shape of the characters you type. To do so, create a new layer for the mask and select the Horizontal Type Mask tool or the Vertical Type Mask tool. Set options, and then enter type. A red mask appears over the active layer as you enter the type. When you click the *Commit* button on the options bar, the selection border is displayed on the image. It's just like any other selection border that you use as-is or invert to select, cut, copy, move, or adjust selections. Select the layer you want the mask to apply to, and cut, copy, fill, or otherwise edit the selection. (Type, shape, fill, and adjustment layers should be simplified first).



APPLYING LAYER STYLES



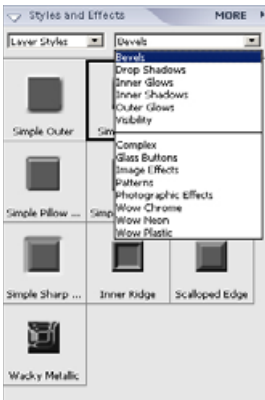
The “f” icon indicates a layer has a style.



The Layer > Layer Style submenu.



When you try to apply some styles to the background layer, you are asked if you want to convert it to a regular layer.



The drop-down arrow on the Styles and Effects palette lets you select groupings of effects. To see their full names, choose List View from the palette’s menu.

Layer styles are predefined visual effects accessed from the Styles and Effects palette, also used to apply filters (page 77) and effects (page 154). When you select a layer and apply a style, the entire layer is affected. If you then edit the layer, for example, crop the image, the effect automatically adjusts to the revised content. The effects of layer styles are cumulative, so you can create new effects by combining two or more styles. To replace one style with another, you have to first remove the previous style to avoid their being combined.

When you apply a style, an “f” icon is displayed to the right of the layer’s name in the Layers palette to indicate the style can be edited.

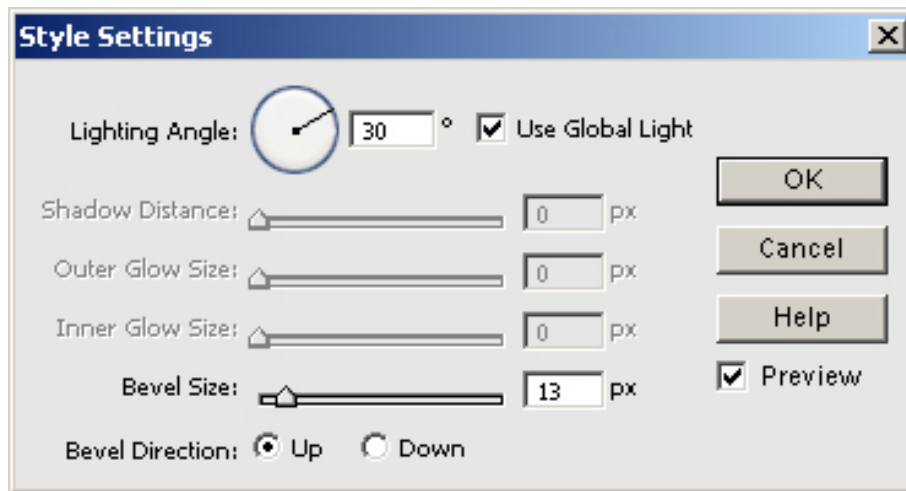
- To display the Styles and Effects palette if it isn’t in the palette bin, select *Window > Styles and Effects*. The palette has two drop-down arrows. Click the one on the left to select *Layer Styles* and the palette displays thumbnails of the styles in the group selected using the drop-down arrow on the right. The layer styles of most interest to photographers are those in the Bevels, Photographic Effects, and Image Effects sets.

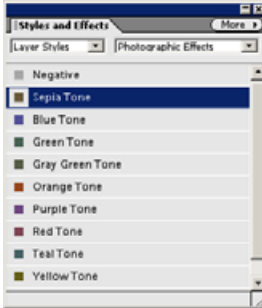
- To apply a layer style to a selected layer, select the layer you want it applied to then click the style’s thumbnail in the palette. You can also drag the style to the image and drop it.

- To remove a layer style from the select layer, click the *Undo* and *Redo* buttons on the shortcuts bar, select *Layer > Layer Style > Clear Layer Style*.

- To hide or show all layer styles, select *Layer > Layer Style* to display a submenu and then select *Hide All Effects* or *Show All Effects*.

- To edit a layer’s style settings to adjust the effect (not all affects can be edited) double-click the “f” icon in the Layers palette, or select *Layer > Layer Style > Style Settings* to display the Style Settings dialog box. Adjust one or more of the settings, and click *OK*. If a setting is dimmed, it is not available for the effect you are using. Here are the settings you have to choose from:

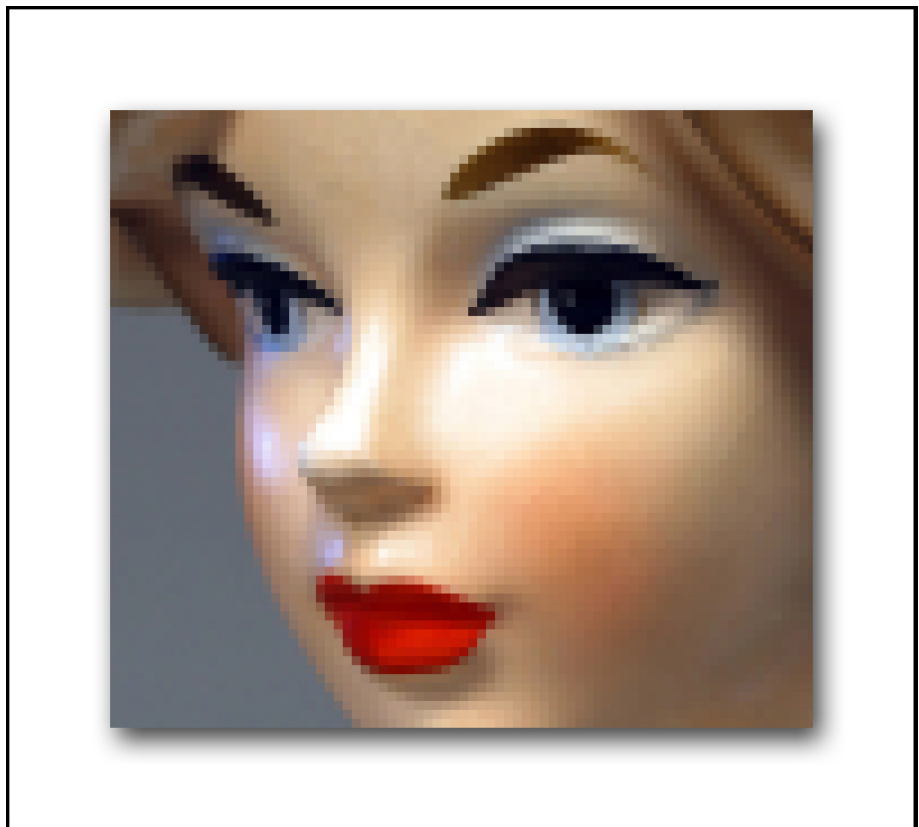




The layer styles of most interest to photographers are those in the Photographic Effects and Image Effects sets.

- *Lighting Angle* adjusts the angle from which light appears to shine on the subject.
 - *Use Global Light* applies the same lighting angle to all styles in the image so there appears to be a consistent light source.
 - *Shadow Distance* adjusts the distance of a drop shadow from the layer's content.
 - *Outer Glow Size* adjusts the size of a glow on the outside edges of the layer's content.
 - *Inner Glow Size* adjusts the size of a glow on the inside edges of the layer's content.
 - *Bevel Size* adjusts the size of beveling along the inside edges of the layer's content.
 - *Bevel Direction* adjusts the direction of the bevel, either up or down.
- To change the scale of a style, the effects of which depend on the size and other characteristics of elements on the layer, select *Layer > Layer Style > Scale Effect*. Click the *Scale* triangle and drag the slider to scale the effects from 1% to 1000% (100% is the default).
- To copy style settings between layers, select the layer containing the style settings you want to copy. Select *Layer > Layer Style > Copy Layer Style*. Select the destination layer in the Layers palette, and choose *Layer > Layer Style > Paste Layer Style*.

Here an image was copied to a larger blank image. When it was pasted in, Elements automatically placed it on its own layer. That layer was then selected and a drop shadow added.



CREATING ANIMATED GIFs

The Graphics Interchange Format (GIF) is generally used for images with large areas of solid colors such as line art, logos, and type. The format is rarely used for digital photos for one major reason—it only supports 8-bit color so images can only have 256 colors vs the millions in a 24-bit JPEG image. Despite this drawback, the format has one use in digital photography—creating small animated files that display one image after another, much like frames in a movie.

The process of determining which 256 colors to use in the image is called *indexing*, so images in GIF format are sometimes called *indexed color* images. When you convert an image to indexed color, a color lookup table is created to store and index the colors in the image. If a color in the original image does not appear in the color lookup table, the application either chooses the closest color in the table or simulates the color using a combination of available colors—a process called *dithering*.

TIP

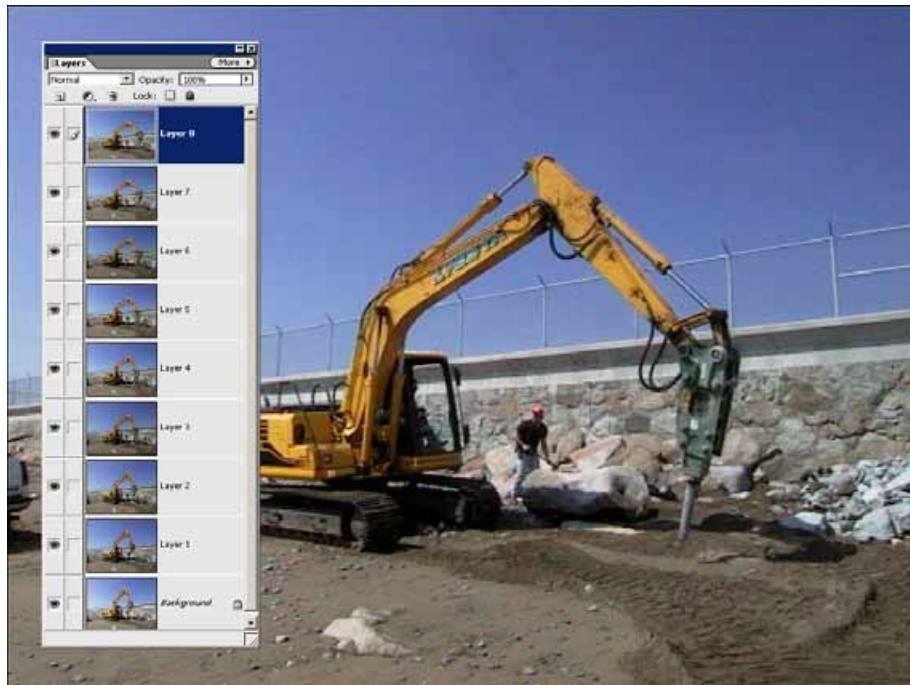
■ When opening multiple files, you can select and open them all at once (page 20), or use the File Browser or Organizer.

CREATING AN ANIMATED GIF

The first step in creating an animated GIF is capturing the images. You can show a sequence of any kind, perhaps as a small slide show or animation. All of the images should be the same size and shape. If creating an animation, one good way to capture the images is using your camera's continuous mode. You can often select a smaller image size and capture a rather large number of images just by holding down the shutter button.

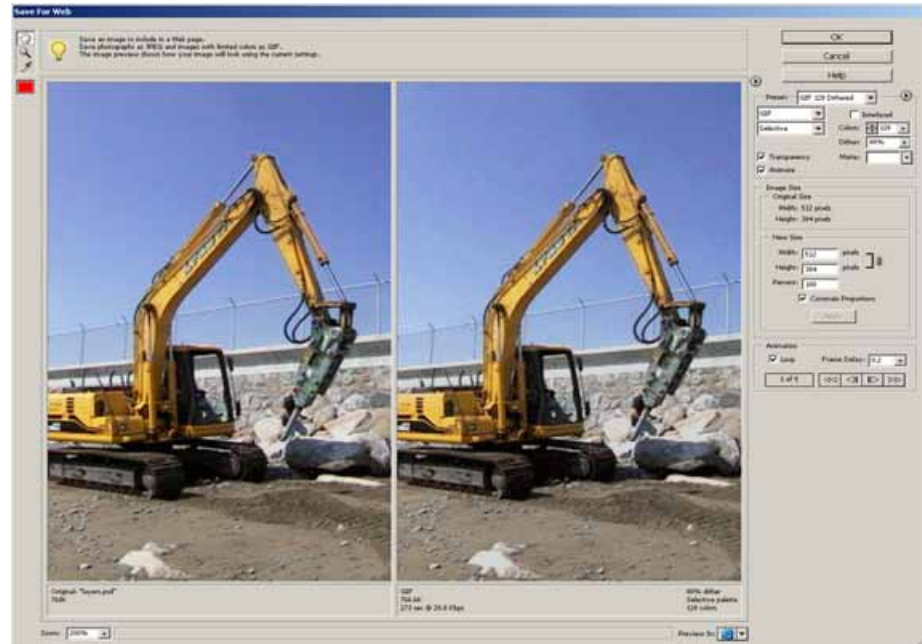
Once you have the images, you need to put each on its own layer in an image—each layer will become a frame in the animation. One way to do this is to save the first image in the series under a new name. Then, use the *Select > All* commands to cut and paste the other images into that file, in the order you want them to appear. When you paste each in, it will automatically be on its own layer. Display the Layers palette to see the sequence.

Each frame in an animated GIF is on its own layer in the image.

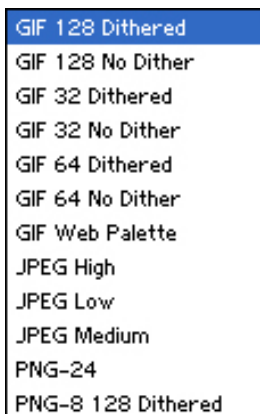


SAVING AN ANIMATED GIF

To save an animated GIF, click the *Save for Web* button on the shortcuts bar or select *File>Save for Web* to display the Save for Web dialog box. Many of these commands are discussed in the section “Optimizing Images for the Web” (page 43) but some apply specifically to animated GIFs.



ESSENTIAL SETTINGS



The file formats listed on the Settings drop-down menu

■ *Settings* drop-down arrow displays a list of preset image formats, so you can choose one of the GIF formats. The numbers in each GIF choice indicate the number of colors used in the format. *Dither* means that colors not in the color table are simulated by mixing the available colors. Using more colors and dithering gives better results but creates larger files. For digital photos, start with *GIF 128 Dithered* and preview the results. If the file is too large, consider changing its size, or number of frames before using fewer colors or turning off dithering.

■ *Animate* check box, displayed only when you have selected a GIF format, must be on to save an animated GIF.

■ *Preview in* displays a browser icon you can click to launch your default Web browser to preview the animation and information about its size and settings. (The drop-down arrow selects any other installed browser.) Use your browser’s Stop and Refresh or Reload commands to stop or replay the animation. Close or minimize the browser to return to the Save for Web dialog box.

■ *Animation* section sets characteristics of the animation and lets you scroll through it. To use this section, the *Animate* check box must be on.

● *Loop*, when on, plays the animation over and over.

● *Frame Delay* specifies how long each frame is displayed during playback. When creating an animation, the interval should be short—the default is 0.02. When creating a slide show, the interval should be longer—perhaps 5 seconds or so.

- *Page* buttons scroll through the animation. The outer buttons jump you to the first or last frame. The inner two scroll you a frame at a time.

- *OK* displays the Save Optimized As dialog box so you can specify a folder and filename and click *Save*. The animation is saved with a .GIF filename extension.

OPTIONAL SETTINGS

In addition to the essential settings, there are other settings you can change.

- *Optimized file format* displays the format selected in *Settings* and has a drop-down arrow that provides an alternate way of specifying a GIF format. If you use this setting, a *Colors* settings appears and you can select 256 colors for even higher quality.

- *Color reduction algorithm* specifies how colors are selected for the color table. The default setting of *Selective* is best for digital photos. For a discussion of the other choices, look up “*algorithm*” in help.

- *Interlaced* creates an image that displays at low-resolution in a browser while the full resolution image is downloading. Normally you would leave this off.

- *Colors* specifies the maximum number of colors in the color palette.

- *Dither* slider specifies how colors are mixed to create missing colors. A higher amount dithers more colors, but increases file sizes.

- *Matte* drop-down arrow lets you specify which color fills transparent areas of the image, if there are any.

- *Transparency* check box, when on, preserve transparency if the image has it. When off, transparent pixels are filled by the color specified in the *Matte* box.

- *Image Size* shows the current image size and lets you change it (page 43).

TIP

■ As you change settings, keep your eye on the file size and download times shown below the optimized preview image.